

Stereo Review's

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# STEREO DIRECTORY & BUYING GUIDE 1981

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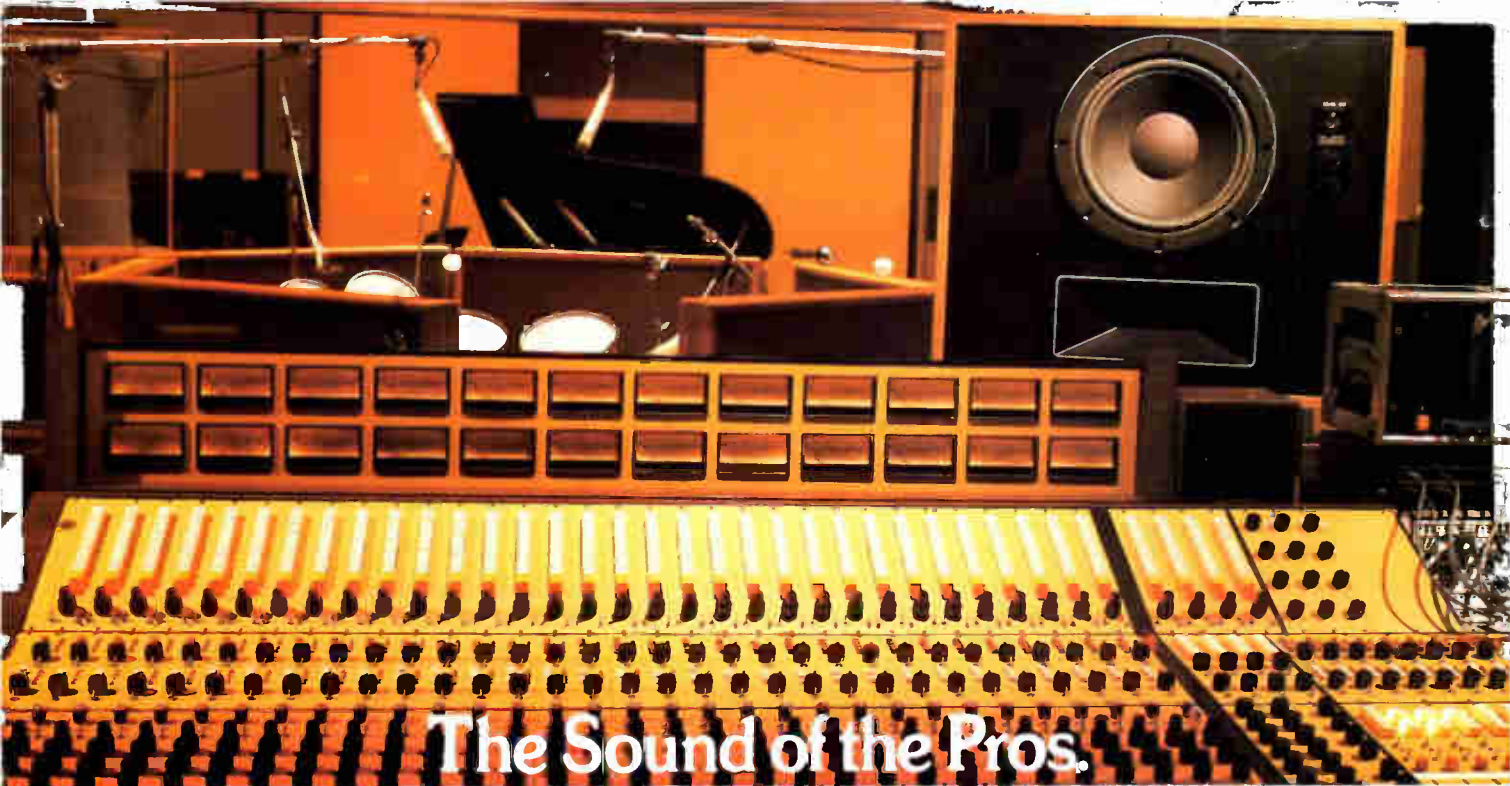
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**1939...FIRST DIRECT-DRIVE TURNTABLE SYSTEM.  
1951...FIRST MOVING-COIL CARTRIDGE.  
1972...FIRST DIGITAL (PCM) RECORDING.**



*In 1939, while many turntable manufacturers were trying to make the transition from horn phonographs to electrical record players, Denon developed its first direct-drive turntable, (shown above). Denon engineers discovered that only a direct connection between motor and platter — free of the pulleys or belts found in more primitive drive mechanisms — could completely eliminate speed fluctuations that obscure musical detail.*

*Today, many turntable makers have discovered the virtues of direct-drive. It is now the accepted means of approaching state-of-the-art performance. But only one company has had 40 years to refine the direct-drive principle. It is the same company that 29 years ago developed another technology now in widespread use: the Moving-Coil Cartridge. It is the same company that changed the entire process of recording music by inventing digital (PCM) recording.*

*The company is Denon.*



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The latest stage in Denon's refinement of direct-drive is the DP-60L Semi-Automatic Turntable. It uses a unique AC Servomotor with a quartz "clock" speed-reference to achieve exceptional torque and speed accuracy, while eliminating the corrective speed surges that degrade the performance of other direct-drive turntables. The DP-60L is supplied with two plug-in tonearm wands — one straight and one S-shaped — to assure a precise match-up with the characteristics of any phono cartridge.

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The Denon turntables for 1980: Six musical instruments from the company where innovation is a tradition.

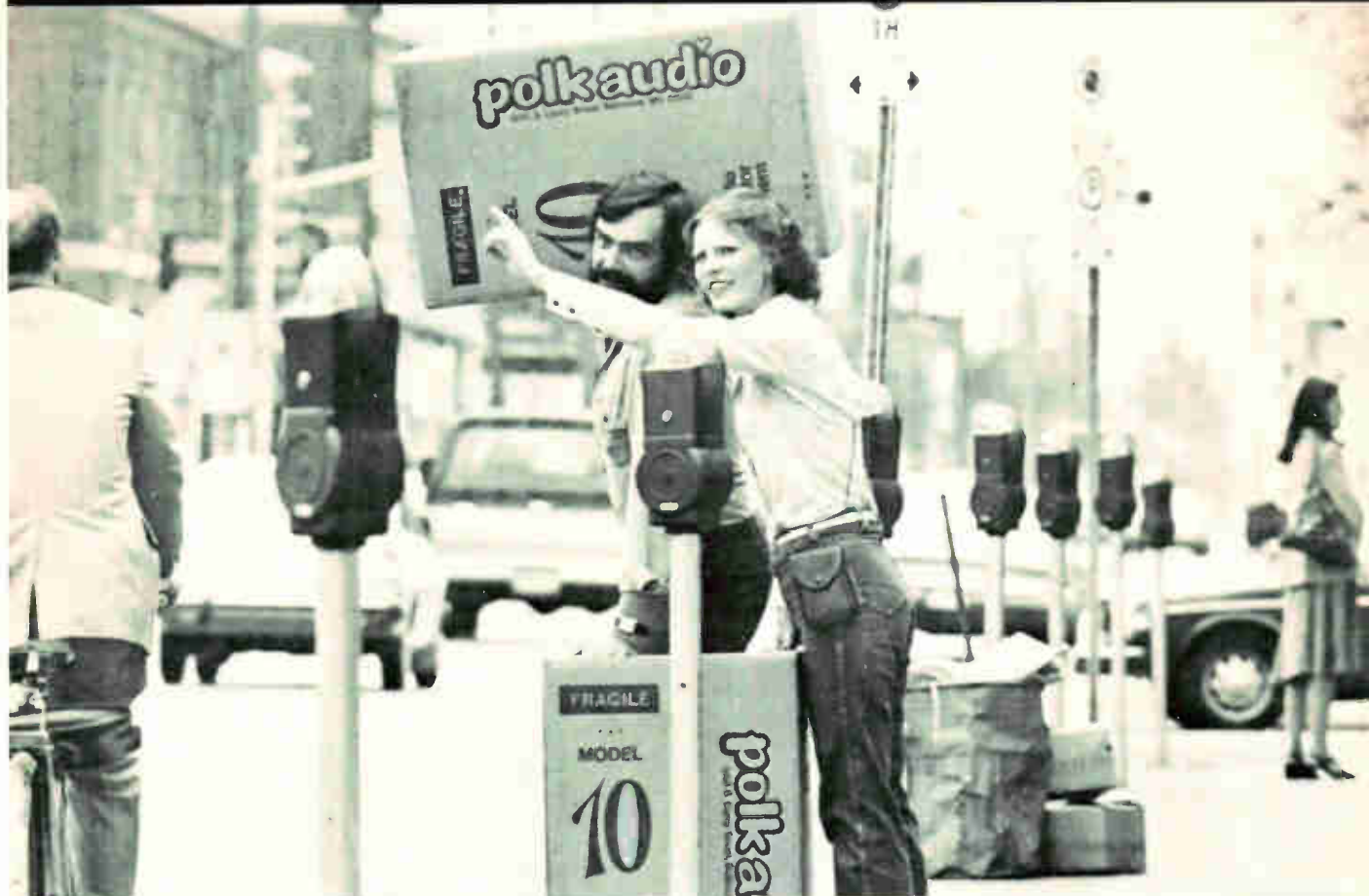
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AMERICA'S FOREMOST ROCK/JAZZ MAGAZINE SAYS

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Monitor 5

Monitor 7

Monitor 10

Real-Time Array  
Reference Monitor System

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# STEREO DIRECTORY & BUYING GUIDE 1981

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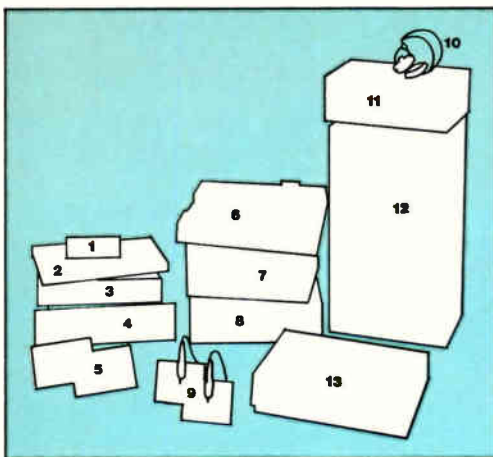
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  2. Sanyo PLUS N55 Noise-Reduction System
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  10. Mura Red Set III Stereo Headphones
  11. B-I-C T-3M Stereo Cassette Deck
  12. Altec Lansing Model Eight Speaker System
  13. RCA SelectaVision VET250 Video Cassette Recorder

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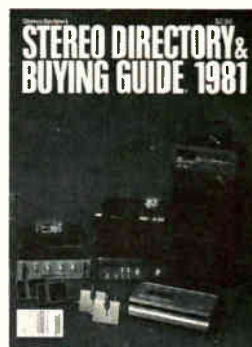
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**STEREO DIRECTORY & BUYING GUIDE**



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**NIKKO AUDIO**

(with optional rack-mounts), Alpha 220 DC servo nonswitching power amplifier.

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# GETTING STARTED IN HI-FI

By Harold A. Rodgers

If you've been promising yourself to get a stereo component system to replace that old compact phonograph "one of these days," you may never find a better time to act than right now. Prices of home audio equipment have declined steadily in recent years, but with inflation galloping along as it is, there is a good chance that they may start to rise again. So this could easily be the moment at which your stereo dollars will buy the most value.

Perhaps you are hesitant because you think component equipment buying is complicated and requires special training. This article will show you how

easy it is to select equipment and how to avoid buying pitfalls.

● **Where to Buy.** The first thing you will have to decide is where you will buy your equipment. If you are fortunate enough to have a fairly unconstrained budget and expect to become heavily involved in hi-fi listening, a specialist audio shop may be your best bet. Stores of this kind are usually manned by knowledgeable personnel who can help you make reasoned choices. They are more likely to provide amenities, such as home delivery and installation as well as repair work and assistance in

obtaining warranty service should a component fail. Another service that may be offered is the opportunity to audition components in your home. This can be very helpful in judging loudspeakers.

These dealers are usually very reliable, as they depend heavily on a good reputation to bring new business and, more importantly, repeat business. The tradeoff involved in dealing with such a specialist is that prices are not often substantially discounted. Service, after all, costs money.

Middle-level stores, which are often parts of chains, offer fewer services but generally lower prices. Usually, they do not supervise sales personnel as carefully as specialists do, so you may have to be more circumspect about what advice you take. These stores will probably assist you in case of equipment failure, but niceties such as home installation or trial are usually not available. Note also that these dealers use promotion more than reputation to ensure a steady supply of customers.

If you are convinced that you know what you want and don't need any help, you may want to try a full-discount store. These dealers cut prices heavily, often to within a few percent of wholesale, but offer almost nothing in the way of extra service. "Cash and carry" and "send it back to the factory if it breaks" are generally the rules. Some of these are warehouse-type operations that have no demonstration facilities, so you may have to decide what you want in advance.

● **Encountering the Salesperson.** As noted earlier, the audio salon depends on repeat business to a large extent.



"BOY, THEY SURE GIVE BIG DISCOUNTS AWAY FROM THE 'HIGH RENT DISTRICT'!"

They therefore have policies that encourage their sales staff to treat customers well. In discount stores, on the other hand, the sales personnel often know little more than where the equipment is stacked and how much to charge, and will not too often bother to try and sway your decisions. It is in middle-level stores that alertness and skillful bargaining are likely to pay off.

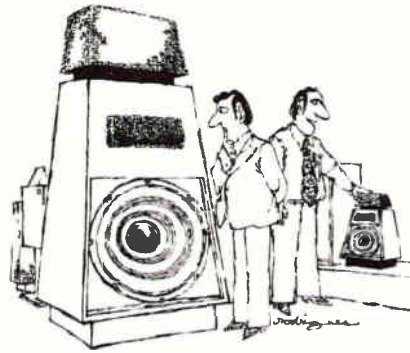
Frequently, in such stores, salespeople are encouraged by differential commissions and special bonuses to sell some items of merchandise rather than others. Also, it is not unusual for stores to have a minimum selling price that includes a minimal commission for the salesman. Naturally, he doesn't tell you what that price is, but everything you pay in excess of it might increase his commission. Thus, it seldom pays to jump at the first price offered in such middle-level stores.



...OH DAMN! I KNEW THERE WAS SOMETHING I FORGOT TO DO! THE SPEAKERS ARE OUT OF PHASE!

Of course, it is perfectly legitimate for a salesperson to try to influence your choice—that's part of his job. The crucial part is the means used to influence you. Watch out for "bait and switch," an unethical procedure in which the customer is lured into the store by an extremely attractive price on an item and then induced to buy something on which the store makes a larger profit. Beware, too, of any disparaging remarks about what you appear to be favoring or about the "on-sale" item you're interested in. To succeed in a switch, the salesperson has to frighten you out of a decision, which is hard to do subtly. Any "scare" tactics at all are your cue to head for the door. On the other hand, if the salesman senses that you don't really like the special that much or that you've made a "bare bones" selection, he may try to tempt you into buying something better. This is called "step-up" and is perfectly fair. After all, you can't be tempted by something you don't like.

Indeed, if you take the long-term view, he is doing you a favor in helping you find out what you really want or need.



...HOWEVER, IF YOU'D LIKE THE SAME THING IN A LESSER PRICE RANGE...

● **Picking a System.** Basically, a home audio system consists of a turntable equipped with pickup cartridge, an electronics package—which may or may not include AM and FM radio—and a pair of loudspeakers. A case is sometimes made that the loudspeakers are the most critical components, as no matter how good everything else is the speakers are the only means for the sound to get into your listening room. Actually, this argument is fallacious, for everything in the system can influence the way it sounds, but loudspeakers are certainly the most variable in performance and virtually impossible to judge in any way but by listening to them. Some authorities suggest that a certain fraction of your budget be reserved for speakers, but it is possible to find that the cheaper of two models sounds better. A better course is to set a ceiling price and start listening.

You will, naturally, be in a stronger position if you have some idea of what a good speaker sounds like. If you have friends with stereo systems, pay attention to what their speakers sound like, and, if possible, discuss with these friends the strong and weak points of their equipment. You may be able to get a friend to come to the store with you to offer guidance, but if you do, be sure to get a speaker that *you* like, not one that your *friend* likes.

Much has been written about conducting critical auditions, switching pairs of speakers back and forth in order to make close comparisons. One point that is often made is that for an A/B test (as such a comparison is often called) to be valid, levels of the two speakers must be precisely equal. However, it would take an expert armed with elaborate test equipment to verify that this is the case. Moreover, even differences of position will influence the sounds of speakers significantly. If you're going to be really fussy, buy from a store that will let you try the speakers at home.

What you should watch out for, though, are cases in which a speaker that you have heard before and liked seems to sound positively awful. While it may be that you are hearing it in comparison with a vastly superior competitor, it is also possible that the setup put it at an unfair disadvantage. If in doubt, re-audition the speaker elsewhere. Also, be suspicious of dealers' house-brand loudspeakers. As you have no way of knowing what they would cost elsewhere, it is impossible to judge their value. Granted, you may be offered what seems like a generous discount on such merchandise, but that doesn't mean much when the markup is unusually large and the nominal retail price inflated.

Finally, take time to be sure that you really like a speaker before you buy it. Remember that while characteristics such as "very heavy" bass, very "forward" midrange, or "sizzly" treble may be seductive at first, they are bound to become tiresome in the long run.

● **The Electronics Package.** Now that you've chosen the speakers, most of the hard work has been done. The principal criterion that the electronics package must satisfy is to have enough power to drive the speakers you've picked. Speakers vary in a ratio of about 10:1 (10 decibels) or more in their power requirements, so this is no trivial matter. If you are on a tight budget and your favorite speakers are power-hogs, you may have to reconsider and take second- or third-best to come up with a speaker that needs less power. High power can drive up the cost of electronics quite rapidly.

Distortion, which once was a matter of great concern in electronics, is so low in modern equipment as to warrant little concern. Tests have repeatedly shown that when distortion is less than or equal to 0.1%, it is simply inaudible. Another factor that can be safely ignored is small differences in power. It has been shown that the ear barely notices a doubling of power. (Doubling of subjective loudness requires a tenfold increase in power.) This being the case, the difference between, say, 30 and 35 watts, is inaudible, amounting to less than 1 decibel.

● **Receiver or Separates?** For most first-time buyers, the most convenient and economical electronics package is a *receiver*. This is a component that combines a power amplifier (to drive the loudspeakers), a preamplifier and switching center (to boost low-level signals from the phono pickup, to per-

(Continued on page 10)



# AIWA M-501 MINI-COMPONENTS.

## FULL PERFORMANCE... STUDIO SOUND.

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Full featured control unit, including MC cartridge, bass and treble controls, -20dB muting, cross-dubbing and all input/output facilities.

### SA-P50U DC Stereo Power Amplifier

50 watts per channel, minimum RMS at 8 ohms, both channels driven from 20-20,000 Hz with no more than 0.02% THD. 9-point peak power indicators.

### ST-R50U Quartz Synthesized Tuner

Precise, automatic or manual tuning with a 12-station programmable memory: six each for AM and FM.

### SD-L50U Metal Compatible Stereo Cassette Deck

Completes the entire system. Professional-type IC logic controls, 3-color peak level bar graph indicators, Dolby\* NR.

Equally exciting is Aiwa's M-502, a complete system in two components... AX-S50U AM/FM Stereo Quartz Synthesized Auto Tuning Receiver (20 watts per channel,



minimum RMS at 8 ohms, both channels driven from 20-20,000 Hz with no more than 0.1% THD)... and the SD-L50U described above.

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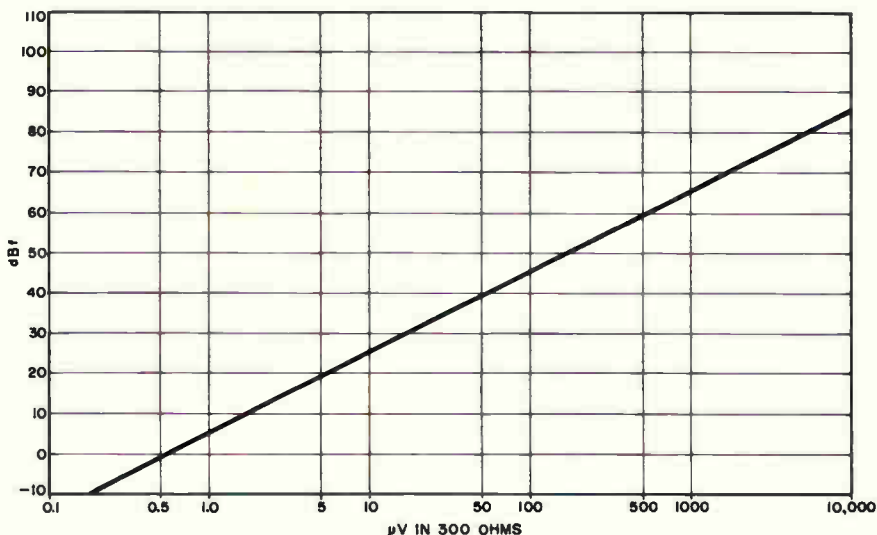
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mit modification or filtering of the signals, and to allow switching between program sources), and an AM/FM tuner. A receiver is simple to use, simple to connect, and generally represents a well-balanced system.

The biggest drawback of a receiver is that its degree of control sophistication is related to its power output. Secondary features of the equipment vary with power too. A top-of-the line receiver will, besides its higher power output, offer elaborate tone controls and filters, more flexible switching, fancy readouts (often digital), power meters, output muting, connections for secondary speakers, and other "bells and whistles" that are missing or considerably simplified in its lower-priced companion models. The tone controls and filters can, of course, be useful in tailoring the sound to the listener's requirements. But the other features, by and large, offer little more than small increments in convenience, although they are often considered to enhance product appearance and to impress one's friends. So there's no technical basis on which to advise for or against such features. The decision must lie with the individual buyer's taste, ego, and budget.

If you live in an urban or suburban location, the tuner sections of almost all receivers will be adequate. The distinctions between price points are measurable in the laboratory and, of course, appear in specification sheets, but they are really quite subtle in practice. Only if you live in a deep fringe

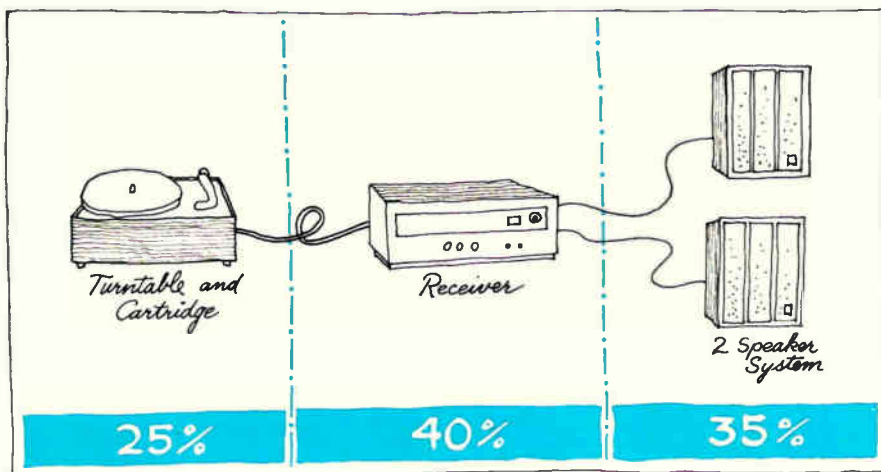


Picking a separate tuner is no longer the problem it once was. Sensitivity is now specified unambiguously in dBf (decibels referred to 1 femtowatt or  $10^{-15}$  watt) and can be easily compared from model to model. In the rare cases in which sensitivity is specified in microvolts, you can convert to dBf using the chart on page . But make sure that the microvolt figures are specified across a 300-ohm antenna input. If the reference is a 75-ohm input, the figures come out 6 dBf higher. You will be looking, by the way, for the lowest sensitivity number you can find. Ignore, however, the misnamed *usable sensitivity*; concentrate on the *50-dB quieting sensitivity* or, better yet, *50-dB quieting sensitivity in stereo*.

tion conditions. These are available at attractive prices and represent good buys.

The ultimate in separateness is achieved by taking the additional step of breaking the integrated amplifier apart into a power amplifier and a pre-amplifier/control center. (Many integrated amplifiers have "pre out, main in" jacks that allow this to be achieved electrically, though not mechanically.) For most beginners, this level of sophistication is unnecessary, and it can even be confusing. Unless you expect the audiophile bug to bite hard, and think that extra flexibility and the ability to upgrade the various sections of the electronics package individually justifies more complex interconnections, higher cost, and a more difficult buying decision, stick with a receiver or integrated amplifier.

On the other hand, if you do go the three-component separates route, buy from a dealer in whom you have confidence and from whom you can comfortably accept guidance. Literature that purports to help with buying decisions is abundant, but reading seems unlikely to make a nontechnical beginner enough of an expert to feel confident about making such choices. Experience is the best teacher, and to become an advanced audio enthusiast involves an investment in time and money.



area and want a medium- or low-priced receiver, are you likely to have problems with the FM section. Here, your best choice might well be an integrated amplifier—in effect, a receiver with the tuner section left out—plus a separate tuner. This will cost more, but it is probably the only way in which you will receive good FM reception.

Once it was important to be aware of certain tradeoffs in FM tuner design: selectivity *versus* freedom from distortion and multipath interference, for example. Nowadays, these tradeoffs have been engineered out, often by including in the tuner special circuitry that adjusts itself for best performance depending on what is demanded by recep-

● **Record-Playing Equipment.** Having decided on your loudspeakers and electronics, you will want to complete your system with a turntable/tonerarm/phono cartridge combination. These, in truth, are all separate components, but normally the turntable and tonerarm are sold as a single, factory-built unit. For

(Continued on page 12)



## Lux Tuner/Amplifiers



**R-3055**—55 watts per channel, minimum RMS into 8 ohms, both channels driven from 20–20,000 Hz with no more than 0.05% Total Harmonic Distortion.

# Sound thinking is... *DUO- $\beta$* and intelligent tuning.

Sound is all we think of. Exquisite sound, rich and full from top to bottom. With the kind of sophistication that simplifies, so everything about Lux/Tuner/Amplifiers is functional... designed for a purpose.

Great sound starts with super-stable, DC amplification for low inherent distortion, high dynamic range and wide bandwidth. Then, with Lux's exclusive duo-Beta circuitry, distortion is taken below audibility...almost unmeasurable.



**R-3030**—30 watts per channel, minimum RMS into 8 ohms, both channels driven from 20–20,000 Hz with no more than 0.05% Total Harmonic Distortion.

We've eliminated the flat amp stage which reduces phase distortion even further, and designed the tone controls into the power amplifier section. Finally, a subsonic filter removes the last traces of audible rumble and other low frequency noise.

Superior sound also depends on pinpoint center tuning. Lux's intelligent tuning systems find—and hold—that elusive center. Mistuning is a thing of the past.

Lux's new, Flash Tuning System\* is an array

of LEDs which point the direction to tune, automatically changing into a signal strength indicator at the exact center tuning point.

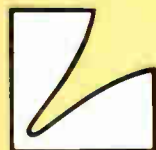


**R-3045**—45 watts per channel, minimum RMS into 8 ohms, both channels driven from 20–20,000 Hz with no more than 0.05% Total Harmonic Distortion.

Another system, Closed Loop Locked (CLL) Acculock, provides an electro-mechanical lock at the exact center tuning point. You can do it blindfolded. The Acculock system includes variable sensitivity and a lock defeat for every tuning circumstance.

Lux's Tuner/Amplifiers: R-3030, R-3045 and R-3055 incorporate duo-Beta circuitry and Flash Tuning. R-3055 includes CLL Acculock as well. Both the R-3045 and R-3055 have provision for MC cartridge, with variable input impedance and equalizer gain...automatically.

Every Lux Tuner/Amplifier is built with a host of features...the expected and the exclusive. But the definitive test is performance. Superior sound, simply achieved. Listen at your Lux dealer. Lux Tuner/Amplifiers ...better because they're built with sound thinking. \*Patent Pending



Ultimate Fidelity Stereo Components

# LUX Audio of America, Ltd.

Reflecting Tomorrow's Technology in Today's System

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CIRCLE NO. 26 ON READER SERVICE CARD

## GETTING STARTED...

someone just getting started, this is a great convenience. Factory-installed tonearms are economical as well.

What you need in a turntable is freedom from low-frequency noise (rumble), stable rotation speed (low wow and flutter), and accurate speed, although the last is the least critical of the three. (Rumble is never welcome and will prove less of a problem if your electronics package includes an infrasonic filter.) From a tonearm, one would ask for accurate geometry (low tracking error), low pivot friction, freedom from resonances, and reasonably low mass. The lower the mass of the arm—consistent with other requirements—the better the stylus of the phono cartridge will remain in contact with the grooves of warped discs. This is especially true if a cartridge with a highly compliant stylus suspension is used.



“...THIS HAS TO BE THE TENTH STORE — DOES THERE HAVE TO BE A LITTLE ALLIGATOR ON THE GRILL CLOTH?”

Also to be considered are the convenience features of a turntable: manual models play a single disc at a time and must be started and stopped by hand; semi-automatic types are started by hand but lift the tonearm and shut off automatically at the end of a record; a fully automatic model adds automatic start to the automatic shutdown of the semi-automatic. An increasing number of turntables make the operating controls accessible with the dust cover closed. This is a worthwhile feature.

Record changers, which automatically play six sides in sequence, are also worth thinking about. Older models have a reputation for mishandling records, but with modern equipment, the bad name is undeserved. Moreover, today's changers can also be used to play single discs. Note, though, that the tonearm plane differs according to the number of records stacked on the platter. This causes the angle at which the stylus intersects the record, to vary. The consequences are, however, rarely seriously audible.

Like other equipment, turntables vary in price and level of performance.

In general, competing models of similar price will be similar in performance, although they may have strengths and weaknesses that differ. Some people classify turntables according to the drive system for the platter, distinguishing those in which the platter is directly coupled to the drive motor from those in which the coupling is via an elastic belt. Both types of design have their advocates, both camps claiming advantages in performance. Belt-drive models, at least up to now, have been a bit cheaper to make and therefore predominate among low-priced models, but the distinction between the two types is hardly critical, especially in basic systems.

Some higher-priced models include such niceties as speed controlled by a precision quartz-referenced oscillator, and motor-driven cueing that allows you to lift or lower the arm at any point on the disc at the touch of a button. These features are attractive but hardly necessary.

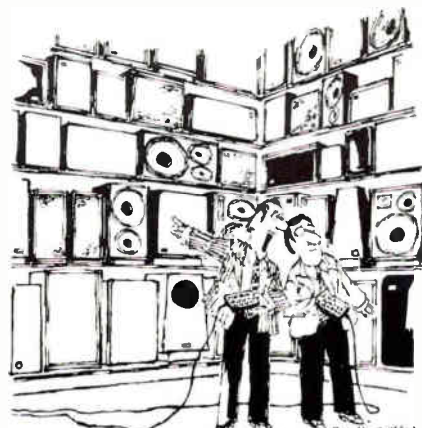
Often, the phono cartridge is the last component picked, but this should not be taken to mean that it is unimportant. Quite the contrary. If the cartridge has done its job poorly, the other components of the system cannot put matters right, no matter how good they are. Moreover, a cartridge whose functioning is really substandard can do irrevocable damage to records. Generally, even in a budget system, a few extra dollars spent to avoid the *cheapest* cartridges will be well rewarded. Actually, it often is not especially costly to be just a few steps away from the top of the line. Pickups are like speakers in that neither price nor specifications are accurate predictors of how they will sound. The solution is the same in both cases—audition carefully.

At this point, it might be logical to examine the problems involved in selecting a tape deck. But since tape facilities are not, in our opinion, usually included in *basic* systems, we defer discussion of this matter to the following article, “A Dozen Ways to Upgrade Your System.” There we concentrate on cassette decks as these are far more popular than the open-reel variety.

● **The System as a Whole.** Now, having settled on speakers, an electronics package, and record playing equipment, you've picked an entire system. One way to be really confident about the system you have chosen is to hear it operate in its entirety before you buy it. Opportunity to do this is generally offered by service-oriented stores.

Be sure, when you install your equipment, that the loudspeakers are connected to the receiver (or amplifier) by wire of sufficient size (16 gauge for short to moderate runs, 14 gauge for

long runs). Dealers sometimes “throw in” small-gauge wire at no cost or nominal cost. Unfortunately, its deleterious effect on reproduced sound makes it a poor bargain. The system is a chain—one weak link anywhere can cause failure, and a single oversized link does no good at all.



“...THE AUDAK, MARK FOURS — WHICH ONES ARE YOU LISTENING TO?”

When you start to consider actual components, the listings found elsewhere in this magazine will prove useful indeed. One good way to proceed is to mentally prepare two or three different systems in your price range (keeping the decisions about loudspeakers and phono pickup tentative, of course). That way you can visit the dealer with several alternatives in mind. You may end up buying entirely different equipment, but the shopping process is simpler and smoother if you have a place to start.

Some manufacturers offer pre-matched component systems in equipment racks at reasonable cost. These may be advantageous in terms of matched appearance and balanced performance. There was a time, when manufacturers were specialists, in which buying all of one's equipment from the same maker would have been viewed with suspicion. In most cases these days, this notion is no longer justified.

It is our belief that approaching the problem of buying stereo equipment for the first time more or less along the lines discussed in this article will make it less forbidding and a lot more enjoyable. You should also end up with a system capable of some 80% of the sonic performance of the best around, and at fairly modest cost. Depending on how fancy you want to get, final cost can be held around \$600-\$1000, and sometimes even lower. One thing you can rely on is that with the generally high quality of audio equipment now available it is unlikely that any thoughtfully chosen system will embarrass you. On the contrary, you can expect it to give you great pleasure. □



# Now more people can afford JVC cassette deck technology.



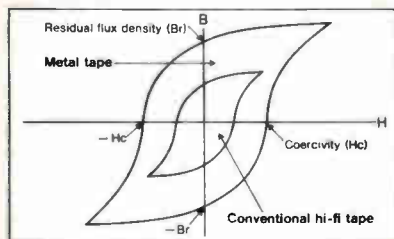
\* E.S.T. is an SUPERBETRAE technology trademarked by JVC. Some models are included only in the KD-A33 and KD-A8 cassette decks.



## Metal-compatible **KD-A33** cassette deck

If you've found that an affordable price usually means a sacrifice of performance, take heart. The JVC KD-A33 metal-compatible cassette deck includes much of the technology found in our most expensive decks. Yet it happens to be one of our least expensive decks.

For example, it uses Sen-Alloy® heads. These JVC-developed heads handle tremendously high currents



Hysteresis curves: metal vs. conventional tape

with ease, so they're especially well suited for recording and erasing metal tape. And SA's superb electromagnetic and physical properties give you accurate frequency balance, superb extension and low distortion through years of use.

When you use metal tape with the KD-A33, you'll get all the performance you expect from metal. But when your budget dictates using a less expensive ferric-oxide tape, you can still get metal-like sound thanks to another JVC development—Super ANRS™.

In recording, Super ANRS™ reduces the level of high-frequency signals so the tape can handle them without saturating. In playback, it boosts them back to their original level. As a result, sounds like cymbal crashes,

trumpet blasts, and spoken sibilants (normally the downfall of cassette recording) are reproduced with astonishing clarity and fidelity to the original.

And like our most expensive decks, the KD-A33 has logic-governed solenoid transport controls. You can switch directly between modes, even from "rewind" to "fast forward," with just a light touch of a switch. The KD-A33 also has provisions for adding a timer device and optional remote control.

Compare the KD-A33 with decks you want but can't afford. Then dial 800-221-7502 for the location of your nearest JVC dealer (in N.Y. State 212-476-8300). You'll find that high-quality cassette performance is more affordable than you thought it was.



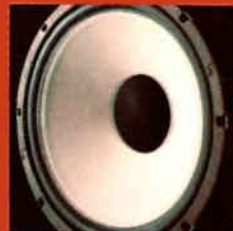
# JVC®

US JVC CORP

58-75 Queens Midtown Expressway, Maspeth, N.Y. 11378. 212-476-8300.

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# The disease is low frequency feedback



# The cure is DiscFoot

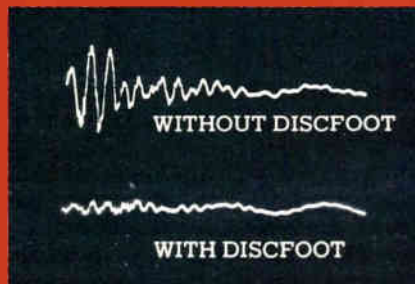
## DISCWASHER® **DiscFoot™** Hi-Technology Turntable Isolation System

- Works in combination with existing feet for dramatic reduction of feedback.
- Isolates better than original or "replacement" feet.

Home environments can "upset" a turntable by feeding back both speaker and footfall vibrations. Acoustic isolation of a turntable involves the complex variables of turntable weight, room/floor conditions and audio system placement. The Discwasher DiscFoot has been specifically designed to successfully isolate most turntables in the home environment.

### The "Material" Solution

The major components of the Discwasher DiscFoot System are new, "totally engineered" chemical complexes that behave radically different than other plastic, rubber or spring systems. These proprietary compounds are durable and precise in behavior, although difficult and expensive to synthesize. Laboratory and real-world tests justify the use of these unusual materials in the DiscFoot System.



### The Telling Test

The oscilloscope photo shows the output of two identical audio systems on the same shelf with their styli contacting the platters. The shelf is being struck by a rubber mallet. The top trace shows a turntable with absorptive "replacement" feet. The lower trace shows a DiscFoot System operating in conjunction with the existing turntable feet. Note the dramatic (tenfold) improvement in shock and feedback isolation.

The DiscFoot System contains four isolation feet, four platform caps, four furniture-protecting sheets and four special damping pads (to adapt DiscFoot units to certain turntables.) Additional single DiscFoot units are available for turntables weighing over 22 lbs. The system costs \$22.

 **DiscFoot™**

Discwasher DiscFoot can be found at audio dealers interested in preserving your music.

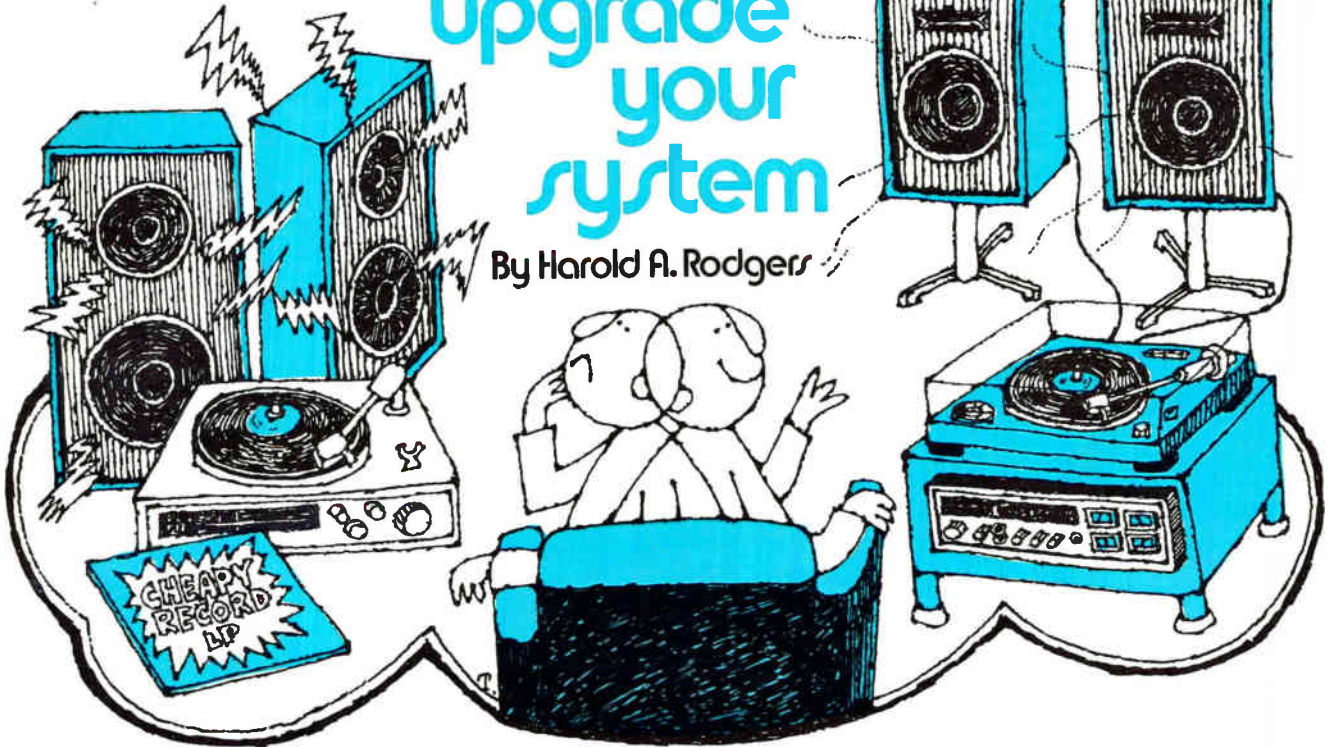
**discwasher®**  
PRODUCTS TO CARE FOR YOUR MUSIC

1407 N. Providence Rd.  
Columbia, Missouri 65201  
CIRCLE NO. 10 ON READER SERVICE CARD



# A dozen ways to upgrade your system

By Harold A. Rodgers



If you have been thinking about upgrading your audio system, but don't know where to begin, here are twelve possibilities. Some are expensive, some not, but all will improve the sound of the music.

**1. Give Your Speakers a Helping Hand.** Start by reviewing the positions allotted to your loudspeakers. Do they have an unobstructed "view" of the listening position? (Sound that travels directly from the speaker to you helps to form a good stereo image.) Are they too close to walls? Most conventional speakers sound best two feet or more from the nearest room boundary. If the speaker is near a corner, it will sound best when different distances separate it from each of the intersecting walls.

Now, if your speakers are perched on the floor, try setting them on stools or some temporary (but secure) structure about one-foot high. A noticeable improvement in sound means that speaker stands are just what you need.

**2. Get Better Loudspeakers.** Often, after living with a set of loudspeakers for a while, one becomes painfully aware of their shortcomings. The solid bass that was once so appealing now seems like mud, or that "forward" midrange is about to become an intoler-

able "honk." Most often, with a reasonable amount of cash and your present speakers as a trade-in, you can do significantly better. You'll have to do the auditioning all over again, but now you're a more sophisticated listener with a better idea of what you want. Take some familiar records along when you go to buy. Judging on the basis of the way they sound will be easier. Remember, though, that the power demands of your new speakers will have to be within the capabilities of your present electronics.

**3. Invest in a Record-Cleaning System.** Dirty records cause deposits to build up on the stylus, making it, in turn, subject to mistracking. And both stylus and discs wear faster when there's a lot of dirt around. Record-cleaning systems are available inexpensively, and when you consider that at today's prices the value of your record collection may exceed that of your playback hardware, they make a lot of sense. You'll get better sound, too.

**4. Change to a Better Phono Cartridge.** Moving to a better phono cartridge is often one of the most cost-effective ways to improve a stereo system, especially if the cartridge you have is part of a special system deal. Some caution is in order, however. If

your turntable has a very massive arm, you may find problems in tracking warped records with a highly compliant, top-of-the-line cartridge. One solution is to replace both the cartridge and turntable, but this can be costly. If your turntable isn't too old, however, you can step down to a less compliant cartridge that's in a manufacturer's line and still maintain the maker's fine-sounding pickup characteristics while giving up some of the top end and tracking at a slightly greater force. Another way out is to choose one of the moderately-priced moving-coil cartridges. Some can be used without step-up devices, others will require a transformer or a head amplifier. Virtually all have stylus suspension stiff enough to tolerate fairly large tonearm mass. The somewhat higher tracking forces they require do not cause significantly greater record wear.

**5. Buy Some High-Quality Discs.** Many of the faults that people attribute to their stereo systems are really problems with the technical quality of their records. The way to check this out is to try a few of the premium-quality recordings now available as discs or cassettes. These are relatively expensive, but they are mastered using sophisti-

(Continued on page 17)

# We've just lowered the price of admission.

Your ticket to a live performance just became even more affordable. Because the Koss K/4DS Digital Delay System with built-in amplifier and matching ambience speakers now has a suggested retail price of just \$459. Now that should really be music to your ears! Not since the introduction of stereo has a product so dramatically increased the listening enjoyment of recorded music. With four computerized ideal environment selections—club,

theater, concert hall, and auditorium—the Koss K/4DS Digital Delay System offers the most life-like and realistic portrayal of a live performance you've ever heard. Ask your audio dealer for a live demonstration, or write c/o Virginia Lamm, for more information on the K/4DS or other famous Koss stereophone and loudspeaker products. Now that the price of admission is so low, you won't want to miss the missing link in stereo.

*Suggested retail \$459*

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**KOSS** K/4DS Digital Delay System  
**hearing is believing™**

KOSS CORPORATION, 4129 N. Port Washington Ave. Milwaukee, Wisconsin 53212 International Headquarters Milwaukee facilities Canada · France · Germany · Ireland

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# A dozen ways...

cated digital or direct-to-disc techniques in most cases and are manufactured with very careful quality control. They can give you a clear idea of just how good your system is—or what its most serious weaknesses are.

**6. Isolate Your Turntable.** Vibrations from your loudspeakers can find their way back to the turntable and ultimately to the phono cartridge. This makes it possible for signals to feed back through the system, sometimes causing outright oscillation (detectable as a sustained howling or rumble), which can damage other components. In less severe cases, the system sounds muddy.

Help for this problem lies in the use of a turntable mounting system that isolates the phono pickup from stray signals.

**7. Improve Your Loudspeaker Cables.** For any runs of more than nine feet, those skimpy wires sold in some places as "loudspeaker wire" just won't do. They will waste amplifier power (in heating themselves) and, worse, deprive your speakers of the amplifier damping their designer expected them to have. For nominal 8-ohm speakers use 16-gauge wire as a minimum or 14-gauge for really long runs (more than 35 feet or so). With 4-ohm speakers, use 14-gauge and 12-gauge wire, respectively.

**8. Add More Power.** If you are playing digitally mastered and direct-cut discs and find that the sound gets a little mushy and strained now and then, chances are that your amplifier is being driven into clipping. This not only detracts from the sound you hear, but can damage your speakers as well. (Strange though it may seem, more speakers are damaged by amplifiers that are too small than by ones that are too big.)

If you have a separate amplifier/pre-amplifier combination, the job is simple—all you need is a new basic power amplifier. An integrated amplifier or receiver will have to be replaced in toto, of course, even if you are still satisfied with the performance of the other sections.

There is an alternative, however. Many receivers and integrated amplifiers are free enough of noise and distortion to rival preamplifiers of just a few years ago and even some current models. Thus, the output of one of these, rather than driving loudspeakers, could drive a larger power amplifier. Some manufacturers offer the interface networks necessary for such a hookup.

**9. Get a Good FM Antenna.** A tuner (or the tuner section of a receiver) simply can't do its best struggling along with the wire dipole that may have come along with it. Even in strong-signal areas, the multipath signals that a poor antenna will pick up are likely to make hash of FM reception, especially stereo. For the homeowner, the best way to go is to buy an FM-only antenna, and have it mounted on the roof well away from metal obstructions, TV antennas, and, most especially, *power lines*. Alternatively, if your TV antenna accepts FM signals, you can tap into it with a splitter. Unless you are very handy, it will probably pay you to have a technician do the installation. Apartment dwellers, who most often are not permitted to mount antennas on the building roof, can either tap into the building master antenna system—if it handles FM—or resort to one of the better indoor FM antennas available.

**10. Add a Signal Processor.** There are many outboard "boxes" that perform specialized functions to enhance the sound of a system into which they are connected. Most can be connected via the tape monitor facilities found in practically all modern receivers, integrated amplifiers, and preamplifiers, and practically all offer connection points for a tape deck.

Equalizers, for example, allow fine control over system frequency response, permitting you to compensate for loudspeaker deficiencies (up to a point), faults in program material, and even room acoustics. Expanders help to restore the original dynamic range of program material that has been compressed in recording. Other devices enhance stereo imaging, synthesize reverberation, cancel noise or eliminate record pops. And, if you are an ardent tape recordist, the increase in dynamic range that a compander can produce in your tape deck will be most welcome.

**11. Add a Tape Deck.** Now that you've had some experience with a hi-fi system, you're in a position to decide whether you need a tape deck or not. A deck will allow you to record memorable radio programs, and preserve valued discs (by dubbing them on tape, playing the tapes most of the time, and storing the discs out of harm's way). It also opens the world of prerecorded tapes to you—and many of these now sound as good as or even better than most discs.

Tape decks are a bit more complicated to evaluate than most other components. First of all, you want wow and flutter below 0.1%—and as far below that as you can get. Next, the signal-to-noise ratio must be good; target

values are 50 dB without Dolby noise reduction, 60 dB with Dolby, but look for the most you can get. Record/play frequency response (at -20 dB recording level) should extend to at least 15 kHz (more is nice to have, but represents just a touch of extra icing on the cake) and should be virtually flat from there down to 100 Hz. Below this, practically all cassette decks have irregularities known as "head bumps" in their frequency-response plots; these should be as small as possible. Finally, check the playback frequency response; this will determine how prerecorded tapes sound.

Many of the newer cassette decks feature the capability of recording on metal-particle tape (any machine equipped for chromium dioxide can play it back), but the principal advantages of this formulation will be most noticeable in live recording. For disc dubs, the most demanding application for which the majority of decks are used, chrome (or equivalent) are all you're likely to need.

Cassette decks vary widely in extra features. For example, a three-head deck will let you monitor as you record and pick up a little extra high-frequency bandwidth. Convenience features are also important: Does a cassette load easily? Is rewind reasonably fast? Some decks allow fine tuning of bias and sensitivity to accommodate variations in tapes. Are you fussy enough to want this? If you are, but don't want to be bothered with tweaking knobs, there are a few decks around equipped with microprocessors to do the job for you. In some other decks, microprocessors will locate selections on a tape and play them for you in any order you please.

Should live recording interest you, you will need microphones. Since recording tastes and techniques vary with the individual and microphones are quite specialized in their applications, purchasing them wisely depends on some experience with actual recording. The neophyte is best advised to start with simple mics, such as a pair of modestly-priced omnidirectionals. After learning what these will and won't do, you'll find it easier to move on to something better.

**12. Add an Equipment Rack.** Not only will this hide the rat's nest of cables interconnecting your components, it will give each unit a place so that the entire system looks positively elegant. In addition, if you get a model that has an open back and casters, you can easily gain access to all the system interconnections. That way you can check them periodically and be sure that corrosion or faulty contacts are not degrading sound quality. □



## Only Custom-Tailored Sound meets your taping needs.

If tape is the only sound that's right for you, to maximize your taping requirements, an ADC Sound Shaper® Two MK II frequency equalizer is a must.

When they designed the Sound Shaper Two, they had you in mind. Because, aside from being a superb all-around equalizer, it lets you work with tape the way you want. For example, now you have two-way tape-dubbing capability, a feature many receivers don't offer. You can "custom-tailor" a record and then record it the way you would have engineered it. And that includes your golden oldies because, with the Sound Shaper Two, you can virtually eliminate the surface noise which has accumulated

over the years.

The entire ADC Sound Shaper line is impressive. The basic Sound Shaper One is a great introduction to frequency equalizers. And the top-of-the-line Sound Shaper Three, the *Paragraphic*™ equalizer, combines the ease and control of a graphic equalizer with the precision and versatility of a parametric. And, all Sound Shaper equalizers, except the Sound Shaper One, feature LED-lit slide controls, allowing for visual plotting of the equalization curve.

With the Sound Shaper Two MK II, you can appreciate the difference custom-tailored sound makes—over and over again.

## Custom-Tailored Sound



*Sound Shaper*® FREQUENCY EQUALIZERS

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# GLOSSARY OF AUDIO TECHNICAL TERMS

## AMPLIFIERS (Section 2)

**Decibel (dB):** A measure of the ratio between two power levels. Doubling or halving the power corresponds to a 3-dB change, and 10-dB corresponds roughly to the audible effect of doubling or halving the loudness of a signal (although it represents a power ratio of 10:1).

**Distortion:** An undesired change in the waveform of a signal. With a single frequency (sine wave) signal, distortion appears as harmonics (multiples) of the input frequency. The rms (effective a.c. point) sum of all harmonic distortion components, is known as *total harmonic distortion*, or THD. When a two-tone test signal is used, distortion components appear at frequencies which are sums and differences of multiples of the input frequencies. Their magnitude is expressed as *intermodulation (IM) distortion*, which is more distressing to hear than THD.

**Equalization:** An intentional departure from response flatness to compensate for complementary characteristics introduced elsewhere in the system (as with discs, tape, and FM broadcasting). Also used to correct for response deficiencies in speakers and other components.

**Filter:** A circuit that attenuates signals above or below a specific frequency without materially affecting signals in its pass-band.

**Frequency Response:** Always specified as a range, such as 50 to 15,000 Hz; but in order to be meaningful it must be further defined in terms of decibel variation from absolute flatness over a specified frequency range (e.g.,  $\pm 3$  dB from 50 to 15,000 Hz). An indication of a sound system's ability to reproduce all audible frequencies supplied to it.

**Hz:** The standard abbreviation of Hertz, the unit of frequency; one cycle per second.

**Integrated Amplifier:** A single component combining the functions and circuitry of a Power Amplifier and Preamplifier.

**Intermodulation (IM):** See *Distortion*.

**Loudness Compensation:** A form of equalization, coupled with the volume control, that progressively emphasizes low frequencies (and sometimes also high frequencies) relative to the middle frequencies as the volume is reduced. Intended to correct for the human ear's natural loss of hearing sensitivity at the frequency extremes when sound level is reduced.

**Noise:** Any unwanted signal unrelated to the desired signal and tending to obscure it. In audio, noise is usually heard as hiss (random noise) or as hum (the power line frequency and its harmonics).

**Power Amplifier:** An amplifier driven by a relatively low voltage, low-power signal, of the order of 0.1 milliwatts or less, which delivers a substantial power output to low impedance speaker loads.

**Power Output:** FTC rules require that amplifier power be measured with all channels operating, after a standard pre-conditioning period to bring amplifier components to their maximum working temperature. Advertised power must be expressed in the form: "50 watts minimum rms per channel into 8 ohms with less than

0.3% harmonic distortion from 20 Hz to 20,000 Hz." The manufacturer is free to establish its own power, frequency, and distortion ratings, and implicit in the rating is the statement that rated distortion will not be exceeded at any power from 0.25 watts to rated power.

**Preamplifier:** Also known as control amplifier, or control center. A switching, amplification, and equalization component designed to select input signals, amplify them and deliver an output voltage to a power amplifier.

**Signal-to-Noise Ratio (S/N):** The ratio in dB between a reference power output (usually the amplifier's rated power) and the hum and noise power in the output of the amplifier.

**Tape Monitor:** An interruption in the signal path of a preamplifier, from which the selected input signal is supplied to an external tape recorder, and to which the playback output of the recorder is returned for further amplification and processing. Tape monitor circuits allow the owner of a recorder with separate recording and playback heads to listen to a tape as it's recorded, ensuring it is being recorded properly. They also allow the use of external signal-processing devices such as equalizers, noise reducers and expanders, and are sometimes known as "external processor loops" for that reason.

**THD:** See *Distortion*.

**Tone Control:** A circuit designed to increase or decrease the amplification in a specific frequency range, with little or no effect at other frequencies. Bass tone controls usually affect frequencies below a turnover frequency which may vary between 100 and 1,000 Hz. Treble tone controls are typically "hinged" to affect frequencies above 1,500 Hz. The range of a tone control (the maximum amount by which it can vary the amplification within its operating range) is typically about  $\pm 15$  dB, but may be as low as  $\pm 7$  dB or as great as  $\pm 20$  dB.

## TUNERS (Section 3)

**AM (Amplitude Modulation):** A process in which the program information is imposed on a carrier signal of constant frequency, by varying its amplitude in proportion to program level. Used on the standard broadcast band (550 to 1650 kHz), and on longwave and shortwave bands.

**AM Suppression:** The ability of an FM tuner to reject AM signals.

**Capture Ratio:** The minimum ratio between the strengths of two FM signals on the same frequency that will enable the tuner to suppress the weaker by 30 dB.

**De-emphasis:** A form of equalization used in FM tuners, complementary to a pre-emphasis used in transmission. The purpose is to improve the overall S/N ratio, while maintaining a uniform frequency response.

**Dolby "B":** A noise reduction system, originally developed for tape recording, but now adapted to FM broadcasting as well.

**FM (Frequency Modulation):** A process in which the program information is imposed on a carrier signal of constant amplitude by varying its instantaneous frequency in proportion to the program level. Used on the FM broadcast band

(88 to 108 MHz).

**I-f Rejection:** The ability of a superheterodyne AM or FM tuner's i-f circuits to reject external interference at the intermediate frequency.

**Image Rejection:** The ability of a superheterodyne receiver to ignore signals removed from the desired frequency by twice the intermediate frequency (10.7 MHz in home FM receivers, 455 kHz in home AM receivers).

**Multipath:** A condition in which a signal reaches the receiving antenna over two or more paths of different lengths. The resulting interference causes distortion in the receiver, as well as loss of stereo channel separation.

**Multiplex:** The system used to transmit two stereo program channels on a single FM carrier in such a form that the complete program (left plus right channels) can be heard on a mono FM tuner. A multiplex demodulator in the tuner converts the composite received program to its two channel form.

**Selectivity:** The ability of a tuner to reject unwanted signals on nearby channels.

**Sensitivity.** In FM, the signal strength a tuner requires in order to reduce noise and distortion to specified levels. "Quieting sensitivity" measures the input signal needed to reduce noise and distortion to 50 dB below the output audio signal level, a fairly listenable condition. "Usable sensitivity" defines the signal level needed to reduce noise and distortion to 30 dB below the audio output, a condition noisy enough to render "usable" a misnomer. Sensitivity is usually stated both in microvolts ( $\mu V$ ) of signal across the tuner's 300-ohm input (figures across the 75-ohm input would be lower) and in "dBf"—decibels above a signal level of one femtowatt ( $10^{-18} W$ ), equivalent to  $0.55 \mu V$  into 300 ohms. See chart.

**Synthesizer:** A system for generating a precise and stable frequency whose accuracy is determined by a quartz crystal oscillator, instead of inductance/capacitance tuned circuits.

## TURNTABLES (Section 4)

**Acoustic Feedback:** The pickup, by a turntable, of vibrations from the loudspeaker. If these vibrations reach the cartridge, they will be reamplified, causing noise (usually a rumble, but in extreme cases a howl) and/or distortion.

**Anti-Skating:** A system for neutralizing the lateral skating force developed with a tonearm having an offset cartridge angle. See *Skating Force*.

**Automatic Turntable:** A record player whose tone arm is positioned automatically for playing records when a control is operated, and which shuts off automatically at the end of play. See *Record Changer*.

**Cueing Device:** A lever or control that raises and lowers the tonearm without direct handling by the operator. Usually viscous damped for uniform rise and fall times, no matter how rapidly the control is moved.

**Direct Drive:** A record playing system whose motor is designed to turn at the record speed. No intermediate coupling devices are used, and the platter rests directly on the motor shaft. Direct-drive motors generally utilize *Electronic Speed Control*.

**Electronic Speed Control:** A system whereby a motor's speed is controlled by feedback from a frequency-sensing circuit attached to the device being powered.

**Flutter:** The audible effect of short-term record speed fluctuations, occurring at a low audio or an infrasonic rate (0.5 to 200 Hz). This causes a frequency modulation of the program material, heard as a wavering or roughness of the sound. It is described as a percentage of rated speed; the smaller this percentage, the less audible the

## GLOSSARY...

**flutter.** The percentage is generally combined with wow. (See Wow.) It is often "weighted" (wrms) so that it corresponds to the average human hearing response.

**Pitch Control:** A circuit which permits a turntable's speed to be varied slightly.

**Radial Tonearm:** A tonearm that moves along a track parallel to the record radius, maintaining perfect tangency to the groove. Sometimes called *straight line tracking arm*.

**Record Changer:** A type of automatic turntable capable of playing a number of records (usually 6 to 10) in sequence.

**Rumble:** The audible effect of low-frequency vibration transmitted from the motor or other moving parts to the record or the tonearm. Heard (as a hum or rumbling sound) only when the pickup stylus is on a rotating record. Rumble is measured in dB below a specified signal level.

**Semi-Automatic:** Having automatic arm return and motor shut-off at the end of a record, but no automatic start and tonearm set-down at the beginning of play.

**Servo Control:** A technique by which the speed or position of a moving device is forced into conformity with a desired, or standard speed or position. The speed of a servo-controlled turntable is established by a precision voltage or frequency standard, to which it is compared and automatically adjusted to reduce the difference to a minimum (see *Electronic Speed Control*).

**Skating Force:** A frictional force between the pickup stylus and the record material, tending to move the pickup toward the center of the record. It is present only when the cartridge is offset at an angle to reduce tracking error. See *Anti-Skating*.

**Statically Balanced Arm:** A type of tonearm whose masses are first balanced about the pivot, then unbalanced to provide tracking force.

**Stroboscope:** A means by which a rotating object can be made to appear stationary, by illuminating it with a flashing light at the correct frequency. Many turntable platters carry a band of dots around their rims, or on their under surfaces, lit by a neon lamp. When the platter speed is adjusted to exactly  $33\frac{1}{3}$  or 45 rpm, the dots appear to stand still.

**Tonearm:** The portion of a record player that supports the phono cartridge and maintains it in the correct relationship to the record surface and the spiral groove.

**Tracking Error:** The angle between the front-rear axis of the phono cartridge and a line tangent to the record groove. Ideally it should be zero, but can be maintained at less than 0.5 degrees per inch of playing radius in a well designed tonearm. Excessive error can cause increased distortion.

**Wow:** The audible effect of a low frequency flutter, occurring at a rate of 0.5 to 10 Hz. Most audible and objectionable on sustained tones. See *Flutter*.

### PHONO CARTRIDGES (Section 5)

**Biradial:** See *Elliptical*.

**Cantilever:** The rod, or tube, that supports the stylus at its free end, is pivoted at or near its other end, and transfers the stylus motion to the generating elements of the cartridge.

**Cartridge:** The device which holds the stylus (or "needle") and translates into an electrical signal the motions of the stylus as it tracks the wiggling modulations of the groove.

**Channel Separation:** The amount of stereo program material from one channel appearing

in the cartridge output for the other channel. Expressed in decibels relative to the desired channel output, with values of 20 to 30 dB (the higher figure being preferable) through most of the audible frequency range being typical of good cartridges.

**Compliance:** The ease with which a stylus can be deflected by the groove wall.

**Damping:** The application of a mechanical resistance, such as a rubber or silicone material, to the cantilever pivot to reduce the amplitude of a resonance.

**Elliptical Stylus:** A stylus whose cross-section, as seen from above, is an ellipse placed across the record groove. Elliptical styli can more readily trace the finer high-frequency modulations of the groove than spherical styli can.

**Magnetic:** A type of cartridge which generates its signal from the relative motions of a magnetic field and a coil or coils (either the field or the coils may move, depending on cartridge design). The output is proportional to the velocity of the stylus motion.

**Mass (tip):** The combined effect of the mass of the diamond stylus, its mounting, the cantilever rod, and the generating elements, as seen by the record groove which must accelerate that mass.

**Moving-coil:** A type of magnetic cartridge in which the coils, connected to the stylus, move within a stationary magnetic field.

**Piezoelectric:** A type of cartridge whose generating element is a ceramic, crystal or electret which generates electricity when bent, twisted or stressed. The output of such cartridges can be fairly high. It is also proportional to the amplitude of the stylus motion, rather than stylus velocity.

**Shibata Stylus:** The first of several multi-radial stylus designs, with two flat facets forming a vee-shaped "prow" in front, and a blunter stern. The main claimed advantage is that the stylus's sharp edges can easily track ultra-fine, high-frequency modulations.

**Spherical Stylus:** A stylus whose shape is conical, with the downward-facing point of the cone rounded to a specified radius of curvature, usually 0.5 or 0.7 mil.

**Stylus:** The specially shaped jewel tip (normally a diamond) that rides in a record groove and follows the variations in groove shape and position. Its motion is transmitted through the supporting cantilever to the generating elements in the cartridge. Styli come in several shapes: see *Elliptical*, *Spherical* and *Shibata*.

**Tracking Force:** The vertical force (in grams) exerted by the stylus on the record groove. Must be high enough to keep the stylus in contact with the groove at all times.

**Transducer:** A device which converts information from one physical form to another. Examples include the phono cartridge (mechanical to electrical), loudspeaker (electrical to acoustical), and microphone (acoustical to electrical).

### TAPE MACHINES (Sections 6-8)

**ANRS, Super ANRS:** A noise reduction system used by JVC. ANRS operates on principles similar to those used by the *Dolby system*. Therefore, there is a degree of compatibility between recordings made with either system.

**Bias:** A high frequency current which is combined with the signal being recorded. Necessary for low distortion and noise, and must be adjusted for the properties of the tape used.

**Bidirectional:** In open-reel or cassette recorders, the ability to play (and, in some cases, record) both stereo track pairs on a tape by reversing the tape's direction of motion without removing and replacing the tape reels or cassette.

**Capstan:** A shaft rotating at constant speed, which is pressed against the tape and moves it past the heads.

**Channel:** An independent signal path. Stereo recorders have two such channels, quadraphonic ones have four.

**Closed-loop drive:** A tape transport mechanism in which the tape's speed and tension are controlled by contact with a capstan at each end of the head assembly.

**Crossfield Recording:** A system in which the *Bias* is not applied to the tape by the recording head, but by a separate head on the tape's backing side, so that the bias signal will not partially erase high frequencies as they are being recorded.

**Cue Control:** A switch which temporarily disables a recorder's *Tape Lifters* during fast-forward and rewind, so the operator can judge what portion of the recording is passing the heads.

**dbx:** A noise reduction system by which the program is compressed before being recorded, and expanded upon playback to restore the original dynamic range.

**Dolby "B":** A noise reduction system widely used in cassette recorders, as well as some open reel and cartridge machines, and in FM broadcasting.

**Dual Capstan:** See *Closed Loop*.

**Dynamic Range:** The ratio between the maximum recorded level (usually that which results in 3% playback distortion) and the playback noises from a tape recorded with no signal input. Expressed in decibels (dB).

**Echo:** A special recording effect, in which a portion of the recorded program is taken from the playback head, a short interval after being recorded, and mixed with the incoming program. Principally used at tape speeds greater than  $3\frac{3}{4}$  ips, where the delayed signal is not heard as a separate sound.

**Equalization:** Different equalization characteristics are used in the recording and playback amplifiers of a tape recorder, to compensate for the magnetic characteristics of the tape and the heads. Playback equalization is standardized to give flat frequency response with any properly recorded tape, while recording equalization is a property of a particular machine, depending on its head design and the tape for which it was meant.

**Flutter:** A rapid pitch fluctuation, caused by uneven tape movement across the heads. Usually heard as a slight roughness, and in extreme cases as a "gargling" sound.

**Four Track (Quarter Track):** A tape format in which the width of the tape is recorded in four parallel magnetic tracks, separated by narrow unrecorded guard bands.

**Half Track:** See *Two Track*.

**Head:** A magnetic component containing a coil through which a signal current is passed, and a narrow gap in its pole structure against which the tape presses.

**Line:** A term used to denote a high level signal input or output circuit. Line level is usually of the order of a volt, as distinguished from the microphone level of the order of millivolts.

**Memory Counter (or Rewind):** A system which allows the tape to be rewound automatically to any predetermined point on the tape.

**Monitor Head:** A separate playback head on some tape recorders that makes it possible to listen to the material on the tape an instant after it has been recorded, and while the recording is still in progress.

(Continued on page 22)

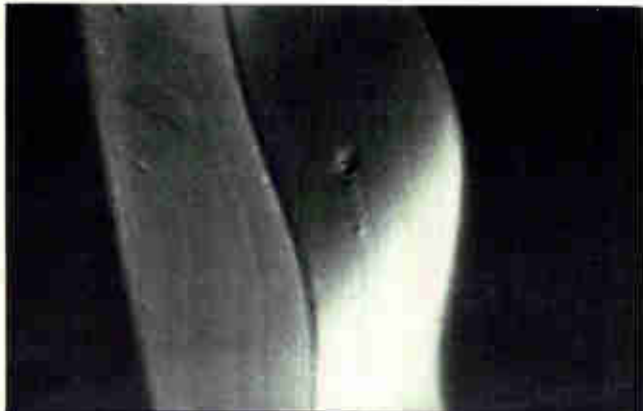


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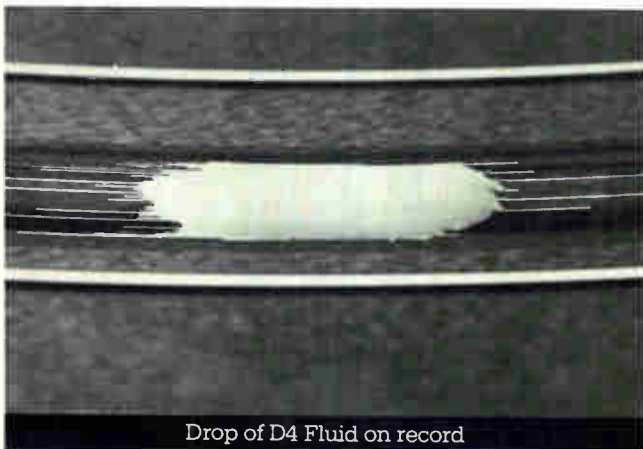
# Aqueous Cleaning vs. Organic Solvents

Electron microscopy (Figure 1) shows the principal cause of record wear: small particles of microdust, deposited from the air by gravity, are ground along the record groove by the stylus. Surface noise goes up. Sound quality goes down.



Record etched by dust held to surface by "slick" treatment

Figure 1



Drop of D4 Fluid on record

Figure 2

Figure 2 shows a drop of the aqueous Discwasher D4 Fluid, literally lifting dust and contamination out of record grooves. The extraordinarily complex D4 Fluid uses water pure enough for kidney dialysis, along with eleven chemically engineered additives that still results in lower dry-weight residue than most tap water. This formula is amazingly high in cleaning activity, uniquely safe for vinyl and vinyl additives, and preferentially "carries" contamination into the new Discwasher D4 pad.

In some record care products, organic solvents are used rather than water. Organic solvents such as ozone-gobbling chlorofluorocarbons, petroleum distillates (hexane, heptane) and alcohol concentrates are indeed speedy extractors and delivery solvents. They evaporate fast. Some organic solvents can dissolve vinyl stabilizers. Organic solvents may leave a "slick" looking record by treating the disc with other compounds carried in the solvent mix. In doing so, record contamination may also be dried back onto the disc in a nice even layer. Dust is often "held" to the record surface by "treatment."



Record cleaned with D4 System

Figure 3

Electron micrograph (Figure 3) shows a record cleaned with the Discwasher D4 System. High technology record care leaves only a clean surface.



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## GLOSSARY...

**MPX Filter, Multiplex Filter:** Circuits to remove 19 kHz tones from a signal to be recorded, in order to prevent audible interference between the tape recorder's bias signal and the 19-kHz pilot tone in the output signal from a stereo FM tuner or receiver.

**Pause Control:** A feature of some tape recorders that make it possible to stop the movement of tape temporarily without switching the machine from "play" or "record."

**Peak Indicator:** An indicator, usually of the flashing-light type, showing when transient signal levels exceed a recorder's ability to handle them without distortion. Such indicators are often used to supplement *Recording-Level Meters*, which usually indicate average signal levels.

**Peak-Reading meter:** A type of *Recording-Level Meter* whose needle rises quickly and falls back at moderate speed, permitting the operator to judge the levels of transient peak waveforms.

**Quarter Track:** See *Four Track*.

**Recording-Level Meter:** An indicator on a tape recorder that provides some idea of the signal-levels being applied to the tape from moment to moment. It is intended as an aid in setting the recording levels to ensure that the tape is neither overloaded with excessive levels or "under-recorded" with too little signal, allowing hiss and other noise to intrude.

**Saturation:** An effect that occurs when a tape is fully magnetized, and further increase of signal input level does not produce a corresponding increase in recorded level. Saturation can also occur in the magnetic structure of the heads.

**Signal-to-Noise Ratio (S/N):** See *Dynamic Range*.

**Sound-on-Sound:** A process in which a program is recorded first on one track, then played back and re-recorded with added material on the other track.

**Sound-with-Sound:** A process by which a program is recorded on one track, then monitored as a second program is recorded on another track.

**Tension Arm:** An arm, or feeler, over which the tape rides as it enters or leaves the heads. It is lightly spring loaded to take up any tape slack and maintain a uniform tension, in order to reduce flutter. Should the tape end or break, the arm causes the transport to shut off.

**Track:** The path on the magnetic tape along which a single channel of sound is recorded.

**Two Track (Half Track):** A tape format in which the width of the tape is recorded in two parallel magnetic tracks, separated by an unrecorded guard band. As compared to *Four Track* recording, the two track system gives improved dynamic range and can be edited without loss of program, since the tape is passed in a single direction only.

**VU Meter:** A type of *Recording Level Indicator* which shows average signal levels in decibels relative to a fixed 0-dB reference level (and, often, in percent of maximum recommended modulation). While the term is frequently used for any level meter using this scale, it applies most strictly to meters having a specified, standard degree of damping; it is widely used in professional equipment in the United States, because the standardized damping allows the operator familiar with one VU meter to closely judge signal levels on any other true VU meter.

### SPEAKER SYSTEMS (Section 11)

**Acoustic Suspension:** A speaker system in which the woofer cone is loosely suspended,

and its motion controlled to a great extent by the stiffness of the enclosed air. Noted for its extended, low distortion bass output and low efficiency.

**Coaxial:** Tweeters are sometimes mounted in front of woofers; since each driver fires along the same axis, they are said to be coaxial.

**Crossover Network:** A filter which passes low frequencies to a woofer, middle frequencies to a mid-range driver (in three-way systems) and high frequencies to a tweeter. Frequencies outside the range of each driver are attenuated at a rate determined by the network design (see *Slope*). A crossover frequency is a frequency at which each of two drivers is receiving half the amplifier's power; below or above that point, one speaker will receive more power than the other.

**Dipole:** A form of speaker which radiates in approximately equal amounts to the rear and the front.

**Dispersion:** The spread of a speaker's high frequencies, measured in degrees.

**Driver:** Any individual speaker within a system, such as the woofer, tweeter, etc.

**Dynamic:** A speaker drive principle using the interaction between the magnetic field surrounding a voice coil carrying a signal current and a fixed magnetic field to move the coil and the cone to which it is attached.

**Efficiency:** The percentage of the electrical input power to a speaker that is converted to acoustic energy. Varies from a small fraction of one percent to as much as ten percent or more, depending on the design of the speaker. Higher efficiency means that less electrical amplifier power is required for a given listening volume, but is not directly related to sound quality.

**Electrostatic:** A speaker drive principle in which a thin plastic membrane, or diaphragm, is suspended in an electric field that is varied by the signal from the amplifier. This causes the diaphragm to move, propagating a pressure wave in the air.

**Impedance:** A speaker's opposition to the flow of an alternating current, which varies with frequency.

**Infinite Baffle:** A fully sealed box enclosing the speaker.

**Molecular Film:** A type of *piezoelectric* speaker.

**Motional Feedback:** Correction of a speaker's response by feeding information about its motion back to the amplifier. The amplifier then compares the speaker's motions with its own output and changes this output in such a way as to counteract any changes (distortions) created by the speaker.

**Moving-Coil:** See *Dynamic*.

**Omnidirectional:** Emitting sound equally in all directions. Frequently applied to speakers that are only "omni" in the forward or upward hemisphere.

**Piezoelectric:** A speaker drive principle using a ceramic element which expands or bends under the application of a signal voltage. This deflection generates a sound output. Used in some tweeter designs.

**Polar Response:** The variation of output, at any given frequency, at different angles to the forward axis of symmetry of the speaker. In general, it will be different in horizontal and vertical planes, as well as with frequency. See *Dispersion*.

**Port:** An opening in a speaker enclosure, permitting the bass radiation from the back of the woofer cone to be combined with its forward radiation to enhance the total response.

**Ribbon:** A form of high-frequency driver using a light ribbon suspended in a magnetic field to generate sound when current is passed

through it. In its basic form, a very high quality but fragile high frequency driver.

**Sub-Woofer:** A speaker designed only to handle very low frequencies, usually from a top of 100 Hz to a bottom below 20 Hz.

**Super-Tweeter:** A tweeter used only for extremely high frequencies; usually in 4-way or 5-way systems.

**Tweeter:** A high frequency driver.

**Two-way, Three-way:** Refers to the number of frequency bands into which a speaker's output is divided. A two-way system would divide the spectrum into two such bands, one of which would be handled by a woofer or woofers, the other by a tweeter or tweeters. A three-way system would have one or more woofers, midrange speakers and tweeters. Systems up to five-way have been marketed.

**Woofer:** A low-frequency driver.

### HEADPHONES & MICROPHONES (Sections 12 and 13)

**Bi-Directional:** Responding equally well to sounds from two opposite directions (a figure-8 pattern).

**Cardioid:** A heart-shaped polar response, with strong rejection to signals arriving from the rear.

**Circumaural:** A headphone in which the ear-piece completely surrounds the wearer's ear, and is sealed to the head to provide tight bass coupling.

**Condenser:** A type of electrostatic microphone characterized by wide frequency range and low distortion.

**Dynamic:** A headphone driver using a voice coil in a magnetic field, driving a paper or plastic diaphragm as in a speaker.

**Electret:** A permanently polarized form of condenser microphone.

**Electrostatic:** A headphone drive system using a thin plastic membrane in a high voltage electrostatic field, whose variation by the signal voltage moves the entire diaphragm to create a sound pressure wave.

**Impedance:** See definition under *Speakers*.

**Moving Coil:** See *Dynamic*.

**Omnidirectional:** Responding equally to sounds arriving from any direction.

**Ribbon:** A type of microphone using a light metal foil ribbon in a powerful magnetic field. Widely used in studios.

**Self-Energizing:** A type of electrostatic phone which uses the stepped-up signal voltage to supply the d.c. polarizing voltage required for operation.

**Sensitivity:** A measurement of the electrical output of a microphone for a given sound pressure level at its diaphragm.

**Super-Cardioid:** Similar to cardioid (see above) but with a narrower response lobe.

### SIGNAL PROCESSORS (Section 14)

**dbx:** A complementary compressor/expander system. See definition under *Tape Recorders*.

**Dolby "B":** A system for minimizing noise added to a program during recording. See definition under *Tape Recorders*.

**Expander:** A device used to restore natural dynamic range by counteracting the compression of dynamic range used in the making of recordings and in broadcasting.

**Graphic Equalizer:** A multi-band equalizer whose controls are sliders, so that their settings can be seen as a rough graph of their frequency response characteristics. See also *Equalization* under *Amplifiers*.



# “Listening tests confirmed what the excellent measurements implied: the Eumig FL-1000 is a superb performer.”

JULIAN HIRSCH—STEREO REVIEW, APRIL 1980

What you are about to read is Julian Hirsch's unedited conclusion in his review of the Eumig FL-1000.

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**SHURE BROTHERS, INC.**  
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**SIGNET DIVISION**, Audio-Technica U.S., Inc.  
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(Continued on page 197)

# UNTIL NOW, THE DIFFERENCE BETWEEN ONE HEADSET AND ANOTHER WAS ALL IN YOUR HEAD.



When it comes to the sound they deliver, all headsets are essentially the same. The sound always seems to originate from inside the listener's head. The richness of the sound might vary from one design to another, but the "inside-the-head" effect never varies.

Until now, Mura has created the first really new development in headset listening. It's called "Stereo Separation Control," or SSC.

Here's how it works: SSC alters the phase relationship in each ear to move the sound out in front of you. Your brain interprets this altered phase relationship eliminating the "inside-the-head" effect that disturbs stereo purists. The result is like listening to a fine set of stereo speakers. Or an actual live performance.

Just slip on a pair of Mura headsets with SSC and flip the "enhance" switch. You'll experience the first real improvement in stereo headsets that doesn't hit you right between the ears. Mura Corporation, 177 Cantiague Rock Rd., Westbury, N.Y. 11590.



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## MURA

You'll be hearing from us.

CIRCLE NO. 34 ON READER SERVICE CARD

# ALL YOU HAVE TO DO IS LISTEN.

## THE SANSUI 900 SUPER SYSTEM.

Just listen.

Your ears will tell you immediately. Here is sound that's just about as good as it gets. And your eyes will tell you here's styling that's a cut above the rest.

But best of all, here is a sensibly priced complete system of high performance separates that is as easy to use as it is to buy.

All you have to do is plug it in — and enjoy.

**C-77 Control Center/ Preamplifier with Automatic Fader and Moving Coil Pre-Preamp** Unique in offering full stereo mixing with the convenience of an automatic and manual fader for smooth, professional sounding transitions from any connected source to any other, plus a built in pre-preamp for moving-coil cartridges. Variable loudness control.



**B-77 LINEAR-A DC Servo Power Amplifier with Spectrum Analyzer and Peak Power Meter.** Sensibly rated at 60 watts channel, min. RMS, both channels into 8 ohms from 20-20,000Hz, with no more than 0.03% THD. Direct-coupled throughout, it features Sansui's exclusive new "Linear A" circuitry for low distortion with high efficiency, along with separate 10-band spectrum analyzer and peak power displays that show just what your system is doing.

**T-77 Quartz-PLL Digital Synthesizer FM/AM Tuner with 8 Preset FM/AM Stations and Auto Search** Digital Quartz-PLL Synthesizer design, which guarantees the most accurate tuning possible, is the highlight of this extraordinary tuner. Stores up to 8 stations in memory circuits for instant recall.

This system also has a direct/



drive automatic-return FR-D3 turntable with its low 0.028% wow/flutter and 72dB S/N ratio.

The attractive audio rack that contains the 900's components has additional space for an optional Sansui metal-tape compatible cassette deck.

Also included are two S-50 12", 3-way loudspeakers specially designed to perfectly match the system's components and fill your listening room with an uncanny amount and quality of music.

If you love great high fidelity, but don't have the patience for a lot of shopping and technical talk, you'll want to see and hear the Sansui 900 Super System. Visit your Sansui dealer and find out how



easy it is to own a top-of-the-line high fidelity system.

The Sansui 900 Super System. All you have to do is listen.

**SUPERCOMPO**

**Sansui**

**SANSUI ELECTRONICS CORP.**

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CIRCLE NO. 42 ON READER SERVICE CARD



# 1

# RECEIVERS

## ADVENT

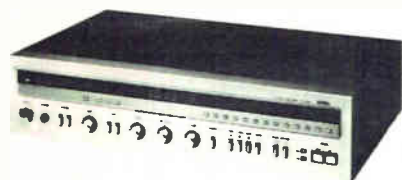
### 300 FM Stereo Receiver

Combines Holman phono preamp circuit, FM multiplex tuner, and 30-W power amplifier. 15 W/ch continuous from 20-20,000 Hz with 0.5% THD; frequency response 20-20,000 Hz; power bandwidth 40-20,000 Hz; S/N 82 dB (phono). Tuner section: sensitivity 13.2 dBf (2.5  $\mu$ V) mono; capture ratio 1.2 dB; stereo separation 35 dB; spurious rejection 95 dB. Inputs: phono, tape, aux.; controls: volume, balance, bass, treble, loudness, tape monitor, mono/stereo; front-panel headphone jack; black metal enclosure; 3 1/2" H  $\times$  15 1/4" W  $\times$  9" D (plus 1 1/2" for knob clearance)..... \$299

## AIWA

### AX-7800U Stereo Receiver

Power amp: features nine-LED power indicator display (features signal-strength function) and two-



speaker switching; 60 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.7% THD; damping factor 35 at 8 ohms from 20-20,000 Hz. Preamp: features bass and treble controls with turnover frequency switches; balance control; loudness switch; tape/source monitor switch; input selector with LEDs; frequency response  $\pm$ 0.5 dB from 30-15,000 Hz (phono RIAA), 10-50,000 Hz  $\pm$ 1 dB (aux. and tape); S/N 80 dB (phono), 95 dB (aux. and tape). Tuner: features sensor-touch up/down FM tuning with hold scan and stop and LED frequency readout display; six-station memory preset with channel readout; nine-LED signal-strength display; mode and muting switches; auto/manual switch; AM/FM selector; FM IHF usable sensitivity 10.8 dBf (mono); 50-dB quieting 17.2 dBf (mono), 37.2 dBf (stereo); S/N 75 dB (mono), 70 dB (stereo); dist. 0.1% (mono), 0.2% (stereo); alternate channel selectivity 75 dB  $\pm$ 400 kHz; stereo separation 45 dB at 1000 Hz; AM usable sensitivity 250  $\mu$ V/m (ferrite antenna), 25  $\mu$ V (external antenna); AM S/N 50 dB; 4 1/2" H  $\times$  20 1/4" W  $\times$  17 1/4" D..... \$520

### AX-7700U Stereo Receiver

Power amp: features five-LED peak power indicator display and two-speaker switching; 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.1% THD; frequency response 20-30,000 Hz  $\pm$ 1 dB; damping factor 30 at 8 ohms from 20-20,000 Hz. Preamp: features bass and treble controls; hi filter; balance control; loudness switch; tape/source monitor switch; input selector; S/N 72 dB (phono), 90 dB (aux. and tape). Tuner: features five-LED signal-strength and three-

LED tuning indicators; mode and muting switches; FM IHF usable sensitivity 11.2 dBf; 50-dB quieting 17.2 dBf (mono), 38.1 dBf (stereo); S/N 73 dB (mono), 68 dB (stereo); IHF dist. 0.25% (mono), 0.4% (stereo); alternate channel selectivity 65 dB  $\pm$ 400 kHz; stereo separation 38 dB at 1000 Hz; AM usable sensitivity 250  $\mu$ V/m (ferrite antenna), 25  $\mu$ V (external antenna); S/N 50 dB. 4 1/4" H  $\times$  17 1/4" W  $\times$  15 1/4" D..... \$300  
**AX-7300U.** Similar to AX-7700U minus power output meter display and high filter; 25 W/ch continuous under same conditions; FM tuner S/N 70 dB (mono), 65 dB (stereo); FM separation 30 dB at 1000 Hz; 6 1/4" H  $\times$  16 1/4" W  $\times$  15 1/4" D..... \$210

## Mini-Component Series

### M-501 Series

Consists of SA-P50U stereo power amplifier, SA-C50U stereo preamplifier, ST-R50U quartz synthesizer AM-FM stereo tuner, and SD-L50U metal-compatible stereo cassette deck; recommended options include AP-D50U direct-drive turntable, HR-50U noise-reduction unit, RC-R300U infrared wireless remote control system, SC-E50 bass-reflex speaker system, and MT-50U digital quartz audio timer; overall dimensions 13" H  $\times$  10" W..... \$990  
**SA-P50U Power Amplifier.** Features dc circuitry, heavy-duty toroidal power transformer with large electrolytic capacitors, nine-LED peak power indicators, A-B speaker selectors, and self-resetting protection circuit. 50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD; power bandwidth 10-50,000 Hz with 0.05% IHF dist.; S/N 115 dB; damping factor 40 at 1000 Hz, 8 ohms; input voltage/impedance 800 mV/37k ohms; 2 1/4" H  $\times$  9 1/4" W  $\times$  11 1/4" D.

**SA-C50U Preamplifier.** Features built-in moving-coil head amp; separate bass and treble controls with center defeat; 6-dB/octave low filter switch; -20-dB muting; tape/source monitoring with 1-to-2 tape dubbing; loudness switch; input selectors with LEDs. Input sensitivity/impedance 2.5 mV/47k ohms (phono MM), 0.25 mV/100 ohms (MC), 150 mV/47k ohms (tuner, aux., tape); frequency response  $\pm$ 0.2 dB from 20-20,000 Hz (phono RIAA), 10-100,000 Hz  $\pm$ 0/-3 dB (aux., tape); S/N 89 dB (MM), 73 dB (MC), 105 dB (tuner, aux., tape); THD 0.008% from 20-20,000 Hz (tuner, aux., tape), 0.002% at 1000 Hz (phono MM); 2 1/4" H  $\times$  9 1/4" W  $\times$  10 1/4" D.

**ST-R50U AM-FM Tuner.** Features PLL quartz digital synthesizer tuning with auto/manual up/down scan tuning and LED digital frequency readout; six-station AM/FM memory preset with LEDs; FM muting, hi-blend, mono/stereo, and AM/FM selectors; five-LED signal-strength indicators. FM section: usable sensitivity 1.9  $\mu$ V; S/N 75 dB (mono), 72 dB (stereo); frequency response 30-15,000 Hz  $\pm$ 0.5/-1.5 dB; THD at 1000 Hz 0.1% (mono), 0.2% (stereo); capture ratio 1.5 dB; alternate channel selectivity 70 dB  $\pm$ 400 kHz; image rejection 80 dB; i-f and spurious rejection 90 dB; stereo separation 45 dB at 1000 Hz; 2 1/4" H  $\times$  9 1/4" W  $\times$  11 1/4" D.

**SD-L50U Cassette Deck.** Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc servo capstan and reel motors, and

ultra hard permalloy record/playback and double-gap ferrite erase heads. Features bias and equalization selectors for normal, FeCr, CrO<sub>2</sub>, and metal tapes; dual tri-color 12-LED peak-reading bar graph display; timer standby selector with external timer; IC logic: feathertouch function controls with LEDs; continuous auto repeat; rec/sync operation with optional turntable. Wow and flutter 0.04% wms; frequency response  $\pm$ 2/-3 dB 30-13,000 Hz (normal), to 15,000 Hz (CrO<sub>2</sub>), to 16,000 Hz (metal); S/N 64 dB with Dolby, FeCr; input sensitivity/impedance 50 mV/50k ohms (line in), 0.3 mV/200-10,000 ohms (mic); 4 1/4" H  $\times$  9 1/4" W  $\times$  10 1/4" D.

**RC-R300U Remote Control System.** Designed for use with M-501/502 Mini-Component Systems; consists of receiver and infrared wireless remote control transmitter unit; receiver features preamp input selector buttons with LEDs, muting, volume control, and remote and power on/off. Remote control unit features tape monitor on/off, six-station AM-FM memory preset (up to ten stations with AX-S50U stereo receiver), and all AD-L50U transport functions; also includes AP-D50U start/cut turntable operation; 2 1/4" H  $\times$  9 1/4" W  $\times$  10" D..... \$250

### M-301 Series

Consists of SA-P30U power amplifier, SA-C30U stereo preamplifier, ST-R30U AM-FM stereo tuner, and SD-L30U stereo cassette deck; optional AP-D30H turntable recommended; total system height 12"..... \$815

**SA-P30U Power Amplifier.** Features dc circuitry, BTL switch for mono bridging, A/B speaker selector, and five-LED power indicators; 35 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.01% THD, 70 W mono; S/N 115 dB (IHF A); damping factor 45 at 1000 Hz, 8 ohms; frequency response 10-100,000 Hz  $\pm$ 0/-3 dB; 2 1/4" H  $\times$  8 1/4" W  $\times$  8 1/4" D.

**SA-C30U Stereo Preamplifier.** Features bass and treble controls, low filter switch, -20-dB muting, mono/stereo switch, tape/source monitoring, loudness switch, and input selectors with LEDs; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/47k ohms (tuner, aux., tape); S/N 87 dB (phono), 99 dB (tuner, aux.); RIAA deviation  $\pm$ 0.2 dB from 20-20,000 Hz; 2 1/4" H  $\times$  8 1/4" W  $\times$  9 1/4" D.

**ST-R30U AM-FM Stereo Tuner.** Features LED digital frequency readout, five-LED signal-strength indicators, and hi-blend, muting/afc, and band switches. FM section: usable sensitivity 1.9  $\mu$ V; S/N 73 dB (mono), 70 dB (stereo); stereo dist. 0.25%; capture ratio 1.5 dB; alternate channel selectivity 70 dB  $\pm$ 400 kHz; i-f rejection 80 dB; stereo separation 45 dB at 1000 Hz; 2 1/4" H  $\times$  8 1/4" W  $\times$  9" D.

**SD-L30U Stereo Cassette Deck.** Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc servomotor, and hard permalloy head. Features tape selectors for normal, CrO<sub>2</sub>, and metal tapes; dual five-LED peak level indicators; auto stop; record level control with separate mic/line input selector. Wow and flutter 0.09% wms; S/N 60 dB with Dolby; frequency response 25-14,000 Hz (normal), to 16,000 Hz (CrO<sub>2</sub> and metal tape); 2 1/4" H  $\times$  8 1/4" W  $\times$  9 1/4" D.

# 1 RECEIVERS

## M-502 Series

Consists of AX-S50U AM-FM quartz digital synthesizer stereo receiver and SD-L50U metal-compatible stereo cassette deck; recommended options include AP-D50U direct-drive turntable, HR-50U noise-reduction unit, RC-R300U infrared wireless remote control system, SC-E50 bass-reflex speaker system, and MT-50U digital audio timer ..... \$730

**AX-S50U AM-FM Receiver.** Amplifier: features seven-LED peak power indicators (double as tuning signal-strength function), bass and treble controls, loudness switch, tape/source monitoring, and phono, tuner, aux. input selector; 20 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.1% THD; damping factor 30; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/47k ohms (aux. and tape); phono overload 200 mV at 1000 Hz; S/N 80 dB (phono), 95 dB (aux., tape); phono RIAA  $\pm 0.5$  dB from 30-15,000 Hz. Tuner: features quartz PLL digital synthesizer tuning with auto/manual up/down scan tuning and LED digital frequency readout; ten-station AM/FM memory preset; LED signal-strength indicators. FM section: usable sensitivity 2  $\mu$ V; 50-dB quieting 4  $\mu$ V (mono), 42  $\mu$ V (stereo); S/N 75 dB (mono), 70 dB (stereo); THD 0.1% (mono), 0.3% (stereo); capture ratio 1.5 dB; alternate channel selectivity 70 dB. 2 1/4" H x 9 1/4" W x 11 1/4" D.

**SD-L50U Cassette Deck.** See M-501 Series.

**RC-R300U Remote Control System.** See M-501 Series ..... \$250

## AKAI

### AA-R50 Stereo Receiver

Features dc amplifier with dual LED bar graph power meters with range selector; bass, midrange, and treble controls; tape 1 and 2 and dub 1-to-2 monitor selectors; A-B speaker switching; high and low filter selectors; FM Dolby de-emphasis and FM mute selectors; illuminated signal strength and tuning meters; AM, FM, phono, and aux. input selectors; balance control; loudness selector. Amp: output 62 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.04% THD. FM tuner: IHF sensitivity 1.7  $\mu$ V; IHF selectivity 70 dB. Walnut grain vinyl cover with silver panel; 5.9" H x 18.9" W x 14.2" D ..... \$450

**AA-R40.** Similar to AA-R50 minus midrange control and high and low filter selectors; power output 50 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.04% THD; FM IHF usable sensitivity 1.8  $\mu$ V ..... \$400

### AA-R30 Stereo Receiver

Features LED bar graph power indicators with range selector; tape 1 and 2 and dub 1-to-2 monitor switches; A-B speaker switching; AM, FM, phono, and aux. input selectors; bass and treble controls; balance control; loudness selector; FM Dolby de-emphasis and FM mute selectors; signal strength and tuning meters. Amplifier output: 38 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD. FM tuner: IHF sensitivity 1.8  $\mu$ V; IHF selectivity 60 dB. Walnut-grain vinyl cabinet; 5.6" H x 17.3" W x 12.2" D ..... \$300

**AA-R20.** Similar to AA-R30 without tape dubbing and FM mute selector; power output 26 W/ch under same conditions; FM tuner sensitivity 1.9  $\mu$ V (IHF) ..... \$250

### Mini Component Series

#### UC-5 Series

Consists of UC-W5 stereo power amplifier, UC-A5 stereo preamplifier, UC-S5 AM-FM stereo tuner, UC-F5 stereo cassette deck, and SW-N5 speaker system; optional RC-5 infrared remote control unit and DT-120S digital timer available; total system dimensions (minus speakers) 13" H x 11" W.

**UC-W5 Power Amplifier.** Features dc circuitry, pulse power supply, LED power output indicators with X1/X0.1 meter range switch, and two-speaker switching; 35 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.01% THD; 2.2" H x 11" W x 11.2" D ..... \$300

**UC-A5 Stereo Preamplifier.** Features FET input circuitry, built-in moving-coil head amp, bass and treble controls, four-position loudness control, and input selectors; frequency response  $\pm 0.2$  dB (phono RIAA), 2-100,000 Hz (tuner, tape, aux.); S/N 82 dB (IHF A); 2.2" H x 11" W x 11.1" D ..... \$230

**UC-S5 AM-FM Stereo Tuner.** Features quartz digital synthesizer tuning with auto/manual scan tuning and LED digital frequency readout; six-station AM/FM memory preset; five-LED signal-strength indicators. FM section: usable sensitivity 1.2  $\mu$ V; capture ratio 1.0 dB; selectivity 70 dB; stereo separation 52 dB; 2.2" H x 11" W x 10.7" D ..... \$330

**UC-F5 Cassette Deck.** See Section 6, Cassette Tape Machines, under Akai's Mini Component Series ..... \$475

**SW-N5 Speaker System.** See Section 16, Speakers, under Aiwa's Mini Component Series ..... \$300 pr.

**RC-5.** Wireless remote control unit for UC-5 system ..... \$275

**DT-120S.** Digital audio timer for UC-5 ..... \$70

#### UC-2 Series

Consists of UC-U2 stereo integrated amplifier, UC-K2 AM-FM stereo tuner, UC-M2 stereo cassette deck, and SW-N2 speaker system; total system height approx. 9.7" H.

**UC-U2 Integrated Amplifier.** Features dual LED power output indicators, bass and treble controls, and two-deck tape monitoring and dubbing; 23 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.06% THD; 2.7" H x 11" W x 11.3" D ..... \$230

**UC-K2 AM-FM Tuner.** Features illuminated tuning scale with LED tuning pointer, five-LED signal-strength indicators, and FET front end. FM section: usable sensitivity 1.9  $\mu$ V; capture ratio 1.5 dB; stereo separation 40 dB at 1000 Hz; 2.2" H x 11" W x 12" D ..... \$190

**UC-M2 Cassette Deck.** See Section 6, Cassette Tape Machines, under Akai's Mini Component Series ..... \$280

**SW-N2 Speaker System.** See Section 16, Speaker Systems, under Akai's Mini Component Series ..... \$185 pr.

## AUDIOLOGIC by RANDIX

### LXR-720 Stereo Receiver

Compact vertical AM-FM stereo receiver with built-in six-band graphic equalizer. Amplifier/equalizer section: features two-way speaker switching; bass, midrange and treble slide controls with center frequencies at 100, 200, 500, 1500, 3500, and 10,000 Hz,  $\pm 12$  dB boost or cut; low and high filter switches; loudness switch; tape monitor switch; phono, aux., and mode selector; 20 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.5% THD. Tuner section: features five-station AM/FM memory preset with memory LED; up/down scan tuning; LED digital frequency readout; five-LED signal-strength indicators; 10" H x 6.75" W x 10.25" D ..... \$450

## AUDIO PRO by INTERSEARCH

### TA-150 Stereo Receiver

AM-FM stereo receiver with interlock, memory, and logic functions performed by micro-computer. Features one adjustable control knob for volume, balance, treble, midrange, bass, tuning, presetting of stations, and setting of digital clock readout. Power amp: 75 W/ch continuous, both channels driven into 8 ohms at 0.1% THD, 90 W/ch continuous, both channels driven into 4 ohms at 0.1% THD; frequency response 10-100,000 Hz +0/-3 dB; slew factor 30; S/N 90 dB; dynamic headroom 1 dB at 8 ohms, 1.9 dB at 4 ohms. Preamp: features low and high filters, bass, midrange, and treble tone controls, linear bypass and loudness controls, and two-deck tape monitoring, all with LEDs; input sensitivity/impedance 1.8 mV/47k ohms (phono 1), 54

mV/44k ohms (tape and aux.); phono overload 150 mV; frequency response  $\pm 0.5$  dB from 20-30,000 Hz (phono RIAA), 16-100,000 Hz +0/-3 dB (tape and aux.); S/N 70 dB (phono), 75 dB (tape and aux.); THD 0.1%. Tuner features five-station FM and two-station AM preset, LED digital frequency/clock display, and FM muting; 50-dB quieting sensitivity 17 dBf (mono), 37 dBf (stereo); capture ratio 2 dB max.; i-f response -110 dB; AM rejection 55 dB; selectivity 80 dB; stereo separation 40 dB at 1000 Hz; frequency response 30-15,000 Hz  $\pm 1.5$  dB (mono and stereo); 75- and 300-ohm antenna connectors. Additional features include solid-state switches, full-printed circuitry, and interchangeable function modules; optional moving-coil head amp available; 4 1/2" H x 19 1/2" W x 10 1/4" D ..... \$1295

**TPA-150.** TA-150 without power amplifier; includes built-in headphone amplifier ..... \$1045

## BANG & OLUFSEN

### Beomaster 4400 FM Receiver

FM stereo receiver. Amp section: features dual power supplies, Bessel filter (designed to eliminate TID), and dc voltage overload protective relay with LED in power amp; bass and treble tone controls designed around active filter circuits; linear control; balance control; two-speaker handling; two-deck tape monitoring; low and high filters. 70 W/ch continuous into 4 ohms; frequency response 20-20,000 Hz; max. THD 0.1%; IM dist. 0.1%; input sensitivity/impedance 2.2 mV/47,000 ohms (phono), 200 mV/470,000 ohms (tape); S/N (linear) 60 dB (phono), 65 dB (tape). Tuner section: features dual FETs in front end and i-f section with ceramic filters, double-tuned quadrature detector, and PLL stereo decoder; six-station FM preset; slidebar tuning; sensitivity for 50 dB quieting 18 dBf (mono), 38 dBf (stereo); THD at 50 dB quieting 1% max. (stereo, 6 kHz); S/N at 65 dBf 70 dB (mono), 67 dB (stereo); capture ratio 4 dB (mono); AM suppression 50 dB (mono); selectivity 1 dB (mono, adj. channel), 58 dB (mono, alternate channel); image response -69 dB (mono); i-f response -85 dB (mono). 117-V ac. 50-60 Hz, 30-310 W; 3 1/4" H x 22 1/4" W x 11" D ..... \$925

### Beomaster 2400 FM Receiver

Low-slung design with no visible knobs; electronic touch-control switching; preset FM station capability; wireless remote control. Amplifier section: 30 W/ch continuous power into 4 ohms from 20-20,000 Hz at 0.2% THD; IM dist. 0.15%; phono sensitivity 3 mV; S/N better than 60 dB phono, 65 dB tape; stereo separation 56 dB at 1 kHz, 38 dB from 250-10,000 Hz. Tuner section: usable sensitivity 19.2 dBf (5.0  $\mu$ V) mono; 50-dB quieting sensitivity 38.9 dBf (4.7  $\mu$ V) stereo, 18.5 dBf (4.6  $\mu$ V) mono; S/N 70 dB (phono), 66 dB stereo at 65 dBf; frequency response 30-15,000 Hz  $\pm 1.5$  dB; THD at 50-dB quieting 1.0% or less; IM distortion 0.5% mono, 0.6% stereo; capture ratio 4.5 dB mono; alternate channel selectivity 58 dB; AM suppression 50 dB; i-f rejection 85 dB; spurious response rejection 87 dB; subcarrier suppression 45 dB at 19 kHz, 50 dB at 38 kHz; stereo separation 35 dB at 1 kHz, 29 dB at 100 Hz, 24 dB at 10 kHz. Front panel touch switches control two volume (with illuminated volume direction increase/decrease as volume does same), phono/tape selection and up to five preset FM stations with illuminated display; functions duplicated (except only four preset stations) on optional wireless remote. Additional controls under hinged top panel include main tuning dial, afc switch, bass, treble and balance controls; "volume memory" presets volume level when unit is turned on. 2 1/2" H x 24 1/4" W x 9 1/4" D ..... \$725

### Beomaster 1600 FM Receiver

Features multiplex clutch system consisting of two endless-ribbed-belt master controls handling many operations determined by cue levers (when function lever is depressed, movement of ribbed belt is transferred directly to given function with LED indicators showing level of adjustment; one ribbed belt controls volume, balance, bass and treble functions and the other controls FM tuning). Other controls include afc and phono and tape input selectors.



Amplifier: 20 W/ch continuous, both channels driven into 8 ohms; dynamic headroom 1.5 dB at 8 ohms; max. THD 0.4%; IHF IM dist. 0.2%; wide-band damping factor 45; input sensitivity/impedance 0.55 mV/47k ohms (phono), 55 mV/470k ohms (tape); phono overload 77 mV; frequency response  $\pm 1.5$  dB from 20-20,000 Hz (phono RIAA), 20-20,000 Hz  $\pm 1$  dB (tape); S/N 79 dB (phono), 80 dB (tape). FM tuner: features precision tuning of weak signals through ribbed belt's tactile sensing and variable brightness signal-strength indicator designed to achieve consistently high S/N ratio—tuner's decoder gives mono signal of high quality if stereo signal received is weak; as signal strength improves channel separation is increased; mono usable sensitivity 2.4  $\mu$ V/75 ohms; 50-dB quieting at 75 ohms 2.6  $\mu$ V (mono), 24  $\mu$ V (stereo); S/N 70 dB (mono), 68 dB (stereo); frequency response 30-15,000 Hz  $\pm 1.5$  dB; dist. 0.3% (mono and stereo); capture ratio 1.5 dB; alternate channel selectivity 54 dB; spurious and i-f rejection 110 dB; image rejection 87 dB; stereo separation 40 dB at 1000 Hz; precision-machined aluminum, natural wood veneer, and polished glass control panel; 3 $\frac{1}{2}$ " H  $\times$  23 $\frac{3}{4}$ " W  $\times$  9 $\frac{1}{2}$ " D..... \$325

## BOSE

### Spatial Control™ Receiver

Combines four bridged power amplifiers (or two stereo pairs), preamplifier, equalizer, compensation



circuitry and two headphone amplifiers; designed to enable listener to widen or narrow spatial sound image according to program material played. Power amp: features four direct-coupled power amplifiers; complete protection circuitry; two-speaker switching; 100 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.09% THD and IM dist.; power bandwidth 20-20,000 Hz; S/N (A weighted) 90 dB (inputs shorted). Preamp: features automatic CMOS switching logic gain and equalization controls through rear-panel programming of number and types of speakers being used with LED indicator (Bose 901 Speaker System designed to complement Spatial Control™ Receiver);  $\pm$  low- and high-frequency slide controls with wide/narrow low-frequency range selector, source and room compensation selector, and low filter; balance slide control; narrow/wide spatial slide control with in/out selection and LED indicator; two-deck tape monitoring; input selectors with LEDs; input sensitivity/impedance 2.0 mV/47k ohms (phono), 200 mV/50k ohms (aux. and tape); frequency response  $\pm 0.3$  dB (phono RIAA), 20-20,000 Hz  $+0.1/-0.5$  dB (tape and aux.); S/N (A weighted) 83 dB (phono, inputs shorted); phono overload 145 mV. FM tuner: MOS FET front end; PLL multiplex stereo decoder; FM muting; mode selector with LED; loudness switch; signal-strength and FM tuning meters; IHF usable sensitivity 10.8 dBf (1.9  $\mu$ V) mono, 15.6 dBf (3.3  $\mu$ V) stereo; 50-dB quieting 16.11 dBf (3.5  $\mu$ V) mono, 36.11 dBf (35  $\mu$ V) stereo; S/N 65 dB (mono), 70 dB (stereo); frequency response 30-15,000 Hz  $+0.2/-1.0$  dB; THD 0.1% (mono), 0.25% (stereo); capture ratio 1.8 dB; alternate channel selectivity 70 dB; image rejection 80 dB; spurious rejection 100 dB; stereo separation 45 dB at 1000 Hz. AM 20-dB usable sensitivity 250  $\mu$ V/m (ferrite antenna), 25  $\mu$ V (external antenna); S/N 45 dB. Oiled walnut cabinet with all controls, except volume and tuning controls plus lighted meters and tuning dial, behind bottom front panel; 6 $\frac{1}{8}$ " H  $\times$  20 $\frac{1}{2}$ " W  $\times$  16 $\frac{1}{4}$ " D..... \$860

### 550 Stereo Receiver

Features source and room compensation controls. Power amp: features dc circuitry; two-speaker switching; 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.09%

THD and IM dist.; power bandwidth 20-20,000 Hz; S/N 87 dB (A weighted). Preamp: features equalizer with low and high frequency slide controls, wide/narrow low-frequency switch, and low filter switch; balance slide control; tape monitor switch; loudness switch; input selector; input sensitivity/impedance 2.75 mV/47k ohms (phono), 150 mV/50k ohms (aux. and tape); S/N (A weighted) 76 dB (phono); frequency response  $\pm 0.5$  dB (phono RIAA), 20-20,000 Hz  $+0.5$  dB (aux. and tape); phono overload 100 mV at 1000 Hz, 1.0% THD. FM tuner: features mode and FM muting; signal-strength and tuning meters; IHF usable sensitivity 11.25 dBf (2.0  $\mu$ V) mono, 16.11 dBf (3.5  $\mu$ V) stereo; 50-dB quieting 16.82 dBf (3.8  $\mu$ V) mono, 37.27 dBf (40  $\mu$ V) stereo; S/N 60 dB (mono), 65 dB (stereo); frequency response 30-15,000 Hz  $+1/-3$  dB; THD 0.25% (mono), 0.5% (stereo); capture ratio 1.9 dB; alternate channel selectivity 60 dB; image rejection 65 dB; spurious rejection 80 dB; stereo separation 40 dB at 1000 Hz. AM 20-dB usable sensitivity 350  $\mu$ V/m (ferrite antenna), 50  $\mu$ V (external antenna); S/N 40 dB. Oiled walnut cabinet; 5 $\frac{1}{4}$ " H  $\times$  18 $\frac{1}{4}$ " W  $\times$  12 $\frac{1}{4}$ " D..... \$380

## CALIBRE

### 240 Stereo Receiver

AM-FM stereo receiver with FM Dolby circuitry. Power amp: features two-speaker switching; 42 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD and IM dist. Preamp: features bass and treble controls; balance control; two-way tape dubbing and monitoring; high filter; mute, mono, and loudness switches; phono S/N 80 dB (A weighted); phono overload 210 mV. Tuner: features three-LED signal-strength and FM tuning indicator display; FM IHF usable sensitivity 1.9  $\mu$ V (mono), 2.5  $\mu$ V (stereo); 50-dB quieting 2.8  $\mu$ V (mono), 39.8  $\mu$ V (stereo); THD at 1000 Hz 0.1%; S/N 72 dB; capture ratio 1.5 dB; alternate channel selectivity 66 dB..... \$375  
**225.** Similar to 240 without Dolby circuitry; 26 W/ch continuous under same conditions; FM alternate channel selectivity 60 dB..... \$280  
**215.** Similar to 225 minus tape dubbing and LED signal-strength display; 16 W/ch under same conditions; FM S/N 68 dB..... \$230

## CONCEPT

### 12.0D FM Stereo Receiver

Amp section: 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; S/N (A weighted) 80 dB (phono); phono overload 220 mV. FM section: IHF usable sensitivity 1.7  $\mu$ V (mono); 50-dB quieting 2.7  $\mu$ V (mono), 36  $\mu$ V (stereo); S/N 72 dB (mono), 74 dB (stereo); THD 0.1% at 1000 Hz; capture ratio 0.8 dB; alternate channel selectivity 85 dB..... \$850

### 7.5D Stereo Receiver

Amplifier: 75 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist.; S/N 80 dB (phono, A weighted); phono overload 220 mV. FM tuner: IHF usable sensitivity 1.7  $\mu$ V (mono), 4.5  $\mu$ V (stereo); 50-dB quieting 2.7  $\mu$ V (mono), 36  $\mu$ V (stereo); THD 0.1%; S/N 70 dB (mono), 72 dB (stereo); capture ratio 1 dB; alternate channel selectivity 80 dB..... \$575

### 4.5D Stereo Receiver

Amplifier: 45 W/ch continuous, both channels dri-

ven into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist.; S/N 78 dB (phono, A weighted); phono overload 220 mV. FM tuner section: IHF usable sensitivity 1.8  $\mu$ V (mono), 6  $\mu$ V (stereo); 50-dB quieting 2.8  $\mu$ V (mono), 38  $\mu$ V (stereo); THD 0.1%; S/N 68 dB (mono), 72 dB (stereo); capture ratio 1.1 dB; alternate channel selectivity 78 dB... \$450

## DENON

### DRA-600 Stereo Receiver

Dc-coupled AM-FM stereo receiver. Power amp features Class A circuitry; 60 W/ch continuous. Preamp features built-in moving-coil head amp and dual tape/source monitor switch. Tuner features LED digital tuning with 8-station memory preset, up/down scan tuning, and LED digital readout..... \$540

## FISHER

### RS 2010 Stereo Receiver

Amp section: features dual power output meters; three-speaker switching; built-in five-band graphic equalizer (center frequency slide controls at 50, 250, 1000, 4500, and 15,000 Hz  $\pm 10$  dB) with EQ defeat; subsonic filter switch; loudness contour; two-deck tape monitoring; LED input selector with LED indicators; 100 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/50k ohms (tape, aux.). Tuner: features signal-strength and tuning meters; FM muting, FM multiplex filter, and mono switches. FM section: usable sensitivity 9.8 dBf (1.7  $\mu$ V) mono; 50-dB quieting 13.15 dBf (2.5  $\mu$ V) mono, 35.9 dBf (34  $\mu$ V) stereo; S/N 75 dB (mono), 70 dB (stereo); THD at 50-dB quieting 0.3% (mono), 0.4% (stereo); stereo separation 50 dB at 1000 Hz..... \$600

### RS 270 Stereo Receiver

Amp section: features Class A-II non-switching dc circuitry; dual nine-LED power level indicator dis-



play; two-speaker switching; built-in moving-coil head amp; bass and treble controls with 200/400-Hz bass and 3000/6000-Hz treble turnover frequency selectors; subsonic and high filter switches; loudness switch; two-deck tape monitoring with two-way tape dubbing; input selectors with lighted readout indicators; 50 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; input sensitivity/impedance 2.5 mV/50k ohms (phono MM), 60  $\mu$ V/22 ohms (phono MC), 150 mV/50k ohms (aux., tape). Tuner: features quartz PLL digital frequency synthesizer tuning with auto/manual up/down scan tuning and LED digital frequency readout; six-station AM-FM memory preset; five-LED signal-strength indicators; FM muting. FM section: usable sensitivity 10.3 dBf (1.8  $\mu$ V) mono; 50-dB quieting 14.14 dBf (2.8  $\mu$ V) mono, 36.78 dBf (38  $\mu$ V) stereo; S/N 75 dB (mono), 70 dB (stereo); THD at 50-dB quieting 0.3% (mono),

## NOTICE TO READERS

Prices of items described are suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealer.

# 1 RECEIVERS

0.4% (stereo); stereo separation 50 dB at 1000 Hz

..... \$550

**RS 250.** Similar to RS 270 minus bass and treble turnover frequency controls, and PLL quartz-locked digital frequency tuning with scan tuning and six-station memory preset; has one-way tape dubbing and servo lock tuning with LED digital frequency readout; phono MM input sensitivity 2 mV; FM mono usable sensitivity 10.77 dBf (1.9  $\mu$ V)... \$450

**RS 240.** Similar to RS 250 minus Class A-II non-switching circuitry, power output level indicator display, high and subsonic filter switches, tape dubbing, and built-in moving-coil head amp; has dc power amp and tape/source monitoring; 30 W/ch with 0.03% THD and IM dist.; input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/100k ohms (aux., tape); FM tuner THD at 50-dB quieting 0.4% (mono), 0.5% stereo)..... \$400

## RS 2004A Stereo Receiver

Amplifier section: features dual power output meters; two-speaker switching; five-band graphic equalizer with EQ defeat; loudness contour; tape/source monitoring; input selector; 45 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist.; input sensitivity/impedance 2 mV/50k ohms (phono), 150 mV/100k ohms (tape and aux.). Tuner: features signal-strength and tuning meters and FM muting. FM section: usable sensitivity 10.77 dBf (1.9  $\mu$ V) mono; 50-dB quieting 14.14 dBf (2.8  $\mu$ V) mono, 36.78 dBf (38  $\mu$ V) stereo; S/N 70 dB (mono), 66 dB (stereo); THD at 50-dB quieting 0.3% (mono), 0.4% (stereo); stereo separation 45 dB at 1000 Hz..... \$350

## TA 5000 Stereo Receiver

Amplifier section: features two-speaker switching; bass and treble controls; loudness switch; source/mic mixing level control; tape/source monitoring; input selector with LEDs; 30 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist.; input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/50k ohms (aux. and tape). Tuner: features servo-lock touch sensor tuning; five-LED signal-strength indicators; servo locked tuning indicator. FM section: usable sensitivity 10.77 dBf (1.9  $\mu$ V) mono; 50-dB quieting 14.14 dBf (2.8  $\mu$ V) mono, 36.78 dBf (38  $\mu$ V) stereo; S/N 70 dB (mono), 66 dB (stereo); THD at 50-dB quieting 0.4% (mono), 0.5% (stereo); stereo separation 45 dB at 1000 Hz..... \$300

## RS2003 Stereo Receiver

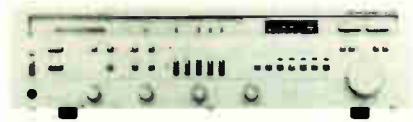
AM-FM stereo receiver with five-band graphic equalizer. Amplifier/equalizer: features two speaker switching; tape/source monitor switch; volume/balance control; loudness contour switch; input selector with LED function display; equalizer defeat switch; 30 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist.; damping factor 40; input sensitivity/impedance 2 mV/50k ohms (phono), 150 mV/100k ohms (tape and aux.); frequency response  $\pm 0.5$  dB from 30-15,000 Hz (phono), 20-20,000 Hz  $\pm 0.5$  dB (aux.); S/N (IHF A) 76 dB (phono), 90 dB (tape and aux.); equalizer center frequencies set at 50, 250, 1000, 4500, and 15,000 Hz,  $\pm 10$  dB boost or cut. Tuner: features signal-strength and center tuning meters; FM muting switch; FM usable sensitivity 1.9  $\mu$ V (mono), 4.6  $\mu$ V (stereo); 50-dB quieting 2.8  $\mu$ V (mono), 38  $\mu$ V (stereo); S/N 70 dB (mono), 66 dB (stereo); THD at 50-dB quieting 0.3% (mono), 0.4% (stereo); frequency response 20-15,000 Hz  $\pm 0.5$  dB; capture ratio 1.0 dB; alternate channel selectivity 68 dB  $\pm 400$  kHz; image rejection 56 dB; i-f rejection 100 dB; spurious rejection 85 dB; stereo separation 45 dB at 1000 Hz; 5 7/8" H x 19 1/4" W x 14 7/8" D..... \$300

**RS2002.** Similar to RS2003 without tuning meter; 20 W/ch continuous with 0.09% THD and IM dist.; damping factor 20..... \$250

## HARMAN/KARDON

### hk680i AM-FM Stereo Receiver

Amplifier section: features two speaker switching; bass and treble controls with tone defeat; subsonic



and high-cut filter selectors; two-deck tape monitoring with two-way dubbing; loudness and muting defeat selectors; phono and aux. input selectors with LED indicators; 60 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.02% THD; frequency response 1-150,000 Hz  $-3$  dB; IM dist. 0.04% and TIM dist. 0.009% at rated out; slew rate 65 V/ $\mu$ sec; S/N (A weighted) 88 dB (phono), 100 dB (aux.); phono overload 225 mV. Tuner: features digitally-synthesized quartz-locked tuning with auto/manual up/down scan tuning and LED digital frequency readout; six-station AM/FM memory preset with LEDs; 12-LED AM/FM signal-strength indicators; AM, FM, and auto FM selectors with LEDs; mono/stereo blend control; LED quartz lock and stereo FM indicators. FM section: mono sensitivity 10.8 dBf (1.9  $\mu$ V); 50-dB quieting 14.8 dBf (3.0  $\mu$ V) mono, 36.1 dBf (35  $\mu$ V) stereo; S/N 75 dB; frequency response 0-100,000 Hz  $-3$  dB; capture ratio 1.2 dB; alternate channel selectivity 80 dB; stereo separation 55 dB at 1000 Hz..... \$599

### hk570i Stereo Receiver

Amplifier: features two-speaker switching; bass and treble controls with tone defeat; subsonic and high-cut filter switches; two-deck tape monitoring with one-way tape dubbing; loudness and muting defeat switches; phono and aux. input selectors; 45 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.02% THD; frequency response 1-150,000 Hz  $-3$  dB; IM dist. 0.05% and TIM dist. 0.01% at rated out; slew rate 60 V/ $\mu$ sec; S/N (A weighted) 88 dB (phono), 100 dB (aux.); phono overload 150 mV. Tuner: features five-LED signal-strength and three LED center tuning indicators with station lock beacon; AM, FM, and auto FM function selectors; mono/stereo blend control. FM section: mono usable sensitivity 11.2 dBf (2.0  $\mu$ V); 50-dB quieting 15.1 dBf (3.1  $\mu$ V) mono, 36.6 dBf (37  $\mu$ V) stereo; S/N 75 dB; frequency response 0-100,000 Hz  $-3$  dB; capture ratio 1.3 dB; alternate channel selectivity 70 dB; stereo separation 50 dB at 1000 Hz..... \$399

**hk460i.** Similar to hk570i minus high-cut filter and two-deck tape monitoring with two-way dubbing; has monitor/source tape selector; 30 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.07% THD; IM dist. 0.07% and TIM dist. 0.02% at rated out; phono S/N 86 dB (A weighted); phono overload 130 mV. FM section: mono sensitivity 12.4 dBf (2.3  $\mu$ V); 50-dB quieting 15.6 dBf (3.3  $\mu$ V) mono, 37.7 dBf (42  $\mu$ V) stereo; S/N 70 dB; frequency response 0-90,000 Hz  $-3$  dB; capture ratio 1.5 dB; alternate channel selectivity 67 dB; stereo separation 45 dB at 1000 Hz..... \$329

**hk350i.** Similar to hk460i minus tone defeat, subsonic filter, and LED tuning lock indicator; 20 W/ch under same conditions with 0.09% THD; frequency response 3-120,000 Hz  $-3$  dB; IM dist. 0.09% and TIM dist. 0.06% at rated out; slew rate 40 V/ $\mu$ sec; S/N 85 dB (phono), 95 dB (aux.); phono overload 100 mV. FM tuner: mono sensitivity 13.2 dBf (2.5  $\mu$ V); 50-dB quieting 16.1 dBf (3.5  $\mu$ V) mono, 38.3 dBf (45  $\mu$ V) stereo; S/N 65 dB; frequency response 0-60,000 Hz  $-3$  dB; capture ratio 2.0 dB; alternate channel selectivity 60 dB; stereo separation 40 dB at 1000 Hz..... \$249

## HEATH

### AR-1650 Stereo Receiver

Amplifier section: features two-speaker switching; bass, midrange, and treble tone controls with tone defeat; high and low filter switches; loudness

switch; tape monitoring and dubbing; mode switch; input selector; 125 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD and IM dist.; frequency response 20-20,000 Hz  $+0/-0.2$  dB; hum and noise  $-90$  dB; input sensitivity 0.67 mV (phono), 67 mV (aux.); phono overload 150 mV; frequency response  $+0.2$  dB from 20-20,000 Hz (phono RIAA), 20-20,000 Hz  $+0/-0.2$  dB (aux.); THD 0.1% (phono), 0.05% (aux.). Tuner: features LED digital frequency readout with rotary tuning; signal-strength and tuning meters; Dolby FM and muting selectors; wide/narrow FM bandwidth selector. FM section: usable sensitivity 10.3 dBf (1.8  $\mu$ V) mono, 16.1 dBf (3.5  $\mu$ V) stereo; 50-dB quieting 13.2 dBf (2.5  $\mu$ V) mono, 36.1 dBf (36  $\mu$ V) stereo; S/N 73 dB; frequency response 20-15,000 Hz  $\pm 0.5$  dB; THD 0.5%; alternate channel selectivity 40 dB (wide), 80 dB (narrow); image rejection 100 dB; 7" H x 21 1/2" W x 16 7/8" D.

**AR-1650S Kit.** Silver faceplate..... \$780

**AR-1650B.** Ebony faceplate..... \$800

### AR-1515 Stereo Receiver

Features digital readout and signal-strength and center-tune meters; secondary controls concealed behind fold-down front panel. Accepts Dolby FM module. Amplifier: 70 W/ch min. continuous into 8 ohms at 0.08% THD over 20-20,000 Hz; IM dist. less than 0.08% at full power; frequency response 8-45,000 Hz  $+0/-3$  dB. Tuner: input sensitivity 2 mV (mag. phono), 200 mV (aux., tape, and dub); FM sensitivity 1.8  $\mu$ V for 30 dB quieting; capture ratio 1.3 dB. 6 7/8" H x 21 1/2" W x 15" D.

Kit..... \$500

**AD-1504.** Dolby FM module (kit)..... \$45

### AR-1429 Stereo Receiver

Amplifier: 35 W/ch min. continuous into 8 ohms at less than 0.1% THD over 20-20,000 Hz; IM dist. less than 0.2% at full power; frequency response 5-45,000 Hz  $+0/-1$  dB at 1 W. Tuner: input sensitivity 2 mV (mag. phono), 200 mV (aux., tape, and tape monitor); FM sensitivity 3.5  $\mu$ V (16.1 dBf); capture ratio 1.5 dB. Features two tuning meters, stereo indicator, main and remote speaker selection, and headphone jack. 4 3/4" H x 20" W x 13 1/2" D.

Kit..... \$300

### AR-1219 Stereo Receiver

15 W/ch min. continuous into 8 ohms at 0.5% THD over 20-20,000 Hz; frequency response 7-100,000 Hz  $+1$  dB; FM response 20-15,000 Hz  $\pm 1$  dB; channel separation 40 dB typically, 35 dB min.; sensitivity 2  $\mu$ V; capture ratio 2 dB; pre-assembled FM tuner section; stereo light; headphone jack; 3 7/8" H x 17" W x 13" D.

Kit..... \$230

## HITACHI

### HTA-7000 Tuner/Amplifier

Combined linear power amplifier with quartz-synthesized tuner. Amplifier features phono and aux. input selectors, AM/FM mode selectors, tape 1 and 2 monitor switches; 55 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD. Tuner: features six-station AM/FM memory preset with memory LED; auto/manual up/down scan tuning; LED digital frequency readout; five-LED signal-strength indicators; LED FM stereo indicator..... \$500

### SR-8010 Stereo Receiver

Amplifier section: features Class G amplification with LED; electronic power protection circuitry with



LED; dual-LED bar-graph power level display, two-speaker switching; bass and treble tone controls; low and high filter switches; loudness switch; two-



way tape copying; tape 1 and 2 source monitor switch; AM/FM and phono/aux. function selector; 50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.07% THD; damping factor 40 at 1000 Hz, 8 ohms; power bandwidth 10-40,000 Hz; input sensitivity/impedance 2.5 mV/47k ohms (phono), 200 mV/50k ohms (aux. and tape); phono overload 250 mV; S/N (IHF A) 75 dB (phono), 90 dB (aux. and tape); frequency response  $\pm 0.5$  dB from 30-15,000 Hz (phono), 10-40,000 Hz  $\pm 1$  dB (aux. and tape). Tuner: features dual-LED tuning arrows for precise tuning; five-LED signal-strength indicators; stereo/mono mode and FM muting switches. FM section: usable sensitivity 1.64  $\mu$ V (mono), 5.5  $\mu$ V (stereo); 50-dB quieting 3.9  $\mu$ V (mono), 39  $\mu$ V (stereo); S/N 74 dB (mono), 68 dB (stereo); frequency response 30-12,000 Hz  $\pm 0.5$  dB; THD at 1000 Hz 0.15% (mono), 0.25% (stereo); capture ratio 1 dB; alternate channel selectivity 75 dB; image rejection 56 dB; i-f rejection 80 dB; stereo separation 45 dB at 1000 Hz; 5 1/4" H x 18 1/2" W x 14 1/2" D ..... \$450

### SR-6010 Stereo Receiver

Amplifier section: features Class G power amplifier with LED, incorporating primary and standby amp; low-distortion OCL circuitry; dual five-LED power meter indicators; two-way speaker switching; bass, treble, and balance controls; subsonic filter; loudness switch; source/tape monitor switch; 35 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD; IM dist. 0.05% at rated output (60 and 7000 Hz, 4:1); power bandwidth 10-30,000 Hz at half-rated output; damping factor 30 at 1000 Hz, 8 ohms; input sensitivity/impedance 3 mV/50k ohms (phono), 150 mV/36k ohms (tape); phono overload 140 mV; frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA), 15-30,000 Hz  $\pm 2$  dB (tape); S/N (IHF A) 75 dB (phono), 92 dB (tape). Tuner: features dual-LED tuning arrows for precise tuning; PLL FM multiplex IC and FM front end with low-noise FET and 3-gang variable tuning capacitor; FM mode/muting switch; five-LED signal-strength indicators. FM section: IHF usable sensitivity 1.9  $\mu$ V (mono), 50-dB quieting 3.9  $\mu$ V (mono), 39  $\mu$ V (stereo); S/N 75 dB (mono), 70 dB (stereo); frequency response 30-12,000 Hz  $\pm 2$  dB; THD at 1000 Hz 0.15% (mono), 0.3% (stereo); capture ratio 1.0 dB; alternate channel selectivity 70 dB; image rejection 50 dB; i-f rejection 80 dB; stereo separation 40 dB at 1000 Hz; 4 1/4" H x 17 1/2" W x 11 1/2" D ..... \$300

**SR-5010.** Similar to SR-6010 minus precise dual-LED tuning arrow indicators; has dual five-LED indicator display for signal-strength (right), tuning (left), and power meter (both) functions with meter select switch; 25 W/ch continuous with 0.05% THD; damping factor 25 at 1000 Hz, 8 ohms; phono overload 130 mV ..... \$260

### SR-4010 Stereo Receiver

Power amp: features integrated hybrid IC circuitry; dual five-LED power logarithmic meter display (also combines functions of signal-strength and center-tuning) with meter select switch; power/speaker switch for main, remote, and phones; 25 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD and IM dist.; power bandwidth 10-40,000 Hz; damping factor 30 at 1000 Hz, 8 ohms. Preamp: features bass, treble, and balance controls; loudness switch; tape/source monitor switch; input selector; input sensitivity/impedance 3 mV/50k ohms (phono), 150 mV/30k ohms (tape); phono overload 130 mV; frequency response  $\pm 0.5$  dB (phono RIAA), 15-30,000 Hz  $\pm 2$  dB (tape); S/N (IHF A) 75 dB (phono), 92 dB (tape). Tuner: features FET and three-gang variable tuning capacitor in FM front end; PLL IC FM multiplex circuit; subsonic filter; signal strength and tuning logarithmic display; FM usable sensitivity 1.9  $\mu$ V (mono), 50-dB quieting sensitivity 3.9  $\mu$ V (mono), 39  $\mu$ V (stereo); S/N 75 dB (mono), 70 dB (stereo); THD at 1000 Hz 0.15% (mono), 0.3% (stereo); frequency response 30-12,000 Hz  $\pm 2$  dB; capture ratio 1.0 dB; alternate channel selectivity 76 dB; image rejection 50 dB; i-f and spurious rejection 80 dB; stereo separation 40 dB at 1000 Hz; AM sensitivity 20  $\mu$ V (IHF), 4 1/4" H x 17 1/2" W x 10 1/2" D ..... \$230

**SR-2010.** Similar to SR-4010 without power output and tuning meter display and subsonic filter; 15 W/ch with 0.3% THD and IM dist.; FM S/N 74 dB (mono), 68 dB (stereo); alternate channel selectivity 55 dB ..... \$200

## JVC

### R-S77 Stereo Receiver

Amplifier section: features Class A-B configuration; dual 8-LED power level indicators; two-speaker



switching; five-band SEA graphic equalizer with center frequency slide controls at 40, 250, 1000, 5000, and 15,000 Hz,  $\pm 12$  dB boost or cut, and SEA record; high filter switch; two-deck tape monitoring/dubbing; sliding balance and volume controls; FM muting; loudness switch; input selectors with LEDs; 60 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.005% THD and 0.004% IM dist.; damping factor 55 at 8 ohms; input sensitivity/impedance 2.5 mV/47k ohms (phono), 180 mV/43k ohms (aux. and tape); phono overload 180 mV at 1000 Hz; frequency response  $\pm 0.5$  dB from 20-20,000 Hz (phono RIAA), 20-20,000 Hz  $\pm 0.1$  dB (aux. and tape); S/N (IHF A) 88 dB (phono), 98 dB (aux. and tape). Tuner: features PLL digital synthesizer tuning with six-station AM/FM memory preset; LED digital frequency readout with dimmer switch; manual/auto up/down scan tuning; local/distant switch; five-LED signal-strength and LED FM tuning and FM stereo indicators. FM section: usable sensitivity 0.9  $\mu$ V (75 ohms); 50-dB quieting 3.0  $\mu$ V (mono), 40  $\mu$ V (stereo); S/N (IHF weighted) 80 dB (mono), 70 dB (stereo); frequency response 30-15,000 Hz  $\pm 0.5$  dB; THD at 1000 Hz 0.15% (mono), 0.3% (stereo); alternate channel selectivity 80 dB  $\pm 400$  kHz; capture ratio 1.0 dB; image rejection 78 dB; i-f rejection 100 dB; stereo separation 45 dB at 1000 Hz; 4 1/4" H x 18 1/2" W x 15" D ..... \$530

### R-S55 Stereo Receiver

Amplifier section: features dc OCL configuration; two-speaker switching; sliding bass, treble, balance, and volume controls; mono and loudness switches; tape monitoring; input selector with LEDs; 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and 0.003% IM dist.; damping factor 45 at 8 ohms; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/40k ohms (aux. and tape); frequency response  $\pm 0.5$  dB from 20-20,000 Hz (phono RIAA), 15-50,000 Hz  $\pm 1$  dB (aux., tape); S/N (IHF A) 88 dB (phono), 98 dB (aux., tape). Tuner: features PLL digital synthesizer tuning with seven-station AM/FM memory preset; LED digital frequency readout; up/down auto/manual scan tuning; FM muting. FM section: usable sensitivity 1.1  $\mu$ V (75 ohms); 50-dB quieting 1.7  $\mu$ V (mono), 22  $\mu$ V (stereo); S/N (IHF weighted) 78 dB (mono), 68 dB (stereo); frequency response 30-15,000 Hz  $\pm 0.5$  dB; THD at 1000 Hz 0.15% (mono), 0.3% (stereo); capture ratio 1.0 dB; alternate channel selectivity 65 dB  $\pm 400$  kHz; image rejection 55 dB; i-f rejection 90 dB; stereo separation 45 dB at 1000 Hz; 4 1/4" H x 17 1/2" W x 15 1/2" D ..... \$400

**R-S33.** Similar to R-S55 minus digital synthesizer tuning with AM/FM memory preset, LED digital frequency readout, and scan tuning; analog tuner has junction FET r-f amp and three-gang variable capacitor and five-LED signal-strength and LED tuning indicators; amp has five-band SEA graphic equalizer with SEA record, high filter switch, two-deck tape monitoring/dubbing, and dual eight-LED output level indicators. Same rated power as R-S55 under same conditions with 0.007% IM dist.; aux. and tape input impedance 50k ohms; aux. and tape frequency response 20-20,000 Hz  $\pm 0.1$  dB; FM usable sensitivity 0.9  $\mu$ V (75 ohms); 50-dB quieting 3.0  $\mu$ V (mono), 45  $\mu$ V (stereo); FM S/N 82

# #

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# 1 RECEIVERS

dB (mono), 70 dB (stereo); image rejection 60 dB; 4 $\frac{1}{2}$ " H x 17 $\frac{1}{2}$ " W x 13 $\frac{1}{8}$ " D..... \$330

## R-S7 Stereo Receiver

Power amp: features fully complementary OCL amp circuitry; triple power protection; two-speaker switching; 50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; damping factor 45 from 20-20,000 Hz, 8 ohms. Preamp: features low-noise phono equalizer; bass and treble controls; balance control; loudness and source/tape monitor switches; input selector; input sensitivity/impedance 2.5 mV/47k ohms (phono), 170 mV/40k ohms (aux. and tape); phono overload 140 mV; S/N (IHF A) 82 dB (phono), 100 dB (aux. and tape); frequency response  $\pm 0.5$  dB from 20-20,000 Hz (phono RIAA), 15-50,000 Hz  $\pm 1$  dB (aux. and tape). Tuner: features PLL multiplex demodulator IC; double FM muting; signal-strength and FM tuning meters; mono switch; FM usable sensitivity 0.9  $\mu$ V (mono); 50-dB quieting 1.5  $\mu$ V (mono), 22.5  $\mu$ V (stereo); frequency response 30-15,000 Hz +0.5/-1 dB; dist. at 1000 Hz 0.15% (mono), 0.3% (stereo); S/N (IHF A) 82 dB (mono), 70 dB (stereo); capture ratio 1.0 dB; alternate channel selectivity 65 dB  $\pm 400$  kHz; image rejection 60 dB; i-f rejection 90 dB; AM sensitivity 300  $\mu$ V/m (bar antenna), 30  $\mu$ V (external antenna); 5 $\frac{1}{8}$ " W x 17 $\frac{1}{8}$ " W x 13 $\frac{3}{8}$ " D..... \$300

R-S5. Similar to R-S7 minus FM tuning meter; output 25 W/ch under same conditions; damping factor 40 from 20-20,000 Hz, 8 ohms; aux./tape input sensitivity/impedance 120 mV/40k ohms; phono overload 120 mV; 5 $\frac{1}{8}$ " H x 16 $\frac{1}{8}$ " W x 13 $\frac{3}{8}$ " D..... \$220

## R-S11 Stereo Receiver

Amplifier section: features eight-LED output level indicators; two-speaker switching; sliding bass and treble tone controls; sliding balance and volume controls; high filter switch; two-deck monitoring capability; loudness switch; 25 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; damping factor 40 at 8 ohms; input sensitivity/impedance 2.5 mV/47k ohms (phono), 120 mV/40k ohms (aux., tape); phono overload 100 mV at 1000 Hz; S/N (IHF A) 88 dB (phono), 98 dB (aux., tape); frequency response  $\pm 0.5$  dB from 20-20,000 Hz (phono RIAA), 15-50,000 Hz  $\pm 1$  dB (aux., tape). Tuner: features five-LED signal-strength and three-LED center-channel tuning indicators; mode/FM mute off switch. FM section: usable sensitivity 0.9  $\mu$ V (75 ohms); 50-dB quieting 3.0  $\mu$ V (mono), 45  $\mu$ V (stereo); S/N (IHF A) 82 dB (mono), 70 dB (stereo); frequency response 30-15,000 Hz +0.5/-1 dB; THD at 1000 Hz 0.15% (mono), 0.3% (stereo); alternate channel selectivity 65 dB  $\pm 400$  kHz; capture ratio 1.0 dB; image rejection 60 dB; i-f rejection 90 dB; stereo separation 45 dB at 1000 Hz; 4 $\frac{1}{2}$ " H x 17 $\frac{1}{2}$ " W x 13 $\frac{1}{8}$ " D..... \$250

## KENWOOD

### KR-9050 DC Stereo Receiver

Power amp: features dc circuitry, dual peak power meters with left/right peak LEDs, dual power supply, and two-way three-speaker switching with LEDs; 200 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD; IM dist. 0.0045%; slew rate 110 V/ $\mu$ sec; rise time 0.95  $\mu$ sec; frequency response 0-280,000 Hz -3 dB; S/N 115 dB (A weighted); damping factor 50 from 20-20,000 Hz. Preamp: features bass, mid-range, and treble controls with tone defeat; loudness switch; subsonic and high filters; -20 dB attenuator and 50-Hz boost switches; two-way tape dubbing with monitor switch; input selector with LEDs; input sensitivity/impedance 2.5 mV/50k

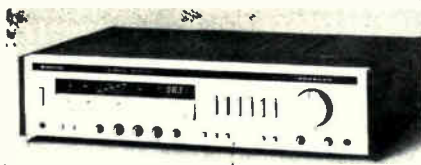
ohms (phono 1 and 2), 200 mV/50k ohms (aux. and tape), 2.2 mV/50k ohms (mic); S/N (A weighted) 85 dB (phono 1 and 2), 110 dB (aux. and tape), 74 dB (mic); max. phono input 260 mV; frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA), 5-210,000 Hz -3 dB (aux. and tape). Tuner: features dual MOS FET front end; pilot canceller; PLL multiplex filter; i-f wide/narrow band selector with LEDs; signal strength and tuning meters; FM muting; FM servo lock with LED; two-step stereo sensitivity selector. FM section: usable sensitivity 1.7  $\mu$ V; mono 50-dB quieting 2.8  $\mu$ V, stereo 35  $\mu$ V; S/N 83 dB (mono), 76 dB (stereo); THD 0.07% (mono), 0.08% (stereo); frequency response 20-15,000 Hz  $\pm 0.5$  dB; capture ratio 1.0 dB; alternate channel selectivity at 300 kHz 30 dB (wide), 60 dB (narrow); image rejection 85 dB; spurious rejection 100 dB; i-f rejection 106 dB. AM sensitivity 250  $\mu$ V/m. Walnut veneer cabinet and silver panel; 6 $\frac{3}{8}$ " H x 23 $\frac{1}{8}$ " W x 18 $\frac{1}{8}$ " D..... \$1150

### KR-8050 DC Stereo Receiver

Power amp: features dc circuitry with dc coupled switch (also functions as subsonic filter), power boost switch, dual peak power meters, and two-way speaker switching; 150 W/ch continuous (power boost on) or 120 W/ch continuous (power boost off), both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD; IM dist. 0.005%; slew rate 200 V/ $\mu$ sec; rise time 0.9  $\mu$ sec; damping factor 85 from 20-20,000 Hz. Preamp: features bass, mid-range, and treble controls with tone defeat and 50-Hz boost; high filter switch; two-way tape dubbing with monitor switch; mic level control; mode switch; input selector with LEDs; input sensitivity/impedance 2.5 mV/50k ohms (phono 1, 2), 200 mV/50k ohms (aux. and tape), 2.2 mV/50k ohms (mic); S/N (A weighted) 85 dB (phono 1 and 2), 108 dB (aux. and tape), 74 dB (mic); max. phono input 220 mV rms; frequency response 20-20,000 Hz  $\pm 0.2$  dB (RIAA phono), 0-320,000 Hz -3 dB (aux. and tape). Tuner: features pulse count FM detector circuitry; dual-gate MOS FETs in front end; signal-strength and tuning meters; FM muting; wide/narrow i-f bandwidth selector; FM sensitivity threshold selector. FM section: usable sensitivity 1.8  $\mu$ V; mono 50-dB quieting sensitivity 3.2  $\mu$ V, stereo 38  $\mu$ V; S/N 83 dB (mono), 75 dB (stereo); THD 0.07% (mono), 0.08% (stereo); frequency response 20-15,000 Hz +0.5/-1 dB; capture ratio 1.0 dB; alternate channel selectivity at 300 kHz 30 dB (wide), 60 dB (narrow); image rejection 83 dB; spurious rejection 100 dB; i-f rejection 105 dB. AM usable sensitivity 250  $\mu$ V/m. Simulated walnut grain cabinet; 6 $\frac{3}{8}$ " H x 22 $\frac{3}{8}$ " W x 16 $\frac{1}{8}$ " D..... \$820

### KR-770 Stereo Receiver

Power amp: features dc circuitry with dc-coupled/subsonic filter switch, LED peak power indicators,



and A/B speaker switching; 80 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; slew rate 180 V/ $\mu$ sec; rise time 1.0  $\mu$ sec. Preamp: features  $\pm 10$ -dB bass, midrange, and treble controls with tone defeat and 100-500 Hz and 2000-10,000 Hz turnover frequency controls; subsonic and high filter switches; -20-dB attenuator and loudness; pushbutton AM/FM/phono/aux. input selectors; mic mixing control; left/right balance control; two-deck tape monitoring and copying; frequency response  $\pm 0.3$  dB from 20-20,000 Hz (RIAA phono), 0-320,000 Hz -3 dB (tape); S/N 85 dB (phono), 105 dB (tape); max. phono input 240 mV. Tuner: features digital quartz synthesizer tuning with six AM/FM memory preset tuning, auto scan tuning, and LED digital frequency readout; narrow/wide i-f bandwidth selector with LED; mode switch; five-LED signal-strength graph display; LED tuned/lock

and stereo indicators. FM section: usable sensitivity 1.7  $\mu$ V; 50-dB quieting 3.5  $\mu$ V (mono), 35  $\mu$ V (stereo); S/N 74 dB (mono), 70 dB (stereo); THD at 1000 Hz 0.09% (mono), 0.1% (stereo); frequency response 20-15,000 Hz +0.5/-1 dB; capture ratio 1.0 dB; image rejection 80 dB; stereo separation 50 dB at 1000 Hz; 5 $\frac{1}{8}$ " H x 21 $\frac{1}{8}$ " W x 14 $\frac{1}{8}$ " D..... \$679

### KR-750 Stereo Receiver

Power amp: features dc circuitry with zero switching, LED power level indicators, and A/B speaker switching; 60 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; slew rate 120 V/ $\mu$ sec; rise time 1.0  $\mu$ sec. Preamp: features  $\pm 10$ -dB bass and treble controls; subsonic and high filters; mode and loudness switches; AM/FM/phono input selector with LEDs; two-deck tape monitoring and copying; frequency response  $\pm 0.3$  dB (RIAA phono), 0-300,000 Hz -3 dB (tape); S/N 85 dB (phono), 105 dB (tape); max. phono input 230 mV. Tuner: features auto sequential tuning with auto scan tuning, FM preset tuning, and LED digital frequency readout; narrow/wide i-f bandwidth selector; three-LED signal-strength indicators; LED tuned/lock, stereo, and preset indicators. FM section: usable sensitivity 1.8  $\mu$ V; 50-dB quieting 3.5  $\mu$ V (mono), 40  $\mu$ V (stereo); S/N 76 dB (mono), 72 dB (stereo); THD at 1000 Hz 0.1% (mono), 0.15% (stereo); frequency response 20-15,000 Hz +0.5/-1.0 dB; capture ratio 1.0 dB; image rejection 52 dB; alternate channel selectivity at  $\pm 400$  kHz 45 dB (wide), 65 dB (narrow); 5 $\frac{1}{8}$ " H x 19 $\frac{1}{8}$ " W x 13 $\frac{3}{8}$ " D..... \$519

KR-730. Similar to KR-750 minus LED digital frequency readout and i-f bandwidth selection; power output 42 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and 0.002% IM dist..... \$409

KR-720. Similar to KR-730 minus subsonic filter, FM preset tuning, auto scan tuning, and LED input selectors; has servo lock tuning with LED digital frequency readout; 40 W/ch under same conditions with 0.025% IM dist.; rise time 1.5  $\mu$ sec; preamp frequency response  $\pm 0.4$  dB from 30-15,000 Hz (RIAA phono), 5-250,000 Hz -3 dB (tape), phono S/N 80 dB, and max. phono input 200 mV; FM usable sensitivity 1.9  $\mu$ V, mono 50-dB quieting 4.0  $\mu$ V, stereo S/N 71 dB, frequency response 30-15,000 Hz +1/-1.5 dB, alternate channel selectivity 52 dB at  $\pm 400$  kHz, image rejection 48 dB, and stereo separation at 1000 Hz 45 dB; 4 $\frac{1}{2}$ " H x 18 $\frac{3}{8}$ " W x 11 $\frac{3}{8}$ " D..... \$329

KR-710. Similar to KR-720 minus LED digital frequency readout and servo lock tuning; 28 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.08% THD and 0.04% IM dist.; S/N 78 dB (phono), 104 dB (tape); tape frequency response 7-200,000 Hz -3 dB; FM frequency response 30-15,000 Hz +1/-2 dB... \$245

### KR-80 Stereo Receiver

Power amp: features dc circuitry, five-LED power level indicators, and two-speaker switching; 27 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD and 0.02% IM dist.; damping factor 45 at 1000 Hz, 8 ohms. Preamp: features bass and treble controls; high filter and loudness switches; AM/FM/phono input selector and loudness switches; two-deck tape monitoring and copying; input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/50k ohms (tape), 3.0 mV/50k ohms (mic); max. phono input 160 mV rms at 1000 Hz, 0.05% THD; frequency response  $\pm 0.3$  dB from 20-20,000 Hz (phono RIAA), 5-130,000 Hz -3 dB (tape); S/N (A weighted) 78 dB (phono), 105 dB (tape), 72 dB (mic). Tuner: features voltage-synthesizer tuning with five-station AM/FM memory preset, auto scan tuning, manual tuning, and LED digital frequency readout; three-LED signal-strength indicators; FM mode switch with stereo LED. FM tuner: usable sensitivity 1.8  $\mu$ V; 50-dB quieting 3.5  $\mu$ V (mono), 40  $\mu$ V (stereo); S/N 75 dB (mono), 70 dB (stereo); THD at 1000 Hz 0.1% (mono), 0.15% (stereo); frequency response 30-15,000 Hz +0.5/-2 dB; capture ratio 1.0 dB; image rejection 50 dB; spurious rejection 80 dB; i-f rejection 105 dB; alternate channel selectivity 50



dB  $\pm$  400 kHz; stereo separation 47 dB at 1000 Hz; 3 $\frac{1}{4}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  13 $\frac{1}{32}$ " D ..... \$379

### Remote Control Components

Series consists of KA-500 stereo integrated amplifier, KT-500 quartz synthesizer AM-FM stereo tuner, AT-500 audio program timer, and KD-4100R automatic single-play turntable (see Turntable section), interfaceable with RC-500 infrared beam remote control transmitter and separate receiver unit.

**KA-500 Stereo Integrated Amplifier.** Features tri-color dual-LED bar graph power output indicators;  $\pm$ 10-dB bass, treble, and balance slide controls; mic mixing; loudness and muting switches; phono/tuner/aux./tape input selectors; up/down volume controls with LED 0-10 level indicators; 43 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.1% THD and 0.03% IM dist.; frequency response 10-80,000 Hz  $-3$  dB; input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/30k ohms (tuner, aux., tape); S/N (IHF A) 75 dB (phono), 67 dB (mic), 105 dB (tuner, aux., tape); max. phono input 80 mV rms; 5 $\frac{1}{4}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  11 $\frac{1}{16}$ " D ..... \$285

**KT-500 AM-FM Tuner.** Quartz-lock synthesizer tuner features six-station AM/FM memory preset tuning, up/down scan tuning, LED digital frequency readout, and LED FM stereo, tuned and preset indicators. FM tuner: usable sensitivity 1.9  $\mu$ V; 50-dB quieting 4.0  $\mu$ V (mono); S/N 70 dB (mono), 66 dB (stereo); THD at 1000 Hz 0.1% (mono), 0.15% (stereo); frequency response 30-15,000 Hz  $+0.2/-3$  dB; capture ratio 1.5 dB; alternate channel selectivity 60 dB; 5 $\frac{1}{4}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  11 $\frac{1}{32}$ " D ..... \$285

**AT-500 Audio Program Timer.** Presets AM or FM station to turn on and off at instructed time over one-week period; six-station AM/FM memory preset, present time, time adjust, and second adjust buttons, and day of week/everyday buttons with LED digital frequency/24-hr clock/day readout; stopwatch facility ..... \$125

**RC-500 Remote Control System.** System consists of microprocessor remote control center and infrared beam remote control transmitter with power on/off, volume up/down, muting, and phono/tuner/aux./tape input selection for amplifier and AM/FM mode and six-station AM/FM preset tuning for tuner ..... \$240

### Slimline Separates

Series consists of KA-80 dc integrated amplifier/KT-80 FM stereo tuner or KA-60 integrated amplifier/KT-60 AM-FM stereo tuner (KR-80 stereo receiver also part of series but has separate listing in this section); components measure 3 $\frac{1}{4}$ " H  $\times$  17 $\frac{1}{4}$ " W.

**KA-80 Integrated Amplifier.** DC-coupled integrated amplifier features front-panel power on/off, tape/source monitoring, aux./tuner/phono input buttons, and volume control; hidden controls (behind hinged panel) include mic mixing and dc-coupled/subsonic filter switch; 48 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD; frequency response 0-450,000 Hz  $-3$  dB (dc coupled on); S/N (IHF A) 86 dB (phono), 106 dB (tuner, aux., tape); max. phono input 230 mV rms; 13" D ..... \$310

**KT-80 FM Stereo Tuner.** Features pulse count detector, servo-lock tuning, rec calibration, mode/muting, and lock switches, and five-LED signal-strength and LED stereo and tuned/lock indicators; FM section usable sensitivity 1.9  $\mu$ V, mono 50-dB quieting 3.3  $\mu$ V, S/N 83 dB (mono) and 80 dB (stereo), stereo THD 0.07% at 1000 Hz, and capture ratio 1.5 dB; 13 $\frac{1}{8}$ " D ..... \$209

**AT-80D Audio Timer.** Programmable audio timer for KA/KT-80; functions include program preset for recording while user is away, alarm system and auto system shutoff; features fluorescent digital 24-hr clock/timer display, LED ac outlet status indicator, and fast/slow and back/forward timer setting adjustment controls ..... \$125

**KA-60 Stereo Integrated Amplifier.** Features bass, treble, balance, mic mixing, and volume rotary controls, and loudness and tape/aux./tuner/phono input selectors; 30 W/ch continuous, both channels driven into 8 ohms from 40-20,000 Hz with 0.08% THD and IM dist.; frequency response 10-100,000

Hz  $+0/-3$  dB; input sensitivity/impedance 2.5 mV/50k ohms (phono, mic), 150 mV/30k ohms (tuner, aux., tape); S/N (IHF A) 80 dB (phono), 100 dB (tuner, aux., tape), 73 dB (mic); max. phono input 180 mV rms; 13 $\frac{1}{4}$ " D ..... \$199

**KT-60 AM/FM Stereo Tuner.** Features FET front end and frequency-linear three-gang variable tuning capacitor, FM mode and AM/FM selector switches. FM section: usable sensitivity 1.9  $\mu$ V; 50-dB quieting 4.0  $\mu$ V (mono); S/N 77 dB (mono), 72 dB (stereo); THD at 1000 Hz 0.1% (mono), 0.15% (stereo); capture ratio 1.5 dB; alternate channel selectivity 60 dB; 13 $\frac{1}{4}$ " H ..... \$155

## KIRKSAETER

### Moderator 130-150 Stereo Receiver

Amplifier section: features built-in moving-coil head amp; phono blend;  $\pm$ 12-dB bass and treble and  $\pm$ 6-dB midrange tone controls with tone defeat; 12-dB/octave high and low filter switches; tape dubbing; three-speaker switching; ambience for rear speakers; mic blend; 100 W/ch continuous from 20-20,000 Hz with 0.025% THD and 0.008% IM dist., 250 W/ch headroom; frequency response 2-150,000 Hz  $-3$  dB; input sensitivity 1.5 mV (phono MM), 36 mV (high level); phono overload 170 mV (MM), 70 mV (MC); S/N 75 dB (phono), 95 dB (aux.); phono RIAA equalization  $\pm$ 0.2 dB from 20-20,000 Hz. FM tuner: features automatic noise suppression circuit; five-station FM preset tuning; 50-dB quieting 35 dBf (stereo); S/N 74 dB (mono); 70 dB (stereo); frequency response 20-16,000 Hz  $+0/-3$  dB; THD at 1000 Hz 0.15% (mono), 2% (stereo); capture ratio 1 dB; alternate channel selectivity 99 dB; stereo separation variable from min. of 6 dB to 58 dB at 35-dBf quieting; 5 $\frac{1}{4}$ " H  $\times$  19 $\frac{1}{4}$ " W  $\times$  12 $\frac{1}{4}$ " D ..... \$1600

### Moderator 75-100 Stereo Receiver

Amplifier section: features built-in moving-coil head amp; phono blend;  $\pm$ 12-dB bass and treble and  $\pm$ 6 dB midrange tone controls with tone defeat; 12-dB/octave high and low filter switches; tape dubbing; three-speaker switching; ambience for rear speakers; 80 W/ch continuous from 20-20,000 Hz with 0.025% THD and 0.008% IM dist., 200 W/ch headroom; frequency response 2-120,000 Hz  $-3$  dB; input sensitivity 1.5 mV (phono), 36 mV (high level); phono overload 170 mV (MM), 70 mV (MC); S/N 75 dB (phono), 95 dB (aux.); phono RIAA  $\pm$ 0.2 dB from 20-20,000 Hz. FM tuner: features automatic noise suppression circuit; five-station FM memory preset; 50-dB quieting 35 dBf (stereo); S/N 74 dB (mono), 70 dB (stereo); frequency response 20-16,000 Hz  $+0/-3$  dB; THD at 1000 Hz 0.15% (mono), 2% (stereo); capture ratio 1 dB; alternate channel selectivity 99 dB; stereo separation variable from min. of 6 dB to 58 dB at 35-dBf quieting; 5 $\frac{1}{4}$ " H  $\times$  19 $\frac{1}{4}$ " W  $\times$  12 $\frac{1}{4}$ " D ..... \$1300

### Moderator 50-75 Stereo Receiver

Amplifier section: features built-in moving-coil head amp; phono blend;  $\pm$ 12-dB bass and treble and  $\pm$ 6-dB midrange controls with tone defeat; 12-dB/octave high and low filters; tape dubbing; three-speaker switching; ambience for rear speakers; 60 W/ch continuous from 20-20,000 Hz with 0.025% THD and 0.008% IM dist., 150 W/ch headroom; frequency response 2-120,000 Hz  $-3$  dB; input sensitivity 1.5 mV (phono), 36 mV (high level); phono overload 170 mV (MM), 70 mV (MC); S/N 75 dB (phono), 95 dB (aux.); phono RIAA  $\pm$ 0.2 dB from 20-20,000 Hz. FM tuner: features automatic noise suppression circuit and five-station FM memory preset; 50-dB quieting 35 dBf (stereo);

S/N 74 dB (mono), 70 dB (stereo); frequency response 20-16,000 Hz  $+0/-3$  dB; THD at 1000 Hz 0.15% (mono), 2% (stereo); capture ratio 1 dB; alternate channel selectivity 99 dB; stereo separation variable from min. of 6 dB to 58 dB at 35-dBf quieting; 5 $\frac{1}{4}$ " H  $\times$  19 $\frac{1}{4}$ " W  $\times$  12 $\frac{1}{4}$ " D ..... \$1000

## LUX

### R-1120-A Stereo Receiver

Amplifier: 120 W/ch continuous power into 8 ohms with both channels driven (20-20,000 Hz); THD 0.02%; IM dist. no more than 0.02%; frequency response 15-100,000 Hz  $\pm$ 1 dB; input sensitivity 0.18 mV (phono 1), 2.7 mV (phono 2), 180 mV line; phono overload 160 mV; S/N, weighted (IHF "A") 86 dB phono, 100 dB line; filter frequencies (6 dB/oct) subsonic 45 Hz, and high-cut 7,000 Hz. FM tuner: FM sensitivity for 50 dB quieting, 14.1 dBf (2.8  $\mu$ V) mono; IHF usable sensitivity 10.3 dBf (1.8  $\mu$ V) mono; FM distortion 0.06% mono, 0.1% stereo; capture ratio 1.9 dB; stereo separation 42 dB at 1000 Hz; AM suppression 55 dB; image rejection 80 dB; i-f rejection 85 dB; S/N 74 dB mono, 70 dB stereo; SCA rejection 60 dB. AM section: usable sensitivity (IHF) 200  $\mu$ V/m; image ratio 75 dB; i-f rejection 80 dB; S/N 52 dB; dist. 0.5%; selectivity 32 dB. Has loudness, peak indicator, speaker switch, tape dubbing switch ..... \$995

### R-1070 Stereo Receiver

Amplifier section: features dc and pre out/main in circuitry; LED peak level indicators; tape dubbing; 75 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.015% THD; IM dist. 0.15%; frequency response 15-100,000 Hz; input sensitivity 2.7 mV (phono), 160 mV (tuner, aux., tape), 1.4 V (main in); phono overload 160 mV; S/N (IHF A) 86 dB (phono), 106 dB (tuner, aux., tape). FM tuner section: features wide/narrow i-f bandwidth selector; IHF usable sensitivity 1.8  $\mu$ V (mono); S/N 75 dB; frequency response 30-15,000 Hz  $\pm$ 1 dB; AM suppression 62 dB. 7 $\frac{1}{4}$ " H  $\times$  19 $\frac{1}{4}$ " W  $\times$  16" D ..... \$795

### Luxman R-3055 Stereo Receiver

Amp section: features dual five-LED power level indicators; A-B speaker switching; built-in moving-



coil head amp; bass and treble tone controls; subsonic and high-cut filter switches; loudness control; tape/source monitor switch with two-way tape dubbing; input selector with moving-coil position; 55 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD; frequency response 15-60,000 Hz; phono S/N 90 dB; phono sensitivity 2.2 mV (MM), 0.3 mV (MC); phono overload 160 mV. Tuner: features FM muting and mono switches and five-LED tuning direction indicators; capture ratio 1.3 dB; S/N 75 dB at 65 dBf; alternate channel selectivity 65 dB  $\pm$ 400 kHz; stereo separation 45 dB at 1000 Hz; 6 $\frac{1}{2}$ " H  $\times$  19 $\frac{1}{16}$ " W  $\times$  12 $\frac{1}{32}$ " D ..... \$595

**R-3045.** Similar to R-3055 except 45 W/ch under same conditions ..... \$495

## MARANTZ

### SR8000 Stereo Receiver

Amplifier section: features dc power amp circuitry; dual LED power level logarithmic display; two-speaker switching; bass, midrange, and treble tone controls; low (20 Hz) and high (8000 Hz) filter switches; rec mode selector with two-way tape dubbing and monitoring; loudness switch; input selector with LEDs; 88 W/ch continuous into 4 ohms from 20-20,000 Hz with 0.05% THD and IM dist.; frequency response 10-70,000 Hz  $\pm$ 1 dB; input

### NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 24.

sensitivity 2.7 mV (phono), 160 mV (high level); phono overload 225 mV; S/N 90 dB (phono), 98 dB (aux.); phono RIAA deviation  $\pm 0.2$  dB from 20-20,000 Hz. Tuner section: features quartz-locked digital synthesizer tuning with up/down scan tuning and LED digital frequency readout; seven-station AM/FM memory preset; five-LED signal-strength/multipath indicators with multipath selector; FM muting/mode switch. FM section: 50-dB quieting 13.2 dBf (mono), 36.1 dBf (stereo); S/N 80 dB (mono), 72 dB (stereo); frequency response 30-15,000 Hz  $\pm 0.5$  dB; THD at 1000 Hz 0.15% (mono), 0.2% (stereo); capture ratio 1.0 dB; alternate channel selectivity 65 dB; stereo separation 45 dB;  $5\frac{1}{2}''$  H  $\times$   $18\frac{1}{2}''$  W  $\times$   $13\frac{1}{2}''$  D.....\$695

### SR6000 Stereo Receiver

Power amp: features dc circuitry; LED power output logarithmic display; two-speaker switching; 70 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.025% THD and IM dist.; damping factor 50 at 20 Hz. Preamp: features bass, midrange, and treble controls; 6 dB/octave low (20 Hz) and high (8000 Hz) filters; loudness switch; rec mode selector with two-way tape dubbing and monitoring; input sensitivity/impedance 2.7 mV/47k ohms (phono), 160 mV/25k ohms (high level); phono overload 225 mV; S/N (A weighted) 90 dB (phono), 98 dB (high level); frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA), 10-70,000 Hz  $\pm 1$  dB (high level). Tuner: features dual-gate MOS FET r-f front end; PLL FM multiplex demodulator with pilot canceller; Gyro-Touch™ tuning; FM muting/mode and mono/stereo switch; signal-strength/multipath and FM tuning meters; FM IHF usable sensitivity 1.7  $\mu$ V (mono); 50-dB quieting 2.5  $\mu$ V (mono), 35  $\mu$ V (stereo); S/N 80 dB (mono), 72 dB (stereo); dist. at 1000 Hz 0.15% (mono), 0.2% (stereo); frequency response 30-15,000 Hz  $\pm 0.5/-1$  dB; capture ratio 1.0 dB; alternate channel selectivity 65 dB; image rejection 55 dB; i-f and spurious rejection 90 dB; stereo separation 45 dB at 1000 Hz; AM usable sensitivity 20  $\mu$ V (IHF) and S/N 50 dB;  $5\frac{1}{2}''$  H  $\times$   $18\frac{1}{2}''$  W  $\times$   $13\frac{1}{2}''$  D.....\$550

**SR4000.** Similar to SR6000 minus rec mode selector and high filter; has one-way tape dubbing; 50 W/ch continuous under same conditions; frequency response  $\pm 0.3$  dB (phono RIAA), 10-60,000 Hz  $\pm 1$  dB (high level); S/N (A weighted) 88 dB (phono); phono overload 130 mV; FM IHF usable sensitivity 1.8  $\mu$ V (mono); 50-dB quieting 2.7  $\mu$ V (mono), 38  $\mu$ V (stereo); FM S/N 78 dB (mono), 70 dB (stereo); stereo dist. at 1000 Hz 0.25%; i-f rejection 85 dB.....\$415

### SR2000 Stereo Receiver

Power amp: features direct-coupled complementary output stage; dual power meters; two-speaker switching; 30 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist.; damping factor 36 at 20 Hz. Preamp: features bass, midrange, and treble controls; loudness switch; tape monitor switch; input selector; input sensitivity/impedance 2.7 mV/47k ohms (phono), 160 mV/25k ohms (high level); phono overload 130 mV; frequency response  $\pm 0.5$  dB from 20-20,000 Hz (phono RIAA), 15-50,000 Hz  $\pm 1$  dB (high level); S/N (A weighted) 86 dB (phono), 98 dB (high level). Tuner: features dual-gate MOS FET r-f front end; Gyro-Touch™ tuning; FM tuning meter; FM muting/mode and stereo/mono switch; FM IHF usable sensitivity 1.9  $\mu$ V (mono); 50-dB quieting 2.8  $\mu$ V (mono), 40  $\mu$ V (stereo); S/N 75 dB (mono), 68 dB (stereo); dist. at 1000 Hz 0.15% (mono), 0.25% (stereo); frequency response 30-15,000 Hz  $\pm 0.5/-1$  dB; capture ratio 1.0 dB; alternate channel selectivity 62 dB; image rejection 50 dB; i-f rejection 85 dB; spurious rejection 90 dB; stereo separation 45 dB at 1000 Hz; AM usable sensitivity 20  $\mu$ V and S/N 50

dB.  $5\frac{1}{2}''$  H  $\times$   $18\frac{1}{2}''$  W  $\times$   $12\frac{1}{2}''$  D.....\$325

**SR1000.** Similar to SR2000 without midrange control; has separate balance and volume controls; 20 W/ch with 0.09% THD and IM dist.; damping factor 30 at 20 Hz; frequency response  $\pm 0.75$  dB (phono RIAA), 15-40,000 Hz  $\pm 1$  dB (high level); S/N (A weighted) 84 dB (phono), 96 dB (high level); FM 50-dB quieting 2.9  $\mu$ V (mono), 42  $\mu$ V (stereo); FM stereo dist. 0.3% at 1000 Hz; alternate channel selectivity 60 dB; i-f and spurious rejection 80 dB.....\$275

## MITSUBISHI

### DA-R20 Stereo Receiver

Amplifier section: features two-speaker switching; built-in moving-coil head amp; separate bass and



treble controls with tone defeat; 12-dB/octave low and high filter switches; record selector with two-deck tape duplication; mode switch; continuous loudness and balance controls; input selector with separate phono MM and MC switch; 60 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; dynamic headroom 1.0 dB; power bandwidth 10-80,000 Hz  $-3$  dB; damping factor 120 from 20-20,000 Hz; input sensitivity/impedance 100  $\mu$ V/10 ohms (phono MC), 2.5 mV/47k ohms (phono MM), 150 mV/33k ohms (aux., tape); phono overload 140 mV (MM), 7 mV (MC); frequency response  $\pm 0.3$  dB from 20-20,000 Hz (phono RIAA), 0-100,000 Hz  $+0.2/-2$  dB (aux., tape); THD from 20-20,000 Hz 0.01%; S/N (IHF A) 89 dB (phono MC), 94 dB (MM), 106 dB (aux., tape). Tuner: features fluorescent AM/FM digital frequency readout with circular tuning dial; dual-gate MOSFETs and high-precision four-ganged tuning capacitor; LED tuning lock indicator; wide/narrow i-f band selector; FM high blend and muting/mode switches; signal-strength and tuning meters. FM section: usable sensitivity 1.6  $\mu$ V (mono); 50-dB quieting 3.0  $\mu$ V (mono), 38  $\mu$ V (stereo); S/N 84 dB (mono), 80 dB (stereo); frequency response 50-15,000 Hz  $\pm 0.5$  dB; THD mono 0.08% (wide), 0.15% (narrow), stereo 0.1% (wide), 0.2% (narrow); capture ratio 1.5 dB; alternate channel selectivity 60 dB (wide), 75 dB (narrow); image rejection 85 dB; i-f and spurious rejection 100 dB; stereo separation at 1000 Hz 20 dB with hi-blend on;  $6\frac{1}{2}''$  H  $\times$   $18\frac{1}{2}''$  W  $\times$   $16\frac{1}{2}''$  D.....\$560

**DA-R10.** Similar to DA-R20 minus built-in moving-coil head amp and LED digital tuning frequency readout; amp output 45 W/ch under same conditions and damping factor 110 from 20-20,000 Hz; FM tuner image rejection 50 dB, i-f rejection 90 dB, and spurious rejection 80 dB.....\$390

**DA-R7.** Similar to DA-R10 minus low and high filter switches, tone defeat, and detented loudness control in amp section and i-f bandwidth and high blend switches in tuner section; amp output 30 W/ch under same conditions, damping factor 40 from 20-20,000 Hz, and frequency response  $\pm 0.3$  dB from 10-50,000 Hz (phono RIAA) and 20-20,000 Hz  $\pm 0.5$  dB (aux., tape). FM tuner: usable sensitivity 1.8  $\mu$ V (mono); S/N 82 dB (mono), 76 dB (stereo); THD 0.2% stereo; alternate channel selectivity 65 dB; stereo separation 45 dB at 1000 Hz.....\$295

## NAD (USA)

### 7080 Stereo Receiver

Power amp: features eight high-current output transistors; filtered and regulated power supplies; main/remote speaker switching; 90 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; slew rate 40 V

$\mu$ sec; damping factor 120 at 50 Hz, 8 ohms; S/N (A weighted) 104 dB. Preamp: features bass and treble controls with turnover frequency and tone defeat switches; infrasonic, high, and low filters; mono, mute, and loudness controls; two-way tape dubbing and monitoring with LEDs; input selector with LEDs; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/50k ohms (high level); phono overload 200 mV; frequency response  $\pm 0.3$  dB (phono RIAA), 20-20,000 Hz  $\pm 0.5$  dB (high level); S/N (A weighted) 82 dB at 10 mV (phono), 95 dB (high level). Tuner: features dual-gate MOS FET front end; PLL IC multiplex demodulator; signal-strength and tuning meters; FM muting; FM IHF usable sensitivity 1.8  $\mu$ V (mono); 50-dB quieting 3.0  $\mu$ V (mono), 35  $\mu$ V (stereo); S/N (A weighted) 74 dB (mono), 70 dB (stereo); frequency response 30-15,000 Hz  $\pm 0.5$  dB; THD at 1000 Hz 0.2% (mono), 0.3% (stereo); capture ratio 1.0 dB; alternate channel selectivity 70 dB; image rejection 70 dB; i-f rejection 80 dB; stereo separation 40 dB at 1000 Hz; AM sensitivity 300  $\mu$ V.  $5.9''$  H  $\times$   $19.3''$  W  $\times$   $14.2''$  D.....\$648

**7060.** Similar to 7080 minus turnover frequency switches and tone defeat, low filter, and audio muting; has one-way tape dubbing; 60 W/ch continuous under same conditions; slew rate 30 V/ $\mu$ sec; damping factor 100; S/N 103 dB (main amp), 80 dB at 10 mV (phono); high-level impedance 18k ohms; FM usable sensitivity 1.9  $\mu$ V mono; 50-dB quieting 3.5  $\mu$ V (mono), 45  $\mu$ V (stereo); S/N 72 dB (mono), 68 dB (stereo); capture ratio 1.5 dB; alternate channel selectivity 62 dB  $\pm 400$  kHz; image rejection 50 dB; i-f rejection 60 dB;  $5.5''$  H  $\times$   $17.7''$  W  $\times$   $14.2''$  D.....\$530

**7045.** Similar to 7060 except 45 W/ch continuous with 0.05% THD and IM dist.; slew rate 20 V/ $\mu$ sec; damping factor 75; high-level S/N 92 dB.....\$448

**7020.** Similar to 7045 except 20 W/ch continuous with 0.02% THD and IM dist.; slew rate 15 V/ $\mu$ sec; damping factor 50;  $4.7''$  H  $\times$   $16.5''$  W  $\times$   $9.5''$  D.....\$330

## NAKAMICHI

### 730 Stereo Receiver

Features touch-activated electronic switching for all functions; triple-transistor phono preamplifier; motor-driven variable capacitor for automatic tuning; four preset FM stations; SAW i-f filter; PLL MPX demodulator; Dolby FM; toroidal core power transformer. Specifications: 105 W/ch continuous sine wave into 8 ohms over 5-20,000 Hz with less than 0.02% THD, less than 0.004% IM dist.; phono equivalent input noise better than  $-137$  dB; 50-dB quieting sensitivity 18.3 dBf (mono); capture ratio 1.5 dB; MPX separation better than 45 dB at 1000 Hz;  $3\frac{1}{2}''$  H  $\times$   $23\frac{1}{2}''$  W  $\times$   $14\frac{1}{2}''$  D.....\$1390

**RM-730.** Optional wireless remote control system for 730 Receiver; uses pulse-code-modulated infrared light.....\$215

### 530 Stereo Receiver

Amplifier: features triple-transistor phono preamp; two-speaker switching; bass, treble, and balance



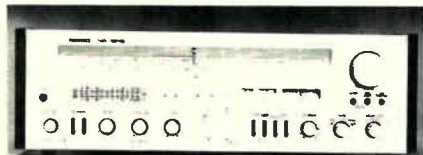
controls; subsonic filter; mono, loudness, and audio muting switches; input selectors; tape monitor switch; 55 W/ch continuous sine wave into 8 ohms from 10-20,000 Hz with 0.02% THD and 0.002% IM dist.; phono equivalent input noise  $-138$  dB. Tuner: features motor-driven FM variable capacitor for automatic tuning; four-station memory preset for FM; SAW i-f filter; PLL multiplex demodulator; FM muting (with LED), hi blend, and 20/40 dB threshold switches; FM 50-dB quieting sensitivity 19.2 dBf (mono); capture ratio 1.5 dB; stereo separation 45 dB at 1000 Hz.  $5\frac{1}{2}''$  H  $\times$   $19\frac{1}{2}''$  W  $\times$   $13\frac{1}{2}''$  D.....\$690



## NIKKO

### NR-1219 Stereo Receiver

Power amp: features dc circuitry; dual 12-LED power output bar display; two-speaker selector;



electronic protection circuitry with LED; regulated power supply; 100 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; damping factor 50 into 8 ohms at 1000 Hz. Preamp features bass, midrange, and treble controls; loudness, audio muting, and subsonic and high filter switches; two-way tape monitoring and dubbing; input selector with LEDs. Tuner features T-locked tuning system with dual-gate MOS FET front end; signal-strength and tuning meters; mono, 25- $\mu$ sec de-emphasis and FM muting switches; LED stereo and T-locked indicators; FM usable sensitivity 1.8  $\mu$ V; FM separation 48 dB at 1000 Hz. Champagne gold panel with rosewood cabinet; 7" H x 21 $\frac{1}{2}$ " W x 15" D ..... \$650

**NR-1019.** Similar to NR-1219 without audio muting and FM de-emphasis switch; has dual power output meters; 70 W/ch continuous ..... \$540

**NR-819.** Similar to NR-1019 without dual power meters, midrange control, LED input select indicators, and two-way tape dubbing; has tape monitor switch; 45 W/ch continuous with 0.05% THD and IM dist.; damping factor 40 at 8 ohms, 1000 Hz; 6" H x 20" W x 13" D ..... \$370

**NR-719.** Similar to NR-819 without high filter; 35 W/ch under same conditions ..... \$330

**NR-519.** Similar to NR-719 without signal-strength meter, mode switch, and T-locked tuning with LED; 20 W/ch continuous with 0.08% THD and IM dist.; damping factor 30; FM usable sensitivity 2.2  $\mu$ V; separation 40 dB at 1000 Hz; 5 $\frac{1}{2}$ " H x 17 $\frac{1}{2}$ " W x 11" D ..... \$240

## NYTECH

### CTA-250XDII Stereo Receiver

Features toroidal power supply; built-in moving-coil head amp; four-station FM preset in keyboard design. 25 W/ch continuous at 0.1% THD; frequency response 30-15,000 Hz; THD 0.7%; S/N 65 dB (phono MM), 60 dB (phono MC), 75 dB (tuner); 4 $\frac{1}{2}$ " H x 8 $\frac{1}{2}$ " W x 13 $\frac{1}{2}$ " D ..... \$1150

## ONKYO

### TX-7000 Stereo Receiver

Amplifier section: features Super Servo and linear switching circuitry; dual power output meters; two-speaker switching; bass and treble tone controls; subsonic and high filter selectors; loudness and mono/stereo mode selectors; two-deck tape monitoring with one-way dubbing; input selectors with LEDs; 90 W/ch continuous with 0.02% THD and IM dist.; damping factor 50 at 1000 Hz, 8 ohms. Tuner: features quartz-locked tuning with LED digital frequency readout and analog tuning dial scale; signal-strength (doubles as right power output meter) and tuning meters; FM muting, 25- $\mu$ sec de-emphasis, and EPS selectors; LED quartz-locked and tuned indicators. FM section: usable sensitivity 9.8 dB (1.7  $\mu$ V); capture ratio 1.3 dB; IHF selectivity 70 dB; image rejection 90 dB; i-f rejection 100 dB; stereo separation 40 dB at 1000 Hz ..... \$700

**TX-5000.** Similar to TX-7000 except 65 W/ch with



0.03% THD and IM dist.; FM usable sensitivity 10.3 dBf (1.8  $\mu$ V) and capture ratio 1.4 dB ... \$500

### TX-3000 Stereo Receiver

Amp section: features Super Servo and linear switching circuitry; 45 W/ch with 0.04% THD and 0.1% IM dist.; damping factor 40 at 1000 Hz, 8 ohms. FM tuner section: usable sensitivity 11.2 dBf (2  $\mu$ V); capture ratio 1.5 dB; IHF selectivity 60 dB; image rejection 60 dB; i-f rejection 85 dB; stereo separation 40 dB at 1000 Hz ..... \$350

### TX-2000 Stereo Receiver

Amp section: features two-speaker switching; bass and treble tone controls; mode and loudness selectors; two-deck tape monitoring with one-way tape dubbing; 27 W/ch with 0.06% THD and 0.1% IM dist.; damping factor 35 at 1000 Hz, 8 ohms. Tuner: features servo-locked tuning with LED locked and tuned indicators; signal-strength meter; FM muting. FM section: usable sensitivity 12.0 dBf (2.2  $\mu$ V); capture ratio 1.5 dB; IHF selectivity 60 dB; image rejection 45 dB; i-f rejection 80 dB; stereo separation 40 dB at 1000 Hz ..... \$255

### Slim-Line Midi Separates

#### TX-20 Micro Stereo Receiver

Amplifier: features bass and treble controls; balance control; A and B speaker switch; high filter; loudness switch; input selector; mode switch with LED; source/tape monitor switch; 30 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.08% THD. Tuner: features four-ganged variable tuning capacitor and two dual-gate MOS FETs in front end; quartz servo-lock tuning with one-touch sensor control; LED signal-strength bar display; LED tuned/locked, flashing direction arrow, and stereo indicators; muting/lock switch. Front-panel lid covers all controls, with exception of tuning, volume, function selection, and monitor controls and dial; 3" H ..... \$330

**TX-30.** Improved version of TX-20; features dual Super Servo circuitry in amp section and quartz-locked digitally-synthesized tuning with LED frequency digital readout and auto up/down scan tuning; seven FM and two AM memory preset stations with direct access to program source and memory stations; output 40 W/ch ..... \$420

**A-15 Integrated Amplifier.** Features dual Super Servo circuitry, dual power output meters, phono, tuner, and tape 1 input selectors, 40-step volume control, and power on/off on front panel with secondary controls behind concealed front-panel flip-down door; 30 W/ch continuous both channels driven into 8 ohms from 20-20,000 Hz with 0.08% THD; 3" H x 16 $\frac{1}{2}$ " W ..... \$170

**T-15 AM-FM Tuner.** Features servo-locked tuning with built-in touch sensor system that automatically locks onto station; five-LED signal-strength indicators; LED tuning indicators; FM mono and auto muting and AM selectors; FM usable sensitivity 11.2 dBf (2  $\mu$ V); 3" H x 16 $\frac{1}{2}$ " W ..... \$135

#### CX-70 AM/FM Receiver/Cassette Deck

Unit combines amplifier, tuner, and cassette deck. Amp section: features bass and treble controls; loudness switch; input selector; 20 W/ch continuous. Tuner: features three-ganged variable capacitor in front end; five-LED signal-strength and center tuning indicators; FM capture ratio 1.5 dB. Cassette features metal-compatibility; soft-touch loading inside drawer of cassette section with cassette open button; hard permalloy record/playback and ferrite erase heads; Dolby noise-reduction system; tape selector switch for normal, high, and metal tapes; mic level control; three-digit tape counter with reset; wow and flutter 0.08% wrms; S/N 56 dB with Dolby, metal tape ..... \$400

## OPTONICA

### SA-5606 Stereo Receiver

Power amp: features dual power output meters, three-speaker switching, and two-color LED power protection indicators; 85 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD. Preamp: features bass, midrange, and treble controls; low- and high-cut filters; loudness contour; input selector with separate phono 1 and 2 switch; rec out selector; two-way

tape dubbing with monitor; -20-dB audio muting; RIAA deviation  $\pm$ 0.2 dB; phono overload 280 mV; phono S/N 76 dB. Tuner: features Opto-lock tuning with LED indicator; signal-strength and tuning meters; hi-blend, FM muting, and air check calibrator switches; AM/FM switch; FM IHF usable sensitivity 1.7  $\mu$ V; S/N 80 dB (mono), 73 dB (stereo); FM THD 0.1% (mono), 0.3% (stereo); IHF selectivity 80 dB; ebony finish; 7.2" H x 21.7" W x 15.9" D ..... \$620

### SA-5406 Stereo Receiver

Power amp: features two-speaker switching and two-color power protection LED indicator; 65 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.035% THD. Preamp: features bass and treble controls; low- and high-cut filters; -20-dB audio muting; mode and loudness switches; balance control; two-way tape dubbing and monitoring; input selector; RIAA deviation  $\pm$ 0.3 dB from 30-20,000 Hz; phono overload 240 mV; phono S/N 76 dB. Tuner: features Opto-lock tuning with LED; high-blend, FM muting, and air-check calibrator switches; signal-strength and tuning meters; FM sensitivity 1.8  $\mu$ V; FM S/N 73 dB (mono), 68 dB (stereo); FM THD 0.2% (mono), 0.4% (stereo); FM IHF selectivity 72 dB; ebony finish; 6.5" H x 19.6" W x 15.3" D ..... \$470

### SA-5206 Stereo Receiver

Amplifier: features two-speaker switching; LED power protection indicator; bass and treble controls; low- and high-cut filters; balance control; mode switch; one-way tape dubbing with monitor switch; loudness switch; input selector; 45 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD; phono S/N 73 dB; phono overload 150 mV. Tuner: features signal-strength and tuning meters; air check calibrator; FM muting; FM IHF usable sensitivity 1.9  $\mu$ V (mono); FM S/N 73 dB (mono), 67 dB (stereo); FM THD 0.2% (mono), 0.4% (stereo); FM IHF selectivity 60 dB; ebony finish; 6.4" H x 19.3" W x 15" D ..... \$360

### SA-5101 Stereo Receiver

Amplifier: features two-speaker switching; loudness control; one-way tape dubbing; 25 W/ch continuous into 8 ohms with 0.05% THD; phono S/N 73 dB; phono overload 150 mV. Tuner: features five-LED signal-strength and three-LED tuning meter display; FM muting and air check calibrator switches; FM IHF usable sensitivity 1.9  $\mu$ V (mono); FM S/N 73 dB (mono), 67 dB (stereo); FM THD 0.1% (mono), 0.2% (stereo); FM IHF selectivity 60 dB; brushed aluminum faceplate; 5 $\frac{1}{2}$ " H x 17 $\frac{1}{2}$ " W x 11 $\frac{1}{2}$ " D ..... \$260

**SA-5105.** Same as SA-5101 but with ebony finish ..... \$260

## PANASONIC

### RA-7700 Receiver/Cassette Deck

AM-FM stereo receiver with built-in stereo cassette player/recorder. Power amp section: direct-coupled circuitry; two-speaker switching; 25 W/ch continuous, both channels driven into 8 ohms from 40-20,000 Hz with 0.07% THD. Preamp: features bass and treble controls; balance control; loudness switch; tape monitor switch. Tuner: features FET r-f front end; flywheel tuning; LED signal-strength/tuning meter; afc switch. Cassette deck: front-loading design with Dolby noise-reduction system; CrO<sub>2</sub> and normal tape selector; automatic tape program sensor; flow meter for peak level/VU; recording level control with two volume controls; three-digit tape counter with reset; mic mixing with separate volume control; simulated wood cabinet ..... \$380-\$430

**RA-7800.** Same as RA-7700 except has 8-track player/recorder instead of cassette ..... \$420-\$470

### RA-7500 Receiver/Cassette Deck

AM-FM stereo receiver with built-in stereo cassette player/recorder. Power amp section: features direct-coupled circuitry; dual power meters; two-speaker switching; 15 W/ch continuous, both channels driven into 8 ohms from 40-20,000 Hz with 0.07% THD. Preamp: features bass and treble controls; tape monitor switch; mic mixing with separate volume control; loudness switch. Tuner: features FET

# 1 RECEIVERS

r-f front end; flywheel tuning; afc tuning; signal-strength/tuning meter. Cassette deck features front-loading design with Dolby noise-reduction system; tape selector for CrO<sub>2</sub> and normal tapes; recording level control; two VU meters; three-digit tape counter. Simulated wood cabinet ..... \$290-\$340  
**RA-7600.** Same as RA-7500 except has 8-track player/recorder instead of cassette ..... \$280-\$330

## JC PENNEY

### MCS 3125 Stereo Receiver

Power amplifier section: features pure complementary SEPP OCL circuitry; dual LED instantaneous power output bar display; two-speaker switching with LEDs; 8- and 4-ohm speaker impedance switch; 125 W continuous into 8 ohms from 20-20,000 Hz with 0.05% THD and IM dist. Preamp: includes ten-band graphic equalizer display with center frequencies set at 60, 240, 1000, 4000, and 16,000 Hz, ±10 dB boost or cut each channel has separate stepped controls for each band and separate tone defeat switch; loudness control; mic level control; LED-indicated input selector includes record level check; two-way tape dubbing and monitoring; frequency response ±0.3 dB from 30-20,000 Hz (phono RIAA); phono overload 200 mV; S/N 78 dB (phono). Tuner: features dual-gate MOS FET FM front end; PLL multiplex demodulator; FM quadrature detector; LED signal-strength and tuning indicators; LED-indicated quartz-lock tuning with LED digital FM readout display; Dolby noise-reduction adaptor switch; multiplex filter and FM muting switches; FM usable sensitivity 1.8 μV (mono); 50-dB quieting 3.0 μV (mono); S/N 75 dB mono; THD 0.1% (mono), 0.2% (stereo); frequency response 20-15,000 Hz; capture ratio 1 dB; alternate channel selectivity 80 dB; image rejection 85 dB; stereo separation 50 dB at 1000 Hz; AM sensitivity 300 μV/m and S/N 55 dB. 8<sup>1</sup>/<sub>2</sub>" H × 19<sup>1</sup>/<sub>16</sub>" W × 17<sup>1</sup>/<sub>16</sub>" D ..... \$800

### MCS 3260 Stereo Receiver

Amplifier section: features dual 12-LED power output bar graph display with display off and X10 button selectors; two-speaker switching; ±12-dB bass, midrange, and treble controls; low and high filter switches; loudness, -20-dB audio muting, and mode switches; two-deck tape monitoring with two-way tape dubbing; input selector with LED indicators; 60 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; frequency response 10-40,000 Hz ±1 dB; RIAA phono deviation ±0.3 dB; phono sensitivity 2.5 mV; phono overload 190 mV; phono S/N 77 dB. Tuner: features PLL frequency synthesizer digital tuning with auto/manual up/down scan tuning and LED digital frequency readout; six-station AM/FM memory preset; five-LED signal-strength ladder display; FM muting and multiplex filter switches. FM section: THD at 1000 Hz 0.1% (mono), 0.15% (stereo); capture ratio 1.0 dB; alternate channel selectivity 70 dB; 6" H × 19.44" W × 13" D ..... \$450

### MCS 3248 Stereo Receiver

Amplifier section: features dual 12-LED power output bar graph indicators; two-speaker switching; ±12-dB bass and treble controls; high filter; loudness and mode switches; two-deck tape monitoring with two-way dubbing; input selector with LEDs; 45 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; frequency response 10-40,000 Hz ±2 dB; RIAA phono deviation ±0.3 dB; phono sensitivity 2.5 mV; phono overload 190 mV; phono S/N 77 dB. Tuner: features frequency linear FM front end; five-LED signal strength and three-LED FM tuning indicators; FM muting. FM section: capture ratio 1.2 dB; alternate channel selectivity 60 dB; 5.8" H × 19.22" W × 12.84" D ..... \$350

### MCS 3230 Stereo Receiver

Power amp: features two-way speaker switching; 32 W/ch continuous, both channels driven into 8 ohms from 4-20,000 Hz with 0.3% THD; IHF power bandwidth 30-22,000 Hz. Preamp: features bass and treble controls; balance control; tape monitor switch; loudness switch; input selector; input sensitivity/impedance 3.0 mV/47k ohms (phono), 250 mV/100k ohms (aux.), 400 mV/50k ohms (tape monitor); frequency response ±1 dB from 20-15,000 Hz (phono RIAA), 20-20,000 Hz ±1 dB (aux. and tape); S/N (IHF A) 70 dB (phono), 80 dB (tuner, aux., and tape). Tuner: features PLL multiplex demodulator; AM/FM signal-strength meter; FM muting; mode switch; flywheel tuning; FM usable sensitivity 2 μV (mono); 50-dB quieting sensitivity 5 μV (mono); S/N 70 dB; frequency response 50-15,000 Hz -3 dB; dist. 0.2% (mono); capture ratio 1.5 dB; alternate channel selectivity 60 dB +400 kHz; image rejection 55 dB; stereo separation 40 dB at 1000 Hz; AM usable sensitivity 300 μV/m and S/N 45 dB. 6" H × 17<sup>1</sup>/<sub>16</sub>" W × 11<sup>1</sup>/<sub>16</sub>" D ..... \$230

## PHILIPS

### AH797 Stereo Receiver

Amplifier section: features switchable six-speaker capability; thermal and speaker protection LED;



bass and treble controls; high- and low-cut filters; mono and loudness selectors; two-deck tape monitoring and dubbing; input selector with LED indicators; 60 W/ch continuous power into 8 ohms from 20-20,000 Hz with 0.03% THD and 0.04% IM dist.; damping factor 50; input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/100k ohms (aux., tape); phono overload 210 mV; frequency response ±0.5 dB (phono RIAA), 15-30,000 Hz ±0.5 dB (aux., tape); S/N (A-weighted) 70 dB phono, 90 dB aux./tape. Tuner section: features signal-strength and tuning meters; FM muting; auto stereo noise-cancelling circuitry; PLL multiplex decoder. FM section: usable sensitivity 10.3 dBf (1.8 μV) mono; 50-dB quieting 14.1 dBf (2.8 μV) mono, 35 μV stereo; S/N at 65 dBf, 70 dB mono, 65 dB stereo; THD at 1000 Hz 0.13% (mono), 0.15% (stereo); capture ratio 1.6 dB; selectivity 75 dB (dual generator); AM suppression 45 dB; i-f rejection 100 dB; image rejection 90 dB; spurious response rejection 95 dB; stereo separation 45 dB at 1 kHz; silver finish; 6" H × 20<sup>1</sup>/<sub>16</sub>" W × 15<sup>1</sup>/<sub>2</sub>" D ..... \$400  
**AH7971.** Same as AH797 but in black ..... \$400  
**AH796.** Similar to AH797 minus LED protection indicator, low filter switch, and auto stereo noise cancelling circuit; has four-speaker capability; 45 W/ch under same conditions with 0.03% IM dist.; FM stereo THD 0.25% at 1000 Hz ..... \$330  
**AH7961.** Black-finish version of AH796 ..... \$330

### AH795 Stereo Receiver

Amplifier section: features four-speaker capability; bass and treble controls; high filter switch; loudness and mono switches; two-deck tape/source monitoring; input selector; 30 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.06% THD and 0.1% IM dist.; damping factor 30; input sensitivity/impedance 2.3 mV ±1 dB/50k ohms (phono), 140 mV/100k ohms (aux., tape); phono overload 200 mV; S/N (A weighted) 70 dB (phono), 90 dB (aux., tape); frequency response ±1 dB (phono RIAA), 20-20,000 Hz ±1 dB (aux.). Tuner section: features signal-strength and tuning meters and PLL multiplex decoder. FM section: usable sensitivity 13.2 dBf (2.5 μV) mono; 50-dB quieting 17.2 dBf (4 μV) mono, 39.2 dBf (50 μV) stereo; S/N 70 dB (mono and stereo); THD at 1000 Hz 0.2% (mono), 0.3% (stereo); capture ratio 1.8 dB; selectivity 62 dB (dual generator); i-f rejection 80 dB; image re-

jection 60 dB; spurious rejection 70 dB; stereo separation 42 dB at 1000 Hz; silver faceplate; 5.5" H × 17.31" W × 13.25" D ..... \$240  
**AH7951.** Black-finish version of AH795 ..... \$240  
**AH794.** Similar to AH795 minus high filter switch and signal-strength meter; has tape monitor switch; 20 W/ch under same conditions with 0.08% THD; aux. and tape input sensitivity 130 mV; phono overload 150 mV ..... \$200  
**AH7941.** Black-finish version of AH794 ..... \$200

## PIONEER

### SX-3900 Stereo Receiver

Power amp section: features dc configuration and non-switching Vari-Bias™ circuitry; eight super linear ring emitter transistors; toroidal transformer with two 15,000-μF electrolytic capacitors; "I-Skived" heat sink; gold-plated dual-contact relay protection circuitry; dual 12-fluorescent power output bar graph indicators with LED dimmer switch; two-speaker switching; 120 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.005% THD and IM dist.; frequency response 5-200,000 Hz +0/-3 dB; damping factor 60 from 20-20,000 Hz, 8 ohms; hum and noise -115 dB (short-circuited A); input sensitivity/impedance 1 V/50k ohms. Preamp section: features low-noise discrete phono equalizer design; bass and treble controls with 200/400-Hz bass and 2000/4000-Hz treble turnover frequency controls and tone defeat; 15-Hz low and 8000-Hz high filter switches; loudness switch; -20-dB muting and mode switches; two-deck tape/source monitoring with two-way tape dubbing; adaptor switch for connection of Pioneer's equalizer, range expander, or reverb amp; input selectors with LEDs; input sensitivity/impedance 2.5 mV/50k ohms (phono 1, 2), 150 mV/50k ohms (aux., tape 1, 2, adaptor); phono overload 300 mV at 1000 Hz, 0.005% THD; S/N (short-circuited A) 86 dB (phono), 105 dB (aux., tape); frequency response ±0.2 dB from 20-20,000 Hz (phono RIAA), 7-80,000 Hz +0/-1 dB (aux., tape); THD 0.005% at 10 V out, 20-20,000 Hz. Tuner section: features quartz servo-lock digital tuning with LED digital frequency readout and analog dial scale; electronic fluroscan signal-strength and tuning indicators; LED FM quartz locked and stereo indicators; FM muting and 25-μsec Dolby de-emphasis switches; built-in FM re-lock (keeps last station heard in perfect tune when receiver is turned on again). FM section: usable sensitivity 9.8 dBf (1.7 μV) mono; 50-dB quieting 14.2 dBf (2.8 μV) mono, 36 dBf (34.7 μV) stereo; S/N 83 dB (mono), 78 dB (stereo); frequency response 20-15,000 Hz +0.2/-0.8 dB; dist. at 1000 Hz 0.07% (mono), 0.15% (stereo); capture ratio 1.0 dB; alternate channel selectivity 80 dB; spurious rejection 100 dB; image rejection 90 dB; i-f rejection 100 dB; stereo separation 50 dB at 1000 Hz; walnut-grain vinyl cabinet with silver faceplate; 6<sup>1</sup>/<sub>16</sub>" H × 20<sup>1</sup>/<sub>16</sub>" W × 17<sup>1</sup>/<sub>16</sub>" D ..... \$800  
**SX-3800.** Similar to SX-3900 minus LED dimmer, bass and treble turnover frequency controls with



tone defeat, high filter switch, adaptor switch, and FM Dolby 25-μsec de-emphasis; amp has four super linear ring emitter transistors, one-way tape dubbing, and one phono input; 60 W/ch under same conditions; damping factor 50; phono overload 250 mV; S/N 82 dB (phono), 110 dB (aux., tape). FM section: usable sensitivity 10.3 dBf (1.8 μV) mono; 50-dB quieting 16.2 dBf (3.6 μV) mono, 37 dBf (39 μV) stereo; frequency response 20-15,000 Hz +0.2/-1.2 dB; alternate channel selectivity 75 dB; spurious and image rejection 65 dB; i-f rejection 90 dB; stereo separation 45 dB at 1000 Hz; 6<sup>1</sup>/<sub>16</sub>" H × 9<sup>1</sup>/<sub>16</sub>" W × 17<sup>1</sup>/<sub>16</sub>" D ..... \$500



### SX-3700 Stereo Receiver

Power amp section: features dc configuration; heavy-duty power supply with two 8000- $\mu$ F electrolytic capacitors; gold-plated dual-contact relay protection circuitry; dual 12-fluorescent power output bar graph indicators; two-speaker switching; 45 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; damping factor 40. Preamp section: features bass and treble controls; low filter switch; two-deck tape monitoring with one-way dubbing; mode and loudness switches; input selectors with LEDs; input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/50k ohms (aux., tape 1, 2); phono overload 250 mV at 1000 Hz, 0.02% THD; frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA), 10-100,000 Hz  $+1/-3$  dB (aux., tape); S/N (short-circuited A) 79 dB (phono), 95 dB (aux., tape). Tuner: features quartz servo lock tuning with LED digital frequency readout and analog tuning scale; fluorocan signal-strength and tuning indicators; LED FM quartz locked and stereo indicators; FM muting. FM section: usable sensitivity 10.3 dBf (1.8  $\mu$ V) mono; 50-dB quieting 15 dBf (3.1  $\mu$ V) mono, 37 dBf (39  $\mu$ V) stereo; S/N 80 dB (mono), 75 dB (stereo); frequency response 20-15,000 Hz  $+0.2/-0.8$  dB; dist. at 1000 Hz 0.07% (mono), 0.15% (stereo); capture ratio 1.0 dB; alternate channel selectivity 75 dB; spurious and image rejection 65 dB; i-f rejection 90 dB; stereo separation 45 dB at 1000 Hz; walnut-grain vinyl top and side panels with silver faceplate; 5 $\frac{1}{4}$ " H  $\times$  18 $\frac{1}{8}$ " W  $\times$  14 $\frac{1}{8}$ " D..... \$375

### SX-780 Stereo Receiver

Power amp section: features dual power output meters and two-speaker switching; 45 W/ch into 8 ohms from 20-20,000 Hz with 0.03% THD and 0.05% IM dist. Preamp section: features bass and treble controls; low filter switch; mode and loudness switches; two-deck tape monitoring with one-way tape dubbing and LED monitor indicators; input selector; phono input sensitivity/impedance 2.5 mV/50k ohms; phono overload 200 mV; S/N 76 dB (phono), 95 dB (aux., tape). Tuner section: features signal-strength/tuning meter and FM muting. FM section: usable sensitivity 10.3 dBf (1.8  $\mu$ V) mono; 50-dB quieting 16.2 dBf (3.6  $\mu$ V) mono, 37.0 dBf (39  $\mu$ V) stereo; S/N 80 dB (mono), 72 dB (stereo); dist. at 1000 Hz 0.07% (mono), 0.15% (stereo); capture ratio 1.0 dB; alternate channel selectivity 75 dB; image and spurious rejection 65 dB; i-f rejection 90 dB; stereo separation 45 dB at 1000 Hz; 5 $\frac{1}{2}$ " H  $\times$  18 $\frac{1}{8}$ " W  $\times$  12 $\frac{1}{2}$ " D..... \$375

**SX-680.** Similar to SX-780, except 30 W/ch at 0.1% THD, same conditions; 0.1% IM dist.; frequency response 10-60,000 Hz  $+0.5/-1.5$  dB; S/N 75 dB phono, 90 dB aux./tape. FM section: usable sensitivity 10.8 dBf (1.9  $\mu$ V); 50-dB quieting sensitivity 16.8 dBf (3.8  $\mu$ V) mono, 37.0 dBf (39.0  $\mu$ V) stereo; selectivity 60 dB; separation 40 dB at 1 kHz, 30 dB from 30-15,000 Hz. Features similar, but combined mode/FM mute switch, no filter, no dubbing. 5 $\frac{1}{8}$ " H  $\times$  17 $\frac{1}{8}$ " W  $\times$  12 $\frac{1}{2}$ " D..... \$300

**SX-580.** Similar to SX-680, except 20 W/ch at 0.3% THD, same conditions; IM dist. 0.3%; S/N 73 dB phono, 90 dB aux./tape; features single tape monitor..... \$250

### SX-3600 Stereo Receiver

Power amp section: features current-mirror-loaded differential input and boot-strapped predriver and push-pull output circuitry; power supply with two large electrolytic capacitors; dual 12-fluorescent power output bar graph indicators; two-speaker switching with LEDs; 30 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD and IM dist.; damping factor 35. Preamp section: features bass and treble controls; two-deck tape monitoring; mode and loudness selectors; input selector with LEDs; input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/50k ohms (aux., tape 1, 2); phono overload 140 mV; frequency response  $\pm 0.3$  dB from 30-15,000 Hz (phono RIAA), 10-50,000 Hz  $+0.5/-3$  dB (aux., tape); S/N (short-circuited A) 76 dB (phono), 96 dB (aux., tape). Tuner section: features junction-type FET r-f amp with transistor mixer in front end; IC i-f and multiplex sections; fluorocan signal-strength and FM tuning

meter indicators; LED stereo indicator; FM muting. FM section: usable sensitivity 11.2 dBf (2.0  $\mu$ V) mono; 50-dB quieting 16.1 dBf (3.5  $\mu$ V) mono, 37 dBf (39  $\mu$ V) stereo; S/N 78 dB (mono), 72 dB (stereo); frequency response 20-15,000 Hz  $+0.5/-1$  dB; dist. at 1000 Hz 0.1% (mono), 0.15% (stereo); capture ratio 1.0 dB; alternate channel selectivity 60 dB; spurious and image rejection 65 dB; i-f rejection 90 dB; stereo separation 40 dB at 1000 Hz; walnut-grain vinyl side panels and walnut-like metal top; 5 $\frac{1}{8}$ " H  $\times$  17 $\frac{1}{8}$ " W  $\times$  12 $\frac{1}{8}$ " D..... \$275

## REALISTIC

### STA-2100D Stereo Receiver

Amplifier section: features bass and treble controls; high and low filters; 120 W/ch continuous from 20-20,000 Hz with 0.05% THD; IM dist. 0.05% at 70 W; frequency response  $\pm 1.5$  dB from 30-20,000 Hz (phono RIAA), 15-25,000 Hz  $\pm 1$  dB (high level); input sensitivity 2, 4, or 8 mV (phono), 140 mV (high level); phono overload 220 mV; S/N 84 dB (phono), 96 dB (aux.). Tuner: features PLL multiplex demodulator; FM Dolby; 50-dB quieting 12 dBf (mono), 35 dBf (stereo); S/N 70 dB (mono), 75 dB (stereo); frequency response 20-15,000 Hz  $\pm 1.5$  dB; THD at 1000 Hz 0.1% (mono), 0.05% (stereo); capture ratio 1.5 dB; alternate channel selectivity 75 dB; stereo separation 40 dB from 100-10,000 Hz. 6 $\frac{1}{8}$ " H  $\times$  20 $\frac{1}{2}$ " W  $\times$  16 $\frac{1}{8}$ " D..... \$700

### STA-2200 Stereo Receiver

Amplifier: features LED power output meter display; bass and treble controls with separate turnover frequency selectors; two-deck tape monitoring and dubbing; 60 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.02% THD; IM dist. 0.01% at 42 W; frequency response 10-85,000 Hz  $\pm 2$  dB; S/N 85 dB (phono), 99 dB (aux.); input sensitivity 2.2 mV (phono), 160 mV (high level); phono overload 200 mV. Tuner: features digital-synthesis tuning with LED digital frequency readout and built-in digital clock; six-station AM/FM memory preset; Dolby FM circuitry; LED FM tuning indicators; MOS FET power output stage. FM section: 50-dB quieting 16.5 dBf (mono); S/N 68 dB; capture ratio 1.5 dB; alternate channel selectivity 68 dB; stereo separation 48 dB at 1000 Hz; 6 $\frac{1}{8}$ " H  $\times$  18 $\frac{1}{8}$ " W  $\times$  15 $\frac{1}{8}$ " D..... \$600

### STA-2080 Stereo Receiver

Amplifier: features bass,  $\pm 6$ -dB midrange, and treble controls; 80 W/ch continuous from 20-20,000 Hz with 0.03% THD; S/N 83 dB (phono), 99 dB (aux.); frequency response  $\pm 0.5$  dB from 20-15,000 Hz (phono RIAA), 15-25,000 Hz  $\pm 2$  dB (high level); input sensitivity 2.2 mV (phono), 160 mV (high level); phono overload 200 mV. Tuner: S/N 70 dB; capture ratio 1.5 dB; alternate channel selectivity 70 dB; stereo separation 48 dB at 1000 Hz; walnut veneer cabinet; 6" H  $\times$  20 $\frac{1}{8}$ " W  $\times$  15 $\frac{1}{8}$ " D..... \$500

### STA-2250 Stereo Receiver

Amplifier: features bass, midrange, and treble controls; 6-dB/octave high and 12-dB/octave low filters; 50 W/ch continuous from 20-20,000 Hz with 0.02% THD; IM dist. 0.01% at 30 W; frequency response  $\pm 1$  dB from 20-15,000 Hz (phono RIAA), 20-20,000 Hz  $\pm 1$  dB (high level); S/N 85 dB (phono), 96 dB (aux.); input sensitivity 2.2 mV (phono); phono overload 170 mV. Tuner: features digital-synthesis tuning with LED frequency readout; eight station AM/FM memory preset; multiplex filter; LED FM signal-strength indicators. FM section: 50-dB quieting 12.8 dBf (mono); S/N 72 dB (mono), 67 dB (stereo); THD 0.15% at 1000 Hz; capture ratio 1.5 dB; selectivity 68 dB; separation 48 dB at 1000 Hz; walnut veneer cabinet..... \$429

### STA-960 Stereo Receiver

Amplifier: 50 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD; frequency response 30-20,000 Hz  $\pm 1$  dB; S/N 86 dB (phono), 99 dB (aux.); input sensitivity 2.5 mV (phono), 160 mV (high level); phono overload 150 mV. FM tuner:

50-dB quieting sensitivity 11.2 dBf (mono); capture ratio 2 dB; alternate channel selectivity 50 dB; stereo separation 45 dB at 1000 Hz; S/N 65 dB; THD 0.4% at 1000 Hz. Features two tape monitors; front-panel tape dubbing; signal-strength and center-channel tuning meters; 5 $\frac{1}{8}$ " H  $\times$  19 $\frac{1}{8}$ " W  $\times$  14 $\frac{1}{2}$ " D..... \$400

### STA-820 Stereo Receiver

Amplifier section: 40 W/ch continuous from 20-20,000 Hz with 0.06% THD; IM dist. 0.06% at 28 W; frequency response 10-50,000 Hz  $\pm 2$  dB; input sensitivity 2.2 mV (phono); phono overload 200 mV; S/N 83 dB (phono), 96 dB (aux.). Tuner: S/N 69 dB; THD 0.5%; capture ratio 1.9 dB; alternate channel selectivity 57 dB; stereo separation 45 dB at 1000 Hz; 6 $\frac{1}{2}$ " H  $\times$  18 $\frac{1}{2}$ " W  $\times$  13 $\frac{1}{2}$ " D..... \$360

### STA-11 Stereo Receiver

Amplifier section: features two-speaker switching; bass, midrange, and treble controls; high filter; loudness, mono, and tape monitor switches; EQ circuit/switch for mini speakers; input selectors; 30 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.02% THD; frequency response 30-20,000 Hz  $\pm 1.5$  dB; S/N 89 dB (phono), 90 dB (high level); phono overload 170 mV. Tuner: features five-LED signal-strength and LED tuning indicators; multiplex filter; FM muting. FM section: 50-dB quieting 16.1 dBf (mono), 39.8 dBf (stereo); S/N 69 dB stereo; THD 0.3% at 1000 Hz; capture ratio 1.0 dB; alternate channel selectivity 70 dB; stereo separation 45 dB at 1000 Hz; 2 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  12 $\frac{1}{2}$ " D..... \$320

### STA-720 Stereo Receiver

Amplifier: features two-speaker switching; bass and treble controls with center defeat; loudness, mono, and tape monitor button selectors; input selectors with LEDs; 25 W/ch continuous from 20-20,000 Hz with 0.05% THD; IM dist. 0.03% at 20 W/ch; frequency response 20-20,000 Hz  $\pm 1$  dB; S/N 81 dB (phono), 93 dB (aux.); input sensitivity 2.5 mV (phono), 160 mV (high level); phono overload 140 mV. Tuner: features LED digital frequency readout, five-LED signal-strength indicators, LED stereo indicator, and FM muting with LED. FM section: 50-dB quieting 12.1 dBf (mono); S/N 70 dB; capture ratio 1.0 dB; selectivity 65 dB; stereo separation 40 dB at 1000 Hz; 3 $\frac{1}{8}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  12 $\frac{1}{4}$ " D..... \$300

### STA-100 Stereo Receiver

Amp section: features bass and treble controls and tape monitoring and dubbing; 22 W/ch continuous from 20-20,000 Hz with 0.1% THD; frequency response  $\pm 2$  dB from 50-20,000 Hz (phono RIAA), 20-20,000 Hz  $\pm 2$  dB (high level); input sensitivity 2.2 mV (phono), 160 mV (high level); phono overload 120 mV; S/N 83 dB (phono), 87 dB (aux.). Tuner: features FM Dolby de-emphasis; 50-dB quieting 14.2 dBf (mono), 39 dBf (stereo); S/N 65 dB (mono), 75 dB (stereo); frequency response 20-20,000 Hz  $\pm 0.5$  dB (mono); THD at 1000 Hz 0.1% (mono), 0.5% (stereo); capture ratio 1.5 dB; alternate channel selectivity 65 dB; stereo separation 38 dB at 1000 Hz; 6" H  $\times$  17" W  $\times$  12 $\frac{1}{2}$ " D..... \$280

### STA-530 Stereo Receiver

Amplifier: 16 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.06% THD; frequency response 15-25,000 Hz  $\pm 2$  dB; S/N 87 dB (phono), 75 dB (aux.); input sensitivity 2.2 mV (phono), 120 mV (high level); phono overload 130 mV. FM tuner: 50-dB quieting 11.25 dBf (mono); capture ratio 2 dB; alternate channel selectivity 70 dB; stereo separation 38 dB at 1000 Hz; S/N 67 dB; has PLL multiplex; 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{3}{8}$ " W  $\times$  12" D..... \$200

### STA-7 Stereo Receiver

Amplifier: 10 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.4% THD; frequency response 15-30,000 Hz  $\pm 2$  dB; S/N 81 dB (phono), 86 dB (aux.); phono input sensitivity 2.2 mV; phono overload 100 mV; frequency equalization response for mini speakers  $+6.5$  dB at 100 Hz. FM tuner: 50-dB quieting 19 dBf (mono), 44 dBf (stereo); capture



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ratio 3 dB; selectivity 45 dB; stereo separation 34 dB at 1000 Hz; S/N 72 dB (mono), 68 dB (stereo); frequency response 15-15,000 Hz  $\pm$  2 dB. Features equalization circuit for 50-Hz low-end response with mini speakers (switchable for flat response with regular speaker systems); blackout dial; signal-strength meter; A/B speaker selections; stereo/mono; three tone controls; headphone jack; ac outlet; black front panel. 3 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{2}$ " D..... \$180

## STA-430 Stereo Receiver

Amplifier: features two-speaker switching; bass and treble controls; loudness switch; mono and tape monitoring switches; input selector; 10 W/ch continuous from 20-20,000 Hz with 0.6% THD; frequency response  $\pm$  0.5 dB (phono RIAA), 15-30,000 Hz  $\pm$  2 dB (high level); S/N 89 dB (phono), 72 dB (aux.), 70 dB (tuner); input sensitivity 2.2 mV (phono), 160 mV (high level); phono overload 90 mV. Tuner: features tuning meter; 50-dB quieting 16.5 dBf (stereo); THD 1.0% at 1000 Hz; capture ratio 3.0 dB; selectivity 45 dB; stereo separation 34 dB at 1000 Hz; 5 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  12" D..... \$160

## REFERENCE BY QUADRAFLEX

### 650FET R Stereo Receiver

Amplifier: 65 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.1% THD; IM dist. 0.02% at 1 W; S/N 80 dB (phono), 85 dB (tape and aux.); phono overload 200 mV; RIAA deviation  $\pm$  0.25 dB; bass tone control range  $\pm$  10 dB at 50 Hz with 150 Hz turnover and at 100 Hz with 300 Hz turnover, treble  $\pm$  10 dB at 10,000 and 20,000 Hz. FM tuner: IHF sensitivity 9.8 dBf (1.7  $\mu$ V) mono, 17.7 dBf (4.2  $\mu$ V) stereo; 50-dB quieting sensitivity 13.5 dBf (2.6  $\mu$ V) mono, 35.9 dBf (34  $\mu$ V) stereo; channel separation at 1000 Hz 44 dB, 24 dB with multiplex blend; THD 0.1% mono, 0.15% stereo; S/N 72 dB; capture ratio 1 dB; alternate channel selectivity 72 dB; i-f rejection 95 dB; image rejection 60 dB. Features MOS FET front end; six equalization functions through turnover switch for presence control, separate LEDs; signal-strength and center-tuning meters; two-deck provisions for tape monitoring/dubbing; switchable speaker selector; hi-filter control; FM mute; overload indicator; headphone jack. 5 $\frac{1}{2}$ " H  $\times$  18 $\frac{1}{2}$ " W  $\times$  14" D..... \$480  
**450R.** Similar to 650FET R except 45 W/ch continuous under same conditions; IM dist. 0.04%; S/N 75 dB (phono), 80 dB (tape and aux.); FM tuner alternate channel selectivity 70 dB. Features separate turnover switch for presence controls with four equalization functions for tone control..... \$390  
**300R.** Similar to 450R except 30 W/ch continuous under same conditions; IM dist. 0.05%; phono overload 125 mV. FM usable sensitivity 10.3 dBf (1.8  $\mu$ V) mono, 17.9 dBf (4.3  $\mu$ V) stereo; 50-dB quieting sensitivity 14.2 dBf (2.8  $\mu$ V) mono, 36.4 dBf (36  $\mu$ V) stereo; THD 0.22% mono, 0.4% stereo; alternate channel selectivity 68 dB. Features similar minus clipping level indicator and turnover switch for presence control; 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  12 $\frac{1}{2}$ " D..... \$320  
**240R.** Similar to 300R except 24 W/ch continuous under same conditions; S/N 72 dB (phono), 78 dB (tape and aux.); phono overload 120 mV. FM tuner sensitivity (IHF) 10.8 dBf (1.9  $\mu$ V) mono, 18.3 dBf (4.5  $\mu$ V) stereo; THD 0.22% mono, 0.45% stereo; S/N 70 dB mono, 69 dB stereo. Features similar but no signal-strength meter and no LED mode indicators. 5 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{2}$ " D..... \$270  
**180R.** Similar to 240R except 18 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.15% THD; S/N 70 dB (phono), 75 dB (tape and aux.). FM tuner 50-dB quieting 14.8 dBf (3.0  $\mu$ V) mono, 36.8 dBf (38  $\mu$ V) stereo; THD 0.25% mono, 0.5% stereo; alternate channel selectivity 65 dB; S/N 70

dB mono, 68 dB stereo. Features similar but less FM mute switch; 5 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{2}$ " D ..... \$230

## ROTEL

### RX-2002 Stereo Receiver

Power amp: features dc circuitry and dual FET two-stage direct-coupled OCL complementary output circuitry; dual power supplies; dual nine-LED peak power indicator display; two-speaker switching; 90 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist. Preamp: features direct-coupled NF phono equalizer and tone control amp and phono moving-coil head amp; bass and treble controls with tone defeat; loudness switch; subsonic and high filters; -15 dB muting; tape monitor switch with two-way dubbing; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/30k ohms (tape); phono overload 260 mV. Tuner: features dual-gate MOS FET front end; quartz-lock FM tuning with LED; LED digital frequency readout; LED signal-strength and tuning display indicators; FM PLL multiplex with built-in pilot signal canceller; FM muting and 25- $\mu$ sec de-emphasis switches; mode selector; FM usable sensitivity 1.6  $\mu$ V (mono), 50-dB quieting sensitivity 38  $\mu$ V (stereo); S/N 75 dB; capture ratio 1.0 dB; image rejection 85 dB, stereo separation 45 dB at 1000 Hz; AM sensitivity 200  $\mu$ V/m (ferrite antenna); 5 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  14 $\frac{1}{2}$ " D ..... \$850  
**RX-2001.** Similar to RX-2002 without mode selector and tone defeat; power output 75 W/ch continuous under same conditions; phono input impedance 50k ohms; phono overload 250 mV; FM usable sensitivity 1.7  $\mu$ V (mono); image rejection 60 dB. \$750

### RX-604 Stereo Receiver

Power amp: features dc circuitry; dual power supplies; dual peak power meters; two-speaker switching; 50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist. Preamp: features direct-coupled NF phono equalizer and tone control amplifier; bass and treble controls; subsonic filter; input select buttons with LEDs; loudness switch; -15-dB audio muting; tape monitor switch with one-way tape dubbing; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/35k ohms (tape); phono overload 160 mV. Tuner: features FM MOS FET front end; PLL multiplex; signal-strength/tuning meter; FM muting; FM useable sensitivity 1.9  $\mu$ V (mono); 50-dB quieting 42  $\mu$ V (stereo); S/N 70 dB; capture ratio 1.0 dB; image rejection 55 dB; stereo separation 45 dB at 1000 Hz; AM sensitivity 200  $\mu$ V/m (IHF, ferrite antenna); 5 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  13 $\frac{1}{2}$ " D ... \$400  
**RX-504.** Similar to RX-604 minus audio muting and LED input indicators; output 40 W/ch continuous under same conditions ..... \$350  
**RX-404.** Similar to RX-504 minus one-way tape dubbing; has tape monitor selector; output 30 W/ch continuous with 0.06% THD and IM dist.; tape input sensitivity/impedance 150 mV/33k ohms; FM stereo 50-dB quieting 44  $\mu$ V; stereo separation 40 dB at 1000 Hz; AM sensitivity 250  $\mu$ V/m; 12 $\frac{1}{2}$ " D ..... \$290

### RV-555 Stereo Receiver

Amplifier: compact receiver with dc OCL power amplifier and dc NF phono equalizer and tone control amplifier; 20 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD, 24 W/ch into 4 ohms; frequency response 20-50,000 Hz; S/N (IHF "A") 75 dB (phono), 85 dB (tape and aux.); input sensitivity/impedance 2.8 mV/47,000 ohms (phono), 150 mV/50,000 ohms (tape, aux., and tuner). FM tuner: IHF sensitivity 2.0  $\mu$ V mono, 47  $\mu$ V stereo; alternate channel selectivity 50 dB; capture ratio 2.0 dB; S/N 70 dB mono; stereo HD 0.15% at 1000 Hz; stereo separation 35 dB at 1000 Hz; image rejection 40 dB; frequency response 30-15,000 Hz  $\pm$  0.5/-1 dB. AM IHF sensitivity 12.5  $\mu$ V (ext. antenna). Features signal-strength tuning meter, front-panel function and connection facilities, and stereo indicator. Includes RS-555 two-way air-suspension bookshelf speakers..... \$310

**RV-C1.** DC pulse-regulated converter for RV-555; converts to battery power supply ..... \$75

## RX-1000 Stereo Receiver

Amp: features low-noise ICs; two-speaker switching; bass and treble controls; loudness and subsonic filter switches; tape monitor switch with one-way tape dubbing; 35 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.06% THD and IM dist.; frequency response 5-40,000 Hz  $\pm$  0/-1 dB. Tuner: features FM FET front end; PLL multiplex; LED signal-strength and tuning indicators; FM muting; mode switch; FM usable sensitivity 1.9  $\mu$ V; 50-dB quieting 3.8  $\mu$ V (mono); capture ratio 1.5 dB; selectivity 60 dB  $\pm$  400 kHz; stereo separation 40 dB at 1000 Hz; i-f rejection 60 dB; AM sensitivity 200  $\mu$ V/m; 3 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{2}$ " D..... \$300

## RX-300A Stereo Receiver

Amplifier: two-speaker switching; 20 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.5% THD, 24 W/ch into 4 ohms at 1000 Hz; frequency response 20-50,000 Hz  $\pm$  3 dB; S/N (IHF "A") 75 dB (phono), 85 dB (tuner and tape); input sensitivity/impedance 2.5 mV/47,000 ohms (phono), 150 mV/50,000 ohms (tape, aux., tuner). FM tuner: IHF sensitivity 2.0  $\mu$ V (mono), 48  $\mu$ V (stereo); capture ratio 2.0 dB; alternate channel selectivity 50 dB; IHF S/N 70 dB (mono); stereo separation 35 dB at 1000 Hz; image rejection 40 dB; frequency response 30-15,000 Hz  $\pm$  0.5/-1 dB; HD 0.3% stereo at 1000 Hz. AM tuner IHF sensitivity 12.5  $\mu$ V (ext. antenna) Features dc OCL complementary power circuitry; dc NF phono equalizer and tone control amplifier; linear FM dial scale and signal-strength tuning meter; stereo indicator; facility for two speaker systems; headphone jack. 125 mm H  $\times$  400 mm W  $\times$  252 mm D..... \$235

## SAE

### R18 Stereo Receiver

Amplifier: features LED power and tape output bar graph display; parametric equalizer; moving-coil phono input; 180 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD. Tuner: features digital frequency readout; quartz-lock synthesized touch tuning; LED signal-strength and multipath bar graph display; five-station AM and FM memory preset; 50-dB stereo quieting 34.7 dBf; FM dist. 0.15% (stereo). Includes infrared remote control ..... \$1500

### R12 Stereo Receiver

Amplifier: features LED power and tape output bar graph display; parametric equalizer with tape EQ; external processor loop input; moving-coil phono input; 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD. Tuner: features digital frequency readout; quartz-lock synthesized touch tuning; LED signal-strength and multipath bar graph display; 50-dB stereo quieting 34.7 dBf; FM dist. 0.15% (stereo). Includes infrared remote control ..... \$1200

### R9 Stereo Receiver

Amplifier: features LED power output bar graph display; two-way tape dubbing; external processor input; bass, midrange, and treble controls; 90 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD. Tuner: features digital frequency readout; quartz-lock synthesized touch tuning; LED signal-strength and multipath bar graph display; 50-dB stereo quieting 36.1 dBf; FM dist. 0.22% (stereo)..... \$850

### R6 Stereo Receiver

Amplifier: features LED power and tape output bar graph display; two-way tape dubbing; external processor input; 60 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD. Tuner: features digital frequency readout; quartz-lock tuning; LED signal-strength and multipath bar display; 50-dB quieting 36.1 dBf (stereo); FM dist. 0.25% (stereo)..... \$675



## SANSUI

### G-9700 DC Stereo Receiver

Amplifier: features dc power amp; dual 12-LED bar graph peak-power level meters with range and mode control; speaker power protector circuitry with auto shut-off; separate bass, midrange, and treble controls with tone defeat; two-way speaker switching; subsonic and high filters; loudness and balance controls; mic mixing; two-way tape monitoring and dubbing; output 200 W/ch continuous, both channels driven into 8 ohms with 0.02% THD; frequency response 0-200,000 Hz +0/-3 dB; rise time 1.4  $\mu$ sec. Tuner features digital quartz-locked tuning circuitry; fluorescent signal-strength and center tuning readouts; LED digital frequency readout; FM wide/narrow i-f bandwidth selector; audio muting; FM mode switch; FM auto noise filter; Dolby FM de-emphasis switch ..... \$1100

**G-7700.** Similar to G-9700 minus power meter range and mode selectors, midrange tone control, FM i-f bandwidth selector, and FM auto noise filter; has 15-segment LED peak power bar graph display and two-way tape dubbing; output 120 W/ch continuous with 0.025% THD; FM tuner sensitivity 1.7  $\mu$ V (IHF); FM S/N 76 dB; FM dist.; 0.1%; FM capture ratio 1.0 dB ..... \$800

**G-6700.** Similar to G-7700 except 90 W/ch; FM tuner sensitivity 1.9  $\mu$ V (IHF); FM S/N 75 dB. \$730

### 5900Z Stereo Receiver

Amplifier section: features dc servo amp circuitry; dual LED peak power level indicators; two-speaker



switching; bass and treble tone controls with center defeat; up/down touchbutton volume controls with fluorescent level indicators; high filter switch; loudness switch; -20-dB audio muting; tape/source monitoring with one-way tape dubbing; input selectors; 75 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.03% THD; S/N 80 dB (phono), 95 dB (aux.). Tuner: features digital synthesizer tuning with LED digital frequency readout, analog dial scale, and auto/manual up/down scan tuning; six-station AM/FM memory preset with LED indicators; auto/mono FM mode/muting switch; five-LED signal-strength indicators; LED FM stereo and locked indicators. FM section: IHF usable sensitivity 10.8 dB; S/N 76 dB; THD 0.15% ..... \$600

**4900Z.** Similar to 5900Z minus touchbutton volume controls with volume level indicators, audio muting, and tape dubbing; 55 W/ch under same conditions ..... \$490

**3900Z.** Similar to 4900Z minus LED peak power level indicators; 40 W/ch with 0.05% THD ..... \$390

### R-70 Stereo Receiver

Amplifier: features dc servo amplifier circuitry; dual LED peak power level indicators; two-speaker switching; bass and treble controls with center defeat; high filter switch; loudness switch; two-deck tape monitoring/copying; input selector; 65 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.08% THD; S/N 73 dB (phono), 90 dB (aux.). Tuner: features five-LED signal-strength and center tuning indicators and FM mode/muting switch. FM section: IHF usable sensitivity 12 dB; S/N 72 dB; THD 0.5%; selectivity 55 dB; capture ratio 1.0 dB ..... \$400

**R-50.** Similar to R-70 minus dc servo amp circuitry; 45 W/ch continuous into 8 ohms from 30-20,000 Hz with 0.09% THD ..... \$300

**R-30.** Similar to R-50 minus LED power indicators and high-cut filter; 25 W/ch into 8 ohms from 40-20,000 Hz with 0.09% THD ..... \$230

### Super Compo Series 900

Consists of B-77 power amplifier, C-77 stereo pre-amplifier, T-77 AM-FM stereo tuner, FR-D3 direct-drive turntable, S-50 three-way bookshelf speaker system, and audio rack console; optional matching

cassette deck available; must be purchased as integral unit.

**B-77 Stereo Power Amplifier.** Features Linear A circuitry and dc servo configuration; separate vertical LED peak power and eight-level spectrum analyzer displays; two-speaker switching; 60 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.03% THD; frequency response 5-70,000 Hz +0/-2 dB; S/N 115 dB ..... \$300

**C-77 Stereo Preamplifier.** Features two-source mixing and automatic or manual cross-fading with fluorescent indicator; built-in moving-coil head amp; bass and treble controls with center defeat; high- and low-cut filter switches; variable loudness control; two-way tape dubbing; built-in mic preamp; frequency response  $\pm 0.5$  dB from 20-20,000 Hz (RIAA phono), 5-70,000 Hz +0.5/-2 dB (aux., tuner, tape); S/N 80 dB (phono MM), 60 dB (phono MC), 90 dB (aux., tuner, tape) ..... \$200

**T-77 AM-FM Stereo Tuner.** Features quartz PLL digital synthesizer tuning with LED digital frequency readout and auto/manual up/down scan tuning; eight-station AM/FM memory preset with last station automatically stored and battery backup during power outage; five-LED signal-strength indicators. FM section: IHF usable sensitivity 10.8 dB; S/N 72 dB; THD 0.25%; capture ratio 1.0 dB ..... \$270

**FR-03 Turntable.** Two-speed (33 $\frac{1}{3}$  and 45-rpm) semi-automatic single-ply direct-drive turntable with auto return/shutoff arm; see Section 4. Turntables, for more information ..... \$190

**S-50 Speaker System.** Three-way bookshelf speaker system; see Section 16, Speakers, for more information ..... \$400 pr.

## SANYO

### PLUS 200 Stereo Receiver

Power amp section: features full input-to-output dc coupling; fluid convection radiator; dual power supplies; may be separated with optional "umbilical" cord; dual 12-LED peak power display with X0.01, X0.1, and X1 power display range selector; three-way speaker switching; 200 W/ch continuous, both channels driven into 4 or 8 ohms from 20-20,000 Hz with 0.009% THD; frequency response 7-100,000 Hz +0/-1 dB; S/N 110 dB (IHF A); damping factor 60; slew rate 170 V/ $\mu$ sec. Preamp section: features variable resistive and capacitive loading for MM cartridges (with selectors) and preamp for moving-coil cartridges; bass, midrange, and treble controls with tone defeat and bass and treble turnover frequency selectors; two-way tape dubbing and monitoring; subsonic and high filters; -20-dB muting and loudness switches; input selector with LEDs; external processor loop control; input sensitivity/impedance 2.5 mV/47k ohms (phono MM), 250  $\mu$ V/100 ohms (phono MC), 150 mV/47k ohms (aux. and tape); frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA), 20-20,000 Hz  $\pm 0.3$  dB (aux. and tape); S/N (IHF A) 97 dB (phono MM), 70 dB (MC), 95 dB (aux. and tape); max. phono input 250 mV rms (MM), 25 mV rms (MC). Tuner: features "sampling quartz locked" tuning with frequency readout display; seven-LED signal-strength/multipath/deviation bar graph display; narrow/wide i-f bandwidth selector; FM multiplex filter; quartz locked, 25- $\mu$ sec, FM de-emphasis, and FM muting switches; FM usable sensitivity 1.8  $\mu$ V (mono); 50-dB quieting 2.6  $\mu$ V (mono), 36  $\mu$ V (stereo); THD at 1000 Hz, mono 0.15% (narrow), 0.09% (wide), stereo 0.2% (narrow), 0.1% (wide); S/N 83 dB (mono), 78 dB (stereo); frequency response 20-15,000 Hz +0.5/-1 dB; alternate channel selectivity 80 dB (narrow) and 55 dB (wide) at  $\pm 400$  kHz; capture ratio 1.8 dB (narrow), 1.2 dB (wide) ..... \$900

**PLUS 130.** Similar to PLUS 200 without variable resistive and capacitive loading controls for MM cartridges, FM deviation meter function, and FM multiplex filter switch in tuner section; power amp not separable; power output 130 W/ch continuous, both channels driven into 4 or 8 ohms from 20-20,000 Hz with 0.025% THD; damping factor 50; slew rate 150 V/ $\mu$ sec ..... \$760

### PLUS 75 Stereo Receiver

Power amp: features dc, all-differential drive, and

IC circuitry; dual seven-LED peak power bar graph display with X0.1 and X1 display range selector; two-way speaker switching; 75 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; frequency response 7-100,000 Hz +0/-1 dB; S/N 110 dB (IHF A); damping factor 50; input sensitivity/impedance 1 V/47k ohms; slew rate 80 V/ $\mu$ sec. Preamp: features low-noise class-A phono preamp with moving-coil cartridge capability; bass, midrange, and treble controls with tone defeat and bass and treble turnover frequency selectors; subsonic and high filters; two-way tape dubbing and monitoring; -20-dB muting; input selector with LEDs; input sensitivity/impedance 2.5 mV/47k ohms (phono MM), 250  $\mu$ V/100 ohms (phono MC), 150 mV/47k ohms (aux. and tape); frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA), 10-40,000 Hz  $\pm 0.5$  dB (aux. and tape); S/N (IHF A) 85 dB (phono MM), 70 dB (phono MC), 95 dB (aux. and tape); max. phono input 200 mV (MM), 20 mV (MC). Tuner: features dual-gate MOS FET FM front end; "sampling quartz locked" tuning system with illuminated analog dial and LED digital frequency readout; quartz locked switch with LED; FM muting; five-LED signal-strength bar display; rear-panel de-emphasis switch; FM usable sensitivity 1.9  $\mu$ V (mono); 50-dB quieting 2.7  $\mu$ V (mono), 39  $\mu$ V (stereo); S/N 75 dB (mono), 70 dB (stereo); THD at 1000 Hz 0.2% (mono), 0.3% (stereo); frequency response 20-15,000 Hz +1/-2 dB; alternate channel selectivity 75 dB; capture ratio 1.2 dB; stereo separation 45 dB at 1000 Hz; spurious rejection 80 dB; image rejection 70 dB; i-f rejection 90 dB; AM usable sensitivity 300  $\mu$ V/m (ferrite, external antenna). 5 $\frac{1}{2}$ " H  $\times$  18 $\frac{1}{8}$ " W  $\times$  11 $\frac{1}{2}$ " D ..... \$550

**PLUS 55.** Similar to PLUS 75 without midrange control, bass and treble turnover frequency selectors, and tone defeat; no -20-dB muting switch; moving-magnet phono preamp only; has five-LED power bar graph display and one-way tape dubbing; output 55 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist; damping factor 40; slew rate 60 V/ $\mu$ sec; aux. and tape frequency response 10-40,000 Hz +1 dB; phono S/N 75 dB (IHF A); max. phono input 150 mV rms ..... \$400

### 2050 Stereo Receiver

Power amp: features complementary Darlington-connected circuitry; dual power meters; two-way speaker switching; four-way output protection; 50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD. Preamp: features phono moving-magnet preamp; bass and treble controls; high and low filters; two-deck tape monitoring and dubbing; input selector with LEDs; input sensitivity/impedance 150 mV/47k ohms (aux. and tape), 2.5 mV (phono); frequency response  $\pm 0.2$  dB from 30-15,000 Hz (phono RIAA), 10-40,000 Hz +0/-1 dB (aux. and tape); phono overload 150 mV; S/N (IHF A) 78 dB (phono), 95 dB (aux. and tape). Tuner: features dual-gate MOS FET front end; "sampling quartz-locked" tuning with LED locked indicator; signal-strength and tuning meters; mode/FM muting switch; FM usable sensitivity 1.9  $\mu$ V (IHF); S/N 75 dB (mono), 70 dB (stereo); dist. 0.2% (mono) and 0.3% (stereo) at 1000 Hz; capture ratio 1.5 dB; alternate channel selectivity 70 dB; spurious rejection 80 dB; image rejection 70 dB; i-f rejection 90 dB. stereo separation 45 dB at 1000 Hz. 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{8}$ " W  $\times$  10 $\frac{1}{8}$ " D ..... \$300

**2033.** Similar to 2050 minus low filter switch and quartz-locked tuning; tuner has analog tuning dial; output 33 W/ch; frequency response  $\pm 0.4$  dB (phono RIAA), 20-40,000 Hz (aux. and tape); S/N (IHF A) 73 dB (phono) and 90 dB (aux. and tape); max. phono overload 130 mV ..... \$270

**2016.** Similar to 2033 minus dual power and center tuning meters, high filter, and two-way tape dubbing and monitoring; has tape/source monitor switch and one-way speaker switching; power output 16 W/ch continuous, both channels driven into 8 ohms from 40-20,000 Hz with 0.3% THD; frequency response  $\pm 0.8$  dB from 30-15,000 Hz (phono RIAA), 10-30,000 Hz +0/-1 dB (aux. and

# 1 RECEIVERS

tape); aux. and tape impedance 50k ohms; phono S/N 70 dB (IHF A); FM usable sensitivity 2.0  $\mu$ V (IHF); S/N 70 dB (mono), 65 dB (stereo); dist. 0.3% (mono), 0.4% (stereo); capture ratio 3.0 dB; alternate channel selectivity 55 dB; spurious rejection 70 dB; image rejection 50 dB; i-f rejection 80 dB; stereo separation 40 dB at 1000 Hz ..... \$180

## H. H. SCOTT

### 390R Stereo Receiver

Amplifier section: 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at



0.03% THD and IM dist.; damping factor 100; frequency response 20-20,000 Hz  $\pm$ 0.5 dB; phono sensitivity 2.5 or 5 mV switchable; max. input 300 or 600 mV; S/N (weighted, inputs shorted) 90 dB phono, 95 dB tape/aux. FM tuner section: IHF usable sensitivity 9.8 dBf (1.7  $\mu$ V) mono; 50-dB quieting sensitivity 15.6 dBf (3.3  $\mu$ V) mono, 35.6 dBf (33  $\mu$ V) stereo. S/N 80 dB mono, 75 dB stereo. distortion 0.1% mono, 0.2% stereo; capture ratio 1.0 dB; selectivity 80 dB; i-f rejection 100 dB; image rejection 90 dB; spurious response rejection 100 dB; subcarrier rejection 74 dB; stereo separation 50 dB at 1kHz. AM section: sensitivity 150  $\mu$ V/m (rod antenna); S/N 55 dB; selectivity 50 dB; image rejection 60 dB. Features 18-LED logarithmic power display calibrated in watts and dBW; detented volume, bass, midrange and treble controls with tone defeat and switchable bass and treble turnover; two-position subsonic and high filters; FM muting; loudness mode; dual tape monitors with two-way dubbing; two phono inputs with switchable sensitivity; LED function indicators; external-processor accessory loop; dual tuning meters; three speaker outputs; switchable 25/50/75  $\mu$ sec de-emphasis. 6 $\frac{1}{2}$ " H  $\times$  22 $\frac{1}{2}$ " W  $\times$  15 $\frac{1}{4}$ " D ..... \$775  
**380R.** Similar to 390R, but 85 W/ch continuous under same conditions. Features similar, but subsonic and single-position high filters only; signal strength, tuning, and dual power meters; no loudness switch; two speaker outputs. 6" H  $\times$  20 $\frac{1}{2}$ " W  $\times$  13 $\frac{3}{4}$ " D ..... \$600  
**370R.** Similar to 380R, but 60 W/ch at 0.05% THD and IM dist. under same conditions; damping factor 60; phono sensitivity 2.5 mV; max phono input 200 mV; S/N (weighted, inputs shorted) 85 dB phono, 90 dB aux./tape. FM tuner section: usable sensitivity 10.3 dBf (1.8  $\mu$ V) mono; 50-dB quieting sensitivity 16.1 dBf (3.5  $\mu$ V) mono, 36.3 dBf (36  $\mu$ V) stereo; S/N 75 dB mono, 70 dB stereo; distortion 0.125% mono, 0.25% stereo; capture ratio 1.25 dB; selectivity 60 dB; i-f rejection 85 dB; image rejection 65 dB; spurious response rejection 80 dB; subcarrier rejection 60 dB; stereo separation 45 dB at 1kHz. AM section: sensitivity 250  $\mu$ V/m; S/N 50 dB; selectivity 45 dB; image rejection 60 dB. Features similar, but no tone defeat or turnover switches; low instead of subsonic filter, single phono input with fixed sensitivity. 6" H  $\times$  20 $\frac{1}{2}$ " W  $\times$  11 $\frac{3}{4}$ " D ..... \$500  
**350R.** Similar to 370R, but 40 W/ch at 0.06% THD and IM dist., same conditions; FM capture ratio 1.5 dB; AM S/N 45 dB, selectivity 40 dB, image rejection 40 dB. Features similar, but no midrange control or LED input-select indicators, hi filter only, one-way tape dubbing. 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{3}{4}$ " W  $\times$  11 $\frac{3}{4}$ " D ..... \$400  
**330R.** Similar to 350R except 25 W/ch at 0.08% THD and IM dist., same conditions; S/N 80 dB

phono, 85 dB tape/aux.; max phono input 180 mV; damping factor 50; frequency response 20-20,000 Hz  $\pm$ 1.0 dB. FM tuner section: usable sensitivity 10.8 dBf (1.9  $\mu$ V) mono; 50-dB quieting sensitivity 16.7 dBf (3.8  $\mu$ V) mono, 37 dBf (39  $\mu$ V) stereo; S/N 72 dB mono, 67 dB stereo; distortion 0.15% mono, 0.3% stereo; capture ratio 2.0 dB; selectivity 50 dB; i-f rejection 80 dB; image rejection 55 dB; spurious response rejection 78 dB; subcarrier rejection 58 dB. Features similar, but no power meters, has single tape monitor. 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{3}{4}$ " W  $\times$  10 $\frac{1}{4}$ " D ..... \$280

### 375 R Stereo Receiver

Amplifier section: features dc power amp with fully complementary OCL output stages and low-noise differential input stage current mirror loaded; short- and open-circuit electronic protection; dual fluorescent output level meters calibrated in watts and dBW; two-speaker switching; LED safety protection indicator; detented bass, midrange, and treble tone controls; high and subsonic filter switches; two tape monitors with 1-to-2 tape dubbing; 65 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD. Tuner section: features three-stage FM i-f ceramic filters; LSI/PLL stereo decoder; fluorescent digital frequency readout and high-inertia flywheel tuning; fluorescent display for center tuning, signal-strength, and stereo indication; FM muting; multiplex filter; 25/50/75- $\mu$ sec FM de-emphasis switch; 75/300-ohm antenna input terminals; wood side panels ..... \$460

### 355 R Stereo Receiver

Amplifier section: features dc circuitry with fully complementary OCL output stages and low-noise differential input stage current mirror loaded; short- and open-circuit electronic protection; dual fluorescent power output level meters calibrated in watts and dBW; LED safety protection indicator; two-speaker switching; bass, midrange, and treble tone controls with center defeat; high and subsonic filters; two tape monitors with 1-to-2 tape copying; 45 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.08% THD. Tuner section: features three-stage FM i-f ceramic filters and LSI/PLL stereo decoder; five-LED digital IC-controlled signal-strength indicators; three-LED center tuning indicators; LED stereo indicator; FM muting; 25/50/75- $\mu$ sec FM de-emphasis switch; multiplex filter; 75/300-ohm antenna input terminals; wood side panels ..... \$380

### 335 R Stereo Receiver

Amp section: features dc design with fully complementary OCL output and low-noise differential input stage current mirror loaded; short- and open-circuit electronic protection; 12-LED logarithmic power output bar graph display; two speaker switching; bass and treble tone controls with center defeat; subsonic filter; tape monitor switch; 27 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.08% THD. Tuner section: features three-stage FM i-f ceramic filters; LSI/PLL stereo decoder; five-LED digital IC-controlled signal-strength and three-LED center-tuning indicators; LED stereo indicator; FM muting; 75/300-ohm antenna input terminals; wood side panels ..... \$280

### 325 R Stereo Receiver

Amp section: features dc circuitry with fully complementary OCL output stage and low-noise differential input stage current mirror loaded; short- and open-circuit electronic protection; two-speaker switching; bass and treble tone controls with center defeat; subsonic filter; tape monitor switch; 18 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.1% THD. Tuner section: features three-stage FM i-f ceramic filters; LSI/PLL stereo decoder; five-LED digital IC-controlled signal-strength indicators and three-LED tuning indicators on dial pointer; LED stereo indicator; FM muting; 75/300-ohm antenna input terminals; wood side panels ..... \$230

## SHARP

### System 30 Pro Series

Consists of SM-30 integrated amplifier and ST-30 broadcast tuner ..... \$390

**SM-30 Integrated Amplifier.** Features OTL dc circuitry; dual six-LED power output indicators; two-speaker switching; bass and treble controls; fader control; loudness, mode, and input pushbutton selectors. 25 W/ch continuous into 8 ohms from 40-20,000 Hz with 0.8% THD; damping factor 30 at 8 ohms, 1000 Hz; input sensitivity/impedance 3.5 mV/47k ohms (phono), 220 mV/47k ohms (tuner, tape, aux.), 3 mV/47k ohms (mic); frequency response  $\pm$ 1 dB from 20-20,000 Hz (phono RIAA), 20-45,000 Hz  $\pm$ 3 dB (tape, tuner, aux.); 3 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{4}$ " W  $\times$  9 $\frac{1}{2}$ " D.

**ST-30 AM-FM Tuner.** Features FET front end and PLL multiplex circuitry; five-LED signal-strength and LED center-tuning indicators; band, mode, and air check pushbutton selectors; 400-Hz tone generator. FM section: IHF sensitivity 11.2 dBf (2.0  $\mu$ V); S/N 70 dB; dist. at 400 Hz 0.2% (mono), 0.4% (stereo); frequency response 30-15,000 Hz  $\pm$ 3 dB; capture ratio 1.5 dB; IHF selectivity 60 dB; image rejection 50 dB; i-f rejection 80 dB; spurious rejection 70 dB; 3 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{4}$ " W  $\times$  9 $\frac{1}{2}$ " D.

## SHERWOOD

### S-7650 CP Stereo Receiver

Amplifier section: 50 W/ch (16.5 dBW) continuous power into 8 ohms, 20-20,000 Hz at 0.2% THD; IM dist. 0.2%; frequency response 20-20,000 Hz  $\pm$ 0.5 dB; phono sensitivity 2.5 mV; max. phono input 160 mV; phono input 47k ohms, 220 pF; S/N (A-weighted) 80 dB phono (92 dB for 10 mV in), 95 dB aux.; damping factor 30. Tuner section: FM usable sensitivity 9.8 dBf (1.7  $\mu$ V) mono; 50-dB quieting sensitivity 13.9 dBf (2.7  $\mu$ V) mono, 36.8 dBf (38  $\mu$ V) stereo; S/N 70 dB mono, 66 dB stereo; distortion 0.15% mono, 0.25% stereo, at 100% modulation; capture ratio 1.0 dB; selectivity 70 dB; AM rejection 60 dB; i-f rejection 90 dB; image response rejection 80 dB; spurious response rejection 95 dB; separation 40 dB at 1000 Hz, 30 dB from 20-10,000 Hz; antenna 300-ohm and 75-ohm. AM: sensitivity 15  $\mu$ V; selectivity 25 dB; i-f rejection 40 dB; image rejection 40 dB; spurious response rejection 40 dB; frequency response -6 dB at 4000 Hz ..... \$425  
**S-7450 CP.** Similar to S-7650 except 35 W/ch (14.8 dBW), same conditions; max phono input 140 mV. Tuner section: FM usable sensitivity 10.3 dBf (1.8  $\mu$ V); 50-dB quieting sensitivity 15.6 dBf (3.3  $\mu$ V) mono, 37.0 dBf (39  $\mu$ V) stereo; selectivity 60 dB; AM rejection 55 dB; image rejection 55 dB; i-f rejection 75 dB; spurious response rejection 85 dB; AM sensitivity 20  $\mu$ V ..... \$350  
**S-7250 CP.** Similar to S-7450 except 25 W/ch (13.0 dBW), same conditions. Tuner section: FM usable sensitivity 10.8 dBf (1.9  $\mu$ V) mono; 50-dB quieting sensitivity 16.1 dBf (3.5  $\mu$ V) mono, 37.0 dBf (39  $\mu$ V) stereo; spurious response rejection 80 dB ..... \$290  
**S-7150 CP.** Similar to S-7250 CP except 18 W/ch continuous under same conditions; phono S/N 79 dB (IHF A); FM capture ratio 1.2 dB ..... \$230

## SONY

### STR-V55 Stereo Receiver

Amplifier: features dc circuitry; Pulse Power Supply and High- $f_T$  multiple miniature transistors; built-in moving-coil head amp; two-speaker switching; bass and treble tone controls with center defeat; low-filter switch; mode, loudness, and -20-dB audio muting selectors; two-deck tape monitoring and two-way dubbing; input selectors with LED indicators; 55 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; damping factor 50 at 1000 Hz, 8 ohms; frequency response 0-40,000 Hz +0/-1 dB (power amp),  $\pm$ 0.5 dB (phono RIAA), 5-200,000 Hz -1 dB (tape, aux.); input sensitivity/impedance 1 V/50k ohms (power amp), 2.5 mV/50k ohms (phono MM), 0.25 mV/100k ohms (phono MC), 150 mV/50k ohms (tape, aux.); phono overload 200 mV (MM), 20 mV (MC); S/N (IHF A) 116 dB (power amp), 80 dB (phono MM), 65 dB (phono MC), 95 dB (tape, aux.). Tuner: features quartz digital frequency-synthesis tuning with memory/auto/manual



up/down scan tuning with LED digital frequency readout and eight-station AM/FM memory preset with LED digital memory station readout; low, mid, and high tuning level selectors; five-LED signal-strength indicators. FM section: 50-dB quieting sensitivity 16.1 dBf (3.5  $\mu$ V) mono, 36.1 dBf (35  $\mu$ V) stereo; S/N 75 dB (mono), 70 dB (stereo); THD at 1000 Hz 0.1% (mono), 0.15% (stereo); frequency response 30-15,000 Hz +0.5/-1.5 dB; capture ratio 1 dB; alternate channel selectivity 80 dB  $\pm$ 400 kHz; image rejection 85 dB; i-f rejection 100 dB; spurious rejection 95 dB; stereo separation 45 dB at 1000 Hz; 5 1/4" H  $\times$  17" W  $\times$  14 1/4" D.....

..... \$520  
**STR-V45.** Similar to STR-V55 minus two-way tape dubbing, audio muting, and built-in moving-coil position; has one-way tape dubbing and el-core power transformer with bipolar output devices; 40 W/ch under same conditions with 0.04% THD and IM dist.; tape, aux. frequency response 5-50,000 Hz -1 dB..... \$420

### STR-V35 Stereo Receiver

Amplifier section: features dc circuitry; el-core transformer with bipolar output devices; electronic relay protection; two-speaker switching; bass and treble controls with tone defeat; mode and loudness selectors; two-deck tape monitoring and one-way tape dubbing; input selectors with LEDs; 35 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist.; damping factor 40 at 1000 Hz, 8 ohms; frequency response  $\pm$ 0.5 dB (phono RIAA), 5-70,000 Hz -1 dB (aux., tape); input sensitivity/impedance 2.5 mV/50k ohms (phono MM), 150 mV/50k ohms (aux., tape); phono overload 150 mV; S/N (IHF A) 79 dB (phono MM), 95 dB (tape, aux.). Tuner: features acute servo lock tuning; five-LED signal strength and three-LED center tuning indicators; low/high muting selectors. FM section: 50-dB quieting 16.1 dBf (3.5  $\mu$ V) mono, 36.1 dBf (35  $\mu$ V) stereo; S/N 75 dB (mono), 70 dB (stereo); THD at 1000 Hz 0.1% (mono), 0.15% (stereo); frequency response 30-15,000 Hz  $\pm$ 1 dB; capture ratio 1.5 dB; alternate channel selectivity 60 dB  $\pm$ 400 kHz; image rejection 45 dB; spurious rejection 75 dB; i-f rejection 90 dB; stereo separation 45 dB at 1000 Hz; 5 1/4" H  $\times$  17" W  $\times$  14 1/4" D..... \$320  
**STR-V25.** Similar to STR-V35 except 28 W/ch under same conditions; phono S/N (IHF A) 77 dB..... \$270

### STR-V15 Stereo Receiver

Amp section: features two-speaker switching; bass and treble tone controls; switchable loudness compensation; two-deck tape monitoring; input selectors; 22 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.08% THD and IM dist.; S/N (IHF A weighted) 75 dB (phono MM), 90 dB (tape, aux.). Tuner: features acute servo lock tuning; five-station FM preset; LED signal-strength, FM tuning, and FM stereo indicators; interstation muting. FM section: usable sensitivity 10.3 dBf (1.8  $\mu$ V); 50-dB quieting 16.1 dBf (3.5  $\mu$ V) mono, 38.3 dBf (45  $\mu$ V) stereo; S/N 75 dB (mono), 70 dB (stereo); HD at 1000 Hz 0.2% (mono), 0.3% (stereo); capture ratio 1.5 dB; stereo separation 45 dB at 1000 Hz; 4 1/2" H  $\times$  17" W  $\times$  12 3/4" D..... \$220

## STUDER/REVOX

### Revox B780 FM Stereo Receiver

Amplifier section: features  $\pm$ 8-dB bass (120 Hz), presence (3000 Hz), and treble (8000 Hz) tone



controls with tone defeat; switchable low, high, and low/high filter selections; mono, loudness, and -20-dB audio muting selectors; phono, tuner,

aux., tape 1 and 2 input selectors; 75 W/ch into 8 ohms from 20-20,000 Hz with 0.05% THD; dynamic headroom 1 dB. Tuner: features microcomputer-controlled digital synthesis tuning with auto up/down pushbutton scan tuning in 25-kHz steps (accuracy  $\pm$ 0.0025%) and LED digital frequency readout; 18-station memory preset with last station instantly recalled; noise reduction, high blend, FM mono, muting off, and stereo only selectors; signal-strength meter; IHF 50-dB quieting 13.2 dBf (2.5  $\mu$ V); stereo THD 0.25%; S/N 78 dB; capture ratio 2 dB; alternate channel selectivity 78 dB; AM suppression 70 dB; unit can be used with European, Asian, and U.S. station allocations and de-emphasis curves and with standard ac line voltages; 6" H  $\times$  17 3/4" W  $\times$  16 1/2" D..... \$2699

## TANDBERG

### TR 2080 Stereo Receiver

Amplifier section: 80 W/ch continuous power into 8 ohms from 20-20,000 Hz at 0.05% distortion, both



channels driven; dynamic intermodulation (DIM) 0.02%; rise time 1  $\mu$ sec. AM tuner includes two MOS FETs and auto volume control. Features provision for two tape recorders, two phono, three pairs of speakers. Inputs have separate preamplifiers with adjustable sensitivity controls; mode switch; filters, tone and other controls can modify signals on Tape 2 output. Rosewood and black lacquer finishes available..... \$1200

**TR 2060.** Similar to TR 2080 with 5-gang FM tuning; electronic pushbutton selection preset tuning for five FM stations; stereo decoder with PLL oscillator; connections for two tape decks, one phono; direct-coupled amplifier; 60 W/ch at 0.09% THD and IM, 20-20,000 Hz into 8 ohms; DIM under 0.03%; slew rate 20 V/ $\mu$ sec; rise time 1  $\mu$ sec..... \$800

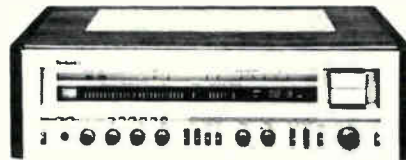
**TR 2045.** Similar to TR 2060. Five FM presets; high and low filters. 45 W/ch under same conditions; FM stereo S/N 74 dB; AM suppression 65 dB; stereo separation 40 dB..... \$650

**TR 2030.** Similar to TR 2045 except 30 W/ch under same conditions..... \$500

## TECHNICS

### SA-818 Stereo Receiver

AM-stereo FM receiver incorporates Class A dc servo power amp, Acoustic Control preamp, and LSI



quartz digital synthesizer tuner. Power amplifier: features integral power supply/output circuitry block, LED protection/safety indicators, dual flashing LED peak power indicators with on/off and X1 (0.1-160 W) and X0.01 (0.001-1.6 W) meter display controls, and main, remote, and main + remote speaker selector; 110 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.005% THD and 0.01% IM dist.; dynamic headroom 1.5 dB into 8 ohms. Preamp: features Acoustic Control system with 50-Hz  $\pm$ 10-dB bass, 1000-Hz  $\pm$ 6-dB midrange, and 20,000-Hz  $\pm$ 10-dB treble controls with  $\pm$ 6 dB/octave low (100/70 Hz) and high (10,000/7000 Hz) boost/cut switches; mode, -20-dB audio muting, and loudness switches; tuner/phono/aux. input selector with LEDs; rec mode with two-way tape dubbing; tape/source monitor switch; balance control; frequency response  $\pm$ 0.3 dB (RIAA phono), 20-20,000 Hz

+0/-0.3 dB (aux. and tape); input sensitivity/impedance 0.28 mV/47k ohms (phono), 16 mV/33k ohms (aux. and tape); S/N (IHF A) 74 dB (phono), 79 dB (aux. and tape); max. phono input 180 mV. Tuner: features eight AM/FM electronic preset pushbutton tuning with LED preset channel indicators and memory (stores last preset station); manual up/down scan tuning; fluorescent digital frequency display; dual i-f bandwidth with LED indicators; LED quartz-lock indicator; two-color five-LED AM/FM signal-strength indicators; pushbutton selectors for 25, 50, and 75  $\mu$ sec FM de-emphasis; hi-blend; FM/AM muting/mode. FM tuner specs: sensitivity 1.8  $\mu$ V; 50-dB quieting 2.5  $\mu$ V (mono), 35.4  $\mu$ V (stereo); THD at 1000 Hz 0.1% (mono), 0.15% (stereo); S/N 76 dB (mono) and 72 dB (stereo); frequency response 20-15,000 Hz +0.2/-0.8 dB; alternate channel selectivity  $\pm$ 400 kHz 65 dB (normal), 85 dB (narrow); capture ratio 1.2 dB (normal); image rejection 80 dB; i-f rejection 90 dB; stereo separation 45 dB at 1000 Hz. 6 3/4" H  $\times$  22 1/2" W  $\times$  15 1/2" D..... \$800

**SA-616.** Similar to SA-818 minus tuner i-f bandwidth, FM hi-blend, and FM de-emphasis selectors; no muting and mono/stereo mode switches in preamp section; preamp has bass and treble controls with low, mid (1000 Hz  $\pm$ 5 dB) and high boost/cut controls; amp output 80 W/ch under same conditions; input sensitivity 0.3 mV (phono), 18 mV (aux., tape); max. phono input 140 mV; FM tuner alternate channel selectivity 75 dB..... \$650

### SA-505 Stereo Receiver

Power amplifier section: features current-mirror-loaded differential stage and pure complementary OCL output stage; power supply with transformer, bridged rectifier, and two electrolytic capacitors; flashing dual five-LED peak power indicators with X1 and X0.1 display switch; main, remote, and main + remote speaker switch; LED protection/safety indicators; 63 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist.; dynamic headroom 1.4 dB into 8 ohms. Preamp features Acoustic Control bass and treble controls with low (100 Hz  $\pm$ 6 dB) and high (10,000/7000 Hz  $\pm$ 6 dB) boost/cut switches, balance control, loudness, rec mode with two-way tape dubbing and source/tape 1 and 2 monitor switches, and input selector with LEDs; frequency response  $\pm$ 0.3 dB (RIAA phono), 20-20,000 Hz  $\pm$ 0.2 dB (tuner, aux., tape); input sensitivity/impedance 0.3 mV/47k ohms (phono), 17 mV/27k ohms (tape); S/N (IHF A) 73 dB (phono), 77 dB (tuner, aux., tape); max. phono input 120 mV. Tuner: features four-pole dual-gate MOS FET front end, dual-color five-LED signal-strength display, and FM muting/mode switch. FM tuner specs: sensitivity 1.9  $\mu$ V; 50-dB quieting 2.7  $\mu$ V (mono), 39.7  $\mu$ V (stereo); THD at 1000 Hz 0.15% (mono), 0.3% (stereo); S/N 75 dB (mono) and 70 dB (stereo); frequency response 20-15,000 Hz +1/-2 dB; capture ratio 1.2 dB; alternate channel selectivity 70 dB; image rejection 60 dB; i-f rejection 75 dB; stereo separation 45 dB at 1000 Hz; 6 1/4" H  $\times$  18 3/4" W  $\times$  11 1/2" D... \$420

**SA-404.** Similar to SA-505 minus two-way tape dubbing and LED protection/safety indicators; 50 W/ch continuous under same conditions; input sensitivity 0.4 mV (phono), 20 mV (tape); tuner, aux., tape S/N 78 dB..... \$350

**SA-303.** Similar to SA-404 minus LED program indicators and low and high boost/cut controls; has high (-6 dB/octave at 7000 Hz) filter switch; 40 W/ch under same conditions; RIAA phono frequency response  $\pm$ 0.8 dB; input sensitivity 0.5 mV (phono), 25 mV (tape); phono S/N 75 dB; 5 1/2" H  $\times$  18 1/2" W  $\times$  10 1/2" D..... \$280

**SA-202.** Similar to SA-303 minus LED power level indicators with display switch, LED FM tuning indicator, and hi filter switch; has provision for one tape deck with tape/source monitor switch; 30 W/ch from 30-20,000 Hz; tuner, aux., tape frequency response 20-20,000 Hz  $\pm$ 0.8 dB; tape input sensitivity 30 mV; tuner, aux., tape S/N 80 dB; max. phono input 75 mV; FM tuner 50-dB quieting 3.0  $\mu$ V (mono) and 45  $\mu$ V (stereo); mono THD at 1000 Hz 0.18%; alternate channel selectivity 68 dB; image rejection 55 dB; i-f rejection 70 dB..... \$220

**SA-101.** Similar to SA-202 except 18 W/ch from

# 1 RECEIVERS

40-20,000 Hz; input sensitivity 0.6 mV (phono), 35 mV (tape); phono S/N 76 dB; FM tuner alternate channel selectivity 65 dB; 5<sup>1</sup>/<sub>2</sub>" H x 17<sup>1</sup>/<sub>2</sub>" W x 11<sup>1</sup>/<sub>2</sub>" D ..... \$180

## Remote Control Audio System

Consists of SE-AB08 stereo/mono power amplifier, ST-K808 quartz synthesizer AM-stereo FM tuner/preamp, SL-D33 direct-drive automatic single-play turntable, and RS-M45 direct-drive metal-compatible stereo cassette deck, all controlled by SH-R808 infrared wireless remote control unit (receiver and transmitter are separate units). See turntable and cassette tape sections for respective listings.

**SE-AB08 Power Amplifier.** Hybrid IC/transistor stereo/mono power amplifier with current-mirror-loaded differential IC first amp stage and two-stage pure complementary Darlington IC output stage; features electronic protection circuitry and main/remote speaker operation; output 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD (stereo), 90 W/ch with 0.03% THD (mono); frequency response 20-20,000 Hz +0/-0.2 dB; S/N 108 dB; 2<sup>1</sup>/<sub>16</sub>" H x 16<sup>1</sup>/<sub>16</sub>" W x 11<sup>1</sup>/<sub>2</sub>" D ..... \$200

**ST-K808 AM-FM Tuner/Preamp.** Quartz-synthesizer AM-stereo FM tuner/preamp. Features 8 AM/FM pushbutton preset tuning with memory and LEDs; manual up/down scan tuning; built-in programmable multi-function timer with digital 24-hr quartz clock/radio frequency readout; hidden controls behind front panel include bass, treble, and balance, program mode and clock call, and pushbutton mode/FM-AM muting, loudness, high filter, and subsonic filter switches. Preamp: frequency response +1 dB (RIAA phono), 10-50,000 Hz -1 dB (tuner, aux., tape); S/N 78 dB (phono), 97 dB (tuner, aux., tape); THD 0.05%. FM tuner: sensitivity 1.9  $\mu$ V; 50-dB quieting 4.6  $\mu$ V (mono), 4B  $\mu$ V (stereo); THD 0.15% (mono), 0.3% (stereo) at 1000 Hz; alternate channel selectivity 75 dB; 2<sup>1</sup>/<sub>16</sub>" H x 16<sup>1</sup>/<sub>16</sub>" W x 12<sup>7</sup>/<sub>32</sub>" D ..... \$450

**SH-R808 Remote Control System.** Infrared wireless remote receiver/transmitter control unit with four-bit microcomputer; features eight AM/FM pushbutton preset tuning, manual up/down scan tuning, pushbutton FM, AM, phono, and tape monitor, and muting ..... \$250

**SE-AB08, ST-K808, SH-R808.** Amplifier, preamp/tuner, and remote control unit when purchased together ..... \$900

## Micro Series I

Consists of SE-C01 stereo/mono dc power amplifier, SU-C01 stereo preamplifier, and ST-C01 servo-locked AM-stereo FM tuner measuring 1<sup>1</sup>/<sub>2</sub>" H x 11<sup>1</sup>/<sub>2</sub>" W.

**SE-C01 Power Amplifier.** Stereo/mono dc power amplifier with current-mirror-loaded differential first amp stage with thermally-balanced dual transistors, voltage amp stage, and power amp stage. Features dual 12-LED peak power meter display with X1 (0-160 W/ch into 8 ohms) and X0.1 (0-16 W/ch) meter range switch; pulsed power supply; current limiter; short circuit protection circuitry; relay protection circuit. 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist. (stereo), 55 W with 0.05% THD (mono). frequency response 20-20,000 Hz +0/-0.1 dB; dynamic headroom 1.7 dB into 8 ohms. S/N 94 dB; damping factor 40 ohms into 8 ohms. 9<sup>7</sup>/<sub>32</sub>" D ..... \$360

**SU-C01 Stereo Preamplifier.** Features built-in moving-coil pre-amp, bass and treble controls with defeat; high (6 dB/octave at 7000 Hz) and subsonic (12 dB/octave at 30 Hz) filters, loudness, source/tape monitoring, input selector including phono MC. Frequency response  $\pm$ 0.2 dB (RIAA phono MM and MC), 20-20,000 Hz +0.005 dB (tuner, aux., tape), input sensitivity/impedance 1.25 mV/47k ohms (MM), 50  $\mu$ V/47 ohms (MC),

75 mV/47k ohms (tuner, aux., tape). S/N 77 dB (MM), 79 dB (MC), 93 dB (tuner, aux., tape); max phono input 200 mV (MM), 8 mV (MC). 9<sup>1</sup>/<sub>2</sub>" D

\$260

**ST-C01 AM-FM Stereo Tuner.** Features active servo lock and dual-gate FET front end, LED tuning dial pointer, servo lock on/off with LED, muting/FM mode, and AM/FM selectors. FM section: sensitivity 1.9  $\mu$ V; 50-dB quieting 3.9  $\mu$ V (mono), 45  $\mu$ V (stereo); THD at 1000 Hz 0.1% (mono), 0.15% (stereo); S/N 75 dB (mono), 70 dB (stereo); alternate channel selectivity 75 dB; capture ratio 1 dB; image rejection 50 dB; i-f rejection 85 dB; 10<sup>1</sup>/<sub>32</sub>" D ..... \$260

## Micro Series II

Consists of SU-C03 integrated dc amplifier and ST-C03 AM/FM stereo tuner.

**SU-C03 Stereo Integrated Amplifier.** Features dc power amp circuitry; large audio capacitors; heat sinks; ICL phono equalizer; main/remote speaker switches; bass and treble controls with defeat; loudness; high and subsonic filter switches; source/tape monitoring; aux., tuner, and phono input selectors with lighted indicators; 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; damping factor 50 into 8 ohms; frequency response  $\pm$ 0.5% dB (phono), 20-20,000 Hz +0/-0.3 dB (tuner and aux.); input sensitivity/impedance 0.4 mV/47k ohms (phono), 25 mV/39k ohms (aux., tuner, tape); S/N 77 dB (phono), 81 dB (aux., tuner, tape); max. phono input 110 mV; 3<sup>7</sup>/<sub>32</sub>" H x 11<sup>1</sup>/<sub>16</sub>" W x 10<sup>1</sup>/<sub>16</sub>" D ..... \$320

**ST-C03 AM-FM Tuner.** Quartz synthesizer AM/FM stereo tuner with 4-pole MOS FET front end; features eight AM/FM pushbutton preset tuning with LEDs and memory/memory lock, manual up/down scan tuning, LED digital frequency display, five-LED signal-strength, and muting/FM mode and AM/FM selector buttons. FM section: sensitivity 1.9  $\mu$ V; 50-dB quieting 3.9  $\mu$ V (mono), 45  $\mu$ V (stereo); THD at 1000 Hz 0.08% (mono), 0.15% (stereo); S/N 77 dB (mono), 72 dB (stereo); frequency response 20-15,000 Hz +0.5/-1.5 dB; alternate channel selectivity 75 dB; capture ratio 1.0 dB; image rejection 65 dB; i-f rejection 85 dB; 1<sup>1</sup>/<sub>2</sub>" H x 11<sup>1</sup>/<sub>16</sub>" W x 9<sup>1</sup>/<sub>32</sub>" D ..... \$330

## TOSHIBA

### SA-7150 Stereo Receiver

Digital-synthesis-tuned receiver with digital frequency readout and six-station memory. Amplifier section: features OCL circuitry, toroidal power transformer, peak-reading power meters, and three-speaker switching; 150 W/ch continuous power into 8 ohms (20-20,000 Hz) at 0.05% or less THD and IM dist. (0.03% at half power); power bandwidth 5-35,000 Hz; frequency response 5-50,000 Hz +0/-0.5 dB; damping factor 50. Preamp: features bass and treble controls with turnover frequency switches and tone defeat; low and high filters; -20 dB audio muting; two-way tape dubbing and monitoring; mode switch; input selector; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/47k ohms (aux. and tape); phono overload 350 mV rms at 1000 Hz; frequency response  $\pm$ 0.2 dB from 30-15,000 Hz (phono RIAA), 10-50,000 Hz +0.5/-1.5 dB (aux.). S/N 80 dB (phono), 95 dB (tape and aux.). Tuner section: features LED signal-level display; Dolby FM; FM muting; hi-blend, multipath listening check; wide/narrow FM i-f; FM usable sensitivity 9.8 dBf (1.7  $\mu$ V); 50-dB quieting sensitivity 14.7 dBf (3.0  $\mu$ V) mono, 37.6 dBf (42  $\mu$ V) stereo; S/N 70 dB (stereo), 75 dB (mono); FM distortion 0.1% stereo, 0.08% mono; capture ratio 1.0 dB; selectivity 80 dB narrow, 50 dB wide; AM suppression 55 dB; i-f rejection 100 dB; spurious rejection 100 dB; image rejection 85 dB at 98 MHz; sub-carrier rejection 70 dB; stereo separation 50 dB at 1000 Hz. AM sensitivity 350  $\mu$ V/m (IHF, ferrite antenna), 30  $\mu$ V/m (IHF, ext. antenna); AM selectivity 30 dB; S/N 50 dB; image rejection 40 dB; i-f rejection 30 dB. Brushed aluminum front panel with speaker and tone controls behind retractable cover; walnut side panels; 7.9" H x 21.7" W x 19.7" D ..... \$1100

### SA-850 Stereo Receiver

Power amp: features triple-secondary power transformer and twin filter capacitors; two-speaker switching; 50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; power bandwidth 10-35,000 Hz; damping factor 50. Preamp: features bass and treble controls with tone defeat; subsonic filter; loudness and mode switches; two-way tape dubbing and monitoring; input selector; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/47k ohms (tuner, aux., tape); phono overload 200 mV rms at 1000 Hz; frequency response  $\pm$ 0.3 dB from 20-20,000 Hz (phono RIAA), 10-40,000 Hz +0.5/-1 dB (tuner, aux., tape); S/N 78 dB (phono), 95 dB (tape and aux.). Tuner: features PLL quartz crystal digital synthesizer tuning with up/down scan tuning and LED digital frequency readout; six-station memory preset for AM and FM; band and mode switches; five-LED signal-strength meter bar display; FM usable sensitivity 1.8  $\mu$ V (mono); 50-dB quieting 3.2  $\mu$ V (mono), 45  $\mu$ V (stereo); S/N 72 dB (mono), 68 dB (stereo); frequency response 20-15,000 Hz +0.5/-1.5 dB; dist. at 1000 Hz 0.15% (mono), 0.2% (stereo); capture ratio 1.0 dB; alternate channel selectivity 80 dB; image rejection 60 dB; i-f rejection 90 dB; spurious rejection 75 dB; stereo separation 45 dB at 1000 Hz. AM sensitivity 300  $\mu$ V/m (IHF, ferrite antenna) and S/N 50 dB. Brushed aluminum front panel with walnut side panels (amplifier controls hidden behind lower half of front panel); 4.5" H x 18.9" W x 15.4" D ..... \$520

### SA-5000 Stereo Receiver

Amplifier section: features dc circuitry; two-speaker switching;  $\pm$ 10-dB bass (100 Hz) and treble (10,000 Hz) controls with tone defeat; -6 dB/octave subsonic filter switch; input selector with LEDs; 50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; frequency response 10-60,000 Hz +1/-2 dB; RIAA phono deviation  $\pm$ 0.3 dB; S/N 90 dB (phono, ref. 10 mV), 95 dB (aux.); phono overload 240 mV. Tuner section: features servo lock tuning and LED signal-strength and center tuning indicators. FM section: usable sensitivity 1.8  $\mu$ V; 50-dB quieting 3.6  $\mu$ V (mono), 45  $\mu$ V (stereo); S/N 78 dB (mono), 72 dB (stereo); dist. at 1000 Hz 0.08% (mono), 0.15% (stereo); selectivity 75 dB; stereo separation 45 dB at 1000 Hz; frequency response 20-15,000 Hz +0.5/-2 dB; 4.6" H x 17.7" W x 14.6" D ..... \$380

### SA-3500 Stereo Receiver

Amplifier section: features dc circuitry;  $\pm$ 10-dB bass and treble controls; subsonic filter; 35 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist.; frequency response 10-50,000 Hz +1/-2 dB; RIAA phono deviation  $\pm$ 0.3 dB; S/N 90 dB (phono), 95 dB (aux.); phono overload 200 mV. Tuner: features LED signal-strength and center tuning indicators. FM section: usable sensitivity 1.8  $\mu$ V; 50-dB quieting 3.6  $\mu$ V (mono), 45  $\mu$ V (stereo); S/N 78 dB (mono), 72 dB (stereo); dist. at 1000 Hz 0.08% (mono), 0.15% (stereo); frequency response 20-15,000 Hz +0.5/-2 dB; alternate channel selectivity 75 dB; stereo separation 45 dB at 1000 Hz; 4.6" H x 17.7" W x 14.6" D ..... \$300

**SA-2500.** Similar to SA-3500 except 25 W/ch under same conditions with 0.05% THD and IM dist.; RIAA phono deviation  $\pm$ 0.5 dB; S/N 86 dB (phono), 90 dB (aux.); phono overload 180 mV; FM tuner alternate channel selectivity 65 dB and stereo separation 40 dB at 1000 Hz; 13.8" D ..... \$250

### SA-725 Stereo Receiver

Amplifier section: 25 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.08% THD and IM dist.; frequency response 10-40,000 Hz  $\pm$ 1 dB; RIAA phono deviation  $\pm$ 0.5 dB; S/N 80 dB (phono), 90 dB (aux.); input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/47k ohms (aux., tape); phono overload 200 mV at 1000 Hz. FM tuner section: usable sensitivity 1.9  $\mu$ V; 50-dB quieting 3.5  $\mu$ V (mono), 50  $\mu$ V (stereo); S/N 70 dB (mono), 65 dB (stereo); dist. at



1000 Hz 0.2% (mono), 0.3% (stereo); frequency response 20-15,000 Hz +0.5/-2 dB; alternate channel selectivity 65 dB; stereo separation 40 dB at 1000 Hz; 5.7" H x 18.9" W x 13.4" D ..... \$250

## VECTOR RESEARCH

### VRX-9000 Stereo Receiver

Amplifier section: features direct-coupled OCL power amplifier circuitry; dual power output meters



with low/high-range meter switch; two-speaker switching; separate bass, midrange, and treble controls with tone defeat; 12-dB/octave low and high filter switches; loudness control; -20-dB audio muting; two-deck tape monitoring with two-way dubbing; phono, tuner, and aux. input selector with LEDs; 80 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.08% THD and 0.1% IM dist.; damping factor 50 at 1000 Hz, 8 ohms; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/47k ohms (aux., tape 1, 2); frequency response  $\pm 0.5$  dB from 20-20,000 Hz (phono RIAA), 10-50,000 Hz +0.5/-1 dB (high level); S/N (IHF A weighted) 82 dB (phono), 93 dB (aux. and tape). Tuner: features PLL frequency-synthesizer quartz-locked digital tuning with up/down scan tuning with hold scan and LED digital frequency readout; six-station AM/FM memory preset; five-LED signal-strength indicators; 25- $\mu$ sec Dolby de-emphasis and FM muting switches; LED FM stereo indicator. FM section: IHF usable sensitivity 10.8 dBf (1.9  $\mu$ V); 50-dB quieting 19 dBf (mono), 40 dBf (stereo); S/N 75 dB (mono), 70 dB (stereo); frequency response 20-15,000 Hz  $\pm 1$  dB; dist. at 1000 Hz 0.08% (mono), 0.25% (stereo); capture ratio 1.1 dB; alternate channel selectivity 65 dB; spurious rejection 72 dB; image and i-f rejection 100 dB; stereo separation 46 dB at 1000 Hz; 5 $\frac{1}{2}$ " H x 17 $\frac{1}{2}$ " W x 14 $\frac{1}{2}$ " D ..... \$750

### VR-7000 Stereo Receiver

Amplifier section: features direct-coupled OCL circuitry; dual five-LED power level bar graph display with low/high-range meter switch; two-speaker switching; bass, midrange, and treble controls; high filter; loudness switch; two-deck tape monitoring with two-way dubbing; phono and aux. input selector with LEDs; 65 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.08% THD and 0.1% IM dist.; damping factor 50 at 1000 Hz, 8 ohms; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/47k ohms (aux. and tape); phono overload 180 mV at 1000 Hz; frequency response  $\pm 0.5$  dB from 20-20,000 Hz (phono RIAA), 10-50,000 Hz +0.5/-1 dB (high level); S/N (IHF A weighted) 82 dB (phono), 93 dB (aux. and tape). Tuner: features dual-gate MOS FET FM front end; signal-strength and tuning meters; 25- $\mu$ sec FM Dolby de-emphasis and FM muting switches. FM section: IHF sensitivity 10.8 dBf (1.9  $\mu$ V); 50-dB quieting 19 dBf (mono), 40 dBf (stereo); S/N 78 dB (mono), 71 dB (stereo); frequency response 30-15,000 Hz  $\pm 1.5$  dB; dist. at 1000 Hz 0.15% (mono), 0.25% (stereo); capture ratio 1.2 dB; alternate channel selectivity 55 dB; spurious rejection 65 dB; image rejection 50 dB; i-f rejection 80 dB; stereo separation 40 dB at 1000 Hz; 5 $\frac{1}{2}$ " H x 17 $\frac{1}{2}$ " W x 14 $\frac{1}{2}$ " D ..... \$550

**VR-5000.** Similar to VR-7000 minus LED power level bar graph display and FM Dolby de-emphasis switch; 45 W/ch under same conditions ..... \$400

**VR-2500.** Similar to VR-5000 minus midrange tone control, high filter, two-deck tape monitoring with two-way dubbing, LED mode and input indicators, and FM muting; has tape/source monitoring; 22 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.3% THD and IM dist.; damping factor 40 at 1000 Hz, 8 ohms; phono overload 100 mV at 1000 Hz; 5 $\frac{1}{2}$ " H x 17 $\frac{1}{2}$ " W x 14 $\frac{1}{2}$ " D ..... \$265

## YAMAHA

### CR-3020 Stereo Receiver

Amplifier section: 160 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.1% THD, 200 W/ch into 4 ohms; IM dist. 0.03%; damping factor 70; frequency response 0-100,000 Hz +2/-3 dB; phono sensitivity 2 mV (MM), 50  $\mu$ V (MC); max. input levels 310 mV (MM in), 7.5 mV (MC); input impedance 47k, 68k, 100k ohms (phono 1, MM), 10 ohms (phono 2, MC), 50k ohms (others); S/N (IHF "A") 96 dB (MM phono), 85 dB (MC phono), 100 dB (aux., tape), 118 dB (power amp main in). Tuner section: FM usable sensitivity 11.2 dBf (2.0  $\mu$ V) mono; 50-dB quieting sensitivity 15.3 dBf (3.2  $\mu$ V) mono, 37.2 dBf (40  $\mu$ V) stereo; FM S/N 80 dB mono, 75 dB stereo; FM dist. 0.07% mono or stereo at 1000 Hz (local), 0.2% mono, 0.6% stereo (DX); capture ratio 1.0 dB (local), 1.5 dB (DX); selectivity 60 dB (local), 80 dB (DX); AM suppression 60 dB; i-f response -120 dB; image response -110 dB; spurious response 110 dB; subcarrier rejection 70 dB; stereo separation 52 dB at 1000 Hz (local), 30 dB (DX). AM section: sensitivity 300  $\mu$ V/m (rod antenna); S/N 50 dB; selectivity 45 dB; image response -75 dB; i-f response -75 dB. Features dual tuning and power level meters (right-channel meter doubles as signal-strength indicator), meters also read tape output; independent input and recorder output select; independent headphone level control and main/rec-out monitor selection; dual tape monitors with two-way dubbing; bass, midrange and treble controls with switchable turnover frequency and defeat; separate volume and variable loudness-compensation controls; adjustable FM muting level; DX/Local/Auto select; recorder-calibration tone; audio muting; dual phono inputs with moving-coil head amp (switchable) on one; FM high-blend and Dolby-adaptor switches. 7 $\frac{1}{2}$ " H x 24 $\frac{1}{2}$ " W x 19 $\frac{1}{2}$ " D ..... \$1500

### CR-2040 Stereo Receiver

Power amp section: features dc circuitry; left/right peak-delay power meters; LED overload and half-power indicators; two-speaker switching; 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD; power bandwidth 10-50,000 Hz; damping factor 40 at 1000 Hz, 8 ohms. Preamp section: features built-in moving-coil cartridge head amp; bass, presence (mid frequencies), and treble controls with own turnover frequency controls; loudness and balance controls; low and two high filters; -20-dB audio muting; two-way tape dubbing; input selector with separate phono load capacitance switch; input sensitivity/impedance 2.5 mV/100k, 68k, 47k, 33k ohms (phono MM), 100  $\mu$ V/50 ohms (phono MC), 120 mV/40k ohms (aux. and tape); phono overload 270 mV (MM), 11 mV (MC); frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA), 5-100,000 Hz +0.2/-2 dB (aux. and tape); HD 0.01% (MM), 0.05% (MC); IM dist. 0.02% (aux. and tape); S/N (IHF/new IHF) 95 dB/76 dB (MM), 86 dB/79 dB (MC), 100 dB/81 dB (aux. and tape). Tuner: features J-FET and four-gang tuning capacitor in front end; built-in automatic local/distant i-f selector with LEDs; PLL multiplex IC demodulator; signal-strength (switchable to right power output reading) and FM tuning meters; muting/optimum tuning system lock switch; mode and adaptor switches; FM IHF usable sensitivity 1.6  $\mu$ V at 300 ohms, 0.8  $\mu$ V at 75 ohms; 50-dB quieting 3.2  $\mu$ V (mono), 35  $\mu$ V (stereo), 25  $\mu$ V (auto blend); S/N (IHF) 90 dB (mono), 84 dB (stereo); HD at 1000 Hz 0.07% (mono), 0.09% (stereo); frequency response 50-10,000 Hz  $\pm 0.4$  dB; capture ratio 1.5 dB; alternate channel selectivity (IHF) 82 dB (DX), 48 dB (local); image rejection 80 dB; i-f and spurious rejection 100 dB; stereo separation 50 dB at 1000 Hz; AM tuner usable sensitivity 15  $\mu$ V. Ebony wood veneer cabinet; 6 $\frac{1}{2}$ " H x 22 $\frac{1}{2}$ " W x 16" D. \$860

**CR-1040.** Similar to CR-2040 except has separate phono MM/MC selector in place of phono load capacitance selector; no turnover frequency tone controls or LED half-power overload indicator; 80 W/ch continuous under same conditions; power bandwidth 10-40,000 Hz; phono MM input impedance 47k ohms; phono S/N (IHF A/new IHF) 88 dB/81 dB, aux. and tape new IHF S/N 83 dB; 6 $\frac{1}{2}$ " H x

21 $\frac{1}{2}$ " W x 15 $\frac{1}{2}$ " D ..... \$660

**CR-840.** Similar to CR-1040 without built-in moving-coil head amp, power output meters, LED overload indicator, and audio muting switch; has one high filter; 60 W/ch under same conditions; phono overload 140 mV; phono frequency response  $\pm 0.4$  dB from 20-20,000 Hz; phono harmonic dist. 0.02%; S/N (IHF A/new IHF), 94 dB/78 dB (phono), 100 dB/85 dB (aux. and tape); FM 50-dB quieting sensitivity 40  $\mu$ V for stereo; FM S/N (IHF) 84 dB (mono), 80 dB (stereo); FM HD at 1000 Hz 0.08% (mono), 0.1% (stereo); 6 $\frac{1}{2}$ " H x 20" W x 15 $\frac{1}{2}$ " D ..... \$495

**CR-640.** Similar to CR-840 minus presence tone control, tuner adaptor switch, and optimum tuning system lock with LED; 40 W/ch under same conditions; aux. and tape S/N 86 dB (new IHF); FM image rejection 50 dB; spurious and i-f rejection 80 dB ..... \$395

### CR-440 Stereo Receiver

Power amp section: features differential current-mirror input, constant-current predrive output, and Darlington power stage; two-way speaker switching; 30 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD; dynamic headroom 1.5 dB at 8 ohms. Preamp section: features two-stage dc NF low-noise IC phono equalizer circuit; bass and treble controls; continuously variable loudness control; rec out selector; input selector; input sensitivity/impedance 2.5 mV/47k ohms (phono), 120 mV/45k ohms (aux., tape); phono overload 140 mV; frequency response  $\pm 0.5$  dB from 20-20,000 Hz (phono RIAA and aux., tape); IM dist. 0.01% (aux., tape); S/N (IHF A) 94 dB (phono), 100 dB (aux., tape). Tuner: features wide-air-gap three-ganged tuning capacitor and r-f amp with low-noise J-FET in FM front end; signal strength and FM tuning meters; FM muting/mono switch. FM section: usable sensitivity 1.8  $\mu$ V at 300 ohms (IHF); 50-dB quieting 3.5  $\mu$ V (mono), 40  $\mu$ V (stereo); S/N (IHF A) 80 dB (mono), 76 dB (stereo); HD at 1000 Hz 0.15% (mono), 0.2% (stereo); frequency response 30-15,000 Hz  $\pm 1.5$  dB; capture ratio 1.5 dB; alternate channel selectivity 65 dB  $\pm 400$  kHz (IHF); stereo separation 45 dB at 1000 Hz; ebony-finish cabinet; 6 $\frac{1}{2}$ " H x 17 $\frac{1}{2}$ " W x 12 $\frac{1}{2}$ " D ..... \$320

**CR-240.** Similar to CR-440 minus rec out selector and signal-strength and FM tuning meters; has five-LED signal-strength indicators, two-LED tuning dial indicator and source/monitor tape switch; 20 W/ch continuous under same conditions; dynamic headroom 1.1 dB; aux./tape input sensitivity/impedance 120 mV/40k ohms; phono overload 120 mV; 5 $\frac{1}{2}$ " H x 17 $\frac{1}{2}$ " W x 12 $\frac{1}{2}$ " D ..... \$250

## ZENITH

### MC7051 Stereo Receiver

Power amp section: features direct-coupled OCL circuitry; two electrolytic capacitors; speaker overload protection circuit; two-speaker switching; 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD and IM dist.; damping factor 40 from 20-20,000 Hz. Preamp: features bass, treble, and balance controls; high and low filters; two-way tape monitoring and dubbing; loudness switch; input selector with LEDs; input sensitivity/impedance 2.5 mV/50k ohms (phono 1, 2, and mic), 150 mV/50k ohms (aux. and tape); phono overload 125 mV at 1000 Hz; frequency response  $\pm 1$  dB from 30-15,000 Hz (phono RIAA), 20-20,000 Hz  $\pm 1$  dB (aux. and tape); S/N (IHF A) 75 dB (phono), 85 dB (aux. and tape). Tuner: features dual-gate MOS FET and four-gang variable capacitor in FM front end; FM muting and de-emphasis switches; signal-strength and tuning meters; mode switch with stereo FM LED; FM usable sensitivity 1.8  $\mu$ V (mono), 5.5  $\mu$ V (stereo); 50-dB quieting 3.0  $\mu$ V (mono), 40  $\mu$ V (stereo); S/N 70 dB (mono), 65 dB (stereo); dist. 0.3% (mono), 0.5% (stereo); frequency response 30-15,000 Hz +0.6/-2 dB; capture ratio 1.0 dB; alternate channel selectivity 70 dB; spurious rejection 75 dB; image rejection 85 dB; i-f rejection 90 dB; stereo separation 45 dB at 1000 Hz; 6.01" H x 19.27" W x 14.96" D ..... \$360

# 2

# AMPLIFIERS

2

## POWER AMPLIFIERS

### ADCOM

#### GFA-1 Power Amplifier

Fully complementary stereo bridged mono amplifier; toroidal transformer; dual power supplies; built-in protection relay and thermal overload switch. 200 W ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD and 0.1% IM dist.; damping factor 200; slew rate 80 V  $\mu$ sec; input sensitivity 1.5 V; black cabinet with vents on all sides; 8'  $\frac{1}{2}$ " H  $\times$  10'  $\frac{1}{2}$ " W  $\times$  6'  $\frac{1}{2}$ " D. .... \$400  
**GFRP-1/2.** Rack panel for one two amplifiers ... \$60

### AIWA

#### SA-P50U/SA-P30U Power Amplifiers

See Section 1, Receivers, under Aiwa's M-501 and M-301 Series Mini-Component Systems.

### AMBER

#### Series 70 Power Amplifier

Modular class AB stereo power amplifier features built-in bridging circuit with rear-panel switch for mono operation; passive power supply with two massive filter capacitors; low- and high-pass filters; 6-sq-ft heatsinking capacity. 70 W ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.09% THD or IM dist.; 200 W mono into 8 ohms with 0.25% THD or IM dist.; frequency response 5-100,000 Hz  $\pm$  3 dB (small signal); slew rate 25 V  $\mu$ sec; noise 90 dB below 70 W; input sensitivity/impedance 1.15 V/100,000 ohms; 5.25" H  $\times$  19" W  $\times$  11.5" D. .... \$460

### APT

#### Apt 1 Power Amplifier

Features dc circuitry; mono bridging; rear-panel 2-16 ohm speaker load switch (includes reactive



loads) with front-panel LED readout for adjustment; dual two-color LED readout for signal at output and overload detection; relay protection circuit; safe-area limit detector. 100 W/ch continuous, both channels driven into 4 or 8 ohms and 65 W/ch into 16 ohms with 0.03% THD, 150 W/ch into 2 ohms with 0.05% THD, 200 W mono into 8 or 16 ohms; dynamic headroom 3 dB at 4 or 8 ohms, 2 dB at 2 ohms, 1 dB at 16 ohms; frequency response 10-30,000 Hz  $\pm$  0.5 dB; slew factor 10 at

20,000 Hz; output noise 80 dB below 1 W; crosstalk 70 dB at 1000 Hz between channels; dynamic range 103 dB; input sensitivity/impedance 92.5 mV rms (1 W)/50k ohms; damping factor greater than 200. Gray wrinkle baked enamel finish; 3.12" H  $\times$  16.9" W  $\times$  10.19" D. .... \$641

### AUDIO INTERNATIONAL

#### CM912a Power Amplifier

Features dual peak-reading power meters; relay speaker protection; thermostatically-controlled forced-air cooling. 150 W ch continuous into 8 ohms from 20-20,000 Hz with 0.1% THD and IM dist.; frequency response 20-20,000 Hz  $\pm$  0.1 dB at rated output; damping factor 50 at 8 ohms, 20-20,000 Hz; slew rate 40 V  $\mu$ sec; hum and noise  $\pm$  100 dB; sensitivity 1 V input for rated out; 100, 120, 200, or 240 V ac, 50/60 Hz, 35 W (idle), 700 W (max.); bronze anodized aluminum finish; 5'  $\frac{1}{2}$ " H  $\times$  19" W  $\times$  17'  $\frac{1}{2}$ " D. .... \$899  
**CM912-1.** Power module for CM912a ..... \$249

#### CM914 Power Amplifier

100 W ch continuous into 8 ohms from 20-20,000 Hz with 0.1% THD and IM dist.; frequency response 20-20,000 Hz  $\pm$  0.1 dB at rated out; damping factor 50 at 8 ohms, 20-20,000 Hz; slew rate 40 V  $\mu$ sec; hum and noise  $\pm$  100 dB; sensitivity 1 V in for rated out; 100, 120, 200, 220, or 240 V ac, 50/60 Hz, 35 W (idle), 600 W (max.); bronze anodized aluminum finish, 5" H  $\times$  19" W  $\times$  10" D. .... \$449

**CM914-1.** Handle side panel kit for CM914 ..... \$50

**CM914-3.** LED clipping indicator ..... \$75

**CM662.** Feedback speaker coupler ..... \$75

### AUDIONICS OF OREGON

#### BA150 Power Amplifier

Analog-to-digital hybrid solid-state/tube stereo power amplifier with Class A input and driver sections and Class B output stage. Features C-MOS digital logic circuitry (automatically optimizes bias of output tubes); heavy-duty power supply mounted in subchassis behind faceplate; power supply regulation for both audio and digital functions; adjustable 0-14-dB negative feedback control; front-panel ac mains switch with rear-mounted master circuit breaker; high/low power switch; LED auto bias and peak clipping indicators for each channel; LED turn on, normal operate, and 150-W operate mode indicators. 150 W/ch continuous, both channels driven into 4, 8, or 16 ohms from 30-20,000 Hz with 3.0% THD; frequency response 5-30,000 Hz  $\pm$  0.5 dB at 14-dB negative feedback, 5-25,000 Hz  $\pm$  2 dB at 0-dB negative feedback; THD and IM dist. 3.0% with 0-dB negative feedback; input sensitivity 1.8 V for rated out; brushed black anodized front panel and chassis; rack-mount handles included; 10'  $\frac{1}{2}$ " H  $\times$  19" W  $\times$  14'  $\frac{1}{4}$ " D. .... \$3250

#### CC2 Power Amplifier

Stereo power amplifier with rear-panel mono bridging; dual peak-reading LED indicators; includes rack-mount handles. 70 W/ch continuous, both

channels driven into 8 ohms from 20-20,000 Hz with 0.18% THD, 225 W mono into 8 ohms with 0.35% THD; frequency response 20-20,000 Hz  $\pm$  0.5 dB; negative feedback 23 dB; slew rate 36 V  $\mu$ sec (doubles in mono mode); input sensitivity/impedance 1.0 V/22.9k ohms (non-inverting); brushed black anodized front panel and chassis; rack-mount handles included; 3'  $\frac{1}{2}$ " H  $\times$  19" W  $\times$  8'  $\frac{1}{2}$ " D. .... \$549

### AUDIO RESEARCH

#### M-360 Power Amplifier

Vacuum tube mono power amplifier features cathode current bias adjust with separate controls for each tube, power monitor meter, ac voltage meter, and front-panel fuses/indicators for plate and screen. 360 W into 4, 8, or 16 ohms from 20-15,000 Hz with 1.0% THD; power bandwidth 15-30,000 Hz; 10.5" H  $\times$  19" W  $\times$  17.25" D. .... \$5500

#### D-350B Power Amplifier

Linear stereo/bridged mono power amplifier. Features power-line monitor meter with identified operating ranges; output power monitor meters; dual power supplies; built-in speaker line fuse holders; logic circuitry; front-panel power supply fuses; three built-in fans. 350 W ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.25% THD; IM dist. less than 0.1% at rated output; S/N 110 dB (unweighted); input sensitivity/impedance 1.35 V rms/60,000 ohms. 10'  $\frac{1}{2}$ " H  $\times$  19" W  $\times$  17'  $\frac{1}{4}$ " D. .... \$4400

#### D-79 Power Amplifier

Vacuum tube power amplifier features cathode current bias adjust with separate controls/ch; dual power monitors metered as safe operation/caution markings; ac voltage meter; two front-panel line fuse out, plate/fuse out, and screen fuse out indicators. Output 75 W/ch continuous, both channels driven into 4, 8, or 16 ohms from 20-20,000 Hz with 1.0% THD; power bandwidth 15-40,000 Hz  $\pm$  3 dB; IM dist. 0.5% (SMPT); S/N 90 dB below rated output (wide band, unweighted), 80 dB below rated output (line); input sensitivity/impedance 0.75 V rms/80k ohms nominal; damping factor 6; output regulation 1.75 dB, 16-ohm load to open circuit; includes rack-mount handles; 10'  $\frac{1}{2}$ " H  $\times$  19" W  $\times$  17'  $\frac{1}{4}$ " D. .... \$3700

#### D-110B Power Amplifier

Linear two channel power amplifier. Features bridged mono switch; power-line monitor meters; dual power supplies; built-in speaker line fuse holders; front-panel power supply fuses; three built-in fans. 100 W/ch continuous, both channels driven into 8 ohms from 1-20,000 Hz at 0.25% THD; IM dist. less than 0.05%; S/N 100 dB (unweighted); input sensitivity/impedance 1.5 V rms/60,000 ohms; min. load impedance 4 ohms; damping factor more than 200. 10'  $\frac{1}{2}$ " H  $\times$  19" W  $\times$  17'  $\frac{1}{4}$ " D. .... \$3250

#### D-125 Power Amplifier

Solid-state stereo power amplifier. Features eight



regulated power supplies; switch for bridged mono operation; LED output clipping indicators; three built-in fans. 120 W/ch continuous, both channels driven into 8 ohms from 1-30,000 Hz at 0.1% THD; IM dist. 0.02% max.; S/N 110 dB; input sensitivity/impedance 1.6 V rms/60,000 ohms; min. load impedance 4 ohms; damping factor 250. 10.5" H x 19" W x 17.25" D..... \$2950

#### D-100B Power Amplifier

100 W/ch continuous, both channels driven into 8 ohms over 1-20,000 Hz with 0.25% THD and 0.1% IM dist.; S/N 100 dB unweighted; sensitivity 1.5 V rms (high level); load impedance 4 ohms (min.); damping factor 200; 5'4" H x 19" W x 10'1" D..... \$1695

WC-4. Walnut-finished wood cabinet for D-100B..... \$99

#### D-52B Power Amplifier

Linear two-channel power amplifier. Features built-in switch for bridged mono operation; front-panel power supply fuses. 50 W/ch continuous, both channels driven into 8 ohms from 1-20,000 Hz at 0.25% THD; IM dist. less than 0.1%; S/N 90 dB (unweighted); input sensitivity 1.1 V rms/60,000 ohms; damping factor 200. 5'4" H x 19" W x 10'1" D..... \$1395

WC-4. Walnut-finished wood cabinet for D-52B..... \$99

### AUDIRE

#### 2M Power Amplifier

Features clipping LEDs, twin taut-band moving-coil power output meters with range selector switch, and ac on/off switch; 100 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz, 120 W/ch into 4 ohms; THD and IM dist. less than 0.05% at 100 W; power bandwidth 10-20,000 Hz  $\pm$  0.2 dB; frequency response 10-60,000 Hz  $\pm$  0.2 dB at 1 W; hum and noise  $\pm$  100 dB; damping factor 150; input sensitivity/impedance 1.0 V rms/33k ohms. Includes front-panel rack mount; 5'4" H x 15" W x 13" D..... \$710

Model 2. Similar to 2M minus power output meters with selector switch and ac switch..... \$560

#### Crescendo Power Amplifier

Discrete power amplifier features dual 12-LED vertical logarithmic power output display. 60 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD and IM dist.; frequency response 10-20,000 Hz  $\pm$  0.2 dB; hum and noise  $\pm$  100 dB; slew rate 40 V  $\mu$ sec; damping factor 150; input impedance 51,000 ohms; 5.25" H x 19" W x 9" D..... \$395

### BEDINI

#### 200/200 Power Amplifier

Class A stereo power amplifier employing positive feedback from output of amplifier to input of driver stage; capacitor-coupled input stage with tantalum capacitor into push-pull dual differential amp circuitry, emitter push-pull level translator, and push-pull Darlington in final three stages; rugged power supply with dual transformers; glass epoxy circuit boards. 200 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.01% THD; IM dist. 0.025%; bandwidth 1-100,000 Hz into 8 ohms at 1 W; damping factor 40 dB at 50 Hz; S/N 83 dB unweighted; input sensitivity/impedance 0.5 V/50k ohms; rack-mountable; 8.75" H x 19" W x 23" D..... \$3795

100/100. Similar to 200/200 except 100 W/ch with 0.015% THD; damping factor 48 dB at 50 Hz; S/N 84 dB unweighted; 6'3" H x 19" W x 17" D..... \$1895

45/45. Similar to 100/100 except 45 W/ch under same conditions; bandwidth 1-150,000 Hz; damping factor 59 dB at 50 Hz; S/N 85 dB unweighted..... \$1300

25/25. Similar to 45/45 except 25 W/ch under same conditions; no dual power transformers; damping factor 58 dB at 50 Hz; S/N 92 dB un-

weighted; 4.5" H x 16" W x 14.5" D..... \$750  
10. Similar to 25/25 except 10 W/ch under same conditions; bandwidth 1-250,000 Hz; damping factor 54 dB at 50 Hz; S/N 87 dB unweighted; 4.5" H x 14" W x 10.75" D..... \$400  
Rack mount..... \$16

### BELLES RESEARCH

#### Belles -A- Power Amplifier

Class A stereo power amplifier features independent power supply channel with heavy-duty transformer, full-wave rectifier, and two computer-grade power supply capacitors; non-inverting circuitry; complementary differential amplifiers and emitter follower output circuitry in push-pull configuration; internally-installed heatsinks; precision thermal sensors; rectangular LED power indicator. 70 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD; power bandwidth 1-100,000 Hz  $\pm$  0.15 dB; slew rate 35 V  $\mu$ sec for 86 V p-p; input sensitivity 1.577 V rms for 70 W, 8 ohms; 1/2-in black anodized aluminum chassis with 1/2-in front panel and black rack-mount handles; 11" H x 19" W x 16" D..... \$1695

### BGW

#### Model 210 Power Amplifier

100 W/ch continuous into 8 ohms; frequency response 20-20,000 Hz  $\pm$  0.2 dB; THD 0.02%; IM dist. 0.02%; residual hum and noise  $\pm$  110 dB; slew rate 40 V  $\mu$ sec; rise time 3  $\mu$ sec; input sensitivity 1.4 V for rated output; high speed relay activated arc-interrupter speaker protection; four-position speaker selector; meter display of average responding LEDs (10 on each of two meters) with three-position ( $\pm$  20, 10, and 0 dB) meter sensitivity switch; 5'4" H x 19" W x 11'3" D..... \$659  
Cabinet for 210..... \$45

#### Professional Series

#### 1250 Power Amplifier

Stereo power amplifier with rear-panel mono bridging; designed for professional use. Features fully complementary circuitry using 48 200-W power transistors; three-speed solid-state fan control with LED fan hi/lo indicators; dual multicolored nine-LED peak-reading power indicators with LED clipping and idle indicators channel and with rear-panel 4 8-ohm mono/stereo full-scale-range meter calibration; LED standby and overtemperature indicators; separate left/right dB-calibrated gain controls; electronically balanced inputs with sockets for optional input transformers; XLR-type and 1/4-in phone input connectors; speaker protection circuit 400 W/ch continuous sine wave, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD, 600 W/ch into 4 ohms with 0.05% THD, and 1200 W mono into 8 ohms with 0.05% THD; IM dist. 0.02%; small-signal frequency response 1-125,000 Hz  $\pm$  0.3 dB; hum and noise  $\pm$  115 dB below 400 W (unweighted, 20-20,000 Hz); input sensitivity/impedance 0.775 V/15,000 ohms; damping factor 230 at 8 ohms, 1000 Hz; steel chassis; 7" H x 19" W x 18" D..... \$1999

#### 750B Power Amplifier

Stereo power amplifier with rear-panel mono bridging switch; designed for professional use. Features



fully complementary circuitry using 12 power output transformers channel; dual nine-LED peak-reading power indicators with LED clipping and idle indicators and rear-panel 4/8-ohm full-scale-range meter calibration; separate left and right gain con-

## Real Power for the Real World: The Apt 1 Amplifier



Apt Corporation believes there's only one good reason to create a new product: a genuine need. The Apt 1 Amplifier is just such a product. With 3 dB of Dynamic Headroom, it can deliver as much as *twice* its 100w average rated power (20 Hz-20 kHz @ 0.03% THD) on musical peaks—just as program material so often requires. And, it can deliver this extra performance into any actual loudspeaker, not just on the test bench. The Apt 1 also incorporates new approaches to power supply, driver stage, and protection circuit design, which all contribute to a uniquely *useful* amplifier.

## Problem Solving in a Real System: The Holman Preamp



You don't live in an ideal world—neither does your stereo music system. The Holman Preamp is the result of over 2 man-years of research into how and why components behave in real-world hifi systems. As such, it provides an unprecedented balance of features and performance, which combine toward a common goal: *sonic excellence*.

The Holman Preamp and the Apt 1 Amplifier; individually or together they make music systems work better, and *sound* better.

For information, check the appropriate box(es) below and send with your name and address to:

#### Apt Corporation

Box 512  
Cambridge, Massachusetts 02139

Apt 1 Amplifier brochure and the name of your local dealer.

Holman Preamp brochure.

For an Apt 1 Owner's Manual, please send \$4 (\$5 foreign).

trols; speaker protection circuitry; heavy-duty two-speed industrial fan; 540-sq. in. finned heatsink for each channel; XLR and 1/4-in. phone jacks; provision for plug-in input matching transformer. 225 W/ch continuous sine wave, both channels driven into 8 ohms from 20-20,000 Hz with 0.1% THD, 360 W into 4 ohms with 0.2% THD, 720 W mono into 8 ohms with 0.2% THD; IM dist. 0.02%; small-signal frequency response 1-90,000 Hz +0/-3 dB; hum and noise -106 dB below 225 W (unweighted, 20-20,000 Hz); input sensitivity/impedance 2.12 V/15,000 ohms; damping factor 230 at 8 ohms, 1000 Hz; 7" H x 19" W x 12" D ..... \$1259  
**750C.** Same as 750B minus LED power output indicator display; has two LED clipping indicators ..... \$1159

### 620 Power Amplifier

Stereo power amplifier designed for commercial sound applications. Features twelve 150-W complementary transistors/channel; high-speed 15-MHz op-amp front end; massive heatsinks; high-speed magnetic circuit breaker; output matches 4, 8, or 32-ohm loads and 25-70-V distributed systems; LED clipping indicators and left and right gain controls; rear-panel barrier-strip input/output connections and 1/4-in. phone jacks. 200 W/ch continuous sine wave, both channels driven into 8 ohms from 20-20,000 Hz with 0.25% THD and 0.06% IM dist (direct), 200 W/ch continuous sine wave, both channels driving 25-70-V distributed system from 40-15,000 Hz with 0.5% THD (transformer output); small-signal frequency response 1-70,000 Hz +0/-3 dB; hum and noise 100 dB below rated output into 8 ohms (unweighted, 20-20,000 Hz); damping factor 120 at 8 ohms, 1000 Hz; matte black finish; 8 3/4" H x 19" W x 11 3/4" D ..... \$1029

### 600 Power Amplifier

Stereo power amplifier with mono bridging; designed for professional use. Features ten 150-W complementary transistors per channel; high-speed 15-MHz op-amp front end; massive heatsinks; separate left and right gain controls; LED clipping indicators. 175 W/ch continuous sine wave, both channels driven into 8 ohms from 20-20,000 Hz with 0.1% THD, 250 W/ch into 4 ohms with 0.15% THD, and 500 W mono into 8 ohms with 0.15% THD; IM dist. 0.02%; small-signal frequency response 1-90,000 Hz +0/-3 dB; hum and noise 106 dB below rated output into 8 ohms (unweighted, 20-20,000 Hz); damping factor 230 at 8 ohms, 1000 Hz; 8 3/4" H x 19" W x 11 3/4" D ..... \$899

### 320 Power Amplifier

Stereo power amplifier designed for commercial sound applications. Features four 250-W complementary transistors per channel; high-speed 15-MHz op-amp front end; separate left right calibrated gain controls; two LED clipping indicators; massive heatsinks; high-speed magnetic circuit breaker; output matches 4, 6, 8, or 50-ohm loads and 25 or 70-V distributed systems. 100 W/ch continuous sine wave, both channels driven into 8 ohms from 20-20,000 Hz with 0.2% THD (direct), 100 W/ch continuous sine wave, both channels driving 25-70-V distributed system from 40-15,000 Hz with 0.5% THD (transformer out); IM dist. 0.05%; small-signal frequency response 1-50,000 Hz +0/-3 dB; hum and noise 100 dB below rated output into 8 ohms (unweighted 20-20,000 Hz); damping factor 150 at 8 ohms, 1000 Hz; matte black finish; 5 1/4" H x 19" W x 11 3/4" D ..... \$729

### 300 Power Amplifier

Stereo power amplifier with mono bridging; designed for professional use. Features four 15-W complementary transistors per channel; high-speed 15-MHz op-amp front end; LED clipping indicators; separate left/right gain controls; massive heatsinks;

optional 25/70-V autotransformers available. 100 W/ch continuous sine wave, both channels driven into 8 ohms from 20-20,000 Hz with 0.1% THD, 125 W/ch into 4 ohms with 0.15% THD, 250 W mono into 8 ohms with 0.15% THD; IM dist. 0.02%; small-signal frequency response 1-100,000 Hz +0/-3 dB; hum and noise 106 dB below rated output into 8 ohms (unweighted, 20-20,000 Hz); damping factor 230 at 8 ohms, 1000 Hz; 5.25" H x 19" W x 11.75" D ..... \$599

### 100B Power Amplifier

Stereo power amplifier with mono bridging; designed for professional use. Features fully complementary output devices with 180-W dissipation; peak current limiter; dual four-LED meter indicators at idle, 0.5% of rated output, 50% power, and clipping; separate left/right gain controls; XLR and 1/4-in. input connectors; provisions for plug-in input transformers for balanced line capability; rear-panel barrier strip. 50 W/ch continuous sine wave, both channels driven into 8 ohms from 20-20,000 Hz with 0.1% THD, 60 W/ch into 4 ohms with 0.2% THD, 120 W mono into 8 ohms with 0.2% THD; IM dist. 0.02%; small-signal frequency response 1-90,000 Hz +0/-3 dB; hum and noise 106 dB below 50 W (unweighted, 20-20,000 Hz); damping factor 400 at 8 ohms 1 3/4" H x 19" W x 11 1/2" D ..... \$489

### 50A Power Amplifier

Stereo power amplifier with mono bridging; designed for professional use. Features full complementary output with 180-W dissipation; peak current limiter; separate left/right gain controls; rear-panel barrier strip. 25 W/ch continuous sine wave, both channels driven into 4 or 8 ohms from 20-20,000 Hz with 0.05% and 0.08% THD respectively, 50 W mono into 8 ohms with 0.08% THD; IM dist. 0.01%; small-signal frequency response 1-100,000 Hz +0/-3 dB; hum and noise 102 dB below 25 W (unweighted, 20-20,000 Hz); damping factor 400 at 8 ohms; 1 3/4" H x 19" W x 11 1/2" D ..... \$349

## BOZAK

### 929 Power Amplifier

150 W/ch continuous sine wave into 8 ohms (20-20,000 Hz) at 0.2% THD; response at full output 20-20,000 Hz +0 dB/-0.2 dB; THD at 1000 Hz 0.1%; response 3-100,000 Hz +0/-3 dB (at 1 W); damping factor 100 at 20 and 1000 Hz; S/N (unweighted) 100 dB; input impedance 35,000 to 100,000 ohms (100k pot); two power meters; matte black front panel; optional walnut veneer enclosure extra; 7" H x 17 3/4" W x 12" D ..... \$925

### 939 Power Amplifier

70 W/ch continuous sine wave into 8 ohms (20-20,000 Hz) at 0.2% THD; frequency response 20-20,000 Hz +0/-0.2 dB; S/N (unweighted) 90 dB; subsonic switch; damping factor 100; input level controls; 32 dB gain; black front panel; optional walnut veneer enclosure extra ..... \$525

## Professional Line

### CMA-2-80 Power Amplifier

Stereo power amplifier features all-silicon solid-state circuitry; open and short-circuit protection; overheat protection. 80 W/ch continuous, 160 W continuous total output; frequency response 20-20,000 Hz  $\pm 0.5$  dB; HD 0.5% from 20-10,000 Hz; noise -80 dB below rated output; input sensitivity 0.7 V for rated output; anodized brushed aluminum finish; 5 1/4" H x 19" W x 12" D ..... \$775

**CMA-1-80.** Mono version of CMA-2-80; frequency response 20-20,000 Hz  $\pm 1$  dB; input sensitivity 1.0 V ..... \$599

### CMA-2-65 Power Amplifier

Dual power amplifiers feature direct-coupled circuitry; electronically protected output; overheat protection. 65 W/ch continuous into 8 ohms, 130 W total; frequency response 20-20,000 Hz +0/-1

dB; THD 0.1% at 1000 Hz; IM dist. 0.2% (SMPT); damping factor 100 at 20 and 1000 Hz; rise time 3  $\mu$ sec; S/N 90 dB unweighted; input sensitivity 0.6 V; 5 1/4" H x 19" W x 10 1/4" D ..... \$575

## BRYSTON

### 4B Power Amplifier

Fully complementary circuit class AB power amplifier features bridging switch, 1000-sq-in heatsink area, regulated power supplies to all voltage gain stages, channel separation back to line cord, and LED pilot and red LED clipping indicators. 200 W/ch into 8 ohms from 20-20,000 Hz with 0.05% THD, 800 W bridged into 8 ohms; IM dist. 0.025% from 10 mW-200 W; noise -100 dB; slew rate 60 V/ $\mu$ sec; power bandwidth 1-100,000 Hz; damping factor 500 at 20 Hz, ref. 8 ohms; input sensitivity/impedance 1.25 V/50k ohms; 5.25" H x 19" W x 13 5/8" D ..... \$1400

**3B.** Similar to 4B except 100 W/ch under same conditions, 400 W bridged; input sensitivity/impedance 1 V/50k ohms; has 500-sq-in heatsink area; 9" D ..... \$900

**2B.** Similar to 3B except 50 W/ch under same conditions, 200 W bridged; input sensitivity/impedance 0.75 V/50k ohms; has 250-sq-in heatsink area; 3.5" H x 19" W x 10" D ..... \$525

## CARVER

### C-500 Power Amplifier

Features FET signal circuitry and extra output transistors; dual moving LED switchable peak/peak-hold bar graph display with VU ballistics; left/right sensitivity controls with +15 dB sensitivity display switch; LED overload indicator. 251 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD; IM dist. 0.06% at 200 W; frequency response 1-250,000 Hz  $\pm 0.25$  dB; S/N 110 dB (A weighted); slew rate 80 V/ $\mu$ sec; dynamic range 70 dB. Brushed champagne gold finish with brown trim; 6 1/4" H x 19" W x 9 1/4" D ..... \$722

### M-400 Power Amplifier

Features magnetic field circuitry that eliminates need for oversized heatsinks, power transformers, and electrolytic capacitors; dual moving LED verti-



cal peak level display with VU ballistics. 200 W/ch into 8 ohms from 1-20,000 Hz with 0.05% THD and 0.06% IM dist.; frequency response 1-250,000 Hz  $\pm 0.25$  dB; S/N 100 dB (A weighted); slew rate 40 V/ $\mu$ sec; dynamic range 50 dB. Brushed champagne gold finish with brown trim; 6 3/4" H x 6 3/4" W x 6 3/4" D ..... \$349

## CARVIN

### OCA700 Power Amplifier

Features dc circuitry; geometrical power-base output transistors; heavy-duty two-speed fan; built-in Butterworth active crossover for biamping with rear-panel switch; dual LED power output ladder display; two gain controls; LED clipping level and overtemperature indicators; relay protected output; thermostatic controls; balanced XLR inputs. 175 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD, 650 W mono with 0.09% THD; slew rate 35 V/ $\mu$ sec; hum and noise 100 dB below rated output; input sensitivity 2.5 V; damping factor 200 ref. 8 ohms at 1000 Hz; 5 1/4" H x 19" W x 12" D ..... \$595



**DCA300.** Similar to DCA700 except 100 W/ch and 300 W mono under same conditions ..... \$445

**DCM301 Power Amplifier**

Mono power amplifier with dc circuitry; features built-in nine-band graphic equalizer with center frequency slide controls at 60, 120, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz  $\pm$  15 dB with EQ in/out switch; gain control; thermostatic control with LED overtemperature indicator. 100 W continuous into 8 ohms with 0.05% THD; frequency response 20-20,000 Hz  $\pm$  0.1 dB; slew rate 25 V/ $\mu$ sec; hum and noise 100 dB below rated output; input sensitivity 2.1 V; damping factor 10k ohms; 5 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  12" D ..... \$350

**DCM151.** Similar to DCM301 except 70 W under same conditions ..... \$275

*Prices listed are those sold directly from the manufacturer.*

**CONRAD-JOHNSON**

**Premier One Power Amplifier**

Vacuum tube design with low-noise precision parts in audio circuitry; LED bias indicators. 200 W/ch continuous, both channels driven into 4, 8, or 16 ohms from 30-15,000 Hz with 1.0% THD and IM dist.; frequency response 20-20,000 Hz  $\pm$  0.5 dB; S/N 90 dB ..... \$3850

**MV75-1 Power Amplifier**

Vacuum tube design with low-noise precision parts in audio circuitry; LED bias indicators. 75 W/ch continuous, both channels driven into 4, 8, or 16 ohms from 30-15,000 Hz with 1.0% THD and IM dist.; 150 W mono; frequency response 20-20,000 Hz  $\pm$  0.5% dB; S/N 90 dB ..... \$985

**MV45-1.** Similar to MV75-1 except 45 W/ch under same conditions ..... \$699

**CROWN**

**M-600 Power Amplifier**

Monaural power amplifier features peak average power meter with LEDs and adjustable thresholds; changeable input control modules; short, mismatch, open circuit, high line voltage and input overload protection; turn-on delay. 600 W into 8 ohms over 1-20,000 Hz with 0.05% THD and 0.01% IM dist.; 1000 W continuous into 4 ohms over 1-15,000 Hz with 0.05% THD; frequency response 0-100,000 Hz  $\pm$  1 dB (1 W); input sensitivity 3.46 V rms  $\pm$  1% for 600 W continuous into 8 ohms; hum and noise 120 dB below rated output; phase response  $\pm$  0-15 degrees (0-20,000 Hz, 1 W into 8 ohms); damping factor greater than 800; input impedance 25,000 ohms  $\pm$  30% (standard input); 8 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  16 $\frac{1}{2}$ " D ..... \$2395

**M-2000.** Consists of two M-600 units coupled together; 2000 W into 8 ohms over 1-15,000 Hz with 0.05% THD and 0.01% IM dist.; 1200 W into 16 ohms over 1-20,000 Hz with 0.05% THD; frequency response 0-50,000 Hz  $\pm$  1 dB (1 W into 8 ohms); input sensitivity 3.16 V rms  $\pm$  1% for 2000 W into 8 ohms; hum and noise 115 dB below rated output; phase response  $\pm$  0-20 degrees (0-20,000 Hz, 1 W into 8 ohms); damping factor greater than 250; 120- and 240-V ac, 50-60 Hz, 160 W (idle), 3800 W (at rated output); 17 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  16 $\frac{1}{2}$ " D ..... \$4790

**SA-2 Power Amplifier**

Features dual-LED input/output comparator display indicators; stereo/mono switch; remote mute; four on-board computers that analyze demand and immediate history of amplifier and load for max. output power; two-speed fan cooling. 220 W continuous into 8 ohms from 20-20,000 Hz with 0.05% THD and 0.01% IM dist.; frequency response 0-80,000 Hz  $\pm$  0/-1.5 dB; S/N 110 dB (A weighted); 7" H  $\times$  19" W  $\times$  14 $\frac{1}{2}$ " D ..... \$1749

**PSA-2 Power Amplifier**

Features dual-channel LED overload, signal, and standby indicators; LED power on; high-impedance

balanced inputs; switchable high and low-pass filters (for true bi-amplification); 50 pulse/sec test tone generator; limiter compressor with variable threshold; five-sec turn on delay; mono/stereo switch; two-speed fan cooling. 220 W continuous into 8 ohms from 20-20,000 Hz with 0.05% THD and 0.01% IM dist.; frequency response 0-80,000 Hz  $\pm$  0/-1.5 dB at 1 W; S/N 110 dB below rated output; 7" H  $\times$  19" W  $\times$  14 $\frac{1}{2}$ " D ..... \$1649

**DC-300A Power Amplifier**

Single- or dual-channel power amplifier. Stereo mode: 155 W/ch into 8 ohms over 1-20,000 Hz with 0.05% THD and 0.01% IM dist.; frequency response 0-100,000 Hz  $\pm$  1 dB (1 W into 8 ohms); input sensitivity 1.71 V  $\pm$  2% for 155 W into 8 ohms; hum and noise 115 dB below rated output; phase response  $\pm$  0-15 degrees (0-20,000 Hz, 1 W); damping factor greater than 750; input impedance 25,000 ohms  $\pm$  30%; short, mismatch, open circuit, thermal, and input overload protection; 120-, 128-, 240-, 248-, and 256-V ac  $\pm$  10%; 50-400 Hz, 40 W (idle), 510 W (at rated output); fits 19-in standard rack mount; includes IOC (input/output comparator); 7" H  $\times$  9 $\frac{3}{4}$ " D ..... \$1049

**7R. Cabinet** ..... \$75

**D-150A Power Amplifier**

Single- or dual-channel power amplifier. Stereo mode: 80 W/ch into 8 ohms over 1-20,000 Hz with 0.05% THD and 0.01% IM dist.; frequency response 0-100,000 Hz  $\pm$  1 dB (1 W into 8 ohms); input sensitivity 1.19 V  $\pm$  2% for 80 W into 8 ohms; hum and noise 110 dB below rated output; phase response  $\pm$  0-15 degrees (0-20,000 Hz, 1 W); damping factor greater than 400; input impedance 25,000 ohms  $\pm$  30%; short, mismatch, open circuit, thermal, and input overload protection; 120- and 240-V ac  $\pm$  10%. 50-400 Hz, 30 W (idle), 250 W (at rated output); includes IOC (input/output comparator); 5 $\frac{1}{2}$ " H  $\times$  17" W  $\times$  8 $\frac{3}{4}$ " D ..... \$669

**5R. Cabinet** ..... \$65

**PL-1 Power Amplifier**

Features LED input-output comparator readout display; mono/stereo switch; 50 W continuous into 8 ohms from 20-20,000 Hz with 0.05% THD; 0.00095% IM dist. at 50 W; frequency response 5-100,000 Hz  $\pm$  0/-3 dB; S/N 110 dB below rated output; 3 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  12 $\frac{1}{4}$ " D ..... \$499

**D-75 Power Amplifier**

Single- or dual-channel power amplifier. Features two IOCs (input/output comparators), three meter indicators (two signal and one power), and separate signal and chassis grounds. Stereo: 35 W/ch continuous into 8 ohms from 20-10,000 Hz at 0.05% THD, 45 W/ch continuous into 4 ohms from 20-20,000 Hz at 0.05% THD; frequency response 20-20,000 Hz  $\pm$  0.1 dB and 5-100,000 Hz  $\pm$  1.2 dB at 1 W into 8 ohms; IM dist. 0.05% max. from 0.01-0.25 W; slew rate 6 V/ $\mu$ sec; damping factor 4.00 from 0-400 Hz into 8 ohms; rated for 4- and 8-ohm loads, safely handles purely reactive loads; input sensitivity 0.9 V  $\pm$  2% for 35 W into 8 ohms. Mono: 95 W continuous into 8 ohms from 20-20,000 Hz at 0.05% THD; frequency response at 1 W into 16 ohms from 20-20,000 Hz  $\pm$  0.2 dB, from 6-50,000 Hz  $\pm$  1 dB. General: hum and noise 106 dB below rated output from 20-20,000 Hz; phase response  $\pm$  10, -15 degrees from 20-20,000 Hz at 1 W; input impedance  $\pm$  30% at 20,000 ohms (balanced),  $\pm$  30% at 10,000 ohms (unbalanced),  $\pm$  30% at 25,000 ohms (unbalanced phone jack); amplifier output protection volt-amp limiting circuit; ac voltages from 100-240 V  $\pm$  10% between 50-400 Hz; 1 $\frac{3}{4}$ " H  $\times$  19" W  $\times$  3" D ..... \$449

**DB SYSTEMS**

**DB-6 Power Amplifier**

Features Class A, FET, and digital circuitry; 12 dB/octave subsonic filter; peak-clipping LEDs; electronic clamp (in place of relays). 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.003% THD. 60 W continuous into 4 ohms; THD 0.0008% at 1000 Hz; IM dist. less than 0.002%; frequency response 20-40,000

Hz  $\pm$  0/-1 dB; input sensitivity/impedance 1 V/50,000 ohms; S/N 112 dB at 1 V in (A weighted), 96 dB at 1 W into 8 ohms (A weighted); slew rate 15 V/ $\mu$ sec; damping factor greater than 400 from 20-1000 Hz, 40 at 20,000 Hz. 4.9" H  $\times$  16" W  $\times$  12.8" D ..... \$495

**DB-6M.** Similar to DB-6 except bridged mono amplifier with 140 W continuous with 0.008% THD, 225 W continuous into 4 ohms; slew rate greater than 30 V/ $\mu$ sec ..... \$525

Mono conversion of DB-6 to DB-6M ..... \$30

**DENON**

**POA-3000 Power Amplifier**

Class A stereo power amplifier with five power transistors/size, real bias circuitry, cascode emitter follower drive circuit, coupling capacitorless direct dc servo control circuit, and power supply with large-capacity toroidal power transformer and low-impedance electrolytic capacitor; has dual peak meters. 180 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.01% THD; HD and IM dist. 0.003%; frequency response 10-100,000 Hz  $\pm$  3 dB; S/N 122 dB (HF A); damping factor 200 into 8 ohms at 1000 Hz; input sensitivity impedance 1 V/50k ohms; subsonic filter 6 dB/octave at 16 Hz ..... \$2300

**DYNACO**

**ST-420 Power Amplifier**

Fully complementary direct-coupled power amplifier with double dual cascode front end; low-noise toroidal transformer power supply; large heat sink; amp and speaker protection circuitry; on/off transient suppression circuit. 200 W/ch continuous into 8 ohms; frequency response 10-25,000 Hz  $\pm$  0/-1 dB; THD 0.05% from 10-20,000 Hz; IM dist. 0.05% at 60, 7000 Hz; S/N 102 dB; input sensitivity impedance 1.5 V rms 47k ohms; slew rate 30 V/ $\mu$ sec; 7" H  $\times$  15" W  $\times$  8" D ..... \$750

**EUMIG USA**

**M-1000 Power Amplifier**

Time-processed dc circuitry with high-speed transistors in driver and output stages; switchable ca-



pacitor for electrostatic speakers; features dual 12-LED calibrated peak power display with X0.1 and X1 meter range selector, two-speaker switches, -30 dB attenuator, and left/right volume control. 100 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.0075% THD; frequency response 0-200,000 Hz  $\pm$  1 dB; S/N 105 dB; damping factor 120 at 8 ohms, 1000 Hz; channel separation 70 dB from 20-30,000 Hz; matte black or chrome finish; 19-in rack-mount face plate ..... \$795

**FISHER**

**BA 6000 Power Amplifier**

Features dc circuitry; dual illuminated power meters with LED peak-reading indicators and 0-20 dB meter range selector; four-position speaker selector; input level control. 100 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.01% THD and IM dist.; damping factor 50 ..... \$500

**BA 3000.** Similar to BA 6000 minus input level control; 60 W/ch under same conditions ..... \$380

**DAVID HAFLER**

**DH-200 Power Amplifier Kit**

Features class A output stages and symmetrical mir-

# 2 POWER AMPLIFIERS

ror-image complementary push-pull input-to-output circuitry; incorporates two assembled and tested amplifier modules; has mono bridging capability to 300-W conversion; 100 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD; frequency response 1-100,000 Hz -3 dB at 1 W; damping factor 150 at 1000 Hz, 8 ohms; slew rate 30 V/ $\mu$ sec; rise time 2.5  $\mu$ sec; input sensitivity/impedance 1.5 V rms/22,000 ohms; available in kit or assembled form.  
Kit..... \$330

## HARMAN/KARDON

### 700 Series High Technology Separates

#### hk770 Power Amplifier

Features dc coupled design; discrete components in audio circuitry; twin toroidal power supplies with



two toroidal transformers; massive heatsinks; dual instantaneous LED peak-reading vertical display (0.05-100 W into 8 ohms) with pushbutton display on/off and X1 X0.1 display sensitivity selectors; two speaker switching. 65 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD; power bandwidth 8-100,000 Hz at 32.5 W/ch with 0.03% THD; frequency response 1-250,000 Hz -3 dB; THD 0.006% at 1000 Hz; IM dist. 0.01% at rated output; total TIM dist. 0.007% at rated output; damping factor 50; slew rate 150 V/ $\mu$ sec into 8 ohms; S/N 123 dB (IHF A); input sensitivity/impedance 1.2 V/35k ohms; 2.9" H x 15.2" W x 12.6" D..... \$399

## HEATH

#### AA-1800 Power Amplifier

Features LED left and right peak-level indicators; individually fused power supply lines with rugged output devices; rear-panel input level controls, speaker outputs, and line fuse; speaker turn-on delay with LED protection indicator; LED power indicator. 250 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.025% THD; dynamic headroom 2.5 dB; frequency response 20-20,000 Hz  $\pm$ 0.1 dB; THD (to rated output) 0.025%, IM dist. 0.02%, TIM dist. 0.03%; hum and noise -85 dB ref. 1 W (unweighted); damping factor 100; input sensitivity/impedance 110 mV/20k ohms; wire-frame chassis; 7" H x 19" W x 16.75" D.  
Kit..... \$600

#### AA-1600 Power Amplifier

Features left/right peak output, high temperature, and power on LEDs; 125 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD, TIM, and IM dist.; frequency response 7-50,000 Hz  $\pm$ 1 dB; hum and noise -100 dB; 7 $\frac{1}{2}$ " H x 19" W x 13" D.  
Kit..... \$330

#### AA-1515 Power Amplifier

70 W/ch min. continuous into 8 ohms at 0.08% THD over 20-20,000 Hz; frequency response 8-45,000 Hz +0/-1 dB; input sensitivity 2 mV (phono), 150 mV (aux., tuner, tape, tape monitor, and tape dub); secondary controls concealed behind fold-down front panel; outputs for two speaker pairs; stereo headphone jack; lighted power meters and program legends; 6 $\frac{1}{2}$ " H x 17 $\frac{1}{2}$ " W x 14 $\frac{1}{2}$ " D.  
Kit..... \$300

#### AA-1219 Power Amplifier

15 W/ch into 8 ohms at 0.5% THD over 20-20,000 Hz; phono, tape, tuner, and aux. inputs; tape monitor circuit; 3 $\frac{1}{2}$ " H x 12 $\frac{3}{4}$ " W x 12" D.  
Kit..... \$130

## HITACHI

#### HMA-7500 Mk II Power Amplifier

MOS FET power amplifier with pure complementary dc OCL and two-stage differential circuitry systems.



Features calibrated peak power meters with meter range switch, two-speaker switching, protection relay for power resistors and connected speakers, and subsonic filter. 75 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.008% THD; THD and IM dist. 0.01% at rated output; IHF power bandwidth 5-40,000 Hz at 0.01% THD; frequency response 0-200,000 Hz +0/-1 dB; input sensitivity/impedance 1 V/50,000 ohms; load impedance 4-16 ohms; damping factor 60; S/N 120 dB (IHF "A"); channel separation 105 dB at 1000 Hz, 70 dB at 100,000 Hz; output terminal 4-16 ohms (speaker A or B), 8-16 ohms (speaker A + B); one ac outlet. Soft gray finish; 6 $\frac{1}{2}$ " H x 18 $\frac{1}{2}$ " W x 14" D..... \$550

#### HMA-6500 Power Amplifier

Features MOS FETs and direct-coupled circuitry; electronic power protection circuitry; dual power meters; two-speaker switching. 50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD; IM dist. 0.005% at half-rated output; frequency response 0-100,000 Hz +0/-1 dB (dc setting), 5-100,000 Hz +0/-1 dB (normal setting); input sensitivity/impedance 1 V/50k ohms; S/N 115 dB (IHF A); damping factor 50 at 1000 Hz, 8 ohms; 6" H x 17 $\frac{1}{2}$ " W x 12 $\frac{1}{4}$ " D..... \$330

## INTERSOUND

#### SP-300 Power Amplifier

High-resolution power amplifier features all discrete main amplifier design; low-noise matched monolithic FET in input stage and wideband fully complementary emitter-follower triple output stage; mono bridging from 4 ohms and up with rear-panel mono-stereo switch and front-panel LED indicators; isolated unbalanced and precision active balanced inputs; magnetic circuit breaker, thermal protection with LED, overload indicators, turn-on delay, dc protection, and variable threshold dissipation limiter; dual left/right input level controls, LED power on and ready indicators. 100 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD. 300 W mono into 8 ohms at 0.1% THD; SMPTE IM dist. 0.03% from 250 mW to rated power, 8 ohms; TIM dist. 0.02%; IHF IM dist. 0.05%; frequency response 20-20,000 Hz  $\pm$ 0.15 dB; damping factor 100 from 20-1000 Hz at 8 ohms; slew rate 45 V/ $\mu$ sec; input sensitivity/impedance 1 V rms/40k ohms (balanced); S/N 110 dB (A weighted); 5 $\frac{1}{2}$ " H x 19" W x 13 $\frac{1}{4}$ " D... \$599

## KENWOOD

#### Audio Purist Group

#### L-09M Single-Channel Power Amp

300 W continuous into 8 ohms over 20-20,000 Hz with 0.02% THD; IM dist. 0.007%; frequency response 0-100,000 Hz +0/-2 dB; residual noise less than 35  $\mu$ V; S/N 120 dB; triple push-pull class AB full complementary symmetry circuitry; chim-

ney-type structural heat sinks; gold-plated screw-type pin plugs with special audio cable for preamp connection; remote power switch for control by L-07CII control amplifier; 6 $\frac{1}{2}$ " H x 19" W x 16 $\frac{1}{4}$ " D..... \$700

#### L-07MII Power Amplifier

Features dc circuitry; single-channel power supply system; direct-drive method with short 1-m speaker cable for close positioning of power amp and speakers; pure complementary symmetrical push-pull circuitry with dual-gate FETs in input stages and constant-current supplies; gold-plated plugs and connectors; full protection circuitry. Output 150 W minimum continuous into 8 ohms from 20-20,000 Hz with 0.007% THD; IM dist. 0.003%; frequency response 0-600,000 Hz +0/-3 dB; S/N 120 dB short-circuited; damping factor 120 from 0-20,000 Hz, 8 ohms; slew rate  $\pm$ 170 V/ $\mu$ sec; rise time 0.55  $\mu$ sec at  $\pm$ 1, 20, or 40 V; input sensitivity/impedance 1 V/50k ohms; 6 $\frac{1}{2}$ " H x 7 $\frac{1}{2}$ " W x 15 $\frac{1}{2}$ " D..... \$600

L-05M. Similar to L-07MII except 100 W continuous into 8 ohms with 0.005% THD; IM dist. 0.001%; damping factor 150 from 0-20,000 Hz, 8 ohms..... \$425

## LUX

#### Luxman M-4000A Power Amplifier

Direct-coupled dc stereo power amplifier features dual power meters and dual-LED peak level indica-



tors with peak indicator on/off and 0.1-20-dB meter sensitivity switch; separate left and right 22-click input level controls in 1-dB increments; speaker and two amplifier protection circuits. 180 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.015% THD and IM dist.; frequency response 3-100,000 Hz -1 dB; S/N 116 dB (IHF A); input sensitivity/impedance 600 mV/50k ohms; 6 $\frac{1}{2}$ " H x 19 $\frac{3}{32}$ " W x 15 $\frac{1}{4}$ " D.... \$1495

#### Luxman M-120A Power Amplifier

Features separate LED peak level indicators for left and right channels and duo-Alpha mono modes with full X0.1 power indicator switch; two-way speaker switching; left and right mono input level controls. 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.015% THD and 0.01% IM dist., 300 W into 8 ohms with 0.03% THD (duo-Alpha mono output); frequency response 10-100,000 Hz -1 dB; S/N 110 dB (IHF A weighted); damping factor 50; input sensitivity/impedance 900 mV/160k ohms; 5 $\frac{1}{2}$ " H x 17 $\frac{1}{4}$ " W x 13 $\frac{3}{32}$ " D..... \$625

## METRON

#### A-4000 Power Amplifier

Features two illuminated peak power meters calibrated to 50 dB; level controls adjustable in 1-dB increments; two input switches with LED; A/B speaker selector switches with LED; dimmer switch; two headphone jacks. 350 W continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist., 550 W continuous into 4 ohms; frequency response 2.5-200,000 Hz -3 dB, 5-100,000 Hz -1 dB; S/N greater than 115 dB (A weighted); slew rate 50 V/ $\mu$ sec; damping factor min. 200; input sensitivity/impedance 2.0 V/10k ohms. 7.87" H x 18.9" W x 18.5" D... \$1600

#### M-200 Power Amplifier

Features illuminated power averaging meters cali-



brated to +3 dB at clipping point; stepped 2-dB level controls; protection indicator. 125 W continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist., 240 W continuous into 4 ohms; frequency response 2500-200,000 Hz -3 dB, 5-100,000 Hz -1 dB; S/N greater than 105 dB (unweighted); slew rate 70 V/ $\mu$ sec; damping factor min. 175 at 100 Hz into 8 ohms; input sensitivity/impedance 1.4 V/10,000 ohms. 5.875" H  $\times$  19" W  $\times$  13" D..... \$650

## MITSUBISHI

### DA-A15DC Power Amplifier

Direct-coupled and can amplify dc signals; 150 W/ch into 8 ohms from 20-20,000 Hz with 0.01%



THD; IM dist. 0.008% at rated power; frequency response 20-20,000 Hz  $\pm$ 0.1 dB at rated power; input sensitivity/impedance 1 V variable/50,000 ohms; damping factor 100; channel separation 100 dB at 1000 Hz, 80 dB at 20,000 Hz; S/N (IHF "A") 123 dB; 6 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{2}$ " D..... \$700  
**DA-A10DC.** Similar to DA-A15DC, but 100 W/ch into 8 ohms; S/N (IHF "A") 122 dB..... \$470  
**DA-A7DC.** Similar to DA-A10DC except 75 W/ch under same conditions; channel separation 80 dB at 1000 Hz, 60 dB at 20,000 Hz; 6 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  9 $\frac{1}{2}$ " D..... \$330  
**DA-M10.** Power output level meter unit for DA-A15DC, DA-A10DC, and DA-A7DC amplifiers; power amplifier function controls on meter unit front panel; 6 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  4 $\frac{1}{2}$ " D..... \$170

### M-A01 Micro-Power Amplifier

70 W/ch continuous, both channels driven into 8 ohms from 15-20,000 Hz at 0.01% THD; IM dist. 0.008% at rated power; power bandwidth 10-60,000 Hz (IHF) at 0.05% THD; frequency response 20-20,000 Hz  $\pm$ 0.1 dB at rated power; input sensitivity/impedance 1 V/50k ohms; damping factor 100 from 20-20,000 Hz; S/N at rated power 123 dB closed circuit (IHF "A"); slew rate 30 V/ $\mu$ sec. Features dc amplification, dual 12-LED peak-level indicators with peak level range switch, speaker selector, and large heat sinks. 5 $\frac{1}{2}$ " H  $\times$  10 $\frac{1}{2}$ " W  $\times$  9 $\frac{1}{2}$ " D..... \$500

## MTI

### 245 Power Amplifier

Designed to maximize headroom in handling transients. Features automatic current, overload, and thermal protection; dual nine-LED peak output level indicators; mono bridging capability through external connection. 40 W/ch continuous into 8 ohms; headroom 10 dB (can reproduce 250 W peak); frequency response 5-100,000 Hz  $\pm$ 0-3 dB, band-pass limited; dist. 0.05%; output noise -80 dB re 1 W into 8 ohms; S/N 100 dB; 1.75" H  $\times$  12.5" W  $\times$  8" D..... \$595

## NAIM by AUDIOPHILE SYSTEMS

### NAP 250 Power Amplifier

Features gain decoupling capacitor and passive single pole filter with no slew rate limit within bandwidth; heavy aluminum extruded heatsink; toroidal main transformers; four regulated power supplies. 70 W continuous into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; frequency response 5-40,000 Hz  $\pm$ 3 dB; transient capability 400 VA; sensitivity 1.6 V; impedance 22k ohms; can drive reactive loads with phase angles from -90° to +9°

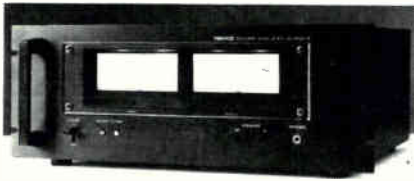
with no appreciable distortion change; 5" H  $\times$  17" W  $\times$  12" D..... \$2000

**NAP 160.** Similar to NAP 250 except has built-in 24-V regulated power supply (powers Naim preamps); 50 W under same conditions; transient capability 250 VA; sensitivity 1.4 V..... \$1070

## NIKKO

### Alpha VI Power Amplifier

DC stereo power amplifier features mono bridging; pair of FETs coupled to cascode amp and current



source and differential amp coupled to cascode amp and current mirror and triple Darlington configuration with four parallel SEPP output stages; separate power supplies and regulated power supply for input and voltage translator stages; dual peak power meters; A-B speaker switching; two-speed cooling fan; power limiters and wide-gap relay protection circuitry with LED overload and high-temperature indicators. Output 300 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.01% THD and IM dist., 650 W bridged with 0.02% THD; damping factor 150 at 8 ohms, 1000 Hz; S/N 115 dB (IHF A); input sensitivity 1 V; matte black finish; 7 $\frac{1}{4}$ " H  $\times$  19" W  $\times$  18 $\frac{1}{4}$ " D..... \$1400

### Alpha 440 Power Amplifier

Features high-speed bipolar transistors with dc servo-feedback loop non-switching output and dual FET input circuitry; dual vertical LED bar graph power indicator display; separate input level controls; relay-controlled speaker selector; LED power and protection-circuit indicators; headphone jack. 220 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.008% THD, 240 W/ch continuous into 4 ohms; S/N 115 dB; matte black finish; 6.9" H  $\times$  19" W  $\times$  18" D..... \$950

### Alpha 220 Power Amplifier

Features dc servo-feedback loop non-switching output and dual-FET input circuitry; speaker selector switch; LED power on and protection-circuit indicators; headphone jack. 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.008% THD; S/N 115 dB; slew rate 100 V/ $\mu$ sec; matte black finish; 5.4" H  $\times$  19" W  $\times$  13.5" D..... \$499

## ONKYO

### M-5060 Power Amplifier

Features dual Super Servo and linear switching circuitry; independent mono amps on same chassis; two large power transformers; dual two-color power output meters with peak hold; stable protection circuitry with IC voltage and current sensing device; two-speaker switching; separate left/right gain controls; 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.005% THD..... \$796

### M-505 Power Amplifier

Features two mono amplifiers with own power supply; large heatsinks; dc amplifier circuitry; relay-operated protective circuit; three-step low-cut filter; power, cutoff frequency, and left/right level adjuster controls; "P" input and speaker outputs. 105 W/ch continuous, both channels into 8 ohms over 20-20,000 Hz with 0.05% THD (140 W/ch into 4 ohms); IM dist. 0.05%; damping factor 100 (8 ohms, 1 kHz); frequency response 0-150,000 Hz  $\pm$ 0/-1.5 dB; input sensitivity 1.5 V; input impedance 100,000 ohms; load impedance 4-16 ohms; S/N 110 dB (IHF A); embossed vinyl over metal cabinet. 6 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  12 $\frac{1}{4}$ " D..... \$580

## OPAMP LABS

### SM-100K Power Amplifier Kit

50 W/ch continuous or 100 W continuous mono power amplifier; kit consists of panel chassis with hardware, two 440KR power operational amplifiers, 536 power supply, PC-SM100 convertible stereo 50-W or mono 100-W PC boards, and all necessary components; see Section 14, Accessories, for information on 440KR; 7" H  $\times$  19" W  $\times$  7" D..... \$225  
**SM-100W.** Wired unit..... \$300

## OPTONICA

### SX-9305 Power Amplifier

Features three-color LED power output bar graph display; graphic spectrum analyzer; two LEDs for protection circuitry; two-speaker switching; detented volume control. 100 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.01% THD; ebony faceplate..... \$850

## PHASE LINEAR

### D-500 Series Two Power Amplifier

505 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.09% THD, 800 W continuous into 4 ohms at 1000 Hz; IM dist. 0.09%; damping factor 1000/min; S/N 110 dB (IHF "A"). Features dual LED peak-responding meters; two input sensitivity controls; high/low impedance operating modes; high frequency limiters; automatic speaker safeguard system. 7" H  $\times$  19" W  $\times$  15" D..... \$1600

### 700 Series Two Power Amplifier

360 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.09% THD and IM dist.; frequency response 0-40,000 Hz (1 W, direct-coupled inputs); sensitivity 1.2 V; hum and noise -110 dB; load impedance 4-16 ohms. Features peak-responding LED meters, dual channel controls for input sensitivity; light brushed gold, anodized panel; 7" H  $\times$  19" W  $\times$  10" D..... \$1000  
 Walnut side panels..... \$50

### 400 Series Two Power Amplifier

210 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.09% THD and IM dist.; frequency response 12-40,000 Hz (1 W); S/N 110 dB (IHF "A"); load impedance 4-16 ohms; sensitivity 1.0 V. Features peak-responding LED meters; individual channel controls for input sensitivity; light brushed gold anodized panel. 7" H  $\times$  19" W  $\times$  10" D... \$700  
 Walnut side panels..... \$50

### 300 Series Two Power Amplifier

Features direct-coupled mirror-image drive circuitry and fully complementary output stage; dc speaker protection and output relay; power semiconductor. 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.009% THD and 0.005% IM dist.; frequency response 11-190,000 Hz  $\pm$ 0/-1 dB; S/N 110 dB (IHF A weighted); damping factor 330; slew rate 110 V/ $\mu$ sec; rise time 1.0  $\mu$ sec (small signal); input sensitivity/impedance 0.88 V rms/49k ohms; 3 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  11 $\frac{1}{2}$ " D..... \$500

## PHILIPS

### AH 380 Power Amplifier

Features dc design with high-conductance dual FET input, non-capacitive OCL and direct-mode ICL,



and parallel push-pull configuration; toroidal power transformer with 22,000- $\mu$ F capacitors; current

limiter, short circuit at output terminals, thermal switching, and dc protection circuits with automatic self-checking fault indicator and LED heat and dc indicators; dual peak-reading power meters calibrated in dB and watts (into 8 ohms); two-speaker switching; separate left right input level controls 100 W ch continuous sine wave, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD; HD and IM dist. 0.01% at 70 W; frequency response 5-200,000 Hz -3 dB (normal input), 0-200,000 Hz -3 dB (direct in); S/N 100 dB; load impedance 4-16 ohms; input sensitivity 1 V. Designed for use with Philips' AH 280 preamplifier and AH 180 tuner but complements most high-fidelity systems; black metal cabinet; 4" H x 19" W x 13 1/2" D ..... \$470

## PIONEER

### SPEC-2 Power Amplifier

250 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD; frequency response 1-80,000 Hz +0/-1 dB; damping factor 70; hum and noise 110 dB (IHF A); impedance selector for 4 or 8 ohms; input sensitivity control; two peak power level meters; built-in surge current control and protection circuits; 6 7/8" H x 18 1/8" W x 13 1/8" D ..... \$995

### SPEC-4 Power Amplifier

150 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.01% THD (180 W/ch into 4 ohms with 0.03% THD); IM dist. 0.01% at rated output; frequency response 5-100,000 Hz +0 -1 dB; input sensitivity/impedance 1 V 50,000 ohms; load impedance 4-16 ohms; damping factor 100 (8 ohms); hum and noise 115 dB (IHF A). 7 3/8" H x 18 3/32" W x 17 1/32" D ..... \$795

## PRECISION FIDELITY

### M7 Power Amplifier

Vacuum-tube power amplifier with triode input stage and constant-current differential amp input; 50 W/ch continuous, 100 W mono ..... \$699

## PROFESSIONAL SYSTEMS

### Studio IV Mono Power Amplifier

350 W continuous into 8 ohms from 20-20,000 Hz with 0.02% THD, 550 W continuous into 4 ohms with 0.04% THD; sensitivity 1.6 V for 350 W into 8 ohms; slew rate 100 V/μsec; damping factor 2000 (at amp output), 200 (at speaker terminals); S/N 100 dB ..... \$895

### Studio Two Power Amplifier

80 W/ch continuous into 8 ohms with 0.02% THD, 140 W ch continuous into 4 ohms with 0.04% THD over 20-20,000 Hz; sensitivity 1.2 V for 100 W into 8 ohms; slew rate 100 V/μsec; damping factor 2000 (at amp output), 200 (at speaker terminals); S/N 100 dB ..... \$650

## PS AUDIO

### PS Model One Power Amplifier

Class AB power amplifier with front-panel power switch and LED; 80 W continuous into 8 ohms; slew rate 75 V/μsec ..... \$449

## QUAD by ACOUSTICAL MFG.

### Quad 405 Power Amplifier

Voltage power amplifier with feed-forward error-correction current dumping output circuitry; fixed high-pass filter; clamp circuit interrupts output to

speaker in case of component failure; no controls. 100 W continuous sine wave into 8 ohms from 100-1000 Hz with 0.01% THD and with 0.05% THD at 10,000 Hz; frequency response 20-20,000 Hz -0.5 dB; slew rate 0.1 V/μsec; hum and noise -95 dB (A weighted); 115 mm H x 340.5 mm W x 195 mm D ..... \$675

### Quad 303 Power Amplifier

Employs symmetrical triple circuitry; no controls. 45 W continuous sine wave into 8 ohms from 100-1000 Hz with 0.03% THD and 0.1% THD at 10,000 Hz; frequency response 30-35,000 Hz -1 dB, 8 ohms; hum and noise -100 dB (A weighted); 159 mm H x 120 mm W x 324 mm D ..... \$395

## ROTEL

### RB-5000 Power Amplifier

Features two average power meters with three-position sensitivity switch (0, -10, and -20 dB) plus 16-LED peak indicators; standby and overload protection, and three speaker select LED indicators; three-position filter (lab test, normal, and low). 500 W/ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.009% THD and IM dist.; frequency response 0-200,000 Hz -3 dB (1 W/ch into 8 ohms); hum and noise -120 dB (IHF A); damping factor 180 from 20-20,000 Hz, 8 ohms; 9 7/16" H x 19" W x 16 1/8" D ..... \$2700

### RB-2000 Power Amplifier

Features complementary push-pull dc OCL output circuitry; separate power supplies for dual FET, differential and pre-driver stages and power output stage; dual peak level power meters; connection for two pairs of speakers; protection indicator; gold-plated input jacks. 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.01% THD and IM dist.; frequency response 0-200,000 Hz -3 dB; S/N 110 dB (IHF "A"); damping factor 60 from 20-20,000 Hz, 8 ohms; input sensitivity 1.5 V/50,000 ohms. 5 3/8" H x 19" W x 16 1/8" D ..... \$610

### RB-1000 Power Amplifier

Features dc circuitry; toroidal transformer; left/right input level controls; two-speaker switching; LED protection indicator. 65 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD; frequency response 5-100,000 Hz; S/N 90 dB; residual noise 0.2 mV; input sensitivity/impedance 1 V/20k ohms; 3 7/32" H x 16 1/8" W x 11 1/32" D ..... \$320

## SAE

### 2600 Power Amplifier

400 W ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.05% THD and IM dist. (600 W ch continuous into 4 ohms with 0.1% THD); frequency response 20-20,000 Hz -0.25 dB; S/N 100 dB; input sensitivity 2.12 V; relay protection for speakers; fully complementary plus parallel output stage; 7" H x 19" W x 14" D. \$1600

### 2401 Power Amplifier

250 W/ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.025% THD and IM dist.; dynamic headroom 0.5 dB; damping factor 60; frequency response 20-20,000 Hz +0 -0.5 dB; S/N 125 dB (IHF A weighted); input sensitivity 2.24 V. relay protection for speakers; volt/amp limiter. complementary double differential inputs and complementary series-connected output stages. LED display; feedback level control: 7" H x 19" W x 12 1/2" D ..... \$1050

### 2300 Power Amplifier

150 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD and IM dist.; frequency response 20-20,000 Hz -0.25 dB; S/N 100 dB; input sensitivity 1.5 V. Features fully complementary circuits, toroidal power supply, full protection, and LED display for output monitoring. 5 1/4" H x 19" W x 12 1/2" D ..... \$775

### 2200 Power Amplifier

100 W/ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.05% THD and IM dist.; frequency response 20-20,000 Hz -0.25 dB; S/N 100 dB; sensitivity 1.5 V rms for rated output, 100,000 ohms; LED display; 5.25" H x 19" W x 8.5" D ..... \$550  
WMC-3. Unassembled walnut cabinet ..... \$60

### 3100 Power Amplifier

50 W ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD and IM dist.; frequency response 20-20,000 Hz -0.25 dB; S/N 100 dB; input sensitivity 1.0 V. Features fully complementary circuits, toroidal power supply, thermal, signal relay, and electronic protection, and LED display for output monitoring. 5 1/4" H x 19" W x 8 1/2" D ..... \$350  
WMC-3. Unassembled walnut cabinet ..... \$60

## SANSUI

### BA-F1 DD/DC Power Amplifier

Features "Diamond Differential dc circuitry"; dual peak power meters calibrated in dB and W; left/right



input level controls; speaker switching for two systems. Output 110 W/ch continuous, both channels driven into 8 ohms from 10-20,000 Hz with 0.008% THD; frequency response 0-600,000 Hz -0.3 dB; slew rate 200 V/μsec; rise time 0.5 μsec; S/N 125 dB; matte black finish with detachable rack-mount handles ..... \$665

### B-77 Linear-A DC Power Amplifier

See Section 1. Receivers, under Sansui's Super Compo Series 900.

## SANYO

### PLUS P55 Power Amplifier

Features dc-coupled FET circuitry and MOS FET output stage; fluid convection radiator dissipates heat to liquid; three-way output protection and turn-on delay relay with LED; dual 12-LED graphic peak power display with X0.1 and X1 display range selector; two-way speaker switching; channel strapping for single-channel operation. Output 100 W/ch continuous, both channels driven into 4 or 8 ohms from 20-20,000 Hz with 0.009% THD and IM dist., 200 W mono; frequency response 7-100,000 Hz +0 -1 dB; S/N 110 dB (IHF A); damping factor 60; input sensitivity/impedance 1 V/47k ohms; slew rate 150 V/μsec; includes rack-mount handles; fits optional EIA-standard rack; 3 1/2" H x 17 3/8" W x 10 3/8" D ..... \$400

## SONY

### TA-N88B Power Amplifier

Stereo power amplifier with pulse-width modulation circuitry and complementary push-pull vertical FET output circuitry; features pulse-locked power supply system and three stages of amplifier/speaker protection circuitry; 160 W ch continuous into 8 ohms from 20-20,000 Hz with max. 0.5% THD; IM dist. 0.1%; S/N 110 dB (closed circuit, "A"); frequency response 5-40,000 Hz -0.5 -1.0 dB; damping factor 20 at 1000 Hz; input sensitivity/impedance 1.4 V 50,000 ohms; speaker impedance 8 ohms; suitable for 19-in rack mount; 3 1/8" H x 18 1/8" W x 14 1/8" D ..... \$1050

### TA-N86B Power Amplifier

Features all-stage direct-coupled design circuitry;



three-mode amplification (Class B, Class A, mono); pulse-locked power supply; two sets of inputs for direct- or capacitor-coupled operation. 80 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.007% (stereo) and 0.015% (mono) THD (Class B), 18 W/ch under same conditions (Class A), 200 W (mono) ..... \$600

## SOUNDCRAFTSMEN

### RA7501 Power Amplifier

Class H bridged mono/stereo power amplifier. Features auto-buffer for continuous 2-ohm operation; channel A and B level controls; two clipping LEDs and LED overload indicator; rear-panel stereo/bridged mono switch with either balanced or unbalanced inputs. 250 W/ch into 8 ohms (stereo) and 750 W into 8 ohms (bridged mono) from 20-20,000 Hz with 0.09% THD; TIM 0.02% max., IM dist. 0.05% max.; slew rate 50 V/ $\mu$ sec; dynamic headroom 2 dB; 19-in rack mount with handles ..... \$799

### "New Class H" Power Amplifiers

250 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD; IM dist. 0.05%; S/N better



than 105 dB; slew rate 50 V/ $\mu$ sec; damping factor greater than 100; input sensitivity/impedance 1.3 V/15-50,000 ohms; "Vari-Portional" system meters output power requirements for optimum efficiency; class AB amplifier; solid-state crowbar fail-safe overload protection circuitry with automatic reset; nonlimiting output circuitry; black anodized front panel with silver trim and walnut side panels; 7" H x 19" W x 15" D.

**MA5002.** Features red LED clipping indicators and green LEDs for Vari-Portional system usage; dual power cords for remote ac on/off; VU meters with 10- and 100-times increased sensitivity meter range selection; two speaker switching; power switch; separate gain controls ..... \$799

**PA5001.** Without VU meters; has range, Vari-Portional and clipping LEDs, speaker switching, and gain controls ..... \$649

**EA5003.** Includes 10-band octave equalizer,  $\pm 12$  dB/octave with 18-dB range for zero-gain controls/channel; no VU meters ..... \$949

## STRELIOFF

### DC-1 400/400 Power Amplifier

Class AB stereo power amplifier employing discrete devices; 450 Joule power supply; front-panel LED thermal overload indicators and external output fusing pushbuttons with LED blown fuse indicators per channel; LED power on indicator; modular chassis design for easy servicing and circuit updating. 400 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 1.0% THD and IM dist.; frequency response 10-25,000 Hz  $\pm 1$  dB; S/N 101 dB unweighted; 10 $\frac{1}{2}$ " H x 19" W x 17" D ..... \$3500

**DC-1 200/200.** Similar to DC-1 400/400 except 200 W/ch continuous under same conditions; S/N 98 dB unweighted; has 220 Joule power supply; 7" H x 19" W x 12" D ..... \$2500

**DC-1 100/100.** Similar to DC-1 200/200 except 100 W/ch continuous under same conditions; S/N 95 dB unweighted; has 115 Joule power supply ..... \$2000

### DC-1 50/50 Power Amplifier

Class AB stereo power amplifier employing discrete devices; 50 W/ch continuous; both channels driven into 8 ohms from 20-20,000 Hz with 1.0% THD

and IM dist.; frequency response 10-25,000 Hz  $\pm 1$  dB; S/N 95 dB unweighted; 5 $\frac{1}{4}$ " H x 19" W x 12" D ..... \$750

## STUDER/REVOX

### A740 Power Amplifier

100 W/ch into 8 ohms from 20-20,000 Hz with 0.1% THD; frequency response 20-20,000 Hz +0/-0.75 dB; sensitivity 1 V for rated output. Features fully complementary push-pull circuitry at every stage, low negative feedback, and fully electronic protection circuit without relays; peak-indicating power output meters; 3-dB stepped input level controls; front-panel headphone jacks; front-panel carrying handles; RCA and XLR input connectors; switchable subsonic filter at input; 6" H x 17" W x 14" D ..... \$1499

## TANDBERG

### TPA-3003 Power Amplifier

Features toroidal power transformer; large heatsink surfaces (top panel of chassis used as heatsink); separate left/right LED peak clipping indicators. 150 W/ch into 8 ohms at 0.02% THD ..... \$1200

## TAPCO

### CP500 Power Amplifier

Features Powerlock for each channel (prevents amplifier clipping and blown speaker diaphragms); speaker protection-safety relay; dual level controls; fan cooler. 150 W/ch into 8 ohms, 510 W mono into 8 ohms ..... \$1075

**CP500M.** Same as CP500 except also has two



power output meters and LED blown fuse and thermal overload indicators ..... \$1275

### CP120 Power Amplifier

Features Powerlock for each channel; two level controls; speaker protection safety relay; fan cooler. 50 W/ch into 8 ohms, 122 W mono into 8 ohms .. \$650

## TECHNICS

### SE-9060 Power Amplifier

Stereo dc power amplifier with six power supplies and mono bridging. 70 W/ch sine wave continuous into 8 ohms over 20-20,000 Hz with 0.02% THD and IM dist., 180 W mono; frequency response 20-20,000 Hz +0/ -0.1 dB; S/N (IHF A) 115 dB; damping factor 70; load impedance 4-16 ohms (main or remote), 8-16 ohms (main plus remote); 120-V ac, 60 Hz, 240 W; 3 $\frac{1}{2}$ " H x 19" W x 14 $\frac{1}{2}$ " D ..... \$460

## THRESHOLD

### STASIS I Power Amplifier

Non-phase-inverting high-speed mono power amplifier features constant voltage/constant current linear state design; incorporates 72 150-W rated single-diffused power transistors in output stage; 1-kW transformer with four 18,000- $\mu$ F computer-grade electrolytic capacitors; switchable peak output power (+3 to 40 dB)/line voltage condition meter; amp on/standby switch selector with LED indicators; LED error waveform indicator showing instantaneous clipping or fault-related shutdown; LED over temperature indicator. 200 W from 20-20,000 Hz into 8 ohms at 120-V line source; THD and IHF IM dist. 0.1% at rated power; power bandwidth 0.5-100,000 Hz -3 dB; group propagation delay

1.5  $\mu$ sec; slew rate 50 V/ $\mu$ sec; gain factor +26.6 dB; rise time 3  $\mu$ sec; damping factor 100 from 0-20,000 Hz; hum and noise -106 dB unweighted below full power; min. load impedance 4 ohms; 8 $\frac{1}{2}$ " H x 19" W x 17 $\frac{1}{2}$ " D ..... \$3500

**STASIS 2.** Similar to STASIS 1 except stereo power amplifier with 200 W/ch output under same conditions; minus dual-function meter and LED standby; error waveform, and over temperature indicators; has dual 12-LED peak output vertical indicators (+3 to -40 dB) and 48 single-diffused power transistors in output stage; damping factor 80 under same conditions; 6 $\frac{1}{2}$ " H x 19" W x 17 $\frac{1}{2}$ " D ..... \$2450

**STASIS 3.** Similar to STASIS 2 but uses 32 power transistors in output stage; 100 W/ch under same conditions; damping factor 60 under same conditions; hum and noise -103 dB unweighted. \$1675

### CAS-2 Power Amplifier

Features cascode design and bridged mono capability; 20 150-W rated output devices with 3.6 kW dissipation reserve; dual power supplies and active current sourcing; 43-dB-range peak-reading LED indicators/ch. 100 W/ch continuous from 20-20,000 Hz with 0.03% THD and IM dist.; frequency response 1.5-100,000 Hz; damping factor 120 from 0-20,000 Hz; slew rate 40 V/ $\mu$ sec; hum and noise -90 dB unweighted ..... \$990

## TOSHIBA

### SC-665 Power Amplifier

Features OCL-dc circuitry; toroidal power transformer and two shunted V-type metallized film capacitors; dual peak power meters; two-speaker switching; switchable dc/5-Hz subsonic operation; -20-dB muting switch. 65 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; IHF power bandwidth 5-70,000 Hz; frequency response 0-80,000 Hz  $\pm 1$  dB; damping factor 60; S/N 117 dB (IHF A); input level/impedance 1 V/47k ohms; 3.8" H x 16.5" W x 13.9" D ..... \$350

### M-15 Micro Power Amplifier

Features OCL-dc circuitry; toroidal power transformer and two filter capacitors; LED-indicated two-speaker and BTL switches. 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist., 90 W into 8 ohms at 20-20,000 Hz with 0.05% THD (balanced transformer less); frequency response 0-70,000 Hz +0/-1 dB; damping factor 60 at 8 ohms; S/N 115 dB (IHF A); input sensitivity/impedance 1 V/56k ohms; one-piece aluminum diecast body; 4.2" H x 10.1" W x 8.3" D ..... \$340

**M15B.** Black finish ..... \$350

### SC-335 Power Amplifier

Features audio muting switch (-20 dB); left/right power meters with power range selector switch; double-pair speaker drive selection; stereo headphone jack; heat radiator. 40 W/ch continuous into 8 ohms from 20-20,000 Hz at 0.1% THD and IM dist.; damping factor 25; frequency response 5-80,000 Hz  $\pm 1$  dB; power bandwidth 5-50,000 Hz, both channels driven, at 0.1% THD; S/N (IHF "A") 95 dB (main in); 3 $\frac{1}{2}$ " H x 16 $\frac{1}{2}$ " W x 9 $\frac{1}{2}$ " D ..... \$180

**SC-335MK II.** Matte black version of SC-335 with LED power output indicators. .... \$200

## VA SYSTEMS

### Two Power Amplifier

Features remote on/off switching; dc relay speaker protection; fan cooler; capable of driving low-impedance loads. 200 W/ch into 8 ohms; frequency response 20-100,000 Hz  $\pm 0.5$  dB; S/N 85 dB; 7" H x 19" W x 14" D ..... \$1325

### Three Power Amplifier

Features mono bridging; balanced symmetrical feedback; remote on/off switching; dc relay speaker protection; capable of driving low-impedance loads. 125 W/ch continuous into 8 ohms, 400 W mono;

## 2 POWER AMPLIFIERS

frequency response 20-100,000 Hz  $\pm 0.5$  dB; S/N 88 dB; 5 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  14 $\frac{1}{2}$ " D..... \$975

### YAMAHA

#### M-2 Power Amplifier

DC power amplifier features dual FET with cascode bootstrap circuit in input stage and three-stage emitter-follower complementary triple push-pull dc circuitry with linear-transfer bias circuit in output stage; high-capacity toroidal power transformer and two high-capacity electrolytic capacitors; power transistor, dc detection, and muting protection circuits; dual-LED peak level bar graph display; LED overload indicator; illuminated two-speaker switching; separate left and right input level controls and dc/ac input switch on rear panel. 240 W ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.005% THD; power bandwidth 10-100,000 Hz at half rated power; frequency response 10 (0 dB)-100,000 (-0.7  $\pm$  0.5 dB) Hz (dc mode, 120 W, 8 ohms), 10 (1.5  $\pm$  0.5 dB)-100,000 (-0.7  $\pm$  0.5 dB) Hz (ac mode, 120 W, 8 ohms); THD 0.003% from 10-20,000 Hz, 120 W into 8 ohms; IM dist. 0.002% at 60:7000 Hz ratio, 120 W into 8 ohms; damping factor 200 at 8 ohms, 20,000 Hz; input sensitivity/impedance 1 V 25k ohms; S/N 123 dB (IHF A); 7 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  14 $\frac{1}{2}$ " D..... \$1200

**M-4.** Similar to M-2 without linear-transfer bias circuit and muting protection circuit; 120 W ch under same conditions; THD 0.005% from 10-20,000 Hz, 60 W into 8 ohms; S/N 118 dB (IHF A); 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  14 $\frac{1}{2}$ " D..... \$650

## 2 PREAMPLIFIERS

### ACOUSTAT

#### MRP-1 Modular Reference Preamp

Solid-state stereo preamplifier incorporates ultra-low-noise composite transistor moving-coil head amp and dc-coupled line section; power supply storing 40,000 mF at  $\pm 65$  V, 40,000 mF at  $\pm 47$  V, and 26,000 mF at  $\pm 20$  V with eight separate stages of shunt regulation—separate high energy, low impedance, ultra low noise, isolated and decoupled dc supplies for each section of each channel, acting as independent mono preamp with own isolated power supply; 1% tolerance metal-film resistors in active audio circuits; includes moving-magnet phono gain card with 47k-ohm impedance and head amp card (optional third phono card extra); 70-V/ $\mu$ sec device in line amp section; 17-dB electronic feather-touch muting; two switchable audio outputs (also control two low-power dc completion circuits); LED remote amp on indicator; buffered tape outputs; can drive solid-state or vacuum-tube amplifiers..... \$1195

### ADC

#### Designer Series

#### B100 Preamplifier

Cascode vacuum tube preamplifier features built-in moving-coil head amp; cascode voltage amplifiers; two transistor-regulated power supplies; separate left/right output level controls; low filter switch; two deck tape monitoring with two-way dubbing; stereo/mono mode selector; phono and aux. 1, 2, and 3

input selectors with separate phono 1, 2, and MC selectors and input level control. Input sensitivity



0.5 mV (phono), 0.05 V (high level); input impedance 47k ohms (phono 1), adjustable capacitance and impedance (phono 2), 25-100 ohms (MC); phono overload 375 mV; frequency response  $\pm 0.1$  dB (RIAA phono), 2-250,000 Hz -3 dB (high level); THD 0.2% at 2 V from 10-100,000 Hz; THD and IM dist. 0.09%; S/N 70 dB (phono); matte black finish with rosewood, oak, or walnut side panels; 3 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  13" D..... \$1199

### ADCOM

#### GFP-1 "The Silent Partner™" Preamp

Features FET input phono stage; bass and treble controls with tone defeat; high and low filter selectors; loudness switch; -20-dB audio muting and mono selectors; two-deck tape-monitoring and dubbing; input selector for phono 1 and 2, tuner, and aux. Input sensitivity 0.5 mV (phono), 28.1 mV (tape); phono overload 250 mV; gain 35 dB (phono), 25 dB (line); output 10 V; THD 0.009% from 20-20,000 Hz at 2.5 V; 3" H  $\times$  19" W... \$300

### AGI

#### 511A Preamplifier

Features bi-amplified phono stage; dual feedback system with electrolytic coupler and separate ac feedback loop; no filters or tone controls; front-panel input select buttons, one-way tape dubbing with two-deck monitor switches, mono switch, and tone send selector (controls external processor loop for equalizers and other signal processors). Gain 33.0 dB  $\pm$  0.25 dB at 1000 Hz (phono), 18.9 dB  $\pm$  0.25 dB (high level), 40.1 dB  $\pm$  0.25 dB at 1000 Hz (Option H high gain phono); input impedance 47k ohms (phono), 38k ohms (high level); phono overload at 1000 Hz 160 mV (phono), 70 mV (Option H high gain phono); max. output (into 10,000 ohms) 7 V (phono), 9.5 V (high level); output impedance 220 ohms at rec out (phono), 47 ohms (high level); hum and noise below 10 mV at 1000 Hz -88 dB (phono, A weighted), -80 dB (phono, unweighted), -106 dB below full output from 20-20,000 Hz (high level, unweighted); frequency response  $\pm 0.25$  dB (RIAA phono), 20-20,000 Hz  $\pm 0.1$  dB (high level); slew rate 250 V/ $\mu$ sec (phono), 50 V/ $\mu$ sec (high level); rise time at 2 V peak-to-peak 0.01  $\mu$ sec max. (phono), 0.25  $\mu$ sec max. (high-level); THD and IM dist. 0.005%; Option G (gold-finish panel and knobs) and Option H (high-gain phono stage) are available at no extra cost but must be requested at time of purchase of 511A; 5 $\frac{1}{2}$ " H  $\times$  14" W  $\times$  10" D..... \$565  
**Option F.** High or low 12 dB/octave Butterworth filter at -3 dB user-specified frequency..... \$50  
 Oak hardwood cabinet for 511A..... \$78  
 Walnut hardwood cabinet for 511A..... \$85

### AIWA

#### SA-C50U/SA-C30U Preamplifiers

See Section 1, Receivers, under Aiwa's M-501 and M-301 Series Mini-Component Systems.

### AMBER

#### Preamp One

Features precision metal film resistors and film capacitors in RIAA phono circuit; heavy-duty power supply with storage capacitors; phono, tuner, tape, and aux. input selectors; ultrasonic (6 dB/octave

above 40,000 Hz) and infrasonic (12 dB/octave below 15 Hz) filter switches; stereo/mono switch; mute switch; tape monitor loop; rear-panel 47k/100k-ohm phono resistance switch and 0/47/100/220/330/470-pF phono capacitance switch. Frequency response  $\pm 0.5$  dB (phono RIAA), 1-60,000 Hz  $\pm 0$ -3 dB (high level); THD 0.05% from 20-20,000 Hz; IM dist. (SMPTE) 0.03% (phono), 0.02% (high level); slew rate 13 V/ $\mu$ sec; noise -70 dB below 10 mV at 1000 Hz (phono); gain 37 dB at 1000 Hz (phono to tape out), 26 dB (high level); phono overload 100 mV at 1000 Hz; 3.5" H  $\times$  19" W  $\times$  8.5" D..... \$399

### APT

#### Holman Preamplifier

Features dc phono preamp with FET/bipolar differential pair-input configuration; optional plug-in preamp for moving-coil cartridges (step-up trans-



former not needed); three-tape deck input selector switch with two tape monitor loops and dubbing switches; 32-step attenuator volume control; variable mode control and balance control; bass and treble controls with tone defeat switch; high filter switchable between 40,000 and 8000 Hz (12 dB/octave rolloff); headphone amplifier output; front-panel mute control. THD at rated output 0.01%, IM dist. 0.01% (SMPTE), TIM dist. 0.006%; frequency response 20-20,000 Hz  $\pm 0.5$  dB; input sensitivity/impedance 5 mV rms/47,000, 100,000 ohms in parallel with 50, 100, 200, 300, or 400 pF (phono 1), 5 mV rms/47,000 ohms in parallel with 100 pF (phono 2), 320 mV rms/50,000 ohms (high level); 2.0 V rms output level; phono overload 100 mV rms at 1000 Hz, line input overload 10 V rms at 1000 Hz; gain 36.5 dB (phono to tape), 18 dB (high level to main); S/N ("A" weighted) 80 dB below input reference level of 10 mV rms at 1000 Hz (phono 1 and 2), 106 dB V (line). Gray wrinkle baked-enamel finish; 3.12" H  $\times$  15.04" W  $\times$  8.19" D..... \$493

### AUDIO INTERNATIONAL

#### CM300 Control Center

Features FET circuitry; bass and treble controls; high and low filters; two phono and two tape inputs. Input sensitivity/impedance 1.6-6.4 mV/47k ohms (phono), 200 mV/250k ohms (high level); phono overload 100 mV at 1000 Hz, 40-dB gain; frequency response  $\pm 0.25$  dB from 20-20,000 Hz (phono RIAA), 5-20,000 Hz  $\pm 0.1$  dB (high level); S/N 80 dB at 10 mV in (phono), 100 dB (high level); output 2 V rms into 10,000 ohms, 1000 pF (10 V rms max.) and 1 V rms into 600 ohms (5 V rms max.); 5 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  17" D..... \$549

#### CM301 Big Foot Preamplifier

Straight line preamplifier features FET circuitry; balance and level controls; -6-dB/octave low filter in/out; tape/source monitoring; mode switch; input selectors for phono, tuner, and aux. Input sensitivity/impedance 2.2 mV/47k ohms and 100 pF (phono), 200 mV/100k ohms (high level); phono overload 155 mV at 1000 Hz; frequency response  $\pm 0.25$  dB (phono RIAA), 10-80,000 Hz  $\pm 1$  dB (high level); S/N 80 dB below 10 mV in (phono), 100 dB below rated output (high level); 1.75" H  $\times$  19" W  $\times$  6.5" D..... \$399

### AUDIONICS OF OREGON

#### RS1 Preamplifier

Straight-line class A dc-coupled stereo preamplifier. Features axial tilt circuitry with front-panel controls (electronically compensates for mechanical stylus misalignment errors of up to  $\pm 7$  degrees from vertical plane); computer-designed infrasonic



filter; selectable resistive and capacitive loading PC-mount DIP switches; two tape inputs with full record, dubbing, and monitoring capability; stereo, mono, and mute switch; ac switch; balance and volume controls. Input sensitivity/impedance 2 mV/47k or 100k ohms (phono), 100 mV/25k ohms (high level); phono overload 165 mV min.; phono S/N 82 dB (A weighted); phono RIAA equalization  $\pm 0.2$  dB from 20-20,000 Hz; tape output 0.2-0.45 V typical, output impedance 2.2k ohms, and THD and IM dist. 0.01%; source impedance 500 ohms; black anodized aluminum front panel with rack-mount handles; 3 1/2" H x 19" W x 7 1/2" D ..... \$749

### BT2 Preamplifier

Straight-line class A stereo preamplifier. Features phono, tuner, aux., and tape monitor inputs; defeat-able subsonic filter; dual-tracking regulator power supply. Phono: input sensitivity 2 mV, S/N 80 dB below 10 mV (A weighted), overload 150 mV, and RIAA equalization  $\pm 0.5$  dB from 20-20,000 Hz; high-level input sensitivity/impedance 100 mV/25k ohms; tape output 0.2-2 V typical, output impedance 10,000 ohms, and THD and IM dist. 0.01% max., 20-20,000 Hz; source and load impedance 500 ohms; black anodized silk-screened front panel with rack-mount handles; 3 1/2" H x 19" W x 7 1/2" D ..... \$479

## AUDIO RESEARCH

### SP-6B Preamplifier

Features segmented 2-dB gain automatic muting; front-panel mute switch; rear-panel gain range switch (-10 dB); separate on/off switch; indicator for three amp power receptacles. Max. input 500 mV at 1000 Hz (magnetic phono); input impedance 50,000 ohms (all inputs); output impedance 500 ohms at 1000 Hz; rated output (IHF) 5 V rms from 20-30,000 Hz (all outputs), 60 V rms at 1000 Hz into 500,000-ohm load at 1.0% THD (main out); S/N 90 dB below 1 V rms input; frequency response 5-30,000 Hz  $\pm 0.25$  dB (high level), RIAA phono deviation  $\pm 0.25$  dB from 30-40,000 Hz; HD less than 0.03% at 5 V rms out (IHF); IM dist. less than 0.008% at 5 V rms out (IHF SMPTE); gain 34 dB (magnetic phono in to tape out), 60 dB (magnetic phono in to main out), 0 dB (high level in to tape out), 26 dB (high level in to main out). 5 1/2" H x 19" W x 10 1/4" D ..... \$1495

**WC/OC-4.** Walnut or oak finished wood cabinet for SP-6B ..... \$99

### SP-4A Preamplifier

Features provisions for alternate compensation of magnetic phono sections; shielded power supply and head amp sections; main output turn-on delay; gold-contact switching controls. Frequency response 1-100,000 Hz  $+0/-3$  dB; 2 V rated output (10 V overload); 0.005% THD and IM dist. at rated output; S/N 84 dB (phono, 10 mV input); sensitivity 0.1 V (high level), 2 mV (phono); phono overload 300 mV; tape impedance/output 2000 ohms/0.5 V. 3 1/2" H x 19" W x 8 1/2" D ..... \$1395

**WC-5.** Walnut finished wood cabinet for SP-4A. \$99

### SP-5 Preamplifier

Frequency response 1-100,000 Hz  $+0/-3$  dB; 2 V rated output (10 V overload); 0.005% THD and IM dist. at rated output; S/N 80 dB (phono, 10 mV input); sensitivity 0.1 V (high level), 2 mV (phono); phono overload 300 mV; tape impedance/output 2000 ohms/0.5 V; 3 1/2" H x 19" W x 8 1/2" D ..... \$1095

**WC-5.** Walnut finished wood cabinet for SP-5 ... \$99

## AUDIRE

### Diffet 1A Preamplifier

Features three switch positions for moving-coil cartridge: standard (47,000 ohms and 0 dB), medium-gain (40 ohms and +6 dB), and low-gain (500 or 47,000 ohms and +12 dB). Magnetic phono: RIAA  $\pm 0.25$  dB from 20-20,000 Hz; phono overload 175 mV at 1000 Hz; HD 0.005% at 20 Hz and

0.008% at 20,000 Hz; output 15 V rms; gain 38.5 dB at 1000 Hz; S/N 93 dB. High level: frequency response 0-100,000 Hz  $+0/-0.25$  dB; THD 0.005% at 3 V rms out; IM dist 0.001%; S/N 93 dB at 3 V rms out; gain 23 dB. Inputs: magnetic phono, tuner, aux., tape 1/2; outputs: two tape and two main; two switched and two unswitched ac outlets; volume, balance, short-wave selector, and short-wave power controls. 4 3/4" H x 19" W x 7" D .....

\$650

**Diffet 1.** Similar to Diffet 1A, minus provisions for moving-coil cartridges ..... \$590

### Legato Preamplifier

Features 18 dB/octave subsonic filter; two-way tape dubbing with copy/source record and tape/source monitor switches; input selector with separate phono 1/phono 2 selector. Frequency response  $\pm 0.25$  dB from 20-20,000 Hz (phono RIAA), 0-100,000 Hz  $+0/-0.25$  dB (high level); HD 0.005% at 3 V rms; S/N 90 dB; phono overload 150 mV at 1000 Hz; gain 38.5 dB (phono), 19.5 dB (high level); 1.75" H x 19" W x 7" D..... \$370

## BAUMAN RESEARCH

### PRO-400 Preamplifier

Stereo preamplifier incorporates separate circuits in each channel for high-level amp, phono amp, sub-



sonic amp, moving-coil head amp, tape buffer amp, and tone control amp. Features  $\pm 10$ -dB bass and treble controls with tone defeat; subsonic filter switch; input selector with separate phono MM and MC switch; two-way tape dubbing/monitoring; balance control. Input impedance 47k/100k ohms selectable (phono MM), 0-1000 ohms variable (phono MC), 25k ohms (high level); phono MM input capacitance 50-350 pF in 50-pF increments; phono overload at 1000 Hz 175 mV rms (MM), 25 mV rms (MC); frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA), 20-400,000 Hz  $+0/3$  dB (bandwidth); THD at 2.0 V rms into 600 ohms and 1000 pF, 20-20,000 Hz 0.01% (phono MM), 0.02% (phono MC), 0.005% (high level); S/N (A weighted IHF) 88 dB re 10 mV at 1000 Hz (MM), 72 dB re 1 mV at 1000 Hz (MC), 100 dB re 2 V rms at 500 mV in (high level); 8" H x 19" W x 16" D..... \$1350

## BGW

### Model 203 Control Center

Gain 42 dB (phono to tape out, 1 kHz), 22 dB and 10 dB (high level to line out) with high-low gain switch set to high and low, respectively; frequency response 20-20,000 Hz  $\pm 0.2$  dB (high level),  $\pm 0.25$  dB of RIAA (phono); input impedance 47,000 ohms (phono), 90,000 ohms (high level); input overload 100 mV (phono, 1000 Hz), 10 V (high level); max. output 8 V rms into 600 ohms (line), 10 V rms into 5000 ohms (phono at tape out), 4 V rms into 5000 ohms (rated output); THD 0.01%; subsonic and scratch filters; front-panel tape copy and headphone jacks; provisions for remote MC preamp and ac power switching; active bass and treble tone circuitry; equalizer in/out jacks; 5 1/4" H x 19" W x 11 3/4" D ..... \$719

Cabinet for 203 ..... \$41

### Model 103 Preamplifier

Gain 40 dB at 1000 Hz (phono to tape out), 20 dB (high level to line out); input impedance 47,000 ohms (phono), 90,000 ohms (high level); input overload 100 mV at 1000 Hz (phono), 6.0 V (high level); 95-dB dynamic range (phono); max. output voltage 8 V rms into 600 ohms (line out), 10 V rms into 5000 ohms (phono at tape out); THD less than 0.01% at rated output; S/N 80 dB unweighted (phono), 90 dB below rated output (high level to

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# 2

## PREAMPLIFIERS

line out); frequency response 20-20,000 Hz  $\pm$  2.5 dB (high level and phono RIAA). Features all-discrete circuitry; separate bass and treble tone controls equalized at  $\pm$  15 dB at 50 and 15,000 Hz with tone defeat; three-pole (18 dB/octave) subsonic filter; two-deck tape monitoring; input selector for tuner, aux., tape 1 and 2, and equalizer phono with LEDs; one switched and two unswitched ac outlets; black anodized front panel; 3 1/2" H  $\times$  19" W  $\times$  10 1/2" D..... \$439  
Walnut-veneered cabinet for 103..... \$41

### BOZAK

#### 919 Mixer/Preamplifier

Designed to be used with the 929 power amplifier; features bass, treble, and midrange equalization; high and low filters; bass turnovers at 200 and 400 Hz; treble turnovers at 2000 and 4000 Hz; three simultaneous inputs with individual level controls (phono, mike, choice of tape, tuner, or aux.); separate bass, midrange, and treble controls for each channel; cue selector for monitoring each input separately; mode selector for stereo, reverse stereo, stereo blend, or stereo plus; response (RIAA phono equalization) 30-15,000 Hz  $\pm$  0.5 dB; has full complement of inputs, outputs, and operating controls; matte black panel; optional walnut veneer enclosure extra..... \$875

#### 909 Preamplifier

Features plug-in circuits; all-silicon circuitry; active filters; flat or equalized switchable tape outputs; inputs: phono 1 and 2, tuner, aux., tape monitor 1 and 2; controls: bass and treble for each channel, balance, volume, lo/hi filters, EQ defeat, stereo/mono, tape dubbing. Frequency response 20-20,000 Hz  $\pm$  0.25 dB; dist. 0.1% IM and harmonic; S/N (unweighted) 80 dB (phono), 90 dB (high level); 12 V output into 600 ohms..... \$490

### BRYSTON

#### 1B Preamplifier

Low-level low-noise preamplifier designed for maximum musical accuracy. Features open-loop linearity circuit; noise-free and voltage-stabilized power supplies; built-in defeatable rumble filter (6 dB/octave at 30 Hz); phono 1 and 2, tape 1 and 2, aux., and tuner source selector; phono, tuner, aux., and tape 1 and 2 tape selector; stereo/mono switch; balance and volume controls. Available gain 40 dB (phono), 20 dB (line); noise -80 dB ref. 5 mV in at 1000 Hz (unweighted); dist. 0.005% from 20-20,000 Hz (through phono stage at 5 V out)..... \$795

### CARVER

#### C-4000 Preamplifier

Features sonic audio hologram generator designed to recreate vector sound field present during original recording and to locate musical instruments precisely in space (enlarged zone of coherence enables three people sitting side by side to experience the holographic effect—older units will be upgraded by dealer for modest charge); built-in three-channel time delay system with 25-W amp and user-selectable 35/50 msec initial delay and five primary delays; third-generation audio-correlator noise-reduction system and peak limiter; separate left and right bass and treble controls with turnover frequency switches and tone defeat; cartridge matching; two-way tape dubbing and monitoring; external signal processor input; infrasonic filter. Frequency response  $\pm$  0.25 dB from 20-20,000 Hz (phono RIAA), 5-200,000 Hz -1 dB (high level); input sensitivity 0.85 mV (phono), 50 mV (high level);

phono overload 150 mV at 1000 Hz; phono gain 35 dB. Noise reduction 20 dB from 2500-20,000 Hz, 10 dB from 200-20,000 Hz. Sonic hologram image resolution 5° arc in horizontal plane, 20° arc in vertical plane. Peak limiter total dynamic range recovery 6 dB. Time delay: delay time 85 msec max.; dist. 0.2%; bandwidth 20-10,000 Hz, feed forward to 19,000 Hz. 6 1/4" H  $\times$  19" W  $\times$  B" D..... \$898

#### C-1 Preamplifier

Features Sonic Hologram Generator™, recreating recorded sound into three-dimensional image; separate bass and treble tone controls/ch with high and low turnover frequency controls and tone defeat; 18-dB/octave infrasonic filter; tape/source monitoring with two-way tape dubbing; speaker switching; provision for external processor; input selector. Frequency response  $\pm$  0.25 dB "extended" curve (phono RIAA), 5-200,000 Hz (high level); phono overload 150 mV at 1000 Hz, 1500 mV at 20,000 Hz; image resolution 5-degree arc in horizontal plane, 20-degree arc in vertical..... \$525

### CONRAD-JOHNSON

#### VP2 Preamplifier

Vacuum-tube stereo preamplifier features low-noise metal film resistors and polyester and mica capaci-



tors in audio circuitry and vacuum tube design; two-deck tape monitoring with one-way dubbing; input selector for phono, tuner, tape, and aux.; reverse/stereo/mono mode selector; two amplifier outputs. Frequency response 2-100,000 Hz (bandpass),  $\pm$  0.25 dB from 20-20,000 Hz (phono RIAA); S/N 70 dB below 10 mV in (phono), 84 dB below 2.5 V out (high level); THD and IM dist. 0.05%; gain 35 dB (phono), 28 dB (high level); max. output 25 V; phono overload 500 mV at 1000 Hz; 4 1/4" H  $\times$  14" W  $\times$  11 1/4" D..... \$585

### CROWN

#### DL-2 Control Center/Preamplifier

Three-piece stereo control preamp consisting of switching module with all controls, power supply, and phono module A (phono preamp stage for placement at turntable). Switching Module: features digital control-setting displays, digital interface for wireless remote control system, and eight dual-channel touch-button selectable inputs, two for external signal processors and one mixable input. Specifications: frequency response into 10,000 ohms from 10-50,000 Hz  $\pm$  0.1 dB and 1-100,000 Hz  $\pm$  0.5 dB; 2.5 V rated output, 11 V rms max. before overload; phase response into 10,000 ohms from 20-20,000 Hz  $\pm$  8 degrees; hum and noise below rated output 97 dB max. (unweighted), 101 dB max. (A weighted); IM dist. 0.0003% max. below 10-V output; THD with 10,000-ohm load at rated output 0.0003% max. at 1000 Hz, 0.0008% max. from 20-20,000 Hz; input gain/impedance 20 dB  $\pm$  0.2 dB/100k ohms; output impedance 50 ohms; three-circuit, 1/4-in headphone jack with 1-ohm min. impedance, 17 V rms max. output, and frequency response from 10-50,000 Hz  $\pm$  0.1 dB at rated output; 63.5 dB dynamic range gain on seven-segment LED displays; frequency adjust controls set at 20, 40, 80, 400, 800, 1600, 5000, 10,000, and 20,000 Hz; 18 dB/octave roll-off; 31-position switched attenuators for  $\pm$  0.2 dB adjustment over 50-dB range; 7 1/2" H  $\times$  17" W  $\times$  14" D. Power Supply: Seven switched and two unswitched ac outlets; two dc outlets; 3 1/2" H  $\times$  17" W  $\times$  7 1/2" D. Phono Module A: frequency response into 10,000 ohms 20-20,000 Hz  $\pm$  0.25 dB (RIAA), 10-30,000 Hz  $\pm$  0.1 dB (flat); phase response into 10,000 ohms

20-20,000 Hz  $\pm$  5 degrees (RIAA), 20-20,000 Hz -12 degrees (flat); hum and noise -88 dB (RIAA unweighted), -94 dB (RIAA "A"), -84 dB (flat unweighted), -89 dB (flat "A"); IM dist. 0.0005% min. into 10,000 ohms, SMPTE at rated output; THD 0.002% min. into 10,000 ohms from 20-20,000 Hz at rated output; input gain from 30-50 dB, 2.5 V at 1000 Hz; input impedance 47,000 or 100,000 ohms; output impedance 600 ohms with max. 11 V rms; 3 1/2" H  $\times$  1 3/4" W  $\times$  6 1/4" D. Switching Module and Power Supply have satinized aluminum front panel with charcoal Lexan inlay, other surfaces black anodized; Phono Module A has black anodized steel finish..... \$2495

#### Straight Line One Preamplifier

Features precision-stepped gain control (2-dB steps); balance control; low filter; two-deck tape monitor buttons; dual-channel preamp overload indicators; input selector for phono, tuner, and aux. 1 and 2. Input sensitivity 2.5 mV (phono), 250 mV (high level); phono overload 33-330 mV; frequency response  $\pm$  0.5 dB from 20-20,000 Hz (phono RIAA), 10-200,000 Hz  $\pm$  0.1 dB (high level); THD 0.002%; IM dist. 0.0005%; 3 1/2" H  $\times$  19" W  $\times$  12 1/4" D..... \$599

### DB SYSTEMS

#### DB-1A Preamplifier

THD less than 0.0008% from 20-20,000 Hz; IM dist. less than 0.001%; frequency response (phono) 10-40,000 Hz  $\pm$  0.07 dB, (high level) 2-50,000 Hz  $\pm$  0, -1 dB; S/N (IHF A weighted) B9



dB (phono), 90 dB (line); filters: (low cut) flat, 20 Hz, 36 Hz at 6 dB/octave (phono only), (high cut) flat, 5000 Hz, 10,000 Hz at 6 dB/octave; output impedance 1000 ohms; max. output voltage 6 V into 10,000 ohms; max. load for rated dist. 10,000 ohms/3000 pF; input sensitivity for 1 V output: phono 2 mV into 50,000 ohms/100 pF, high level 120 mV into 50,000 ohms. Controls: selector, balance, volume, low cut, high cut, tape monitor (includes "mute" position); requires separate regulated power supply (included); B.5"  $\times$  3.2"  $\times$  7"..... \$400

DB-1Au. Same as DB-1A except with gold jacks..... \$415

DBR-1A. Same as DB-1A except mounted in standard rack; requires DB-2 power supply..... \$368

DB-2. Power supply; wired for 120 V or 240 V operation; supplies up to 300 mA at 33 V (includes protective current limiter)..... \$62

### DENNESEN ELECTROSTATIC

#### Sirius Preamplifier

Features no feedback, high slew rate, and low TIM dist. Input sensitivity/impedance 500 mV/47k ohms (phono), 100 mV/50k ohms (tuner, aux., tape); frequency response  $\pm$  0.1 dB from 5-250,000 Hz (phono); THD 0.005%; S/N 90 dB phono; max. output 1.5 V; 1 3/4" H  $\times$  19" W  $\times$  6" D..... \$350

### DENON

#### PRA-2000 Preamplifier

Real-time non-feedback stereo preamplifier with two dc linear amplifiers, direct dc servo circuitry, and built-in MC cartridge head amplifier. Features electronic operations switches and preset mecha-



nism. Input sensitivity/impedance 2.5 mV/50k ohms (phono MM), 0.125 mV/100 ohms (phono MC), 150 mV/50k ohms (aux., tuner, tape); max. phono input at 1000 Hz 380 mV (phono MM), 19 mV (phono MC); phono RIAA equalization  $\pm 0.2$  dB from 20-100,000 Hz; THD 0.002% (MM), 0.003% (MC); S/N (IHF A) 86 dB (MM), 79 dB (MC); 132 mm H  $\times$  455 mm W  $\times$  357 mm D..... \$1300

## DYNACO

### PAT-10 Preamplifier

Features three-band active equalizer system with defeat; midrange presence control; subsonic and high-frequency cutoff filters; variable active loudness control; two-deck tape monitoring and dubbing; internal headphone buffer amplifier; transient suppression circuit. Frequency response  $\pm 0.25$  dB from 20-20,000 Hz (phono RIAA), 10-75,000 Hz  $+0/-1$  dB (high level); THD 0.008%; S/N 82 dB (phono), 102 dB (high level); input sensitivity 1 mV in for 0.5 V out at 1000 Hz (phono), 0.5 V in for 0.5 V out at 1000 Hz (high level); input impedance 47k ohms (phono and high level); adaptable to rack mounting; 3 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  8" D..... \$400

## EIDOLON RESEARCH

### MENTAT Preamplifier

Vacuum-tube high-resolution preamplifier with Class A cascode phono input section, Class A sin-



gle-ended voltage high-level section, and low output impedance follower stage. Features actively regulated high voltage power supply; actively regulated filament supply with timing network; two level controls; high and low filter switch; output control; two-deck tape monitoring; modules for precise loading for phono capacitance and impedance provided. Input impedance variable (phono), 33k ohms (line); output impedance 600 ohms; gain 44.5 dB (phono), 15 dB (high level); rated output 2 V from 5-50,000 Hz (phono), 2.5 V from 0.7-100,000 Hz (high level); frequency response  $\pm 0.1$  dB from 20-20,000 Hz (phono RIAA), 0.7-100,000 Hz  $+0/-1.5$  dB (high level); THD and IM dist. 0.05% at rated output; hum and noise below 5 mV in at 1000 Hz -74 dB (phono unweighted), -78 dB (high level, unweighted); phono overload 380 mV at 1000 Hz. External power supply 3.5" H  $\times$  5" W  $\times$  8" D; main chassis 3.5" H  $\times$  19" W  $\times$  9.5" D..... \$1400

### SALESIA Preamplifier

Vacuum-tube stereo preamplifier similar to MENTAT minus external power supply and regulation networks; filament and plate voltage power supplies; input sensitivity 2 mV (phono), 0.2 V (high level); phono overload 300 mV; phono input impedance 47.5k ohms; frequency response 1.5-100,000 Hz  $+0/-1.5$  dB; THD and IM dist. 0.05%; S/N 70 dB unweighted; 3.5" H  $\times$  15" W  $\times$  7" D..... \$650

## EUMIG USA

### C-1000 Preamplifier

Features dc circuitry; built-in moving-coil head amp; bass and treble controls with tone defeat; low-cut (15 and 70 Hz) and high-cut (8000 and 12,000 Hz) filter switches; loudness and mode switches; tape monitor switch with two-way dubbing; input selector. Frequency response 0-200,000 Hz  $\pm 1$  dB (overall),  $\pm 0.5$  dB from 20-20,000 Hz (phono RIAA); S/N 80 dB (moving magnet), 70 dB (moving-coil), 100 dB (tuner, aux., tape); THD 0.005% from 20-20,000 Hz; black matte or chrome finish; 19-in rack mountable..... \$580

## FISHER

### CC 3000 Preamplifier

Features moving-coil head amp; three-position phono impedance switch; bass and treble controls with tone defeat; subsonic filter switch; loudness contour; two-way tape dubbing; five-position mode switch. Input sensitivity/impedance 2.5 mV/33k and 47k ohms (phono MM), 60  $\mu$ V/22 ohms (phono MC), 150 mV/100k (tuner, aux., tape 1, 2); frequency response  $\pm 0.2$  dB (phono RIAA),  $\pm 0.5$  dB (aux.); THD 0.007%; IM dist. 0.005%; S/N (short circuit, A) 86 dB (MM), 70 dB (MC), 105 dB (tuner, aux., tape)..... \$250

## DAVID HAFLER

### DH-101 Preamplifier

Rated output 3 V; max. output 7 V; dist. 0.0006% (phono, 1 kHz, 3 V output), 0.001% (high level); slew rate 12 V/ $\mu$ sec; phono overload 200 mV (1 kHz); hum and noise (A weighted) -88 dB (phono, 1 kHz, 10 mV input), -90 dB (high level, 1 V); frequency response 2-20,000 Hz  $\pm 0.5$  dB (phono), 20-20,000 Hz  $+0/-0.25$  dB (high level); gain 34 dB (phono, 1 kHz), 20 dB  $\pm 1$  dB (high level); input impedance 25,000 ohms (high level); bass and treble controls; provision for patching in external equipment; three switched ac convenience outlets; 3.25" H  $\times$  13.75" W  $\times$  8.38" D. Kit..... \$200 Assembled..... \$300

## HARMAN/KARDON

### 700 Series High Technology Separates

#### hk725 Preamplifier

Features dc coupling and discrete component configuration; FET front ends in eight-stage phono and high-level stages;  $\pm 8$ -dB fixed resistor pushbutton



bass and treble tone controls (in 2-dB steps) with LED center defeat; subsonic and high cut filter switches; loudness selector; two-deck tape monitoring and two-way tape dubbing; tuner, aux., and phono input selectors. Input sensitivity/impedance 2.3 mV/47k ohms (phono), 145 mV/23k ohms (high level); phono overload 250 mV at 1000 Hz; frequency response 1-150,000 Hz  $+0/-1$  dB (high level), RIAA phono deviation  $\pm 0.2$  dB from 20-20,000 Hz; S/N (IHF A) 90 dB (phono), 106 dB (high level); THD 0.009% (phono), 0.005% (high level); IM dist. 0.009% at 2 V out; slew rate 200 V/ $\mu$ sec; 2.9" H  $\times$  15.2" W  $\times$  12.6" D..... \$279

## HEATH

### AP-1800 Preamplifier

Features built-in moving-coil cartridge head amplifier; two-speaker switching; separate left/right bass



and treble tone controls with bass and treble turn-over frequency switches; low and high filter switches; variable loudness control; 20-dB audio muting; two-deck tape monitoring with two-way dubbing; adaptor on/off switch; mode selector; input selector with switchable phono sensitivity/capacitance selectors; attenuator volume control. Output 1.5 V; THD and IM dist. 0.02%; switches up to 1500 W using ac; 5 $\frac{1}{4}$ " H  $\times$  19" W  $\times$  11 $\frac{1}{4}$ " D. Kit..... \$350

## HITACHI

### HCA-7500 Mk II Preamplifier

Complementary push-pull, three-stage dc equalizer amplifier circuitry, three-stage dc push-pull FET differential tone control amplifier circuitry, and built-in moving-coil head amplifier. Features bass and treble controls with turnover frequency selectors and tone defeat; low and high filter switches; two-way tape dubbing and monitoring; -20-dB muting; mode switch; input selector with separate moving-magnet and moving-coil phono cartridge load control. Specifications: input sensitivity/impedance 2 mV-6 mV/50k ohms (phono 1), 2 mV/50k ohms (phono 2), 100 mV/50k ohms (tuner, aux., tape 1 and 2); max. input level 350 mV at 1000 Hz (phono 1 and 2); output level/impedance 1 V/600 ohms (preamp out), 100 mV/600 ohms (tape out, PIN and DIN); max. output level more than 7 V (preamp out); frequency response 20-20,000 Hz  $\pm 0.2$  dB (phono 1 and 2), 5-100,000 Hz  $+0/-1$  dB (tuner, aux., tape 1 and 2); THD 0.005% at 1 V, tape out (phono 1 and 2, tuner, and aux.); S/N (IHF "A") 87 dB (phono 1 and 2), 100 dB (tuner, aux., tape 1 and 2); residual hum and noise (preamp out) 8 mV; soft gray finish; 6 $\frac{1}{2}$ " H  $\times$  18 $\frac{1}{8}$ " W  $\times$  13 $\frac{1}{4}$ " D..... \$350

### HCA-6500 Preamplifier

Features bass and treble controls with tone defeat; left/center/right balance control; subsonic filter; two-way tape dubbing and monitoring; mode, loudness, and -20-dB muting switches; input selector. Input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/40k ohms (tuner, aux., tape); phono overload 150 mV; frequency response 20-20,000 Hz  $\pm 0.3$  dB (phono), 20-20,000 Hz  $+0/-1$  dB (tuner, aux., tape); S/N (IHF A) 83 dB (phono), 90 dB (tuner, aux., tape); HD 0.005%; 3 $\frac{1}{8}$ " H  $\times$  17 $\frac{1}{8}$ " W  $\times$  10 $\frac{3}{8}$ " D..... \$200

## INTERSOUND

### IVP Instrument Voicing Preamplifier

Control center designed for electrical music instruments in real-performance environments; features bass and treble controls with variable frequency controls covering 30-240, 100-800, 450-3600, and 1200-9600 Hz with active  $\pm 15$  dB boost and cut equalization; two BIFET inputs with independent level controls; unbalanced high/low input gain sensitivity switches; tube voice circuit with tube and clean voice volume adjustment and LED status indicators; master volume control. Frequency response 20-20,000 Hz  $\pm 1$  dB; dist. 0.1%; S/N 85 dB with EQ flat; overall gain +18 dB nominal, +36 dB max.; nominal input level 800 mV rms at 0 dBV (low), 225 mV rms at -10 dBV (high)..... \$399

## KENWOOD

### Audio Purist Group

#### L-07CII Control Preamplifier

Features low-level impedance circuitry, two independent phono equalizer amplifiers for moving-coil



and moving-magnet cartridges, and cascode differential buffer amplifier circuitry; bass and treble tone controls; 18-Hz subsonic filter; output switch; two-way tape dubbing; input selector. Frequency response  $\pm 0.2$  dB from 20-20,000 Hz (RIAA phono 1) and from 30-20,000 Hz (RIAA phono 2), 1-350,000 Hz  $+0/-3$  dB (tuner, aux., and tape play); THD 0.004% from 20-20,000 Hz at 1 V out (tuner, aux., tape), and at 3 V out (phono 1), 0.008% from 20-20,000 Hz at 1 V out (phono 2); input sensitivity/impedance 2.5 mV/50k ohms (phono 1), 0.2 mV/600 ohms (phono 2), 140 mV/25k ohms (tuner, aux., tape); S/N 90 dB (phono 1),

# 2

## PREAMPLIFIERS

70 dB (phono 2), 10B dB (tuner, aux., tape); max. input 450 mV rms (phono 1), 40 mV rms (phono 2); includes low-impedance cable and remote power switch for connection to L-09M, L-07MII, and L-05M power amplifiers; 3<sup>1</sup>/<sub>2</sub>" H x 18<sup>1</sup>/<sub>2</sub>" W x 13<sup>1</sup>/<sub>2</sub>" D ..... \$900

### LUX

#### Luxman C-5000A Preamplifier

Features built-in moving-coil head amplifier; separate bass and treble tone controls with bass (55, 77,



110, 155, 220, 310, 440, 620, and 880 Hz) and treble (440, 620, 880, 1200, 1700, 2500, 3500, 5000, and 7000 Hz) turnover frequency selectors with tone bypass and 50/off/100 Hz low-boost switch; 6-dB/octave and 12-dB/octave subsonic (10/off/20 Hz) and 6 dB/octave and 12 dB/octave high-cut (9000/off/15,000 Hz) filter switches; three-deck tape/source monitoring with two-way tape dubbing; mono/stereo/reverse mode switch; balance control; input selector with separate phono MM and MC and tape 1, 2, and 3 selectors. Input sensitivity 2.2 mV (MM 1 and 2), 145 mV (tuner, aux., tape), depends on step-up transformer re phono MC; input impedance 50k ohms (phono MM 1), 100, 50k, 100k ohms (MM 2), 60k ohms (tuner, aux., tape), depends on step-up transformer for phono MC; frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA), 1-150,000 Hz  $\pm 0.5$  dB (tuner, aux., monitor); THD (rec out 145 mV, 20-20,000 Hz) 0.005% (phono), 0.005% (tuner and aux. at 1 V), 0.002% (tape at 1 V); S/N (IHF A weighted) 78 dB (phono MC), 80 dB (MM 1 and 2), 100 dB (tuner, aux., tape); output voltage 1 V typical (pre out), 145 mV typical (rec out); 7<sup>1</sup>/<sub>2</sub>" H x 19<sup>1</sup>/<sub>2</sub>" W x 13<sup>1</sup>/<sub>2</sub>" D ..... \$1395

#### Luxman C-120A Preamplifier

Features built-in moving-coil head amp; separate bass and treble controls with bass (150/300/600-Hz) and treble (1500/3000/6000 Hz) turnover frequency selectors with tone bypass and low boost (70/off/150 Hz) selector; linear equalizer with up-tilt and down-tilt positions; 6-dB/octave subsonic (15 and 30 Hz) and high-cut (9000 and 15,000 Hz) filter switches; tape/source monitoring with two-way tape dubbing; mono/stereo switch; input selector with moving-coil position. Input sensitivity/impedance 2.0 mV/50k ohms (phono MM), 200  $\mu$ V/390 ohms (MC), 130 mV/60k ohms (aux., tuner, tape); phono overload 300 mV; frequency response  $\pm 0.3$  dB from 20-20,000 Hz (phono RIAA), 10-80,000 Hz  $\pm 0.5$  dB (aux., tuner); THD 0.007% at 3 V, 20-20,000 Hz (rec out to phono MM and pre out to aux., tuner); S/N (IHF A weighted) 88 dB (MM), 74 dB (MC), 100 dB (aux., tuner); output voltage 1 V typical (pre out), 130 mV (rec out); 3<sup>1</sup>/<sub>2</sub>" H x 17<sup>1</sup>/<sub>2</sub>" W x 11<sup>1</sup>/<sub>2</sub>" D ..... \$445

### METRON

#### PR-1 Preamplifier

Features multiple-gang stepped attenuator volume control adjustable in 2-dB increments; separate stepped bass and treble controls  $\pm 10$  dB; detented

balance control; input selector switch with LED; tape monitor switch; tape dubbing switch; -20 dB muting switch; subsonic filter (-9 dB/octave at 10 Hz); headphone jack. Input sensitivity (IHF) 0.5 mV (phono 1 and 2), 55 mV (aux. and tuner), 62 mV (tape), 0.45 mV at 1000 Hz (mic); phono input impedance 47k ohms; phono overload 230 mV at 1000 Hz; THD and SMPTE IM dist. 0.01% (phono to main out), 0.005% (aux., tuner, tape to main out); RIAA phono deviation  $\pm 0.2$  dB from 30-15,000 Hz, 5-200,000 Hz -3 dB (aux., tuner, tape 1 and 2), 50-20,000 Hz -3 dB (mic); S/N (IHF "A") phono 84 dB (weighted), 73 dB (unweighted), aux., tuner, and tape 92 dB (unweighted), mic 77 dB (weighted), 70 dB (unweighted). 2.8" H x 18.9" W x 14.2" D ..... \$500

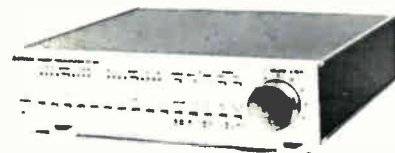
### MITSUBISHI

#### DA-P20 Preamplifier

Dual-mono docking preamplifier. Features attenuator-type level controls: independent tone controls, tone-defeat, and output level controls for each channel; provisions for two tape decks with duplication and monitoring facilities from one to the other; subsonic filter; A, B or A+B speaker selections; input selector includes moving-coil position. Specifications: input sensitivity/impedance 0.1 mV/10 ohms (phono MC), 2.3 mV/50k ohms (phono MM), 150 mV/50k ohms (tuner, aux., tape 1/2); RIAA deviation  $\pm 0.2$  dB from 20-20,000 Hz (phono MC, MM), +0/-0.5 dB from 10-100,000 Hz (tuner, tape 1/2); THD 0.005% (phono MC), 0.003% (phono MM), 0.002% (tuner, aux., tape 1/2); S/N (IHF "A") 77 dB into 47 ohms (phono MC), 84 dB, closed circuit (phono MM), 110 dB, closed circuit (tuner, aux., tape 1/2); channel separation 80 dB at 20,000 Hz for phono MC/MM, 100 dB for tuner and tape 1/2; phono overload 12 mV at 1000 Hz with 0.1% THD (phono MC), 290 mV (phono MM); output level/impedance 1 V/600 ohms rated, 18 V max., 150 mV/600 ohms (tape 1/2); load impedance 8-16 ohms. 6<sup>1</sup>/<sub>2</sub>" H x 16<sup>1</sup>/<sub>2</sub>" W x 8" D ..... \$430

#### M-P01 Micro Preamplifier

Features built-in moving-coil head amp; separate bass and treble digital tone controls with boost or



cut LEDs and tone defeat; subsonic filter; provisions for two tape decks with tape duplication and monitoring facilities from one to the other; separate input selectors for phono MM, MC, tuner, and aux. with LEDs; gold-plated phono input terminals. Specifications: input sensitivity/impedance 100  $\mu$ V/10 ohms (phono MC), 2.3 mV/50k ohms (phono MM), 150 mV/50k ohms (tuner, aux., tape 1/2); RIAA deviation  $\pm 0.2$  dB from 20-20,000 Hz (phono), +0/-0.5 dB from 10-100,000 Hz (high level); THD at 1 V output from 20-20,000 Hz -20 dB 0.005% (phono MC), 0.003% (phono MM), 0.002% (high level); S/N (IHF "A") 77 dB (phono MC), 84 dB at rated input (phono MM), 110 dB, closed circuit (high level); phono overload at 1000 Hz with 0.1% THD 12 mV (MC), 290 mV (MM); output level/impedance 1 V/600 ohms, rated (preamp out), 150 mV/600 ohms at rated output (tape 1/2). 2<sup>1</sup>/<sub>4</sub>" H x 10<sup>1</sup>/<sub>2</sub>" W x 9<sup>1</sup>/<sub>2</sub>" D ..... \$370

### MTI

#### 500 Line Preamplifier

Class A linear amplifier with time-aligned circuitry; can drive low-impedance loads without using power

amplifier or can be used as bandpass amplifier in



biamp system. Features self-matching moving-coil cartridge loading system; continuously adjustable moving-magnet resistance loading (variable from 0-100,000 ohms) and capacitance adjustments (seven 50-pF steps from 0-370 pF); high-capacitance power supply with 23,500-mF capacitance in filter section; low-filter switch; two-deck tape monitoring/copying; mono/stereo control; separate moving-magnet, moving-coil, aux. and tuner input controls; reduced gain control. Frequency response  $\pm 0.2$  dB from 100-20,000 Hz (phono), 15-150,000 Hz +0/-3 dB, bandpass limited (line amp); time displacement 2  $\mu$ sec (phono), 8  $\mu$ sec (line amp); dist. 0.01%; max. output 9 V rms (phono),  $\pm 12$  V peak (main out to line amp),  $\pm 24$  V peak (speakers out to line amp); rated output 2 V rms (phono), 3 V rms (line amp); line amp output noise -80 dBm unweighted; input impedance fully adjustable (moving-magnet), current driven, matching any cartridge (moving-coil), 20k ohms (line amp); line amp gain 20 dB (main out), 26 dB (speakers out); 2.25" H x 16.5" W x 9" D ..... \$895

#### 200 Preamplifier

Features time-aligned circuitry; self-matching moving-coil cartridge loading system; 50, 100, and 220-pF magnetic phono loading capacitance selectors; moving-coil, phono, and tape input controls; reduced gain control. Phono section: frequency response 100-20,000 Hz  $\pm 0.2$  dB; time displacement 2  $\mu$ sec; max. output 9 V rms; rated output 2 V rms; dist. 0.01%; input impedance 47k ohms (MM), current driven and matches any cartridge (MC); 1.75" H x 12.5" W x 6" D ..... \$445

### MXR

#### System Preamp

Control preamplifier combines functions of preamp, mixer, and patch bay; can process two independent



programs simultaneously. Features A/B six-position input selectors for instrument, tape 1 and 2, aux., tuner, and phono; mix control; main-channel selector for monitoring input source, mixed output, or tape input with separate monitor and monitor level controls; switchable subsonic filter; two tape loops with two-way dubbing; two processor loops; integral headphone amp with independent level and selection controls; left mono, right mono, and stereo reverse switching; high/low gain switch. RIAA equalization  $\pm 0.25$  dB; phono S/N 88 dB; phono gain 40 dB at 1000 Hz; THD and IM dist. 0.005%; max. signal output -19 dBV; rear-panel ac convenience outlet; black anodized extrusion with solid walnut end pieces; optional rack-mount ears available; 3<sup>1</sup>/<sub>2</sub>" H x 19" W x 6" D ..... \$460

#### Linear Preamp

Straight line preamp features switchable subsonic filter (-31 dB at 5 Hz, -1 dB at 20 Hz); high/low gain switch; two-deck tape monitoring with two-way dubbing; left-right mono/stereo reverse mode switch; phono, aux., and tuner input selectors. Frequency response  $\pm 0.25$  dB from 20-20,000 Hz (phono RIAA), 10-40,000 Hz  $\pm 0.25$  dB (line); THD 0.005% at 0 dBV, 20-20,000 Hz, any input to out; residual noise 88 dB below 10 mV in (phono, A weighted), 90 dB below 1 V in, 20-20,000 Hz



Revised and updated!

Stereo Review's SRT14-A

# STEREO TEST RECORD

THE EDITORS AND TECHNICAL STAFF OF STEREO REVIEW PRESENT THE MOST COMPREHENSIVE, ACCURATE AND EASY-TO-USE TEST RECORD EVER DEVELOPED. SRT14-A HAS BEEN REVISED AND UPDATED FROM THE ORIGINAL SRT14 VERSION USING MORE SOPHISTICATED TEST SIGNALS TO MAKE THE JOB OF SETTING UP AND EVALUATING YOUR SYSTEM EVEN EASIER.



This latest version contains everything you need to get the fullest, most realistic reproduction from your stereo equipment. Whether you've spent thousands on your stereo system or have a more modest setup, the SRT14-A is an indispensable tool for helping you realize the full potential of your equipment. Best of all, you don't have to be an electronics engineer to use it. You can actually perform a complete stereo system checkup by ear alone.

## A test lab in a record jacket

Employing the most advanced recording, mastering, and pressing techniques, the Stereo Review SRT14-A is produced to strict laboratory standards. Engraved in its grooves are a series of precisely recorded test tones, frequency sweeps, and pink noise signals that enable you to accurately analyze and check your stereo system for:

- Frequency response.
- Stereo separation.
- Cartridge tracking ability.
- Channel balance.
- Hum and noise, including turntable rumble.
- Wow and flutter.
- Optimum speaker placement.
- Cartridge Tracking Force & Anti-skating.
- Musical Instrument Tuning, Standards, and more...much more.

And you can do it all without any instruments...by ear alone.

## Step-by-step instructions

Included with SRT14-A is a detailed instruction manual, complete with charts, tables, and diagrams. This takes you step by step through the testing process. It explains the significance of each test. It tells you what to listen for. It clearly describes any aberrations in system response. And it details corrective procedures.

## For professionals too

The usefulness of the SRT14-A is not confined to the nontechnical listener. Included on the record are a series of tests that call for the use of sophisticated measuring instruments, such as oscilloscopes, chart recorders, and distortion analyzers. These tests permit the advanced audiophile and professional to make precise measurements of transient response, recorded signal velocity, anti-skating compensation, IM distortion, and a host of other performance characteristics.

## SRT14-A record contents

**CARTRIDGE TRACKING, HIGH FREQUENCY.** Consists of a two-tone signal (16,000 and 16,300 Hz) that repeatedly swoops to a high level and returns to a fixed low level. The level and quality of the audible 300-Hz "difference tone" indicates pickup quality and mistracking.

**FREQUENCY RESPONSE, 20 kHz to 25 Hz.** Uses one-third octave bands of pink noise, centered on twenty-nine frequencies over the audio spectrum, compared with reference tones at three levels.

**SEPARATION, LEFT-TO-RIGHT.** Uses test tones consisting of one-third octave bands of pink noise recorded in the left channel with reference tones in the right, to check leakage from left to right.

**SEPARATION, RIGHT-TO-LEFT.** Same as Test 3, with channels reversed.

**CARTRIDGE TRACKING, LOW FREQUENCY.** Uses a single 300-Hz tone that repeatedly swoops to a high level, producing buzzy tones if the cartridge is misadjusted or inferior.

**CHANNEL BALANCE.** Two random-phase noise signals, one in each channel, produce sounds heard separately to allow accurate setting of channel balance.

**CARTRIDGE AND SPEAKER PHASING.** A low-frequency signal alternates in and out of phase in the two channels to allow proper phasing of cartridge and speakers.

**LOW-FREQUENCY NOISE.** A very-low-level orchestral passage, followed by a section of "quiet groove," allows analysis of low-frequency noise.

**TURNTABLE FLUTTER.** A passage of piano music is recorded three times with increasing amounts of flutter. The degree to which the record player's flutter "masks" the test passages indicates the severity of turntable flutter.

**FREQUENCY-RESPONSE SWEEP, 500 Hz, TO 20,000 Hz, LEFT CHANNEL.** A steady tone rises from 500 Hz to 20 kHz, allowing evaluation of system electrical response by instrument.

**FREQUENCY-RESPONSE SWEEP, 500 Hz TO 20,000 Hz, RIGHT CHANNEL.** Same as Test 10, but in right channel.

**TONE-BURST.** The test signal is sixteen cycles on, same period off, sweeping from 500 Hz to 20 kHz, allowing evaluation of transient response of phono cartridges.

**INTERMODULATION DISTORTION.** A phono cartridge's intermodulation distortion can be measured directly using a standard IM meter designed to analyze an SMPTE signal.

**ANTI-SKATING ADJUSTMENT.** A specially designed signal allows adjustment of anti-skating force for best reproduction of high-level passages.

**1000-Hz REFERENCE TONES.** Four tones with recorded velocities that increase by 3-dB steps can be used to determine (by the comparison method) the recorded signal velocity on a disc recording.

**FLUTTER AND SPEED ACCURACY.** A 3,150-Hz tone recorded with great accuracy of speed provides the standard signal for use with a flutter meter or frequency counter.

**STEREO SPREAD.** A series of drum beats recorded out of doors provides a guide to optimum speaker placement for a subjectively satisfying stereo effect.

**STANDARD "A."** The standard 440-Hz tone is recorded with very high precision for tuning instruments and for checking turntable speed.

**CHROMATIC OCTAVE.** The tones of the "equal-tempered" octave from 440 Hz to 880 Hz are recorded with accuracy better than 0.1 per cent.

**GUITAR TUNING TONES.** The six notes of standard guitar tuning are recorded with accuracy better than 0.1 per cent.

## The final step

Start getting the most out of your stereo system. Make the SRT14-A your next record purchase. Just complete the coupon and mail it along with your remittance... today!



CHARGE ORDERS — for your convenience PHONE 24 HRS.  
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Please send \_\_\_\_\_ SRT14-A Stereo Test Records @ \$8.95 each (\$10.95 outside U.S.A.).

Enclosed is \$ \_\_\_\_\_

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City/State/Zip \_\_\_\_\_

\*Residents of CA, CO, DC, FL, IL, MA, MI, MO, NY STATE, UT, and VT add applicable sales tax.

# 2 PREAMPLIFIERS

(line); gain 40 dB at 1000 Hz, 0/20 dB selectable (line); phono overload 120 mV peak at 1000 Hz; max. output +19 dBV at 9.0 V rms, 20-20,000 Hz; input impedance 47k ohms (phono), 100k ohms (line); black anodized extrusion with solid walnut end pieces; rack mountable with optional rack-mount ears available; 1 1/2" H x 19" W x 6" D. \$330

## NAIM by AUDIOPHILE SYSTEMS

### NAC 32 Preamplifier

Features input selector for moving-magnet and moving-coil phono cartridges, tuner, and two tape; volume and balance controls; mode switch; normal, mute, and tape monitor switch. Input sensitivity 2.0 mV (MM), 0.1 mV (phono MC), 75 mV (high level); max. phono overload 200 mV (MM), 10 mV (MC); frequency response 20-20,000 Hz ±0.5 dB; THD and IM dist. 0.02%; 3" H x 8" W x 12" D. \$920

### NAC 12S Preamplifier

Features input selector for moving-coil phono cartridge, tuner, and tape; volume and balance controls. Input sensitivity 0.1 mV (phono), 75 mV (high level); phono overload 10 mV; frequency response 20-20,000 Hz ±0.5 dB; THD and IM dist. 0.02%; 3" H x 5" W x 12" D. \$650

## NIKKO

### Beta 40 Preamplifier

Features built-in moving-coil phono stage; adjustable phono capacitance to match any phono cartridge; all FET signal stages; +8/-9 dB bass and treble tone controls with defeat; 12-dB/octave subsonic filter; loudness switch; input and record out selectors; full tape-dubbing facilities; headphone amp stage; toroidal power transformer; gold-plated phono input terminals; single-circuit-board construction. THD 0.005% (phono MM and line), 0.01% (phono MC); phono overload 330 mV (MM), 33 mV (MC); S/N 83 dB (phono MM), 72 dB (phono MC), 100 dB (line); rack-mountable matte black cabinet; 2 1/2" H x 19" W x 13" D. \$450

### Beta 20 Preamplifier

Features moving-coil phono stage; ±7.5-dB bass and treble tone controls with center defeat; 12-dB/octave subsonic filter; separate input and record out selectors; two-way tape dubbing. THD 0.005% (phono MM and line), 0.01% (phono MC); phono overload 250 mV (MM), 25 mV (MC); S/N 86 dB (MM), 72 dB (MC), 100 dB (line); rack mountable matte black cabinet; 2 1/2" H x 19" W x 13" D. \$279

## ONKYO

### P-3060 Preamplifier

Features dual Super Servo and linear switching circuitry; cascode current mirror three-stage differential amp with class A push-pull final stage; built-in moving-coil head amp; passive direct tone control system; selectable 6-dB/octave subsonic filter; two-way tape dubbing; input selector for tuner, aux., and tape 1 and 2; 250/400-pF moving-magnet capacitance selector; accommodation for three types of moving-coil cartridges: 100-ohm termination for high-output MC (i.e. Dynavector), 3-10 ohm input (i.e. Koetsu or Supex), and 10-40 ohm input (i.e. Denon or Onkyo's MC-100). Frequency bandwidth 1.8-170,000 Hz +0.2 -3 dB (phono MM), 4-150,000 Hz +0.2 -3 dB (MC), 0.8-170,000 Hz +0/-3 dB (tuner, aux., tape); THD 0.05%; phono overload at 1000 Hz 300 mV (MM/high MC), 17 mV (MC). \$550

### P-303 Preamplifier

Features two mono amplifiers, separate moving-coil

amplifier with provision for moving-magnet cartridge, and equalizer amplifier circuitry; 32-detent, 4-gang attenuator volume control; transient killer circuit with reed relay; power, volume, balance, tape monitor; phono/tuner selector, MM/MC cartridge, impedance selector (30,000, 50,000, and 100,000 ohms), and accessory terminal switch controls. Input sensitivity/impedance 100 μV/10 ohms (phono MC), 2.5 mV/30,000, 50,000, 100,000 ohms (switchable, phono MM), 150 mV/50,000 ohms (tuner, tape), 1.5 V/82,000 ohms (accessory receive); rated output/impedance 150 mV/2000 ohms (tape), 1.5 V/100 ohms (accessory send), 1.5 V (15 V max.)/600 ohms (output); frequency response 3.5-200,000 Hz +0/-1.5 dB (tuner), RIAA ±0.2 dB (phono); phono overload 330 mV rms at 1 kHz, 0.05% THD (phono MM), 13 mV rms at 1 kHz, 0.05% THD (phono MC); THD 0.006% (phono MM, 3 V output), 0.03% (phono MC, 3 V output); IM dist. 0.01%; S/N (IHF A) 70 dB (phono MC), 83 dB (phono MM), 100 dB (tuner). African wood veneer over Lauan plywood finish. 3 1/2" H x 17 1/4" W x 14 1/8" D. \$410

**U-30.** System selector unit provides additional input/output facilities to P-303; phono 1, 2, and 3; tuner (aux.) 1, 2, and 3; tape monitor 1, 2, Source; record mode channel 1 to 2, channel 2 to 1, rec. off; pre-out 1, 2, 1+2, off; mode stereo (normal, reverse)/mono (L+R, L, R); speakers 1, 2, 1+2, off; headphone; meter selector reads speaker output power (10 and 100 W), pre-amplifier-out (dB-scale at 1 V and 10 V), off. African wood veneer over Lauan plywood; 3 1/2" H x 17 1/4" W x 14 1/8" D. \$400

**E-30.** Audio equalizer provides additional frequency notches to P-303: 63 (45/32 switchable), 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz; max. switchable range ±5/+10 dB in 0.5/1 dB step; African wood veneer over Lauan plywood; 3 1/2" H x 17 1/4" W x 14 1/8" D. \$550

## OPTONICA

### SO-9205 Preamplifier

Features built-in moving-coil cartridge head amp; tone controls with tone defeat; switchable subsonic, low, and high filters; audio muting; two-way tape dubbing; loudness and mode switches; input selector with separate three-position phono impedance and phono capacitance selectors; LED indicators for inputs; S/N 90 dB (phono), 100 dB (aux.); phono overload 300 mV; ebony faceplate. \$350

## PHASE LINEAR

### 4000 Series Two Preamplifier

Features single-pass noise-reduction and dynamic-range-recovery systems; frequency response 20-20,000 Hz ±0.4 dB (high level), RIAA phono deviation ±0.4 dB; gain 40 dB (phono), 20 dB (high level); S/N (IHF "A") 80 dB (phono), 85 dB (high level); two monitor switches for two-deck operation; separate dc headphone amplifier; 22-detent 2-dB stepped attenuator volume control; ultrasonic filter; switched outlets handle 1100 W. 7" H x 19" W x 10" D. \$700

Walnut side panels. \$50

### 3000 Series Two Preamplifier

Features CMOS logic memory system which switches critical signal paths to 14 relays; tactile pushbutton controls; phono 1 stage for moving-magnet cartridges and phono 2 stage for moving-coil cartridges; two-deck tape monitoring and dubbing facilities; noise reduction loop (processes noise ahead of tape monitor); subsonic filter (18 dB/octave at 15 Hz); dc headphone amplifier. Specifications: dist. less than 0.04% from 20-20,000 Hz; 2.0 V rms rated output; S/N 90 dB (phono MM), 78 dB (phono MC), 91 dB (high level); RIAA phono deviation +0.3/-0.3 dB, 20-20,000 Hz ±0.1 dB (high level); input impedance 47,000 ohms (phono MM), 50, 200, or 500 ohms (phono MC), 50,000 ohms (high level); phono overload 120 mV (MM), 12 mV (MC). 3 1/2" H x 19" W x 8" D. \$600

## 3300 Series Two Preamplifier

Features bass and treble tone controls with 100/250-Hz bass and 3000/6500-Hz treble turnover



frequency selectors and tone defeat; two-deck tape/source monitoring and dubbing; -20-dB muting; built-in 90-mW (8 ohms) headphone amplifier; phono/tuner/aux. input selector. Input sensitivity/impedance 2.2 mV/47k ohms (phono), 225 mV/35k ohms (high level); phono overload 100 mV at 1000 Hz; frequency response ±0.25 dB (RIAA phono deviation), 10-135,000 Hz +0/-3 dB (high level); rated output 2.0 V rms; THD 0.003% at rated output, 20-20,000 Hz; SMPTE IM dist. 0.002% IHF (60, 7000 Hz, 4:1); S/N below rated output, A weighted 92 dB (phono), 98 dB (high level); slew rate 10 V/μsec; 2 1/2" H. \$400

## PHILIPS

### AH 280 Preamplifier

Features wide-band low-noise dc amplifiers; leakage-cancellation low-noise power supply; four-gang



21 step bass and treble tone controls with 250/500-Hz bass and 2500/5000-Hz treble turnover frequency selectors and tone defeat; 12-dB/octave high (8000 Hz) and 6-dB/octave subsonic (10 Hz) filters; two-deck tape/source monitoring with two-way tape dubbing; mono, loudness, and -20-dB muting selectors; input selector; direct, switchable, and +10-dB outputs. Input sensitivity/impedance 2 mV/40k ohms (phono 1, 2), 245 mV/10k ohms (aux., tuner), 210 mV/15k ohms (tape 1, 2), 1.7 mV/47k ohms (mic); phono overload 240 mV; S/N (IHF A) 85 dB (phono 1, 2), 104 dB (aux., tuner, tape), 78 dB (mic); frequency response ±0.5 dB (phono RIAA), 10-200,000 Hz -2 dB (aux., tuner, tape), 50-200,000 Hz +0.5/-3 dB (mic); HD 0.006% (phono), 0.005% (aux., tuner, tape); stereo separation at 1000 Hz 62 dB (phono), 56 dB (aux., tuner, tape). System designed to complement Philips' AH 380 power amplifier and AH-180 tuner but integrates into any high-fidelity system; black metal cabinet; 2 1/2" H x 19" W x 13 1/8" D. \$370

## PIONEER

### SPEC-1 Preamplifier

Input sensitivity/impedance 2.5 mV/50,000 ohms (phono, mike), 150 mV/100,000 ohms (tuner, aux., tape); 0.05% THD at 2 V output; frequency response 30-15,000 Hz ±0.2 dB (phono), 10-70,000 Hz +0/-0.5 dB (tuner, aux., tape); tone controls; filters; mixing facilities; level adjust; input impedance selector; 6 1/8" H x 18 1/8" W x 16 3/8" D. \$650

## PRECISION FIDELITY

### C7 Preamplifier

Vacuum-tube preamplifier with cascode circuitry. Front panel controls include left and right level controls, low filter (-3 dB at 12 Hz) switch, tape monitoring, mono switch, and phono, tuner, and aux. input selector. Input impedance 47k ohms shunted by 50 pF (phono), 25k ohms (high level); gain 50 dB at 1000 Hz (phono), unity, passive (high level); phono overload 400 mV peak-to-peak at 1000 Hz; phono THD 0.01% at 5 V rms out, 1000 Hz using 400-Hz high-pass filter; phono S/N 73 dB below 10 mV input using 400-Hz high-pass filter; phono



RIAA  $\pm 0.5$  dB from 20-20,000 Hz; phono slew rate 60 V/ $\mu$ sec; 3.5" H  $\times$  19" W  $\times$  9.5" D..... \$549

## PROFESSIONAL SYSTEMS

### Studio One Control Amplifier

Discrete class A design; features bass and treble equalization with  $\pm 15$ -dB boost or cut and low and high filters. Frequency response  $\pm 0.25$  dB (phono RIAA), 20-20,000 Hz  $\pm 0.25$  dB (line); THD 0.01% ref. 2 V; S/N 88 dB (IHF A, 10 mV at 1000 Hz, phono), 98 dB (2 V out); slew rate 50 V/ $\mu$ sec; gain 45 dB at 1000 Hz (phono), 20 dB (line). \$640

## PS AUDIO

### PS III/LCC Preamplifier

Stereo preamplifier features separate phono section; passive equalization; complete tone control section..... \$487

## QUAD by ACOUSTICAL MFG.

### Quad 44 Control Unit

Features tone control system consisting of lift/step bass control (boosts low frequency response of small loudspeakers and attenuates bass output when operating as filter giving 5-dB drop at two frequencies),  $\pm 2$ -dB tilt control (shifts tonal balance), and variable filter slope control at 5000, 7000, and 10,000 Hz, all with defeat position; balance/mono switch; input selectors for radio, aux., disc, and tape 1 and 2 with optional mic or moving-coil inputs available. Input sensitivity/impedance 1 mV at 35 mV in/47k ohms (phono), 100 mV at 5 V in/39k ohms (tape) and 1M ohms (radio and aux.); frequency response  $\pm 0.5$  dB from 30-20,000 Hz (phono RIAA), 30-20,000 Hz  $+0/-1$  dB (high level); dist. 0.02% typically; residual noise 104 dB (A weighted); 103 mm H  $\times$  321 mm W  $\times$  207 mm D..... \$795

### Quad 33 Control Unit

Features bass and treble controls with tone defeat; variable filter slope control at 5000, 7000, and 10,000 Hz; two-deck tape monitoring; stereo selector; radio 1 and 2, tape, and disc input selectors. Frequency response  $\pm 0.5$  dB from 30-20,000 Hz; dist. 0.02% at 0.5 V rms out; residual noise 90 dB (controls level or cancelled); 92 mm H  $\times$  260 mm W  $\times$  165 mm D..... \$460

## RG DYNAMICS

### Dimension 3 Control Preamplifier

Employs circuit designed to isolate cartridge-preamplifier interaction and minimize overload and



TIM distortion; features bass and treble controls with tone defeat; subsonic filter; mode switch; LED-indicated input selector includes tape 1 and 2; two-way tape dubbing and monitoring; gold-plated phono input jacks; external signal processor loop. Phono input sensitivity/impedance 2 mV/47k ohms; gain 34 dB (phono), 20.5 dB (line); phono overload 200 mV at 1000 Hz (input sine wave); frequency response  $\pm 0.05$  dB from 20-20,000 Hz (phono RIAA), 0.5-170,000 Hz  $\pm 3$  dB (line); S/N 68 dB (phono, A weighted), 85 dB (line level); THD 0.01% at 1000 Hz (phono), 0.02% from 20-20,000 Hz (high level); silver panel with walnut side panels; 3 1/2" H  $\times$  18" W  $\times$  12" D..... \$595

## ROTEL

### RC-5000 Preamplifier

Stereo dc amplifier configuration with dc NF phono

equalizer and dc ND graphic equalizer; includes built-in moving-coil head amplifier. Features 10-band octave equalizer  $\pm 10$  dB from 100-10,000 Hz; four-gang attenuated volume control; independent recording selector; subsonic and superonic filters; full tape dubbing with three tape decks; stereo mic mixing; two independent power supplies; gold-plated input jacks and input/output facility; third power supply for relays and headphone amplifier; two headphone jacks. THD and IM dist. 0.002% (aux.) from 20-20,000 Hz; S/N (IHF "A") 85 dB (phono), 95 dB (tuner and tape); input sensitivity/impedance 2-8 mV/30-100,000 ohms (phono 1), 2 mV/50,000 ohms (phono 2), 0.1 mV/32 ohms (phono MC), 150 mV/50,000 ohms (tuner, aux., tape), 5 mV/600 and 50,000 ohms (mic), 150 mV/600 ohms (main in); 12 dB/octave low filter at 15 and 60 Hz, 12 dB/octave high filter at 7000 and 24,000 Hz; 7 1/2" H  $\times$  19" W  $\times$  16 5/8" D..... \$1600

### RC-2000 Preamplifier

Four-block dc amplifier configuration with NF phono equalizer and built-in moving-coil head amplifier. Features attenuated volume control; left/right bass and treble tone controls  $\pm 10$  dB/octave from 100-10,000 Hz; independent recording selector; subsonic and superonic filters; full tape dubbing with two tape decks; shielded split power supplies; gold-plated input jacks; headphone jack. THD and IM dist. 0.002% from 20-20,000 Hz; S/N (IHF "A") 80 dB (phono), 100 dB (tuner and tape); input sensitivity/impedance 2 mV/50,000 ohms (phono 1 and 2), 0.1 mV/32 ohms (MC phono), 150 mV/50,000 ohms (tuner, aux., and tape), 0.775 V/50,000 ohms (main in); 12 dB/octave low filter at 15 Hz, 12 dB/octave high filter at 24,000 Hz; 5 3/4" H  $\times$  19" W  $\times$  13 1/4" D..... \$530

### RC-1000 Control Amplifier

Features OP equalizer amplifier and moving-coil head amplifier. Equalizer: ten-band octave equalizer with center frequencies set at 32, 63, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz,  $\pm 12$  dB boost or cut. Preamp: features three-position phono load impedance selector switch; two-way tape dubbing and monitoring; subsonic filter; 15 dB muting; input sensitivity/impedance 2.5 mV/35k, 50k, 70k ohms (MM), 0.2 mV/30 ohms (MC), 150 mV/50k ohms (aux. and tuner); frequency response 5-70,000 Hz  $+0/-1$  dB; THD 0.03%; S/N 75 dB (MM), 60 dB (MC), 90 dB (aux. and tuner); 3 7/8" H  $\times$  16 1/8" W  $\times$  11 1/2" D. \$320

## SAE

### 2100 Parametric Preamp

Serves as complete control center; incorporates parametric equalizer; frequency response 20-20,000 Hz  $\pm 0.25$  dB; THD and IM dist. 0.005%; S/N 95 dB (phono); stepped volume control; gain control; full tape EQ/dubbing facilities; speaker switching; scope outputs; four phono circuits with separate feedback gain controls; 7" H  $\times$  19" W  $\times$  8 1/2" D..... \$1125

2100L. Same as 2100 but without parametric equalizer; has LED display which monitors output at tape, line, or power amp level..... \$975

WMC-2. Unassembled walnut cabinet for 2100 and 2100L..... \$65

### 2900 Parametric Preamp

Incorporates parametric equalizer, full tape EQ/dubbing facilities, relay muting, and feedback gain control; THD and IM dist. 0.01%; frequency response 20-20,000  $\pm 0.25$  dB (phono and high level); S/N 78 dB (phono), 95 dB (aux.); 5.25" H  $\times$  19" W  $\times$  3.5" D..... \$550

WMC-4. Unassembled walnut cabinet..... \$60

### 3000 Tone Control Preamplifier

Features two-stage phono circuit, full tape recording facilities and tape EQ, and 30 Hz, 12 dB/octave, and 100 Hz 6 dB/octave filters. Frequency response 20-20,000 Hz  $\pm 0.25$  dB; THD and IM dist. 0.02%; S/N 72 dB (phono), 85 dB (aux.). 5 1/4" H  $\times$  19" W  $\times$  3 1/2" D..... \$350

WMC-4. Unassembled walnut cabinet..... \$60

## SANSUI

### CA-F1 00/DC Preamplifier

Features "Diamond Differential dc circuitry" in phono equalizer section; phono moving-coil, phono moving-magnet, tuner, and aux. input selector; A-B speaker switching; tape 1, 2, and source monitor control; separate bass and treble controls with tone defeat switch; balance control; loudness contour; switchable subsonic filter control; main outputs can be fed to one or two power amps. Frequency response  $\pm 0.2$  dB from 20-20,000 Hz (RIAA phono), 5-600,000 Hz (aux., tuner, and tape); THD 0.005%; S/N 90 dB (phono), 100 dB (aux., tuner, and tape); slew rate 50 V/ $\mu$ sec; rise time 0.6  $\mu$ sec; phono overload 350 mV; nominal output 1 V; matte black finish with detachable rack-mount adaptors..... \$495

### C-77 Preamplifier

See Section 1, Receivers, under Sansui's Super Compo Series 900.

## SANYO

### PLUS C55 Preamplifier

Features low-noise moving-coil pre-preamp, discrete op amp moving-magnet phono preamp/equalizer, and dc-coupled class-A circuitry; bipolar power supplies; passive volume and balance controls and passive subsonic filter switch; bass and treble controls with turnover frequency switches and tone defeat; two-way tape dubbing and monitoring; input and mode selectors. Input sensitivity/impedance 2.5 mV/47k ohms (phono MM), 100  $\mu$ V/100 ohms (phono MC), 150 mV/47k ohms (aux. and tape); frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA), 10-40,000 Hz  $\pm 0.5$  dB (aux. and tape); S/N (IHF A) 85 dB (phono MM), 70 dB (phono MC), 100 dB (aux. and tape), max. phono input 250 mV rms (MM), 10 mV rms (MC); includes rack-mount handles; 1 3/4" H  $\times$  19" W (with handles)  $\times$  10 1/2" D..... \$250

## SONY

### TA-E888 Reference Preamplifier

Dual mono preamp features direct-coupled circuitry; built-in moving-coil head amp with separate power supply; dual-FETs and bipolar transistors in EQ and buffer amp stages; monitor switch for two tape decks and source; input selector with separate selectable phono input impedance control; subsonic filter; three-position audio muting; balance and mode controls. Input sensitivity/impedance 2.5 mV/50k ohms (phono 1), 2.5 mV/10k-100k ohms (phono 2), 0.125 mV/25 or 100 ohms (head amp), 150 mV/50k ohms (tuner, aux., tape); max. input 250 mV (phono 1 and 2), 12.5 mV (head amp); frequency response  $\pm 0.2$  dB (phono RIAA), 0-500,000 Hz  $+0/-1$  dB (tuner, aux., tape); THD and IM dist. 0.002%; S/N (IHF A) 88 dB (phono 1 and 2), 80 dB (head amp), 105 dB (tuner, aux., tape); 3 1/8" H  $\times$  18 1/8" W  $\times$  14 1/2" D..... \$1300

### TA-E86B Preamplifier

Features direct-coupled circuitry; built-in moving-coil head amp; selectable phono input impedance selector; two pairs of preamp outputs include bass-boost/subsonic filter..... \$600

## SOUNDCRAFTSMEN

### SP4002 Signal Processor/Preamp

Combination preamplifier and 10-band octave equalizer. Preamplifier section features two separate phono preamps with variable cartridge loading (0-750 pF) and variable impedance (100/47,000 ohms); variable  $\pm 20$  dB gain stage; S/N 97 dB; 300 mV overload; will accept moving-coil, variable-reluctance, or moving-magnet cartridges; six input sources; two external processing loops, equalizer and mono A + B mixing switchable to two tape or two line outputs; switchable tape monitoring/dubbing. Graphic equalizer:  $\pm 15$  dB control/octave; spec-

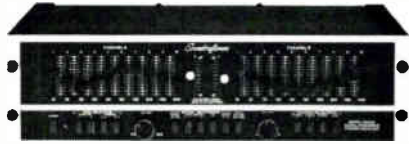
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## PREAMPLIFIERS

trum level control and LEDs for input-to-output balancing; EQ S/N 114 dB at full output; Tape 2 jack duplicated on front panel; click-stop stepped volume control; subsonic filter ..... \$699

### SP4001 Signal Processor/Preamp

Combination preamplifier and ten-band stereo octave equalizer. Preamp features two-deck tape mon-



itoring with two-way dubbing; signal processing section with subsonic filter, two external loops, EQ defeat, and mono switch (may be applied to line or tape outputs for recording); phono 1 and 2, tuner, and aux. input selectors; phono S/N 97 dB; THD 0.01%. Equalizer section: center frequency slide controls at 30, 60, 120, 240, 480, 960, 1920, 3840, 7680, and 15,360 Hz,  $\pm 12$  dB; has dual zero-gain slide controls with LEDs for input/output balancing ..... \$549  
**SP4000.** Same as SP4001 minus graphic equalizer; has third external loop with front-panel access and headphone outputs ..... \$399

### SPATIAL

#### TVA-1 Spatial Coherence Preamplifier

Low-noise preamplifier incorporating four Knapp TFET-Valves (wide dynamic range transconductance devices). Features bass and treble controls with center defeat; switchable 20, 40, 80, and 160 Hz low-filter selector; two-deck tape monitoring with two-way dubbing; mode selector; phono 1 and 2, tuner, and aux. 1 and 2 input selector. Input sensitivity 0.6 mV (phono), 60 mV (aux.); phono overload 200 mV; frequency response  $\pm 0.25$  dB from 20-20,000 Hz (phono RIAA), 10-40,000 Hz  $\pm 0.25$  dB (high level); THD 0.04%; S/N 78 dB (phono IHF A); output 8 V ..... \$1395

### STRELIOFF

#### PA-1 Preamplifier

Features two independent phono sections with variable impedance matching; separate left and right



pre-volume level controls; main and head tape monitoring with two-way tape dubbing; input selector with LED indicators; rear-panel attenuation for tuner, tape, and aux. inputs; rear-panel output/input facility for processing pre-volume signal by external device (i.e. equalizer); modular plug-in circuit boards. Input sensitivity/impedance 1.5 mV/20k-200k ohms variable, 50 mV (high level); phono overload 250 mV at 1000 Hz; frequency response  $\pm 1$  dB from 20-20,000 Hz (phono RIAA), 10-50,000 Hz  $\pm 1$  dB (high level); THD and IM dist. 0.1% at 10 V rms driving 600 ohms; phono noise -90 dB (ASA "A") below 10 mV, ref. 1000 Hz; 3 1/2" H x 19" W x 16" D ..... \$1250

**RS-1.** Regulated supply for PA-1; features main switch with four rear-panel  $\pm 30$ -V dc supply outputs for preamp electronics and six accessory

switches with rear-panel ac line outlets for other electronics; regulation  $\pm 1\%$  of rated dc output; 100-120 V, 50/60 Hz (45 W for preamp, 1750 W max. total for ac line outlets on rear panel); 3 1/2" H x 19" W x 12" D ..... \$1000

### TANDBERG

#### TCA-3002 Control Amplifier

Wireless control amplifier features moving-coil input designed as complete preamplifier stage employing 11 discrete semiconductor devices/ch; moving-magnet phono input with capacitance and resistance adjustments; separate bass and treble controls with tone defeat; Butterworth subsonic filter; mono and loudness switches; two-deck tape monitoring with two-way tape dubbing; built-in headphones amp with separate volume control ..... \$1000

### TECHNICS

#### SU-9070 Preamplifier

Stereo dc preamplifier features built-in moving-coil head amp; three tape monitors with multi-way tape dubbing; subsonic filter. Output voltage/impedance 20 V/600 ohms (pre out max.), 150 mV (rec out tape); frequency response 20-20,000 Hz  $+0/-0.1$  dB (tuner, aux.), RIAA  $\pm 0.2$  dB (phono); S/N (IHF A) 88 dB (phono MM), 72 dB (phono MC), 105 dB (tuner, aux.); THD 0.004%; input sensitivity/impedance 2.5 mV/47,000 ohms (phono MM), 60  $\mu$ V/50 ohms (phono MC), 150 mV/47,000 ohms (tuner, aux.); max. phono input voltage (1 kHz, rms) 350 mV (phono MM), 8 mV (phono MC); 120-V ac, 60 Hz, 30 W; 3 3/4" H x 19" W x 14 1/2" D .. \$460

### THRESHOLD

#### SL 10 Preamplifier

Direct-coupled cascode/class A stereo preamplifier features built-in moving-coil pre-preamp with sepa-



rate power supply; discrete design with tantalum and polystyrene capacitors in signal path; 20,000- $\mu$ F supply regulation; individually adjustable rear-panel impedance and capacitance settings for phono input; tape monitor switch; channel balance control. Frequency response  $\pm 0.5$  dB (RIAA phono), 0-500,000 Hz  $+0/-3$  dB (high level); THD 0.012% from 20-20,000 Hz (phono), 0.003% from 20-5000 Hz (high level); SMPTE IM dist. 0.006% at 1 V out (phono), 0.008% at 10,000 Hz, 5 V out (high level); S/N (A weighted) 90 dB (phono); phono overload 320 mV at 1000 Hz; slew rate 150 V/ $\mu$ sec; 2.62" H x 19" W x 8" D... \$1090

### TOSHIBA

#### C15 Micro Preamplifier

Features high-gain dual FET dc amplifiers; bass and treble controls with tone defeat and EQ direct; mono, subsonic, and tape/source monitor switches; input selector. Input sensitivity/impedance 2.5 mV/47k ohms (phono 1 and 2), 150 mV/47k ohms (tuner, aux., tape); phono overload 300 mV rms at 1000 Hz; frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA), 10-100,000 Hz  $+0/-2$  dB (tuner, aux., tape); dist. 0.01% at 1 V out; S/N (IHF A) 88 dB (phono), 106 dB (tuner, aux., tape); silver finish; 2.1" H x 10.1" W x 8.2" D ..... \$300

**C15B.** Black finish ..... \$310

#### SY-665 Preamplifier

Features built-in moving-coil FET head amp and two ICs for tone control amp; bass and treble controls

with tone defeat; subsonic filter; loudness and mode switches; two-way tape dubbing and monitoring; mic mixing; input selector with LEDs. Input sensitivity/impedance 2.5 mV/47k ohms (phono MM), 0.12 mV/39 ohms (phono MC), 150 mV/47k ohms (tuner, aux., tape); phono overload at 1000 Hz 250 mV (MM), 10 mV (MC); frequency response  $\pm 0.3$  dB from 20-20,000 Hz (phono RIAA), 7-40,000 Hz  $\pm 1$  dB (tuner, aux., tape); dist. 0.01% (aux.); S/N (IHF A) 80 dB (MM), 65 dB (MC), 95 dB (aux., tape, tuner); 3.8" H x 16.5" W x 9.3" D ..... \$200

#### SY-335 Preamplifier

Features twin-tape monitoring/duplicating facilities; 41-position click-stop volume control; microphone mixing with control/switch; mode and loudness switches; phono equalization amp. Max. output 1.0 V; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/47k ohms (tuner, aux., tape 1, 2); THD 0.1%; 150 mV phono overload; RIAA deviation  $\pm 0.5$  dB (phono), 20-40,000 Hz  $\pm 1$  dB (aux.); S/N 80 dB ("A" weighted); three ac outlets, 3 1/2" H x 16 1/2" W x 9 1/2" D ..... \$120  
**SY-335MK II.** Matte black version of SY-335.. \$140

### TRINITY AUDIO

#### BWF Mod I Preamplifier

Stereo preamplifier with dc servo loop design. Features three tape monitor switches with cross dubbing, two phono and two aux. inputs, gold contact switches, mylar capacitors, metal film resistors, and conductive plastic pots ..... \$499

### VA SYSTEMS

#### Seven Preamplifier

Features variable high-frequency phono shelving and variable low-frequency phono cut controls; switchable phono input matching; two-way tape dubbing; buffered inputs and outputs; input selectors for two phono, two tape, tuner, and two aux. Frequency response 20-100,000 Hz  $\pm 0.5$  dB (high level),  $\pm 0.5$  dB from 20-20,000 Hz (phono RIAA); output 12 V p-p; optional rack mount available; 3 1/2" H x 17" W x 9" D ..... \$950

#### Six Preamplifier

Features switchable phono input matching; logic touch controls; buffered inputs and outputs; input selector for phono, tuner, two reserve, and two tape. Frequency response 20-100,000 Hz  $\pm 0.5$  dB (high level),  $\pm 0.5$  dB from 20-20,000 Hz (phono RIAA); output 12 V p-p; optional rack mount available; 3 1/2" H x 17" W x 9" D ..... \$625

### YAMAHA

#### C-2a Preamplifier

DC preamplifier features low-noise moving-coil cartridge head amplifier and low-noise dual FET phono equalizer with current noise reduction circuit and tone control amplifier circuitry; bass and treble controls; subsonic filter; -20-dB audio muting; mode switch; two-way tape dubbing; input selector with separate phono load resistance/capacitance selector. Input sensitivity/impedance 2.5 mV/100, 47k, 68k, 100k ohms variable (phono 1 MM), 100  $\mu$ V/50 ohms (MC), 2.5 mV/47k ohms (phono 2 MM), 150 mV/47k ohms (aux., tuner, and tape); phono overload 350 mV at 1000 Hz (MM), 10 mV at 20,000 Hz (MC); frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA, MM),  $\pm 0.3$  dB from 20-20,000 Hz (MC), 10-100,000 Hz  $\pm 0.2$  dB (aux., tuner, tape); THD 0.003% at 5 V out (MM to pre out), 0.01% at 5 V out (MC to pre out), 0.003% at 10-V out (aux., tuner, tape); IM dist. 0.003% at 10 V out (aux., tuner, tape); S/N (IHF A) 104 dB (phono MM), 92 dB (MC), 107 dB (aux., tuner, tape); 2 1/2" H x 17" W x 12 1/2" D ..... \$950

#### C-4 Preamplifier

Features low-noise dc phono equalizer, moving-coil cartridge head amp, current noise-reduction circuit,



and tone control amplifier circuitry; bass and treble controls with turnover frequency controls, tone defeat, and illuminated tone bypass switch; phone input with level control; low and high filter switches; mode buttons; two-way tape dubbing; illuminated -20-dB audio muting; input selector with separate phono input selector and two phono cartridge load resistance/capacitance selectors; two sets of pre-out terminals on rear panel with front-panel switches. Input sensitivity/impedance 2.5 mV/100, 33k, 47k, 68k, and 100k ohms (phono MM), 100  $\mu$ V/50 ohms (MC), 150 mV/47k ohms (aux., tuner, tape); phono overload 285 mV at 1000 Hz (MM), 10 mV at 20,000 Hz (MC); frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA), 5-100,000 Hz  $\pm 0.5$  dB (tuner, aux., tape); THD 0.0035% at 2 V out (MM to pre out), 0.1% at 2 V out (MC to pre out), 0.0035% at 10 V out (aux., tuner, tape), 0.02% at 8 ohms, 12 mW out (phones out); IM dist. 0.005% at 10 V out (aux., tuner, tape); S/N (IHF A) 97 dB (MM), 91 dB (MC), 106 dB (aux., tuner, tape, tone bypass on), 100 dB (tone bypass off); 4 1/2" H  $\times$  17 1/4" W  $\times$  14 3/4" D..... \$550

### C-8 Control Amplifier

DC stereo preamplifier with built-in low-noise moving-coil head amplifier, dc phono equalizer amp with dual-FET and dc flat amp circuitry, parametric tone control servo circuitry, low-noise, low-distortion power supply circuit, and headphone amplifier with OCL power amp and low-noise IC circuit. Features low and high parametric tone slide controls from 31.5-640 Hz and 640-12,500 Hz, respectively, with  $\pm 12$ -dB low and high level and low and high narrow/wide bandwidth controls and pre out/defeat/rec out 1 and 2 tone mode selector; low-cut (15 Hz at -12 dB/octave) and high-cut (10,000 Hz at -12 dB/octave) filter switches; -20-dB audio muting; input selector with separate phono MM and MC switches; rec out switch with two-way tape copying; pre out switch; stereo/mono mode switch; balance and volume controls. Input sensitivity/impedance 2.5 mV/47k ohms (phono 1 and 2 MM), 100  $\mu$ V/50 ohms (phono MC), 150 mV/47k ohms (aux., tuner, tape 1, 2); phono overload at 1000 Hz 240 mV, 0.01% THD (MM 1 and 2), 9 mV, 0.03% THD (phono MC); output level/impedance 150 mV/220 ohms (rec out 1, 2), 2 V/950 ohms (pre out), 1 V/180 ohms (phones out); frequency response  $\pm 0.2$  dB from 20-20,000 Hz (MM 1, 2),  $\pm 0.3$  dB from 20-20,000 Hz (MC), 10-100,000 Hz  $\pm 0.3$  dB (aux., tuner, tape); THD from 20-20,000 Hz 0.005% (MM 1 and 2 to pre out), 0.02% (MC to pre out), 0.01% (aux., tuner, tape); IM dist. 0.015% at 10 V out (aux., tuner, tape); S/N (IHF A) 97 dB at 10 V out (aux., tuner, tape); S/N (IHF A) 97 dB at 10 dB (MM 1 and 2), 89 dB at 500  $\mu$ V (MC), 102 dB (aux., tuner, tape); 4 1/2" H  $\times$  14 1/4" W  $\times$  13 3/4" D..... \$450

dB; damping-factor 60 at 8 ohms from 20-20,000 Hz. Preamp: features built-in moving-coil head amplifier; bass and treble controls with turnover frequency switches and six-LED turnover frequency/filter setting displays; low and high filters; loudness and muting switches; balance control; two-way tape dubbing and monitoring with separate tape 3 play/record control; mode switch; input selector with LEDs and phono capacitance selector; input sensitivity/impedance 200  $\mu$ V/10 ohms (phono MC), 150 mV/47k ohms (tuner, aux., tape, DIN); phono overload 280 mV (MM); RIAA deviation  $\pm 0.2$  dB from 30-15,000 Hz; S/N (IHF A) 83 dB (MM), 70 dB (MC), 100 dB (tuner, aux., tape); 6 3/4" H  $\times$  18 1/4" W  $\times$  14 1/4" D..... \$550

### AA-8300U Integrated Amplifier

Power amp: features dual peak power meters; two-speaker switching; 45 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.1% THD and IM dist.; damping factor 45 at 8 ohms from 20-20,000 Hz. Preamp: features bass and treble controls; low and high filters; loudness and -15-dB muting; two-way tape dubbing and monitoring; balance/volume control; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/47k ohms (aux., tape, and DIN); phono overload 130 mV; frequency response  $\pm 0.3$  dB from 30-15,000 Hz (phono RIAA), 10-50,000 Hz  $\pm 0.2$  dB (aux. and tape); S/N (IHF A) 80 dB (phono), 90 dB (aux. and tape); 5 1/2" H  $\times$  16 1/4" W  $\times$  13" D..... \$300

## AKAI

### AM-U06 Integrated Amplifier

Power amp section: features dc circuitry, pulsed power supply, two-color fluorescent power indicator display with X1/X0.1 meter range switch, and two-speaker switching; 68 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.008% THD. Preamp section: features built-in moving-coil head amp; bass, midrange, and treble controls with center defeat; subsonic and high filter switches; audio muting; loudness control; rec selector with two-way tape dubbing and LED indicators; input selector with LEDs and separate three-position magnetic cartridge impedance selector; walnut-grain vinyl cabinet; 4.1" H  $\times$  17.3" W  $\times$  12" D..... \$350

**AM-U04.** Similar to AM-U06 minus moving-coil head amp, magnetic cartridge impedance selector, and audio muting; 48 W/ch under same conditions. .... \$280

### AM-U03 Integrated Amplifier

Power amp section: features dc circuitry, fluorescent power indicator display with X1/X0.1 meter range selector, and two-speaker switching; 37 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.008% THD. Preamp section: features bass and treble controls with built-in defeat; three-position loudness control; tape monitoring/dubbing switch; input selector with LEDs; walnut grain vinyl cabinet; 4.1" H  $\times$  17.3" W  $\times$  11.8" D..... \$230

## DENON

### PMA-630 Integrated Amplifier

Power amp: features purely complementary push-pull dc circuitry; heavy-duty power transformer with two block capacitors; two-speaker switching; 80 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.008% THD; IM dist. 0.005%; frequency response 0-100,000 Hz  $\pm 0/-1$  dB; S/N 112 dB (IHF A); input sensitivity/impedance 320 mV/100k ohms. Preamp: features detented volume control; balance control; switchable 20- and 40-Hz subsonic filter; loudness switch; two-way tape dubbing and monitoring; rec out selector; input selector; input sensitivity/impedance 2.5 mV/50k ohms (phono 1 and 2), 320 mV/30k ohms (tuner, aux., tape); phono overload 200 mV at 1000 Hz; gain 89 dB; RIAA phono deviation  $\pm 0.2$  dB; THD 0.003% at 10 V out; rated output 2.5 V; S/N 86 dB (phono), 112 dB (tuner and aux.); complements TU-630 tuner; brushed aluminum panel; 145 mm H  $\times$  434 mm W  $\times$  390 mm D..... \$465

### PMA-530 Integrated Amplifier

Integrated stereo amplifier with capacitorless direct dc servo system. Power amp: features FET differen-



tial direct dc servo plus transistor differential current mirror circuitry and pure complementary push-pull output circuitry; direct coupled/tone switch and A/B speaker switching; 60 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.003% THD and IM dist.; slew rate 170 V/ $\mu$ sec; rise time 0.6  $\mu$ sec; frequency response 1-400,000 Hz  $\pm 0/-3$  dB; S/N 100 dB (IHF A); input sensitivity/impedance 150 mV/30k ohms. Preamp: features MC pre-amp and MM equalizer amp circuitry; separate bass and treble controls; subsonic filter; pushbutton aux., tuner, phono MM, and phono MC input selectors with LEDs; rec out with two-way tape dubbing; source/two-tape monitor switching; loudness switch; input sensitivity/impedance 2.5 mV/50k ohms (phono MM), 0.25 mV/100 ohms (phono MC), 150 mV/30k ohms (tuner, aux., tape); RIAA deviation  $\pm 0.2$  dB from 20-20,000 Hz (MM), and from 30-20,000 Hz (MC); max. phono input at 1000 Hz 200 mV (MM), 20 mV (MC); S/N (IHF A) 88 dB (MM), 72 dB (MC), 100 dB (tuner, aux., tape); 112 mm H  $\times$  434 mm W  $\times$  390 mm D..... \$390

## FISHER

### CA2420 Integrated Amplifier/Equalizer

Power amp section: features dc circuitry, dual power meters, and two-speaker switching; 80 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; damping factor 50. Preamp/equalizer: features built-in moving-coil head amp; five-band graphic equalizer with EQ defeat switch; subsonic filter; mode and loudness switches; two-way tape dubbing and monitoring; balance control; input selector; phono capacitance selector; input sensitivity/impedance 2.5 mV/50k ohms (MM), 60  $\mu$ V/22 ohms (MC), 150 mV/100k ohms (tuner, aux., tape); phono overload 230 mV (MM), 6 mV (MC); frequency response  $\pm 0.5$  dB (phono RIAA), 20-20,000 Hz  $\pm 0.5$  dB (high level); S/N (IHF A) 80 dB (MM), 70 dB (MC), 90 dB (tuner, aux., tape); equalizer center frequencies set at 50, 250, 1000, 4500, and 15,000 Hz,  $\pm 10$  dB boost or cut; subsonic filter 6 dB/octave at 10 Hz. 5 1/4" H  $\times$  17 1/4" W  $\times$  13" D..... \$500

### CA2320 Integrated Amplifier

Power amp: features dc circuitry and two-speaker switching; 60 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; damping factor 50. Preamp: features built-in moving-coil head amp; bass and treble controls with tone defeat; switchable 5/20 Hz subsonic filter; two-way tape monitoring and dubbing; balance control; loudness switch; mode selector; input selector; input sensitivity/impedance 2.5 mV/50k ohms (MM), 60  $\mu$ V/22 ohms (MC), 150 mV/50k ohms (tuner, aux., tape); phono overload 230 mV (MM), 6 mV (MC); frequency response  $\pm 0.5$  dB (phono RIAA), 20-20,000 Hz  $\pm 0.5$  dB (aux.); S/N (IHF A) 80 dB (MM), 70 dB (MC), 90 dB (tuner, aux., and tape); 3 1/2" H  $\times$  17 1/4" W  $\times$  12 1/4" D. \$400

### CA2220 Integrated Amplifier/Equalizer

Power amp: features dc circuitry, dual power meters, and two-speaker switching; 50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; damping factor 50. Preamp/equalizer: features five-band graphic equalizer with EQ defeat; subsonic filter; mode and loudness switches; two-way tape dubbing and monitoring; input selector; input sen-



## AIKO by TZL INTERNATIONAL

### AU-80 Integrated Amplifier

Power amp: features dual power output meters; two-speaker switching; 40 W/ch continuous into 4 ohms with 0.2% HD at 1000 Hz. Preamp features bass and treble controls; low and high filters; loudness, mode, and tape/source monitor switches. 5 1/4" H  $\times$  17" W  $\times$  8 1/4" D..... \$260

## AIWA

### AA-8700 Integrated Amplifier

Power amp: features dc circuitry; logarithmic compression peak power meters; two-speaker switching; 75 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; frequency response 5-100,000 Hz  $\pm 0/-3$

# 2

## INTEGRATED AMPLIFIERS

sitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/100k ohms (tuner, aux., tape); phono overload 230 mV; frequency response  $\pm 0.5$  dB (phono RIAA), 20-20,000 Hz  $\pm 0.5$  dB (aux.); S/N (IHF A) 80 dB (phono), 90 dB (tuner, aux., and tape); equalizer center frequencies set at 50, 250, 1000, 4500, and 15,000 Hz,  $\pm 10$  dB boost or cut; 5'  $\frac{1}{2}$ " H  $\times$  17'  $\frac{1}{2}$ " W  $\times$  13'  $\frac{1}{2}$ " D..... \$400  
**CA2120.** Similar to CA2220 minus subsonic filter; 35 W/ch continuous under same conditions... \$330

### CA 660 Integrated Amplifier

Power amp section: features dual power output meters with five-LED peak level indicators and two-speaker switching; 40 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.07% THD and IM dist. Preamp section: features bass and treble controls; loudness switch; source/mic mixing level/record control; input selector with illuminated indicators; input sensitivity/impedance 2.5 mV (phono), 150 mV (tuner, aux., tape 1, 2); S/N (IHF A) 78 dB (phono), 95 dB (tuner, aux., tape); RIAA phono deviation  $\pm 0.5$  dB..... \$300

### CA 120 Integrated Amplifier

Power amp section: features dual power output meters and two-speaker switching; 30 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.07% THD and IM dist. Preamp section: features bass and treble controls; high filter switch; loudness switch; mode selector; two-deck tape monitoring; input selectors with LEDs; input sensitivity/impedance 2.5 mV/50k ohms (phono) 150 mV/50k ohms (tuner, aux., tape); S/N (IHF A) 78 dB (phono), 95 dB (tuner, aux., tape); RIAA phono deviation  $\pm 0.5$  dB..... \$250

## HARMAN/KARDON

### 700 Series High Technology Separates

#### hk750 Integrated Amplifier

Power amp section: features dc circuitry; toroidal power supply; two-speaker switching; 45 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.03% THD; frequency response 1-150,000 Hz  $\pm 3$  dB; IM dist. 0.05% and TIM dist. 0.01% at rated out; slew rate 60 V/ $\mu$ sec. Preamp: features bass and treble tone controls with tone defeat; subsonic and high filter selectors; mode and loudness selectors; two-deck tape monitoring and two-way dubbing; phono 1 and 2, tuner, and aux. input selectors with LEDs; S/N (A weighted) 88 dB (phono), 100 dB (aux.); phono overload 150 mV ..... \$329

## HITACHI

#### HA-7700 Integrated Amplifier

Power amp section: features MOS FETs and dc circuitry; dual power supplies; two-speaker switching; 65 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD; IM dist. 0.008%; frequency response 0-100,000 Hz  $\pm 0/1$  dB (dc); input sensitivity/impedance 1 V/47k ohms; S/N 115 dB (IHF A); damping factor 60 at 1000 Hz, 8 ohms. Preamp section: features bass and treble controls with tone defeat; two-way tape monitoring and dubbing;  $-16$ -dB muting switch; low filter; balance control; input selector with separate cartridge load impedance selector; mode switch; input sensitivity/impedance 2.5 mV/100, 22,000, 47,000, and 100,000 ohms (phono MM), 250  $\mu$ V/100 ohms (MC), 150 mV/47k ohms (tuner, aux., tape); phono overload 300 mV (MM), 30 mV (MC); frequency response 20-20,000 Hz  $\pm 0.2$  dB (phono RIAA), 10-100,000 Hz  $\pm 0/2.5$  dB (tuner and aux.); S/N (IHF A) 86 dB (phono MM), 68 dB (MC), 100 dB (tuner, aux., tape); HD 0.002% (MM), 0.01% (MC), 0.005% (tuner, aux., tape);

speaker, tone, mode, and phono impedance controls on front panel hidden behind hinged door; 6'  $\frac{1}{2}$ " H  $\times$  17'  $\frac{1}{2}$ " W  $\times$  15" D..... \$600

#### HA-5700 Integrated Amplifier

Power amp: features MOS FETs; two-transformer power supply circuitry; dual LED power logarithmic meter display with  $\times 0.1$  and  $\times 1$  range selector; two-speaker switching; 50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD; IM dist. 0.008%; power bandwidth 5-60,000 Hz; damping factor 50 at 1000 Hz, 8 ohms. Preamp: features built-in moving-coil head amp; bass and treble controls with tone defeat; subsonic filter; loudness and mode switches; balance control; two-way tape dubbing and monitoring; input selector with LEDs; input sensitivity/impedance 2.5 mV/47k ohms (MM), 0.25 mV/10 ohms (MC), 150 mV/47k ohms (tuner, aux., tape); phono overload 200 mV (MM), 20 mV (MC); frequency response 20-20,000 Hz  $\pm 0.5$ -4.5 dB (phono), 10-100,000 Hz  $\pm 0.5$ -4.5 dB (tuner and aux.); S/N (IHF A) 82 dB (MM), 62 dB (MC), 100 dB (tuner and aux.); HD 0.005% (MM), 0.02% (MC, tuner, aux., tape); 4'  $\frac{1}{2}$ " H  $\times$  17'  $\frac{1}{2}$ " W  $\times$  15" D..... \$400

#### HA-3700 Integrated Amplifier

Power amp section: features Super-Linear circuit (biases transistors to idle on alternate half cycles instead of turning off), dual seven-LED power meter display, and two-way speaker switching; 35 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD; power bandwidth 5-30,000 Hz at half-rated output; THD 0.05%; IM dist. 0.05% at half-rated output; damping factor 40 at half-rated output. Preamp section: features low-noise EQ amp circuitry; bass, treble, and balance controls with tone defeat; subsonic filter switch; loudness switch; aux., tuner, and tape input selectors with LEDs; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/40k ohms (tape); phono overload 200 mV at 1000 Hz, 0.05% THD; frequency response  $\pm 0.5$  dB from 30-15,000 Hz (phono RIAA), 10-50,000 Hz  $\pm 0.5$  3 dB (tape); S/N (IHF A) 83 dB (phono), 100 dB (tape); 3'  $\frac{1}{2}$ " H  $\times$  17'  $\frac{1}{2}$ " W  $\times$  11'  $\frac{1}{2}$ " D..... \$200

**HA-2700.** Similar to HA-3700 minus Super-Linear circuit in power amp, tone defeat, and input LED indicators; has five-LED power meter display and source/tape monitor and tuner/phono function switches; 20 W/ch with 0.05% THD under same conditions; phono S/N 80 dB (IHF A); phono overload 150 mV; 1'  $\frac{1}{2}$ " H  $\times$  17'  $\frac{1}{2}$ " W  $\times$  11'  $\frac{1}{2}$ " D... \$170

## JVC

#### A-X4 Integrated Amplifier

Power amp section: features Class A-B configuration with active bias and ICL dc circuitry; dual



12-LED power level indicators; two-speaker switching; direct power supply; triple power protection; 60 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.005% THD and 0.004% IM dist.; frequency response 0-100,000 Hz  $\pm 0$ -3 dB; damping factor 75 at 1000 Hz, 8 ohms. Preamp section: features built-in moving-coil head amp; five-band S.E.A. graphic equalizer with center frequency slide controls at 40, 250, 1000, 5000, and 15,000 Hz,  $\pm 12$  dB boost or cut, and defeat and SEA record switches; EQ subsonic filter button;  $-20$ -dB muting; tape/source monitoring with two-way tape dubbing; loudness selector; input selectors with separate phono MM/MC selector and LED indicators; input sensitivity/impedance 2.5 mV/47k ohms (phono MM), 200  $\mu$ V/100 ohms (phono MC), 150 mV/47k ohms (tuner, aux., tape); phono overload 220 mV (MM), 15 mV (MC); phono RIAA equalization  $\pm 0.3$  dB from 20-20,000 Hz (MM),  $\pm 0.5$  dB from 30-20,000 Hz (MC); S/N (IHF A) 84 dB (MM), 67 dB (MC), 109 dB (tuner,

aux., tape); 4'  $\frac{1}{2}$ " H  $\times$  18'  $\frac{1}{2}$ " W  $\times$  13'  $\frac{1}{2}$ " D..... \$400  
**A-X3.** Similar to A-X4 minus S.E.A. graphic equalizer; has bass and treble controls with tone defeat and variable loudness control; 55 W/ch under same conditions..... \$350  
**A-X2.** Similar to A-X4 minus dc circuitry, direct power supply, moving coil head amp, tape/source monitoring, EQ subsonic filter switch, and muting; 40 W/ch with 0.007% THD and IM dist.; frequency response 10-100,000 Hz  $\pm 0$ -3 dB; damping factor 50; tuner, aux., tape input impedance 40k ohms; S/N (IHF A) 75 dB (phono), 95 dB (tuner, aux., tape); phono overload 150 mV; RIAA phono equalization  $\pm 0.5$  dB from 20-15,000 Hz; 4'  $\frac{1}{2}$ " H  $\times$  16'  $\frac{1}{2}$ " W  $\times$  12'  $\frac{1}{2}$ " D..... \$250  
**A-X1.** Similar to A-X2 minus S.E.A. graphic equalizer; has bass and treble controls; 30 W/ch under same conditions..... \$210

## KENWOOD

#### KA-907 DC Integrated Amplifier

Power amp: features dc circuitry, dc coupled selector with LED, full complementary circuit design,



and dual power supplies; LED power safety indicator; output 150 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.01% THD; IM dist. 0.0045%; damping factor 100 from 0-20,000 Hz; slew rate  $\pm 230$  V/ $\mu$ sec; rise time 0.8  $\mu$ sec; frequency response 0-400,000 Hz  $\pm 0$ -3 dB (dc coupled on), 1-400,000 Hz  $\pm 0$ -3 dB (dc coupled off). Preamp: features built-in low-noise moving-coil head amp and super-low-noise moving-magnet phono equalizer amp; bass and treble tone controls with 150/400 and 3000/6000 Hz turnover frequency selectors with tone defeat; 20 dB attenuator; 18-Hz subsonic and 8000-Hz high filters; two-way speaker switching; two-deck tape dubbing and monitoring; loudness level and 30- and 100-Hz frequency controls; input selector with separate phono selections; mode selector; phono frequency response  $\pm 0.2$  dB from 20-20,000 Hz (RIAA); input sensitivity/impedance 2.5 mV/33k, 47k, and 100k ohms (phono 1 MM), 2.5 mV/47k ohms (phono 2 MM), 0.1 mV/100 ohms (phono 1 MC), 150 mV/50k ohms (tuner, aux., tape A and B); S/N (IHF A) 90 dB (phono 1 and 2 MM), 70 dB (phono 1 MC), 105 dB (tuner, aux., tape); max. input level 230 mV rms (phono 1 and 2 MM), 9 mV rms (phono 1 MC). Power amp and preamp separable; 6'  $\frac{1}{2}$ " H  $\times$  18'  $\frac{1}{2}$ " W  $\times$  18'  $\frac{1}{2}$ " D..... \$1000

#### KA-801 DC Integrated Amplifier

Power amp: features dc circuitry with dc coupled switch, dual peak power meters, and dual power supplies; 110 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.015% THD; IM dist. 0.003%; damping factor 100 from 0-20,000 Hz; slew rate  $\pm 150$  V/ $\mu$ sec; rise time 0.8  $\mu$ sec; frequency response 0-400,000 Hz  $\pm 3$  dB (dc coupled on), 18-400,000 Hz  $\pm 3$  dB (dc coupled off). Preamp: features low-noise phono equalizer amp; bass and treble controls with tone defeat; two-way speaker switching; balance control;  $-20$  dB attenuator; loudness switch; input selector; subsonic filter (functions as dc coupled switch); two-way tape dubbing and tape B and source monitoring; phono frequency response  $\pm 0.2$  dB from 20-20,000 Hz (RIAA); input sensitivity/impedance 2.5 mV/50k ohms (phono), 200 mV/50k ohms (tuner, aux., and tape A and B); S/N (IHF A) 90 dB (phono), 105 dB (tuner, tape, and aux.); max. phono input 230 mV rms; 6'  $\frac{1}{2}$ " H  $\times$  17'  $\frac{1}{2}$ " W  $\times$  16'  $\frac{1}{2}$ " D..... \$699  
**KA-701.** Similar to KA-801 without peak power meters; has turnover frequency controls for bass and treble with defeat and 8000-Hz high filter switch;



power output 80 W/ch continuous with 0.02% THD; slew rate  $\pm 120$  V/ $\mu$ sec; rise time 0.9  $\mu$ sec; S/N 89 dB (phono), 110 dB (tuner, tape, aux.); max. phono input 220 mV rms. .... \$499  
**KA-601.** Similar to KA-701 minus turnover frequency selectors and high filter switch; power output 60 W/ch continuous; IM dist. 0.004%; slew rate  $\pm 110$  V/ $\mu$ sec; S/N 87 dB (phono), 105 dB (tuner, aux., tape); phono RIAA frequency response  $\pm 0.3$  dB from 20-20,000 Hz ..... \$399

**KA-305 Integrated Amplifier**

Power amplifier: 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.08% THD; IM dist. 0.004%; damping factor 40; frequency response 3-100,000 Hz  $\pm 3$  dB. Preamp: features bass and treble controls with bypass tone control, loudness and balance, mic mixing with mic level control, and input selector; phono frequency response  $\pm 0.4$  dB from 30-15,000 Hz (RIAA); input sensitivity/impedance 2.5 mV/50k ohms (phono and mic), 150 mV/30k ohms (tuner, aux., and tape); S/N (IHF A) 77 dB (phono), 105 dB (tuner, aux., tape), 73 dB (mic); max. phono input 260 mV rms; 5<sup>1/2</sup>" H x 15<sup>1/2</sup>" W x 11<sup>29/32</sup>" D \$199  
**KA-405.** Similar to KA-305 except dc amplifier with peak power meters, two-way tape dubbing with source monitor switch, and LED input selector display; 55 W/ch with 0.05% THD; IM dist. 0.009%; frequency response 2-250,000 Hz  $\pm 0/ \pm 3$  dB; phono S/N 83 dB; phono overload 210 mV... \$299

**LUX**

**Luxman L-11 Integrated Amplifier**

Features moving-coil position and input transformer socket; linear equalizer; two-position subsonic filter; headphone jack; two tape deck capability with separate selectors; tape monitor circuit; speaker protection circuit; ac power outlet. Power amplifier: 100 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.02% THD and IM dist.; frequency response 2500-100,000 Hz  $\pm 0/ \pm 1$  dB; input sensitivity 1.6 V; damping factor 80. Preamplifier: input sensitivity 2.5 mV (phono 1 and 2), 150 mV (aux., tuner); S/N (IHF "A") better than 92 dB (phono); frequency response 20-20,000 Hz  $\pm 0.2$  dB (phono), 2500-100,000 Hz  $\pm 0/ \pm 1$  dB (tuner, aux., monitor 1 and 2) ..... \$945

**Luxman L-10 Integrated Amplifier**

Features variable tonal range of  $\pm 2/ \pm 2.5$  dB; speaker protection circuit; subsonic filter; tape 1 and 2 recording selectors; tape monitor switch; headphone jack; extra ac outlets (switched and unswitched). Power amplifier: 55 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.015% THD and IM dist.; frequency response 0-100,000 Hz  $\pm 1$  dB; input sensitivity 300 mV; hum and noise  $-100$  dB (IHF "A"); damping factor 80. Preamplifier: output 300 mV; input sensitivity 3 mV (phono), 300 mV (tuner, aux.); S/N (IHF "A") 90 dB (phono), 100 dB (tuner, aux.); frequency response 20-20,000 Hz  $\pm 1$  dB (phono), 0-100,000 Hz  $\pm 1$  dB (tuner, aux.). 3<sup>1/4</sup>" H x 17<sup>1/4</sup>" W x 14<sup>3/4</sup>" D ..... \$795

**Luxman L-580 Integrated Amplifier**

Power amp section: features dual LED power indicators with peak indicator switch and two-speaker switching; 100 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; slew rate 150 V/ $\mu$ sec; rise time 0.6  $\mu$ sec; frequency response 10-100,000 Hz  $\pm 1$  dB; S/N 105 dB (IHF A weighted). Preamp section: features built-in moving-coil head amplifier; separate bass and treble controls with 150/300/600-Hz bass and 1500/3000/6000-Hz treble turnover frequency selectors, 70/150 Hz low boost switch, and tone bypass; subsonic and high filter switches; tape/source monitoring with two-way tape dubbing; input selector with separate phono MM and MC selector; input sensitivity/impedance 1.8 mV/50k ohms (MM), 0.06-0.18 mV/100 ohms (MC), 240 mV/40k ohms (tuner and aux.); frequency response  $\pm 0.3$  dB from 20-20,000 Hz (phono RIAA), 10-100,000 Hz  $\pm 1$  dB (tuner, aux.); S/N (IHF A

weighted) 90 dB (phono), 100 dB (tuner and aux.); 7<sup>1/8</sup>" H x 18<sup>11/32</sup>" W x 14<sup>1/2</sup>" D ..... \$795

**Luxman L-480 Integrated Amplifier**

Power amp section: features dual LED power level indicators with peak indicator off switch and two-speaker switching; 70 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; frequency response 10-100,000 Hz  $\pm 1$  dB; S/N 105 dB (IHF A). Preamp section: features built-in moving-coil head amp; bass and treble controls with 200/400-Hz bass and 2000/4000-Hz treble turnover frequency selectors and tone defeat; subsonic and high-cut filter switches; tape/source monitor switch with two-way tape dubbing; mode switch; input selector includes moving-coil circuit; input sensitivity/impedance 1.2 mV/50k ohms (MM), 300  $\mu$ V/100 ohms (MC), 190 mV/50k ohms (tuner and aux.); frequency response  $\pm 0.3$  dB from 20-20,000 Hz (phono RIAA), 10-100,000 Hz  $\pm 1$  dB (tuner and aux.); S/N (IHF A weighted) 94 dB (MM), 70 dB (MC), 105 dB (tuner and aux.); 5<sup>29/32</sup>" H x 18<sup>11/32</sup>" W x 13<sup>1/8</sup>" D ..... \$495

**MARANTZ**

**PM700 Integrated Amplifier**

Power amp: features dc circuitry; dual LED power output logarithmic displays; two-speaker switching; 70 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.025% THD and IM dist.; damping factor 60 at 20 Hz. Preamp: features built-in moving-coil cartridge head amplifier; built-in five-band stereo graphic equalizer with center frequencies set at 50, 200, 800, 3200, 12,800 Hz,  $\pm 12$  dB boost or cut and EQ defeat; 6 dB/octave low (20 Hz) and high (9000 Hz) filters; mono switch; loudness switch; balance control; record mode selector with two-way tape dubbing and two-

deck tape monitoring; input selector; input sensitivity/impedance 2.8 mV/47k ohms (phono MM), 0.2 mV/40 ohms (phono MC), 150 mV/30k ohms (high level); phono overload 220 mV (MM), 16 mV (MC); S/N (A weighted) 92 dB (phono MM), 98 dB (high level); frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono), 10-70,000 Hz  $\pm 1$  dB (high level); dynamic range 123 dB (phono MM), 112 dB (MC); 5<sup>7/8</sup>" H x 16<sup>3/4</sup>" W x 13" D ..... \$450  
**PM500.** Similar to PM700 minus built-in moving-coil head amp, record out selector, and high filter; has single five-band graphic equalizer with same center frequencies; 50 W/ch continuous, under same conditions; phono RIAA deviation  $\pm 0.3$  dB; phono S/N 90 dB (A weighted); phono dynamic range 117 dB ..... \$330  
**PM300.** Similar to PM500 minus mono switch, EQ defeat, and two-way tape dubbing and monitoring; has tape/source monitor switch, power level meters, and bass, midrange, and treble slide controls; 30 W/ch continuous with 0.04% THD and IM dist.; phono overload 130 mV; phono RIAA deviation  $\pm 0.5$  dB; phono S/N 87 dB (A weighted); phono dynamic range 109 dB; high level frequency response 15-50,000 Hz  $\pm 1$  dB; 5<sup>7/8</sup>" H x 16<sup>3/8</sup>" W x 9<sup>9/16</sup>" D ..... \$225

**NAD (USA)**

**3080 Integrated Amplifier**

Power amp: features eight high-current output transistors; separate filtered and regulated power supplies; 2-ohm load impedances; dual power output meter with 8/80 W meter switch; main/remote speaker switching; 90 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; slew rate 40 V/ $\mu$ sec; damping factor 120 at 8 ohms, 50 Hz; S/N 104 dB (A weighted); frequency response 5-50,000 Hz  $\pm 0/ \pm 3$  dB; input sensitivity/impedance 1.2 V/10k

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ohms. Preamp: features bass and treble controls with switchable turnover frequency selectors and tone defeat; infrasonic and high filters; two-way tape dubbing and monitoring; loudness, mono, and muting switches; mic level control with jack; input selector; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/50k ohms (high level); phono overload 200 mV; frequency response  $\pm 0.3$  dB (phono RIAA), 20-20,000 Hz  $\pm 0.5$  dB (high level); THD 0.01%; S/N (A weighted) 82 dB at 10 mV (phono), 95 dB (mute off, high level). 5.5" H  $\times$  19.3" W  $\times$  14.2" D ..... \$535

**3060.** Similar to 3080 without meter switching and mic level control; 60 W/ch continuous under same conditions; slew rate 30 V/ $\mu$ sec; damping factor 100; main amp input sensitivity/impedance 1.0 V/33k ohms; main amp S/N (A weighted) 103 dB; high-level input impedance 18k ohms; 5.5" H  $\times$  17.7" W  $\times$  14.2" D ..... \$425

**3045.** Similar to 3060 minus bass and treble turnover frequency selectors and tone defeat; 45 W/ch continuous with 0.05% THD and IM dist.; slew rate 20 V/ $\mu$ sec; damping factor 75; main amp input sensitivity 0.85 V; S/N (A weighted) 101 dB (main amp), 92 dB (high level) ..... \$350

### 3040 Integrated Amplifier

Power amp section: features high-voltage high-current output stage using 20-ampere 200-W output transistors; soft clipping<sup>TM</sup> circuit with LED indicator; dual power supplies; dual five-LED power output meters from 0.4-80 W at 8 ohms and 0.8-160 W at 4 ohms; low-frequency speaker equalization selector (compensates for rolloff of acoustic-suspension bookshelf systems); two-speaker switching; speaker lead compensator feedback circuit with LED; rear-panel mono bridging; 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD, IM, and TIM dist.; 100 W mono at 8 ohms; IHF dynamic headroom +3 dB at 8 ohms; damping factor 50 at 8 ohms; slew factor 50. Preamp section: features provision for high-output moving-coil phono cartridges; bass and treble controls; 12-dB/octave infrasonic and ultrasonic filters; three-position phono capacitance switch; rec out and input selectors; loudness switch; low-level switch; mono switch; input sensitivity/impedance 2.5 mV/47k ohms (phono 1), 0.8 mV (phono 2); phono 1 overload 270 mV at 1000 Hz; RIAA deviation  $\pm 0.3$  dB; 3.8" H  $\times$  16.5" W  $\times$  11.4" D ..... \$398

### 3020 Integrated Amplifier

Power amp: features five-LED peak-reading display; soft clipping<sup>TM</sup> circuit; 20 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; slew rate 15 V/ $\mu$ sec; damping factor 50 at 8 ohms. Preamp: features bass, treble, and balance controls; built-in 24-dB/octave infrasonic filter; audio muting and loudness switches; input selectors; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/20k ohms (high level); phono overload 270 mV at 1000 Hz; frequency response  $\pm 0.3$  dB (phono RIAA), 20-20,000 Hz  $\pm 0.5$  dB; S/N (A weighted) 81 dB at 10 mV (phono), 96 dB (high level). Power and preamp sections separable; 3.8" H  $\times$  16.5" W  $\times$  9.5" D ..... \$198

## NAIM by AUDIOPHILE SYSTEMS

### NAP 110 Power/NAC 42 Pre-Amplifiers

Separate units sold as pair. Power amp: 40 W continuous into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist; frequency response 5-40,000 Hz  $\pm 3$  dB; transient capability 150 VA; 5" H  $\times$  8" W  $\times$  11" D. Preamp: features phono, tape, and tuner inputs, normal/mute/monitor switch, and balance control; input sensitivity 2.0 mV (phono), 75 mV (high level); frequency response

20-20,000 Hz  $\pm 0.5$  dB; THD and IM dist. 0.02%; phono overload 200 mV; 3" H  $\times$  8" W  $\times$  11" D ..... \$1090

## NIKKO

### NA-890 Integrated Amplifier

Power amp: features fully complementary OCL circuitry; dual power meters with 5 W and 100 W meter range control; two-way speaker switching; 70 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist.; damping factor 60 at 8 ohms, 1000 Hz. Preamp: features discrete transistors in phono section; bass and treble controls with tone defeat; 20-dB audio muting and loudness switches; subsonic and high filter switches; two-way tape monitoring and dubbing; input selector; input sensitivity/impedance 2.3 mV/47k ohms (phono), 150 mV/50k ohms (aux., tuner, tape); frequency response  $\pm 0.2$  dB from 30-15,000 Hz (phono RIAA), 20-20,000 Hz  $\pm 0.2$  dB (aux. and tape); S/N (IHF A) 85 dB (phono), 100 dB (aux., tuner, tape); 5 1/2" H  $\times$  16 1/2" W  $\times$  13 1/4" D ..... \$350

**NA-690.** Similar to NA-890 without meter range selector, audio muting, and tone defeat switches; 45 W/ch under same conditions ..... \$250

**NA-590.** Similar to NA-690 without dual power meters, speaker switching, two-way tape dubbing, and high filter switch; 35 W/ch continuous with 0.05% THD and IM dist; frequency response  $\pm 1$  dB from 30-15,000 Hz (phono RIAA), 10-50,000 Hz  $\pm 0.5$  dB; S/N 80 dB (phono), 90 dB (aux., tuner, and tape); 3 3/4" H  $\times$  17 1/2" W  $\times$  14 1/2" D ..... \$210

### NA-790 Integrated Amplifier

Power amp: features low-distortion, low-noise circuitry; speaker protection system; 53 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist.; damping factor 60 into 8 ohms. Preamp: features built-in moving-coil head amp; subsonic filter; bass and treble controls; phono input sensitivity 2.3 mV/50k ohms; frequency response  $\pm 0.5$  dB from 30-15,000 Hz (phono RIAA), 10-50,000 Hz  $\pm 0.5$  dB (high level); phono S/N 82 dB; phono overload 200 mV at 1000 Hz; rack-mountable; 3 3/4" H  $\times$  16 1/2" W  $\times$  12 3/4" D ..... \$280

## ONKYO

### A-7090 Integrated Amplifier

Power amp: features servo-controlled circuitry (servo loop functions as phase inversion and bass amplification as well as negative feedback circuitry); all-stage direct-coupled OCL discrete circuitry; dual power supplies; electronic amp and speaker protection relays; dual eight-LED peak power bar display with center power LED and XO.01, XO.1, and X1 pushbutton range selector; 110 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.018% THD and IM dist.; frequency response 5-80,000 Hz  $\pm 1$  dB; S/N 110 dB (IHF A); damping factor 50 into 8 ohms. Preamp: features built-in moving-coil head amp; bass and treble controls with separate turnover frequency controls and tone defeat; loudness and -20-dB muting; two-way speaker switching with A, B, and C speaker terminals; two-way tape dubbing and monitoring; low and high filter switch; mode selector; input sensitivity/impedance 2.5 mV/50k ohms (phono 1 and 2), 250  $\mu$ V/40 ohms (phono MC), 150 mV/50k ohms (tuner, aux., tape); THD and IM dist. 0.01%; frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA), 10-50,000 Hz  $\pm 0/-1$  dB (aux.); S/N (IHF A) 78 dB (phono MM), 68 dB (phono MC), 90 dB (aux.); phono overload 250 mV rms at 1000 Hz. Power and preamp separable through EPS front-panel switch; 6 1/8" H  $\times$  16 1/2" W  $\times$  16 3/4" D ..... \$700

### A-7070 Integrated Amplifier

Power amp: features servo-controlled circuitry; all-stage direct-coupled OCL circuitry; dual power supplies; electronic amp and speaker protector relays; dual eight-LED peak power bar display with center

power LED and XO.1, X1 range selector; 70 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; frequency response 15-50,000 Hz  $\pm 1$  dB; damping factor 50 into 8 ohms. Preamp: features bass and treble controls with separate tone defeat switches; low and high filters; mode, loudness, and -20-dB muting; two-way speaker switching; two-way tape monitoring and dubbing; input selector; input sensitivity/impedance 2.5 mV/50k ohms (phono 1 and 2), 150 mV/50k ohms (tuner, aux., tape); frequency response 20-20,000 Hz  $\pm 0.3$  dB (RIAA phono); S/N (IHF A) 80 dB (phono), 90 dB (aux.); phono overload 200 mV rms at 1000 Hz. 4 1/8" H  $\times$  16 1/2" W  $\times$  15 3/4" D ..... \$430

### A-7040 Integrated Amplifier

Power amp: features servo-controlled circuitry; all-stage direct-coupled OCL circuitry; dual power supplies; speaker protection; dual five-LED peak power bar display with center power LED and XO.1, X1 range selector; 50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.026% THD and IM dist.; frequency response 15-50,000 Hz  $\pm 1$  dB; damping factor 45 into 8 ohms. Preamp: features bass and treble controls; balance control; high cut filter; mode and loudness switches; two-way speaker switching; two tape monitor switches with one-way dubbing; input selector; input sensitivity/impedance 2.5 mV/50k ohms (phono 1 and 2), 150 mV/50k ohms (tuner and tape); phono frequency response  $\pm 0.5$  dB from 20-20,000 Hz (RIAA); S/N (IHF A) 80 dB (phono), 90 dB (tuner); phono overload 170 mV rms at 1000 Hz; 4 1/8" H  $\times$  16 1/2" W  $\times$  15 3/4" D ..... \$300

## OPTONICA

### SM-7305 Integrated Amplifier

Power amp: features dual-LED power output bar graph display; two-speaker switching; two-color LED protection indicator; 70 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.01% THD. Preamp: features bass and treble controls with variable tone defeat; balance control; 15 and 30 Hz subsonic and 8000 and 15,000 Hz high filter buttons; mono mode; two-way tape dubbing and monitoring; loudness and 20-dB muting; input selector with LEDs. S/N 80 dB (phono, low), 90 dB (phono, high), 100 dB (aux.); RIAA deviation  $\pm 0.3$  dB from 20-20,000 Hz; phono overload 300 mV; ebony faceplate; 2.9" H  $\times$  16.9" W  $\times$  15" D ..... \$440

### SM-4305 Integrated Amplifier

Power amp: has two-way speaker switching; 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD. Preamp: features bass and treble controls; subsonic and high filter buttons; two-way tape dubbing and monitoring; mono mode switch; loudness and 20-dB muting; balance control; input selector with LEDs; S/N 75 dB (phono, low), 85 dB (phono, high), 90 dB (aux.); phono RIAA deviation  $\pm 0.4$  dB from 20-20,000 Hz; phono overload 250 mV; ebony faceplate; 2.9" H  $\times$  16.9" W  $\times$  15" D ..... \$270

## JC PENNEY

### MCS 3865 Integrated Amplifier

Features separate left/right power meters; two-deck provisions for tape dubbing; tape monitor switch, mode selector with speaker reverse; volume, balance, tone defeat, and loudness controls, switchable speaker selector; headphone jack, dual power supplies, 65 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD; IM dist. 0.02%; RIAA phono deviation  $\pm 0.5$  dB from 20-20,000 Hz; S/N 86 dB; phono overload 360 mV; bass and treble control range  $\pm 9$  dB ..... \$400

### MCS 3850 Integrated Amplifier

Power amp section: features dual 12-LED power output bar graph indicators; two-speaker switching; dual power protection system; 45 W/ch continuous



into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; frequency response 20-40,000 Hz  $\pm$  1 dB; IM dist. 0.03%. Preamp section: features  $\pm$  9-dB bass and treble tone controls; high and subsonic filters; loudness switch; audio muting; recording source selector with two-way tape dubbing; five-position input selector with LED indicators; phono S/N 75 dB and overload 200 mV; 4" H  $\times$  18" W  $\times$  13.6" D ..... \$240

## PIONEER

### SA-9800 Integrated Amplifier

Power amp section: features dual-LED peak power bar graph display with dim/bright meter switch; two-



speaker switching; 100 W/ch continuous, both channels driven into 8 ohms from 10-20,000 Hz with 0.005% THD. Preamp: features built-in moving-coil head amp; bass and treble controls with turnover frequencies and tone defeat; subsonic and high filters; balance control; loudness and audio muting switches; mode selector; two-way tape dubbing and monitoring; input selector with two cartridge capacitance load selectors. 6 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{16}$ " W  $\times$  16 $\frac{3}{4}$ " D ..... \$750

### SA-8800 Integrated Amplifier

Power amp: features dc circuitry in hybrid Class A/B configuration; non-switching output; dual power supplies; four ring emitter transistors/ch; dual-LED peak power bar graph display; two-speaker switching; 80 W/ch continuous, both channels driven into 8 ohms from 10-20,000 Hz with 0.005% THD and 0.002% IM dist.; frequency response 5-200,000 Hz  $\pm$  0/-2 dB; damping factor 55 from 20-20,000 Hz, 8 ohms; hum and noise -118 dB (short-circuited A); input sensitivity/impedance 1 V/50k ohms. Preamp: features dc flat amp and low-noise phono equalizer; bass and treble controls with tone defeat, subsonic and high filters; balance and mode switches; loudness and -20-dB muting; two-way tape dubbing and monitoring; input selector with two cartridge load capacitance selectors; input sensitivity/impedance 2.5 mV/50k ohms (phono 1 and 2), 150 mV/50k ohms (tuner, aux., tape); phono overload 250 mV; THD 0.006% from 10-50,000 Hz; frequency response  $\pm$  0.2 dB from 20-20,000 Hz (phono RIAA), 5-100,000 Hz  $\pm$  0/-1 dB (tuner, aux., tape); S/N (A, short-circuited) 90 dB (phono), 110 dB (tuner, aux., tape). Walnut-grain vinyl cabinet; 6 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{16}$ " W  $\times$  16 $\frac{3}{4}$ " D ..... \$550

**SA-7800.** Similar to SA-8800 minus high filter and phono 2 input with cartridge capacitance selectors; 65 W/ch continuous with 0.009% THD and 0.003% IM dist.; phono overload 200 mV; phono S/N 87 dB (short-circuited, A); 6 $\frac{1}{2}$ " H  $\times$  11 $\frac{1}{16}$ " W  $\times$  14 $\frac{13}{16}$ " D ..... \$450

**SA-6800.** Similar to SA-7800 minus non-switching output, muting, and mode switches; one-way tape dubbing; 45 W/ch continuous with 0.03% THD and IM dist.; damping factor 30 from 20-20,000 Hz; phono overload 180 mV; frequency response  $\pm$  0.3 dB from 30-15,000 Hz (phono RIAA), 10-50,000 Hz  $\pm$  0/-1.5 dB (tuner, aux., tape); S/N 78 dB (phono), 100 dB (tuner, aux., tape); 5 $\frac{1}{8}$ " H  $\times$  17 $\frac{3}{16}$ " W  $\times$  10 $\frac{11}{16}$ " D ..... \$300

**SA-5800.** Similar to SA-6800 minus dc power circuitry and tone defeat; 25 W/ch under same conditions; phono input sensitivity/impedance 2.5 mV/47k ohms; phono overload 140 mV; frequency response  $\pm$  0.5 dB from 30-15,000 Hz (phono RIAA), 20-40,000 Hz  $\pm$  2 dB (tuner, aux., tape); S/N 76 dB (phono), 98 dB (tuner, aux., tape). \$200

## ROGERS/REFERENCE MONITOR

### A75 Series 3 Integrated Amplifier

Power amp: features dc coupled circuitry; 50 W/ch continuous sine wave into 8 ohms from 20-30,000 Hz; THD 0.08% at 1000 Hz up to 40 W, 8-ohm load; damping factor 60 at 20 Hz. Preamp: features bass and treble controls; high- and low-pass filters; two-way tape dubbing and monitoring; input sensitivity/impedance 1.8 mV/47k ohms (phono), 180 mV/100k ohms (tuner, tape, aux.); frequency response  $\pm$  1 dB (phono RIAA), 25-20,000 Hz  $\pm$  1 dB (tuner, tape, aux.); S/N 70 dB (phono), 80 dB (high level). 4 $\frac{1}{2}$ " H  $\times$  14 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{4}$ " D ..... \$750

## ROTEL

### RA-2040 Integrated Amplifier

Power amplifier: dc OTL complementary push-pull power circuitry; 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.01% THD and IM dist., 140 W/ch continuous into 4 ohms at 1000 Hz; frequency response 0-200,000 Hz  $\pm$  3 dB. Preamplifier: dc FET phono equalizer and RIAA equalization; S/N (IHF "A") 80 dB (phono), 100 dB (tuner and tape); input sensitivity/impedance 2 mV/50,000 ohms (phono 1 and 2), 0.1 mV/33 ohms (moving-coil phono), 150 mV/50,000 ohms (tuner, aux., tape), 980 mV/33,000 ohms (main in); 12 dB/octave subsonic filter at 15 Hz, 12 dB/octave supersonic filter at 24,000 Hz; phono overload 450 mV. Features stepped bass and treble controls with turnover switches; full tape dubbing; loudness switch; audio muting switch; peak LED bar-chart power indicators; additional capacitance and load impedance controls; 5 $\frac{3}{8}$ " H  $\times$  19" W  $\times$  16 $\frac{1}{16}$ " D ..... \$880

**RA-2030.** Similar to RA-2040 except 80 W/ch continuous into 8 ohms, 110 W/ch continuous into 4 ohms; frequency response 0-125,000 Hz; phono overload 300 mV. Features similar except includes moving-coil head amplifier ..... \$680

**RA-2020.** Similar to RA-2030 except 60 W/ch continuous, both channels driven into 8 ohms, 85 W/ch into 4 ohms; THD and IM dist. 0.02%; frequency response 0-100,000 Hz  $\pm$  3 dB; S/N 75 dB (phono), 95 dB (tuner and tape); phono overload 200 mV. Features similar to RA-2030 less recording selector and capacitance and load impedance switches; 12 $\frac{1}{16}$ " D ..... \$485

### RA-1000 Integrated Amplifier

Power amp: features dc circuitry; two-speaker switching; 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD; frequency response 5-70,000 Hz  $\pm$  0/-1 dB. Preamp: features two-way tape dubbing and monitoring; phono selector for MM cartridges; subsonic filter; mode and loudness controls; -15-dB audio muting; input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/50k ohms (tuner and aux.); S/N 75 dB (phono), 85 dB (aux. and tuner). Equalizer: eight bands using OP amplifier; center frequencies set at 40, 100, 200, 400, 1000, 2500, 5000, and 10,000 Hz,  $\pm$  12 dB boost or cut; 3 $\frac{7}{16}$ " H  $\times$  16 $\frac{3}{16}$ " W  $\times$  11 $\frac{1}{16}$ " D ..... \$360

## SAE

### A14 Integrated Amplifier

Features LED power and tape output bar graph display; parametric equalization with tape EQ; moving-coil phono input; subsonic filter. 140 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD ..... \$750

### A7 Integrated Amplifier

Features LED power output bar graph display; bass, midrange, and treble controls; external processor input; two-way tape dubbing and monitoring; subsonic filter. 70 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD ..... \$450

### C3A Integrated Amplifier

50 W/ch continuous, both channels driven into 8

ohms from 20-20,000 Hz at 0.05% THD; features full complementary circuitry, full tape copy capabilities, stepped volume, bass, and treble controls, dual power level indicators, subsonic filter, and muting switch ..... \$325

## SANSUI

### AU-X1 DD/DC Integrated Amplifier

Features "Diamond Differential dc circuitry" in phono equalizer and driver stage in power amp section; separate left/right power amp level controls; power amp operation control with ac/dc 1/dc 2/integrated settings; jump switch (bypasses 14-dB gain of preamp output section); switchable (-3 dB at 16 Hz) subsonic filter; input selector for phono 1 and 2 with moving magnet and moving-coil provision, tuner, and aux./tuner; two-way tape dubbing and monitoring; A and B speaker switching. Power amp: output 160 W/ch continuous, both channels driven into 8 ohms from 5-20,000 Hz with 0.008% THD; frequency response 0-500,000 Hz; slew rate 260 V/ $\mu$ sec; rise time 0.5  $\mu$ sec. Phono preamp: frequency response  $\pm$  0.2 dB from 20-20,000 Hz (RIAA); S/N 91 dB (moving-magnet), 76 dB (moving-coil), 100 dB (aux.); phono overload 330 mV; matte black finish with rack-mounting ..... \$1450

### AU-D11 Integrated Amplifier

Power amp section: features DD/dc circuitry plus super feedforward error correction amp circuitry;



loop heat sinking; two-speaker switching; 120 W/ch continuous, both channels driven into 8 ohms from 10-20,000 Hz with 0.005% THD; frequency response 0-300,000 Hz  $\pm$  3 dB; slew rate 400 V/ $\mu$ sec. Preamp section: features built-in moving-coil head amp and DD/dc circuitry; bass and treble controls with 150/300-Hz bass and 3000/6000-Hz treble turnover frequency selectors and tone defeat; 16- and 20,000-Hz filter switches; -20-dB muting; two-way tape dubbing; rec selector; input selector with separate phono MM/MC selector and high/low MC gain switch; S/N 80 dB (phono MM), 110 dB (aux., tuner, tape); black-finish cabinet ..... \$1000

**AU-D9.** Similar to AU-D11 except 95 W/ch under same conditions; slew rate 350 V/ $\mu$ sec; gray finish. .... \$650

### AU-D7S Integrated Amplifier

Power amp section: features linear-A class output with DD/dc circuitry; dual vertical LED peak power level display with range and display switches; two-speaker switching; 80 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.015% THD; frequency response 0-100,000 Hz  $\pm$  0.5 dB; slew rate 220 V/ $\mu$ sec. Preamp section: features built-in moving-coil head amp; super bass, bass, treble, and presence tone controls with tone defeat; rec selector; two-deck source/tape monitoring and dubbing; mode switch; loudness switch; input selector buttons with LEDs; S/N 86 dB (phono), 110 dB (aux., tuner, tape); silver finish ..... \$480

**AU-07B.** Same as AU-D7S except with black finish. .... \$480

**AU-D5S.** Similar to AU-D7 except 65 W/ch under same conditions; silver finish ..... \$390

**AU-05B.** Same as AU-D5S except with black finish. .... \$390

### AU-417 Integrated Amplifier

Power amp section: features dc circuitry and two-speaker switching; 65 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.02% THD; frequency response 0-200,000 Hz  $\pm$  3 dB; slew rate 50 V/ $\mu$ sec. Preamp section: features bass and treble con-

trols with tone defeat; subsonic filter switch; loudness switch; two-deck tape/source monitoring with two-way tape dubbing; input selector; RIAA phono deviation  $\pm 0.2$  dB from 20-20,000 Hz; phono overload 300 mV; S/N 80 dB (phono), 100 dB (aux., tuner, tape); rack-mountable ..... \$395

#### A-80 Integrated Amplifier

Power amp: features dc servo circuitry, two power output meters with five-LED peak reading indicators, and two-speaker switching; 65 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD. Preamp section: features built-in moving-coil head amp; bass and treble tone controls with center defeat; subsonic and high filter switches; variable loudness control; -20-dB muting; rec out selector with two-way tape dubbing; input selector with LEDs; S/N 80 dB (phono MM), 95 dB (aux. and tape) ..... \$320

**A-60.** Similar to A-80 minus power output meters; has LED peak level indicators; 45 W/ch under same conditions; phono S/N 75 dB ..... \$230

**A-40.** Similar to A-60 minus dc servo circuitry, LED peak level indicators, built-in moving coil head amp, subsonic and high filter switches, variable loudness control, muting, and rec out selector with two-way tape dubbing; has loudness switch; power amp has OCL circuitry and power output meters; 25 W/ch continuous into 8 ohms from 35-20,000 Hz with 0.09% THD; S/N 73 dB (phono), 90 dB (aux.) ..... \$180

#### AU-217II Integrated Amplifier

Features bass, treble, and balance controls; high filter, loudness, and source/tape monitor switches; input selector for switchable subsonic filter, phono, tuner, and tape/aux. Power output: 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.06% THD. Preamp: frequency response  $\pm 0.5$  dB from 30-15,000 Hz (RIAA); phono sensitivity 2.5 mV; S/N 76 dB (phono), 94 dB (aux.); phono overload 180 mV; matte black finish; rack mountable ..... \$230

**AU-117II.** Similar to AU-217II without phono subsonic filter; power output 25 W/ch continuous; both channels driven into 8 ohms from 20-20,000 Hz with 0.17% THD; phono overload 150 mV ..... \$190

## SANYO

#### PLUS A75 Integrated Amplifier

Power amp section: features fully complementary dc circuitry; dual 12-LED input/output peak level indicators with  $\times 1/0.1$  display range and output/input mode selectors; two-speaker switching; 75 W/ch continuous, both channels driven into 4 or 8 ohms from 20-20,000 Hz with 0.009% THD and IM dist.; damping factor 50 at 1000 Hz, 8 ohms; residual hum and noise 0.2 mV; slew rate 120 V/ $\mu$ sec. Preamp section: features combination wide-band dc-coupled Class A gain blocks; built-in moving-coil head amp; bass and treble tone controls with 100, 200, and 400-Hz bass and 2500, 5000, and 10,000-Hz treble turnover frequency selector buttons and tone defeat; 12 dB/octave subsonic filter; loudness control; mode switch; two-deck tape/source monitoring with LEDs and two-way tape dubbing; -20-dB audio muting; input selectors with LEDs; input sensitivity/impedance 2.5 mV/47k ohms (phono MM), 250  $\mu$ V/100 ohms (phono MC), 150 mV/47k ohms (aux. and tape); phono overload at 1000 Hz 250 mV rms (MM), 25 mV rms (MC); frequency response  $\pm 0.2$  dB (phono RIAA), 10-40,000 Hz  $\pm 0.5$  dB (aux. and tape); S/N (IHF A) 85 dB (phono MM), 70 dB (MC), 95 dB (aux. and tape);  $5\frac{1}{4}$ " H  $\times$   $17\frac{3}{4}$ " W  $\times$   $10\frac{1}{4}$ " D ..... \$450

#### PLUS A35 Integrated Amplifier

Power amp: features dc-coupled and two cascaded differential amplifier circuitry; dual 12-LED peak

power bar graph display with X0.1 and X1 display range selector; four-way output protection; two-way speaker switching; 50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; frequency response 7-100,000 Hz  $+0/-1$  dB; S/N 110 dB (IHF A); damping factor 50; slew rate 90 V/ $\mu$ sec. Preamp: features Class A phono preamp circuitry with moving-coil cartridge capability; subsonic and high filters; bass and treble controls; loudness switch; two-way tape dubbing and monitoring; input selector buttons with LEDs; input sensitivity/impedance 2.5 mV/47k ohms (phono MM), 250  $\mu$ V/100 ohms (phono MC), 150 mV/47k ohms (aux. and tape); frequency response  $\pm 0.2$  dB from 20-20,000 Hz (phono RIAA), 20-20,000 Hz  $\pm 0.5$  dB (aux. and tape); S/N (IHF A) 85 dB (phono MM), 70 dB (aux., tape, phono MC); max. phono input 250 mV rms (MM), 25 mV rms (MC); includes rack-mount handles;  $3\frac{1}{2}$ " H  $\times$   $19$ " W  $\times$   $10\frac{1}{4}$ " D ..... \$300

#### DCA611 Integrated Amplifier

60 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.08% THD; IM dist. 0.05%; frequency response 20-20,000 Hz  $+0/-1$  dB (aux. and tape), RIAA phono deviation  $\pm 0.5$  dB from 30-15,000 Hz; phono sensitivity/overload 2.5/150 mV; aux. and tape sensitivity/impedance 150 mV/50,000 ohms; low (12 dB/octave at 30 Hz) and high (6 dB/octave at 7000 Hz) filters; tone control  $\pm 10$  dB at 100 and 10,000 Hz. Features separate midrange control  $\pm 10$  dB at 1000 Hz; two-deck tape monitoring and dubbing; front-panel record jack; two peak power meters; 41-step attenuator volume control; switchable (A, B or A+B) speaker selector switch.  $5\frac{1}{4}$ " H  $\times$   $16\frac{1}{2}$ " W  $\times$   $13\frac{1}{4}$ " D ..... \$270

**DCA411.** Similar to DCA611 except 45 W/ch; no midrange and low filter controls ..... \$200

**DCA311.** Similar to DCA411 except 30 W/ch and less tape monitoring/dubbing facilities ..... \$180

## H. H. SCOTT

#### 480A Integrated Amplifier

85 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; input sensitivity 2.5 mV (phono), switchable 2.5/5.0 mV (phono 2), 150 mV (high level); S/N (weighted, input shorted) 90 dB (phono), 95 dB (high level); RIAA equalization  $\pm 0.5$  dB from 20-20,000 Hz, high level at 1 W; phono overload switchable 180 and 360 mV; separate bass ( $\pm 10$  dB at 100 Hz), midrange ( $\pm 6$  dB at 1000 Hz), and treble ( $\pm 10$  dB at 10,000 Hz) tone controls; high (12 dB/octave at 8000 Hz) and subsonic (12 dB/octave at 18 Hz) filters; channel separation 65 dB at 1000 Hz (phono), 75 dB at 1000 Hz (high level); crosstalk 80 dB at 1000 Hz; damping factor 100 at 1000 Hz into 8 ohms. Features two independent phono preamps; bimodal electro-sensor relay protection and delay circuit; linear to logarithmic op amp meter drive converters; 32-detent logarithmic dB-calibrated volume attenuator; variable impedance and capacitance selection; five-position mode switch; separate record and input selectors; accessory input switch; phono sensitivity switch; center detent balance control; dual range output power level meters calibrated in watts and dBW; two tape monitors with full tape copy; switchable speaker selector;  $5\frac{1}{4}$ " H  $\times$   $17$ " W  $\times$   $14\frac{1}{4}$ " D ..... \$500

**460A.** Similar to 480A except 70 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist. Features similar but no variable impedance/capacitance selection and no accessory input switch ..... \$430

**440A.** Similar to 460A except 55 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD and IM dist.; S/N (weighted, input shorted) 85 dB (phono), 90 dB (high level); phono overload 180 mV; channel separation 60 dB (phono), 70 dB (high level); no subsonic filter. Features similar except two-position mode selector and no record and input selectors;  $5\frac{1}{4}$ " H  $\times$   $17$ " W  $\times$   $11\frac{1}{4}$ " D ..... \$350

#### 430A Integrated Amplifier

Power amp section: features dual power output level

meters calibrated in watts and dBW and two-speaker switching; 45 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.08% THD. Preamp section: features bass and treble tone controls with tone defeat, two-deck tape/source monitoring with two-way tape dubbing, loudness contour switch, and input selectors with LEDs; optional 19-in rack mounting ..... \$225

**410A.** Similar to 430A minus LED input indicators; 30 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.1% THD ..... \$200

## SHARP

#### SM-30 Integrated Amplifier

See Section 1, Receivers, under Sharp's System 30 Pro Series.

## SHERWOOD

#### S-702 CP Integrated Amplifier

Power amp: features three separate circuits for protection of speakers and amplifier; two-speaker switching; 65 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.2% THD and IM dist.; frequency response 5-110,000 Hz  $\pm 1$  dB; S/N 105 dB (IHF A weighted); damping factor 30:1 at 8 ohms; input sensitivity/impedance 1.0 V/50k ohms. Preamp: features bass and treble controls with tone defeat; subsonic and high filters; loudness and mode switches; two-way tape dubbing and monitoring; mic mixing; input selector; input sensitivity/impedance 2.5 mV/47k ohms (phono), 160 mV/50k ohms (aux. and tape); phono overload 200 mV at 1000 Hz; S/N (IHF A) 80 dB (phono), 95 dB (aux.), 80 dB (mic); frequency response  $\pm 0.5$  dB (phono RIAA), 20-20,000 Hz  $\pm 0.5$  dB.  $5\frac{1}{2}$ " H  $\times$   $17\frac{1}{4}$ " W  $\times$   $12\frac{1}{4}$ " D ..... \$350

**S-402 CP.** Similar to S-702 CP minus subsonic filter and tone defeat; 40 W/ch continuous under same conditions; S/N (IHF A) 100 dB (main amp), 90 dB (aux.) ..... \$250

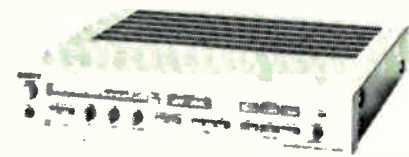
## SONY

#### TA-F70 Integrated Amplifier

Power amp section: features direct-coupled dc circuitry; pulse power supply; Thermo-Dynamic cooling system; 20-LED peak power bar display (from 0.01-130 W); connections for two pairs of speaker systems; 90 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.007% THD and IM dist.; frequency response 0-100,000 Hz  $+0/-1$  dB; damping factor 100 at 8 ohms, 1000 Hz. Preamp: features low-noise transistor that provides for phono moving-coil cartridge; bass and treble controls with electronic tone defeat; switchable subsonic filter; two tape monitors with two-way tape dubbing; signal processing bypass selector; LED input and tape monitor selectors; input sensitivity/impedance 2.5 mV/50k ohms (phono MM), 0.125 mV/33 or 100 ohms (phono MC), 150 mV/50k ohms (tuner, aux., tape); max. phono input 300 mV (MM), 15 mV (MC); phono RIAA  $\pm 0.2$  dB; S/N (IHF A) 88 dB (MM), 78 dB (MC), 105 dB (tuner, aux., tape);  $6\frac{3}{16}$ " H  $\times$   $17$ " W  $\times$   $16\frac{1}{16}$ " D ..... \$725

#### TA-F55 Integrated Amplifier

Features dc circuitry; multiplicity of mini transistors in output transistor; pulse power supply; thermo-



dynamic cooling utilizing heat pipe; two speaker switching; built-in moving-coil head amp and discrete phono amp stage; 3/40-ohm and 180/330-pF cartridge loading selector; bass and treble controls with center defeat; low filter and loudness pushbutton switches; two-pushbutton volume controls with



volume range scale and LED bar level indicators; -20 dB audio muting; two-deck tape monitoring and two-way dubbing; input selector buttons with LEDs; 65 W/ch continuous, both channels driven into 8 ohms with 0.008% THD; 3 1/4" H x 17" W x 12 1/2" D ..... \$400

**TA-F45.** Similar to TA-F55 minus volume pushbutton controls with meter range and -20 dB audio muting; has rotary volume/balance control; 50 W/ch continuous under same conditions; 13 1/4" D... \$300

**TA-F35 Integrated Amplifier**

Features pure complementary symmetrical dc output circuitry; overload protection, built-in moving coil head amp; dual six-LED peak power level indicators; two-speaker switching; bass and treble controls with center defeat; low filter and loudness pushbutton switches; tape monitoring; input selectors with separate phono MM/MC selector; 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.015% THD; 3 1/4" H x 17" W x 13 1/4" D ..... \$220

**TA-242 Integrated Amplifier**

Features dual ten-LED power level indicators; two-speaker switching; bass and treble tone controls; loudness switch; tuner, phono, and tape input selectors with LEDs; 22 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.08% THD; 4 1/4" H x 17" W x 13 1/4" D ..... \$165

**Precise Series**

**TA-P7F Mini Integrated Amplifier**

Power amp: features pulse power supply; Thermo-Dynamic cooling system; LED peak power indicators; 50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.01% THD and IM dist.; frequency response 5-60,000 Hz +0/-1 dB; damping factor 35 at 8 ohms, 1000 Hz. Preamp: features built-in moving coil capability through low-noise transistor; bass and treble controls with electronic tone defeat, acoustic compensator with two-position bass boost and loudness, balance, switchable subsonic filter, and MM/MC cartridge selector located behind removable front panel; input selectors with LEDs; input sensitivity/impedance 2.5 mV/50k ohms (phono MM), 0.25 mV/100 ohms (phono MC), 150 mV/50k ohms (tuner, aux., tape); max. input 120 mV (MM), 12 mV (MC); phono RIAA ±0.2 dB; S/N (IHF A) 88 dB (MM), 75 dB (MC), 100 dB (tuner, aux., tape); complements miniature Precise Series ST-P7J tuner and PS-P7X turntable; 3 1/4" H x 8 1/2" W x 13" D ..... \$500

**STUDER/REVOX**

**Revox B750 Integrated Amplifier**

Fully complementary integrated stereo amplifier with equalizer connections and tape copy circuitry. Power amplifier: 75 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz ±0.5 dB with 0.05% THD; damping factor better than 80 dB at 8 ohms; input sensitivity/impedance 1 V/20,000 ohms (power amp in). Preamplifier: input sensitivity/impedance 200 mV/100,000 ohms (tuner, aux., tape 1 and 2), 1.5-7 mV/25,000, 50,000, 100,000 ohms (phono 1), 5 mV/50,000 ohms (phono 2); output/load impedance 6.5 mV/10,000 ohms (tape 2 out), 24.5 V/8 ohms (speaker A and B), 200 mV/50,000 ohms (tape 1 and 2), 1 V/10,000 ohms (pre out), 24.5 V/100 ohms (phone 1 and 2); S/N 90 dB unweighted (tuner, aux., tape 1 and 2), 82 dB weighted (phono 1 and 2); channel separation at 1000 Hz better than 66 dB; RIAA phono equalization ±0.5 dB from 20-20,000 Hz. Features separate bass, treble, and presence controls (±8 dB in 2-dB steps) with tone defeat switch; 20-dB front-panel level pad; high (12 dB/octave at 8000 Hz) and low (12 dB/octave at 50 Hz) filters; calibrated balance control; two-deck capability with tape copy function; switchable A/B and A+B speaker selector; preamp out and power amp in accessible for outboard equalizer or other accessory; two headphone jacks. 6" H x 17 1/2" W x 13 1/4" D... \$999

**TECHNICS**

**SU-V8 Integrated Amplifier**

Power amp section: features Class A design and dc circuitry with linear cascode three-stage Darlington configuration and one-chip dual FETs; integral power supply/output stage block; independent right/left power supplies with transformers, rectifier, and ripple circuits; protection relay circuit with auto reset; front-panel A or B or A+B speaker selector; 110 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.005% THD and 0.007% IM dist.; dynamic headroom 1.2 dB into 8 ohms; damping factor 60 into 8 ohms; load impedance 4-16 ohms (main or remote), 8-16 ohms (main + remote). Preamp section: features 30-Hz +10/0-dB super bass tone control with 75/150 Hz (12 dB/octave) turnover frequency selectors, 100-Hz ±7-dB bass, and 20,000-Hz ±10-dB treble controls with defeat; subsonic (-12 dB/octave at 20 Hz) and high (-6 dB/octave at 7000 Hz) filter switches; balance control; rec selector with two-way tape dubbing; input selector with separate phono MM 1 and 2 and phono MC selector; mode, -20-dB muting, and loudness switches; frequency response ±0.3 dB (RIAA phono), 20-20,000 Hz +0/-0.2 dB (tuner, aux.); input sensitivity/impedance 0.25 mV/47k ohms (phono MM), 17 μV/47 ohms (phono MC), 15 mV/47k ohms (aux., tuner, tape); max. input 145 mV (phono MM), 10 mV (MC); S/N 76 dB (MM), 75 dB (MC), 80 dB (aux., tuner, dc); 6 1/2" H x 16 1/2" W x 15 1/2" D ..... \$550

**SU-V6 Integrated Amplifier**

Power amp: features Class A design and dc circuitry with linear cascode three-stage Darlington configuration and one-chip dual FETs; integral power supply/output stage block; heavy-duty power supplies with rectifier and ripple filter circuits; A or B and A+B speaker selector; 70 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.007% THD and IM dist.; dynamic headroom 1.6 dB into 8 ohms; damping factor 60 into 8 ohms; load impedance 4-16 ohms (main or remote), 8-16 ohms (main and remote). Preamp: features 50-Hz ±10-dB bass and 20,000-Hz ±10 dB treble controls with defeat; subsonic (-12 dB/octave at 20 Hz) and high (-6 dB/octave at 7000 Hz) filter switches; balance, mode and loudness; rec selector with two-way tape dubbing; input selector with separate MM and MC phono selector; frequency response ±0.5 dB (RIAA phono), 20-20,000 Hz +0/-0.3 dB (tuner, aux.); input sensitivity/impedance 0.3 mV/47k ohms (MM), 23 μV/47 ohms (MC) 18 mV/47k ohms (aux., tuner, tape); S/N 77 dB (MM), 74 dB (MC), 81 dB (aux. and tuner); max. input 130 mV (MM), 9 mV (MC); 6 1/2" H x 16 1/2" W x 13 1/2" D ..... \$400

**SU-V4.** Similar to SU-V6 minus stereo/mono mode selector; subsonic filter -6 dB/octave at 30 Hz; 55 W/ch continuous into 8 ohms with 0.02% THD and IM dist.; dynamic headroom 1.5 dB into 8 ohms; damping factor 50 into 8 ohms; RIAA frequency response ±0.8 dB; aux., tuner, tape input sensitivity/impedance 19 mV/27k ohms; S/N 75 dB (MM), 70 dB (MC), 79 dB (aux. and tuner); max. phono MM input 140 mV; 5 1/2" H x 16 1/2" W x 11 1/2" D ..... \$300

**SU-V2.** Similar to SU-V4 minus MC input selection and straight dc/via tone selector; 40 W/ch under same conditions; dynamic headroom 1.1 dB into 8 ohms; input sensitivity 0.4 mV (phono), 24 mV (aux., tuner, tape); S/N 73 dB (phono), 78 dB (aux., tuner); 10 1/2" D ..... \$200

**SU-Z1 Integrated Amplifier**

Power amp: features Class A output stage and two-stage Darlington IC; bridged full-wave rectifier circuitry with two large capacitors; dual power level meters; main and remote speaker switching; 25 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.08% THD. Preamp: features ±10 dB bass and treble tone controls with defeat; loudness switch; rec mode with two-way tape dubbing; tape/source monitor switch; balance control; phono, tuner, and aux. input selectors; S/N 73 dB (phono) ..... \$160

**TOSHIBA**

**SB-445 Integrated Amplifier**

Features 30-segment LED peak power meters, separate bass (±7 dB at 100 Hz) and treble (±9 dB at 10,000 Hz) tone controls, mic mixing, and audio fade circuit. 45 W/ch, both channels driven into 8 ohms from 20-20,000 Hz with 0.06% THD and IM dist.; frequency response 5-100,000 Hz -3 dB; RIAA phono deviation ±0.5 dB; phono overload 150 mV; 5.8" H x 16.6" W x 10.1" D ..... \$260

**YAMAHA**

**A-1 Integrated Amplifier**

DC integrated amplifier with built-in head amplifier for moving coil cartridges. Power amplifier: 70 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.02% THD; THD 0.005% max.; IM dist. 0.003% max.; power bandwidth 10-50,000 Hz; frequency response 20-20,000 Hz +0/-0.2 dB; damping factor over 100 at 8 ohms, 1000 Hz. Preamplifier: input sensitivity/impedance 2.5 mV/47k ohms/200 pF (phono moving magnet), 60 μV/10 ohms (phono moving coil), 200 mV/47k ohms (tuner, aux., tape); max. input level 230 mV rms (moving magnet), 6 mV rms (moving coil); S/N at 10 mV ref. level better than 97 dB (phono moving magnet), better than 82 dB (phono moving coil), 112 dB min. (tuner, aux., tape); output sensitivity/impedance 200 mV/600 ohms (record playback), 2 V/600 ohms (preamp out); RIAA deviation 0 ±0.2 dB, 20-20,000 Hz +0/-0.2 dB (tuner, aux.); channel separation at 1000 Hz 70 dB min. at 5.1-ohm input (tuner), 75 dB min. at 5100-ohm input (phono moving magnet), 75 dB min. (phono moving coil, input shorted); headphone output 39 mV (8 ohms, rated output). Features FET input circuitry employed in power amplifier, tone control and equalizer; dual power meters; separate rec. out and input selectors; variable loudness controls; and high filter and power amp direct switches. 4 1/2" H x 17 1/2" W x 15" D ..... \$630

**A-550 Integrated Amplifier**

Power amp section: features dc OCL design with pure complementary SEPP, current mirror, and bi-



polar power supply circuitry; two-way speaker switching; 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz; THD 0.005% at 3 V (phono to rec out), 0.01% at 20 W (tuner to speakers out); IM dist. 0.005% at 8 ohms, 20 W, 60:7000 Hz (tuner to speaker out); power bandwidth 10-70,000 Hz; damping factor 50 at 8 ohms, 1000 Hz. Preamp: features low-noise phono equalizer circuitry; bass and treble controls with center-defeat; high filter switch; built-in subsonic filter; continuously variable loudness control; rec out selector with two-way tape copying; input selectors; input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/47k ohms (tuner, aux., tape 1 and 2); phono overload 200 mV at 1000 Hz, 0.005% THD; frequency response ±0.2 dB from 40-20,000 Hz (phono RIAA), 4-70,000 Hz +0/-2.0 dB (tuner, aux., tape); S/N (IHF A) 98 dB (phono), 104 dB (tuner, aux., tape); output sensitivity/impedance 150 mV/600 ohms (rec out); 4 1/2" H x 17 1/2" W x 13 1/4" D ..... \$250

**A-450.** Similar to A-550 minus two-way speaker switching and rec out selector; has two-way tape copying; 30 W/ch continuous with 0.02% THD; THD 0.007% at 3 V out (phono to rec out); IM dist. 0.01% (tuner, tape 1, 2 to speaker out); power bandwidth 10-60,000 Hz at 0.05% THD; phono overload 185 mV; phono RIAA -0.3 dB from 40-20,000 Hz; S/N (IHF A) 92 dB (phono), 100 dB (tuner, tape); 4 1/2" H ..... \$195

# 3

# TUNERS

## AIKO by TZL INTERNATIONAL

### TU-81 AM-FM Stereo Tuner

Features signal-strength and tuning meters; high blend and muting switches. FM usable sensitivity 1.9  $\mu$ V (mono); S/N 60 dB; HD 0.2%; AM S/N 45 dB; 5 1/2" H x 17" W x 8 1/4" D..... \$220

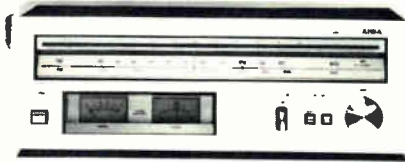
## AIWA

### AT-9700 FM Stereo Tuner

Features MOS FET front end; quartz PLL multiplex circuitry; quartz-controlled servo-lock tuning with LED digital frequency readout display; ten-LED signal-strength and three-LED tuning indicator displays; LED indicator selector; automatic sharp/normal selectivity selector with LEDs; output level control; mode selector with LEDs. IHF usable sensitivity 10.3 dBf (normal), 12.8 dBf (sharp); 50-dB quieting, mono 15.3 dBf (normal and sharp), stereo 35.3 dBf (normal and sharp); S/N 80 dB (mono), 78 dB (stereo); dist. mono 0.03% (normal), 0.2% (sharp), stereo 0.05% (normal), 0.5% (sharp); capture ratio 1.0 dB (normal), 2.0 dB (sharp); alternate channel selectivity  $\pm$ 400 kHz 50 dB (normal), 80 dB (sharp); image and spurious rejection 110 dB; stereo separation at 1000 Hz 50 dB (normal), 30 dB (sharp); 6 7/8" H x 18 1/8" W x 14 1/8" D .. \$520

### AT-9300U AM-FM Stereo Tuner

Features PLL multiplex circuitry; hi blend and muting switches; signal-strength and tuning meters. FM



section: IHF usable sensitivity 1.9  $\mu$ V (mono); 50-dB quieting 4.5  $\mu$ V (mono), 44  $\mu$ V (stereo); IHF S/N 73 dB (mono), 68 dB (stereo); frequency response 30-15,000 Hz +0.3/-2.5 dB; dist. 0.2% (mono), 0.3% (stereo) at 1000 Hz; capture ratio 1.5 dB; IHF alternate channel selectivity 72 dB  $\pm$ 400 kHz; image rejection 48 dB; i-f rejection 75 dB; spurious rejection 70 dB; stereo separation 42 dB at 1000 Hz. AM section: sensitivity 240  $\mu$ V/m (IHF, ferrite antenna), 25  $\mu$ V (IHF, external antenna); S/N 50 dB. 5 1/8" H x 16 1/8" W x 13 3/8" D..... \$210

### ST-R50U/ST-R30U AM-FM Stereo Tuners

See Section 1, Receivers, under Aiwa's M-501 and M-301 Series Mini-Component Systems.

## AKAI

### AT-V04 AM-FM Stereo Tuner

Features digital synthesizer tuning with auto/manual up/down scan tuning and LED digital frequency readout; seven-station AM/FM memory preset; FM muting and mode switches; five-LED signal-

strength indicators; FM tuning LED for manual tuning. FM section: IHF usable sensitivity 9.3 dBf (1.6  $\mu$ V); capture ratio 1.2 dB; stereo separation 65 dB; 3" H x 17.3" W x 13.1" D ..... \$280

### AT-K03 AM-FM Stereo Tuner

Features digital tuning with rotary tuning dial and LED digital frequency readout; five-LED signal-strength and LED center tuning indicators; mode and band pushbuttons. FM section: IHF usable sensitivity 10.8 dBf (1.9  $\mu$ V); capture ratio 1.2 dB; stereo separation 52 dB; 3.1" H x 17.3" W x 13.4" D..... \$230

## CROWN

### FM-1 FM Tuner

Features quartz-crystal IC frequency synthesizer tuning with auto continuous scan and auto search-and-stop operations; five-station memory preset; LED digital frequency readout display; 20-LED analog tuning indicator dial; LED signal-strength and multipath meter displays; 25- or 75- $\mu$ sec de-emphasis; carrier band filter and muting selectors. IHF usable sensitivity 10.8 dBf (mono); 50-dB quieting 2.75  $\mu$ V (mono), 35  $\mu$ V (stereo); S/N 70 dB (mono), 65 dB (stereo); THD 0.1% (mono), 0.09% (stereo); frequency response 30-15,000 Hz  $\pm$ 0.5 dB; capture ratio 2.0 dB; alternate channel selectivity 75 dB; image and spurious rejection 114 dB; stereo separation 45 dB at 1000 Hz; 5 1/4" H x 19" W x 15" D..... \$995

## DENON

### TU-630 FM Stereo Tuner

Features dual-gate MOS FETs and five-ganged variable capacitor in front end; wide/narrow i-f bandwidth selector; FM detector circuitry; multiplex IC circuit with pilot canceller; servo-lock tuning with LED; built-in low-distortion 3-W/ch power amp with headphone jack; FM muting; auto/hi blend/mono/rec level selector; multipath detector; built-in oscillator; five-LED signal-strength and three-LED tuning meter indicators. Usable sensitivity 1.7  $\mu$ V; 50-dB quieting 3.3  $\mu$ V (mono), 30  $\mu$ V (stereo); S/N 82 dB (mono), 79 dB (stereo); frequency response 20-15,000 Hz +0.2/-1.5 dB; THD at 1000 Hz, mono 0.03% (wide), 0.1% (narrow), stereo 0.06% (wide), 0.12% (narrow); capture ratio 1.0 dB (wide), 1.5 dB (narrow); selectivity 35 dB at 400 kHz (wide), 80 dB at 300 kHz (narrow); image rejection 110 dB; i-f rejection 105 dB; spurious rejection 110 dB; stereo separation at 1000 Hz 55 dB (wide), 50 dB (narrow); matches PMA-630 integrated amplifier; brushed aluminum front panel; 98.5 mm H x 434 mm W x 364 mm D..... \$340

### TU-530 AM-FM Stereo Tuner

Features dual-gate MOS FETs in front end, FM 4-gang variable condenser, and AM 2-gang variable condenser; PLL multiplex circuits with pilot cancellers; servo-lock tuning with LED; five-LED signal-strength and three-LED tuning indicators; hi blend and muting switches; FM/FM mono/auto FM mono/rec level function control; LED stereo indicator. FM

section: usable sensitivity 1.7  $\mu$ V; S/N 82 dB (mono), 79 dB (stereo); frequency response 20-15,000 Hz +0.2/-1.5 dB; THD 0.08%



(mono), 0.1% (stereo); capture ratio 1.0 dB; image and spurious rejection 90 dB; i-f rejection 100 dB; alternate channel selectivity 70 dB at  $\pm$ 400 kHz. AM usable sensitivity 300  $\mu$ V/m and THD 0.4%; 99 mm H x 434 mm W x 364 mm D..... \$260

## DRACO LABS

### Micro/CPU FM Tuner

Features six-section varactor front end; PLL multiplex decoder; PLL frequency-synthesis microcomputer-locked tuning with auto up/down scan tuning and LED four-digit frequency readout display; user-programmable station call letter display with store switch and manual tuning knob; four-station memory preset with LED station display; normal-wide i-f bandwidth selector; toroidal and active low-pass filters; linear phase ceramic i-f filter; variable analog switch muting; signal-strength and tuning meters. IHF usable sensitivity 1.6  $\mu$ V mono; 50-dB quieting mono 2.1  $\mu$ V (normal), 3.0  $\mu$ V (wide); S/N 82 dB (mono), 75 dB (stereo); frequency response 20-15,000 Hz  $\pm$ 0.5 dB; THD at 1000 Hz, mono 0.1% (normal), 0.07% (wide), stereo 0.2% (normal), 0.07% (wide); capture ratio 1.0 dB (normal), 0.5 dB (wide); selectivity 85 dB (normal), 18 dB (wide); image rejection 130 dB; i-f rejection 120 dB; spurious rejection 130 dB; stereo separation at 1000 Hz 50 dB (normal), 55 dB (wide); 6 7/8" H x 20" W x 14 1/8" D..... \$1000

## EDINBURGH WIRELESS

### SMT-2 Stereo Tuner

Features front-panel eight-station pushbutton preset and LED center tuning and stereo indicators; no tuning scale on front panel (all preset stations on rear panel). Frequency response 30-15,000 Hz; stereo THD 0.7% at 100% modulation; capture ratio 1.5 dB; alternate channel selectivity 60 dB..... \$600

## EUMIG

### T-1000 FM Tuner

Features digitally-synthesized PLL FM tuning with manual up/down scan and LED frequency readout;



ten-station memory preset with LED display, stored



through CMOS IC or built-in automatic rechargeable NiCd battery; five-LED signal-strength display; wide/narrow i-f bandwidth; mode and muting buttons. Usable sensitivity 1.6  $\mu\text{V}$  (mono); 50-dB quieting 12 dBf (mono), 36.1 dBf (stereo); stereo separation 50 dB at 1000 Hz; matte black or chrome finish; 19-in rack mount face plate.... \$795

## FISHER

### FM2421 AM-FM Stereo Tuner

Features digital frequency-synthesized tuning with auto/manual search and scan; LED digital fre-



quency readout display; six-station memory preset for AM or FM with LEDs; wide/narrow i-f bandwidth selector; multiplex filter; FM muting; five-LED signal-strength indicators. FM section: usable sensitivity 9.8 dBf (1.7  $\mu\text{V}$ ) mono, 17.9 dBf (4.3  $\mu\text{V}$ ) stereo; 50-dB quieting 13.2 dBf (2.5  $\mu\text{V}$ ) mono, 35.9 dBf (34  $\mu\text{V}$ ) stereo; S/N 75 dB (mono), 70 dB (stereo); THD at 50-dB quieting 0.3% (mono), 0.4% (stereo); frequency response 20-15,000 Hz  $\pm 1$  dB; capture ratio 0.8 dB; alternate channel selectivity 75 dB  $\pm 400$  kHz; image rejection 80 dB; i-f and spurious rejection 100 dB; stereo separation 46 dB at 1000 Hz. AM section: usable sensitivity 280  $\mu\text{V/m}$ ; selectivity 45 dB; S/N 55 dB. 3 1/2" H  $\times$  17 1/2" W  $\times$  13" D.....\$400

### FM2121 AM-FM Stereo Tuner

Features signal-strength and center tuning meters; FM muting and high blend switches; function selector. FM section: usable sensitivity 1.9  $\mu\text{V}$  (mono), 4.6  $\mu\text{V}$  (stereo); 50-dB quieting 2.8  $\mu\text{V}$  (mono), 38  $\mu\text{V}$  (stereo); S/N 72 dB (mono), 68 dB (stereo); THD at 50-dB quieting 0.3% (mono), 0.5% (stereo); frequency response 20-15,000 Hz  $\pm 1$  dB; capture ratio 1.0 dB; alternate channel selectivity 70 dB  $\pm 400$  kHz; image rejection 60 dB; i-f rejection 75 dB; spurious rejection 85 dB; stereo separation 40 dB at 1000 Hz. AM section: usable sensitivity 300  $\mu\text{V/m}$ ; selectivity 42 dB; S/N 55 dB. 3 1/2" H  $\times$  17 1/2" W  $\times$  13" D.....\$230

### FM 440 AM-FM Stereo Tuner

Features five-LED signal strength and LED center tuning indicators; multiplex filter switch; mode selector switches; LED stereo indicator. FM section: usable sensitivity 14.1 dBf (2.8  $\mu\text{V}$ ) mono, 20 dBf (5.5  $\mu\text{V}$ ) stereo; 50-dB quieting 20.76 dBf (6.0  $\mu\text{V}$ ) mono, 38.26 dBf (45  $\mu\text{V}$ ) stereo; S/N 65 dB (mono), 60 dB (stereo); THD at 50-dB quieting 0.4% (mono), 0.5% (stereo); capture ratio 1.0 dB; stereo separation 40 dB at 1000 Hz.....\$180

### FM 120 AM-FM Stereo Tuner

Features five-LED signal-strength indicators; LED center-tuning indicator on dial scale; FM muting and high blend switches. FM section: usable sensitivity 14.1 dBf (2.8  $\mu\text{V}$ ) mono; 50-dB quieting 20.76 dBf (6.0  $\mu\text{V}$ ) mono, 38.26 dBf (45  $\mu\text{V}$ ) stereo; S/N 65 dB (mono), 60 dB (stereo); THD at 50-dB quieting 0.4% (mono), 0.5% (stereo); capture ratio 1.0 dB; stereo separation 40 dB at 1000 Hz.....\$180

## HARMAN/KARDON

### 700 Series High Technology Separates

#### hk715 AM-FM Stereo Tuner

Features digital-synthesis quartz-locked tuning with auto up/down scan tuning and LED digital frequency readout; eight-station AM/FM memory preset with LEDs; seven-LED signal-strength indicators; pushbutton band, mode, and FM muting selectors; high blend filter and multiplex null cir-

cuit. FM section: IHF usable sensitivity 1.7  $\mu\text{V}$ ; 50-dB quieting 3.0  $\mu\text{V}$  (mono), 34  $\mu\text{V}$  (stereo); S/N 79 dB (mono), 77 dB (stereo); THD at 1000 Hz



0.07% (mono), 0.09% (stereo); frequency response 0.1-160,000 Hz; capture ratio 1.0 dB; alternate channel selectivity 70 dB; image rejection 80 dB; i-f and spurious response rejection 105 dB; stereo separation 50 dB at 1000 Hz; 2.9" H  $\times$  15.2" W  $\times$  12.6" D.....\$369

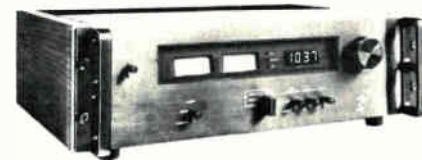
#### hk710 AM-FM Stereo Tuner

Features five-LED signal-strength indicators; center-channel tuning indicator incorporated into dial lights; PLL multiplex decoder; multiplex null circuit; AM, auto FM, and FM muting selectors. FM section: IHF usable sensitivity 1.9  $\mu\text{V}$ ; 50-dB quieting 3.5  $\mu\text{V}$  (mono), 37  $\mu\text{V}$  (stereo); S/N 77 dB (mono), 75 dB (stereo); THD at 1000 Hz 0.08% (mono), 0.1% (stereo); frequency response 0.1-160,000 Hz; capture ratio 1.0 dB; alternate channel selectivity 70 dB; image rejection 60 dB; i-f and spurious response rejection 95 dB; stereo separation 46 dB at 1000 Hz; 2.9" H  $\times$  15.2" W  $\times$  12.6" D.....\$229

## HEATH

### AJ-1600 AM-FM Stereo Tuner

Features digitally-synthesized tuning with LED digital frequency readout display; wide/narrow i-f band-



width selector; r-f attenuator and muting switches; Dolby noise-reduction system; hi blend, mono/stereo, and AM switch; signal-strength/multipath meter with switch; tuning meter. FM section: usable sensitivity 1.8  $\mu\text{V}$  (mono), 3.5  $\mu\text{V}$  (stereo); S/N 83 dB (mono), 75 dB (stereo); frequency response 20-15,000 Hz  $\pm 0.5$  dB; alternate channel selectivity 40 dB (wide), 80 dB (narrow); 5 1/4" H  $\times$  19" W  $\times$  14" D. Kit.....\$400

## HITACHI

### FT-8000 FM Stereo Tuner

Features quartz crystal digitally-synthesized PLL tuning system with auto scan/manual tuning; four gang variable capacitance diode and dual-gate MOS FETs in electronic front end; multiplex demodulator circuitry; six-station memory preset with LED memory write and erase indicators; LED digital frequency/clock readout display; five-LED signal-strength indicators; multipath switch; mono/mute, hi-blend, and 440-Hz record level switches. Usable sensitivity 11.2 dBf (new IHF), 1.0  $\mu\text{V}$  (75 ohms, IHF); 50-dB quieting 3.3  $\mu\text{V}$  (mono), 40  $\mu\text{V}$  (stereo); S/N 72 dB (mono), 68 dB (stereo); frequency response 20-15,000 Hz  $+0.5/-1.2$  dB; HD at 1000 Hz 0.12% (mono), 0.15% (stereo); capture ratio 1.2 dB; alternate channel selectivity 80 dB (IHF); image rejection 70 dB; i-f rejection 85 dB; spurious rejection 100 dB; stereo separation 50 dB at 1000 Hz; 3 1/8" H  $\times$  17 1/8" W  $\times$  15 1/8" D.....\$450

### FT-5000 AM-FM Stereo Tuner

Features dual-gate MOS-FETs and four-gang variable capacitance diode in electronic front end; multiplex demodulator circuit; quartz crystal digitally-synthesized PLL tuning system with automatic scan/manual tuning; seven-station memory preset for AM or FM stations with LEDs; LED frequency readout display; five-LED signal-strength display; FM muting, mode, and function selectors. FM sec-

tion: IHF usable sensitivity 1.9  $\mu\text{V}$  (mono); 50-dB quieting 16.2 dBf (mono), 38.2 dBf (stereo); S/N 65 dB (mono), 62 dB (stereo); HD at 1000 Hz 0.1% (mono), 0.2% (stereo); frequency response 20-15,000 Hz  $+1/-1.5$  dB; capture ratio 1.0 dB; alternate channel selectivity 75 dB (IHF); image and i-f rejection 70 dB; stereo separation 45 dB at 1000 Hz. AM section: sensitivity 500  $\mu\text{V/m}$  for 20-dB S/N; selectivity 32 dB; S/N 45 dB; HD 0.7%. 4 1/8" H  $\times$  17 1/8" W  $\times$  10 1/8" D.....\$300

### FT-4400 AM-FM Stereo Tuner

Features microcomputer-controlled quartz-crystal PLL digital synthesizer tuner with all-electronic front end with four-gang variable capacitance tuning diode and PLL IC multiplex decoder; six-station AM/FM memory preset with memory LED with battery backup system in case of power failure; fluorescent AM/FM frequency readout (stores last station before system is turned off); automatic FM or auto/manual AM/FM up/down scan tuning; FM mode, AM/FM, and rec level selector buttons; five-LED signal-strength indicators and LED stereo indicator. FM section: IHF usable sensitivity 1.9  $\mu\text{V}$  (mono); 50-dB quieting 16.2 dBf (mono), 38.2 dBf (stereo); S/N 75 dB (mono), 68 dB (stereo); frequency response 30-12,000 Hz  $+0.5/-1.0$  dB; THD at 1000 Hz 0.09% (mono), 0.08% (stereo); capture ratio 1.5 dB; alternate channel selectivity and image rejection 70 dB; i-f rejection 85 dB; stereo separation 50 dB; 3 1/4" H  $\times$  17 1/4" W  $\times$  11 1/4" D.....\$250

### FT-3400 AM-FM Stereo Tuner

Features dual-LED tuning arrows (light up when station is precisely tuned); auto/mono/FM muting mode switch; pushbutton AM/FM selector with LEDs. FM section: IHF usable sensitivity 1.0  $\mu\text{V}$  into 75 ohms (mono); 50-dB quieting 22.2 dBf (mono), 37.2 dBf (stereo); S/N 75 dB (mono), 69 dB (stereo); frequency response 30-15,000 Hz  $+1.5/-2.0$  dB; THD at 1000 Hz 0.1% (mono), 0.12% (stereo); capture ratio 1.0 dB; alternate channel selectivity 55 dB (IHF); image rejection 50 dB; i-f rejection 80 dB; stereo separation 45 dB at 1000 Hz; 3 1/4" H  $\times$  17 1/4" W  $\times$  12 1/4" D.....\$160

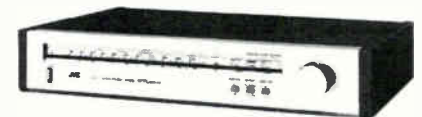
## JVC

### T-40P AM-FM Stereo Tuner

Features four-gang electronic varicap in FM front end; quartz PLL frequency synthesizer tuning with auto up/down scanning; eight-station AM/FM memory preset with LEDs and memo bar; LED digital frequency readout display; PLL multiplex with automatic pilot canceller; mode, muting, and AM/FM switches; LED signal-strength bar indicators. FM section: usable sensitivity 1.6  $\mu\text{V}$  (mono); 50-dB quieting 3.0  $\mu\text{V}$  (mono), 25  $\mu\text{V}$  (stereo); S/N 70 dB (mono), 65 dB (stereo); frequency response 20-15,000 Hz  $+0.5/-3.0$  dB; dist. at 1000 Hz 0.15% (mono), 0.3% (stereo); capture ratio 1.5 dB; alternate channel selectivity 65 dB; image rejection 70 dB; i-f rejection 80 dB; spurious rejection 75 dB; stereo separation 45 dB at 1000 Hz. AM section: usable sensitivity 150  $\mu\text{V/m}$  (bar antenna); 4 1/8" H  $\times$  16 1/8" W  $\times$  11 1/8" D.....\$300

### T-X3 AM-FM Stereo Tuner

Features quartz PLL frequency-synthesizer tuning; phase tracking loop FM detector circuitry and



switchable auto/off quieting slope control with LED indicators; five-LED signal-strength and LED tuning indicators; muting/mode and AM/FM selector buttons. FM section: usable sensitivity 0.9  $\mu\text{V}$ ; 50-dB quieting 1.8  $\mu\text{V}$  (mono), 9.8  $\mu\text{V}$  (stereo with quieting), 19  $\mu\text{V}$  (stereo, quieting off); S/N 82 dB (mono), 78 dB (stereo); frequency response 30-15,000 Hz  $+0.3/-2$  dB; THD at 1000 Hz 0.08% (mono), 0.10% (stereo); capture ratio 1.0

# 3 TUNERS

dB; alternate channel selectivity 70 dB; image and i-f rejection 80 dB; spurious rejection 90 dB; stereo separation 50 dB at 1000 Hz; 3 1/2" H x 18 1/4" W x 14 1/4" D ..... \$220

**T-X1.** Similar to T-X3 minus phase tracking loop and quieting slope control circuitry with LEDs; has three LED tuning indicators. 50-dB quieting 1.5  $\mu$ V (mono), 22.5  $\mu$ V (stereo); stereo S/N 70 dB; frequency response 40-12,500 Hz +0.5/-3 dB; THD at 1000 Hz 0.15% (mono), 0.3% (stereo); alternate channel selectivity 65 dB; image rejection 60 dB; i-f rejection 90 dB; stereo separation 45 dB at 1000 Hz; 4 1/4" H x 16 1/4" W x 10 1/4" D ..... \$180

## T-V3 AM-FM Stereo Tuner

Features FET r-f amp and three-gang tuning capacitor in front end; PLL multiplex IC demodulator; AM signal-strength/FM tuning meter; selector, mode, and muting switches. FM section: usable sensitivity 1.2  $\mu$ V; 50-dB quieting 17.2 dBf (mono), 38.3 dBf (stereo); S/N 70 dB (mono), 65 dB (stereo); frequency response 50-15,000 Hz +0.5/-1 dB; dist. at 1000 Hz 0.25% (mono), 0.45% (stereo); capture ratio 1.5 dB; alternate channel selectivity 55 dB; image rejection 55 dB; i-f rejection 75 dB; spurious rejection 60 dB; stereo separation 40 dB at 1000 Hz; 3 1/2" H x 16 1/4" W x 12 1/4" D ..... \$140

## KENWOOD

### KT-917 FM Stereo Tuner

Features nine-ganged tuning capacitor and double-tuned antenna input stage with double-diffused



MOS FET in i-f front end; pulse-count FM detector and LED distortion detection loop circuitry; narrow/wide/normal i-f bandwidth with control and LED display; signal-strength, tuning, and deviation/multipath meters with deviation/multipath switch; quieting and 20- and 40-dBf muting controls with LEDs; FM Dolby de-emphasis switch; antenna switching; output control. Usable sensitivity 1.9  $\mu$ V; 50-dB quieting 3.4  $\mu$ V (mono), 40  $\mu$ V (stereo); S/N 90 dB (mono), 84 dB (stereo); THD at 1000 Hz, mono 0.03% (wide), 0.06% (normal), 0.15% (narrow), at 1000 Hz, stereo 0.04% (wide), 0.09% (normal), 0.12% (narrow); capture ratio 0.8 dB (wide), 1.4 dB (normal), 1.7 dB (narrow); alternate channel selectivity 35 dB (wide), 60 dB (narrow and normal); stereo separation at 1000 Hz 60 dB (wide), 55 dB (normal), 50 dB (narrow); frequency response 10-16,000 Hz +0.2/-0.5 dB; spurious, image, and i-f rejection 125 dB; 6 1/2" H x 18 1/4" W x 18 1/2" D ..... \$1000

### KT-815 AM-FM Stereo Tuner

Features five-gang FM tuning capacitor with dual-gate MOS FETs in front end; pulse-count FM detector circuitry; wide and narrow i-f bandwidths with selector; multiplex PLL IC with pilot canceller circuit; servo-lock tuning with LED; muting control; mode switch; output level control; signal strength and tuning meters. FM section: usable sensitivity 1.8  $\mu$ V; 50-dB quieting sensitivity 3.4  $\mu$ V (mono), 40  $\mu$ V (stereo); S/N 84 dB (mono), 80 dB (stereo); THD at 1000 Hz, mono 0.04% (wide), 0.16% (narrow), at 1000 Hz, stereo 0.05% (wide), 0.15% (narrow); capture ratio 1.0 dB (wide), 2.0 dB (narrow); alternate channel selectivity 45 dB (wide), 60 dB at 300 kHz (narrow); stereo separation at 1000 Hz 55 dB (wide), 49 dB (narrow); frequency

response 30-15,000 Hz +0.3/-0.5 dB; spurious rejection 120 dB; image rejection 110 dB; i-f rejection 105 dB. AM section: usable sensitivity 9  $\mu$ V; S/N 55 dB. 6 1/2" H x 17 1/4" W x 15 1/2" D... \$440

**KT-615.** Similar to KT-815 minus servo lock tuning with LED; has four-gang tuning capacitor in front end; FM S/N 81 dB (mono), and 78 dB (stereo), THD at 1000 Hz mono 0.05% (wide) and 0.17% (narrow), at 1000 Hz stereo 0.06% (wide) and 0.25% (stereo), alternate channel selectivity on narrow bandwidth 54 dB, stereo separation at 1000 Hz narrow 48 dB, frequency response 30-15,000 Hz +0.2/-1.5 dB, spurious rejection 105 dB, image rejection 85 dB, i-f rejection 100 dB; AM usable sensitivity 13  $\mu$ V and S/N 50 dB ..... \$299

### KT-413 AM-FM Stereo Tuner

Features frequency-linear five-ganged tuning capacitor and FET in front-end; one-touch left/right automatic sequential tuning with LED servo lock indicator; dial scanning and five-station AM and FM preselected scanning with LED; LED signal-strength bar display; FM mode selector; high/low stop level selector for strong/weak broadcast signals. FM section: usable sensitivity 1.9  $\mu$ V; 50-dB quieting 4.0  $\mu$ V (mono), 40  $\mu$ V (stereo); S/N 77 dB (mono), 72 dB (stereo); THD 0.1% (mono), 0.15% (stereo) at 1000 Hz; frequency response 30-15,000 Hz +0.2/-2 dB; capture ratio 1.0 dB; alternate channel selectivity 60 dB; spurious rejection 85 dB; image rejection 55 dB; i-f rejection 80 dB; stereo separation 50 dB at 1000 Hz. AM section: sensitivity 16  $\mu$ V; S/N 48 dB. 5 1/2" H x 15 1/4" W x 11" D... \$250

**KT-313.** Similar to KT-413 without automatic sequential tuning with LED servo lock and auto and preset scanning; has signal-strength and tuning meters; stereo 50-dB quieting sensitivity 45  $\mu$ V; FM stereo separation 45 dB at 1000 Hz; FM i-f rejection 90 dB; AM S/N 50 dB; 11 1/2" H x 13 1/2" D ..... \$179

## Audio Purist Group

### L-07TII FM Stereo Tuner

Features seven-section frequency-linear tuning capacitor and double-diffused dual-gate MOS FETs in front end; switchable i-f bandwidth; pulse-count detector circuitry; multiplex filter switch with LED; muting switch; signal-strength and tuning meters. Usable sensitivity 1.7  $\mu$ V; 50-dB quieting 3.0  $\mu$ V (mono), 40  $\mu$ V (stereo); S/N 84 dB (mono), 80 dB (stereo); THD at 1000 Hz, mono 0.035% (wide), 0.14% (narrow), at 1000 Hz, stereo 0.065% (wide), 0.2% (narrow); capture ratio 0.7 dB (wide), 1.3 dB (narrow); alternate channel selectivity 30 dB (wide), 100 dB at 400 kHz (narrow); stereo separation at 1000 Hz 52 dB (wide), 50 dB (narrow); frequency response 20-15,000 Hz +0.2/-1 dB; spurious and image rejection 120 dB; i-f rejection 110 dB; 3 1/2" H x 18 1/2" W x 13 1/2" D ..... \$625

## KIRKSAETER

### FM-6 FM Tuner

Features five-station memory preset; adjustable stereo muting; 25/50/75- $\mu$ sec Dolby de-emphasis; automatic noise suppression circuit. 50-dB quieting 35 dBf (stereo); S/N 74 dB (mono), 70 dB (stereo); frequency response 20-16,000 Hz +0/-3 dB; THD at 1000 Hz 0.15% (mono), 2% (stereo); capture ratio 1 dB; alternate channel selectivity 99 dB; stereo separation variable from min. of 6 dB to 58 dB at 35-dBf quieting; 5 1/2" H x 19 1/4" W x 12 1/4" D ..... \$850

## LUX

### Luxman 5T10 FM Stereo Tuner

Features tuning lock system, i-f bandwidth selector, multiplex check switch, recording test-tone circuit, center-tuning and signal-strength meters, FM muting switch, FM muting level control, and output level control. Usable mono sensitivity 10.3 dBf (1.8  $\mu$ V); 50-dB quieting mono sensitivity 15.6 dBf (3.3  $\mu$ V); THD 0.05% wide (1000 Hz), 0.06% narrow (1000 Hz); capture ratio 0.8 dB (wide), 2 dB (narrow); alternate channel selectivity 90 dB

(narrow  $\pm$ 400 kHz); S/N 80 dB; spurious response ratio 100 dB; i-f response -100 dB; image response -100 dB; AM suppression 62 dB; stereo separation 50 dB wide, 30 dB narrow; output voltage 1 V (fixed), 0-1 V (variable); output impedance 100 ohms (fixed), 100-1250 ohms (variable). \$795

### Luxman T-450 AM-FM Stereo Tuner

AM-FM stereo tuner with CLL tuning lock system; features test tone oscillator; mono switch; local/dis-



tant and muting threshold switch; accurate touch-off tuning; three-LED signal-strength indicators; LED tuning and stereo indicators. FM section: IHF usable sensitivity 1.8  $\mu$ V; 50-dB quieting 3.0  $\mu$ V (mono); S/N 73 dB; frequency response 30-15,000 Hz  $\pm$ 1 dB; THD at 1000 Hz 0.08% (mono), 0.1% (stereo); capture ratio 1.3 dB; alternate channel selectivity 65 dB; spurious rejection 90 dB; i-f rejection 100 dB; image rejection 75 dB; stereo separation 45 dB at 1000 Hz; 4 1/4" H x 18 1/4" W x 12 1/4" D ..... \$395

### Luxman T-400 AM-FM Stereo Tuner

Features flash tuning system; 440-Hz test tone oscillator; mono switch; FM muting switch; five-LED signal-strength indicators. FM section: 50-dB quieting 3.1  $\mu$ V (mono); frequency response 30-15,000 Hz  $\pm$ 1 dB; THD 0.1% at 1000 Hz (mono); S/N 75 dB; stereo separation 62 dB; alternate channel selectivity 65 dB; 4 1/2" H x 18 1/4" W x 12 1/2" D ..... \$255

## MARANTZ

### ST500 AM-FM Stereo Tuner

Features electronic PLL quartz-locked synthesizer tuning with auto/manual up/down scan tuning and LED digital frequency readout; seven-station AM/FM memory preset with LED indicators; selectable wide/narrow i-f bandwidth selector; five-LED signal-strength/multipath indicators with multipath switch. FM section: 50-dB quieting 13.2 dBf (mono), 36.1 dBf (stereo); S/N 80 dB (mono), 72 dB (stereo); frequency response 30-15,000 Hz  $\pm$ 0.5 dB; THD at 1000 Hz 0.2% (mono), 0.3% (stereo); capture ratio 0.9 dB; alternate channel selectivity 65 dB; stereo separation 48 dB at 1000 Hz; 2 1/4" H x 16 3/4" W x 11 1/4" D ..... \$375

### ST400 AM-FM Stereo Tuner

Features dual-gate MOS FET r-f front end; electronic Gyro-Touch™ tuning with servo lock and FM digital frequency readout display; FM muting/mode and servo lock buttons; signal-strength and FM tuning meters. FM section: IHF usable sensitivity 10.3 dBf (1.8  $\mu$ V) mono; 50-dB quieting 13.2 dBf (2.5  $\mu$ V) mono; S/N 78 dB (mono), 70 dB (stereo); dist. at 1000 Hz 0.15% (mono), 0.25% (stereo); frequency response 30-15,000 Hz +0.2/-1 dB; capture ratio 1.0 dB. AM usable sensitivity 20  $\mu$ V (IHF); 5 1/2" H x 16 3/4" W x 9 1/4" D ..... \$280

**ST300.** Similar to ST400 minus LED digital frequency readout display and servo lock tuning; FM 50-dB quieting 2.8  $\mu$ V (mono); FM S/N 75 dB (mono), 68 dB (stereo) ..... \$225

## MITSUBISHI

### DA-C20 Tuner-Preamplifier

AM/FM stereo combination has individual-channel preamplifiers and moving-coil head amplifier. Also features locked tuning, detent volume control and independent output level controls. FM section: sensitivity 11.2 dBf (2.0  $\mu$ V) mono, 22.7 dBf (7.5  $\mu$ V) stereo; 50-dB quieting sensitivity 19.2 dBf (5.0  $\mu$ V) mono, 39.2 dBf (50  $\mu$ V) stereo; S/N 75 dB (stereo); frequency response 30-15,000 Hz  $\pm$ 1



dB; THD (1000 Hz, 65 dBf) 0.08% stereo (wide), 0.5% (narrow); selectivity 45 dB (wide), 75 dB (narrow); capture ratio 0.8 dB (wide), 1.5 dB (narrow); stereo separation at 1000 Hz: 45 dB (wide), 40 dB (narrow). AM section: sensitivity 45 dB (bar antenna); selectivity 30 dB; THD 0.8%. Preamp section: input sensitivity/impedance 0.1 mV/10 ohms (phono MC), 2.3 mV/50,000 ohms (phono MM, 100 pF), 150 mV/50,000 ohms (tuner, aux., play); output level max. 18 V; S/N (IHF "A") 77 dB (phono MC), 84 dB (phono MM), 110 dB (tuner, aux., play); THD 0.005% max.; channel separation at 20,000 Hz 80 dB (phono MC, MM), 100 dB (tuner, play). Other features include subsonic filter; separate tape monitoring and duplication; A/B or A+B speaker pushbutton selection; FM muting; separate tone controls with defeat switches; signal strength and tuning meters; front-panel headphone jack. 6<sup>3</sup>/<sub>4</sub>" H x 16<sup>1</sup>/<sub>2</sub>" W x 11<sup>1</sup>/<sub>2</sub>" D.....\$510

#### DA-F20 FM Stereo Tuner

Features both conventional tuning and digital frequency readout with a quartz PLL synthesizer;



switchable selectivity; inter-station muting; signal-strength and center-tuning LEDs; tape record level check signal; variable and fixed output level. Specifications: sensitivity mono 11.2 dBf (2.0 μV), stereo 22.7 dBf (7.5 μV); 50-dB quieting sensitivity 19 dBf (5.0 μV) mono, 39.2 dBf (50 μV) stereo; S/N stereo 75 dB (wide), 70 dB (narrow); alternate channel selectivity 45 dB (wide), 75 dB (narrow); stereo separation 50 dB at 1000 Hz (wide); THD at 1000 Hz and 65 dBf 0.08% (wide), 0.25% (narrow); capture ratio 0.8 dB (wide), 1.3 dB (narrow). 6<sup>3</sup>/<sub>4</sub>" H x 16<sup>1</sup>/<sub>2</sub>" W x 10<sup>3</sup>/<sub>8</sub>" D.....\$430

#### DA-C7 AM-FM Tuner-Preamp

Tuner-preamp docks physically and electrically with any of company's power amplifiers to provide receiver services. Tuner: features locked tuning system with LED lock; signal-strength and tuning meters; wide/narrow FM i-f bandwidth selector; muting/mode and bandwidth selectors; pilot canceller circuit; FM sensitivity 2.0 μV (mono), 7.8 μV (stereo); 50-dB quieting 5.5 μV (mono), 55 μV (stereo); S/N 73 dB stereo; frequency response 30-16,000 Hz +0.5/-1 dB; THD at 1000 Hz stereo 0.1% (wide), 0.5% (narrow); capture ratio 1.0 dB (wide), 2.0 dB (narrow); stereo separation at 1000 Hz 45 dB (wide), 35 dB (narrow); AM sensitivity 200 μV/m (bar antenna) and selectivity 25 dB. Preamp: features separate bass and treble controls with tone defeat for left and right channels; subsonic filter; balance control; two-speaker switching; two-way tape monitoring and dubbing; mode switch; input selector; input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/50k ohms (aux., tape); S/N (IHF A) 87 dB (phono), 99 dB (aux. and tape); THD 0.003%; 6<sup>3</sup>/<sub>4</sub>" H x 16<sup>1</sup>/<sub>2</sub>" W x 11<sup>1</sup>/<sub>2</sub>" D.....\$360

#### M-F01 Micro FM Tuner

Miniature FM tuner with quartz-PLL synthesizer tuning; five-gang tuning condenser with dual-gate MOS-FETs and four-pole linear-phase LC filters; recording level check signal; five-LED signal-strength and LED tuning indicators. Specifications: sensitivity 11.2 dBf (2.0 μV) mono, 22.7 dBf (7.5 μV) stereo; 50-dB quieting sensitivity 19.2 dBf (5.0 μV) mono, 39.2 dBf (50 μV) stereo; S/N 77 dB (stereo); capture ratio 1.0 dB; alternate channel selectivity 70 dB; image response -100 dB; i-f response -100 dB; AM suppression 65 dB; stereo separation 50 dB at 1000 Hz, 40 dB at 10,000 Hz; frequency response 30-16,000 Hz +1 dB; THD at 1000 Hz 0.08% (mono), 0.1% (stereo). 2<sup>3</sup>/<sub>4</sub>" H x 10<sup>1</sup>/<sub>8</sub>" W x 9<sup>1</sup>/<sub>8</sub>" D.....\$340

## NAD (USA)

#### 4080 AM-FM Stereo Tuner

Features dual-gate MOS FET front end; PLL IC multiplex demodulator; switchable signal-strength/multipath meter and tuning meter; 19-kHz pilot canceller; Dolby FM, muting, and multiplex filter switches; calibration tone selection; output level control. FM section: IHF usable sensitivity 1.8 μV (mono); 50-dB quieting 3.0 μV (mono), 35 μV (stereo); S/N (A weighted) 74 dB (mono), 70 dB (stereo); frequency response 30-15,000 Hz ±0.5 dB; THD at 1000 Hz 0.2% (mono), 0.3% (stereo); capture ratio 1.0 dB; selectivity 70 dB ±400 kHz; image rejection 70 dB; i-f rejection 80 dB; stereo separation 40 dB at 1000 Hz. AM sensitivity 300 μV; 5.5" H x 17.7" W x 14.2" D.....\$315

#### 4020A AM-FM Stereo Tuner

Features junction FET front end; PLL IC multiplex demodulator; LED tuning indicators. FM section: IHF usable sensitivity 1.9 μV (mono); 50-dB quieting 3.5 μV (mono), 40 μV (stereo); S/N (A weighted) 75 dB (mono), 70 dB (stereo); frequency response 30-15,000 Hz ±0.5 dB; THD at 1000 Hz 0.2% (mono), 0.3% (stereo); capture ratio 1.5 dB; selectivity 65 dB; image rejection 50 dB; i-f rejection 75 dB; stereo separation 42 dB at 1000 Hz. AM sensitivity 250 μV; 3.8" H x 16.5" W x 9.5" D.....\$198

## NIKKO

#### Gamma 40 FM Tuner

Features T-lock servo auto fine tuning with LED digital frequency readout and linear dial scale; wide/narrow i-f bandwidth selector; switchable high-blend circuit; low-noise dual-gate MOS FET front end. Usable sensitivity 10.3 dBf (1.8 μV); 50-dB

quieting 33 μV stereo; S/N 86 dB (mono), 78 dB (stereo); THD 0.02% (mono), 0.08% (stereo); rack-mountable with matte black finish; 2<sup>3</sup>/<sub>4</sub>" H x 19" W x 13" D.....\$450

#### Gamma 20 AM-FM Stereo Tuner

Features frequency-synthesis tuning with LED digital frequency/clock readout; six-station AM/FM memory preset; pilot-cancelling IC; built-in record calibration signal; adjustable muting threshold; output level control. FM section: usable sensitivity 10.3 dBf (1.8 μV); 50-dB quieting 33 μV stereo; S/N 75 dB (mono), 65 dB (stereo); THD 0.2% stereo; frequency response 50-15,000 Hz ±0.5 THD; capture ratio 1.5 dB; alternate channel selectivity 70 dB; rack-mountable with matte black finish; 2<sup>3</sup>/<sub>4</sub>" H x 19" W x 13" D.....\$379

#### NT-890 AM-FM Stereo Tuner

Features dual-gate FM MOS FET front end; quadrature detector; signal-strength and tuning meters; multiplex canceller; multipath distortion switch; AM/auto FM/mute/hi-blend/FM mono selector. FM section: usable sensitivity 1.9 μV; 50-dB quieting 14.2 dBf (mono), 30 dBf (stereo); S/N 72 dB (mono), 68 dB (stereo); THD 0.1% (mono), 0.2% (stereo); selectivity 65 dB; capture ratio 1.0 dB; spurious rejection 80 dB; image rejection 55 dB; i-f rejection 90 dB; stereo separation 50 dB at 1000 Hz; frequency response 20-20,000 Hz -1 dB; 5<sup>1</sup>/<sub>2</sub>" H x 16<sup>1</sup>/<sub>2</sub>" W x 14<sup>1</sup>/<sub>8</sub>" D.....\$220

#### NT-790 AM-FM Stereo Tuner

Features low-noise FET front end; LED signal-strength and tuning indicators; high blend filter and FM muting circuit switches. FM section: usable sensitivity 2.0 μV; 50-dB quieting 20 dBf (mono), 35 dBf (stereo); S/N 72 dB (mono), 60 dB (stereo); THD 0.2% (mono), 0.5% (stereo); capture ratio 1.5 dB; alternate channel selectivity 55 dB; spurious rejection 70 dB; image rejection 55 dB; i-f rejection

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## NYTECH

### CTP-102 Tuner/Preamp

Features four-station FM preset in keyboard design. Tuner: frequency response 30-15,000 Hz; THD 0.7% at 100% modulation (stereo); alternate channel selectivity 60 dB ..... \$875

## ONKYO

### T-909 FM Tuner

Digitally-synthesized FM tuner features dual-gate MOS FET in front-end and mixer circuit and tuned buffer circuit in oscillator; quartz-controlled tuning with up/down scanning and LED digital frequency display; seven-station preset automatic tuning; signal-strength meter; LED tuned and stereo indicators; multiplex IC and pilot canceller circuits. Usable sensitivity (IHF) 9.8 dBf (1.7  $\mu$ V) mono, 17.2 dBf (4.0  $\mu$ V) stereo; 50-dB quieting 14.7 dBf (3.0  $\mu$ V) mono, 36.1 dBf (35  $\mu$ V) stereo; S/N 80 dB (mono), 74 dB (stereo); capture ratio 1.5 dB; image rejection 85 dB; i-f rejection 100 dB; spurious rejection 105 dB; alternate channel selectivity 80 dB (IHF); stereo separation 45 dB at 1000 Hz; frequency response 30-16,000 Hz  $+0.5/-2$  dB; 3 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{8}$ " W  $\times$  13 $\frac{1}{8}$ " D..... \$950

### T-4090 AM-FM Stereo Tuner

Features four-ganged variable tuning capacitor and dual-gate MOS FETs in front end; quartz-locked tuning circuitry with touch sensor tuning control; LED locked, tuned, flashing direction arrow, and stereo indicators; LED signal strength bar display; PLL multiplex IC circuit; recording level check switch; stereo noise filter, mute/lock, and 25- $\mu$ sec FM de-emphasis switches; output level control. FM section: usable sensitivity 1.7  $\mu$ V (mono), 4  $\mu$ V (stereo); 50-dB quieting 3  $\mu$ V (mono), 35  $\mu$ V (stereo); S/N 76 dB (mono), 68 dB (stereo); capture ratio 1.3 dB; image rejection 90 dB; i-f rejection 100 dB; spurious rejection 95 dB; alternate channel selectivity 70 dB; stereo separation 40 dB at 1000 Hz; frequency response 30-15,000 Hz  $+0.5/-1.5$  dB. AM section: usable sensitivity 25  $\mu$ V; S/N 45 dB. 4 $\frac{1}{8}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  15 $\frac{3}{8}$ " D..... \$340

### T-4040 AM-FM Stereo Tuner

Features four-ganged variable tuning capacitor in FET front end; automatic servo-locked tuning with touch sensor tuning knob; LED locked, tuned, flashing direction arrow, and stereo indicators; LED signal-strength bar display; stereo noise filter and mute/lock switches; output level control; PLL IC multiplex; rear-panel three-position tuning sensor switch. FM section: usable sensitivity 1.9  $\mu$ V (mono), 4.5  $\mu$ V (stereo); 50-dB quieting 3.5  $\mu$ V (mono), 35  $\mu$ V (stereo); S/N 73 dB (mono), 66 dB (stereo); capture ratio 1.5 dB; image rejection 60 dB; i-f rejection 90 dB; spurious rejection 85 dB; alternate channel selectivity 60 dB (IHF); stereo separation 40 dB at 1000 Hz; frequency response 30-15,000 Hz  $+0.5/-1.5$  dB. AM section: usable sensitivity 25  $\mu$ V; S/N 45 dB. 4 $\frac{1}{8}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  15 $\frac{3}{8}$ " D..... \$230

## OPTONICA

### ST-9405 AM-FM Stereo Tuner

Features digitally-synthesized tuning with auto search/scan tuning; LED digital frequency readout display; ten-station memory preset with LED indicators; wide/narrow i-f bandwidth selector with LED; threshold local/distant switch; air-check calibrator;

12-LED signal-strength bar graph display; three-LED tuning meter; hi-blend switch; FM muting; mode switch; multipath monitor switch; variable output terminal; pilot canceller. FM section: IHF usable sensitivity 1.7  $\mu$ V (mono); S/N 75 dB (mono), 70 dB (stereo); frequency response 30-15,000 Hz  $\pm 1.5$  dB; THD mono 0.1% (wide), 0.2% (narrow), stereo 0.2% (wide), 0.3% (narrow); IHF selectivity 35 dB (narrow), 80 dB (wide); stereo separation 50 dB (wide), and 45 dB (narrow) at 1000 Hz; ebony faceplate..... \$1000

### ST-7405 AM-FM Stereo Tuner

Features Opto-Lock tuning system with LED indicator; LED digital frequency readout display; seven-LED signal-strength and center tuning meter displays; narrow/wide i-f bandwidth selector with LED; multipath monitor switch; air-check calibrator; pilot canceller; hi blend switch; FM muting switch; mode switch; variable output terminal. FM section: IHF usable sensitivity 1.7  $\mu$ V; S/N 75 dB (mono), 70 dB (stereo); frequency response 30-15,000 Hz  $\pm 1.5$  dB; THD mono 0.1% (wide), 0.2% (narrow), stereo 0.2% (wide), 0.3% (narrow); IHF selectivity 35 dB (narrow), 80 dB (wide); stereo separation 50 dB (wide) and 45 dB (narrow) at 1000 Hz; ebony faceplate; 2.9" H  $\times$  19.9" W  $\times$  15.5" D ..... \$400

### ST-4405 AM-FM Stereo Tuner

Features five-LED signal-strength and three-LED tuning meter displays; air-check calibrator; high blend, FM muting and mode switches; pilot canceller; variable output terminal. FM section: IHF usable sensitivity 1.7  $\mu$ V; S/N 75 dB (mono), 70 dB (stereo); response 30-15,000 Hz  $\pm 1.5$  dB; THD 0.2% (mono), 0.3% (stereo); IHF selectivity 65 dB; stereo separation 45 dB at 1000 Hz; ebony faceplate; 2.9" H  $\times$  16.9" W  $\times$  15.5" D ..... \$250

## JC PENNEY

### MCS 3710 FM Stereo Tuner

Features PLL multiplex circuitry; signal-strength and center-tuning meters; FM muting switch; multiplex filter; flywheel tuning knob; record level check; FM dipole antenna; quadrature detector for FM. IHF usable sensitivity 1.9  $\mu$ V; quieting sensitivity 14.8 dBf (3.0  $\mu$ V); mono and stereo THD 0.2%; S/N 72 dB mono; capture ratio 0.6 dB; alternate channel selectivity 70 dB; image rejection 85 dB; stereo separation 45 dB; frequency response 9-16,000 Hz ..... \$230

### MCS 3705 AM-FM Stereo Tuner

Features LED digital AM/FM frequency readout and analog tuning dial scale; IC-formed i-f stage and frequency linear FM front end; FM anti-birdy filter; PLL IC FM multiplex demodulator with low-pass filter; FM mode, muting, and band selector switches. FM section: frequency response 30-15,000 Hz  $+1/-1.5$  dB; THD at 1000 Hz 0.1% (mono), 0.2% (stereo); S/N 78 dB; capture ratio 1.0 dB; alternate channel selectivity 60 dB; stereo separation 50 dB at 1000 Hz; 4" H  $\times$  18" W  $\times$  13.6" D..... \$190

## PHASE LINEAR

### 5100 Series Two AM-FM Stereo Tuner

Features digitally-synthesized tuning with manual/auto up/down scan tuning and AM or FM six-station memory preset with LED indicators; LED digital frequency readout display; FM muting and record level check switches; five-LED signal-strength indicator display; PLL multiplex demodulator with auto pilot signal cancelling circuit; 25/75  $\mu$ sec de-emphasis switch. FM section: usable sensitivity 1.9  $\mu$ V (mono); 50-dB quieting 3.2  $\mu$ V (mono), 41.1  $\mu$ V (stereo); S/N 80 dB (mono), 75 dB (stereo); frequency response 20-15,000 Hz  $+0.2/-0.5$  dB; dist. at 1000 Hz 0.05% (mono), 0.08% (stereo); capture ratio 1.0 dB; alternate channel selectivity 60 dB; image rejection 80 dB; i-f rejection 100 dB; spurious rejection 80 dB; stereo separation 55 dB at 1000 Hz. AM usable sensitivity 300  $\mu$ V/m (IHF, ferrite antenna) and S/N 50 dB. 3 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  12" D..... \$450

## PHILIPS

### AH 180 AM-FM Stereo Tuner

Features microprocessor-controlled PLL synthesis digital tuning incorporating PLL synthesizer and



CPU large-scale ICs; auto/manual up/down scan tuning with LED digital frequency readout; automatic key-in tuning for exact frequency desired; 12-station AM/FM memory preset with LED indicators; tuning lock; five-LED signal-strength and local LED indicators; multiplex filter; mono/stereo and stereo only selectors; level 1(mono)/2 (stereo) FM muting and 850-kHz muting; output level control; 48-hr memory-storage standby when equipment is shut off or in case of power failure. FM section: IHF usable sensitivity 10.3 dBf (1.8  $\mu$ V); S/N 70 dB; frequency response 20-15,000 Hz  $+0.5/-1$  dB; THD 0.1% (mono), 0.15% (stereo); capture ratio 1.5 dB at 1 mV in. selectivity 70 dB at 100- $\mu$ V in. i-f, image, and spurious response rejection 100 dB; stereo separation 55 dB at 1000 Hz. Designed to complement AH 380 power amplifier and AH 280 preamplifier but integrates into any high-fidelity system; black metal cabinet; 2 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  13 $\frac{1}{8}$ " D ..... \$560

## PIONEER

### TX-9800 AM-FM Stereo Tuner

Features quartz-locked tuning system with LED; signal-strength and center tuning meters; wide/narrow AM-FM i-f bandwidth selector; multiplex noise filter; FM muting/mode and function switches with LEDs; output level control. FM section: usable sensitivity 1.5  $\mu$ V (mono); S/N 83 dB (mono), 80 dB (stereo); capture ratio 0.8 dB (wide), 2.0 dB (narrow); alternate channel selectivity 30 dB (wide), 85 dB (narrow); stereo separation 55 dB at 1000 Hz (wide); 6 $\frac{1}{8}$ " H  $\times$  17 $\frac{1}{8}$ " W  $\times$  15 $\frac{1}{8}$ " D..... \$450

### TX-7800 AM-FM Stereo Tuner

Features dual-gate MOS FET and frequency-linear four-gang variable capacitor in front end; servo-lock/touch sensor tuning with servo re-lock (when system's power is turned on again); PLL IC multiplex demodulator; quadrature discriminator; LED signal-strength and tuning indicator display; function switch with LEDs; wide/narrow AM i-f bandwidth selector; multiplex noise filter; FM muting/mode switch; output level control. FM section: usable sensitivity 1.6  $\mu$ V (mono); 50-dB quieting 3.3  $\mu$ V (mono), 39.2  $\mu$ V (stereo); S/N 83 dB (mono), 79 dB (stereo); frequency response 20-15,000 Hz  $+0.2/-0.5$  dB; dist. at 1000 Hz 0.05% (mono), 0.08% (stereo); capture ratio 1.0 dB; alternate channel selectivity 75 dB; image rejection 85 dB; i-f rejection 100 dB; spurious rejection 95 dB; stereo separation 50 dB at 1000 Hz. AM section: sensitivity 300  $\mu$ V/m (IHF, ferrite antenna), 15  $\mu$ V (IHF, external antenna); S/N 50 dB. 6 $\frac{1}{8}$ " H  $\times$  17 $\frac{1}{8}$ " W  $\times$  15 $\frac{1}{8}$ " D..... \$350

### TVX-9500 VHF/UHF TV Audio Tuner

Converts all VHF/UHF television audio signals to FM. Features VHF electronic tuning with LED channel indicators and front-panel touch buttons for channels 2-13; UHF rotary detent selector for channels 14-83 and fine tune control; i-f amplifier circuitry; one-stage differential amp and two-stage dc output amplifier circuitry; automatic frequency control. Specifications: 50-dB quieting sensitivity 32 dBf (22  $\mu$ V) at 25,000 Hz DEV.; S/N 65 dB; dist. at 65 dBf, 25,000 Hz DEV. 0.07% at 100 Hz, 0.07% at 1000 Hz, 0.2% at 6000 Hz; frequency response 50-10,000 Hz  $+0.5$  dB/-1.0 dB; capture ratio 1.0 dB; alternate channel selectivity 25 dB; image response -50 dB (VHF), -40 dB (UHF); i-f response -50 dB (VHF), -55 dB (UHF); AM suppression ratio 50 dB; antenna input 300 ohms and



75 ohms (VHF), 300 ohms (UHF); output level/impedance 400 mV/4700 ohms. 3 7/8" H x 16 1/4" W x 13 1/2" D ..... \$250

### TX-6800 AM-FM Stereo Tuner

Features FET and three-gang variable capacitor in front end; PLL multiplex; quadrature discriminator; built-in pilot canceller circuit; LED signal-strength and tuning indicator display; function switch with LEDs; FM muting. FM section: usable sensitivity 1.9  $\mu$ V (mono); 50-dB quieting 3.1  $\mu$ V (mono), 44  $\mu$ V (stereo); S/N 80 dB (mono), 74 dB (stereo); frequency response 20-15,000 Hz +0.5/-1.0 dB; dist. at 1000 Hz 0.1% (mono), 0.2% (stereo); capture ratio 1.0 dB; alternate channel selectivity 60 dB; image rejection 60 dB; i-f rejection 80 dB; spurious rejection 70 dB; stereo separation 40 dB at 1000 Hz. AM section: sensitivity 300  $\mu$ V/m (IHF, ferrite antenna), 15  $\mu$ V (IHF, external antenna); S/N 50 dB. 5 1/4" H x 17 3/4" W x 11 3/4" D ..... \$200

## QUAD BY ACOUSTICAL MFG.

### FM3 VHF/FM Tuner

Front panel features dial scale with five preset markers controllable by turning knob; rear-panel preset noise-suppression adjustment; all other controls provided by Quad 33 control unit. Dist. 0.3% at 1000 Hz and  $\pm$ 40 kHz deviation; capture ratio 3 dB; alternate channel selectivity 46 dB  $\pm$ 400 kHz; image rejection 56 dB; i-f rejection 80 dB; channel separation 40 dB at 1000 Hz; frequency response 20-15,000 Hz  $\pm$ 1 dB; 92 mm H x 260 mm W x 165 mm D..... \$395

## ROTEL

### RT-2100 FM Stereo Tuner

Quartz PLL FM tuner with built-in Dolby noise-reduction circuit. Features quartz PLL tuning and multiplex section with dual wide/narrow band selection; LED signal-strength and center-tuning configuration readout; digital station readout; FM muting switch; multipath switch; flywheel tuning. IHF sensitivity 1.6  $\mu$ V mono, 29 dBf stereo; mono S/N 80 dB (IHF); stereo HD 0.07% (wide), 0.2% (narrow); capture ratio 1.0 dB; IHF alternate channel selectivity 35 dB (wide), 80 dB (narrow); stereo separation 50 dB (wide) at 1000 Hz; image and i-f rejection 115 dB; AM suppression 55 dB; frequency response 30-15,000 Hz  $\pm$ 0.5 dB. 5 1/4" H x 19" W x 12 1/2" D ..... \$600

**RT-2000.** Similar to RT-2100 but AM section included; IHF sensitivity 9.3 dBf (1.6  $\mu$ V) mono, 30 dBf stereo; stereo HD 0.1%; capture ratio 1.0 dB; alternate channel selectivity 75 dB (IHF); frequency response 30-15,000 Hz +0.5/-1 dB; stereo separation 45 dB at 1000 Hz. AM section: IHF sensitivity 12.5  $\mu$ V; S/N 50 dB; image rejection 60 dB; selectivity 40 dB. Features similar less LED meter displays and Dolby noise-reduction circuit; has signal-strength and tuning meters. .... \$430

### RT-1000 AM-FM Stereo Tuner

Features FET front end; PLL multiplex section; LED signal-strength and tuning indicators; hi-blend and muting switch. FM section: usable sensitivity 1.9  $\mu$ V (mono); 50-dB quieting sensitivity 3.8  $\mu$ V (mono); S/N 70 dB (mono), 65 dB (stereo); dist. 0.3% at 1000 Hz (stereo); capture ratio 1.5 dB; i-f rejection 60 dB; stereo separation 40 dB at 1000 Hz. AM usable sensitivity 200  $\mu$ V/m (IHF, ferrite antenna); selectivity 30 dB; 3 7/8" H x 16 1/4" W x 11 1/2" D ..... \$250

## SAE

### 8000 FM Digital Tuner

Features LED digital frequency display; five-gang, dual-gate FET front end; log meters for center-channel tuning and signal strength. Sensitivity 8.5 dBf (1.6  $\mu$ V); linear-phase monolithic i-f filters with PLL MPX circuitry; 0.2% THD; capture ratio 1.5 dB; AM suppression 100 dB; image rejection 100 dB; selectivity 120 dB; stereo separation 30 dB (over 50-15,000 Hz); 5.25" H x 19" W x 11" D.... \$800

### T14 AM-FM Stereo Tuner

Features varactor front end; LED digital frequency readout; quartz-lock and synthesized touch tuning; five-station memory preset for AM and FM; LED signal-strength/multipath and output level bar graph displays; variable i-f bandwidth selector; linear phase filters; PLL multiplex filter. 50-dB quieting 34.8 dBf (stereo); S/N 76 dB; THD 0.15% (stereo) ..... \$575

### 3200 FM Digital Tuner

Features digital frequency readout; front-end and linear-phase filters; signal-strength and center tuning LED displays; 75- and 300-ohm antenna inputs; tape out jack. IHF usable sensitivity 10.3 dBf (1.8  $\mu$ V); 50-dB quieting sensitivity 37.2 dBf (40  $\mu$ V); dist. less than 0.2% stereo, 0.15% mono; stereo separation 35 dB from 50-10,000 Hz. \$500

### T7 AM-FM Stereo Tuner

Features digital frequency readout; quartz-lock tuning; LED signal-strength/multipath and output level bar graph displays. 50-dB quieting 34.8 dBf (stereo); S/N 67 dB; THD 0.22% (stereo), 0.11% (mono) ..... \$400

### T3U AM-FM Stereo Tuner

Features linear AM-FM dial; signal-strength and FM center-channel tuning meters; PLL multiplex; illuminated pushbutton modes. IHF usable sensitivity 10.3 dBf (1.8  $\mu$ V); capture ratio 1.5 dB; THD 0.15% mono, 0.25% stereo ..... \$275

## SANSUI

### TU-X1 AM-FM Stereo Tuner

Features separate AM and FM tuning systems with signal-strength (combined signal-strength/multipath in FM) and tuning meters, switchable output level control, switchable muting, and wide/narrow i-f bandwidth controls in each section; seven-gang tuning capacitor; dc composite and dc audio output amplifier circuitry; 200-V  $\mu$ sec multiplex driver in FM section and synchronized PLL product detector circuitry in AM section; LED AM and FM wide and narrow and FM stereo indicators; calibration tone switch control; noise filter; upper/lower beat canceller. FM IHF sensitivity 1.49  $\mu$ V; 50-dB quieting sensitivity 34.0 dBf (stereo); dist. 0.03% (stereo); selectivity 80 dB (narrow band), 55 dB (wide band); S/N 80 dB (stereo); matte black finish..... \$980

### TU-S9 AM-FM Stereo Tuner

Features quartz PLL digital synthesizer tuning with auto/manual up/down scan tuning and LED digital



frequency readout; ten-station AM/FM memory preset with LED indicators; five-LED signal/multipath indicators with meter selector switch; noise canceller, calibration tone, and FM muting/auto or mono mode switches; LED search, FM stereo and direct set indicators. FM section: usable sensitivity 10.5 dBf; S/N 85 dB; THD 0.06%; capture ratio 1.0 dB..... \$400

### TU-S7S AM-FM Stereo Tuner

Features quartz PLL digital synthesizer tuning with auto/manual up/down scan tuning and LED digital frequency readout; six-station AM/FM memory preset with lighted indicators; FM noise canceller, FM auto/mono mode, and AM/FM selector switches; five-LED signal and LED stereo and search indicators. FM section: usable sensitivity 10.5 dBf; S/N 83 dB; THD 0.07%; capture ratio 1.0 dB; silver finish ..... \$320

**TU-S7B.** Same as TU-S7S except in black ..... \$320

### TU-417 AM-FM Stereo Tuner

Features FET r-f stage, i-f section with three differential amplifier limiter stages, and four-element lin-

ear phase ceramic filter; PLL stereo demodulator; signal-strength and tuning meters; switchable muting and noise canceller selectors; output level control; input selector for auto/mono FM and AM with FM stereo LED. FM section: IHF sensitivity 10.1 dBf (mono); frequency response 20-15,000 Hz +0.5/-1 dB; dist. 0.07% (mono), 0.09% (stereo); satin-black front panel with detachable rack-mount handles ..... \$275

**TU-217.** Similar to TU-417 minus noise-canceller circuitry and combined muting and auto/mono FM mode switch; FM sensitivity 10.1 dBf; THD 0.12%; capture ratio 1 dB ..... \$190

### T-80 AM-FM Stereo Tuner

Features quartz-locked digital tuning with analog dial and LED frequency readout; LED signal-strength and tuning indicators; noise canceller switch; FM auto or mono mode/muting and AM/FM selector switches. FM section: IHF usable sensitivity 10.8 dBf; S/N 72 dB; THD 0.2%; selectivity 60 dB; capture ratio 1.0 dB ..... \$270

### T-60 AM-FM Stereo Tuner

Features FET input and PLL stereo multiplex demodulator; three-gang tuning capacitor; five-LED signal-strength and center-tuning indicators; FM auto or mono mode/muting and AM/FM selector switches. FM section: IHF usable sensitivity 10.8 dBf; S/N 72 dB; THD 0.2%; selectivity 60 dB; capture ratio 1.0 dB ..... \$150

### T-77 AM-FM Stereo Tuner

See Section 1, Receivers, under Sansui's Super Compo Series 900.

## SANYO

### PLUS T55 AM-FM Stereo Tuner

Features four varactor tuning diodes in FM front

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end; quartz-lock frequency synthesizer digital tuning with LED analog and frequency digital readout display; 12-station memory tuning with LEDs; fluorescent signal-strength and FM tuning display; variable FM muting threshold; wide-narrow i-f bandwidth selector; passive four-pole LC multiplex filter; input selector and output level control. FM section: usable sensitivity 1.8  $\mu\text{V}$  (mono); 50-dB quieting 3.0  $\mu\text{V}$  (mono), 36  $\mu\text{V}$  (stereo); THD at 1000 Hz, mono 0.15% (narrow), 0.09% (wide), stereo 0.2% (narrow), 0.1% (wide); frequency response 20-15,000 Hz  $\pm 1/-2$  dB; alternate channel selectivity 80 dB (narrow), 55 dB (wide),  $\pm 400$  kHz; capture ratio 1.8 dB (narrow), 1.2 dB (wide); stereo separation 42 dB (narrow), and 48 dB (wide) at 1000 Hz; spurious rejection 80 dB; image rejection 70 dB; i-f rejection 90 dB. AM section: usable sensitivity 300  $\mu\text{V/m}$  (ferrite, external antenna); S/N 45 dB. Includes rack-mount handles; 1 1/2" H  $\times$  17 1/2" W (19" with handles)  $\times$  10 1/2" D..... \$350 **PLUS T35**. Similar to PLUS T55 without 12-station memory preset; features "sampling quartz locked" tuning system with illuminated analog tuning dial, digital frequency readout, and on/off locked switch; record level calibration oscillator..... \$300

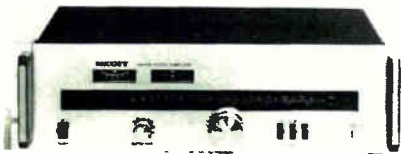
#### FMT 611K AM-FM Stereo Tuner

MOS-FET FM front end with ceramic i-f filters and PLL multiplex decoder. Features FM muting switch; signal-strength and center-channel tuning meters; multiplex noise switch; FM stereo indicator; flywheel tuning. FM section: IHF usable sensitivity 10.8 dBf (1.9  $\mu\text{V}$ ); S/N 75 dB mono, 65 dB stereo; dist. at 1000 Hz 0.08% mono, 0.02% stereo; capture ratio 1.0 dB; alternate channel selectivity 70 dB; image and i-f rejection 55 dB; AM rejection 50 dB; stereo separation 45 dB at 1000 Hz; 300- and 75-ohm antenna inputs. AM section: IHF sensitivity 300  $\mu\text{V/m}$ ; selectivity 43 dB; S/N 65 dB; image rejection 50 dB; i-f rejection 48 dB; built-in antenna. 5 1/2" H  $\times$  16 1/2" W  $\times$  13 1/2" D..... \$170

### H.H. SCOTT

#### 570T AM-FM Stereo Tuner

Features four-gang FM tuning capacitor and dual-gate MOS FET in front end; PLL multiplex demodu-



lator; signal-strength and tuning meters; multiplex filter, mode and muting switches; output level control; rear-panel 25/50/75  $\mu\text{sec}$  de-emphasis switch. FM section: IHF sensitivity 10.3 dBf (1.8  $\mu\text{V}$ ); 50-dB quieting sensitivity 16.1 dBf (3.5  $\mu\text{V}$ ) mono, 35.6 dBf (33  $\mu\text{V}$ ) stereo; S/N 75 dB (mono), 70 dB (stereo); frequency response 25-15,000 Hz  $\pm 2$  dB; dist. 0.1% (mono), 0.2% (stereo); capture ratio 1.0 dB; alternate channel selectivity 70 dB; image rejection 80 dB; i-f and spurious rejection 90 dB; stereo separation 50 dB at 1000

#### NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 24.

Hz. AM usable sensitivity 250  $\mu\text{V/m}$  (bar antenna) and S/N 50 dB. 5 1/2" H  $\times$  17" W  $\times$  11 1/2" D.... \$250

#### 530T AM-FM Stereo Tuner

Features four-gang FM tuning capacitor and dual-gate MOS FETs in front end; combined signal-strength/center tuning meter; muting and mode switches; rear-panel 25/50/75  $\mu\text{sec}$  de-emphasis switch. FM section: IHF sensitivity 10.8 dBf (1.9  $\mu\text{V}$ ); 50-dB quieting sensitivity 16.7 dBf (3.8  $\mu\text{V}$ ) mono, 36 dBf (35  $\mu\text{V}$ ) stereo; S/N 72 dB (mono), 67 dB (stereo); frequency response 25-15,000 Hz  $\pm 2$  dB; dist. 0.15% (mono), 0.3% (stereo); capture ratio 1.5 dB; alternate channel selectivity 60 dB; image rejection 65 dB; i-f rejection 85 dB; spurious rejection 80 dB; stereo separation 45 dB at 1000 Hz. AM usable sensitivity 250  $\mu\text{V/m}$  (bar antenna) and 45 dB S/N. 5 1/2" H  $\times$  17" W  $\times$  11 1/2" D..... \$200

### SHARP

#### ST-30 Broadcast Tuner

See Section 1, Receivers, under Sharp's System 30 Pro Series.

### SHERWOOD

#### S-32 CP AM-FM Stereo Tuner

Features cross-coupled PLL stereo multiplex demodulator; high inertia flywheel tuning; signal-strength and tuning meters; multiplex noise filter; FM muting; output level control; selector switch with LEDs. FM section: IHF usable sensitivity 1.7  $\mu\text{V}$  (mono); 50-dB quieting 2.8  $\mu\text{V}$  (mono); IHF S/N 74 dB (mono), 68 dB (stereo); frequency response 20-15,000 Hz  $\pm 1/-2$  dB; THD at 1000 Hz 0.1% (mono), 0.2% (stereo); capture ratio 1.0 dB; alternate channel selectivity 70 dB; image rejection 60 dB; i-f rejection 75 dB; spurious rejection 85 dB; stereo separation 45 dB at 1000 Hz. AM sensitivity 15  $\mu\text{V}$ . 5 1/2" H  $\times$  17" W  $\times$  12 1/2" D..... \$290

### SONY

#### ST-J60 FM Stereo Tuner

Features varactor diode and MOS FET amplification in front end; quartz lock frequency synthesis tuning with LED digital frequency readout; eight-station memory preset with LEDs; manual or autoscanning tuning; LED multipath/signal strength meter display with selector; defeatable muting and built-in 400-Hz calibration test tone controls; front-panel insert cards to indicate preset stations. 50-dB quieting sensitivity 3.5  $\mu\text{V}$  (mono), 40  $\mu\text{V}$  (stereo); S/N 77 dB (mono), 72 dB (stereo); frequency response 30-15,000 Hz  $\pm 0.2/-0.5$  dB; THD and IM dist. at 1000 Hz 0.06% (mono), 0.08% (stereo); capture ratio 1.0 dB; alternate channel selectivity 85 dB at 400 Hz; image rejection 85 dB; i-f rejection 95 dB; spurious response  $-100$  dB; stereo separation 50 dB at 1000 Hz; AM suppression 60 dB; 3 1/2" H  $\times$  17" W  $\times$  12 1/2" D..... \$400

#### ST-J55 AM-FM Stereo Tuner

Features quartz lock digital frequency synthesis tuning (0.002% accuracy) with separate automatic



and manual up/down scan tuning and LED digital frequency readout; eight-station AM/FM memory preset with LED digital station recall readout (metal nitride oxide semiconductor IC retains last station stored before set is turned off or unplugged); five-LED signal-strength and three-LED center tuning indicators; pushbutton stereo muting, calibration tone, and AM/FM controls; 3 1/2" H  $\times$  17" W  $\times$  12 1/2" D..... \$300

#### ST-A35 AM-FM Stereo Tuner

Features acute servo lock tuning with three-LED tuning indicators; variable capacitor r-f front end with four-gang FM and two-gang AM tuning; five-LED signal-strength indicators; pushbutton calibration tone, hi blend, high/low level, and muting/stereo selectors; FM mono THD 0.08% at 1000 Hz; FM alternate channel selectivity 80 dB; FM stereo separation 50 dB at 1000 Hz; 3 1/2" H  $\times$  17" W  $\times$  16 1/2" D ..... \$200

#### ST-242 AM-FM Stereo Tuner

Features five-station FM preset with LED indicators; AM/FM manual pushbutton tuning; stereo-mono mode/muting switch; five-LED signal-strength indicators; LED FM tuned and stereo indicators. FM section: S/N 70 dB; stereo THD 0.3% at 1000 Hz; capture ratio 1.5 dB; stereo separation 45 dB at 1000 Hz; 4 1/2" H  $\times$  17" W  $\times$  12 1/2" D ..... \$170

### Precise Series

#### ST-P7J Mini FM Stereo Tuner

Features varactor diodes and MOS FET front end; quartz lock frequency synthesis tuning with LED digital frequency display; eight-station memory preset; manual or autoscanning tuning; LED signal-strength meter display; defeatable muting; front-panel inset cards indicate preset stations; feather-touch function controls with LEDs. 50-dB quieting sensitivity 3.5  $\mu\text{V}$  (mono), 40  $\mu\text{V}$  (stereo); S/N 77 dB (mono), 72 dB (stereo); frequency response 30-15,000 Hz  $\pm 0.2/-0.5$  dB; THD and IM dist. at 1000 Hz 0.06% (mono), 0.08% (stereo); capture ratio 1.0 dB; selectivity 85 dB at 400 Hz; image rejection 85 dB; i-f rejection 95 dB; spurious rejection 100 dB; stereo separation 50 dB at 1000 Hz; AM suppression 60 dB; complements Precise Series TA-P7F integrated amplifier and PS-P7X turntable; 3 1/2" H  $\times$  8 1/2" W  $\times$  13" D ..... \$500

### STUDER/REVOX

#### Revox B760 FM Digital Tuner

Digital frequency synthesizer FM tuner with manual or memory tuning capacity of up to 15 pre-tuned



channels through pushbutton operation; five-digit LED front-panel display of 50-kHz-step station frequencies; variable muting and separation; Dolby-B card option available; logarithmic signal-strength and center-tuning meters; multipath scope output. IHF 50-dB quieting sensitivity 2.5  $\mu\text{V}$ ; capture ratio 2 dB at 65 dBf; spurious, image, and i-f rejection 106 dB or better; mid-band separation 42 dB; AM suppression 75 dB; THD less than 0.15% (stereo and mono); S/N 78 dB at 65 dBf; rotor-antenna position memory; can be used with European, Asian, and U.S. station allocations and de-emphasis curves and with any standard ac line voltages; 6" H  $\times$  17 1/2" W  $\times$  13 1/2" D ..... \$1649

### TANDBERG

#### TPT-3001 FM Tuner

Features computer-type logic servo tuning system;



eight-ganged varactor tuning diodes in front end



and dual-gate MOS FETs in r-f and mixer stages; eight-station memory preset with touchbutton recall and LED program readout; wide/normal/narrow i-f bandwidth selector; autorange signal-strength with  $\times 1000$  meter range LED and center tuning/preset frequency meters; mono, ANC, servo, and muting switches with LEDs; three-circuit muting; output level control; S/N 90 dB; narrow selectivity 125 dB. .... \$1500

## TECHNICS

### ST-9038 FM Stereo Tuner

Quartz-synthesizer FM stereo tuner. Features quartz-oscillated digital program readout; three-position muting switch; mode switch for pink noise, auto, and mono; auto hi-blend on/off; power on/off; auto tune down/up dial and main auto tuning dial. IHF sensitivity 12.8 dBf (1.2  $\mu$ V) at 75 ohms; 50-dB quieting sensitivity at 75 ohms 18.1 dBf (2.2  $\mu$ V) mono, 38.1 dBf (22  $\mu$ V) stereo; THD 0.1% (mono), 0.15% (stereo); S/N 75 dB (mono); frequency response 20-18,000 Hz  $+0.1/-0.5$  dB; capture ratio 1.0 dB; alternate channel selectivity 75 dB; image response  $-105$  dB; i-f response  $-105$  dB; spurious response  $-105$  dB; AM suppression 55 dB; stereo separation 45 dB at 1000 Hz; output level 0-1.5 V. 1 $^{19}/_{32}$ " H  $\times$  18 $^{1}/_{16}$ " W  $\times$  11 $^{1}/_{32}$ " D ..... \$600

**SH-9038.** 32-step microprocessor-controlled programming unit (see Section 14, Accessories, under Technics) ..... \$600

### ST-9030 FM Stereo Tuner

Professional Series component; has automatic narrow and wide i-f bandwidth selection; PLL MPX IC circuitry; pilot and subcarrier cancelling circuits; servo tuning circuit; eight-ganged variable tuning capacitor; signal meter (linear to 81 dBf); sensitivity 1.2  $\mu$ V; 50-dB quieting sensitivity at 75 ohms 18.1 dBf (2.2  $\mu$ V) mono, 38.1 dBf (22  $\mu$ V) stereo; THD at 1000 Hz 0.08% (mono and stereo wide), 0.15% (mono narrow), 0.3% (stereo narrow); S/N 80 dB mono; frequency response 20-18,000 Hz  $+0.1/-0.5$  dB variable; capture ratio 0.8 dB (wide); alternate channel selectivity 25 dB (wide), 90 dB (narrow); image response  $-135$  dB; i-f response  $-135$  dB; AM suppression 58 dB (wide); stereo separation 50 dB (1 kHz, wide) ..... \$460

### ST-S7 AM-FM Stereo Tuner

Quartz synthesizer digital AM-FM stereo tuner with digital signal processing, dc amplification, detec-



tion, and stereo decoding, and variable cancel circuitry with automatic level adjustment and jitter distortion elimination circuitry. Features 16-pushbutton preset tuning (8 AM and 8 FM) with manual up/down scan tuning; fluorescent digital display with LED channel indicators and memory (stores last station before tuner is off); built-in programmable timer (two programs can be set to go on and off every day and additional program set for particular time) with 24-hr digital quartz clock; 440-Hz 50% modulation recording level check switch; optional FM antenna tuning control with SH-F101 indoor antenna. FM section: sensitivity 0.95  $\mu$ V; 50-dB quieting 1.8  $\mu$ V (mono), 20  $\mu$ V (stereo); THD at 1000 Hz 0.1% (mono), 0.15% (stereo); S/N 77 dB (mono), 72 dB (stereo); frequency response 5-18,000 Hz  $+0.2/-0.5$  dB; alternate channel selectivity 85 dB  $\pm$  400 kHz; capture ratio 1.0 dB; image rejection 80 dB; i-f rejection 110 dB; stereo separation 55 dB at 1000 Hz; 2 $^{1}/_{32}$ " H  $\times$  16 $^{1}/_{16}$ " W  $\times$  12 $^{1}/_{32}$ " D ..... \$350

**SH-F101.** Electronic tuning dipole indoor FM antenna for ST-S7, ST-S3, ST-S1, ST-Z1, and ST-K80B tuners; employs zig-zag pattern antenna element and two varactor diodes and coils; battery-powered with LED battery life indicator; frequency range 88-108 MHz variable tuning; relative gain  $-2$  dB; half-power angle 90 degrees; output impedance

75 ohms; standing wave ratio 1.2 or less; 6 $^{1}/_{16}$ " H  $\times$  16 $^{7}/_{32}$ " W  $\times$  4 $^{1}/_{16}$ " D ..... \$80

### ST-S3 AM-FM Stereo Tuner

Quartz synthesizer digital tuner with four narrow-tolerance variable capacitance diodes and four-pole MOS FET front end. Features seven AM/FM push-button preset with LEDs and memory storage of last station preset; manual up/down scan tuning; LED digital radio frequency display; LED quartz-locked tuning indicator; AM-FM muting/FM mode and AM/FM selector. FM section: sensitivity 1.9  $\mu$ V; 50-dB quieting 3.9  $\mu$ V (mono), 47  $\mu$ V (stereo); THD at 1000 Hz 0.15% (mono), 0.3% (stereo); S/N 75 dB (mono), 70 dB (stereo); frequency response 20-15,000 Hz  $+0.5/-1.5$  dB; alternate channel selectivity 75 dB; capture ratio 1.0 dB; image rejection 65 dB; i-f rejection 100 dB; stereo separation 45 dB at 1000 Hz; 2 $^{1}/_{32}$ " H  $\times$  16 $^{1}/_{16}$ " W  $\times$  9 $^{1}/_{16}$ " D. .... \$280

### ST-S1 AM-FM Stereo Tuner

AM-FM stereo tuner with active servo lock and r-f FET front end. Features five-LED signal strength and three-LED tuning indicators; active servo lock, AM-FM muting/FM mode, and AM/FM selector switches; three-ganged variable tuning capacitor. FM section: sensitivity 1.9  $\mu$ V; 50-dB quieting 3.9  $\mu$ V (mono), 47  $\mu$ V (stereo); THD at 1000 Hz 0.15% (mono), 0.3% (stereo); S/N 75 dB (mono), 70 dB (stereo); frequency response 20-15,000 Hz  $+0.5/-1.5$  dB; alternate channel selectivity 75 dB; capture ratio 1.0 dB; image rejection 55 dB; i-f rejection 85 dB; stereo separation 45 dB at 1000 Hz; 5 $^{1}/_{32}$ " H  $\times$  16 $^{1}/_{16}$ " W  $\times$  9 $^{1}/_{16}$ " D ..... \$180

**ST-Z1.** Similar to ST-S1 minus active servo lock tuning system and LED signal-strength and tuning indicators; has FM tuning/AM signal meter and FM muting; FM sensitivity 2.0  $\mu$ V, frequency response 20-15,000 Hz  $+1/-2$  dB, alternate channel selectivity and image rejection 60 dB, i-f rejection 72 dB, and stereo separation 40 dB at 1000 Hz; 5 $^{1}/_{32}$ " H  $\times$  16 $^{1}/_{32}$ " W  $\times$  8 $^{1}/_{2}$ " D ..... \$150

## TOSHIBA

### F15 Micro FM Stereo Tuner

Features PLL quartz crystal digital synthesizer tuning with up/down scan tuning and LED digital frequency/memory channel readout; ten-station memory preset; mono and rec calibration switches; manual/auto mode. Usable sensitivity 0.95  $\mu$ V; S/N 72 dB (mono), 68 dB (stereo); frequency response 20-15,000 Hz  $+0.2/-0.8$  dB; dist. at 1000 Hz 0.15% (mono), 0.25% (stereo); capture ratio 1.0 dB; alternate channel selectivity 75 dB; image rejection 50 dB; i-f rejection 80 dB; spurious rejection 100 dB; stereo separation 45 dB at 1000 Hz; silver finish; 2.1" H  $\times$  10.1" W  $\times$  7.7" D ..... \$360

**F15B.** Black finish ..... \$370

### ST-665 AM-FM Stereo Tuner

Features PLL quartz crystal digital synthesizer tuning with up/down scan tuning and LED digital fre-



quency readout display; six-station memory preset for AM and FM; five-LED signal-strength bar display; function, mode, and record calibration controls. FM section: usable sensitivity 1.8  $\mu$ V (mono); S/N 72 dB (mono), 68 dB (stereo); frequency response 20-15,000 Hz  $+0.5/-1.5$  dB; dist. 0.15% (mono), 0.2% (stereo); capture ratio 1.0 dB; alternate channel selectivity 80 dB; image rejection 60 dB; spurious rejection 75 dB; stereo separation 45 dB at 1000 Hz. AM usable sensitivity 300  $\mu$ V/m and S/N 50 dB; 2.3" H  $\times$  16.5" W  $\times$  11.5" D. \$300

### ST-445 AM-FM Stereo Tuner

Features digitally-synthesized tuning with LED digital frequency readout; six-station AM/FM memory preset; LED signal-strength indicators; record calibration control. Usable sensitivity 1.9  $\mu$ V; S/N 68

dB (mono), 72 dB (stereo); dist. at 1000 Hz 0.15% (mono), 0.13% (stereo); alternate channel selectivity 70 dB; stereo separation 40 dB at 1000 Hz; 5.8" H  $\times$  16.6" W  $\times$  10.1" D ..... \$260

### ST-335 AM-FM Stereo Tuner

Features FET front end with ceramic filters; PLL IC MPX circuitry; twin tuning meters; linear tuning scale; tuning knob; built-in FM broadcast reference signal; FM muting/mode switch; LED stereo indicator. FM section: sensitivity (IHF) 11.2 dBf (2.0  $\mu$ V); S/N 73 dB (mono), 65 dB (stereo); capture ratio 1.0 dB; alternate channel selectivity 60 dB; stereo separation 40 dB at 1000 Hz; frequency response 30-15,000 Hz  $\pm 1$  dB. AM section: sensitivity 300  $\mu$ V/m; S/N 45 dB; selectivity 25 dB. 3 $^{1}/_{16}$ " H  $\times$  16 $^{1}/_{16}$ " W  $\times$  10 $^{1}/_{16}$ " D ..... \$160

**ST-335MK II.** Matte black version of ST-335 with center tuning and signal-strength LED indicators ..... \$180

## YAMAHA

### T-2 FM Stereo Tuner

Features digital frequency display; r-f mode selector; i-f mode selector; automatic DX; digital readout; slide-rule dial; 330-Hz record calibration; signal Q meter. FM usable sensitivity 8.8 dBf (1.5  $\mu$ V); 50-dB quieting sensitivity 13.2 dBf (2.5  $\mu$ V) mono, 34.2 dBf (28  $\mu$ V) stereo; THD 0.05% (mono and stereo); S/N 88 dB (mono); frequency response 10-18,000 Hz  $+0.3/-3$  dB; capture ratio 1 dB; alternate channel selectivity 100 dB; image response  $-120$  dBf; i-f response  $-120$  dBf; AM suppression 60 dB; stereo separation 55 dB at 1000 Hz; output 0.5 V fixed, 1 V variable. 2 $^{1}/_{16}$ " H  $\times$  17 $^{1}/_{16}$ " W  $\times$  13 $^{1}/_{16}$ " D ..... \$750

### CT-1010 AM-FM Stereo Tuner

Has PLL multiplex decoder; wide-gap five-gang variable capacitor; image response  $-110$  dB; sensitivity 1.9  $\mu$ V; 19-kHz pilot carrier cancellation; manual tuning with automatic disengagement of afc; muting circuit; signal strength/quality and center-zero metering; 333-Hz recording signal calibration generator ..... \$385

### T-1 AM-FM Stereo Tuner

Features DX selection circuitry for automatic selection of i-f bandwidth; signal quality meter; record calibration system; direct-current amplifiers. FM section: usable sensitivity 9.8 dBf (1.7  $\mu$ V); 50-dB quieting sensitivity 14.8 dBf (3  $\mu$ V) mono, 36 dBf (35  $\mu$ V) stereo; THD 0.05% (mono and stereo); S/N 80 dB (mono); frequency response 30-15,000 Hz  $\pm 0.5$  dB; capture ratio 1.0 dB; alternate channel selectivity 92 dB; image response  $-90$  dB; i-f response  $-100$  dB; AM suppression 65 dB; stereo separation 55 dB at 1000 Hz; output 0.5 V fixed. AM section: sensitivity 15  $\mu$ V (IHF); selectivity 30 dB; S/N 50 dB. 3 $^{1}/_{16}$ " H  $\times$  17 $^{1}/_{16}$ " W  $\times$  14 $^{1}/_{16}$ " D. \$365

### T-550 AM-FM Stereo Tuner

AM-FM stereo tuner with Uniresonance ceramic filters in i-f stage and dc negative-feedback PLL FM



multiplex demodulator; dial-pointer two-LED tuning indicator; six-LED signal-strength indicators; built-in recording calibration oscillator; FM muting/mode switch; AM/FM switch; AM loop antenna. FM section: usable sensitivity 0.85  $\mu$ V (IHF, 300/75 ohms); 50-dB quieting 3  $\mu$ V (mono), 40  $\mu$ V (stereo); THD at 1000 Hz 0.05% (mono), 0.07% (stereo); S/N (IHF) 84 dB (mono), 80 dB (stereo); frequency response 50-10,000 Hz  $+0.3/-0.5$  dB; capture ratio 1.5 dB; alternate channel selectivity 65 dB (IHF); image rejection 60 dB; i-f rejection 90 dB; spurious response  $-80$  dB; stereo separation 50 dB at 1000 Hz. AM IHF sensitivity 15  $\mu$ V and S/N 52 dB; 3 $^{1}/_{16}$ " H  $\times$  17 $^{1}/_{16}$ " W  $\times$  13 $^{1}/_{16}$ " D ..... \$190



# Single-play vs. multiplay: the argument is over.

BSR is proud to put an end to the seemingly endless debate over what style of turntable is the "correct" turntable—single-play or multiplay.

## **Introducing the BSR Pro III Series— the third generation of turntables.**

The BSR Pro III Series combines the precision and accuracy of the finest single-play and the ease and versatility of a multiplay. At a price well within the range of both.

### **The tonearm—a story in itself.**

This may be the finest tonearm ever offered on a multiplay turntable. It has an extremely low mass carbon fiber head shell, designed to be used with today's finest low-mass cartridges and measures an impressive 237mm from pivot to stylus. And, its sleek, rapier-straight line will give you unerring tracking performance.

### **Two motors are better than one.**

The BSR Pro III Series 300 and 200 models feature a direct response FG Belt Drive turntable with a quartz-locked control system that references the speed of the motor to that of the turntable. Additionally, there is an independent servomotor that drives the tonearm only during cycle changes. This unique two-motor design eliminates complicated cams, trip switches, etc.—all of which can interfere with optimum turntable performance.

### **Independent tonearm and turntable suspension.**

BSR Pro III Series turntables utilize a floating suspension system to isolate both the turntable and the tonearm. Mounted together on a separate subplate, independent of base, cover and controls, this eliminates most causes of vibration and acoustic feedback.

### **Three-record umbrella spindle— short and sweet.**

Unlike traditional six-record multiplays, the BSR

Pro III Series turntables are designed to play up to three records. The decreased height and weight of the record stack allows for a much more precise vertical tracking angle and overall turntable performance.

### **Digital readouts.**

BSR Pro III Series turntables have a multifunction digital display, allowing you to determine both quartz-locked and variable turntable speed, elapsed time, stylus time and exact turntable leveling.

### **Lateral cueing.**

The BSR Pro III Series has the only lateral cue control on a multiplay turntable. It provides fast and slow cueing in both directions, allowing for precise location of any portion of a record.

### **Remote control.**

For total convenience, the BSR Pro III Series 300 has infrared remote control, which handles all major turntable functions, including volume control, from as far away as 40 feet.

### **Look at the look.**

The BSR Pro III Series has a handsome low-profile design, with all electronic pushbutton controls conveniently placed outside the closed dustcover.

### **Add it up—both sides win.**

Whether you're a believer in single-play or multiplay turntables, we believe that the BSR Pro III Series offers exactly what you demand. We invite you to examine it at your audio dealer.

**BSR Pro III Series.**  
The Third Generation of Turntables.

BSR (USA) Ltd., Blauvelt, New York 10913. BSR (Canada) Ltd., Rexdale, Ontario.



# 4

# TURNTABLES

## ADC

### 3001-DD Turntable

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable without tonearm; dc brushless motor; strobe with  $\pm 5\%$  speed adjustment; wow and flutter 0.035% (DIN 45-507); rumble -70 dB (DIN B); 3" H  $\times$  18 $\frac{3}{8}$ " W  $\times$  14 $\frac{1}{4}$ " D..... \$250

## AIKO by TZL INTERNATIONAL

### AT-83 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto return/cut tonearm; 4-pole synchronous motor; 12-in aluminum platter; S-shaped arm with magnetic cartridge and diamond stylus; wow and flutter 0.1% wrms; S/N 45 dB; 6.2" H  $\times$  16.9" W  $\times$  14" D..... \$160

## AIWA

### LP-3000U Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) linear-track programmable quartz-lock direct-drive turntable with automatic tonearm; pulse-synthesizer quartz PLL servomotor; 7 $\frac{3}{16}$ -in linear-track and statically-balanced zinc diecast straight tonearm with removable 16.5-g aluminum diecast headshell and independent coreless motor drive; 31-cm zinc diecast platter. Features microprocessor-controlled automatic 15-selection programming with auto repeat (includes repeat of selection segment), cue and review, forward and back skipping, and pause; infrared LED disc sensor with disc size selector for 17-, 25-, and 30-in discs; quartz-locked speed control with LED readout; pitch control ( $\pm 6\%$ ) with LED; feather-touch electronic controls. Wow and flutter 0.025% wrms; rumble -75 dB (DIN B); tracking force range 0-3 g; cartridge weight range 4-15 g (with accessory headshell). Resonance-absorbing height-adjustable insulator feet; dustcover does not cover operations controls; 5 $\frac{1}{16}$ " H  $\times$  18 $\frac{1}{16}$ " W  $\times$  17 $\frac{3}{16}$ " D..... \$1000

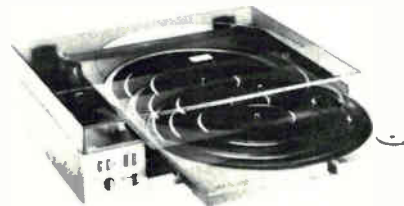
### AP-2600 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-locked direct-drive turntable with auto lift/stop tonearm; quartz PLL servomotor; 9 $\frac{3}{16}$ -in statically-balanced zinc-diecast S-shaped tonearm with viscous-damped cueing and adjustable anti-skating; 13 $\frac{3}{16}$ -in aluminum alloy diecast platter. Features digital speed readout display; pitch control ( $\pm 6\%$  in 0.1% steps) with LED digital readout; speed adjust; rec-sync mechanism; built-in muting; solenoid feather-touch controls. Wow and flutter 0.025% wrms; rumble -75 dB (DIN B); tracking force range 0-3 g; cartridge weight range 3-14 g; resin cabinet with height-adjustable insulators; removable hinged dustcover; 6" H  $\times$  18 $\frac{1}{16}$ " W  $\times$  15 $\frac{1}{16}$ " D..... \$400

### AP-D50U Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) front-loading FG direct-drive turntable with automatic/manual tone-

arm; front-loading design separately powered to move table forward to receive or eject record and to retract under dustcover during play mode; 4-phase 8-pole linear torque direct-drive Hall motor and two



dc motors; 30-cm aluminum diecast platter; 8 $\frac{1}{2}$ -in statically-balanced J-shaped arm with moving-magnet cartridge and stylus cleaner; adjustable pitch control; rec-sync operation with company tape decks; continuous repeat; three-size disc selector. Wow and flutter 0.028% wrms; S/N 75 dB (DIN B); cartridge weight range 3.5-8.5 g; 4 $\frac{3}{16}$ " H  $\times$  17 $\frac{3}{4}$ " W  $\times$  14 $\frac{1}{16}$ " D..... \$350

### AP-D30H Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with auto return arm; slotless linear torque direct-drive motor; statically-balanced J-shaped arm with moving-magnet cartridge, oil-damped cueing, and adjustable anti-skating;  $\pm 3\%$  speed control adjustment; all control operations accessible with dustcover down; wow and flutter 0.035% wrms.... \$220

### AP-2100 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto return arm; 4-pole synchronous motor; 31-cm aluminum diecast platter; 8 $\frac{3}{16}$ -in statically-balanced J-shaped arm with moving-magnet cartridge, oil damped cueing, and anti-skating; rec-sync disc-to-cassette recording. Wow and flutter 0.07% wrms; S/N 62 dB (DIN B); tracking force range 0-4 g; cartridge weight range 3.5-8.5 g; 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{3}{8}$ " W  $\times$  14 $\frac{3}{8}$ " D..... \$150

## AKAI

### AP-Q60 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz PLL direct-drive turntable with automatic tonearm; dc servomotor; statically-balanced S-shaped arm with oil-damped cueing, stylus overhang adjustment, and anti-skating control; strobe light with variable pitch control; electronic speed change. Wow and flutter 0.037% DIN; rumble -70 dB (DIN B); includes vibration-absorbing insulated feet and removable hinged smoked dustcover; 5.5" H  $\times$  17.3" W  $\times$  15.8" D..... \$220

**AP-Q50.** Similar to AP-Q60 except semi-automatic with auto return arm; wow and flutter 0.05% DIN.... \$190

### AP-D40 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm, direct-drive turntable

with automatic arm; dc servomotor; statically-balanced S-shaped tonearm with oil-damped cueing, anti-skating control, and stylus overhang adjustment; electronic speed change; strobe light with variable pitch control. Wow and flutter 0.047% DIN; rumble -73 dB (DIN B); includes vibration-absorbing insulated feet and removable smoked dustcover; 5.5" H  $\times$  17.3" W  $\times$  15.8" D ..... \$170

**AP-030.** Similar to AP-D40 except semi-automatic with auto return arm; wow and flutter 0.05% DIN; rumble -70 dB (DIN B)..... \$150

### AP-B20 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto return tonearm; 4-pole synchronous motor; low-resonance S-shaped arm with oil-damped cueing, anti skating control, and stylus overhang adjustment. Wow and flutter 0.05% DIN; rumble -65 dB (DIN B); includes vibration-absorbing insulated feet and removable hinged smoked dustcover; 5.3" H  $\times$  17.3" W  $\times$  14" D ..... \$100

### AP-B10C Manual Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with manual arm and magnetic cartridge; four-pole synchronous motor; low-mass straight arm with anti-skating and stylus overhang. Wow and flutter 0.5%; rumble -65 dB (DIN B); includes vibration-absorbing insulated feet and removable smoked dustcover; 5.3" H  $\times$  17.3" W  $\times$  14" D ..... \$100

## BANG & OLUFSEN

### Beogram 4004 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) computer-controlled belt-drive turntable with automatic tangential-tracking tonearm; tachometer-controlled dc motor and separate dc motor for arm drive; short low-mass electronic-circuited straight tonearm with MMC 20EN pickup cartridge with elliptical naked diamond stylus. Features one-touch automatic operation with power-assisted manual operation; optical scan detector arm sensor; anti-skating adjust; leaf spring/pendulum suspension system. Wow and flutter  $\pm 0.025\%$ ; rumble -65 dB (DIN A); tracking error 0.04 degree max.; rosewood-veneer base; 4" H  $\times$  19" W  $\times$  14 $\frac{1}{4}$ " D..... \$895

### Beogram 3404 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) electronically-controlled belt-drive turntable with automatic tonearm; servo-controlled dc motor; low-mass tonearm with MMC 20EN pickup cartridge with elliptical nude diamond stylus. Features illuminated one-touch automatic start, pause and stop controls; fine speed adjustment; left-side manual controls; auto anti-skating adjust; three-point pendulum suspension system. Wow and flutter 0.03%; rumble -65 dB; tracking error 0.126 degree/cm; includes dustcover that does not cover controls; rosewood-veneer base; 3 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  14 $\frac{1}{4}$ " D..... \$495

### Beogram 1600 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable

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with automatic lift/shutoff tonearm; single master control for all operations; servo-controlled, dc motor; automatic anti-skating and speed adjustment  $\pm 3\%$ ; speed deviation 0.1%; wow and flutter less than  $\pm 0.06\%$ ; rumble (DIN weighted) 62 dB; tracking error 0.126"/cm (0.32"/in); comes equipped with magnesium alloy tonearm and MMC 10E stereo cartridge with  $5 \times 15\text{-}\mu\text{m}$  elliptical diamond stylus, hinged dustcover (records can be played with cover closed), and rosewood veneer base (oak, teak or white lacquer finishes available on special order);  $3\frac{1}{2}'' \text{H} \times 17\frac{1}{4}'' \text{W} \times 13'' \text{D}$ . \$325

## B-I-C

### Micro 350 Automatic Multi-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive automatic multi-changer handles up to six records; 24-pole 300-rpm synchronous motor; 10 $\frac{1}{2}$ -in aluminum platter; ultra-low-mass (8.9 g) straight MicroMass tonearm with offset head. Features sliding program control for 1-6 records (automatically shuts off after number of records set have been played); variable speed with pitch control and strobe markings. Wow and flutter 0.08% wrms; rumble -64 dB (DIN B); tracking force range 1-4 g; cartridge weight range 0-9 g; includes base and dustcover..... \$130

**Micro 250.** Similar to Micro 350 minus variable speed control with strobe..... \$110

**Micro 150X.** Similar to Micro 350 except includes magnetic phono cartridge; wow and flutter 0.1% wrms; rumble -63 dB (DIN B)..... \$100

## BSR

### Pro III Series

#### Pro 300 Automatic Multiple-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive three-record multiple-play turntable with automatic arm;



quartz-lock FG dc servomotor; low-mass statically-balanced straight arm with own motor and carbon fiber headshell; includes QTX-3 full-function infrared remote control unit (includes volume control). Features LED digital display of speed, elapsed time, stylus time, and electronic level; 7/12-in disc size selectors with LEDs;  $\pm$ pitch selectors; slow/fast vertical/lateral cue; LED quartz and arm function indicators; includes QPP-1 power pack 120 V ac with ac cable, three-record multi-play umbrella spindle, rotating single-play spindle, 45-rpm single-play adaptor, and removable hinged dustcover..... \$300

**Pro 200.** Same as Pro 300 minus infrared remote control unit..... \$250

### Quanta Series

#### 70MX Automatic Multiple-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm), belt-drive three-re-

cord multi-play with automatic arm; dynamically-counterbalanced J-shaped arm with ADC integrated QLM 32 MK III B cartridge; viscous cueing; includes three-record multi-play umbrella spindle and removable hinged dustcover..... \$110

**60MX.** Similar to 70MX except includes ADC 30 MK III B cartridge..... \$90

**50MX.** Similar to 60MX except three-speed unit with six-record multi-play; has spring-balanced arm and auto arm lock; includes ADC magnetic cartridge..... \$80

## CALIBRE

### 360 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with auto lift/shutoff tonearm; dc servomotor; 11-in S-shaped arm with adjustable anti-skating and damped cueing; strobe with pitch control; wow and flutter 0.035% (DIN 45 507); rumble -70 dB (DIN 45 539 B); tracking force range 0-3 g; 7" H  $\times$  17 $\frac{1}{4}$ " W  $\times$  13 $\frac{1}{2}$ " D..... \$195

### 330 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto lift/shutoff arm; hysteresis synchronous motor; 11-in S-shaped arm with damped cueing and adjustable anti-skating; wow and flutter 0.1% (DIN 45 507); rumble -62 dB (DIN 45 539 B); tracking force range 0-4 g; 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  13 $\frac{1}{2}$ " D..... \$130

## CONCEPT

### 2QD Semi-Automatic Single-Play

Two speed (33 $\frac{1}{3}$  and 45 rpm) quartz-locked direct-drive turntable with auto lift tonearm; dc servomotor; 11-in straight arm with damped cueing and adjustable anti-skating; LED strobe with  $\pm 6\%$  speed adjust; wow and flutter 0.025% (DIN 45 507); rumble -70 dB (DIN 45 539 B); tracking force range 0-3 g; 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  14 $\frac{1}{2}$ " D..... \$295

## DENON

### DP-80 Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-PLL direct-drive turntable without arm; three-phase out-rotor ac servomotor; 308-mm double aluminum alloy platter with lower platter mounted to motor shaft and connected to disc platter by spring and damper; quartz-crystal PLL variable/normal speed control with  $\pm 6\%$  servo speed control at variable mode and magnetic record detection system. Wow and flutter 0.015% wrms; rumble -77 dB (DIN B); includes 100 V, 50 VA ac output stepdown transformer; optional cabinets available; 140 mm H  $\times$  376 mm dia..... \$860

**OK-100.** Walnut wood veneer cabinet for DP-80 and DP-6000..... \$210

**OK-300.** Compressed beechwood cabinet for DP-80 and DP-6000..... \$400

**OK-2300.** Compressed beechwood cabinet with two-arm base for DP-80 and DP-6000..... \$690

### DP-6000 Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-controlled direct-drive turntable without arm; pulse-width-modulated ac motor;  $\pm 6\%$  quartz-crystal PLL speed control with illuminated stroboscope. Wow and flutter 0.015% wrms; rumble -77 dB; optional finished cabinets available; 7 $\frac{1}{2}$ " H  $\times$  20 $\frac{1}{4}$ " W  $\times$  16 $\frac{1}{4}$ " D..... \$625

### DP-60L Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-locked direct-drive turntable with auto lift/shut off arm; ac servomotor; includes one low-mass straight arm and one mid-mass S-shaped arm; speed accuracy  $\pm 0.002\%$ ; wow and flutter 0.015% wrms; rumble -76 dB DIN B..... \$585

### DP-40F Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) PLL quartz-crystal direct-drive turntable with electronically-controlled



servo automatic arm; ac servomotor; 300-mm casted aluminum platter; 244-mm statically-balanced S-shaped arm with MC type angular motor, anti-skating, and light impact-molded headshell; magnetic record detection quartz PLL servo speed control (0.002% deviation); front-panel touch-sensor arm operation controls outside dustcover; LED lock control; disc size selector. Wow and flutter 0.015% wrms; rumble -75 dB (DIN B); tracking force range 0-2.5 g/rotation; cartridge weight range 15-21 g; woodgrain-finish cabinet; 146 mm H  $\times$  485 mm W  $\times$  437 mm D..... \$535

### DP-75 Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-lock direct-drive turntable without arm; ac servomotor; double damped platter; quartz-controlled speed; electronic function controls. Wow and flutter 0.015% wrms; rumble -80 dB DIN B; speed accuracy  $\pm 0.002\%$ ..... \$520

### DP-1200 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with auto lift/shutoff tonearm; ac servomotor; Denon DA-307 dynamically damped and statically balanced tonearm with oil-damped cueing and adjustable height; servo speed control; record-end sensor; standby end-of-cue switch. Wow and flutter 0.018% wrms; rumble -75 (DIN B); starting time 1.5 sec; marble base and mahogany laminated plywood cabinet; 6 $\frac{1}{2}$ " H  $\times$  19 $\frac{1}{16}$ " W  $\times$  15 $\frac{3}{8}$ " D.. \$375

**OK-200.** Base with hinged dustcover..... \$260

**DA-307.** Dynamically damped tonearm; effective length 9 $\frac{3}{4}$ -in..... \$275

### DP-1250 Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable without arm; ac servomotor; 30-cm aluminum alloy diecast platter;  $\pm 3\%$  magnetic record detection servo speed control. Wow and flutter 0.018% wrms; rumble -75 dB (DIN B); walnut-veneer-finished Lauan wood cabinet; 171 mm H  $\times$  510 mm W  $\times$  417 mm D..... \$340

### DP-30L Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with auto lift/shutoff tonearm; ac servomotor; 220-mm statically-balanced S-shaped tonearm with touch-control cueing and separate motor. Wow and flutter 0.018% wrms; high-density resin-compound base with anti-vibration feet; brown finish cabinet..... \$290

**DP-30LS.** DP-30L with silver finish..... \$290

## DUAL

All Dual turntables feature ultra-low-mass straight-line tubular tonearms mounted in true four-point gimbal suspensions; total effective tonearm and cartridge mass 8 g; dynamically balanced tonearm requires no critical leveling of chassis; precision-machined platters; tracking to  $\frac{1}{4}$  g; vernier-adjust damped counterbalance; direct-dial setting of stylus force; stylus force applied around vertical pivot; anti-skating calibrated for conical and elliptical styli; adjustable pitch control for 33 $\frac{1}{3}$  and 45 rpm;



illuminated strobe; cueing system damped in both directions; stylus overhang adjustment; dustcover included; base 3 1/2" H x 16 1/2" W x 14 1/2" D.

### Single-Play Turntable

**CS731Q.** Fully automatic, single play turntable with ULM tonearm. Features anti-resonance filter user-tunable to specific mass and compliance of high-performance cartridge; quartz reference oscillator (11% pitch) with LEDs and illuminated strobe, and phase-locked-loop monitoring circuit; front-panel solenoid-operated controls; variable cueing descent speed; rumble -78 dB; wow and flutter 0.015% wrms. \$580

**714Q.** Similar to CS731Q but semi-automatic tonearm with automatic return and shut-off; switchable lead-in groove sensor indicates when tonearm is precisely over 7-in and 12-in lead-in grooves. \$500

**650RC.** Fully automatic direct-drive turntable with ULM tonearm; front-panel solenoid operations controls; tunable anti-resonance filter; 10% pitch control; CMOS regulator circuit and integral frequency generator in motor; optional wireless remote control available. \$420

**RE152/RE120.** Wireless remote control transmitter/receiver system for 650RC; start, stop and cue operations from up to 40 ft away; transmitter/receiver priced separately. \$80/\$40

**622.** Similar to 650RC without remote control; controls on chassis. \$330

**606.** Similar to 622 except semi-automatic with auto return/shut off arm; mechanical lead-in groove



sensor indicates when stylus is over 12- and 7-in lead-in grooves. \$300

**522.** Similar to 622 except vario belt-drive turntable; has 6% pitch control, illuminated strobe, and continuous repeat; wow and flutter  $\pm 0.04\%$  wrms; rumble -70 dB. \$235

**506.** Similar to 522 except semi-automatic with auto shut-off tonearm. \$190

### Automatic Multiple-Play Changers

Additional features of Dual turntables include vario-belt drive system; automatic and manual operation in both single- and multiple-play modes; interchangeable rotating single-play spindle; 6% pitch control; elevator-action multiple-play spindle holds up to six records; records may be removed from platter without removing spindle.

**1264.** ULM tonearm; 12-in platter; illuminated strobe; tunable anti-resonance filter; continuous repeat switch; rumble -70 dB; wow and flutter  $\pm 0.04\%$  wrms; 5 1/2" H x 16 1/2" W x 14 1/2" D. \$280

**1257.** Compact version of 1264 without illuminated strobe, continuous repeat, and filter; 10 1/2-in platter. \$190

## DUNLOP SYSTEM by H&H INT'L

### Systemdek Single-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with provision for rapid interchange of arms (arm not included); 24-pole synchronous high-torque motor mounted on anti-vibration assembly; diecast alloy platter with high-density lamb's wool mat; bearing assembly comprised of 10-mm-high stain-

less-steel precision spindle countersunk at foot to accommodate precision 8-mm ball bearing; three-point floating suspension height/level-adjustable using spanner (supplied); heavy-sheet steel base plate with height adjustable rubber feet; aluminum-extruded plinth sides attached to base plate via vibration-isolating barriers. Wow and flutter 0.05% DIN; rumble -70 dB (DIN B); 460 mm H x 365 mm W x 150 mm D. \$796

## FISHER

### MT 6360 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) remote-control programmable direct-drive turntable with automatic arm; 120-pole linear ac servomotor; J-shaped tubular arm with viscous-damped cueing. Features infrared wireless remote control unit; programmable microcomputer for track selection; disc track sensor/counter; LED digital track readout; strobe with speed control. Wow and flutter 0.035% wrms; rumble -70 dB; 6" H x 17 1/2" W x 14 1/2" D. \$350

### MT 6455 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) quartz-lock direct-drive turntable with automatic arm; 120-pole linear ac servomotor; low-mass straight tonearm with viscous-damped cueing, anti-skating, and stylus overhang gauge. Features front-mounted controls (accessible when dustcover is down); disc size selector; repeat function; strobe with speed control. Wow and flutter 0.035% wrms; rumble -70 dB; 6" H x 17 1/2" W x 14 1/2" D. \$280

**MT 6435.** Similar to MT 6455 except semi-automatic with auto return/shutoff arm; 5 1/2" H. \$250

**MT 6430.** Similar to MT 6435 minus quartz lock circuitry. \$190

### MT6335 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) quartz-locked direct-drive turntable with auto return/shutoff tonearm; 120-pole linear quartz PLL ac servomotor; 222-mm S-shaped tonearm with counterweight; 12 1/4-in aluminum diecast platter with stroboscope. Features quartz-locked speed control (0% variation); viscous-damped cueing; variable calibrated anti-skating and stylus pressure adjustment. Wow and flutter 0.035% wrms; rumble -70 dB (DIN 45539B); tracking force range 0.6-3.5 g; 6" H x 17 1/2" W x 14 1/2" D. \$200

**MT6330.** Similar to MT6335 without quartz-locked servo system. \$170

### MT 6320 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) direct-drive turntable with auto return/shutoff arm; dc servomotor; tubular S-shaped arm with viscous-damped cueing and adjustable anti-skating; strobe with speed controls; front-mounted controls accessible when dustcover is down. Wow and flutter 0.035% wrms; rumble -68 dB (DIN B); 5 1/2" H x 17 1/2" W x 14 1/2" D. \$150

### MT 6117 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) four-pole ac synchronous, belt-drive turntable with automatic return/shutoff tonearm; stereo magnetic cartridge, S-shaped balanced tonearm; viscous damped cueing; anti-skate control; wow and flutter 0.08% wrms; rumble -55 dB (DIN "B"); tracking force range 0.7-3.5 g; tracking error  $\pm 3$  degrees; 11-in platter; effective arm length 193 mm; gray walnut base; 5 1/2" H x 17 1/2" W x 13 1/2" D. \$120

### MT6310 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with auto return/shutoff tonearm; dc servomotor; 222-mm S-shaped tonearm with viscous-damped cueing, adjustable anti-skating, and counterweight; 12 1/4-in, 2-lb aluminum platter with built-in strobe light. Wow and flutter 0.04% wrms; rumble -68 dB (DIN 45539B); tracking force range 0.6-3.5 g; 5 1/2" H x 17 1/2" W x 14 1/2" D. \$120

## GARRARD U. S. A.

### Advanced Design Group—Direct Drive

#### DDQ650 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) quartz-locked direct-drive turntable with semi-automatic arm; quartz-



locked slotless brushless motor; low-mass straight arm with self-adjusting resin headshell and jewel pivot bearings; LED stroboscope with electronic variable speed control; front-panel electronic controls with LEDs; wow and flutter 0.03% wrms; rumble -72 dB (DIN B); 6 1/2" H x 17 1/2" W x 14 1/2" D. \$265

**DDQ550.** Similar to DDQ650 minus LED strobe with electronic speed control. \$240

#### DD455 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) direct-drive turntable with automatic arm; slotless brushless dc servomotor; low-mass straight tonearm with self-adjusting resin headshell and jewel pivot bearings; LED strobe with electronic variable speed control; front-mounted mechanical controls; wow and flutter 0.035% wrms; rumble -71 dB (DIN B); 6 1/2" H x 17 1/2" W x 14 1/2" D. \$220

**DD450.** Similar to DD455 except with semi-automatic arm. \$210

### Advanced Design Group—Belt Drive

#### GT355 Single/Multiple-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with automatic/manual arm; 1000-rpm dc servomotor; low-mass straight arm with self-adjusting resin headshell and jewel pivot bearings; LED strobe with electronic variable speed control; front-mounted mechanical controls; wow and flutter 0.06% wrms; rumble -68 dB (DIN B); 7 1/2" H x 17 1/2" W x 14" D. \$240

**GT355ap.** Same as GT355 except single-play only. \$220

#### GT255 Single/Multiple-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with automatic/manual arm; synco-lab motor; low-mass straight arm with self-adjusting resin headshell and jewel pivot bearings; front-mounted low-friction mechanical controls; wow and flutter 0.08% wrms; rumble -65 dB (DIN B); 5 1/2" H x 17 1/2" W x 14" D. \$210

**GT255ap.** Same as GT255 except single-play only. \$190

### System Series

#### GT12MkII Single/Multiple-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with auto/manual arm; four-pole induction motor; low-mass arm with removable cartridge carrier; top-mounted controls with damped cueing and repeat; wow and flutter 0.1% wrms; rumble -59 dB (DIN B); 6 3/8" H x 16 1/2" W x 13 1/2" D. \$110

**GT120ap.** Similar to GT12MkII except single-play only with automatic arm. \$100

## HITACHI

#### HT-860 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) quartz-locked direct-drive turntable with automatic tonearm; brushless, slotless, coreless dc servo Utonitorque motor; 230-mm statically-balanced S-shaped tubular tone-

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## TURNTABLES

arm with built-in anti-skating and low-mass resonance-damped magnesium plug-in headshell; die-cast aluminum platter. Features IC logic-controlled soft-touch operations buttons operable with cover down; touch-button arm operation in forward and reverse, continuous movement, and height adjustment, enabling no physical contact between user and arm; variable pitch control ( $\pm 9.9\%$  in 0.1% steps); automatic record size electric-eye sensor; electronic memory repeat (up to nine times on one side); digital display for speed, pitch, size, and number of repeat entered; full speed reached within  $\frac{1}{3}$  rotation at 33 $\frac{1}{3}$  rpm. Wow and flutter 0.025% wrms; rumble -78 dB (DIN B); tracking force range 0-3 g; cartridge weight range 4-10 g; includes detachable acrylic resin dustcover; aluminum diecast base and insulated feet; 6" H  $\times$  19" W  $\times$  16 $\frac{1}{4}$ " D..... \$700

**HT-561 Automatic Single-Play**

Two-speed (33 $\frac{1}{3}$  and 45 rpm) PLL quartz-lock direct-drive turntable with automatic tonearm; brush-



less slotless coreless Uinitorque motor and separate dc arm motor; 310-mm aluminum-alloy diecast platter; 220-mm statically-balanced tubular S-shaped arm with gimbal support and European-standard plug-in headshell. Features photo-sensor arm return;  $\pm 3$ -mm arm height adjustment; front-mounted 12/7-in disc size selector with LEDs, speed with LEDs, repeat with LED, up/down, and start/cut feather touch controls. Wow and flutter 0.02% wrms; rumble -78 dB (DIN B); tracking force range 0-3 g in 0.1-g steps; cartridge weight range 4-10 g; includes detachable plastic dustcover; 6 $\frac{1}{8}$ " H  $\times$  17 $\frac{1}{8}$ " W  $\times$  15 $\frac{3}{4}$ " D..... \$350  
**HT-466.** Similar to HT-561 minus LED indicators; has 7, 10, 12-in disc size selector inside closed dustcover and quartz-lock indicator; wow and flutter 0.025% wrms; 5 $\frac{1}{4}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  15 $\frac{1}{4}$ " D. \$240

**HT-464 Automatic Single-Play**

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with automatic tonearm; brushless slotless coreless dc servo Uinitorque motor and separate arm motor; 310-mm aluminum-alloy diecast platter; universal statically-balanced tubular S-shaped arm with gimbal support and fiberglass headshell. Features photo-sensor arm return; front-mounted slow/fast speed adjust, speed, repeat, up/down and start/cut selectors; 7, 10, and 12-in disc size selector;  $\pm 3\%$  33 $\frac{1}{3}$ -rpm and  $\pm 5\%$  45-rpm pitch controls; viscous damped cueing; anti-feedback insulator feet. Wow and flutter 0.03% wrms; rumble -77 dB (DIN B); tracking force range 0-3 g in 0.1-g steps; cartridge weight range 4-10 g; includes detachable plastic dustcover; 5" H  $\times$  17 $\frac{1}{8}$ " W  $\times$  14 $\frac{3}{4}$ " D..... \$200

**HT-41S Semi-Automatic Single-Play**

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-lock direct-drive turntable with auto return/cut tonearm; brushless coreless slotless Uinitorque motor; 310-mm

aluminum-alloy diecast platter; 220-mm straight tubular arm with gimbal suspension and plug-in headshell; front-panel speed, cut, and up/down controls; LED quartz lock indicator. Wow and flutter 0.03% wrms; rumble -75 dB (DIN B); tracking force range 0-3 g in 0.1-g steps; cartridge weight range 4-10 g; includes removable hinged dustcover; 4 $\frac{3}{16}$ " H  $\times$  17 $\frac{1}{8}$ " W  $\times$  14 $\frac{3}{8}$ " D..... \$170  
**HT-40S.** Similar to HT-41S except has dc servo drive system and 3% pitch control with LED stroboscope..... \$140

**HT-324 Semi-Automatic Single-Play**

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto return/cut tonearm; four-pole synchronous motor; 220-mm statically-balanced S-shaped tubular tonearm with tracking-force adjustment, viscous-damped cueing, anti-skating, and universal plug-in headshell; 310-mm aluminum alloy diecast platter. Wow and flutter 0.06% wrms; rumble -65 dB (DIN B); tracking force range 0-3 g; cartridge weight range 4-10 g; 5" H  $\times$  17 $\frac{1}{8}$ " W  $\times$  14 $\frac{3}{8}$ " D..... \$110

## JVC

**QL-Y5F Automatic Single-Play**

Two-speed (33 $\frac{1}{3}$  and 45 rpm) microcomputer-controlled double-servo quartz direct-drive turntable



with auto/manual tonearm; coreless dc servomotor; 310-mm aluminum diecast platter; 245-mm dynamically-balanced electronic servo-controlled J-shaped arm with two motors controlling horizontal and vertical movements. Features electronically-controlled arm set down/return, cueing, Q-damping, anti-skating, and tracking force; soft-touch up/down and left/right button controls (for manual operation); repeat button; arm height adjuster; LED quartz lock indicator for speed and disc size. Wow and flutter 0.025% wrms; S/N 78 dB (DIN B); tracking force range 0-3 g in 0.25-g steps; cartridge weight range 14.5-24 g (includes headshell); polished rosewood veneer base with hinged dustcover; 6 $\frac{3}{8}$ " H  $\times$  18 $\frac{1}{8}$ " W  $\times$  17 $\frac{3}{8}$ " D..... \$430  
**QL-Y3F.** Similar to QL-Y5F minus manual arm controls; arm is statically-balanced with one motor controlling horizontal movement..... \$360

**QL-F6 Automatic Single-Play**

Two-speed (33 $\frac{1}{3}$  and 45 rpm) double servo quartz direct-drive turntable with automatic tonearm; coreless dc servomotor; 327-mm aluminum diecast platter; 233-mm statically-balanced gimbal-support S-shaped tonearm with one-piece non-resonant headshell; pitch control meter ( $\pm 6\%$ ) with memory. Wow and flutter 0.025% wrms; rumble -78 dB (DIN B); tracking force range 0-3 g; cartridge weight range 13-20 g (includes headshell); aluminum diecast cabinet; 5 $\frac{1}{32}$ " H  $\times$  17 $\frac{1}{32}$ " W  $\times$  15 $\frac{1}{4}$ " D. \$400

**L-F66 Automatic Single-Play**

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with automatic arm; coreless dc servomotor and separate arm motor; 308-mm aluminum diecast platter; 220-mm statically-balanced J-shaped arm. Features photosensor end-of-play detection; pitch control with strobe; record size selector, speed,

start, and reject controls; all controls accessible when dustcover is down. Wow and flutter 0.03% wrms; S/N 75 dB; tracking force range 0-3 g in 0.1-g steps; cartridge weight range 12.5-18.5 g (includes headshell); 5 $\frac{1}{16}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  14 $\frac{1}{16}$ " D..... \$180

**L-A55 Semi-Automatic Single-Play**

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with auto-return/shutoff tonearm; coreless dc servomotor; 220-mm statically-balanced aluminum-alloy S-shaped tonearm with dual-contact bearing; 308-mm platter with strobe. Wow and flutter 0.03% wrms; rumble -75 dB (DIN B); tracking force range 0-3 g; cartridge weight range 12.5-18.5 g (includes headshell); 5 $\frac{1}{8}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  14 $\frac{1}{8}$ " D..... \$150

**L-A11 Semi-Automatic Single-Play**

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto return/shutoff tonearm; four-pole synchronous motor; 220-mm statically-balanced aluminum-alloy S-shaped tonearm with dual-contact bearing; 300-mm aluminum alloy diecast platter. Wow and flutter 0.06% wrms; rumble -63 dB (DIN B); tracking force range 0-3 g; cartridge weight range 14.5-18.5 g; 5 $\frac{1}{8}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  14 $\frac{1}{8}$ " D..... \$110

## KENWOOD

**KD-850 Automatic Single-Play**

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz PLL direct-drive turntable with electronically-controlled auto-



matic arm; 20-pole 30-slot brushless dc servomotor and 2-pole 3-slot dc micro motor; 13-in aluminum alloy diecast platter; 9 $\frac{3}{16}$ -in statically-balanced Penta-Litz-wired S-shaped pipe arm with EIA plug-in connector and low-resonance aluminum diecast headshell, and anti-skating and oil-damped cueing. Features feathertouch electronic pushbutton controls outside dustcover, including repeat (continuous play), cut (auto interruption of play and arm return), and fast (quick location of particular track in either direction); arm height adjustment; electronic-controlled braking system; automatic 17/25/30-in disc size selectors with LEDs; LED quartz lock speed indicator. Wow and flutter 0.022% wrms; rumble -83 dB (DIN weighted); starting time 1.8 sec; tracking force range 0-3 g; cartridge weight range 2-12 g; includes low-resistance phono cables with gold-plated terminals, 45-rpm adaptor, overhang gauge, and 2.6-lb reinforced acrylic dustcover; 6 $\frac{3}{16}$ " H  $\times$  19 $\frac{3}{16}$ " W  $\times$  15 $\frac{1}{8}$ " D.... \$595

**KD-5100 Automatic Single-Play**

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz PLL direct-drive turntable with automatic tonearm; coreless and slotless dc servomotor and 2-pole 3-slot dc micro motor; low-mass straight arm. Features electronic 17/25/30-in disc size selector, cueing, repeat, play/cut, and speed selector pushbutton controls with LEDs..... \$349

**KD-4100 Automatic Single-Play**

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with electronically-controlled automatic arm; core-



# 4

# TURNTABLES

## ADC

### 3001-DD Turntable

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable without tonearm; dc brushless motor; strobe with  $\pm 5\%$  speed adjustment; wow and flutter 0.035% (DIN 45-507); rumble -70 dB (DIN B); 3" H  $\times$  18 $\frac{1}{2}$ " W  $\times$  14 $\frac{1}{4}$ " D..... \$250

## AIKO by TZL INTERNATIONAL

### AT-83 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto return/cut tonearm; 4-pole synchronous motor; 12-in aluminum platter; S-shaped arm with magnetic cartridge and diamond stylus; wow and flutter 0.1% wrms; S/N 45 dB; 6.2" H  $\times$  16.9" W  $\times$  14" D..... \$160

## AIWA

### LP-3000U Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) linear-track programmable quartz-lock direct-drive turntable with automatic tonearm; pulse-synthesizer quartz PLL servomotor; 7 $\frac{3}{16}$ -in linear-track and statically-balanced zinc diecast straight tonearm with removable 16.5-g aluminum diecast headshell and independent coreless motor drive; 31-cm zinc diecast platter. Features microprocessor-controlled automatic 15-selection programming with auto repeat (includes repeat of selection segment), cue and review, forward and back skipping, and pause; infrared LED disc sensor with disc size selector for 17-, 25-, and 30-in discs; quartz-locked speed control with LED readout; pitch control ( $\pm 6\%$ ) with LED; feather-touch electronic controls. Wow and flutter 0.025% wrms; rumble -75 dB (DIN B); tracking force range 0-3 g; cartridge weight range 4-15 g (with accessory headshell). Resonance-absorbing height-adjustable insulator feet; dustcover does not cover operations controls; 5 $\frac{1}{16}$ " H  $\times$  18 $\frac{3}{16}$ " W  $\times$  17 $\frac{3}{16}$ " D..... \$1000

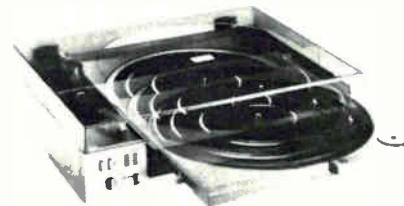
### AP-2600 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-locked direct-drive turntable with auto lift/stop tonearm; quartz PLL servomotor; 9 $\frac{3}{16}$ -in statically-balanced zinc-diecast S-shaped tonearm with viscous-damped cueing and adjustable anti-skating; 13 $\frac{3}{16}$ -in aluminum alloy diecast platter. Features digital speed readout display; pitch control ( $\pm 6\%$  in 0.1% steps) with LED digital readout; speed adjust; rec-sync mechanism; built-in muting; solenoid feather-touch controls. Wow and flutter 0.025% wrms; rumble -75 dB (DIN B); tracking force range 0-3 g; cartridge weight range 3-14 g; resin cabinet with height-adjustable insulators; removable hinged dustcover; 6" H  $\times$  18 $\frac{3}{16}$ " W  $\times$  15 $\frac{3}{16}$ " D..... \$400

### AP-D50U Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) front-loading FG direct-drive turntable with automatic/manual tonearm; front-loading design separately powered to move table forward to receive or eject record and to retract under dustcover during play mode; 4-phase 8-pole linear torque direct-drive Hall motor and two

dc motors; 30-cm aluminum diecast platter; B $\frac{1}{2}$ -in statically-balanced J-shaped arm with moving-magnet cartridge and stylus cleaner; adjustable pitch control; rec-sync operation with company tape decks; continuous repeat; three-size disc selector. Wow and flutter 0.028% wrms; S/N 75 dB (DIN B); cartridge weight range 3.5-8.5 g; 4 $\frac{3}{16}$ " H  $\times$  17 $\frac{3}{16}$ " W  $\times$  14 $\frac{1}{16}$ " D..... \$350



Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with auto return arm; slotless linear torque direct-drive motor; statically-balanced J-shaped arm with moving-magnet cartridge, oil-damped cueing, and adjustable anti-skating;  $\pm 3\%$  speed control adjustment; all control operations accessible with dustcover down; wow and flutter 0.035% wrms.... \$220

### AP-D30H Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with automatic tangential-tracking tonearm; tachometer-controlled dc motor and separate dc motor for arm drive; short low-mass electronic-circuited straight tonearm with MMC 20EN pickup cartridge with elliptical naked diamond stylus. Features one-touch automatic operation with power-assisted manual operation; optical scan detector arm sensor; anti-skating adjust; leaf spring/pendulum suspension system. Wow and flutter  $\pm 0.025\%$ ; rumble -65 dB (DIN A); tracking error 0.04 degree max.; rosewood-veneer base; 4" H  $\times$  19" W  $\times$  14 $\frac{1}{4}$ " D..... \$895

### AP-2100 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto return arm; 4-pole synchronous motor; 31-cm aluminum diecast platter; 8 $\frac{3}{16}$ -in statically-balanced J-shaped arm with moving-magnet cartridge, oil damped cueing, and anti-skating; rec-sync disc-to-cassette recording. Wow and flutter 0.07% wrms; S/N 62 dB (DIN B); tracking force range 0-4 g; cartridge weight range 3.5-8.5 g; 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{3}{8}$ " W  $\times$  14 $\frac{3}{8}$ " D..... \$150

## AKAI

### AP-Q60 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz PLL direct-drive turntable with automatic tonearm; dc servomotor; statically-balanced S-shaped arm with oil-damped cueing, stylus overhang adjustment, and anti-skating control; strobe light with variable pitch control; electronic speed change. Wow and flutter 0.037% DIN; rumble -70 dB (DIN B); includes vibration-absorbing insulated feet and removable hinged smoked dustcover; 5.5" H  $\times$  17.3" W  $\times$  15.8" D..... \$220

AP-Q50. Similar to AP-Q60 except semi-automatic with auto return arm; wow and flutter 0.05% DIN.... \$190

### AP-D40 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable

with automatic arm; dc servomotor; statically-balanced S-shaped tonearm with oil-damped cueing, anti-skating control, and stylus overhang adjustment; electronic speed change; strobe light with variable pitch control. Wow and flutter 0.047% DIN; rumble -73 dB (DIN B); includes vibration-absorbing insulated feet and removable smoked dustcover; 5.5" H  $\times$  17.3" W  $\times$  15.8" D..... \$170

AP-D3D. Similar to AP-D40 except semi-automatic with auto return arm; wow and flutter 0.05% DIN; rumble -70 dB (DIN B)..... \$150

### AP-B20 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with manual arm and magnetic cartridge; four-pole synchronous motor; low-resonance S-shaped arm with oil-damped cueing, anti skating control, and stylus overhang adjustment. Wow and flutter 0.05% DIN; rumble -65 dB (DIN B); includes vibration-absorbing insulated feet and removable hinged smoked dustcover; 5.3" H  $\times$  17.3" W  $\times$  14" D..... \$100

### AP-B10C Manual Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with manual arm and magnetic cartridge; four-pole synchronous motor; low-mass straight arm with anti-skating and stylus overhang. Wow and flutter 0.5%; rumble -65 dB (DIN B); includes vibration-absorbing insulated feet and removable smoked dustcover; 5.3" H  $\times$  17.3" W  $\times$  14" D..... \$100

## BANG & OLUFSEN

### Beogram 4004 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) computer-controlled belt-drive turntable with automatic tangential-tracking tonearm; tachometer-controlled dc motor and separate dc motor for arm drive; short low-mass electronic-circuited straight tonearm with MMC 20EN pickup cartridge with elliptical naked diamond stylus. Features one-touch automatic operation with power-assisted manual operation; optical scan detector arm sensor; anti-skating adjust; leaf spring/pendulum suspension system. Wow and flutter  $\pm 0.025\%$ ; rumble -65 dB (DIN A); tracking error 0.04 degree max.; rosewood-veneer base; 4" H  $\times$  19" W  $\times$  14 $\frac{1}{4}$ " D..... \$895

### Beogram 3404 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) electronically-controlled belt-drive turntable with automatic tonearm; servo-controlled dc motor; low-mass tonearm with MMC 20EN pickup cartridge with elliptical nude diamond stylus. Features illuminated one-touch automatic start, pause and stop controls; fine speed adjustment; left-side manual controls; auto anti-skating adjust; three-point pendulum suspension system. Wow and flutter 0.03%; rumble -65 dB; tracking error 0.126 degree/cm; includes dustcover that does not cover controls; rosewood-veneer base; 3 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  14 $\frac{1}{2}$ " D..... \$495

### Beogram 1600 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable

# 4 TURNTABLES

with automatic lift/shutoff tonearm; single master control for all operations; servo-controlled, dc motor; automatic anti-skating and speed adjustment  $\pm 3\%$ ; speed deviation 0.1%; wow and flutter less than  $\pm 0.06\%$ ; rumble (DIN weighted)  $-62$  dB; tracking error 0.126"/cm (0.32"/in); comes equipped with magnesium alloy tonearm and MMC 10E stereo cartridge with  $5 \times 15\text{-}\mu\text{m}$  elliptical diamond stylus, hinged dustcover (records can be played with cover closed), and rosewood veneer base (oak, teak or white lacquer finishes available on special order);  $3\frac{1}{2}'' \text{H} \times 17\frac{1}{4}'' \text{W} \times 13'' \text{D}$ . \$325

## B•I•C

### Micro 350 Automatic Multi-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive automatic multi-changer handles up to six records; 24-pole 300-rpm synchronous motor; 10 $\frac{1}{2}$ -in aluminum platter; ultra-low-mass (8.9 g) straight MicroMass tonearm with offset head. Features sliding program control for 1-6 records (automatically shuts off after number of records set have been played); variable speed with pitch control and strobe markings. Wow and flutter 0.08% wrms; rumble  $-64$  dB (DIN B); tracking force range 1-4 g; cartridge weight range 0-9 g; includes base and dustcover. \$130  
**Micro 250.** Similar to Micro 350 minus variable speed control with strobe. \$110  
**Micro 150X.** Similar to Micro 350 except includes magnetic phono cartridge; wow and flutter 0.1% wrms; rumble  $-63$  dB (DIN B). \$100

## BSR

### Pro III Series

#### Pro 300 Automatic Multiple-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive three-record multiple-play turntable with automatic arm;



quartz-lock FG dc servomotor; low-mass statically-balanced straight arm with own motor and carbon fiber headshell; includes QTX-3 full-function infrared remote control unit (includes volume control). Features LED digital display of speed, elapsed time, stylus time, and electronic level; 7/12-in disc size selectors with LEDs;  $\pm$ pitch selectors; slow/fast vertical/lateral cue; LED quartz and arm function indicators; includes QPP-1 power pack 120 V ac with ac cable, three-record multi-play umbrella spindle, rotating single-play spindle, 45-rpm single-play adaptor, and removable hinged dustcover. \$300

**Pro 200.** Same as Pro 300 minus infrared remote control unit. \$250

### Quanta Series

#### 70MX Automatic Multiple-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm), belt-drive three-re-

cord multi-play with automatic arm; dynamically-counterbalanced J-shaped arm with ADC integrated QLM 32 MK III B cartridge; viscous cueing; includes three-record multi-play umbrella spindle and removable hinged dustcover. \$110  
**60MX.** Similar to 70MX except includes ADC 30 MK III B cartridge. \$90  
**50MX.** Similar to 60MX except three-speed unit with six-record multi-play; has spring-balanced arm and auto arm lock; includes ADC magnetic cartridge. \$80

## CALIBRE

### 360 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with auto lift/shutoff tonearm; dc servomotor; 11-in S-shaped arm with adjustable anti-skating and damped cueing; strobe with pitch control; wow and flutter 0.035% (DIN 45 507); rumble  $-70$  dB (DIN 45 539 B); tracking force range 0-3 g; 7" H  $\times$  17 $\frac{1}{4}$ " W  $\times$  13 $\frac{1}{2}$ " D. \$195

### 330 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto lift/shutoff arm; hysteresis synchronous motor; 11-in S-shaped arm with damped cueing and adjustable anti-skating; wow and flutter 0.1% (DIN 45 507); rumble  $-62$  dB (DIN 45 539 B); tracking force range 0-4 g; 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{8}$ " W  $\times$  13 $\frac{1}{2}$ " D. \$130

## CONCEPT

### 2QD Semi-Automatic Single-Play

Two speed (33 $\frac{1}{3}$  and 45 rpm) quartz-locked direct-drive turntable with auto lift tonearm; dc servomotor; 11-in straight arm with damped cueing and adjustable anti-skating. LED strobe with  $\pm 6\%$  speed adjust; wow and flutter 0.025% (DIN 45 507); rumble  $-70$  dB (DIN 45 539 B); tracking force range 0-3 g; 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  14 $\frac{1}{2}$ " D. \$295

## DENON

### DP-80 Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-PLL direct-drive turntable without arm; three-phase out-rotor ac servomotor; 308-mm double aluminum alloy platter with lower platter mounted to motor shaft and connected to disc platter by spring and damper; quartz-crystal PLL variable/normal speed control with  $\pm 6\%$  servo speed control at variable mode and magnetic record detection system. Wow and flutter 0.015% wrms; rumble  $-77$  dB (DIN B); includes 100 V, 50 VA ac output stepdown transformer; optional cabinets available; 140 mm H  $\times$  376 mm dia. \$860

**OK-100.** Walnut wood veneer cabinet for DP-80 and DP-6000. \$210

**DK-300.** Compressed beechwood cabinet for DP-80 and DP-6000. \$400

**OK-2300.** Compressed beechwood cabinet with two-arm base for DP-80 and DP-6000. \$690

### DP-6000 Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-controlled direct-drive turntable without arm; pulse-width-modulated ac motor;  $\pm 6\%$  quartz-crystal PLL speed control with illuminated stroboscope. Wow and flutter 0.015% wrms; rumble  $-77$  dB; optional finished cabinets available; 7 $\frac{3}{8}$ " H  $\times$  20 $\frac{1}{16}$ " W  $\times$  16 $\frac{1}{8}$ " D. \$625

### DP-60L Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-locked direct-drive turntable with auto lift/shut off arm; ac servomotor; includes one low-mass straight arm and one mid-mass S-shaped arm; speed accuracy  $\pm 0.002\%$ ; wow and flutter 0.015% wrms; rumble  $-76$  dB DIN B. \$585

### DP-40F Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) PLL quartz-crystal direct-drive turntable with electronically-controlled



servo automatic arm; ac servomotor; 300-mm casted aluminum platter; 244-mm statically-balanced S-shaped arm with MC type angular motor, anti-skating, and light impact-molded headshell; magnetic record detection quartz PLL servo speed control (0.002% deviation); front-panel touch-sensor arm operation controls outside dustcover; LED lock control; disc size selector. Wow and flutter 0.015% wrms; rumble  $-75$  dB (DIN B); tracking force range 0-2.5 g/rotation; cartridge weight range 15-21 g; woodgrain-finish cabinet; 146 mm H  $\times$  485 mm W  $\times$  437 mm D. \$535

### DP-75 Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-lock direct-drive turntable without arm; ac servomotor; double damped platter; quartz-controlled speed; electronic function controls. Wow and flutter 0.015% wrms; rumble  $-80$  dB DIN B; speed accuracy  $\pm 0.002\%$ . \$520

### DP-1200 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with auto lift/shutoff tonearm; ac servomotor; Denon DA-307 dynamically damped and statically balanced tonearm with oil-damped cueing and adjustable height; servo speed control; record-end sensor; standby end-of-cue switch. Wow and flutter 0.018% wrms; rumble  $-75$  (DIN B); starting time 1.5 sec; marble base and mahogany laminated plywood cabinet; 6 $\frac{1}{2}$ " H  $\times$  19 $\frac{1}{16}$ " W  $\times$  15 $\frac{3}{8}$ " D. \$375  
**OK-200.** Base with hinged dustcover. \$260  
**OA-307.** Dynamically damped tonearm; effective length 9 $\frac{3}{4}$ -in. \$275

### DP-1250 Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable without arm; ac servomotor; 30-cm aluminum alloy diecast platter;  $\pm 3\%$  magnetic record detection servo speed control. Wow and flutter 0.018% wrms; rumble  $-75$  dB (DIN B); walnut-veneer-finished Lauan wood cabinet; 171 mm H  $\times$  510 mm W  $\times$  417 mm D. \$340

### DP-30L Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with auto lift/shutoff tonearm; ac servomotor; 220-mm statically-balanced S-shaped tonearm with touch-control cueing and separate motor. Wow and flutter 0.018% wrms; high-density resin-compound base with anti-vibration feet; brown finish cabinet. \$290  
**DP-30LS.** DP-30L with silver finish. \$290

## DUAL

All Dual turntables feature ultra-low-mass straight-line tubular tonearms mounted in true four-point gimbal suspensions; total effective tonearm and cartridge mass 8 g; dynamically balanced tonearm requires no critical leveling of chassis; precision-machined platters; tracking to  $\frac{1}{4}$  g; vernier-adjust damped counterbalance; direct-dial setting of stylus force; stylus force applied around vertical pivot; anti-skating calibrated for conical and elliptical styli; adjustable pitch control for 33 $\frac{1}{3}$  and 45 rpm;



illuminated strobe; cueing system damped in both directions; stylus overhang adjustment; dustcover included; base 3 1/2" H x 16 1/2" W x 14 1/2" D.

### Single-Play Turntable

**CS731Q.** Fully automatic, single play turntable with ULM tonearm. Features anti-resonance filter user-tunable to specific mass and compliance of high-performance cartridge; quartz reference oscillator (11% pitch) with LEDs and illuminated strobe, and phase-locked-loop monitoring circuit; front-panel solenoid-operated controls; variable cueing descent speed; rumble -78 dB; wow and flutter 0.015% wrms. \$580

**714Q.** Similar to CS731Q but semi-automatic tonearm with automatic return and shut-off; switchable lead-in groove sensor indicates when tonearm is precisely over 7-in and 12-in lead-in grooves. \$500

**650RC.** Fully automatic direct-drive turntable with ULM tonearm; front-panel solenoid operations controls; tunable anti-resonance filter; 10% pitch control; CMOS regulator circuit and integral frequency generator in motor; optional wireless remote control available. \$420

**RE152/RE120.** Wireless remote control transmitter/receiver system for 650RC; start, stop and cue operations from up to 40 ft away; transmitter/receiver priced separately. \$80/\$40

**622.** Similar to 650RC without remote control; controls on chassis. \$330

**606.** Similar to 622 except semi-automatic with auto return/shut off arm; mechanical lead-in groove



sensor indicates when stylus is over 12- and 7-in lead-in grooves. \$300

**522.** Similar to 622 except vario belt-drive turntable; has 6% pitch control, illuminated strobe, and continuous repeat; wow and flutter ±0.04% wrms; rumble -70 dB. \$235

**506.** Similar to 522 except semi-automatic with auto shut-off tonearm. \$190

### Automatic Multiple-Play Changers

Additional features of Dual turntables include vario-belt drive system; automatic and manual operation in both single- and multiple-play modes; interchangeable rotating single-play spindle; 6% pitch control; elevator-action multiple-play spindle holds up to six records; records may be removed from platter without removing spindle.

**1264.** ULM tonearm; 12-in platter; illuminated strobe; tunable anti-resonance filter; continuous repeat switch; rumble -70 dB; wow and flutter ±0.04% wrms; 5 1/2" H x 16 1/2" W x 14 1/2" D. \$280

**1257.** Compact version of 1264 without illuminated strobe, continuous repeat, and filter; 10 1/2-in platter. \$190

## DUNLOP SYSTEM by H&H INT'L

### Systemdek Single-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with provision for rapid interchange of arms (arm not included); 24-pole synchronous high-torque motor mounted on anti-vibration assembly; diecast alloy platter with high-density lamb's wool mat; bearing assembly comprised of 10-mm-high stain-

less-steel precision spindle countersunk at foot to accommodate precision 8-mm ball bearing; three-point floating suspension height/level-adjustable using spanner (supplied); heavy-sheet steel base plate with height adjustable rubber feet; aluminum-extruded plinth sides attached to base plate via vibration-isolating barriers. Wow and flutter 0.05% DIN; rumble -70 dB (DIN B); 460 mm H x 365 mm W x 150 mm D. \$796

## FISHER

### MT 6360 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) remote-control programmable direct-drive turntable with automatic arm; 120-pole linear ac servomotor; J-shaped tubular arm with viscous-damped cueing. Features infrared wireless remote control unit; programmable microcomputer for track selection; disc track sensor/counter; LED digital track readout; strobe with speed control. Wow and flutter 0.035% wrms; rumble -70 dB; 6" H x 17 1/2" W x 14 1/2" D. \$350

### MT 6455 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) quartz-lock direct-drive turntable with automatic arm; 120-pole linear ac servomotor; low-mass straight tonearm with viscous-damped cueing, anti-skating, and stylus overhang gauge. Features front-mounted controls (accessible when dustcover is down); disc size selector; repeat function; strobe with speed control. Wow and flutter 0.035% wrms; rumble -70 dB; 6" H x 17 1/2" W x 14 1/2" D. \$280

**MT 6435.** Similar to MT 6455 except semi-automatic with auto return/shutoff arm; 5 1/2" H. \$250

**MT 6430.** Similar to MT 6435 minus quartz lock circuitry. \$190

### MT6335 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) quartz-locked direct-drive turntable with auto return/shutoff tonearm; 120-pole linear quartz PLL ac servomotor; 222-mm S-shaped tonearm with counterweight; 12 1/4-in aluminum diecast platter with stroboscope. Features quartz-locked speed control (0% variation); viscous-damped cueing; variable calibrated anti-skating and stylus pressure adjustment. Wow and flutter 0.035% wrms; rumble -70 dB (DIN 45539B); tracking force range 0.6-3.5 g; 6" H x 17 1/2" W x 14 1/2" D. \$200

**MT6330.** Similar to MT6335 without quartz-locked servo system. \$170

### MT 6320 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) direct-drive turntable with auto return/shutoff arm; dc servomotor; tubular S-shaped arm with viscous-damped cueing and adjustable anti-skating; strobe with speed controls; front-mounted controls accessible when dustcover is down. Wow and flutter 0.035% wrms; rumble -68 dB (DIN B); 5 1/2" H x 17 1/2" W x 14 1/2" D. \$150

### MT 6117 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) four-pole ac synchronous, belt-drive turntable with automatic return/shutoff tonearm; stereo magnetic cartridge, S-shaped balanced tonearm; viscous damped cueing; anti-skate control; wow and flutter 0.08% wrms; rumble -55 dB (DIN "B"); tracking force range 0.7-3.5 g; tracking error ±3 degrees; 11-in platter; effective arm length 193 mm; gray walnut base; 5 1/2" H x 17 1/2" W x 13 1/2" D. \$120

### MT6310 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with auto return/shutoff tonearm; dc servomotor; 222-mm S-shaped tonearm with viscous-damped cueing, adjustable anti-skating, and counterweight; 12 1/4-in, 2-lb aluminum platter with built-in strobe light. Wow and flutter 0.04% wrms; rumble -68 dB (DIN 45539B); tracking force range 0.6-3.5 g; 5 1/2" H x 17 1/2" W x 14 1/2" D. \$120

## GARRARD U. S. A.

### Advanced Design Group—Direct Drive

#### DDQ650 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) quartz-locked direct-drive turntable with semi-automatic arm; quartz-



locked slotless brushless motor; low-mass straight arm with self-adjusting resin headshell and jewel pivot bearings; LED stroboscope with electronic variable speed control; front-panel electronic controls with LEDs; wow and flutter 0.03% wrms; rumble -72 dB (DIN B); 6 1/4" H x 17 1/2" W x 14 1/2" D. \$265

**DDQ550.** Similar to DDQ650 minus LED strobe with electronic speed control. \$240

#### DD455 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) direct-drive turntable with automatic arm; slotless brushless dc servomotor; low-mass straight tonearm with self-adjusting resin headshell and jewel pivot bearings; LED strobe with electronic variable speed control; front-mounted mechanical controls; wow and flutter 0.035% wrms; rumble -71 dB (DIN B); 6 1/4" H x 17 1/2" W x 14 1/2" D. \$220

**DD450.** Similar to DD455 except with semi-automatic arm. \$210

### Advanced Design Group—Belt Drive

#### GT355 Single/Multiple-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with automatic/manual arm; 1000-rpm dc servomotor; low-mass straight arm with self-adjusting resin headshell and jewel pivot bearings; LED strobe with electronic variable speed control; front-mounted mechanical controls; wow and flutter 0.06% wrms; rumble -68 dB (DIN B); 7 1/2" H x 17 1/2" W x 14" D. \$240

**GT355ap.** Same as GT355 except single-play only. \$220

#### GT255 Single/Multiple-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with automatic/manual arm; synco-lab motor; low-mass straight arm with self-adjusting resin headshell and jewel pivot bearings; front-mounted low-friction mechanical controls; wow and flutter 0.08% wrms; rumble -65 dB (DIN B); 5 1/2" H x 17 1/2" W x 14" D. \$210

**GT255ap.** Same as GT255 except single-play only. \$190

### System Series

#### GT12MkII Single/Multiple-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with auto/manual arm; four-pole induction motor; low-mass arm with removable cartridge carrier; top-mounted controls with damped cueing and repeat; wow and flutter 0.1% wrms; rumble -59 dB (DIN B); 6 1/4" H x 16 1/2" W x 13 1/2" D. \$110

**GT120ap.** Similar to GT12MkII except single-play only with automatic arm. \$100

## HITACHI

#### HT-860 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) quartz-locked direct-drive turntable with automatic tonearm; brushless, slotless, coreless dc servo Utonitorque motor; 230-mm statically-balanced S-shaped tubular tone-

arm with built-in anti-skating and low-mass resonance-damped magnesium plug-in headshell; die-cast aluminum platter. Features IC logic-controlled soft-touch operations buttons operable with cover down; touch-button arm operation in forward and reverse, continuous movement, and height adjustment, enabling no physical contact between user and arm; variable pitch control ( $\pm 9.9\%$  in 0.1% steps); automatic record size electric-eye sensor; electronic memory repeat (up to nine times on one side); digital display for speed, pitch, size, and number of repeat entered; full speed reached within  $\frac{1}{3}$  rotation at 33 $\frac{1}{3}$  rpm. Wow and flutter 0.025% wrms; rumble -78 dB (DIN B); tracking force range 0-3 g; cartridge weight range 4-10 g; includes detachable acrylic resin dustcover; aluminum diecast base and insulated feet; 6" H x 19" W x 16 $\frac{1}{4}$ " D..... \$700

#### HT-561 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) PLL quartz-lock direct-drive turntable with automatic tonearm; brush-



less slotless coreless Uinitorque motor and separate dc arm motor; 310-mm aluminum-alloy diecast platter; 220-mm statically-balanced tubular S-shaped arm with gimbal support and European-standard plug-in headshell. Features photo-sensor arm return;  $\pm 3$ -mm arm height adjustment; front-mounted 12.7-in disc size selector with LEDs, speed with LEDs, repeat with LED, up/down, and start/cut feather touch controls. Wow and flutter 0.02% wrms; rumble -78 dB (DIN B); tracking force range 0-3 g in 0.1-g steps; cartridge weight range 4-10 g; includes detachable plastic dustcover; 6 $\frac{1}{8}$ " H x 17 $\frac{3}{4}$ " W x 15 $\frac{3}{4}$ " D..... \$350  
**HT-466.** Similar to HT-561 minus LED indicators; has 7, 10, 12-in disc size selector inside closed dustcover and quartz-lock indicator; wow and flutter 0.025% wrms; 5 $\frac{1}{4}$ " H x 17 $\frac{1}{4}$ " W x 15 $\frac{1}{4}$ " D. \$240

#### HT-464 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with automatic tonearm; brushless slotless coreless dc servo Uinitorque motor and separate arm motor; 310-mm aluminum-alloy diecast platter; universal statically-balanced tubular S-shaped arm with gimbal support and fiberglass headshell. Features photo-sensor arm return; front-mounted slow/fast speed adjust, speed, repeat, up/down and start/cut selectors; 7, 10, and 12-in disc size selector;  $\pm 3\%$  33 $\frac{1}{3}$ -rpm and  $\pm 5\%$  45-rpm pitch controls; viscous damped cueing; anti-feedback insulator feet. Wow and flutter 0.03% wrms; rumble -77 dB (DIN B); tracking force range 0-3 g in 0.1-g steps; cartridge weight range 4-10 g; includes detachable plastic dustcover; 5" H x 17 $\frac{1}{8}$ " W x 14 $\frac{1}{4}$ " D..... \$200

#### HT-41S Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-lock direct-drive turntable with auto return/cut tonearm; brushless coreless slotless Uinitorque motor; 310-mm

aluminum-alloy diecast platter; 220-mm straight tubular arm with gimbal suspension and plug-in headshell; front-panel speed, cut, and up/down controls; LED quartz lock indicator. Wow and flutter 0.03% wrms; rumble -75 dB (DIN B); tracking force range 0-3 g in 0.1-g steps; cartridge weight range 4-10 g; includes removable hinged dustcover; 4 $\frac{3}{8}$ " H x 17 $\frac{1}{8}$ " W x 14 $\frac{3}{8}$ " D..... \$170  
**HT-40S.** Similar to HT-41S except has dc servo drive system and 3% pitch control with LED stroboscope..... \$140

#### HT-324 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto return/cut tonearm; four-pole synchronous motor; 220-mm statically-balanced S-shaped tubular tonearm with tracking-force adjustment, viscous-damped cueing, anti-skating, and universal plug-in headshell; 310-mm aluminum alloy diecast platter. Wow and flutter 0.06% wrms; rumble -65 dB (DIN B); tracking force range 0-3 g; cartridge weight range 4-10 g; 5" H x 17 $\frac{1}{8}$ " W x 14 $\frac{3}{8}$ " D..... \$110

### JVC

#### QL-Y5F Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) microcomputer-controlled double-servo quartz direct-drive turntable



with auto/manual tonearm; coreless dc servomotor; 310-mm aluminum diecast platter; 245-mm dynamically-balanced electronic servo-controlled J-shaped arm with two motors controlling horizontal and vertical movements. Features electronically-controlled arm set down/return, cueing, Q-damping, anti-skating, and tracking force; soft-touch up/down and left/right button controls (for manual operation); repeat button; arm height adjuster; LED quartz lock indicator for speed and disc size. Wow and flutter 0.025% wrms; S/N 78 dB (DIN B); tracking force range 0-3 g in 0.25-g steps; cartridge weight range 14.5-24 g (includes headshell); polished rosewood veneer base with hinged dustcover; 6 $\frac{3}{8}$ " H x 18 $\frac{3}{8}$ " W x 17 $\frac{3}{8}$ " D..... \$430  
**QL-Y3F.** Similar to QL-Y5F minus manual arm controls; arm is statically-balanced with one motor controlling horizontal movement..... \$360

#### QL-F6 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) double servo quartz direct-drive turntable with automatic tonearm; coreless dc servomotor; 327-mm aluminum diecast platter; 233-mm statically-balanced gimbal-support S-shaped tonearm with one-piece non-resonant headshell; pitch control meter ( $\pm 6\%$ ) with memory. Wow and flutter 0.025% wrms; rumble -78 dB (DIN B); tracking force range 0-3 g; cartridge weight range 13-20 g (includes headshell); aluminum diecast cabinet; 5 $\frac{1}{32}$ " H x 17 $\frac{1}{16}$ " W x 15 $\frac{1}{4}$ " D. \$400

#### L-F66 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with automatic arm; coreless dc servomotor and separate arm motor; 308-mm aluminum diecast platter; 220-mm statically-balanced J-shaped arm. Features photosensor end-of-play detection; pitch control with strobe; record size selector, speed,

start, and reject controls; all controls accessible when dustcover is down. Wow and flutter 0.03% wrms; S/N 75 dB; tracking force range 0-3 g in 0.1-g steps; cartridge weight range 12.5-18.5 g (includes headshell); 5 $\frac{1}{8}$ " H x 17 $\frac{1}{4}$ " W x 14 $\frac{3}{16}$ " D..... \$180

#### L-A55 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with auto-return/shutoff tonearm; coreless dc servomotor; 220-mm statically-balanced aluminum-alloy S-shaped tonearm with dual-contact bearing; 308-mm platter with strobe. Wow and flutter 0.03% wrms; rumble -75 dB (DIN B); tracking force range 0-3 g; cartridge weight range 12.5-18.5 g (includes headshell); 5 $\frac{1}{8}$ " H x 17 $\frac{1}{4}$ " W x 14 $\frac{1}{16}$ " D..... \$150

#### L-A11 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto return/shutoff tonearm; four-pole synchronous motor; 220-mm statically-balanced aluminum-alloy S-shaped tonearm with dual-contact bearing; 300-mm aluminum alloy diecast platter. Wow and flutter 0.06% wrms; rumble -63 dB (DIN B); tracking force range 0-3 g; cartridge weight range 14.5-18.5 g; 5 $\frac{3}{8}$ " H x 17 $\frac{1}{4}$ " W x 14 $\frac{1}{16}$ " D..... \$110

### KENWOOD

#### KD-850 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz PLL direct-drive turntable with electronically-controlled auto-



matic arm; 20-pole 30-slot brushless dc servomotor and 2-pole 3-slot dc micro motor; 13-in aluminum alloy diecast platter; 9 $\frac{3}{16}$ -in statically-balanced Penta-Litz-wired S-shaped pipe arm with EIA plug-in connector and low-resonance aluminum diecast headshell, and anti-skating and oil-damped cueing. Features feathertouch electronic pushbutton controls outside dustcover, including repeat (continuous play), cut (auto interruption of play and arm return), and fast (quick location of particular track in either direction); arm height adjustment; electronic-controlled braking system; automatic 17/25/30-in disc size selectors with LEDs; LED quartz lock speed indicator. Wow and flutter 0.022% wrms; rumble -83 dB (DIN weighted); starting time 1.8 sec; tracking force range 0-3 g; cartridge weight range 2-12 g; includes low-resistance phono cables with gold-plated terminals, 45-rpm adaptor, overhang gauge, and 2.6-lb reinforced acrylic dustcover; 6 $\frac{3}{16}$ " H x 19 $\frac{3}{16}$ " W x 15 $\frac{1}{8}$ " D.... \$595

#### KD-5100 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz PLL direct-drive turntable with automatic tonearm; coreless and slotless dc servomotor and 2-pole 3-slot dc micro motor; low-mass straight arm. Features electronic 17/25/30-in disc size selector, cueing, repeat, play/cut, and speed selector pushbutton controls with LEDs..... \$349

#### KD-4100 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with electronically-controlled automatic arm; core-



less and slotless dc servomotor and 2-pole 3-slot dc micro motor; 12<sup>3</sup>/<sub>16</sub>-in aluminum alloy diecast platter; 8<sup>7</sup>/<sub>16</sub>-in statically-balanced S-shaped tubular arm with EIA plug-in connector, headshell, dial anti-skating control, and oil-damped cueing. Features electronic controls, including speed selector, 17/25/30-in disc size selector, and repeat with LEDs; illuminated stroboscope. Wow and flutter 0.03% wrms; rumble -71 dB (DIN weighted); tracking force range 0-3 g; cartridge weight range 3-9 g; (with headshell); includes 45-rpm adaptor, overhang gauge, and hinged dustcover; 5<sup>1</sup>/<sub>2</sub>" H x 17<sup>1</sup>/<sub>16</sub>" W x 14<sup>3</sup>/<sub>16</sub>" D ..... \$269

**KD-4100R.** Same as KD-4100 except accepts optional RC-500 remote control unit with disc size selector, play/cut, and repeat operations..... \$269

**RC-500.** Infrared beam remote control unit with separate receiver section; see Receiver Section for other series components ..... \$240

### KD-3100 Semi-Automatic Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) direct-drive turntable with auto-return/cut tonearm; coreless and slotless dc servomotor and 12-pole ac geared motor for automatic arm function; 12<sup>3</sup>/<sub>16</sub>-in aluminum alloy diecast platter; 8<sup>7</sup>/<sub>16</sub>-in statically balanced S-shaped tubular tonearm. Features illuminated stroboscope; anti-skating and oil-damped cueing; speed adjustment control; speed selector with LED; stylus pressure direct readout counter. Wow and flutter 0.03% wrms; rumble -71 dB (DIN weighted); tracking force range 0-3 g; cartridge weight 3-9 g; includes low-capacitance phono cables, headshell, and 45-rpm adaptor stand; ABS copolymer resin base; 5<sup>1</sup>/<sub>2</sub>" H x 17<sup>1</sup>/<sub>16</sub>" W x 14<sup>3</sup>/<sub>16</sub>" D..... \$199

### KD-2100 Automatic Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) belt-drive turntable with automatic arm; FG servo dc motor; 12<sup>3</sup>/<sub>16</sub>-in aluminum alloy diecast platter; 8<sup>7</sup>/<sub>16</sub>-in statically-balanced S-shaped tubular arm with headshell, anti-skating, and oil-damped cueing. Features illuminated stroboscope; separate fine speed adjustable controls; repeat on and repeat off/cut controls; up/down cueing switch; 17/30-in record size selector. Wow and flutter 0.04% wrms; rumble -67 dB (DIN weighted); tracking force range 0-3 g; cartridge weight range 5-10 g; includes 45-rpm adaptor, overhang gauge, and dustcover; 5<sup>1</sup>/<sub>2</sub>" H x 17<sup>1</sup>/<sub>16</sub>" W x 14<sup>3</sup>/<sub>16</sub>" D ..... \$183

### KD-1600 Semi-Automatic Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) belt-drive turntable with auto-return tonearm; 4-pole synchronous motor; 12-in aluminum alloy diecast platter; 8<sup>7</sup>/<sub>16</sub>-in statically-balanced straight arm with headshell, anti-skating and direct readout stylus pressure; controls include play/cut with LED play indicator and speed selector. Wow and flutter 0.05% wrms; rumble -65 dB (DIN weighted); tracking force range 0-3 g; cartridge weight range 4-12 g; includes 45-rpm adaptor and reinforced dustcover; 5<sup>1</sup>/<sub>2</sub>" H x 17<sup>1</sup>/<sub>16</sub>" W x 14<sup>3</sup>/<sub>16</sub>" D ..... \$135

## KM LABORATORIES

### Audio Linear Turntable

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) precision-ground neoprene belt-drive turntable without arm; 24-pole synchronous motor suspended in neoprene housing; 305-mm non-magnetic forged aluminum platter; neoprene four-point suspension system with integral height adjustment. Wow and flutter 0.08% weighted; rumble -70 dB weighted; includes hinged dustcover; 155 mm H x 450 mm W x 365 mm D ..... \$339

With arm..... \$549

## LINN SONDEK by AUDIOPHILE SYSTEMS

### LP12 Manual Single-Play

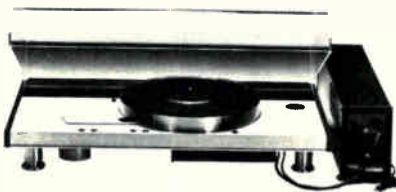
One-speed (33<sup>1</sup>/<sub>3</sub> rpm) belt-drive turntable with manual tonearm, 24-pole synchronous motor, 12-in

zinc aluminum alloy diecast platter (9 lbs) with felt mat, and single-point oil-bath bearing, hardened tool steel spindle; adjustable three-point spring-suspension subchassis; heavy gauge stainless-steel base plate and solid kiln-dried hardwood base. Wow and flutter 0.04% wrms; rumble -60 dB unweighted; speed accuracy ±0.04%; optional 45-rpm adaptor available; 5<sup>1</sup>/<sub>2</sub>" H x 17<sup>1</sup>/<sub>16</sub>" W x 14" D..... \$960

## LUX

### Luxman PD-555 Single-Play

Three-speed (33<sup>1</sup>/<sub>3</sub>, 45, and 78 rpm) belt-drive vacuum-stabilized turntable with provision for use of



two arms simultaneously (arms not included); brushless slotless dc servomotor; built-in vacuum pump (exhausts air through platter which results in keeping discs as close to platter as possible) with vacuum meter and separate stabilizer unit; aluminum diecast platter; built-in quartz-lock stroboscope and adjustable ±2.5% rotation range; feather-touch top-mounted operations switches. Wow and flutter 0.03% wrms; rumble -72 dB; solid diecast aluminum high-inertia cabinet. \$1995

### Luxman PD-441 Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) direct-drive quartz PLL turntable with provision for one arm with detachable sliding arm base (arm not included); quartz-controlled load-free-spindle brushless dc servomotor; two-step brake insulator. Wow and flutter 0.025% wrms; rumble -75 dB; includes detachable acrylic resin dustcover; 6<sup>3</sup>/<sub>16</sub>" H x 18<sup>1</sup>/<sub>16</sub>" W x 15<sup>1</sup>/<sub>16</sub>" D ..... \$675

### Luxman PD277 Automatic Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) direct-drive turntable with automatic tonearm; brushless and slotless dc servomotor and separate motor for tonearm; statically-balanced low-mass straight tonearm with electronic operations controls; mirror-reflex strobe with ±4% pitch control. Wow and flutter 0.03%; rumble -60 dB; 6" H x 18<sup>1</sup>/<sub>16</sub>" W x 13<sup>3</sup>/<sub>16</sub>" D..... \$395

**PD272.** Similar to PD277 except has manual tonearm with oil-damped cueing..... \$345

**PD270.** Same as PD277 without tonearm..... \$285

### Luxman PD-264 Semi-Auto Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) direct-drive turntable with auto cut/return arm; dc servo brushless motor; 30-cm aluminum diecast platter; 240-mm statically-balanced straight arm with anti-skating, tonearm height, and stylus height adjustments; mirror-reflex LED stroboscope with ±6% fine speed control. Wow and flutter 0.035% wrms; rumble -60 dB (IEC B); tracking force range 0-3 g; cartridge weight range 4-11 g; includes detachable semi-free-stop hinged acrylic resin dustcover 4<sup>1</sup>/<sub>16</sub>" H x 17<sup>1</sup>/<sub>16</sub>" W x 14<sup>3</sup>/<sub>16</sub>" D ..... \$225

## MARANTZ

### 6370Q Automatic/Manual Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm), direct-drive, quartz-locked turntable with auto return/shutoff arm; dc servomotor; rpm speed/deviation digital readout; lateral balanced tonearm; oil-damped cueing; shock absorbent feet; anti-skating; wow and flutter 0.02% (NAB weighted); rumble -70 dB (NAB RRL); includes dustcover and walnut-finish base; 5<sup>1</sup>/<sub>2</sub>" H x 18<sup>1</sup>/<sub>16</sub>" W x 14<sup>1</sup>/<sub>16</sub>" D ..... \$470

### TT6000 Automatic Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) quartz-locked direct-drive turntable with automatic tonearm; two motors; 12<sup>1</sup>/<sub>16</sub>-in platter; 9-in low-mass straight arm with viscous damped cueing, anti-skating, and detachable carbon-filled headshell; front-panel controls accessible when dustcover is down. Wow and flutter 0.025%; rumble -75 dB (DIN B); includes detachable hinged dustcover; 5<sup>1</sup>/<sub>2</sub>" H x 17<sup>3</sup>/<sub>16</sub>" W x 15" D..... \$310

### TT4000 Semi-Automatic Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) quartz-locked direct-drive turntable with automatic return/shutoff tonearm; brushless slotless high-torque dc motor; 8.5-in straight tonearm with removable headshell, acoustically decoupled counterweight, and vertical viscous-damped cueing; 12.6-in dynamically-balanced platter. Wow and flutter 0.025% wrms; rumble -72 dB (DIN B); tracking force range 0-4 g; damped shock-absorbent feet; removable damped-hinged dustcover (does not cover controls); 5<sup>1</sup>/<sub>2</sub>" H x 17<sup>3</sup>/<sub>16</sub>" W x 15" D..... \$250

**TT2000.** Similar to TT4000 without quartz lock; has coreless 8-pole, 2-phase dc servomotor and strobe light and ±4% pitch control; wow and flutter 0.03% wrms..... \$200

### 6025 Semi-Automatic Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) belt-drive turntable with automatic return/shutoff arm; four-pole ac-synchronous motor; reject button; damped cueing; anti-skating; shock absorbent feet; wow and flutter 0.07% (NAB weighted); rumble -65 dB (NAB RRL); includes dustcover and base; 5<sup>1</sup>/<sub>2</sub>" H x 17<sup>1</sup>/<sub>16</sub>" W x 13<sup>3</sup>/<sub>16</sub>" D..... \$130

## MICRO SEIKI by SAE

### RX-5000 Manual Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) belt-drive manual turntable without arm; frequency-generator servomotor; includes remote control unit; wow and flutter 0.015% wrms; rumble -80 dB ..... \$3500

**RX-3000.** Similar to RX-5000 except wow and flutter 0.02% wrms; and rumble -78 dB; dc servomotor ..... \$2200

### BL-91 Manual Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) belt-drive manual turntable without arm; frequency-generator servomotor; wow and flutter 0.025%; rumble -75 dB ..... \$750

**BL-91L.** Same as BL-91 except takes transcription arm..... \$1200

### DQX-1000 Single-Play Automatic

Direct-drive, quartz PLL servo-controlled motor; will accept three tonearms because of special casting containing three separate modular pods; separate layers of cork and rubber for turntable mat; two-layer absorber system consisting of cushion rubber and insulator balls with built-in springs; turntable controls and power supply in separate unit for speed select, stop, power, and fine-speed adjustment; without tonearm or cartridge ..... \$900

**MAX-505.** Dynamically balanced manual arm for DQX-1000..... \$275

### DQX-500 Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) quartz-locked PLL direct-drive turntable; dc servomotor; phono motor



and arm integrated with metal base; 13<sup>3</sup>/<sub>16</sub>-in alumi-

num platter; 9 $\frac{3}{8}$ -in MA-707 dynamically-balanced variable-mass arm with mechanically-controlled viscous damped cueing; wow and flutter 0.02% wrms; rumble -75 dB (DIN B); tracking force 0-3 g; 5 $\frac{1}{2}$ " H x 16 $\frac{1}{8}$ " W x 13 $\frac{1}{4}$ " D ..... \$600

#### DQ-3 Manual Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz PLL direct-drive turntable with manual arm; dc servomotor; wow and flutter 0.025% wrms; rumble -75 dB (DIN B) ..... \$500

**DQ-44.** Similar to DQ-3 ..... \$450

#### DD-31 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with auto-lift tonearm; wow and flutter 0.03% wrms; rumble -75 dB (DIN B) ..... \$375

#### MV-14 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto return/cut arm; 4 pole synchronous motor; wow and flutter 0.055% wrms; rumble -65 dB (DIN B) ..... \$190

#### DD-24 Single-Play Manual

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive dc servo-controlled turntable with electronically-controlled tonearm return/shutoff with manual operation; DD-24 statically-balanced S-shaped arm; viscous damped cueing; inside force canceller; on/off and rotational speed pushbutton controls; speed adjustment  $\pm$  5% range; automatic quick start when arm moves toward record; 12 $\frac{1}{2}$ -in aluminum platter; anti-howl rubber feet; wow and flutter less than 0.03%; rumble -73 dB (DIN "B"); max. tracking error less than 1.5 degrees; tracking force adjustment 0.3-g; 4 $\frac{7}{8}$ " H x 17 $\frac{3}{8}$ " W x 13 $\frac{1}{4}$ " D ..... \$200

**MB-14.** Similar to DD-24 except belt-drive, four-pole synchronous system; tubular S-shaped arm with detachable headshell; oil-damped cueing; anti-skating control; 11 $\frac{7}{8}$ -in aluminum platter; wow and flutter less than 0.55%; rumble -65 dB (DIN "B"); 5 $\frac{1}{8}$ " H x 17 $\frac{3}{8}$ " W x 13 $\frac{1}{4}$ " D ..... \$275

### MITSUBISHI

#### LT-30 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) linear-tracking PLL quartz crystal direct-drive turntable with automatic



tonearm; slotless brushless servomotor and separate dc motors for arm and automatic operations; 12 $\frac{1}{2}$ -in aluminum diecast platter with 14-oz SBR mat; 6 $\frac{7}{8}$ -in statically-balanced linear-tracking straight stainless-steel arm with ultralightweight magnesium diecast shell and chuck-type headshell mount. Features LSI electronic pushbutton controls for stop, start, lift/cue, repeat, speed selector, and platter on/off with LED indicators; auto disc size detector through photo-optical sensors; LED tracking error and arm movement indicators;  $\pm$  3-mm

arm height adjustment; counterweight with anti-resonance filter. Wow and flutter 0.025% wrms; S/N 78 dB (DIN B), 65 dB (IEC B); tracking force range 0-3 g; cartridge weight range 4-10 g (with 6-g headshell), to 20 g (with subweight); includes height-adjustable feet and detachable dustcover; 5 $\frac{3}{8}$ " H x 19 $\frac{1}{8}$ " W x 16 $\frac{1}{4}$ " D ..... \$690

#### LT-5V Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) vertical-linear-tracking PLL quartz lock belt-drive turntable with automatic tonearm; dc motors for servo, arm drive, and automatic functions; 12-in aluminum diecast platter; 7 $\frac{1}{8}$ -in statically balanced linear-tracking straight stainless-steel arm with GFRP headshell. Features LSI electronic pushbutton controls (accessible with dustcover down) for stop, start, lift/cue, repeat, and speed with photoelectric sensors detecting presence and size of disc; LED arm movement and tracking error indicators; stylus tracking force dial; spring-loaded record clamp and stabilizer and integrated arm position scale for vertical format; stroboscopic speed indication. Wow and flutter 0.045% wrms; S/N 76 dB (DIN B), 65 dB (IEC B); cartridge weight range 10-20 g; metallic-finish particleboard cabinet with detachable polystyrene dustcover and acoustic insulator feet; 17" H x 18 $\frac{3}{8}$ " W x 7 $\frac{1}{8}$ " D ..... \$450

#### DP-EC7 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive dc turntable with automatic tonearm; 20-pole 30-slot FG dc servomotor; separate motors for arm and automatic functions; 12 $\frac{1}{2}$ -in aluminum diecast platter; 9-in statically-balanced J-shaped arm with GFRP headshell and internal butyl-rubber damping in offset counterweight and arm. Features LSI electronic pushbutton controls (accessible with dustcover down) for speed, repeat, start, lift/cue, and stop with LED indicators; auto disc size/speed photoelectric sensors;  $\pm$  3% speed adjustment and stroboscope. Wow and flutter 0.03% wrms; S/N 73 dB (DIN B), 60 dB (IEC B); tracking force range 0-3 g; cartridge weight range 5-10.5 g; includes detachable dustcover and wood cabinet with acoustic insulator feet; 5 $\frac{3}{8}$ " H x 17 $\frac{3}{8}$ " W x 15" D ..... \$300

#### DP-5 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with automatic arm; 20-pole brushless direct-drive FG dc motor; 12 $\frac{1}{2}$ -in aluminum diecast platter; 9-in statically-balanced J-shaped tubular arm with GFRP headshell and offset anti-resonance counterweight damped cueing. Features switch selectors (accessible with dustcover down) for speed, up/down arm movement, 7/10/12-in disc size, and start/stop operations; rotary repeat switch; separate  $\pm$  3% fine speed adjustments with stroboscope. Wow and flutter 0.03% wrms; S/N 70 dB (DIN B), 60 dB (IEC B); tracking force range 0-3 g; cartridge weight range 4.5-10 g; 5 $\frac{3}{8}$ " H x 17 $\frac{3}{8}$ " W x 14 $\frac{1}{8}$ " D ..... \$220

### NAD (USA)

#### 5080 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with auto return/shut off tonearm; electronically-controlled brushless dc motor; low-mass straight arm with plug-in carbon-fiber headshell, gimbal suspension, ball race lateral bearings, anti-skating, and viscous cueing; 11.89-in dynamically balanced diecast aluminum platter with illuminated strobe and variable pitch control. Wow and flutter 0.03% wrms; rumble -70 dB (DIN B); tracking force range 0-3.5 g; start-up time  $\frac{2}{3}$  revolution to full speed; ABS base; 6" H x 18.5" W x 15" D ..... \$279

**5040.** Similar to 5080 except belt-drive with FG dc servomotor and open-cradle suspension tonearm with plug-in magnesium headshell; wow and flutter 0.05% wrms; rumble -67 dB (DIN B) ..... \$229

**5020.** Similar to 5040 minus strobe and pitch control; has 4-pole synchronous motor; arm same as

5080; wow and flutter 0.06% wrms; rumble -65 dB (DIN B) ..... \$198

### ONKYO

#### CP-1280F Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) PLL quartz-locked direct-drive turntable with automatic tonearm;



20-pole 30-slot brushless dc motor and separate arm motor; 13-in platter with thick anti-static neoprene mat; 9 $\frac{3}{8}$ -in low-mass statically-balanced carbon-fiber straight angular-ply tubular tonearm with detachable ADC-type carbon-fiber headshell, anti-skating, direct-reading tracking force adjustment, and manual arm lifter. Additional features include  $\pm$  5.9% quartz-locked variable pitch control with LED indicator; 17/30-in disc selector; auto repeat. Wow and flutter 0.025% wrms; rumble -78 dB (DIN B); cartridge weight range 4-8.5 g; rosewood veneer base with coil-spring and rubber-damped feet plus 3-mm butyl rubber shock absorbers. \$450

**CP-1260F.** Similar to CP-1280F except has  $\pm$  6% pitch control; rumble -75 dB (DIN B); cartridge weight range 4-11 g ..... \$360

#### CP-1150F Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) PLL quartz-locked direct-drive turntable with automatic arm; servo and arm motors; low-mass angular-ply carbon-fiber straight tonearm with detachable ADC-type headshell; acrylic turntable mat. Features microcomputer-controlled arm functions with automatic scan (arm scans next selection to be played in either direction) and optical sensing for auto shutoff at end of play; quartz PLL speed control with illuminated strobe; 17/30-in disc size selector; auto repeat; optional RC-6 remote control unit available. Wow and flutter 0.025% wrms; rumble -75 dB (DIN B); isolated polymer base with triple insulated feet .. \$320

**CP-1130F.** Similar to CP-1150F minus quartz PLL servo system and carbon-fiber arm; has variable pitch and black anodized aluminum straight arm; rumble -72 dB (DIN B) ..... \$240

#### CP-1030F Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-locked direct-drive turntable with automatic tonearm; brushless, coreless, slotless quartz dc motor and motor for arm function; low-mass statically-balanced straight tubular arm with detachable non-resonant carbon fiber headshell and direct-reading tracking force counterbalance; 1.4-kg aluminum diecast platter with bevel edges. Features continuous repeat; two-tier strobe with front-panel LED strobe window; adjustable anti-skating dial; oil-damped cueing by automatic and manual function; opto-electric shut-off; double-insulated rubber feet. Wow and flutter 0.03% wrms; S/N 75 dB (DIN B); cartridge weight range 5-8.5 g; includes hinged dustcover (does not cover front-panel controls) ..... \$315

#### CP-1020F Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with automatic tonearm; brushless, coreless, slotless FG servo dc motor and dc motor for tonearm; 224-mm statically-balanced straight pipe tonearm



with detachable headshell with ADC-type connector and direct-readout tracking force counterbalance; 31-cm bevel-rimmed aluminum diecast platter. Features continuous repeat; separate speed adjust controls ( $\pm 2\%$  accuracy); two-tiered strobe; anti-skating with dial adjustment; oil-damped cueing by automatic and manual operation; double-insulated rubber feet. Wow and flutter 0.035% wrms; S/N 72 dB (DIN B); cartridge weight range 5-8.5 g; includes removable hinged dustcover (does not cover front-panel controls) and 45-rpm adaptor; 5 $\frac{1}{4}$ " H  $\times$  17 $\frac{1}{8}$ " W  $\times$  14 $\frac{1}{2}$ " D.....\$220

**CP-1015A Semi-Automatic Single-Play**  
Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with auto return/cut arm; brushless dc servomotor; low-mass statically-balanced straight arm with detachable ADC-type carbon-fiber headshell and front-panel cueing controls; illuminated strobe with  $\pm 2\%$  pitch adjustment; wow and flutter 0.035% wrms; rumble -78 dB (DIN B); high-density polymer base with triple-insulated feet.....\$160

**CP-1010A Semi-Automatic Single-Play**  
Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto return/auto cut tonearm; 24-pole FG servo dc motor; 213-mm statically-balanced straight pipe arm with detachable headshell with ADC-type connector and direct-readout tracking force counterbalance; 31-cm bevel-rimmed aluminum diecast platter. Features separate speed controls ( $\pm 2\%$  accuracy); anti-skating with adjustable dial; oil-damped manual cueing; two-tier illuminated strobe; double-insulated spring-loaded rubber feet. Wow and flutter 0.05% wrms; S/N 67 dB (DIN B); cartridge weight range 5-8.5 g; includes hinged removable acrylic dustcover (does not cover front-panel controls) and 45-rpm record adaptor; 5 $\frac{1}{4}$ " H  $\times$  17 $\frac{1}{8}$ " W  $\times$  14 $\frac{1}{2}$ " D.....\$145

## OPTONICA

**RP-9705 Automatic Single-Play**  
Two-speed (33 $\frac{1}{3}$  and 45 rpm) programmable microprocessor-controlled quartz-locked direct-drive turntable with automatic tonearm and separate remote control unit; statically-balanced and sensor tonearms with direct-readout stylus force, anti-skating, viscous-damped cueing, and overhang mark. Features automatic programmable music selector (programs up to ten different selections or one selection repeatedly ten times), programmer also plays portions of selections; infrared remote control with complete programming functions; LED pre-program and play-program digital readout; solenoid operations controls. Wow and flutter 0.028% wrms; rumble -70 dB (DIN B); nylon turntable base.....\$950

**RP-7705 Automatic Single-Play**  
Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-lock direct-drive turntable with automatic tonearm; coreless quartz-locked dc motor; 8.3-in statically-balanced J-shaped tonearm and separate sensor tonearm. Features nine-position auto program locate device; strobe with  $\pm 4\%$  pitch control; anti-skating and viscous-damped cueing; overhang mark; direct-readout stylus force; solenoid-operations controls with LEDs. Wow and flutter 0.03% wrms; rumble -70 dB (DIN B); min. tracking force 1 g; nylon base; 4.3" H  $\times$  18.9" W  $\times$  15.1" D.....\$320

**RP-4705 Automatic Single-Play**  
Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with automatic tonearm; coreless FG dc servomotor; platter with strobe and  $\pm 4\%$  pitch control; 8.3-in statically-balanced J-shaped tonearm with direct-readout stylus force, anti-skating, viscous-damped

cueing, and overhang mark; solenoid operations controls with LEDs. Wow and flutter 0.035% wrms; rumble -68 dB (DIN B); min. tracking force 1.0 g; nylon turntable base; 4.3" H  $\times$  18.9" W  $\times$  15.5" D.....\$220

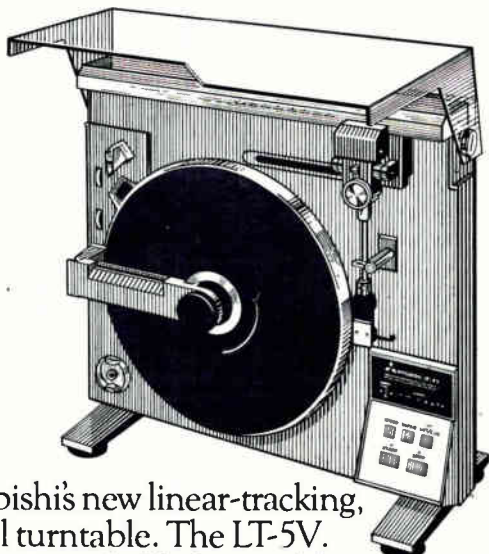
## PANASONIC

**SL-H401 Automatic Single-Play**  
Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with automatic tonearm; FG servomotor; 12-in aluminum diecast platter with illuminated stroboscope and variable pitch control ( $\pm 10\%$ ); statically-balanced aluminum S-shaped tonearm with moving-magnet cartridge and anti-skating; viscous-damped cueing; electronic speed switching; heavy-duty base material with separate isolators; detachable hinged dustcover.....\$150-\$170

**SL-H301 Semi-Automatic Single-Play**  
Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with automatic return tonearm; dc servomotor; 12-in aluminum diecast platter; statically-balanced S-shaped tonearm with moving-magnet cartridge, viscous-damped cueing, and anti-skating; electronic speed switching; built-in audio isolators; includes detachable hinged tilt-back dustcover.....\$100-\$125

**SL-H201 Automatic Changer**  
Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive record changer with automatic tonearm; synchronous 24-pole motor; 11-in aluminum platter; low-mass aluminum tubular S-shaped tonearm with Shure moving-magnet cartridge, bi-directional viscous-damped cueing, tracking force adjustment, and anti-skating; features memo-gram; simulated wood base.....\$90-\$110

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Mitsubishi's new linear-tracking, vertical turntable. The LT-5V.

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# 4 TURNTABLES

## JC PENNEY

### MCS 6800 Semi-Auto Single-Multi/Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) programmable belt-drive turntable with auto return/shutoff tonearm; 24-pole ac synchronous motor; 11 $\frac{1}{4}$ -in recessed platter; straight tonearm with decoupled counterweight, preset anti-skating, and electro-optical sensing magnetic cartridge. Features remote control unit for programming within 50-ft radius; six-record multi-play capability; can program up to 27 selections from six records or 13 selections from one record; electronically-controlled cue, pause, and muting; auto speed record size/speed selection. Wow and flutter 0.05% wrms; rumble -65 dB (DIN B); includes removable hinged dustcover (all controls outside cover). 45-rpm adaptor, 9-V battery for remote unit, and rotating manual and multi-play spindles; anti-resonant plastic black-finish cabinet; 7" H x 17 $\frac{1}{2}$ " W x 17 $\frac{1}{2}$ " D ..... \$250

### MCS 6700 Automatic Single-Multi/Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive dc servomotor controlled single-/multi-play turntable with automatic arm operation; speed deviation 0.06%; fine speed control; strobe; S-shaped tubular tonearm with cue/pause and anti-skating; arm length 9.06-in; wow and flutter 0.03% wrms (JIS); rumble -73 dB (IEC A weighted); tracking error 3.5 degrees; includes universal cartridge head, 45-rpm adaptor, and dustcover; 6 $\frac{1}{8}$ " H x 17 $\frac{1}{2}$ " W x 14 $\frac{1}{2}$ " D ..... \$230

**MCS 6601.** Similar to MCS 6700 except single-play with automatic return/stop tonearm; wow and flutter 0.03% ..... \$230

### MCS 6710 Semi-Auto Single-Multi/Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with auto return shut-off tonearm; dc servomotor; 12-in aluminum diecast recessed platter with strobe and  $\pm 6\%$  pitch control; S-shaped tubular arm with damped cue/pause. Features single-/multi-play capability (up to six records); manual size selector for 7- and 12-in discs; six-program selector; repeat; electronic speed change; Wow and flutter 0.05% wrms (JIS); rumble -65 dB (IEC A weighted); tracking force range 0-3 g; includes manual and umbrella spindles, 45-rpm adaptor, and removable tinted plastic dustcover; 6 $\frac{1}{2}$ " H x 16 $\frac{1}{8}$ " W x 14" D ..... \$160

### MCS 6503 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive dc servomotor controlled turntable with auto return/stop tonearm; speed deviation 0.16%; fine speed control; strobe; S-shaped tubular arm (length 8.65-in) with anti-skating and cue/pause controls; wow and flutter 0.05% wrms (JIS); rumble -65 dB (DIN "B"); tracking error 3.5 degrees; includes dustcover; black wood cabinet; 5 $\frac{1}{8}$ " H x 16 $\frac{1}{2}$ " W x 13 $\frac{1}{4}$ " D ..... \$130

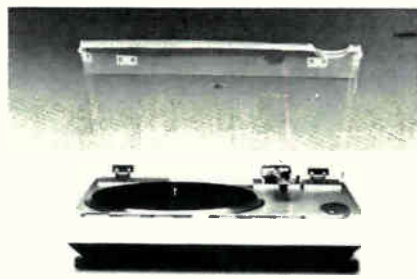
**MCS 6502.** Same as MCS 6503 except has wood-grain vinyl cabinet ..... \$130

## PHASE LINEAR

### 8000 Series Two Auto Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) PLL quartz-locked direct-drive turntable with manual/automatic tonearm; PLL Hall-effect motor; 12.2-in aluminum diecast platter; 7.5-in linear-motor tangential-tracking statically-balanced straight tonearm; three-diameter disc size selector; automatic repeat. Wow and flutter 0.013% wrms; rumble -78 dB (DIN B); cartridge weight range 4-14.5 g; 6" H x 19.4" W x

17.5" D ..... \$750



17.5" D ..... \$750

## PHILIPS

### AF977 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) digital quartz PLL belt-drive turntable with automatic tonearm; Direct Control tachogenerator motor; has tubular straight arm. Features feather-touch controls; LED digital speed readout; pitch control ( $\pm 0.002\%$ ); adjustable anti-skating and stylus force readout (0.5-3 g range). Wow and flutter 0.02% wrms; rumble -73 dB (DIN B) ..... \$380

### AF829 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with automatic tonearm; Direct Control tachogenerator motor; has straight tubular tonearm. Features front-mounted feather-touch controls; nine-LED pitch control display in 0.5% steps with separate controls for both speeds; adjustable anti-skating, cueing, and stylus force readout (0.5-3 g). Wow and flutter 0.03% wrms; rumble -70 dB (DIN B). \$280

### AF887 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz PLL belt-drive turntable with auto return/shutoff tonearm; dc



tachogenerator motor; 12 $\frac{1}{32}$ -in aluminum diecast platter; 8.46-in tubular aluminum straight arm with adjustable de-coupled counterweight with direct-readout stylus force, light detachable headshell, hydraulically-damped cueing, and anti-skating. Features electronic speed, reject, and stop touch controls; LED quartz locked indicator; shock-proof free-floating arm and platter sub-chassis. Wow and flutter 0.025% wrms; rumble 73 dB (DIN "B"); tracking force range 0.75-3 g; includes hinged dustcover; 13 $\frac{1}{4}$ " H x 16 $\frac{1}{2}$ " W x 15 $\frac{1}{4}$ " D ..... \$240

### AF729 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with automatic arm; dc tachogenerator motor; 12 $\frac{1}{32}$ -in aluminum diecast platter; 8.46-in tubular aluminum straight arm with detachable headshell, adjustable counterweight with direct-readout stylus force, anti-skating, and hydraulically-damped cueing. Features front-mounted controls;  $\pm 3\%$  pitch controls with three-LED speed bar indicators; shock-proof free-floating platter and arm sub-chassis. Wow and flutter 0.05% wrms; rumble -65 dB (DIN B); tracking force range 0.75-3 g; includes hinged dustcover; 5 $\frac{1}{2}$ " H x 17 $\frac{1}{4}$ " W x 14 $\frac{1}{3}$ " D ..... \$200

### AF777 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with automatic arm; dc tachogenerator motor; 12 $\frac{1}{32}$ -in aluminum diecast platter; 8.46-in tubular aluminum arm with direct-readout stylus force, anti-skating, and hydraulically-damped cueing; pitch control with three-LED speed bar indicators. Wow and flutter 0.05% wrms; rumble -65 dB (DIN B); tracking force range 0-4 g; 5 $\frac{1}{2}$ " H x 17 $\frac{1}{2}$ " W x 13 $\frac{1}{4}$ " D ..... \$185

### AF677 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto return/shutoff arm; dc tachogenerator motor; 12 $\frac{1}{32}$ -in aluminum diecast platter; 8.46-in tubular aluminum arm with detachable headshell, direct-readout stylus force, anti-skating, and hydraulically-damped cueing; free-floating arm and platter sub-chassis. Wow and flutter 0.05% wrms; rumble -65 dB (DIN B); tracking force range 0-3 g; 5 $\frac{1}{2}$ " H x 16 $\frac{1}{2}$ " W x 13 $\frac{1}{4}$ " D ..... \$170

### AF685 Manual Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive with end-of-record shutoff; dc motor; viscous-damped cueing; anti-skating; pitch control; wow and flutter 0.09% wrms; rumble -60 dB (DIN B) ..... \$120

## PIONEER

### PL-630 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-PLL direct-drive turntable with automatic lead-in/play/return/shut-off tonearm (can be set for manual operation). Features quartz-PLL Hall and dc motors with three ICs for electronic control; front-panel touch-sensitive buttons and LEDs; pitch control (range  $\pm 6\%$ ) and meter display; optical-electronic end-of-play detection; electronic cueing device and quick-stop; anti-skating; S-curved gimbal-supported tonearm (effective length 237 mm); magnesium headshell; coaxial suspension system. Wow and flutter 0.025% wrms max.; rumble -65 dB (JIS), -75 dB (DIN "B"). Includes removable hinged acrylic cover. 5 $\frac{1}{8}$ " H x 18 $\frac{1}{2}$ " W x 16 $\frac{1}{8}$ " D ..... \$449

### PL-600 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz PLL peripheral-integrated FG servo direct-drive turntable with au-



omatic tonearm; quartz PLL Hall-effect dc motor and separate dc arm motor; aluminum platter; 9 $\frac{1}{16}$ -in statically-balanced S-shaped pipe arm with direct-readout counterweight, anti-skating, electronic cueing, and  $\pm 3$ -mm height-adjustment. Features all-electronic automatic operation controls accessible when dustcover is down; LED opto-electronic arm-position detector; auto repeat with LED indicator; quick start/stop; coaxially-suspended platter, motor, and arm; 7/10/12-in disc size selector. Wow and flutter 0.025% wrms; S/N 78 dB (DIN B); cartridge weight range 4-9 g; includes free-hinged acrylic dustcover; 5 $\frac{1}{2}$ " H x 17 $\frac{1}{8}$ " W x 15 $\frac{1}{8}$ " D ..... \$399

**PL-500.** Similar to PL-600 except with automatic/



manual arm; minus electronic operations controls, opto-electronic arm-position detector, and quick start/stop; has Warren Gear arm motor for automatic functions, 8 1/4-in arm with oil-damped cueing, and built-in strobe illumination light; S/N 75 dB (DIN B); cartridge weight range 4-10 g; 15 3/16" D ..... \$299

### PL-400 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) quartz PLL direct-drive turntable with automatic arm; quartz PLL stable hanging rotor Hall-effect dc motor; aluminum diecast platter; 8 1/4-in statically-balanced S-shaped pipe arm with shock-proof polyester-based resin and glass fiber headshell, counterweight/tracking force dial, anti-skating, and oil-damped cueing. Features quick start, auto repeat, built-in strobe illumination light, 7/10/12-in disc size selector, and platter, motor, and arm coaxial suspension; all controls accessible outside dustcover. Wow and flutter 0.025% wrms; S/N 75 dB (DIN B); cartridge weight range 4-9 g; includes removable hinged dustcover; 3 3/4" H x 16 9/16" W x 14 3/16" D ..... \$199

PL-300. Similar to PL-400 except semi-automatic with auto return/shutoff arm, no auto repeat or disc size selector ..... \$179

PL-200. Similar to PL-300 minus quartz PLL servo system; has coreless stable hanging rotor Hall-effect dc motor and ±2% pitch control ..... \$149

## REALISTIC

### LAB-420 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) direct-drive turntable with automatic tonearm; 20-pole brushless dc servomotor; S-shaped arm (tracks down to 0.5 g) includes magnetic cartridge with elliptical stylus and low-capacitance pick-up leads; neon strobe with ±4% pitch control; damped cue/pause; programmable repeat (plays one side of record up to six times); calibrated anti-skating. Wow and flutter 0.03% wrms; rumble -63 dB (DIN B); walnut veneer base and hinged dustcover; 5 5/8" H x 17 1/2" W x 13 13/32" D ..... \$220

### LAB-390 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) direct-drive turntable with automatic arm; brushless dc motor; front-mounted controls; anti-shock feet; includes Realistic/Shure magnetic cartridge with elliptical stylus. Wow and flutter 0.03% wrms; rumble -75 dB (DIN B); hinged dustcover and base ..... \$170

### LAB 270 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with automatic return/eject tonearm; dc servomotor; removable headshell; cueing; wow and flutter 0.05%; rumble -65 dB (DIN B); includes base, dustcover, and cartridge ..... \$140

### LAB-220 Automatic Changer

Two-speed (33 1/3 and 45 rpm) belt-drive automatic record changer; 24-pole motor with solid-state speed control; strobe light with ±3% speed adjustment; includes Realistic magnetic cartridge, base, and dustcover ..... \$140

### LAB-58 Automatic Changer

Two-speed (33 1/3 and 45 rpm) automatic/manual changer plays up to six records; 24-pole synchronous motor; dual-scale anti-skating; wow and flutter 0.08% wrms; rumble -62 dB (DIN B); includes dustcover and magnetic cartridge with stylus; vibration-isolated base with simulated walnut finish ..... \$100

### LAB-120 Automatic Single-Play

Three-speed (33 1/3, 45, and 78 rpm) turntable with automatic/manual tonearm; damped cue/pause; four-pole induction motor; adjustable tracking; supplied with magnetic cartridge with diamond stylus and dustcover; simulated walnut base ..... \$90

## REFERENCE by QUADRAFLEX

### 620T Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) direct-drive turntable with auto lift/shutoff tonearm; 20-pole, 30-slot dc servomotor; 11 1/2-in straight tonearm with adjustable anti-skating and damped cueing; strobe with pitch control; wow and flutter 0.03% (DIN 45 507); rumble -70 dB (DIN 45 539 B); tracking force range 0-3 g; 6 1/4" H x 18" W x 13 1/2" D ..... \$250

### 510T Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with auto shutoff tonearm; ac synchronous motor; 11 1/2-in S-shaped tonearm with adjustable anti-skating and damped cueing; wow and flutter 0.1% (DIN 45 507); rumble -60 dB (DIN 45 539 B); tracking force range 0-4 g; 5 13/16" H x 17 1/4" W x 14 3/4" D ..... \$140

## REGA

### Planar 3 Manual Single-Play

Belt-drive turntable with manual tonearm; 24-pole synchronous motor; precision-ground glass platter with felt mat; Rega arm with magnetic bias; tracking force range 0-3 g; tracking error 1.5 degrees/in; includes base and dustcover; 5" H x 17 1/2" W x 14" D ..... \$530  
Without arm ..... \$395

### Planar 2 Manual Single-Play

Belt-drive turntable with manual arm; 24-pole synchronous motor; precision-ground glass platter with hybrid isolation mat; Rega arm with magnetic bias; tracking force 0-3 g; tracking error 1.5 degrees/in; includes base and dustcover; 4 3/4" H x 17 1/2" W x 14 1/2" D ..... \$410  
Without arm ..... \$295

## ROTEL

### RP-1010 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) quartz-lock PLL direct-drive turntable with automatic tonearm, dc servomotor, and statically-balanced glass-fiber straight arm with glass-fiber headshell. Features front-panel controls accessible outside dustcover; stroboscope with speed controls (±4% accuracy); anti-skating and cue; spring-loaded insulator feet. Wow and flutter 0.025% wrms; rumble -63 dB (IEC B); tracking force range 0.75-3 g; includes detachable dustcover; 6" H x 17 23/32" W x 14" D ..... \$325

### RP-1001 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) direct-drive turntable with auto return/lead-in/shutoff arm, dc servomotor, and statically-balanced straight arm with glass-fiber headshell. Features front-panel controls accessible outside dustcover; stroboscope with speed controls (±4% accuracy); anti-skating and cue; spring-loaded insulator feet. Wow and flutter 0.03% wrms; rumble -60 dB (IEC B); tracking force range 0.75-3 g; includes detachable dustcover; 5 11/16" H x 17 3/16" W x 14 3/16" D ..... \$210

### RP-550 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) direct-drive turntable with auto return/shutoff tonearm, FG dc servomotor, and statically-balanced straight arm with glass-fiber headshell. Features front-panel controls accessible outside dustcover; stroboscope with speed controls (±3% accuracy); anti-skating and cue. Wow and flutter 0.04% wrms; rumble -58 dB (IEC B); tracking force range 1-3 g; includes detachable dustcover; 5 1/4" H x 17 23/32" W x 13 23/32" D ..... \$210

### RP-500 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with auto return/shutoff tonearm, four-pole hysteresis synchronous motor, and statically-balanced



### CASSETTE TAPES

TDK	DC-90 LO NOISE TAPE	\$14.50 / 10
TDK	SA-C90 SUPER AVILIN TAPE	28.50 / 10
TDK	SA-C80 SUPER AVILIN TAPE	21.50 / 10
TDK	C-90AD NEW AUDIA TAPE	24.50 / 10
TDK	C-60AD NEW AUDIA TAPE	16.50 / 10
BASF	C-90 PROFESSIONAL TYPE I	26.50 / 10
BASF	C-90 PRO TYPE II OR III	27.50 / 10
BASF	C-90 STUDIO SERIES TAPE	24.50 / 10
BASF	C-90 PERFORMANCE SERIES	17.00 / 10
MAXELL	C-90LN LOW-NOISE ECONOMY	23.50 / 12
MAXELL	C-60UD ULTRA-DYNAMIC TAPE	23.00 / 12
MAXELL	C-90UD ULTRA-DYNAMIC TAPE	29.50 / 12
MAXELL	UD-XL C-60 TYPE I OR II	28.50 / 12
MAXELL	UD-XL C-90 TYPE I OR II	38.50 / 12
SCOTCH	C-60 MASTER TYPE II OR III	25.00 / 10
SCOTCH	C-90 REEL TYPE II OR III	31.50 / 10

### REEL TO REEL TAPES

TDK	L-1800 AUDIA SERIES TAPE	\$64.50 / 10
TDK	L-3600 10 1/2" AUDIA	180.00 / 10
MAXELL	UD-35-180 ULTRA-DYNAMIC 7"	57.50 / 10
MAXELL	UD-35-180 SAME ON 10 1/2"	153.00 / 10
MAXELL	UD-XL 35 90B XL BACK-COATED	69.50 / 10
MAXELL	UD-XL 180B 10 1/2"	198.50 / 10
SCOTCH	207-R90 POLYBASE POSITRAK	50.00 / 10
SCOTCH	M-7R 180 ON 7" REEL	63.00 / 10

### EMPIRE

MODEL EDR-9	\$110.00	MODEL STANTON 881S	\$72.50
MODEL 2000Z	55.00	MODEL 681EES	53.50
MODEL 3000ME/X	19.00	MODEL 681EEE	45.00
<b>SHURE PICKERING</b>			
MODEL V-15-4	\$82.50	MODEL XSV-4000	\$63.00
MODEL V-15-3HE	75.90	MODEL XSV-3000	44.00
MODEL M 97HE	49.50	MODEL 1200-E	35.00

### AUTOMOTIVE ELECTRONICS

PIONEER	KP-8500 AM/FM CASSETTE	\$138.00
PIONEER	KE-2000 AM/FM CASSETTE	157.00
PIONEER	KP-9500 CASS. PB, DOLBY®	178.00
PIONEER	KP-5000 WITH DIGITAL TUNER	250.00
JENSEN	R-430 AM/FM CASSETTE	302.00
JENSEN	R-420 AM/FM CASSETTE	238.00
JENSEN	R-110 AM/FM CASSETTE	192.00
JENSEN	R-405 AM/FM CASSETTE	180.00

### LOUDSPEAKER SYSTEMS

JENSEN	TRIAx II J-1-033 (6x9")	\$75. PR
JENSEN	COAX II J-1-037 (6x9")	60. PR
JENSEN	COAX II J-1-041 (5 1/4")	49. PR
JENSEN	TRIAx J-1-065 (6x9")	62. PR
JENSEN	TRIAx J-1-101 (4x10")	62. PR
PIONEER	TS-695 (6x9") 3-WAY-40 WATT	89. PR
PIONEER	TS-696 (6x9") 2-WAY-40 WATT	72. PR
PIONEER	TS-168 6 1/2" DOOR MOUNT-3-WAY	75. PR
PIONEER	TS-167 6 1/2" DOOR MOUNT-2-WAY	48. PR

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straight tonearm with glass-fiber headshell; anti-skating; cue stick; front-panel controls accessible outside dustcover; double floating insulation system. Wow and flutter 0.06% wrms; rumble -55 dB (IEC B); tracking force range 1-3 g; includes detachable dustcover; 5 $\frac{1}{8}$ " H  $\times$  17 $\frac{3}{32}$ " W  $\times$  13 $\frac{3}{32}$ " D..... \$170

## SANSUI

### XR-Q11 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz PLL direct-drive turntable with automatic "Dyna Optimum Bal-



anced" tonearm; features computerized seven-program automatic track sequence music selector with LED indicators; digital speed readout; up/down, start/stop, and repeat pushbutton controls; anti-feedback base construction; front-mount accessible controls. Wow and flutter 0.015%; S/N 78 dB (DIN B)..... \$650

### XR-Q9 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive computerized quartz-PLL turntable with automatic "Dyna Optimum Balanced" straight tonearm and servomotor. Features electronic speed selector ( $\pm$ 0.002% accuracy) with LED digital display; electronic cue, pause, arm return, up/down, repeat, and start/stop controls. Anti-feedback construction with tonearm and motor sub-chassis separated from fiberglass and bulk-molding compound base board; includes hinged dustcover that does not cover controls. \$500

### FR-Q5 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) computer-controlled quartz PLL direct-drive turntable with automatic "Dyna-Optimum Balanced" S-shaped tonearm; brushless direct-drive servomotor and separate motor for arm lift, cue, and return; die-cast aluminum alloy platter. Features built-in computer with programmable repeat (repeats record once or indefinitely) and memory that stores beginning and end of record selection; up-front controls; electronic speed selector (0.002% accuracy); 45-rpm record spindle adaptor; cartridge mounting gauge; electronic/mechanical damping. Wow and flutter 0.025% wrms; S/N 75 dB; min. tracking force 0.5 g; includes dustcover with automatic hinges..... \$340

### FR-D4 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) computer-controlled direct-drive turntable with automatic "Dyna-Optimum Balanced" S-shaped tonearm; brushless dc servomotor and motor for arm lift, cue, and return; aluminum alloy diecast platter. Features built-in computer that stores beginning and end of record and with programmable repeat; up-front controls including pitch control; electronic/mechanical damping; 45-rpm record spindle adaptor; cartridge

mounting gauge. Wow and flutter 0.028% wrms; rumble -72 dB; min. tracking force 0.5 g; includes removable dustcover with automatic hinges (does not cover controls)..... \$240

### FR-D3 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) electronically-controlled direct-drive turntable with auto return/shutoff tonearm; 20-pole 30-slot brushless motor; aluminum alloy diecast platter; 8 $\frac{1}{16}$ -in statically-balanced S-shaped tonearm. Features wide-band strobe control;  $\pm$ 3% pitch control; up-front controls (outside dustcover). Wow and flutter 0.028% wrms; S/N 72 dB (DIN B); min. tracking force 1 g; includes removable hinged dustcover..... \$190

### P-50 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto return/shut off S-shaped statically-balanced tonearm; wow and flutter 0.06% wrms; rumble -60 dB (DIN B)..... \$140

## SANYO

### PLUS Q60 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) PLL quartz-locked direct-drive turntable with automatic tonearm; 20-pole 30-slot brushless dc servomotor and separate dc motor for arm; 9.33-in straight carbon-fiber tonearm with carbon-fiber headshell and calibrated counterweight; 3.3-lb aluminum diecast platter. Features quartz-locked double servo speed control; touch pushbutton controls with LEDs; stylus timer clock display/reset with memory; LED digital stylus tracking force display; LED speed and pitch readout; suspension/isolation system; four rubber/air damped suspension feet; calibrated anti-skating; disc size selector for 7, 10, and 12-in discs. Wow and flutter 0.025% wrms; rumble -73 dB (DIN B); tracking force range 0-3 g; cartridge weight range 4-10 g; includes 45-rpm adaptor and hinged dustcover (does not cover controls); 6" H  $\times$  17 $\frac{3}{8}$ " W  $\times$  14 $\frac{3}{8}$ " D..... \$550

**PLUS Q50.** Similar to PLUS Q60 without LED readouts..... \$300

### PLUS Q40 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz-locked direct-drive turntable with automatic arm; 20-pole 30-slot brushless dc servomotor; 8.66-in straight aluminum tubular arm with ABS headshell and calibrated counterweight; 2.2-lb aluminum diecast platter. Features front-panel control switches; disc size selector for 7, 10, and 12-in discs; automatically adjustable strobe frequency; suspension/isolation design; four rubber damped feet; adjustable anti-skating. Wow and flutter 0.03% wrms; rumble -70 dB (DIN B); tracking force range 0-3 g; cartridge weight range 4-10 g; includes 45-rpm adaptor and hinged dustcover (does not cover controls); 6" H  $\times$  17 $\frac{3}{8}$ " W  $\times$  14 $\frac{3}{8}$ " D..... \$200

**Q25.** Similar to Q40 except semi-automatic with auto return/shutoff arm; no disc size selector; 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{3}{8}$ " W  $\times$  15" D..... \$180

### TP1030 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) two-motor servo-controlled brushless dc direct-drive turntable with auto tonearm. Features electronic speed change ( $\pm$ 3% speed adjustment); illuminated stroboscope; S-shaped counterbalanced tone arm with plug-in headshell; anti-skating; cueing control; automatic continuous repeat; reject button; auto shutoff. Wow and flutter 0.03% wrms; rumble -70 dB; tracking force range 0-3 g; tracking error  $\pm$ 1.5 degrees; 6 $\frac{1}{16}$ " H  $\times$  18 $\frac{1}{4}$ " W  $\times$  15" D..... \$170

### TP1012A Semi-Automatic Single-Play

Two speed (33 $\frac{1}{3}$  and 45 rpm) dc servo-controlled direct-drive turntable with end-of-record automatic return/shutoff tonearm. Features speed adjustment  $\pm$ 3%; illuminated stroboscope; S-shaped counterbalanced arm; anti-skating; cueing control; reject

control. Wow and flutter 0.04% wrms; rumble -70 dB; tracking error  $\pm$ 1.5 degrees; tracking force range 0-3 g; 5 $\frac{1}{8}$ " H  $\times$  17 $\frac{3}{8}$ " W  $\times$  14 $\frac{1}{8}$ " D..... \$140  
**TP1010.** Similar to TP1012 except PLL dc servo-controlled belt-drive turntable with auto return/shutoff laterally-balanced tonearm; wow and flutter 0.05%..... \$120  
**TP1010C.** TP1010 with unmounted Pickering magnetic stereo cartridge..... \$130

### TP1005 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) belt-drive turntable with auto return tonearm; 68-pole tachogenerator PLL servomotor; 220-mm S-shaped tonearm with plug-in headshell and calibrated counterweight; 1 $\frac{1}{2}$ -lb diecast aluminum platter. Features adjustable anti-skating; viscous-damped cueing; electronic speed control. Wow and flutter 0.05% wrms; rumble -60 dB; tracking force range 0-3 g; hinged dustcover; 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  14 $\frac{1}{8}$ " D..... \$90  
**TP1005C.** TP1005 with unmounted magnetic stereo cartridge..... \$100

## H. H. SCOTT

### PS97XV Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) quartz PLL direct-drive turntable with automatic tonearm with single



play or repeat functions; high torque motor with electronic switching commutation; servo-applied speed lock; pushbutton speed change; 12-in aluminum platter with strobe and adjustable speed controls; S-shaped unipoint-suspension statically-balanced tonearm; viscous damped cueing; direct-readout anti-skating; stylus pressure control; record size selector. Wow and flutter 0.03% wrms; rumble -60 dB; tracking force range 1-3 g; includes spare headshell holder and hinged dustcover; 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  13 $\frac{3}{4}$ " D..... \$260

**PS77XV.** Similar to PS97XV except semi-automatic with automatic reject/return/shutoff tonearm; no record selector; 7" H  $\times$  17 $\frac{1}{4}$ " W  $\times$  13 $\frac{3}{4}$ " D..... \$235

### PS-78 Semi-Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) PLL quartz-locked direct-drive turntable with auto reject/return/shutoff arm; two-speed 72 pole FG servomotor; 12-in aluminum diecast platter; unipoint-suspension statically-balanced S-shaped tonearm with viscous damped cueing, direct readout anti-skating and stylus pressure controls, and anti-resonance counterweight; strobe with  $\pm$ 3% quartz-locked adjustable speed controls; LED quartz lock indicator. Wow and flutter 0.03% wrms; S/N 60 dB; tracking force range 1-3 g; includes low-capacitance phono cables, spare headshell holder, and hinged dustcover; 7" H  $\times$  17.25" W  $\times$  13.75" D..... \$220  
**PS-68.** Similar to PS-78 minus quartz-locked PLL reference system..... \$180

### PS87A Automatic Single-Play

Two-speed (33 $\frac{1}{3}$  and 45 rpm) direct-drive turntable with automatic tonearm with single play or repeat functions; 72-pole FG ac servomotor; pushbutton speed change; 12-in aluminum platter with strobe



and adjustable speed controls; S-shaped unipoint-suspension statically-balanced tonearm; viscous damped cueing; direct-readout stylus pressure and anti-skating controls; record size selector. Wow and flutter 0.03% wrms; rumble -60 dB; tracking force range 1-3 g; includes spare headshell holder and hinged dustcover; 5 1/4" H x 17 1/4" W x 13 1/4" D..... \$210

**PS67A.** Similar to PS67A except semi-automatic with automatic reject/return/shutoff tonearm; no record size selector; 7" H x 17 1/4" W x 13 1/4" D..... \$200

**PS47A.** Similar to PS67A except FG dc servo-controlled belt-drive turntable; gimbal supported statically balanced arm; no spare headshell holder; wow and flutter 0.05% wrms; rumble -55 dB; tracking force range 1-4 g; 5 1/2" H x 17 1/4" W x 13 1/4" D..... \$150

**PS17A.** Similar to PS47A except semi-automatic with automatic return/shutoff arm; four-pole ac synchronous motor; no stroboscope with adjustable speed control; wow and flutter 0.07% wrms; rumble -52 dB; tracking force range 1.5-4 g..... \$130

**PS-48 Semi-Automatic Single-Play**

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with auto reject/return/shutoff arm; two-speed FG dc servomotor; 12-in aluminum diecast platter; gimbal-mounted statically-balanced arm with viscous damped cueing, direct-readout stylus pressure, anti-skating, and anti-resonance counterweight; pushbutton speed change; strobe with ±3% speed controls. Wow and flutter 0.05% wrms; S/N 55 dB; tracking force range 1-4 g; includes low-capacitance phono cables, low-Q compression base, and hinged dustcover; 5.5" H x 17.25" W x 13.75" D..... \$150

**PS-18 Semi-Automatic Single-Play**

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with auto return/shutoff arm; four-pole ac synchronous motor; 12-in aluminum diecast platter; low-mass gimbal-mounted statically-balanced straight tonearm with anti-resonance counterweight, viscous damped cueing, direct readout stylus pressure, and anti-skating; pushbutton speed change. Wow and flutter 0.07% wrms; S/N 52 dB; tracking force range 1.5-4 g; includes low-Q compression base, low-capacitance phono cables, and hinged dustcover; 5.25" H x 17.25" W x 15.25" D..... \$130

**SHERWOOD**

**ST802 Semi-Automatic Single-Play**

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with auto return/cut tonearm; FG dc servomotor; heavy aluminum diecast platter; 213-mm low-mass straight tonearm with detachable headshell; front-panel controls; separate ±3% speed controls; bidirectional damped cueing; illuminated two-tier stroboscope. Wow and flutter 0.06% wrms (JIS); rumble -65 dB (DIN B); cartridge weight range 5-8.5 g; includes removable acrylic dustcover and base with spring-loaded rubber feet; 5.25" H x 18" W x 14.5" D..... \$150

**ST801 Semi-Automatic Single-Play**

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with auto return/cut tonearm; 4-pole synchronous motor; heavy aluminum diecast platter; 213-mm low-mass straight arm with detachable headshell; bidirectional damped cueing. Wow and flutter 0.08% wrms (JIS); rumble -62 dB (DIN B); cartridge weight range 5-8.5 g; includes removable acrylic dustcover and base with spring-loaded rubber feet; 5.25" H x 18" W x 14" D..... \$120

**SONY**

**PS-B80 Electronic Single-Play**

Two-speed (33 1/3 and 45 rpm) microprocessor-controlled turntable with electronic-controlled Velocity

Feedback automatic tonearm; brushless slotless BSL motor; 9 1/4-in statically-balanced J-shaped tonearm driven by two linear motors for horizontal and vertical motion; one-piece diecast aluminum headshell with four-clamp connector; 12 1/4-in single diecast aluminum platter (4 lb, 14 oz with mat). Features Magnedisc monitoring head and quartz-crystal lock speed reference (accuracy ±0.002%); electronic stylus force with LED digital readout; auto electronic anti-skating; auto tonearm balancing; electronic damping; auto record-size sensing; auto shutoff; front-panel cueing and arm indexing with memory control; built-in stylus cleaner; fluid-filled feet. Wow and flutter 0.02% wrms; rumble -78 dB (DIN B); startup time 1/4 rotation at 33 1/3 rpm; tracking force range 0.5-3 g; includes hinged dustcover with controls outside; 7 1/2" H x 19 1/2" W x 16 1/2" D..... \$1800

**PS-X75 Automatic Single-Play**

Two-speed (33 1/3 and 45 rpm) computer-controlled quartz-crystal-locked direct-drive turntable with au-



tomatic electronic microprocessor-controlled tonearm; brushless slotless motor; Biotracer arm, driven by two linear motors for vertical and horizontal motion, with electronically-controlled stylus force, anti-skating, and cueing; Magnedisc servo control for speed monitoring and electrical input adjustment; stylus muting sensor; automatic 7/10-in disc size selector; IC logic arm transport functions include right/left arm movement (controls accessible when dustcover is down); Bulk Molding Compound (calcium carbonate, fiberglass and polyester binder) base. Wow and flutter 0.025% wrms; rumble -78 dB (DIN B); 165 mm x 480 mm x 420 mm.. \$500

**PS-X65.** Similar to PS-X75 except arm does not have motor for vertical motion..... \$400

**PS-X55.** Similar to PS-X65 except has low-mass straight aluminum arm with independent motor, long-span pivot and overhang adjustment; 430 mm x 130 mm x 362 mm..... \$270

**PS-X45.** Similar to PS-X55 minus logic-controlled arm transport functions and automatic disc size sensor; wow and flutter 0.003% wrms; 130 mm x 430 mm x 372 mm..... \$200

**PS-T33 Automatic Single-Play**

Two-speed (33 1/3 and 45 rpm) direct-drive turntable with automatic arm; brushless slotless motor; low-mass aluminum alloy straight tonearm with long-span pivot, direct readout stylus force, anti-skating adjustment, viscous damped cueing, and low-mass diecast aluminum headshell; Magnedisc servo control; strobe with variable pitch control; auto start/stop; Bulk Molding Compound base. Wow and flutter 0.025% wrms; rumble -73 dB (DIN B); includes removable spring-loaded dustcover; 430 mm x 140 mm x 362 mm..... \$170

**PS-T22.** Similar to PS-T33 except semi-automatic with automatic return arm; no auto repeat/start; 130 mm x 430 mm x 362 mm..... \$150

**Precise Series**

**PS-P7X Semi-Auto/Manual Single-Play**

Two-speed (33 1/3 and 45 rpm) quartz-crystal direct-drive turntable with auto return/shutoff or manual tonearm; brushless, slotless BSL motor; 12 1/4-in

diecast aluminum platter (2 lb, 11 oz); 8 1/2-in statically-balanced aluminum J-shaped tonearm driven by discrete FG servomotor; one-piece diecast aluminum headshell with four-clamp connector. Features Magnedisc servo control and LED quartz reference speed readout (accuracy ±0.003%); quick stop and electromagnetic braking; luminous sensor for arm return; audio muting circuit; viscous-filled height-adjustable feet. Wow and flutter 0.025% wrms; rumble -75 dB (DIN B); start-up time 1/4 rotation at 33 1/3 rpm; tracking force range 0-3 g; 4 3/8" H x 17" W x 13 1/2" D..... \$450

**STANTON**

**8005 Semi-Automatic Single-Play**

Two-speed (33 1/3 and 45 rpm) slow-speed, synchronous belt-drive turntable supplied with either Stanton 881S or 681 Triple-E phono cartridge and extra cartridge adaptor head; wow and flutter 0.07% max. (DIN weighted); rumble -55 dB (DIN weighted); stylus force range 0-4 g; tracking error ±1.2 degrees max.; anti-skate adjustable with separate scales for any stylus; 6" H x 14 1/2" W x 16 1/2" D.

With 881S phono cartridge: tracking force 1 1/4 g; frequency response 10-25,000 Hz; channel separation 35 dB; output 0.9 mV/cm/sec; stereohedron stylus..... \$500

With 681 Triple-E phono cartridge: tracking force 1 g +0.5/-0.25 g; frequency response 12-22,000 Hz; channel separation 35 dB; output 0.7 mV/cm/sec; elliptical diamond stylus..... \$440

**8005M.** Same as 8005 except manual operation.

With 881S..... \$450

With 681 Triple-E..... \$390

**STUDER/REVOX**

**Revox B790 Tangential Tracking**

Two-speed (33 1/3 and 45 rpm) quartz-controlled dc servo direct-drive turntable with servo-electronic tangential tonearm; quartz-controlled Hall commutated dc motor with permanent magnet; platter start up/stop time less than 1 sec; speed accuracy ±0.01%. Tonearm mounted in overhead tangential tracking trolley with opto-electronic LED sensing and servo guidance system; auto lift/return/shut-off after play; servo-electronic and dc motor tonearm follow-up; cartridge output electronically muted except when stylus in groove; electronically controlled, pneumatically-damped cartridge lowering. Front-panel controls operable with dustcover in place; four-digit quartz LED readout; automatically-activated run-out switch. Wow and flutter less than 0.05% (DIN weighted), better than 0.1% (DIN unweighted); rumble -68 dB ("A" weighted); includes cartridge; 5 1/2" H x 17 1/2" W x 15" D.. \$899

**Revox B795 Tangential Tracking**

Two-speed (33 1/3 and 45 rpm) quartz-controlled direct-drive turntable with tangential-tracking arm;



quartz-regulated Hall commutated dc motor with permanent magnet; platter start-up time less than 1 sec; speed accuracy ±0.01%. Arm section: 1.5-in tonearm mounted in overhead tangential tracking trolley with opto-electronic LED sensing and servo guidance system; auto lift/return/shut off; servo-

# 4 TURNTABLES

electronic and dc motor arm follow-up; cartridge output electronically muted except when stylus in groove; pneumatically-damped cartridge lowering. Front-panel controls operable with dustcover down; four-digit quartz LED readout; automatically-activated run-out switch. Wow and flutter 0.05% (DIN weighted), 0.1% (DIN unweighted); rumble -68 dB (A weighted); includes cartridge; 5<sup>3</sup>/<sub>8</sub>" H x 17<sup>1</sup>/<sub>2</sub>" W x 15" D ..... \$599

## TECHNICS

### SP-10 MK II Single-Play Manual

Three-speed (33<sup>1</sup>/<sub>3</sub>, 45, and 78 rpm) direct-drive turntable with phase-lock quartz-crystal speed control of low-speed, dc brushless motor; build-up time to precise speed within 25 degree rotation (0.25 sec) at 33<sup>1</sup>/<sub>3</sub> rpm; stop time (magnetic brake) within 30 degree rotation (0.3 sec); long-term speed stability ±0.002% (within ±36 msec over 30-min period, less than 3/4 sec in 10 hr); wow and flutter 0.025% wrms (JIS); rumble -70 dB; solenoid controls (including remote); 4<sup>1</sup>/<sub>8</sub>" H x 14<sup>1</sup>/<sub>2</sub>" W x 14<sup>1</sup>/<sub>2</sub>" D ..... \$900

### SP-15 Single-Play

Three-speed (33<sup>1</sup>/<sub>3</sub>, 45, and 78 rpm) quartz-synthesizer direct-drive turntable without tonearm; hetero pole brushless dc motor; integrated rotor-platter motor; quartz-synthesizer pitch control in 0.1% increments (±9.9%) with LED digital display; start-up and stop time 0.4 sec; wow and flutter 0.025% wrms; rumble -56 dB (DIN A), -78 dB (DIN B); diecast aluminum base ..... \$600

**SP-25.** Similar to SP-15 except two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) with high-torque dc motor; minus LED digital pitch readout; ±6% pitch control; rumble -50 dB (DIN A); start-up time 0.7 sec ..... \$350

### SL-10 Automatic Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) quartz PLL direct-drive turntable with automatic linear-tracking tone-



arm; ultra-low-speed brushless dc motor; 12-in aluminum diecast platter; 4<sup>1</sup>/<sub>8</sub>-in dynamically balanced linear-tracking gimbal-suspension tonearm driven by coreless dc motor; moving-coil stereo cartridge with coreless twin-ring structure and boron pipe cantilever; built-in MC pre-preamp. Features: record-jacket-size unit constructed as two integral halves (sealed close upon operation), with upper half containing linear tracking arm, drive control system, and microcomputer electronic control block and lower half containing direct-drive rotor/platter motor and quartz PLL control circuit; optoelectronic sensor for servo control of arm (after front-panel pushbutton start) in horizontal or vertical playing position; auto record speed with manual control if disc is larger or smaller than standard; auto lead-in/disc size selection; front-panel controls effect forward/backward search capability with LED direction indicators, repeat from beginning during play, auto repeat at end of play, auto stop and auto cueing and

muting; auto return; pre-preamp bypass switch; disc stabilizer with strobe; built-in 45-rpm adaptor; dial scale on exterior cabinet (confirms position of arm over record surface). Turntable: wow and flutter 0.012% wrms, 0.025% wrms (JIS); rumble -78 dB DIN B (IEC weighted), -56 dB DIN A (IEC unweighted). Arm: tracking error angle ±0.1 degree; effective mass 9 g with cartridge. Cartridge: frequency response 10-10,000 Hz ±0.5 dB; compliance 12 x 10<sup>-6</sup> cm/dyne at 100 Hz; tracking force 1.25 g ±0.25 g; 0.2 x 0.7 mil elliptical square nude diamond stylus tip; effective moving mass 0.23 mg; weight 6 g. Head preamp (specs exclude cartridge): frequency response 20-20,000 Hz ±0.5 dB; S/N 70 dB (IHF A); rated output 2.5 mV; THD 0.02% at rated output. Includes dc power supply terminal and record stabilizer; 3.5" H x 12.5" W x 12.5" D ..... \$600

### SL-1600MK2 Automatic Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) quartz-locked direct-drive turntable with automatic tonearm; gimbal-suspension S-shaped tonearm with variable height adjustment and double cueing; four-line strobe calibration; +5% pitch control with front-panel graphic display; front-panel microcomputer operations controls; infrared auto record size selector sensor; stylus illuminator; electronic braking; aluminum base with double-isolation suspension system. Wow and flutter 0.025% wrms; rumble -78 dB (DIN B) ..... \$400

**SL-1700MK2.** Similar to SL-1600MK2 except semi-automatic with auto return arm ..... \$350

**SL-1800MK2.** Similar to SL-1700MK2 except has manual tonearm ..... \$300

### SL-1200MK2 Manual Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) quartz-locked direct-drive turntable with manual tonearm; brushless dc motor; gimbal-suspension S-shaped tonearm with variable helicoid height adjustment; damped platter with LED strobe illuminator; quartz-locked slide pitch control (±8%); fully electronic braking system; wow and flutter 0.025% wrms; rumble -56 dB (DIN A), -78 dB (DIN B); aluminum diecast cabinet and visco-elastic base material for acoustic isolation ..... \$350

### SL-D5 Automatic Changer

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) direct-drive changer with automatic arm; hetero-pole brushless dc motor; S-shaped gimbal-suspension tonearm. Features front-panel B-FG servo speed control, pitch control with illuminated stroboscope, start/stop, and memogram repeat (plays records with last record repeated six times or indefinitely); viscous-damped cueing; anti-skating control. Wow and flutter 0.03% wrms; rumble -75 dB (DIN B); arm weight 12 g with headshell (cartridge not included); includes hinged detachable dustcover ..... \$220

### SL-Q2 Semi-Automatic Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) quartz-phase-locked direct-drive turntable with automatic return tonearm; FG servomotor; low-mass gimbal-suspension S-shaped tonearm with anti-skating and bidirectional viscous-damped cueing; strobe with prism stylus illuminator; pitch control (±6%); aluminum diecast base with acoustic-feedback insulators; wow and flutter 0.025% wrms; rumble -78 dB (DIN B) ..... \$190

**SL-Q3.** Similar to SL-Q2 except has automatic tonearm with memo repeat (up to six times or continuously) ..... \$220

### SL-B5 Automatic Changer

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) belt-drive changer with auto arm; FG servo-controlled dc motor; low-mass low-friction gimbal-suspended S-shaped arm. Features servo-controlled rpm speed; electronic speed switching; front-panel speed, ±6% pitch adjust with illuminated stroboscope, memogram repeat (desired number of records played with last record repeated or last record repeated six times or indefinitely), disc size, and start stop controls; viscous-damped cueing. Wow and flutter 0.045%

wrms; rumble -70 dB (DIN B); includes hinged detachable dustcover ..... \$180

### SL-D3 Automatic Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) IC-controlled direct-drive turntable with automatic tonearm; back-electromotive-force FG dc servomotor; 12-in aluminum diecast platter with 10% variable pitch control and illuminated strobe; low-mass gimbal-suspension S-shaped tonearm with viscous-damped cueing and anti-skating; wow and flutter 0.03% wrms (JIS); rumble -75 dB (DIN B) ..... \$170

**SL-D2.** Similar to SL-D3 except semi-automatic with auto return/shut off arm ..... \$150

**SL-D1.** Similar to SL-D2 except has manual tonearm ..... \$125

## Remote Control System

### SL-D33 Automatic Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) direct-drive turntable with automatic tonearm; high-torque FG servo dc motor; 12<sup>3</sup>/<sub>8</sub>-in aluminum diecast platter; 9<sup>1</sup>/<sub>8</sub>-in statically-balanced gimbal-suspension S-shaped tubular arm driven by dc servomotor, with direct-leading tracking force adjustment and anti-skating force control; SH-R808 remote control unit designed to complement SL-D33 plus other Remote Control Series components. Features microcomputer- and electronic-controlled record size and tonearm movement; direct repeat; 10% pitch control; cueing; optional remote start/stop/cue control. Wow and flutter 0.014% wrms; rumble -75 dB DIN B (IEC weighted); arm effective mass 12 g with headshell; adjustable tracking force 0-2.5 g; cartridge weight range 6-9.5 g; headshell weight 7.5 g; includes hinged detachable dustcover; 5<sup>7</sup>/<sub>8</sub>" H x 16<sup>3</sup>/<sub>8</sub>" W x 14<sup>3</sup>/<sub>8</sub>" D ..... \$260

**SH-R808.** Infrared wireless remote control unit employing 4-bit microcomputer; incorporates features of company's complete Remote Control Series System ..... \$250

## THORENS

All Thorens turntables are belt-driven, single-play units powered by dc servomotors with tachogenerator for precise speed control; straight tubular tonearms have interchangeable shafts instead of headshells for lower effective mass; gimbal suspension, anti-skating; 9-in tonearm effective length; tracking error less than 0.18°/cm (0.46°/in).

### TD-126C MKIII Semi-Auto Single-Play

Three-speed (33, 45 and 78 rpm) turntable with auto arm lift and motor shutoff; with electronic speed selection and pitch control (±6%), stroboscope, electronic velocity sensor actuates arm lift and return; wow and flutter less than 0.04%; rumble -72 dB weighted, -51 dB unweighted; frictionless, magnetic anti-skating; with base and dustcover; 6<sup>1</sup>/<sub>8</sub>" H x 19<sup>1</sup>/<sub>8</sub>" W x 15<sup>1</sup>/<sub>2</sub>" D ..... \$800

**TD-126C MKIII.** Same as TD-126C MKIII, but without arm ..... \$645

### TD-115C Semi-Automatic Single-Play

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) dual servo system with commutator-type pulse-modulated dc motor and automatic end-of-record shut-off tonearm; 72-pole tachogenerator for electronic speed selection; pitch control; fast start; current feedback provides automatic pitch control to correct load variations; jeweled pivot bearings in arm; magnetic anti-skating device; wow and flutter 0.05%; rumble -48 dB unweighted, -68 dB weighted; 11<sup>1</sup>/<sub>8</sub>-in platter; arm length 8<sup>3</sup>/<sub>8</sub>-in; tonearm mass 7.5 g; 5<sup>1</sup>/<sub>8</sub>" H x 17<sup>1</sup>/<sub>8</sub>" W x 14<sup>1</sup>/<sub>8</sub>" D ..... \$435

**TD-110C.** Same as TD-115C except no auto cue and shut-off ..... \$350

### TD160 II B Transcription Turntable

Two-speed (33<sup>1</sup>/<sub>3</sub> and 45 rpm) belt-drive turntable without tonearm; 16-pole two-phase synchronous motor; 12-in dynamically-balanced non-ferrous die-



cast platter. Wow and flutter 0.04% (DIN 45507); rumble -65 dB (unweighted); 6 1/2" H x 17 1/2" W x 14 1/8" D ..... \$395

### TD105 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) servo-controlled electronic belt-drive turntable with auto return tone-



arm; dc motor with 72-pole tachogenerator; 8 3/4-in straight tonearm; 12-in dynamically-balanced zinc alloy platter with LED stroboscope and electronic pitch control ( $\pm 6\%$ ); friction-free velocity-sensing electronic shutoff; feather-touch operations controls; frictionless magnetic anti-skating. Wow and flutter 0.05% (DIN 45507); rumble -72 dB (weighted); 5" H x 17 1/4" W x 15 1/2" D ..... \$335  
**T0-104.** Same as TD105 except has manual tonearm ..... \$270

## TOSHIBA

### SR-Q300 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) quartz-locked direct-drive turntable with automatic arm; aluminum die-



cast platter; 215-mm statically-balanced carbon-fiber straight arm with calibrated tracking force and anti-skating controls. Features automatic arm indexing and speed selection with digital speed read-out; front-mounted controls (accessible when dust-cover is down). Wow and flutter 0.025%; S/N 75 dB (DIN B); acoustic-isolation feet; 4.9" H x 16.6" W x 15" D ..... \$300

### SR-Q200 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) quartz-locked direct-drive turntable with automatic arm; aluminum die-cast platter; 215-mm straight arm with calibrated tracking force and anti-skating controls; auto arm indexing and speed selection with LED speed indicator; front-mounted controls; acoustic isolation feet. Wow and flutter 0.025%; S/N 75 dB (DIN B); 4.9" H x 16.6" W x 15" D ..... \$230  
**SR-Q100.** Similar to SR-Q200 except semi-automatic with auto return arm ..... \$200

### SR-F200 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) direct-drive turntable with automatic straight arm; automatic arm indexing and speed selection; repeat; strobe with variable pitch control; front-mounted controls; acoustic isolation feet. Wow and flutter 0.028%; S/N 73 dB

(DIN B); 4.9" H x 16.6" W x 15" D ..... \$180  
**SR-A200.** Similar to SR-F200 except semi-automatic with auto return/shutoff arm ..... \$150

### SR-F100 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with automatic straight arm; FG dc servomotor; front-mounted controls; auto arm indexing and speed selection; variable pitch control with strobe; repeat; acoustic isolation feet. Wow and flutter 0.05%; S/N 65 dB (DIN B); 4.9" H x 16.6" W x 15" D ..... \$140  
**SR-F102.** Same as SR-F100 except includes magnetic cartridge ..... \$160

### SR-A100 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with auto return/shutoff arm; synchronous motor; S-shaped statically balanced tonearm; front-mounted controls; acoustic isolation feet. Wow and flutter 0.06%; S/N 65 dB (DIN B); 5.1" H x 16.6" W x 14.1" D ..... \$115  
**SR-A102.** Same as SR-A100 except includes magnetic cartridge ..... \$140

## YAMAHA

### PX-2 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) linear-tracking dual-quartz PLL servo direct-drive turntable with auto-



matic/manual tonearm; 4-phase 8-pole coreless dc Hall-effect motor; 12 1/2-in aluminum diecast platter with rubber mat; 7 1/2-in linear-tracking straight tubular tonearm with opto-electronic tracking error sensor, coreless dc servomotor, and forged aluminum headshell. Features front-panel automatic electronic speed, auto repeat and cut, and play, and 7, 10, and 12-in disc size selectors with LED record size and repeat indicators; manual up/down cueing with two-speed forward/reverse operations; LED quartz-lock indicator;  $\pm 1/4$ -in arm height adjustment (accommodates most cartridges). Wow and flutter 0.01% wrms; S/N 80 dB (DIN B/IEC 98A weighted); tracking force range 0-2.5 g in 0.1-g increments, statically balanced; cartridge weight range 5-11 g (10-16 g with subweights); black-finish aluminum diecast base with removable free-stop hinged acrylic resin dustcover and spring/rubber insulators; 6 1/4" H x 19 3/4" W x 16 3/4" D ..... \$900

### P-750 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) quartz-lock PLL servo direct-drive turntable with automatic arm; dc coreless slotless 8-pole Hall-effect motor; 12-in aluminum diecast platter; 8 3/4-in straight tubular arm with two carbon-fiber ADC resin headshells and sliding tracking-force adjustment weight. Features front-panel speed, quartz lock LED, repeat, oil-damped manual cueing, and cut/play selector buttons; 7 and 12-in disc size selector;  $\pm 0.1$ -in tonearm height adjustment; adjustable anti-skating dial. Wow and flutter 0.015% wrms; rumble -77 dB (DIN B, IEC 98A weighted); tracking force range 0-3 g in 0.1-g steps; cartridge weight range 2.5-10 g; solid diecast aluminum base with W-type insulation feet and removable hinged dustcover; silver finish; 5 1/4" H x 17 3/4" W x 14 3/4" D ..... \$260  
**P-550.** Similar to P-750 minus quartz PLL servo

system and tonearm height adjustment; has 3% pitch control and four-band stroboscope. .... \$220  
**P-450.** Similar to P-550 except belt-drive system with FG dc servomotor; wow and flutter 0.04% wrms; rumble -70 dB (DIN B, IEC 98A weighted) ..... \$180  
**P-350.** Similar to P-450 except semi-automatic operation with auto return/cut arm; minus pitch control with stroboscope, auto repeat and play, and disc size selector ..... \$140

## ZENITH

### MC9050 Semi-Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) direct-drive turntable with auto return/shutoff tonearm; dc servomotor; counterbalanced S-shaped arm with Shure M75EJ magnetic cartridge with diamond stylus; lathed aluminum platter. Features built-in strobe and pitch control; adjustable stylus pressure; two-way viscous-damped cueing; adjustable anti-skating; includes acrylic hinged dustcover; metallic gold-finish base ..... \$250

### MC9030 Automatic Single/Multiple-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with automatic tonearm; four-pole high-torque induction motor; 11 1/4-in aluminum platter; aluminum S-shaped balanced tubular tonearm with Shure M75ECS magnetic cartridge with elliptical diamond stylus. Features four-position mode selector for single-record play, multiple-record play, continuous repeat, and auto shutoff; viscous-damped cueing; adjustable anti-skating. Wow and flutter 0.2% wrms; rumble -50 dB (DIN B); includes 45-rpm single-play adaptor, single-play 33 1/3-rpm record spindle, and spring-loaded hinged acrylic dustcover; 7 3/4" H x 16 1/4" W x 14 1/8" D ..... \$150

### MC9035 Automatic Single/Multiple-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with automatic tonearm; 24-pole synchronous motor; aluminum tubular S-shaped arm with counterbalance weight assembly and Shure magnetic cartridge with diamond stylus; 11-in raised metal platter. Features three-position mode selector for single-record play with auto shutoff, auto six-record play with auto shutoff, and six-time one-record continuous repeat; bi-directional viscous-damped cueing; adjustable auto-skating and stylus force controls. Wow and flutter 0.08% wrms; rumble -60 dB (DIN B); includes 45-rpm adaptor, multi-play and single-play 33 1/3-rpm spindle and acrylic dustcover; 6.62" H x 16.18" W x 15.18" D.. \$140

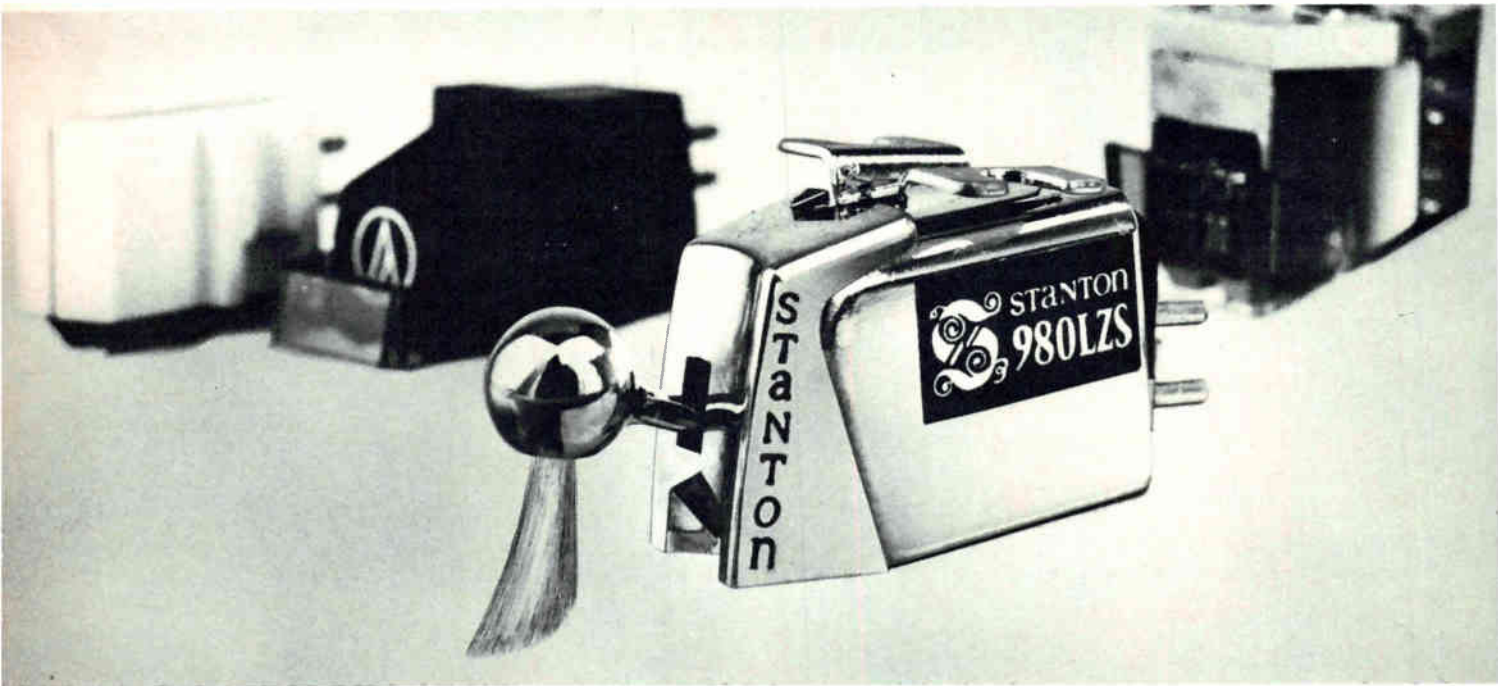
### MC9025 Automatic Single/Multiple-Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with automatic tonearm; 24-pole synchronous motor; aluminum tubular S-shaped arm with counterbalance weight assembly and Shure M74CSZ magnetic cartridge with diamond stylus; 11-in metal platter. Features programmable auto multi-record play, manual single-record play, and continuous repeat; bi-directional viscous-damped cueing; adjustable anti-skating and stylus force controls. Wow and flutter 0.08% wrms; rumble -60 dB (DIN B); includes 45-rpm adaptor, multi-play and single-play 33 1/3-rpm spindle, and acrylic dustcover; 6.62" H x 16.18" W x 15.18" D ..... \$110

### MC9020 Automatic Changer

Three-speed (33 1/3, 45, and 78 rpm) belt-drive single/multiple-play turntable with automatic arm; 4-pole high-induction motor; 10 1/2-in steel platter with steel base; lightweight balanced tubular S-shaped aluminum arm supplied with Shure M75CS magnetic cartridge with diamond stylus; adjustable anti-skating and manual cueing; 7/10/12-in disc size selector. Wow and flutter 0.28% wrms; rumble -46 dB (DIN B); includes 45-rpm multi-play adaptor, single- and multi-play 33 1/3-rpm record spindles, and acrylic dustcover; simulated walnut-grain finish cabinet; 7 3/4" H x 16 1/4" W x 15 1/2" D ..... \$100

# The moving coil replacement from Stanton Magnetics... the revolutionary 980LZS!



Now from the company to whom the professionals look for setting standards in audio equipment comes a spectacular new cartridge concept. A low impedance pickup that offers all the advantages of a moving magnet cartridge without the disadvantages of the moving coil pickup. At the same time it offers exceedingly fast rise time—less than 10 micro seconds—resulting in dramatic new crispness in sound reproduction—a new "openness" surpassing that of even the best of moving coil designs. The 980LZS incorporates very low dynamic tip mass (0.2 mg.) with extremely high compliance for superb tracking. It tracks the most demanding of the new so called "test" digitally mastered and direct cut recordings with ease and smoothness at 1 gram <sup>+1/2</sup>/<sub>1/4</sub>.

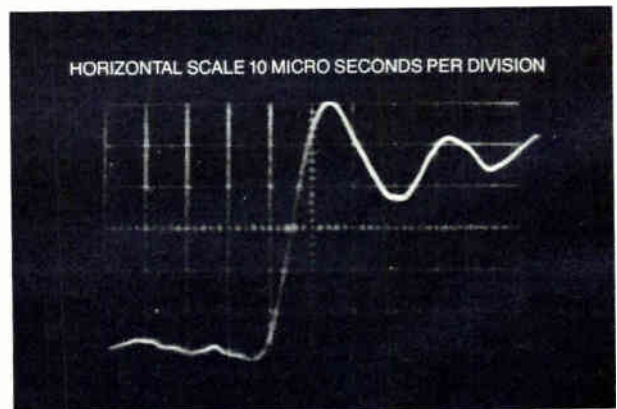
The 980LZS features the famous Stereohedron™ stylus and a lightweight samarium cobalt super magnet. The output can be connected either into the moving coil input of a modern receiver's preamps or can be used with a preamp, whose output is fed into the conventional phono input.

For "moving coil" audiophiles the 980LZS offers a *new standard* of consistency and reliability while maintaining all the sound characteristics even the most critical moving coil advocates demand. For moving magnet advocates the 980LZS provides one more level of sound experience while maintaining all

the great sound characteristics of cleanliness and frequency response long associated with fine moving magnet assemblies.

From Stanton... The Choice of The Professionals.

For further information write to: Stanton Magnetics, Terminal Drive, Plainview, N.Y. 11803.



Actual unretouched oscilloscope photograph showing rise time of 980LZS using CBS STR112 record.



## STANTON

THE CHOICE OF THE PROFESSIONALS™

CIRCLE NO. 39 ON READER SERVICE CARD



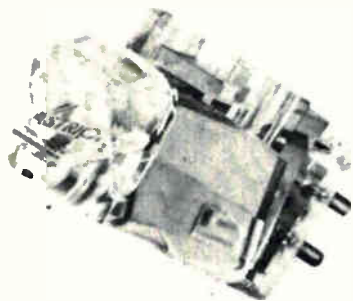
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# PHONO CARTRIDGES (includes Tonearms)

## ADC

### Astrion Phono Cartridge

Handcrafted phono cartridge with 0.0015 x 0.00025-in square nude modified elliptical dia-



mond stylus tip and sapphire crystal cantilever; output 0.9 mV/cm/sec; frequency response 20-20,000 Hz  $\pm$  1 dB; channel balance/separation 1 dB/30 dB at 1000 Hz; tracking force 1.2 g  $\pm$  0.2 g; load capacitance 300 pF; load resistance 47,000 ohms; 5.7 g..... \$185

### ZLM Phono Cartridge

Induced-magnet omni-pivotal phono cartridge; output 1 mV at 1 cm/sec; frequency response 10-20,000 Hz  $\pm$  1 dB; channel separation 30 dB (1 kHz); tracking force 0.5-1.25 g; 0.0002 x 0.0015-in nude Aliptic tapered cantilever stylus assembly; supplied with stylus brush, screwdriver, signed frequency response curve, and all mounting hardware..... \$135

### XLM Mk III Phono Cartridge

Induced-magnet omni-pivotal phono cartridge; output 1 mV at 1 cm/sec; frequency response 10-20,000 Hz  $\pm$  1 dB; channel separation 28 dB (1 kHz); tracking force 0.3-1.2 g; nude 0.2 x 0.7 mil elliptical tapered cantilever stylus assembly; supplied with stylus brush, screwdriver, signed specifications card, and all mounting hardware..... \$110

### XLM Mk II Phono Cartridge

Induced-magnet omni-pivotal phono cartridge; output 1.1 mV at 1 cm/sec; frequency response 15-24,000 Hz  $\pm$  2 dB; separation 26 dB at 1000 Hz; tracking force range 0.3-1.2 g; 0.3 x 0.7-mil Diasa elliptical diamond tip stylus..... \$100

### QLM 36 Mk III Phono Cartridge

Induced-magnet omni-pivotal phono cartridge; output 1.1 mV at 1 cm/sec; frequency response 15-20,000 Hz  $\pm$  2 dB; channel separation 26 dB (1 kHz); tracking force 0.3-1.2 g; Diasa (nude) 0.3 x 0.7 mil straight cantilever stylus assembly; supplied with screwdriver and all mounting hardware..... \$80

### QLM 34 Mk III Phono Cartridge

Induced-magnet phono cartridge; output 1.6 mV at

1 cm/sec; frequency response 20-20,000 Hz  $\pm$  2 dB; channel separation 24 dB (1 kHz); tracking force 1.5-3 g; bushed 0.3 x 0.7 mil elliptical straight cantilever stylus assembly; supplied with all mounting hardware..... \$65

### QLM 33 Mk III Phono Cartridge

Induced-magnet phono cartridge; output 1.2 mV at 1 cm/sec; frequency response 20-20,000 Hz  $\pm$  2 dB; separation 24 dB at 1000 Hz; tracking force range 1-2 g; 0.7-mil spherical diamond-tip stylus..... \$55

### QLM 32 Mk III Phono Cartridge

Induced-magnet phono cartridge; output 1.5 mV at 1 cm/sec; frequency response 20-18,000 Hz  $\pm$  2 dB; channel separation 20 dB (1 kHz); tracking force 2-4 g; bushed 0.4 x 0.7 mil elliptical straight cantilever stylus assembly; supplied with all mounting hardware..... \$50

### QLM 30 Mk III Phono Cartridge

Induced-magnet phono cartridge; output 1.5 mV at 1 cm/sec; frequency response 20-18,000 Hz  $\pm$  3 dB; channel separation 20 dB (1 kHz); tracking force 3-5 g; bushed 0.7 mil spherical straight cantilever stylus assembly; supplied with all mounting hardware..... \$35

## Integra Series

Low-mass induced-magnet phono cartridge features integrated carbon-fiber headshell with cartridge, calibrated overhang adjustment, and vertical tracking angle adjustment; omni-pivot system.

**XLM III.** 0.0002 x 0.0007-in rectangular nude elliptical diamond stylus mounted to tapered cantilever; frequency response 10-20,000 Hz  $\pm$  1 dB; channel separation 28 dB at 1000 Hz; tracking force 1.2  $\pm$  0.3 g; 12 g..... \$130

**XLM II.** 0.0003 x 0.0007-in nude Diasa elliptical stylus mounted to hollow cantilever; frequency response 15-24,000 Hz  $\pm$  2 dB; channel separation 26 dB at 1000 Hz; tracking force 1.2  $\pm$  0.3 g; 12 g..... \$110

**XLM 1.** 0.0004 x 0.0007-in bushed elliptical diamond stylus mounted to hollow cantilever; frequency response 20-20,000 Hz  $\pm$  2 dB; channel separation 24 dB at 1000 Hz; tracking force 1.5  $\pm$  0.4 g; 12 g..... \$70

## ALT-1 Tonearm

12-in S. S. ball-bearing straight tonearm with removable carbon-fiber headshell and slide base; max. tracking force 1.25 degrees at 2.38, 3.69, 5.75 in; tracking force 0-4 g; total cable capacitance 220 pF; cartridge weight range 4-11 g; damped cueing and adjustable anti-skating... \$150

## LMF-1 Tonearm

12.33-in S. S. ball-bearing straight carbon-fiber tonearm with headshell; max. tracking force 1.25 degrees at 2.38, 3.69, and 5.75 in; tracking force range 0-2 g; total cable capacitance 220 pF; cartridge weight range 4-11 g; damped cueing and adjustable anti-skating..... \$205

**LMF-2.** Similar to LMF-1 except has removable headshell; cartridge weight range 3-11 g..... \$215

## ADCOM

### XC-LT Phono Cartridge

High-output moving-coil phono cartridge with Line-Trace stylus, large-diameter thin-wall aluminum cantilever, and crosscoil armature; output 2.5 mV at 5 cm/sec; frequency response 20-20,000 Hz  $\pm$  1.5 dB; channel separation 28 dB at 1000 Hz; tracking force 1.8 g; effective tip mass 0.35 mg; weight 4.7 g..... \$240

**XC-E.** Same as XC-LT except has elliptical stylus..... \$200

### LC-LT Phono Cartridge

Low-output moving-coil phono cartridge with Line-Trace stylus, large-diameter thin-wall aluminum cantilever, and crosscoil armature; output 0.3 mV at 5 cm/sec; frequency response 20-20,000 Hz  $\pm$  1.5 dB; channel separation 28 dB at 1000 Hz; tracking force 1.8 g; 4.7 g..... \$200

**LC-E.** Same as LC-LT except has elliptical stylus..... \$160

## AKG

### P8E Phono Cartridge

Variable-reluctance moving-iron phono cartridge with single pivot point suspension system. Output voltage 3.75 mV at 5 cm/sec; frequency response 10-28,000 Hz; channel balance/separation  $\pm$  1 dB/30 dB at 1 kHz; optimum load impedance 47,000 ohms; optimum load capacitance 470 pF; tracking force 0.75-1.25 g; 0.2 x 0.7 mil elliptical diamond stylus; includes frequency response/crosstalk curve and screwdriver; weight 5.86 g..... \$165

### P8E Phono Cartridge

Variable-reluctance moving-iron phono cartridge with single pivot point suspension system. Output voltage 4.0 mV at 5 cm/sec; frequency response 10-23,000 Hz; channel balance/separation  $\pm$  1 dB/30 dB at 1 kHz; optimum load impedance 47,000 ohms; optimum load capacitance 470 pF; tracking force 0.75-1.25 g; 0.2 x 0.7 mil elliptical diamond stylus; includes frequency response/crosstalk curve and screwdriver; weight 5.86 g..... \$115

### P7E Phono Cartridge

Variable-reluctance moving-iron phono cartridge with single pivot point suspension system. Output voltage 4.5 mV at 5 cm/sec; frequency response 10-21,500 Hz; channel balance/separation  $\pm$  2 dB/25 dB at 1 kHz; optimum load impedance 47,000 ohms; optimum load capacitance 470 pF; tracking force 1.25-2.5 g; 0.3 x 0.7 mil elliptical diamond stylus; weight 5.86 g..... \$80

### P6E Phono Cartridge

Variable-reluctance moving-iron phono cartridge with single pivot point suspension system. Output voltage 6.25 mV at 5 cm/sec; frequency response 20-20,000 Hz; channel balance/separation  $\pm$  2 dB/20 dB at 1 kHz; optimum load impedance 47,000 ohms; optimum load capacitance 470 pF; tracking force 1.5-3 g; 0.4 x 0.8 mil elliptical diamond stylus; weight 5.86 g..... \$60

# 5 PHONO CARTRIDGES

## P6R Phono Cartridge

Variable-reluctance moving-iron phono cartridge with single pivot point suspension system. Output voltage 6.25 mV at 5 cm/sec; frequency response 20-20,000 Hz; channel balance/separation  $\pm 2$  dB/15 dB at 1 kHz; optimum load impedance 47,000 ohms; optimum load capacitance 470 pF; tracking force 2-4 g; 0.7 mil spherical diamond stylus; weight 5.86 g ..... \$50

## ALL-TEST

### ATD-25 Phono Preamp

Amplifies magnetic phono cartridge signals to level which will drive high-level inputs of any stereo amp, integrated amp, or receiver; IM dist. 0.01%, 0.005% typical; noise 80 dB below 10 mV input, 20-20,000 Hz (input shorted); negative feedback 70 dB at 1 kHz; gain 36 dB at 1 kHz; input impedance 47,000 ohms  $\pm 5\%$ ; frequency response 20-20,000 Hz  $\pm 0.5$  dB of RIAA curve; channel separation 80 dB at 10,000 Hz; max. output 8 V rms into 47,000 ohms or higher, 7 V rms into 10,000 ohms; channel balance within  $\pm 0.1$  dB.... \$185

## ANDANTE by SUMIKO

### E Phono Cartridge

Micro-mass magnetic phono cartridge with aluminum-alloy tubular cantilever and 0.2 x 0.8-mil polished bonded-diamond elliptical stylus; hand-wound coils; output 5.0 mV; frequency response 12-30,000 Hz; channel separation 30 dB at 1000 Hz; compliance  $20 \times 10^{-6}$  cm/dyne; tracking force range 1-1.9 g; input impedance 47,000 ohms; 6 g ..... \$80

**S.** Similar to E except uses 0.5-mil polished bonded-diamond spherical stylus; frequency response 18-27,000 Hz; channel separation 28 dB at 1000 Hz; compliance  $18 \times 10^{-6}$  cm/dyne; tracking force range 1-2.5 g ..... \$65

**H.** Similar to S except output 10 mV; frequency response 18-23,000 Hz; channel separation 27 dB at 1000 Hz; compliance  $15 \times 10^{-6}$  cm/dyne .. \$50

## ARISTA

### SA/200 Tone Arm

237-mm S-shaped tonearm with one-point cross-suspension system; oil damped arm lifter and lateral movement canceller; 0-3 g tracking dial inside force canceller; tracking angle error  $+2^\circ$  to  $-1^\circ$ ; horizontal sensitivity 10 mg (first action); vertical sensitivity 20 mg (first action); tracking force range 0-3 g in 0.5-g steps; revolving pressure adjustment; cartridge weight range 4-12 g ..... \$140

## ASTATIC

### MF100 Phono Cartridge

Moving-flux phono cartridge combines characteristics and sound of moving-coil cartridges and efficiency and low inductance and load impedance of moving-magnet and induced-magnet cartridges; uses Shibata-type parabolic stylus and tapered cantilever with single-point front-fulcrum pivot system; output 3.5 mV at 5 cm/sec, 1 kHz; channel balance/separation 1 dB/25 dB at 1 kHz; frequency response 10-40,000 Hz; compliance  $50 \times 10^{-6}$  cm/dyne; tracking force 1.25 g  $\pm 0.25$  g; user-replaceable styli; 5.5 g ..... \$268

**MF100H.** Premounted headshell ..... \$290

### MF200 Phono Cartridge

Moving-flux phono cartridge with Shibata-type para-

bolic stylus; output 4.2 mV at 5 cm/sec, 1 kHz; channel balance/separation 1.5 dB/23 dB at 1 kHz; frequency response 10-40,000 Hz; tracking force 1.75 g  $\pm 0.25$  g; user-replaceable styli ..... \$160

**MF200H.** Premounted headshell ..... \$183

### MF300 Phono Cartridge

Moving-flux phono cartridge with 0.3 x 0.7-mil elliptical diamond stylus; output 4.2 mV at 5 cm/sec, 1 kHz; channel balance/separation 2 dB/20 dB at 1 kHz; compliance  $35 \times 10^{-6}$  cm/dyne; tracking force 1.75 g  $\pm 0.25$  g; user-replaceable styli. \$100

**MF300H.** Premounted headshell ..... \$123

### MF400 Phono Cartridge

Moving-flux phono cartridge with 0.5-mil spherical diamond stylus; output 3.5 mV at 5 cm/sec, 1 kHz; channel balance/separation 2 dB/20 dB at 1 kHz; frequency response 10-25,000 Hz; compliance  $35 \times 10^{-6}$  cm/dyne; tracking force 2 g  $\pm 0.5$  g; user-replaceable styli ..... \$80

**MF400H.** Premounted headshell ..... \$103

## AUDIO RESEARCH

### MCP-22 Moving-Coil Preamplifier

Vacuum-tube moving-coil preamp features input and output controls and five-position gain and impedance controls; front-panel preamp and outlets power switches with LEDs, +output and mute switches. Frequency response  $\pm 0.25$  dB from 30-40,000 Hz (phono RIAA); HD 0.01% at 2 V rms out; IM dist. 0.005% at 2 V rms out (SMPTE); gain range 30-54 dB in 6-dB steps; max. input 500 mV at 1000 Hz; input impedance 10, 30, 100, 300, and 820 ohms; rated output 2 V rms from 20-20,000 Hz; output impedance 500 ohms; noise  $-1 \mu\text{V}$ ; includes rack-mount handles; 5 1/4" H x 19" W x 10 1/4" D ..... \$1800

## AUDIO-TECHNICA

### AT32 Phono Cartridge

Dual moving micro-coil phono cartridge; output 0.4 mV at 5 cm/sec; frequency response 10-24,000 Hz; channel balance/separation 0.75 dB/30 dB at 1 kHz; tracking force 1-2 g; beryllium cantilever and 0.2 x 0.7-mil nude-mounted elliptical stylus on 0.12-mm square shank nude diamond ..... \$300

### AT20SS Phono Cartridge

Frequency response 5-50,000 Hz; output 2.7 mV at 5 cm/sec; channel balance/separation 0.75 dB/35 dB at 1 kHz; tracking force 0.75-1.75 g; nude-mounted square-shank Shibata stylus; beryllium cantilever; supplied with individual frequency response curves for both channels; replacement stylus ATN20SS (\$125) ..... \$250

### AT15SS Phono Cartridge

Frequency response 5-45,000 Hz; output 2.7 mV at 5 cm/sec; channel balance/separation 0.75 dB/33 dB at 1 kHz; tracking force 0.75-1.75 g; nude-mounted square-shank Shibata stylus; beryllium cantilever; supplied with individual frequency response curves for both channels; replacement stylus ATN15SS (\$100) ..... \$200

### AT15XE Phono Cartridge

Output 2.7 mV at 5 cm/sec; frequency response 5-30,000 Hz; channel balance/separation 0.75 dB/28 dB at 1 kHz; tracking force 0.75-1.75 g; square-shank nude-mounted 0.2 x 0.7 mil elliptical stylus; supplied with individual stereo response curves; replacement stylus ATN15XE (\$85)... \$175

### AT14Sa Phono Cartridge

Output 2.7 mV at 5 cm/sec; frequency response 5-45,000 Hz; channel balance/separation 1 dB/27 dB at 1 kHz; tracking force 0.75-1.75 g; square-shank nude-mounted Shibata stylus; replacement stylus ATN14 (\$75) ..... \$150

### AT30E Phono Cartridge

Moving-coil type; output 0.28 mV at 5 cm/sec; fre-

quency response 15-25,000 Hz; channel balance/separation 0.75 dB/25 dB at 1 kHz; tracking force range 1.4-2 g; 0.3 x 0.7-mil nude-mounted elliptical stylus; replacement stylus ATN30E (\$65). \$125

### AT12Sa Phono Cartridge

Output 2.7 mV at 5 cm/sec; frequency response 15-45,000 Hz; channel balance/separation 1 dB/26 dB at 1 kHz; tracking force 0.75-1.75 g; Shibata stylus; replacement stylus ATN12S (\$60)..... \$120

### AT13Ea Phono Cartridge

Output 4.2 mV at 5 cm/sec; frequency response 10-30,000 Hz; channel balance/separation 1 dB/25 dB at 1 kHz; tracking force 0.75-1.75 g; 0.2 x 0.7 mil square-shank diamond stylus; replacement stylus ATN13 (\$50)..... \$100

### AT12XE Phono Cartridge

Output 4.2 mV at 5 cm/sec; frequency response 15-28,000 Hz; channel balance/separation 1.5 dB/23 dB at 1 kHz; tracking force 1-2 g; 0.4 x 0.7 mil bonded diamond mounted to thin-wall stylus tube; replacement stylus ATS12 (\$45)..... \$85

### AT12E Phono Cartridge

Output 4.2 mV at 5 cm/sec; frequency response 15-26,000 Hz; channel balance/separation 1.5 dB/23 dB at 1 kHz; tracking force 1-2 g; bonded 0.4 x 0.7 mil elliptical tip and thin-wall stylus tube; replacement stylus ATS12 (\$40)..... \$70

### AT11E Phono Cartridge

Output 4.8 mV at 5 cm/sec; frequency response 15-25,000 Hz; channel balance/separation 1.5 dB/21 dB at 1 kHz; tracking force range 1.5-2.5 g; bonded 0.4 x 0.7 mil elliptical diamond tip and thin-wall stylus tube; replacement stylus ATS11E (\$35)..... \$60

### AT11 Phono Cartridge

Output 4.8 mV at 5 cm/sec; frequency response 15-22,000 Hz; channel balance/separation 1.5 dB/21 dB at 1 kHz; tracking force 1.5-2.5 g; spherical bonded tip; replacement stylus ATS11 (\$30)... \$50

### AT10 Phono Cartridge

Output 4.8 mV at 5 cm/sec; frequency response 20-20,000 Hz; channel balance/separation 2 dB/20 dB at 1 kHz; tracking force 2-3 g; spherical bonded tip; replacement stylus ATS10 (\$25)... \$40

## "Vector-Aligned" Series

### AT155LC Phono Cartridge

Output 5.0 mV at 5 cm/sec at 1 kHz; frequency response 5-35,000 Hz with class I tolerance; channel balance/separation 0.5/31 dB at 1 kHz; tracking force 0.8-1.6 g; nude mounted square shank linear contact stylus; beryllium cantilever; Vector-Aligned dual magnet; para-toroidal coil; replacement stylus ATN155LC (\$100) ..... \$225

### AT140LC Phono Cartridge

Output 5.0 mV at 5 cm/sec; frequency response 5-32,000 Hz with class II tolerance; channel balance/separation 0.75/30 dB at 1 kHz; tracking force 0.8-1.8 g; nude-mounted square shank linear contact stylus; Vector-Aligned dual magnet; para-toroidal coil replacement stylus ATN140LC (\$75)... \$175

### AT125LC Phono Cartridge

Para-toroidal coil construction; output 5.0 mV at 5 cm/sec; frequency response 15-28,000 Hz with class III tolerance; channel balance/separation 1/29 dB at 1 kHz; linear contact titanium-bonded stylus; Vector-Aligned dual magnet; replacement stylus ATN125LC (\$60) ..... \$130

### AT130E Phono Cartridge

Output 5.0 mV at 5 cm/sec; frequency response 10-30,000 Hz with class II tolerance; channel balance/separation 0.75/30 dB at 1 kHz; tracking force 0.8-1.8 g; 0.2 x 0.7-mil BiRadial nude mounted diamond stylus; Vector-Aligned dual mag-



net; para-toroidal coil; replacement stylus ATN130E (\$50)..... \$120

**AT120E Phono Cartridge**

Para-toroidal coil construction; output 5.0 mV at 5 cm/sec; frequency response 15-25,000 Hz with class III tolerance; channel balance/separation 1/29 dB at 1 kHz; tracking force 1-1.8 g; Vector-Aligned dual magnet; 0.3 x 0.7-mil BiRadial nude mounted diamond stylus; replacement stylus ATN120E (\$45)..... \$90

**AT110E Phono Cartridge**

Output 4.5 mV at 5 cm/sec; frequency response 20-22,000 Hz; channel balance/separation 26 dB at 1 kHz; tracking force 1-2 g; 0.4 x 0.7-mil BiRadial bonded diamond stylus; replacement stylus ATN110E (\$35)..... \$65

**AT105 Phono Cartridge**

Output 4.5 mV at 1 kHz; frequency response 20-20,000 Hz; tracking force 1.5-2.5 g; channel separation 26 dB at 1 kHz; 0.7-mil UniRadial bonded diamond stylus; dual magnet; replacement stylus ATN105 (\$30)..... \$50

**"Omnitec" Series**

**AT24 Phono Cartridge**

Moving-magnet phono cartridge with toroidal coils; output 2.2 mV at 5 cm/sec; frequency response



15-25,000 Hz; channel balance/separation 0.5 dB/35 dB at 1 kHz; tracking force 0.8-1.6 g; nude-mounted square shank 0.2 x 0.7-mil elliptical stylus; beryllium cantilever; replacement stylus ATN2 (\$150)..... \$250

**AT25.** Same as AT24 except integral type with own headshell from direct plug-in; replacement stylus ATN25 (\$150)..... \$275

**AT22 Phono Cartridge**

Moving-magnet phono cartridge with toroidal coils; output 2.2 mV at 5 cm/sec; frequency response 15-23,000 Hz; channel balance/separation 0.75 dB/30 dB at 1 kHz; tracking force 0.9-1.7 g; nude-mounted square shank 0.2 x 0.7-mil elliptical stylus; beryllium cantilever; replacement stylus ATN23a (\$100)..... \$200

**AT23a.** Same as AT22 except integral type with own headshell from direct plug-in; replacement stylus ATN23a (\$100)..... \$225

**"The Professionals" Series**

**ATP-3 Phono Cartridge**

For stereo operation; output 5.3 mV at 5 cm/sec; frequency response 15-25,000 Hz; channel balance/separation 1.5 dB/23 dB at 1 kHz; load impedance 47,000 ohms; tracking force 2-3 g; 0.3 x 0.7 mil nude elliptical diamond stylus; replacement stylus ATP-N3; weight 7.2 g..... \$80

**ATP-2 Phono Cartridge**

For stereo operation; output 5.3 mV at 5 cm/sec; frequency response 15-22,000 Hz; channel balance/separation 1.5 dB/23 dB at 1 kHz; load impedance 47,000 ohms; tracking force 3-5 g; 0.4 x 0.7 mil elliptical diamond stylus; replacement stylus ATP-N2; weight 7.2 g..... \$60

**ATP-2XN.** Same as ATP-2 with extra stylus..... \$90

**ATP-1 Phono Cartridge**

For stereo operation; output 5.3 mV at 5 cm/sec; frequency response 20-20,000 Hz; channel balance/separation 1.5 dB/21 dB at 1 kHz; load impedance 47,000 ohms; tracking force 3-5 g; 0.6 mil spherical diamond stylus; replacement stylus ATP-N1; weight 7.2 g..... \$45

**AT1010 Tonearm**

Features low-frequency resonance damping; silver wire used for all arm leads including AT-MS headshell; gold-plated contacts; lateral balance adjustment for tracking warped records; stylus pressure 0-2.5 g..... \$350

**AT-1009 Tonearm**

Includes all basic elements of the AT-1005 II plus exclusive pneumatic arm lift with convenient lever control; special low-mass plug-in shell; sliding counterweight with set screw for setting static balance; separate micro-adjust for precise balance; precision lever and dial scale for anti-skating adjust; arm height ±2 1/2 mm adjustment with separate micro-adjust lever; stylus force gauge with sliding ring-weight calibrated to 0.1 g..... \$175

**AT-D.** Plug-in headshell..... \$12

**AT-1005 II Tonearm**

Features calibrated adjustments to permit exact selection of desired tracking force, anti-skating, with stylus overhang; perforated plug-in shell and sliding cartridge mounting, attaches by means of knurled locking ring and spring-loaded contacts; sliding main counterweight; tracking force selected by sliding ring weight along length of arm (calibrations permit adjustment to 0.5 g); one-hole installation of arm. Stylus force 0-3 g, calibrated to 0.5 g; cartridge weight 5-24 g; effective mass 20 g (set for AT14S cartridge)..... \$85

**ART-S.** Plug-in shell..... \$8

**AT-L2.** Optional hydraulic arm lift..... \$17

**AT650 Moving-Coil Transformer**

Passive transformer, no batteries or power supply required; variable impedance 3, 20, 40 ohms and pass; frequency response 10-100,000 Hz; THD 0.05% at 1 mV; output impedance 47,000 ohms..... \$250

**AT630 Moving-Coil Transformer**

Frequency response 15-100,000 Hz; input impedance 20 ohms; output impedance 47,000 ohms; channel balance 0.5 dB; THD 0.01% at 0.5 mV input..... \$95

**AUDIO TECHNOLOGY**

**440 Head Amplifier/Phono Preamplifier**

RIAA equalizer (IHf) with optional built-in head amp; frequency response 20-20,000 Hz ±0.25 dB over 0-20,000 Hz bandwidth; THD and IM dist. 0.05%; S/N 88 dB ("A" weighted); drives 600 ohm load to 5 V rms; will accommodate moving magnet and moving coil cartridges; resistive and capacitive loading for over 120 cartridge combinations; includes test record that adjusts 440 to any cartridge; 1 1/4" H x 7 1/2" W x 5 1/4" D..... \$280

**AUDIRE**

**Poco Pre-Preamp**

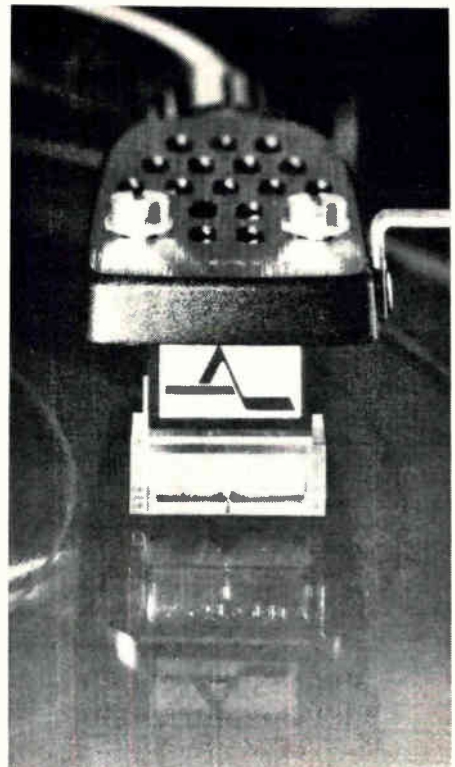
Moving-coil pre-preamp features two gain/impedance and high frequency rolloff gold-plated self-wiping dip switches; dual mono power supply consisting of two pairs of "AA"-size alkaline batteries (life 500 hrs). Frequency response 0.1-48,000 Hz -3 dB (narrow band), 0.1 Hz-1 MHz -3 dB (wide band); gain/input impedance 24 dB/63 ohms and 30 dB/32 ohms switchable; HD 0.025% from 20-20,000 Hz; IM dist. 0.01% (4:1, 60 and 7000 Hz); S/N 100 dB at 50 mV out, unweighted; max. output 0.9 V rms; 1.75" H x 7.25" W x 3.7" D..... \$175

**BANG & OLUFSEN**

**MMC Series Phono Cartridges**

Low-inductance low-mass (4-g) phono cartridges with "Moving Micro Cross" armature.

**MMC 20CL.** Features single-crystal sapphire cantilever with nude multi-radial contact line diamond stylus; effective tip mass 0.3 mg; output 2.12 mV/47k ohms at 5 cm lateral rms; frequency response



**Isn't it time?**

**Astatic announces  
Moving Flux  
MF™**

The newly patented\* Astatic Moving Flux MF™ cartridge is a dramatic breakthrough in phono cartridge design, offering a new transducing system which combines the best features of the moving coil and moving magnet cartridge systems. It retains the superior quality of the moving coil, with the high output (4mV and better) efficiency and low inductance and load impedance of the moving magnet, plus the advantage of a user replaceable stylus.

*Innovative Astatic Moving Flux MF™ cartridges come in four models: MF 100, MF 200, MF 300, MF 400. Available premounted in headshells.*

\*U.S. Patents 4,072,823 and 4,123,067



The Astatic Corporation  
Conneaut, Ohio 44030

CIRCLE NO. 4 ON READER SERVICE CARD

20-20,000 Hz  $\pm$  1 dB; channel separation 30 dB at 1000 Hz; dynamic compliance 30  $\mu$ m/mN; sensitivity 0.6 mV/47k ohms; tracking force 10 mN/1 g.

.....\$240

**MMC 20EN.** Aluminum cantilever with 5  $\times$  17  $\mu$ m elliptical diamond stylus; effective tip mass 0.4 mg; output 2.12 mV/47k ohms at 5 cm lateral rms; frequency response 20-20,000 Hz  $\pm$  2 dB; channel separation 25 dB at 1000 Hz; dynamic compliance 25  $\mu$ m/mN; sensitivity 0.6 mV/47k ohms; tracking force 12 mN/1.2 g. ....\$140

**MMC 20E.** Aluminum cantilever with 5  $\times$  17  $\mu$ m elliptical diamond stylus (0.5 mg effective tip mass); output 2.12 mV/47k ohms; frequency response 20-20,000 Hz  $\pm$  2.5 dB; channel separation 20 dB at 1000 Hz; dynamic compliance 20  $\mu$ m/mN; sensitivity 0.6 mV/47k ohms; tracking force 15 mN/1.5 g. ....\$90

**MMC 10E.** Similar to MMC 20E except frequency response 20-20,000 Hz  $\pm$  3 dB. ....\$55

### SP-12 Phono Cartridge

Moving-iron type; output 1 mV/cm/sec; frequency response 15-25,000 Hz  $\pm$  3 dB; has 0.2  $\times$  0.7-mm elliptical stylus; tracking force 1 to 1.5 g; 15-degree tracking angle; channel separation 25 dB at 1000 Hz; compliance 25  $\times$  10<sup>6</sup> cm/dyne; replacement stylus 5430. ....\$95

## CARVER

### M-04 Moving-Coil Preamplifier

Steps up voltage of moving-coil pickup cartridge to match standard RIAA phono stage; battery-operated with one-year life; LED battery condition indicator. ....\$78

## DB SYSTEMS

### DB-4A MC Pre-Preamplifier

Moving-coil cartridge pre-preamplifier utilizes low-noise cascode amplifiers and diode-protected in-



puts; internal low, medium, and high gain switch (set to medium when shipped). THD 0.0008% from 20-20,000 Hz at 1 V out; noise -84 dB at 1 mV, input shorted, A weighted; frequency response 10-100,000 Hz  $\pm$  0/-0.1 dB; input impedance 9000 ohms and 2000 pF; output impedance 220 ohms; max. load 10,000 ohms and 3000 pF; gain/sensitivity/overload (adjustable internally) 33 dB/40  $\mu$ V/45 mV at high setting, 28 dB/80  $\mu$ V/80 mV (medium setting), 22 dB/160  $\mu$ V/90 mV (low setting); channel balance  $\pm$  0.2 dB. ....\$150

## DECCA

### MK VI Elliptical Cartridge

Stereo cartridge with elliptical styli; tracking force 1.5 g; 5 mV output at 5 cm/sec; recommended load resistance 50,000 ohms; channel separation 20 dB at 1000 Hz; recommended cable load 250-300 pF; cartridge weight 4 g; factory-replaceable stylus. ....\$200  
Replacement stylus (gold). ....\$80

### MK VI Spherical Cartridge

Stereo cartridge with spherical styli; tracking force 2 g; 7.5 mV output at 5 cm/sec; otherwise similar to elliptical model. ....\$150  
Replacement stylus (plum). ....\$70

## London International Tonearm

Separate tonearm features frictionless jeweled unipivot magnetic floating assembly, magnetic anti-skating, optional vertical and lateral fluid damping, micrometer-type tracking-force adjustment, spirit level in head shell, adjustable stylus overhang provisions; effective arm mass 9 g; effective arm friction better than 0.02 g lateral and vertical; tracking force 1/2-3 g; cable capacitance 120  $\mu$ F/ch; cartridge weight range 5-12 g; pivot-to-stylus distance 9 1/2-in; height adj. 2 1/4-in max., 1 1/4-in min. ....\$150

## DENON

### DL-305 Moving-Coil Cartridge

Lightweight moving-coil phono cartridge with amorphous boron cantilever; frequency response 20-75,000 Hz; channel separation 28 dB at 1000 Hz; dynamic compliance 14  $\times$  10<sup>6</sup> cm/dyne; weight 5.8 g. ....\$565

### DL-303 Moving-Coil Cartridge

Lightweight moving-coil phono cartridge with double-constructed aluminum tapered pipe cantilever and 0.1  $\times$  0.05-mm rectangular stylus with elliptical solid diamond tip; output 0.2 mV at 1000 Hz, 5 cm/sec; frequency response 20-70,000 Hz; channel separation 28 dB at 1000 Hz; channel balance 1 dB at 1000 Hz; output impedance 40 ohms from 20-20,000 Hz; load impedance 100 ohms (with optional AU-340 step-up transformer 40 ohms); dynamic compliance 13  $\times$  10<sup>6</sup> cm/dyne; stylus force 1.2  $\pm$  0.2 g; weight 5.8 g. ....\$385

**AU-340.** Audio step-up transformer with 3 ohms/40 ohms/pass switching; step-up ratio 1:10 at 40 ohms, 1:33 at 3 ohms; primary impedance 3 and 40 ohms, secondary 4000 ohms; load impedance 50k ohms; frequency response 10-120,000 Hz  $\pm$  0.5/-1 dB; dist. 0.05% from 20-20,000 Hz, 40 ohms; channel balance 0.5 dB; 70 mm H  $\times$  155 mm W  $\times$  215 mm D. ....\$425

### DL-103D Moving-Coil Cartridge

Moving-coil stereo phono cartridge with cross-shaped armature; output 0.25 mV at 50 mm/sec; frequency response 20-65,000 Hz; channel separation 28 dB at 1000 Hz; channel balance 1 dB max. at 1000 Hz; 100-ohm load impedance; compliance 12  $\times$  10<sup>6</sup> cm/dyne; tracking force 1.5  $\pm$  0.2 g; elliptical diamond stylus; weight 7.5 g. ....\$267

### DL-103/T Moving-Coil Cartridge

Includes non-switchable 40-ohm cartridge transformer. Cartridge: output 0.3 mV at 50 mm/sec; frequency response 20-45,000 Hz; channel separation over 25 dB at 1000 Hz; channel balance 1 dB max. at 1000 Hz; 100-ohm load impedance; compliance 5  $\times$  10<sup>6</sup> cm/dyne; tracking force 2.5  $\pm$  0.3 g; conical stylus; weight 8.5 g. Transformer: 1:10 step-up ratio; 40-ohm primary impedance, 4000-ohm secondary impedance; frequency response 20-40,000 Hz  $\pm$  1 dB; 50k-ohm load impedance; 38 mm H  $\times$  51 mm W  $\times$  115 mm D. ....\$200

**DL-103.** Same as DL-103/T minus cartridge transformer. ....\$140

### DL-103S Moving-Coil Cartridge

Output 0.3 mV at 50 mm/sec; frequency response 20-60,000 Hz; channel separation over 25 dB at 1000 Hz; channel balance 1 dB max. at 1000 Hz; 100-ohm load impedance; compliance 8  $\times$  10<sup>6</sup> cm/dyne; tracking force 1.8  $\pm$  0.3 g; modified Shibata stylus; weight 7.8 g. ....\$186

### DL-301 Moving-Coil Cartridge

Moving-coil phono cartridge with aluminum alloy tapered pipe cantilever and elliptical solid diamond stylus tip; frequency response 20-60,000 Hz; channel separation 28 dB at 1000 Hz; compliance 13  $\times$  10<sup>6</sup> cm/dyne; weight 4.7 g. ....\$150

### AU-320 Cartridge Transformer

For moving-coil type. 1:10 step-up ratio; 3-40-ohm primary impedance, 4000-ohm secondary impedance; frequency response 10-100,000 Hz  $\pm$  1 dB;

65 mm H  $\times$  97 mm W  $\times$  155 mm D. ....\$160

**AU-310.** Similar to AU-320 except with 20-40,000 Hz  $\pm$  1 dB frequency response; 53 mm H  $\times$  51 mm W  $\times$  181 mm D. ....\$95

## HA-1000 Cartridge Head Amplifier

MC-type cartridge head amplifier; frequency response 8-600,000 Hz  $\pm$  0/-1 dB; input noise level -157 dB/V rms; input impedance 200 ohms; IM dist. and HD 0.008%; crosstalk -70 dB; 68 mm H  $\times$  125 mm W  $\times$  292 mm D (power supply 68 mm H  $\times$  107 mm W  $\times$  141 mm D). ....\$440

## Tonearms

### DA-401 Tonearm

Lightweight 322-mm statically-balanced S-shaped tonearm with dynamically-damped system; has two-piece high-rigidity headshell; oil-damped cueing and non-contact magnetic anti-skating control; tracking error 2.5 degrees; tracking force range 0-2 g in 0.1-g increments; height adjustment 42-70 mm; cartridge weight range 4-10 g; effective mass 7.5 g. ....\$360

### DA-307 Tonearm

332-mm statically-balanced dynamic S-shaped tonearm with magnesium-alloy diecast headshell; has magnetic anti-skating, oil-damped cueing, and vernier-dial direct-reading tracking force; tracking error 2.5 degrees; cartridge weight range 5-10 g; height adjustment 42-70 mm. ....\$275

## DYNAVECTOR

### DV/100K Moving-Coil Phono Cartridge

Moving-coil phono cartridge with 0.4  $\times$  0.4  $\times$  2.5-mm oblique cut nude diamond cantilever and 0.1  $\times$  0.1-mm line contact diamond stylus; step-up transformer or head amp not necessary; automatic coil winder wraps 11.5-micron-thick wire hair with moving coils wound on non-ferrous core; output 0.2 mV at 5 cm/sec, 1000 Hz; channel separation 20 dB at 1000 Hz; frequency response 20-70,000 Hz; dynamic compliance 15  $\times$  10<sup>6</sup> cm/dyne; tracking force 1.5 g  $\pm$  1/-0.3 g; 5.3 g. ....\$1000

**DV/100R.** Similar to DV/100K except has oblique cut naked ruby cantilever; frequency response 20-50,000 Hz. ....\$275

### DV/20A Mark 2 Moving-Coil Cartridge

Moving-coil phono cartridge with 0.3  $\times$  0.7-mil elliptical diamond stylus and tapered aluminum cantilever; step-up transformer or head amp not necessary; automatic coil winder wraps 11.5-micron-thick wire hair with moving coils wound on non-ferrous core; output 3.6 mV at 5 cm/sec, 1000 Hz; channel separation 20 dB at 1000 Hz; frequency response 20-20,000 Hz; compliance 24  $\times$  10<sup>6</sup> cm/dyne; tracking force 1.8 g; polyester-reinforced glass-fiber main frame; 5.3 g. ....\$230

**OV/20B Mark 2.** Similar to DV/20A except has straight solid beryllium cantilever. ....\$290

### 10X Moving-Coil Cartridge

Output 2 mV (3.45 cm/sec); channel balance  $\pm$  0.65 dB; channel separation 20 dB at 1000 Hz; 85-ohm dc coil resistance; 0.6-mil non-replaceable spherical stylus on aluminum cantilever; tracking force 2.5 g; weight 9.5 g; 1/2-in mounting center. ....\$120

### DV/6A Step-Up Transformer

Moving-coil step-up transformer features solid silver wire and massive magnetic core; adaptable impedance 3-40 ohms with 1:13 step-up ratio; max. input 300 mV at 50 Hz; dist. 0.01%. ....\$550

**OV/6X.** Similar to DV/6A except with adaptable impedance 3-60 ohms and step-up ratio 1:20; max. input 200 mV at 50 Hz. ....\$250

### DV-505 Tonearm

Bi-axis inertia-controlled dynamic balance-type tonearm; arm has two pivots; dynamic damping system to eliminate arm resonance; electro-magnetic damping system; free-standing type mounting; overall length 335 mm, effective length 241 mm;



height 72-94 mm; offset angle 21.5°; lateral tracking error 0.2-2.2°; overhang 15 mm; height adjustable over 38-70 mm; suitable cartridge weights 9-35 g; supplied with 1.2 m cable..... \$700

## EMPIRE

### EDR.9 Phono Cartridge

Low-mass linear moving-iron/variable-reluctance phono cartridge with tapered aluminum cantilever



and 0.3 x 3.0-mil LAC polished nude-mounted diamond stylus; suitable for almost all amplifier systems. Features LAC (large area of contact) stylus design with proper dimensions from side to side, smaller dimensions from front to back, and large low-pressure degree of contact between stylus and groove from top to bottom; three-element inertially-damped tuned stylus system with miniature iron bar inside of hollow cantilever tube; lightweight hollow ferrous tube connected to cantilever. Output 4.5 mV at 3.54 cm/sec; frequency response 20-35,000 Hz ± 1.75 dB; channel balance/separation ± 0.75 dB (1 kHz)/30 dB (500-15,000 Hz); load impedance 47k ohms/ch; load capacitance 150 pF/ch; compliance 28 x 10<sup>-6</sup> cm/dyne; tracking force range 1-2 g; 5.2 g..... \$200

### Dynamic Interface Series

#### 600LAC Phono Cartridge

Low-mass three-magnet four-coil phono cartridge with two samarium-cobalt magnets, tapered vapoored boron aluminum-alloy cantilever, and LAC stylus; designed to interface with low-capacitance turntables and preamps; has inertially damped tuning stylus and stylus lock. Output 4.0 mV at 3.54 cm/sec, 1000 Hz; frequency response 20-28,000 Hz ± 1.75 dB; channel balance/separation ± 1.0 dB/30 dB at 1000 Hz; input load 47,000 ohms; load capacitance 150 pF; dynamic compliance 20 x 10<sup>-6</sup> cm/dyne; tracking force range 1-2 g; stylus replacement S600LAC black; 5.3 g..... \$175

**500ID.** Similar to 600LAC except uses 0.2 x 0.7-mil bi-radial diamond stylus; frequency response 20-23,000 Hz ± 1.75 dB; tracking force range 0.75-1.5 g; stylus replacement S500ID purple..... \$125

**400TC.** Similar to 500ID minus inertially-damped tuning stylus; has tapered aluminum-alloy cantilever; output 3.8 mV at 3.54 cm/sec, 1000 Hz; frequency response 20-20,000 Hz ± 2 dB; channel separation 28 dB at 1000 Hz; tracking force range 0.75-2 g; stylus replacement S400TC red..... \$100

#### 300ME Phono Cartridge

Low-mass three-magnet four-coil phono cartridge with two samarium cobalt magnets, aluminum-alloy cantilever, and 0.2 x 0.7-mil biradial diamond stylus; designed to interface with low-capacitance turntables and preamps; has bias spring suspension; output 4.5 mV at 3.54 cm/sec, 1000 Hz; frequency response 20-20,000 Hz ± 3 dB; channel balance/separation ± 1.5 dB/27 dB at 1000 Hz; load resistance 47k ohms; load capacitance 150-400 pF; dynamic compliance 17 x 10<sup>-6</sup> cm/dyne; tracking force range 1.2 g; replacement stylus S300ME smoked; 5.3 g..... \$70

**200E.** Similar to 300ME except uses 0.3 x 0.7-mil elliptical stylus; output 5.5 mV at 3.54 cm/sec, 1000 Hz; channel separation 25 dB at 1000 Hz; dynamic compliance 14 x 10<sup>-6</sup> cm/dyne; load capacitance 250 pF; tracking force range 2-4 g; stylus

replacement S200E blue..... \$60  
**100S.** Similar to 200E except with 0.7-mil spherical diamond stylus; output 5.0 mV at 3.54 cm/sec, 1000 Hz; channel separation 23 dB at 1000 Hz; dynamic compliance 10 x 10<sup>-6</sup> cm/dyne; tracking force range 2.5-5 g; stylus replacement S100S yellow..... \$40

### 2000 Series

#### 2000Z Phono Cartridge

For matrix four-channel and stereo operation; output 3 mV/ch at 3.54 cm/sec; frequency response 20-20,000 Hz ± 1 dB; channel balance/separation ± 0.75 dB (1 kHz)/30 dB (500-15,000 Hz); input load 47,000 ohms/ch; total capacitance 300 pF/ch; compliance 30 x 10<sup>-6</sup> cm/dyne; tracking force 0.75-1.25 g; 0.2 x 0.7 mil elliptical stylus... \$150

#### 2000E/III Phono Cartridge

For matrix four-channel and stereo operation; output 4.5 mV/ch at 3.54 cm/sec; frequency response 20-20,000 Hz ± 2 dB; channel balance/separation ± 1 dB (1 kHz)/28 dB (500-15,000 Hz); input load 47,000 ohms/ch; total capacitance 400-500 pF/ch; compliance 20 x 10<sup>-6</sup> cm/dyne; tracking force 0.75-1.5 g; 0.2 x 0.7 mil elliptical stylus..... \$85

## FULTON

### Fulton Blue Phono Cartridge

Moving-coil phono cartridge; output 0.33 mV at 1000 Hz; frequency response 10-60,000 Hz -0.5 dB; channel separation 34 dB at 1000 Hz; load capacitance 30 pF; head amp load 125 ohms recommended; dynamic compliance 12 x 10<sup>-6</sup> cm; tracking force 1.5-1.75 g; 0.65-mil polished conical stylus; weight 5 g..... \$350

### Tonearm

Features precision metal bearings and Fulton headshell wire throughout length; no headshell; can track digital recordings; 9 1/4" L from pivot.... \$1295

## GOLDRING by HERVIC

#### 6900/IGC Phono Cartridge

Low-mass moving-magnet phono cartridge with van den Hul fine-line diamond stylus; output 4.5 mV at 5 cm/sec, 1000 Hz; frequency response 20-20,000 Hz ± 2 dB; channel balance/separation 2/25 dB at 1000 Hz; static compliance 40 mm/N lateral, 20 mm/N vertical; tracking force range 0.75-1.5 g; load resistance 47k ohms; load capacitance 150-200 pF; 4 g..... \$250

#### 6900/SE2 Phono Cartridge

Low-mass moving-magnet phono cartridge with micro-miniature magnet, ultra-thin-walled hard aluminum-alloy tube, and 0.0007 x 0.0002-in elliptical nude diamond stylus; output 4.5 mV at 5 cm/sec, 1000 Hz; frequency response 20-20,000 Hz ± 2 dB; channel separation 25 dB; tracking force 0.75-1.5 g; load resistance 47k ohms; load capacitance 150-200 pF; 4 g..... \$160

#### 6900E Phono Cartridge

Low-mass phono cartridge; output 6.5 mV at 5 cm/sec; frequency response 20-20,000 Hz ± 3 dB; channel separation 20 dB at 1000 Hz; tracking force 1-3 g; 0.7 x 0.3-mil elliptical stylus..... \$95

## GRACE by SUMIKO

#### 747 Tonearm

Low-mass highly-rigid damped aluminum tubular straight tonearm with detachable headshell incorporating wide-surface coupling mechanism; case-hardened orthogonal bearing system; decoupled counterweight isolated by damper; anti-skating and cueing; overall length 293-321 mm; stylus overhang 15 mm; cartridge weight range 4-10 g... \$275

#### 707II Tonearm

Low-mass highly-rigid aluminum tubular straight

## Empire's EDR.9 The Phono Cartridge Designed for Today's Audiophile Recordings



Direct-to-Disc and digital recording have added a fantastic new dimension to the listening experience. Greater dynamic range, detail, stereo imaging, lower distortion and increased signal-to-noise ratio are just a few of the phrases used to describe the advantages of these new technologies.

In order to capture all the benefits of these recordings, you should have a phono cartridge specifically designed to reproduce every bit of information with utmost precision and clarity and the least amount of record wear.

The Empire EDR.9 is that cartridge. Although just recently introduced, it is already being hailed as a breakthrough by audiophiles, not only in the U.S., but in such foreign markets as Japan, Germany, England, France, Switzerland and Sweden.

At \$200, the EDR.9 is expensive, but then again, so are your records.

For more detailed information and test reports, write to:

Empire Scientific Corporation  
1055 Stewart Avenue  
Garden City, New York 11530

# EMPIRE



# 5 PHONO CARTRIDGES

tonearm with acrylic headshell; orthogonal gimbal bearing system incorporates two-part cone mechanism made of solid base material with case-hardened bearing cone tip; decoupled counterweight isolated by small rubber damper; anti-skating and cueing; overall length 288-313 mm; stylus overhang 15 mm; cartridge weight range 4.5-12 g; available in black or silver..... \$200

## GRADO LABORATORIES

### G2 + Phono Cartridge

Features twin tip diamond stylus; output 3 mV at 3.54 cm/sec; frequency response 10-60,000 Hz; channel separation 25 dB from 10-30,000 Hz; tracking force 1.5 g; weight 4.5 g..... \$250  
**G1 +.** Similar to G2 + except has Grado diamond stylus..... \$150

### F1 + Phono Cartridge

Output 3 mV at 3.54 cm/sec; frequency response 10-60,000 Hz; channel separation 25 dB from 10-30,000 Hz; Grado diamond stylus; tracking force 1.5 g; weight 4.5 g..... \$75  
**F2 +.** Similar to F1 + except has 0.7 x 0.3-mil elliptical diamond stylus..... \$60  
**F3E +.** Similar to F2 + except frequency response 10-55,000 Hz..... \$50

### FCE + 1 Phono Cartridge

Output 3 mV at 3.54 cm/sec; frequency response 10-50,000 Hz; channel separation 20 dB from 10-30,000 Hz; 0.7 x 0.3-mil elliptical diamond stylus; tracking force range 1.5-3 g; weight 4.5 g..... \$38

### FCE + Phono Cartridge

Output 5 mV at 3.54 cm/sec; frequency response 10-35,000 Hz; channel separation 20 dB from 10-20,000 Hz; 0.7 x 0.3-mil elliptical diamond stylus; tracking force range 1.5-3 g; weight 4.5 g..... \$35

**FCR +.** Similar to FCE + except with 0.5-mil spherical diamond stylus..... \$25

## HADCOCK by H&H INT'L

### GH228 "E" Tonearm

Low-mass unipivot-designed tonearm with stainless-steel precision ball bearing, detachable precision aluminum-alloy cast headshell, and double decoupled main counterweight with lateral balance rider weights and silicon-fluid-damped tube; adjustable bias and tracking force adjustment; detachable top arm assembly with plug and socket (additional top arm assemblies available); separate headshells available. Overall length 11.4 in; height 1.7-3.5 in; offset angle 23 degrees; rear overhang 2.4 in; headshell mounting 0.5-in centers; cartridge weight range 3-12 g..... \$250

## INFINITY

### Black Widow GF Tone Arm

Low-mass tapered-graphite-fiber straight tonearm; accepts any cartridge. Features low-frequency



damping device using silicone fluid to control cartridge and arm resonance; no headshell (cartridge attaches directly to adjustable crossmember on

arm); adjustable anti-skating and oil-damped cueing; precision-machined vertical and lateral bearings; gold-plated plugs and cable tips. Cartridge weight range 4-8.5 g; stylus force spring adjustment 1/2-g calibration; bearing friction at stylus point 0.005 g vertical bearing, 0.01 g lateral bearing; ±10-mm sliding base adjustment (quick slide-set and lock type); effective arm mass 3 g..... \$240

## JMAS

### MIT-1 Phono Cartridge

Moving-coil phono cartridge with Hull stylus; stylus features mirror-image transduction in playback of records and designed to track high-frequency modulations; frequency response 20-20,000 Hz; channel separation 40 dB at 1000 Hz; impedance 5 ohms..... \$550

## JML

### TA-3A Tonearm

Low-mass tonearm with resonance-damped counterweight and continuously adjustable silicone-fluid damping of vertical and horizontal movement; micro-adjustable height; jeweled unipivot and ball-support bearing; cartridge weight range 2-11 g; tracking error 0.35 degree/in; stylus-to-pivot distance 9 in; effective mass 2.5 g with cartridge; capacitance 100 pF (including 3-ft cable supplied)..... \$249

## JVC

### MC-2E Phono Cartridge

Micro moving-coil cartridge with direct-coupled transducer and duralumin cantilever; 0.07 x 0.14-mm diamond tip elliptical stylus; output 0.2 mV at 5 cm/sec; channel balance/separation 1 dB/25 dB; impedance 30 ohms; dynamic compliance 8 x 10<sup>-6</sup> cm/dyne at 100 Hz; optimum tracking force 1.5 ±0.15 g; frequency response 10-25,000 Hz; weight 8.7 g..... \$200

## LUSTRE by SUMIKO

### GST-801 Tonearm

Magnetic-drive dynamically-balanced stainless-steel pipe J-shaped tonearm with magnesium-alloy headshell; features magnetic-flux-varying-type stylus force application system with magnetic-flux-varying-type anti-skating mechanism; plated plastic damped tube in pipe arm reduces vibration; fine adjustment of arm height using built-in helicoid mechanism; effective length 240 mm; adjustable height range 41-71 mm; overhang 15 mm; horizontal tracking error 1.1 degrees inside circumference, 2 degrees outside circumference; tracking force range 0.3-2.5 g (directly readable); cartridge weight range 13.5-28 g (includes headshell)..... \$500

## LUX

### CX-1 DC Head Amplifier

Offers switchable gain (20 or 30 dB) for moving-coil cartridges of either middle- or low-output type; moving-magnet cartridge has "bypass" position. Equivalent input noise 150 dB V (RIAA, IHF "A"); THD no more than 0.003%; frequency response 5-500,000 Hz 1 dB; input and output impedances 100 ohms; 3 1/2" H x 5 1/4" W x 12" D. \$295

## MARCOF

### PPA-2 Pre-Preamplifier

Moving-coil pre-preamplifier features constant bias circuitry in power supply stage; internal two-position gain and impedance selection dip switches..... \$250

### PPA-1 Pre-Preamplifier

Moving-coil step-up pre-preamplifier features Class

A common-base push-pull circuitry; on/off switch with LED indicator; battery-powered by two 9-V transistor batteries (life 300-400 hrs). Input impedance 36 ohms; output impedance 3920 ohms; dist. 0.005% at 100 mV rms out, 20-20,000 Hz; gain 27.5 dB; frequency response 20-20,000 Hz ±0.05 dB; channel balance ±0.1 dB; channel separation 95 dB at 150 mV rms out, 20,000 Hz; input overload 100 mV rms; max. output 2.5 V rms, 20-20,000 Hz; noise -85 dB IHF A weighted; slew factor 400 (IHF); 2 1/4" H x 5" W x 6" D..... \$120  
**PPA-1h.** Same as PPA-1 except input impedance 10 ohms and gain 34 dB..... \$120

## MICRO-ACOUSTICS

### 530-mp Stereo Cartridge

Low-mass direct-coupled electret phono cartridge with Micro-Point diamond stylus and beryllium cantilever; frequency response 5-20,000 Hz ±1.25 dB; channel separation 30 dB at 1000 Hz, 15 dB at 10,000 Hz; output voltage 3.5 mV/ch at 5 cm/sec peak recorded velocity; load requirements 10,000-100,000 ohms; cable capacity 100-1500 pF; tracking force range 0.7-1.4 g; cartridge weight 4 g, 3.2 g without stylus hood..... \$220

### 2002-e Stereo Cartridge

Low-mass direct-coupled electret phono cartridge with 0.0002 x 0.0007-in elliptical diamond stylus and beryllium cantilever; frequency response 5-20,000 Hz ±1.5 dB; tracking force range 0.7-1.4 g; channel separation 30 dB at 1000 Hz, 15 dB at 10,000 Hz; output voltage 3.5 mV/ch at 5 cm/sec peak recorded velocity; load 10,000-100,000 ohms; cable capacitance 100-1500 pF; cartridge weight 4 g, 3.2 g without stylus hood..... \$130

### 282-e Stereo Cartridge

Direct-coupled electret phono cartridge with 0.0002 x 0.0007-in elliptical diamond stylus and ultra-lightweight aluminum cantilever; frequency response 5-20,000 Hz ±2 dB; channel separation 25 dB at 1000 Hz, 15 dB at 10,000 Hz; output voltage 3.5 mV/ch at 5 cm/sec peak recorded velocity; load requirements 10,000-100,000 ohms; cable capacity 100-1500 pF; tracking force range 0.75-1.5 g; cartridge weight 5.2 g..... \$100

## System II Series

### 630 Phono Cartridge

Ultra-low-mass direct-coupled electret phono cartridge with computer-optimized Micro-Point II dia-



mond playback stylus, 0.0001-in Micro-Fine beryllium cantilever, twin-pivot revolver with iridium-platinum axial damper at apex, and ultra-lightweight carbon-fiber headshell; designed for wide-dynamic-range and digital recordings. Additional features include internal warp stabilizer damping system; microcircuit automatically matches cartridge output to any existing cable capacitance and preamp input resistance; Vari-Balance™ system consisting of three removable 0.5-g weights incorporated inside cartridge body; independent suspension and damping systems; dynamic feedback damping system; 24-carat solid gold wiring. Output 3.5 mV; frequency response 5-20,000 Hz ±1 dB (supplied with individual calibration curve); channel separation 30 dB at 1000 Hz; tracking force range 0.7-1.4 g; rise time 4.5 μsec; phono input



cable capacitance/load resistance 25-1500 pF/5k-100k ohms; cartridge weight 2.5-4 g (adjustable with Vari-Balance)..... \$250  
**3002.** Similar to 630 minus iridium-platinum axial damper and calibrated frequency response curve; frequency response 5-20,000 Hz  $\pm 1.25$  dB; rise time 5.0  $\mu$ sec..... \$150  
**382.** Similar to 3002 except uses elliptical diamond stylus with standard beryllium cantilever; minus Vari-Balance; frequency response 5-20,000 Hz  $\pm 1.5$  dB; tracking force range 0.75-1.5 g; rise time 6  $\mu$ sec; cartridge weight 4 g..... \$120

## NAD (USA)

### 9000 Phono Cartridge

Moving-coil phono cartridge with 0.4 x 0.7-mil elliptical stylus; output 1.8 mV at 5 cm/sec, 1000 Hz; frequency response 20-20,000 Hz  $\pm 2$  dB; channel separation 30 dB at 1000 Hz; tracking force range 1.2-1.8 g; load resistance 47k ohms; load capacitance not critical; factory-replaceable stylus (\$80); 6 g..... \$160

### 9300 Phono Cartridge

Low-mass induced-magnet phono cartridge with 0.0003 x 0.0007-in nude elliptical diamond stylus bonded directly onto cantilever and with cantilever assembly pivoted in elastomeric material; output 5.5 mV at 5 cm/sec; frequency response 15-24,000 Hz  $\pm 2$  dB; channel balance/separation 1.5 dB/26 dB at 1000 Hz; tracking force 1.2 g  $\pm 0.3$  g; load capacitance 275 pF; load resistance 47k ohms; supplied with individually-measured response curve graph; gold case with black body and stylus holder; replacement stylus NAD 93 (\$60); 5.75 g..... \$125

**9200.** Similar to 9300 except with 0.0003 x 0.0007-in Diasa elliptical stylus; frequency response 15-20,000 Hz  $\pm 2$  dB; channel balance/separation 2 dB/24 dB at 1000 Hz; silver case with charcoal gray body and stylus holder; replacement stylus NAD 92 (\$45)..... \$85

**9100.** Similar to 9200 except with 0.0007-in bushed spherical diamond stylus; output 5.8 mV; frequency response 20-20,000 Hz  $\pm 3$  dB; channel balance 3 dB; tracking force range 1-2 g; no response chart included; dark blue body and stylus holder; replacement stylus NAD 91 (\$25)..... \$45

## NAGATRON

### HV9100 Ribbon Stereo Phono Cartridge

Fine wire-ribbon magnetic cartridge converts mechanical signal from record into electrical signal by reacting to stylus tip motion over record grooves; constant dc magnetic flux; no internal coil; uses one-point support for straight-line titanium stylus cantilever; acrylic resin headshell; frequency response 20-30,000 Hz; output 0.04 mV at 5 cm/sec (1000 Hz); channel balance/separation 1.0/25 dB at 1000 Hz; output impedance 3 ohms at 1000 Hz; nominal dynamic compliance  $7 \times 10^6$  cm/dyne; 0.4 x 0.8 mil elliptical nude solid diamond stylus..... \$275

**HA-9000.** Head amplifier designed for use with Nagatron HV9100 and moving-coil cartridges; frequency response 10-200,000 Hz  $\pm 1$  dB; 40-dB gain; THD 0.01% at 1000 Hz; noise level at input -155 dB/V (RIAA and IHF "A"); max. input 8.4 mV; output to magnetic phono in 50,000 ohms; input impedance 20 ohms; battery-powered with individual power supplies/channel..... \$330

### 9600 Super IM Phono Cartridge

Two-channel induced-magnet aluminum magnesium alloy phono cartridge with tapered, tubular boron cantilever and samarium cobalt magnet; frequency response 20-30,000 Hz; output 2 mV at 50 mm/sec, 1000 Hz; channel balance/separation 1 dB/27 dB at 1000 Hz; recommended load 47,000 ohms; dynamic compliance  $15 \times 10^6$  cm/dyne at 100 Hz; tracking force range 0.9-1.3 g; triangle-tip elliptical semi-line-contact stylus; effective mass 0.031 mg; JIS and EIA standard mount; weight 7.6 g..... \$225

### 300 Series Phono Cartridges

Features critically aligned two-channel samarium-cobalt alloy induced magnet structure; universal mount; frequency response 10-25,000 Hz; channel balance/separation 1.0/25 dB at 1000 Hz; output 4.0 mV at 50 mm/sec (1000 Hz); recommended load 30,000-100,000 ohms, 50,000 ohms nominal; dynamic compliance  $9 \times 10^6$  cm/dyne; static compliance  $20 \times 10^6$  cm/dyne.

**360CEX.** Hand-selected 0.3 x 0.7 mil shaped elliptical nude diamond stylus with tapered carbon-fiber cantilever; effective mass 0.60 mg..... \$165

**360CE.** 0.3 x 0.7 mil shaped elliptical nude diamond stylus; effective mass 0.6 mg..... \$135

**350E.** 0.3 x 0.7 mil elliptical nude diamond stylus with aluminum UT-58 cantilever; effective mass 0.65 mg..... \$95

**344DE.** 0.3 x 0.7-mil bonded elliptical diamond stylus with aluminum cantilever and permalloy micro tubular armature; super permalloy magnet structure; frequency response 20-25,000 Hz; dynamic compliance  $8 \times 10^6$  cm/dyne/100 Hz; weight 6 g..... \$70

**340S.** 0.5 mil spherical diamond stylus; aluminum UT-58 cantilever; effective mass 0.85 mg..... \$55

**300DJ.** Designed for broadcasters, discos, and other commercial users; features back cueing capability, low distortion, and heavy-duty stylus, cantilever, and suspension; tracking pressure 4-5 g; grain-oriented equi-radial stylus..... \$65

### 200 Series Phono Cartridges

Two-channel cobalt-alloy magnet structure; universal mount; frequency response 10-25,000 Hz; channel balance/separation 1.0/25 dB at 1000 Hz; output voltage 4.0 mV at 50 mm/sec (1000 Hz); recommended load 30,000-100,000 ohms, 50,000 ohms nominal; dynamic compliance  $8 \times 10^6$  cm/dyne at 1000 Hz; static compliance  $20 \times 10^6$  cm/dyne.

**220CE.** 0.3 x 0.7 mil shaped elliptical nude diamond stylus with tapered carbon-fiber cantilever; effective mass 0.60 mg..... \$120

**210E.** 0.3 x 0.7 mil elliptical nude diamond stylus with aluminum UT-58 cantilever; effective mass, 0.65 mg..... \$84

**200S.** 0.5 mil spherical diamond stylus with aluminum UT-58 cantilever; mass 0.85 mg..... \$45

### 100 Series Phono Cartridges

Two-channel induced magnet with super-permalloy shield; frequency response 20-20,000 Hz; effective mass 0.85 mg; channel balance/separation 1.5/24 dB at 1000 Hz; output 4.0 mV at 50 mm/sec (1000 Hz); recommended load 30,000-100,000 ohms, 50,000 ohms nominal; dynamic compliance more than  $8 \times 10^6$  cm/dyne at 1000 Hz; static compliance  $20 \times 10^6$  cm/dyne; aluminum cantilever.

**195IE.** 0.3 x 0.7 mil elliptical diamond stylus; integral head shell..... \$55

**185E.** 0.3 x 0.7 mil elliptical diamond stylus; universal mount..... \$45

**175IS.** 0.5 mil spherical diamond stylus; integral headshell..... \$43

**165S.** 0.5 mil spherical diamond stylus; universal mount..... \$35

### Ag 9200 Z Coupler

Impedance and level coupling device designed for 3-ohm output impedance of Nagatron's ribbon cartridge and most low-output moving-coil cartridges to 47k-ohm input impedance of magnetic input stage on most preamps. Features chemically pure silver windings and very short magnetic circuit; selector switch for balanced or unbalanced line hook-up. Input impedance 3 ohms; output impedance 33k ohms; load resistance 47k ohms min.; load capacitance 200 pF; frequency response 12-35,000 Hz  $\pm 0.5$  dB; max. input 300 mV at 50 Hz; dist. 0.0001% at 5 mV in, 1000 Hz; crosstalk 75 dB; gain 40 dB..... \$325

## NAKAMICHI

### MC-1000 Reference Pickup

Moving-coil pickup with low-mass single-crystal

**INTRODUCING THE LIGHTEST, FASTEST CARTRIDGES EVER.**

Picture a laser-oriented, microscopic diamond, practically invisible to the naked eye. A hair-thin beryllium cantilever. An instant-response, direct-coupled transducer. An iridium-platinum axial damper. An ultra-light carbon-fiber housing. All, computer-optimized as a total system, resulting in the lightest, fastest cartridges ever.

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phono cartridge technology for the 80's. In 1974, our patented direct-coupled cartridges revolutionized phono technology by optimizing both transient ability and tracking ability in a single design. Now, history repeats itself in our new System II line of direct-coupled cartridges. They're the best reason we know of to replace the phono cartridge you now own. Available now at authorized Micro-Acoustics dealers, or write, Micro-Acoustics Corporation, 8 Westchester Plaza, Elmsford, NY 10523. In Canada, H. Roy Gray Ltd., Markham, Ont.



**Micro-Acoustics Corporation**  
**System II Direct-Coupled**  
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beryllium cantilever assembly, direct-coupled one-point supported coil assembly, and Crystal Permalloy laminated core; output 0.2 mV (1 kHz, 5 cm/sec); frequency response 15-65,000 Hz; channel separation 27 dB at 1 kHz; impedance 3.5 ohms; compliance  $16 \times 10^{-6}$  cm/dyne; tracking force range 1.5-2.1 g; features Shibata stylus; supplied with SME-type headshell and individual test data... \$345

**MC-500.** Similar to MC-1000 but with duraluminum cantilever and no tonearm shell; output 0.9 mV (1 kHz, 5 cm/sec); frequency response 20-35,000 Hz; channel separation 25 dB at 1 kHz; impedance 20 ohms; compliance  $7 \times 10^{-6}$  cm/dyne; tracking force 1.9-2.5 g; elliptical stylus... \$170

### MB-150 Moving-Coil Booster Amplifier

Switchable gain 22 or 38 dB; equivalent input noise -158 dB (IHF "A" weighted); THD less than 0.005%; 20-20,000 Hz; frequency response 10-100,000 Hz +0/-0.5 dB, 22-dB gain setting; requires PS-100 Power Supply;  $2\frac{1}{2}'' \text{H} \times 7\frac{1}{2}'' \text{W} \times 4'' \text{D}$ ... \$140

## ONKYO

### MC-100 Stereo Phono Cartridge

Moving-coil magnesium-alloy phono cartridge with cantilever constructed of two duralumin layers and carbon-fiber middle layer; permalloy coil-bobbin construction and Alnico V magnet; output 0.4 mV at 1000 Hz, 5.5 cm/sec; frequency response 20-50,000 Hz; channel separation 28 dB at 1000 Hz; dynamic compliance  $8.5 \times 10^{-6}$  cm/dyne; load impedance 24 ohms  $\pm 20\%$ ; tracking force 1.8 g  $\pm 0.2$  g; weight 8.5 g... \$170

**MT-2.** Transformer for MC-100... \$98

## ORTOFON

### Moving-Coil Cartridges

#### MC30 Phono Cartridge

Moving-coil pickup cartridge with fine-line diamond stylus; features wide-range damping system constructed of two layers of specially-formulated rubber with platinum disc between. Output/ch 0.08 mV at 5 cm/sec at 1000 Hz; frequency response 20-20,000 Hz  $\pm 1$  dB; channel balance 1 dB; channel separation 25 dB at 1000 Hz; dynamic compliance  $13 \mu\text{m/mN}$  vertical and horizontal; load impedance 47,000 ohms/channel stereo; tracking force 1.5 g; 6- $\mu\text{m}$  stylus tip radius; weight 7 g... \$650

**T-30.** Moving-coil transformer boosts MC30 signals to feed normal phono input; features two toroidal cores and rotary switch with bypass (for magnetic cartridges), 3, 6, 12, 24, and 48-ohm overlapping ranges. Output loading 47,000 ohms and 150 pF; frequency response 8-90,000 Hz +0.3/-1 dB; gain 32 dB (3 ohms), 29 dB (6 ohms), 26 dB (12 ohms), 23 dB (24 ohms), 20 dB (48 ohms); channel balance 0.2 dB; channel separation 50 dB from 5-50,000 Hz; square wave rise time 3  $\mu\text{sec}$ ; 40 mm H  $\times$  80 mm W  $\times$  142 mm D... \$550

#### MC20 MkII Phono Cartridge

Moving-coil pickup cartridge with 0.14  $\times$  0.07-mm nude fine-line diamond stylus; features wide-range damping system and square magnetic pole. Output 0.09 mV at 5 cm/sec, 1000 Hz; frequency response 20-20,000 Hz  $\pm 1$  dB; channel balance/separation 1.5 dB/25 dB at 1000 Hz; dynamic compliance  $12 \mu\text{m/mN}$  at 10 Hz; 8  $\times$  40- $\mu\text{m}$  stylus tip; tracking force 1.7 g; weight 7 g... \$350

#### MC20 Phono Cartridge

Moving-coil pickup cartridge with 8- $\mu\text{m}$  fine-line diamond stylus tip and beryllium-filled stepped

cantilever; features three-part rubber-suspension damping system and square pole piece. Output/ch 0.07 mV at 5 cm/sec (1 kHz); frequency response 20-20,000 Hz  $\pm 1$  dB; channel balance 2 dB; channel separation 25 dB at 1000 Hz; load impedance 47,000 ohms; tracking force 1.5-2 g; compliance  $25 \times 10^{-6}$  cm/dyne (horizontal),  $15 \times 10^{-6}$  cm/dyne (vertical); requires transformer or pre-pre-amplifier; weight 7 g... \$215

### MC10 Phono Cartridge

Moving-coil pickup cartridge with lightweight aluminum-alloy cantilever, 8- $\mu\text{m}$  elliptical diamond stylus tip, and gold-plated terminal pins. Output voltage/ch 0.1 mV at 5 cm/sec, 1000 Hz; frequency response 10-20,000 Hz +3/-2 dB; channel balance/separation 2 dB/22 dB at 1000 Hz; horizontal and vertical compliance  $15 \mu\text{m/mN}$ ; tracking force range 1.7-2.3 g; weight 7 g... \$165

## Concorde Series

### Concorde 30 Phono Cartridge

Low-mass variable magnetic shunt phono cartridge with nude fine-line diamond stylus, specially-hardened aluminum-alloy cantilever, and integral cartridge/headshell. Output 3 mV at 5 cm/sec at 1000 Hz; frequency response 20-25,000 Hz; channel balance 1.5 dB at 1000 Hz; channel separation 25 dB at 1000 Hz; dynamic compliance  $25 \times 10^{-6}$  cm/dyne lateral,  $28 \times 10^{-6}$  cm/dyne vertical; load impedance 47,000 ohms; tracking force 1.2-1.8 g; weight 6.5 g... \$180

**Concorde 20.** Similar to Concorde 30 except has axially-oriented fine-line diamond stylus; output 3.5 mV at 5 cm/sec at 1000 Hz; frequency response 20-20,000 Hz; channel balance 2 dB at 1000 Hz; compliance  $25 \times 10^{-6}$  cm/dyne vertical,  $20 \times 10^{-6}$  cm/dyne lateral; tracking force 1.5-2.1 g... \$140

**Concorde 10.** Similar to Concorde 20 except has elliptical diamond stylus; output 5.0 mV at 5 cm/sec, 1000 Hz; channel separation 20 dB at 1000 Hz; dynamic compliance  $20 \mu\text{m/mN}$  (vertical),  $15 \mu\text{m/mN}$  (lateral)... \$100

## LM VMS Series

### LM30 Phono Cartridge

Low-mass variable magnetic shunt moving-magnetic phono cartridge with lightweight aluminum-alloy cantilever and nude fine-line diamond stylus. Output 3.0 mV at 5 cm/sec, 1000 Hz; frequency response 20-25,000 Hz; channel balance/separation 1.5 dB/25 dB at 1000 Hz; dynamic compliance  $25 \mu\text{m/mN}$  (lateral); tracking force range 12-18 mN; weight 2.6 g... \$160

**LM30H.** Same as LM30 except designed for recent turntables with ultra-low-mass tonearms; frequency response 20 20,000 Hz; dynamic compliance  $35 \mu\text{m/mN}$ ; tracking force range 8-12 mN... \$160

### LM20 Phono Cartridge

Low-mass variable magnetic shunt phono cartridge with axially-oriented fine-line diamond stylus. Output 3.5 mV at 5 cm/sec, 1000 Hz; frequency response 20-20,000 Hz; channel balance/separation 2 dB/25 dB at 1000 Hz; dynamic compliance  $20 \mu\text{m/mN}$ ; tracking force range 15-21 mN; weight 2.6 g... \$125

**LM20H.** High-compliance version of LM20; designed for turntables with lighter tonearms; output 3.0 mV at 5 cm/sec, 1000 Hz; dynamic compliance  $35 \mu\text{m/mN}$ ; tracking force range 8-12 mN... \$125

### LM15 Phono Cartridge

Low-mass variable magnetic shunt phono cartridge with elliptical stylus; designed for medium-weight tonearms. Output 4.0 mV at 5 cm/sec at 1000 Hz; frequency response 20-20,000 Hz; channel balance/separation 2 dB/25 dB at 1000 Hz; dynamic compliance  $20 \mu\text{m/mN}$ ; tracking force range 15-21 mN; weight 2.6 g... \$95

**LM10.** Similar to LM15 except designed for heavier tonearms in older models; output 5.0 mV at 5 cm/sec, 1000 Hz; channel separation 20 dB at 1000 Hz; dynamic compliance  $15 \mu\text{m/mN}$ ; tracking force range 17-23 mN... \$70

## VMS Series

### FF15XE MkII Phono Cartridge

Variable magnetic shunt phono cartridge with 8- $\mu\text{m}$  elliptical diamond stylus tip. Output/ch 1.2 mV at 1000 Hz, 1 cm/sec; frequency response 20-20,000 Hz; channel balance/separation 2 dB/20 dB at 1000 Hz; compliance  $20 \mu\text{m/mN}$  (horizontal and vertical); tracking force range 1.5-3 g; replacement stylus NF15XE Mk II; weight 5 g.. \$50

### Ortofon/SME 30 H Cartridge/Arm

Coupling of Ortofon's Concorde 30 low-mass cartridge/headshell with SME's Series III and IIS low-mass tonearms; uses solid nude fine-line diamond stylus and specially-hardened aluminum alloy cantilever in S-shaped arm. Output 3 mV at 5 cm/sec, 1000 Hz; frequency response 20-20,000 Hz; channel balance/separation 1.5 dB/25 dB at 1000 Hz; dynamic compliance  $35 \mu\text{m/mN}$ ; tracking force range 0.8-1.2 g; tonearm resonant frequency 13 Hz; hum sensitivity  $0.2 \mu\text{V/A/m}$  at 50 Hz; weight 10.5 g... \$250

### MCA-76 Moving-Coil Pre-Preamplifier

Matches moving-coil cartridge signals to magnetic phono inputs; can be used with stereo, four-channel matrix, and CD-4 systems. Features built-in power supply, by-pass and flat/CD-4 filter switches, and subsonic filter. Frequency response 20-50,000 Hz +0/-0.5 dB (flat) and +0/-3 dB (CD-4); voltage gain/ratio 34 dB  $\pm 0.5$  dB; input impedance 75 ohms at 1000 Hz; output impedance 140 ohms; max. input 6 mV rms; channel separation 60 dB; HD 0.04% (2nd), 0.01% (3rd); IM dist. 0.01%; hum level 120 dB below max. input; S/N 69 dB;  $1.5'' \text{H} \times 2.3'' \text{W} \times 8.8'' \text{D}$ ... \$310

### MCA-10 Moving-Coil Pre-Preamplifier

Battery-powered moving-coil pre-preamplifier features bypass function, battery condition meter/on-off indicator, and automatic adjustable gain. Frequency response 7-200,000 Hz +0/-1 dB; THD 0.1% at 70 mV rms out; input impedance 11 ohms; max. input 6 mV rms; voltage gain 33 dB; output impedance 675 ohms; recommended load impedance 47,000 ohms; S/N 66 dB unweighted at 20,000 Hz; uses two 1.5-V IEC LR 14 alkaline batteries with 800-hr life (intermittent use); 40 mm H  $\times$  80 mm W  $\times$  140 mm D... \$215

### STM-72 Passive Moving-Coil Transformer

Matches moving-coil cartridges to conventional magnetic inputs; double-shielded; frequency response 10-50,000 Hz; voltage gain/ratio 1:60; recommended load impedance 47/100k ohms (stereo/CD-4)... \$85

## OSAWA

### MP-50 Phono Cartridge

Incorporates lightweight boron cantilever with ultra-lightweight triangle-tip super elliptical diamond sty-



lus; stylus assembly held in place with Allen fasteners; frequency response extends to 28,000 Hz; tracking force 1.5 g max... \$230

Premounted in Osawa High Performance headshell... \$250

### MP-30 Phono Cartridge

Incorporates durable boron cantilever with triangle-



tip 0.4 × 0.7-mil elliptical diamond stylus; frequency response 20-25,000 Hz; tracking force range 1.3-2 g; stylus assembly held in place with Allen fasteners ..... \$150  
Premounted in Osawa High Performance headshell ..... \$170

#### MP-20 Phono Cartridge

Moving permalloy-induced samarium cobalt magnet in fiberglass-reinforced plastic body; butyl rubber cantilever damper; triangular diamond stylus; boron stylus cantilever; gold-plated cartridge pins; frequency response 20-23,000 Hz; dynamic compliance  $9 \times 10^{-6}$  cm/dyne ..... \$120  
Pre-mounted in Osawa High Performance headshell ..... \$140

#### MP-15 Phono Cartridge

Moving permalloy-induced samarium cobalt magnet in fiberglass-reinforced body; aluminum alloy cantilever; 0.3 × 0.7-mil precision-bonded elliptical diamond stylus; frequency response 20-20,000 Hz; channel separation 24 dB at 1000 Hz; dynamic compliance  $8 \times 10^{-6}$  ..... \$100  
Pre-mounted in Osawa High Performance headshell ..... \$120

#### MP-11 Phono Cartridge

High-impact ABS plastic body with hardened aluminum cantilever tube and 0.3 × 0.7-mil elliptical diamond stylus; frequency response 20-20,000 Hz; tracking force range 1.8-2.3 g ..... \$80  
Premounted in Osawa High Performance headshell ..... \$100

#### MP-10 Phono Cartridge

Incorporates hardened aluminum cantilever and 0.5-mil conical diamond stylus in high-impact ABS plastic body; frequency response 20-20,000 Hz; tracking force range 2-2.5 g ..... \$60  
Premounted in Osawa High Performance headshell ..... \$80

#### Ultracraft AC-300MKII Tonearm

Single needle-point support with adjustable oil damping; accepts interchangeable straight or S-shape metal and carbon fiber arm stems; with straight tubular stem ..... \$400  
**AC-3000MC.** Same as Ultracraft AC-300MKII except has black anodized brass arm ..... \$500

#### Ultracraft AC-30 Tonearm

Black brass tonearm for moving-coil and low-mass, moderate-to-high compliance magnetic cartridges with 7-mm fixed stem; adjustable anti-skating control; oil-damped cueing lever; locking rest; calibrated counterweight in grams; decoupled shaft from arm minimizes vibration transmission ..... \$300

## PICKERING

#### XLZ/7500S Phono Cartridge

Phono cartridge with nude stereohedron diamond stylus tip; sensitivity 0.6 mV/cm/sec ± 2 dB; frequency response 10-50,000 Hz; channel separation 35 dB; tracking force range 0.5-1.5 g; includes Dustamatic brush; replacement stylus D7500 ..... \$250

#### XSV/5000 Phono Cartridge

Phono cartridge with nude stereohedron diamond stylus tip; output 5.5 mV at 5.5 cm/sec; frequency response 10-50,000 Hz; channel separation 35 dB; tracking force 1 g ± 0.5 g; includes Dustamatic brush; replacement stylus D5000 ..... \$200  
**XSV/4000.** Similar to XSV/5000 except frequency response 10-36,000 Hz; tracking force 1 g ± 0.25 g; replacement stylus D4000 ..... \$160

#### XSV/3000 Phono Cartridge

Output 5 mV at 5.5 cm/sec; frequency response 10-30,000 Hz; Stereohedron stylus tip; tracking force 0.75-1.5 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D3000 ..... \$115

#### XV-15/1200E Phono Cartridge

Output 4.4 mV at 5.5 cm/sec; frequency response

10-30,000 Hz; 0.2 × 0.7 mil elliptical stylus; tracking force 0.5-1.25 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D1200 ..... \$92

#### XV-15/750E Phono Cartridge

Output 4.4 mV at 5.5 cm/sec; frequency response 10-25,000 Hz; 0.3 × 0.7 mil elliptical stylus; tracking force 0.5-1.5 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D750 ..... \$75

#### XV-15/625DJ Phono Cartridge

Designed for disco use; output 0.8 mV/cm/sec; channel separation 30 dB; tracking force 1-4 g; 0.3 × 0.7-mil elliptical stylus ..... \$70

#### XV-15/625E Phono Cartridge

Output 4.4 mV at 5.5 cm/sec; frequency response 10-25,000 Hz; 0.3 × 0.7 mil elliptical diamond



stylus; tracking force 0.75-1.5 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D625 ..... \$69

#### XV-15/400E Phono Cartridge

Output 5.5 mV at 5.5 cm/sec; frequency response 10-25,000 Hz; 0.4 × 0.7 mil elliptical stylus; tracking force 1-1.5 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D4000 ..... \$63

#### XV-15/200E Phono Cartridge

Output 8 mV at 5.5 cm/sec; frequency response 10-25,000 Hz; 0.4 × 0.7 mil elliptical stylus; tracking force 2-4 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D200 ..... \$58

#### XV-15/350 Phono Cartridge

Output 6 mV at 5.5 cm/sec; frequency response 10-25,000 Hz; 0.7 mil spherical stylus; tracking force 1-3 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D350 ..... \$46

#### XV-15/140E Phono Cartridge

Output 8 mV at 5.5 cm/sec; frequency response 10-20,000 Hz; 0.5 × 0.7 mil elliptical stylus; tracking force 3-5 g; channel separation 35 dB; has Dustamatic brush; replacement stylus D140 ..... \$40

#### XV-15/150 Phono Cartridge

Output 8 mV at 5.5 cm/sec; frequency response 10-25,000 Hz; 0.7 mil spherical stylus; tracking force 2-4 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D150 ..... \$40

#### XV-15/100 Phono Cartridge

Output 8 mV at 5.5 cm/sec; frequency response 10-20,000 Hz; 0.7 mil spherical stylus; tracking force 3-7 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D100 ..... \$35

#### Micro IV Series

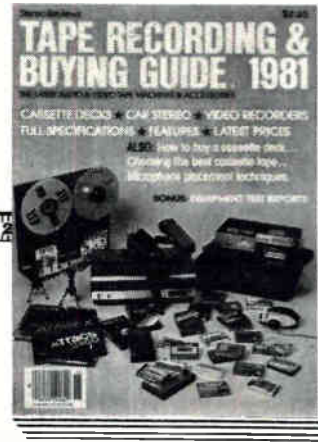
##### V-15 Micro IV AME Phono Cartridge

Output 5.5 mV at 5.5 cm/sec; frequency response 20-20,000 Hz; 0.4 × 0.7 mil elliptical stylus; tracking force 1-2 g; channel separation 30 dB; features Dustamatic brush; replacement stylus DIV-AME ..... \$55

##### V-15 Micro IV ATE Phono Cartridge

Output 6.5 mV at 5.5 cm/sec; frequency response

# TAPE MEASURE



## Stereo Review's 1981 TAPE RECORDING & BUYING GUIDE

Don't shop for tape equipment before you know how it measures up.

If you're thinking of new tape equipment, from buying a first cassette deck to adding state-of-the-art metal-tape capability, you owe it to yourself to look through the 1981 Tape Recording & Buying Guide first.

#### Here are all the facts you need.

Think of it as a 134-page "tape measure" to judge the basics of equipment before you shop. Instead of leafing through a whole shopping bag of brochures, just get this one-volume reference, which not only has all the facts (including prices), but is easy to use for comparisons.

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A special 84-page section gives you facts, specs, and prices on cassette, open-reel, and 8-track tape machines... video cassette recorders... car stereo equipment, including boosters and equalizers... headphones and microphones... mixers and signal processors... even blank tape and accessories.

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 MI, MO, NY STATE, UT, and VT add  
 applicable sales tax.

# 5 PHONO CARTRIDGES

20-18,000 Hz; 0.4 × 0.7 mil elliptical stylus; tracking force 2-4 g; channel separation 28 dB; features Dustamatic brush; replacement stylus DIV-ATE ..... \$44

## V-15 Micro IV AM Phono Cartridge

Output 6 mV at 5.5 cm/sec.; frequency response 20-20,000 Hz; 0.7 mil spherical stylus; tracking force 1-3 g; channel separation 30 dB; features Dustamatic brush; replacement stylus DIV-AM. \$38

## V-15 Micro IV ACE Phono Cartridge

Output 8 mV at 5.5 cm/sec; frequency response 20-17,000 Hz; 0.5 × 0.7 mil elliptical stylus; tracking force 3-5 g; channel separation 26 dB; features Dustamatic brush; replacement stylus DIV-ACE ..... \$33

## V-15 Micro IV AT Phono Cartridge

Output 8 mV at 5.5 cm/sec; frequency response 20-18,000 Hz; 0.7 mil spherical stylus; tracking force 2-4 g; channel separation 28 dB; features Dustamatic brush; replacement stylus DIV-AT. \$33

## V-15 Micro IV AC Phono Cartridge

Output 8 mV at 5.5 cm/sec; frequency response 20-17,000 Hz; 0.7 mil spherical stylus; tracking force 3-7 g; channel separation 26 dB; features Dustamatic brush; replacement stylus DIV-AC. \$27

## 4-Channel

## XUV/4500-Q Phono Cartridge

For stereo, four-channel matrix (SQ and QS), and discrete four-channel playback; output 3.4 mV at 5.5 cm/sec; frequency response 10-50,000 Hz; Quadrahedral stylus with Quadrahedron tip; tracking force 0.5-1.5 g; channel separation 35 dB at 1 kHz; 25 dB at 30 kHz; channel balance 1.5 dB; features Dustamatic brush ..... \$150

## PP-1 Stereo Pre-Preamplifier

Stereo preamplifier with rumble filter; input impedance 47,000 ohms; gain at 1 kHz 38 dB; frequency response (RIAA) 30-15,000 Hz ± 2 dB; S/N 60 dB ..... \$30

## PREMIER by SUMIKO

## LME Phono Cartridge

Hand-assembled moving-coil phono cartridge with lightweight high-magnetic-field samarium cobalt magnet and 0.3 × 0.8-mil nude polished diamond stylus with base cemented to cantilever; output 0.35 mV at 5 cm/sec, 1000 Hz; frequency response 10-36,000 Hz +2 dB; channel balance/separation 0.5/30 dB at 1000 Hz; compliance 18 × 10<sup>-6</sup> cm/dyne; tracking force range 1.3-2 g; impedance 7 ohms at 1000 Hz; 4.75 g ..... \$149

**LMS.** Similar to LME except with 0.6-mil nude polished diamond stylus; frequency response 10-30,000 Hz; channel separation 27 dB at 1000 Hz ..... \$109

## SAEC by AUDIOSOURCE

## WE-506/30 Tonearm

Professional concealed double knife-edge statically balanced tonearm with space-age alloy material developed by French aircraft manufacturer; effective length 295 mm; overhang 9 mm; tracking error 0 at inner groove; tracking force range 0-4 g; cartridge weight range 5-15 g; ULS-3X 18-g headshell; optional output cord available ..... \$900

## WE-308SX Tonearm

Concealed double-knife-edge statically balanced tonearm with genuine ruby bearings and built-in equalizer (reduces crosstalk by 20 dB); effective

length 240 mm; overhang 5 mm; tracking error 0 at inner groove; tracking force range 0-4 g; cartridge weight range 4-15.5 g; ULS-3X 18-g headshell ..... \$600

## WE-308L Tonearm

Double knife-edge statically-balanced tonearm; effective length 270 mm; overhang 5 mm; tracking error 0 at inner groove; tracking force range 0-4 g; cartridge weight range 5.5-12.5 g; ULS-2 7.3-g headshell ..... \$280

**WE-308N.** Similar to WE-308L except shorter arm with 240-mm effective length; cartridge weight range 5-11 g ..... \$240

## SATIN by OSAWA

## M-117G Phono Cartridge

Moving-coil phono cartridge with fixed-point pivot; output 3 mV; frequency response 20-25,000 Hz; compliance 12 × 10<sup>-6</sup> cm/dyne; tracking force 0.5-1.5 g; 0.2 × 0.8 mil elliptical diamond stylus; user-replaceable stylus mounts in magnetic mounting; needs no transformer or head amp ..... \$180

Premounted ..... \$200

**M-117S.** Similar to M-117G except has 0.2 × 0.8-mil super elliptical stylus; tracking force 1-2 g; frequency response 15-30,000 Hz ..... \$250

Premounted ..... \$270

**117Z.** Similar to M-117G except has conical diamond stylus ..... \$100

Premounted ..... \$120

**M-117ZE.** Similar to M-117Z except has 0.2 × 0.8-mil diamond stylus; tracking force 1-2 g; frequency response 20-20,000 Hz ..... \$130

Premounted ..... \$150

## SHURE

## V15 Type IV Phono Cartridge

Moving-magnet type; output 4 mV at 5 cm/sec peak velocity (1 kHz); frequency response 10-25,000 Hz; channel separation 25 dB at 1000 Hz; tracking force 0.75-1.25 g; hyperelliptical stylus; features viscous damped dynamic stabilizer; replacement stylus VN45HE ..... \$165

**V15 Type IV-6.** Same as V15 Type IV except with 0.6-mil spherical tip stylus; replacement stylus VN4G ..... \$159

## V15 Type III-HE Phono Cartridge

Moving-magnet type; output 3.5 mV at 5 cm/sec peak velocity (1 kHz); frequency response 10-25,000 Hz; channel separation 25 dB at 1 kHz; tracking force 0.75-1.25 g; hyperelliptical stylus; replacement stylus VN35 HE ..... \$115

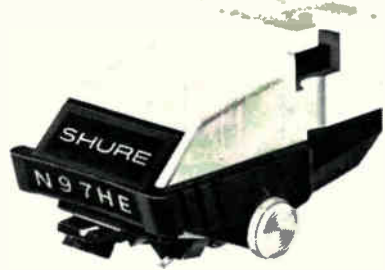
## M97HE Phono Cartridge

Moving-magnet type; output 4 mV at 5 cm/sec peak

velocity (1 kHz); frequency response 20-20,000 Hz; channel separation 25 dB at 1 kHz; tracking force 0.75-1.25 g; hyperelliptical stylus; features viscous-damped dynamic stabilizer; replacement stylus N97HE ..... \$112

**M97ED.** Same as M97HE except with 0.2 × 0.7-mil biradial (elliptical) tip; replacement stylus N97ED ..... \$105

**M97GD.** Same as M97HE except with 0.6-mil spherical tip; replacement stylus N97GD ..... \$88



**M97EJ.** Same as M97HE except with 0.4 × 0.7-mil biradial (elliptical) tip; tracking force 1.5-3 g; channel separation 20 dB at 1 kHz; replacement stylus N97EJ ..... \$88

**M97B.** Same as M97EJ except with 0.6-mil spherical tip stylus; replacement stylus N97B ..... \$81

## SC39ED Phono Cartridge

Professional moving-magnet type; output 4 mV at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; channel separation 25 dB at 1 kHz; tracking force 0.75-1.5 g; 0.2 × 0.7-mil biradial (elliptical) stylus; features MASAR™ tip and SIDE-GUARD stylus deflector; replacement stylus SS39ED ..... \$100

**SC39EJ.** Same as SC39ED except tracking force 1.5-3 g; channel separation 20 dB at 1 kHz; 0.4 × 0.7-mil stylus; replacement stylus SS39EJ ..... \$70

**SC39B.** Same as SC39EJ except with 0.7-mil spherical tip stylus; replacement stylus SS39B. \$60

## M95HE Phono Cartridge

Output 4.7 mV at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; channel separation 25 dB (1 kHz); tracking force 0.75-1.5 g; hyperelliptical diamond tip; replacement stylus N95HE ..... \$98

**M95ED.** Same as M95HE except with biradial (elliptical) tip; replacement stylus N95ED ..... \$85

**M95EJ.** Same as M95ED except channel separation 20 dB at 1 kHz; tracking force 1.5-3 g; replacement stylus N95EJ ..... \$68

## M75ED Type 2 Phono Cartridge

Output 5 mV at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; tracking force 0.75-1.5 g; 0.2 × 0.7 mil biradial (elliptical) stylus; replacement stylus N75ED Type 2 ..... \$73

**M75G Type 2.** Same as M75ED Type 2 but with 0.6 mil spherical stylus; replacement stylus N75G Type 2 ..... \$55

## M91ED Phono Cartridge

Moving-magnet type; output 5 mV at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; channel separation 25 dB (1 kHz); tracking force 0.75-1.5 g; 0.2 × 0.7 mil biradial (elliptical) stylus; replacement stylus N91ED ..... \$73

**M91GD.** Same as M91ED but with 0.6 mil spherical stylus; replacement stylus N91GD ..... \$62

## M93E Phono Cartridge

Moving-magnet type; output 6.2 mV at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; channel separation 20 dB (1 kHz); tracking force 1.5-3 g; 0.4 × 0.7 mil biradial (elliptical) stylus; replacement stylus N93E ..... \$56

## M70EJ Phono Cartridge

Output 6.2 mV at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; tracking force 1.5-3 g; 0.4 × 0.7 mil biradial (elliptical) stylus ..... \$49

**M70B.** Same as M70EJ but with 0.6 mil spherical stylus; replacement stylus N70B ..... \$44

## M75B Type 2 Phono Cartridge

Output 5 mV at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; tracking force 1.5-3 g; 0.6 mil spherical stylus; replacement stylus N75B Type 2 ..... \$49

**M75EJ Type 2.** Same as M75B Type 2 but with 0.4 × 0.7 mil biradial (elliptical) stylus; replacement stylus N75EJ Type 2 ..... \$62

## M55E Phono Cartridge

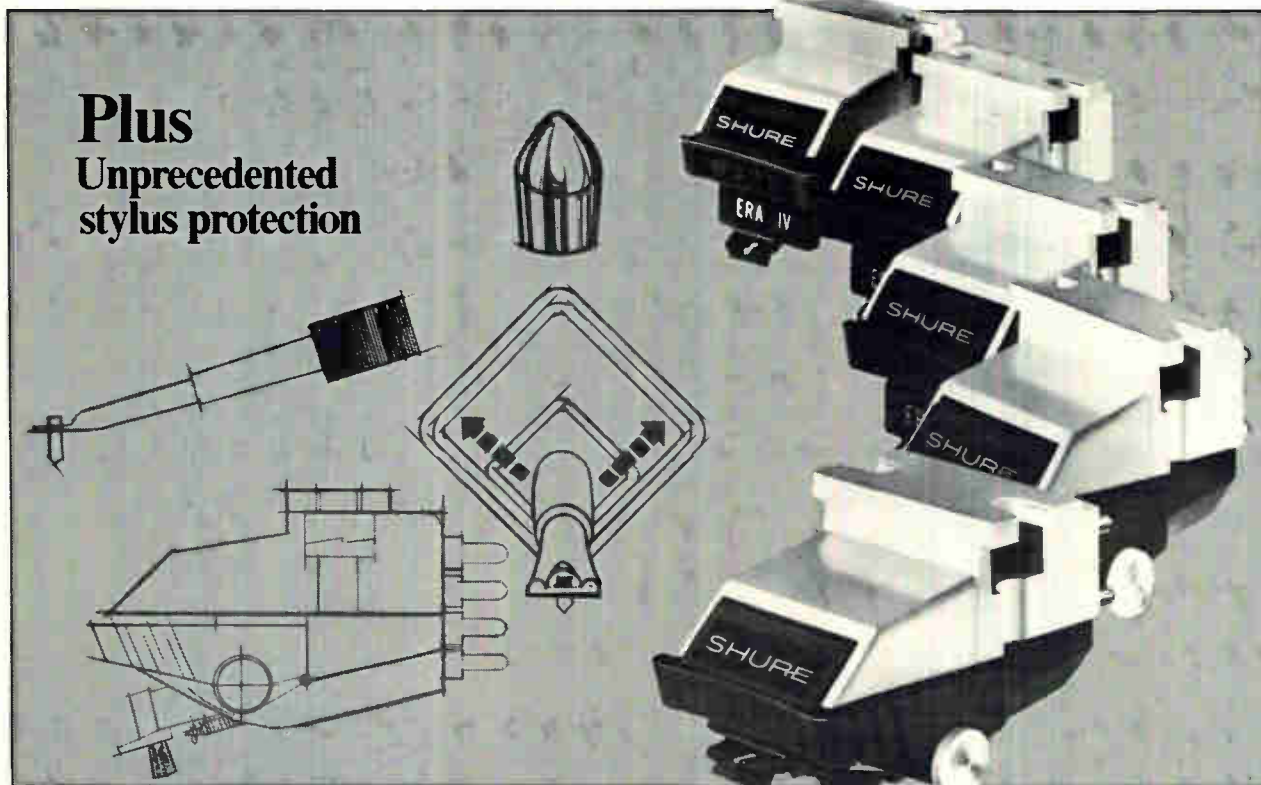
Moving-magnet type; output 6.2 mV at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; tracking force 0.75-2 g; channel separation 20 dB (1 kHz); 0.2 × 0.7 mil biradial (elliptical) stylus; replacement stylus N55E ..... \$46

## M44E Phono Cartridge

Moving-magnet type; output 9.5 mV at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; tracking force 1.75-4 g; channel separation 20 dB (1 kHz); 0.4 × 0.7 mil biradial (elliptical) stylus; replacement stylus N44E ..... \$40



# fact: five new Shure Cartridges feature the technological breakthroughs of the V15 Type IV



**Plus  
Unprecedented  
stylus protection**

## the M97 Era IV Series phono cartridges

Model	Stylus Configuration	Tip Tracking Force	Applications
M97HE	Nude Hyperelliptical	¾ to 1½ grams	Highest fidelity where light tracking forces are essential.
M97ED	Nude Biradial (Elliptical)	¾ to 1½ grams	
M97GD	Nude Spherical	¾ to 1½ grams	
M97EJ	Biradial (Elliptical)	1½ to 3 grams	Where slightly heavier tracking forces are required.
M97B	Spherical	1½ to 3 grams	
78 rpm Stylus for all M97's	Biradial (Elliptical)	1½ to 3 grams	For 78 rpm records.

Shure has written a new chapter in the history of affordable hi-fi by making the space-age technological breakthroughs of the incomparable V15 Type IV available in a complete line of high-performance, moderately-priced cartridges: the M97 Era IV Series Phono Cartridges, available with five different interchangeable stylus configurations to fit every system and every budget.

The critically acclaimed V15 Type IV is the cartridge that astonished audiophiles with such vanguard features as the Dynamic Stabilizer—which simultaneously overcomes record-warp caused problems, provides electrostatic neutralization of the record surface, and effectively removes dust and lint from the record—and, the unique telescoped stylus assembly which results in lower effective stylus mass and dramatically improved trackability.

Each of these features... and more... has been incorporated in the five cartridges in the M97 Series—there is even an M97 cartridge that offers the low distortion Hyperelliptical stylus! What's more, every M97 cartridge features a unique lateral deflection assembly, called the SIDE-GUARD, which responds to side thrusts on the stylus by withdrawing the entire stylus shank and tip safely into the stylus housing before it can bend.

**NEW! M97 Series Era IV Phono Cartridges...**  
**Five new invitations to the new era in hi-fi.**



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Manufacturers of high fidelity components, microphones, sound systems and related circuitry.

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# 5 PHONO CARTRIDGES

## SC35C Phono Cartridge

Professional moving-magnet type; output 5 mV at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; channel separation 20 dB at 1 kHz; tracking force 4-5 g; 0.6-mil spherical stylus; features band alignment point; replacement stylus SS35C .....\$30

## M3D Phono Cartridge

Moving-magnet type; output 7.5 mV at 5 cm/sec; frequency response 20-15,000 Hz; tracking force 3-6 g; 0.7 mil spherical stylus; replacement stylus N3D.....\$26

## 4-Channel

### M24H Four-Channel Cartridge

For discrete and matrix four-channel and stereo operation; output 3 mV at 5 cm/sec peak velocity (1 kHz); frequency response 20-50,000 Hz; channel balance/separation 2 dB/22 dB (1 kHz); tracking force 1-1.5 g; hyperbolic tip linked to high-energy magnet via low-mass stylus assembly .....\$97

### M64 Preamplifier

Fixed-gain stereo preamplifier with switch-selected phono and tape equalization; for use with unequalized amplifier inputs and microphones and as buffer amplifier in "flat" position; on-off ac/dc switch; two phono jack inputs; 120 V ac  $\pm$  10%, 50/60 Hz, 5 W .....\$81

### SME3009 Series III Tonearm

Integral carrying arm interchangeable for multi-cartridge use; low-friction pivots; high-precision, protected ball races on vertical axis, knife edges on horizontal axis; precise tracking force gauge (up to 2.5 g can be applied without gauge); balance system accommodates max. 12-g cartridges; antiskating force; fine adjustment 0-2.5 g; fluid-damped cueing control; gold-plated electrical contacts; adjustable fluid damper .....\$294

**SME3009 Series IIIs.** Performance same as Series III without adjustable fluid damper (optional F.D. III-S \$44.50); simplified arm adjustments....\$240

### SME3009 Series II Tonearm

Incorporates non-detachable shell for reduced weight; low-friction pivots for vertical axis and knife-edges for horizontal axis; bed slides on bedplate for tracking adjustment with protractor; arm mass divided by elastic coupling; lever-operated hydraulically damped cueing control; tracking force 1-1.5 g; cartridge weight range 4-9 g.....\$177

## SIGNET

### MK111E Moving-Coil Cartridge

Dual moving micro-coil cartridge; samarium cobalt magnet; frequency response 5-50,000 Hz; output 0.4 mV at 5 cm/sec; channel balance/separation 0.5 dB/30 dB min. at 1000 Hz; tracking force 1-2 g; 0.2 x 0.7 mil nude mounted elliptical diamond stylus; beryllium cantilever; weight 4.8 g .....\$300

**MK112E.** Same as MK111E except cartridge is integrated into own headshell with molded finger lift and adjustment for overhang dimension.....\$325

**MK10T.** Transformer matches MK111E and 112E to conventional magnetic phono inputs.....\$95

**MK12T.** Moving-coil transformer with selector for 3, 20, 40 ohms or passive impedance.....\$300

### TK9E Phono Cartridge

Frequency response 10-25,000 Hz; output 2.2 mV at 5 cm/sec; tracking force 0.8-1.6 g; channel balance/separation 0.5 dB/35 dB at 1000 Hz; 0.2 x 0.7 mil elliptical square-shank nude diamond stylus; 0.3-mil beryllium cantilever; replacement stylus TKN 29 (\$175).....\$275

### TK7SU Phono Cartridge

Frequency response 5-45,000 Hz; output 2.7 mV at 5 cm/sec; channel balance/separation 0.75 dB/30 dB at 1000 Hz; tracking force  $\frac{3}{4}$ -1 $\frac{1}{4}$  g; nude square-shank miniature Shibata stylus; micromass tapered tube cantilever; replacement stylus TKN3 (\$100).....\$185

### TK7E Phono Cartridge

Frequency response 5-30,000 Hz; output 2.7 mV at 5 cm/sec; channel balance/separation 0.75 dB/30 dB at 1000 Hz; tracking force  $\frac{3}{4}$ -1 $\frac{1}{4}$  g; 0.2 x 0.7-mil nude square-shank miniature elliptical stylus; micro-mass tapered tube cantilever; replacement stylus TKN2 (\$75).....\$160

### TK5E Phono Cartridge

Frequency response 10-30,000 Hz; output 4.2 mV at 5 cm/sec; channel balance/separation 1.0/25 dB at 1000 Hz; tracking force  $\frac{3}{4}$ -1 $\frac{1}{4}$  g; 0.2 x 0.7-mil nude square-shank elliptical stylus; tapered cantilever; replacement stylus TKN1 (\$50).....\$90

### TK3E Phono Cartridge

Frequency response 15-28,000 Hz; output 4.2 mV at 5 cm/sec; channel balance/separation 1.0 dB/28 dB at 1000 Hz; tracking force 1-1 $\frac{1}{4}$  g; 0.3 x 0.7 mil elliptical nude diamond stylus; thin-walled tube cantilever; replacement TKN6 (\$30).....\$55

### TK1E Phono Cartridge

Frequency response 15-25,000 Hz; output 4.8 mV at 5 cm/sec; channel balance/separation 1.5 dB/26 dB at 1000 Hz; tracking force 1 $\frac{1}{2}$ -2 $\frac{1}{2}$  g; 0.4 x 0.7 mil elliptical diamond stylus; thin-walled tubed cantilever; replacement stylus TKN 22 (\$25)....\$40

**TK1E/H.** Same as TK1E except mounted on universal aluminum headshell .....\$45

### XK50 Tonearm

Integral tonearm to eliminate headshell connecting ring resonance and weight; has Signetrace™ damped planar tracking; designed to accommodate cartridges weighing 4-11 g; provides anti-skating adjust for elliptical conical line type styli; tracking force adjust 1/10 g; increments 0-1.6 g; overhang adjust 5 mm; tracking error  $\pm$  1 $\frac{1}{2}$ ° max.; total arm and cable capacitance 80 pF; weight 9.5 g....\$400

**XKSP1.** Extra integral tonearm tube to XK50 ....\$60

*The company offers at extra cost a choice of carbon fiber, beryllium, titanium or boron cantilever material to go with spherical, elliptical, and Shibata styli.*

## SONUS by SONIC RESEARCH

### Dimension 5 Phono Cartridge

Magnetic phono cartridge with Lambda diamond stylus and integrated tapered aluminum cantilever; micro-machined armature; designed to reproduce direct-to-disc and PCM recordings; output 0.8 mV/cm/sec; frequency response 10-20,000 Hz  $\pm$  1 dB, 20-40,000 Hz +2/-5 dB; compliance 50 cms/dyne x 10<sup>-6</sup>; channel balance/separation  $\pm$  1 dB/30 dB at 1000 Hz; tracking force range 1-1.5 g; weight 5.5 g.....\$250

Replacement stylus.....\$125

### Sonus Series II

#### Gold Phono Cartridges

Electromagnetically balanced cartridges with interchangeable styli among Gold models; output 0.8 mV/cm/sec at 1000 Hz; compliance 50 cms/dyne x 10<sup>-6</sup>; channel balance  $\pm$  2 dB; channel separation 30 dB at 1000 Hz, 20 dB from 20-20,000 Hz; load impedance 47,000 ohms/ch; tracking force range  $\frac{3}{4}$ -1 $\frac{1}{4}$  g; weight 5.5 g.

**Blue Label.** Modified-line-contact ellipsoid stylus for extended high-frequency response quadraphonic recordings; frequency response 10-16,000 Hz  $\pm$  1 dB (replacement stylus \$87).....\$165

**Red Label.** Biradial (elliptical) stylus; response 10-10,000 Hz  $\pm$  1 dB (replacement stylus \$82) \$160

**Green Label.** Precision spherical stylus; response 10-10,000 Hz  $\pm$  1 dB (replacement \$77).....\$155

### Silver Phono Cartridges

Similar in principal characteristics to Gold series; output 1.0 mV/cm/sec at 1000 Hz; compliance 40 cms/dyne x 10<sup>-6</sup>; nominal balance  $\pm$  2 dB; channel separation 30 dB at 1000 Hz, 20 dB from 20-20,000 Hz; load impedance 47,000 ohms; tracking force range 1-1 $\frac{1}{4}$  g; weight 5.5 g.

**Silver "P".** Modified-line-contact ellipsoid stylus suitable for quadraphonic recordings; frequency response 10-15,000 Hz  $\pm$  1 dB (replacement stylus \$50).....\$100

**Silver "E".** Biradial (elliptical) stylus (replacement stylus \$45); response 10-15,000 Hz  $\pm$  1 dB...\$95

### Black Phono Cartridges

Similar in principle characteristics to Gold series; output 1.0 mV/cm/sec, 5 mV at 5 cms/sec; frequency response 10-10,000 Hz  $\pm$  1 dB, 10-20,000 Hz -2/-1 dB; channel balance/separation  $\pm$  2 dB/25 dB at 1000 Hz; compliance 30 x 10<sup>-6</sup> cms/dyne; load impedance/ch 47,000 ohms; weight 5.5 g.

**Black "A".** Precision-ground and polished bi-radial elliptical stylus; tracking force range 1.5-2 g (replacement stylus \$40).....\$80

**Black "C".** Precision spherical stylus; tracking force 1.5-2 g (replacement stylus \$30).....\$70

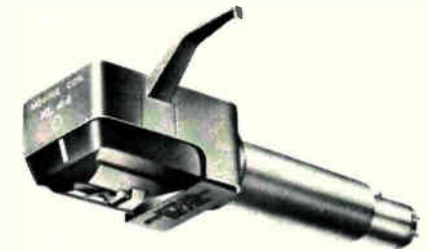
## SONY

### XL-55 Pro Phono Cartridge

Figure-8 design moving-coil phono cartridge with integrated magnesium headshell and aluminum, beryllium, and carbon fiber composite cantilever; output 0.2 mV at 5 cm/sec, 1000 Hz, 45 degrees; frequency response 10-50,000 Hz; channel separation 30 dB; channel balance 1 dB at 1000 Hz; compliance 15 x 10<sup>-6</sup> cm/dyne; recommended tracking force 2.0 g; 0.3 x 0.8 mil elliptical stylus; includes stylus brush and stylus guard; 22 g..\$300

### XL-44 Phono Cartridge

Figure-8 moving-coil phono cartridge with nude elliptical diamond stylus attached directly to cantilever



lever and mounted in standard four-pin diecast aluminum headshell; frequency response extends to 40,000 Hz.....\$200

**XL-44L.** Same as XL-44 minus headshell; has nude super-elliptical diamond stylus.....\$180

### XL-33 Phono Cartridge

Figure-8 moving-coil phono cartridge with elliptical diamond stylus mounted on rigid tempered aluminum cantilever and in four-pin diecast aluminum headshell; response extended to 35,000 Hz...\$100

### VL-7 Phono Cartridge

Lightweight moving-magnet phono cartridge with elliptical diamond stylus and carbon fiber cantilever; extends frequency response to 25,000 Hz.....\$80

### VL-5 Phono Cartridge

Moving-magnet cartridge with low-mass aluminum cantilever and low-distortion moving system ....\$40

## SOUNDAIDS

### Tonearm Modification

Converts arm on manual turntable to low-mass configuration; modification process includes thin lightweight straight arm tube, fixed headshell, resonance-isolated counterweight, overhang adjustment, and low-capacitance leads; original bearing assembly, cueing, and anti-skating retained; pivot



to stylus distance variable; tracking force range 0.75-2 g; cable capacitance 90 pF; cartridge weight range 2-10 g; 4 g ..... \$90

## STANTON

### 980 LZS Phono Cartridge

Low-impedance phono cartridge with nude stereohedron stylus tip; output 0.06 mV/cm/sec  $\pm$  2 dB; frequency response 10-50,000 Hz; channel separation 35 dB; tracking force range 0.5-1.5 g; includes Dustamatic brush; replacement stylus D98S... \$250

### 681 Triple-E Phono Cartridge

Output 0.7 mV/cm/sec  $\pm$  2 dB; frequency response 10-12,000 Hz  $\pm$  1.5 dB; channel balance/separation  $\pm$  2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 0.75-1.5 g; 0.2  $\times$  0.7 mil elliptical diamond stylus; weight 5.5 g with self-supporting (1 g) brush; replacement stylus D6800EEE, D6810 for LP's, D6827 for 78's ..... \$125

### 681 Triple-E S Type

Output 0.7 mV/cm/sec  $\pm$  2 dB; frequency response 10-12,000 Hz  $\pm$  0.5 dB; channel balance/separation  $\pm$  2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 0.75-1.5 g; Stereohedron stylus; weight 6.3 g with self-supporting (1 g) brush; replacement stylus 6800EEE-S, D6810 for LP's, D6827 for 78's ..... \$105

### 680SL Disco Cartridge

Output 1.1 mV/cm/sec  $\pm$  2 dB; frequency response 20-20,000 Hz; channel balance/separation 2 dB/



30 dB; load resistance 47,000 ohms; load capacitance 275 pF; nude stereohedron stylus tip; tracking force range 3-6 g with brush; weight 5.5 g ..... \$99

### 680EL Disco Cartridge

Output 0.82 mV/cm/sec  $\pm$  2 dB; frequency response 20-18,000 Hz; channel balance/separation  $\pm$  2 dB/30 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 2-5 g; 0.4  $\times$  0.7 mil elliptical diamond stylus; weight 5.5 g; replacement stylus D6800EL ..... \$96

### 681EE Phono Cartridge

Output 0.82 mV/cm/sec  $\pm$  2 dB; frequency response 10-10,000 Hz  $\pm$  2 dB; channel balance/separation  $\pm$  2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 0.75-1.5 g; 0.2  $\times$  0.7 mil elliptical diamond stylus; weight 5.5 g with self-supporting (1 g) brush; replacement stylus D6800EE, D6810 for LP's, D6827 for 78's ..... \$88

### 681SE Phono Cartridge

Output 1 mV/cm/sec  $\pm$  2 dB; frequency response 10-10,000 Hz  $\pm$  0.5 dB; channel balance/separation  $\pm$  2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 2-4 g; 0.4  $\times$  0.7 mil elliptical stylus; weight 5.5 g with self-supporting (1 g) brush; replacement stylus D6800SE, D6810 for LP's, D6827 for 78's ..... \$88

### 681A Phono Cartridge

Output 1 mV/cm/sec  $\pm$  2 dB; frequency response 10-10,000 Hz  $\pm$  0.5 dB; channel balance/separation  $\pm$  2 dB/35 dB (1 kHz); load impedance

47,000 ohms; load capacitance 275 pF; tracking force range 1.5-3 g; 0.7 mil spherical stylus; weight 5.5 g with self-supporting (1 g) brush; replacement stylus D6807A, D6810 for LP's, D6827 for 78's ..... \$80

### 680EE Phono Cartridge

Output 0.82 mV/cm/sec  $\pm$  2 dB; frequency response 20-20,000 Hz; channel balance/separation  $\pm$  2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 0.75-1.5 g; 0.3  $\times$  0.7 mil elliptical diamond stylus; weight 5.5 g with self-supporting (1 g) brush; replacement stylus D680 ..... \$69

### 600EE Phono Cartridge

Output 1 mV/cm/sec  $\pm$  2 dB; frequency response 20-20,000 Hz  $\pm$  2.5 dB; channel balance/separation  $\pm$  2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 1-2 g; 0.3  $\times$  0.7 mil elliptical diamond stylus; weight 5 g; replacement stylus D6003EE, D6010 for LP's, D6027 for 78's ..... \$63

**600E.** Similar to 600EE but frequency response 20-20,000 Hz  $\pm$  2 dB; 0.4  $\times$  0.7 mil elliptical diamond stylus; tracking force 1.5-3 g; replacement stylus D6004E ..... \$57

**600A.** Similar to 600E but with 0.7 mil stylus; tracking force range 2-4 g; replacement D6071A ..... \$52

### 500EE Phono Cartridge

Output 1 mV/cm/sec  $\pm$  2 dB; frequency response 20-10,000 Hz  $\pm$  1 dB; channel balance/separation  $\pm$  2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 1-2 g; 0.3  $\times$  0.7 mil elliptical diamond stylus; weight 5 g; replacement stylus D5100EE, D5110 for LP's, D5127 for 78's ..... \$43

### 500AA Phono Cartridge

Output 1 mV/cm/sec  $\pm$  2 dB; frequency response 20-10,000 Hz  $\pm$  1 dB; channel balance/separation  $\pm$  2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 1-2.5 g; 0.5 mil spherical diamond stylus; weight 5 g; replacement stylus D5105AA, D5110 for LP's, D5127 for 78's ..... \$37

### 500E Phono Cartridge

Output 1 mV/cm/sec  $\pm$  2 dB; frequency response 20-10,000 Hz  $\pm$  1 dB; channel balance/separation  $\pm$  2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 2-5 g; 0.4  $\times$  0.7 mil elliptical diamond stylus; weight 5 g; replacement stylus D5100E, D5110 for LP's, D5127 for 78's ..... \$35

### 500A Phono Cartridge

Output 1 mV/cm/sec  $\pm$  2 dB; frequency response 20-10,000 Hz  $\pm$  1 dB; channel balance/separation  $\pm$  2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 2-5 g; 0.7 mil spherical diamond stylus; weight 5 g; replacement stylus D5107A, D5110 for LP's, D5127 for 78's ..... \$32

## Professional Series

### 881S Phono Cartridge

Output 0.9 mV/cm/sec; frequency response 10-25,000 Hz (individually calibrated to 20,000 Hz); channel balance/separation (1 kHz)  $\pm$  1 dB/35 dB; load impedance 47,000 ohms; load capacitance 275 pF (including arm leads, cables, and amp); tracking force 0.75-1.25 g; nude Stereohedron stylus; weight 5.7 g with self-supporting (1 g) brush; silver with white handle and white brush; replacement stylus D81, D810 for mono LP's, D827 for 78's ..... \$170

**881E.** Similar to 881S except has 0.0002  $\times$  0.0007-in elliptical diamond stylus; frequency response 10-22,000 Hz (individually calibrated to 20,000 Hz); replacement stylus D81E ..... \$150

### 880S Phono Cartridge

Phono cartridge with nude stereohedron diamond stylus tip; output 0.9 mV/cm/sec; frequency re-

sponse 10-25,000 Hz; channel separation 35 dB; tracking pressure 1 g  $\pm$  0.25 g; load impedance/capacitance 47,000 ohms/275 pF; silver with white handle and white brush; 5.7 g; replacement stylus D80S ..... \$140

**880E.** Similar to 880S except has 0.0002  $\times$  0.0007-in elliptical diamond stylus; response 10-22,000 Hz; replacement stylus D80E ..... \$120

## SUPEX by SUMIKO

### SDX-1000 Phono Cartridge

Low-mass moving-coil phono cartridge with 0.3  $\times$  0.7-mil Advanced Line Contact modified elliptical nude diamond stylus tip on rectangular base, boron-coated aluminum cantilever, and samarium cobalt magnet; Bimorphic (two sheets of composite resin damping material) damping system; uni-axial pivot; frequency response 20-45,000 Hz; weight 4.6 g ..... \$500

### SD-900 Super II Phono Cartridge

Low-mass moving-coil phono cartridge with 0.3  $\times$  0.7-mil Advanced Line Contact modified elliptical nude diamond stylus tip on rectangular base and almite-coated cantilever; Bimorphic damper; uni-axial system ..... \$350

### SD-900E + Super Phono Cartridge

Low-mass moving-coil phono cartridge with 0.3  $\times$  0.7-mil Advanced Line Contact modified elliptical nude diamond stylus tip on rectangular base and aluminum cantilever; uni-axial pivot; magnetic pole piece; Bimorphic damper; frequency response 10-20,000 Hz ..... \$225

## THORENS

### TMC 70 Phono Cartridge

Moving-coil pick-up cartridge; designed for Thorens TD-110 and TD-115 turntable arms; output 0.15 mV at 1 cm/sec; frequency response 20-20,000 Hz  $\pm$  2 dB; channel separation 25 dB at 1000 Hz; dynamic compliance 12  $\times$  10<sup>6</sup> cm/dyne; tracking force range 2-3 g; 8- $\mu$ m fine-line diamond stylus; may be used directly with low-impedance (22-ohm) phono pre-amp ..... \$465

## VA SYSTEMS

### Five Record Tracing Instrument

For 7/8-in servo-driven tonearm with removable proprietary headshell; precision straight-line tracking; local and remote cueing; remote vertical tracking angle, tracking force, and cartridge azimuth adjustments; arm-to-record center line overhang adjustment; tracking force 1-5 g; resonance 10 Hz with Denon 1030 cartridge; tracking error 0 ..... \$2850

## YAMAHA

### MC-1X Phono Cartridge

Integrated moving-coil phono cartridge with tapered tubular beryllium cantilever and twin dual coreless IC coils in aluminum diecast housing; output 0.2 mV at 5 cm/sec, 1000 Hz; channel separation 28 dB at 1000 Hz; frequency response 10-20,000 Hz; recommended stylus pressure 1.8 g  $\pm$  0.2 g; 0.1-mm square pure diamond stylus with special-contour 8  $\times$  40-micron elliptical tip; replacement stylus by factory; weight 18.5 g  $\pm$  0.1 g ..... \$270

**MC-15.** Same as MC-1X except has universal unmounted headshell; weight 7.8 g  $\pm$  0.1 g ..... \$220

### MC-7 Phono Cartridge

Vertical/horizontal matrix moving-coil phono cartridge with V/H cross sendust core armature, tapered aluminum tube cantilever, and 0.14  $\times$  0.07-mm square solid diamond stylus tip; output 0.3 mV at 1000 Hz, 5 cm/sec peak; channel balance/separation at 1000 Hz 1 dB/28 dB; frequency response 10-20,000 Hz; tracking force 1.5 g  $\pm$  0.3 g; dynamic compliance 15  $\times$  10<sup>6</sup> cm/dyne; high-impact plastic housing; weight 5.7 g ..... \$120

# AIWA AD-M800U STEREO CASSETTE DECK

## Three heads...and a brain.

Only the very best decks have three heads. But Aiwa's metal compatible deck adds wireless remote control. And a brain ... DATA. Aiwa's exclusive, microcomputer Digital Automatic Tape Adaptation.

### THE DATA SYSTEM

In less time than it takes to read what DATA does ... DATA does it. Set DATA's computer and press START. LEDs begin to flicker. One each for LH, FeCr, CrO<sub>2</sub> and METAL.

DATA's electronic senses analyze the tape and an LED lights up as the others go out. Now you—and DATA—know the kind of tape being used.

Another LED flickers and lights. BIAS is set for best frequency response using a built-in 6 kHz reference signal. The next LED flickers and lights. Dolby\* levels are calibrated and set using a 400 Hz reference signal.

Two LEDs remain. One flickers and lights. EQ-M is set ... equalization for the mid-range 5-10 kHz. Then the next, EQ-H ... equalization for the high, 10-18 kHz range is set.

Further down the panel an LED lights. It's green. OK! You're ready to record. But ... if the red LED lights instead, the machine's not wrong. The tape is. Get another tape or switch to manual over-ride.

Once DATA is set, you record with maximum sonic quality, regardless of whose tapes or what type you're using. And DATA stores the tape analyses—at your command—in its memory bank. Four different tapes of your choice.

Cassette recording was never so precise. So simple. And so fast.

### IT ALL ADDS UP

Precise sophistication like DATA deserves features and performance to match. You've got them, starting with built-in wireless remote control for full-function performance from across

the room, using dependable, invisible infrared projection.

You have 3-head performance using linear, ultra-hard sennet heads with Aiwa's exclusive V-cut geometry for contour effect elimination doing away with roughness at low frequencies. And each

head is designed for best performance at its specific function.

Add Double-Dolby\*; IC logic controls; dual motor drive; backlit VU meters with 5-step peak reading LEDs; auto-repeat; memory replay; oil-damped eject and more.

The sum of the parts is frequency response of 30-17,000 Hz using metal tape. S/N ratio of 68dB with FeCr, Dolby on. Wow & Flutter 0.04% WRMS.

This is one of the finest decks you can get at any price. If you prefer, it's available in black with rack handles as the AD-M800BU.

Aiwa's AD-M800U is like having your own recording engineer tucked away in a small but powerful chip. The power's there for you. Listen to an Aiwa. Or write Bob Fisher, national sales manager for more information.



\*Dolby is a registered trademark of Dolby Laboratories.

Upgrade to...

# AIWA®

AIWA AMERICA INC.,

35 Oxford Drive, Moonachie, New Jersey 07074  
Distributed in Canada by: Shiro (Canada) Ltd.

CIRCLE NO. 2 ON READER SERVICE CARD



# 6

# CASSETTE TAPE MACHINES

## AIKO by TZL INTERNATIONAL

### CD-82 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system and hard permalloy head. Features bias and equalization selectors for normal and CrO<sub>2</sub> tape; separate left/right input level controls; dual VU meters; auto stop; 5<sup>1</sup>/<sub>2</sub>" H x 16<sup>1</sup>/<sub>2</sub>" W x 10<sup>1</sup>/<sub>2</sub>" D ..... \$250

## AIWA

### AD-6900 Mk II U Cassette Deck

Front-loading wireless-remote-controlled metal-compatible stereo cassette deck with Dolby noise-reduction system, 38-pulse FG servomotor in dual-capstan drive system, and three-head combination V-cut Ferrite Guard record/playback and erase heads. Features separate three-position bias and equalization for LH, FeCr, and metal tapes with automatic CrO<sub>2</sub> tape switching; +20% bias fine adjust controls for LH, FeCr, and CrO<sub>2</sub> tapes and "Flat Response Tuning System;" two dual-scale peak/VU meters with peak hold, peak, and VU LED controls; separate mic and line recording level controls; output level slide control; tape source monitor switch; feather-touch logic-controlled tape function controls on deck with LEDs and on hand-held remote control unit; three-digit tape counter with reset and memory stop/replay; external record play repeat timer provision; includes wireless infrared remote control unit. Wow and flutter 0.04% wrms; frequency response +2/-3 dB at 0 VU 25-9000 Hz (CrO<sub>2</sub>), to 12,500 Hz (metal), at -20 VU, -2/-3 dB 25-14,000 Hz (LH), to 17,000 Hz (CrO<sub>2</sub>), to 18,000 Hz (metal); S/N 68 dB with FeCr tape, Dolby on; input sensitivity impedance 0.25 mV 200-10,000 ohms (mic), 75 mV 50,000 ohms (line); output level impedance 0.41 V 50,000 ohms (line), 2 mW/8 ohms (headphone); 4<sup>3</sup>/<sub>4</sub>" H x 17<sup>1</sup>/<sub>2</sub>" W x 12<sup>1</sup>/<sub>2</sub>" D ..... \$890

### AD-M700U Cassette Deck

Front-loading metal-compatible stereo cassette deck with double Dolby circuitry, dc servo capstan



and dc reel motors, and combination V-cut sendust guard record playback and hi-bias ferrite double-gap erase heads. Features separate bias and equalization selectors for normal, CrO<sub>2</sub> (automatic selection), FeCr, and metal tapes with bias fine adjust for all tape types and LED biased-tape indicators; dual VU meters with tri-color five-LED peak indicators; soft-touch logic function controls with LED record rec mute, play, and pause indicators; record and output level controls; tape source monitor switch; continuous repeat with memory start stop; timer switch operable with external audio timer; fast forward/rewind time 90 sec (C-60). Wow and flutter

0.04% wrms; frequency response +2/-3 dB 30-13,000 Hz (LH), to 15,000 Hz (CrO<sub>2</sub>), to 16,000 Hz (FeCr), to 17,000 Hz (metal); S/N 65 dB with Dolby, FeCr tape; input sensitivity impedance 0.3 mV 200-10,000 ohms (mic), 50 mV 50k ohms (line in); silver faceplate; 4<sup>3</sup>/<sub>4</sub>" H x 17<sup>3</sup>/<sub>4</sub>" W x 11<sup>1</sup>/<sub>2</sub>" D ..... \$490  
**AD-M700BU.** AD-M700U with black faceplate..... \$500

### AD-R500U Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system with multiplex filter, frequency-generator servo capstan and dc reel motors, and Sendust record/playback and double-gap ferrite erase heads. Features quick auto reverse (turnaround time 0.4 sec) for one-time record/playback of one side, single playback or record of both sides, and continuous uninterrupted playback with LED mode indicators; solenoid IC logic tape function controls; automatic LH CrO<sub>2</sub> tape switching; separate metal tape button; backlit VU meters with three-step peak-reading LEDs; oil-damped cassette eject; optional remote control unit available. Controls for record level, balance, mic and headphone inputs, metal tape, Dolby, and reverse mode selector switches concealed behind front panel. Wow and flutter 0.05% wrms; frequency response +2/-3 dB, -20 VU recording 30-15,000 Hz (LH), to 16,000 Hz (CrO<sub>2</sub>), to 17,000 Hz (metal); S/N 65 dB with Dolby, metal; input sensitivity impedance 0.3 mV 200-10,000 ohms (mic), 50 mV 50k ohms (line), 0.1 mV 5.6k ohms (DIN); 4.75" H x 17.75" W x 10.75" D ..... \$450

### AD-M600U Cassette Deck

Front-loading metal-compatible stereo cassette deck with dual Dolby circuitry, dc servo capstan and dc reel motors, and combination sendust guard record play and hi-bias ferrite double-gap erase heads. Features bias and equalization selectors for normal, CrO<sub>2</sub> (automatic selection), FeCr, and metal tapes with variable bias adjustment for LH tape; dual switchable VU tape time meters with tri-color five-LED peak indicators; record and output level controls; three-digit tape counter with memory replay stop; logic-soft-touch function controls with LED record/rec mute, play, and pause indicators; timer standby with external audio timer; fast forward rewind time 90 sec (C-60). Wow and flutter 0.04% wrms; frequency response +2/-3 dB 30-13,000 Hz (LH), to 15,000 Hz (CrO<sub>2</sub>), to 16,000 Hz (FeCr), to 17,000 Hz (metal); S/N 65 dB with Dolby, FeCr; 4<sup>3</sup>/<sub>4</sub>" H x 17<sup>3</sup>/<sub>4</sub>" W x 11<sup>1</sup>/<sub>2</sub>" D ..... \$390

### AD-L450U Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system with multiplex filter, dc servo capstan and dc reel motors, and sendust laminated permalloy DX record playback and double-gap ferrite erase heads. Features bias and equalization slide selector for LH, CrO<sub>2</sub>, and metal tapes; three-step peak-reading LED display; separate left/right record level controls; electronic auto stop; timer standby; rec/mute edit control; digital tape counter; soft damped eject; IC logic tape function controls; optional remote control unit available. Wow and flutter 0.04% wrms; frequency re-

sponse +2/-3 dB, -20 VU 30-13,000 Hz (LH), to 15,000 Hz (CrO<sub>2</sub>), to 16,000 Hz (metal); S/N 65 dB with Dolby, metal; input sensitivity impedance 0.3 mV 200-10,000 ohms (mic), 50 mV 50k ohms (line), 0.1 mV 5.6k ohms (DIN); 4.75" H x 16.5625" W x 11.75" D ..... \$290

### AD-L300U Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc servomotor, ultra hard permalloy record/playback and double-gap ferrite erase heads. Features nine-program Quick Music Sensor (locates beginning of desired selection in fast forward or rewind) with red LED digital indicators displaying numerical selection; 12-segment LED bar graph display with three bands in green (-20 to -2 dB), orange (0 to -4 dB), and red (+6 to -10 dB); bias and equalization selector for LH, CrO<sub>2</sub>, and metal tapes with bias fine adjust; separate left/right record input controls; digital tape counter; rec mute; cue and review. Wow and flutter 0.06% wrms; frequency response +2/-3 dB, -20 VU 30-12,000 Hz (LH), to 14,000 Hz (CrO<sub>2</sub> and metal); S/N 62 dB with Dolby, FeCr; input sensitivity impedance 0.3 mV 200-10,000 ohms (mic), 5 mV 50k ohms (line), 0.1 mV 2.7k ohms (DIN); 5<sup>1</sup>/<sub>2</sub>" H x 16<sup>1</sup>/<sub>2</sub>" W x 11<sup>1</sup>/<sub>2</sub>" D ..... \$240

### AD-M250U Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc servomotor, and ultra-hard permalloy head. Features separate bias and equalization for LH, FeCr, CrO<sub>2</sub>, and metal tapes; LH fine bias adjust; dual VU meters with -3 and -7 dB peak-reading LEDs; record level control with line mic input selector; output level control; full auto stop; cue and review; piano-key tape function controls. Wow and flutter 0.06% wrms; frequency response +3 dB at 20 VU 30-12,500 Hz (LH), to 14,000 Hz (CrO<sub>2</sub> and FeCr); S/N 62 dB with FeCr tape, Dolby on; input sensitivity impedance 0.3 mV 3000 ohms (mic), 75 mV 50,000 ohms (line); output level impedance 0.41 V 50,000 ohms (line), 0.8 mW/8 ohms (phones); 5<sup>1</sup>/<sub>2</sub>" H x 16<sup>1</sup>/<sub>2</sub>" W x 10<sup>5</sup>/<sub>8</sub>" D ..... \$195

**AD-M100U.** Similar to AD-M250U without peak-reading LEDs, LH bias fine adjust, and output level control; has auto CrO<sub>2</sub> tape selector and separate left right record level controls with line mic input selector; wow and flutter 0.07% wrms; S/N 60 dB with CrO<sub>2</sub> tape, Dolby on ..... \$179

## AKAI

### GX-F90 Cassette Deck

Front-loading metal-compatible stereo cassette deck with dual-Dolby circuitry, GX record playback and high-current erase heads, and direct-drive dc servomotor and dc motor for tape handling. Features IPLS (Instant Program Location System); two-color LED bar-graph peak VU meters; three-digit tape counter with reset, auto repeat, and memory rewind; record/play timer start; mic line mixing; tape source monitor switch; output level control; calibration tone oscillator; four-position tape selector with lighted tape selector indicator; illuminated feather-touch logic solenoid tape function controls.

# 6 CASSETTE TAPE MACHINES

Wow and flutter 0.03% wrms; frequency response 25-21,000 Hz  $\pm$  3 dB with metal tape; dist. 0.6% at 1000 Hz, 0 VU with metal tape; S/N 62 dB without Dolby, improved 10 dB above 5000 Hz using metal tape with Dolby; 4.1" H  $\times$  17.3" W  $\times$  14.6" D ..... \$595

**GX-F80.** Similar to GX-F90 without IPLS and calibration tone oscillator; electronically-controlled dc servo capstan and dc tape handling motors; wow and flutter 0.035% wrms; 5.3" H  $\times$  17.3" W  $\times$  13.4" D ..... \$495

## GX-F60R Bi-Directional Cassette Deck

Front-loading bi-directional record play metal-compatible stereo cassette deck with Dolby noise-reduction system and super GX twin-field record playback head. Features quick reverse in record, play, and continuous play with LED indicators; dual fluorescent bar graph display with switchable VU peak control; illuminated feathertouch logic solenoid controls; four-position tape selector with LED indicators; remote-controllable record mute; record and output level controls; three-digit tape counter with memory on off and reset; timer record play with external audio timer. Wow and flutter 0.04% wrms; frequency response 30-19,000 Hz  $\pm$  3 dB with metal tape; S/N 60 dB using metal tape without Dolby; walnut vinyl cabinet; 5.9" H  $\times$  17.3" W  $\times$  11.4" D ..... \$500

## GX-M50 Cassette Deck

Front-loading metal-compatible stereo cassette deck with dual-Dolby circuitry and GX record playback and high-current erase heads. Features IPLS (Instant Program Location System); mic line mixing; tape source monitoring; output level control; two-color fluorescent bar graph peak VU meters; four-position illuminated tape selector for LN, LH, CrO<sub>2</sub>, and metal tapes; bias fine adjust; master recording level control for fade-in/fade-out; FM copy; three-digit tape counter with reset and memory rewind; piano-key tape function controls. Wow and flutter 0.04% wrms; frequency response 25-21,000 Hz  $\pm$  3 dB with metal tape; dist. 0.6% at 1000 Hz, 0 VU with metal tape; S/N 62 dB without Dolby, improved by 10 dB above 5000 Hz using metal tape with Dolby; 6.2" H  $\times$  17.3" W  $\times$  10.9" D ..... \$375

## CS-M40R Bi-Directional Cassette Deck

Front-loading bi-directional record play metal-compatible stereo cassette deck with Dolby noise-reduction system and sendust record playback head. Features auto manual reverse record play and quick reverse continuous play; fluorescent bar graph display with peak LED; normal CrO<sub>2</sub> metal tape selector; record level control with mic DIN line input selector; output level control; rec mute; timer standby with external audio timer. Wow and flutter 0.06% wrms; frequency response 30-18,000 Hz  $\pm$  3 dB with metal tape; S/N 60 dB using metal tape without Dolby; walnut vinyl cabinet; 5.9" H  $\times$  17.3" W  $\times$  11.4" D ..... \$350

## GX-M10 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and super GX record play and high-current erase heads. Features instant program search system (IPSS) with nine LED program selection digital readout; tape selector for LN, LH, CrO<sub>2</sub>, and metal tapes; dual fluorescent bar graph peak VU meter display; timer record playback capability with external timer; rec mute; auto stop; three-digit tape counter with memory rewind; recording level and output level controls. Wow and flutter 0.04% wrms; frequency response 30-19,000 Hz  $\pm$  3 dB with metal; dist. 0.6% at 1000 Hz, 0 VU; S/N 71 dB (Dolby on, metal); brushed aluminum front panel and wood-grain vinyl cabinet; 5.6" H  $\times$  17.3" W  $\times$  9.8" D ..... \$300

## CS-M02 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and Sendust record playback and dual-gap high-current erase heads. Features tape selector for normal, CrO<sub>2</sub>, and metal tapes; two-level fluorescent bar graph VU peak-reading display; timer record playback capability with external timer; rec mute; auto play; record and output level controls; three-digit counter with reset. Wow and flutter 0.045% wrms; frequency response 30-18,000 Hz  $\pm$  3 dB with metal; dist. 0.7% at 1000 Hz, 0 VU; S/N with Dolby 70 dB (metal); brushed aluminum front panel and gray vinyl cabinet; 5.6" H  $\times$  17.3" W  $\times$  9.8" D ..... \$230

**CS-M01A.** Similar to CS-M02 less rec mute and output level control; has vertical VU meters instead of display; wow and flutter 0.05% wrms; frequency response 30-18,000 Hz  $\pm$  3 dB with metal tape; S/N 59 dB using metal tape without Dolby..... \$180

## Mini Component Series

### UC-F5 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and twin field super GX head for metal tape; available only as part of UC-5 Mini Component Series. Features four-position tape selector; dual fluorescent peak level bar graph display; LED digital tape counter with reset and memory; auto play, stop, rewind and repeat; logic solenoid tape function controls; record and output level controls; timer start with external timer. Wow and flutter 0.035% wrms; frequency response 30-19,000 Hz  $\pm$  3 dB (metal); S/N 61 dB using metal tape without Dolby; 6.3" H  $\times$  11" W  $\times$  10.9" D ..... \$475

### UC-M2 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and sendust head for metal tape. Features 12-segment bar graph meter display with five peak level indicators; four-position tape selector; record level control with mic line input selector; output level control. Wow and flutter 0.06% wrms; frequency response 30-18,000 Hz  $\pm$  3 dB (metal tape); S/N 56 dB using metal tape without Dolby; 4.8" H  $\times$  11" W  $\times$  11.2" D ..... \$280

## AUDIOLOGIC by RANDIX

### TCD-25 Cassette Deck

Compact vertical front-loading stereo cassette deck with Dolby noise-reduction system. Features separate bias and equalization for normal, CrO<sub>2</sub>, and FeCr tapes; separate left right record level controls; mic line input selector; dual VU meters; three-digit tape counter. Wow and flutter 0.2%; frequency response 35-12,500 Hz  $\pm$  3 dB; S/N 52 dB with Dolby; 10" H  $\times$  6" W  $\times$  7" D ..... \$300

## BANG & OLUFSEN

### Beocord 8000 Cassette Recorder

Dual-microcomputer-controlled metal-compatible top-loading cassette recorder with Dolby noise-re-



duction system and single Sendust combination head containing Sendust alloy poles and bedding. Features electronic time measurement of tape travel in all operating modes, shown on illuminated digital display—precise measurement accomplished by microcomputer calibration of inserted cassette tape based on varying tape lengths, types, and thick-

nesses of magnetic coating (calibration data erased upon ejection); electronically-controlled automatic search locates any time-indexed selection through pushbutton operation—user can also instruct recorder to hold tape until otherwise specified and when to turn record or playback function on or off; automatic memory returns tape to beginning of last recorded segment; automatic four-second pause effected from stop button; electronically-controlled dual eight-LED peak program meters monitoring signal strength; built-in electronic timer shows correct time when TIME SET is pressed; automatic demagnetization of tape head; fast forward rewind time 70 sec (C-60). Wow and flutter  $\pm$  0.1%; frequency response 30-16,000 Hz  $\pm$  2.5 dB (chrome); S/N with Dolby 68 dB (metal), 65 dB (chrome), 63 dB (ferro); input sensitivity/impedance 1 mV 10k ohms (radio), 120 mV 1.2M ohms (aux.), 0.1 mV 2.2k ohms (mic); output level/impedance 800 mV 2k ohms (receiver), 9 V/56 ohms (headphones); 5" H  $\times$  20" W  $\times$  11" D ..... \$995

### Beocord 1900 Cassette Recorder

Top-loading cassette recorder with Dolby noise-reduction system and single Sendust combination head. Features memory, Dolby, and bias touch controls; sliding input-signal level control; two illuminated peak-reading VU meters; mic input; channel balance control; above-surface-mount tape function keys; three-digit counter with memory; fast forward/rewind time 90 sec. Wow and flutter  $\pm$  0.15% (DIN); frequency response 30-15,000 Hz (chrome, DIN); S/N 64 dB with Dolby (chrome); input sensitivity/impedance 2 mV 22k ohms (DIN), 0.175 mV/2.2k ohms (mic); output level/sensitivity 700 mV/22k ohms (DIN); 3" H  $\times$  15" W  $\times$  9" D ..... \$525

## BENJAMIN ELECTROPRODUCTS

### Lenco RAC 10 Auto Cassette Changer

Automatic cassette changer plays up to 10 cassettes in succession without interruption for up to 15 hrs; four separate motors play both sides of cassettes sequentially; output impedance 25 ohms; output 350 mV; changeover time 10 sec; has track 1, track 2, auto, and single play indicator lights; 495 mm  $\times$  252 mm  $\times$  210 mm ..... \$795

## B-I-C

### T-4M Cassette Deck

Front-loading microprocessor-controlled metal-compatible two-speed (1 $\frac{1}{2}$ " and 3 $\frac{3}{4}$ " ips) three-head



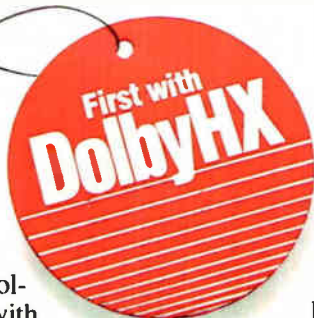
stereo cassette deck with four Dolby circuits for encode/decode and FM copy, tachometer feedback dc servo capstan and dc spooling motors in dual-capstan transport, and wide-gap record, narrow-gap playback, and erase heads. Features LED peak-reading (-36 to +9 dB) bar graph display; three-digit electronic tape counter readout with microprocessor-controlled counter reset, memory inhibit, memory 1, memory 2, auto rewind, and auto play buttons; solenoid tape function controls with pause, record, and play LEDs; separate mic and line record and headphone and output level controls; tape/source monitor; separate three-position bias and equalization for hi, normal, and metal tapes with bias trim and adjustable Dolby calibration; multiplex filter; pitch control ( $\pm$  5%); record safety/mute switch; fast forward/rewind time 50 sec (C-60). Wow and flutter 0.05% wrms (1 $\frac{1}{2}$ " ips) and 0.03% wrms (3 $\frac{3}{4}$ " ips); frequency response at  $\pm$  3 dB 20-21,000 Hz (1 $\frac{1}{2}$ " ips), to 23,000 Hz (3 $\frac{3}{4}$ " ips); THD 1.3% at 1 $\frac{1}{2}$ " ips, 1.0% at 3 $\frac{3}{4}$ " ips; S/N with Dolby at 1 $\frac{1}{2}$ " ips 64 dB (70  $\mu$ sec tape), at 3 $\frac{3}{4}$ " ips



# Here's how to make a standard \$5 tape outperform a \$10 metal tape.



The hk400XM with frequency response from 15-20kHz  $\pm$  3dB.



Record a standard \$5 tape on one of the new Harman Kardon High Technology cassette decks with Dolby HX\*. And a \$10 metal tape on a conventional deck. Any conventional deck.

Now compare.

The Harman Kardon deck with Dolby HX will give you substantially better performance from the standard tape. More dynamic headroom. And better signal-to-noise ratio.

Yet the recording made on our Harman Kardon High Technology deck costs about half as much. Which can save you a small fortune if you plan a tape library of any size.

Of course our new High Technology decks are metal capable, too. So you can use Dolby HX *and* metal tape for performance that can't be topped by anything less than a professional quality open reel deck.

But Dolby HX is only part of the performance story.

## Our heads cost more. And they deliver more.

The heads used in a cassette deck probably dictate the performance you'll get more than any other single component. That's why at Harman Kardon, we spent a lot more

time and money on our head designs and materials. We started with Super Sendust Alloy, the costliest and most advanced material available. In manufacturing, we machine our head gaps to incredibly precise tolerances, and align them with equal care. Obviously, this process takes more time and costs more money. But it results in frequency response unheard of in a single speed cassette deck at any price.

Even our most economical deck, for instance, gives you ruler-flat frequency response from 15 Hz to an incredible 19,000 Hz from a conventional tape. You also get features like Dolby NR, a front panel bias fine trim, MPX filter and memory.

As you move on up the line, the specs just get better. And so do the features. Like the world's first headroom safety indicator to prevent tape saturation far more accurately than any peak level indicators. You'll also find built-in Dolby and bias test tones. Normal and slow meter ballistics. A fader control. Plus our exclusive Auto Program Search System that scans a tape automatically, sampling the beginning of each cut until you've located the one you want.

Yet the new Harman Kardon High

Technology cassette decks do share one thing in common with the conventional decks.

A conventional price tag.

So before you settle for a deck that will set you back \$10 or more every time you want a quality recording, audition the new Harman Kardon Decks with Dolby HX.

You'll get performance that beats metal. At about half the price.

\*Dolby and the double-D symbol are trademarks of Dolby Laboratories. Dolby HX is a standard feature on all Harman Kardon High Technology decks except the 100M.



The hk100M with frequency response from 15-19kHz  $\pm$  3dB.



The hk200XM with frequency response from 15-19kHz  $\pm$  3dB.



The hk300XM with frequency response from 15-20kHz  $\pm$  3dB.

## harman/kardon

240 Crossways Park West, Woodbury, NY 11797  
Toll free: 1-800-528-6050 ext. 870

CIRCLE NO. 17 ON READER SERVICE CARD

with Dolby 67 dB (70- $\mu$ sec tape), all "A" weighted, ref. 3.0% THD; erasure 75 dB; input impedance 50k ohms (line), 600 ohms (mic); output level impedance 2 V rms/10k ohms (line), 0.7 V rms, 100 ohms (headphones); 6 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  10 $\frac{1}{2}$ " D ..... \$750

### T-3M Cassette Deck

Front-loading metal-compatible two-speed (1 $\frac{1}{2}$  and 3 $\frac{3}{4}$  ips) stereo cassette deck with four Dolby circuits for encode/decode and Dolby FM, tachometer feedback dc servomotor in dual-capstan transport, and separate wide-gap record, narrow-gap playback, and erase heads. Features -36 to -9 dB LED peak-reading bar graph display with chameleon LED record THD overload indicators; three-digit tape counter with memory and reset; bias and equalization selectors for high, normal, and metal tapes; multiplex filter; record ready with LED; tape source monitoring, record calibration, and mic/line buttons; separate output and headphone level controls; piano-key tape function controls; fast forward/rewind time 50 sec (C-60). Wow and flutter 0.05% wrms (1 $\frac{1}{2}$  ips), 0.03% wrms (3 $\frac{3}{4}$  ips); frequency response  $\pm$ 3 dB with 70- $\mu$ sec tape 20-21,000 Hz (1 $\frac{1}{2}$  ips), to 23,000 Hz (3 $\frac{3}{4}$  ips); THD at 0 VU with 70- $\mu$ sec tape 1.3% (1 $\frac{1}{2}$  ips) and 1.0% (3 $\frac{3}{4}$  ips); S/N ("A" weighted, 3.0% THD, 70- $\mu$ sec tape) with Dolby 65 dB (1 $\frac{1}{2}$  ips), 68 dB (3 $\frac{3}{4}$  ips); line input 200 mV; mic input impedance 8-600 ohms; output level impedance 2.0 V rms/10k ohms (line), 0.7 V rms/100 ohms (headphones); 6 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  10 $\frac{1}{2}$ " D ..... \$500

**T-2M.** Similar to T-3M except has single Dolby noise-reduction circuitry, single-capstan transport, and two heads; no tape source monitor and record calibration buttons; wow and flutter 0.06% wrms (1 $\frac{1}{2}$  ips) and 0.04% wrms (3 $\frac{3}{4}$  ips); frequency response  $\pm$ 3 dB 25-19,000 Hz (1 $\frac{1}{2}$  ips), to 21,000 Hz (3 $\frac{3}{4}$  ips); THD 1.5% (1 $\frac{1}{2}$  ips), 1.2% (3 $\frac{3}{4}$  ips); S/N with Dolby 64 dB (1 $\frac{1}{2}$  ips), 67 dB (3 $\frac{3}{4}$  ips); 6 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  10 $\frac{1}{2}$ " D ..... \$350

### T-05M Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc servo capstan motor, and metal-compatible record playback head. Features separate bias and equalization for normal, high, and metal tapes; dual 20 to -8-dB peak-reading bar graph display; separate left and right record level controls; three-digit tape counter with reset. Wow and flutter 0.07% wrms; frequency response 30-19,000 Hz  $\pm$ 3 dB with 70- $\mu$ sec tape; S/N 63 dB with Dolby (A weighted below 3.0% THD); line input 200 mV; mic input impedance 8-600 ohms; 5 $\frac{1}{2}$ " H  $\times$  15 $\frac{1}{2}$ " W  $\times$  9 $\frac{1}{2}$ " D ..... \$210

## CALIBRE

### 440 Cassette Deck

Front-loading stereo cassette deck with dual-Dolby circuitry. Features left right digital LED bar-graph VU display from -20 to -8 dB; separate bias and equalization switches for FeCr, normal, and special tapes; three-digit tape counter with reset and memory; left-right balance control; record master level control; mic line source input selectors; piano-key tape function controls; LED azimuth adjust. Wow and flutter 0.06% wrms; frequency response 30-15,500 Hz  $\pm$ 3 dB (FeCr); S/N 61.5 dB with Dolby; 4.8" H  $\times$  18.16" W  $\times$  12.6" D ..... \$295

## CONCEPT

### ELC Cassette Deck

Front-loading stereo cassette deck with dual Dolby circuitry, dc electronic servo capstan and dc hub motor, and sintered Alloy Linear Phase

record/playback and ferrite erase heads. Features electronic logic solenoid-assisted tape function controls with LEDs; memory stop, auto play, auto repeat, and timer record and play with optional external timer controls; bias and equalization for Fe, FeCr, and special tapes; separate mic and line input level controls; output level control; two dB-calibrated recording level meters with LED peak-reading indicator; three-digit tape counter with reset; fast-forward/rewind time 75 sec (C-60). Wow and flutter 0.05% wrms; frequency response  $\pm$ 3 dB 30-16,000 Hz (CrO<sub>2</sub>, FeCr, and special), to 14,500 Hz (Fe and normal); THD 1.0% at +3 dB, 0.3% typically; S/N 62 dB with Dolby; input sensitivity/impedance 60 mV/47k ohms (line), 0.27 mV/600 ohms (mic); output level/impedance 1.0 V at +3 dB/47 ohms (line), 100 mV/8 ohms (headphone); 5 $\frac{1}{2}$ " H  $\times$  19 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{2}$ " D ..... \$525

## DENON

### DR-250 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, dc servo capstan and dc reel motors, and Sendust record/playback and double-gap ferrite erase heads. Features continuously variable bias adjust; three-position tape selector for LH, FeCr, and cobalt tapes; muted recording/pause button; timer recording playback provision; automatic repeat; auto rewind and memory stop; logic-controlled tape function buttons with LEDs; three-digit tape counter with reset; two VU meters with vertical three-color five-LED peak level indication array; fast-forward/rewind time 70 sec (C-60). Wow and flutter 0.05% wrms; frequency response  $\pm$ 3 dB 35-15,000 Hz (cobalt), to 14,000 Hz (LH); S/N 62 dB at 3.0% THD, Dolby on (cobalt); channel separation 35 dB at 1000 Hz; crosstalk 65 dB at 1000 Hz; input level/impedance 68 dB/10k ohms (mic), 21 dB/50k ohms (line); 8-ohm headphone load impedance at 0.7 mW; 147 mm H  $\times$  434 mm W  $\times$  267 mm D ..... \$430

### DR-230 Cassette Deck

Front-loading metal-compatible stereo cassette deck with IC Dolby noise-reduction system, dc servo

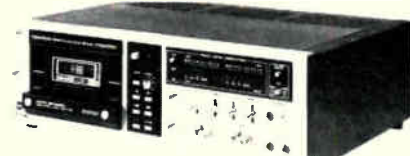


capstan and dc reel motors, and Sendust-laminated record playback and double-gap ferrite erase heads. Features tape selector for LH, FeCr, CrO<sub>2</sub>, and metal tapes with bias fine adjust; dual-color LED peak-reading bar graph display (-25 to +6 dB); IC logic tape function controls with LEDs and direct mode change; rec mute; input level control; one-touch eject; timer record play with external timer; fast forward/rewind time 80 sec (C-60). Wow and flutter 0.04% wrms (JIS); frequency response 30-16,500 Hz (metal), to 16,000 Hz (CrO<sub>2</sub> and FeCr), to 15,000 Hz (LH); overall S/N 64 dB with Dolby; input sensitivity/impedance 0.4 mV/50k ohms unbalanced (mic), 70 mV/50k ohms unbalanced (line); 112 mm H  $\times$  434 mm W  $\times$  300 mm D ..... \$375

## DUAL

### C839 RC Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, two-motor



dual-capstan twin-belt closed-loop drive system,

and Sendust record/playback head and erase head in direct load and lock system with automatic head protection. Features computerized logic solenoid tape function controls with direct-mode switching; electronic fade/edit; record/play auto reverse and continuous repeat; 8% variable pitch control; equalized LED peak-level bar-graph indicators; switchable limiter; switchable multiplex filter; timer provision for optional external timer; memory stop and play; separate line/DIN and mic input selectors; line/mic mixing; headphone level control; six-position bias and equalization selector for Fe, Fe I, Cr, Cr II, FeCr, and metal tapes; auto tape-slack prewind; provision for optional remote control; fast forward/rewind time 65 sec (C-60). Wow and flutter 0.03% wrms; frequency response  $\pm$ 3 dB 20-18,000 Hz (Fe), to 19,000 Hz (CrO<sub>2</sub> and FeCr), to 20,000 Hz (metal); HD 0.4%; S/N with Dolby 67 dB (Fe and CrO<sub>2</sub>), 69 dB (FeCr), 70 dB (metal); 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  13 $\frac{3}{4}$ " D ..... \$875

**RC152/RE120.** Wireless remote transmitter/receiver control for C839 RC; has playback speed, fast wind/rewind, pause, and master off controls ..... \$80

**C830.** Similar to C839 without computerized logic solenoid tape function controls, auto reverse, playback, and record, auto tape-slack prewind, and timer and remote control provision with optional timer and remote control unit; has PLL dc servomotor with i-f generator and true monitor capability; wow and flutter 0.035% wrms; frequency response  $\pm$ 3 dB 20-17,000 Hz with Fe tape and to 18,000 Hz with CrO<sub>2</sub> ..... \$500

### C820 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, high-torque dc servomotor with i-f generator, twin-belt drive system, direct load and lock system, and Sendust record/playback head. Features equalized LED peak-level bar-graph indicators; two-way memory stop; switchable multiplex filter; switchable limiter; logic-controlled intermode switching; six-position bias and equalization; separate line and mic input level controls; auto shutoff; fast forward/rewind time 65 sec (C-60). Wow and flutter 0.04% wrms; frequency response 20-16,000 Hz (Fe), to 17,000 Hz (CrO<sub>2</sub>), to 18,000 Hz (FeCr), to 19,000 Hz (metal); HD 0.5%; S/N with Dolby 64 dB (Fe and CrO<sub>2</sub>), 67 dB (FeCr and metal); 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  13 $\frac{3}{4}$ " D ..... \$420

**C812.** Similar to C820 without two-way memory stop and switchable limiter; has four-way bias equalization, equalized peak-reading meters, and M-X-Ferrite record playback head; wow and flutter 0.045% wrms; frequency response  $\pm$ 3 dB 20-16,500 Hz (CrO<sub>2</sub>), to 17,000 Hz (FeCr), to 18,000 Hz (metal); S/N with Dolby 63 dB (Fe and CrO<sub>2</sub>), 66 dB (FeCr), 67 dB (metal) ..... \$300

## EUMIG USA, INC.

### FL-1000 Cassette Deck

Front-loading microprocessor-controlled metal-compatible stereo cassette deck with Dolby noise-



reduction system, three separate heads, and optoelectronic servo capstan motor. Unit can interface with any 8-bit home computer system, and up to 16 units can be interconnected through one computer and individually controlled simultaneously or sequentially to play or record any section of any tape. Features logic-controlled solenoid tape function controls; 14-segment channel fluorescent level display with switchable VU, peak-reading, and peak-hold functions; separate 400- and 16,000-Hz oscillators; bias controls for metal, high bias, and normal bias tapes; master fader for mic/line and line/line mixing; variable output control; LED digital counter display with microprocessor-controlled indexing;



# For those who appreciate simple virtuosity

## The 480 Series

With the 480 Series, Nakamichi again offers a more affordable cassette recorder—a deck that is simpler to operate, but that sacrifices neither Nakamichi sound nor Nakamichi excellence. The secret is simple. The Asymmetrical, Diffused-Resonance Transport—shared by all three models and closely akin to that of the highly acclaimed 582—is a 3-motor, dual-capstan drive so unique in its simplicity and elegance that it can be manufactured with virtually zero defects. Each 480-Series deck is factory calibrated to yield optimum performance with three types of tape—ferric, chrome-equivalent, and metal. Use products of equivalent quality, and you can experience Nakamichi sound and Nakamichi specifications—response to 20 kHz—in your home.



### 480

The 2-Head Model 480—fully metal-compatible thanks to our special, narrow-gap, Sendust R/P head and exclusive Direct-Flux erase head. Wide-range, peak-responding meters, professional sliding level controls, Dolby, and defeatable MPX filter, of course! Even an optional remote control.



### 481

Step up to the 481, a 3-Head deck utilizing Nakamichi's exclusive "Crystalloy" cores and "Discrete-Head" technology. All the features of the 480 plus the greater dynamic range of a discrete 3-Head format.

### 482

For those who demand "tape monitoring," the 482—a 3-Head deck similar to the 481 but with two complete sets of electronics and Double-Dolby so you can hear exactly what has been recorded as it is being recorded.



The 480-Series starts at under \$500. For more information, write to Nakamichi U.S.A. Corp., 1101 Colorado Avenue, Santa Monica, CA 90401

# 6 CASSETTE TAPE MACHINES

speed accuracy 15,000 times/sec. Wow and flutter 0.035% wrms; frequency response 20-20,000 Hz  $\pm$  3 dB (metal and CrO<sub>2</sub>), 30-18,000 Hz  $\pm$  3 dB (ferric); S/N 72 dB (metal), 68 dB (CrO<sub>2</sub>), and 66 dB (ferric); rack-mountable ..... \$1550

### CCD Metropolitan Cassette Deck

Top-loading stereo cassette deck with Dolby noise-reduction system, opto-electronic servo-controlled capstan motor, dc-controlled mixing circuits, and three heads. Features C MOS logic tape function controls with LEDs; LED display record-level indicators; built-in tone generator; three-digit tape counter with reset and memory rewind; full-function remote control; automatic or manual record level setting; separate headphone volume control. Wow and flutter 0.05% wrms; frequency response 20-20,000 Hz  $\pm$  3 dB (FeCr and CrO<sub>2</sub>), 30-16,000 Hz (ferric); S/N with Dolby 72 dB (FeCr), 68 dB (CrO<sub>2</sub>), and 66 dB (ferric); 5.4" H  $\times$  17.1" W  $\times$  11.8" D ..... \$1300

## FISHER

### CR4029 Cassette Deck

Front-loading two-speed (1 $\frac{1}{2}$ " and 3 $\frac{3}{4}$ " ips) metal-compatible cassette deck with dual Dolby noise-reduction system, dc servo motor, capstan drive, and three VHT Sendust heads. Features four position bias and equalization selectors for metal particle, normal, FeCr, and CrO<sub>2</sub> tapes with bias fine adjust; tape source monitor switch; two illuminated VU meters; LED tape, source, Dolby, and record indicators; piano-key function buttons; and mic/line input selector. Wow and flutter 0.06% wrms (1 $\frac{1}{2}$ " ips), 0.05% wrms (3 $\frac{3}{4}$ " ips); frequency response  $\pm$  3 dB at 1 $\frac{1}{2}$ "  $\pm$  30-14,000 Hz (normal), to 16,000 Hz (CrO<sub>2</sub> and FeCr), to 18,000 Hz (metal),  $\pm$  3 dB at 3 $\frac{3}{4}$ "  $\pm$  30-20,000 Hz (normal), 30-22,000 Hz (CrO<sub>2</sub> and FeCr), 30-25,000 Hz (metal); THD 1.5% at 0 VU (1 $\frac{1}{2}$ "  $\pm$  1.2% at 0 VU (3 $\frac{3}{4}$ "  $\pm$ ); S/N 52 dB (Dolby off), 62 dB (Dolby on); channel separation 45 dB; signal crosstalk  $\sim$  70 dB; input sensitivity/impedance 0.2 mV/600-10,000 ohms (mike), 100 mV/100,000 ohms (line); output 1 V/5000 ohms (line); walnut-grain vinyl veneer finish; 4 $\frac{3}{4}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  12 $\frac{1}{2}$ " D ..... \$400

### DD 300 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, direct-drive dc servo capstan motor, and two MX ferrite heads. Features tape selector for normal, FeCr, CrO<sub>2</sub>, and metal tapes; dual VU meters with three peak-reading LED indicators; input level control with line mic input selector; output level control; auto repeat memory; three-digit tape counter with reset; rec mute; electronic solenoid feather-touch controls with LEDs; timer standby with external audio timer. Wow and flutter 0.04%; frequency response 30-18,000 Hz  $\pm$  3 dB (metal tape); S/N 62 dB with Dolby; 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  9 $\frac{1}{2}$ " D ..... \$350  
**DD 280.** Similar to DD 300 minus FeCr tape position, auto repeat memory, and output level control; has separate left right input level controls; metal tape frequency response 30-15,000 Hz  $\pm$  3 dB; optional RC 80 full-function remote control unit available; 4" H  $\times$  17 $\frac{1}{2}$ " W  $\times$  10 $\frac{1}{2}$ " D ..... \$300

### CR4028 Cassette Deck

Front-loading two-speed metal-compatible cassette deck with Dolby noise-reduction system, dc governor motor, capstan drive, and two Sendust ferrite heads. Features Auto Search Function (automatically locates the next gap in tape selection) with search cue button, two illuminated VU meters, metal and standard tape bias and equalization, tape selector switch for normal, CrO<sub>2</sub>, FeCr, and metal tapes, and piano-key function buttons. Wow and flutter 0.07% wrms (1 $\frac{1}{2}$ "  $\pm$ ), 0.06% wrms (3 $\frac{3}{4}$ "  $\pm$ ); fre-

quency response  $\pm$  3 dB at 1 $\frac{1}{2}$ "  $\pm$ : 30-14,000 Hz (normal), to 15,000 Hz (CrO<sub>2</sub> and FeCr), to 16,000 Hz (metal), at 3 $\frac{3}{4}$ "  $\pm$ : 30-20,000 Hz (normal), to 22,000 Hz (CrO<sub>2</sub> and FeCr), to 23,000 Hz (metal); THD 1.8% (1 $\frac{1}{2}$ "  $\pm$ ), 1.6% (3 $\frac{3}{4}$ "  $\pm$ ); S/N 52 dB (Dolby off), 62 dB (Dolby on); channel separation 42 dB; signal crosstalk  $\sim$  70 dB; input sensitivity/impedance 0.2 mV/600-10,000 ohms (mike), 100 mV/100,000 ohms (line); output 1 V/5000 ohms (line); walnut-grain vinyl veneer finish; 4 $\frac{3}{4}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  12 $\frac{1}{2}$ " D ..... \$280  
**CR4027.** Similar to CR4028 without metal tape capability; has two super permalloy ferrite heads; wow and flutter 0.08% wrms (1 $\frac{1}{2}$ "  $\pm$ ), 0.07% wrms (3 $\frac{3}{4}$ "  $\pm$ ); THD 2% at 0 VU (1 $\frac{1}{2}$ "  $\pm$ ), 1.8% at 0 VU (3 $\frac{3}{4}$ "  $\pm$ ); channel separation 40 dB ..... \$250

### CR4016M Cassette Deck

Front-loading two-speed metal-compatible cassette deck with Dolby noise-reduction system, dc servo motor, capstan drive, and two super permalloy ferrite heads. Features electronic tape speed change, metal/CrO<sub>2</sub>/normal bias and high/low equalization switches, two illuminated VU meters, tape selector switch. Wow and flutter 0.1% wrms (1 $\frac{1}{2}$ "  $\pm$ ), 0.09% wrms (3 $\frac{3}{4}$ "  $\pm$ ); frequency response  $\pm$  3 dB at 1 $\frac{1}{2}$ "  $\pm$ : 40-13,000 Hz (normal), to 14,000 Hz (CrO<sub>2</sub>), to 15,000 Hz (metal),  $\pm$  3 dB at 3 $\frac{3}{4}$ "  $\pm$ : 40-18,000 Hz (normal), to 19,000 Hz (CrO<sub>2</sub>), to 20,000 Hz (metal); S/N 50 dB (Dolby off), 60 dB (Dolby on); THD 2.2% (1 $\frac{1}{2}$ "  $\pm$ ), 1.9% (3 $\frac{3}{4}$ "  $\pm$ ); channel separation 40 dB; signal crosstalk  $\sim$  70 dB; input sensitivity/impedance 0.2 mV/600-10,000 ohms (mike), 100 mV/100,000 ohms (line); walnut-grain vinyl veneer finish; 5 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  9 $\frac{1}{2}$ " D ..... \$250

### CR 120 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc governor motor, and two hard permalloy ferrite heads. Features play/rewind auto search; bias and equalization selectors for normal, CrO<sub>2</sub>, and metal tapes; separate left/right input level controls with mic/line input selector; dual VU meters with three peak-reading LEDs; rec mute; full auto stop. Wow and flutter 0.08% wrms; frequency response 30-15,000 Hz  $\pm$  3 dB with metal; S/N 60 dB with Dolby; 4 $\frac{3}{4}$ " H  $\times$  15 $\frac{3}{4}$ " W  $\times$  8" D ..... \$200  
**CR 110.** Similar to CR 120 minus auto search, peak-reading LEDs, and mic/line input selector ..... \$170

### CR 4013 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, dc governor motor, and two super permalloy ferrite heads. Features LED record level meters; manual CrO<sub>2</sub> tape selector; separate left/right record level controls; auto stop. Wow and flutter 0.1% wrms; frequency response 40-12,000 Hz  $\pm$  3 dB with CrO<sub>2</sub>; S/N 58 dB with Dolby; 5 $\frac{1}{2}$ " H  $\times$  15 $\frac{3}{4}$ " W  $\times$  9" D ..... \$150  
**CR 4012.** Similar to CR 4013 minus Dolby noise-reduction system; S/N 48 dB ..... \$120

## HARMAN/KARDON

### hk400xm Cassette Deck

Front-loading linear-phase metal-compatible stereo cassette deck with Dolby HX circuitry with LED



headroom safety indicators and Dolby noise reduction, two motors, and three heads. Features separate bias and equalization buttons for LN, FeCr, CrO<sub>2</sub>, and metal tapes with bias fine trim and bias and Dolby tone generators; dual 12-LED peak-reading bar graph display with slow/normal meter ballistics switch; solenoid transport controls with electronic automatic program search and LEDs; rec mute; digital tape counter readout with memory and reset; auto rewind and replay; line and mic level controls; output level control; fader control; tape/

source monitoring; rec/play timer with external timer. Wow and flutter 0.03% wrms (NAB); frequency response 15-20,000 Hz  $\pm$  3 dB with FeCr and CrO<sub>2</sub> low-noise tapes; S/N 68 dB with Dolby, A weighted; mic impedance 600-50,000 ohms ..... \$649

### hk300xm Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby HX circuitry with LED headroom safety indicators and Dolby noise reduction, two motors, and two heads. Features bias/equalization selectors for LN, FeCr, CrO<sub>2</sub>, and metal tapes with bias fine trim and tone generators for bias and Dolby calibration; dual 12-LED peak-reading bar-graph display with slow/normal meter ballistics switch; solenoid transport controls with electronic automatic program search; line and mic level controls; output level control; rec mute. Wow and flutter 0.03% wrms (NAB); frequency response 15-20,000 Hz  $\pm$  3 dB with FeCr and CrO<sub>2</sub> low-noise tape; S/N 67 dB with Dolby, A weighted; mic impedance 600-50,000 ohms ..... \$449

### hk200xm Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby HX circuitry and Dolby noise reduction and two heads. Features auto program search; three-digit tape counter with memory replay; bias and equalization selectors with bias fine trim; dual 12-LED peak-reading bar-graph display with slow/normal meter ballistics switch; input level control with separate mic/line selector; output level control. Wow and flutter 0.04% wrms (NAB); frequency response 15-19,000 Hz  $\pm$  3 dB with FeCr and CrO<sub>2</sub> low-noise tape; S/N 65 dB with Dolby, A weighted; mic impedance 600-50,000 ohms ..... \$349

### hk100m Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system with switchable multiplex filter and two heads. Features dual 12-LED peak-reading meters; bias and equalization selectors with bias fine trim; input level control with separate mic/line selector; output level control. Wow and flutter 0.05% wrms (NAB); frequency response 15-19,000 Hz  $\pm$  3 dB with low-noise CrO<sub>2</sub>; S/N 63 dB with Dolby, A weighted; mic impedance 600-50,000 ohms ..... \$269

## 700 Series High Technology Separates

### hk705 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby HX and Dolby B circuitry, dc servomotor, and Sendust Alloy heads. Features push-button tape selectors for low noise, FeCr, CrO<sub>2</sub>, and metal tapes; subsonic filter; dual vertical 12-LED peak-level meter display; record and output level controls; three-digit tape counter with memory and reset; rec mute; LED tape end warning indicator; fast forward/rewind time 75 sec (C-60). Wow and flutter 0.04% wrms (NAB); frequency response  $\pm$  3 dB from 20-19,000 Hz (metal), to 18,000 Hz (CrO<sub>2</sub> and FeCr), to 17,000 Hz (LN); S/N 68 dB with Dolby, metal tape; 2.9" H  $\times$  15.2" W  $\times$  12.6" D ..... \$449

## HITACHI

### D-5500M Cassette Deck

Front-loading microcomputer-controlled metal-compatible stereo cassette deck with dual-Dolby noise-reduction system, Unitorque direct-drive capstan and dc servo reel motors, dual-capstan transport, and closed-gap ferrite record/playback and erase heads. Features microcomputerized automatic bias and equalization calibration with push-button test, four memory, tape formulation (CrO<sub>2</sub>, normal, FeCr, and metal), and manual controls with bias and equalization level meters and LED display chart for system; infrared wireless remote control with tape function controls and LEDs (operates within 32-ft radius or can be inserted in front panel when not in use); two VU meters with three LED peak indicators at +7, -3, and 0 dB; auto rewind play/stop; rec mute; separate line and mic/DIN record level controls; output level control; tape/source



monitor switch; three-digit tape counter with reset; air-damped cassette eject; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.028% wrms; frequency response  $\pm 3$  dB in normal position using Hitachi tape 30-18,000 Hz (normal and FeCr), to 19,000 Hz (CrO<sub>2</sub> and metal), in test position of Automatic Tape Response System using other tapes 30-18,000 Hz (normal and FeCr), to 20,000 Hz (CrO<sub>2</sub> and metal); dist. 1.0% at 0 VU, 1000 Hz; S/N (A weighted, metal tape, 3.0% THD) 69 dB with Dolby, 60 dB without Dolby; input sensitivity/impedance 60 mV/100k ohms (line), 0.35 mV/300-5000 ohms (mic); output level 550 mV; 7 $\frac{1}{8}$ " H x 17 $\frac{1}{8}$ " W x 12 $\frac{1}{2}$ " D..... \$1000

**D-3300M.** Similar to D-5500M except has memory storage capability for one tape bias/EQ calibration; dual fluorescent peak level bar graph meters with 0-dB peak hold button, and LED battery, 1000-Hz test, and 7000- and 15,000-Hz frequency indicators in automatic tape response system; no bias and EQ level meters and manual control; infrared remote control optional; has IC logic function controls; wow and flutter 0.023% wrms; CrO<sub>2</sub> and metal tape frequency response 30-20,000 Hz  $\pm 3$  dB; input sensitivity/impedance 85 mV/100k ohms (line), 0.5 mV/300-5000 ohms (mic); 6.5" H x 17" W x 10" D..... \$700

### D-98DM Cassette Deck

Front-loading metal-compatible stereo cassette deck with dual-Dolby noise-reduction system and built-in Dolby Calibration Control System for specific tape fine tuning. Unitorque direct-drive capstan and dc servo reel motors, closed-gap ferrite record/playback and erase heads, and dual capstan, closed-loop transport. Features separate bias and equalization switches for normal, CrO<sub>2</sub>, FeCr, and metal tapes with bias adjust; graphic operations mode indicator; TTL IC logic tape function controls; edit button; auto rewind play/stop; tape/source monitor; separate line and mic/DIN record level controls; output level control; dual VU meters with 0, +3, and +7 LED peak indicators; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.03% wrms; frequency response  $\pm 3$  dB 30-17,000 Hz (normal and FeCr), to 18,000 Hz (CrO<sub>2</sub>), to 19,000 Hz (metal); dist. 1.2% at 0 VU, 1000 Hz; S/N (A weighted, metal tape, 3.0% THD) 68 dB with Dolby; input sensitivity/impedance 80 mV/70k ohms (line), 0.35 mV/300-5000 ohms (mic); output level 550 mV; 6 $\frac{1}{8}$ " H x 17" W x 10" D..... \$500

### D-90S Cassette Deck

Front-loading metal-compatible stereo cassette deck with dual-Dolby noise-reduction system, electronically-controlled dc servo and dc reel motors, and close-gap ferrite record/play and erase heads. Features IC logic tape function controls; tape selector for normal, FeCr, CrO<sub>2</sub>, and metal tapes with bias adjustment; dual VU meters with separate left/right record calibration controls and five LED peak indicators; auto rewind stop/play; tape/source monitor switch; record level control with line/mic switch; output level control; record/play timer selector; three-digit tape counter with reset. Wow and flutter 0.04% wrms; frequency response  $\pm 3$  dB 30-17,000 Hz (normal and FeCr), to 18,000 Hz (CrO<sub>2</sub>), to 19,000 Hz (metal); dist. 1.2% at 1000 Hz, 0 VU; S/N (A weighted, 3.0% THD) 68 dB with Dolby; input sensitivity/impedance 60 mV/50k ohms (line), 0.3 mV/300-5000 ohms (mic); output 500 mV; 4 $\frac{3}{8}$ " H x 17 $\frac{1}{8}$ " W x 10 $\frac{1}{2}$ " D..... \$450

### D-75S Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc capstan and dc reel motors, and Sendust record/playback and double-gap ferrite erase heads. Features fluorescent bar graph VU/peak-reading meter display; four-position tape selector for normal, FeCr, CrO<sub>2</sub>, and metal tapes; record level control with line/mic input selector; output level control; feather-touch logic tape function controls; auto rewind and auto play switch; rec mute; three-digit tape counter with reset; fast forward and rewind time 90 sec (C-60). Wow and flutter 0.04% wrms; frequency response  $\pm 3$  dB 30-15,000 Hz (normal and FeCr), to 16,000 Hz (CrO<sub>2</sub>), to 17,000 Hz (metal); dist. 1.2% at 0 VU,

1000 Hz; S/N (A weighted, 3.0% THD) 66 dB with Dolby; input sensitivity/impedance 60 mV/47,000 ohms (line), 0.38 mV/300-5000 ohms (mic); 4 $\frac{3}{8}$ " H x 17 $\frac{1}{8}$ " W x 10 $\frac{1}{2}$ " D..... \$350

**D-45S.** Similar to D-75S but has SL permalloy record/playback and erase heads, "Power-Assisted" piano-key tape function controls, and auto stop; no output level control; wow and flutter 0.05% wrms; metal tape frequency response 30-15,000 Hz  $\pm 3$  dB; S/N 75 dB with Dolby ..... \$250

### D-33S Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc motor, and metal-compatible super-life record/play and metal-compatible double-gap erase heads. Features tape selector for normal, CrO<sub>2</sub>, and metal tapes; left/right record level controls with line/mic input selector; two VU meters with +3-dB peak LED indicator; rec mute; power-assisted tape function controls. Wow and flutter 0.07% wrms; frequency response  $\pm 3$  dB 30-14,000 Hz (normal), to 15,000 Hz (CrO<sub>2</sub> and metal); S/N (A weighted) 65 dB with Dolby; input sensitivity/impedance 60 mV/50k ohms (line in), 0.35 mV/300-5000 ohms (mic); 4 $\frac{3}{8}$ " H x 17 $\frac{1}{8}$ " W x 10 $\frac{1}{2}$ " D..... \$200

**D-22S.** Similar to D-33S minus metal-compatibility, peak-reading LED, and rec mute; has SL permalloy record/play and ferrite erase heads, full auto stop and piano-key tape function controls; wow and flutter 0.08% wrms; frequency response  $\pm 3$  dB 30-13,000 Hz (normal and FeCr), to 14,000 Hz (CrO<sub>2</sub>); S/N 64 dB with Dolby, A weighted; 4 $\frac{3}{8}$ " H x 17 $\frac{1}{8}$ " W x 7 $\frac{1}{2}$ " D..... \$160

## JVC

### KD-A8 Cassette Deck

Front-loading computerized metal-compatible stereo cassette deck with Super ANRS (automatic noise reduction system), X-cut SA (Sen-Alloy) record/playback and two-gap SA erase heads, and FG dc servo capstan and dc reel motors in ID (independent drive) tape transport. Features computer-controlled B.E.S.T. (bias, equalization, and sensitivity of tape) Tuning System which automatically detects SF/normal, FeCr, SA/CrO<sub>2</sub>, or metal tape, super ANRS/ANRS, non record, S&L (search and lock), or record mute modes, bias adjustment, high frequency equalization (flat response at 10,000 Hz  $\pm 1.0$  dB accuracy),  $\pm 0.5$  dB tape sensitivity adjustment, and error detection with correction with LED peak indicators at -10, -5, 0, +3, and +6 dB; solenoid controlled tape function controls; timer standby with music wake-up; three-digit tape counter with memory stop and play; real-time pause; provision for optional remote control; two-stepped gear/oil-damped cassette lid; fast forward/rewind time 85 sec (C-60). Wow and flutter 0.035% wrms; frequency response at 20 VU  $\pm 1$  dB with computer 40-12,500 Hz (metal, SA/chrome, and normal), at  $\pm 3$  dB 25-17,000 Hz (metal and SA/chrome), to 16,000 Hz (normal), at 0 VU 25-12,000 Hz  $\pm 3$  dB (metal), to 8000 Hz (SA/chrome); THD 1.2% at 0 VU, 1000 Hz (metal); S/N 58 dB without ANRS, improved 5 dB at 1000 Hz and 10 dB above 5000 Hz with ANRS; crosstalk -65 dB at 1000 Hz; channel separation 35 dB at 1000 Hz; input sensitivity/impedance 0.2 mV/600-10,000 ohms (mic), 80 mV/70k ohms (line); output level/impedance 0-300 mV/3-8k ohms (line), 0-0.5 mW/8-1k ohms (headphone); 4 $\frac{7}{8}$ " H x 17 $\frac{1}{8}$ " W x 15 $\frac{1}{2}$ " D..... \$750

**KD-A77.** Similar to KD-A8 without computerized B.E.S.T. tuning system; has recording equalizer



switch and combination three-head record/playback and two-gap SA erase heads; wow and flutter

0.04% wrms; frequency response at 20 VU  $\pm 3$  dB 25-18,000 Hz (metal and SA/chrome); 4 $\frac{3}{8}$ " H x 17 $\frac{1}{8}$ " W x 15" D..... \$570

**KD-A7.** Similar to KD-A77 without multi-LED peak level indicators and three-head monitor switch; has fluorescent 12-level spectro peak indicators set at 60, 150, 400, 1000, 2400, 6000, and 15,000 Hz, X-cut SA record/playback and two-gap SA erase heads, and recording equalizer circuit; frequency response at 20 VU with metal and SA/chrome tapes 25-17,000 Hz  $\pm 3$  dB; 12 $\frac{1}{8}$ " D..... \$500

### KD-A66 Cassette Deck

Front-loading computer-controlled metal-compatible stereo cassette deck with super ANRS noise-reduction system, electronic governor dc capstan and dc reel motors, and X-cut Sen-Alloy record/play and two-gap Sen-Alloy erase heads. Features micro-processor-IC B.E.S.T. tuning system (all tapes are automatically adjusted for correct bias and equalization, fine bias in eight steps, fine equalization in eight steps/ch, sensitivity matching in eight steps, and error detection and correction) with front-panel LED display; dual VU meters with five-LED peak indicators; tape selector for normal, CrO<sub>2</sub>, FeCr, and metal tapes; record and output level controls; IC logic tape function controls; rec mute; timer standby; three-digit tape counter with memory stop/play and auto rewind/play; optional remote control available; fast-forward/rewind time 85 sec (C-60). Wow and flutter 0.04% wrms; frequency response  $\pm 3$  dB at -20 VU 30-16,000 Hz (metal and chrome), to 15,000 Hz (normal); S/N 60 dB without ANRS, metal; input sensitivity/impedance 0.2 mV/600-10,000 ohms (mic), 80 mV/100k ohms (line), 0.1 mV/k ohms (DIN); 4.75" H x 17.75" W x 12.25" D..... \$500

**KD-A55.** Similar to KD-A66 minus computer B.E.S.T. tuning system; has fast forward/rewind music scan system and mic/line input selector; 4 $\frac{3}{8}$ " H x 16 $\frac{1}{8}$ " W x 11 $\frac{1}{8}$ " D..... \$350

**KD-A33.** Similar to KD-A55 minus five-LED peak indicators, output level control, music scan, and memory play/stop and auto rewind/play ..... \$300

### KD-2 Portable Cassette Deck

Top-loading portable stereo cassette deck with super ANRS, electronic governor coreless dc motor, and SA record/playback and two-gap ferrite erase heads. Features three-way power source (ac, 6 V dc, or four "D" batteries); left/right master recording/volume control; three-position input switch; two round VU meters; separate headphone amp with level control; piano-key tape function controls; dual-ball cassette hold system; fast-forward/rewind time 90 sec (C-60). Wow and flutter 0.09% wrms; frequency response  $\pm 3$  dB 30-16,000 Hz (SA/chrome), to 15,000 Hz (normal); THD 1.2% at 0 VU; 1000 Hz; S/N 57 dB, improved 5 dB at 1000 Hz and 10 dB above 5000 Hz with ANRS; weighs 8.8 lbs with batteries; 3 $\frac{3}{8}$ " H x 10 $\frac{1}{8}$ " W x 11 $\frac{1}{8}$ " D..... \$350

### KD-A22 Cassette Deck

Front-loading metal-compatible stereo cassette deck with super ANRS noise-reduction system, electronic governor dc motor, and Metaperm record/playback and two-gap ferrite erase heads. Features tape selector for normal, FeCr, CrO<sub>2</sub>, and metal tapes; multiple music scan system in forward or reverse (can skip selections to next or preceding ones repeatedly by pushing pause and scan buttons the number of times user wants selections skipped); dual VU meters with five-LED peak indicators; record level control; rec mute; rewind/auto play; cue and review; three-digit tape counter with reset; timer standby; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.05% wrms; frequency response  $\pm 3$  dB at -20 VU 40-15,000 Hz (metal and chrome), to 14,000 Hz (normal); S/N 60 dB without ANRS, metal tape; input sensitivity/impedance 0.2 mV/600-10,000 ohms (mic), 80 mV/100k ohms (line), 0.1 mV/k ohms (DIN); 5 $\frac{1}{8}$ " H x 16 $\frac{1}{8}$ " W x 10 $\frac{3}{8}$ " D..... \$200

**KD-A11.** Similar to KD-A22 minus LED peak indicators, super ANRS noise-reduction system, music scan, rec mute, and cue and review; has Dolby noise-reduction system..... \$170

6

CASSETTE  
TAPE MACHINES

## KENWOOD

## KX-2060 Cassette Deck

Front-loading metal-compatible stereo cassette deck with dual Dolby noise-reduction system, elec-



tronically-controlled dc motor in two-belt drive system, and ferrite combination wide-gap record narrow-gap play and ferrite erase heads. Features separate bias and equalization selectors for normal, CrO<sub>2</sub>, and metal tapes optimized by record calibration and bias fine adjust controls with 400-Hz and 10-kHz tone oscillators and LEDs and LED tuning scale (indicates correct record calibration); dual fluorescent peak level meters; separate line and mic input level controls; output level control; tape source monitor switch; electronic pushbutton tape function controls with LED indicators; three-digit tape counter with memory; timer standby with external timer; one headphone and two mic jacks; fast-winding time 80 sec (C-60). Wow and flutter 0.04% wrms; frequency response  $\pm 3$  dB 25-17,500 Hz (normal), to 18,000 Hz (CrO<sub>2</sub> and metal); S/N with Dolby 66 dB (normal), 69 dB (CrO<sub>2</sub>), 70 dB (metal); HD 1.0% at 1000 Hz, 0 VU with metal; input sensitivity impedance 77.5 mV 50k ohms (line), 1.4 mV 10k ohms (DIN), 0.19 mV 56k ohms (mic); supplied with stereo connection cords and head cleaning set; 6" H  $\times$  17<sup>3</sup>/<sub>16</sub>" W  $\times$  14<sup>7</sup>/<sub>16</sub>" D..... \$649

## KX-1060 Cassette Deck

Front-loading metal-compatible stereo cassette deck with dual Dolby noise-reduction system, electronically-controlled dc motor, and ferrite combination record playback and ferrite erase heads. Features bias and equalization selectors for normal, chrome, and metal tapes with separate left right bias adjust controls and built-in 400-Hz and 10-kHz tone oscillators with LEDs; tape source monitor switch; input control with mic line DIN att mic selector; output level control; three-digit tape counter with memory and reset; two lit VU meters with peak-reading LED; full auto shut-off; lever tape function controls with LEDs; timer standby with external timer; fast-winding time 85 sec (C-60). Wow and flutter 0.045% wrms; frequency response  $\pm 3$  dB 30-17,000 Hz (normal), to 18,000 Hz (chrome and metal); S/N with Dolby 63 dB (normal), 65 dB (chrome and metal); input sensitivity impedance 77.5 mV 50k ohms (line), 0.75 mV 4k ohms (DIN), 0.19 mV 18k ohms (mic); 6" H  $\times$  17<sup>3</sup>/<sub>16</sub>" W  $\times$  14<sup>7</sup>/<sub>16</sub>" D..... \$450

## KX-800 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc motor, and ferrite combination record play and ferrite erase heads in three-head configuration. Features tape selector for normal, CrO<sub>2</sub>, FeCr, and metal tapes with bias fine adjust; dual VU meters with 0,  $\pm 3$ ,  $\pm 6$  dB LED peak indicators; record level control with mic/line/DIN att mic input selector; output level control; rec mute with LED; soft-touch tape transport controls; full auto shutoff; timer standby; three-digit tape counter with reset; fast forward/rewind time 85 sec (C-60). Wow and flutter 0.05% wrms; frequency response  $\pm 3$  dB 35-14,000 Hz (normal), to 16,000 Hz (CrO<sub>2</sub> and FeCr, and metal); S/N with Dolby 62 dB (normal), 64 dB (CrO<sub>2</sub>, FeCr, and metal); input sensitivity impedance 77.5 mV 50k ohms (line), 1.1 mV 4k

ohms (DIN), 0.19 mV 15k ohms (mic); 5<sup>1</sup>/<sub>2</sub>" H  $\times$  17<sup>3</sup>/<sub>16</sub>" W  $\times$  14" D..... \$369

## KX-600 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc motor, and Sendust Guard record play and ferrite erase heads. Features tape selector buttons for normal, FeCr, CrO<sub>2</sub>, and metal with bias fine adjust; dual VU meters with 0,  $\pm 3$ ,  $\pm 6$  dB peak indicator display; rec mute; record level control; timer standby; three-digit tape counter with reset; full auto shutoff; soft-touch tape transport controls; fast forward/rewind time 85 sec (C-60). Wow and flutter 0.05% wrms; frequency response  $\pm 3$  dB 40-14,000 Hz (normal), to 15,000 Hz (CrO<sub>2</sub>, FeCr, and metal); S/N with Dolby 62 dB (normal), 64 dB (CrO<sub>2</sub>, FeCr, and metal); input sensitivity impedance 77.5 mV 50k ohms (line), 0.1 mV k ohms (DIN), 0.2 mV 10k ohms (mic); 5<sup>1</sup>/<sub>2</sub>" H  $\times$  17<sup>3</sup>/<sub>16</sub>" W  $\times$  11<sup>1</sup>/<sub>2</sub>" D..... \$269

## KX-500 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc motor, and Sendust Guard record playback and ferrite erase heads. Features separate tape selectors for normal, FeCr, CrO<sub>2</sub>, and metal tapes with bias fine adjust; record mute switch; dual fluorescent bar-graph VU peak-reading meters; record level control; touch-key tape function controls; timer standby with external timer; three-digit tape counter; fast-winding time 85 sec (C-60). Wow and flutter 0.05% wrms; frequency response  $\pm 3$  dB 40-14,000 Hz (normal), to 15,000 Hz (CrO<sub>2</sub>, FeCr, and metal); S/N with Dolby 62 dB (normal), 64 dB (CrO<sub>2</sub>, FeCr, and metal); HD 1.3% at 1000 Hz, 0 VU with metal; input sensitivity impedance 77.5 mV 50k ohms (line), 0.19 mV 10k ohms (mic); 5<sup>1</sup>/<sub>2</sub>" H  $\times$  15<sup>3</sup>/<sub>16</sub>" W  $\times$  11<sup>1</sup>/<sub>2</sub>" D..... \$239

## KX-400 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc motor, and hard permalloy record play and ferrite erase heads. Features bias and equalization selectors for normal and chrome tapes; dual VU meters; left right record level control; rec mute; full auto shutoff; timer standby; three-digit tape counter with reset; fast forward/rewind time 85 sec (C-60). Wow and flutter 0.05% wrms; frequency response  $\pm 3$  dB 40-13,000 Hz (normal), to 15,000 Hz (chrome); S/N with Dolby 60 dB (normal), 62 dB (chrome); input sensitivity impedance 77.5 mV 50k ohms (line), 0.1 mV k ohms (DIN), 0.2 mV 10k ohms (mic); 5<sup>1</sup>/<sub>2</sub>" H  $\times$  15<sup>3</sup>/<sub>16</sub>" W  $\times$  11<sup>1</sup>/<sub>2</sub>" D..... \$189

## LUX

## Luxman Laboratory Reference Series

## 5K50 Cassette Deck

Front-loading metal-compatible stereo cassette deck with realtime processed dc record/playback amp circuitry, quartz-locked direct-drive dual capstan motor and two coreless reel motors, ferrite record and erase and Sendust playback heads, and Dolby noise-reduction system. Features four-digit, seven-segment LED electronic tape counter display (also reads record/playback time in min and sec) with memory and reset; fluorescent green 24-dot/ch plasma level meter with upper 12 dots for peak hold; variable bias with "Bridge Recording by Bias Current and Signal Current"; azimuth adjustment with two lamps; search cue/review; IC logic-controlled operations; equalization for normal, CrO<sub>2</sub>, and EX (metal) tapes; tape/source monitor switch; separate mic/line record level controls; rec mute; headphone jack; two mic jacks; 400 and 6000 Hz oscillator; provision for optional remote control. Wow and flutter 0.03% wrms; S/N with Dolby 66 dB (CrO<sub>2</sub>), 65 dB (LH); frequency response 30-18,000 Hz (CrO<sub>2</sub>), to 16,000 Hz (LH), both  $\pm 3$  dB; dist. 1.2% with LH tape at 1000 Hz, 0 dB; separation 35 dB at 1000 Hz, 0 dB; crosstalk -60 dB at 1000 Hz, 0 dB; input sensitivity 100 mV

(line), 0.25 mV (mic), 2 mV/1k ohms (DIN); output level 580 mV; headphone output 1 mW into 8 ohms; 5<sup>1</sup>/<sub>2</sub>" H  $\times$  17<sup>3</sup>/<sub>16</sub>" W  $\times$  14<sup>1</sup>/<sub>2</sub>" D..... \$1995

## K15 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby-HX noise-reduction system, dc



servo capstan and dc reel motors, three sendust heads, and two dc direct-coupled amplifiers for recording and playback. Features fluoroscan peak-reading meters with peak hold; three-position bias and equalization for LH, CrO<sub>2</sub>, and metal tapes with bias fine adjust; LED digital tape counter display with automatic program repeat on preset controls and auto play and rewind; logic solenoid tape function controls; rec mute; mic line mixing; tape source monitor switch; output level control; timer rec play with external audio timer. Wow and flutter 0.04% wrms; frequency response  $\pm 3$  dB 30-16,000 Hz (LH), to 17,000 Hz (CrO<sub>2</sub>), to 18,000 Hz (metal); S/N 65 dB with metal, Dolby on; rosewood vinyl cabinet; 4<sup>1</sup>/<sub>2</sub>" H  $\times$  17<sup>1</sup>/<sub>2</sub>" W  $\times$  14<sup>1</sup>/<sub>2</sub>" D..... \$899

## K12 Cassette Deck

Front-loading metal-compatible stereo cassette deck with realtime processed dc recording/playback amps, FG servo capstan and electronic governor reel motors, Sendust record/playback and ferrite erase heads, and Dolby noise-reduction system. Features four-digit, seven-segment LED digital tape counter timer; fluorescent green plasma level meter with peak hold function; IC logic-controlled operations controls; record mute; mic mixing; memory rewind; separate line/mic recording level controls; bias equalization selector for normal, CrO<sub>2</sub>, and EX (metal) tapes; provision for optional remote control; headphone jack. Wow and flutter 0.04% wrms; S/N with Dolby 69 dB (metal), 65 dB (CrO<sub>2</sub>), 63 dB (LH); frequency response  $\pm 3$  dB from 30-20,000 Hz (metal), to 18,000 Hz (CrO<sub>2</sub>), and to 16,000 Hz (LH); dist. 1.2% with LH tape at 1000 Hz, 0 dB; input sensitivity impedance 100 mV/50k ohms (line), 0.25 mV 50k ohms (mic), 30 mV 1k ohms (DIN); output level impedance 580 mV/220 ohms (line in), 1 mW into 8 ohms (headphone); 4<sup>1</sup>/<sub>2</sub>" H  $\times$  17<sup>1</sup>/<sub>2</sub>" W  $\times$  14<sup>1</sup>/<sub>2</sub>" D..... \$745

## K8 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc servomotor, and two sendust heads. Features solenoid tape function controls; three-position bias and equalization for LH, CrO<sub>2</sub>, and metal tapes with bias fine adjust; dc record amp; fluoroscan meters; LED digital tape counter display with memory rewind and auto rewind/replay switch; rec mute; output level control. Wow and flutter 0.055% wrms; frequency response 30-17,000 Hz (metal); S/N 65 dB with metal tape, Dolby on; 5<sup>1</sup>/<sub>2</sub>" H  $\times$  18<sup>1</sup>/<sub>2</sub>" W  $\times$  11<sup>1</sup>/<sub>2</sub>" D..... \$499

**K5A.** Similar to K8 without auto rewind/replay and LED digital counter display; wow and flutter 0.06% wrms; frequency response 30-20,000 Hz with metal; 5<sup>1</sup>/<sub>2</sub>" H  $\times$  17<sup>1</sup>/<sub>2</sub>" W  $\times$  10<sup>3</sup>/<sub>16</sub>" D..... \$399

**K1.** Similar to K5A minus fluoroscan peak-reading meters, memory rewind, and rec mute; has dual VU meters; wow and flutter 0.07% wrms; frequency response 30-17,000 Hz (metal); S/N 63 dB (metal)..... \$299

## MARANTZ

## SD 9000 Cassette CompuDeck

Two-speed (1<sup>7</sup>/<sub>8</sub> and 3<sup>3</sup>/<sub>4</sub> ips) microprocessor-controlled metal-compatible front-loading stereo cassette deck with dual Dolby circuitry. Sendust alloy three-head system, and two servo-controlled motors. CompuDeck microprocessor programming and



selection circuitry features random access memory and sequential access memory playback programming keyboard of up to 19 music selections; keyboard tape counter start/stop and memory call with counter memory mode selector; timer on/off with clock functions; timer/counter/clock selector switch; program start/skip/pause with program mode selector. Additional features include four-digit LED counter/timer/program indicator display; LED peak level bar graph display; pushbutton normal, special/CrO<sub>2</sub>, FeCr, and metal tape selectors with bias fine adjust ( $\pm 15\%$ ); speed selector; separate mic and line record level controls; tape/source monitor switch; output level control; rec mute; electronic feather-touch tape function controls with LED play, pause, and record indicators; built-in record/playback timer; sensor total system shutoff; front-panel access for head adjustment. Wow and flutter 0.03% wrms (3 $\frac{3}{4}$  ips), 0.05% wrms (1 $\frac{1}{2}$  ips); frequency response  $\pm 3$  dB at high speed 25-23,000 Hz (metal), to 22,000 Hz (FeCr and CrO<sub>2</sub>), to 20,000 Hz (normal), at standard speed  $\pm 3$  dB 25-20,000 Hz (metal), to 18,000 Hz (FeCr), to 17,000 Hz (CrO<sub>2</sub>), to 16,000 Hz (normal); S/N with Dolby over 5000 Hz 72 dB (high speed), 69 dB (standard speed); 5 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{2}$ " D..... \$800

**SD 8000.** Similar to SD 9000 without tape/source monitor switch; has single-Dolby circuitry ..... \$700

### SD 6000 Cassette Deck

Two-speed (1 $\frac{1}{2}$  and 3 $\frac{3}{4}$  ips) metal-compatible front-loading cassette deck with Dolby noise-reduction system, Sendust alloy record/playback and erase heads, and two servo-controlled motors. Features LED bar graph peak-level meters; three-digit tape counter with reset and memory rewind/replay; pushbutton tape selector for normal, special/CrO<sub>2</sub>, FeCr, and metal tapes with bias fine adjust ( $\pm 15\%$ ); speed selector switch; record/playback timer; rec mute; separate mic and line record level controls; output level control; auto slack take-up; electronic feather-touch tape function controls with LED play, pause, and record indicators; total system sensor shut-off. Wow and flutter 0.03% wrms (3 $\frac{3}{4}$  ips), 0.05% wrms (1 $\frac{1}{2}$  ips); frequency response  $\pm 3$  dB at 3 $\frac{3}{4}$  ips 30-22,000 Hz (metal), to 21,000 Hz (FeCr and CrO<sub>2</sub>), to 18,000 Hz (normal), at 1 $\frac{1}{2}$  ips 30-19,000 Hz (metal), to 17,000 Hz (FeCr and CrO<sub>2</sub>), to 15,000 Hz (normal); S/N with Dolby over 5000 Hz 71 dB (3 $\frac{3}{4}$  ips), 68 dB (1 $\frac{1}{2}$  ips); 5 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{2}$ " D..... \$550

**SD 4000.** Similar to SD 6000 without memory rewind/replay, bias fine adjust, auto slack take-up, output level control, and record/playback timer; has CompuSkip automatic sequential program selection in rewind or fast forward, dual-Dolby circuitry, tape/source monitor switch, cue and review, piano-key tape function controls, and LED record indicator; wow and flutter 0.04% wrms (3 $\frac{3}{4}$  ips), 0.06% (1 $\frac{1}{2}$  ips); FeCr and CrO<sub>2</sub> tape frequency response at 3 $\frac{3}{4}$  ips 30-20,000 Hz  $\pm 3$  dB; S/N with Dolby over 5000 Hz 70 dB (3 $\frac{3}{4}$  ips), 67 dB (1 $\frac{1}{2}$  ips); 5 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  9 $\frac{1}{2}$ " D..... \$450

### SD 3020 Cassette Deck

Two-speed (1 $\frac{1}{2}$  and 3 $\frac{3}{4}$  ips) metal-compatible front-loading stereo cassette deck with Dolby noise-reduction system and two superhard permalloy heads; has two peak-level LEDs. Wow and flutter 0.07% wrms (1 $\frac{1}{2}$ ), 0.05% wrms (3 $\frac{3}{4}$ ); overall frequency response 30-16,000 Hz  $\pm 3$  dB (1 $\frac{1}{2}$ ), 30-19,000 Hz  $\pm 3$  dB (3 $\frac{3}{4}$ ); S/N with Dolby 64 dB (1 $\frac{1}{2}$ ), 67 dB (3 $\frac{3}{4}$ ); stereo separation 40 dB at 1000 Hz; fast forward/rewind time 100 sec; 5 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  9 $\frac{1}{2}$ " D..... \$315

**SD 1020.** Similar to SD 3020; wow and flutter 0.08% wrms (1 $\frac{1}{2}$ ), 0.06% (3 $\frac{3}{4}$ ); S/N with Dolby 63 dB (1 $\frac{1}{2}$ ), 64 dB (3 $\frac{3}{4}$ ) ..... \$245

### SD 800 Cassette Deck

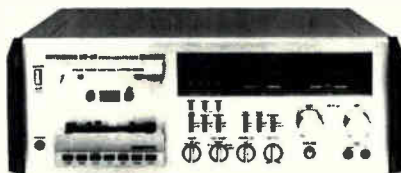
Front-loading stereo cassette deck with Dolby noise-reduction system and super hard record/playback permalloy head. Features separate bias and equalization for normal, special/CrO<sub>2</sub>, and FeCr tapes; separate left and right record level controls; two VU meters; three-digit tape counter with reset; total system shut-off. Wow and flutter 0.08% wrms; fre-

quency response  $\pm 3$  dB 35-15,000 Hz (FeCr), to 14,000 Hz (CrO<sub>2</sub>), to 13,000 Hz (normal); S/N 63 dB with Dolby over 5000 Hz; 5 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  9 $\frac{1}{2}$ " D..... \$200

## MITSUBISHI

### DT-40 Cassette Deck

Front-loading dual-speed (1 $\frac{1}{2}$  and 3 $\frac{3}{4}$  ips) metal-compatible stereo cassette deck with Dolby noise-



reduction system with multiplex filter, dual-speed PLL-controlled dc servo capstan and dc reel motors, and Sendust combination four-micron record/triple-laminated core one-micron playback head and ferrite/Sendust erase heads. Features bias and equalization selector for normal, FeCr, special, and metal tapes with bias fine adjust; dual peak-reading meters with peak hold; fluorescent digital tape counter display with read out/in memory, repeat, and reset; separate line and mic level controls; tape/source monitor switch; output level control; automatic spacing-pause system (ASPS) button for equal spacing between selections; record/play timer with external audio timer; feathertouch logic microswitch controls; LED tape speed, Dolby, and metal tape indicators; fast forward/rewind time 80 sec (C-60). Wow and flutter 0.05% wrms (1 $\frac{1}{2}$  ips), 0.04% wrms (3 $\frac{3}{4}$  ips); frequency response  $\pm 3$  dB at 1 $\frac{1}{2}$  ips: 40-15,000 Hz (normal), to 17,000 Hz (special), to 18,000 Hz (FeCr), to 20,000 Hz (metal),  $\pm 3$  dB at 3 $\frac{3}{4}$  ips: 40-20,000 Hz (normal), to 22,000 Hz (special and FeCr), to 23,000 Hz (metal); S. N 68 dB with Dolby, metal tape; input sensitivity/impedance 0.3 mV/2.2k ohms (mic), 100 mV/47k ohms (line); 6.75" H  $\times$  16.75" W  $\times$  14.875" D..... \$650

### M-T01 Cassette Deck

Compact direct front-loading stereo cassette deck with Dolby noise-reduction system, closed-loop dual-capstan drive dc servomotor, and sendust recording, playback head. Features solenoid-operated microswitch controls; automatic spacing-pause button; twin peak-reading VU meters; three-position bias and equalization for normal, special, and FeCr tapes; multiplex filter; timer control with external timer unit; memory-stop and memory-play; microphone and line input level controls; output level control; headphone jack; two mic jacks with left channel doubling as mono mic jack; three-digit tape counter; fast forward/rewind time 80 sec (C-60). Wow and flutter 0.05% wrms; S/N (weighted at +3 dB) 56 dB without Dolby, 64 dB with Dolby; frequency response 40-13,000 Hz (normal), to 15,000 Hz (special and FeCr), all  $\pm 3$  dB; erasure ratio 70 dB at 1000 Hz; crosstalk 35 dB between channels, 65 dB between tracks; harmonic dist. 1.0% at 400 Hz; input sensitivity 0.3 mV (mic), 100 mV (line); bias frequency 85 kHz; 5 $\frac{1}{2}$ " H  $\times$  10 $\frac{1}{2}$ " W  $\times$  9 $\frac{1}{2}$ " D..... \$560

### DT-7 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and dc servo capstan motor. Features tape selector switch for normal, FeCr, and separate metal/special tapes; separate left/right record level controls; rec mute; dual VU meters; soft-touch transport controls; timer standby with external audio timer; fast forward/rewind time 105 sec (C-60). Wow and flutter 0.07% wrms; frequency response 40-14,000 Hz (normal), to 16,000 Hz (FeCr, special, metal); S/N 66 dB with Dolby (weighted at 3% THD, 400 Hz, metal tape); input sensitivity/impedance 0.3 mV/1.8k ohms (mic), 90 mV/50k ohms (line); 6 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  14 $\frac{1}{2}$ " D..... \$260

## NAD (USA)

### 6140M Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby HX and noise-reduction system, dc servo capstan motor, and Sendust record/play and ferrite erase heads. Features dual-LED peak level bar graph display; bias and equalization for normal, FeCr, CrO<sub>2</sub>, and metal tapes; record and playback level controls; feathertouch solenoid tape transport controls; three-digit tape counter with memory rewind; fast-winding time 70 sec (C-60) Wow and flutter 0.045% wrms; frequency response  $\pm 3$  dB 35-16,000 Hz (normal), to 17,000 Hz (CrO<sub>2</sub> and FeCr), to 19,000 Hz (metal); S/N 65 dB with Dolby, metal tape (A weighted); input sensitivity/impedance 0.5 mV/10k ohms (mic), 35 mV/50k ohms (line), 6 mV/25k ohms (DIN); 4.5" H  $\times$  16.5" W  $\times$  11" D..... \$479

### 6040 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby HX and B noise-reduction system, dc servo capstan motor, and Sendust record/play and ferrite erase heads. Features illuminated peak-reading VU meters; bias and equalization pushbuttons for normal, FeCr, CrO<sub>2</sub>, and metal tapes; record and output level controls; three-digit tape counter with memory rewind; fast-winding time 110 sec (C-60). Wow and flutter 0.07% wrms; frequency response 20-18,000 Hz  $\pm 3$  dB (CrO<sub>2</sub>, FeCr, and metal); S/N 64.5 dB with Dolby, metal tape (CCIR weighted); input sensitivity/impedance 0.2 mV/2k ohms (mic), 60 mV/50k ohms (line), 3 mV/15k ohms (DIN); 4.5" H  $\times$  16.5" W  $\times$  9" D..... \$279

## NAKAMICHI

### 1000ZL Computing Cassette Deck

Front-loading computer-controlled discrete stereo cassette deck with Dolby noise-reduction system,



double-capstan transport, and three heads. Micro-computer automatically calibrates azimuth, bias, level and equalization of any quality tape; features four tape memories for recording conditions obtained by computer; 15 program RAMM with 30 command memories via high-speed bi-directional search; LED status indicators. Additional features include 70/120- $\mu$ sec equalization selector; under/normal/over bias set selector; 400-Hz test tone oscillator; quartz-controlled bias oscillator; multiplex and subsonic filter switches; dual fluorescent recording level bar graph display with peak hold and VU/peak switch; two-channel mic, line input, and output level vertical slide controls; tape/source monitoring; LED four-digit tape counter readout with memory stop/play; pitch control; timer record/play with external audio timer; C-MOS logic function controls powered by motor-drive cam; direct-coupled recording and playback amplifiers and double NF equalizer circuitry; three microphone inputs for tri-mic recording and mic/line mixing; provision for external noise-reduction system. Wow and flutter 0.04% wrms; frequency response 10-25,000 Hz  $\pm 3$  dB; THD 0.8% with metal tape; S/N 66 dB at 3.0% THD. 400 Hz, with Dolby; EIA rack-mounting; 10 $\frac{1}{2}$ " H  $\times$  20 $\frac{3}{4}$ " W  $\times$  12 $\frac{1}{2}$ " D..... \$3800

### 680ZX Cassette Deck

Front-loading two-speed (1 $\frac{1}{2}$  and 3 $\frac{3}{4}$  ips) metal-compatible stereo cassette deck with double Dolby noise-reduction system, PLL dc servo main, dc azimuth alignment, dc reel, and dc cam motors, crystal record/playback and E-8L direct-flux erase

heads in discrete three-head configuration, and Automatic Azimuth Alignment. Features double NF dc record and phase-corrected double NF playback amplifiers; RAM program search system with LED program indicator; three-position tape selector for EX, SX, and ZX tape with equalization switch; fluorescent VU/peak-reading meter display with meter calibration/peak hold/VU meter switch; manual two-speed cueing; master and record level controls; tape/source monitor switch; output level control; playback pitch control; three-digit tape counter with memory reset; timer record/play with external timer; solenoidless tape function controls. Frequency response  $\pm 3$  dB at 1 7/8 ips 10-22,000 Hz, at 1 5/8 ips 10-15,000 Hz; THD with metal tape 0.8% at 1 7/8 ips, 1.5% at 1 5/8 ips; S/N with Dolby at 400 Hz, 3.0% THD 66 dB at 1 7/8 ips, 60 dB at 1 5/8 ips; EIA 19-in rack mount; 5 3/4" H  $\times$  19" W  $\times$  13 3/4" D..... \$1550

**670ZX.** Similar to 680ZX except one-speed cassette deck; has 47-dB peak-reading meters; no switchable meter calibration/peak hold/VU control.. \$1150

**660ZX.** Similar to 670ZX minus tape/source monitoring; has single Dolby noise-reduction system..... \$995

**RM-200.** Wired remote control duplicates control systems of 660ZX, 670ZX, and 680ZX; includes record, two-speed cueing, and RAM function; 15-ft cable..... \$45

### 680 Cassette Deck

Front-loading two-speed (1 7/8 and 1 5/8 ips) metal-compatible stereo cassette deck with Dolby noise-reduction system, PLL dc servo main, dc reel, and dc cam motors, and Crystalloy record/playback and E-8L direct-flux erase heads in discrete three-head configuration. Features double NF dc record and phase-corrected double NF playback amplifiers; RAM program search system with LED program indicator; manual high-speed cueing; fluorescent VU/peak-reading meter display with meter calibration/peak hold/VU meter switch; three-position tape selector for EX, SX, and ZX (metal) tapes with separate EQ switch; tape/source monitor switch; timer start; playback pitch control; three-digit tape counter with memory reset; solenoidless tape function controls. Wow and flutter 0.04% wrms (1 7/8 ips), 0.08% wrms (1 5/8 ips); frequency response  $\pm 3$  dB, at 1 7/8 ips 10-22,000 Hz, at 1 5/8 ips 10-15,000 Hz; THD with metal tape 0.8% at 1 7/8 ips, 1.5% at 1 5/8 ips; S/N with Dolby at 400 Hz, 3% THD 66 dB at 1 7/8 ips, 60 dB at 1 5/8 ips; 4 7/8" H  $\times$  19" W  $\times$  12 3/4" D..... \$1350

**RM-200.** Wired remote control duplicates control system of 680; includes record, two-speed cueing, and RAM function; 15-ft cable..... \$45

### 700II Cassette Deck

Stereo record/play deck with double Dolby noise-reduction system, dc servomotor, and permalloy playback and record head azimuth alignment beacon in three-head design. Features IC logic tape transport controls; separate bias and equalization switches for EX and SX tape; LED record calibration indicators; 50-dB peak-reading meters; line and mic input level controls; blend mic control; tape-source monitor switch; output level control; playback pitch control; three-digit tape counter with memory start; auto shutoff. Wow and flutter 0.05% wrms; frequency response 35-20,000 Hz  $\pm 3$  dB; S/N 65 dB at 400 Hz, 3.0% THD (with Dolby and SX tape); THD 1.5% at 400 Hz, 0 dB; inputs 0.2 mV at 10,000 ohms (mic), 50 mV at 50,000 ohms (line); outputs 1 V max (line variable), 40 mV/ch max. into 8 ohms (headphones); 10 1/2" H  $\times$  20 1/2" W  $\times$  5 1/2" D..... \$1140

### 582 Discrete Cassette Deck

Metalloy-compatible discrete record/play cassette deck with Dolby noise-reduction system, "Second-Generation" Direct-Flux erase head, Crystalloy re-

cord SuperHead, and Crystalloy playback SuperHead with discrete configuration for independently-adjustable record and play azimuths, and PLL dc servomotor and two dc motors in closed-loop, double-capstan system. Features three-position tape selector for EX, SX, and ZX tapes; equalization selector; defeatable multiplex filter; tape-start memory and timer self-start in record/play; built-in 400-Hz (0 dB) and 15-kHz ( $\pm 20$  dB) test oscillators; three-position record calibration and bias adjust controls; source/tape monitoring; 47-dB peak-reading meters; double-negative-feedback record and play amplifiers; MOS logic-controlled anti-spill and tape-end shutoff; high-output 8-ohm headphone amplifier. Frequency response 20-20,000 Hz  $\pm 3$  dB; wow and flutter 0.05% wrms max., 0.1% weighted peak; S/N 66 dB at 400 Hz, 3.0% THD, A-weighted (with ZX metalloy tape and Dolby); THD 0.8% at 400 Hz, 0 dB (with ZX tape); erasure 60 dB with ZX tape; input 50k ohms at 50 mV; output 2.2k ohms at 1 V; headphone output 45 mW; 5 1/4" H  $\times$  19 1/2" W  $\times$  13 3/4" D..... \$890

**581.** Same as 582 without source/tape monitoring..... \$770

**RM-200.** Wired remote control duplicates control systems of 582 and 581; includes record, two-speed cueing, and RAM function; 15-ft cable... \$45

### 482 Cassette Deck

Front-loading metal-compatible stereo cassette deck with double Dolby noise-reduction system, three-motor drive including motor-driven cam system, and Crystalloy record/playback and dual-gap Direct-Flux erase heads in discrete three-head design. Features tape buttons for EX, SX, and ZX tape with equalization switch; 47-dB peak-reading meters; sliding left/right record level controls; tape; source monitor switch; three-digit tape counter with reset and memory start; auto shutoff. Wow and flutter 0.06% wrms; frequency response 20-20,000 Hz; S/N 63 dB at 400 Hz, 3.0% THD, A weighted (ZX tapes, with Dolby); THD 0.9% at 400 Hz, 0 dB with ZX tape; input 30k ohms at 50 mV; output 2.2k ohms at 1 V; headphone output 10 mV. 5 3/4" H  $\times$  17 3/4" W  $\times$  11 1/4" D..... \$775

**481.** Similar to 482 minus tape/source monitoring; has single Dolby noise-reduction system..... \$655

**480.** Similar to 481 except has Sendust record/playback and Direct-Flux erase heads in two-head design and is driven by PLL dc servomotor and two dc motors in closed-loop double-capstan system; S/N 62 dB; THD 1.0%; output 2.2k ohms at 600 mV; available in matte black or silver finish.... \$495

**RM-100.** Wired remote control duplicates all tape function controls on 480, 481, and 482; 15-ft cable..... \$45

### 580M Cassette Deck

Metal-compatible stereo cassette deck with Dolby noise-reduction system, PLL dc servomotor and two dc motors in closed-loop double capstan, and Sendust record/playback and Direct-Flux erase heads in two-head configuration. Features double negative-feedback record and play amplifiers; separate bias and equalization for EX, SX, and ZX tapes; 47-dB peak-reading meters; built-in 400-Hz test oscillators for record calibration controls; manual two-speed cueing; tape-start memory; timer record/play; C-MOS logic-controlled anti-spill and tape-end shutoff; high-output headphone amplifier (8 ohms). Wow and flutter 0.05% wrms; frequency response 20-20,000 Hz  $\pm 3$  dB; S/N 64 dB at 400 Hz, 3.0% THD, A weighted (ZX tape with Dolby); THD 1.0% at 400 Hz, 0 dB; input 50k ohms at 50 mV; output 3.9k ohms at 1 V; headphone output 45 mV; 5 1/4" H  $\times$  19 1/2" W  $\times$  13 3/4" D..... \$690

**RM-200.** Wired remote control duplicates control system of 580M; includes record, two-speed cueing, and RAM function; 15-ft cable..... \$45

## NEAL-FERROGRAPH (USA)

### 312 Cassette Recorder

Front/top-loading metal-compatible stereo cassette recorder with Dolby HX and B noise-reduction systems, three motors, and Sen-alloy heads; vertical or horizontal operation. Features tape selector switch for normal, ferric oxide, CrO<sub>2</sub>, and metal tapes; dual

peak-reading meters with bias and 500-Hz tone calibration switches; logic-controlled solenoid transport controls with LEDs; stop sensor; record level control with separate mic, DIN, and line pushbutton selectors; mono switch (enables recording on both tracks from mono input and gives mono output at headphone socket); balance control; output level control; provision for optional full-function remote control; fast forward/rewind time 50 sec (C-60). Wow and flutter 0.09% wrms (DIN); frequency response -1, -3 dB 35-14,000 Hz (normal), to 15,000 Hz (FeCr, CrO<sub>2</sub>, and metal); S/N with Dolby HX and B on 66 dB (normal and special); input sensitivity/impedance 300  $\mu$ V/2k ohms (mic), 80 mV/200k ohms (high-level line), 3 mV/10k ohms (low-level line); brushed silver anodized aluminum, black suede, or two-tone brown finishes; 8.9" H  $\times$  17.5" W  $\times$  6.1" D..... \$1195

## NIKKO

### ND-790 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system. Features bias and equalization selector for normal, FeCr, CrO<sub>2</sub>, and metal tapes with fine bias and equalization adjust; dual-LED vertical VU/peak-reading meter display with switchable VU/peak hold button; three-digit tape counter with memory rewind; rec mute; input level control with mic/DIN/line input selector; output level control; cue and review; fast forward/rewind time 75/90 sec (C-90). Wow and flutter 0.06% wrms (JIS); frequency response -3/-6 dB 30-14,000 Hz (normal), to 16,000 Hz (FeCr), to 20,000 Hz (metal); S/N 56 dB at 1000 Hz without Dolby; max. input -26 dB  $\pm$  4 dB (line), -72 dB  $\pm$  4 dB (mic); 19-in rack mountable; matte black anodized aluminum finish..... \$330

### ND-590 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and hard permalloy record/play and ferrite erase heads. Features separate bias and equalization switches for ferric, CrO<sub>2</sub>, FeCr, and metal tapes; dual VU meters; rec mute; switchable multiplex filter; separate input and output level controls; LED record and Dolby indicators; fast-winding time 80 sec (C-60). Wow and flutter 0.055% wrms; frequency response 30-15,000 Hz (ferric), to 17,000 Hz (CrO<sub>2</sub> and FeCr), to 18,000 Hz (metal); overall S/N 63 dB with Dolby; input sensitivity 50 mV (line), 0.25 mV (mic); matte black or silver finish; 5 1/4" H  $\times$  16 1/2" W  $\times$  10 3/4" D..... \$210

## ONKYO

### TA-2080 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and two-channel Dolby recording calibrations, PLL dc servo drive and dc reel motors in two-capstan drive system, and Sendust alloy record and playback and laminated core erase heads. Features automatic "Accu-Bias" control with built-in 400- and 10,000-Hz oscillators (compatible with all tape formulations); separate bias and equalization for metal, high, and normal tapes; electronic logic-controlled feathertouch tape function controls; VU meters with left/right 10-step LED peak indicators; fade out control; mic mixing; three-digit tape counter with reset and memory rewind; built-in timer function operable with optional audio timer; multiplex filter; auto stop; record mute; lighted auto Accu, Dolby, record, play, and pause indicators; line and mic input level controls; left/right channel mic jacks with auto stereo/mono switchover; phone jack (8-200 ohm headphones); soft eject; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.045% wrms; frequency response 20-16,000 Hz (normal), to 18,000 Hz (high), to 20,000 Hz (metal); S/N 62 dB with metal tape, Dolby out; input level/impedance 0.3 mV/5k ohms (mic), 50 mV/100k ohms (line); output level 775 mV at 0 VU (line out); 6 1/2" H  $\times$  17 1/2" W  $\times$  14 3/4" D..... \$800



### TA-2060 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby HX and noise-reduction system,



two direct-drive motors, and sendust alloy record/play and double-gap ferrite erase heads. Features normal, high, and metal tape selectors with LED indicators and Accubias adjust for any tape type; Dolby NR/HX selector with LED HX indicator; peak-hold meters; fade out control; tape/source monitoring; input and output level controls; rec mute; full logic tape function controls; three-digit tape counter with memory play/stop; timer record/play with external audio timer. Wow and flutter 0.04% wrms; frequency response 20-19,000 Hz  $\pm$  3 dB with metal tape; S/N 60 dB without Dolby ..... \$450

### TA-2040 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, frequency generator dc servomotor, and Sendust alloy record/playback and ferrite erase heads. Features "Accu-Bias" adjust with separate selectors for metal, high, and normal tape; fluorescent VU level meters; electronic pushbutton tape function controls; auto stop; input selector; three-digit tape counter with reset. Wow and flutter 0.055% wrms; frequency response 20-19,000 Hz (metal); S/N 60 dB without Dolby; 4 1/2" H x 16 1/2" W x 13" D ..... \$370  
**RC-5.** Remote control unit for TA-2040..... \$50

### TA-630DS Cassette Deck

Front-loading stereo cassette deck with dual-Dolby circuitry, PLL dc servomotor in two-belt drive transport, and hyperbolic S&S Sendust head. Features "Accu-Bias" with built-in 400- and 10,000-Hz oscillators with Accu bias adjust; three-position bias and equalization for CrO<sub>2</sub>, FeCr, and normal tapes; three-digit tape counter with reset and memory rewind; piano-key tape function controls; dual VU meters with two peak indicators; auto stop; timer start/pause provision; rec mute; Dolby FM/line/mic-DIN input selector; input and output level controls; high/low impedance headphone jack. Wow and flutter 0.055% wrms; frequency response 20-15,000 Hz (normal), to 18,000 Hz (FeCr and CrO<sub>2</sub>); S/N 68 dB with Dolby (FeCr above 5000 Hz); input level/impedance 0.3 mV/50k ohms (mic), 50 mV/50k ohms (line), 0.1 mV/5k ohms (DIN); output level/load impedance 0.775 V/50k ohms (line and DIN); headphone impedance 8-200 ohms; 6 1/4" H x 16 1/2" W x 12" D..... \$350  
**TA-630DM.** Same as TA-630DS except has metal-compatibility; frequency response 20-19,000 Hz with metal tape..... \$350

### TA-2050 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system with multiplex filter, direct-drive servo capstan and dc reel motors, and hyperbolic-designed hard permalloy record/playback and laminated-core ferrite erase heads. Features tape selector for metal, high, and normal tape with "ACCUBIAS" adjust for fine tuning; dual peak-reading meters; fade-out/in control for gradual erasure at beginning or end of tape; rec mute; input selector; three-digit tape counter with memory play/stop and reset; timer play/record with external audio timer; IC-logic electronic soft-touch tape function controls; optional RC-5 remote control unit available; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.045% wrms; frequency response  $\pm$  3 dB 30-16,000 Hz (normal), to 17,000 Hz (high position), to 18,000 Hz (metal); S/N 60 dB with metal tape, Dolby out; input sensitivity/impedance 0.3 mV/5k ohms (mic), 50 mV/50k ohms (line); 4.75" H x 16.5" W x 10.63" D.. \$300

### TA-2010 Cassette Deck

Front-loading stereo cassette deck with dual-Dolby

circuitry, dc servomotor, and hard permalloy Widex record/playback and ferrite erase heads. Features "Accu-Bias" adjust; three-position bias and equalization for high, FeCr, and normal tapes; piano-key tape function controls; three-digit tape counter with reset; input level control; two VU meters with  $\pm$  3 dB Dolby level indication; auto stop; pause control; two mic jacks; high-impedance phone jack; fast forward/rewind 90 sec (C-60). Wow and flutter 0.08% wrms; frequency response 20-14,000 Hz (normal), to 16,000 Hz (FeCr and CrO<sub>2</sub>); S/N 54 dB with FeCr tape, Dolby out; input level/impedance 0.3 mV/5k ohms (mic), 50 mV/50k ohms (line); output level/load impedance 480 mV/50k ohms (line); head-phone load impedance 8-200 ohms; 5 1/8" H x 16 1/2" W x 10 1/2" D..... \$260

### TA-2020 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system with multiplex filter, high-torque dc servomotor, and hard permalloy record/playback and double-gap laminated-core ferrite erase heads. Features tape selector buttons for normal, high, and metal tapes with "ACCUBIAS" adjust for fine tuning; separate left/right input level controls; dual illuminated VU meters; three-digit tape counter with reset; timer start/pause button with external audio timer; LED record and Dolby indicators; full auto stop; piano-key tape function controls; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.06% wrms; frequency response  $\pm$  3 dB 30-14,000 Hz (normal), to 15,000 Hz (high and metal); S/N 60 dB with metal, Dolby out; input sensitivity/impedance 0.3 mV/5k ohms (mic), 50 mV/50k ohms (line); 4.75" H x 16.5" W x 10.625" D ..... \$225

### TA-1900 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and hard permalloy record/play and ferrite erase heads. Features bias and equalization selectors for normal, high, and metal tapes; separate left/right input level controls; two VU meters. Wow and flutter 0.07% wrms; frequency response 30-14,000 Hz  $\pm$  3 dB with metal tape; S/N 56 dB without Dolby..... \$190

## OPTONICA

### RT-6905 Cassette Deck

Front-loading fully-programmable metal-compatible stereo cassette deck section on upper faceplate and



computer-controlled audio timer section on lower faceplate incorporated into single unit. Cassette deck with dual Dolby noise-reduction system and FM multiplex filter, quartz-locked PLL servo capstan and two-speed FG servo reel motors, and four heads including dual Sendust alloy record/play head and sensing head for APMS and APSS; features Automatic Program Music Selector (APMS), which programs for automatic play up to 15 selections on cassette in any order--APMS highlights include auto repeat control (repeats auto play instructions up to five times), two direct memories (M1 button memorizes tape counter number when depressed and M2 memorizes desired auto stop point), two counter memory buttons (set desired auto start and stop tape counter numbers for tape section replay), auto cue button for delayed programming, skip/check button (skips to start and plays next selection during playback/repeat of program or checks song numbers and order of program in stop mode), deck programming tone (indicates computer is on), auto space key (inserts four-second blank segment anywhere on tape and switches to

pause after four seconds have elapsed), and digital LCD with APMS instructions conveyed on front panel. Additional cassette deck features include Automatic Program Search System (APSS) which skips to start of next selection or beginning of previous selection; tape selector for normal, FeCr, CrO<sub>2</sub>, and metal tapes with sensitivity and bias recording fine adjust and sensitivity/bias record calibration controls for each tape type, two-color Opto™ peak level display with peak hold and auto reset (holds peak level for three seconds and then automatically resets); source/tape monitor buttons, separate mic and line input controls with limiter; output level control; microcomputer-controlled tape tension adjuster; tape function buttons with LEDs and function indicators, along with recording and APSS, duplicated on infrared remote control (included). Audio timer section: enables user to program up to 42 different instructions; features 12/24-hr LCD quartz clock/programmable instructions, built-in alarm, time signal tone, and memory power protection. Wow and flutter 0.038% wrms; frequency response 20-22,000 Hz (metal); S/N 70 dB with Dolby over 5000 Hz; ebony cabinet with gold-trimmed controls..... \$1600

### RT-6502 Cassette Deck

Front-loading microprocessor-controlled metal-compatible stereo cassette deck with Dolby noise-reduction system, frequency-generated servomotor, and superhard permalloy head. Features Auto Program Locate Device (APLD) with five memory functions (locates beginning of selection, automatically plays any segment of tape in forward or reverse, auto on/off, repeatedly plays certain segment of tape, and has rewind and tape counter memory); quartz digital clock and LCD display; LCD electronic tape and elapsed time displays; Opto peak level display with peak hold function; record and Dolby LED indicators; separate mic and line input level controls; four-position bias and equalization for normal, CrO<sub>2</sub>, FeCr, and metal particle tapes; full auto stop; illuminated tape compartment. Wow and flutter 0.045% wrms; frequency response 20-17,000 Hz (normal), to 18,000 Hz (CrO<sub>2</sub>), to 20,000 Hz (metal); S/N 68 dB with Dolby..... \$400  
**RT-6506.** RT-6502 with ebony finish ..... \$400

### RT-6202 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system. Features nine-position Auto Program Locate Device (APLD) that locates any selection in forward or reverse; logic solenoid-controlled transport; Opto peak level display with peak hold; mic/line mixing; output volume control; four-position bias and equalization for normal, CrO<sub>2</sub>, FeCr, and metal particle tapes; timer/start mechanism. Wow and flutter 0.04% wrms; frequency response 25-15,000 Hz (normal), to 17,000 Hz (CrO<sub>2</sub>), to 18,000 Hz (metal); S/N 67 dB with Dolby..... \$380  
**RT-6206.** RT-6202 with ebony finish ..... \$380

### RT-6101 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system. Features nine-position Auto Program Locate Device (APLD) that scans and stops at desired selection; four-position bias and equalization for normal, CrO<sub>2</sub>, FeCr, and metal particle tapes; Opto peak level display with peak hold; electronic auto stop; output volume control; mic/line mixing. Wow and flutter 0.055% wrms; frequency response 25-15,000 Hz (normal), to 16,000 Hz (CrO<sub>2</sub>), to 18,000 Hz (metal); S/N 67 dB with Dolby..... \$290  
**RT-6105.** RT-6101 with ebony finish ..... \$290

### RT-6002 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system. Features Auto Program Search System (APSS); bias and equalization for normal, CrO<sub>2</sub>, FeCr, and metal tapes; electronic auto stop; left and right input controls with mic/line input selector; output volume control; Opto peak level display. Wow and flutter 0.06% wrms; frequency response 30-17,000 Hz (metal); S/N 67 dB with Dolby..... \$210  
**RT-6006.** RT-6002 with ebony finish..... \$210

# 6 CASSETTE TAPE MACHINES

## PANASONIC

### RN-006A Microcassette Recorder

Two-hr two-speed microcassette recorder with electronic governor motor and capstan drive. Features built-in condenser mic; full auto-stop; LED record/battery indicators; edit function; tape speed selector; one-touch record/cue/review controls; locking pause control; five-hr rechargeable system; comes with ac adaptor, five-hr recharging pack, telephone pick up, two blank cassettes, earphones, carrying case and strap; champagne gold finish; 5 1/2" H x 2 7/8" W x 3 1/8" D ..... \$260

## PEARLCORDER by OLYMPUS

### S802 Microcassette Recorder/Player

Two-hour two-speed pocket microcassette recorder with capstan drive. Features built-in 45-mm dynamic speaker; built-in electret condenser microphone; side-mounted rewind, stop, and play switches; top-mounted volume, fast forward/cue slider, and record button controls; tape eject; auto off; LED battery check recording indicator; digital tape counter. Tape speeds 1.2 cm/sec for 120 min, 2.4 cm/sec for 60 min; frequency response 300-5000 Hz; max output 150 mW at 2.4 cm/sec; silver finish; 9 oz; 4 8" H x 2.6" W x 1" D..... \$150

## JC PENNEY

### MCS 3563 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; permalloy record/play and ferrite erase heads; dc motor; FM multiplex filter; memory reset; bias control for normal, FeCr and CrO<sub>2</sub> tapes; mic line source selectors; timer standby; record mute; tape run, peak, record, memory, and Dolby LEDs; low, mid and high tone controls; power on/off; tape counter with reset; all playback/record function modes; record level meters and controls; left right mic jacks; headphone jack. Wow and flutter 0.07% wrms; frequency response 20-12,500 Hz ± 3 dB (normal tape), 20-15,000 Hz ± 3 dB (CrO<sub>2</sub> and FeCr tapes); S/N 64 dB (CrO<sub>2</sub> tape with Dolby), 63 dB (normal tape with Dolby); THD 1.4% ..... \$270

### MCS 3570 Cassette Deck

Front-loading stereo cassette deck with Dolby noise reduction system. Features LED ten-program memory preset; bias and equalization for normal, FeCr, and CrO<sub>2</sub> tapes; mic mute line input selector; record and output level controls; two VU meters with LED peak indicator; three-digit tape counter with reset; auto shut-off. Wow and flutter 0.09% wrms; frequency response 30-14,000 Hz (CrO<sub>2</sub> and normal); S/N with Dolby 64 dB (CrO<sub>2</sub>), 63 dB (normal); wood grain-finished vinyl cabinet with brushed aluminum faceplate; 5 1/4" H x 15 3/4" W x 10 7/8" D..... \$250

### MCS 3552 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system. Features separate bias and equalization for normal, FeCr, and special CrO<sub>2</sub> tapes; separate left and right record level controls; dual VU meters; three-digit tape counter with reset; auto shut-off. Wow and flutter 0.14% wrms; frequency response 40-12,500 Hz ± 3 dB; S/N with Dolby 56 dB (CrO<sub>2</sub>) and 54 dB (normal and FeCr); 6 1/4" H x 16 1/4" W x 10 1/4" D..... \$180

**MCS 3536.** Similar to MCS 3552 minus FeCr tape selection; wow and flutter 0.25% wrms; response 40-15,000 Hz ± 3 dB (CrO<sub>2</sub>), to 14,000 Hz (ferric oxide); S/N 57 dB with Dolby; 5 7/8" H x 14 1/2" W x 10 1/4" D ..... \$150

## PHASE LINEAR

### 7000 Series Two Cassette Deck

Hidden-loaded (behind front panel) microprocessor-controlled metal-compatible stereo cassette deck with dual Dolby noise-reduction system, quartz PLL direct-drive capstan and coreless dc reel motors, and uni-crystal ferrite record/playback and separate erase heads. Features MicroScan system that automatically adjusts and optimizes bias, level, and equalization with all tape types including metal; nine memory locations with LED digital readout for storage of bias/level/equalization settings for playback accuracy; dual LED VU bar graph display with peak/peak hold/average and dimmer selectors; tape selector for standard, FeCr, CrO<sub>2</sub>, and metal tapes with bias fine adjust; four-digit tape counter with LED digital readout; mic/line input controls; output level control; pitch control; record/playback timer capability with external timer. Wow and flutter 0.03% wrms; frequency response ± 3 dB 25-16,000 Hz (standard), to 18,000 Hz (FeCr and CrO<sub>2</sub>), to 19,000 Hz (metal); S/N 70 dB with Dolby; THD 1.0%; input sensitivity/impedance 0.3 mV/10k ohms (mic), 60 mV/100k ohms (line); fast winding time 75 sec (C-60). All controls, except tape transport and LED readout and VU meter displays, behind front panel; 12 1/2" H x 20 3/4" W x 19 1/4" D ..... \$1350

## PHILIPS

### N5781 Cassette Deck

Front-loading microcomputer-controlled metal-compatible stereo cassette deck with calibrated Dolby noise-reduction system, two electronically-controlled dc motors, and three ferrite heads. Features four-position tape selector for ferro, FeCr, chrome and metal tapes with separate left/right bias fine adjust, 400- and 10,000-Hz test oscillators, and separate left/right Dolby calibration controls; LED digital tape counter display with memory 1 and 2, memory clear, memory execute, auto rewind, and auto play selector buttons; fluorescent peak-reading bar graph display with peak hold; master record level control with separate mic and line controls; output level control; tape/source monitoring; ± 5% pitch control; solenoid tape function controls; rec mute; timer record/play with external audio timer; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.045% wrms; overall frequency response 20-20,000 Hz; S/N 72.5 dB with metal tape, Dolby on; silver front panel; 5.9" H x 17 7" W x 10.23" D ..... \$570

**N5788.** Rack-mount version of N5781 with black



anodized front panel; 19" W..... \$600

### N5631 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc motor, and two ferrite heads. Features switchable peak/VU fluorescent bar graph meter display; bias and equalization slide selectors for ferro, CrO<sub>2</sub>, and metal tapes with bias fine adjust; on/off limiter; separate mic and line record level controls; output level control; electronic pushbutton tape function controls including rec mute; timer provision; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.06% wrms; overall frequency response 30-18,000 Hz; S/N 70.5 dB with Dolby, metal tape; silver front panel; 5 9" H x 16 5" W x 10 25" D ..... \$370

**N5391.** Similar to N5631 minus peak/VU switch, bias fine adjust, limiter, and electronic pushbutton transport controls; has record level control with mic/line/rec mute input selector, line output level control, and piano-key tape function controls; wow and flutter 0.18% wrms; overall frequency response 40-16,000 Hz; S/N 62.5 dB with Dolby, metal tape ..... \$270

## N5371 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, dc motor, and two ferrite heads. Features bias and equalization selectors for ferro, FeCr, and chromium tapes; dual VU meters with + 3-dB LED peak indicator; record level control with mic/rec mute input selector; line output control; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.08% wrms; overall frequency response 30-17,000 Hz; S/N 70.5 dB with Dolby, ferro-chrome; 6" H x 16.5" W x 10.25" D ..... \$230

**N5171.** Similar to N5371 minus rec mute, input selector, line output level control, and LED peak indicator; has two-position bias and equalization for chromium and ferro tapes and separate left/right record level controls; wow and flutter 0.2% wrms; overall frequency response 40-12,500 Hz; S/N 58.5 dB with Dolby, chromium tape ..... \$180

## PIONEER

### CT-F1250 Cassette Deck

Microprocessor-controlled front-loading metal-compatible stereo cassette deck with Dolby noise-reduc-



tion system, closed-loop dual-capstan transport with quartz-locked direct-drive capstan motor and dc fast-winding motor, and "Single-Crystal Ferrite Solid" record/playback and Alfex erase heads. Features four memory functions; monitoring-while-recording capability; two 24-segment Fluorescan average/peak/peak-hold meters; automatic bias and equalization controls; multiplex filter; mic/line mixing and recording; auto stop; quartz-locked pitch control; fast forward/rewind time 65 sec (C-60). Wow and flutter 0.03% wrms; frequency response 20-16,000 Hz ± 3 dB (standard), to 17,500 Hz with CrO<sub>2</sub> and FeCr tapes, to 18,500 Hz (metal); S/N 69 dB with Dolby (chrome); two mic, two line, and DIN inputs; two line, DIN, and headphone outputs; 7 3/8" H x 16 1/8" W x 14 1/8" D ..... \$695

### CT-F950 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronically controlled dc servomotor with built-in generator for capstan drive in closed-loop dual-capstan transport, and crystalline ferrite record/playback and Alfex erase heads in three-head configuration. Features digital readout tape counter; memory/repeat functions; electronic microprocessor for record/play level display (20 segments in each channel, covering a range from 20 dB to 7 dB, can also show VU's and peak level); electronic tape transport with soft-touch controls; bias adjust facility; automatic chrome tape selection; add-on recording; timer start; fast-winding time 85 sec (C-60). Wow and flutter 0.04% wrms; frequency response 25-15,000 Hz ± 3 dB (standard LH tape), 25-17,000 Hz ± 3 dB (chromium dioxide and FeCr tapes), 25-18,000 Hz ± 3 dB (metal); S/N 59 dB (Dolby off), 69 dB (Dolby on); HD 1.3% at 0 dB; mike input sensitivity/impedance 0.3 mV-100 mV/30k ohms; 7 3/8" H x 16 1/8" W x 14 1/8" D..... \$595

### CT-F850 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system; electronically-controlled dc servomotor with built-in generator for capstan drive and dc high-torque fast-winding motor in closed-loop dual-capstan transport, and Sendust record and playback and Alfex erase heads. Features Fluorescan level indicators with average and peak functions. Wow and flutter 0.04% wrms; frequency response 20-17,000 Hz (standard LH tape), to 18,000 Hz (CrO<sub>2</sub> and FeCr tapes), to



19,000 Hz (metal tape); S/N with Dolby 69 dB; HD 1.2%; mic input sensitivity/impedance 0.3 mV-100 mV/10k ohms; 5 7/8" H x 16 1/8" W x 14 1/8" D ..... \$495

### CT-F750 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, high-torque dc servomotor, and stationary four-track record/playback and two ferrite erase heads. Features auto reverse; line/mic-DIN input selector; soft-touch buttons; vertical-hold tape mounting; LED Dolby; bias and equalization for standard, FeCr, CrO<sub>2</sub>, and metal tapes; illuminated cassette compartment; fast forward/rewind time 85 sec (C-60). Wow and flutter 0.05% wrms; frequency response 20-15,000 Hz (standard), to 17,000 Hz (FeCr and CrO<sub>2</sub>), to 18,000 Hz (metal), all ±3 dB; S/N 69 dB with Dolby; HD 1.2% at 0 dB; mic input sensitivity/impedance 0.3 mV-100 mV/10k ohms; 5 7/8" H x 16 1/8" W x 13 1/4" D ..... \$395

### CT-F650 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc servomotor, and hard permalloy record/playback and ferrite erase heads. Features automatic music selection that locates gaps between musical selections; vertical cassette holding mechanism; LED Dolby; tape selector switch; tape compartment illumination; complete complement of inputs and outputs; fast forward/rewind time 85 sec (C-60). Wow and flutter 0.05% wrms; frequency response 20-15,000 Hz (standard), to 17,000 Hz (chrome and ferrichrome), to 18,000 Hz (metal); S/N 69 dB with Dolby; HD 1.2%; 5 7/8" H x 16 1/8" W x 13 1/4" D ..... \$295

### CT-F500 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, dc servomotor, and hard permalloy recording/playback and ferrite erase heads. Features flywheel capstan drive; automatic shut-off in all modes; soft-damping cassette holder; three-mode tape bias/equalization switching; left/right mic jacks; two large VU meters; three-digit tape counter; record and Dolby on indicators; fast-winding time 90 sec (C-60). Wow and flutter 0.05% wrms; frequency response 40-13,000 Hz ±3 dB (STD tape), 40-15,000 Hz ±3 dB (CrO<sub>2</sub> and FeCr tape); S/N 54 dB (Dolby off), 64 dB (Dolby on); HD 1.5%; mike input sensitivity/impedance 0.3 mV-110 mV/10k ohms; 5 1/2" H x 14 1/8" W x 10 1/4" D ..... \$195

## REALISTIC

### SCT-3100 Cassette Deck

Front-loading metal-compatible stereo cassette deck with double Dolby noise-reduction system, FG servo capstan and dc reel motors, and ferrite-core titanium-surface record/play and double-gap ferrite erase heads in three-head configuration. Features adjustable fine bias with built-in twin-tone test oscillators; left/right record calibration controls; solenoid-controlled logic tape function controls; auto rewind/play; dual VU meters with +3 and +6 peak-reading LEDs; timer switch with external timer. Wow and flutter 0.04% wrms; frequency response ±3 dB 30-19,000 Hz (ferric), to 20,000 Hz (CrO<sub>2</sub>), to 21,000 Hz (metal); S/N 67 dB with metal, Dolby on (3.0% THD, CCIR weighted). \$600

### SCT-31 Cassette Deck

Front-loading metal-compatible stereo cassette deck with double Dolby noise-reduction system, electronically-governed dc capstan servomotor, and ferrite-core titanium-surface record/playback and double-gap ferrite erase heads in three-head configuration. Features 16-segment LED bar graph display with switchable peak hold; variable bias; auto stop; power-assist tape function controls; record control with memory ring. Wow and flutter 0.05% wrms; frequency response ±3 dB 30-19,000 Hz (ferric), to 20,000 Hz (CrO<sub>2</sub>), to 21,000 Hz (metal); S/N 66 dB with metal tape, Dolby on (3.0% THD, CCIR weighted). \$430

### SCT-21 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and hard permalloy record/playback and ferrite erase heads. Features variable bias adjust; 14-segment fluorescent bar graph display with switchable peak hold; auto stop; record level control with memory ring; output level control. Wow and flutter 0.06% wrms; frequency response ±3 dB 30-15,000 Hz (ferric), to 18,000 Hz (CrO<sub>2</sub>), to 20,000 Hz (metal); S/N 66 dB with metal tape, Dolby on (3.0% THD, CCIR weighted). \$300

### SCT-22 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and hard permalloy record/play and ferrite erase heads. Features tape selector for ferric, CrO<sub>2</sub>, and metal tapes; 12-segment fluorescent peak-level bar graph display; auto stop; separate record level controls with memory ring; output level control. Wow and flutter 0.07% wrms; frequency response ±3 dB 30-13,000 Hz (ferric), to 14,000 Hz (CrO<sub>2</sub>), to 15,000 Hz (metal); S/N 65 dB with metal tape, Dolby on (3.0% THD, CCIR weighted). \$220

### SCT-24 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system with switchable multiplex filter. Features dual LED peak metering; auto stop; tape selector buttons for ferric, CrO<sub>2</sub>, and metal tapes; digital tape counter. Wow and flutter 0.15% wrms; frequency response ±3 dB 30-12,000 Hz (ferric and CrO<sub>2</sub>), to 14,000 Hz (metal); S/N 64 dB with metal tape, Dolby on (3.0% THD, CCIR weighted). \$150

## REFERENCE by QUADRAFLEX

### 412D Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and two heads. Features dual VU meters with peak-reading LED; metal, special, and normal tape selector buttons; separate left/right input selectors; three-digit tape counter with reset; piano-key tape function controls include one for door. Wow and flutter 0.06% wrms; frequency response 30-18,000 Hz ±3 dB (metal); S/N 62 dB with Dolby; 6 1/4" H x 15 1/4" W x 10" D ..... \$250

## ROTEL

### RD-2200M Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronic governor dc motor, and Sendust recording/playback and ferrite erase heads. Features bias and equalization controls for normal, CrO<sub>2</sub>, and metal tapes with adjustable bias control; input selector for line, mic, and record mute; multiplex filter; 13-element LED bar chart peak level indicator; three-digit tape counter; pushbutton controls for reset and memory rewind; operation controls for eject, record, rewind/review, play, fast forward/cue, and pause; headphone amplifier with control; headphone and two mic jacks. Wow and flutter 0.05%; frequency response 30-17,000 Hz ±3 dB (normal) and 30-19,000 Hz ±3 dB (CrO<sub>2</sub> and FeCr tapes); S/N 64 dB with CrO<sub>2</sub>, Dolby in; rack mountable; 5 7/8" H x 19" W x 10 1/8" D ..... \$450

### RD-1000M Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, FG servo capstan and dc servo reel motors, and hard permalloy record/playback and ferrite erase heads. Features feathertouch solenoid tape function controls with LEDs; auto stop, auto repeat, and auto rewind; three-digit tape counter with memory rewind/play; two VU meters with LED peak indicator; normal, CrO<sub>2</sub>, and metal tape selectors; record/play timer buttons with optional external timer unit; direct-mode switching; fast-winding time 90 sec (C-60). Wow and flutter 0.045% wrms; 3 7/8" H x 16 1/8" W x 11 1/8" D ..... \$440

### RD-2000 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, electronic governor dc motor, and Sendust recording/playback head. Features three-position bias and equalization with adjustable bias control; five LED peak indicators; two VU meters; input selector for line and mic/DIN; multiplex filter; headphone and two mic jacks; damped ejection; tape counter. Wow and flutter 0.05%; frequency response 30-14,000 Hz ±3 dB (normal), 30-15,000 Hz ±3 dB (CrO<sub>2</sub>), 30-16,000 Hz (FeCr); S/N 63 dB with Dolby; rack mountable; 5 1/8" H x 19" W x 10 3/8" D ..... \$370

### RD-500 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronic governor dc motor, and High B permalloy record/playback and ferrite core erase heads. Features four-position tape selection for normal, chrome, ferric, and metal tapes with bias adjust and LED indicators for each tape; twin VU meters with peak LED; full auto shutoff; three-digit tape counter; headphone and mic jacks; fast-winding time 90 sec (C-60). Wow and flutter 0.05% wrms; frequency response ±3 dB 30-14,000 Hz (normal), to 15,000 Hz (chrome), to 16,000 Hz (FeCr), to 17,000 Hz (metal); dist. 0.6% with metal at 400 Hz; S/N 64 dB with Dolby, chrome tape; input sensitivity/impedance 0.3 mV/10k ohms (mic), 25 mV/47k ohms (line); 2 7/8" H x 16 1/8" W x 10 1/8" D ..... \$320

## SAE

### SAE Two Line

### C4 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and FG servo motor. Features logic solenoid tape function controls; three-position bias and equalization for normal, FeCr, and high output (includes metal) tapes with variable bias; auto stop; LED peak level bar graph display; mic, line, and record mute switch; tape counter with reset; timer switch; optional remote control. Wow and flutter 0.06%; frequency response 30-18,000 Hz ±2.5 dB ..... \$550  
Remote One. Remote control unit for C4 and C3D ..... \$50

### C3D Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, FG servomotor, and two heads. Features solenoid logic tape function controls; auto stop; memory rewind; bias and equalization for low noise, FeCr, and CrO<sub>2</sub> tapes; two lighted VU meters; mic/line input selector; rec mute; record level and record balance controls; timer switch for optional external ac timer; provision for optional remote control. Wow and flutter 0.06%; frequency response 30-18,000 Hz ±3 dB; S/N 64 dB with Dolby; 5.3" H x 17.4" W x 14" D ..... \$400

## SANSUI

### SC-5330 Cassette Deck

"Direct-O-Matic" front-loading metal-compatible stereo cassette deck with dual-Dolby circuitry, FG



servo capstan and reel motors with holdback tension mechanism, special record/playback and ferrite erase heads, and dc amplifier circuitry. Features three-position bias and equalization selectors for metal, CrO<sub>2</sub>, and normal tapes; two VU meters with five-LED peak-reading indicators; memory rewind, replay, and repeat buttons; rec mute; mic/line mix-

# 6 CASSETTE TAPE MACHINES

ing with switchable limiter; output level control; logic-controlled feather-touch tape function controls include tape lead-in; LED record, play, and pause indicators; three-digit tape counter with reset; provision for optional external play/record timer Wow and flutter 0.038% wrms; frequency response  $\pm 3$  dB 20-20,000 Hz (metal), to 17,000 Hz (CrO<sub>2</sub>); S/N 69 dB with Dolby; black matte finish with detachable rack-mounting handles; 7<sup>1</sup>/<sub>2</sub>" H x 19" W (handles on) x 12" D ..... \$520

## SC-3300 Cassette Deck

"Direct-O-Matic" front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, FG servo capstan and reel motors with hold-back tension mechanism, and special record/playback and ferrite erase heads. Features separate bias and equalization for metal, CrO<sub>2</sub>, and normal tapes; 16-segment LED peak-reading indicators; memory rewind; auto replay and repeat functions; record mute; logic-controlled feather-touch tape function controls include tape lead-in; LED record, pause, and play indicators; mic line mixing; provision for external record play timer. Wow and flutter 0.04%; frequency response 20-16,000 Hz  $\pm 3$  dB (metal and CrO<sub>2</sub>); S/N 69 dB with Dolby; rosewood-grain finish; 6<sup>3</sup>/<sub>16</sub>" H x 16<sup>3</sup>/<sub>16</sub>" W x 12" D ..... \$420

**SC-3330.** Same as SC-3300 except has black matte finish with detachable rack-mounting handles; 6<sup>3</sup>/<sub>16</sub>" H x 19" W (handles on) x 12" D. . \$420

## SC-1300 Cassette Deck

"Direct-O-Matic" front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc drive motor and constant-tension holdback mechanism, and special record/playback and ferrite erase heads. Features 16-segment LED peak-reading indicators; three-position bias and equalization for metal, CrO<sub>2</sub>, and normal tapes; record mute; tape lead-in; separate input/output level controls; provision for external timer activation. Wow and flutter 0.05%; frequency response 20-16,000 Hz  $\pm 3$  dB (metal and CrO<sub>2</sub>); S/N 69 dB with Dolby; simulated rosewood finish; 6<sup>3</sup>/<sub>16</sub>" H x 16<sup>3</sup>/<sub>16</sub>" W x 12<sup>3</sup>/<sub>16</sub>" D ..... \$320

**SC-1330.** Same as SC-1300 except has black matte finish with detachable rack-mount handles; 6<sup>3</sup>/<sub>16</sub>" H x 19" W x 12<sup>3</sup>/<sub>16</sub>" D ..... \$320

## D-100 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system with new IC circuitry, high-torque dc motor, and Hi-B permalloy record/playback head. Features bias and equalization selection for normal, chrome, and metal tapes with dc equalizer amp circuitry; VU meters with tri-color five-LED bar graph peak-reading display; auto stop; recording level control; soft-eject system. Wow and flutter 0.055%; frequency response  $\pm 3$  dB 20-17,000 Hz (metal), to 16,000 Hz (chrome), to 15,000 Hz (normal). ..... \$250

## D-90 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, dc servomotor, and super hard permalloy record playback and ferrite erase heads. Features separate bias and equalization for normal, FeCr, and CrO<sub>2</sub> tapes; dual VU meters; record level control; piano-key tape function controls; provision for external timer with auto shut-off. Wow and flutter 0.055%; frequency response  $\pm 3$  dB 35-15,000 Hz (CrO<sub>2</sub>), to 14,000 Hz (normal); S/N 65 dB with Dolby; metal cabinet; 5<sup>3</sup>/<sub>8</sub>" H x 16<sup>3</sup>/<sub>16</sub>" W x 9<sup>3</sup>/<sub>16</sub>" D. .... \$200

## SANYO

## RD5025 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, high

torque dc motor, and two heads. Features Automatic Music Select System (scans tape in either direction and reverts to play mode at beginning of next selection); bias and equalization selectors for normal, FeCr, CrO<sub>2</sub>, and metal tapes; separate left/right input level controls; dual seven-LED peak-reading bar graph display; three-digit tape counter with reset; auto stop ..... \$190

## RD5035 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, Sendust Alloy record/playback head and ferrite erase head, and dc high torque motor. Features equalization and bias switches for metal, CrO<sub>2</sub>, FeCr, and normal tapes with LEDs; two input level controls for both channels; multiplex filter; dual VU meters; digital tape counter with reset; auto stop; air damped cassette door; headphone jack; two mic jacks with left doubling as mono mic. Wow and flutter 0.08%; frequency response 30-19,000 Hz ..... \$170

## RD5350 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, PLL dc servomotor with 34 stator and 34 rotor poles, and permalloy recording head. Features LED peak indicators; separate calibrated input and output level controls; two lighted VU meters; record mute; standby timer; full automatic stop; locking pause; separate bias and equalization switching (CrO<sub>2</sub> and normal); separate left and right microphone jacks; headphone jack; digital tape counter; Dolby on/off switch; line-in, mic/DIN input button. Frequency response up to 17,000 Hz with CrO<sub>2</sub> and FeCr tape; S/N 64 dB (Dolby on); simulated walnut covered metal cabinet ..... \$150

## RD5030 Cassette Deck

Front-loading stereo record/playback deck with Dolby noise-reduction system; tape select switch for normal, CrO<sub>2</sub>, and FeCr tape; pause control; calibrated level controls; separate bias/equalization switching; full automatic stop; left and right mike inputs; frequency 30-16,000 Hz; wow and flutter 0.08%; S/N 62 dB (Dolby on) ..... \$140

## RD5009 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system. Features tape selector for normal and CrO<sub>2</sub> with separate metal on/off selector; dual five-LED peak level bar graph display; separate left/right input level controls; auto stop. Wow and flutter 0.07% wrms; frequency response 30-16,000 Hz  $\pm 3$  dB ..... \$130

## RD5008 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, high torque dc motor, and two heads. Features auto stop; CrO<sub>2</sub> and normal tape selector; dual five-LED VU bar graph indicators; input level controls; piano-key tape function controls. Wow and flutter 0.1% wrms; frequency response 30-14,000 Hz  $\pm 3$  dB (CrO<sub>2</sub>); S/N 60 dB (CrO<sub>2</sub> with Dolby); 5" H x 14" W x 8" D ..... \$120

## PLUS Series

## RD5372 Cassette Deck

Front-loading microprocessor-controlled metal-compatible stereo cassette deck with dual-Dolby noise-reduction system, dc servo capstan and dc governor reel motors, and separate but integrated Sendust Alloy record and play heads and ferrite erase head; solenoid transport control. Features digital tape counter readout display with reset and memory rewind; auto rewind and repeat; PLL speed control; timer standby for record/playback with provision for external timer/programmer; tape/source monitor switch; defeatable FM multiplex filter; defeatable peak limiter; normal, FeCr, CrO<sub>2</sub>, and metal tape selection; lighted front-panel function and tape selection indicators; LED record, pause, and play indicators; two VU meters with peak LEDs; removable damped door. Wow and flutter 0.04% wrms; frequency response  $\pm 3$  dB 30-19,000 Hz (metal), to 18,000 Hz (CrO<sub>2</sub> and FeCr), to 15,000 Hz (normal); S/N with Dolby 70 dB (metal), 69 dB (FeCr), 67 dB (CrO<sub>2</sub>), and 66 dB (normal); THD 0.8% (metal), 1.5% (CrO<sub>2</sub>); input sensitivity/

impedance 0.26 mV/600 ohms (mic), 100 mV/100 ohms (line); line output level/load impedance 1 V/7k ohms; channel separation 42 dB; crosstalk  $-70$  dB; 6<sup>1</sup>/<sub>2</sub>" H x 17<sup>3</sup>/<sub>16</sub>" W x 12<sup>3</sup>/<sub>16</sub>" D ..... \$400

**RD5370.** Similar to RD5372 without digital tape counter readout display, LED record, play, and pause indicators, auto rewind and repeat, and PLL-synthesized speed control; CrO<sub>2</sub> and FeCr frequency response 30-17,000 Hz, normal 30-13,000 Hz; THD 1.7% (metal), 2.0% (CrO<sub>2</sub>) ..... \$340

## D65 Cassette Deck

Front-loading metal-compatible auto-reverse cassette deck with Dolby noise-reduction system, Sendust Alloy record/playback and ferrite erase heads, and dc servo capstan and dc governor reel motors. Features separate bias and equalization for metal, CrO<sub>2</sub>, FeCr, and normal tapes; defeatable FM multiplex filter; auto stop; edit record mute control; digital tape counter with reset; timer standby function with provision for optional external timer/programmer; output level control; two lighted VU meters; feather-touch solenoid transport controls and mode selectors; lighted tape direction arrows; damped door; headphone jack; two mic jacks with left jack doubling as mono mic jack. Wow and flutter 0.04% wrms; frequency response  $\pm 3$  dB 20-18,000 Hz (metal), to 16,000 Hz (CrO<sub>2</sub> and FeCr), to 13,000 Hz (normal); S/N with Dolby 70 dB (metal), 69 dB (FeCr), 67 dB (CrO<sub>2</sub>), and 66 dB (normal); THD 0.8% (metal), 1.5% (CrO<sub>2</sub>); input sensitivity/impedance 0.3 mV/400-10,000 ohms (mic), 50 mV/50 ohms (line); line output level/load 0.53 V/7k ohms; channel separation 42 dB; crosstalk  $-70$  dB; 5<sup>1</sup>/<sub>2</sub>" H x 16<sup>1</sup>/<sub>2</sub>" W x 10<sup>1</sup>/<sub>2</sub>" D ..... \$400

## D62 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, Sendust Alloy record/playback and ferrite erase heads, and dc servomotor. Features automatic music select system (automatically locates gap between musical selections on cassette) with flashing tape direction arrows; two-color fluorescent peak-hold level bar graph displays with high-speed peak/standard VU selection switch; bias and equalization for metal, CrO<sub>2</sub>, FeCr, and normal tapes; mic/line mixing; output level control; defeatable FM multiplex filter; auto stop; piano-key transport controls include record mute; digital tape counter with memory rewind; timer standby with provision for external tuner and programmable timer; removable damped door; black metal finish. Wow and flutter 0.04%; frequency response  $\pm 3$  dB 20-20,000 Hz (metal), to 17,000 Hz (CrO<sub>2</sub> and FeCr), to 13,000 Hz (normal); S/N with Dolby 70 dB (metal), 67 dB (CrO<sub>2</sub>), 69 dB (FeCr), and 66 dB (normal); THD 0.8% (metal), 1.5% (CrO<sub>2</sub>); input sensitivity/impedance 0.3 mV/400-10,000 ohms (mic), 50 mV/50k ohms (line); output level/load 530 mV/7k ohms (line), 50 mV/8 ohms (phone); channel separation 42 dB; crosstalk  $-70$  dB; 5<sup>1</sup>/<sub>2</sub>" H x 17<sup>1</sup>/<sub>2</sub>" W x 11<sup>1</sup>/<sub>2</sub>" D ..... \$330

**D60.** D62 with silver faceplate ..... \$320

**D55.** Similar to D60 without automatic music select system ..... \$290

**D45.** Similar to D55 without dual-mode bar graph display and memory rewind; has one-color peak-hold bar graph display; wow and flutter 0.05% wrms; frequency response  $\pm 3$  dB 30-19,000 Hz (metal), to 17,000 Hz (CrO<sub>2</sub> and FeCr), to 13,000 Hz (normal); S/N with Dolby 67 dB (metal), 66 dB (FeCr), 64 dB (CrO<sub>2</sub>), 63 dB (normal); headphone output/load 32 mV/8 ohms; channel separation 38 dB; 5<sup>3</sup>/<sub>8</sub>" H x 16<sup>1</sup>/<sub>2</sub>" W x 11<sup>1</sup>/<sub>2</sub>" D ..... \$260

## H. H. SCOTT

## 6750M Cassette Deck

Slimline front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, FG dc servomotor, and super B permalloy record/playback and dual-gap ferrite erase heads. Features bias and equalization for normal, CrO<sub>2</sub>, and metal tapes; dual fluorescent peak level indicator display; full logic feather-touch tape function controls; rec mute; separate left/right record level controls with mic/line input selector; three-digit tape counter with memory rewind; optional full-function remote con-



tol unit available; fast forward/rewind time 80 sec (C-60). Wow and flutter 0.045% wrms; frequency



response  $\pm 3$  dB 25-16,000 Hz (normal), to 17,000 Hz (CrO<sub>2</sub>), to 18,000 Hz (metal); S/N 66 dB with Dolby, metal tape; input sensitivity 3 mV (mic), 100 mV (line); optional 19-in rack mount; 4" H x 17" W x 10" D..... \$350  
**665DM.** Similar to 675DM minus memory rewind and dual fluorescent peak level display; has dual VU meters; wow and flutter 0.05% wrms..... \$300

### 671DM Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc motor, and super hard permalloy "B" record/playback head. Features bias and equalization selectors for normal, FeCr, CrO<sub>2</sub>, and metal tapes; dual VU meters with LED peak indicator; record level control; mic/line input selector; output level control; three-digit tape counter with memory rewind and reset; full auto shutoff; LED Dolby and record indicators; fast forward/rewind time 90 sec. Wow and flutter 0.04% wrms; frequency response 25-15,000 Hz (normal), to 17,000 Hz (FeCr), to 18,000 Hz (CrO<sub>2</sub> and metal); S/N 66 dB with Dolby (A weighted); input sensitivity/impedance 60 mV/47k ohms (line), 5 mV/5k ohms (mic); optional 19-in rack-mount handles available; 5.25" H x 17" W x 11.75" D..... \$250

### 610D Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc motor, and super hard permalloy record/play head. Features bias and equalization selector for normal, FeCr, and CrO<sub>2</sub> tape; dual VU meters; record level control; mic/line input selector; three-digit tape counter with reset; LED record and Dolby indicators; full auto stop; fast forward/rewind time 90 sec. Wow and flutter 0.05% wrms; frequency response 25-15,000 Hz (normal), to 16,000 Hz (FeCr and CrO<sub>2</sub>); S/N 64 dB with Dolby (A weighted); input sensitivity/impedance 60 mV/47k ohms (line), 5 mV/5k ohms (mic); optional 19-in rack-mount handles available; 5.25" H x 17" W x 11.75" D..... \$200

## SHARP

### RT-4488 Cassette Deck

Front-loading microprocessor-controlled metal-compatible stereo cassette deck with Dolby noise-reduction system, frequency-generator dc servomotor, and superhard permalloy record/play and double-gap ferrite erase heads. Features 10-selection auto program locate device (APLD) with five separate memory functions (locates beginning of selection, automatically plays any segment of tape in forward or reverse modes, automatic on/off, repeatedly plays certain segment of tape, and has rewind and tape counter memory), LCD quartz digital clock and program selection display, and LCD electronic tape and elapsed time displays; Sharpscan peak level display with peak hold function; LED record and Dolby indicators; separate mic and line input level controls; output level control; four-position bias and equalization for normal, CrO<sub>2</sub>, FeCr, and metal particle tapes; auto stop; illuminated tape compartment. Wow and flutter 0.048% wrms; frequency response 20-16,000 Hz (normal), to 17,000 Hz (CrO<sub>2</sub>), to 18,000 Hz (FeCr), to 20,000 Hz (metal); S/N 68 dB with Dolby; 5 1/8" H x 16 1/8" W x 14 1/8" D..... \$390

### RT-2266 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc motor, and permalloy-plus record/play and double-gap ferrite erase heads. Fea-

tures nine-position auto program locate device (APLD) (locates any selection in forward or reverse) with display panel; Sharpscan peak level display with peak hold; mic/line mixing; output volume control; four-position bias and equalization for normal, CrO<sub>2</sub>, FeCr, and metal particle tapes; solenoid-controlled transport operations; timer/start mechanism; auto spacing; auto stop. Wow and flutter 0.045% wrms; frequency response 25-15,000 Hz (normal), to 16,000 Hz (CrO<sub>2</sub>), to 18,000 Hz (FeCr), to 19,000 Hz (metal); S/N 67 dB with Dolby; 5 1/8" H x 16 1/8" W x 10 1/8" D..... \$380

### RT-2251 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, two dc motors, and permalloy record/playback head. Features Automatic Program Search System that scans in forward and reverse modes and stops at desired selection; soft-touch solenoid tape function controls; LED control display; three-digit tape counter with reset; two VU meters with LED peak indicator; high/low bias and equalization buttons; mic/line input selector; left and right record level controls; output level control. Wow and flutter 0.055% wrms; frequency response 25-17,000 Hz (FeCr); S/N 66 dB with Dolby. \$360

### RT-1199 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc motor, and permalloy-plus record/play and double-gap ferrite erase heads. Features nine-position auto program locate device (scans tape in forward or reverse and stops at desired selection); four-position bias and equalization for normal, CrO<sub>2</sub>, FeCr, and metal particle tapes; Sharpscan peak level display with peak hold function; electronic auto stop; output volume control; mic/line mixing. Wow and flutter 0.058% wrms; frequency response 30-15,000 Hz (normal), to 16,000 Hz (CrO<sub>2</sub> and FeCr), to 18,000 Hz (metal); S/N 67 dB with Dolby; 5 1/8" H x 16 1/8" W x 10 3/8" D..... \$280

### RD110AC Micro Cassette Recorder

Three-cubic-centimeter micro cassette recorder features capstan drive system, two-speed control system, built-in electret condenser mic, auto stop, electronic pause, three-digit tape counter, cue/review, LED record/battery indicator, earphone monitoring, and two-way power supply; accepts two AA batteries; includes ac adaptor..... \$250

### RT-1178 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system. Features three-position bias and equalization for normal, CrO<sub>2</sub>, and FeCr tapes plus metal tape selector; electronic auto stop; separate left/right record level controls; output volume control; Sharpscan peak level display; auto program search system in forward or reverse. Wow and flutter 0.065% wrms; frequency response 30-15,000 Hz (normal), to 16,000 Hz (CrO<sub>2</sub> and FeCr), to 18,000 Hz (metal); S/N 67 dB with Dolby..... \$220

### RT-30 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc motor, and hard permalloy record/play and ferrite erase heads. Features auto program search system in fast forward or rewind; Sharpscan peak-level display; bias and equalization for normal, CrO<sub>2</sub>, FeCr, and metal tapes; separate left/right record level controls with mic/line input selector; damped eject; electronic auto stop; LED Dolby and record indicators. Wow and flutter 0.075% wrms; frequency response 30-14,000 Hz (normal), to 15,000 Hz (CrO<sub>2</sub> and FeCr), to 17,000 Hz (metal); S/N 66 dB with Dolby; 5 1/2" H x 16 1/8" W x 9 1/8" D..... \$190

### RT-20 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc motor, and hard permalloy record/play and three-gap ferrite erase heads. Features computer-controlled multi display showing Sharpscan peak level meters, time, AM/PM, elec-

tronic tape counter, and time counter; bias and equalization for normal, CrO<sub>2</sub>, and metal tapes; pushbutton tape time remaining counter for C-90, C-60, and C-46 tapes with 3-min warning; timer alarm; 50/60-Hz ac frequency selector; mic/line input selector; auto stop. Wow and flutter 0.09% wrms; frequency response 30-14,000 Hz (normal), to 17,000 Hz (metal); S/N 64 dB with Dolby; 5" H x 15 3/8" W x 8 7/8" D..... \$190

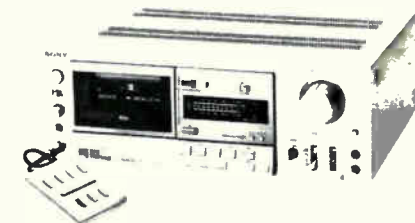
### RT-10 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc motor, and hard permalloy record/play and ferrite erase heads. Features LED peak level display; tape selector for normal, CrO<sub>2</sub>, and metal tapes; separate left/right record level controls; soft-eject cassette holder; auto stop. Wow and flutter 0.09% wrms; frequency response 30-14,000 Hz (normal), to 16,000 Hz (metal); S/N 62 dB with Dolby; silver finish; 5" H x 15 3/8" W x 8 7/8" D. \$130

## SONY

### TC-K77R Cassette Deck

Front-loading metal-compatible stereo cassette deck with IC Dolby noise-reduction system, BSL



servo capstan and dc reel motors, and infrared-sensor rotating three-head system with sendust-ferrite record/play and two-gap ferrite-and-ferrite erase heads for auto reverse play/record at end of tape; includes full-function remote control unit. Features tape selector for normal, CrO<sub>2</sub>, FeCr, and metal tapes with two-position bias adjust for normal tape; auto reverse system (tape can play both sides once or reverse continually up to five times); auto stop; dual LED peak-reading bar graph display (-40 to +8 dB) with auto/manual peak hold reset buttons; record level control with line mic input selector; line out/headphones level control; microprocessor-controlled tape transport controls with indicators; auto-space rec mute; three-digit tape counter with memory; punch-in recording; timer record/play with external timer; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.05% wrms; frequency response  $\pm 3$  dB 30-17,000 Hz (metal and FeCr), to 16,000 Hz (CrO<sub>2</sub>), to 15,000 Hz (normal); S/N 59 dB with FeCr tape, Dolby off (IHF A weighted); 6 1/8" H x 17" W x 12 1/4" D..... \$600

### TC-K81 Cassette Deck

Front-loading metal-compatible stereo cassette deck with IC Dolby noise-reduction system, BSL servo capstan and dc reel motors, and separate sendust-ferrite record and play and four-gap ferrite-and-ferrite erase heads. Features separate bias and equalization slide controls for normal, FeCr, CrO<sub>2</sub>, and metal tapes with bias and separate left right record calibration (8000-400 Hz tones) controls for all tape types; dual 16-segment LED peak-reading bar graph display with auto/manual peak hold reset buttons and bias/rec level calibration switch; auto play after fast forward rewind or memory rewind; IC logic tape function controls; auto-space rec mute; record level control with mic/line input selector; line/out phones level control; tape source monitor switch; three-digit tape counter with memory rewind; timer record/play with external timer; provision for optional remote control; fast forward rewind time 80 sec (C-60) Wow and flutter 0.04% wrms; frequency response  $\pm 3$  dB 30-18,000 Hz (FeCr and metal), to 17,000 Hz (CrO<sub>2</sub>), to 15,000 Hz (normal); S/N 60 dB with FeCr, Dolby off (IHF A weighted); 5 1/8" H x 17" W x 11 3/8" D..... \$530  
**RM-50.** Remote control for TC-K81..... \$50



SONY

POWER



A  
SONY

METALLIC 46



DOLBY NR

SD

BIAS

MONITOR

LINE OUT PHONES

STEREO CHANNELS





# SONY INTRODUCES A CASSETTE DECK FOR PEOPLE WHO WOULD ONLY CONSIDER REEL-TO-REEL.

Until now the superiority of reel-to-reel tape decks to cassette decks has gone unquestioned.

But Sony, renowned for its unique ability to perfect each link in the recording chain—microphones, motors, tape heads, even the tape itself—has just created the TC-K81. A cassette deck so advanced it delivers the kind of crisp, clear, unwavering sound reproduction you would only expect from reel-to-reel.

## HEADS WITHOUT HEADACHES.

Just as in the best open reels, at the heart of the Sony TC-K81 cassette deck are three separate heads. One to erase, one to record and one to play back. This arrangement offers instantaneous "off-the-tape monitoring." Which means you can compare the quality of the recorded music to the quality of the original—while you're recording.

In addition, each head can be optimized for its own specific function.

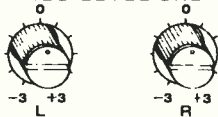
Of course, fitting three heads into the tiny cassette shell openings, accurately, for years on end, is no small feat. Especially since the slightest alignment error can cause significant high-frequency loss. So to make sure you hear all the sound you're supposed to, Sony has created a major breakthrough in head design with a unique independent suspension system.

This remarkable system allows incredible precision and consistency in head alignment. And just as important, there's no longer the need for you to realign the heads from one tape to the next as in other cassette decks. Equally innovative is that only Sony uses heads that are a combination of Sendust and Ferrite. So you get the advantages of both, without the disadvantages of either.

BIAS CAL



REC LEVEL CAL



## TWO FUNCTIONS, TWO MOTORS.

Because tape-speed irregularities can affect your music, the K81 has two separate motors. One takes care of fast forward and rewind, while the other, combined with what we call "Closed-Loop Dual-Capstan Drive," moves the tape with absolute uniformity past the heads. There's no pulling, pushing or tugging.

This division of labor reduces the number of mechanical parts needed in the drive mechanism and virtually eliminates wow and flutter.

## THE LAST WORD IN FINE TUNING.

All tape is not created equal. So the K81 features front-panel bias calibration controls. These allow the K81 to be hand-tailored in order to get the ideal high-frequency response out of each individual tape.

And to insure your recordings are made on a background of silence, free of annoying tape hiss, the K81 incorporates the Dolby® Noise Reduction System. But Sony goes one better with a foolproof record calibration device that insures the Dolby System will always work at its peak effectiveness.

Obviously we could fill pages on the technological advancements in the K81. Like the two 16-segment, LED Peak Program Meters. Or the special "Auto-Space Record Mute" which allows you to blank out commercials and other interruptions.

But you don't have to understand all the circuitry to know what makes the K81 superior.

When it comes to high fidelity there's only one thing you have to know. And that's Sony.

**SONY**  
High Fidelity

FEATURES AND SPECIFICATIONS: Independent-suspension three-head design with switchable tape-source monitoring/Metal tape recording and playback/Sendust and Ferrite record and play heads/Two-motor closed-loop dual-capstan tape drive/Microprocessor solenoid-logic transport with feather-touch controls/Bias and record level calibration with built-in test tones/16-segment LED Peak Program Meters/Auto-space record muting/Auto-play repeat capability/Optional remote control/Wow and flutter (WRMS) 0.04%/Frequency response (metal) 30 Hz-18 kHz  $\pm 3$  dB/Signal-to-noise ratio (metal or FeCr, Dolby off) 60 dB.

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CIRCLE NO. 44 ON READER SERVICE CARD

**TC-K65 Cassette Deck**

Front-loading metal-compatible stereo cassette deck with IC Dolby noise-reduction system, BSL servo capstan and dc reel motors, and sendust-ferrite record/play and four-gap ferrite-and-ferrite erase heads. Features Random Music Sensor with memory (programs up to 16 selections, including repeats, in any order), LED digital program display, auto fast forward/rewind scan, and auto play; separate bias and equalization slide selectors for normal, FeCr, CrO<sub>2</sub>, and metal tapes; dual LED peak-reading bar graph display (-40 to +8 dB) with auto/manual peak hold reset; microprocessor-controlled tape transport controls; auto-space rec mute; punch-in recording; record level control with separate mic/line level controls; three-digit tape counter with memory rewind; auto replay after memory or manual rewind; timer rec/play with external timer; optional remote control provision; fast forward/rewind time 80 sec (C-60). Wow and flutter 0.04% wrms; frequency response  $\pm 3$  dB 30-17,000 Hz (FeCr and metal); S/N 59 dB with FeCr, Dolby off (IHF A weighted); 5 1/8" H  $\times$  17" W  $\times$  11 3/8" D..... \$500

**TC-K71 Cassette Deck**

Front-loading metal-compatible stereo cassette deck with IC Dolby noise-reduction system, BSL servo capstan and high-torque reel motors, and separate sendust-ferrite record and play and four-gap ferrite-and-ferrite erase heads. Features tape selector for normal, CrO<sub>2</sub>, FeCr, and metal tapes with variable fine bias for normal tape; 16-segment LED peak-reading bar graph display with auto/manual peak hold reset buttons; IC logic solenoid tape transport controls; auto-space rec mute; auto play after manual/memory rewind; record level control; line out/phones control; tape source monitor switch; three-digit tape counter with memory rewind; timer rec/play; optional remote control provision; fast forward/rewind time 80 sec (C-60). Wow and flutter 0.04% wrms; frequency response  $\pm 3$  dB 30-18,000 Hz (metal and FeCr), to 17,000 Hz (CrO<sub>2</sub>), to 15,000 Hz (normal); S/N 60 dB with FeCr, Dolby off (IHF A weighted); 5 1/8" H  $\times$  17" W  $\times$  11 3/8" D..... \$430

**TC-K61.** Similar to TC-K71 minus tape/source monitoring; has line mic input selection; frequency response  $\pm 3$  dB 30-17,000 Hz (metal and FeCr), to 16,000 Hz (CrO<sub>2</sub>), to 14,000 Hz (normal); S/N 59 dB under same conditions..... \$320

**TC-K44 Cassette Deck**

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc FG servomotor, and sendust-ferrite record/play and four-gap ferrite erase heads. Features pushbutton selectors for normal, CrO<sub>2</sub>, FeCr, and metal tapes; LED peak-reading/VU meter display; record level control with mic rec/play and line input selector; headphones level control; rec mute; punch-in recording; LED Dolby and record indicators; three-digit tape counter with reset; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.06% wrms; frequency response  $\pm 3$  dB 30-15,000 Hz (FeCr and metal), to 14,000 Hz (CrO<sub>2</sub>); S/N 58 dB with FeCr, Dolby off (IHF A weighted); 4 1/8" H  $\times$  17" W  $\times$  11 3/8" D..... \$230

**TC-K22.** Similar to TC-K44 minus rec mute, headphone volume control, LED peak-reading display, and LED Dolby; has super high-density permalloy rec/play head, dual VU meters, and switch selections for tape, Dolby, and line/mic input..... \$190

**Limited-Edition Audio Lab Series****TC-K88B Cassette Deck**

Power-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, three-motor quartz-locked direct-drive transport, and separate sendust-and-ferrite record and play and four-

gap ferrite-and-ferrite erase heads. Features tape selector for metal, CrO<sub>2</sub>, FeCr, and normal tapes with variable bias control for all tapes; auto music sensor system; LCD peak-reading meter display with auto/manual peak hold reset buttons; auto stop and auto play; auto-space record mute; feathertouch transport controls; punch-in recording; tape-remaining scale; optional remote control provision; dc head/playback amplifier; fast forward/rewind time 60 sec (C-60). Wow and flutter 0.03% wrms; frequency response  $\pm 3$  dB 30-17,000 Hz (metal and FeCr), to 16,000 Hz (CrO<sub>2</sub>), to 15,000 Hz (normal); S/N 60 dB with FeCr, Dolby off (IHF A weighted); 3 1/8" H  $\times$  18 1/2" W  $\times$  15 1/4" D..... \$1200

**Portable****TC-D5M Portable Cassette Deck**

Lightweight metal-compatible stereo cassette deck with Dolby noise-reduction system, coreless motor with FG servo control and dc-to-dc converter power supply, and sendust-ferrite record/playback head. Features dual VU meters with LED peak indicator; switchable limiter; monitor level control; low-impedance mic input; line inputs and outputs; stereo headphone jack with level control; operates on two "D" batteries for up to four hours; 3 lbs, 12 oz; 1 7/8" H  $\times$  9 1/8" W  $\times$  6 1/8" D..... \$700

**TANDBERG****TCD 3004 Cassette Deck**

Microprocessor-controlled metal-compatible vertical front-loading stereo cassette deck with dual



gap ferrite-and-ferrite erase heads. Features PROM-brain logic microprocessor function controls with LED indicators; recording preset; DYNEQ™ record equalization and ACTILINEAR™ recording systems; four-position bias/record and 70/120- $\mu$ sec playback equalization controls with bias fine adjust; calibration selector for off, azimuth, bias fine adjust, and left and right record levels with calibration meter; separate left/right record level and mic level controls with master control; source/tape monitor switch; headphones volume control; LED digital counter readout with memory and reset; dual peak-reading meters; error detection digital readout; winding speed control; azimuth control. Frequency response 20-20,000 Hz  $\pm 3$  dB; S/N 70 dB..... \$2800

**TCD 440A Cassette Deck**

Metal-compatible stereo cassette deck with dual Dolby noise-reduction system, separate record, playback, and Tandberg erase heads (80 dB erasure at 1000 Hz and 60 dB erasure at 100 Hz), and three motors in dual capstan transport system. Features "DYNEQ™" record equalization circuitry designed to automatically adjust record pre-emphasis of deck to maximize potential treble response while simultaneously minimizing treble distortion; "Actilinear™" recording system; dual peak-reading meters with second scale reflecting metal-particle signal levels; 10-kHz test oscillator; bias adjust controls for ferric, CrO<sub>2</sub>, and metal tapes with set of left/right LEDs; separate left and right slider input and output level controls; source/tape monitor button; record preset; three-digit tape counter with reset; PROM logic-controlled tape function controls with LEDs; LED Dolbys, tape I and II/metal, source/tape, rec preset on/off, and power on/off indicators; optional PCM infrared wireless remote control available. Frequency response 20-20,000 Hz  $\pm 3$  dB; S/N 70 dB ("A" weighted); anodized matte black finish; 4" H  $\times$  18 1/2" W  $\times$  8 1/8" D..... \$1600

**TCD 340A Cassette Deck**

Front-loading stereo cassette deck with four Dolby-B processors, three motors, and separate adjustable azimuth recording and playback heads and dual-gap erase head. Features Actilinear recording system; solenoidless operation; electronic logic tape function controls; equalized peak-reading/VU meters; variable input/output controls; mode indicator lights; tape selector switch; multiplex filter; front-panel electronic editing; pneumatically-damped cassette door; digital tape counter. Wow and flutter 0.12% wrms, 0.08% (JIS); frequency response 30-20,000 Hz; S/N 65 dB (IEC A); horizontal or vertical operation; rack mountable..... \$1200

**TCD 420A Cassette Deck**

Front-loading metal-compatible stereo cassette deck with dual-Dolby noise-reduction system, three motors in dual capstan transport system, and diamond-cut multicore Senalloy record/playback and Tandberg erase (80 dB erasure at 1000 Hz, 60 dB at 100 Hz) heads. Features Dyneq, dynamic equalization amplifier circuitry; Actilinear recording system; tape and bias selectors for tape I (ferric), II (chrome), and metal with left- and right-channel bias adjust selectors for each tape; separate left and right input and output level vertical slide levers; equalized peak-reading/VU meters; three-digit tape counter with reset; headphone and two mic jacks. Wow and flutter 0.13% wrms; frequency response 30-18,000 Hz  $\pm 3$  dB; THD 3.0% (metal), 2.0% (ferric and chrome); S/N with metal tape 68 dB (IEC A); input sensitivity/impedance 8 mV/47k ohms (radio), 40 mV/220k ohms (left/right inputs), mic input sensitivity 0.15-20 mV (mic input matched to dynamic microphone); 4" H  $\times$  18 1/2" W  $\times$  8 1/8" D..... \$850

**TCD 320 Cassette Deck**

Horizontal- or vertical-operating stereo cassette deck with Dolby B noise-reduction system and synchronous record/replay, fast forward, and back wind motors in dual capstan closed-loop transport system. Features self-adjusting input amplifier; equalized peak-reading/VU meters; defeatable multiplex filter; headphone output and playback volume controls. Wow and flutter 0.13% wrms (record/playback), 0.09% (JIS); frequency response 30-18,000 Hz; S/N 65 dB min..... \$650

**TCR-222 Cassette Deck**

Top-loading cassette deck for mono recording and playback; has three-motor system, one synchronous hysteresis motor for recording and playback and two servo dc motors for fast winding, and dual-capstan closed-loop drive system. Features peak-reading meter; tape counter; output and input level controls; bass and treble controls; large built-in speaker and amplifier with output power of 12 W continuous. Wow and flutter (DIN) 0.2%; frequency response 40-14,000 Hz (DIN); S/N (DIN) 58 dB; max. dist. 3% at 0 dB; mic input suitable for dynamic microphone with impedance less than 700 ohms; mic input sensitivity 0.1 mV to 17 mV at 200 ohms..... \$650

**TEAC****C-1 MkII Cassette Deck**

Front-loading stereo cassette deck with Dolby noise-reduction system and three-motor and three-head dual-capstan transport system with PLL dc servo capstan and two dc coreless reel motors. Features LSI logic tape function operation controls; pitch control to vary tape speed up to  $\pm 4\%$ ; double-action input controls; two peak program VU meters; three-position bias and equalization switch; optional interchangeable bias/equalization card, CX-8; three-position monitor switch; switchable Dolby/dbx noise reduction system with optional dbx II interface; input selector switch for mic/mic-with-attenuation/line; memory function for auto-stop/repeat; timer control switch; provision for optional remote control unit. Wow and flutter 0.04% (NAB weighted); frequency response 31.5-18,000 Hz  $\pm 3$  dB (CrO<sub>2</sub>), 31.5-16,000 Hz  $\pm 3$  dB (Hi-Fi); S/N 60 dB, improved 5 dB at 1 kHz and 10 dB over 5



kHz with Dolby; fast-winding time 100 sec (C-60); two mic inputs - 72 dB (0.25 mV), 600-ohm impedance; two line inputs 60 mV, 50,000-ohm impedance; available in champagne or brown; 6 1/2" H x 19" W x 13 7/8" D ..... \$1350

**C-2.** Similar to C-1 except has two motors and accepts metal-particle tape; wow and flutter 0.05%; frequency response 20-20,000 Hz (metal or chrome); S/N 68 dB with Dolby, 90 dB with dbx (optional) ..... \$1000

**C-3.** Similar to C-2 without provision for optional dbx II Interface and plug-in bias/equalization modules; S/N 58 dB, improved 5 dB at 1000 Hz, 10 dB over 5000 Hz with Dolby ..... \$600

#### CX-650R Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system. Features solenoid-operated bi-directional record/play; feather-touch micro-switched logic tape function controls; separate three-position bias and equalization; programmable auto reverse/continuous play; programmable timer function; record mute; tape counter with memory rewind; provision for optional remote control unit ..... \$700

#### C-3X Cassette Deck

Front-loading two-speed (1 7/8 and 3 3/4 ips) three-head metal-compatible stereo cassette deck with Dolby B (10-dB S/N improvement over 5000 Hz) and Dolby HX (7-dB at 12,000 Hz and 15 dB at 15,000 Hz S/N improvement) noise-reduction system plus capability for optional dbx II interface. Features bias and equalization slide selectors for normal, CrO<sub>2</sub>, and metal tapes with separate left/right bias fine adjust and left/right record calibration controls with adjust/preset switch; separate left/right record level controls with mic/line/optional test oscillator input selector; output level control; source/tape monitor switch; IC logic tape function controls with indicators; rec mute; three-digit tape counter with memory play and memory stop; timer play/record with external timer; dual peak-level meters; optional remote control available ..... \$650

#### A-770 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, separate



dc servo capstan and dc reel motors, and three heads. Features microcomputer-controlled LED digital program display with 19-position program memory capacity, memory timer, auto rewind, auto repeat play, and auto search in fast forward and rewind; bias and equalization selectors for normal, CrO<sub>2</sub>, and metal tapes; IC logic tape function controls including rec mute; record level control with mic/line input selector; output level control; tape/source monitoring; dual peak level meters; timer rec/play with external timer; optional remote control available. Wow and flutter 0.05% (NAB weighted); frequency response 30-19,000 Hz with metal tape; S/N 59 dB without Dolby (3% THD, weighted); 4 1/8" H x 17" W x 11 7/8" D ..... \$600

**A-660.** Similar to A-770 minus programmable memory system and tape/source monitoring; has three-digit tape counter with memory play/stop and two heads ..... \$360

#### A-550RX Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system and dbx circuitry, dc servomotor, and high-density ferrite erase and record/playback heads. Features feather-touch microprocessor-controlled tape function controls; rec/mute control; programmable record/play timer; three-position bias and equalization; separate left and right record level controls; output level control; mic/line switching; three-digit tape counter with memory rewind. Wow and flutter 0.06% wrms; frequency response 30-16,000 Hz (chrome); S/N 56 dB, 66 dB with

Dolby over 10,000 Hz, 90 dB with dbx; 147 mm H x 440 mm W x 345 mm D ..... \$550

#### A-510 MkII Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, high-density ferrite record/playback and erase heads, and FG dc servomotor. Features fluorescent liquid peak-reading bar graph display; feathertouch micro-switched logic tape function controls; differential gear-coupled record level controls; output level control; separate three-position bias and equalization; programmable timer function; three-digit tape counter with memory rewind; rec mute; provision for remote control... \$475

#### CX-400 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc servomotor, and three heads. Features bias and equalization selectors for normal, CrO<sub>2</sub>, and metal tapes; fluorescent bar graph meter display with peak hold, auto/manual reset, and dimmer controls; three-digit tape counter with memory stop; record level control with mic/line input selector; output level control; tape/source monitor switch; rec mute. Wow and flutter 0.05% (NAB weighted); frequency response 30-20,000 Hz with metal tape; overall S/N 58 dB at 3.0% THD, weighted; 5 1/4" H x 16 1/8" W x 11 1/2" D ..... \$320

**CX-350.** Similar to CX-400 minus bar graph metering display and tape/source monitoring; has combination record/playback and erase heads, electronic servomotor, and two VU meters; metal tape frequency response 30-19,000 Hz; 5 1/4" H ..... \$230

**CX-310.** Similar to CX-350 minus rec mute, memory stop, and output level control; wow and flutter 0.06%; 5 1/4" H ..... \$200

#### M-124 Syncaset Cassette Deck

Front-loading Simul-Sync stereo cassette deck with Dolby noise-reduction system, FG dc servomotor, and record/playback and erase heads. Features Simul-Sync (for monitoring on one track while simultaneously recording on another through the same head) with cross-feed switch for slight blending of left and right channels; mic blend level control with left/blend and right mic jacks; independent bias and equalization selectors for normal and CrO<sub>2</sub> tapes; separate left and right record level controls; mic/DIN and line input selector; three-digit tape counter with memory rewind; two VU meters; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.07% (NAB weighted); frequency response 30-16,000 Hz (CrO<sub>2</sub>); S/N 55 dB, improved 5 dB at 1000 Hz and 10 dB at 5000 Hz with Dolby; input sensitivity/impedance 60 mV/50k ohms (line), 0.25 mV/600 ohms (mic); 6 1/4" H x 16 1/8" W x 11 1/2" D ..... \$450

### TECHNICS

#### RS-M68 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, FG dc servomotor, and four-track Sendust Extra (SX) record/playback and double-gap ferrite erase heads. Features full auto reverse record/playback with three-position mode switch (continuous play until stopped manually, auto stop at end of reverse record or play cycle, and auto reverse that disengages after end of side); two-color fluorescent bar graph peak meters with adjustable meter light switch; forward and rewind cue/review; three-digit tape counter with memory auto play, rewind auto play, and memory stop; separate three-position bias and equalization for CrO<sub>2</sub>, FeCr, and normal tapes; input level control with line and mic/DIN input selector; output level control; timer standby switch; fast forward/rewind time 86 sec (C-60). Wow and flutter 0.06% wrms; frequency response 20-17,000 Hz (CrO<sub>2</sub> and FeCr); S/N 67 dB with Dolby; input sensitivity/impedance 0.25 mV/36k ohms (mic), 60 mV/47k ohms (line); 6.5" H x 17.75" W x 13.875" D ..... \$500

#### RS-M56 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, FG dc servomotor, and hot pressed ferrite record/playback and double-gap fer-

## Hi-Fi Buys

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<p><b>Technics SLB1</b></p> <p>Servo Motor Belt Drive Turntable \$66</p>	<p><b>PIONEER HPM-60</b></p> <p>\$129 10" 4way Speakers</p>
<p><b>maxell UDC 90</b></p> <p>\$2.49 Ultra-Dynamic Tape</p>	<p><b>SONY EHF C90</b></p> <p>Extended Range \$2.99 Chrome Bias Cassette Tape</p>

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**CIRCLE NO. 18 ON READER SERVICE CARD**

rite erase heads. Features Micro-Computer Music Selector that quickly searches and stops at user-specified song (20-selection capacity in any order) with LED digital display showing Present Status (selection being played), Music Select (next selection programmed to be played), and Music Address (programmable instructions of number of selection being played and next selection that will be played) as well as indicating elapsed time between recorded selections through rec mute; two-color fluorescent bar graph peak meters; separate three-position bias and equalization for normal, FeCr, and CrO<sub>2</sub> tapes with bias fine adjust; rec mute; cue and review with quick review; separate line and mic input level controls; output level control; three-digit tape counter with memory rewind and memory auto play; timer standby. Wow and flutter 0.045% wrms; frequency response 30-17,000 Hz (CrO<sub>2</sub> and FeCr); S/N 67 dB with Dolby; input sensitivity/impedance 0.25 mV/10k ohms (mic), 60 mV/22k ohms (line); 5.875" H x 16.875" W x 10.5" D ..... \$500

#### RS-M51 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc motor, and high-saturation flux density MX record/play head and sendust/ferrite erase heads. Features automatic recording level system with autorec sensor and readout display (searching red LED checks peak levels during seven-second period and green LED indicates level is set and recording can begin) plus manual and up/down level fine adjust; automatic tape selectors for normal, FeCr, CrO<sub>2</sub>, and metal tapes; two-color 18-segment fluorescent peak-reading display with auto-reset 2-sec peak hold memory circuit; pause/rec mute control; rewind auto play; auto stop; auto mic/line switchover. Wow and flutter 0.05% wrms; frequency response +3 dB 30-16,000 Hz (metal, CrO<sub>2</sub>, and FeCr), to 15,000 Hz (normal); S/N 67 dB with Dolby; 11.9 cm H x 43 cm W x 27 cm D ..... \$400





### RS-M63 Cassette Deck

Front-loading metal-compatible stereo cassette deck with dual Dolby circuitry, hot pressed ferrite combination wide-gap record/narrow-gap playback heads in single housing and double-gap sendust/ferrite erase head, and high-torque dc motor. Features three-head five-LED function display; two-color fluorescent bar graph peak meters with adjustable meter light control; four-position bias and equalization selector for normal, FeCr, CrO<sub>2</sub>, and metal tapes with bias adjust control; separate line and mic input level controls; tape source monitor switch; output level control; three-digit tape counter with memory auto play, memory rewind, and rewind auto play; cue and review with quick review; timer standby; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.05% wrms; frequency response 20-20,000 Hz (metal), to 18,000 Hz (CrO<sub>2</sub> and FeCr); S/N 67 dB with Dolby; 5.625" H × 16.875" W × 10.625" D ..... \$380

### RS-M45 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, planar-opposed direct-drive dc servo capstan and dc reel motors, and SX (Sendust Extra) record/playback and double-gap sendust/ferrite erase heads. Features four-position bias and equalization selector for normal, FeCr, CrO<sub>2</sub>, and metal tapes; two-color 18-segment fluorescent peak-reading bar graph display with auto-reset 2-sec peak-hold memory circuit; input level control with line/mic input selector; output level control; rec mute; timer record playback with external timer; electronic auto stop; IC logic tape function controls with direct mode switching; optional remote control available with all transport modes; three-digit tape counter with reset; fast forward/rewind time 85 sec (C-60). Wow and flutter 0.035% wrms; frequency response ±3 dB 30-17,000 Hz (metal), to 16,000 Hz (CrO<sub>2</sub> and FeCr), to 15,000 Hz (normal); S/N 68 dB with Dolby; input sensitivity/impedance 0.25 mV/100k ohms (mic), 60 mV/47k ohms (line); 3<sup>1</sup>/<sub>8</sub>" H × 16<sup>1</sup>/<sub>8</sub>" W × 13<sup>1</sup>/<sub>8</sub>" D ..... \$330

### RS-M24 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, high-torque dc motor, and MX record/playback and double-gap sendust/ferrite erase heads. Features tape selector buttons for normal, FeCr, CrO<sub>2</sub>, and metal tapes; two-color 18-segment fluorescent peak-level bar graph display with auto-reset 2-sec peak-hold memory circuit; rewind auto play; auto stop; input level control with line/mic selector; output level control; one-touch record button; cue and review; rec mute; record/play timer with external timer; optional remote control available with pause and rec mute functions; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.05% wrms; frequency response ±3 dB 30-16,000 Hz (metal, CrO<sub>2</sub>, and FeCr), to 14,000 Hz (normal); S/N 67 dB with Dolby; input sensitivity/impedance 0.25 mV/46k ohms (mic), 60 mV/40k ohms (line); 4<sup>1</sup>/<sub>8</sub>" H × 16<sup>1</sup>/<sub>8</sub>" W × 11<sup>1</sup>/<sub>8</sub>" D ..... \$250

**RS-M14.** Similar to RS-M24 minus output level control and jack for optional remote control unit; has four-position rotary switch for tapes and double-gap ferrite erase head; mic input sensitivity/impedance 0.25 mV/25k ohms; 9<sup>1</sup>/<sub>8</sub>" D ..... \$200

### RS-M8 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc motor, and MX record/play head. Features tape selector for normal, CrO<sub>2</sub>, and metal tapes; 12-segment fluorescent meters; separate left/right input level controls with line/mic selector; auto stop; three-digit tape counter with reset. Wow and flutter 0.07% wrms; frequency response 20-17,000 Hz (metal), to 16,000 Hz (CrO<sub>2</sub>), to

15,000 Hz (normal); S/N 66 dB with Dolby; 5<sup>1</sup>/<sub>8</sub>" H × 16<sup>1</sup>/<sub>8</sub>" W × 8<sup>1</sup>/<sub>8</sub>" D ..... \$170

**RS-M6.** Similar to RS-M8 without metal compatibility; has three-position tape selector for normal, FeCr, and CrO<sub>2</sub> tapes and dual VU meters in place of bar graph display; wow and flutter 0.08% wrms; frequency response 30-15,000 Hz (CrO<sub>2</sub> and FeCr), to 14,000 Hz (normal) ..... \$150

### Professional Series

#### RS-M95 Cassette Deck

Front-loading quartz-locked metal-compatible stereo cassette deck with Dolby noise-reduction system, quartz-locked direct-drive motor, and hot-pressed ferrite record/playback and erase heads in three-head system. Features dual-color fluorescent VU/instant peak peak hold bar graph display; four-position bias and equalization for normal, FeCr, CrO<sub>2</sub>, and metal tapes with bias fine adjust; micro-processor tape counter with memory play/rewind/stop; optional RP-9690-P or RP-070 remote control unit available; black metal cabinet ..... \$1300

#### RS-9900US Cassette Deck

Incorporates closed-loop, double-capstan, three-motor drive, separate amplifier unit, and Dolby noise-reduction system. Features memory play/rewind; pitch control; remaining tape time meter; calibration controls for Dolby play and record, bias, equalization; tape/source monitoring; mike attenuator; tape selection switch; 400- and 8000 Hz test oscillators; MPX filter. Amp unit: S/N 67 dB with Dolby; 55-dB dynamic range (mike amp recording capacity). Tape transport: wow and flutter 0.04% wrms; frequency response 25-18,000 Hz ±3 dB (normal tape), to 20,000 Hz with CrO<sub>2</sub> tape; fast-winding time 70 sec (C-60); two HPF record/play and ferrite erase heads; transport: 7<sup>1</sup>/<sub>8</sub>" H × 19" W × 14<sup>1</sup>/<sub>8</sub>" D; amp: 6<sup>1</sup>/<sub>8</sub>" H × 19" W × 14<sup>1</sup>/<sub>8</sub>" D. \$1000

#### RS-M85II Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system; vertical hold, flat component style; quartz-locked-planar-opposed dc brushless, coreless, slotless direct drive capstan motor with servo-controlled circuit; separate coreless reel motor; full IC logic control; laminated Sendust head; low noise equalizer and high linearity amplifier; MPX filter. Features fluorescent electronic bar graph peak meters dim/bright and VU/peak meter switch; four-position tape selector with fine bias adjustment; electronic full auto-stop; record muting; mic line mixing; output level control; three-digit tape counter with memory rewind; timer record with external timer; left and right channel microphone jacks; stereo headphone jack; electronic muting circuit. Wow and flutter 0.035% wrms; speed deviation 0.3%; fast-winding time 80 sec (C-60); frequency response 30-16,000 Hz ±3 dB (CrO<sub>2</sub> and FeCr tape), 30-14,000 Hz ±3 dB (normal tape); S/N 59 dB (Dolby off), 69 dB (above 5 kHz, Dolby on); mic input sensitivity 0.25 mV; mic impedance 400-10,000 ohms; 3<sup>1</sup>/<sub>8</sub>" H × 19" W × 15<sup>1</sup>/<sub>8</sub>" D ..... \$700

### Micro Series

#### RS-M02 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, FG servo direct-drive dc capstan and dc coreless reel motors, and SX record/playback and double-gap sendust/ferrite erase heads. Features two-color fluorescent peak-reading bar graph display; tape selector buttons for normal, FeCr, CrO<sub>2</sub>, and metal tapes; IC logic tape function controls; rec/rec mute button with LED; input level control with rear-panel mic/line switch and front-panel LED mic indicator; timer record play with external timer; three-digit tape counter with reset; fast forward/rewind time 80 sec (C-60). Wow and flutter 0.035% wrms; frequency response ±3 dB 30-17,000 Hz (metal), to 16,000 Hz (CrO<sub>2</sub> and FeCr), to 14,000 Hz (normal); S/N 68 dB with Dolby; input sensitivity/impedance 0.25 mV/400-10,000 ohms (mic), 60 mV/47k ohms (line); 3<sup>1</sup>/<sub>8</sub>" H × 11<sup>3</sup>/<sub>8</sub>" W × 9" D ..... \$500

### RS-M04 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and MX record/playback head. Features auto tape selector buttons for normal, CrO<sub>2</sub>, FeCr, and metal tapes; two-color 18-segment fluorescent bar graph display with auto-reset peak hold memory circuit; music selector system; rewind auto play; auto stop; input and output level controls; rec mute; timer standby; three-digit tape counter with reset. Wow and flutter 0.05% wrms; frequency response ±3 dB 30-16,000 Hz (metal, CrO<sub>2</sub>, and FeCr), to 14,000 Hz (normal); S/N 67 dB with Dolby; 12.2 cm H × 29.7 cm W × 23.2 cm D ..... \$300

### Remote Control Series

#### RS-M45 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, FG servo direct-drive motor, and Sendust Extra record/play and double-gap sendust/ferrite erase heads. Features tape selector for normal, FeCr, CrO<sub>2</sub>, and metal tapes; dual fluorescent peak-reading meter display with peak hold; IC logic tape function controls with LED indicators; rec mute; input level control with line/mic selector; output level control; three-digit tape counter with auto reset; timer record with external timer; optional SH-R808 or RP-9645 remote control units available; fast forward/rewind time 85 sec (C-60). Wow and flutter 0.035% wrms; frequency response ±3 dB 30-17,000 Hz (metal), to 16,000 Hz (CrO<sub>2</sub> and FeCr), to 15,000 Hz (normal); S/N 68 dB with Dolby, FeCr and CrO<sub>2</sub> tape; input sensitivity/impedance 0.25 mV/100k ohms (mic), 60 mV/47k ohms (line); 3<sup>1</sup>/<sub>8</sub>" H × 16<sup>1</sup>/<sub>8</sub>" W × 13<sup>1</sup>/<sub>8</sub>" D ..... \$330

**SH-R808.** Infrared wireless remote control unit with separate receiver section; has pushbutton record, rewind, play, fast forward, rec mute, pause, and stop controls; see Receiver and Turntable sections for other series components ..... \$250

**RP-9645.** Wired remote control unit for RS-M45; has full-function tape transport controls ..... \$30

## TOSHIBA

### PC-X60 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system with multiplex filter, dc servo capstan and dc reel motors, high-linearity dc amplification, and Aurex-Sendust record/play and Aurex-Ferrite erase heads. Features bias and equalization selectors for normal, CrO<sub>2</sub>, and metal tape with LED tape indicators; -40 to +10-dB peak level meters; IC logic-controlled feathertouch tape function controls with LEDs; record level control with mic/line/rec mute input selector; output level control; three-digit tape counter with reset and memory stop/play; rec/play timer with external audio timer; fast forward/rewind time 70 sec (C-60). Wow and flutter 0.035% wrms; frequency response at ±3 dB 20-17,000 Hz (normal), to 18,000 Hz (chrome), to 20,000 Hz (metal); S/N 70 dB (metal with Dolby); THD 0.6% (metal); input sensitivity/impedance 0.25 mV/600 ohms (mic), 70 mV/50k ohms (line); metallic silver diecast aluminum panel; 4<sup>3</sup>/<sub>8</sub>" H × 16<sup>1</sup>/<sub>8</sub>" W × 11" D ..... \$400

### PC-X40 Cassette Deck

Front loading programmable metal compatible stereo cassette deck with Dolby noise-reduction system and All-Sendust record/playback and ferrite erase heads. Features digital IC-controlled programmable multi-music quick sensor system (programs up to six musical selections) with play/skip button; dual LED bar graph peak-level meters with switchable dot/bar level indicator; auto repeat and auto program; tape editor switch; separate bias and equalization for normal, CrO<sub>2</sub>, and metal tapes; separate left/right record level controls; output level control; three-digit tape counter with reset and memory rewind; cue and review; soft eject; provision for optional external timer. Wow and flutter 0.05% wrms; frequency response 20-18,000 Hz ±3 dB at 20-dB input; S/N with Dolby 72 dB (metal), 68 dB (CrO<sub>2</sub>) ..... \$380



**PC-X20.** Similar to PC-X40 without programmable multi-music quick sensor system, memory rewind, auto program, and tape editor control ..... \$300

**PC-X33 Cassette Deck**

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system with multiplex filter. Features IC logic feather-touch tape function controls; four-position tape selector; LED bar graph peak meter display; separate left/right record level controls; auto repeat with memory rewind; rec mute; optional remote control available. Wow and flutter 0.045% wrms; metal frequency response 25-18,000 Hz  $\pm 3$  dB; S/N 60 dB (metal, Dolby off); 16 $\frac{1}{2}$ " W  $\times$  11" D ..... \$330

**PC-X22 Cassette Deck**

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system with multiplex filter and super hard All-Permalloy head. Features four-position tape selector; VU meters; separate left/right level controls; rec mute. Wow and flutter 0.05% wrms; frequency response 25-18,000 Hz  $\pm 3$  dB with metal; S/N 60 dB (metal, Dolby off); 4 $\frac{1}{2}$ " H  $\times$  16 $\frac{1}{4}$ " W  $\times$  11" D. .... \$250

**PC-X12 Cassette Deck**

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system with multiplex filter, dc servomotor, and super hard Aurex-Permalloy record/play and four-gap Aurex-Ferrite erase heads. Features bias and equalization selectors for normal, CrO<sub>2</sub>, and metal tapes; recording and output level controls; line/mic input selector; oil-damped soft eject; cue and review; dual lighted VU meters; one-touch recording; timer standby with external audio timer; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.06% wrms; frequency response  $\pm 3$  dB 30-15,000 Hz (normal), to 16,000 Hz (chrome), to 18,000 Hz (metal); S/N 69 dB with Dolby; THD 0.8% (metal, 400 Hz, 0 dB); input level/impedance 0.25 mV/600 ohms (mic), 70 mV/50k ohms (line); silver finish; 5 $\frac{1}{4}$ " H  $\times$  16 $\frac{1}{4}$ " W  $\times$  10 $\frac{1}{4}$ " D ..... \$199

**PC-X12B.** PC-X12 in matte black..... \$210

**PC-X10M Cassette Deck**

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc servomotor, and permalloy record/play and ferrite erase heads. Features bias and equalization selectors; separate left/right record level controls; dual lighted VU meters; LED record and noise-reduction indicators; cue and review; timer record/play with external audio timer; full auto stop; fast forward/rewind time 80 sec (C-60). Wow and flutter 0.05% wrms; frequency response  $\pm 3$  dB 25-15,000 Hz (normal), to 16,000 Hz (chrome), to 18,000 Hz (metal); S/N 69 dB (metal with Dolby); input level/impedance 0.25 V/600 ohms (mic), 100 mV/50k ohms (line); 5 $\frac{1}{4}$ " H  $\times$  16 $\frac{1}{4}$ " W  $\times$  8 $\frac{1}{4}$ " D..... \$170

**Micro Series**

**PC-D12 Cassette Deck**

Direct front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, two motors, and superhard permalloy heads. Features IC logic solenoid function controls; LED peak-reading meter display; four-position tape selector; three-digit tape counter with memory stop/play; timer record/play with external timer; optional remote control available. Wow and flutter 0.045% wrms; metal frequency response 20-20,000 Hz  $\pm 3$  dB; S/N 68 dB with Dolby, metal tape; 4.2" H  $\times$  10" W  $\times$  8.4" D..... \$450

**PC-D12B.** Matte black version of PC-D12 ..... \$460

**PC-D10 Cassette Deck**

Direct front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and super hard permalloy heads. Features LED peak-reading meter display; three-position bias and equalization; separate left/right input level controls; output level control; cue/review. Wow and flutter 0.05% wrms; metal frequency response 35-18,000 Hz  $\pm 3$  dB; S/N 60 dB without Dolby, metal tape;

4.2" H  $\times$  10" W  $\times$  8.4" D ..... \$270  
**PC-D10B.** Matte black version of PC-D10 ..... \$280

**UHER by WALTER ODEMER**

**CR-240 Portable Cassette Deck**

Compact front-loading portable cassette deck with Dolby noise-reduction system, collectorless, low-wear motor with electronic control, two contrarotating flywheels, and built-in loudspeaker for mono monitoring. Features automatic start after fast-forward or rewind; automatic end-of-tape shut-off; switchable alc; remote control accessory; clock timer operation; separate or tandem (mechanical coupling) record level controls; twin peak-reading level meters for record and playback with meter illumination and three LED function indicators; battery check with quick-action switch; built-in condenser microphone; linear stereo power amplifier; stereo headphone jack socket; joy stick control for selection of three tape transport functions. Wow and flutter 0.2% (DIN); frequency response 30-16,000 Hz; S/N 58 dB (Dolby off, FeCr), 66 dB (Dolby on, CrO<sub>2</sub> and FeCr), 65 dB (Dolby on, Fe<sub>2</sub>O<sub>3</sub>); crosstalk at 1 kHz, -70 dB (reverse track), -45 dB (stereo); mic input 0.2 mV at 500 ohms source impedance; power: ac mains, dry cells, rechargeable, or car battery; 9 $\frac{1}{4}$ "  $\times$  2 $\frac{1}{8}$ "  $\times$  7 $\frac{1}{4}$ " ..... \$1489

**CR-240AV.** Audio-visual version of CR-240.. \$1576

**VECTOR RESEARCH**

**VCX-600 Cassette Deck**

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system containing four Dolby processors, fg servo dc capstan and servo reel motors, and separate Sendust record, Sendust playback, and ferrite erase heads. Features computerized programmable music search (eight program buttons with LEDs represent eight selections on tape side, of which one or several chosen pieces are sought out and played); programmable search that automatically seeks next selection; separate bias and equalization for Fe, Co, and metal tapes with bias adjust; dual LED peak level bar graph meters; separate auto play and rewind buttons; memory stop; IC logic tape function controls with LEDs; rec mute; cue and review; input and output level controls; tape/source monitor switch; three-digit tape counter with reset; optional remote control capability; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.06% wrms; frequency response  $\pm 3$  dB 30-16,000 Hz (normal), to 18,000 Hz (Co/CrO<sub>2</sub>), to 20,000 Hz (metal); S/N (A weighted, 3.0% THD) 65 dB with Dolby; input sensitivity impedance 60 mV/50,000 ohms (line), 0.25 mV/600 ohms (mic); output level/impedance 580 mV/1000 ohms (line), headphones 8 ohms; 5 $\frac{1}{4}$ " H  $\times$  17 $\frac{1}{8}$ " W  $\times$  14 $\frac{1}{4}$ " D..... \$750

**VCX-500.** Similar to VCX-600 less eight-selection programmable music search, auto play and rewind, and tape/source monitor switch; has combination Sendust record/playback and ferrite erase heads; line output level/impedance 500 mV/1000 ohms..... \$575

**VCX-300.** Similar to VCX-500 without rec mute; has electrically-governed dc motor and piano-key tape function controls; no option for remote control unit; wow and flutter 0.09% wrms; frequency response  $\pm 3$  dB 30-15,000 Hz (normal), to 17,000 Hz (Co/CrO<sub>2</sub>), to 19,000 Hz (metal)..... \$400

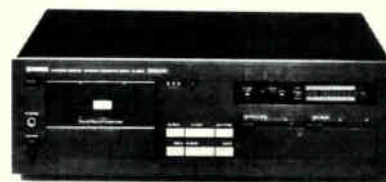
**VR-2.** Wired remote control for VCX-500/600. \$75

**YAMAHA**

**K-950 Cassette Deck**

Direct-front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, FG dc servo capstan and high-torque dc reel motors, Pure Plasma Process Sendust record/play and double-gap ferrite erase heads, and low-noise equalizer amp circuitry. Front-panel features are -30 to +3 dB peak-level bar-graph display; LED LH, CrO<sub>2</sub>, metal, and Dolby indicators on display panel; IC logic tape function controls, including rec mute

with LED and auto rec/pause; sliding record and output level controls. Hidden controls behind front



panel include bias and equalization selector for LH, CrO<sub>2</sub>, and metal tapes with bias adjust; Dolby NR with multiplex filter switch; subsonic filter switch; record balance control; line/mic input selector; tape/source monitor switch; sharp/soft focus switch (controls quality of sound images during tape playback); memory rewind; timer record/play with external timer; two mic jacks. Wow and flutter 0.028% wrms (JIS); frequency response  $\pm 3$  dB 30-17,000 Hz (LH), to 19,000 Hz (CrO<sub>2</sub>), to 22,000 Hz (metal); S/N 60 dB with CrO<sub>2</sub>, Dolby off (JIS weighted); input sensitivity/impedance 0.3 mV/5k ohms (mic), 60 mV/50k ohms (line); fast forward/rewind time 75 sec (C-60); black cabinet; 5.5" H  $\times$  17.5" W  $\times$  12" D..... \$490

**K-850 Cassette Deck**

Direct-front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronic governor dc servomotor, Pure Sendust record/playback and double-gap ferrite erase heads, and dc EQ amp circuitry. Features auto repeat, auto rewind, auto recording standby, timer record (with external timer), and manual (defeats all auto functions) positions on auto function selector; LH, CrO<sub>2</sub>, and metal tape selection with auto switching between LH and CrO<sub>2</sub> tapes; sharp/soft focus switch for improved sound image; dual -40 to +5 dB peak-level meters; IC logic tape function controls, including auto rec/pause and rec mute; auto shut-off; record and output level controls; "Roller-Coupled Cassette Holder" grip with hinged cover when no tape is loaded; fast forward/rewind time 75 sec (C-60). Wow and flutter 0.04% wrms (JIS); frequency response  $\pm 3$  dB 30-16,000 Hz (LH), to 18,000 Hz (CrO<sub>2</sub>), to 19,000 Hz (metal); S/N 60 dB with CrO<sub>2</sub>, Dolby off (JIS weighted); input sensitivity/impedance 0.3 mV/5k ohms (mic), 50 mV/100k ohms (line); silver faceplate and wood cabinet; 5 $\frac{1}{4}$ " H  $\times$  17 $\frac{1}{8}$ " W  $\times$  12 $\frac{1}{2}$ " D..... \$360

**K-350 Cassette Deck**

Direct-front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc servomotor, and Sendust record/play and double-gap ferrite erase heads. Features tape selector buttons for LH, CrO<sub>2</sub>, and metal tapes; auto shutoff; directly switchable transport functions; separate left/right record level controls; dual VU meters; direct tape-loading with flip-up mechanism cover; three-digit tape counter with reset; fast forward/rewind time 90 sec (C-60). Wow and flutter 0.06% wrms; frequency response  $\pm 3$  dB 40-14,000 Hz (LH), to 15,000 Hz (CrO<sub>2</sub>), to 18,000 Hz (metal); S/N 57 dB with CrO<sub>2</sub>, Dolby off; input sensitivity/impedance 0.3 mV/5k ohms (mic), 50 mV/80k ohms (line); silver faceplate and wood cabinet; 5 $\frac{1}{32}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  10 $\frac{1}{2}$ " D..... \$240

**ZENITH**

**MC9070 Cassette Deck**

Front-loading stereo cassette deck with Dolby noise-reduction system, electronically-controlled dc motor, and recording/playback and erase heads. Features two VU meters with LED peak indicators; bias and equalization for normal, FeCr, and CrO<sub>2</sub> tapes; left/right record level control; piano-key tape function controls; three-digit tape counter. Wow and flutter 0.08% wrms (JIS); frequency response  $\pm 3$  dB 40-13,000 Hz (normal), to 14,000 Hz (CrO<sub>2</sub>), to 15,000 Hz (FeCr); HD 1.5%; S/N with Dolby 62 dB using normal tape over 5000 Hz, 66.5 dB using CrO<sub>2</sub> tape over 5000 Hz; fast-winding time 85 sec (C-60); 5.98" H  $\times$  16.77" W  $\times$  9.33" D..... \$250

# 7

# OPEN-REEL TAPE MACHINES

## AKAI

### GX-635D Stereo Tape Deck

Two-speed (7 1/2 and 3 3/4 ips), 1/4-track, two-channel record/playback stereo deck with ac servo direct-drive capstan and two reel motors and two GX record, two GX playback, and two erase heads; handles up to 10 1/2-in reels. Features automatic reverse in record/playback; ±6% pitch control; full logic solenoid function controls; mic/line mixing; output level control; record mute; real time counter; remote control jack. Wow and flutter 0.03% rms at 7 1/2 ips; frequency response 30-27,000 Hz ± 3 dB with WR tape; dist. 0.5% at 7 1/2 ips (1000 Hz, 0 VU); S/N 62 dB DIN without Dolby, improved 10 dB above 5000 Hz with Dolby; 19" H × 17.4" W × 10.1" D ..... \$995

### GX-267D Stereo Tape Deck

Two-speed (7 1/2 and 3 3/4 ips), 1/4-track, two-channel stereo deck with two GX playback, two GX record, and two erase heads and center pole generator ac servo capstan and two eddy current reel motors; handles up to 7-in reels; direct capstan drive system. Features two brake drums each fitted with Mylar brake belt for supply and take-up reels; three-position record/playback auto reverse for one-way record/playback, one-cycle record/playback, or one-cycle record and continuous playback. Feather-touch solenoid operations controls with direct function control; record mute with 1-sec timing indicator; timer start switch with wake-up music function; line/mic input mixing controls; instant pause control; dual VU meters; low noise/wide range tape selector switch; dual monitoring; left/right record mode selector switches; output level control, one-way damped tension arm. Wow and flutter 0.04% rms (7 1/2 ips), 0.06% rms (3 3/4 ips), frequency response ± 3 dB 30-25,000 Hz (7 1/2 ips), to 19,000 Hz (3 3/4 ips), both with Akai LN-150-7 tape; dist. 0.5% at 1000 Hz, 0 VU; S/N 60 dB (JIS); input sensitivity/impedance 0.25 mV/2.4k ohms (mic), 70 mV/100k ohms (line), output level 0.775 V (line), 100 mV into 8 ohms (headphone); 18.5" H × 17.3" W × 9.8" D ..... \$850

### GX-625 Stereo Tape Deck

Two-speed (3 3/4 and 7 1/2 ips) 1/4-track two-channel



stereo tape deck with ac servo direct-drive capstan

and two eddy-current reel motors and two GX heads for record and playback and one erase head; max. reel capacity 10 1/2 in. Features auto repeat, play, and stop; illuminated logic solenoid tape function controls with LED standby indicator; LED digital timer/tape counter readout; two-deck tape monitoring; mic/line mixing; output level control; variable pitch control; mono/stereo recording; timer record/playback with external timer; computerized electronic braking system. Wow and flutter 0.03% rms at 7 1/2 ips; frequency response 30-26,000 Hz ± 3 dB at 7 1/2 ips; S/N 62 dB weighted, with low-noise tape and peak recording level at 3% THD; 17.6" H × 17.3" W × 9.5" D ..... \$750

### GX-255 Stereo Tape Deck

Two-speed (7 1/2 and 3 3/4 ips), 1/4-track two-channel stereo/mono tape deck with ac servo direct drive capstan and two eddy-current reel motors and three GX heads in four-head function; 7-in reel capacity. Features auto/manual reverse playback; tape/source monitor switch; mic/line mixing; output level control; low noise/wide range tape selector; illuminated logic solenoid tape function controls with standby indicators; see-through head cover for editing; stereo/mono record; two VU meters. Wow and flutter 0.04% rms (7 1/2 ips); frequency response 30-24,000 Hz ± 3 dB at 7 1/2 ips; dist. 0.5% at 1000 Hz, 0 VU (7 1/2 ips); S/N 61 dB DIN; 16.5" H × 17.3" W × 9.5" D ..... \$650

### GX-4000DB Stereo Tape Deck

Two-speed (7 1/2 and 3 3/4 ips), 1/4-track, two-channel stereo system with Dolby noise-reduction system, GX recording and playback heads and erase head, and four-pole induction motor; handles up to 7-in reels. Features tape/source monitor and low noise/wide range selector switches; auto stop; mic/DIN/line mixing; output control; pause control; four-digit index counter with reset; LED record indicator. Wow and flutter 0.08% rms; frequency response ± 3 dB 30-24,000 Hz (7 1/2 ips), to 16,000 Hz (3 3/4 ips); dist. 1.0% at 1000 Hz, 0 VU; S/N 60 dB without Dolby; input sensitivity 0.25 mV (mic), 70 mV (line), 2 mV into 10k ohms (DIN); output level 580 mV (line), 100 mV into 8 ohms (headphone), 0.3 V (DIN); 12.4" H × 17.3" W × 9.1" D ..... \$500  
**GX-4000D.** Same as GX-4000DB without Dolby noise-reduction system ..... \$400

### 1722II Stereo Tape Deck

Two-speed (7 1/2 and 3 3/4 ips), 1/4-track, two-channel stereo tape system with record/playback and erase heads and two-speed induction motor; handles up to 7-in reels. Features low noise/wide range tape selector switch; three-way speaker switch for mute/recording monitor, normal, and PA; auto shut-off; rear-panel speaker switch convertible to PA system; pause control, built-in phono equalizer amp directly records from magnetic phono cartridge; built-in 5 × 7-in speakers with speaker jacks, line and DIN in and out connections; two VU meters. Wow and flutter 0.14% rms (7 1/2 ips), 0.18% rms (3 3/4 ips); frequency response ± 3 dB at 7 1/2 ips 30-21,000 Hz (wide-range tape), to 18,000 Hz (low-noise), at 3 3/4 ips 40-15,000 Hz (wide range), to 13,000 Hz (low-noise); dist. 2.0% at 1000 Hz, 0 VU; S/N 50 dB; output 10 W total music power, 6 W continuous;

crosstalk 60 dB (mono), 45 dB (stereo); input sensitivity/impedance 0.5 mV/100k ohms (mic), 150 mV/330k ohms (line); output level 1.23 V (line), 100 mV into 8 ohms (headphone), 5 W into 8 ohms (speaker); 14.1" H × 14" W × 9.8" D ..... \$475

## NEAL-FERROGRAPH (USA)

### SP7 Tape Recorder

Three-speed (choice of 15, 7 1/2, and 3 3/4 high, 7 1/2, 3 3/4 and 1 1/2 medium, or 3 3/4, 1 1/2, and 1 1/2 low ips) tape recorder with three motors, 250-µin record, 80-µin replay, and erase heads; choice of mono full-track or half-track or stereo half-track or quarter-track heads; max. reel capacity 10 1/2 in. Features illuminated VU meters logic-controlled transport functions; 0.1-sec fast start/correct speed operation; damped tension arms; remote control facility. Other options include balanced line in/line out, power amp/speaker, rack mounting, Cannon XLR connectors, stainless-steel retainers, and Dolby noise-reduction in stereo only. Wow and flutter (peak, DIN weighted) at high speed 0.08% (15), 0.1% (7 1/2), 0.17% (3 3/4), at medium speed 0.08% (7 1/2), 0.15% (3 3/4), 0.2% (1 1/2), at low speed 0.15% (3 3/4), 0.2% (1 1/2), 0.4% (1 1/2); frequency response 30-20,000 Hz ± 2 dB (15), 30-17,000 Hz ± 2 dB (7 1/2), 40-14,000 Hz ± 3 dB (3 3/4), 50-7000 Hz ± 3 dB (1 1/2), 60-3000 Hz ± 3 dB (1 1/2); S/N 60 dB (1/2 track, Dolby out), 58 dB (1/4 track, Dolby out); 16 1/2" H × 18 3/4" W × 10" D.  
**SP7 A1.** Mono line in/line out ..... \$1463  
**SP7 A3.** Mono line in/line out with mic amp ..... \$1646  
**SP7 A2.** Stereo line in/line out ..... \$1829  
**SP7 A4.** Stereo line in/line out with mic amp ..... \$1966  
 Balanced lines (per channel) ..... \$274  
 Power amp and speaker (per channel) ..... \$183  
 Cannon XLR sockets (per channel) ..... \$46  
 Rack-mounting brackets ..... \$156  
 Dolby B noise-reduction system; for stereo only ..... \$411

## PHILIPS

### N4506 Tape Recorder

Three-speed (7 1/2, 3 3/4, and 1 1/2 ips) switchable 1/4 or 1/2-track preamplified tape recorder with three di-



rect-drive dc motors and three heads; accepts reels



up to 7 in. Features dynamic noise limiter in playback mode; A-B monitor switch; two peak-reading meters; solenoid transport controls with direct switchable tape direction; input selection and level adjustment of phono, tuner, aux., and line; adjustable outputs; sound-on-sound and sound-with-sound; post-fading; four-digit counter with memory stop; auto stop; LED overload indicators; cueing. Frequency response 35-11,500 Hz (1 1/2 ips), to 20,000 Hz (3 3/4 ips), to 26,000 Hz (7 1/2 ips); S/N (without DNL) 60 dB (7 1/2 and 3 3/4 ips), 58 dB (1 1/2 ips); wow and flutter 0.05% (7 1/2 ips), 0.07% (3 3/4 ips), 0.2% (1 1/2 ips); fast-winding time 180 sec (1800 ft); channel separation 30 dB; track separation 60 dB; 17" H x 21 3/4" W x 8 1/4" D..... \$630

#### N4504 Tape Recorder

Three-speed (7 1/2, 3 3/4, and 1 1/2 ips) 1/2-track tape recorder with three direct-drive dc motors and three heads; max. reel capacity 7 in. Features two peak-reading meters; solenoid transport controls with direct switchable tape direction; A-B monitor switch; dynamic noise limiter. Frequency response 35-11,500 Hz (1 1/2 ips), to 20,000 Hz (3 3/4 ips), to 26,000 Hz (7 1/2 ips); S/N (without DNL) 60 dB (7 1/2 and 3 3/4 ips), 58 dB (1 1/2 ips); wow and flutter (wrms) 0.05% (7 1/2 ips), 0.07% (3 3/4 ips), 0.2% (1 1/2 ips); fast-winding time 180 sec (1800 ft); channel separation 25 dB; track separation 60 dB; full complement of inputs/outputs; 16 3/4" H x 16 3/4" W x 7 1/4" D..... \$480

### PIONEER

#### RT-2022 Stereo Tape Deck

Two-speed (7 1/2 and 15 ips), 1/2-track, three-motor, three-head stereo deck; will handle up to 10 1/2-in reels; 1/2 pole hysteresis synchronous motor and two six-pole inner-rotor induction motors for reel drive. Features solenoid-operated direct-change function buttons; separate transport and amplifier units; plug-in head assembly; scrape filter; continuously variable tape bias; two-step tape equalizer and tape selector with time-constant switch mechanism for use with all types of tape; wide-dynamic-range playback amplifier; independent recording amplifier for line and mike input/output; "synchronomonitor" mechanism for sound-on-sound and sound-with-sound. Wow and flutter 0.04% wrms at 15 ips, 0.08% wrms at 7 1/2 ips; S/N 55 dB; THD 0.8% max. at 15 ips, 1.0% max. at 7 1/2 ips; response 30-28,000 Hz ± 3 dB at 15 ips, 40-20,000 Hz ± 3 dB at 7 1/2 ips; full complement of inputs and outputs; 21 3/4" H x 18 1/4" W x 10 3/4" D..... \$1590

#### RT-909 Stereo Tape Deck

Two-speed (3 3/4 and 7 1/2 ips), 1/2-track, three-motor, four-head stereo tape deck. FG dc servo dual-capstan motor and two six-pole inner rotor reel motors; accepts both 10 1/2- and 7-in reels. Features two-step bias and equalization selector with variable bias; Fluorscan level indicators with peak and average functions; four-digit electronic counter; reel and speed selector; pitch control; repeat switch; timer start with external timer; auto reverse; tape/monitor switch; separate mic/line and left/right input level controls; output level control. Wow and flutter 0.04% at 7 1/2 ips, 0.08% at 3 3/4 ips; frequency response 20-28,000 Hz ± 3 dB (7 1/2 ips), 20-18,000 Hz ± 3 dB (3 3/4 ips); S/N 60 dB (7 1/2 ips), 55 dB (3 3/4 ips); 13 3/4" H x 18 1/4" W x 12 1/2" D..... \$895

**RT-901.** Similar to RT-909 except has three heads..... \$795

#### RT-707 Stereo Tape Deck

Auto-reverse playback stereo reel to reel tape deck;



two speed (3 3/4 and 7 1/2 ips); speed accuracy ± 0.5%; three-motor, four-head, 1/2-track, two-channel design; handles 7-in reels; FG servo ac direct drive motor for capstan drive and two six-pole inner-rotor induction motors for reel drive. Features solenoid operated, direct switchable function buttons and preset function buttons for timer record and play; auto and manual reverse play; auto repeat play; independent L/R recording mode selectors; two bias and two equalization tape selection; full complement of inputs/outputs. Wow and flutter 0.05% wrms (7 1/2 ips), 0.08% wrms (3 3/4 ips); S/N 58 dB; dist. 1% max. (7 1/2 ips); fast rewind 100 sec (7-in reel); frequency response 30-24,000 Hz ± 3 dB (7 1/2 ips), 30-16,000 Hz ± 3 dB (3 3/4 ips); crosstalk -50 dB; channel separation 50 dB; pitch control ± 6% (playback only); 9 1/4" H x 18 3/32" W x 14 1/32" D..... \$695

#### RT-701 Stereo Tape Deck

Two speed (3 3/4 and 7 1/2 ips) design; speed accuracy ± 0.5%; three-motor, three-head design; FG servo ac direct drive motor for capstan drive and two six-pole inner-rotor induction motors for reel drive; handles 7-in reels. Features solenoid-operated direct switchable function buttons and preset function buttons for timer record and play; permalloy heads; line/mike mixing; two bias and two equalization tape selectors; full complement of inputs/outputs; fast rewind 100 sec. Wow and flutter 0.05% wrms (7 1/2 ips), 0.08% wrms (3 3/4 ips); S/N 58 dB; dist. 1% (7 1/2 ips); frequency response 30-24,000 Hz ± 3 dB (7 1/2 ips), 30-16,000 Hz ± 3 dB (3 3/4 ips); crosstalk -50 dB; channel separation 50 dB; pitch control ± 6% (playback only); 9 1/4" H x 18 3/32" W x 14 1/32" D..... \$595

### 4-Channel

#### RT-2044 4-Channel Tape Deck

Same as RT-2022 stereo deck except with two TAU-11 amplifier units; 37 13/16" H x 18 1/4" W x 10 3/16" D..... \$2010

### REALISTIC

#### TR-3000 Open-Reel Stereo Tape Deck

Two-speed (7 1/2 and 3 3/4 ips) 1/2-track two-channel stereo tape recorder with three motors and three heads including hard permalloy record/play head; will accept up to 7-in reels. Features full logic solenoid tape function controls; dual 3-in VU meters, record mute and pause controls; twin idler arms; scrape flutter filter; separate high/low bias and equalization selectors; separate mic/line level controls with mixing capability; digital tape counter; low-impedance 1/4-in mike inputs; 1/4-in headphone jack. Wow and flutter 0.06% wrms (7 1/2 ips); frequency response ± 3 dB 30-28,000 Hz (7 1/2 ips), 30-20,000 Hz (3 3/4 ips); S/N 66 dB (7 1/2 ips), 63 dB (3 3/4 ips) at 3.0% THD, THD 0.9% at 0VU..... \$500

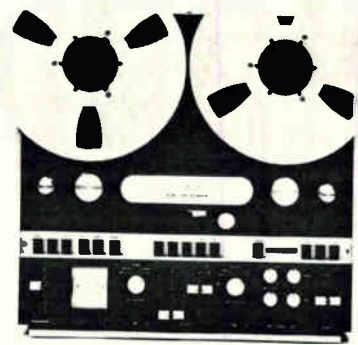
### STUDER/REVOX

#### B67 Stereo Tape Recorder

Three-speed (choice of 3 3/4, 7 1/2, and 15 ips or 7 1/2, 15, and 30 ips) two-channel tape recorder with two servo-controlled ac capstan motors, designed for professional use. Electronics console features record and playback level controls, record switch with LED, input/sync/reproduce selector switch with LEDs, VU level meters for each channel with peak-reading LEDs, and safe/ready switch preventing accidental recording and erasure; equalization internally switchable to CCIR- or NAB-standard curves; logic-controlled LSI-circuit transport functions; editing through integral splicing block and momentary rewind button; electronic digital counter reads hours, minutes, and seconds (accuracy 0.5%); rear-panel connector for external oscillator. Wow and flutter 0.06% at 15 ips (weighted peak); frequency response 30-18,000 Hz ± 2 dB (15 ips); S/N 62 dB in stereo (NAB, unweighted); HD below 1.0% at 1000 Hz (NAB); die-cast chassis; 19.5" H x 19" W x 10.5" D..... from \$3910

#### A700 Stereo Tape Recorder

Three-speed (choice of 15, 7 1/2, and 3 3/4 ips, 15 1/2, 1 1/2, and 3 3/4 ips, or 1 1/2, 3 3/4, 7 1/2 ips) stereo tape



recorder with plug-in head assembly (1/4- or 1/2-track available), three heads (fourth head optional), and frequency and phase servo capstan motor and two servo reel motors. Features microprocessor-controlled digital logic function controls; quartz-crystal speed control, logic-controlled tape tension, electronic tape-motion sensor, digital tape counter read-out in min and sec; auto stop logic; electronic pause control; instant repeat play control; continuous record or play function; solid-state switching of audio circuits; built-in four-input mixer; switched selection of 12 input sources including four balanced hi/lo mike inputs; built-in magnetic phono preamp; master record level slide fader; stereo echo; five stereo outputs; zero-level line outputs and level and tone-controlled outputs; VU meter with overmodulation indicators; input or off-tape metering; variable speed (± 7 halftones) with optional remote control available, variable speed (2.5 to 21.5 ips) with external oscillator. Wow and flutter (DIN 45507/IEEC 193-1971) 0.06% (15 ips), 0.08% (7 1/2 ips), 0.10% (3 3/4 ips); frequency response +2/-3 dB 30-22,000 Hz (15 ips), to 20,000 Hz (7 1/2 ips), to 16,000 Hz (3 3/4 ips); S/N on 1/2-track 63 dB (15 and 7 1/2 ips), 60 dB (3 3/4 ips); on 1/4-track machines 67 dB (15 and 7 1/2 ips), 64 dB (3 3/4 ips); 18.2" H x 19" W x 6.9" D..... \$2999

#### A77 Mk IV Tape Deck

Two-speed (3 3/4 and 7 1/2 ips or 7 1/2 and 15 ips), 1/2- or 1/4-track stereo tape recorder with servo-controlled capstan and two reel motors and three heads; reel capacity 10 1/2 in. Features dual VU meters; auto shut off; relay/solenoid operations controls; off-tape or input monitoring; two record level controls; provision for remote control; optional plug-in 8-W power amp boards; metal cage for rack or custom mounting, and suitcase version with built-in speakers available. Wow and flutter (DIN 45507/IEEC 193-1971) 0.06% (15 ips), 0.08% (7 1/2 ips), 0.1% (3 3/4 ips); frequency response +2/-3 dB 30-22,000 Hz (15 ips), to 20,000 Hz (7 1/2 ips), to 16,000 Hz (3 3/4 ips); S/N on 1/2-track 62 dB (7 1/2), 59 dB (3 3/4), on 1/4-track 66 dB (15 and 7 1/2 ips), 63 dB (3 3/4 ips); 16 3/4" H x 14 3/16" W x 7 1/4" D..... \$1499

**A77 Mk IV Professional.** Same as A77 Mk IV but only in 7 1/2 and 15 ips speed; balanced and floating inputs and outputs; no input selector and level controls accessible from outside of machine; inputs and outputs via Cannon connectors..... \$1950

#### B77 Stereo Tape Recorder

Two-speed (choice of 3 3/4 and 7 1/2 ips, 7 1/2 and 15 ips, 15 1/2 and 1 1/2 ips, or 1 1/2 and 3 3/4 ips) stereo tape recorder with three motors; reel capacity 10 1/2 in. Features integrated drive logic computer-type push-point function keys, built-in tape cutter close to headblock; dual VU meters with peak level indicators; separate left/right record and input level controls; tape monitor switch; provision for remote control of all functions and electric timer operation; connectors for remote control of tape transport functions, remote control of variable tape speed, and slide projector or crossfade unit. Wow and flutter (DIN 45507/IEEC 193-1971) 0.06% (15 ips),

0.08% (7 1/2 ips), 0.1% (3 3/4 ips), frequency response +2/-3 dB 30-22,000 Hz (15 ips), to 20,000 Hz (7 1/2 ips), to 16,000 Hz (3 3/4 ips); S/N on 1/2-track 63 dB (15 ips and 7 1/2 ips), 60 dB (3 3/4 ips), on 1/2-track 67 dB (15 and 7 1/2 ips), 64 dB (3 3/4 ips); mic input level, impedance 0.15 mV/2.2k ohms (lo position, 50- to 600-ohm mics), 2.8 mV, 110k ohms (hi, 20k-ohm mics), 16.3" H x 17.8" W x 8.14" D..... \$1499

**B77 Self Sync.** Same as B77, available in 3 3/4 and 7 1/2 ips or 7 1/2 and 15 ips speeds with playback possibility from record head..... \$1599

**B77 Dolby B.** Same as B77 except 3 3/4 and 7 1/2 ips speed only with Dolby B noise-reduction system, separate compressors and expanders for each channel, S/N on 1/2-track 67 dB (3 3/4 ips), 72 dB (7 1/2 ips)..... \$1799

**B77 Autostart.** Same as B77 except with VOX control..... \$1749

**B77 Slide Sync.** Same as B77 except with additional head for slide projector control..... \$1599

## TANDBERG

### TD 20A "Baron" Open-Reel Deck

Features Actilinear recording system, active trans-conductance circuit for lower intermodulation;



built-in Sel Sync, four-motor solenoidless operation, phase linearity network, pushbutton operation with LED indicators, including "Free" position for easy tape editing and threading, stand-by position with LED when one or both record buttons are engaged, electronically-governed speed, optional infrared (wireless) remote control or conventional cord remote control, four line inputs and master control for fading in, out, two-step front panel switch for mic attenuation (25 dB), very wide scale, peak-reading VU meters, front panel accessible bias adjustment, available in three versions

7 1/2 and 3 3/4 ips, 1/2-track..... \$1500  
15 and 7 1/2 ips, 1/2-track..... \$1650  
15 and 7 1/2 ips, 1/2-track..... \$1750  
Carrying case with/without wheels... \$300/\$245  
Wireless remote control..... \$150

### Series 15 Open-Reel Recorder

Three-speed (7 1/2, 3 3/4, 1 1/2 ips) mono record/play open-reel recorder, wow and flutter 0.1% at 7 1/2 ips, frequency response 40-18,000 Hz ±2 dB at 7 1/2 ips, S - N N 55 dB at max. record level, 5 W channel continuous, both channels driven, preamp output 0.75 V, low-Z mic, high- and low-level inputs, 6 3/4" H x 13 3/4" W x 11 1/4" D

**1521F.** 1/2-track or 1/2-track, includes foot control..... \$750  
**1521.** 1521F without foot control..... \$650

## TASCAM by TEAC

### 80-8 Recorder/Reproducer

1/2-in, 8-tracks; will take up to 10 1/2-in reels NAB

hub only, 15 ips and 7 1/2 ips tape speed, function select panel; full IC logic tape transport; memory stop function, digital counter; integrated dbx noise



reduction, line input -10 dB (0.3 V), impedance greater than 20,000 ohms, unbalanced, line output -10 dB (0.3 V), load impedance greater than 10,000 ohms, unbalanced; record level 0 VU referenced to 3 dB above; wow and flutter 0.04% rms (NAB, weighted), 0.06% peak (ANSI, weighted); fast-winding time 120 sec with 240-ft tape; frequency response 40-18,000 Hz ±3 dB, S/N 65 dB weighted, 60 dB unweighted, dist. 1.0% at 400 Hz, 0 VU; overall THD 3.0% at 10 dB above 0 VU, crosstalk greater than 45 dB at 400 Hz, 21" H x 17 1/4" W x 12" D..... \$3990

### 35-2 Recorder/Reproducer

Switchable two-track stereo-four-track stereo playback two-speed (15 and 7 1/2 ips ±0.5%) open-reel recorder/reproducer with dc servo-controlled capstan and two eddy current induction reel motors and high-density Permaflux erase, record, playback, and 4-track playback heads, 10 1/2-in reel capacity, separate transport and electronics design. Transport features touch-button logic tape function controls with motion-sensing direct mode changes, pitch control, punch-in recording facility; cueing and edit, four-digit tape counter. Electronics features optional dbx encode/decode, six-step bias selector and variable record EQ control, source calibration; output monitor switch, separate left and right input and output level controls; two VU meters with LED peak indicators. Wow and flutter (NAB weighted) 0.03% at 15 ips, 0.06% at 7 1/2 ips, frequency response 40-22,000 Hz ±3 dB (15 ips), to 18,000 Hz (7 1/2 ips), HD 0.6%, S/N 100 dB with dbx, 65 dB without dbx at 3.0% THD, stereo channel separation 50 dB at 1000 Hz, line input sensitivity, impedance 60 mV/50,000 ohms; line output level load impedance 0.45 V/10,000 ohms, headphone output impedance -21 dB/8 ohms, fast forward, rewind time 160 sec for 1800 ft, 16 1/2" H x 18 1/2" W x 10 1/2" D (transport), 6 1/2" H x 18 1/2" W x 9 1/2" D (electronics)..... \$1990  
**DX-2.** Plug-in dbx noise-reduction cards..... \$225

### 40-4 Recorder/Reproducer

Four-track, 1/2-in recorder/reproducer; will take up to 10 1/2-in reels NAB hub only, 15 and 7 1/2 ips tape speeds, includes function select panel, full IC logic tape transport, memory stop function, digital counter, integrated dbx noise-reduction system; line input -10 dB (0.3 V) impedance greater than 20,000 ohms, unbalanced, line output -10 dB (0.3 V) load impedance greater than 10,000 ohms, unbalanced, wow and flutter 0.04% wrms NAB at 15 ips, fast-winding time 120 sec for 2500-ft tape, frequency response 40-20,000 Hz ±3 dB (15 ips), 40-15,000 Hz ±3 dB (7 1/2 ips); S/N 63 dB weighted, 58 dB unweighted at 15 ips, 65 dB weighted, 60 dB unweighted at 7 1/2 ips, overall dist. 1% at 400 Hz, 0 VU at 9 dB, crosstalk greater than 50 dB at 400 Hz, 21" H x 17 1/4" W x 12" D. \$1790

### Creative Series

### 32-28 Recorder/Reproducer

Two-speed (15 and 7 1/2 ips) two-track two-channel

1/2-in recorder/reproducer with FG servo capstan and two dc slotless reel motors and three heads, 10 1/2-in reel capacity, optional DX-2B plug-in dbx noise-reduction module available. Features selectable equalization for IEC and NAB; two-position record bias and equalization, separate mic and line level controls; -20-dB mic attenuation, output level control; left/right tape/source monitoring; left and right record mode selectors; dual VU meters; punch-in record and rec mute, cueing, touch-button logic-controlled function controls with direct-mode switching, ±6% pitch control, four-digit tape counter. Wow and flutter (NAB weighted) 0.02% (15 ips), 0.04% (7 1/2 ips); frequency response ±3 dB at 0 VU 40-20,000 Hz (15 ips), to 18,000 Hz (7 1/2 ips); S/N ref. 3.0% THD at 1000 Hz, 15 ips, 63 dB (NAB EQ, A weighted), 65 dB (IEC EQ weighted), crosstalk 50 dB at 1000 Hz; 17 1/2" H x 17" W x 10 1/2" D..... \$1125

## TEAC

### A-6600 Stereo Tape Deck

Two speed (7 1/2 and 3 3/4 ips), 1/2-track, two-channel deck, will handle reels up to 10 1/2-in, four heads (erase, record, play, reverse playback). Features auto-reverse and counter repeat, two capstans, one for each direction, tape guide rollers; cueing facility for both forward and reverse tracks; record mode indicator lights; auto spacer for inserting blank spaces between selections, separate left and right level controls; master gain controls for mic and line inputs; hi and low bias and equalization settings; three-position monitor switch, peak LEDs flash at 10 VU (7 1/2 ips) and 8 VU (3 3/4 ips), remote control with optional RC-80..... \$1575

### A-3300SX-2T Tape Deck

Two-speed (15, 7 1/2 ips), 1/2-track, two-channel stereo or mono deck, one dual-speed hysteresis synchronous capstan motor, two eddy-current induction reel motors; three heads, will handle 7-in and 10 1/2-in reels. Wow and flutter 0.04% (15 ips), 0.06% (7 1/2 ips) NAB weighted, S/N 60 dB; frequency response 30-26,000 Hz ±3 dB at 15 ips, 30-24,000 Hz ±3 dB at 7 1/2 ips, THD 1% at 1 kHz. Features independent left/right channel source, tape selectors, VU-type level meters, manual cue lever, separate bias and equalization selectors, 17 1/2" H x 17 1/2" W x 8 1/2" D..... \$1050

## Audio Specialist Series

### X-10 Stereo Tape Deck

Two-speed (7 1/2 and 3 3/4 ips) 1/2-track two-channel tape recorder with three dc motors in closed-loop dual-capstan drive system and erase, record, and playback heads, 10 1/2-in reel capacity. Features pitch control, cue lever, pushbutton tape function controls with rec mute, separate mic and line input level controls, output level control; source/tape monitor switch, separate two-position recording bias and equalization buttons; four-digit tape counter with memory and timer, two VU meters. Wow and flutter (NAB weighted) 0.03% (7 1/2 ips), 0.04% (3 3/4 ips), frequency response 30-28,000 Hz (7 1/2 ips), to 20,000 Hz (3 3/4 ips), S/N 63 dB, 17 1/2" H x 17" W x 10 1/2" D..... \$1000

**X-10R.** Same as X-10 except bi-directional record playback with six heads (two each erase, record, and playback)..... \$1150

### X-7 Stereo Tape Deck

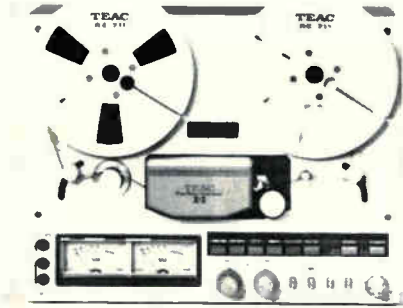
Two-speed (7 1/2 and 3 3/4 ips) 1/2-track two-channel tape deck with three dc motors in closed-loop dual-capstan drive and erase, record, and playback heads, 7-in reel capacity. Features pitch control, separate mic and line input level controls, tape source monitor switch, output level control, two-position bias and equalization, two VU meters; pushbutton tape function controls including rec mute; timer standby; four-digit tape counter, provision for optional remote control unit. Wow and flutter (NAB weighted) 0.03% (7 1/2 ips), 0.04% (3 3/4 ips), frequency response 30-28,000 Hz (7 1/2 ips), to 20,000 Hz (3 3/4 ips), S/N 63 dB, 14 1/2" H x 17" W x 10 1/2" D..... \$700

**X-7R.** Same as X-7 except has bi-directional record/playback and auto repeat..... \$800



### X-3 Stereo Tape Deck

Two-speed (7 1/2 and 3 3/4 ips) 1/2-track two-channel tape recorder with dc servo capstan and two induc-



tion reel motors and three-head configuration. 7-in reel capacity. Features separate mic and line input controls, output level control, two-position bias and equalization selectors, rec mute with LED, tape source monitor switch, dual VU meters, four-digit tape counter, fast-acting spring-loaded reel holders, detachable head housing. Wow and flutter (NAB weighted) 0.04% at 7 1/2 ips, 0.06% at 3 3/4 ips, overall frequency response 30-28,000 Hz (7 1/2 ips), to 20,000 Hz (3 3/4 ips), overall S/N 58 dB at 3.0% THD, weighted, 12 1/2" H x 16 1/2" W x 9 1/2" D. . . . . \$550

### 4-Channel

#### A-3440 4-Channel Tape Deck

Two-speed (15 and 7 1/2 ips) 1/2-track four-channel Simul-Sync tape deck with erase, record sync and playback heads and three motors. 10 1/2-in reel capacity. Features four function select buttons with LEDs and source/sync play output select buttons with tape source monitoring and standby functions, headphone monitor switch with four-track pushbuttons, independent level control, four separate input and output level controls per channel with mic attenuation/mic/line input selectors, four VU meters, pitch control, four-digit tape counter, micro-switch tape function controls with LED pause and record, manual cueing, four unbalanced high- or low-impedance microphone input jacks, provision for optional dbx interface noise-reduction unit and optional RC-70 remote control. Wow and flutter (NAB weighted) 0.04% (15 ips), 0.06% (7 1/2 ips), frequency response  $\pm 3$  dB 40-22,000 Hz at 0 VU (15 ips), to 20,000 Hz at -10 VU (7 1/2 ips), S/N 65 dB with 3.0% THD, weighted, input sensitivity impedance 60 mV 50,000 ohms (line), 0.25 mV 600 ohms (mic); 117 V ac, 60 Hz, 20 1/2" H x 17 1/2" W x 9 1/2" D. . . . . \$1600

#### A-2340SX Tape Deck

Two-speed (7 1/2 and 3 3/4 ips) 1/2-track four-channel Simul-Sync tape recorder with erase, record, and playback heads and three motors. 7-in reel capacity. Features four Sync function select buttons with tape/source output select switches, four mic/line input level controls and output level controls for each channel; four VU meters, micro-controlled tape function controls; four-digit tape counter, four mic jacks and two phone jacks, provision for optional RC-120 remote control unit. Wow and flutter (NAB weighted) 0.08% (7 1/2 ips), 0.10% (3 3/4 ips), frequency response  $\pm 3$  dB 40-18,000 Hz (7 1/2 ips), to 10,000 Hz (3 3/4 ips), S/N 62 dB with 3.0% THD, weighted, input sensitivity impedance 0.1 V 100k ohms (line), 0.25 mV/600 ohms (mic), 17 1/2" H x 13 1/2" W x 8 3/4" D. . . . . \$1175

## TECHNICS

#### RS-1520US Open-Reel Deck

Compact professional tape deck, 1/2-track, two-channel recording/playback and 1/4-track, two channel playback; four head system; three speeds (15, 7 1/2, 3 3/4 ips); quartz control phase-locked dc brushless servo direct-drive capstan motor; reel tables, two-tape tension controlled dc brushless direct drive motors; isolated loop direct-drive transport system. Features full IC logic tape transport func-

tions; direct switching from mode-to-mode without tape strain; separate left and right bias and equalization controls; left and right VU meters; built-in



stroboscope. Wow and flutter 0.018% wrms (15 ips), 0.3% wrms (7 1/2 ips); fast-winding time 150 sec with 2500-ft tape, frequency response 30-30,000 Hz  $\pm 3$  dB (15 ips), 30-25,000 Hz  $\pm 3$  dB (7 1/2 ips), S/N 60 dB, 0.8% dist., 50 dB channel separation, mic input sensitivity 0.25 mV (-72 dB); microphone impedance 200-10,000 ohms; 17 1/2" H x 18" W x 10 1/2" D. . . . . \$2000

**RS-1506US.** Similar to RS-1520US except 1/4-track, two-channel recording/playback and 1/2-track, two-channel playback. . . . . \$1500

**RS-1700US.** Similar to RS-1506US except auto-reverse in both recording and playback modes, 1/4-track, two-channel recording/playback with six-head system. . . . . \$2000

#### RS-1500US Open-Reel Deck

Three-speed (15, 7 1/2, and 3 3/4 ips) 1/2-track two-channel record, playback, and erase and 1/4-track two-channel playback stereo tape recorder with quartz-controlled PLL dc brushless servo direct-drive capstan motor with double pinch rollers and two tape-tension-controlled dc brushless direct-drive reel motors and four heads for recording, 1/2- and 1/4-track playback, and erasure, max. reel capacity 10 1/2 in. Features IC logic-plus-transistor tape transport controls with LED indicators and mode-to-mode switching with automatic pause between modes, three-position bias and equalization switches; dual two-scale VU meters with normal-range (+3 dB) and high-range (-6 dB) meter scale selector, separate mic and line level input controls with mixing, 0/20-dB mic attenuator, output level control, left and right tape/source monitor switches, left/right rec mode switches, four-digit tape counter showing elapsed time in min and sec, timer start with external audio timer, edit dial; fast forward/rewind cueing;  $\pm 6\%$  pitch control; fast forward/rewind time 150 sec (2500-ft, 1.5-mil tape). Wow and flutter 0.018% wrms (15 ips), 0.03% wrms (7 1/2 ips); frequency response  $\pm 3$  dB 30-30,000 Hz (15 ips), 20-25,000 Hz (7 1/2 ips), 20-15,000 Hz (3 3/4 ips), S/N (NAB weighted) 60 dB (15 and 7 1/2 ips), 58 dB (3 3/4 ips), THD at 400 Hz, 0 VU 0.8%; channel separation 50 dB; input sensitivity, impedance 0.25 mV 4.7k ohms (mic, unbalanced), 60 mV 150k ohms (line, phono jack), rosewood veneer side panels, 17 1/2" H x 19 3/4" W x 10 1/2" D. . . . . \$1500

## UHER by WALTER ODEMER

#### SG-631 Logic Open-Reel Deck

Three-speed (7 1/2, 3 3/4, 1 1/2 ips) two- or four-track stereo record/play deck, Omega looping system eliminates pinch roller, drive couplings, springs, and function wheels, four-motor drive system includes two dc hub motors, an electronically regulated capstan drive, and a servomotor to form the Omega loop. Wow and flutter 0.05%, frequency response 20-25,000 Hz (7 1/2 ips), to 16,000 Hz (3 3/4 ips), to 12,500 Hz (1 1/2 ips), S/N 65 dB (two-track at 7 1/2 ips). Features built-in strobe disc, speed control; peak-reading meter; built-in "Dia-Pilot" for re-

coding signal impulses and automatic slide-projector control, switchable peak-level limiter; separate stereo headphone power with volume, bass, and treble controls, A/B monitoring; remote-control facilities, 10 1/2-in reel, max. . . . . \$2357

#### SG 561 Royal Open-Reel Deck

Four speed (7 1/2, 3 3/4, 1 1/2, 1 1/4 ips) two- or four-track mono stereo record play deck with interchangeable two- or four-track tape head mount with Recovac longlife heads and built-in stereo amplifier with mixing facility, 7-in reel capacity. Features "Synchro-Play" sound-with-sound, "Multi-Play" sound-on-sound, reverb effect, and echo. "Dia-Pilot" for record/playback of cueing signals for auto slide projectors, will also synchronize sound and picture in 8- and 16-mm film-making; separate mic/radio and phono input controls, mic in/out switch, dual peak-reading meters, tape source monitor switch, separate and continuous tandem tone control, four-digit tape counter with zero reset, tape tension comparator, electronic end-of-tape shut-off. Wow and flutter (DIN 45507) 0.05% (7 1/2 ips), 0.1% (3 3/4 ips), 0.2% (1 1/2 ips), frequency response 20-20,000 Hz (7 1/2 ips), to 15,000 Hz (3 3/4 ips), to 9000 Hz (1 1/2 ips) S/N (weighted, DIN 45500) on two-track 67 dB (7 1/2 ips), 66 dB (3 3/4 ips), 65 dB (1 1/2 ips), on four-track 65 dB (7 1/2 ips), 64 dB (3 3/4 ips), 61 dB (1 1/2 ips), crosstalk 60 dB (mono), -45 dB (stereo), 13.9" H x 18" W x 7.5" D. . . . . \$1785

#### 4200 Report Monitor Recorder

Four-speed (7 1/2, 3 3/4, 1 1/2, 1 1/4 ips) two-track three head stereo record/play recorder with Recovac tape



head. Features three-digit counter, direct tape monitoring with earphones or speaker, electronic start and stop with remote switch, manual, or foot-switch operation, master level control with separate left right record controls, dual peak-reading level meters, 5-in. max. reel size, ac. single-cell, car, or rechargeable battery operation. Wow and flutter 0.15% (7 1/2), 0.2% (3 3/4), 0.25% (1 1/2), S/N 62 dB (rms A curve), frequency response (DIN 45500) 20-25,000 Hz (7 1/2), 20-16,000 Hz (3 3/4), 25-13,000 Hz (1 1/2), 25-5000 Hz (1 1/4), input range 0.12-40 mV at 200 ohms (mic), 2.4-700 mV (radio), 0.045-20 V at 2 megohms (phono). \$1361  
**4400.** Four-track version of 4200 . . . . . \$1361  
**4000AV.** Two-track mono version of 4200, has three heads. . . . . \$1190

#### SG-521 Four-Speed Recorder

Four-speed (7 1/2, 3 3/4, 1 1/2, and 1 1/4 ips) recorder, interchangeable head assemblies for two- or four-track operation, remote capability for start/stop, can be sound-activated, end-of-tape stop, on/off automatic level control switch, bass and treble controls, four-digit index counter. Frequency response 30-20,000 Hz, wow and flutter 0.02% wrms (both at 7 1/2 ips), 6 W/ch continuous into 8 ohms (30-20,000 Hz) at 1% THD, S/N 65 dB (two-track at 7 1/2 ips); can be operated vertically or horizontally . . . . . \$1162

# 8

# VIDEO CASSETTE TAPE RECORDERS

## AKAI

### VT-300N Nighthawk Portable VCR

Portable 1/2-in, 30-min black-and-white video cassette recorder designed for low-light applications; modular design with optional detachable three-in black-and-white monitor; includes Nighthawk video camera with C-mount 8:1 zoom lens, detachable 1.5-in VF-300E electronic viewfinder, and built-in omnidirectional electret microphone. Recorder has twin rotating glass and crystal ferrite heads in frequency modulation system; uses USA Standard TV signal; features quick start, piano key function controls, battery meter, and three-digit tape counter with reset; resolution 270 lines; S/N 40 dB (video), 45 dB (audio); input 1 V p-p into 75 ohms (video), -65 dB into 600 ohms (audio); audio frequency response 80-10,000 Hz; accepts Akai VK30 cassette, ac or two 6-V battery operation; 5" H x 9.75" W x 11.5" D. Video camera features 500-line horizontal resolution at 15,750 Hz; vertical frequency 60 Hz; video output 1 V p-p composite; 8" H x 2.6" W x 6.5" D..... \$2395

### VT-350 Portable VCR

Portable black-and-white video cassette recorder with vertical-interval editing, variable speed frame control, and still frame; 1/2-in cassette format; 30-min recording time; twin rotating head, frequency modulation recording system; audio dubbing; includes black and white video camera with "C" lens mount, VF-300E electronic viewfinder, and 8:1 (11.5 to 90 mm) zoom lens; battery or ac power; recorder dimensions 5" H x 9.75" W x 11.5" D; camera dimensions 3.6" H x 4.3" W x 7.8" D..... \$2195

### ActiVideo VCR/Tuner-Timer

Portable VHS two-hour color video cassette recorder with detachable color TV tuner adaptor/timer. Video



recorder has rotary slant azimuth two-head scan system and NTSC color video signal system; features double-speed playback; still and single-frame advance/variable speed playback (still through four times normal speed control); front-panel remote pause control jack; three-digit tape counter with memory; sound dubbing; LED flashing dew warning, battery warning, and tape motion indicators; video horizontal resolution 240 lines; input 0.5-2 V, 75 ohms unbalanced (video), -65 dB, 600 ohms (mic); output 1 V, 75 ohms unbalanced (video), -20 dB, 1000 ohms (audio); S/N 45 dB (video), 40 dB (audio); audio frequency response 50-10,000 Hz. Tuner/timer features built-in programmable 24-hr LED digital clock/timer display that can be preset for up to seven days with auto on-off function; 12-channel (UHF/VHF) electronic tuning; auto battery recharging; auto shut-off; auto external/internal battery switch; three-hour battery

charge time. System operates on ac house current or rechargeable nickel-cadmium batteries; includes antenna switch box, r-f converter, earphone, remote pause control, T-30 video cassette, channel display card for tuner, antenna cable, UHF antenna, 75/300 ohm antenna converters and 300/75 ohm antenna converters; 13.3 lbs (VCR), 10.4 lbs (tuner); 4.8" H x 11.5" W x 11.9" D..... \$1495

## GENERAL ELECTRIC

### IVCR010W Video Cassette Recorder

VHS four-hour computer-programmable color video cassette recorder. Features electronic memory bank with five program select buttons with LED indicators, auto start, stop, and channel change, repeat program button, and four sequence indicator lights; built-in digital clock/timer display with memory recall (displays pre-programmed schedule of shows); 12-channel pushbutton electronic tuning for any combination of VHF/UHF channels; three-digit tape counter with memory and program search; remote pause control for use within 16 ft; audio dubbing; pause control; long/standard play tape speed selector; tracking control; includes 75-ohm coaxial cable, two 300-ohm UHF twin leads, 300/75 ohm transformer, 75/300 ohm transformer, and terminal block; high impact plastic construction with wood-grain finish; 6 1/4" H x 18 1/4" W x 14 1/4" D. \$1300

### 1VCR1012W Video Cassette Recorder

Programmable six-hour three-speed VHS color video cassette recorder; programs up to five shows over one-week period. Features 10X normal-speed video scan in forward or reverse (six-hr mode) and 3X and 1/2X-normal speed quick and slow scan in forward mode (six-hr mode); frame advance in 6-hr mode; program search in fast forward/rewind; electronic clock/timer with LED digital readout; built-in electronic 12-button UHF/VHF tuner; counter with memory; audio dubbing; includes full-function wired remote control unit and dustcover; 5" H x 17" W x 13" D..... \$1060

### IVCR0005W Video Cassette Recorder

VHS four-hour color video cassette recorder. Features built-in 24-hr digital clock/timer display with preselected auto start/stop; long/standard play recording selector; built-in VHF/UHF tuner; tape counter with memory switch and program search; remote pause control for use within 20 ft; tracking control; audio dubbing; dew indicator lamp; 6 7/8" H x 19 1/8" W x 15 1/2" D..... \$995

## JVC

### Vidstar HR-6700U VCR

Programmable six-hour two-speed VHS color video cassette recorder with rotary slant azimuth two-head helical scan system and separate SP and EP video heads. Features microcomputer-controlled programmable timer (allows unattended recording of six programs at specific time and day for any recording time length from 5-395 minutes) with LED digital clock/timer/program/recording length display, auto shutoff at end of program, and memory storage

of three programs; auto SP/EP playback switching; freeze frame, slow motion, speed or normal playback; four-digit tape counter with cue/counter auto search; 12-channel VHF/UHF electronic tuner with digital indicators; edit start control; audio dubbing; record select (when recording from camera or other video source); damped cassette eject. Horizontal resolution 240 lines; input 0.5-2.0 V p-p/75 ohms unbalanced (video), -67 dBs/10k ohms unbalanced (mic), -20 dBs/50k ohms unbalanced (line); S/N 45 dB (video), 40 dB (audio); audio frequency response 50-10,000 Hz. Supplied with remote control unit with 16-ft cord, videocassette, dustcover, channel number film, antenna cable, two matching transformers, and power cord; 5 1/2" H x 18 1/2" W x 13 3/4" D..... \$1350

### VF-C509U Electronic Viewfinder

Electronic viewfinder with black-and-white screen and monitoring capability, attaches to either side of camera and can be positioned at 180-degree angle; 1.5-in high-definition picture tube; 6 1/4" H x 2 1/2" W x 4 3/8" D..... \$110

## MITSUBISHI

### HS-300U Video Cassette Recorder

Programmable six-hour two-speed VHS color video cassette recorder with five computer-controlled di-



rect-drive motors. Features programmable timer (records up to six programs over one-week period) with LED digital 24-hr clock/timer readout; freeze frame and single frame advance in EP mode (6-hr tape); slow motion in EP mode with 1/2- and 1/4-speed selector buttons; picture search in forward or reverse (EP mode); electronic touch tuning; electronic tape function controls; audio dubbing; three-digit tape counter with memory; auto rewind; TV/VTR switch; camera/TV input; optional 15-function wireless remote control available. Video horizontal resolution 240 lines (SP), 220 lines (EP); input 0.5-2.0 V p-p/75 ohms unbalanced (video), -20 dB/50k ohms unbalanced (line) -65 dB/10k ohms unbalanced (mic); audio frequency response -10 dB 50-10,000 Hz (SP), to 7000 Hz (EP); S/N 45 dB (video), 40 dB (audio); includes 75-ohm VHF output cable, 300-ohm UHF connector cable, and dustcover; 6 1/2" H x 19 1/8" W x 13 1/2" D..... \$1350 Remote control unit for HS-300U..... \$100

## PANASONIC

### Omnivision VI Series



### PV-1750 Video Cassette Recorder

Six-hour programmable three-speed VHS color video cassette recorder with ddc and direct-drive capstan motors and two hot-pressed-ferrite video heads; can program up to eight different shows over two-week period. Features picture search in SP, LP, and SLP modes; soft touch controls; built-in programmable clock/timer with LED digital readout; built-in electronic UHF/VHF tuning with 14-pushbutton channel selection; auto rewind in record/play at end of tape; special motion features in SP and SLP mode via remote control; full-function remote control unit included; audio dubbing; four-digit counter with memory; one-hour battery-back-up for clock; simulated woodgrain finish ..... \$1450

### PV-1650 Video Cassette Recorder

Two/four/six-hour programmable VHS color video cassette recorder with solid-state integrated circuitry, ddc motor, hot pressed ferrite heads, and azimuth recording system; compatible with color or b & w TV sets and other 2/4 or 2/4/6-hr VHS systems. Features VTR tuner remote channel selector; fast/slow/still frame with frame advance in standard- or super-long-play modes; built-in programmable clock/timer/tuner for unattended recording of four different programs; dim-bright switch for clock/timer readout; built-in UHF/VHF tuner, audio dubbing; tracking control; pause mode with remote pause control; digital memory counter with auto search and shut-off; dew detector; records TV programs off air and home movies with optional TV camera; lightweight annealed aluminum diecast chassis and simulated woodgrain finish; includes hard plastic dustcover ..... \$1395

**PV-1600.** Similar to PV-1650 minus VTR tuner remote channel selector; has electronic index signal (locates beginning of recorded programs in fast forward) and unswitched ac outlet..... \$1295

### PV-3200 Portable VCR

Portable six-hour programmable VHS color video cassette recorder for switchable SLP (six-hour), LP (four-hour), and SP (two-hour) recording; compatible with color or black-and-white and other 2/4 and 2/4/6-hr VHS systems; incorporates solid-state integrated circuitry, direct-drive video head cylinder (ddc) and dc motors, hot pressed ferrite heads, and azimuth recording system. Features still frame with frame advance switch on SLP mode; built-in digital clock with time on and time limiter; digital memory counter with auto search and shut-off after rewind; audio dubbing, built-in electronic UHF/VHF tuner/timer (enables recording of one station while viewing another); soft touch tape function pushbutton controls; tracking control; pause mode with remote pause control; dew detector; ac, dc, or car battery operation; auto recharging system and overcharge protection; records TV programs off air or home-movies with optional TV camera; one-hr operation using LCR-1812 battery with optional color camera; includes rechargeable battery pack; lightweight annealed aluminum diecast chassis..... \$1295

**PV-3100.** Similar to PV-3200 except electronic UHF/VHF tuner and built-in digital clock optional; supplied with ac adaptor ..... \$1150

### PV-1400 Video Cassette Recorder

Six-hour programmable three-speed VHS color video cassette recorder with ddc and direct-drive capstan motors and two hot-pressed-ferrite video heads; can program up to eight different shows over two-week period. Features picture search in LP and SLP modes; built-in programmable clock/timer with LED digital readout; soft touch controls; built-in electronic UHF/VHF tuner with 14-button channel selection; auto rewind in record/play at end of tape; one-hour battery back-up for clock, four-digit counter with memory; audio dubbing; includes remote pause/channel change/cue and review control unit; simulated woodgrain finish ..... \$1295

**PV-1300.** Similar to PV-1400 except records one program over 24-hr period ..... \$1095

### PV-1200 Video Cassette Recorder

Two/four/six-hour programmable VHS color video cassette recorder with solid-state integrated circuitry, ddc motor, hot pressed ferrite heads, and azimuth recording system; compatible with color or

b&w TV and other 2/4 and 2/4/6-hr VHS systems. Features auto tape threading; built-in digital clock with time on and time limiter; audio dubbing; built-in UHF/VHF tuner; tracking control; pause mode with remote pause control; digital memory counter with auto search and shut off; dew detector; records TV programs off air or home movies with optional TV camera; unswitched ac outlet; lightweight annealed aluminum diecast chassis and woodgrain finish ..... \$1095

### Color Cameras

**PK-800.** Video camera with 3/8-in single Saticon tube, auto zoom lens, movable left/right mounted electronic viewfinder, and extended boom electret-condenser microphone ..... \$1250

**PK-750.** Video camera with 3/8-in single Vidicon tube, auto zoom lens, movable left/right mounted electronic viewfinder, and extended boom electret-condenser microphone ..... \$1000

**PK-700.** Video camera with 3/8-in single Vidicon tube, auto zoom lens, electronic viewfinder, and extended boom electret-condenser microphone ..... \$1000

**PK-530.** Video camera with 3/8-in single Vidicon tube, 3 1 manual zoom with fixed detent position for easy focusing, optical through-the-lens viewfinder, and built-in electret condenser microphone ..... \$775

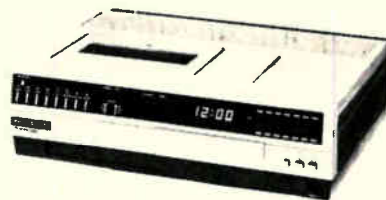
## PHILCO/GTE

### V1715 Portable VCR

Portable two-piece six-hour three-speed VHS color video cassette recorder with separate VHF/UHF electronic tuner. Recorder programmed to record eight shows over two-week period; features manual pause, freeze frame and frame-by-frame advance in six-hr mode; audio dubbing; microprocessor-controlled direct-mode function buttons. Tuner features electronic 14-pushbutton channel selection, built-in electronic timer with LED digital readout. Includes remote pause/still/frame advance control, carrying strap and battery, and blank videocassette; recorder 4 1/2" H x 11 1/2" W x 9 3/8" D; tuner 4 3/8" H x 11 3/8" W x 9 3/8" D..... \$1500

### V1550 Video Cassette Recorder

Programmable six-hour three-speed VHS color video cassette recorder can be programmed to record up



to eight shows over two-week period. Features video scan in forward or rewind at 9X normal speed, built-in electronic timer with LED digital readout, manual pause; built-in electronic VHF/UHF tuner with 14-button VHF/UHF channel selector; audio dubbing; includes remote pause/channel change/scan control and videocassette; 5 1/2" H x 19" W x 14" D ..... \$1395

### V1330 Video Cassette Recorder

Programmable six-hour three-speed VHS color video cassette recorder. Features built-in VHF/UHF tuners with program selection; built-in electronic digital clock/timer display; four-digit tape counter with memory; editing capability with remote pause control; audio dubbing. S/N 43 dBs (video), 40 dBs (audio); video horizontal resolution 240 lines; audio frequency response 50-10,000 Hz, supplied with remote control unit, power cord, videocassette, and antenna cables; 5 1/2" H x 19" W x 14" D .... \$1150

## QUASAR

### 5160 Video Cassette Recorder

Six-hour three-speed microprocessor-controlled VHS color video cassette recorder. Features eight-

program recording capability over two-week period with LED clock/timer record or playback program



readout display; 14-pushbutton varactor tuning; high-speed picture search, four-digit tape counter with memory; 13-mode cable remote control (operable within 20-ft area) includes normal play, slow motion, still/pause, frame advance, double speed, cue, review, fast forward, rewind, stop, channel change, and record; smoked pearl silver cabinet ..... \$1500

**5040.** Similar to 5160 except has four-mode remote control with cue and review, pause, and channel change..... \$1250

### 5030 Video Cassette Recorder

Six-hour three-speed programmable VHS color video cassette recorder features one-program recording capability up to one day in advance; varactor tuning; channel lock and automatic TV/VCR switching; four-function cable remote control with cue, review, pause, and channel change..... \$1100

### VH5300 Portable VCR

Portable six-hour three-speed VHS color video cassette recorder with two rotary hot press ferrite video, stationary audio control, and full-track and audio-dubbing erase heads. Features special effects (playback in slow motion, freeze frame, and frame advance in 6-hr mode), three-digit tape counter with memory, tuner/camera switch, audio overub, built-in rechargeable 80-min battery, and scene transition stabilizer, car cord for 12-V dc operation or ac power supply optional. Horizontal resolution 280 lines (b&w), 240 lines (color). Supplied with VC-T60 1-2-3 hr videocassette, battery pack, shoulder strap, earphone, 5-ft 75-ohm VHF output cable, 75/300 ohm VHF matching transformer, mic attenuator, mic plug matching adaptor, battery connector cord, and remote pause control; 12 lbs with battery; 4 5" H x 11.5" W x 9.75" D ..... \$1000

**VA512.** 14-pushbutton varactor tuner for VH5300SE, has LED digital electronic clock/timer display and auto fine tuning. .... \$250

**VA520.** Programmable 14-pushbutton varactor tuner for VH5300SE, programs up to 8 programs over two-week period; has LED digital electronic clock/timer display and auto fine tuning ..... \$350

### Color Cameras

**VK730.** Video camera with F1.8 6:1 zoom lens, adjustable electronic viewfinder, and boom microphone..... \$1000

**VK725.** Video camera with F1.8 6:1 zoom lens, fixed electronic viewfinder, and boom microphone. .... \$1000

## RCA

### VET450 SelectaVision VCR

Programmable six-hour three-speed VHS color video cassette recorder with direct-drive capstan and



\*headwheel motors and two-head helical scan system. Features microprocessor-controlled electronic

# 8 VIDEO CASSETTE TAPE RECORDERS

programmer (programs up to eight different programs on eight different channels over two-week period) with LED digital timer/clock readout, picture search (9x normal speed) in fast forward or rewind (LP or SLP modes); electronic touchbutton tuning of VHF/UHF channels 14-82; auto tape rewind in all modes except timer; four-digit tape counter with memory; tracking control; soft-touch electronic tape transport controls; audio dubbing; auto TV/VCR switch; dew moisture control. Includes remote channel change/pause/picture search control with 20-ft cord and three-hour videocassette. 5' 1/2" H x 18' 1/2" W x 14" D..... approx. \$1150  
**VET250.** Similar to VET450 except has built-in 24-hr electronic clock/timer with auto stop... \$995

## VEP150 SelectaVision Portable VCR

Six-hour three-speed portable VHS color video cassette recorder with direct-drive capstan and head-wheel motors, powered by built-in rechargeable battery (1.5-hrs recording time), cigarette lighter socket (with optional dc power cord), or on ac house current (with TEP1400 tuner/timer or PDP500 ac adaptor charger). Features soft-touch transport controls; audio dubbing; three-digit tape counter with memory, LED battery indicators for full charge, adequate charge, and 5-min recording time remaining; power saver circuit (automatically switches recorder to standby after 5-min pause), air-damped cassette insert/eject, tracking control. Output 1.0 V p-p, ±0.2 V, input 1.0 V p-p ±0.5 V, r-f output level 1.5-3 mV. Supplied with remote start/stop/pause control with 19-ft 8-in cord, earphone, 3-hr videocassette, and removable handle. 15 lbs, 4' 3/4" H x 10' 1/2" W x 11' 3/4" D..... \$1075

**TEP1400.** Microprocessor-controlled tuner timer module for VEP150; programmed to record up to five different programs on different channels over one-week period. Features LED digital timer/clock display; electronic touchbutton tuning for channels 2-83; built-in ac power adaptor and battery charger, output 1.0 V p-p ±0.5 V, 4' 3/4" H x 10' 1/2" W x 12' 1/4" D..... \$350

**PDP500.** Ac adaptor charger for VEP150, recharges built-in battery off regular ac house current, plays back videocassettes on ac current, or can be used for in-home camera recording. 4' 1/2" H x 4' 3/4" W x 11" D..... \$149

## CC006 Color Video Camera

Lightweight color VHS video camera with f1.8 6.1 power zoom lens, electronic viewfinder, and boom microphone (telescopes out to 7.75 in). has on-camera record/pause control, includes 9-ft 10-in cable and compact power supply with 500-W ac outlet for VCR hookup. \$949

## SANYO

### VCR5050 Video Cassette Recorder

Programmable five-hour two-speed Betacord color video cassette recorder with three solenoid-actuated



motors; can program one show over 24-hr period. Features high-speed (15X normal speed) forward or reverse scan, freeze frame with single-frame advance, built-in electronic timer/clock with LED digital readout, sleep switch, one-touch recording, auto rewind at end of tape, four-digit tape counter with memory; includes six-function handheld remote

control unit, vinyl dustcover, L500 videocassette, and connector cables and input transformers; 6.3" H x 17.6" W x 14.6" D..... \$1245

### 9100A Betacord Video Cassette Recorder

Color video cassette recorder with Beta cassette format for one hour, two hour, or three hour recording/playback; one-touch pushbutton operation; built-in digital clock/timer; memory digital tape counter; instant editing with pause control; built-in all-channel tuner; lighted channel indicators; automatic fine tuning; camera and microphone inputs; video inputs/outputs; automatic shut-off with sleep switch; rotary two-head helical scan recording system; 7.7" H x 19.5" W x 14.6" D..... \$795

## SHARP

### VC-6800 Video Cassette Recorder

Six-hour programmable two-speed (1.31 and 0.43 ips) VHS color video cassette recorder with three dc



motors for servo capstan, head drum, and tape loading drive. Features microcomputer-controlled automatic and unattended program system (records up to seven separate programs on seven different channels over one week or automatically records program at same time for seven consecutive days) with programmable keyboard and channel selector, program clock timer AM-PM tape counter LCD display readout, memory recall, and backup batteries to prevent loss of memory during power interruption; auto program locate device in fast forward or rewind, electronic four-digit tape counter with memory; tape remaining LED indicators in LP SP rec play, two-way pause with included remote control unit with 20-ft cord, touchbutton VHF UHF electronic tuning with auto fine tuning, auto TV/VTR switch, audio dubbing, dew warning LED. Horizontal resolution 240 lines (SP mode), output 1.0 V p-p 75 ohms unbalanced (video), input 0.5-2.0 V p-p 75 ohms unbalanced (video), -20 dBm, 100k ohms unbalanced (line, audio), -70 dBm 600 ohms unbalanced (mic), audio frequency response 70 ±4 dB to 10,000 -2 -5 dB Hz in SP mode, 6' 3/4" H x 19' 1/2" W x 15' 1/4" D..... \$1095

### VC-7400 Video Cassette Recorder

Front-loading programmable six-hour two-speed VHS color video cassette recorder programs one show over 24-hr period. Features built-in clock timer with LED digital readout, built-in electronic VHF UHF tuner with 12-pushbutton electronic tuning, illuminated channel indicators, and switchable automatic fine tuning; soft-touch solenoid function controls; tape remaining LED indicator, four-digit tape counter, one-touch recording, includes handheld remote pause control operable within 20-ft radius. \$795

### QC-35 Portable Color Camera

Portable color video camera with tri-electrode 1-in single vidicon tube, standard C mount 6.1 zoom lens, auto iris with manual override, 1.5-in electronic viewfinder/monitor, and built-in electret-condenser microphone \$1095

## SONY

### SL-5800 Video Cassette Recorder

Five-hour programmable Betamax color video cassette recorder with double-azimuth video head. Features built-in programmable timer (preset recording of four programs over two-week period) with LED digital clock/timer readout; variable BetaScan

(searches in forward or reverse from 5-20 times normal speed with remote commander control unit);



3x normal speed fast play; stop - 1/2 normal speed variable slow motion; freeze-frame and frame-by-frame viewing, auto tab marker (automatically marks electronic signal on beginning of each recorded program on tape) with memory; 14 pushbutton VHF UHF tuning, logic-controlled transport controls, audio dubbing, VTR TV switch, B-I play, B-II record play, and B-III 5-hr record operations mode; includes remote commander control with BetaScan, fast play, variable slow motion, freeze-frame, frame-by-frame viewing, and cue/review in fast forward and rewind..... \$1400

**AG-300 BetaStack.** Programmable videocassette autochanger providing up to 20 hrs of record/playback time of four different programs on different channels over two-week period, each on separate cassettes. .... approx. \$350

### SL-5600 Video Cassette Recorder

Programmable Betamax color video cassette recorder features built-in programmer (preset recording of five hours of programs automatically over two-week period or recording of four different programs on different stations at various times) with LED digital timer clock display and memory back-up system (automatically advances clock and keeps programming instructions for 10 minutes during power outage). BetaScan (searches in fast forward or reverse up to 13x normal speed); tab-marker electronic indexing (automatically marks electronic signal on beginning of each recorded program on tape), microprocessor direct mode-to-mode tape transport controls. 14-pushbutton UHF/VHF express tuning; 3x fast play, freeze frame, Beta-I play operation; includes remote control with BetaScan search, 3x fast play, and pause; freeze frame with 15-ft cord, 6' 1/2" H x 19' 1/2" W x 14' 3/4" D..... \$1350

### SL-3000 Portable VCR

Portable one-hour Betamax color video cassette recorder with rotary two-head helical scanning system and EIA-standard NTSC color video signal system. Features one-button recording, audio dubbing, cue function, pause control; logic-controlled tape functions; dew sensor; battery indicator; three-way power supply (ac, dc, or battery operation); four-digit tape counter, tape speed control system. Video S/N 45 dB, input 1.0 V p-p, 75 ohms unbalanced; output 1.0 V p-p, 75 ohms, resolution 240 lines. Audio S/N 40 dB, frequency response 50-7000 Hz. Includes -26-dB earphone, antenna switch and 2-m cable, and shoulder strap; 8.5 kg with tape and battery; 127 mm H x 296 mm W x 345 mm D..... \$1300

**TT-3000.** Tuner-timer for SL-3000; features built-in electronic digital timer for seven-day programmable recording capability with access to 14 VHF/UHF channels, three-hr recording capacity, express tuning, and auto shut-off and fine tuning. 16 lbs, 9 oz..... \$500

**HVC-1000.** MF Trinicon color video camera for SL-3000; has 2 1/2-in Trinicon pick-up tube; built-in F1.8 14-42 mm zoom lens, built-in microphone, single reflex optical viewfinder, remote start/stop recorder control functions, and remote control pause; 300-line resolution, S/N 45 dB; video output 1.0 V p-p, 22 kg..... \$1400

### SL-5400 Video Cassette Recorder

Five-hour Betamax color video cassette recorder with direct-drive dc head and servo capstan motors



in rotary two-head helical scan system and NTSC-color video signal. Features BetaScan system for instant forward/reverse search and scan, built-in three-day timer/multi-event programmer; fourteen-position pushbutton tuning; auto program selector; 3x normal speed fast play; still-frame capability; BetaScan Commander remote control with freeze-frame capability up to 15 ft away; audio dubbing; five recording length settings; air-damped cassette lid; remote camera connector; four-digit tape counter. Video: horizontal resolution 280 lines (monochrome), 240 lines (color), S/N 45 dB (monochrome). Audio: S/N 40 dB, frequency response 50-8000 Hz (Beta II), 100-7000 Hz (Beta III). Includes cassette tape, channel indicators, antenna connectors, 75-ohm coaxial cable, and 300-ohm twin-lead cable. 33 lbs; 6 1/2" H x 19 1/2" W x 15" D..... \$1250

### Betamax SL-8600 VCR

Color video cassette recorder with Beta cassette format for three-hour recording. Features LED clock timer, record/pause indicator, remote pause with 20-ft cord; tape counter with memory; VHF and UHF channel selectors with numeral read-out, rotary two-head helical scan recording system; optional black-and-white sound camera available. 7 1/2" H x 18 1/2" W x 16 1/2" D..... \$1150

### Color Cameras

For Betamax video cassette recorders.

**HVC-2000.** Video camera with Canon 6 1 motor-driven zoom and macro lenses, electronic viewfinder with 1 1/2" picture tube, automatic fade-in-out, and remote control capability..... \$1250

**HVC-2010.** Video camera with 2 1/2 two-position lens (normal and telephoto settings) and direct optical viewfinder..... \$800

### VP-2011 Video Cassette Player

U-Matic 3 1/2" in one-hour video cassette player with microprocessor-controlled Auto Search Control random access unit with automatic program/segment locate and play function, pause control, and LED digital position/selected position readout display. Features auto stop, rewind, and restart, still adjust control, 8-pin VTR connector, BNC video out and playback on conventional TV receiver with optional r-f adaptor..... \$2000

**VO-2610.** U-Matic video cassette player/recorder with input review, skew control, and still adjust..... \$2150

**VP-2010.** U-Matic player with still control... \$1775

**Trident VP-2030.** U-Matic player/recorder can record on three major world TV systems, NTSC, PAL, and SECAM, when used with PVM-1850PS Trinitron monitors..... \$2350

**PVM-1850PS.** Trinitron monitor..... \$1430

## SYLVANIA/GTE

### VC4515 Portable VCR

Portable two-piece six-hour three-speed VHS color video cassette recorder with separate record/play-



back and electronic tuner sections, programmed to record eight programs over two-week period. Recorder features freeze frame and frame-by-frame advance in six-hour mode; auto dubbing button; manual pause control in record/playback; four-digit tape counter with memory; microprocessor-controlled direct-mode tape function switching. Tuner section features 14 electronic pushbutton channel selection; built-in electronic timer for unattended recording with LED digital readout; VCR/TV select button. Includes adjustable carrying strap and battery pack for control section, wired remote pause/still/frame advance, blank videocassette, and earphone; recorder 4 1/2" H x 11 1/2" W x 9 1/2" D, tuner 4 1/2" H x 11 1/2" W x 9 1/2" D..... \$1500

### VC3100 Video Cassette Recorder

Programmable three-speed six-hour VHS color video cassette recorder programmed to record up to eight selections over two-week period. Features forward/rewind Superscan at 9X normal speed in 4- and 6-hour modes; built-in UHF/VHF tuner with 14-pushbutton electronic UHF/VHF channel selection; built-in electronic timer with LED digital clock readout; electronic function buttons; manual pause; auto dubbing; includes wired remote pause/channel change/Superscan control and videocassette; 5 1/2" H x 19" W x 14" D..... \$1395

### VC3000 Video Cassette Recorder

Programmable six-hour three-speed VHS color video cassette recorder that records four programs on four different channels over seven-day period. Features built-in UHF/VHF tuner with 14-button electronic channel selectors with channel indicators; built-in electronic timer with LED digital display; electronic program indexing signal; auto dubbing; manual pause with separate remote control pause unit; remote control channel change; three-digit tape counter with memory; supplied with remote control unit, 1-2 hr videocassette, 5-ft 75-ohm VHF output cable and 5-ft 300-ohm UHF connector cable, and 75/300 ohm VHF matching transformer and 300/75 ohm VHF antenna adaptor; 7" H x 19" W x 14.75" D..... \$1350

### VC2800 Video Cassette Recorder

Six-hour three-speed VHS color video cassette recorder. Features built-in UHF/VHF tuner with electronic pushbutton channel selector; built-in electronic timer with LED digital display; manual pause; auto dubbing, supplied with T 60 1-2 hr videocassette and remote pause/channel change control unit. 5 1/2" H x 18 1/2" W x 14" D..... \$1150

## TOSHIBA

### V-5425 Video Cassette Recorder

Five-hour two-speed programmable Beta-format color video cassette recorder. Features Comput-R-Tune™ programmable 12-station electronic tuning system that presets up to three programs over seven-day period; programmable quartz-locked LCD digital timer with time adjust/time/program switch for preselected recording times by day, time, and for up to a week in advance; freeze frame, fast forward, and reverse with scanning and monitoring facilities; four-digit tape counter with fast forward/rewind auto find and counter memory rewind; visual cue/review picture search in fast forward/rewind LP mode; audio dubbing; remote pause; LED power, record, long play, pause/still, and tape function indicators; camera/remote control connectors controlling record/play pause action on stop-action still frames, one-touch recording. Video input and output 1.0 V p-p, 75 ohms unbalanced, sync, negative; horizontal resolution 250 lines (SP), 240 lines (LP); S/N 45 dB (video SP/LP), 40 dB (audio); audio frequency response 50-8000 Hz (SP), to 7000 Hz (LP); 7" H x 18 1/2" W x 15.2" D..... \$1345

### V-8000 Video Cassette Recorder

Programmable five-hour two-speed Betamax color video cassette recorder; can program one show over



one-week period. Features Comput-R-Tune micro-computer-controlled 12-station electronic tuning system; built-in clock/timer with LED digital frequency readout; visual search; Beta-Scan at 17X normal play mode and super scan at 40X normal play; freeze frame; memory rewind; audio dubbing; solenoid logic controls; six-function wired remote control unit included..... \$1245

### V-5530 Portable VCR

Portable three-hour Beta-format video cassette recorder. Features audio dubbing; remote pause; cue and review; touch reference controls; optional built-in battery supply; allows one hour fully remote recording..... \$1245  
**V-5535.** V-5530 with tuner; does not include ac adaptor..... \$1345  
**TU-530.** Timer/tuner for V-5530; LED timer for hands-off recording; includes battery charging function..... \$245

### LVR Video Tape Recorder

Endless-loop-tape fixed-head fixed-reel two-hour color video tape recorder. System features simplified internal mechanics, 25-sec fast-access time to any track for visual review/preview, 300-track digital tape indexing, distortion- and vibration-free tape handling, smaller size and weight, and high-speed tape duplication, uses 1/2" in 100-m-long graphic-lubricated tape. Additional features include random access and function flexibility; seven-day programmable timer/clock display; red LED track counter display, enter three-digit track number selector. Comput-R-Tune™ programmable 12-station electronic tuning; play and record buttons with LED; up/down for preview, scan, or rewind; repeat with LED indicator (repeats selected 25-sec track, locks, cancelled by play or stop); stop; and eject. Video: EIA NTSC-compatible color in and out signals; S/N 42 dB min., resolution 230 lines (color); track access time 50 msec/track; audio S/N 45 dB; 11.2" H x 15" W x 5.5" D..... approx. \$600

### Color Cameras

**IK-1850AF.** Video camera with auto-focus auto-iris 6 1/2 zoom lens with manual override, electronic viewfinder, and built-in condenser mic..... \$1045

**IK-1610.** Portable color video camera with 25-mm F 1.8 lens, built-in condenser mike, hand grip and shoulder rest, univicon sensitivity, remote trigger pause, and ac/dc operation..... \$895

**IK-1650.** Same as IK-1610 but also has 18-105 mm F 1.8 zoom lens and electronic viewfinder with built-in record/playback monitor and sound..... \$1345

## ZENITH

### VR9000W Video Director VCR

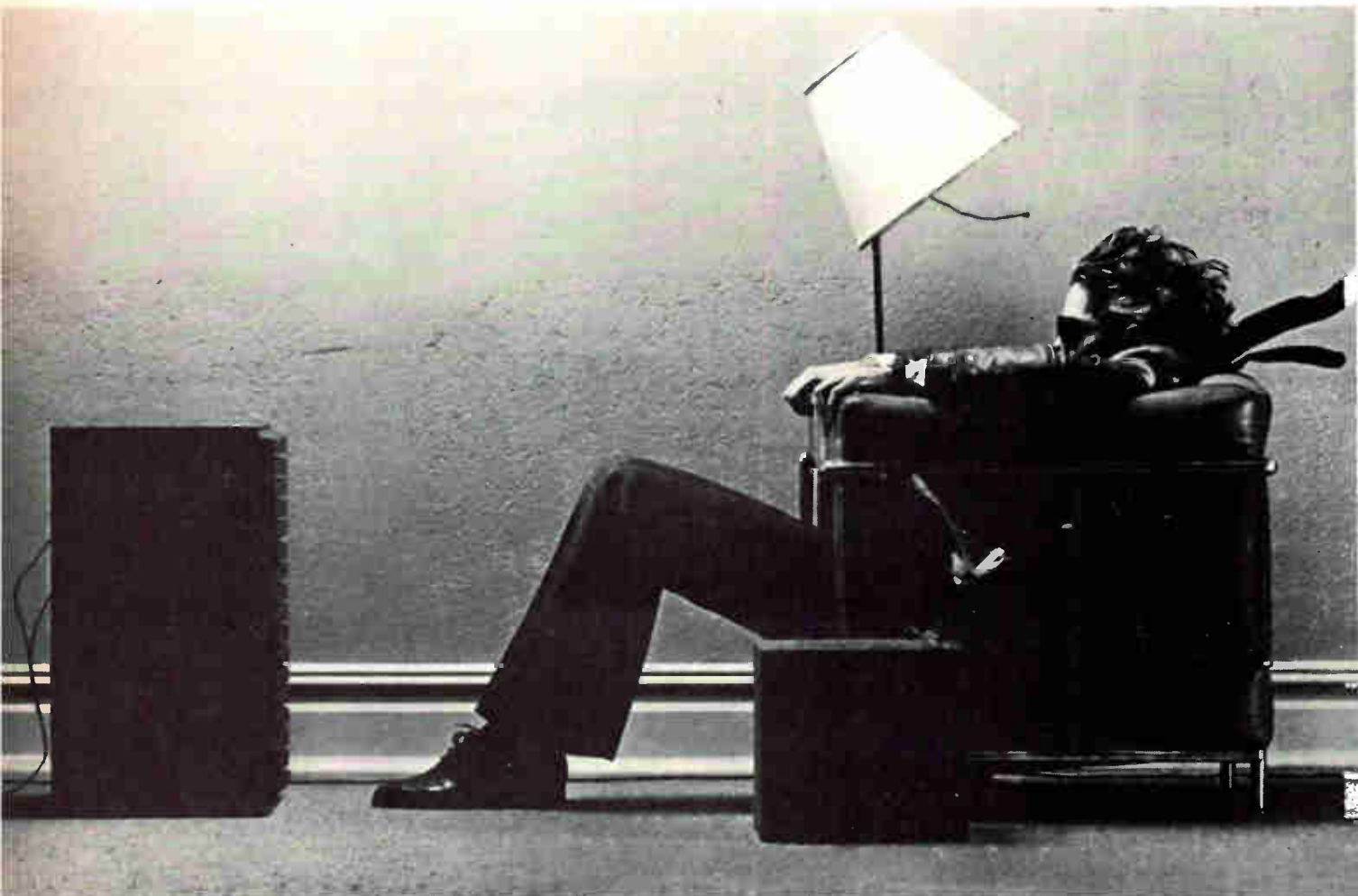
Betamax-format five-hour color video cassette recorder with rotary two-head helical scan recording system and EIA NTSC color video signal. Features Video Action remote control with speed search and stop; automatic digital timer display with auto shut-off permits user to program over three-day period; electronic 14-pushbutton tuning; audio dubbing; tape counter with reset button; camera jack for use with any Zenith black-and-white or color TV camera. Video input 1.0 V p-p ± 10%, 0.5 V, 75 ohms unbalanced; output 1.0 V p-p ± 10%, 75 ohms, horizontal resolution 250 lines ± 20 (monochrome); S/N 45 dB (video), 40 dB (audio); audio frequency response 50-10,000 Hz; simulated American walnut-finish cabinet, 6 1/2" H x 19 1/2" W x 15" D..... \$1125  
**VR9700J.** Similar to VR9000W except features 14-day auto recorder LED display, a microprocessor-controlled programmable timer that can turn on, change, turn off, or record four different programs on different channels over 14-day period, with daily or weekly repeats of program recorded for up to five hours on company's L830 cassette; uses 12-hour AM/PM power line synchronized clock; additional features include automatic indexing in fast forward or rewind and triple forward speed search button on video action remote control (permits rapid viewing of recorded programs); 14-pushbutton electronic tuning is microprocessor-controlled; chestnut vinyl-cushioned cabinet; 6.5" H x 19.5" W x 15.25" D..... \$1300

### Video Cameras

**KC1250.** Color video camera with 6 1/2 F 2.0 zoom lens, electronic viewfinder, and built-in electret microphone; includes power supply adaptor..... \$1395

**KC1000.** Color video camera with 25-mm "C" mount lens, optical pop-up viewfinder, and built-in electret microphone; includes power supply adaptor..... \$995

# AFTER 500 PLAYS OUR HIGH FIDELITY TAPE STILL DELIVERS HIGH FIDELITY.



If your old favorites don't sound as good as they used to, the problem could be your recording tape.

Some tapes show their age more than others. And when a tape ages prematurely, the music on it does too.

What can happen is, the oxide particles that are bound onto tape loosen and fall off, taking some of your music with them.

At Maxell, we've developed a binding process that helps to prevent this. When oxide particles are bound onto our tape, they stay put. And so does your music.

So even after a Maxell recording is 500 plays old, you'll swear it's not a play over five.



**IT'S WORTH IT.**

CIRCLE NO. 28 ON READER SERVICE CARD  
STEREO DIRECTORY & BUYING GUIDE



# 9

# BLANK TAPE

## AMPEX

### MPT (Metal Particle Tape) Cassette

Pure iron microparticles, metal bias, 70- $\mu$ sec equalization

367-C60, 60 min. . . . . \$9.99

### GMII (Grand Master II) Series Cassettes

Cobalt-modified gamma ferric oxide, high bias; 70- $\mu$ sec equalization.

366-C60, 60 min. . . . . \$4.79  
366-C90, 90 min. . . . . \$5.89

### GMI (Grand Master I) Series Cassettes

Premium gamma ferric oxide; normal bias, 120- $\mu$ sec equalization.

365-C60, 60 min. . . . . \$4.29  
365-C90, 90 min. . . . . \$5.39

### EDR (Extended Dynamic Range) Cassettes

Premium gamma ferric oxide; normal bias, 120- $\mu$ sec equalization.

377-C45, 45 min. . . . . \$2.69  
377-C60, 60 min. . . . . \$3.29  
377-C90, 90 min. . . . . \$4.29

### ELN (Extra Low Noise) Series Cassettes

Gamma ferric oxide; normal bias, 120- $\mu$ sec equalization.

374-C45, 45 min. . . . . \$1.79  
374-C60, 60 min. . . . . \$2.39  
374-C90, 90 min. . . . . \$3.29  
374-C120, 120 min. . . . . \$4.69

### GM (Grand Master) Series Cartridges

389-45, 45 min. . . . . \$3.99  
389-90, 90 min. . . . . \$4.79

### ELN (Extra Low Noise) Series Cartridges

385-45, 45 min. . . . . \$2.99  
385-90, 90 min. . . . . \$3.69

### GM (Grand Master) Open-Reel Tapes

356-1511JA, 1200-ft, 7-in reel, 1.5 mil. . . . . \$9.99  
357-1511JA, 1800-ft, 7-in reel, 1.0 mil. . . . . \$11.99  
356-1731JA, 2500-ft, 10' 3/4-in NAB reel, 1.5 mil. . . . . \$26.99  
357-1731JA, 3600-ft, 10' 3/4-in NAB reel, 1.0 mil. . . . . \$29.99

### ELN (Extra Low Noise) Open-Reel Tapes

375-1511J1, 1200-ft, 7-in reel, 1.5 mil. . . . . \$6.99  
376-1511J1, 1800-ft, 7-in reel, 1.0 mil. . . . . \$8.99

### Accessories

E4220BC, Demagnetizer/head cleaner for cassette players/recorders . . . . . \$5.29  
E4228BC, Demagnetizer/head cleaner for 8-track cartridge players/recorders . . . . . \$6.29  
ST-1, Cassette storage unit . . . . . \$1.69

### Video Cassette Tape

#### Beta-Format Videocassettes

101-L250-1C, 30-60 min. . . . . \$11.49  
101-L500-1C, 60-120 min. . . . . \$14.49

#### VHS-Format Videocassettes

102-T60, 60-120 min. . . . . \$16.95  
102-T120, 120-240 min. . . . . \$22.95

## ARISTA

### Cassettes

C60, 60 min. . . . . \$1.49  
C90, 90 min. . . . . \$2.19  
M30, Mini cassette . . . . . \$3.30

### 8-Track

40 min. . . . . \$3.05  
45 min. . . . . \$3.30  
80 min. . . . . \$3.60  
90 min. . . . . \$3.85

## AVANTI PRODUCTS

### Hi Energy Alpha Cassettes

Normal bias; 120- $\mu$ sec equalization; packed in hard Philips box; also available with blistered display card (HEB designated).

HEC-60, 60 min. . . . . \$1.49  
HEB-60 . . . . . \$1.65  
HEC-90, 90 min. . . . . \$1.95  
HEB-90 . . . . . \$2.10

### LNC Cassettes

Low-noise cassettes; packed in hard Philips box; 5-screw assembled shell; precision pins and lubricated rollers; bronze spring and pressure pad; reversible index card; also available as blistered display card (LNB designated).

LNC-40, 40 min. . . . . \$0.90  
LNB-40 . . . . . \$1.10  
LNC-60, 60 min. . . . . \$1.10  
LNB-60 . . . . . \$1.25  
LNC-90, 90 min. . . . . \$1.50  
LNB-90 . . . . . \$1.65

### 8-Track Cartridges

High output, low noise; rubber idler rollers; non-skid guide posts; pressure pad.

BT-45, 45 min. . . . . \$1.75  
BT-90, 90 min. . . . . \$2.10

### CC6/C-60 Carrying Case w/Cassettes

High-impact dark blue plastic cassette carrying case with translucent lid; holds up to ten cassettes; includes six 60-min cassettes . . . . . \$6.75

## BASF

### Metal IV Cassette

Designed for recording on metal/Type IV position, may be played back on chrome/Type II.  
60 min. . . . . \$9.79

### Professional I Series Cassettes

Ferric-oxide; normal/Type I bias/equalization.  
60 min. . . . . \$3.99  
90 min. . . . . \$5.49

### Professional II Series Cassettes

Chromium dioxide for chrome/Type II position.  
60 min. . . . . \$4.49  
90 min. . . . . \$5.99

### Professional III Series Cassettes

Ferrichrome for FeCr/Type III position.  
60 min. . . . . \$4.29  
90 min. . . . . \$5.79

### Studio I Series Cassettes

Ferric oxide for normal/Type I position.  
60 min. . . . . \$3.29  
90 min. . . . . \$4.69

### Studio II Series Cassettes

Chromium dioxide for chrome/Type II position.  
60 min. . . . . \$3.49  
90 min. . . . . \$4.99

### Performance Series Cassettes

Normal Type I position, for music or voice recordings.  
45 min. . . . . \$2.59  
60 min. . . . . \$2.79  
90 min. . . . . \$3.99  
120 min. . . . . \$4.99

### Studio Series 8-Track Cartridges

Low noise/high output.  
45 min. . . . . \$3.49  
90 min. . . . . \$4.29

### Ferro Series Open-Reel Tapes

Low noise/high output  
1800-ft, 7-in reel . . . . . \$12.99  
2400-ft, 7-in reel . . . . . \$16.99  
3600-ft, 7-in reel . . . . . \$21.99

### Music Box

Black plastic storage cabinet holds up to 40 cassettes, can be mounted on wall or set on shelf . . . . . \$15.00

### Accessories

8-track headcleaner . . . . . \$2.19  
Cassette headcleaner . . . . . \$1.99  
7-in plastic storage box . . . . . \$2.99  
7-in plastic reel . . . . . \$1.79

### Video Cassette Tape

#### Betamax Format

Chrome formulation.  
L-500, 1-2 hrs. . . . . \$16.95  
L-750, 1' 3/4-3 hrs. . . . . \$20.95

#### VHS Format

Chrome formulation  
T-60, 1-2 hrs. . . . . \$17.95  
T-120, 2-4 hrs. . . . . \$24.95

## CERTRON

### Ferex I Cassettes

Premium tape.



F-60 FE. 60 min.....	\$3.00
F-90 FE. 90 min.....	\$3.99

### High Energy Gamma Cassettes

Oxide formulation; durable binder system.

C-60 HE. 60 min.....	\$1.99
C-90 HE. 90 min.....	\$2.59
C-120 HE. 120 min.....	\$2.99

### Low Noise Cassettes

C-30 LN. 30 min.....	\$0.99
C-45 LN. 45 min.....	\$1.09
C-60 LN. 60 min.....	\$1.19
C-90 LN. 90 min.....	\$1.59
C-120 LN. 120 min.....	\$1.89

### High Density Cassettes

C-30 HD. 30 min.....	\$1.29
C-45 HD. 45 min.....	\$1.39
C-60 HD. 60 min.....	\$1.59
C-90 HD. 90 min.....	\$2.09
C-120 HD. 120 min.....	\$2.49

### Memotape for Minicassette

MT30. 30 min.....	\$3.99
MT40. 40 min.....	\$4.99

### Micro Cassette

For Lanier, Olympus, and Panasonic capstan-drive machines.

M60. 60 min.....	\$3.99
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### Dictation Cassettes

D30. 30 min.....	\$1.79
D45. 45 min.....	\$1.89
D60. 60 min.....	\$1.99
D90. 90 min.....	\$2.59
D120. 120 min.....	\$2.99

### 8-Track Cartridges

8T-45. 45 min.....	\$1.69
8T-65. 65 min.....	\$1.99
8T-90. 90 min.....	\$2.49

### Tape Accessories

CHC. Cassette head cleaner.....	\$0.99
8T-HC. 8-track head cleaner.....	\$1.19

## DAK INDUSTRIES

### ML Cassettes

Normal bias; 120  $\mu$ sec equalization.

ML46. 46 min.....	\$1.49
ML60. 60 min.....	\$1.76
ML90. 90 min.....	\$2.49

### HEC Cassettes

Normal bias and equalization.

HEC 40. 40 min.....	\$1.27
HEC 60. 60 min.....	\$1.57
HEC 90. 90 min.....	\$1.91
HEC 120. 120 min.....	\$2.96

### EC Special Length Cassettes

Normal bias and equalization.

EC32. 32 min.....	\$0.91
EC62. 62 min.....	\$1.03
EC92. 92 min.....	\$1.23
EC122. 122 min.....	\$1.82

### LNC Cassettes

Low noise; normal bias and equalization.

LNC30. 30 min.....	\$0.77
LNC60. 60 min.....	\$0.92
LNC90. 90 min.....	\$1.17
LNC120. 120 min.....	\$1.89

### C Voice Cassettes

Normal bias and equalization.

C30. 30 min.....	\$0.69
C60. 60 min.....	\$0.81
C90. 90 min.....	\$1.04
C120. 120 min.....	\$1.74

## DENON

### DXM Metal Cassette

Designed exclusively for music; features improved MOL in low and medium frequency range and SOL in high frequency range, wide dynamic range at high-frequency end, and stable and smooth magnetic coating with low drop-out; high-precision cassette shells and matrix sheets; 70- $\mu$ sec equalization.

C60. 60 min.....	\$8.60
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### DX-7 Series Cassettes

Chrome-position double-coated cobalt-doped tape for music programs; 70- $\mu$ sec equalization; high saturation output level in high frequencies and wide dynamic range; precision shell half.

C60. 60 min.....	\$5.00
C90. 90 min.....	\$7.00

### DX-5 Series Cassettes

Double-coated FeCr-type music tape; broad bias curve and +8-dB increase in maximum output level; bias setting of 70  $\mu$ sec; compatible with variety of cassette decks and program sources; ferrichrome position.

FC-60. 60 min.....	\$5.00
FC-90. 90 min.....	\$7.00

### DX-3 Series Cassettes

Double-coated magnetic FeCr-type tape accommodates all types of cassette decks; normal bias setting; normal position.

NC-60. 60 min.....	\$3.99
NC-90. 90 min.....	\$5.60

## FUJI

### Metal Tape

Metal coating with polyester base and pre-stressed polyester backing; very high output, ultra-low noise, 7-12 dB higher MOL than chrome; metal bias, 70  $\mu$ sec equalization; packaged in hinged plastic box.

C46. 46 min.....	\$8.30
C60. 60 min.....	\$9.10
C90. 90 min.....	\$12.00

### FX-I Premium Cassette Series

Pure Ferric coating with polyester base and backing; normal bias; 120  $\mu$ sec equalization; packaged in hinged plastic box.

C46FX-I. 46 min.....	\$4.25
C60FX-I. 60 min.....	\$4.89
C90FX-I. 90 min.....	\$6.70

### FX-II Premium Cassette Series

Beridox coating with polyester base and backing; high bias; 70  $\mu$ sec equalization; packaged in hinged plastic box.

C46FX-II. 46 min.....	\$4.25
C60FX-II. 60 min.....	\$4.89
C90FX-II. 90 min.....	\$6.70

### FL Low-Noise Cassettes

Ferric coating with pre-stressed polyester backing; packaged in hinged plastic box.

C46FL. 46 min.....	\$3.00
C60FL. 60 min.....	\$3.45
C90FL. 90 min.....	\$4.70
C120FL. 120 min.....	\$6.50

### 8-Track Cartridges

8T-45.....	\$4.20
8T-90.....	\$5.60

### FB-151 Master Open-Reel Tapes

Ultra-low-noise, high-output, back-coated master recording tape; for use on tape recorders equipped

with bias selector.	
1200-ft, 7-in reel.....	\$12.25
1800-ft, 7-in reel.....	\$15.85
3600-ft, 10 $\frac{1}{2}$ -in metal reel.....	\$43.20

## Video Cassette Tape

### Videocassette Tapes

Fine-grain Beridox VHS format; high impact ABS housing.

T-120. 2-4 hr.....	\$25.50
T-90. 1 $\frac{1}{2}$ hr.....	\$22.95
T-60. 1-2 hr.....	\$18.35
T-30. 0.5-1 hr.....	\$15.50

Fine-grain Beridox Beta-format videocassettes.

L-500. 1-2 hr.....	\$17.50
L-370. 1 $\frac{1}{2}$ hr.....	\$14.90
L-250. 0.5-1 hr.....	\$13.25
L-125. 15-30 min.....	\$11.95

### Video Head-Cleaning Cassettes

Non-abrasive head cleaner cleans heads in 10 seconds.

VCL-30. VHS format.....	\$25.00
BCL-20. Beta format.....	\$18.50

## HITACHI

### ME Cassettes

Metal-tape bias current for metal-tape position.

ME-46. 46 min.....	\$8.45
ME-60. 60 min.....	\$9.45
ME-90. 90 min.....	\$12.45

### UD-ER Cassettes

Epitaxial magnetic substance; high output and energy, low distortion; normal bias; includes replaceable self-index label and leader tape.

60ER. 60 min.....	\$4.00
90ER. 90 min.....	\$5.50

### UD-EX Cassettes

Epitaxial magnetic substance for chrome position.

60EX. 60 min.....	\$4.00
90EX. 90 min.....	\$5.50

## IRISH

### Professional-Series Cassettes

In polybag.

261-C60-3PA-HK. 60 min; 3/bag.....	\$3.05
261-C90-2PA-HK. 90 min; 2/bag.....	\$2.90
261-C90-3PA-HK. 90 min; 3/bag.....	\$4.25

In flip-top plastic box.

2000-C30. 30 min.....	\$1.40
2000-C60. 60 min.....	\$1.60
2000-C90. 90 min.....	\$2.00

In flip-top plastic box and polybag.

2000-C60B. 60 min.....	\$1.75
2000-C90B. 90 min.....	\$2.15

### Low-Noise, Extended-Range Cassettes

Flip-top plastic box.

262-C60. 60 min.....	\$2.85
262-C90. 90 min.....	\$4.25

### Cassette in Storage Tray

Polybag packaged.

2000C-90SP. 180 min.....	\$3.95
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### 8-Track Cartridges

In sleeve.

281-45. 45 min.....	\$3.00
281-90. 90 min.....	\$3.80

In dustcover.

8T42DC. 42 min.....	\$2.80
8T45 DC. 45 min.....	\$2.90
8T60 DC. 60 min.....	\$2.95
8T84 DC. 84 min.....	\$3.25
8T90 DC. 90 min.....	\$3.65

### Two 8-Track Cartridges in Box

2X42. Two 42 min.....	\$4.00
2X84. Two 84 min.....	\$4.75



### 270 Series Tape

Low-noise, high-output, back coated.  
 276-151. 1200-ft, 7-in reel ..... \$13.15  
 277-151. 1800-ft, 7-in reel ..... \$17.20

### 200 Series Professional Tape

Standard, 1 1/2-mil, polyester base, 1/4-in.  
 231-151. 1200-ft., 7-in reel ..... \$7.35  
 Extra-length, 1-mil, polyester base, 1/4-in.  
 241-151. 1800-ft., 7-in reel ..... \$9.25  
 Double-length, 1 1/2-mil, polyester tensilized base.  
 251-151. 2400-ft., 7-in reel ..... \$16.10

### Video Cassette Tape

#### Betamax Video Cassettes

551-L250-10X. 1 1/2-hr ..... \$15.95  
 551-L500-10X. 1-2 hr ..... \$19.95

## LUX

### XM Series

Magnetic tape features skew adjustment facility, stainless-steel metal tape guide, 7-mm wide pad, roll-spring holding mechanism, four-guideroller system, and sensing roller for transport time.  
 C60 I. 60 min ..... \$6.25  
 C90 I. 90 min ..... \$7.75  
 C60 II. 60 min ..... \$6.75  
 C90 II. 90 min ..... \$8.75

## MAXELL

### MX Metal Cassettes

Metal bias/equalization.  
 MX-46. 46 min ..... \$11.25  
 MX-60. 60 min ..... \$12.50  
 MX-90. 90 min ..... \$14.95

### UD-XL-I Epitaxial Cassettes

Normal bias, 120  $\mu$ sec equalization.  
 C-60. 60 min ..... \$5.25  
 C-90. 90 min ..... \$7.25

### UD-XL-II Epitaxial Cassettes

Chrome type; high-level bias; 70  $\mu$ sec equalization.  
 C-60. 60 min ..... \$5.25  
 C-90. 90 min ..... \$7.25

### Ultra-Dynamic Cassettes

Normal bias.  
 UD-46. 46 min ..... \$3.70  
 UD-60. 60 min ..... \$4.00  
 UD-90. 90 min ..... \$5.90  
 UD-120. 120 min ..... \$7.90

### Low-Noise Cassettes

Normal bias.  
 LN-46. 46 min ..... \$2.45  
 LN-60. 60 min ..... \$2.70  
 LN-90. 90 min ..... \$4.10  
 LN-120. 120 min ..... \$5.30

### Ultra-Dynamic 8-Track

Normal bias.  
 UD8T-46. 46 min ..... \$5.20  
 UD8T-90. 90 min ..... \$6.50

### 8-Track Cartridges

Normal bias; low noise.  
 LN8T-46. 46 min ..... \$3.95  
 LN8T-60. 60 min ..... \$4.40  
 LN8T-90. 90 min ..... \$4.95

### Low-Noise Open-Reel Tape

1.5-mil polyester, normal bias.  
 LN-50-60. 1200-ft, 7-in reel ..... \$8.70  
 LN-50-120. 2500-ft, 10 1/2-in reel ..... \$24.70  
 1-mil polyester  
 LN-35-90. 1800-ft, 7-in reel ..... \$10.00  
 LN-38-180. 3600-ft, 10 1/2-in reel ..... \$28.00  
 0.5-mil polyester  
 LN-25-120. 2400-ft, 7-in reel ..... \$14.95  
 LN-18-180. 3600-ft, 7-in reel ..... \$21.25

### Ultra-Dynamic Open-Reel Tape

Ultra-dynamic, high-energy type, normal bias.  
 1.5-mil polyester  
 UD50-60. 1200-ft, 7-in reel ..... \$9.95  
 UD50-120. 2500-ft, 10 1/2-in reel ..... \$28.30  
 1-mil polyester  
 UD35-90. 1800-ft, 7-in reel ..... \$11.50  
 UD35-180. 3600-ft, 10 1/2-in reel ..... \$31.90

### Professional Epitaxial Open-Reel Tape

Back-coated, ultra-dynamic, high energy, normal bias type.  
 1.5-mil polyester  
 UD-XL 50-60B. 1200-ft, 7-in reel ..... \$12.45  
 UD-XL 50-120B. 2500-ft, 10 1/2-in reel ..... \$33.75  
 1-mil polyester  
 UD-XL 35-90B. 1800-ft, 7-in reel ..... \$14.00  
 UD-XL 35-180B. 3600-ft, 10 1/2-in reel ..... \$38.50

### Tape Accessories

7-in plastic reel ..... \$4.75  
 7-in precision metal reel ..... \$10.50  
 10.5-in precision metal reel ..... \$16.50  
 12 cassette plastic storage box ..... \$5.95  
 12 8-track plastic storage box ..... \$5.95  
 Tape recorder care kit ..... \$8.95  
 Care kit replacement fluid and pads ..... \$3.49

### Video Cassette Tape

#### VHS Epitaxial Videocassettes

Cobalt-ferric oxide formulation, 1/2 in; mirror-finished tape surface and binder system keep head wear to a minimum.  
 T-60. 1-2 hrs ..... \$19.95  
 T-120. 2-4 hrs ..... \$28.50

#### VHS High-Grade Epitaxial Videocassettes

1/2-inch.  
 HG T-30. 30 min ..... \$18.95  
 HG T-60. 60 min ..... \$21.95  
 HG T-90. 90 min ..... \$25.95  
 HG T-120. 120 min ..... \$29.95

#### Beta Videocassettes

1/2-inch.  
 L-250 ..... \$16.95  
 L-500 ..... \$22.50

#### U-matic Videocassettes

3/4-inch.  
 KCA-30. 30 min ..... \$28.50  
 KCA-60. 60 min ..... \$41.50

#### Open Reel Video Tape

1/2 in EIAS Standard.  
 VT-5B. 30 min ..... \$19.00  
 VT-7B. 60 min ..... \$30.00

## MEMOREX

#### HIGH BIAS Cassettes

Ferrite crystal oxide formulation for high bias (chrome/CrO<sub>2</sub>) setting; 70- $\mu$ sec equalization with 4-5 dB noise reduction at high frequencies; built-in hub lock design accepts cassette from either direction. case has snap-lock hinge and overlapping lid.  
 HB-60. 60 min ..... \$4.39

HB-90. 90 min ..... \$5.99

#### MRX<sub>2</sub> Cassettes

Premium ferric oxide formulation for normal bias; 120- $\mu$ sec equalization; special storage case protects cassette with two-way cassette insertion capability.  
 C-30. 30 min ..... \$2.79  
 C-45. 45 min ..... \$2.99  
 C-60. 60 min ..... \$3.19  
 C-90. 90 min ..... \$4.79  
 C-120. 120 min ..... \$6.39

#### 8-Track Cartridges

45 min ..... \$2.99  
 60 min ..... \$3.29  
 90 min ..... \$3.59

#### Accessories

Tape recorder care kit ..... \$8.99  
 8-track head/capstan cleaner ..... \$3.29  
 Cassette cleaning kit ..... \$2.99  
 8-track head cleaner ..... \$1.99  
 Cassette head cleaner ..... \$1.99  
 Record care kit ..... \$5.95  
 Recorder cleaner ..... \$3.19  
 Record cleaning fluid ..... \$2.79

### Video Cassette Tape

#### VHS™ Video Cassettes

1/2 in. low video noise/high r-f output; high Chroma output/low Chroma noise; features dust-proof plastic case with pressure-sensitive labels and removable black sleeve.  
 T-60. 1-2-3 hrs ..... \$16.99  
 T-90. 1 1/2-3-4 1/2 hrs ..... \$18.99  
 T-120. 2-4-6 hrs ..... \$24.99

## NAKAMICHI

#### ZX Cassette Tape

Metalloy (metal-particle) formulation for use with metal-compatible decks only; features ultra-high coercivity and retentivity for improved distortion and MOL. 70  $\mu$ sec equalization.  
 C60 ..... \$9.75

#### SX Cassette Tapes

Single-coated; ionized cobalt and ferric oxide formulation; high coercivity permits use of CrO<sub>2</sub> bias and equalization (70  $\mu$ sec) for 4-5 dB better S/N.  
 C60 ..... \$6.30  
 C90 ..... \$8.00

#### EX II Cassette Tapes

Single-coated; ferricobalt formulation, same bias and equalization (120  $\mu$ sec) as EX tape; extra-low noise, high output.  
 C60 ..... \$6.00  
 C90 ..... \$7.80

#### EX Cassette Tapes

Specially formulated ferrocystal tape for improved frequency response, S/N ratio, and dynamic range; special binder for even particle distribution and reduced head wear  
 C60 ..... \$5.30  
 C90 ..... \$6.60

## NOTICE TO READERS

Prices of items described are suggested prices only and are subject to change without notice. Actual selling prices are determined by the dealer.



## PANASONIC

### Video Cassette Tape

#### VHS Video Cassettes

NV-T60 1-2-3 hr	\$17.95
NV-T120 2-4-6 hr	\$24.95

## QUASAR

### Video Cassette Tape

#### VX-Format

VC-60 1 hr	\$18.95
VC-120 2 hr	\$26.95

#### VHS-Format

VC-T60 1-2-3 hrs	\$14.50
VC-T120 2-4-6 hrs	\$19.95

## REALISTIC

#### Supertape Metal Cassette

44-960 60 min	\$9.95
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#### Supertape Chrome Cassettes

44-930 60 min	\$3.49
44-931 90 min	\$4.49

#### Supertape Gold Cassettes

44-920 45 min	\$2.59
44-921 60 min	\$2.99
44-922 90 min	\$3.99
44-923 120 min	\$4.79

#### Low-Noise Cassettes

44-601 30 min	\$1.49
44-602 60 min	\$1.89
44-603 90 min	\$2.59
44-604 120 min	\$3.19

#### Concertape Cassettes

44-605 60 min	\$0.88
44-620 90 min	\$1.25

#### Concertape 3-Pack Cassettes

44-606 30 min	\$1.99
44-607 60 min	\$2.59
44-613 90 min	\$3.59

#### Supertape High-Output Low-Noise Tape

44-1872 900-ft, 5-in reel	\$3.49
44-1878 1200-ft, 7-in reel	\$4.99
44-1877 1800-ft, 7-in reel	\$5.59
44-1880 3600-ft, 7-in reel	\$9.99

#### Concertape

44-1018 1800-ft, 7-in reel	\$1.95
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#### Low-Noise Tape

44-733 300-ft, 2 1/2-in reel, 0.5 mil	\$1.19
44-734 225-ft, 3-in reel, 1.0 mil	\$1.19
44-760 600-ft, 3 1/2-in reel, 0.5 mil	\$1.99
44-753 900-ft, 5-in reel, 1.0 mil	\$2.49
44-752 1200-ft, 5-in reel, 0.5 mil	\$3.49
44-754 1800-ft, 7-in reel, 1.0 mil	\$4.49
44-758 2400-ft, 7-in reel, 0.5 mil	\$5.49
44-766 3600-ft, 7-in reel, 0.5 mil	\$7.29

#### Supertape 8-Track Tape

44-842 45 min	\$2.99
44-843 90 min	\$3.89

#### Low-Noise 8-Track Tape

44-840 40 min	\$1.99
44-841 80 min	\$2.59

## RECOTON

### Cassettes

Low-noise, ferric-oxide tape.	
RC5-60 60 min, five pack	\$3.99
RC5-90 90 min, five pack	\$5.79
RU4-60 60 min, four pack	\$5.39
RU4-90 90 min, four pack	\$6.79

## RKO TAPE

### Ultrachrome Cassettes

Chromium dioxide formulation; chrome (high) bias, 70- $\mu$ sec equalization; housed in five-screw polystyrene shell with chrome notch	
C-60 60 min	\$4.20
C-90 90 min	\$5.99

### Broadcast I Cassettes

Ferric formulation, normal bias, 120 $\mu$ sec equalization, housed in five-screw polystyrene shell.	
C-60 60 min	\$4.10
C-90 90 min	\$5.75

### XD Cassettes

Ferric bias, for home recording.	
C-45 45 min	\$2.36
C-60 60 min	\$2.60
C-90 90 min	\$3.66

## SCOTCH

### Metafine Cassettes

Fine metal magnetic particle formulation; delivers max. output up to 10 dB better than typical chrome tapes and up to 7 dB greater than oxide tapes; low distortion, added high frequency response, and improved S/N	
45 min	\$7.19
60 min	\$7.99
90 min	\$10.29

### Master I Cassettes

Features premium grade, low-noise ferric oxide; for use with recorders in the normal or 120 $\mu$ sec equalization position; album or "C-Box" (40 cents additional) packaging; improved shell for critical mechanical permanence and three-head recorder equipment	
45 min	\$3.79
60 min	\$4.09
90 min	\$5.39

### Master II Cassettes

Features chrome-compatible modified ferric oxide for use with recorders operating in the CrO <sub>2</sub> or 70 $\mu$ sec equalization position; improved cassette shell for critical mechanical performance and three-head recorder equipment. 3-dB S/N improvement over current CrO <sub>2</sub> cassettes, album or "C-Box" packaging (40 cents additional for "C-Box").	
45 min (album only)	\$4.39
60 min	\$4.79
90 min	\$5.99

### Master III Cassettes

Features improved FeCr dual-layer construction which provides 3-dB improvement in output at low frequencies, 2-dB boost at high frequencies over existing tapes; improved cassette shell for critical mechanical performance and three-head recording equipment, album or "C-Box" packaging (40 cents	
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### NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 24.

additional for "C-Box").

45 min (album only)	\$4.39
60 min	\$4.79
90 min	\$5.99

### Dynarange Cassettes

High-output, low-noise ferric oxide cassette featuring full dynamic range throughout the audible sound spectrum; special back treatment for improved mechanical performance, album package.	
45 min	\$2.79
60 min	\$3.29
90 min	\$4.59
120 min	\$6.39

### Highlander Cassettes

Low-noise oxide formulation for all-purpose cassette use, polyester base.	
45 min	\$1.69
60 min	\$1.99
90 min	\$2.99
120 min	\$4.39

### Master 8-Track Cartridges

Features high-output low-noise ferric-oxide coating for high-frequency sensitivity of 6 dB higher and S/N at low frequencies 6 dB higher than standard cartridges; fully compatible, oxide coating heavy-duty lubricated polyester backing.	
M-8TR-45 45 min	\$4.29
M-8TR-90 90 min	\$4.99

### Dynarange 8-Track Cartridges

Features low-noise ferric oxide; fidelity uniform throughout audible frequency range, heavy-duty binder; lubricant system, precise tape-to-head alignment.	
S-8TR-45 45 min	\$3.19
S-8TR-90 90 min	\$3.99

### Master XS (Extra Sensitive) Open-Reel

Features mastering quality tape for critical music applications; excellent print and max. output properties, biased to be compatible with most retail open-reel decks.	
7-in reel, 60 min at 7 1/2 ips, 1 mil	\$13.39
10 1/2-in metal reel, 120 min at 7 1/2 ips, 1 mil	\$35.69

### 206-207 Open-Reel Tapes

Polyester base, "Posi-Trak" backing, leader, and trailer.	
206 7-in reel, 60 min at 7 1/2 ips, 1.5 mil	\$7.99
207 7-in reel, 90 min at 7 1/2 ips, 1.0 mil	\$9.99

### Dynarange Open-Reel Tapes

Provides high-fidelity recording even at 3 1/2 ips; multi-purpose tape providing full dynamic range throughout audible spectrum, S/N is 4 to 6 dB better than standard tapes.	
211 Polyester backing, white yellow trailers, 5-in reel, 30 min at 7 1/2 ips, 1.5 mil	\$4.09
7-in reel, 60 min	\$6.29
212 5-in reel, 45 min at 7 1/2 ips, 1.0 mil	\$4.89
90 min, 7-in reel	\$8.39
213 7-in reel, 120 min at 7 1/2 ips, 0.5 mil tensilized	\$12.59
214 5-in reel, 90 min at 7 1/2 ips, 0.5 mil tensilized	\$8.39
180 min, 7-in reel	\$16.59

### Highlander Open-Reel Tapes

All-purpose economy tape for vocals as well as speech	
228 7-in reel, 60 min at 7 1/2 ips, 1.5 mil	\$5.49
229 7-in reel, 90 min at 7 1/2 ips, 1.0 mil	\$7.59

## Video Cassette Tape

### VHS-Format Videocassettes

T-30 1/2-1 hr	\$18.45
T-60 1-2 hrs	\$21.75
T-120 2-4 hrs	\$27.95

### Beta-Format Videocassettes

L-250 1/2-1 hr	\$14.95
L-500 1-2 hrs	\$18.95
L-750 1 1/2-3 hrs	\$23.95

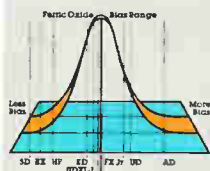
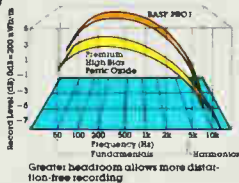


# The Tape Guide

**Professional-I.**  
The one tape that stands up when you crank it up.



Premium ferric oxide tapes have more headroom which allows higher maximum recording levels (MRL). Among all premium ferric oxides PRO I has the best MRL for loud recordings. Uniform maghemite particles provide increased headroom for very accurate and loud recordings with virtually no distortion. In the fundamental music range (20Hz-5kHz) PRO I can be recorded louder and driven harder than even high bias tapes. PRO I is the internationally accepted reference tape, whose bias point is specifically matched to the Type I/normal/ferric position on today's high quality cassette decks.



PRO I is designed to be compatible with the normal bias setting of more cassette decks than any other ferric tape.

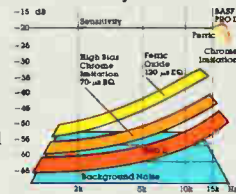
**Professional-II.**  
The world's quietest tape puts nothing between you and your music.



High bias tapes consistently provide wider frequency response and less tape noise (hiss or background noise) than any other tape type. Among premium high bias tapes PRO II is in a class by itself. It is the second generation chromium dioxide tape with superb frequency response and outstanding sensitivity in the critical (10kHz-20kHz) high frequency range. It also has the lowest background noise of any other competitive tape available today. PRO II will capture the many subtle harmonics of the most demanding recordings and play them back with the reality and presence of a live performance. PRO II is the tape for the Type II/chrome/high bias position that comes closest to Metal tape performance for half the price.



The pure chromium dioxide particles in the PRO II, unlike ferric oxide particles, are homogeneously shaped and uniformly sized to give this tape superior performance.

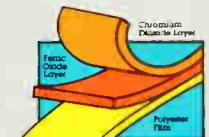


PRO II has the best high frequency sensitivity and the lowest background noise of any high bias tape.

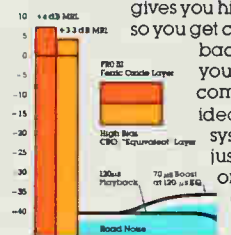
**Professional-III.**  
The only car tape that eliminates the car.



Ferrichrome tapes combine the benefits of chromium dioxide and ferric oxide tapes for superior performance in car stereos. The top layer is pure chromium dioxide for unsurpassed highs and low background noise. The bottom layer is ferric oxide for superior lows and great middle frequencies. And it also gives you higher recording levels, so you get clearer, louder playback without cranking up your volume control to compensate. PRO III is the ideal tape for car stereo systems and performs just as well in the home on the Type III/ferrichrome position.



Two distinct and different oxide layers for "extra bright" playback in car stereo systems.



PRO III provides a higher maximum recording level (MRL) than high bias tapes, and selectively boosts the highs to overcome road and car noise.

**GUARANTEE OF A LIFETIME**

"The guarantee of a lifetime." All BASF tape cassettes come with a lifetime guarantee that covers everything. Should any BASF cassette ever fail—for any reason—simply return it to BASF for a free replacement.



**Patented "Jam-Proof" Security Mechanism (SM).™** All BASF tape cassettes come with our exclusive SM—Security Mechanism. Two precision arms actually "guide" the tape in a smooth, exact and consistent track, so that winding is always even, no matter how often the cassette is played. SM puts an end to tape jamming.



Crosby Drive, Bedford, Massachusetts 01730

CIRCLE NO. 5 ON READER SERVICE CARD



### Videocassette Head Cleaners

Head-cleaning tape with recorded message. "When you can read this message, your heads are clean. Stop the player now."

VHS-format .....	\$28.95
Beta-format .....	\$27.95

## SONY

### Metal Series Cassettes

70- $\mu$ sec metal equalization.	
Metallic 46. 46 min .....	\$8.00
Metallic 60. 60 min .....	\$10.00
Metallic 90. 90 min .....	\$13.00

### FeCr Series Cassettes

Normal or FeCr bias. 70- $\mu$ sec FeCr equalization.	
FeCr-46. 46 min .....	\$4.35
FeCr-60. 60 min .....	\$4.75
FeCr-90. 90 min .....	\$6.10

### EHF Series Cassettes

Cobalt-adsorbed magnetic tape; high bias; 70 $\mu$ sec equalization.	
EHF-46. 46 min .....	\$3.70
EHF-60. 60 min .....	\$4.15
EHF-90. 90 min .....	\$5.75

### SHF Series Cassettes

Ferric oxide magnetic tape; normal bias and 120- $\mu$ sec equalization.	
SHF-46. 46 min .....	\$3.40
SHF-60. 60 min .....	\$3.85
SHF-90. 90 min .....	\$5.20

### HFX Series Cassettes

Normal bias; normal or 120 $\mu$ sec equalization.	
HFX-46. 46 min .....	\$3.00
HFX-60. 60 min .....	\$3.20
HFX-90. 90 min .....	\$4.55
HFX-120. 120 min .....	\$6.20

### LNK Series Cassettes

Normal bias; normal or 120 $\mu$ sec equalization.	
LNK-46. 46 min .....	\$2.05
LNK-60. 60 min .....	\$2.25
LNK-90. 90 min .....	\$3.20
LNK-120. 120 min .....	\$4.15

### Microcassette

Ferric oxide; three to a package.	
3MC. 60 min .....	\$3.80

### Eicasetts

Type I SLH tape.	
LC-60. 60 min .....	\$8.00
LC-90. 90 min .....	\$10.60
Type II FeCr tape.	
LC-60. 60 min .....	\$10.60
LC-90. 90 min .....	\$12.80

### 8-Track Cartridges

8T-46HF. 46 min .....	\$3.30
8T-46HF-C. 46 min .....	\$3.30
8T-90HF. 90 min .....	\$4.20
8T-90HF-C. 90 min .....	\$4.20

### Open-Reel Tapes

FeCr Series.	
FeCr 7-550BL. 90 min .....	\$14.00
FeCr 11-1100BL. 180 min .....	\$39.00
ULH Series.	
ULH 72-370BL. 60 min .....	\$9.00
ULH 7-550BL. 90 min .....	\$11.50
ULH 11-1100BL. 180 min .....	\$31.00

## Video Cassette Tape

### Video Cassettes

Betamax I, II, and III formats; available in blister pack or standard package.

L-125. 15/30/45 min .....	\$10.95
L-250. 30/60/90 min .....	\$12.95
L-500. 60/120/180 min .....	\$16.95
L-750. 90/180/270 min .....	\$20.95
L-830. 200/300 min .....	\$23.95

## STUDER/REVOX

### 621 Magnetic Tape

Low-noise high-output mastering tape; highly compliant. 3600 ft on silver or black NAB metal reel; packaged in Novodur library box.....

\$36.00

## TAPE 5

### Wide-Latitude Cassettes

Small-particle highly-polished gamma ferric oxide mastering cassette tape, normal bias and equalization, wide tolerance for differing bias settings of various cassette decks; S/N 64.4 dB. 5-stainless-steel-screw cassette shell; Norelco-type outer case with overlapping lid.

C-46. 46 min .....	\$2.99
C-60. 60 min .....	\$3.49
C-90. 90 min .....	\$4.49
C-120. 120 min .....	\$5.99

## TDK

### "MA-R" (Metal Alloy-Reference) Cassettes

Metal bias; 70- $\mu$ sec equalization; housed in reference standard diecast metal shell, high-frequency MOL and high coercivity for improved sensitivity and extra recording headroom.

MA-R C60. 60 min .....	\$12.99
MA-R C90. 90 min .....	\$17.99

### "MA" (Metal Alloy) Cassettes

Metal bias. 70- $\mu$ sec equalization; housed in precision molded plastic shell housing and laboratory standard mechanism.

MA-C60. 60 min .....	\$11.60
MA-C90. 90 min .....	\$12.99

### "SA-X" (Super Avilyn-Extended) Cassettes

Double-coated Super-Avilyn-particle tape; high bias; 70- $\mu$ sec equalization; high output and wide dynamic range, housed in precision shell and laboratory standard mechanism.

SA-X C60. 60 min .....	\$4.99
SA-X C90. 90 min .....	\$6.99

### "SA" (Super Avilyn) Cassettes

Cobalt-ferric formulation; high bias; 70- $\mu$ sec equalization; extended frequency response and low noise; super precision mechanism.

SA-C60. 60 min .....	\$4.19
SA-C90. 90 min .....	\$5.89

### "OD" (Optimum Dynamic) Cassettes

Optima Ferric magnetic particle formulation, for mastering and critical recording needs; normal bias; 120- $\mu$ sec equalization; high MOL and wide dynamic range; super precision mechanism.

OD-C60. 60 min .....	\$4.70
OD-C90. 90 min .....	\$6.60

### "AD" (Acoustic Dynamic) Cassettes

Linear ferric oxide particle formulation for normal bias; 120- $\mu$ sec equalization; high-end response and output level; for home and car decks.

AD-C46. 46 min .....	\$2.89
AD-C60. 60 min .....	\$3.09
AD-C90. 90 min .....	\$4.49
AD-C120. 120 min .....	\$6.19

### "D" (Dynamic) Cassettes

Normal bias; 120- $\mu$ sec equalization; precision

mechanism.

D-C30. 30 min .....	\$1.99
D-C46. 46 min .....	\$2.19
D-C60. 60 min .....	\$2.39
D-C90. 90 min .....	\$3.29
D-C120. 120 min .....	\$3.99
D-C180. 180 min .....	\$5.59

### "EC" (Endless) Cassettes

Endless-loop design permits continuous repeating of recorded material; back coated; available with or without foil strip for machines with automatic shut-off sensor

EC-20S(F). 20 sec .....	\$4.19
EC-30S(F). 30 sec .....	\$4.29
EC-1M(F). 1 min .....	\$4.39
EC-3M(F). 3 min .....	\$4.49
EC-6M(F). 6 min .....	\$4.99
EC-12M(F). 12 min .....	\$5.99

### "AD" (Acoustic Dynamic) 8-Track

Gamma ferric oxide formulation, extended frequency response; high saturation and output level; broad dynamic range; high S/N; min. dist.

8TR-45AD. 45 min .....	\$4.39
8TR-90AD. 90 min .....	\$5.59

### "D" (Dynamic) 8-Track Cartridges

Low noise; high output

8TR-45D. 45 min .....	\$3.49
8TR-90D. 90 min .....	\$4.29

### "L" (Audua) Open-Reel Tape

High-density ferric oxide coating; high output, low noise.

L-1200. 1200-ft, 7-in plastic reel .....	\$7.99
L-1800. 1800-ft, 7-in plastic reel .....	\$9.99
L-3600M. 3600-ft, 10 $\frac{1}{2}$ -in metal reel .....	\$27.99

### "LB" (Audua) Open-Reel Tape

High-density ferric oxide back-coated tape for professional-quality mastering; high output; low noise.

LB-1800. 1800-ft, 7-in plastic reel .....	\$12.49
LB-3600. 3600-ft, 10 $\frac{1}{2}$ -in NAB metal reel .....	\$33.99

### "S" (Superior) Open-Reel Tape

Studio quality tape; low noise, high output.

S-1800. 1800-ft, 7-in plastic reel .....	\$7.99
S-3600P. 3600-ft, 10 $\frac{1}{2}$ -in plastic reel .....	\$18.99

## Video Cassette Tapes

### Super Avilyn HG VHS

High-grade formulation for higher output than standard videocassettes, 3-dB better color S/N level, and improved performance at all speeds, especially in 6-hr mode.

VAT-120HG. 2-4-6 hr .....	\$31.50
VAT-60HG. 1-2-3 hr .....	\$23.00

### Super Avilyn VHS Videocassettes

VAT-120. 2-4-6 hr .....	\$26.00
VAT-90. 1 $\frac{1}{2}$ -3-4 $\frac{1}{2}$ hr .....	\$22.00
VAT-60. 1-2-3 hr .....	\$19.00
VAT-30. $\frac{1}{2}$ -1-1 $\frac{1}{2}$ hr .....	\$17.00

### Super Avilyn Beta Videocassettes

Special formula designed to give crisp, clear picture and brilliant color

BAL-500. 1-2-3 hr .....	\$19.00
BAL-250. $\frac{1}{2}$ -1-1 $\frac{1}{2}$ hr .....	\$13.50

## TELEDYNE by OLSON

### Low-Noise Cassettes

Made by Scotch 3M; includes plastic storage box.

TA-798. 60 min .....	\$1.98
TA-799. 90 min .....	\$2.96
TA-800. 120 min .....	\$4.38

### 8-Track Cartridges

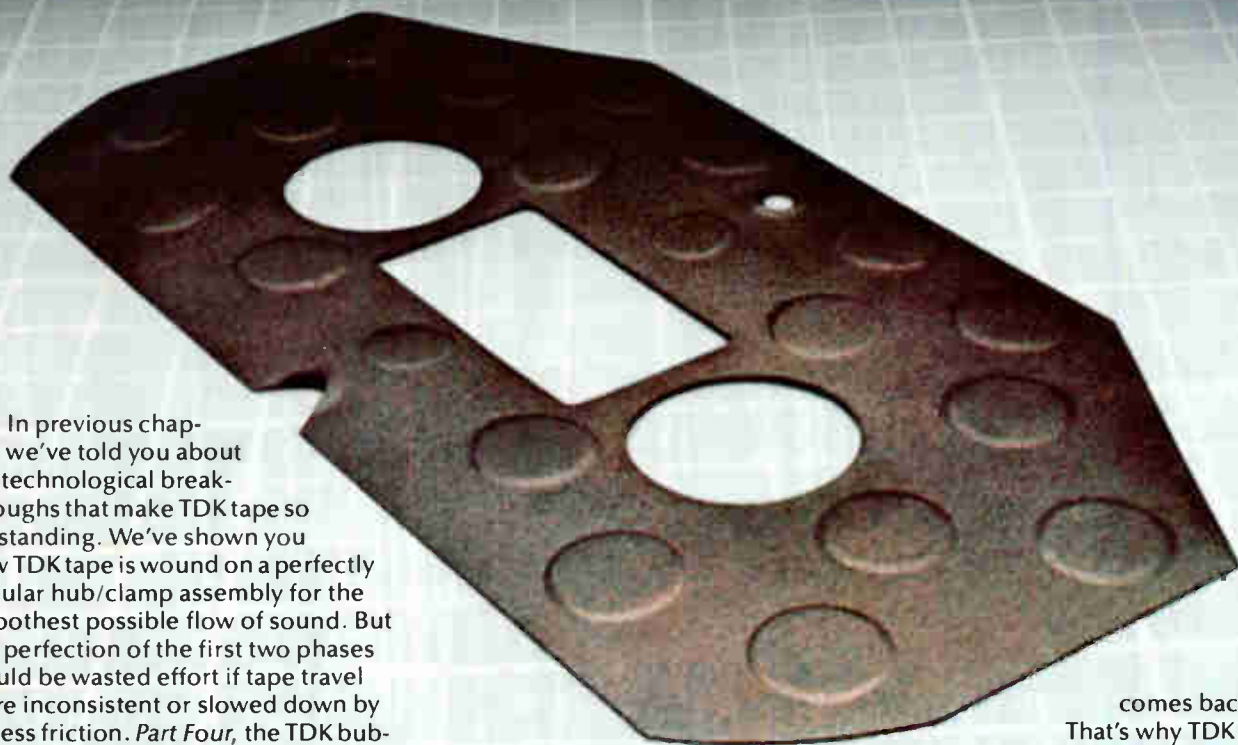
Low-noise, high-output cartridges; designed by Scotch 3M; has non-jamming continuous-loop mechanism; lubricated.

TA-801. 45 min .....	\$3.29
TA-802. 90 min .....	\$4.09



# The continuing story of TDK sound achievement.

## Part Four.



In previous chapters we've told you about the technological breakthroughs that make TDK tape so outstanding. We've shown you how TDK tape is wound on a perfectly circular hub/clamp assembly for the smoothest possible flow of sound. But the perfection of the first two phases would be wasted effort if tape travel were inconsistent or slowed down by excess friction. *Part Four*, the TDK bubble slip sheet, is one of our unique answers to reducing friction. On it rests TDK's reputation for smooth-running sound.

TDK engineers painstakingly studied tape travel. They found the edge of the tape comes into direct contact with the cassette at several points. At any of those critical spots, the tape can be slowed down, tilted away from the parallel, side-tracked or damaged. The need to reduce friction was evident. And it had to begin where the tape edge makes contact with the shell.

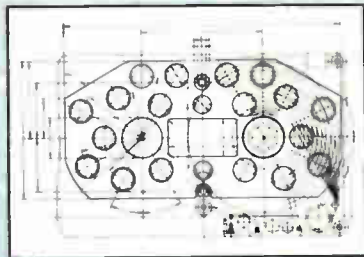
The TDK slip sheet first came into existence as a flat piece of paper. Our engineers knew it had to do more than reduce friction. It also had to maintain constant tape speed and perfect tape winding. Two formulations met the exacting TDK standards. Ultra-thin paper coated with silicone. And teflon

coated with a fine layer of graphite. To further diminish the area of contact between tape and slip sheet, our engineers created the bubble concept.

Each TDK bubble slip sheet is computer-designed with twenty bubbles of varying diameters. Each bubble slip sheet is manufactured to micron tolerances to guarantee uniformity in height. In operation, the TDK bubble slip sheet maintains a constant running angle for the tape, minimizing friction. Tape winding is even and consistent. Your music is recorded and played back in a safe, reliable environment.

Music is what it all

comes back to. That's why TDK considers all parts in a cassette equally important. And why every effort is made to achieve a perfect interplay between them. It's an achievement you'll hear every time you play your favorite music on TDK. Music is the sum of its parts.



Running analysis of TDK bubble slip sheet.



 **TDK**  
The Amazing Music Machine.



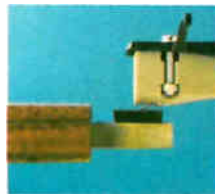
# Give your cartridge more than The Finger!

## Give it Stylus Care With the new Discwasher SC-2 System.

The famous SC-1 stylus brush (standard of the record and hifi industries) now has a synergistic fluid called SC-2.



New Fluid



Nylon Brush



Inspection Mirror

SC-2 Fluid enhances and speeds cleaning and yet protects diamond adhesives, cartridge mounting polymers and fine-metal cantilevers against the corrosive effects of many other "cleaners".

The Discwasher SC-2 System. Stylus care you can finger as clearly superior.



## SC-2 Stylus Care System



**discwasher**<sup>®</sup>  
PRODUCTS TO CARE FOR YOUR MUSIC

1407 N. Providence Rd., Columbia, Missouri 65201

CIRCLE NO. 11 ON READER SERVICE CARD



# 10

# ACCESSORIES

## ACE AUDIO

### 4100 Infrasonic/Ultrasonic Filter

Active filter designed to eliminate subsonic (turntable and record deficiencies) and ultrasonic (rf, power amp overdrive with high-frequency noise, etc.) interference; subsonic filter section below 20 Hz at 18 dB/octave and ultrasonic section above 20,000 Hz at 12 dB/octave; IM dist. 0.002% typical and 0.025% from 20-20,000 Hz ..... \$98.50  
Kit..... \$72.50

### 4000 Subsonic Filter

Low-frequency filter with four rear-panel connectors providing 18 dB/octave rolloff at 20 Hz or under, -3 dB; IM dist. 0.01% at 1-V output; input impedance 47,000 ohms; output impedance 150 ohms; 10,000-ohm min. output load; hum and noise -86 dB; 2 1/4" H x 6" W x 4 3/8" D..... \$92.50  
Kit..... \$66.50

### 3900 Ground Lliminator

Designed to break up ground loop faults in connecting cables and improve hum; employs passive circuitry ..... \$16.25  
Kit..... \$14.25

## ADC

### PRO-GRIP™ Disc-Stabilizer

Designed to minimize disc warp on records; fits all fixed-spindle turntables; counter display mounting capability ..... \$24.95

### PRO/TRAC™ Protractor

Sets proper overhang dimension, eliminates tracking angle error, and minimizes distortion; ±0.005-in accuracy; durable ABS construction; reusable simulated leather holder ..... \$9.95

## ADCOM

### Record Care System

Record cleaning system contains two weighted uni-directional brushes, one to damp clean record surface and one dry brush to remove any excess fluid ..... \$19.95

### Electronic Static Eliminator

Piezoelectric static-eliminating instrument has dual-emission chambers and damped trigger ..... \$19.95

### Carbon Fiber Record Sweep

Anti-static brush has thousands of conductive fibers that removes dust from records or film ..... \$14.95

### Carbon Fiber Headshell

Low-resonance low-mass carbon fiber headshell with non-tarnishing gold plated terminal pins ..... \$11.95

## AIWA

### MT-50U Digital Audio Timer

Digital quartz audio timer can turn on and tune in up to six preselected stations at specified times.

Features timer switch (turns on/off components to two on/off cycles per 24-hour period); LED digital quartz clock display with dimmer switch; 1-99 min



sleep timer setting; electric tone alarm; remaining tape time display in min and sec (when connected to Aiwa's SD-L50 cassette deck); AM/PM indicator; timer accuracy ±15 second/month; 120 V ac, 60 Hz; 1 7/16" H x 9 7/16" W x 10 9/16" D ..... \$160.00

## R. B. ANNIS

### K20/B5 Han-D-Kit

Kit's purpose to measure and eliminate magnetism in recorder components before recorded tapes are damaged; includes gauss-calibrated (5-0-5) pocket magnetometer that measures level of magnetism, magnetically soft and magnetically hard test sensor strips, 1 3/4-in clip-on extension probe, and Han-D-Mag, a powerful dual-use demagnetizer with 350-oersted sine wave demagnetizing field 1/4-in beyond tip of 2 1/4-in long plastic-jacketed probe; can be used for bulk erasing of 1/4-inch-wide tape ..... \$41.50

**K25/S5.** Same as K20/B5 except includes larger jeweled magnetometer with ten times calibration stability ..... \$69.70

*Company also sells individual components of Kit separately as well as different gauss ranges of the 20 and 25 pocket magnetometers.*

## APRES AUDIO

### L'Original Audio Cabinet

Oak-finished audio cabinet with sculptured radial corners; three shelves include two adjustable shelves that can hold over 100 lbs each and permanent shelf with cassette tape drawer below (stores over 100 cassettes); record storage area below cassette drawer; entire cabinet enclosed by oak-framed smoked acrylic door with bolt-and-cylinder lock and key; mounted on casters concealed by chrome apron; two detachable vented rear panels; available in choice of finishes; 53" H x 23 3/4" W x 19 7/8" D .. \$689.00

### Oak Starr Audio Cabinet

S-shaped oak audio cabinet for six stereo components and records; available in choice of hand-rubbed oil finishes; overall dimensions 30" H x 48" W x 18" D ..... \$598.00

### Elegant Audio Cabinet

Streamlined-designed cabinet constructed with oak, oak veneer, and acrylic; sculptured-radial-corner cabinet floats on crescent-shaped acrylic panels and designed to house macro and micro components; record storage area located below cabinet and on top of suspended oak shelf; smoked acrylic drop latch door; vented rear panel; 33 1/4" H x 46" W x 18 1/4" D ..... \$579.00

## Le Starr Audio Cabinet

S-shaped hand-rubbed and polished high-grade acrylic cabinet with chrome support accents; four shelves accommodate six audio components plus area for record storage; overall dimensions 28 1/4" H x 46 1/2" W x 15 1/2" D ..... \$569.00

## ARISTA

### 198 Speaker Selector Switch

Unit allows up to four sets of speakers to be switched on or off ..... \$27.65

## Demagnetizers

- 334.** For reel-to-reel recorders ..... \$7.50
- 332.** For cassette machines ..... \$8.00
- 330.** 12-V long, blunt tip, wand-type unit for cartridge players and recorders ..... \$8.30
- 331.** Same as 330 except 117 V ..... \$6.35
- 335.** Cordless unit for 8-track machines featuring rotary magnet and non-abrasive cleaning tape ..... \$3.85
- 336.** Cordless unit for cassette machines featuring rotary magnet and non-abrasive cleaning tape ..... \$3.30

## Cassette Winders

- 346.** Manual rapid winder ..... \$6.90
- 345.** Takes up tape slack ..... \$1.35

### 322 A. Universal Bulk Tape Eraser

Erases cassette, 8-track, open reel ..... \$27.50

## Head/Capstan Cleaners

- 339.** Cassette head cleaner ..... \$1.10
- 340.** 8-track head cleaner ..... \$1.55
- 349.** 8-track head and capstan cleaner ..... \$2.50
- 341.** Tape head cleaner; also tests for correct alignment and checks stereo balance and equalization ..... \$2.20
- 347.** Same as 341 except for 8-track ..... \$2.75
- 357A.** Cleaning brush and fluid for all tape heads ..... \$1.55

## Tape Salvage Equipment

- 348.** Cassette salvage kit includes screw-closure housing with nylon rollers, silicone slip sheets, hard windows, metal shield, and felt pressure pads. Also includes cutting blade, splicing patches, and two screwdriver/tension winders ..... \$2.75
- 371.** Universal tape splicer has two tracks for 1/4-in and 1/8-in cassette tape ..... \$4.45
- 370.** Cassette editing and recorder care kit includes splicing block, marking pencil, splicing tape, head cleaner, lubricant, mini dust brush, cotton swabs, and cassette head cleaner and demagnetizer. \$8.30
- 327.** Cotton cleaning tips on 6-in applicator; package of 100 ..... \$1.35
- 327C.** Same as 327 except peg-carded ..... \$1.80
- 324.** 1/2-in splicing tape ..... \$1.10
- 326.** 1/4-in splicing tape ..... \$1.10
- 368.** 1/4" x 100 ft. leader tape ..... \$1.65
- 367.** Self-stick aluminum foil sensing and cueing tape; 7/32" x 100" ..... \$2.20

# 10 ACCESSORIES

## Cassette Cases

- 1225.** Walnut-finish video cassette storage module holds up to 12 videocassettes (any format); spring-load injection system; 10<sup>3</sup>/<sub>4</sub>" H x 6<sup>7</sup>/<sub>8</sub>" W x 15<sup>7</sup>/<sub>8</sub>" L ..... \$43.95
- 1228.** Cassette storage cabinet holds 54 cassettes in flip-top boxes; molded plastic inserts; walnut finish ..... \$29.95
- 1226.** Cassette storage case holds 20 cassettes; soft padded vinyl exterior; snap lock; individual tape compartments ..... \$15.95
- 1220.** Modular cassette storage racks; each module holds five cassettes with boxes or eight without boxes; may be wall mounted; case of six ..... \$10.95
- 1224.** Car cassette holder for door, sun visor, or under-dash mounting ..... \$5.25

## Record Accessories

- 431.** 45 rpm dome adapter ..... \$0.39
- 439.** Record brush and tonearm lift ..... \$1.00
- 437.** Automatic stylus brush ..... \$1.90
- 433.** Silicone treated anti-static cloth ..... \$1.00
- 434.** Hands off record grip ..... \$1.95
- 445.** Soft velvet cushioned record cleaning cylinder ..... \$3.25
- 442.** "Record Whisk II" velvet record cleaner with built-in fluid dispenser ..... \$4.15
- 448.** Stylus cleaning kit includes brush and fluid ..... \$2.20
- 425A.** 30 power stylus microscope ..... \$2.75
- 448.** 8-oz record cleaning fluid with cloth ..... \$2.75
- 440.** Anti-static record cover; package of 12 ..... \$1.10
- 441.** 12 poly-lined record sleeves ..... \$2.95
- 428.** Anti-static record care kit includes velvet pad, stylus cleaning brush, fluid and clip on needle brush ..... \$7.50
- 428.** Record care kit includes 442 and stylus brush with fluid ..... \$5.99
- 449.** "X-static" static eliminator ..... \$19.95
- 435.** Automatic disc cleaner which attaches to any turntable ..... \$8.30

## ASPEN LIMITED

The company carries a complete line of tape accessories for use with open-reel, cassette and 8-track equipment.

- Head Cleaner Kit ..... \$3.89
- Wipe Heads (25 jumbo tips per package) ..... \$1.29

## Decktester

8-track cartridge for home and auto use to check 8-track tape decks for tape speed-time, speaker rattle, speaker phasing, wow and flutter, head alignment, crosstalk, channel switching, and worn heads ..... \$8.95

## Stylus Cleaner

1<sup>1</sup>/<sub>4</sub>-oz plastic bottle of stylus cleaning formula with brush in cap; packaged in hard transparent plastic container ..... \$3.39

## Plastic Wax™

Cleans, polishes, removes fine scratch marks, and eliminates static electricity from turntable dustcovers; available in two sizes in squeeze-bottle design.

8 oz ..... \$3.59

16 oz ..... \$5.95

32-oz refill ..... \$10.79

Company will be offering Video Disc Cleaner in the fall of 1980.

## AUDIO CONTROL

### C-50A LED Realtime Analyzer

LED spectrum analyzer with built-in pink noise generator and subminiature electret condenser FET measurement microphone with 20-ft cord and carrying case. Features 101-LED spectrum display that

shows fast or slow peak-reading modes, sound-pressure level with external mic or VU meter readings, and pink noise and microphone analyses with switchable calibration levels from 2- to 4-dB/LED; has active display of 90 red and 11 green LEDs. Other features include continuously variable input level sensitivity with calibration; auto mic/line input switching. Oak end panels; 3.5" H x 9.5" W x 6.5" D ..... \$399.00

## AUDIO GROOME by EMPIRE SCIENTIFIC

### "Dry System"

Complete record-care kit contains double-barrel static eliminator, cleaning brush, stylus cleaning fluid and brush, and lightweight universal headshell; screwdriver and mounting hardware included; mahogany base and black vinyl top storage case ..... \$79.95

- Static eliminator ..... \$39.95
- Cleaning brush dust eliminator ..... \$19.95
- Universal headshell ..... \$6.95
- Carbon-fiber headshell ..... \$14.95
- Stylus cleaning fluid and brush; 1.25 fl. oz. .... \$3.95

### Anti-Static Mat

Cushioned carbon-fiber-impregnated platter mat designed to dissipate static build-up and absorb platter resonance; has printed strobe ring for proper speed calibration ..... \$8.95

### Anti-Static Record Sleeves

Anti-static, anti-dust, tearproof record sleeve constructed of paper on outside and high-density polyvinyl on inside with transparent polyvinyl material covering center hole; ten sleeves/package ..... \$2.50

### Disco Film

Gel solution designed to remove dirt, dust, and oil from bottom of record grooves before record is first played. gel applied to disc with gentle sponge applicator and peeled off when dry; 320 ml ..... \$14.95

### Car Cassette Rack

Heavy-gauge plastic cassette rack holds up to six cassettes; can be screw- or self-adhered tab-mounted in horizontal or vertical position anywhere in car; packaged as hanging model or as wedge-shaped countertop pack; 4<sup>3</sup>/<sub>4</sub>" x 5" x 1<sup>3</sup>/<sub>4</sub>" ..... \$5.95

### Cables and Connectors

- 1/2-meter gold-ended cables ..... \$8.95
- 1-meter gold-ended cables ..... \$10.95
- High-definition cartridge connectors ..... \$7.95

## AUDIO-KARE

### Quietone

Anti-static record preservative lubricant ..... \$7.95

## AUDIONICS OF OREGON

### RVR-RVP Series Drop-In Modules Kits

User-replacement electronics kits designed to improve noise specifications of the non-Dolbyized Revox A-77 tape decks by 1.5 dB; kits usually record and playback drop-in modules and externally-fitted bias-trap network. A-77 improvements with modules: record amp overloads at min. 6 dB above saturation levels of any tape at any frequency; THD 0.2% at 6 dB above saturation; response at 20,000 Hz - 1.5 dB at 7<sup>1</sup>/<sub>2</sub> ips; recalibrates meter sensitivity due to headroom increase. Available for 3<sup>1</sup>/<sub>4</sub>-7<sup>1</sup>/<sub>2</sub> and 7<sup>1</sup>/<sub>2</sub>-15 ips A-77 models; factory-calibrated for bias, equalization at two speeds, record gain; user adjustable in conjunction with A-77 instruction manual.

Complete RVR/RVP kit ..... \$425.00

## AUDIOSOURCE

### High-Definition Speaker Cable

25- or 50-ft speaker cables; rated at 13 ohms; com-

posed of eight insulated wires braided together for each lead; 90-degree relationship between positive and negative leads; flat design; available in pairs.

**FHD 15.** 50-ft ..... \$50.00

**FHD 7.5 + .25-ft** ..... \$25.00

**FHD 5 + .16.4 ft** ..... \$17.50

### Ultra-High-Definition Speaker Cable

UHD speaker cable composed of 60 strands of low-resistance copper, each strand enameled; two conductors are woven at 90-degree angles; each end is pre-tinned, separated by flexible collar, and marked for polarity; dc resistance is typically 10.5 milliohms/meter and 0.147 micro Henry's/meter; impedance rating 8.6 ohms; flat cable enclosed in coffee- or green-color vinyl wrap; available in pairs of 16.4-ft and 32.8-ft lengths.

**UHD-10.** 32.8 ft ..... \$65.00

**UHD 5.** 16.4 ft ..... \$32.50

### LC-1 Audio Input Cable

Low-capacitance audio input cable with 24-K gold-plating on RCA-type phono plugs at both ends; designed for CD-4 and moving-coil cartridges; florentine-textured plug housings; high-grade copper tensile wire; separate ground wire with gold-plated spade lug at each end; r-f shielded; capacitance 35 pF/m; 39" L ..... \$8.95

**LC-2.** 78 in ..... \$12.95

## AUDIO-TECHNICA

### AT6002 Autocleanica™

Double-action disc cleaning system combines soft carbon-conductive brush and plush pad to loosen and remove groove dirt; small arm on weighted base may be placed on motorboard; may be used with most manual turntables or automatic when in manual mode; replacement pad and brush kit available. .... \$12.95

**AT602.** Replacement of conductive brush and pad kit for AT6002 ..... \$2.95

### AT6010a Disc Whisk™

Consists of dropper, anti-static cleaning fluid (applied from back for streaker-free use), pad holder, cleaning edge, adhesive for mounting holder, fluid (AT608), and instructions ..... \$7.95

### AT608 Record Care Formula

Dissolves fingerprints, loosens stubborn particles, and reduces static bond of micro-dust and airborne material; non-alcoholic; use directly on fibers of conventional brushes; 2 oz ..... \$2.50

### AT6012 Sonic Broom™

Record-cleaning system with controlled-density fibers 6 microns in diameter; cleaning fluid may be applied to reservoir or directly to pad; includes holder with cleaning surface. AT608 fluid .. \$12.95

**AT6006.** Rotary disc cleaner ..... \$12.95

### AT607 Stylus Cleaning Formula

Cleaning solution dissolves foreign material on stylus without harming known stylus adhesives; in bottle with stylus brush ..... \$3.95

### PDQII Record Cleaning System

Kit including AT6002 brush, AT6012 cleaner, AT607 stylus cleaner, AT608 solution ..... \$28.95

### AT605 Audio Insulator System

Vibration-damping feet for use under speakers, turntables or both to prevent acoustic feedback; height individually adjustable; supplied in set of 4, with bubble level ..... \$26.95

### AT617 Sonic Tonic

Fluid damping compound with applicator bottle; dries to clear; resilient gel ..... \$6.95

### AT618 Disc Stabilizer

Solid brass disc with rubber coating designed to damp out sound-coloring resonances; fits over turntable spindle ..... \$22.95

### LS-1 Lifesaver™ System

Lubricating and antistatic agent; consists of 2-oz fluid spray bottle and velvet buffer; treats up to 30



# IF YOU'RE NOT USING THE SCOTCH<sup>®</sup> RECORD CARE SYSTEM, YOU'RE USING THE SECOND BEST.

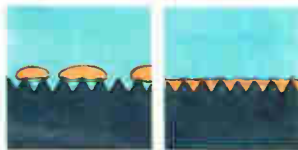
**INTRODUCING SCOTCH<sup>®</sup> RECORD CARE SYSTEM. IT CLEANS,  
ANTI-STATS AND REDUCES FRICTION—ALL IN ONE STEP.**

Finally there's a way to give your records the kind of care and protection that hasn't been possible until now... a way to insure a long life of true sound.

## The System.

The Scotch Record Care System combines new Sound Life<sup>™</sup> fluid with a unique dispensing applicator. To use, simply depress the supply container and Sound Life fluid is fed automatically to the pad. That's all there is to it. It's quick, easy and simple. No guesswork about how much fluid you need or how to apply it correctly. Just place the applicator on your turntable spindle, revolve it and the record is cleaned.

## Super-wetting action deep-cleans grooves.



*Discwasher D3<sup>®</sup> solution (left) beads up on the grooves. Sound Life (right) with super-wetting action deep-cleans grooves*

If your present cleaning solution beads up on the record surface, it may not be getting the job done.

Scotch Sound Life spreads onto the disc surface evenly—safely penetrating grooves to remove micro-dust and fingerprints. Sound Life leaves the record with a brilliant look, as brilliant as the sound is clean and true.

## As it cleans, it wipes out static.

Even though your record surface is clean, it's generally the electrostatic charge that gets it dirty again. An anti-static gun is just a temporary treatment.

One application of Sound Life reduces the residual charge to near zero. And it prevents static from returning no matter how often the record is played.



*(Left) Styrofoam heads are attracted to static charge left on record after cleaning with Discwasher D3<sup>®</sup>*

*Same record (right) after one treatment with new Sound Life fluid.*

## Friction reduction's a plus.

The same application of Sound Life that super-cleans and removes static can reduce stylus drag up to 15%.

And with your sensitive stylus that can mean less wear and improved record life.

## Better stereo performance.

To get all the true, pure sound you expect from your stereo, you need records that are truly clean, and protected from static and friction. Only the Scotch Record Care System gives you all three in one application. Ask to see a demonstration at your record or stereo store right now.

All of the tech data we've used to back up these statements is available free. Write to Magnetic A/V Products Division, 3M Company, 3M Center, St. Paul, MN 55101. Ask for report C-242.



**SCOTCH<sup>®</sup>  
RECORD CARE SYSTEM.  
THE TRUTH COMES OUT.**



**3M**

# 10 ACCESSORIES

records ..... \$12.95  
**LSR-8**, 6-oz refill ..... \$14.95

## AT6005 Pneumatic Tonearm Lift

Adapts to any tonearm, gently lifts stylus from any point on record; pneumatic action cushions motion; separate lift and control units allow control to be located where most convenient; for turntable platters 1<sup>3</sup>/<sub>16</sub>" to 2" high, provides <sup>1</sup>/<sub>16</sub>" lift; requires just two <sup>1</sup>/<sub>16</sub>"-diameter holes; includes 20" control tube ..... \$29.95

## AT6006a Safety Raiser™

Automatic pneumatic tonearm lift at end of play; height adjustable ..... \$22.95

## AT6003 Tri-Capsule

Holds up to 3 spare cartridges in standard plug-in shells (used in most European and Japanese tone arms); smoked-plastic domes ward off accidents and dust ..... \$9.95

## Universal Headshells

**AT-N**, Basic type ..... \$12.95  
**AT-S**, Similar to AT-N except with improved rigidity and lower mass ..... \$8.00  
**AT-D**, Professional quality; low mass; cast aluminum alloy ..... \$12.00  
**AT-MS**, Extra lightweight, low-resonance magnesium headshell with built-in damping; includes AT609 cartridge wires; built-in stylus overhang adjustment screw ..... \$24.95

## Vital Link™ Cable Series

### AT620 Super Conductivity Cable Set

Litz wire construction with double shielding and gold-plated connectors; for low impedance and maximum rejection of r-f interference; set of two ..... \$29.95

### AT622 Universal Tonearm Cable

Low-resistance cable for manual turntables; 51-in braided copper shield; color-coded molded phono plugs; gold-plated connectors ..... \$19.95

### AT610a Cable Set

Low-capacitance cables for connecting turntable and amplifier; 4-ft shielded cable with molded pair phono plugs each end; gold-plated connectors and separate ground wire; only one set needed per turntable ..... \$9.95

### AT641 Cable Connectors

Two gold-plated female phono feed-through cable connectors; extends length of other Vital Link cables ..... \$7.95

### AT609 Headshell Wire Set

Replaces original headshell wiring; set of four color-coded connectors made of silver litz wire and gold-plated ..... \$6.95

## AUDIO TECHNOLOGY

### 510 Peak-Responding LED Display

Combines functions of peak power indicator and peak line level monitor; 16 LED/ch display peak value of complex waveforms within ±0.25 dB; dynamic range of 45 dB resolution; responds to peak power output from 0.003-400 W; rear panel switches set 0-dB reference to 25, 50, or 100 W and match speaker impedances of 4, 8, or 16 ohms; line level inputs continuously variable from 50 mV-5 V with calibrator that balances channels and returns line level mode to 0 VU reference; frequency response 20-20,000 Hz; input impedance 10,000 ohms (line), 20,000 ohms (power); display attack time 750 μsec; display decay time 650 msec; 1<sup>3</sup>/<sub>16</sub>" H × 7<sup>1</sup>/<sub>2</sub>" W × 5<sup>1</sup>/<sub>2</sub>" D ..... \$149.95

**510B**, Multi-color display with green LEDs covering -39 to -1 dB range, yellow LED at 0 dB, and red LEDs covering +1 to +6 dB range ..... \$159.95  
**510-12**, Same as 510 but for mobile use; operates on 12V ..... \$169.95

## BIB

### Audiophile Edition

#### 3000-AE Electronic Groov-Stat

Handheld electronic static reducer releases positive ions onto record surface; pushbutton operation with flashing LED and tone indicator when unit is operating ..... \$34.95

#### 116-AE Disc Care Kit

Record maintenance kit contains Bib Groov-Stat static reducer, record valet manual record cleaner, and stylus cleaner with inspection mirror ..... \$49.95

#### 101-AE Groov-Kleen

Parallel tracking Groov-kleen record cleaner removes dust while record is playing ..... \$14.95

#### 110-AE Record Valet

Hand-held record cleaner with anti-static liquid supplied for reservoir ..... \$14.95

#### 112-AE Stylus Cleaning Kit

Contains special-formula stylus cleaning liquid and cleaning brush with built-in mirror ..... \$11.95

#### 118-AE Record Clamp

Designed to flatten warped records and eliminate record vibration; fits over center spindle and locks in position ..... \$14.95

#### 117-AE Stylus Balance/Turntable Level

Precision-made stylus balance calibrated to be accurate within <sup>1</sup>/<sub>4</sub> g, from <sup>1</sup>/<sub>4</sub> to 5 grams; includes spirit level for table balancing ..... \$14.95

#### 102-AE Turntable Mat

Anti-static turntable mat; fits all turntables .. \$9.95

#### 90-AE Tape Head Demagnetizer

Tape head demagnetizer designed for cassette, 8-track, and reel-to-reel recorders; built-in automatic off switch when not in use; includes two removable probes ..... \$24.95

#### 115-AE Tape Head Cleaning Kit

Multi-angled tape head cleaning tools for use on all tape recorders; includes inspection mirror with cleaning brush, bottle of cleaning fluid, and replacement tips ..... \$14.95

#### 24-AE Cassette Tape Splicer

<sup>1</sup>/<sub>4</sub>-in cassette tape splicer suitable for recording tape of any thickness; makes diagonal or butt splices ..... \$14.95  
**20-AE**, <sup>1</sup>/<sub>4</sub>-in recording tape splicer ..... \$14.95

#### 121-AE Tape Head Cleaning Fluid

Professional fluorocarbon formula; cleans tape heads, capstans, and pinch rollers; residue free and safe for all recorder surfaces ..... \$3.45

### Videophile Edition

#### VE-6 Tape Head Demagnetizer

Demagnetizes heads and guides of all video recorders; built-in off switch when not in use; supplied with two removable probes ..... \$24.95

#### VE-4 Dust Away Air Blast

Compressed-air spray blaster removes dust, dirt, and oxide deposits accumulating around tape travel path; moisture-free and temperature-constant ..... \$4.50

#### VE-5 Maintenance Cleaning Tools

Video recorder cleaning tools with lint-free cleaning pads at tips; cleans video and audio heads, tape guides, and pinch rollers; package of five ..... \$4.50

#### VE-7 Video Tape Head Cleaning Fluid

2-oz video tape cleaning fluid in glass bottle; cleans video and audio heads, capstans, and tape guides of all video machines; non-toxic and non-flammable ..... \$4.25

#### VE-8 Anti-Static Fluid

2-oz bottle of anti-static fluid cleans TV screens,

video camera lenses, and exterior electronic equipment surfaces; non-flammable and non-toxic. .... \$3.75

## VE-2 Video Maintenance Kit

Comprises five VE-5 cleaning tools, VE-7 head cleaning fluid, VE-4 dust-away air blast, inspection mirror, anti-static cleaning cloth, and maintenance manual on VHS and Beta format recorders.. \$24.95

## B-I-C

### FM10 Beam Box FM Antenna

Component-styled electronically directable FM antenna; passive electronic circuit directs sensitivity patterns in four geographic quadrants with 8th-wavelength extruded aluminum elements; tunable front end; broad and narrow bandwidths; improves image rejection and i-f rejection; frequency range 88-108 MHz; gain -5 dB (narrowband), -12 dB (broadband); output impedance 300 ohms (balanced), 75 ohms (unbalanced); standing wave ratio less than 1.5-1 (narrowband); bandwidth 3 MHz at -3 dB points (narrowband); comes with 44-in 300-ohm transmission line and spade lug connectors; matte black finish with clear acrylic top; 4<sup>1</sup>/<sub>2</sub>" H × 14<sup>1</sup>/<sub>2</sub>" W × 14<sup>3</sup>/<sub>4</sub>" D ..... \$99.95

**FMB**, Similar to FM10 except antenna gain -7 dB (narrowband), -14 dB (broadband); for 75-ohm operation, external transformer with coaxial connector required; walnut grain vinyl cabinet; 3<sup>1</sup>/<sub>2</sub>" H × 12<sup>1</sup>/<sub>4</sub>" W × 14" D ..... \$59.95

**FMB**, Basic electronically directable FM antenna with beam direction control; no tuning control or bandwidth selector; 2<sup>1</sup>/<sub>4</sub>" H × 12<sup>1</sup>/<sub>4</sub>" W × 14" D ..... \$29.95

## CARVER

### C-300 Sonic Hologram/Time Delay

Incorporates Sonic Hologram Generator™ with time delay system; designed to recreate larger acoustic space and three-dimensional sound image in enclosed space; delayed sounds reproduced by small secondary loudspeakers, enabling main front channels to reproduce direct sounds ..... \$350.00

### Precision Attenuator

Magnetic field amplifier transforms minimum 10-W receiver into 400-W receiver ..... \$15.00

## CROWN

### RTA-2 Real-Time Audio Analyzer

Real-time spectrum analyzer in <sup>1</sup>/<sub>3</sub>- and full-octave bands, switch selectable; consists of 32 single-pole-pair <sup>1</sup>/<sub>3</sub>-octave bandpass filters centered on <sup>1</sup>/<sub>3</sub>-octave intervals. Features 5-in scope; lighted graticule; built-in pink-noise generator; 800-20,000 Hz and 16-630 Hz fast/slow integration rate select controls; 5 or 10 dB/division select control; 0-70 dB input level control in 10-dB steps, 40-dB range vernier; internal balanced-input gain control. Frequency response 16-20,000 Hz; sensitivity at full-scale indication 15.2 mV-150 V, max. in (unbalanced), 0.76 mV-3 V, max. in (balanced); scans 32 channels in 16.6 msec; max. output 1.1 V rms min.; balanced output 600 ohms/50 ohms (male XLR front connector), unbalanced output 300/25 ohms (<sup>1</sup>/<sub>4</sub>-in phone jack front and rear panel connector); 7" H × 19" W × 15" D ..... \$2395.00

## CUSTOM CASE

### DL-30 Cassette Case

Attache-style cassette carrying case holds 30 cassette tapes and comes in black or brown vinyl finish with aluminum valance and nickel plated hardware ..... \$11.99

### DL-24 8-Track Case

8-track carrying case holds 24 tapes and comes in black, chocolate, musket, burgundy, or camel vinyl finish with aluminum valance and nickel plated hardware ..... \$11.99



*FM Reception out of this world:  
Famous-maker's discovery unlocks  
entire new dimension in reception  
clarity for all FM receivers.*

# Space- Age FM Antenna



**WINEGARD**  
FM-4400 Amplified Antenna  
FM Reception Breakthrough

*Remarkable power antenna magnifies signal 5.6 times! Pulls in weak, fading stations, delivers amazingly clear, distortion-free reception across entire FM band.*

Enjoyable as it is, the physical properties of frequency modulation generate a high incidence of signal breakdown, a frustration well-known to the owners of even the most expensive FM/Stereo receivers.

## BEAUTIFUL, BUT WEAK

FM stations normally broadcast comparatively weak signals, requiring directional assistance in the form of an antenna to beam in the sound waves more or less directly at the receiver. Then, depending upon the sensitivity of the antenna and the power of the broadcast signal, a certain quality (or lack of it) results.

## THE WINEGARD BREAKTHROUGH

Winegard, the world's foremost manufacturers of TV and FM reception products, has, momentarily, changed the entire concept of FM/Stereo reception with a truly remarkable unit entitled the FM-4400 "Stereotron" Amplified Antenna.

Combining the use of exotic space technology materials (ultra-sensitive to wave length contact) with a highly refined solid state power pack, the FM-4400 . . . 1) miraculously connects with and locks in specific FM station outputs, and then 2) amplifies each 'captured' signal 5.6 times, presenting the receiver with an incredibly strong, steady wave output.

## UNEXCELLED CLARITY

Already heralded as one of the singular, high level achievements in the field of sound reception technology, the FM-4400 literally pumps power into every signal it is assigned to connect. (19" gold tone receptor bar rotates for pinpoint directivity).

Nearby stations come in strong with significantly improved power, and almost without belief, far-ranging stations—never before reached with any clarity—are suddenly made part of the FM listening menu.

The unit works indoors, connected and placed atop the FM receiver. No outdoor connection is ever required. Moreover (and not a small point in the sensitive world of sound), the amplification phase of the FM-4400 goes totally unnoticed. Signal-to-noise ratio and proper phasing of signals takes place at what are termed "optimum," or "ideal" levels. The quiet, even delivery of sound using the FM-4400 Stereotron Antenna is immediately noted, particularly by listeners used to discriminating between the "sound" of different, highly sophisticated reception units.

## WINEGARD EXCELLENCE

Experts call the remarkable FM-4400 the "sound barrier breakthrough" FM/Stereo enthusiasts have been waiting for. Key specifications include: walnut base housing, measuring 6½ x 5½ x 3½", with 5' coaxial cable and matching transformer for connection to FM receiver. 88-108MHz amplification, ON-OFF switch, red LED readout, operation on 110-117 VAC. And, being manufactured by Winegard, little more need be said about its quality.

## ORDER AT OUR RISK

So impressive is the performance analysis of the FM-4400, that we are eager to offer its sale to you on a guaranteed no-risk basis, price complete (including all postage and handling) of only \$69.95, purchased direct from JCH Technology. (California residents add 6% sales tax).

And "no-risk" means you are encouraged to order the FM-4400 and try it out in your own home for 30 days. Then, if you decide it meets your expectations, keep it and enjoy exceptional FM reception. However, if the Stereotron FM-4400 fails to measure up, simply return it in good condition and your full purchase price will be cheerfully refunded. We know it's a remarkable antenna, and believe you will agree with a money-back guarantee and one-year limited warranty to prove it.

To order, send a check for \$69.95, complete, to the address shown below. Or, to order direct using your VISA or Master Card, we welcome you to use the toll-free numbers listed below. We keep these lines open 24 hours a day, 7 days a week for your convenience.

**TOLL-FREE . . . . . 800-228-2606**  
**(In Nebraska . . . . . 800-642-8777)**

Winegard's near-in, non-amplified antenna (FM-2400) is also available, \$39.95 complete, with the same no-risk guarantee, recommended mainly for high-density population areas where stations are known to broadcast high wattage signals.

**JCH TECHNOLOGY  
COMPANY**

*"New Innovations In Electronics"*

1420 Alta Vista Drive • Dept. SR  
Vista, California 92083

**C-30 Cassette Case**

Briefcase holds 30 cassettes in red flocked styrene slots; comes in black alligator-grain vinyl leatherette

..... \$4.99  
**C-12.** Similar to C-30 except holds 12 tapes. \$2.39

**54 Tape Case**

Carrying case holds 24 tapes or 48 unjacketed cassettes in individual styrene slots; comes in black alligator-grain vinyl leatherette or blue denim \$4.99

**DB SYSTEMS****DBP-6 Phono Equalization Kit**

Designed to suit frequency response of moving-magnet cartridge to its capacitance load requirement; adds 100-400 pF on phono input of preamp or receiver; kit includes ten color-coded gold-plated plugs with wired-in polystyrene capacitors for 100, 150, 200, 300, and 400 pF added capacitance, two 100-ohm loads for adjusting moving-coil cartridges, two spare plugs, two Y cable connectors, and capacitance chart ..... \$27.95

**DBP-11.** Capacitance-loading switching box similar to DBP-6; features switch-selectable capacitance loading for two moving-magnet cartridges; connectors are gold-plated..... \$79.95

**DBP-6MC Resistive Loading Kit**

Utilizes 1% metal film resistors to experiment with effects of resistive loading on moving-coil phono cartridges, mechanically same as DBP-6; color-coded phono plugs for 10, 20, 50, 100, and 200 ohms; switchable loading is possible through a combination of kit (either DBP-6MC or DBP-6) and DBP-2J passive switch box; includes two empty plugs..... \$27.95

**DBP-2J Passive Switch Box.** Passive switch box with eight input and two output jacks; selects up to four phono inputs; can be used for switching four tape recorders or four amplifiers; allows for selectable loading of cartridges when used with DBP-6 or DBP-6MC kit ..... \$39.95

**DBP-2JAU.** DBP-2J with gold-plated jacks... \$47.95

**DB-7 Phase Inverter/Bandpass Filter**

Increases power output of stereo power amplifier by four times through bridging into mono amplifier and effects a 20-20,000 Hz frequency response to less than 0.3 dB; features buffered inputs and outputs, switchable positive or negative phase for either or both channels, stereo bridging outputs, 1B-dB/octave subsonic and Bessel 1B-dB/octave supersonic filters; gain in inverted mode 0.05 dB of non-inverted gain; requires DB-2 power supply or DBP-1 auxiliary cable ..... \$159.95

**DB-2.** Power supply for DB-7 ..... \$62.00

**DBP-10 Phono Alignment Protractor**

Mylar-laminated protractor measures lateral tracking error of mounted cartridge to 1/4 of one degree; designed to optimize geometry and minimize distortion in tonearm/cartridge combination; includes carrying case..... \$19.95

**DBP-8 Speaker Wire**

Twelve-gauge dual-conductor copper wire; end leads pre-tinned and cut to 16 gauge to fit any connector.

3 meters (10 ft approx.)..... \$6.95

6 meters (20 ft approx.)..... \$11.95

9 meters (30 ft approx.)..... \$16.95

**DBP-9.** Set of eight solderless connectors for DBP-8..... \$5.95

**DBP-12 Audio Cable**

Low-capacitance (400 pF), 10-meter stereo audio cable terminated with rugged gold-plated phono plugs..... \$59.95

**DBP-13J Gold-Plated Phono Jacks**

Set of eight gold-plated jacks for front-panel mount

in 1/4-in hole; hardware included ..... \$10.80

**DBP-13P.** Gold-plated phono plugs; set of eight ..... \$7.20

**DECCA****"Zerohms" Record Brush**

Record brush with a million conductive carbon fiber bristles to clean records and remove static; has conductive disc on handle that gives zero-ohm resistance between handle and bristles to improve static drain..... \$18.95

**Record Cleaner**

Arm-type "dry" cleaner with 20,000 conductive carbon fiber bristles; ground wire to amplifier for static drain path..... \$16.95

**Microbe**

Three-way cleaning brush that mounts on cartridge; adds 1/2-g tracking force; fiber brushes function as stylus protector, stylus cleaner, and record cleaner/static drainer..... \$9.95

**DEVLIN****Speaker Stands**

**Model 10.** Chrome tubular steel stands for average sized speakers; 14-in high x 12-in wide ..... \$49.95 pr.

**Model 20.** Chrome stand supports speakers weighing up to 100 lbs; 13-in high x 10.5-in wide ..... \$59.95 pr.

**Model 30.** Black steel stand for speakers weighing up to 100 lbs; 13-in high x 16-in wide.. \$70.00 pr.

**DICK WAGNER****Directree Record Stand**

Tree-designed chrome record stand with five 3/16-in lucite vertical-position disc-sized holders; accommodates up to 120 single-jacket or 80 double-jacket records; displays ten records full face; rotating self-lubricated polyurethane brushing and ball-bearing base occupies one-square-foot floor space; easy assembly; weight 15 lbs; 71" H ..... \$148.50

**DISCWASHER****DiscKeeper™ Record Rack**

Record rack has calculated compression bar to hold records flat and upright; bar pulls forward to "page through" albums; walnut and custom-formed anodized aluminum in dark natural wood and black matte; wall-mount hardware included ..... \$75.00

**DiscFoot™ Isolation System**

Designed to act in series with independent turntable feet to achieve optimal turntable isolation from



speaker feedback (minimizing air-borne frequencies by as much as 25 dB) and surface-borne vibrations (20-dB improvement); consists of four isolation pods, four furniture-protective pads, four platform caps, and four damping sections ..... \$25.00

Single feet for turntables over 22 lbs..... \$7.00

**DiscKit™ Record Care**

Contains D4 record-cleaning system, DC-1 pad

cleaner, Zerostat anti-static gun, and SC-2 precision stylus-cleaning system; housed in DiscOrganizer, milled walnut tray with smoked plastic dust cover; additional spaces in tray for headshells, screwdriver, etc ..... \$55.00

**D4 Record Care System**

Contains 1.25-fl-oz temperature-stable record-cleaning fluid designed for maximum safety in not damaging stabilizers in high-grade vinyl while minimizing groove residue and soft-fiber bonded pad with hand-milled walnut handle; D4 fluid refills available in 6 and 16-oz bottles ..... \$16.50

**DC-1.** Brush designed to clean Discwasher Record Care pad; available free of charge with all Discwasher Systems and DiscKits; also sold separately ..... \$0.69

**Discorganizer**

Milled walnut tray with dust cover which will house the record-cleaning system and provide space for reserve spindles, stylus guards, cartridges, and other phono accessories..... \$13.50

**D'Stat II Mat**

Very thin fiber turntable mat which polarizes record surface to reduce static during playback ..... \$8.50

**V.R.P. Record Sleeves**

Scratch-free record liner sleeves for protection against "stabilizer drift" and static; conventional size; 10 sleeves per package ..... \$3.50

**SC-2 Stylus Cleaner System**

Contains 0.34-fl-oz bottle of stylus cleaning fluid specifically designed to dissolve abrasive glaze that builds up on unattended styli while leaving stylus adhesives and cartridge polymers unharmed and SC-1 stiff-bristled stylus brush with walnut storage case and magnifying mirror on surface opposite brush ..... \$8.50

SC-2 fluid refill..... \$1.25

**Zerostat®**

Total anti-static system which emits millions of (+) ions upon trigger squeeze and equal number of (-) ions on trigger release; never needs element replacement; comes in red casing..... \$23.00

**Smoglifters II™ Speaker Cables**

Low-resistance, low-inductance speaker cable. 10-meter cable..... \$30.00 ea. 6-meter cable..... \$36.00 pr. 3-meter cable..... \$20.00 pr.

**Gold-ens™ Audio Cables**

Gold-plated connector cables; gold flashed connector pins will never corrode or add resistance with age; protective steel strain reliefs; ultra-low capacitance cords.

1/2-meter ..... \$10.00

1-meter ..... \$11.00

2-meter ..... \$12.50

**DiscTraker**

Damping device; attaches to tonearm head to reduce tonearm/cartridge and record-warp resonance; attaches to cartridge mounting screws..... \$29.00

**Custom Printed Record Sleeve**

Heat-stabilized and plasticizer-stabilized custom record sleeves with option to have logo imprinted in color or headers printed on pegboard-mounted pads of 50; available in pegboard-mount pads or free sleeves ..... \$0.25 ea.

**EEI****Alignment Gauge**

IEC plug-in phono-cartridge alignment gauge measures tracking error with second scale accurately setting cartridge in headshell; suitable with all pick-up arms with 1/2-in center mounting; consists of clear plastic gauge, double-sided protractor with tracking error in degrees on one side and distortion from



tracking error on other, and pad of graph sheets ..... \$16.95

## ELECTROMEDIA DESIGN

### Control One Switch

Signal-activated control center for hi-fi component systems; shuts down system ten minutes after signal is lost; less than ten minutes and time-constant is automatically reset; front-panel "on" switch; "off" switch can shut-off entire system; switching relay contact rating 550 W; can handle 1000 W systems; rear plug-in solid state circuitry; matte black and walnut enclosure with satin aluminum panel; 2 1/2" H x 12 3/4" W x 4 1/4" D..... \$90.00  
**Control II-r.** Same as Control I except remote control with three-conductor wire connected between switch and Control I in any part of house .. \$125.00

## ELECTRONIC SPECIALISTS

### ISO-3 Super Isolator

Three individually filtered 3-prong ac sockets with integral surge suppression for isolating sensitive pre-amps and tuners from the power amp; accommodates 1875 W total load, with each socket able to handle 1000 W load ..... \$85.95

### SFK-33S Super Filter/Suppressor

Features dual balanced Pi-Super Filter and 2000 Amp Spike/Surge Suppressor designed to clean up "pops" and "hash" from hi-fi and electronic organ installations; connecting to 120 V ac line with standard 3-prong plug; three sockets can accommodate 1250 W load ..... \$45.95

### SUP-21 Equipment Protection

Line-cord transient suppressor absorbs repeated power surges; available in two-prong plug/socket ..... \$14.95

SUP-31. Three-prong plug/socket ..... \$17.95

### SPKR/FL Stereo Speaker Filter

Stereo speaker filter helps eliminate interference from entering through speaker leads ..... \$13.95

### PIF Stereo Phono-Input Filter

Filter designed to plug directly into amplifier input jack to reduce phono-input interference... \$11.95

### FM-HP Hi-Pass Interference Filter

Flat 300-ohm twin-lead hi-pass filter connects directly to FM antenna terminals; designed for FM receivers only; eliminates interference from CB, auto ignition, diathermy, and household appliances ..... \$11.95

FM-HP/CX. Same as FM-HP except round 75-ohm coaxial cable high-pass filter ..... \$13.95

## EVENTIDE

### THS224 Real-Time Spectrum Analyzer

Real-time audio spectrum analyzer designed to interface with 8K, 16K, and 32K Commodore PET computers; also compatible with PME-1 and Big Mem add-on memory boards; responds to various addresses in \$B000-\$BFFF range. Functions: prints display axes and frequencies on screen; displays bar graph of data determined during analysis; performs statistically independent real-time analysis for each call; sets and resets fast/slow decay mode; sets and resets averaging mode; sets and resets logarithmic display mode; analyzer gain adjustable 0-48 dB; error message. Input level +14 to -20 dBV; input impedance 10k ohms balanced; 31 two-pole filters from 20-20,000 Hz on ISO center frequencies; resolution 7mV (linear display mode); specify 8K, 16K, or 32K PET ..... \$595.00  
**VTU02.** As above but interfaces with Radio Shack TRS-80 computer with Level 2 BASIC and disk..... \$595.00  
**AI8232.** As above but interfaces with Apple computers; plugs into any I/O connector..... \$545.00

## FALCON

### Stat-Off™ Anti-Static Device

Hand-held device neutralizes static and blows away

loose dirt and lint from records, tapes, and video and audio equipment; includes 3-oz bottle of Pocket Dust-Off® spray cleaner..... \$29.95  
**Adapter.** Converts 14-oz can of Dust-Off® spray to 14-oz Stat-Off™ formula by snapping adapter over chrome nozzle; results in combination anti-static/anti-dust operation ..... \$14.95

### Groove Tube™ Record Cleaner

Cylindrical bottle of cleaning fluid brings micro-dust particles to surface of record and then, with velvet buffer pad wrapped around bottle, brushes record's surface ..... \$6.95

### Tape Head Cleaning Kit

Contains 3-oz can of Dust-Off® and isopropyl-alcohol-soaked flat-head cleaning swabs ..... \$6.95

## FIDELITONE

### 3056 Spin 'n Clean

Record-cleaning device removes dirt and static charge; includes dual velvet brush system and 4-oz record wash solution; record is inserted between cleaning brush pads on roller grooves and spun..... \$15.98

### 3052 Record Care Kit

Contains "Fidelistat" disc jockey, stylus cleaner, and anti-static fluid ..... \$16.98

### 3045 Record-Cleaning Arm

Cleaning arm attaches to turntable to clean record while it rotates; includes anti-static fluid..... \$6.98

### Record Conditioner & Purifier

Record brush is designed to pick up small particles from record in conjunction with purifier fluid; cleaning pad has unidirectional pile and is on a contoured cherry-wood handle with a purifier bottle storage compartment ..... \$10.95  
 Purifier fluid refill; 4 oz..... \$4.99

### Cassette Storage Chests

Solid walnut chest with flocked vacuum formed insert, thumb-slot opener, kirf-mounted hinge and dado lid stop.

**8500.** Holds up to 64 cassettes ..... \$93.95

**8503.** Holds up to 24 VHS video cassettes. \$83.95

**8504.** Holds up to 24 Beta video cassettes. \$77.95

**3143.** Holds up to 12 VHS or Beta video cassettes ..... \$57.95

**3135.** Holds up to 36 cassettes ..... \$52.95

**3135-01.** Holds up to 24 cassettes ..... \$45.95

### Audio Cassette Trays

Solid walnut trays with flocked vacuum formed inserts.

**8509.** Holds up to 36 cassettes ..... \$21.95

**8508.** Holds up to 24 cassettes ..... \$19.95

## FULTON MUSICAL INSTRUMENTS

### Kinetic Barrier

Linear high-order turntable mat designed to suppress spurious resonances afflicting recorded signal; can be tuned to turntable using patented index marker..... \$59.00

### Speaker Interconnect

Designed for speakers with built-in amps or for those who desire shorter speaker leads; RCA to RCA gold connector; 28 ft L ..... \$125.00

### Tonearm Interconnect

Tonearm connector with female DIN and RCA gold-plated connector; 57 in RCA to female DIN; total capacitance/side 48 pF/length ..... \$59.00

## GARRARD U.S.A.

### Dustmaster

Low-mass tonearm-styled record-cleaning device with brush composed of 40,000 carbon fibers at end; removes microdust from record grooves with-

Empire's revolutionary cleaning method peels off every trace of dirt, dust and oil from deep down in your record's grooves.



Write for your free brochure on all fine record care products by Audio Groome. Empire Scientific Corp., Dept AG, Garden City, NY 11530

EMPIRE EMPIRE *Audio Groome by EMPIRE*

# 10 ACCESSORIES

out applying fluids; contacts surface by way of self-stick pad; built-in arm rest and finger lift; black with chrome accents ..... \$19.95

## GC/AUDIOTEX

### 30-8710 Speaker Selector Switch

Controls up to five pairs of stereo speakers; contains two stereo headphone jacks; barrier-type terminal connectors; constant minimum load circuit with 50 W load resistors protects amplifier, min. impedance 4 ohms ..... \$49.95

### 30-8714 Tape and Input Control Unit

Stereo switching panel contains input phono pin jacks for amp, two aux. and two tapes, output phono pin jacks for amp and two tape machines, and 5-pin DIN connector for signal processor input and output; permits dubbing in either direction while listening to another input source; equalizer can be switched in and out of circuit; front-mounted controls include aux. 1 and 2, tape monitors 1 and 2, two tape dubs, and processor switch ..... \$39.95

### LP Cleaning Kit

Includes aerosol Record Basic for removing lubricants, Record Plus lubricant, cleaning tools and book on record care ..... \$11.90

### 30-8600 Audio Maid En-Stat

Consists of 2-oz fine-mist spray bottle of anti-static formula and black velour pile wrap on natural wood handle ..... \$10.00

### Tape Care Products

The company carries a complete line of tape accessories for use with open-reel, cassette, and 8-track equipment.

**30-129.** Tape Care Kit, Jr. contains head cleaner, cotton swabs, and cleaning cloth ..... \$2.70

**30-630.** "Blast-off" tape head cleaner, 3-oz aerosol can ..... \$2.00

**30-128.** Same except in 6-oz aerosol can ..... \$3.55

**30-124-1.** Recording head cleaner, 2-oz bottle ..... \$1.70

**30-124-2.** Recording head lubricant ..... \$1.70

## GOLDRING by HERVIC

### Ex-Static Record Brush

Carbon-fiber record brush; electrically conductive ..... \$20.00

### Hervic Antistat

Piezoelectric record brush produces ionized air to remove static from disc; needs no batteries. \$20.00

### Ex-Static Platter Pad

Carbon-fiber platter pad shorts out static charges and isolates disc from turntable noise ..... \$15.00

## GUSDORF

### Status Pro Collection

#### 1990 Electronics Furniture Tower

Walnut-tone Rendura-coated cabinet designed to house audio and video equipment; top section has three infinitely-adjustable (1 1/4-in centers) shelves and is enclosed by two bronze-tone tempered safety glass doors with magnetic catches—suitable for housing turntable and audio components; below is open area for television; bottom section consists of two-door cabinet that either accommodates VCR on removable slide-out shelf with VCR videocassette storage area below or stores records by inserting record dividers and taking out VCR shelf; optional rack-mount kit available; 1 1/2-in-thick sides; 6 1/2" H x 27" W x 20 1/4" D ..... \$300.00

#### 1930 Home Entertainment Center

Walnut-tone Rendura-coated entertainment center houses audio and video equipment; right-half is



covered with bronze-tone tempered safety glass doors and has four infinitely-adjustable shelves for audio components and record and videocassette storage; upper left-half of unit has slip-in section for television with back panel to conceal wall and bottom half is double-door cabinet with upper slide-out shelf for VCR and lower section for videocassette storage; gallery top shelf can support turntable, etc.; 46" H x 21 1/2" (left side) x 27" (right side) W x 20 1/4" D ..... \$300.00

#### 1900 Credenza

Two-section credenza with both sections enclosed by two bronze-tone tempered safety glass doors; right-half includes storage for records with dividers and audio component; left-half can accommodate three audio components; top surface surrounded by gallery and supports television, turntable, or VCR; hooded double wheel casters; optional rack-mounting kit; 1 1/2-in-thick sides; 49 1/2" H x 23 3/4" (left) x 21 1/2" (right) W x 20 1/4" D ..... \$280.00

#### 1950 Component File Cabinet

Walnut or pecan-tone Rendura-coated cabinet enclosed by smoked bronze-tone tempered safety glass doors held by magnetic catches and with five adjustable shelves; includes removable record dividers for lower shelf and is designed to support turntable on top surrounded by raised gallery; hooded double-wheel casters; 1 1/2-in-thick sides; 46" H x 21 1/2" W x 20 1/4" D ..... \$200.00

#### 1920 Electronics Furniture

Walnut-tone Rendura-coated cabinet consists of upper open section for television and lower two-shelf section enclosed by doors and with VCR slide-out shelf and videocassette storage area below; top shelf has raised gallery on sides; hooded double-wheel casters; 1 1/2-in-thick sides; 46" H x 27" W x 20 1/4" D ..... \$200.00

## HITACHI

### Custom Rack Systems

Rosewood-vinyl or black-with-aluminum-frame rack systems designed for various component configurations; all built with record storage and most accommodate receiver, turntable with mounted cartridge, and two speakers; some models have glass doors.

Receiver rack systems ..... \$449.95-\$699.95

Tuner/amplifier separates ..... \$549.95-\$899.95

Table-top systems ..... \$599.95-\$899.95

## INNOTECH

### SF-2 Stereo Subsonic Filter

Active filter to remove harmful subsonics due to record warp, rumble, etc.; 18 dB/octave below 22 Hz ..... \$90.00

## KEITH MONKS

### Record/Turntable Accessories

Record Sweeper ..... \$27.50

Pivot Sweeper ..... \$23.70

Damped Levelling Kit. Includes four adjustable feet which are placed under each corner of turntable ....

..... \$22.00

Record Care Kit. Includes "Kleen Sweep," small capsule of antistatic fluid, and small nylon brush to clean stylus ..... \$7.60

Antistatic Fluid ..... \$2.40

Ultra Cleaner ..... \$2.90

Kleen Sweep. Plastic holder with treated velvet pad for removing dust on record surface ..... \$5.25

Record Sleeves. Paper sleeves with high density plastic to reduce static on record surface; 10 sleeves ..... \$2.75

1000 Record Sleeves ..... \$163.00

Mark 4. Record cleaning machine with plastic lid ..... \$850.00

Company also carries an extensive line of microphone floor stands, booms, clamps, cable drums, and goosenecks.

## KENWOOD

### PM-80 Power Monitor

Dual two-color 12-LED power output display with X0.1 (0.001-10 W) and X1 (0.01-100 W) meter range selector; employs ICs with 7-msec response time; three-speaker selector switch; 74 mm H x 440 mm W x 160 mm D ..... \$160.00

## KIRSCH

### Glenwood Component Shelf Kits

Company offers three units with 18-in-deep walnut-vinyl laminated shelves; two units feature freestanding bases for proper speaker placement ..... from \$39.00-\$145.00

## LE-BO

### Video Tape Storage Cabinets

Teak-vinyl-trim wooden videocassette storage cabinets hold up to 30 cassettes.

VCM 1016. For Beta-format videocassettes. \$49.95

VCM-1018. For VHS-format videocassettes. \$49.95

### VCM-1002 Video Cassette Module

Walnut-finished storage cabinet holds up to 12 VHS, Beta, or V-cord videocassettes in any mix and in or out of cardboard sleeves (slide-out insert accommodates VHS format); features ejector to remove individual cassettes from module; removable index insert; vertically or horizontally stacked; removable smoked plastic interior; 10 3/4" H x 15 1/2" W x 6 7/8" D ..... \$47.95

VCM 1000. Storage module without cabinet. .... \$26.95

Company also manufactures an extensive line of cassette and 8-track carrying cases and storage units.

### TA-155-A Roto-Rack

Revolving cassette storage roto-rack with individual compartments for each tape; holds up to 20 stackable cassettes; high-impact black plastic with walnut-laminated side panels; individually boxed in colorful display cartons; rotates on Lazy Susan base ..... \$9.95

TA-60. Similar to TA-155-A except has 48-cassette capacity; fine walnut-grain finish ..... \$13.95

### TA-1060 Tape Home Storage Cabinet

High-impact black plastic inserts in walnut-finish wood cabinet; holds up to 60 cassettes; individual compartments for each tape; individually boxed with label ..... \$31.95

### Attache Cassette Carrying Cases

Foam padded-vinyl-covered attache-style cassette tape carrying cases with brushed aluminum trim and color-coordinated interior and exterior; individual compartments for each cassette; individually boxed in colorful display cartons; available in black, brown, or ginger.

TA-133. Holds up to 30 cassettes. .... \$15.95

TA-145. Holds up to 45 cassettes. .... \$20.95

TA-266. Holds up to 60 cassettes. .... \$22.95



## Dual Series Carrying Cases

Foam padded-vinyl-covered carrying case with dual inserts to accommodate cassettes and/or 8-track cartridges; color-coordinated interior and exterior with lining on inside; brushed aluminum trim; individual compartments for each tape; individually boxed in colorful display cartons; Granada brown.

**TA-184.** 12-cartridge capacity for 8-track and/or 14-cassette capacity..... \$15.95

**TA-186.** 24-cartridge capacity and/or 26-cassette capacity..... \$19.95

**TA-188.** 32-cartridge capacity and/or 34-cassette capacity..... \$24.95

## Brass Record Racks

**45-RR.** Holds 40 LPs; has wooden handles... \$4.49

**50-R.** Record browser; holds 50 LPs..... \$4.95

**60-W.** Holds 60 LPs..... \$6.95

**75.** Same as 60-W except with wooden handles..... \$7.95

The company offers a complete line of tape care products for cassettes and 8-track cartridges.

**TA-99.** Cassette maintainer..... \$3.95

**TA-111.** 8-track cartridge maintainer..... \$3.95

**TA-24.** Auto tape maintenance kit..... \$4.95

**TA-89.** Cassette maintenance kit..... \$2.49

**TA-22.** Tape head cleaner and lubricant kit... \$2.95

**TA-38.** Cassette head cleaner..... \$0.99

**TA-26.** 8-track head and capstan cleaner..... \$1.49

## LECTRO TECH

### PPI-400 Peak Power Indicator

Designed to monitor peak audio power across loud-speaker terminals. Power range selectable in 3-dB steps from 6.25 to 800 W continuous for 4, 8, and 16-ohm loads; power level indicators are green, yellow, and red LEDs, calibrated in 8 steps from 0 to -30 dB; input impedance 20,000 ohms min.; frequency response 20-20,000 Hz; max. input power 1250 W continuous into 8 ohms; min. input sensitivity 3.13 mW at 8 ohms; speaker impedance range 2 to 35 ohms..... \$130.00

## LOGICAL SYSTEMS

### 1081 Real Time Audio Analyzer Kit

LED audio analyzer features 81-LED spectrum display over 10-octave audio range; has level and mic/aux./voice select controls. Input level 1 V nominal; input impedance 100k ohms; frequencies set at 31.2, 62.5, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz in 3-dB steps; meter accuracy 0.5 dB/step. Kit includes circuit-board-mounted components, 3.5-in-high black anodized rack mount chassis, and assembly manual; unit hooks up to receiver, preamp, tape machine, mixer, or audio jack of video tape recorder; 3.5" H x 19" W x 7" D..... \$179.00

Wired version..... \$295.00

## MAGNESONICS

### Modular Tele-Cord Electronic Secretary

Records telephone communication through hook-up with cassette recorder; includes modular duplex adaptor, sub-miniature plug connecting to remote input of recorder, miniature plug connecting to aux. or mic input of recorder, main line plug to telephone and wall, with x and y interchangeable, and plug release plunger..... \$49.95

**Tele-Cord R.** Same as above but has regular cord..... \$39.95

### Erase-Sure

Erases cassette or 8-track cartridge to -65 dB from 0 reference; includes four "AA" batteries; 2 3/4" H x 4" W x 3 1/2" D..... \$24.50

### Rapid Rewind

Designed to check and test cassettes before recording for cassette tape tension stabilization, tape binding elimination, and uniform tape pack; winds C-60 cassette in 30 sec; includes four "AA" batteries..... \$24.50

## MARANTZ

### RM-3100 Stack Rack

Walnut-side-panelled stack rack with glass-enclosed record compartment; can accept up to four Marantz components; equipped with RHA-1 or RHA-2 rack handles, two blank filler panels, and chrome casters; 19" W (EIA standard)..... \$280.00

### RM-3700 Stack Rack

Three fixed shelves with full-length smoked-glass door, accessory shelf, and divided record compartment; walnut side panels; 39 1/2" H x 19 7/8" W x 16 1/8" D..... \$240.00

### RM-3060D Stack Rack

Three shelves for Marantz components with full-length smoked glass-door and adjustable lower shelf; walnut grain vinyl veneer; 40" H x 17" W..... \$130.00

**RM-3060.** Similar to RM-3060D without glass door..... \$80.00

### RHA-8 Rack Handles

Component rack handles for all new Marantz components..... \$35.00

## MARCOF

### Warp Knot Low Filter

Passive filter network designed to remove unwanted record warp frequencies without affecting bass program over most speaker systems; installed between turntable leads and phono inputs; response -3 dB at 32 Hz; 6 dB/octave slope..... \$14.95 pr.

## MASTERCRAFT

### "The Stand" Speaker Stands

All are universal speaker stands designed for most rectangular speaker systems unless otherwise noted; shipped as easy-to-assemble kits.

**DD-308 W.** Custom-made speaker stands for Dahlquist DQ 10, hand-rubbed oiled walnut solid hardwood posts and oiled-walnut wood veneer base; 9 1/2" H..... \$75.00 pr.

**DM-127 W.** Universal stand designed for mini speakers (i.e. Rogers, M&K, Visonik David, ADS, Braun, and Spendor mini systems); oiled walnut wood post with oiled-walnut veneer base; 30" H..... \$59.00 pr.

**DU-208 W.** Oiled-walnut wood veneer base and hardwood posts; 9 1/2" H..... \$55.00 pr.

**RT-2.** Clear lucite acrylic plastic stand; 5" H and angled; assembled..... \$55.00 pr.

**DM-111W.** Universal stand for mini speakers, oiled-walnut wood post and veneer base; may be reversed for shelf placement; 12" H and angled..... \$50.00 pr.

**203.** Walnut vinyl veneer base; 5 1/2" H and angled; assembled..... \$44.00 pr.

**UD 203 W.** Same as 203 except with oiled walnut wood veneer base..... \$55.00 pr.

**R-1.** Clear acrylic plastic stand; 3 1/2" H and angled; assembled..... \$34.00 pr.

**MM-3.** Walnut vinyl sides with hardwood cross braces; supports up to 200 lbs; raises speaker from 2 1/2-4 inches; angled..... \$19.95 pr.

## MR. AUDIO

### Record Maintenance/Accessories

**1000.** Record cleaning cloth..... \$1.73

**1001.** Record cleaning kit..... \$1.96

**1004.** Record cleaning spray..... \$2.56

**1011.** Record cleaning brush..... \$0.53

**1012.** Record inserts..... \$0.40

**1013.** Record adaptor..... \$0.40

### Tape Maintenance Products

**1002.** Tape head cleaning spray..... \$2.11

**1010.** Tape head cleaning kit..... \$1.58

### Batt-A-Dapt Adaptor

Adapts all battery-operated electronic products; three models available for 6-9 V operation (1139),

3-12 V operation including motor-driven units (1141), and 3-12 V through cigarette lighter outlet (1144)..... \$3.99-\$5.99

## MITSUBISHI

### DR-720 Audio Equipment Rack

Mobile vertical five-shelf equipment rack with twin-glass double doors, the upper doors designed for easy access to most-used controls and the lower doors designed to protect records from dust and designed for less often used meter-unit controls; lockable front two casters; 65" H x 22 3/8" W x 24 7/8" D..... \$380.00

**DR-707.** Similar to DR-720 except four shelves, 54 3/8" H x 21 3/8" W x 17 3/8" D..... \$280.00

### DA-M10 Power-Level Meters

Measures instantaneous power peaks on dual-channel meters. Features logarithmic scales for continu-



ous reading without switching ranges; response independent of frequency or waveshape. Meter section: peak level -50 to +3 dB; output 1 mW-200 W (x 1), 0.1 mW-20 W (x 0.1); frequency response 20-20,000 Hz ± 1 dB; input sensitivity 1 V; response times 10 msec; recovery time 0.6 sec (0 to -30 dB). Buffer amplifier section: frequency response 20-20,000 Hz ± 0.2 dB, THD 0.01%; S/N 100 dB at 1 V; gain 0 dB (variable); input impedance 50,000 ohms; output impedance less than 600 ohms. Front panel A/B speaker selector and left and right channel level settings; 6 3/4" H x 16 3/4" W x 4 7/8" D..... \$170.00

### MK-30 Speaker Stands

Designed for use with Mitsubishi Honeycomb Speaker Series MS-10, 20, and 30; finished in flat black..... \$55.00 pr.

## MONSTER CABLE

### Platter Pad II

Designed to absorb vertical plane vibration, damp subsonic vibration, reduce vinyl modulation distortion, and reduce feedback; flat surface except for slight indentation in label area; 6.35-mm thick; 439.5 g..... \$35.00

### Monster Cable™ Speaker Wire

Rope-like speaker cable with fine copper stranding; low dc resistance (0.003 ohms/ft); low capacitance (21 pF/ft); low inductance (0.23 µH/ft); color-coded terminations; can be used with all amplifiers.

**MC 15/15.** 15-ft-each stereo pair..... \$25.00

**MC 15/25.** 15-ft and 25-ft stereo pair..... \$30.00

**MC 20/20.** 20-ft-each stereo pair..... \$30.00

**MC 30/30.** 30-ft-each stereo pair..... \$45.00

**MC 500.** Professional spool; custom cut and terminated by dealer or installer..... \$0.80/ft

## MURA

### CA-88 Muradaptor

Converts cassette into 8-track cartridge; cassette loads directly into unit and functions as regular 8-track cartridge; includes fast-forward..... \$79.95

### AMP-618 Stereo Power Meter

Measures left/right stereo channels for accurate adjustment of balance control or left/right channel level controls; lighted peak/average response meters with peak/average switch, power range 0.005-100 W; frequency response 20-20,000 Hz, black and brushed aluminum finish; 3" H x 7" W x 3" D..... \$24.95

# 10 ACCESSORIES

## NAGAOKA by OSAWA

### N103 Kilavolt

Battery-powered static eliminator releases stream of positive ions onto record surface neutralizing dust-



attracting static charges; LED on/battery check indicator; operating time 3-5 sec; also works on film and photo equipment; 1.5-V "C" battery included. . . . . \$49.95

### N10 Stat-10

Static-neutralizing spray contains dry lubricant designed to reduce stylus-groove friction by 40%; 1- $\mu$ -thick protection without residue buildup . . . . . \$16.99

### N101 Stat Tissue

Wipes static charges from plastic turntable dustcovers or other plastic materials; 50 sheets/package . . . . . \$11.99

### N102 Record Sleeves

Anti-static record replacement sleeves; 12/package . . . . . \$2.99

### Record/Stylus Cleaners

**VC-1 Brush.** Handy-grip velvet pad and brush removes loosened dust and lint from record surfaces . . . . . \$4.99

**QR-202 Disc Cleaner Kit.** Contains spray-on anti-static record-cleaning liquid, brush, and specially-napped velvet pad; designed to remove groove deposits; refill EX-202. . . . . \$19.99

**MC-1 Hi-Clean.** Liquid stylus cleaner with brush applicator. . . . . \$3.49

**SB-1 Stylus Brush.** Fine horsehair stylus brush with L-shaped handle . . . . . \$2.49

**RC-401 Round Cleaner.** Rubber-covered cleaner with visco-elastic material with soft brushlike surface in top section that cleans stylus tip in less than one revolution; designed to flatten record warps. \$18.99

### GL-601 MKII Crystal Stabilizer

1.5-lb glass stabilizer designed to flatten warped discs and eliminate mechanical resonances; fits over turntable spindle and record label area; built-in strobe and ball-bearing indicator for turntable speed and leveling check; includes turntable leveling pads . . . . . \$42.99

### PL-1 Player Level

Bubble-level gauge designed to ensure proper leveling; placed on platter . . . . . \$9.99

### GL602 Turntable Mat

12-in 1/4-in-thick crystal turntable mat with center section slightly depressed to allow for label protrusion and total contact between playing surface and mat; includes flexible high-polymer disc-grip stabilizer pressed over turntable spindle to eliminate vibrations from disc and to enhance flywheel effect for higher resolution; weight 2 lb, 4 oz. . . . . \$99.99

### Cassette Maintenance Products

**QC-205 Tape Deck Cleaning Kit.** Contains separate cleaning solutions for tape heads and rubber pinch rollers, mirror, and ten cotton swabs; fluid refills available . . . . . \$7.99

**TC-1 Tape Head Cleaner.** Non-flammable spray cleaner for heads, pinch rollers, and plastic and metal parts; includes ten cotton swabs and spray-

extension tube. . . . . \$5.99  
**QC-209 Head Cleaning Cassette.** Cassette head cleaner removes oxide buildup from tape heads, capstans and pinch rollers and deposits debris on replaceable specially surfaced pad . . . . . \$7.99  
**PC-507 Cassette Repair/Maintenance Kit.** Splicing block with 90 and 60-degree cutting slots and tape hold downs; includes scissors, tweezers, Phillips and conventional screwdrivers, splicing tape, sensor tape, tape probe, and replacement pressure pads and screws . . . . . \$24.99

### CW-402 Pocket Cassette Winder

Battery-operated high-speed cassette winder with auto shutoff at end of tape; winds C-60 cassette within 35 sec; requires two 1.5-V penlight batteries . . . . . \$19.99

**CT-406.** Manual cassette winder; provides 7:1 gear ratio for fast rewind. . . . . \$9.99

*Company also carries pure silver and copper Litz wire, phono connector cables for moving-magnet and moving-coil cartridges, aluminum or magnesium headshells, and screw/nut sets for cartridge mounting.*

## NAKAMICHI

### T-100 Audio Analyzer

Measures and verifies performance of audio equipment; combines functions of an oscillator, a VTVM, a distortion analyzer, and a wow/flutter meter. Oscillator has 21 discrete frequencies from 20 to 20,000 Hz plus wideband pink noise; measures distortion from 0.01% to 3% at 400 Hz; measures level with either peak or average ballistics; measures speed accuracy and wow/flutter (weighted or unweighted); measures noise inputs down to 10  $\mu$ V. Features non-mechanical bar-graph display and logic-controlled FET switching; 9.5 lbs. Includes carrying case; 3" H x 13 1/2" W x 9 1/2" D. . . . . \$850.00

### PS-100 Power Supply

$\pm$ 10 volts dc for MX-100 and other Nakamichi BlackBox Series component operation; can power up to six components . . . . . \$100.00

### SF-100 Subsonic Filter

Filters out unwanted subsonic components; max. 50-dB attenuation at 10 Hz; no attenuating frequencies above 30 Hz; switchable 5-dB boost at 30 Hz and filter bypass; requires PS-100 Power Supply; 2 1/2" H x 7 1/2" W x 4" D. . . . . \$95.00

### DM-10 Head Demagnetizer

Slim-line, easy-to-use recorder head demagnetizer, specially designed for company's cassette decks. . . . . \$28.00

## NOMADIC FURNITURE

### Home Entertainment Cabinets

Solid oak cabinets feature tempered smoked glass doors, nine models available in varying sizes for different purposes. . . . . \$120.00-\$875.00

## NUCLEAR PRODUCTS

### 3C500 Staticmaster

Soft-hair retractable brush with extra-strength polonium element; designed to neutralize static and remove dust from records. . . . . \$19.95

## OMNISONIX

### 801 Omnisonic Imager

Designed to reproduce mono or stereo signals to create dimensional or three-dimensional sound (volume level, stereo separation, and "surround" sound imagery) respectively; connects to internal tape loop of any system; features built-in tape monitor and in/out buttons. Input impedance 25k ohms; max. output 8.5 V; output impedance 200 ohms;

frequency response 10-100,000 Hz  $\pm$ 0.5 dB; THD 0.005% from 10-20,000 Hz; hum and noise -80 dBv; 4.25" H x 10" W x 6" D. . . . . \$179.95

## ONKYO

### CB-7U Custom Rack

Dual wood-grain cabinets, each with transparent glass doors and adjustable shelves; designed for vertical or horizontal layout; 29 1/4" H x 43 3/4" W x 15 3/4" D (horizontal), 58 3/4" H x 21 3/4" W x 15 3/4" D (vertical) . . . . . \$349.95

## OPAMP LABS

### 440 Operational Power Amplifier

Differential dc operational power amplifier module consists of Opamp 4009 driving dual class AB power amplifier; designed for use as servomotor or dc through audio power amplifier; usable in audio applications with single-polarity or bipolar power supply; output capability 50 W continuous; THD and IM dist. 0.5%; constructed on octal plug-in heatsink; 4 1/2" x 5 1/2" x 2 1/2" . . . . . \$60.00  
**440KR.** Kit . . . . . \$35.00

### 34 Amp/Bias Oscillator Module

Octal plug-in model designed for general-purpose signal processing, earphone-speaker power amplification, distribution amplifier, integrated amplifier, microphone amplifier, and magnetic tape erase/record operations; capacitive loading 1  $\mu$ F output; output 20 V rms at 1000-ohm load; input impedance 100k ohms; gain 34 dB; frequency response 20-20,000 Hz  $\pm$ 2 dB; 2" H x 1" dia . . . . . \$25.00

## OPTONICA

### SY-9406 Audio Component Cabinet

Cabinet has three shelves for components (two removable for rack-mount) and record storage compartment with record dividers; rosewood-vinyl covered particleboard; glass door for turntable compartment; turntable compartment: 12.9" H x 15.2" W x 19.2" D; component section shelves 19.2" W x 14.8" D; component section height: upper shelf—12.1", middle—6.3", lower—7.5"; overall 30.7" H x 42.5" W x 16.1" D. . . . . \$220.00

## OSAWA

### DISK-SE22 Turntable Mat

Replacement turntable mat with high density (specific gravity 2.2) to inhibit vibration pickup and add to turntable's flywheel effect for lessened wow and flutter; surface slightly concave to support warped discs; smooth texture for easy cleaning; 5-mm thick; weight 26 oz. . . . . \$29.95

### Disk Mat OM-10

High-density turntable mat with concave surface which supports warped records and improves vertical tracking; inhibits resonant vibrations and reduces wow and flutter; 3.5-mm thick; weight 18 oz . . . . . \$22.95

## PHASE LINEAR

### 1200 Series Two Real Time Analyzer

Features 12-octave frequency bands and four-pole active filters from 16-31,500 Hz on LED matrix display with 20 rectangular LEDs/column and pushbutton mode for dot or bar-column viewing; display range 20- or 40-dB amplitude in 1- or 2-dB steps; fast (20 dB/sec) or slow (2 dB/sec) delay response switch; built-in pink noise generator synthesized by CMOS digital integrated circuits (frequency response 16-20,000 Hz  $\pm$ 1 dB, output 300 mV rms); sound level meter calibration control (52-100 dB with two 0-dB reference levels of 70- or 80-dB SPL); source input with level control and mic/ source pushbutton selection (input sensitivity/impedance 7 mV/47k ohms); includes omnidirec-



tional electret condenser microphone with 20-ft cord and connector (frequency response 20-20,000 Hz  $\pm$  2 dB, sensitivity -65 dB at 1000 Hz); 3 1/2" H x 19" W x 8" D ..... \$800

## PHILIPS

### AH080 Programmable Timer

Can program up to 20 separate switching operations. Features five-way programming modes for direct on/off switching, auto switching at preset times over seven-day period, repeat auto switching at same preset times every day, auto switching after selected time intervals, and auto one-hr switch-on at chosen time; separate switching output accommodates extra records and record players; LED digital clock readout with programmable alarm/clock set controls, black metal cabinet; 2 3/4" H x 19" W x 13 1/2" D ..... \$209.95

## PICKERING

### PST-2 Stylus Timer

Measures stylus wear time from 0-1000 hrs in 1000-hr increments; resettable for long-time use; can be reversed 180° to start over again; mounting time 1 min. .... \$15.95

### RC4™ Record Cleaner

Includes 2-fl-oz liquid record cleaning formula and brush for noiseless operation ..... \$14.95  
8-oz Record Care cleaner refill ..... \$8.95  
2-oz refill ..... \$3.95

### Stylus Cleaning & Inspection Kit

Designed to remove caked-on debris and buildup from stylus as well as maintain general stylus care; includes 2 fl-oz stylus cleaner, nylon brush, long-handled mirror, and magnifying glass ..... \$10.95  
1-oz stylus cleaner refill ..... \$2.50

## PIXOFF by SONIC RESEARCH

### PIXOFF Record Cleaner

Roller-type, using specially-formulated Latex adhesive tape to remove dust and dirt; pliable surface reaches into grooves; adhesive will not stick to record ..... \$17.50  
Tape refill for above ..... \$3.95

## PLATTER MATTER

### Platter Matter

High-density specially-formulated synthetic rubber-like blue-dye platter mat reduces rumble and wow and flutter and inhibits vibration pickup; inert cohesive surface designed for closest contact possible of playing surface with mat; slightly less than 12-in-W allowing raised portion of lead-in groove to overhang mat; recessed center portion accommodates raised label area of record ..... \$34.95

## POLK AUDIO

### Sound Cable

Transmission-line type speaker cable with 9-ohm characteristic impedance (lamp-cord impedance is typically 100 ohms); braided construction to minimize self-inductance and reactance; multiconductor construction for reduced high-frequency resistance. 20-ft cable pair ..... \$49.95

## POWERCOM

### Program Control Center

Program control center connects ten audio sources switchable for tape recording or listening; sources include AM mono, left and right FM, left and right

tape, TV mono, left and right phono, and left and right mic; front panel also has recorder or amplifier inputs for two left and two right channels; inputs and outputs may be reversed and are resistance-isolated by 10k ohms; mono/stereo switch; accepts standard phono-type plugs; shipping prepaid with U.S. orders ..... \$39.95

## REALISTIC

The company's tape accessory line is as follows:

44-210. Bulk tape eraser ..... \$15.95  
44-215. Tape head demagnetizer ..... \$5.95  
44-207. Illuminated head demagnetizer ..... \$13.95  
44-1165. Electronic cassette demagnetizer ..... \$21.95  
44-212. Open-reel tape splicer ..... \$5.95  
44-214. Cassette tape splicer ..... \$5.95  
44-222. Tape recorder care kit ..... \$5.95  
44-626. Cassette repair kit ..... \$1.19  
44-627. 8-track cartridge repair kit ..... \$4.49  
44-670. Cleaning swabs and 2-oz Freon head-cleaning solvent ..... \$2.99  
44-667. Cassette tape carrying case ..... \$19.95  
44-671. 8-track tape carrying case ..... \$15.95  
44-612. Cassette storage album ..... \$3.49  
44-209. Electronic cassette winder ..... \$10.95  
44-280. 7-in metal reel ..... \$6.95

Company also carries a line of audio accessories including record care products, speaker stands and audio racks, volume controls, and audio power meters.

## RECORDER CARE/NORTRONICS

### QM333 The Splicer

Edits, repairs, or adds leaders to magnetic tape;

**Introducing Nagaoka Accessories.**  
**To preserve the sound of music.**

For all the big advances in record pressing and record playing, record preservation and care hasn't gone very far. Now there's a company with new ways to conquer the old problems of noise, warpage and dirt. Nagaoka.

KILAVOLT is the first static eliminator that really works! It uses a battery-powered positive ion generator to completely neutralize dust-attracting static charges.

The CRYSTAL STABILIZER is a heavy non-resonant pure glass cylinder that sits on the center of a warped record, applying even downward pressure without contacting the grooves, to make the record playable.

There's no finer record cleaner than the SUPER CHEMICC, with two pads of fine velvet flanking a gentle cleaning brush. It's used with our special CHEMICC solution to loosen grit without harming the grooves.

You've probably spent a lot of money on records. Your Osawa dealer has a full line of Nagaoka products to help you preserve your investment.

**NAGAOKA** by  
**OSAWA**

OSAWA & CO. (USA) Inc.,  
521 Fifth Avenue, New York, New York 10017

CIRCLE NO. 38 ON READER SERVICE CARD

# 10 ACCESSORIES

designed for 1/4-in reel-to-reel, 8-track cartridge, and cassette tapes; slits tape; has pop-out tape guide ..... \$16.80

## Professional Splicing Blocks

Grooved silver or gold anodized aluminum splicing blocks with two deep slits for straight and diagonal cuts; includes double-backed adhesive and stainless-steel cutting blade; 5 3/4" x 1" x 1/8".

- QM-311. For 1/4-in tapes ..... \$22 00
- QM-312. For 0.150-in cassette tapes ..... \$22 00
- QM-313. For 1/2-in video and audio tapes ..... \$30 00

## Reel Tabs

Pre-cut Mylar or metal tabs in dispenser box; comes in quantities of 50, 200, or 1000; 1/2-in Mylar tabs in quantities of 200 or 1000 also available.

- QM-521. 1/4-in reel tabs, 50 package ..... \$4 40
- QM522. Cassette reel tabs, 50 package ..... \$4 40
- QM524. 1/4-in metal-sensing reel tabs, 50 package ..... \$4 40

## QM-707 Handylap

Kit includes lapping block with five 5 x 9-in coarse abrasive black lapping sheets of paper, five 5 x 9-in medium abrasive yellow sheets, and five 5 x 9-in fine abrasive red sheets ..... \$77.80

- QM-702. Coarse lapping paper, black ..... \$7 20
- QM-703. Medium lapping paper, yellow ..... \$12 20
- QM-704. Fine lapping paper, pink ..... \$12 20

## QM-230 Cassette Bulk Eraser

Self-powered hand-held unit completely erases cassette tapes, requires no batteries or external power source, contoured Cyclac case with wood grain finish ..... \$32 20

## QM-211 Bulk Eraser

Bulk eraser generates a 60 Hz magnetic field which completely erases pre-recorded reels, cassettes and 8-track cartridges up to 1/2-in wide; features touch-control Microswitch that activates on fingertip pressure and deactivates when unit is put down, built-in thermal overload protect circuit; hand-contoured Cyclac case, coiled cord ..... \$47 00

- QM-212. 220-V professional bulk eraser ..... \$52 00

## QM-250 Professional Bulk Tape Eraser

Demagnetizes professional cassette, 1/4-in, 1/2-in, and 1-in open-reel, broadcast 8-track cartridge, and 1/2-in VHS Beta video cassette tapes, holds up to 10 1/2-in reel sizes; 3.25" H x 10" W x 7" D ..... \$290.00

## QM-202 Head Demagnetizer

Head demagnetizer for use with reel-to-reel, cassette, and 8-track recorders, features long, flexible, plastic covered probe that reaches the most inaccessible heads, leaf switch activates with fingertip pressure and deactivates when unit is put down, built-in thermal overload protect circuit, Cyclac case ..... \$20 80

- QM-203. 220-V professional head demagnetizer ..... \$22.80

## QM-280A Cleaner/Demagnetizer

Removes residual magnetism and accumulated oxide and dirt deposits from 8-track heads, includes ac cord for 110-120 V ac operation ..... \$21.00

## Head Cleaners

- QM-140. For cassettes ..... \$3 00
- QM-141. For cassettes, includes liquid head cleaner ..... \$3.40
- QM-180. For 8-track tape ..... \$3 20
- QM-181. For 8-track tape, includes liquid head cleaner ..... \$3 60
- QM-182. 8-track head/capstan cleaner ..... \$3.80

## Alignment Tapes

- AT210B. For cassette recorders ..... \$13.80

AT-200B. Master recording provides zero reference, azimuth alignment, and DIN frequency response tests, includes 3000-Hz tone for speed and flutter ..... \$49 80

- AT-820. For 8-track, 8-min cycle ..... \$11.60
- AT-320. Designed for NAB-type endless-loop mono and stereo cartridge recorders/players, 7.5-ips master recording tests and adjusts head azimuth, program frequency response, program record level, stereo head phasing, cue tone sensitivity, and tape speed ..... \$52.80
- AT-120. 1/4-in reel-to-reel 7.5-ips master recording tape ..... \$49.60

## Cassette Storage/Carrying Cases

Burl walnut vinyl book-like cassette case, cassettes and hubs lock in place.

- QM408. Holds max. 8 cassettes ..... \$8 00
- QM412. Holds max. 12 cassettes ..... \$9 20
- QM416. Holds max. 16 cassettes ..... \$11.00

## VCR Maintenance Products

QM-50. Deluxe video recorder care kit includes 10-oz Super Blast spray, 16-oz tape head cleaner spray, anti-static dustcloth, 25 cellular foam swabs, and disposable wipers ..... \$24.40

QM-95. VCR maintenance kit includes spray head cleaner, cellular foam swabs, anti-static dustcloth, and screwdriver that removes headcover screws ..... \$14.80

VCR-100. Dubbing kit includes all cables and connectors required for dubbing 1/2-in Beta or VHS-format videocassette tapes, can also be used for duplication or editing in real time ..... \$16.00

VCR-103. Tape head cleaner spray for VCR heads, pinch rollers, and capstans, 3 oz ..... \$4 20

VCR-105. Tape head cleaner liquid removes dust, dirt, and tape oxide deposits from VCR heads and parts, 3.2 fl oz ..... \$3 80

VCR-109. High-velocity jet air stream Super Blast Spray cleaner eliminates loose tape oxide dirt and dust, 10 oz ..... \$4 60

VCR-205. Head demagnetizer with angled tip, removes residual magnetism from heads, rollers, and guides ..... \$21 20

VCR-211. Video bulk eraser erases Beta II and VHS-format cassettes, generates 60-Hz magnetic field, touch-activated microswitch that deactivates when put down, Cyclac case, includes ac power cord for 110-120 V ac operation, 50-60 Hz ..... \$47.00

QM-313. Grooved anodized aluminum splicing block for repairing or editing 1/2-in video cassettes, two deep slits for straight or diagonal cuts, includes double-backed adhesive ..... \$30.00

VCR-506. Illuminated inspection mirror for dark, hard-to-reach areas of VCR ..... \$6.60

VCR-512. Cellular foam cleaning swabs for VCR heads and surfaces ..... \$4.80

## Car Tape Maintenance Products

AS-9. 3-oz spray cleaner and 100 six-in cotton swabs ..... \$6.00

AS-141. Cassette life extender features non-abrasive cleaning belt; includes liquid cleaner ..... \$3.40

AS-183. 8-track head/capstan cleaner, designed for use every ten hrs, includes liquid cleaner ..... \$4.20

AS-206. 8-track/cassette head demagnetizer, plugs into car cigarette lighter ..... \$28.30

*Company also carries an extensive line of magnetic and Duracore® tape heads for cassette, 8-track, 2-track mono/stereo and 4-track stereo, and four, eight, sixteen, and twenty-four-channel studio series tape machines, as well as mounting, head, and conversion kits and cable assemblies.*

## RECOTON

### AU-100 Home Audio Rack

Designed to store turntable, amplifier, receiver, and records, has three shelves 19-in wide and 14-in deep, trimmed in chrome and with walnut finish; available in black finish, 32" H x 20" W ..... \$79.99

### V-100 Video Tape Cabinet

Universal design to hold 18 Betamax or VHS video tapes, cabinet can be nested to allow for maximum storage in limited space, walnut finish, 11" H x 23 3/4" W x 6" D ..... \$41 99

## 190TC Cartridge Carrying Case

Stores 24 8-track tapes in vinyl- or suede-covered case; padded handle; lock and key ..... \$15.95

## 196TC Cassette Attache Case

Stores 30 cassettes in individual compartments in suede- or vinyl-covered attache case ..... \$15.95

## CS-8 Cartridge Carousel

Stores 24 8-track cartridges in individual compartments in plastic smoke-finish carousel ..... \$10.99

## CS-1A Cassette Carousel

Stores 20 cassettes vertically in plastic smoke-finish carousel ..... \$5.99

## RBM-44 Magicare Oemagnetizer

8-track head demagnetizer and cleaner, designed for use after every 15-20 hrs of playing time; operates on standard 110 volt current ..... \$9.99

## RBM-45 Magicare Demagnetizer

Cassette demagnetizer designed for home use after 15-20 hrs of playing time; operates on 110 volt current ..... \$9.99

## RBM-41 Magic Cartridge Kit

"Magic Cartridge" functions as head cleaner, capstan cleaner, track selector test, speaker phasing test, and channel balance test; includes 3/4-oz Magic Tape Dew cleaning fluid and the Magic Wand Applicator with six replacement pads ..... \$6.99

## RBM-40 Magic Cassette Kit

Includes 10-ft cassette head cleaner in plastic case, 3/4-oz Magic Tape Dew cleaning fluid, and Magic Wand Applicator with six replacement pads ..... \$5.99

## RBM-42 Magic Tape Cleaning Kit

Includes 3/4-oz Magic Tape Dew cleaning fluid and Magic Applicator with interchangeable brush and pad and six replacement pads ..... \$2 99

## RBM-43 Magicare Tape Editing Kit

For cassette and reel to reel; includes aluminum dual-purpose splicing block, leader tape, splicing tabs, 12 blank cassette labels, and razor blade ..... \$0.99

## Speaker Stands

Available in two sizes and finishes; packed two per carton ..... \$19 99 pr

AU-200/201. 8-in top and 12-in bottom with walnut/black finish.

AU-202/203. 12-in top and 16-in bottom with walnut/black finish.

## RBM-52 Clean Sound II

Record cleaning system features wood-handle applicator, Clean Sound Solution, and pad cleaning brush all packed in smoked plastic storage case ..... \$15 00

## ROBINS

### 42-110 Vac-O-Rec Record Cleaner

Dry filtered vacuum record-cleaning system incorporates vacuum motor and removable washable filter in woodgrain container; uses three-conductor grounding cord for improved static discharge, UL and CSA approved ..... \$49.95

42-105. Similar to 42-110 without filter system and woodgrain case; has built-in 45-rpm adapter ..... \$39.95

42-100. Similar to 42-105 except uses two-conductor cable ..... \$34.95

41-043 ROB-O-STAT Static Neutralizer

Complete with static sensor, removes static charge from records, film, etc.; static sensor checks for presence of static charge on records and indicates proper functioning of neutralizer; requires no outside power source or batteries ..... \$21.00

### "Woodee" Cleaning/Anti-Static System

Eliminates static and removes dust; corduroy velvet pad mounted on oak wood handle; anti-static fluid; cleaner brush. # 41-060 ..... \$13.50

### "Groovee" Automatic Record Cleaner

Automatically removes dirt and dust from record surfaces and grooves while record plays, vertical-bristle brush; rotatable velvet roller. # 41-037 ..... \$8.75



### "Whiskee" Record Cleaner Kit

Record cleaning kit includes portable record cleaner; stylus cleaner and fluid. # 40-061... \$8.30

### Cleaner and Anti-Static System

Uses velvet-covered roller to remove dust and dirt, sliding partition stores water or anti-static fluid which moistens roller. # 41-045 ..... \$4.85

### "Disc Cleaner" Record Cleaner

Stops static and removes dust and grime; soft velvet-cushioned cylinder, comes with storage tube and cleaning brush. # 41-195 ..... \$2.35

### 40-000 Robolite Turntable Light

Three-watt light turns on/off automatically when dustcover is raised/lowered; installs on standard turntable dustcovers; built-in switch; includes 6-ft cord (no batteries needed); 120 V ac..... \$20.00

### Stylus Pressure Gauge

Measures phono stylus pressure to within 1/10 g. # 41-073 ..... \$3.60

### Phono Cartridge Maintenance Kit

Contains stylus microscope, screwdriver, tweezers, stylus fluid and brush; supplied in kit box. # 41-039 ..... \$10.50

### Tape Recorder Head Demagnetizer

Reduces residual magnetism which causes noise build-up; interchangeable tips accommodate open-reel, cassette, and cartridge equipment; built-in switch; 110-120 V ac. # 25-011; UL listed ..... \$15.50

**Economy Model.** Features plastic-shielded probe # 25-013; UL listed ..... \$10.00

### 8-Track Demagnetizer and Cleaner

Cordless cleaner for operation with home or auto units; four-pole rotary magnet; magnetic window, non-abrasive cleaning tape. # 25-032 ..... \$6.50

### Cassette Maintenance Kit

Demagnetizes tape heads of home and auto cassette players/recorders; cordless design, employs four-pole rotary magnet; includes non-abrasive head-cleaning tape; designed to be used after every 15-20 hours of player/recorder use; cordless # 25-007 ..... \$5.25

### 24-001 Video Cassette Eraser

Heavy-duty video cassette eraser erases video cassettes and tapes, and audio cassettes, cartridges, and reels; erases in seconds; reduces tape to low-noise level; no tape contact or wear during erasure, has built-in momentary contact switch; 110-120 V ac intermittent duty (one minute on, 20 minutes off); 6 A; 4 lbs; UL approved; 5" x 5" x 3.5" ..... \$58.50

### 24-014 Audio Tape Eraser

Erases cassettes, cartridges, open-reel, digital cassettes, and magnetic stripe film; erases in seconds, reduces tape to low noise level; no tape contact or wear; has built-in momentary contact switch; 117 V ac intermittent duty (one minute on, 20 minutes off), 220-V model also available; 5 A; 2 lbs; UL approved, 4" x 2.5" x 4.5" ..... \$34.50

### Whistle Stop Head Demagnetizer

Automatic electronic cassette head demagnetizer in cassette format; removes accumulation of residual magnetism from heads of home or car cassette tape machines; whistling tone indicates erasing action, powered by two 1.5-V batteries (included). # 25-005 ..... \$26.50

### 34-000 Cassette Attache Case

High-impact plastic attache-style case holds up to 16 cassettes and/or home and business computer cassettes; snap-lock carrying handle..... \$5.40  
34-000C. 34-000 with smoked top ..... \$6.50

## ROTEL

### RY-1010 Peak Level Spectrum Analyzer

Ten-band octave peak-level spectrum analyzer with built-in pink noise generator and separate mono electret condenser microphone; enables user to see sound characteristics on display as signal passes through component; also measures line input, live microphone sources, and residual noise levels.

Spectrum analyzer display; ten bands with signal frequencies at 32, 63, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz; features twelve LED indicators for each band showing peak level; 12/24/36-dB range selector switch; calibration control; one-octave bandwidth bandpass filter for ten bands. Pink noise generator; frequency response 20-20,000 Hz +0/-0.5 dB; output level 100 mV/3k ohms. Microphone: omnidirectional type with two-position music/voice tone control switch; frequency response 30-16,000 Hz ± 2 dB; includes stand and cable. Additional characteristics include three-position line mode switch for measuring each channel separately or simultaneously; input sensitivity/impedance 0.2 mV/30k ohms (mic), 2 mV/30k ohms (line); 3 7/32" H x 16 1/16" W x 11 1/32" D ..... \$470.00

### RK-100 Rolling Record Cleaner

Removes dirt, dust and fingerprints from records; washable..... \$20.00

### RK-5 Audio Rack

Vinyl-covered particleboard audio rack mounts standard EIA-EIJ-designated components; glass doors and casters with lock; 33 7/32" H x 22 7/16" W x 19 1/16" D ..... \$320.00

## RUSSOUND/FMP

### QT-1 Quad Patching/Control Center

Passive switching center expands tape monitor loop of audio system to accept two- or four-channel noise-reduction systems, graphic equalizers, matrix decoders, and up to four mono, stereo, or quad tape recorders, with switching functions handled through front-panel switches or patch cords, supplied with 16 shielded patch cords. Front panel switches include record, mix, 2-/4-channel, play, monitor, and aux. input and output modes; front panel patching jacks for source/recorders in, recorders/source copy buss, recorder/monitor out, equalizer in/out, noise reduction encode in/out, and noise-reduction decode in/out. Rear panel connects all recorders and accessories with 72 RCA type phono pin jacks. Insertion loss less than 0.5 dB when operating recorders or decoders singly, 6 dB when mixing two channels or two recorder outputs; walnut finish vinyl cabinet; 4 13/16" H x 13 7/16" W x 5" D ..... \$289.95

**QT-1 R.** Rack-mount version of QT-1; semi-gloss black metal cabinet; 5 7/32" H x 19" W x 5" D ..... \$289.95  
**SP-1.** Same as QT-1 except for two-channel stereo systems only; switching capacity for up to four stereo tape recorders and five stereo accessories in any combination of recording, playback, monitoring, or dubbing; supplied with 12 shielded patch cords; walnut vinyl cabinet and semi-gloss black front panel; 5" H x 7 1/4" W x 4 1/8" D ..... \$179.95  
**SP-1R.** Rack-mount version of SP-1; 4 1/4" H x 7" W x 5" D ..... \$179.95

### PP-36R Patchbay

Features 18 inputs and 18 outputs on front panel; connects any combination of components in any sequence; may be used independently in tape monitor loop or to augment patching capability of QT-1 or SP-1; includes 12 patch cords; semi-gloss black-painted metal cabinet; rack-mountable; 1 23/32" H x 19" W x 5" D ..... \$139.95  
**FP-36.** FP-36R without rack mounting; walnut wood sides; 13 7/8" W ..... \$139.95

### TMS-2 Tape Recorder Selector Switch

Accommodates up to five tape recorders or other line level sources with complete monitoring and dubbing facilities; walnut vinyl finish cabinet; 4 1/8" H x 7 3/4" W x 4 1/8" D ..... \$89.95

**TMS-1.** Similar to TMS-2 except connects up to three tape recorders; black metal case; 3" H x 4 1/4" W x 3 1/4" D ..... \$49.95

### MP-2 Speaker Amp Control Center

Accommodates four sets of stereo speakers with volume control and independent program selector for each pair; permits precise speaker level balancing for A-B testing; walnut vinyl cabinet; 4 1/8" H x 7 3/4" W x 4 1/8" D ..... \$129.95  
**SWB-2.** Similar to MP-2 except connects up to three sets of speakers; minus volume controls..... \$39.95

**MP-3.** Similar to MP-2 except with constant impedance L-pad controls rated for 35-W audio power or 70-W peak music power; can be used with high-power amps and low efficiency speakers .. \$149.95  
**SD-4.** Similar to MP-3 minus L-pad controls; has individual auto transformer and ten-position amp output switch for delivery to speaker ..... \$279.95

### HP-1 Speaker Amplifier Selection Center

Connects one or two stereo amplifiers to up to four sets of speakers; handles up to 100-W power output and may be used with any combination of speaker impedances; includes two separate headphone jacks with normal/high power switch; source/off speaker switch; black front panel and rubber feet; 4 3/4" H x 8" W x 4 1/2" D ..... \$89.95  
**HP-1R.** Rack-mount version of HP-1; 5 7/32" H x 19" W x 4 1/2" D ..... \$89.95

### VS-1 Speaker Headphone Volume Control

Switchable speakers/headphones volume control with heavy-duty L pad control; accepts up to 150-W/ch amp outputs; LED power warning indicator; metal case with semi-gloss black painted finish; 3" H x 4 3/16" W x 4 1/2" D ..... \$79.95

## SAEC by AUDIOSOURCE

### SBX-3 Turntable Deck

Inert-composition stable solid-steel mounting base for most turntables; has de-resonator; cut for Denon or Technics SP 10 MK II; brackets for mounting up to three tonearms available ..... \$2495.00

### SS-300 Turntable Mat

Specially-formulated metal turntable mat designed to eliminate distortion-producing resonances in 200-400-Hz range, resulting in 10-20-dB net reduction in overall resonance..... \$139.95

## SANSUI

### GX-150 Audio Rack

Standard 19-in EIA-width audio component console with double glass doors and casters; simulated walnut grain finish. .... \$275.00

**GX-5 Mk II.** GX-150 less glass doors ..... \$250.00

### GX-6 Audio Console

Low-profile wagon-type console with two movable shelves and glass door; simulated rosewood finish; 42" W ..... \$300.00

**GX-10.** Similar to GX-6 but has flip-up top for turntable mounting; 29" W ..... \$250.00

The following accessory racks are available as part of Sansui's Super Compo Series systems.

**GX-90.** Simulated walnut-grain audio equipment rack; 50 1/2" H ..... \$200.00

**GX-70.** Similar to GX-90 except 35 1/2" H .. \$120.00

**GX-60.** Similar to GX-90 except 29 1/4" H .. \$100.00

**GX-77.** Has glass doors, casters, slide-back-and-up glass top, and phones output; 38 1/16" H... \$280.00

## SANYO

### PLUS E55 Audio Program Timer

Designed to preprogram audio system requiring accurate timing, features dual programmable channels, recording standby for unattended recording; playback standby within 24-hr period with wake-up alarm, stores up to nine programs which can be set to go off at intervals during 24-hr period (can be extended to days or weeks), program prompter activates receiver when specified broadcast is on. LED real time (AM/PM, hr/min), Channel 1 on/off time, and Channel 9 on interval displays; 1 1/4" H x 17 1/8" W (19" with handles) x 10" D..... \$249.95

### AR-100 Audio Rack

Walnut-grain-veneer rack includes removable record album dividers, accommodates 19-in components according to EIA rack-mount standards; has twin-wheel cylindrical casters, unassembled, includes assembly tool and caster socket lubricant; 40 3/8" H x 21 1/8" W x 17 3/8" D..... \$99.95

# 10 ACCESSORIES

## SCOTCH

**ERK-130 Cassette Edit/Repair Kit**  
Contains precision splicing block, spindle for manually winding cassette tape, six polyester picks (adhesive tipped for retrieval of tape ends lost in housing), six 130-mil splicing tabs; detailed instruction booklet.....\$3.39

**Pre-Cut Tabs**  
**SPT-7/32-36.** 36 pre-cut 1.0-mil polyester splicing tabs.....\$1.39  
**SST-7/32-18.** 18 pre-cut aluminized sensing tabs.....\$1.39  
**SK-7/32.** 12.5 ft of 1.9 mil polyester splicing tape in dispenser kit.....\$2.29

**Head Cleaners**  
**S-C-HC.** Cassette head cleaner.....\$1.79  
**S-8TR-HC.** 8-track head cleaner.....\$2.99

**C-Box Cassette Storage System**  
Stackable/interlocking cassette storage/carrying boxes with pushbutton drawers, easy access and index label for quick identification.  
Sleeve of three empty C-Box units.....\$3.29  
C-Box wall bracket.....\$2.39  
C-Box carrying handle.....\$2.39  
Box of 10 empty "C-Box" units with handle and bracket.....\$12.29  
25 drawer labels and insert cards.....\$1.99  
Car saddle.....\$9.99

## H.H. SCOTT

**830Z Audio Analyzer**  
Audio analyzer indicates acoustical changes in speaker system's location, optimizes tape deck bias, equalization, record levels, and tape compatibility, and measures peak sound pressure level and dynamic range of program material; hooks into amplifier, receiver, or tape deck input. Features 110-LED visual display grid covering 32-16,000 Hz in 2, 3, or 4 dB range switch; ten-octave band oscillator level control, SPL, flat, A weighting, and C weighting mode switch, external mic/internal mic/aux./calibration input select switch, independent mic and line level controls, LED dimmer; includes remote condenser microphone; optional 19" rack-mount handle.....\$600.00

## SHURE

**M615AS Equalization Analyzer**  
Ten-octave band equalization analyzer from 32-16,000 Hz, adjusts sound system equalizer filters to desired equalization level with LED indicators, consists of M615 Analyzer, ES615 Analyzer Microphone, microphone cable, swivel adaptor, tilt bracket, test/interconnecting cable, and case. 108-132 V ac, 50/60 Hz.....\$612.00  
**M615.** Analyzer only.....\$500.00  
**ES615.** Microphone only.....\$153.00

## SOUNDAIDS

**Cassette Storage Cabinet**  
Wood cabinet with lock-jointed corners and four hand-fitted drawers holding up to 68 cassettes; drawers have recessed sides for easy removal of cassettes; designed to fit standard record shelves so as to function as record dividers or support shelves (with more than one cabinet); 12<sup>3</sup>/<sub>4</sub>" H x 5<sup>9</sup>/<sub>16</sub>" W x 12<sup>3</sup>/<sub>4</sub>" D.....\$40.00

**Record Storage Cabinet Blueprints**  
Plans, instructions, and order forms for building vertical and horizontal record storage units from

pre-cut plywood; each element braces, and is braced by, two others; no tools required; white glue and masking tape needed for assembly; vertical unit 6'6" H x 21<sup>3</sup>/<sub>4</sub>" W x 13<sup>3</sup>/<sub>4</sub>" D; horizontal unit 2' 10<sup>1</sup>/<sub>4</sub>" H x 8' 1<sup>1</sup>/<sub>2</sub>" W x 14" D.....\$5.00

## SOUND GUARD

**Total Record Care System**  
Includes Record Preservation Kit and Record Cleaner Kit.....\$16.99

**Record Preservation Kit**  
Dry lubricant spray containing antistatic materials; provides record surfaces with a strong protective coating without impairing record fidelity; kit includes 2-oz special-formulation liquid pump spray, buffing pad, and grooming pad; one kit treats about 30 LPs both sides.....\$9.99  
2-oz Record Preservation refill.....\$4.99  
6-oz refill.....\$13.50

**Record Cleaner Kit**  
For both heavy-duty record cleaning and light touch-up work, kit includes 2-oz cleaning-solution pump spray, cellulose contaminant-extractor pad, velvet cleaning pad, foam grooming pad and instruction booklet.....\$9.99  
2-oz Record Cleaner refill.....\$4.99

**Stylus Care Kit**  
Stylus maintenance system includes cleaning solution and all necessary tools: 1-oz bottle of Stylus Cleaner with applicator, dry brush, bulb air blower, and 3x and 10x Bausch and Lomb magnifier; components housed in storage unit.....\$9.99

**Record Care Work Pad**  
Rubberized neoprene lint-and-static-free work pad for record cleaning and preservation without interference from contaminants, high friction coefficient for holding records, fluid receptacle area for excess cleaner, easily washable, hands-free operation.....\$7.99

**Record Buffer**  
High-density velvet pile designed for wet cleaning and dry preening of discs; inverted mushroom handle.....\$3.99

## SPECTRA by REFERENCE MONITOR

**Spectra Disc Cushion**  
Triple-layered elastomer disc cushion designed to reduce turntable and disc resonances.....\$55.00

## STANTON

**Permostat Record Care Kit**  
Designed to eliminate record static permanently with one application of anti-static formulated fluid; kit includes 3-oz bottle of fluid (treats up to 25 records, both sides), pump sprayer, buffing pad, and record identification tabs.....\$19.95  
Refill. Treats up to 30 records.....\$14.95  
Jumbo refill. Treats up to 80 records.....\$29.95

**RC4™ Record Cleaner Kit**  
Consists of 2-11-oz liquid record cleaner and brush; noise-free operation.....\$14.95

**Stylus Cleaning & Inspection Kit**  
Consists of 2-11 oz liquid stylus cleaning fluid, nylon brush, long-handled mirror, and magnifying glass; cartridge does not have to be removed during stylus cleaning.....\$10.95

## STATIBRUSH by REFERENCE MONITOR

**Record Care Accessories**  
**Staticleaner.** Carbon fiber disc sweep.....\$39.90  
**Statibrush.** Carbon fiber disc cleaner.....\$19.95

## SUPEREX

**PLM-1 Power Level LED Display**  
Features dual 12-LED bar graph indicators per channel calibrated for power output from 0.12-256 W and 0.03-64 W with switchable peak/average display, 4/8 ohms, and high/low listening sensitivity selectors, accuracy better than 95%, response tracking linear from below 10 Hz-10 MHz...\$99.95

**TSB-3 Graphic Tape Switching Console**  
Stereo tape switching console features color-coded tape duplication processes graphically illustrated on front-panel; three-deck capability; functions include duplicating recordings or broadcasting on three tape decks, mixing two sources for documentary effect, and transfer of program material from one tape deck to another while monitoring and recording additional different program source; both inputs and outputs include stereo, one amplifier, and three tape decks or auxiliary components; dubbing bank for use with any stereo amplifier or receiver with monitoring facilities; controls include three input and three output toggle switches and one output line selector toggle switch; rear-panel phone jacks; 2<sup>9</sup>/<sub>4</sub>" H x 6<sup>1</sup>/<sub>2</sub>" W x 4<sup>3</sup>/<sub>4</sub>" D.....\$50.00

## SWITCHCRAFT

**Universal Connector Kit**  
Contains phono plugs and jacks, phone plugs and jacks, microphone connectors, and receptacles needed for most applications; Switchcraft's "Silent-Plug," no. 169, with special circuit closing device designed to eliminate squalls in audio circuits when plug is disconnected; includes 41 pieces. 360P1.....\$61.65

**Universal Adapter Kit**  
Features 11 frequently used audio adapters and one molded interconnecting cord in reusable plastic box; helps solve problem of interconnecting two pieces of equipment that do not have mating connectors, 12 pieces per box.....\$30.70

## SYMMETRIC SOUND SYSTEMS

**PLM-1 Power Level Meter Kit**  
Designed to indicate power amplifier's clipping level or approach of clipping; features dual ten-LED clipping level indicators with 3-dB/LED range; also sets tape recorder levels by adjusting sensitivity so top LED indicates 0.775 (0 dBm, 600 ohms) -2 V levels. Frequency response 0-20,000 Hz +0/-1 dB, pulse response 50 μsec for 2-dB overload; fall time 0.8 sec; solid American walnut unfinished cabinet with brushed aluminum anodized front panel; 3<sup>1</sup>/<sub>4</sub>" H x 5<sup>1</sup>/<sub>2</sub>" W x 2<sup>1</sup>/<sub>8</sub>" D.....\$42.00

## TDK

**TCL-30 VHS Head Cleaner**  
Non-abrasive head-cleaning cassette for VHS recorders; cleans video and audio heads in 30 seconds and can be used up to 200 times; maintenance record on cassette label.....\$25.00

**CP-36 Cassette Cabinet**  
Holds up to 36 cassettes; has three separate drawers fitting 12 cassettes in each.....\$39.99

**HD-01 Head Demagnetizer**  
De-gaussing circuit demagnetizes recorder heads by loading cassette formed demagnetizer into cassette recorder and depressing play button; red LED lights up when recorder heads are demagnetized; reduces noise level in low and midrange frequencies and midrange and high frequency distortion and attenuation; battery-powered.....\$24.99

**HD-11 Tape Head Demagnetizer**  
Portable hand-held universal tape head demagnetizer designed for open-reel or cassette tape decks; red, LED "on" indicator and green LED "ready-to-use" indicator; side-mounted activator switch; plastic-covered metal tips; included two 1.5 V dry-cell batteries.....\$34.99



### HC-1 Head Cleaner

Cassette tape machine head cleaner ..... \$1.79

### TA-OI Test Tape

Cassette shell conforms with IEC standards; easy adjustment and setting for optimum record/playback levels and balance between left/right channel levels; recorded contents -4 dB at 315 Hz, full track width; 3 1/2-min record time; equalization 3180  $\mu$ sec + 120  $\mu$ sec; recording azimuth 90 degrees  $\pm$  2 min.; level deviation  $\pm$  0.3 dB; level fluctuation within 0.5 VU; reference level at 0 dB, 333 Hz (DIN) ..... \$13.99

### Cassette Labels

EL-40. 40 labels ..... \$1.99  
EX-25. 25 index cards ..... \$1.99

### Empty Reels

AMR7. 7-in metal reel ..... \$8.49  
AMR10. 10 1/2-in metal reel ..... \$13.99

## TEAC

### E-3 Head Demagnetizer

Removes residual magnetism from heads and guides ..... \$29.50

### E-2 Bulk Eraser

Handles 7- and 10 1/2-in reels, built-in pilot light and circuit breaker guard ..... \$100.00

### RMK Recorder Maintenance Kit

Kit includes 3-oz bottle of HC-1 head cleaner, 3-oz bottle of rubber cleaner, 3-oz bottle of stainless polish, cotton swabs, and cleaning cloth ..... \$9.95

## TECHNICS

### SH-9038 Micom Programmable Timer

Functions weekly program with four-bit microprocessor, program content for day and time (hours, minutes), FM channel; two 200 W ac outlets; timer with individual second time counter capability, max. indication 59 minutes; reset, start, hold capability. 1 7/8" H x 1 3/4" W x 1 1/2" D ..... \$600

### SH-9020 Peak/Average Meter Unit

Shunts high-energy peaks of 100  $\mu$ sec at 0-dB input with peak-hold function switch (switch on, -3 dB peak level drop-off after 25 min.). attack time 330  $\mu$ sec (average), 100  $\mu$ sec (peak), recovery time 250  $\mu$ sec (average, 0 to -20 dB), 750  $\mu$ sec (peak, 0 to -3 dB). input sensitivity/impedance 20 dBm (7.75 V)/47,000 ohms (source 1, 2), 100 W (8, 6, 4 ohms) 10,000 ohms (source 3). Features twin peak/average meters (+10 to -50 dB), and three input selectors. 3 7/8" H x 1 9/16" W x 1 4" D. \$360

## TRANSCRIBER

### Sound Saver Record Care

**Classic I.** Rosewood-handled velvet fiber cleaning pad with 2-oz bottle of cleaning fluid; utilizes humidification/cleaning process ..... \$15.00

**The Cylinder.** Handheld cleaner with plastic storage tube and 1 1/2-oz bottle of cleaning fluid ..... \$6.95

**Sound Saver Cleaner One.** Cleaning fluid available in four sizes.

1 1/2-oz bottle ..... \$2.25  
4-oz bottle ..... \$6.00  
16-oz bottle ..... \$16.00  
1-gallon bottle with pump spray ..... \$128.00

## C. E. WATTS

### Record & Stylus Care Kit

Includes Disc Preener, stylus cleaner, and anti-static fluid. products available separately, along with other record care equipment listed below ..... \$14.95

**Disc Preener.** Roller design with built-in non-ionic compound to prevent static buildup, available in black, red, green, or blue ..... \$7.95

**Stylus Cleaner.** Close-pile nylon-velvet-ribbon stylus

cleaner; for all types of pickups ..... \$3.95

**Anti Static Fluid.** 1 oz ..... \$3.95

**Dust Bug.** Hand-tipped nylon-bristle record cleaner brush with mohair plush pad, adjustable dual pedestal for permanent or temporary fixing ..... \$9.95

**Hi-Fi Parastat.** Record maintenance and stylus cleaning kit; designed for elliptical styli and tracking pressures under 2 grams; includes fine nylon bristle brush, stylus cleaner, distilled water dispenser, and 1-oz antistatic fluid ..... \$22.95

**Parastat with Humid Mop Kit.** Includes two velvet-covered rubber pads supporting hand-made pure nylon-bristle brush ..... \$22.95

**Parastat** ..... \$21.95

**Humid Mop Kit.** Includes humid mop, antistatic fluid, and distilled water dispenser solutions ..... \$6.95

**Wash Brush** ..... \$6.95

**Xstatic.** Piezoelectric down-firing spray gun designed to combat static on records by neutralizing dust-attracting charges ..... \$32.95

## WHITING PRODUCTS

### Iso-Base RD-1 Turntable Base

Walnut-finish natural-wood turntable base designed to reduce negative feedback producing 3-5 Hz resonant frequency with various turntable weights by using pairs of left and right hand-wound multiple springs with minimum amount of polyurethane internal damping material; can hold up to 30 lbs using four springs, 45 lbs with six springs; 3" H x 21" W x 15" D ..... \$49.95

# Cleaning your records is only half the battle.

The best record cleaner in the world can't preserve a record. It can only clean it. A good record cleaner can remove dust, oily fingerprints and deep-seated dirt from the grooves. But, it can't protect the record from wear and friction.

The diamond is the hardest natural substance known. At the tip of a stylus, it is the spearhead of over 15 tons per square inch of destructive pressure that shears away microscopic chips of vinyl while traveling along the delicately thin grooves.

The finest high fidelity system can't restore the subtle high frequency and midrange tones that are unavoidably lost.

**Sound Guard™** Record Preservative is a scientifically designed, ultra-thin, dry formulation that practically eliminates record wear. Your records treated with Sound Guard Record Preservative will sound just as good after 100 plays. No hiss. No pops. No clicks.

Give your records 100% protection with two simple steps. First, clean them with Sound Guard Record Cleaner; then preserve them with Sound Guard Preservative. Buy them separately or get them both in the Sound Guard Total Record Care System. And stop record wear in its tracks.

# sound guard

Sound Guard Corp. 348 S.W. 13th Ave., Pompano Beach, Fla. 33060

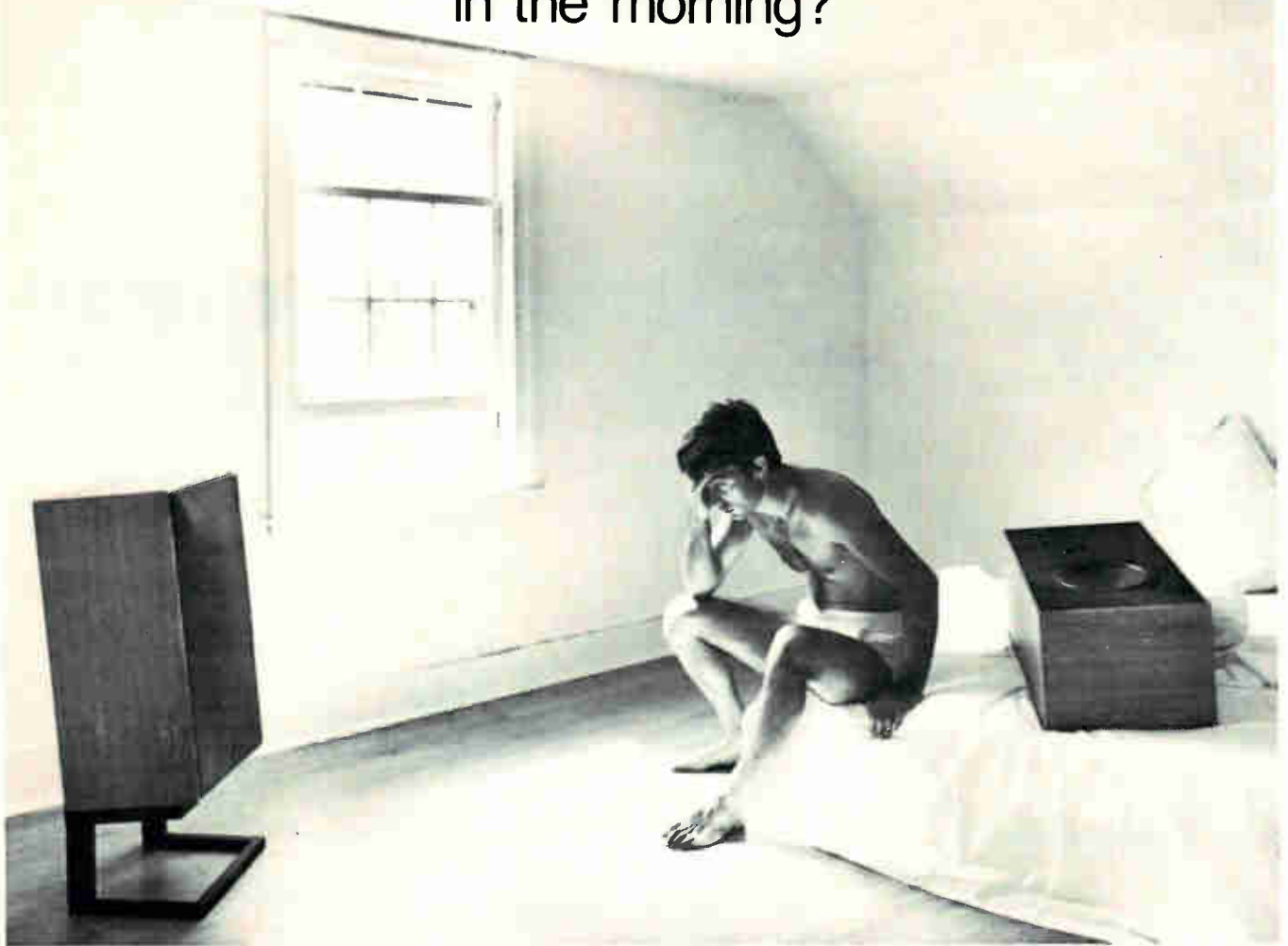
Facilities: Cincinnati, Ohio; Tokyo, Japan; Brussels, Belgium.

CIRCLE NO. 48 ON READER SERVICE CARD



- Removes deep-seated dust and dirt particles
- Virtually eliminates record wear
- Protects sound fidelity
- Provides anti-static protection

## Will you still respect your speakers in the morning?



Sure, they sounded great last night.

But the real test of a speaker system is the morning after.

Will your speakers sweeten your morning coffee with Vivaldi, or will they make you wish you'd never turned your stereo on?

Do your speakers make you glad you're alive, or do they serve only to remind you of last night's excesses?

Some speakers are impressive when played loudly. But a truly great speaker is equally, if not more, impressive at low listening levels. "Loud" is desirable at times, but a speaker to be lived with must do much more.

For years, and without fanfare, ADS has been building monitor speaker systems for some of the most demanding sound engineers in the music industry. ADS technology is uniquely able to accommodate their diverse and challenging re-

quirements. This same technology, not surprisingly, produces some of the finest speaker systems available for home use.

The new ADS L730, for example, is a direct outgrowth of ADS' continuing involvement in digital recording technology. An unusual combination of extended fre-

quency range, uncanny sonic accuracy, razor-sharp stereo imaging and true-to-life dynamic range, the L730 delivers untiring musical performance. Although the system is capable of shaking walls with clean, undistorted sound, you'll appreciate it most on those mornings when quality counts more than quantity.

The L730 is only one of many ADS speakers, all meticulously engineered and superbly crafted. Your ADS dealer will be happy to help you select the model which best suits your purposes. For more information and the name of the ADS dealer nearest you, please write ADS, Dept. SR-17, or call 1-800-824-7888 (California 1-800-852-7777) toll free and ask for Operator 483.



Audio for the  
critically demanding

Analog & Digital Systems, Inc., One Progress Way, Wilmington, MA 01887 (617) 658-5100



# 11

# SPEAKER SYSTEMS

## AAL

### Classic Series

#### C 120 Speaker System

Three-way floor-standing speaker system with two 10-in foam-surround woofers, 5-in cone midrange, and 3-in cone tweeter; frequency response 25-20,000 Hz  $\pm 3$  dB; crossovers at 1000 and 7000 Hz; input range 10-120 W continuous program; impedance 4 ohms; front-mounted midrange and tweeter sensitivity controls; hand-oiled walnut veneer cabinet; 35" H  $\times$  14" W  $\times$  11" D..... \$369

#### C 112 Speaker System

Three-way floor-standing speaker system with 12-in foam-surround woofer, two 5-in cone midrange drivers, and 3-in cone tweeter; frequency response 25-25,000 Hz  $\pm 3$  dB; crossovers at 1000 and 7000 Hz; input range 10-100 W continuous program; impedance 8 ohms; front-mounted midrange and tweeter sensitivity controls; hand-oiled walnut veneer cabinet; 28 1/2" H  $\times$  16" W  $\times$  15" D... \$329

#### C 110 Speaker System

Three-way speaker system with 10-in foam-surround woofer, 5-in cone midrange, and 3-in cone tweeter; frequency response 30-20,000 Hz  $\pm 3$  dB; crossovers at 1000 and 7000 Hz; input range 10-55 W continuous program; impedance 8 ohms; front-mounted midrange and tweeter sensitivity controls; hand-oiled walnut veneer cabinet; 23" H  $\times$  14" W  $\times$  11" D..... \$239

#### C 108 Speaker System

Two-way bookshelf speaker system with 8-in foam-surround woofer and 3-in cone tweeter; frequency response 35-20,000 Hz  $\pm 3$  dB; crossover at 4000 Hz; input range 5-40 W continuous program; impedance 8 ohms; front-mounted tweeter sensitivity control; hand-oiled walnut veneer cabinet; 20" H  $\times$  11 1/2" W  $\times$  10" D..... \$169

### Impression Series

#### IM 920 Speaker System

Three-way floor-standing speaker system with two 10-in foam-surround woofers, 4 1/2-in isolated midrange, and 1-in soft-dome tweeter in vertical alignment; frequency response 35-22,000 Hz  $\pm 3$  dB; crossovers at 500 and 2000 Hz; input range 10-120 W continuous program; impedance 8 ohms; front-mounted tweeter level control; rosewood-grain vinyl finish; 35 3/4" H  $\times$  14 1/2" W  $\times$  11 1/2" D... \$299

**IM 912.** Similar to IM 920 except has one 12-in foam-surround woofer; input range 5-95 W continuous program; 26" H  $\times$  16" W  $\times$  11 1/2" D..... \$249

**IM 910.** Similar to IM 912 except has 10-in woofer; frequency response 38-22,000 Hz  $\pm 3$  dB; input range 5-60 W continuous program; 23 1/2" H  $\times$  14 1/2" W  $\times$  11 1/2" D..... \$219

#### IM 98 Speaker System

Two-way bookshelf speaker system with 8-in foam-surround woofer and 1-in soft dome tweeter in vertical alignment; frequency response 42-22,000 Hz  $\pm 3$  dB; crossover at 1500 Hz; input range 5-45 W continuous program; impedance 8 ohms; front-

mounted tweeter sensitivity control; rosewood-grain vinyl finish; 20" H  $\times$  12" W  $\times$  9 1/2" D..... \$129

### Studio Series

#### Studio 500 Speaker System

Three-way speaker system with 15-in woofer, dual 5 1/4-in cone midrange with 4-oz magnet, and 3-in piezo electric tweeter; frequency response 20-25,000 Hz; crossovers at 1000 and 5000 Hz; input range 10-60 W continuous program; 8-ohm nominal impedance; front mounted midrange and tweeter controls; push terminals; oak-grained vinyl cabinet; 31" H  $\times$  18" W  $\times$  11 1/2" D..... \$259

**Studio 400.** Similar to Studio 500 except with dual 10-in woofers and 5 1/4-in cone midrange; frequency response 25-25,000 Hz; input range 10-75 W continuous; 35" H  $\times$  14 1/2" W  $\times$  11 1/2" D..... \$239

**Studio 300.** Similar to Studio 400 except 12-in woofer; input range 10-50 W continuous program; 27 1/2" H  $\times$  16 1/2" W  $\times$  11 1/2" D..... \$199

**Studio 200.** Similar to Studio 300 except with 10-in woofer; frequency response 27-25,000 Hz; input range 10-40 W continuous program; 24 1/2" H  $\times$  14 1/2" W  $\times$  11 1/2" D..... \$159

#### Studio 100 Speaker System

Two-way speaker system with 8-in woofer, 6 1/2-oz magnet, 1-in voice coil, and 3-in piezo electric tweeter; frequency response 35-25,000 Hz; crossover at 4000 Hz; input range 5-30 W continuous program; push terminals; 8-ohm impedance; oak vinyl cabinet; 22 1/2" H  $\times$  12 1/2" W  $\times$  9" D..... \$129

### Equation Series

#### EQ 21 Speaker System

Three-way speaker system with two 10-in foam-surround woofers, 5 1/4-in cone midrange, and 2-in phenolic ring tweeter; frequency response 25-22,000 Hz  $\pm 3$  dB; crossovers at 1000 and 5000 Hz; input range 5-75 W continuous program; impedance 4 ohms; hickory-grain vinyl finish; 34 1/2" H  $\times$  15 1/2" W  $\times$  11" D..... \$219

**EQ 17.** Similar to EQ 21 except has two 8-in woofers; input range 5-65 W continuous program; 32 1/4" H  $\times$  14" W  $\times$  11" D..... \$185

**EQ 15.** Similar to EQ 17 except has one 15-in foam-surround woofer; frequency response 20-22,000 Hz  $\pm 3$  dB; impedance 8 ohms; 28" H  $\times$  19" W  $\times$  11" D..... \$199

**EQ 13.** Similar to EQ 15 except has 12-in woofer, same midrange, and 1-in phenolic ring tweeter; frequency response 25-22,000 Hz  $\pm 3$  dB; input range 5-50 W continuous program; 24 1/4" H  $\times$  19 1/2" W  $\times$  11" D..... \$175

#### EQ 11 Speaker System

Two-way speaker system with 10-in foam-surround woofer and 2-in phenolic ring tweeter; frequency response 27-22,000 Hz  $\pm 3$  dB; crossover at 4000 Hz; input range 5-50 W continuous program; impedance 8 ohms; hickory-grain vinyl finish; 23" H  $\times$  14 1/2" W  $\times$  11" D..... \$135

#### EQ 25 Subwoofer

Incorporates two 8-in foam-surround woofers; frequency response 10-250 Hz  $\pm 3$  dB; crossover at

100 Hz; input range 5-100 W continuous program; impedance 8 ohms; hickory-grain vinyl finish; 16 1/2" H  $\times$  16" W  $\times$  16" D..... \$249

### Micro Series

#### 100 Speaker System

Two-way miniature speaker system with 4-in woofer and 1-in tweeter; frequency response 50-20,000 Hz  $\pm 3$  dB; crossover at 4000 Hz; input range 5-50 W continuous program; impedance 4 ohms; aluminum diecast enclosure with black grille; 7 1/4" H  $\times$  4 1/2" W  $\times$  4 1/2" D..... \$109

## ACCULAB by RTR INDUSTRIES

#### 440 Speaker System

Four-way acoustic-suspension speaker system with 12-in woofer, 3 3/4-in cone midrange, 2 3/4-in cone tweeter, and 3 1/2-in solid-state super tweeter; frequency response 33-30,000 Hz  $\pm 4$  dB; crossovers at 3300, 7500, and 10,000 Hz; efficiency 91-dB SPL/W/m; input range 5-50 W continuous; impedance 8 ohms; controlled dispersion pattern; vinyl finish with brown cloth grille; 25 1/2" H  $\times$  14 1/4" W  $\times$  11" D..... \$250

#### 340 Speaker System

Three-way acoustic-suspension speaker system with 12-in woofer, 3 3/4-in cone midrange, and 2 3/4-in cone tweeter; frequency response 33-18,500 Hz  $\pm 4$  dB; crossovers at 3300 and 7500 Hz; efficiency 91-dB SPL/W/m; input range 4-40 W continuous; impedance 8 ohms; controlled dispersion pattern; vinyl finish with brown cloth grille; 25 1/4" H  $\times$  14 1/4" W  $\times$  11" D..... \$200

#### 320 Speaker System

Three-way acoustic-suspension speaker system with 10-in woofer, 3 3/4-in cone midrange, and 2 3/4-in cone tweeter; frequency response 40-18,500 Hz  $\pm 4$  dB; crossovers at 3300 and 7500 Hz; efficiency 91-dB SPL/W/m; input range 4-32 W continuous; impedance 8 ohms; controlled dispersion pattern; vinyl finish with brown cloth grille; 22 1/2" H  $\times$  13" W  $\times$  10 1/2" D..... \$150

**220.** Similar to 320 except two-way system minus midrange driver; crossover at 6500 Hz; efficiency 89.9 dB SPL/W/m; input range 4-20 W..... \$125

## ACCUSOUND

#### Saturn SMX Speaker System

Four-way floor-standing speaker system with 15-in subwoofer reactor, 10-in woofer, 2.5-in voice coil, and 5-in midrange/tweeter; frequency response 32-20,000 Hz; crossovers at 60, 400, and 3000 Hz; efficiency 96 dB at 5 W; input range 20-125 W; 8-ohm impedance; midrange and tweeter level controls; walnut veneer with removable black grille; 40" H  $\times$  18" W  $\times$  13 1/2" D..... \$495

#### 120B Speaker System

Four-way bookshelf speaker system with 12-in subwoofer reactor, 10-in woofer, 2-in voice coil, and 5-in midrange/tweeter; frequency response

# 11 SPEAKER SYSTEMS

32-20,000 Hz; crossovers at 60, 400, and 3000 Hz; efficiency 96 dB at 5 W; input range 20-100 W; 8-ohm impedance; midrange and tweeter level controls; walnut veneer with removable black grille; 26" H x 15" W x 10 1/2" D..... \$295

## 100B Speaker System

Three-way bookshelf speaker system with 12-in subwoofer reactor, 8-in woofer, and 1 1/2-in voice coil; frequency response 36-20,000 Hz; crossovers at 60 and 1500 Hz; efficiency 94 dB at 5 W; input range 10-80 W; 8-ohm impedance; midrange and tweeter level controls; walnut veneer with removable black grille; 24" H x 13" W x 10 1/2" D..... \$179

## ACOUSTAT

### Monitor Four-121 Speaker System

Full-range electrostatic floor-standing speaker system incorporates four panels angled for horizontal dispersion and driven full-range as one electrical unit (no crossovers); diaphragm 0.65/1000-in thick; employs high-voltage amplifier and two optimized overlapping transformers that handle midrange band; frequency response 30-20,000 Hz  $\pm$  3 dB; SPL 113 dB at 20 ft (program material); high-frequency balance control; 61" H x 36" W x 9" D..... \$2195 pr.

**Three-121.** Similar to Four-121 except with three panels; 61" H x 28" W x 7" D..... \$1795 pr.

### Monitor Two Speaker System

Full-range electrostatic floor-standing speaker incorporates two panels angled for horizontal dispersion and driven full-range as one electrical unit (no crossovers); diaphragm 0.65/1000-in thick; employs high-voltage amplifier and two optimized overlapping transformers; frequency response 30-20,000 Hz  $\pm$  3 dB; SPL 108 dB; input range 50-100 W/ch; high-frequency balance control; 58" H x 20" W x 3 1/2" D..... \$1195 pr.

## ACOUSTIC RESEARCH

### Vertical Series

#### AR9 Speaker System

Four-way acoustic-suspension floor-standing columnar speaker system features five drivers consisting of two 12-in parallel and connected side-mounted acoustic-suspension woofers handling from 20-200 Hz and 8-in acoustic-suspension low midrange driver handling from 200-1200 Hz in own subenclosure, 1 1/2-in dome upper midrange driver from 1200-7000 Hz, and 3/4-in dome tweeter in vertical array; crossover frequencies at 200, 1200, and 7000 Hz; low frequency response -3 dB at 28 Hz; sensitivity 87-dB SPL/W/m; input 400 W/ch continuous; 4-ohm nominal impedance; three three-position switches for lower midrange, upper midrange and high range level control; walnut veneer cabinet with three grilles; Acoustic Blanket™, absorbent fiber sheet that absorbs front-surface-reflected soundwaves of mid- and high-range drivers, behind front grille; 52 3/4" H x 15" W x 15 1/2" D..... \$800

#### AR90 Speaker System

Four-way acoustic-suspension floor-standing columnar speaker system with five drivers: two 10-in side-firing woofers and 8-in high-temperature lower midrange in own subenclosure, 1 1/2-in high-temperature hemispherical-dome upper midrange, and 3/4-in high-temperature hemispherical-dome tweeter in vertical array; crossovers at 200, 1200, and 7000 Hz; sensitivity 87 dB SPL/W/m; recommended input range 50-300 W/ch continuous power; 4-ohm nominal impedance; three 3-position switches for lower and upper midrange and high-range levels;

Acoustic Blanket™ behind front grille; oiled walnut veneer finish with black contrast and dark grille; 43 3/4" H x 14 1/2" W x 15 1/2" D..... \$600

#### AR91 Speaker System

Three-way acoustic-suspension floor-standing speaker system with 12-in woofer, 1 1/2-in liquid-cooled dome midrange with semi-horn, and 3/4-in liquid-cooled dome tweeter in vertical array; crossovers at 700 and 7500 Hz; sensitivity 87 dB SPL/W/m; handles 200 W/ch continuous power; 4-ohm nominal impedance; two 3-position switches for midrange and high-range levels; Acoustic Blanket™ behind front grille; oiled walnut veneer over high density particle board cabinet; 31 1/2" H x 14" W x 11 1/4" D..... \$425

**AR92.** Similar to AR91 except with 10-in woofer; walnut-grain vinyl veneer cabinet; 31 1/4" H x 14" W x 11 1/4" D..... \$325

### High-Tech Series

#### AR93 Speaker System

Three-way acoustic-suspension floor-standing speaker system with four drivers: two 8-in side-firing woofers and 8-in acoustic-suspension midrange driver in own subenclosure and 1 1/4-in liquid-cooled cone tweeter in vertical array; low frequency response -3 dB at 44 Hz; crossovers at 350 and 2000 Hz; efficiency 87 dB SPL/W/m; max. input 125 W/ch continuous; nominal impedance 6 ohms; Acoustic Blanket™ behind front grille; acoustically-transparent black cloth over high-density particleboard cabinet with black molded cap and base; 30 3/4" H x 14" W x 10 3/4" D..... \$249

**AR94.** Similar to AR93 except has three vertically-aligned drivers consisting of one 8-in front-firing woofer, 8-in woofer/midrange driver, and 1 1/4-in liquid-cooled cone tweeter..... \$199

### Truth in Listening Series

#### AR25 Speaker System

Two-way acoustic-suspension floor-standing speaker system with 8-in woofer and 1 1/4-in pressure tweeter; crossover at 2000 Hz; sensitivity 86 dB SPL/W/m; handles 100 W/ch continuous power; 8-ohm nominal impedance; walnut-grain vinyl veneer finish; also sold in pairs; 21 1/2" H x 11 1/4" W x 7 1/2" D..... \$120

## ACOUSTI-PHASE

### Disco II Speaker System

Three-way floor-standing speaker system with 15-in woofer with 54-oz ceramic magnet, two 2 x 6-in piezo-electric horn midrange drivers, and four piezo electric super tweeters; frequency response 28-30,000 Hz  $\pm$  3 dB; crossovers at 900 and 3000 Hz; input range 20-200 W; 4-ohm impedance; 29" H x 18" W x 15 1/2" D..... \$450

### Phase III+ Speaker System

Three-way bass-reflex speaker system with 12-in double-foam-surround woofer, 5-in midrange, and 1-in Mylar dome tweeter; frequency response 32-20,000 Hz  $\pm$  3 dB; crossovers at 900 and 5000 Hz; input range 10-100 W continuous; impedance 4-8 ohms; tweeter level control; walnut veneer finish; 25" H x 15" W x 13 1/2" D..... \$310

### Phase II Speaker System

Three-way floor-standing speaker system with 10-in woofer, 5-in midrange, and 1-in Mylar dome tweeter; frequency response 35-20,000 Hz  $\pm$  3 dB; crossovers at 1200 and 5000 Hz; input range 10-70 W continuous; impedance 4-8 ohms; tweeter level control, walnut veneer finish; 24 1/2" H x 14 1/4" W x 12 1/2" D..... \$230

### Phase Monitor Speaker System

Two-way floor-standing speaker system with 12-in woofer and 1-in Mylar dome tweeter; frequency response 35-20,000 Hz  $\pm$  4 dB; crossover at 1500 Hz; input range 10-70 W continuous; impedance 4-8 ohms; tweeter level control; 25" H x 14" W x 13 1/2" D..... \$190

### Phase I Speaker System

Two-way bookshelf speaker system with 8-in woofer and 1-in Mylar dome tweeter; response 40-20,000 Hz  $\pm$  4 dB; crossover at 1600 Hz; input range 5-50 W continuous; impedance 8 ohms; tweeter level control; 21 1/2" H x 12 1/2" W x 10 1/4" D..... \$140

Pine cabinet..... \$170

## ACOUSTIQUE 3a INT'L

### 3a 1000 The Reference Speaker System

Four-way floor-standing acoustic pressure feedback speaker system with two 11-in woofers controlled through 150-W feedback amplifier, 8-in cone midrange, 2-in dome midrange, and 3a equiphase flat ribbon tweeter; frequency response 20-40,000 Hz  $\pm$  3 dB; sensitivity 94 dB SPL/W/m; 47" H x 13" W x 13" D..... \$2500

### Triphonic Integrated Speaker System

Three-way acoustic pressure feedback system with sub-bass and satellite units.

**TR 1200.** Coffee table sub-bass includes four 11-in feedback APF woofers and 150 W continuous automatic switch-on feedback amplifier; frequency response from 30-100 Hz  $\pm$  1.5 dB; sensitivity 74-96 dB/W/m; 100 Hz passive and electronic crossovers for bass and satellites; electret microphone with VU meters; linear/rock switch; walnut finish; 14" H x 35" W x 30" D..... \$1665

**TR 1000.** Same as TR 1200 except lounge table sub-bass with three 11-in feedback woofers; finished in Black Chinese lacquer with brushed brass or chrome maple heart on angles; 12" H x 48" W x 12" D..... \$1800

**TR 800.** Same as TR 1200 except corner table sub-bass with two 11-in feedback woofers and TR 1000 finish; 12" H x 30" W x 12" D..... \$1300

**Atom 2.** Two-way PLD satellites with 7-in cone midrange woofer and Equiphase flat ribbon tweeter; frequency response from 100-40,000 Hz  $\pm$  2 dB with 0.5% max. dist.; crossover at 5000 Hz; 150 W continuous max. input; 8-ohm impedance; sensitivity 94 dB/W/m; laminated back wave through flat tunnel; time aligned; 19" H x 9" W x 3" D..... \$300

**Atom 3.** Three-way PLD satellites consisting of 5-in cone low midrange woofer, 2-in dome midrange, and 3/4-in dome tweeter; frequency response from 100-30,000 Hz  $\pm$  1.5 dB with 0.5% max. dist.; crossovers at 2000 and 8000 Hz; 80 W continuous max. input; 8-ohm impedance; 90 dB/W/m sensitivity; laminated back wave through very flat tunnel; time aligned; 17" H x 10" W x 7" D..... \$330

### 3a 680 Master Control System

Three-way acoustic pressure feedback speaker system with 10-in woofer, 2-in dome midrange, and 2 1/4 x 7/8-in symmetrical ribbon tweeter; frequency response 25-40,000 Hz  $\pm$  3 dB; crossovers at 300 and 5000 Hz; sensitivity 1.4 W for 96 dB SPL at 400 Hz and 6 ft on-axis; 8-ohm impedance; max. input 60 W continuous; 125 W built-in servo amplifier; dist. 0.7%; 18" H x 12" W x 8" D..... \$1000

### 3a 650 Prelude Speaker System

Three-way acoustic pressure feedback speaker system with 11-in woofer, 2-in dome midrange, and 3/4-in dome tweeter; response 30-30,000 Hz  $\pm$  3 dB; crossovers at 300 and 4000 Hz; max. input 80 W continuous; 8-ohm impedance; 120 W built-in servo amplifier; 18" H x 12" W x 8" D..... \$679

### 3a 390 Adagio Speaker System

Three-way infinite-acoustic-load speaker system with 11-in woofer, 2-in dome midrange and 3/4-in dome tweeter; frequency response 35-30,000 Hz  $\pm$  3 dB; crossovers at 400 and 4000 Hz; max. input 80 W continuous; 8-ohm impedance; internal acoustic low-pass filter plus infinite transmission line; 31" H x 12" W x 12" D..... \$559

### 3a 120 Allegro Speaker System

Three-way floor-standing 3a-patented acoustic doublet speaker system with two 11-in woofers, 6 3/4-in cone midrange, and two compression chamber horn tweeters, response 50-20,000 Hz  $\pm$  3 dB; crossovers at 800 and 6000 Hz; sensitivity 94 dB SPL/W/m; 37" H x 13" W x 13" D..... \$539



### 3a 370 Auditorat Speaker System

Three-way 3a-patented Peripheral Laminar Decompression speaker system with 10-in woofer, 4-in cone midrange, and 3/4-in 3a hemispheric dome ferrofluid tweeter; frequency response 50-30,000 Hz  $\pm$  3 dB; sensitivity 92 dB SPL/W/m; 28" H  $\times$  12" W  $\times$  12" D.....\$399

### 3a 350 Audio Speaker System

Two-way bass-reflex speaker system with 8-in woofer and equiphase tweeter; frequency response 50-30,000 Hz  $\pm$  3 dB; crossover at 3500 Hz; max. input 60 W continuous; 8-ohm impedance; 25" H  $\times$  12" W  $\times$  10" D.....\$249

### 3a 250 Alphase Speaker System

Two-way Peripheral Laminar Decompression speaker system with 8-in woofer and 3/4-in dome tweeter; frequency response 55-30,000 Hz  $\pm$  3 dB; crossover at 5000 Hz; max. input 40 W continuous; 8-ohm impedance; laminated back wave through very flat tunnel; time aligned; 20" H  $\times$  10" W  $\times$  12" D.....\$249

### HP70 Alto Speaker System

Two-way 3a-patented acoustic doublet speaker system with two 8-in woofers and piezo electric tweeter; frequency response 50-30,000 Hz  $\pm$  3 dB; sensitivity 95 dB SPL/W/m; 30" H  $\times$  11" W  $\times$  11" D.....\$219

## ACR INDUSTRIES

### Aparture R-10 Speaker System

Three-way hybrid transmission-line speaker system with 10-in Bextrene woofer, 3  $\times$  1.5-in ribbon midrange, and 2  $\times$  0.5-in ribbon tweeter; frequency response 35-34,000 Hz  $\pm$  2.5 dB; crossovers at 1500 and 7000 Hz; sensitivity 92 dB SPL/W/m; min. input 15 W; impedance 8 ohms; midrange and tweeter level controls; Wilson art koawood finish with dark brown knit grille; 26" H  $\times$  13" W  $\times$  12" D.....\$300

### Aparture R-8 Speaker System

Two-way hybrid transmission-line speaker system with 8-in Bextrene woofer and 2  $\times$  0.5-in ribbon tweeter; frequency response 42-34,000 Hz  $\pm$  2.5 dB; crossover at 5400 Hz; sensitivity 90 dB SPL/W/m; min. input 15 W; nominal impedance 8 ohms; tweeter level control; Wilson art koawood finish with dark brown knit grille; 22" H  $\times$  12" W  $\times$  12" D.....\$180

### Aparture R-6 Speaker System

Two-way air-suspension bookshelf speaker system with 6 1/2-in polymer woofer and 2  $\times$  0.5-in ribbon tweeter; frequency response 51-34,000 Hz  $\pm$  3 dB; crossover at 4300 Hz; sensitivity 89 dB SPL/W/m; min. input 15 W; nominal impedance 8 ohms; Wilson art koawood finish with dark brown knit grille; 12" H  $\times$  8" W  $\times$  8" D.....\$130

## ACUSTA CRAFT

### CVM-4 Speaker System

Four-way modular system contains two CVS-3 satellites with 10-in woofer, 6-in midrange, super horn tweeter, and two CVW-12 computer-vented dual woofers; frequency response 42-15,000 Hz  $\pm$  3 dB; crossovers at 100, 400, 4000 Hz; sensitivity 91 dB SPL/W/m; recommended input range 20-250 W/ch continuous into 8 ohms; CVS-3: solid-walnut finish, 42" H  $\times$  17" W  $\times$  5 1/2" D; CVW-12: 21 1/2" H  $\times$  21" W  $\times$  21" D; available in kit form.....\$1200

**CVM-4 (WK).** Kit.....\$1010

**CVM-3.** Similar to CVM-4 except with one CVW-10 computer-vented bass module; available in kit form.....\$1020

**CVM-3 (WK).** Kit.....\$849

### CVM-2 Speaker System

Four-way speaker system contains two CVS-2 satellites with 8-in woofer, 6-in midrange, 1-in textile-dome tweeter, and one CVW-10 computer-vented dual woofer; frequency response 50-15,000 Hz  $\pm$  3 dB; crossovers at 100, 400, and 4000 Hz; recom-

mended input range 20-200 W/ch continuous into 8 ohms; sensitivity 91 dB SPL/W/m; available in kit form; CVS-2: "picture-frame" solid-walnut molding, 21 1/2" H  $\times$  12" W  $\times$  5 1/2" D; CVW-10: 21 1/2" H  $\times$  21" W  $\times$  21" D.....\$740

**CVM-2 (WK).** Kit.....\$615

### CVM-1 Speaker System

Three-way bookshelf speaker system with CVS-1 satellite that has 6-in long-throw woofer/midrange and 1-in textile-dome tweeter combined with CVW-10 bass module; frequency response 50-20,000 Hz  $\pm$  4 dB; crossovers at 100 and 2500 Hz; recommended input range 20-125 W/ch continuous into 8 ohms; available in kit form; CVS-1: "picture-frame" solid-walnut molding, 12" H  $\times$  8" W  $\times$  5 1/2" D; CVW-10: 21 1/2" H  $\times$  21" W  $\times$  21" D.....\$560

**CVM-1 (WK).** Kit.....\$469

### CV-19 Speaker System

Three-way floor-standing speaker system with 12-in woofer, two 6-in midrange drivers, and super horn tweeter; frequency response 42-15,000 Hz  $\pm$  3 dB; crossovers at 400 and 4000 Hz; recommended input range 20-200 W/ch continuous into 8 ohms; sensitivity 96 dB SPL/W/m; 4-ohm impedance; walnut veneer finish; available in kit form; 44" H  $\times$  16 1/2" W  $\times$  12 3/4" D.....\$399

**CV-19 (WK).** Kit.....\$340

**CV-18.** Same as CV-19 except 33" H  $\times$  18" W  $\times$  15 1/4" D; available in kit form.....\$399

**CV-18 (WK).** Kit.....\$340

### CV-12 Speaker System

Two-way bookshelf speaker system with 10-in woofer with accordion-pleated edge and soft dome tweeter; frequency response 50-20,000 Hz  $\pm$  3 dB; crossover at 1500 Hz; recommended input range 15-100 W/ch continuous into 8 ohms; sensitivity 91 dB SPL/W/m; 8-ohm impedance; vinyl clad or walnut veneer finish; available in kit form; 23 3/4" H  $\times$  15 3/4" W  $\times$  11 7/8" D.....\$160

**CV-12 (WK).** Kit.....\$125

**CV-14.** Same as CV-12 except three-way speaker with 6-in midrange; crossovers at 400 and 4000 Hz; recommended input range 20-175 W/ch continuous into 8 ohms; available in kit form.....\$210

**CV-14 (WK).** Kit.....\$170

**CV-15.** Same as CV-14 except floor-standing speaker with frequency response 42-15,000 Hz  $\pm$  3 dB; available in kit form; 30" H  $\times$  16 1/2" W  $\times$  11 7/8" D.....\$285

**CV-15 (WK).** Kit.....\$230

## ADC

### B410 Speaker System

Two-way acoustic-suspension bookshelf speaker system with 8-in high-compliance woofer and 1-in soft polyamide dome tweeter; designed to complement the B300 subwoofer, but can be used as full-range system; frequency response 65-17,000 Hz  $\pm$  1.5 dB; crossover at 1200 Hz; sensitivity 88 dB SPL/W/m; input range 10-250 W unclipped music power; nominal impedance 4 ohms; resettable circuit breaker; adjustable tweeter attenuation control; oiled walnut veneer finish with removable acoustic foam grille over flat protruding baffle; packaged in pairs; 16" H  $\times$  10" W  $\times$  9 3/4" D.....\$185 ea.

### MS650 Speaker System

Two-way acoustic-suspension mini speaker system with 6 1/2-in high-compliance woofer and 1-in polyamide soft dome tweeter; frequency response 75-17,000 Hz  $\pm$  1.5 dB; sensitivity 88 dB SPL/W/m; input range 10-150 W; nominal impedance 4 ohms; adjustable tweeter attenuation control; truncated pyramid shape; simulated oak-grain finish with removable acoustic foam grille; 11" H  $\times$  6 1/2" (top)  $\times$  8 1/2" (bottom) W  $\times$  7 1/2" (bottom) D.....\$145

### B300 Subwoofer

Acoustic-suspension floor-standing subwoofer incorporates 12-in downward-firing cone woofer and includes built-in 120-W continuous discrete transistor class AB power amplifier; designed to be used with B410 satellite speakers; frequency response 30-200 Hz  $\pm$  1.5 dB; sensitivity 87 dB SPL/W/m; dist. 3% THD from 30-100 Hz at 100 dB SPL;

input impedance 33k ohms; rosewood, oak, or walnut laminated wood veneer finish; includes black and chrome casters; 22 1/4" H  $\times$  23 3/4" W  $\times$  23 3/4" D.....\$599

## ADCOM

### GFW-1 Subwoofer

Compact subwoofer with 10-in driver and 56-oz magnet; unit has built-in passive crossover, phasing switch and push terminals; frequency response 22-150 Hz  $\pm$  3 dB; crossover at 150 Hz at 12 dB/octave with Braun L200 speakers; impedance 4 ohms; power 100 W DIN; 15 1/2" H  $\times$  17 1/2" W  $\times$  17 1/2" D.

Vinyl veneer walnut finish.....\$230

Genuine walnut veneer finish.....\$290

## ADS

### L2030 Monitor Speaker

Three-way acoustic-suspension floor-standing professional monitor speaker system with two 14-in high-compliance Stiffite cone woofers in separate chambers, one main 2-in soft dome midrange, three auxiliary 2-in soft dome midrange drivers, and 1-in samarium cobalt soft dome tweeter. Features rear compartment for ADS Power Plate 1000 1-kW biampifier module; single-switch biamp conversion; front-panel tweeter and midrange configuration/level controls; user-accessible tweeter protection fuse with built-in spare; optional bar-graph power level indicators available. Frequency response 22-20,000 Hz  $\pm$  3 dB; crossovers at 450 and 4000 Hz; efficiency 95 dB SPL/W/m; power rating 300 W nominal, 1200 W peak program; nominal impedance 6 ohms; mirror-symmetrical angled mid/high-frequency baffles for minimum diffraction; high-grade walnut finish with solid walnut edge inserts and removable black cloth grille; available in mirror-symmetrical matched pairs only; 55 3/4" H  $\times$  27 1/4" W  $\times$  13 1/4" D.....\$1900 ea.

**L1530.** Similar to L2030 except uses two 10-in Stiffite cone woofers in separate chambers and has no auxiliary midrange drivers or midrange level control; frequency response 25-20,000 Hz  $\pm$  3 dB; power rating 150 W nominal, 300 W peak program; available in mirror-symmetrical matched pairs only; 50 3/4" H  $\times$  23 1/4" W  $\times$  12 1/4" D.....\$945 ea.

### L1230 Monitor Speaker

Three-way acoustic-suspension floor-standing professional monitor speaker system with two 8-in high-compliance Stiffite cone woofers in separate chambers, 2-in soft dome midrange driver, and 3/4-in soft dome tweeter; frequency response 30-20,000 Hz  $\pm$  3 dB; crossovers at 550 and 4000 Hz; efficiency 94 dB SPL/W/m; power rating 100 W nominal, 200 W peak program; nominal impedance 6 ohms; tweeter level control; biamp conversion switch; tweeter protection fuse with built-in spare; mirror-symmetrical angled mid/high-frequency baffles for minimum diffraction; high-grade walnut finish with solid walnut edge inserts and removable black cloth grille; available in mirror-symmetrical matched pairs only; 40 3/4" H  $\times$  19 1/4" W  $\times$  9 3/4" D.....\$595 ea.

### SubSat 2300 Powered Bass/Satellite

Modular four-piece system consisting of two ADS 400 miniature speaker systems (see listing), one PB-1500 powered bass module, and one C-1500 bass system control. PB-1500: end-table-designed subwoofer incorporates two 10-in high-compliance Stiffite cone woofers in separate acoustic-suspension chambers and two 100-W continuous power amplifiers; frequency response (dependent on C-1500 settings) -3 dB at 35 Hz without dynamic bass extender, -3 dB at 25 Hz at max. bass extension; efficiency 94 dB SPL/W/m; max. output 114 dB SPL; amp output 100 W/ch continuous sine wave, both channels driven into 4 ohms from 20-200 Hz with 0.08% THD and IM dist.; amp S/N 94 dB (A weighted); input sensitivity 500 mV; damping factor 50 at 50 Hz, 4 ohms; high-grade walnut or oak finish with solid walnut/oak edge inserts and removable black cloth grille. C-1500:

# 11 SPEAKER SYSTEMS

bass system control connects between preamp and power amp or in tape monitor loop of integrated amp or receiver (existing amp drives ADS 400 satellite speakers); incorporates electronic crossover with four crossover frequencies and continuously variable hi-pass Q (0.7-1.4); opto-electronic dynamic bass extender circuitry; master volume control and tape monitor circuit; frequency response 20-20,000 Hz  $\pm$  0.2 dB (bypass mode); crossovers at 72, 90, 115, and 144 Hz; slope 12 dB/octave; dist. 0.005%; S/N 95 dB (A weighted); input sensitivity 100 mV; output impedance 600 ohms; brushed anodized satin-black front panel; optional rack-mount adaptors. For information on ADS 400 mini speakers, see separate listing. PB-1500: 16" H x 22 1/2" W x 23 1/2" D; C-1500: 2" H x 17" W x 10" D; 400: 11 1/2" H x 7 1/2" W x 6 1/2" D.

**SubSat 2300 System.** Includes one pair of ADS 400 minispeakers ..... \$1495  
**PB-1500/C-1500.** Powered bass module and bass system control only ..... \$1195  
**F400.** Floor stands for ADS 400 minispeakers.. \$35

## L810 Speaker System

Three-way acoustic-suspension speaker system with two 8-in high-compliance Stiffilite cone woofers in separate chambers, 2-in soft dome midrange, and 3/4-in soft dome tweeter; drivers are diffraction-corrected flush mounted; frequency response 35-23,000 Hz  $\pm$  3 dB; crossovers at 550 and 4000 Hz; efficiency 94 dB SPL/W/m; power rating 100 W nominal, 200 W peak program; nominal impedance 6 ohms; quick-access tweeter fuse with built-in spare; high-grade walnut radius-edged cabinet with solid walnut edge inserts and removable acoustically-transparent bronze frameless grille; 25 1/2" H x 14 1/2" W x 11 1/2" D ..... \$425

**F800.** Black metal base for L810 ..... \$33  
**L710.** Similar to L810 except uses two 7-in Stiffilite woofers; frequency response 40-23,000 Hz  $\pm$  3 dB; efficiency 93 dB SPL/W/m; power rating 75 W nominal, 150 W peak program; 21 1/2" H x 12 1/2" W x 10 1/2" D ..... \$325  
**F700.** Black metal base for L710 ..... \$32

## L730 Speaker System

Three-way acoustic-suspension speaker system with 10-in high-compliance long-excursion Stiffilite cone woofer, 1 1/2-in soft dome midrange, and 1/2-in soft dome tweeter; drivers are diffraction-corrected flush-mounted; frequency response 30-23,000 Hz  $\pm$  3 dB; crossovers at 650 and 4000 Hz; efficiency 93 dB SPL/W/m; power rating 100 W nominal, 175 W peak program; nominal impedance 6 ohms; quick-access tweeter fuse with built-in spare; oak or walnut radius-edged cabinet with solid oak/walnut edged inserts and acoustically-transparent complementary-finish frameless grille; 25 1/2" H x 14 1/2" W x 11 1/2" D ..... \$365  
**F800.** Black metal base for L730 ..... \$33

## L620 Speaker System

Two-way acoustic-suspension speaker system with 10-in high-compliance long-excursion Stiffilite cone woofer and 1-in soft dome tweeter; frequency response 30-20,000 Hz  $\pm$  3 dB; crossover at 1500 Hz; efficiency 92 dB SPL/W/m; power rating 75 W nominal, 150 W peak program; nominal impedance 6 ohms; user-accessible tweeter fuse with built-in spare; high-grade walnut finish with removable acoustically-transparent bronze frameless grille; 25 1/2" H x 14 1/2" W x 11 1/2" D ..... \$240  
**F800.** Black metal case for L620 ..... \$33  
**L520.** Similar to L620 but uses 8-in Stiffilite woofer; frequency response 35-20,000 Hz  $\pm$  3 dB; power rating 50 W nominal, 100 W peak program; 21 1/2" H x 12 1/2" W x 10 1/2" D ..... \$190  
**F700.** Black metal base for L520 ..... \$32  
**L420.** Similar to L520 but uses 7-in Stiffilite woofer; frequency response 48-20,000 Hz  $\pm$  3 dB; available in pairs only; 17 1/2" H x 11 1/2" W x 7" D ..... \$150 ea.

## 400 Miniature Speaker System

Two-way acoustic-suspension speaker system with 7-in high-compliance ultra-long-excursion Stiffilite cone woofer and 1-in soft dome tweeter; drivers are diffraction-corrected flush-mounted; frequency response 65-20,000 Hz  $\pm$  3 dB; crossover at 1500 Hz; efficiency 93 dB SPL/W/m; power rating 50 W nominal, 75 W peak program; nominal impedance 6 ohms; high-grade oak or walnut finish with radius-edged oak/walnut inserts and acoustically transparent metal grille in complementary finish; available in pairs only; 11 1/2" H x 7 1/2" W x 6 1/2" D. \$180 ea.  
**F400.** Floor stand for 400 (can also be used with 300 and 200 systems); elevates speaker approx. 28 inches above floor; flat black finish; two/box ..... \$35 ea.

## 300 Miniature Speaker System

Two-way miniature acoustic-suspension speaker system with 5 1/2-in high-compliance ultra-long excursion woofer and 1-in soft-dome tweeter; frequency response 68-20,000 Hz  $\pm$  3 dB; crossover at 2500 Hz (12 dB/octave); efficiency 90-dB SPL/W/m; rated input 75 W continuous, min. input 5 W continuous; 4-ohm impedance, brushed satin finish; aluminum enclosure (black or silver anodized) with aluminum grille; 8.67" H x 5.9" W x 5.7" D ..... \$150

**300C.** Same as 300; includes quick-disconnect swivel bracket and all hardware for car installation surface mounting; black finish; 8 1/2" H x 5 1/2" W x 5 1/2" D ..... \$155

## 200 Miniature Speaker System

Two-way miniature acoustic-suspension speaker system with 4-in high-compliance ultra-long excursion woofer and 1-in soft-dome tweeter; frequency response 85-20,000 Hz  $\pm$  3 dB; crossover at 2500 Hz (12 dB/octave); efficiency 90-dB SPL/W/m; rated input 30 W continuous, min. input 5 W continuous; 4-ohm impedance; brushed aluminum enclosure (black or silver anodized) with anodized aluminum grille; 6 1/2" H x 4 1/2" W x 4 1/2" D ..... \$120  
**200C.** Same as 200 except includes swivel bracket and all accessories for car installation surface mounting; black finish ..... \$125

## B-2000 Stereo Bi-Amplification System

Three-piece biamplification system consisting of two P-1000 "Power Plate" 1-kW biampifier modules and C-2000 biampifier system control; Power Plate 1000 fits into special compartments provided on ADS L2030 and L1530 professional monitor speakers. P-1000: features independent pulse-width-modulation digital power supply; dynamic class A bias circuitry; primary voltage regulation; forced-air fan-cooling; proprietary "No-Clip" circuitry; output 500 W/ch continuous sine wave, both channels driven into 4 ohms from 20-20,000 Hz with 0.05% THD; sensitivity response 5-100,000 Hz  $\pm$  0.2 dB; S/N 90 dB (A weighted); input sensitivity 2.0 V; slew rate 100 V/ $\mu$ sec. C-2000: has custom-tailored crossover positions for L2030, L1530, and L910 speakers plus programmable position for other speakers suitable for high-powered biamplification; opto-electronic dynamic bass extender circuitry; remote turn on/off of P-1000 sent from C-2000 via standard audio cables. P-1000 17" H x 20 1/4" W x 4" D ..... \$2500

## ADVANCE SPEAKER KORP

### A-II Speaker System

Two-way speaker system with 8-in long-throw low-resonance cone woofer, 10-in low-resonance cone passive radiator, and 1-in soft dome tweeter; frequency response 30-20,000 Hz  $\pm$  4 dB; crossover at 2000 Hz; sensitivity 90 dB/W/m; input range 15-100 W continuous; impedance 6-8 ohms; tweeter level control; oiled walnut or walnut vinyl cabinet with knit grille; 26 1/2" H x 14 1/2" W x 10 1/2" D ..... \$189

### V-II Speaker System

Two-way speaker system with 8-in long-throw low-resonance cone woofer and 1-in soft dome tweeter; frequency response 45-20,000 Hz  $\pm$  3 dB; crossover at 1800 Hz; sensitivity 92 dB/W/m; input

range 15-80 W continuous; 8-ohm impedance; oiled walnut or walnut vinyl cabinet with knit grille; 20" H x 11 1/2" W x 9 1/2" D ..... \$129

## ADVENT

### Powered Advent Loudspeaker

Two-way acoustic-suspension, biamplified powered speaker system; input sensitivity adjustable up to 0.3 V; input impedance 100,000 ohms; continuously variable equalization controls below 100 Hz ( $\pm$  6 dB at 30 Hz) and above 3000 Hz ( $\pm$  4 dB at 10,000 Hz); switchable subsonic filters; crossover frequency 1500 Hz; walnut veneer finish with walnut front molding and brown grille cloth; requires 120-V ac, 450 W max.; 28 1/2" H x 14 1/2" W x 11 1/2" D ..... \$499

### 5002 Speaker System

Two-way acoustic-suspension bookshelf speaker system with Advent woofer and 1-in dome tweeter; frequency response 42-23,000 Hz  $\pm$  2.5 dB; crossover at 1800 Hz; sensitivity 87 dB/W/m; nominal impedance 8 ohms; two-position crossover switch; walnut grain vinyl finish; 26" H x 14.25" W x 11.5" D ..... \$200

**4002.** Similar to 5002 minus switchable crossover; frequency response 46-23,000 Hz  $\pm$  2.5 dB; has fixed crossover; 21 1/2" H x 13 1/2" W x 9 1/2" D. \$170

### 3002 Speaker System

Two-way acoustic-suspension bookshelf speaker system with woofer and 1-in dome tweeter; frequency response 48-23,000 Hz  $\pm$  3 dB; crossover at 2800 Hz; sensitivity 88 dB/W/m; nominal impedance 8 ohms; walnut grain vinyl finish; 20" H x 12" W x 8.5" D ..... \$130

## AIKO by TZL INTERNATIONAL

### AS-84 Speaker System

Three-way floor-standing speaker system with 12-in Mylar dome woofer, 5-in cone midrange in isolation chamber, and 2-in phenolic ring cone tweeter; frequency response 25-22,000 Hz; crossovers at 1000 and 5000 Hz; handles 40 W continuous, impedance 8 ohms; tweeter level control; 27" H x 15 1/2" W x 10 1/2" D ..... \$200 pr.

## AKAI

### SW-T70 Speaker System

Three-way floor-standing speaker system with 12-in woofer, 5-in midrange, and 1 1/2-in tweeter; frequency response 35-20,000 Hz; crossovers at 1500 and 5000 Hz; max. input 100 W; rated impedance 8 ohms; midrange and tweeter level controls; walnut vinyl enclosure with removable cloth grille; 31.1" H x 15.4" W x 10.8" D ..... \$250  
**SW-T50.** Similar to SW-T70 except uses 10-in woofer; frequency response 40-20,000 Hz; max. input 80 W; midrange level control; 27.4" H x 13.8" W x 10.8" D ..... \$180

### Mini Component Series

#### SW-N5 Speaker System

Two-way mini speaker system with 6.5-in woofer and 1.2-in tweeter; available as part of UC-5 Mini Component Series; frequency response 50-20,000 Hz; max. input 100 W; rated impedance 6 ohms; 12.6" H x 7.5" W x 10.3" D ..... \$300 pr.  
**SW-N2.** Similar to SW-N5 except uses 4-in woofer; available as part of UC-2 Mini Component Series; max. input 50 W; 9.4" H x 4.8" W x 7" D. \$185 pr.

## RICHARD ALLAN by RCS AUDIO

### Monitor 80 Speaker System

Three-way acoustic-suspension speaker system with 10-in Richard Allan woofer, 5-in Richard Allan midrange, and 1-in Richard Allan dome tweeter; frequency response 40-20,000 Hz  $\pm$  3 dB; crossovers at 1000 and 6000 Hz; sensitivity 96 dB SPL/8 W/m; input range 25-100 W; impedance 8 ohms; wal-



nut veneer cabinet; 26" H x 12" W x 11 1/4" D..... \$425

### RA-8 Speaker System

Two-way acoustic-suspension bookshelf speaker system with 8-in bextrene woofer and 3/4-in dome tweeter; frequency response 90-20,000 Hz  $\pm$  3 dB; crossover at 3500 Hz; sensitivity 90 dB SPL/10 W/m; input range 10-30 W; impedance 8 ohms; walnut veneer; 15 1/2" H x 10 1/2" W x 9 1/4" D ..... \$163

## ALLISON

### Model One Speaker System

Stabilized radiation loading design with two 10-in woofers, two 3 1/2-in convex midrange units, and two 1-in convex tweeters; crossovers at 350 and 3750 Hz; LC half-section crossover network, air-core chokes, and nonpolarized computer-grade capacitors; features two control switches for selection of system acoustic power response (flat to concert-hall balance slope); 8-ohm impedance; efficiency 0.7% when placed at floor-wall intersection; minimum amplifier power 30 W/ch for 100-dB SPL in reverberant field; acoustic power output 1/2 acoustic watt minimum over full frequency range, with 70-W input; system resonance 45 Hz nominal; sealed oiled walnut enclosure 40" H x 19" W x 10 3/4" D, internal volume 2550 cubic inches..... \$460

**Model Two.** Same as Model One except has two 8-in woofers, two 3 1/2-in convex midrange, and two 1-in convex tweeters; system resonance 52 Hz nominal; sealed oiled walnut enclosure 36" H x 16" W x 9 3/4" D, internal volume 1775 cubic inches.... \$390

**Model Three.** Stabilized radiation-loading system with 10-in woofer, 3 1/2-in convex midrange, 1-in convex tweeter; LC half-section crossover network; crossovers at 350 and 3750 Hz; min. amp power 30 W/ch for 100-dB reverberant SPL; resonance freq. 45 Hz; designed for corner mounting; two control switches select system acoustic power response; 4-ohm impedance; high-density particle board, walnut veneered, oil finished; 40" H x 15 1/4" W x 10" D (occupies 10 7/8" wall space min.).. \$320

### Model Four Speaker System

Two-way stabilized radiation-loading system with 8-in woofer and two 1-in "Convex Diaphragm" tweeters; crossover at 2000 Hz; LC quarter-section network with three-position control switch to adjust response from nominally flat to "concert-hall" balance slope; 52 Hz resonance; 8-ohm impedance; amp power 30 W/ch for 100-dB SPL in reverberant field; designed to be used against wall or hung on wall (hardware included); walnut-veneered high-density particle board, oiled finish; 11" H x 19 3/4" W x 10" D ..... \$220

### Model Five Speaker System

Two-way stabilized radiation-loading speaker system with 8-in woofer and 1-in convex tweeter; crossover at 2000 Hz; LC quarter-section network with two-position control switch to adjust response to flat or HF slope; 52-Hz resonance; 4-ohm impedance; amp output 15 W/ch for 97-dB SPL in reverberant field; designed for placement against single wall; oiled walnut veneer finish; 11" H x 18 1/2" W x 10" D..... \$160

**Model Six.** Same as Model Five except has 59-Hz resonance; walnut-grain vinyl finish; 11 1/4" H x 11 1/4" W x 11 1/4" D..... \$125

## ALTEC LANSING

### 18 Speaker System

Two-way vented floor-standing enclosure with 15-in bass driver and "Radial Phase Plug" driver mounted on 811B sectoral horn; frequency response 30-20,000 Hz; crossover at 1200 Hz; operational power range 10 to 350 W; long-term broadband max. power 65 W; 8 ohm impedance; dispersion 105 degrees at -6 dB both vertical and horizontal; max. long-term acoustic output 120 dB at 65 W; hand-rubbed oiled walnut or oak finish; acoustically transparent knit fabric grille mounted on removable frame; 39" H x 30" W x 21" D (including base and grille)..... \$900

### 18 Speaker System

Two-way vented floor-standing speaker system features 15-in bass driver with coaxially mounted, constant directivity control horn and compression driver; frequency response 30-20,000 Hz; crossover at 1500 Hz; sensitivity 100 dB (SPL 6), 103 dB (SPL 7); 50-degree dispersion at -6 dB vertical, 70 degrees at -6 dB horizontal; 65 W max. power long-term broadband capacity; 10-350 W amplifier operating range; long-term max. acoustic output 118 dB SPL at 65 W; nominal impedance 8 ohms; hand-rubbed oiled-oak finish with transparent black knit fabric on removable frame grille; 40" H x 26" W x 18" D..... \$900

### A7X Voice of the Theatre

Two-way floor-standing speaker system incorporates 16-in bass speaker in combination with front-loaded exponential horn and rear-loaded bass reflex baffle, high-frequency compression driver loaded with cast aluminum sectoral horn having exponential expansion and a dividing network/dual-band variable equalizer; frequency response 55-20,000 Hz  $\pm$  6 dB; crossover 12 dB/octave at 1200 Hz; 65 W max. continuous power capacity from 20-20,000 Hz; pressure sensitivities 101 dB SPL at 4 ft with 1 W input from 500-3000 Hz, 102.5 dB SPL at 1 m with 1 W input from 500-3000 Hz; dispersion 40 degrees at -6 dB vertical, 90 degrees at -6 dB horizontal; 8-ohm impedance; max. midrange attenuation 12 dB at 2000 Hz; max. high-frequency attenuation -4 dB at 10 kHz; metallic gray finish; 52 1/4" H x 30" W x 24" D ..... \$825

### Model 14 Speaker System

Two-way floor-standing speaker system with 12-in radial phase plug compression woofer mounted to Mantaray™ constant directivity horn; frequency response 35-20,000 Hz; crossover at 1500 Hz; recommended input range 10-350 W; sensitivity 95 dB SPL/W/4-ft; 8-ohm nominal impedance; vented enclosure; hand-rubbed oiled walnut finish with acoustically transparent black knit fabric grille mounted on removable frames; mid- and high-frequency level controls and Automatic Power control; 30" H x 21" W x 16 1/2" D ..... \$530

### Santana II Speaker System

Two-way floor-standing vented enclosure with 12-in bass driver and 8-in frame cone tweeter; frequency response 40-20,000 Hz; crossover at 2500 Hz; max. power 45 W; operational power range 12 to 150 W; long-term max. acoustic output 107.5-dB SPL at 45 W; 8-ohm impedance; hand-rubbed oiled walnut finish with composition slate top; acoustically transparent black knit fabric grille mounted on removable frame; 25 1/4" H x 19" W x 16" D.. \$330

### Mid-Size Speaker Line

#### 8 Speaker System

Three-way vented speaker system with 12-in cast-alloy frame woofer, 5-in cast-alloy frame midrange, and LZT (lead zirconate titanate) compression tweeter with constant-directivity horn and radial phase plug; frequency response 55-20,000 Hz  $\pm$  2.5 dB; crossovers at 700 and 5000 Hz; sensitivity 92 dB SPL; input range 20-200 W; nominal impedance 8 ohms; automatic power control with LED overload indicator; anechoically-damped foam-alloy baffle; imported lacquered Endriana wood cabinet with transparent black heavy-knit grille; 29.5" H x 16.5" W x 14" D..... \$450

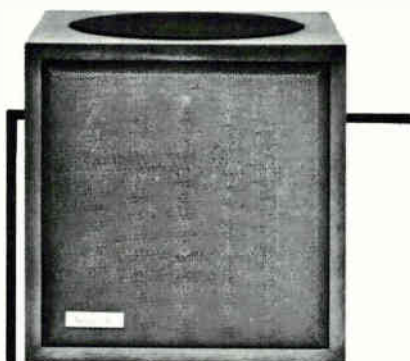
**8.** Similar to 8 except uses 10-in woofer; frequency response 60-20,000 Hz  $\pm$  2.5 dB; sensitivity 90 dB SPL; 25.5" H x 15.5" W x 13.5" D ..... \$350

**4.** Similar to 6 except two-way system minus midrange driver; frequency response 60-20,000 Hz  $\pm$  3 dB; crossover at 2000 Hz; sensitivity 88 dB SPL; 23" H x 14 1/4" W x 12 1/4" D..... \$250

#### LF-2 Coffee Table Subwoofer

Tuned vented square coffee table-designed subwoofer with 12-in bass driver; includes high-power amplifier and electronic crossover with frequency selectable crossovers at 40, 60, and 80 Hz; adjustable sensitivity to match most speaker systems; power control with LED overload indicator; imported lacquered Endriana veneer wood table with nickel

# Le Cube.



The ALLISON: SIX™ is our smallest loudspeaker system. It is an 11-inch cube incorporating the Allison® Room-Matched® design principle.

While compact, the model Six is not a "mini" system in any sense. Its low-frequency output is flat to below 50 Hz with reasonable system efficiency. The highest audible frequencies are reproduced smoothly and dispersed uniformly by the same convex-diaphragm tweeter used in the most expensive Allison models. Allison Sixes are accurate, full-range loudspeaker systems, without allowance for size or price.

*Revue du Son*, in a feature review, \* said "La 'petite' Allison Six est une grande enceinte [loudspeaker]."

If the reviewer is correct in his judgment, you can now buy a pair of great loudspeaker systems for about \$250. And you won't have to move out any furniture to make room for them.

Full-range performance is possible from loudspeakers that can be used as bookends on an open shelf. The Allison Six costs from \$125 to \$131, depending on shipping distance.

Descriptive literature, including complete specifications, is available on request.

For literature and information call (800) 225-4791 [in MA (617) 237-2670] or send coupon.

\**Revue du Son*, No. 32 (November, 1979)



## ALLISON ACOUSTICS

Seven Tech Circle / Natick, MA 01760, U.S.A.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

# 11 SPEAKER SYSTEMS

steel legs.....\$950  
**LF-1.** Similar to LF-2 minus high-power amplifier and electronic crossover; has dual-voice-coil 12-in



bass driver and passive crossover circuitry with 80-Hz fixed crossover; sensitivity adjustable over 18-dB range.....\$700

## ATLANTIS

### Atlantean Series

#### Atlantean III Speaker System

Three-way bass-reflex floor-standing speaker system with 15-in woofer, 5-in closed-back midrange, and two 1-in horn-loaded dome tweeters; features early diffraction treble section; frequency response 45-20,000 Hz  $\pm 5$  dB; crossovers at 800 and 4000 Hz; sensitivity 95 dB SPL/W/m; recommended input range 5-150 W/ch continuous; impedance 4 ohms; tweeter level control; birch-grain vinyl cabinet with wrap-around brown cloth grille; 30" H  $\times$  17 $\frac{1}{2}$ " W  $\times$  14 $\frac{7}{8}$ " D.....\$300

**Atlantean II.** Similar to III except has 12-in woofer, 5-in closed-back midrange, and one 1-in horn-loaded dome tweeter; frequency response 50-20,000 Hz  $\pm 5$  dB; sensitivity 92 dB SPL/W/m; recommended input range 5-100 W/ch continuous; 25" H  $\times$  14 $\frac{1}{8}$ " W  $\times$  13 $\frac{7}{8}$ " D.....\$250

**Atlantean I.** Similar to II except with 10-in woofer; frequency response 55-20,000 Hz  $\pm 5$  dB; sensitivity 90 dB SPL/W/m; recommended input range 5-80 W/ch continuous; 23" H  $\times$  12 $\frac{1}{2}$ " W  $\times$  12 $\frac{3}{4}$ " D.....\$200

### Award Series

#### Award 1203 Speaker System

Three-way acoustic-suspension speaker system with 12-in woofer, 4-in midrange, and 2-in cone tweeter; frequency response 55-18,000 Hz  $\pm 6$  dB; crossovers at 800 and 3000 Hz; sensitivity 90 dB SPL/W/m; min. input 2 W; impedance 8 ohms; tweeter level control; hickory vinyl cabinet with dark brown foam grille; 26" H  $\times$  15.5" W  $\times$  12" D.....\$200

**Award 1003.** Similar to 1203 except with 10-in woofer; frequency response 60-18,000 Hz  $\pm 6$  dB; sensitivity 88 dB SPL/W/m; 24" H  $\times$  14" W  $\times$  11" D.....\$170

#### Award 1002 Speaker System

Two-way acoustic-suspension bookshelf speaker system with 10-in woofer and 2-in cone tweeter; frequency response 60-18,000 Hz  $\pm 7$  dB; crossover at 3000 Hz; sensitivity 87 dB SPL/W/m; min. input 2 W; impedance 8 ohms; hickory vinyl cabinet with dark brown foam grille; 22 $\frac{1}{2}$ " H  $\times$  13" W  $\times$  10 $\frac{1}{2}$ " D.....\$130

## AUDIOALLEY

#### AS-4 Speaker System

Four-way speaker system with 12-in woofer, 5-in cone midrange, 3-in cone tweeter, and 2-in dome

supertweeter; frequency response 30-20,000 Hz  $-5$  dB; crossovers at 700, 1300, and 10,000 Hz; sensitivity 97 dB SPL/W/m; input range 10-100 W; 8-ohm impedance; midrange and tweeter level controls; oiled walnut veneer cabinet with detachable brown grille; 24" H  $\times$  15" W  $\times$  10 $\frac{1}{2}$ " D.....\$598 pr.

#### AS-3 Speaker System

Three-way infinite baffle speaker system with 10-in woofer, 4 $\frac{1}{2}$ -in cone midrange, and 3-in cone tweeter; frequency response 35-20,000 Hz  $-5$  dB; crossovers at 1000 and 5000 Hz; sensitivity 97 dB SPL/W/m; input range 5-65 W; 8-ohm impedance; oiled walnut veneer cabinet with detachable brown cloth grille; 22" H  $\times$  13" W  $\times$  8" D.....\$380 pr.

#### AS-1 Speaker System

Two-way speaker system with 8-in woofer and 3-in cone tweeter; frequency response 40-20,000 Hz  $-5$  dB; crossover at 4000 Hz; sensitivity 97 dB SPL/W/m; input range 5-45 W; 8-ohm impedance; walnut veneer cabinet with detachable brown grille; 22" H  $\times$  13" W  $\times$  6" D.....\$230 pr.

## AUDIO ELECTRONICS SYSTEMS

#### AES 25 Speaker System

Four-way phase-coherent floor-standing speaker system with two 10-in flat woofers, 3-in soft dome lower midrange, 1 $\frac{1}{2}$ -in soft dome upper midrange, and 1-in soft dome tweeter; frequency response 24-20,000 Hz; crossovers at 250, 700, and 3000 Hz; sensitivity 90 dB SPL/W/m; input range 50-200 W; nominal impedance 8 ohms; continuously-variable lower midrange, upper midrange, and tweeter level controls; walnut veneer finish; 42.5" H  $\times$  14" W  $\times$  9" D.....\$585

#### AES 50 T Speaker System

Three-way air-suspension floor-standing speaker system with 12-in woofer, two 2-in soft dome midrange drivers, and 1-in soft dome tweeter; frequency response 25-20,000 Hz; crossovers at 600 and 1500 Hz; sensitivity 93 dB SPL/W/m; input range 50-150 W continuous; nominal impedance 8 ohms; three-position midrange and tweeter level controls; walnut-grain vinyl finish; 34.5" H  $\times$  16" W  $\times$  11.5" D.....\$399

#### AES 42 Speaker System

Three-way air-suspension floor-standing speaker system with 12-in woofer, 1 $\frac{1}{2}$ -in soft dome midrange, and 1-in soft dome tweeter; frequency response 30-20,000 Hz; crossovers at 600 and 2000 Hz; sensitivity 94 dB SPL/W/m; input range 25-100 W continuous; nominal impedance 8 ohms; continuously variable midrange and tweeter level controls; walnut-grain vinyl finish; 27" H  $\times$  15.75" W  $\times$  11.5" D.....\$249

**AES 32.** Similar to AES 42 except has 2-in cone tweeter; frequency response 35-17,000 Hz; crossovers at 700 and 3000 Hz; input range 10-75 W continuous; continuously variable tweeter level control; 26" H  $\times$  14 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{8}$ " D.....\$189

## AUDIO ILLUSIONS

#### The Kenner Model S-1 Speaker System

Two-way floor-standing/bookshelf air-suspension speaker system with 8-in woofer and reflecting tweeter assembly; wide-dispersion pattern; frequency response 40-20,000 Hz  $\pm 3$  dB; input range 40-125 W/ch continuous; nominal impedance 4 ohms; hand-rubbed walnut veneer cabinet; 22.5" H  $\times$  10.25" W  $\times$  9" D.....\$290

## AUDIOMARKETING

#### Big Red Speaker System

Two-way tuned bass-reflex floor-standing speaker system with 15-in cone woofer and coaxial horn tweeter; frequency response 40-18,000 Hz  $\pm 2$  dB; crossover at 2700 Hz, sensitivity 99 dB/W/m; input range 10-200 W; impedance 16 ohms; two-band equalization controls; formica-type finish; 30" H  $\times$  23" W  $\times$  17" D.....\$1095

#### Little Red Speaker System

Two-way acoustic-suspension speaker system with 12-in cone woofer and  $\frac{7}{8}$ -in dome tweeter in time/synchronized array; frequency response 40-18,000 Hz  $\pm 2$  dB; crossover at 2000 Hz; input range 20-100 W; impedance 8 ohms; two-band equalization controls; formica-type finish; 24" H  $\times$  16" W  $\times$  12" D.....\$250

## AUDIOMASTER by RCS AUDIO

#### MLS 4 Speaker System

Two-way bass-reflex floor-standing speaker system with 8-in Audax bextrene woofer and 1-in Audax soft dome tweeter; frequency response 50-20,000 Hz  $\pm 3$  dB; crossover at 3000 Hz; sensitivity 85 dB SPL/W/m; input range 15-75 W; impedance 8 ohms; walnut veneer cabinet; 24 $\frac{1}{2}$ " H  $\times$  10 $\frac{3}{4}$ " W  $\times$  12 $\frac{1}{2}$ " D.....\$275

#### LS 3/5A Speaker System

Two-way BBC-designed acoustic-suspension mini monitor speaker system with 4 $\frac{1}{2}$ -in bextrene woofer and 1-in hard dome tweeter; frequency response 80-20,000 Hz  $\pm 3$  dB; crossover at 3000 Hz; sensitivity 87.5 dB SPL/10 W/m; input range 15-50 W; impedance 8 ohms; walnut veneer finish; 11 $\frac{1}{4}$ " H  $\times$  7 $\frac{1}{4}$ " W  $\times$  6 $\frac{1}{2}$ " D.....\$263

#### MLS 1 Speaker System

Two-way acoustic-suspension bookshelf speaker system with 6-in Audax bextrene woofer and 1-in Audax soft dome tweeter; frequency response 60-20,000 Hz  $\pm 4$  dB; crossover at 3000 Hz; sensitivity 84 dB SPL/W/m; input range 15-60 W; impedance 8 ohms; walnut veneer cabinet; 14 $\frac{1}{2}$ " H  $\times$  9" W  $\times$  7 $\frac{1}{2}$ " D.....\$175

## AUDIO PRO by INTERSEARCH

#### AA-14 Bi-amplified Speaker System

Three-way bi-amplified bass-reflex bookshelf speaker system incorporates Ace-Bass™ subwoofer using two 5-in down-firing rear-mount woofers and one amplifier and flush-mount 4 $\frac{1}{2}$ -in cone midrange and 1-in soft dome tweeter with separate amplifier; frequency response 30-20,000 Hz  $\pm 2$  dB; crossovers at 300 and 2500 Hz; dist. 2% at 96-dB SPL/half-space/1 m at 30 Hz. Features room-matching bass control, tweeter control, sensitivity control (100 mV-50 V range), left/right signal push-button, bass-blend pushbutton control, and power on/off signal-actuated in automatic mode; walnut or black-ash finish; 20 $\frac{1}{2}$ " H  $\times$  12 $\frac{1}{4}$ " W  $\times$  10 $\frac{1}{2}$ " D.....\$1750 pr.

#### B2-50 Amplified Subwoofer

Bass-reflex port design incorporates two long-throw 6 $\frac{1}{2}$ -in cone drivers in push-pull arrangement with built-in power amplifier (affects oscillating mass, damping, and compliance of drivers) and flexible electronic crossover filter (subwoofer correctly interfaces with any satellite system); frequency response 20-200 Hz  $\pm 1.5$  dB; dist. 3% at 20 Hz and 1% above 50 Hz at 100-dB SPL/half space/m; sensitivity adjustable 0-100% (96-dB SPL at 50 mV); 150 W power; separate continuously variable volume and crossover controls for subwoofer and satellite speakers; sensitivity control for subwoofer; power on/off signal-actuated in automatic mode; includes 2-in casters; walnut or black-ash finish; 21 $\frac{1}{4}$ " H  $\times$  18 $\frac{3}{4}$ " W  $\times$  17 $\frac{1}{4}$ " D.....\$995

#### B2-40 Amplified Subwoofer

Bass-reflex port design incorporates two long-throw 5 $\frac{1}{2}$ -in cone woofers in push-pull arrangement with built-in amplifier (affects oscillating mass, damping, and compliance of drivers) and crossover filters; frequency response 30-200 Hz  $\pm 1.5$  dB; dist. 3% at 30 Hz and 1% above 60 Hz at 100 dB SPL/half space/m; variable loudness and crossover controls for subwoofer and satellite speakers; sensitivity control for subwoofer; walnut or black-ash finish; 20.5" H  $\times$  14.75" W  $\times$  14.75" D.....\$695

#### S2-7 Satellite Speakers

Two-way wall-mount satellites with 7-in midrange



and 1-in soft dome tweeter; frequency response 100-20,000 Hz  $\pm 2$  dB (when mounted against wall); high efficiency; walnut or black-ash finish with grille; 15.5" H x 9" W x 5.75" D..... \$495 pr.

## AUDIOSOURCE

### LS-Three Speaker System

Three-way acoustic-suspension compact speaker system with 5-in long-throw woofer, 1 1/2-in soft dome midrange, and 1-in soft dome tweeter; frequency response 80-20,000 Hz; crossovers at 1200 and 5000 Hz; sensitivity 85 dB/W/m; input range 10-70 W; impedance 8 ohms; cast aluminum cabinet with metal grille; 10 1/4" H x 6 3/4" W x 5 1/4" D..... \$160

## AUDIOSTATIC by H&H INT'L

### ES 240 Speaker System

Electrostatic floor-standing speaker system incorporating wafer-thin membrane uniformly driven on both sides over entire surface by alternating tension on heavy perforated steel electrodes; system includes two panels connected by hinges to a central panel; high-voltage power amplifier, (not included) situated in center panel, required..... \$1995

## AVID

### Model 330 Speaker System

Three-way acoustic-suspension floor-standing speaker system with 12-in forward-aligned shallow-cone woofer, 2-in fabric dome midrange, and 1-in fabric dome tweeter; frequency response 35-20,000 Hz  $\pm 3$  dB; crossovers at 575 and 5000 Hz; input range 15-250 W/ch continuous (program); nominal impedance 8 ohms; two front-mounted midrange and high-frequency balance switch controls; walnut veneer cabinet with dark brown solid grille; 30 1/4" H x 17" W x 10 1/4" D..... \$450

Model H/200. Speaker stands..... \$60 pr.

### Model 230 Speaker System

Three-way air-suspension bookshelf speaker system with 10-in high-compliance woofer, 4 1/2-in isolated-cone midrange, and 1-in fabric dome tweeter; frequency response 40-20,000 Hz  $\pm 3$  dB; crossovers at 900 and 5000 Hz; input range 15-150 W/ch continuous (program); 8-ohm nominal impedance; front-mounted midrange and high-frequency controls; walnut vinyl finish with dark brown solid grille; 25" H x 15" W x 10" D..... \$250

### Model 102a Speaker System

Two-way air-suspension bookshelf speaker system with 10-in high-compliance woofer and 1-in plastic dome tweeter; frequency response 44-18,000 Hz  $\pm 3$  dB; crossover at 2200 Hz (12 dB/octave); input range 15-100 W continuous (program); 8-ohm nominal impedance; front-mounted three-position high frequency level control; walnut vinyl finish with dark brown solid grille; 25" H x 15" W x 9 3/4" D..... \$175

### 110 Speaker System

Two-way bookshelf speaker system with 8-in high compliance woofer and 1-in soft dome tweeter; frequency response 48-20,000 Hz  $\pm 3$  dB; crossover at 2500 Hz; handles 100 W continuous power; 8-ohm nominal impedance; walnut grain vinyl finish with dark brown solid grille; 21 1/4" H x 12 1/4" W x 9 3/4" D..... \$145

## BANG & OLUFSEN

### Beovox Phase-Link M-100-2 System

Four-way bass-reflex floor-standing monitor speaker system with 12-in woofer, 4 1/2-in Phase-Link filler driver, 2 1/2-in dome midrange, 1 1/2-in dome tweeter, and 3/4-in super dome tweeter; frequency response 35-22,000 Hz  $\pm 4$  dB; crossovers at 550, 2500, and 8000 Hz; harmonic dist. 1% max.; max. input 100 W continuous, 150 W music power; 4- to 8-ohm impedance; 130° dispersion; LED overload

indicator; includes speaker stand; rosewood veneer cabinet; 29 3/4" H x 15 1/4" W x 12" D..... \$1600

### Beovox Phase-Link M-75 System

Three-way pressure chamber floor-standing monitor speaker system with 10-in woofer, 4 1/2-in Phase-Link filler driver, 2 1/2-in dome midrange, and 1-in dome tweeter; frequency response 38-20,000 Hz  $\pm 4$  dB; crossovers at 500 and 4500 Hz; harmonic dist. 1% max.; max. input 75 W continuous, 125 W music power; 4- to 8-ohm impedance; 120° dispersion; LED overload indicator; includes speaker stand; rosewood veneer cabinet; 25 3/4" H x 13 3/4" W x 10 3/4" D..... \$980

### Beovox Phase-Link S-75 System

Three-way pressure chamber shelf- or wall-mount speaker system with 10-in woofer, 5-in Phase-Link filler driver, 2-in dome midrange, and 1-in dome tweeter; frequency response 42-20,000 Hz  $\pm 4$  dB at 1% max. harmonic dist.; crossovers at 700 and 4000 Hz; max. input 75 W continuous, 100 W music power; impedance 4-8 ohms; 120-degree dispersion; rosewood veneer cabinet; optional speaker stand available; 23 1/4" H x 12 1/2" W x 10" D.. \$680

### Beovox Phase-Link P-45 System

Two-way pressure chamber wall-mount panel speaker system with two 5-in woofers, 3 1/2-in Phase-Link filler driver, and 1-in dome tweeter; frequency response 55-20,000 Hz  $\pm 4$  dB; crossover at 2000 Hz; harmonic dist. 1% max.; max. input 45 W continuous, 75 W music power; 4- to 8-ohm impedance; 120° dispersion; 25 3/4" H x 13 3/4" W x 5 1/4" D..... \$550

### Beovox Phase-Link C-75 System

Two-way rear-radiating log-line bookshelf speaker system with two 4-in woofers and 1-in tweeter; frequency response 75-20,000 Hz  $\pm 4$  dB; crossover at 2500 Hz; dist. 1.0%; max. input 75 W continuous, 90 W music; 6-ohm impedance; 90° dispersion; anodized black or brushed extruded aluminum finish; 12 1/4" H x 4 3/4" W x 7 1/4" D..... \$500

### Beovox Phase-Link S-45-2 System

Two-way shelf- or wall-mount speaker system with 8-in woofer, 3 1/2-in Phase-Link filler driver, and 1-in dome tweeter; frequency response 49-20,000 Hz  $\pm 4$  dB; crossover at 2000 Hz; dist. 1.0%; max. input 45 W continuous, 75 W music; impedance 4-8 ohms; 120° dispersion; optional speaker stand available; rosewood veneer cabinet; 18 1/4" H x 10 1/4" W x 8 1/4" D..... \$395

### Beovox Phase-Link P-30 System

Two-way pressure chamber wall-mount panel speaker system with 6 1/2-in woofer and 1-in dome tweeter; frequency response 58-20,000 Hz  $\pm 4$  dB; crossover at 3000 Hz; harmonic dist. 2% max.; max. input 30 W continuous, 50 W music power; 4- to 8-ohm impedance; 120° dispersion; 21 1/2" H x 11 1/2" W x 4 1/2" D..... \$350

### Beovox Phase-Link C-30 System

Two-way rear-radiating log-line bookshelf speaker system with 4-in woofer and 1-in tweeter; frequency response 100-20,000 Hz  $\pm 4$  dB; crossover at 2500 Hz; dist. 1.0%; input 40 W music; 6-ohm impedance; 90° dispersion; brushed aluminum finish; 12 1/4" H x 4 3/4" W x 5 3/4" D..... \$225

### Beovox S-30 Speaker System

Two-way bookshelf speaker system with 8-in woofer and 1-in tweeter; frequency response 75-18,000 Hz  $\pm 4$  dB; crossover at 3000 Hz; input 50 W music power; impedance 4-8 ohms; rosewood veneer finish; 18 1/4" H x 10 1/4" W x 7 1/4" D..... \$225

## BELLES RESEARCH

### Belles I Speaker System

Two-way passive-radiator free-field floor-standing speaker system with 8-in high-compliance woofer and 10-in rear-panel-mount auxiliary bass radiator mounted in chamfered-edge baffle board supported on walnut stand and free-field-mounted acoustically-transparent-foam-encased tweeter suspended

several inches above enclosure and lying in spacial plane above and behind woofer cone; frequency response 30-20,000 Hz; crossover at 2700 Hz; input range 40-200 W/ch continuous; infinitely variable tweeter level control; walnut finish with black foam grille; 33 3/4" H x 15" W x 17 1/4" D..... \$375

## B. E. S.

### SM300 Speaker System

Four-way floor-standing speaker system with three dynamic drivers and one piezo electric driver activating 1750-sq-in polymer diaphragm pulsating plane; frequency response 30-22,000 Hz; crossovers at 500, 5000, and 10,000 Hz; sensitivity 96 dB/4 W/m; input range 25-250 W/ch continuous; nominal impedance 8 ohms; midrange and tweeter level controls; biamplification capabilities; wood cabinet; 53.5" H x 22" W x 6.75" D..... \$549

### SM270 Speaker System

Three-way floor-standing speaker system with two dynamic drivers and one piezoelectric driver activating 850-sq-in polymer diaphragm pulsating plane; frequency response 32-22,000 Hz; crossovers at 800 and 10,000 Hz; efficiency 96 dB/5 W/m; input range 10-200 W/ch continuous; nominal impedance 8 ohms; tweeter and midrange level controls; wood cabinet; 32.5" H x 22" W x 6.75" D..... \$389

### SM252 Speaker System

Two-way speaker system with two drivers activating 850-sq-in polymer diaphragm pulsating plane; frequency response 38-19,000 Hz; crossover at 900 Hz; efficiency 96 dB/5 W/m; input range 5-180 W/ch continuous; nominal impedance 8 ohms; tweeter level control; wood cabinet; 30.5" H x 20" W x 5.75" D..... \$279

### SM260 Speaker System

Geostatic three-way floor-standing speaker system with two dynamic and one piezoelectric drivers activating 850 in<sup>2</sup> polymer diaphragm pulsating plane; frequency response 38-22,000 Hz; crossovers at 800 and 10,000 Hz; efficiency 88 dB SPL/W/m; max. input 60 W (8 hrs, 400 Hz); recommended amplifier power 5-150 W/ch continuous; nominal impedance 8 ohms; high-frequency and midrange level controls; wood cabinet; 30.25" H x 20" W x 5.75" D..... \$249

### SM250 Speaker System

Geostatic two-way speaker system with two drivers activating 850 in<sup>2</sup> polymer diaphragm pulsating plane; frequency response 40-19,000 Hz; crossover at 800 Hz; sensitivity 88 dB SPL/W/m; recommended amplifier power 5-125 W/ch continuous; nominal impedance 8 ohms; wood cabinet; 28.5" H x 19" W x 4.25" D..... \$199

## B • I • C

### Sound Span TPR 600 Speaker System

Three-way floor-standing speaker system with total power radiator comprised of completely-aligned integrated 12-in horn-loaded woofer and matched horn-loaded compression midrange and horn-loaded tweeter; sensitivity 93 dB/W/m; max. input 130 W continuous music power; impedance 6-8 ohms; walnut veneer cabinet with transparent black top-covering wrap-around grille; 41 1/4" H x 15 1/4" W x 15 1/4" D..... \$420

**TPR 400.** Similar to TPR 600 except uses 10-in woofer with smaller matched midrange and tweeter; sensitivity 92 dB/W/m; max. input 100 W continuous; 38 1/4" H x 13" W x 13" D..... \$350

**TPR 200.** Similar to TPR 400 except uses 8-in woofer with smaller matched midrange and tweeter; sensitivity 90 dB/W/m; max. input 75 W continuous; 32 1/2" H x 11 1/4" W x 11 1/4" D..... \$250

### TPR 100 Speaker System

Two-way bookshelf speaker system with 5-in upper bass/midrange, complementary passive radiator, and 1 1/2-in dynamic tweeter; max. input 50 W; impedance 4 ohms; simulated walnut-grain cabinet

# 11 SPEAKER SYSTEMS

with removable black transparent grille; 15" H x 9" W x 7 1/2" D..... \$130

## BLACKMAX SYSTEMS

### Rock Monitor Speaker Systems

Designed and equalized to reproduce rock music; three models available as three-way floor-standing tower speaker systems with 8, 10, or 12-in woofer; three-position midrange and tweeter equalization controls; tweeter overload protection and circuit breaker..... from \$299-\$499

## BML

### Tracer 2001 Sound Odyssey

Four-way floor-standing planar column speaker system with 8 1/2-in woofer, two staggered-resonance Bextrene ABRs, 5 1/2-in bextrene rear-sealed VHF drivers; frequency response 24-22,000 Hz +6 dB/-4 dB; textured black acrylic with oiled-walnut finish racks and base (white lacquer case and rose-wood racks and base optionally priced)..... \$1100

### Tracer 1501 Sound Rack

Bifurcated transmission line speaker system has two 1 1/2-in inverted-apex direct radiators, 4 1/2-in bextrene ABR, 5 1/2-in bextrene midrange; frequency response 29-22,000 Hz; input range 30-200 W/ch continuous; textured black acrylic with oiled-walnut finish racks and base (white lacquer case and rose-wood racks and base optionally priced); 51" H x 20" W x 5" D..... \$680

### Tracer 1000 Sound Window

Three-way sealed planar column speaker system featuring DualPhase coupling with 7-in bextrene ABR, 7 1/2-in lightweight woofer, and lead-zirconate, lead-titanate bimorph VHF driver; input range from 20-200 W continuous; black acrylic with oiled walnut sides and base with ebony grille..... \$440

### Tracer 1001A Sound Window

Two-way floor-standing planar column speaker system with 8-in ABR and lead-zirconate, lead-titanate bimorph VHF driver; dual phase coupling of main drivers; frequency response 30-20,000 Hz ±3 dB; max. input 200 W continuous; min. input 25 W continuous; finished in black acrylic with natural oiled walnut sides and base with ebony grille; 33" H x 20" W x 5" D..... \$440

## Tracer Reference Series

### 130 Speaker System

Truncated-column floor-standing speaker system with polymer-treated woofer and active bass radiator; drivers are flush-mounted in radius-cornered enclosure; phase compensation network; textured black acrylic finish with oiled walnut pedestal and wrap-around grille; 54" H x 13" W x 13" D... \$600

### 120 Speaker System

Truncated-column floor-standing speaker system with flush-mounted drivers in radius-cornered enclosure; phase compensation network; textured black acrylic finish with oiled walnut pedestal and wrap-around grille; 39" H x 13" W x 13" D.... \$370

### Eleven Speaker System

Speaker system has 7 1/2-in bexiform ABR with rubber surround, 10-in passive radiator, and 2-in edge-damped direct radiator VHF unit; frequency response 28-22,000 Hz; input range 20-200 W/ch; oiled walnut finish with ebony grille; 14 1/2" H x 10" W x 25 1/2" D..... \$250

### 10 Speaker System

Two-way bookshelf speaker system with shunted

coil for tapered acoustic response; frequency response 43-20,000 Hz; input range from 5-100 W continuous; oiled walnut finish with cocoa grille; 22" H x 10" W x 8" D..... \$160

## BOSE

### 901 Series IV Speaker System

Direct/reflecting acoustic-matrix floor-standing speaker system with Active Equalizer. Eight rear-facing and one front-facing 4 1/2-in full-range speakers; input range 10 W to unlimited power; 8-ohm impedance; pentagon-shaped cabinet utilizes multi-cell injection molded core with particle board external panels and walnut veneer finish. Active Equalizer: continuously adjustable high-frequency contour slider with center detent provides shelving with range of ±3 dB above 4000 Hz; continuously adjustable mid-bass contour slider with center detent provides +3/-5 dB adjustment over band of 80-260 Hz; "Below 40" contour control has two positions for 8-dB decrease at 40 Hz; tape monitor switch; input impedance 60,000 ohms; min. load impedance 5000 ohms; noise (A-weighted) 85 dB below 1 V; sold only in stereo pairs (equalizer supplied with each pair); equalizer 2 1/2" H x 11" W x 5" D; speaker 12 1/4" H x 21" W x 13" D... \$475 ea. Without equalizer..... \$405 ea.

**901 Speaker Pedestals.** Slim, contemporary speaker stands designed for 901 Series IV speakers.  
Black..... \$55/pr.  
Chrome..... \$65/pr.

### 601 Speaker System

Two-way direct/reflecting ported floor-standing speaker system with two 8-in woofers and four 3-in high-sensitivity tweeters; crossover at 2000 Hz; input range 20-150 W; 8-ohm impedance; rear-panel two-position symmetry control; walnut veneer laminated cabinet; sold only in stereo pairs; 25 1/2" H x 15" W x 13" D..... \$325 ea.

### 501 Speaker System

Two-way direct/reflecting acoustic-suspension floor-standing speaker system with 10-in long-excursion woofer and two 3 1/2-in tweeters; crossover at 1500 Hz; input range 20-100 W; 4-ohm impedance; direct energy control (adjustable vane in front of outward-facing tweeter matches spatial characteristics to tastes and room); tweeter protection circuit; walnut-grain vinyl finish cabinet; sold only in stereo pairs; 24" H x 14 1/2" W x 14 1/2" D. \$240 ea.

### 301 Speaker System

Two-way direct/reflecting ported bookshelf speaker system with 8-in woofer and 3-in tweeter; woofer transition frequency 3000 Hz, tweeter transition frequency 1200 Hz; min. input 10 W/ch continuous, max. input 60 W/ch continuous; 8-ohm impedance; direct energy control; tweeter protection circuit; particle board cabinet with walnut-grain vinyl veneer finish; sold only in stereo pairs; 10 1/2" H x 17" W x 9 1/2" D..... \$130 ea.

## BOSTON ACOUSTICS

### A200 Speaker System

Three-way acoustic-suspension floor-standing speaker system with 10-in woofer mounted close to floor, 4-in front-panel flush-mount cone midrange in sealed subenclosure, and 1-in front-panel flush-mount polyamide dome tweeter; frequency response 32-20,000 Hz ±2.5 dB; crossovers at 450 and 3000 Hz; sensitivity 90 dB/W/m; min. input 15 W; impedance 8 ohms nominal; walnut veneer cabinet with removable acoustically-transparent black cloth grille; includes integral black pedestal base; 41" H x 21" W x 6 3/4" D..... \$350  
Oak veneer cabinet with wheat-colored grille.. \$370

### A100 Speaker System

Two-way acoustic-suspension floor-standing speaker system with 10-in woofer and 1-in polyamide soft dome tweeter; frequency response 35-20,000 Hz ±3 dB; crossover at 1600 Hz; sensitivity 89 dB/W/m; min. input 15 W; impedance 8

ohms; woodgrain vinyl finish with removable acoustically-transparent black cloth grille; 30 1/2" H x 16 1/2" W x 8 1/2" D..... \$180

## BOZAK

### CS-310B Concert Grand Contemporary

Incorporates four B-199B woofers, two B-209B midrange speakers, and eight tweeters in vertical column for uniform dispersion; frequency response 28-20,000 Hz; 8-ohm impedance; max. input 150 W; min. input 60 W; matte walnut enclosure; 52" H x 36" W x 19" D..... \$1299

**CS-410CL.** Same as CS-310B except Classic cabinet..... \$1399

**CS-410M.** Same as CS-310B except Moorish styling..... \$1425

### Symphony No. 1 CS-4000A Modern

Infinite-baffle, three-way floor-standing system incorporating two 12-in woofers, 6 1/2-in midrange, and eight 2-in tweeters in vertical column; frequency response 35-20,000 Hz; crossovers at 400 and 2500 Hz at 6 dB/octave; 8-ohm impedance; max. input 150 W program; walnut enclosure; 44 1/2" H x 26 1/4" W x 15 1/2" D..... \$799

**CS-4000 CL.** Same as CS-4000A with Classic styling..... \$899

**CS-4000M.** Same as CS-4000A with Moorish styling..... \$950

**CS-4005A.** Same as CS-4000A except low-boy enclosure; 27 1/2" H x 36" W x 20" D..... \$799

### Concerto VII CS-501A Speaker System

Three-way floor-standing system with 12-in high-compliance bass driver, 6 1/2-in midrange, and three tweeters mounted in arc array for improved dispersion; frequency response 40-20,000 Hz; crossovers at 800 and 2500 Hz at 6 dB/octave; 8-ohm impedance; max. input 60 W program; 30" H x 20 1/2" W x 16" D..... \$499

### LS-400A Speaker System

Three-way infinite-baffle speaker system with 12-in cone woofer, 6-in cone midrange, and 1-in soft dome tweeter; frequency response 40-20,000 Hz; crossovers at 500 and 2500 Hz; input 200 W continuous music; impedance 8 ohms; 25 1/2" H x 18" W x 13 1/4" D..... \$349

**LS-250A.** Similar to LS-400A except uses 4 1/2-in cone midrange; frequency response 45-20,000 Hz; crossovers at 500 and 2000 Hz; 23 1/8" H x 14 1/2" W x 12 1/4" D..... \$219

### MB-80 Speaker System

Miniature two-way acoustic-suspension speaker system designed for home, office, car, van, or boat; incorporates 6-in aluminum cone woofer and 1-in soft dome tweeter; frequency response 80-20,000 Hz; crossover at 1600 Hz; input 250 W continuous music; nominal impedance 8 ohms; fail-safe tweeter protection circuit; oak veneer cabinet; 12 1/2" H x 7 1/2" W x 7 1/2" D..... \$450 pr.

### B-1002 Bard Outdoor Speaker

Two-way all-weather speaker system with 8-in cone midrange/woofer and 2-in cone tweeter; frequency response 50-20,000 Hz; input 60 W continuous music power; 8-ohm impedance; uses jack and plug connector; 18" dia. x 21" x 12"..... \$179

### LS-200A Speaker System

Two-way tuned-port bookshelf speaker system with 8-in cone midrange/woofer and 1-in soft dome tweeter; frequency response 60-20,000 Hz; crossover at 1500 Hz; input 150 W continuous music; impedance 8 ohms; 20 1/4" H x 11 1/4" W x 10 1/4" D..... \$129

## Professional Series

### CM-109-23AW Speaker System

Three-way three-line columnar speaker system with bass array comprised of six 8-in drivers over inverse tapered slot, midrange section comprised of nine 4 1/2-in drivers, and treble section of eight 2-in drivers; frequency response 30-16,000 Hz; crossovers at 800 and 2500 Hz; efficiency 126 dB at 150 W,



4-ft on-axis reference; nominal impedance 8 ohms; input capacity 150 W continuous; marine plywood enclosure with beige enamel finish; 57" H x 22 1/4" W x 15 3/4" D ..... \$1399  
**CM-109-23W.** Same as CM-109-23AW except for biampifier operation. .... \$1279

## BRAUN by ADCOM

### L 1030 Speaker System

Three-way acoustic-suspension floor-standing speaker system with 10-in woofer, 2-in dome midrange, and 3/4-in hemispherical dome tweeter; frequency response 20-25,000 Hz; crossovers at 500 and 3000 Hz, 12 dB/octave; input range 25-140 W; impedance 4-8 ohms, black or walnut finish with black metal grille; 27 1/2" H x 12 1/2" W x 10 1/2" D ..... \$1000 pr.

### IC 1005 Speaker System

Three-way speaker system with 10-in woofer, 2-in cone midrange, and 0.75-in dome tweeter; handles 100 W DIN, 140 W peak power; walnut veneer cabinet with black aluminum grille; 21.25" H x 12.2" D x 9.8" D ..... \$600 pr.

### IC-1004 Speaker System

Three-way bookshelf speaker system with 9.9-in cone woofer, 2-in cone midrange, and 0.75-in dome tweeter; frequency response 25-25,000 Hz; crossovers at 500 and 3000 Hz, 12 dB/octave; 80 W continuous, max. 140 W; 8-ohm impedance; walnut veneer with black aluminum grille; 18.9" H x 10.53" W x 9" D ..... \$500 pr.

### L 300 Speaker System

Three-way bookshelf speaker system with 5 1/4-in woofer, 2-in hemispherical dome midrange, and 3/4-in hemispherical dome tweeter; crossovers at 600 and 3000 Hz; 4-ohm impedance; frequency response 35-25,000 Hz; input range 10-50 W; black matte finish; 10" H x 6 1/2" W x 6 3/4" D ..... \$449 pr.

### IC-1003 Speaker System

Three-way bookshelf speaker system with 8.3-in cone woofer, 2-in cone midrange, and 0.75-in dome tweeter; crossovers at 500 and 3000, 12 dB/octave; input 70 W continuous, max. 120 W; frequency response 28-25,000 Hz; 8-ohm impedance; walnut veneer with black aluminum grille; 15.9" H x 9.25" W x 8.26" D ..... \$425 pr.

### IC-1002 Speaker System

Three-way bookshelf speaker system with 6.9-in cone woofer, 2-in dome midrange, and 0.75-in dome tweeter; crossovers at 500 and 4000 Hz, 12 dB/octave; 8-ohm impedance; frequency response 33-25,000 Hz; input 60 W continuous, max. 100 W; walnut veneer with black aluminum grille; 13.6" H x 8.86" W x 7.09" D ..... \$360 pr.

### L200 Speaker System

Miniature two-way air-suspension speaker system with 5 1/4-in dynamic woofer and 1-in hemispherical dome tweeter; frequency response 40-25,000 Hz; crossover at 1500 Hz; power range 10-50 W, 40 W continuous, nominal impedance 4 ohms; curved and perforated aluminum grille; 10" H x 6 1/2" W x 5 1/4" D ..... \$289 pr.

## BURHOE ACOUSTICS

### The Royal Blue Speaker System

Three-way tuned-port floor-standing speaker system with 10-in woofer, 2-in inverted-dome midrange, and two 1-in biradial tweeters (front-face and top-cabinet mount); frequency response 27-26,000 Hz; crossovers at 650 and 3000 Hz; input range 25-150 W; sensitivity 93 dB SPL/W/m; impedance 4-8 ohms; tweeter and midrange level controls; walnut veneer finish with foam grille; 30 1/2" H x 18" W x 11 1/2" D ..... \$400

### The Blue Burhoe Speaker System

Three-way tuned-port bookshelf speaker system with 10-in woofer, 1.5-in inverted-dome midrange, and 1-in bi-radial tweeter; frequency response 30-26,000 Hz; crossovers at 1000 and 2000 Hz; SPL 92 dB; input range 25-100 W; impedance 4-8 ohms; two three-position tweeter level controls; wal-

nut veneer cabinet with foam grille; 24 1/4" H x 14 1/4" W x 10 1/2" D ..... \$275

### The Light Blue Burhoe Speaker System

Two-way tuned-port bookshelf speaker system with 10-in woofer and 1 1/2-in inverted dome tweeter; frequency response 30-16,000 Hz; crossover at 1000 Hz; SPL 94 dB; input range 5-75 W; impedance 5-8 ohms; midrange level control; vinyl finish with foam grille; 24 1/4" H x 14 1/4" W x 10 1/4" D ..... \$190

### The White Burhoe Speaker System

Two-way tuned-port bookshelf speaker system with 8-in woofer and 1-in bi-radial tweeter; frequency response 35-26,000 Hz; crossover at 1500 Hz; SPL 90 dB; input range 15-65 W; impedance 5-8 ohms; tweeter level control; walnut veneer cabinet with foam grille; 22" H x 13 3/4" W x 10" D ..... \$180

### The Green Burhoe Speaker System

Two-way tuned-port bookshelf speaker system with 8-in woofer and 1.5-in inverted dome tweeter; frequency response 45-16,000 Hz; crossover at 1500 Hz; SPL 93 dB; input range 5-50 W; impedance 5-8 ohms; midrange level control; vinyl finish cabinet with foam grille; 18 3/4" H x 11 3/4" W x 10" D ..... \$140

### Infra-Red Subwoofer

Incorporates dual 10-in bass drivers with 10-in passive radiator and passive crossover; frequency response 25-100 Hz; walnut veneer finish; 18" H x 30" W x 14" D ..... \$425

## CALIBRATION STANDARD INSTRUMENTS

### MDM-TA3 Monitor Speaker System

Three-way time-aligned compact monitor speaker system with two 6 1/2-in woofers, mid/high-range driver, and tweeter; frequency response 45-20,000 Hz  $\pm$  3 dB; crossovers at 1800 and 7500 Hz; sensitivity 80 dB SPL/W/m; recommended input 120 W/ch; nominal impedance 8 ohms; sold as mirror-image pairs; rosewood laminate cabinet; 19" H x 16" W x 11.75" D ..... \$880 pr.

### MDM-4 Mix-Down Monitor Speaker

Individually calibrated and documented two-way precision monitor speaker system with two 6 1/2-in woofers and 3 1/2-in midrange/tweeter; velocity control high-pass filter frequency response 70-17,000 Hz  $\pm$  3 dB; crossover at 1500 Hz; sensitivity 80 dB SPL/W/m; input range 15-100 W; nominal impedance 8 ohms; includes free-field anechoic frequency response curve using Bruel and Kjaer acoustic measuring equipment; rosewood laminate finish with aluminum grille and brown cloth grille; 19" H x 13" W x 9 1/4" D ..... \$600 pr.

## CAMBRIDGE PHYSICS

### 310 Speaker System

Three-way acoustic-suspension floor-standing speaker system with 10-in long-throw high-compliance woofer, 4-in cone midrange, and 1-in dome tweeter; frequency response 30-20,000 Hz  $\pm$  1.5 dB; crossovers at 520 and 4000 Hz; sensitivity 84 dB SPL/W/m; input 200 W peak, 100 W music; impedance 8 ohms nominal, 6 ohms from 30-20,000 Hz; variable midrange and tweeter level controls; oiled walnut veneer cabinet with black knit grille; 26 3/4" H x 15 1/4" W x 13" D ..... \$349

### 210 Speaker System

Two-way acoustic-suspension bookshelf speaker system with 10-in long-throw high-compliance woofer and 1 3/4-in midrange/tweeter; frequency response 38-20,000 Hz  $\pm$  1.5 dB; crossover at 950 Hz; sensitivity 86 dB SPL/W/m; input 150 W peak, 85 W music; impedance 11 ohms nominal, 8.5 ohms from 30-20,000 Hz; constant-impedance L-pad brilliance control; oiled walnut veneer cabinet with black knit grille; 24" H x 14" W x 12" D ..... \$209

### 208 Speaker System

Two-way tuned-port bookshelf speaker system with 8-in woofer and 1-in dome tweeter; frequency re-

sponse 50-20,000 Hz  $\pm$  2 dB; crossover at 2000 Hz; sensitivity 94 dB SPL/W/m; input 100 W peak, 50 W music; impedance 5 ohms nominal, 4.6 ohms from 30-20,000 Hz; variable tweeter level control; oiled walnut veneer cabinet with black knit grille; 18 3/4" H x 11" W x 10 1/4" D ..... \$144

## CANNON-TLS

### 1232T Speaker System

Three-way tower speaker system with 12-in cone woofer, 12-in front-mounted passive radiator, 5-in cone midrange, and 2 x 5-in piezo electric tweeter; frequency response 20-30,000 Hz; crossovers at 1000 and 5000 Hz; input range 18-175 W continuous; sensitivity 92.0 dB SPL/W/m, 5-ohm nominal impedance, midrange and tweeter level controls; 39" H x 14 1/4" W x 14" D ..... \$499

**1232.** Similar to 1232T except passive radiator is rear-mounted; frequency response 23-30,000 Hz; input range 15-150 W continuous, 25" H x 14 1/4" W x 14" D ..... \$399

**1032.** Similar to 1232 except uses 10-in woofer and complementary rear-mounted passive radiator; frequency response 25-25,000 Hz; input range 12-120 W continuous; sensitivity 90.5 dB SPL/W/m ..... \$299

### 1022 Speaker System

Two-way tuned-port speaker system with 10-in cone woofer, 2-in cone tweeter, and 2 1/2-in front-facing tuned port low frequency support system; frequency response 30-20,000 Hz; crossover at 2000 Hz; input range 10-90 W continuous; sensitivity 90.5 dB SPL/W/m; 5-ohm nominal impedance; tweeter level control; 22" H x 13 1/2" W x 12 1/4" D ..... \$249  
**822.** Similar to 1022 except uses 8-in woofer; frequency response 35-20,000 Hz; input range 5-70 W continuous; 21" H x 11 1/2" W x 10" D ..... \$199

## CANTON by ADCOM

### GLE 100 Speaker System

Three-way speaker system with 12.2-in woofer, 1/4-in dome midrange, and 0.75-in dome tweeter; frequency response 22-30,000 Hz; crossovers at 800 and 2600 Hz; handles 100-150 W; impedance 4-8 ohms; walnut with bronze metal, matte black with black metal, or matte white with silver metallic removable grille; 13.3" H x 21.6" W x 11.2" D ..... \$499

### GLE 70 Speaker System

Three-way speaker system with 10 1/4-in woofer, 1 1/4-in dome midrange, and 3/4-in dome tweeter; frequency response 25-30,000 Hz; crossovers at 800 and 2200 Hz; input range 5.8-120 W; 4-8 ohm impedance; walnut with bronze metal, matte black with black metal, or matte white with silver metallic removable grille; 11 3/4" H x 17 3/4" W x 9 3/4" D ..... \$360

### Gamma 800 Speaker System

Three-way speaker system with 8-in woofer, 1.18-in dome midrange, and 3/4-in hemispherical dome tweeter; frequency response 30-30,000 Hz; crossovers at 750 and 2200 Hz; input range 25-100 W; impedance 4-8 ohms; black matte finish; 11" square ..... \$340

### GLE 60 Speaker System

Three-way speaker system with 8.7-in woofer, 1.2-in dome midrange, and 0.75-in dome tweeter; frequency response 28-30,000 Hz; crossovers at 800 and 2200 Hz; input range 6.5-100 W; impedance 4-8 ohms; walnut with bronze metal, matte black with black metal, or matte white with silver metallic removable grille; 13 1/4" H x 18 1/4" W x 13 1/4" D ..... \$300

### GLE 50 Speaker System

Three-way speaker system with 7.9-in woofer, 1.2-in dome midrange, and 0.75-in dome tweeter; frequency response 36-30,000 Hz; crossovers at 800 and 2200 Hz; input range 7.4-80 W; impedance 4-8 ohms; walnut with bronze metal, matte black with black metal, or matte white with silver metallic removable grille; 8 3/4" H x 16 1/4" W x 12" D ..... \$250



## CELESTION

### Ditton 662 Speaker System

Three-way floor-standing speaker system with 12.9-in quasi-Butterworth fiber cone woofer with 1.9-in glass fiber voice coil and barium ferrite magnet, 12.9-in passive radiator, damped polypropylene midrange and hot pressed polyethylene polymer tweeter with 0.75-in high-temperature voice coil; frequency response 38-20,000 Hz  $\pm$  3 dB; crossovers at 700 and 4500 Hz; input range 20-160 W; 8-ohm impedance; oiled American walnut or elm finish; 41 $\frac{1}{2}$ " H  $\times$  15 $\frac{1}{4}$ " W  $\times$  11 $\frac{1}{4}$ " D..... \$789

### Ditton 551 Speaker System

Three-way vented floor-standing speaker system with 11.4-in quasi-Butterworth fiber cone woofer with 1.9-in voice coil and barium ferrite magnet, cellulose fiber woven soft dome midrange, and hot pressed polyethylene polymer tweeter with 0.75-in high-temperature voice coil; midrange and treble level controls; frequency response 38-20,000 Hz; crossovers at 600 and 4500 Hz; input range 20-140 W; 8-ohm impedance; available in oiled American walnut, elm, or black ash finish; 28 $\frac{1}{2}$ " H  $\times$  15 $\frac{1}{2}$ " W  $\times$  13" D..... \$525

### Ditton 442 Speaker System

Three-way acoustic-suspension floor-standing speaker system with 12.9-in fiber cone woofer with 1.8-in high temperature voice coil and barium ferrite magnet, 5.1-in plasticized paper cone midrange with 0.98-in voice coil, and hot pressed polyethylene terephthalate polymer tweeter with 0.75-in high-temperature voice coil; frequency response 45-20,000 Hz  $\pm$  3 dB; crossovers at 600 and 4500 Hz; input range 20-120 W; 8-ohm impedance; oiled American walnut, elm, or black ash finish; 30" H  $\times$  15 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{2}$ " D..... \$475

### Ditton 332 Speaker System

Three-way acoustic-suspension speaker system with 11.4-in Butterworth fiber cone woofer with 1.5-in high-temperature voice coil and barium ferrite magnet, 5.1-in cone midrange, and hot pressed polymer dome tweeter; frequency response 50-20,000 Hz  $\pm$  3 dB; crossovers at 600 and 4500 Hz; input range 20-100 W; 8-ohm impedance; oiled American walnut or elm finish; mirror-image pairs available; 25.5" H  $\times$  14" W  $\times$  11.25" D..... \$370

### UL6 Speaker System

Two-way speaker system with 6-in woofer, 6-in passive radiator, and 1-in dome tweeter; frequency response 70-20,000 Hz  $\pm$  4 dB; crossover at 2500 Hz; min. input 20 W; max. input 80 W; 8-ohm impedance; walnut or teak cabinet; 12" H  $\times$  16" W  $\times$  9" D..... \$250

### Ditton 15XR Speaker System

Two-way speaker system with 8-in woofer, 8-in passive radiator, and 1-in pressure dome tweeter; frequency response 60-20,000 Hz  $\pm$  4 dB; crossover at 2500 Hz; max input 60 W; 8-ohm impedance; walnut or teak; 21" H  $\times$  10" W  $\times$  9" D..... \$200

## CERWIN-VEGA

### 316R Speaker System

Three-way floor-standing speaker system with 15-in woofer, 6 $\frac{1}{2}$ -in cone-sealed midrange, 1-in voice-coil horn tweeter, and 1-in rear-reflecting accent tweeter; frequency response 30-17,000 Hz  $\pm$  4 dB; crossovers at 500 and 3500 Hz; sensitivity 103 dB/W/m; max. input 150 W continuous; 8-ohm impedance; midrange, tweeter, and rear tweeter controls..... \$534

### 12TR Speaker System

Three-way floor-standing tower speaker system with

12-in floor-facing woofer, 6 $\frac{1}{2}$ -in sealed-cone midrange, 1.1-in SuperDhorn tweeter, and rear-reflecting 1-in voice-coil horn accent tweeter; frequency response 28-20,000 Hz  $\pm$  4 dB; crossovers at 250 and 4000 Hz; sensitivity 102 dB/W/m; max. input 100 W continuous; 8-ohm impedance; midrange, tweeter, and rear tweeter level controls..... \$503

### S-1 Loud. Speaker

Three-way bookshelf speaker system with 12-in woofer, 6 $\frac{1}{2}$ -in sealed midrange, and 1.1-in Dhorn tweeter; frequency response 28-20,000 Hz  $\pm$  4 dB; crossovers at 300 and 4000 Hz; efficiency 98 dB/W/m; max. input 200 W continuous; 8-ohm impedance; features Bass Turbocharger and Thermo Vapor Suspension; midrange and tweeter level controls; 25" H  $\times$  14 $\frac{1}{2}$ " W  $\times$  14" D..... \$465

### 313 Speaker System

Three-way floor-standing speaker system with 12-in bass driver, 6-in sealed-cone midrange, and 1-in voice coil horn tweeter; frequency response 30-17,000 Hz  $\pm$  4 dB; crossovers at 700 and 3500 Hz; sensitivity 100 dB/W/m; max. input 100 W continuous; 8-ohm impedance; midrange and tweeter level controls..... \$353

### A-123 Speaker System

Three-way bookshelf speaker system with 12-in woofer, 6-in sealed-cone midrange, and 1.1-in voice coil Dhorn tweeter; frequency response 38-20,000 Hz  $\pm$  4 dB; crossovers at 500 and 5000 Hz; sensitivity 97 dB/W/m; max. input 100 W continuous; 8-ohm impedance; midrange and tweeter level controls..... \$332

A-10. Similar to A-123 except two-way system using 10-in woofer; crossover at 2000 Hz; sensitivity 92 dB/W/m; max. input 40 W continuous; tweeter level control..... \$202

### 15-SW Subwoofer

Incorporates 15-in bass driver; frequency response 30-250 Hz; max. input 150 W continuous; sensitivity 100 dB/W/m; 8-ohm impedance..... \$407

### HED Series

#### UT-12R Tower Speaker System

Three-way direct-reflecting tower speaker system with 12-in cast aluminum frame woofer, two 6-in cone midrange drivers (one is rear-reflecting), and 1-in voice coil horn tweeter; frequency response 32-17,000 Hz  $\pm$  4 dB; crossovers at 700 and 4000 Hz; sensitivity 98 dB/W/m; input range 5-80 W continuous; 8-ohm impedance; midrange and tweeter level controls..... \$450

#### U-351 Speaker System

Three-way floor-standing speaker system with 15-in cast aluminum frame woofer, 6-in cone midrange, and 1-in voice-coil horn tweeter; frequency response 32-17,000 Hz  $\pm$  4 dB; crossovers at 700 and 4000 Hz; sensitivity 103 dB/W/m; input range 5-100 W continuous; 8-ohm impedance; mid- and high-frequency level controls..... \$432

U-321. Similar to U-351 except uses 12-in cast aluminum frame woofer; frequency response 38-17,000 Hz  $\pm$  4 dB; sensitivity 98 dB/W/m; input range 5-60 W..... \$305

#### U-123 Speaker System

Three-way rear-ported tuned bookshelf speaker system with 12-in cast aluminum frame woofer, 5-in cone midrange, and 1-in voice coil horn tweeter; frequency response 45-17,000 Hz  $\pm$  4 dB; crossovers at 700 and 4000 Hz; sensitivity 96 dB/W/m; input range 5-60 W continuous; 8-ohm impedance; midrange and tweeter level controls..... \$248

U-12. Similar to U-123 except two-way system without midrange; crossover at 2000 Hz; tweeter level control..... \$224

#### U-10 Speaker System

Two-way rear-ported tuned bookshelf speaker system with 10-in cast aluminum frame woofer and 1-in voice coil Dhorn tweeter; frequency response 42-20,000 Hz  $\pm$  4 dB; crossover at 2000 Hz; sensitivity 94 dB/W/m; input range 5-40 W continuous; 8-ohm impedance; tweeter level control..... \$196

### SW-12 Subwoofer

Incorporates 12-in cast aluminum frame floor-facing woofer with 7-lb magnet and 2-in dual voice coil; frequency response 38-150 Hz  $\pm$  4 dB; crossover at 150 Hz; sensitivity 90 dB/W/m; input range 5-100 W continuous; impedance 8  $\times$  2 ohms. \$322

## CHAPMAN SOUND

### SCJ I Speaker System

Three-way floor-standing speaker system with 12-in calibrated high-compliance woofer, 5-in PlastiFlex bextrene cone midrange, and 1-in dome tweeter; frequency response 25-20,000 Hz; crossovers at 150 and 5000 Hz; sensitivity 90 dB SPL/W/m; input range 25-100 W continuous; 4-ohm impedance; sweep attenuation brilliance control; American walnut vinyl veneer; 28" H  $\times$  18" W  $\times$  13" D..... \$850 pr.

### 310 Speaker System

Three-way speaker system with 10-in high-compliance woofer, 5-in PlastiFlex bextrene cone midrange, and 1-in dome tweeter; frequency response 30-20,000 Hz; crossovers at 250 and 5000 Hz; sensitivity 88 dB SPL/W/m; input range 25-80 W continuous; 4-ohm impedance; sweep attenuation brilliance control; American walnut vinyl veneer; 21 $\frac{1}{2}$ " H  $\times$  14" W  $\times$  11" D..... \$700 pr.

### 255 Speaker System

Two-way bookshelf speaker system with two 5-in PlastiFlex bextrene cone woofers and two 1-in dome tweeters; frequency response 45-20,000 Hz; crossover at 5000 Hz; sensitivity 88 dB SPL/W/m; input range 20-80 W continuous; 4-ohm impedance; sweep attenuation brilliance control; American walnut vinyl veneer..... \$650 pr.

## CHARTWELL by REFERENCE MONITOR

### PM-450 Passive Speaker System

Two-way studio monitor with 1-in soft dome tweeter and 12-in polypropylene cone woofer; frequency response 40-20,000 Hz  $\pm$  3 dB; crossover at 2000 Hz; sensitivity 94 dB SPL/W/m; input range 30-200 W; 8-ohm impedance; teak, walnut, or black finish with black foam grille (other colors on special order); 30" H  $\times$  17 $\frac{1}{2}$ " W  $\times$  15 $\frac{1}{2}$ " D. \$2400

### PM-410 High Power Monitor Speaker

Three-way bass-reflex speaker system with 1-in fabric dome tweeter, 5 $\frac{1}{2}$ -in polypropylene midrange, and 12-in woofer with polypropylene cone; frequency response 45-20,000 Hz  $\pm$  3 dB; crossovers at 300 and 2400 Hz; sensitivity 92 dB SPL/W/m; input range 10-150 W; 8-ohm impedance; teak, walnut, or black finish with matte black grille; furnished with 2-in high wood base; optional chrome plated stand available; 34 $\frac{1}{2}$ " H  $\times$  13" D  $\times$  15 $\frac{1}{2}$ " W..... \$1650 pr.

### PM-210 Monitor Speaker

Two-way bass-reflex speaker system with dome tweeter and 8-in polypropylene cone bass/midrange driver; frequency response 50-20,000 Hz  $\pm$  3 dB; crossover at 2800 Hz; sensitivity 89 dB SPL/W/m; input range 10-100 W; 4-8 ohm impedance; teak, walnut, or black finish; 26" H  $\times$  13.5" W  $\times$  11.2" D..... \$920 pr.

### PM-110 Monitor Speaker

Two-way bass-reflex bookshelf system with 6.5-in bass/midrange driver with polypropylene cone and long-throw voice coil and 1.9-in soft dome tweeter; frequency response 65-20,000 Hz  $\pm$  3 dB; crossover at 2500 Hz; sensitivity 86 dB SPL/W/m; input range 10-60 W; 4-8 ohm impedance; teak, walnut, or black finish; 18 $\frac{1}{2}$ " H  $\times$  9" W  $\times$  8 $\frac{1}{4}$ " D.. \$599 pr.

### LS3/5A Baby Monitor

Two-way compact acoustic-suspension monitor speaker based on BBC design; has 4.5-in bextrene bass/midrange and dome tweeter; frequency response 70-20,000 Hz  $\pm$  3 dB; crossover at 3000 Hz; 15-ohm nominal impedance; max. input 25 W;



teak, walnut, black or rosewood veneer with black grille; 12" H x 7.5" W x 6.3" D ..... \$599 pr.

## CIZEK

### KA-1 Speaker System

Two-way acoustic-suspension bookshelf speaker system with 6 1/2-in woofer and 1-in hemispherical dome tweeter; frequency response  $\pm 1.5$  dB from 100 Hz on up, -3 dB at 70 Hz; sensitivity 88 dB SPL/W/m; input range 15-200 W clean power; 4-ohm nominal impedance; solid Hawaiian Koa wood cabinet with 1-in Acuthane™ baffle and acoustically transparent foam grille; 13 1/4" H x 9" W x 8 1/4" D ..... \$295

### Model 1 Speaker System

Two-way speaker system with 10-in acoustic-suspension woofer and 1-in hemispherical dome tweeter; frequency response 35-17,000 Hz +1.5/-2 dB; crossover at 1500 Hz; efficiency 88 dB/W/m; min. input 15 W; max. input 200 W music power; tweeter level and contour controls and Q adjustment switch; walnut enclosure with transparent foam grille; 25" H x 15 1/2" W x 9 1/2" D ..... \$249

**Model 2.** Similar to Model 1 but with 8-in woofer; frequency response 35-17,000 Hz  $\pm 2$  dB; walnut veneer enclosure; 21" H x 13" W x 9 1/2" D ..... \$189

### Model 3 Speaker System

Two-way acoustic-suspension speaker system with 8-in woofer and 1-in hemispherical dome tweeter; frequency response from 42-18,000 Hz  $\pm 2$  dB; crossover frequency 1500 Hz; efficiency 88 dB/W/m into 4.25 ohms; input range from 15-100 W/ch continuous into 4 ohms; 4.25-ohm impedance from 100-15,000 Hz; 19" H x 11 1/4" W x 7 1/2" D .. \$139

### MG-27 Subwoofer

Acoustic-suspension subwoofer with two 10-in woofers; input range 25-600 W/ch; sensitivity 86 dB SPL/W/m; 4-ohm impedance; internal passive crossover for direct connection to Cizek Models 1, 2, and 3; bi-amped directly through input terminals; may be used in vertical or horizontal position; acoustically transparent foam grille; 29" H x 17 1/4" W x 12 1/2" D ..... \$315

## CLARKE SYSTEMS

### Precedent Speaker System

Three-way infinite-baffle speaker system with 12-in woofer, 5-in midrange, and 1-in soft dome tweeter; crossover frequencies at 500 and 4200 Hz; input range 10-70 W continuous; efficiency 89 dB/W/m; Mylar film crossover network and midrange loading; wood cabinet with brown-fabric grille; 31" H x 15" W x 14" D ..... \$299

### Premiere Speaker System

Three-way infinite-baffle speaker system with 10-in woofer, 5-in midrange, and 1-in soft dome tweeter; crossovers at 900 and 4200 Hz; efficiency 89 dB/W/m on axis at 1000 Hz; input range 10-70 W continuous; Mylar film crossover network and midrange loading; wood cabinet with brown fabric grille; 26" H x 13" W x 11" D ..... \$219

### Transmission Line 1 Speaker System

Two-way modified-transmission-line bookshelf speaker system with 6 1/2-in bextrene cone woofer and 1-in Mylar dome tweeter; crossover at 2000 Hz; sensitivity 86 dB/W/m on axis at 1000 Hz; input range 20-50 W continuous; Mylar film crossover network and woofer loading; wood cabinet with black fabric grille; 17" H x 9" W x 10 1/2" D... \$209

### Encore Speaker System

Two-way resistive wave line three-segment-tuning speaker system with 8-in woofer and 1-in soft dome tweeter; crossover at 2500 Hz; input range 10-45 W continuous; sensitivity 89 dB SPL/W/m at 1000 Hz; wood cabinet with brown fabric grille; 22" H x 12" W x 11" D ..... \$165

### Prelude Speaker System

Two-way ported speaker system with 8-in woofer

and 1.5-in tweeter; crossover frequency at 5000 Hz -6dB/octave; input range 10-40 W continuous; efficiency 1 W at 1000 Hz for 90 dB SPL on axis at 1 m; wood cabinet with brown-fabric grille; 22" H x 12" W x 11" D ..... \$129

## COLES by H&H INTERNATIONAL

### Nimbus Speaker System

Two-way infinite-baffle bookshelf speaker system with 8-in Bextrene cone woofer/midrange with glass-loaded nylon frame and soft nylon dome tweeter; frequency response 60-20,000 Hz  $\pm 2.5$  dB; crossover at 2500 Hz; sensitivity 84 dB/W; input range 40-100 W; impedance 8 ohms; available in teak, walnut, rosewood, or black oak wood veneers; 16 1/2" H x 15 1/4" W x 10" D ..... \$625 pr.

## CONCEPT

### CEM Speaker System

Two-way passive-radiator floor-standing speaker system with 12-in cast basket woofer and Heil tweeter; frequency response 25-23,000 Hz  $\pm 3$  dB; crossover at 1300 Hz; sensitivity 91 dB SPL/W/m; min. input 25 W; 6-ohm impedance; midrange and tweeter level controls; oiled walnut finish cabinet with brown cloth grille; 45" H x 18" W x 15 1/2" D .. \$595

### CE1 Speaker System

Two-way passive-radiator floor-standing speaker system with 10-in cast woofer and Heil tweeter; frequency response 30-23,000 Hz  $\pm 3$  dB; crossover at 1400 Hz; sensitivity 91 dB SPL/W/m; min. input 20 W; 6-ohm impedance; midrange and tweeter level controls; oiled walnut finish with brown cloth grille; 40" H x 15 1/4" W x 15" D ..... \$445

**CE2.** Similar to CE1 except frequency response 35-23,000 Hz  $\pm 3$  dB; crossover at 1500 Hz; 25 1/2" H x 14 1/4" W x 14" D ..... \$345

## DAHLQUIST

### DQ-10 Speaker System

Five-way Phased Array moving-coil speaker system with 10-in woofer in sealed air-suspension enclosure, 5-in mid-bass driver, 2-in soft-dome midrange, 3/4-in dome tweeter, and piezoelectric ceramic super tweeter; frequency response 37-27,000 Hz; crossovers at 400, 1000, 6000, and 12,500 Hz; input range 60-200 W; 8-ohm nominal impedance; features low-diffraction time-delay correction; continuously variable treble-slope control for boost or cut; solid walnut or oak trim with black or white grille cloth; manufactured in mirror-imaged pairs; 31 1/2" H x 30 1/2" W x 9" D ..... \$475

### DQ-1 W Subwoofer

Incorporates 13-in woofer in heavy cast frame mounted in walnut enclosure; recommended application is bi-amped systems but will perform with passive crossovers; typically adds an octave of low bass response to speaker systems; walnut or oak finish with black or white grille cloth; 28" H x 18" W x 14" D ..... \$325

## DALCO

### SW-4 Speaker System

Three-way acoustic suspension floor-standing speaker system with 12-in high-compliance long-throw woofer, 5-in midrange, and 1-in wide dispersion soft dome dome tweeter; frequency response 20-20,000 Hz; crossovers at 900 and 4500 Hz; efficiency 94 dB SPL/W/m; input range 10-100 W continuous; 8-ohm impedance; midrange and tweeter level controls; walnut finish cabinet with snap-off acoustically-transparent cocoa brown grille; 25" H x 15" W x 13 1/2" D ..... \$289

**SW-3.** Similar to SW-4 except has 10-in woofer; frequency response 30-20,000 Hz; input range 8-70 W continuous; 22 1/4" H x 13 1/4" W x 10 7/8" D ..... \$199

### MW-III Speaker System

Two-way acoustic suspension bookshelf speaker system with 8-in high-compliance woofer and 1 1/4-in dome tweeter with double chamber aperiodic damping; frequency response 40-30,000 Hz; crossover at 2000 Hz; input range 5-180 W continuous; efficiency 96 dB SPL/W/m; 8-ohm impedance; matte black, bronze, or white acrylic-finish metal enclosure with removable grilles; 15 1/4" H x 10 1/4" W x 6 1/4" D ..... \$269

### SW-1 Speaker System

Two-way bookshelf speaker with 8-in woofer and 2 1/2-in wide dispersion tweeter; frequency response 38-18,000 Hz; crossover at 4000 Hz; sensitivity 93 dB SPL/W/m; input range 5-50 W continuous; 8-ohm impedance; 17 1/4" H x 10 1/4" W x 8" D ..... \$119

### MW-BC II Dual Drive Subwoofer

Floor standing subwoofer with dual 12-in woofers each having 2-in voice coil; frequency response 20-100 Hz; crossover at 100 Hz; sensitivity 93 dB SPL/W/m; input range 15-200 W continuous; 8-ohm impedance; 24" H x 30" W x 21" D... \$749

**MW-BCIW.** Same as MW-BC II except has only one woofer with two voice coils; walnut cabinet; 30" H x 16" W x 12" D ..... \$439

**MW-BCIB.** Same as MW-BCIW except with black matte cabinet. .... \$399

## DCM

### Time Window Speaker System

Two-way floor-standing speaker system with cylinder back and triangular prism front; optimized for minimum time-dispersion error; incorporates two 6-in Philips woofers and two Philips dome tweeters symmetrically placed on two angled front faces of prism; frequency response 25-18,000 Hz; input range 10-200 W continuous; impedance 6-8 ohms nominal; dispersion 180° horizontal, 60° vertical; 36" H x 14 1/4" W x 11 1/2" D ..... \$660 pr.

### QED Speaker System

Two-way floor-standing speaker system with woofer and tweeter; frequency response 25-18,000 Hz; sensitivity 87 dB/W/m; input range 20-100 W continuous; impedance 12 ohms nominal; 36" H x 11 1/4" W x 9 1/4" D ..... \$480 pr.

### Time Bass Woofer System

Phase-coherent subwoofer system features built-in phase-compensated crossover to accommodate satellite speakers of various efficiencies without biampification; bypass switch permits biamping with electronic crossover if desired; min. impedance 4 ohms; 31" H x 18" W x 18" D ..... \$770 pr.

## DECCA

### London Ribbon Speaker

Horn-coupled ribbon tweeter; uses optional crossover network with low-pass slope at 12 dB/octave and high-pass slope initially at 12 dB/octave with final slope at 45 dB/octave; crossover frequency 1000 Hz; insertion loss less than 1 dB in passband; impedance 8 ohms; power-handling capacity 30 watts max.; dist. less than 1.7% at 2500 Hz with 30 W input, 12 3/4" x 9" ..... \$200

**Crossover network CO/1000/8** ..... \$40

### London Super Tweeter

Ribbon tweeter in enclosure without horn; impedance 8 ohms; crossover 7000 Hz; grey color .. \$200

## DENNESEN ELECTROSTATIC

### ESC 110 Speaker System

Two-way hybrid electrostatic minimum-edge-refraction acoustic-suspension speaker system with 5-in Bextrene woofer and three electrostatic elements; frequency response 50-35,000 Hz; crossover at 3000 Hz; input range 15-100 W; impedance 8 ohms; 18" H x 7" W x 8" D ..... \$250

### SW 110 Subwoofer

Transmission-line subwoofer with 10-in Bextrene

# 11 SPEAKER SYSTEMS

woofer; frequency response 20-150 Hz; crossover at 125 Hz; input range 25-100 W; impedance 8 ohms; 36" H x 14" W x 10" D..... \$300

## DENON

### SC-101 Speaker System

Two-way sealed bookshelf speaker system with 20-cm paper cone woofer and 3.2-cm soft dome tweeter; frequency response 45-20,000 Hz; crossover at 3000 Hz; sensitivity 91 dB/W/m; max. input 80 W music; impedance 8 ohms; 410 mm H x 240 mm W x 242 mm D..... \$350 pr.

**IS-80.** Tubular steel speaker stands for SC-101; 265 mm H x 299 mm W x 302 mm D..... \$60 pr.

## DESIGN ACOUSTICS

### D-12A Speaker System

Three-way dodecahedron floor-standing/ceiling-hung speaker system with two 8-in woofers, 1 1/2-in dome midrange, two 5-in cone midrange drivers, two 1-in dome tweeters, and three 1 1/2-in cone tweeters; frequency response 30-18,000 Hz  $\pm$  2 dB; crossovers at 650 and 2000 Hz; efficiency 89-dB SPL/W/m; selectable 180- or 360-degree dispersion angle; input range 25-200 W/ch; 4-ohm nominal impedance; two-step woofer, midrange, and tweeter level controls; walnut finish with black grille; available with chrome base; 26" H (with base) x 22" diameter..... \$750

**D-12AR.** Same as D-12A but rosewood finish..... \$900

### D-8 Speaker System

Three-way acoustic-suspension floor-standing speaker system with two 10-in woofers, 5-in damped cone midrange, dome tweeter, three cone tweeters, and piezoelectric driver; frequency response 30-17,000 Hz  $\pm$  2 dB; crossovers at 600 and 1500 Hz; sensitivity 94.5-dB SPL/W/m; input range 15-150 W/ch; 8-ohm impedance; three-position switch for woofer, midrange, and tweeter level controls; oiled walnut finish with black grille cloth; 44" H x 16 1/2" W x 12 1/4" D..... \$590

### D-6 Speaker System

Three-way vented acoustic-suspension floor-standing speaker system with 10-in woofer, 5-in damped cone midrange, and five 2 1/2-in cone tweeters; frequency response 30-15,000 Hz  $\pm$  2 dB; crossovers at 800 and 2000 Hz; sensitivity 92-dB SPL/W/m; input range 20-100 W/ch; 8-ohm impedance; woofer and tweeter level controls; oiled walnut finish with black/blue/cocoa/crimson grille cloth; 24 1/2" H x 16 1/2" W x 13 1/4" D..... \$390

### D-4A Speaker System

Three-way acoustic-suspension floor-standing speaker system with two 8-in woofers, 5-in damped cone midrange, and one 1-in dome and two 1 1/2-in cone tweeters; frequency response 35-18,000 Hz  $\pm$  3 dB; crossovers at 700 and 2000 Hz; sensitivity 92 dB SPL/W/m; input range 20-125 W/ch; 4-ohm impedance; woofer and tweeter level controls; oiled walnut finish with black grille cloth; 38" H x 16 1/2" W x 11" D..... \$345

### D-3 Speaker System

Three-way tuned-port bookshelf speaker system with 10-in woofer, 5-in cone midrange, and 1-in dome tweeter; frequency response 40-20,000 Hz  $\pm$  3.5 dB; crossovers at 500 and 2500 Hz; input range 30-100 W continuous; oiled walnut finish with brown cloth grille; 25" H x 12" W x 11 1/2" D..... \$240

### D-2 Speaker System

Two-way vented acoustic-suspension floor-standing speaker system with 10-in woofer and 1-in dome

tweeter; frequency response 40-18,000 Hz  $\pm$  3.5 dB; crossover at 1500 Hz; sensitivity 88-dB SPL/W/m; input range 20-50 W/ch; 8-ohm impedance; tweeter level control; oiled walnut finish with black grille cloth; 34" H x 12 1/2" W x 12 1/4" D..... \$220

### LDM Speaker System

Two-way acoustic-suspension low-diffraction miniature bookshelf speaker system with 5-in woofer and 1-in dome tweeter; frequency response 80-16,000 Hz  $\pm$  1.5 dB; crossover at 2500 Hz; sensitivity 85 dB/W/m; input range 15-50 W; nominal impedance 4 ohms; choice of flat axial or flat omnidirectional direct/omni controls; oiled walnut cabinet with solid walnut beveled baffle and black cloth grille; 11 1/4" H x 7 1/4" W x 5 1/2" D..... \$175

## DIMENSION by CUSTOM CRAFT

### MK-VIII Speaker System

Compact three-way acoustic-suspension bookshelf speaker system with 8-in rubber-surround woofer, 4 1/2-in midrange, and 1-in soft dome tweeter; frequency response 57-20,000 Hz  $\pm$  3 dB; 12-dB LCR crossover network; rated input 75 W continuous; impedance 4 ohms; 3/4-in solid walnut handmade cabinet; 14.5" H x 10" W x 6.5" D..... \$199

### MK-VI Speaker System

Sub-compact two-way acoustic-suspension speaker system with 6-in rubber-surround woofer and 1-in soft dome tweeter; frequency response 69-20,000 Hz  $\pm$  3 dB; 12-dB LCR crossover network; rated input 60 W continuous; impedance 4 ohms; 3/4-in solid walnut handmade cabinet; 10 3/4" H x 7 3/4" W x 5 3/4" D..... \$149

**MK-VIB.** Same as MK-VI except includes mounting brackets..... \$169

### MK-II Speaker System

Micro two-way acoustic-suspension speaker system with 4 1/2-in rubber-surround woofer and 1-in soft dome tweeter; frequency response 89-22,000 Hz  $\pm$  3 dB; 12-dB LCR crossover network; rated input 45 W continuous; impedance 4 ohms; 1/2-in solid walnut handmade cabinet; 7.75" H x 5.25" W x 4.5" D..... \$110

**MK-IIB.** Same as MK-II but includes mounting brackets..... \$125

### MK-XII Subwoofer

Acoustic-suspension subwoofer with 12-in woofer; has passive-combining network; two-position efficiency switch to match all satellites; frequency response 30-100 Hz  $\pm$  3 dB; rated input 100 W continuous; impedance 8 ohms; walnut veneer cabinet with solid walnut trim; 24" H x 16" W x 12" D..... \$445

### MK-XIV Subwoofer

Acoustic-suspension subwoofer with 12-in dual-voice-coil bass driver; frequency response 33-100 Hz  $\pm$  3 dB; rated input 75 W continuous; impedance 8 ohms; walnut vinyl cabinet; 22 1/4" H x 16" W x 12" D..... \$249

## DWD AUDIO SYSTEMS

### ETR Tower 12 Speaker System

Three-way columnar bass reflex floor-standing speaker system with 12-in long excursion woofer with complementary passive radiator, 5-in fluid-cooled cone midrange, and 3-in tweeter; frequency response 36-22,000 Hz  $\pm$  4 dB; crossovers at 1500 and 7000 Hz; sensitivity 98 dB/W/m; input range 20-225 W; nominal impedance 8 ohms; self-recovery circuit breaker; tweeter level control; birch vinyl cabinet; 42" H x 14" W x 11 1/4" D..... \$349

**ETR Tower 10.** Similar to Tower 12 except has 10-in woofer with complementary passive radiator; frequency response 38-22,000 Hz  $\pm$  4 dB; sensitivity 96 dB SPL/W/m; input range 20-200 W; 37 1/4" H x 12 1/2" W x 11 1/4" D..... \$299

### ETR 412 Speaker System

Three-way bass-reflex floor-standing or bookshelf speaker system with 12-in woofer with complemen-

tary passive radiator, 5-in midrange, and 3-in tweeter; frequency response 45-22,000 Hz  $\pm$  4 dB; crossovers at 1500 and 7000 Hz; sensitivity 94 dB/W/m; input range 15-190 W; nominal impedance 8 ohms; self-recovery circuit breaker; tweeter level control; birch vinyl cabinet; 26" H x 14 1/4" W x 11 1/4" D..... \$219

**ETR 410.** Similar to ETR 412 except has 10-in woofer with complementary passive radiator; frequency response 50-22,000 Hz  $\pm$  4 dB; sensitivity 93 dB/W/m; input range 12-175 W; 23" H x 12 1/4" W x 10 3/4" D..... \$175

### ETR 88 Speaker System

Two-way acoustic suspension speaker system with 5-in woofer and 2 1/2-in tweeter; frequency response 100-20,000 Hz  $\pm$  4 dB; crossover at 5000 Hz; input range 10-100 W; tweeter level control; self recovery circuit breaker; birch vinyl or pebble grain ebony vinyl cabinet; 10" H x 6" W x 5" D..... \$149

## DYNACO

### A 350 Speaker System

Four-way passive-radiator floor-standing speaker system incorporates 10-in rubber-edge cone woofer with front-mounted passive radiator in lower cabinet section and 3-in cone midrange, 3/16-in horizontally-mounted front-radiating soft plastic dome tweeter, and Omni-Dyn™ omnidirectional vertically-mounted piezoelectric supertweeter in separate upper section; integral pedestal raises woofer off floor and midrange and tweeters time-aligned to woofer; frequency response 35-25,000 Hz  $\pm$  3 dB; crossovers at 500, 3500, and 11,300 Hz; efficiency 89 dB SPL/W/m; input range 15-110 W continuous; nominal impedance 8 ohms; variable tweeter and midrange level controls; oiled walnut veneer cabinet with charcoal brown grille; 43" H x 14" W x 14 1/2" D..... \$399

### A 250 Speaker System

Three-way acoustic-suspension bookshelf speaker system with 10-in rubber-edge cone woofer, 3-in cone midrange, and 1-in soft cloth dome tweeter; frequency response 45-20,000 Hz  $\pm$  3 dB; crossovers at 300 and 3500 Hz; efficiency 89 dB SPL/W/m; input range 15-110 W continuous; nominal impedance 8 ohms; variable tweeter and midrange level controls; oiled walnut veneer cabinet with dark brown grille; 25" H x 14 1/4" W x 14 1/4" D..... \$265

### A 100 Speaker System

Two-way passive-radiator compact speaker system incorporates 6-in woofer with 6-in passive radiator and 1-in soft cloth dome tweeter; frequency response 55-20,000 Hz  $\pm$  3 dB; crossover at 1100 Hz; efficiency 89 dB SPL/W/m; input range 20-100 W continuous; impedance 8 ohms; oiled walnut veneer cabinet; 11 1/2" H x 6 1/4" W x 7 3/4" D..... \$179

### A 150 Speaker System

Two-way acoustic-suspension bookshelf speaker system with 10-in rubber-edge cone woofer and 1-in soft cloth dome tweeter; frequency response 50-20,000 Hz  $\pm$  3 dB; crossover at 2000 Hz; efficiency 89 dB SPL/W/m; input range 15-65 W continuous; nominal impedance 8 ohms; variable tweeter level control; walnut-grain vinyl cabinet with dark brown grille; 22" H x 12 1/2" W x 12 1/4" D..... \$165

## ELECTRO-VOICE

### Sentry V Monitor Speaker System

Two-way ported floor-standing monitor speaker system with high-efficiency 10-in woofer and ST350A neckless radial horn tweeter; frequency response 45-18,000 Hz  $\pm$  3 dB; crossover at 2000 Hz; sensitivity 96 dB SPL/W/m; long-term average power-handling capacity 30 W from 40-10,000 Hz, short-term 300 W from 40-10,000 Hz; impedance 6 ohms nominal, 4 ohms min.; 28 1/2" H x 20" W x 11 1/4" D..... \$360

**SEQ.** Two-channel active equalizer for Sentry V; frequency response becomes 32-18,000 Hz; has high-frequency slope control and tape/source input control; THD 0.01% at 1 V rms in; IM dist. 0.005% at



1.5 V rms in; max. input signal 7 V rms sine wave; noise output -80 dB below 200 mV; 2" H x 8" W x 8" D..... \$105

**Interface: D Series II Speaker System**

Three-way vented floor-standing speaker system with 12-in downward-firing woofer, 6 1/2-in vented



midrange, and radial horn tweeter; frequency response 23-20,000 Hz, 28-18,000 Hz ± 2.5 dB; crossovers 40 Hz (acoustic), 350 and 3000 Hz (electrical); sensitivity 97 dB SPL/W/m; min. input 1.5 W (for 90-dB SPL); max. input 500 W continuous (for 115-dB SPL); 8-ohm nominal impedance; built-in tweeter protector; woofer environmental control (floor or on floor, next to wall); optional active equalizer extends bass response and eliminates subsonic noise, has high-frequency control (installs into tape monitor circuit of amp or receiver or between preamp and power amp); walnut veneer cabinet; 32" H x 21 1/4" W x 15 1/2" D..... \$927  
Equalizer ..... \$96

**Interface: C Series II Speaker System**

Three-way vented floor-standing speaker system with 10-in woofer, 6 1/2-in vented midrange, and 1 1/2-in super dome tweeter with acoustic lens; frequency response 25-20,000 Hz, 30-18,000 Hz ± 2.5 dB; crossovers 42 Hz (acoustic), 400 and 2500 Hz (electrical); sensitivity 93 dB SPL/W/m; min. input 2.8 W (for 90-dB SPL); max. input 350 W (for 110-dB SPL); 6-ohm nominal impedance; built-in tweeter protector; optional active equalizer available; walnut veneer cabinet; 31 1/2" H x 20" W x 12 1/2" D..... \$495  
Equalizer ..... \$96

**Interface: B Series III**

Two-way vented speaker system with 12-in low-frequency radiator, 8-in midrange/woofer, and 1 1/2-in super dome tweeter with acoustic lens; frequency response 26-20,000 Hz, 30-18,000 Hz ± 2.5 dB; crossover 42 Hz (acoustic), 1500 Hz (electrical); sensitivity 92 dB SPL/W/m; min. input 3.6 W (for 90-dB SPL); max. input 250 W (for 107-dB SPL); 8-ohm nominal impedance; built-in tweeter protector; optional active equalizer available; walnut veneer cabinet; 29 1/4" H x 16" W x 11" D..... \$350  
Equalizer ..... \$96

**Interface: A Series III**

Two-way vented bookshelf speaker system with 12-in low-frequency radiator, 8-in midrange/woofer, and 1 1/2-in super dome tweeter with acoustic lens; frequency response 29-20,000 Hz, 35-18,000 Hz ± 2.5 dB; crossover 49 Hz (acoustic), 1500 Hz (electrical); sensitivity 92 dB SPL/W/m; min. input 3.6 W (for 90-dB SPL); max. input 250 W (for 107-dB SPL); 8-ohm nominal impedance; tweeter-protection circuit and active equalizer optional; walnut veneer cabinet; 24 1/2" H x 15 3/4" W x 8 1/4" D..... \$275  
Equalizer ..... \$96

**Interface: 3 Series II Speaker System**

Two-way speaker system with 12-in low-frequency radiator, 8-in midrange/woofer, and 1 1/2-in super dome tweeter with acoustic lens; frequency re-

sponse 34-20,000 Hz, 40-18,000 Hz ± 4 dB; crossover at 1500 Hz; sensitivity 92 dB SPL/W/m; min. input 3.6 W (for 90-dB SPL); max. input 250 W (for 107-dB SPL); 8-ohm nominal impedance; simulated walnut-grained vinyl finish; 25 1/4" H x 14 3/4" W x 13 1/4" D..... \$240

**Interface: 2 Series II Speaker System**

Two-way speaker system with 10-in low-frequency radiator, 8-in midrange/woofer, and 1 1/2-in super dome tweeter with acoustic lens; frequency response 39-20,000 Hz, 47-18,000 Hz ± 4 dB; crossover at 1500 Hz; sensitivity 92 dB SPL/W/m; min. input 3.6 W (for 90-dB SPL); max. input 250 W (for 107-dB SPL); 8-ohm nominal impedance; simulated walnut-grained vinyl finish; 24 1/4" H x 13 3/4" W x 10 1/4" D..... \$190

**Interface: 1 Series II Speaker System**

Two-way speaker system with 8-in midrange/woofer and 1 1/2-in super dome tweeter with acoustic lens; frequency response 47-20,000 Hz, 56-18,000 Hz ± 4 dB; min. input 3.6 W (for 90-dB SPL); max. input 250 W (for 107-dB SPL); 8-ohm nominal impedance; simulated walnut-grained vinyl finish; 21 1/4" H x 11 3/4" W x 9 1/4" D..... \$140

**EPI**

**500 Speaker System**

Three-way floor-standing speaker system with 10-in "Focused Field" woofer reinforced with two 12-in passive radiators, 4-in sealed-back midrange with aluminum voice coil and ferrofluid damping, and 1-in air-spring tweeter; frequency response 45-20,000 Hz ± 3 dB; crossovers at 750 and 3000 Hz; input range 15-250 W continuous; 4-ohm impedance; oiled walnut and ebony vinyl finish with acoustically transparent black cloth grille; 36" H (with 3.38" integral base) x 12" W x 14" D... \$440

**200C Speaker System**

Two-way floor-standing speaker system with 8-in woofer, 12-in passive radiator, and 1-in air-spring tweeter; frequency response 36-20,000 Hz ± 3 dB; crossover at 1800 Hz; input range 15-125 W continuous; nominal impedance 8 ohms; front-panel high-frequency control; oiled walnut finish with black cloth grille; 32 3/4" H (with 1.5" integral base) x 17" W x 11" D ..... \$300

**140C Speaker System**

Two-way bookshelf/floor-standing speaker system with 6-in long-traverse woofer, 8-in passive radiator, and 1-in air-spring tweeter; frequency response 38-20,000 Hz ± 3 dB; crossover at 1800 Hz; input range 25-90 W; nominal impedance 8 ohms; three-position tweeter level control; oiled walnut finish with acoustically transparent black cloth grille; 24" H x 13 1/2" W x 9" D..... \$210

**120C Speaker System**

Two-way speaker system with 10-in long-traverse woofer and 1-in air-spring tweeter; frequency response 38-20,000 Hz ± 3 dB; crossover at 1800 Hz; input range 25-80 W continuous; 8-ohm nominal impedance; front panel high frequency control; wood-grain vinyl cabinet with black acoustically transparent grille; 25" H x 15" W x 11" D..... \$175

**100V Speaker System**

Two-way bookshelf speaker system with 8-in long-traverse woofer and 1-in air-spring tweeter; frequency response 48-20,000 Hz ± 3 dB; crossover at 1800 Hz; input range 12-80 W; 8-ohm nominal impedance; woodgrain vinyl finish with black cloth grille; 21" H x 11" W x 9" D..... \$120

**EPICURE**

**3.0 Series II Speaker System**

Three-way floor-standing speaker system with 10-in woofer, 6-in midrange, and 1-in acoustic-loading spherical tweeter; frequency response 32-20,000 Hz ± 3 dB; crossovers at 475 and 2000 Hz; nominal impedance 4 ohms; truncated pyramid; 41 1/4" H x 17 1/2" bottom x 8 1/2" top..... \$475

**Interface: C Series II** It sounds like music.

The Interface: C Series II is the fulfillment of our six-year association with optimally vented speakers based on the theories of A.N. Thiele—speaker designs first introduced by Electro-Voice in 1973. The Interface: C offers you a unique combination of high efficiency and high power capacity—the only way to accurately reproduce the 120+ dB peak sound pressure levels found in some types of live music.

The SuperDome™ tweeter, an E-V exclusive, and the VMR™ vented midrange driver, the first to apply optimally vented design to mid frequencies, ensure your music is reproduced without the coloration normally found in other high-efficiency drivers. An honest 30 Hz low end totally eliminates the need for expensive sub-woofer assemblies.

When you spend \$1,000 for a speaker system, get your money's worth. Audition the Interface: C Series II at your nearest Interface dealer. If you want a speaker that sounds like music, the Interface: C Series II is the one you'll buy.

**Ev** Electro-Voice®  
a gulton company

600 Cecil Street, Buchanan, Michigan 49107



# 11 SPEAKER SYSTEMS

## 2.0 Speaker System

Two-way floor-standing speaker system with 6-in woofer, 8-in passive radiator, and 1-in acoustic-loading spherical tweeter; frequency response 38-20,000 Hz  $\pm 3$  dB; crossover at 2000 Hz; nominal impedance 6 ohms; includes integral stand; 34" H  $\times$  10 $\frac{3}{4}$ " W  $\times$  12 $\frac{1}{4}$ " D..... \$300

## 1.0 Speaker System

Two-way miniature speaker system with 6-in woofer and 1-in acoustic-loading spherical tweeter; frequency response 50-20,000 Hz  $\pm 3$  dB; crossover at 2000 Hz; nominal impedance 6 ohms; diffraction-controlling foam front cabinet; 14 $\frac{1}{2}$ " H  $\times$  10 $\frac{1}{4}$ " W  $\times$  8" D..... \$175

## ESS

### AMT Series

#### Transar II Speaker System

System consists of midrange/tweeter drivers with separate subwoofer commode; frequency response 20.6-20,000 Hz  $\pm 3$  dB; passive crossover between woofer and tweeter; electronic crossover with 100-Hz crossover point and mono/stereo low-frequency outputs and 200-W/ch power amp for subwoofer and 20-W/ch power amp for midrange/tweeter drivers required; subwoofer 21" H  $\times$  24" W  $\times$  24" D; satellites 45" H  $\times$  27 $\frac{1}{2}$ " W  $\times$  15" D..... \$3000

#### AMT Monitor Speaker System

Two-way passive-radiator floor-speaker system with 12-in Bextrene rubber-surround cone woofer, 12-in passive radiator, and 21.5 in<sup>2</sup> Heil air motion transformer with polyester articulated silicon-edged diaphragm; frequency response 30-23,000 Hz  $\pm 3$  dB; crossover at 800 Hz; max input 400 W clean music power; 6-ohm nominal impedance; 120° horizontal dispersion, 30° vertical dispersion; sensitivity 91-dB SPL/W/m; presence/brilliance control; oiled walnut finish with black-brown grille; 39.25" H  $\times$  15.63" W  $\times$  15.88" D..... \$696

#### AMT 1C Speaker System

Two-way passive-radiator floor-standing speaker system with 12-in Bextrene rubber-surround cone woofer, 12-in passive radiator, and 21.5 in<sup>2</sup> Heil air motion transformer with polyester articulated silicon-edged diaphragm; frequency response 35-23,000 Hz  $\pm 3$  dB; crossover at 800 Hz; max input 400 W clean music power; 6-ohm nominal impedance; 120° horizontal dispersion, 30° vertical dispersion; sensitivity 91 dB SPL/W/m; midrange presence and brilliance controls; oiled walnut finish with black-brown grille; 35.25" H  $\times$  16.25" W  $\times$  16.25" D..... \$574

#### AMT Bookshelf Speaker System

Two-way passive-radiator bookshelf speaker system with 12-in Bextrene rubber-surround cone woofer, 12-in passive radiator, and 21.5 in<sup>2</sup> Heil air motion transformer with polyester articulated silicon-edged diaphragm; frequency response 40-23,000 Hz  $\pm 3$  dB; crossover at 800 Hz; max input 400 W clean music power; 6-ohm nominal impedance; 120° horizontal dispersion, 30° vertical dispersion; sensitivity 91-dB SPL/W/m; presence/brilliance control; oiled walnut finish with black-brown grille; 24" H  $\times$  14" W  $\times$  14" D..... \$488

### Classic Series

#### Pyramid Speaker System

Two-way tuned-port floor-standing speaker system with 10-in resin-impregnated cone woofer and 20.25 in<sup>2</sup> Heil air-motion transformer midrange/tweeter; 120° horizontal dispersion, 30° vertical dispersion; frequency response 38-24,000 Hz  $\pm 3$  dB; crossover at 1000 Hz; input 250 W clean power; sensitivity 93 dB SPL/W/m; 6-ohm nominal

impedance; top mounted midrange and brilliance controls; genuine walnut veneer finish with dark brown grille; 26.75" H  $\times$  15.5" W  $\times$  15.5" D. \$496

#### Pedestal Speaker System

Two-way tuned-port floor-standing speaker system with two 8-in resin-impregnated cone woofers and 10.4 in<sup>2</sup> Heil air-motion transformer midrange/tweeter; frequency response 42-23,000 Hz  $\pm 3$  dB; 120° horizontal dispersion, 40° vertical dispersion; crossover at 1500 Hz; input range 15-200 W continuous; sensitivity 93 dB SPL/W/m; 6-ohm impedance; brilliance control; genuine walnut veneer finish with dark brown grille; 31 $\frac{1}{4}$ " H  $\times$  13 $\frac{1}{4}$ " W  $\times$  13" D..... \$429

#### Bookshelf Speaker System

Two-way tuned-port bookshelf speaker system with 10-in resin-impregnated cone woofer and 10.4 in<sup>2</sup> Heil air-motion transformer midrange/tweeter; 120° horizontal dispersion, 40° vertical dispersion; frequency response 50-23,000 Hz  $\pm 3$  dB; crossover at 1500 Hz; input 140 W clean power; sensitivity 93 dB SPL/W/m; 6-ohm impedance; front mounted brilliance control; genuine walnut veneer finish with dark brown grille; 25" H  $\times$  15" W  $\times$  13 $\frac{1}{2}$ " D.. \$358

### Targa Series

#### 412T Speaker System

Three-way passive-radiator floor-standing speaker system with 12-in resin-impregnated cone woofer, 12-in passive radiator, 3.5-in cone midrange, and 1-in Mylar dome tweeter; frequency response 30-20,000 Hz  $\pm 4$  dB; crossovers at 800 and 3000 Hz; sensitivity 91.5 dB/W/m; input range 20-175 W continuous; nominal impedance 8 ohms; tweeter and midrange level controls; Alagash birch-grain vinyl finish with dark brown grille; 41.75" H  $\times$  14.25" W  $\times$  13.5" D..... \$399

**312.** Similar to 412T except frequency response 40-20,000 Hz  $\pm 4$  dB; crossovers at 1000 and 3000 Hz; sensitivity 91 dB/W/m; input range 20-150 W; 25" H  $\times$  14.25" W  $\times$  13.5" D..... \$299

**310.** Similar to 312 except uses 10-in resin-impregnated cone woofer and complementary passive radiator; frequency response 45-20,000 Hz  $\pm 4$  dB; sensitivity 90.5 dB/W/m; input range 20-120 W continuous..... \$249

#### 210 Speaker System

Two-way passive-radiator bookshelf speaker system with 10-in resin-impregnated cone woofer, 10-in passive radiator, and 1-in Mylar dome tweeter; frequency response 50-20,000 Hz  $\pm 4$  dB; crossover at 1500 Hz; sensitivity 91 dB/W/m; input range 15-90 W continuous; nominal impedance 8 ohms; tweeter level control; Alagash birch-grain vinyl finish with dark brown grille; 22" H  $\times$  12.25" W  $\times$  13" D..... \$199

**208.** Similar to 210 except tuned-port system with 8-in resin-impregnated cone woofer and 2-in fiber cone tweeter; crossover at 2000 Hz; sensitivity 90 dB/W/m; input range 10-70 W; 21" H  $\times$  11.75" W  $\times$  10" D..... \$139

### Performance Series

#### PS 4A Speaker System

Two-way floor-standing speaker system with 10-in fiber-cone woofer, 10-in fiber-cone passive radiator, and 10.4 in<sup>2</sup> Heil air-motion transformer midrange/tweeter; frequency response 35-24,000 Hz  $\pm 3$  dB; crossover at 2000 Hz; max. input 160 W clean power; 6-ohm nominal impedance; 120° horizontal, 40° vertical dispersion; sensitivity 93-dB SPL/W/m; brilliance control; walnut-grain vinyl finish with dark brown grille; 35" H  $\times$  12 $\frac{1}{2}$ " W  $\times$  12 $\frac{1}{4}$ " D..... \$397

#### PS 5A Speaker System

Two-way bookshelf speaker system with 10-in fiber-cone woofer, 10-in fiberslate passive radiator, and 10.4 in<sup>2</sup> Heil air-motion transformer midrange/tweeter; frequency response 40-22,000 Hz  $\pm 3$  dB; crossover at 2400 Hz; max. input 140 W clean power; 6-ohm nominal impedance; 120° horizontal, 40° vertical dispersion; sensitivity 93-dB SPL/W/m; brilliance control; walnut-grain vinyl finish with dark brown grille; 24 $\frac{1}{4}$ " H  $\times$  14" W  $\times$  14" D..... \$278

#### PS 8A Speaker System

Two-way bookshelf speaker system with 8-in fiber-

cone woofer, 10-in fiberslate passive radiator, and 10.4 in<sup>2</sup> Heil air-motion transformer midrange/tweeter; frequency response 50-22,000 Hz  $\pm 3$  dB; crossover at 2400 Hz; max. input 100 W clean power; 6-ohm nominal impedance; 120° horizontal, 40° vertical dispersion; sensitivity 93-dB SPL/W/m; brilliance control; walnut-grain vinyl finish with dark brown grille; 22" H  $\times$  12 $\frac{1}{4}$ " W  $\times$  10 $\frac{3}{4}$ " D..... \$211

#### PS 9A Speaker System

Two-way bookshelf speaker system with 8-in fiber cone woofer and 10.4 in<sup>2</sup> Heil air-motion transformer; frequency response 55-22,000 Hz  $\pm 3$  dB; crossover at 2400 Hz; max. input 75 W clean power; 6-ohm nominal impedance; 120° horizontal, 40° vertical dispersion; sensitivity 92 dB SPL/W/m; walnut-grain vinyl finish with dark brown grille; 19 $\frac{1}{2}$ " H  $\times$  11 $\frac{1}{2}$ " W  $\times$  9 $\frac{1}{8}$ " D..... \$178

### ESS Model 10

Two-way vented-port floor-standing speaker system with 10-in resin-impregnated fiber cone woofer, 1 $\frac{1}{2}$ -in copper voice coil, and 1-in Mylar dome tweeter with 1-in voice coil; 2 $\frac{1}{2}$ -in vented port Power Bass™; frequency response 35-24,000 Hz; crossover at 2500 Hz; input range 15-80 W; sensitivity 90 dB SPL/W/m; 6-ohm nominal impedance; alagash birch-grain vinyl finish with deep brown grille; 22" H  $\times$  12 $\frac{1}{2}$ " W  $\times$  13" D..... \$150

## FISHER

#### MS 157 "AirDyne" Speaker System

Three-way floor-standing speaker system with 12-in woofer, 8-in passive radiator, 5-in midrange, and 3-in tweeter; frequency response 40-20,000 Hz; crossovers at 1000 and 5000 Hz; sensitivity 92 dB SPL/W/m; input range 8-60 W continuous; nominal impedance 8 ohms; 29 $\frac{1}{4}$ " H  $\times$  14 $\frac{1}{8}$ " W  $\times$  11 $\frac{1}{2}$ " D..... \$160

**MS 147.** Similar to MS 157 except uses 10-in woofer; frequency response 50-17,000 Hz; input range 6.5-45 W continuous; 26 $\frac{1}{4}$ " H  $\times$  14 $\frac{1}{8}$ " W  $\times$  11" D..... \$130

## FRANKMANN RESEARCH

#### The Frankmann Reference Std. Monitor

Four-way speaker system with two 12-in woofers, each in left and right channels of one enclosure, and two 6-in midrange drivers, one diffraction horn tweeter, and one rear-panel cone tweeter, each in left and right satellite panels; one attenuator as part of design mediates response, recording, and listening room variations; frequency response 26-22,000 Hz  $\pm 4$  dB; crossovers at 200, 5000, and 10,000 Hz; efficiency 94-dB SPL/W/m (pink noise); input range 10-125 W; 6-ohm impedance; fuse-protected; bass drivers angularly mounted; walnut, oak, or birch cabinet in early American, walnut, or Mediterranean finish; bass module 29" H  $\times$  29" W  $\times$  20" D; satellite panels 22" H  $\times$  10" W  $\times$  6" D..... \$895

#### The Frankmann 8/4 Speaker System

Four-way two-enclosure linear phase floor-standing speaker system with two 8-in woofers, 6-in midrange, and diffraction horn tweeter; one attenuator as part of design mediates response, recording, and listening room variations; separate woofer and midrange enclosures geometrically stacked for linear phasing with midrange and tweeter mounted in pivoting assembly for angle adjustments; frequency response 32-22,000 Hz  $\pm 4$  dB; crossovers at 250, 5000, and 10,000 Hz; sensitivity 90 dB SPL/W/m; 8-ohm nominal impedance; input range 10-125 W; fuse protected; includes stands allowing vertical or horizontal mounting; walnut, oak, or birch cabinet in early American, walnut, or Mediterranean finish with black grille cloth; 42" H  $\times$  16" W  $\times$  17" D..... \$650 pr.

#### Frankmann C<sub>0</sub> Subwoofer

Infinite-baffle floor-standing subwoofer incorporates eight 12-in woofers (four per channel); frequency response 16-200 Hz  $\pm 4$  dB; crossover at 200 Hz, 18 dB/octave; sensitivity 96 dB SPL/W/m;



input range 10-200 W; impedance 8 ohms; available in custom cabinetry; 30" H x 50" W x 24" D... \$800

**Frankmann C<sub>1</sub> Subwoofer**

Infinite-baffle floor-standing subwoofer incorporates four 12-in woofers (two per channel); frequency response 24-200 Hz ±4 dB; crossover at 200 Hz, 12 dB/octave; sensitivity 96 dB SPL/W/m; input range 10-125 W; impedance 6 ohms; 29" H x 30" W x 20" D..... \$500

**FRAZIER**

**Eleven System**

Three-way speaker system with 15-in and 12-in woofers, four 4-in midranges, each pair isolated in two sealed enclosures, and two dc piezoelectric super horn tweeters; crossovers at 400 and 4000 Hz; efficiency 103-dB SPL/W/m; max. input 100 W continuous; 4-ohm impedance; stepped high-frequency and midrange controls; oiled walnut veneer on fiberboard with black foam grille; 55" H x 30" W x 18" D..... \$1500

**Frazier's Thing**

Three-way speaker system with 12-in and 10-in woofers, exponential midrange horn system, and two stacked piezoelectric super horn tweeters for columnar effect; crossovers at 800 and 4000 Hz; efficiency 99-dB SPL/W/m; handles 60 W continuous; 4-ohm impedance; front-panel brilliance and presence controls; natural oak finish with black knit grille; 48" H x 24" W x 18 1/2" D..... \$1100

**Seven System**

Three-way speaker system with 12-in woofer, two 4-in full-range sealed midranges stacked for columnar effect and two piezoelectric super horn tweeters stacked for columnar effect; crossovers at 400 and 4000 Hz; efficiency 99-dB SPL/W/m; max. input 50 W continuous; 8-ohm impedance; front-panel variable midrange and high-frequency compensators; oiled walnut veneer on fiberboard with removable black knit grille; 29" H x 18" W x 16" D.. \$530

**Mark V System**

Three-way speaker system with 12-in woofer, two 4-in midranges in separate sealed enclosure, and piezoelectric super horn tweeter; crossovers at 500 and 4000 Hz; efficiency 96-dB SPL/W/m; handles 50 W continuous; 8-ohm impedance; front-panel variable midrange and high-frequency compensators; oiled walnut veneer on fiberboard with acoustically transparent, removable black knit grille; 25 1/4" H x 14" W x 12" D..... \$400

**Concerto System**

Three-way speaker system with 10-in woofer, compression horn tweeter, and dc piezoelectric super horn tweeter; crossovers at 2000 and 4000 Hz; max. input 30 W continuous; 8-ohm impedance; brilliance control on front panel; oiled walnut veneer with acoustically transparent, removable black knit grille; 21 1/2" H x 16" W x 16" D..... \$325

**DD-2 Speaker System**

Two-way speaker system with 10-in woofer with 32-oz magnet coupled directly to two cone drivers; input range 5-100 W/ch continuous; variable high frequency compensator; oiled walnut veneer baffle with acoustically transparent black knit grille. \$240

**DD-1 Speaker System**

Two-way bookshelf speaker system with 8-in L.F. woofer coupled directly to cone tweeter; crossover 2400 Hz; efficiency 95 dB SPL/W/m; input range 5-75 W/ch continuous; impedance 8 ohms; walnut veneer cabinet with black grille; 19" H x 10 1/2" W x 10 1/2" D..... \$132

**CAD-1 System**

Two-way bookshelf speaker system with 8-in woofer, 10-oz ceramic magnet, 1-in voice coil, and 3-in solid-backed cone tweeter; frequency response 50-14,000 Hz; crossover at 3000 Hz; input range 15-32 W continuous power; sensitivity 93 dB SPL/W/m; 8-ohm nominal impedance; walnut grain vinyl

with acoustically transparent black double-knit fabric grille; 19" H x 10 1/2" W x 10 1/2" D..... \$105

**FRIED PRODUCTS**

**Super Monitor Speaker System Kit**

Floor-standing speaker system consisting of bass module constructed of transmission line folded three times that incorporates 12-in high-flux density, linear-throw woofer and satellite system fastened above that incorporates upper bass, midrange, and tweeter with pressure relief damping system. Kit includes all parts except wood. 52" H x 30" W x 5" D..... \$1300 pr. Custom-built with wood-finish options..... \$4000 pr. min.

**R/III Speaker System**

Three-way line-tunnel-loading floor-standing speaker system with 10-in plastic-laminated woofer, 5-in laminated midrange, and 1-in resistively-coated dome tweeter; frequency response 32-20,000 Hz -3 dB; crossovers at 350 and 3500 Hz; sensitivity 90 dB SPL at 500 Hz, 1 W; input range 25-100 W/ch; impedance 8 ohms; two-position midrange control; foam grille; sold as mirror-image pairs; 28" H x 16" W x 14 1/2" D... \$1180 pr.

**E Speaker System Kit**

Two-way line-tunnel pyramidal floor-standing speaker system incorporating 8-in woofer with magnetic damping system and dome tweeter; frequency response 32-20,000 Hz ±3 dB; sensitivity 95 dB/W at 500 Hz; impedance 8 ohms; includes 2" pedestal base; 33" H x 18 1/2" (bottom) x 6 1/2" (top) W x 15 1/2" (bottom) x 9 1/2" (top) D..... \$495 pr. Factory assembled..... \$1300 pr.

**C Satellite Speaker Kit**

Two-way pyramidal speaker system designed for use with Super Monitor subwoofer; incorporates 6-in bass/midrange and dome tweeter; features pressure-release damped venting system; 10 1/2" (bottom) x 6" (top) W x 9" (bottom) x 6 1/2" (top) D..... \$450 pr. Factory assembled..... \$800 pr.

**Super Monitor Subwoofer Kit**

Two-channel transmission-line floor-standing subwoofer incorporating 12-in plane source woofer propagator; creates equivalent acoustic air mass in range below 40 Hz; frequency response 20-85 Hz ±3 dB; to 200 Hz (biamp input); input range 25-400 W; sold as mirror-image pairs; 38" H x 29 1/2" W x 15" D..... \$850 pr. Factory assembled..... \$3000 pr. **O.** Similar to Super Monitor except uses 10-in woofer; 31" H x 24 1/2" W x 13 1/2" D..... \$620 pr. Factory assembled..... \$2500 pr.

**FULTON MUSICAL INDUSTRIES**

**Premiere Speaker System**

Seven-way floor-standing speaker system with two 12-in subwoofers, 12-in mid-woofer, 10-in upper-woofer, 8-in midrange, and three tweeters; frequency response 13-80,000 Hz; crossovers at 39, 122, 425, 2400, 8000, and 26,000 Hz; input range 50-1000 W; 8-ohm impedance; American walnut finish; 60" H x 25" W x 22" D.... \$5500 pr.

**Accent Modular Speaker System**

Five-way two-piece floor-standing speaker system consisting of end-tape-designed low-bay woofer and wedge-like tower; subwoofer incorporates two active 12-in woofers (one is floor-loaded); tower incorporates nine 1-in dome drivers and three 2-in dome drivers; crossovers at 22, 122, 4200, and 25,000 Hz. Subwoofer has two level controls; walnut finish; 14" H x 24" W x 22" D..... \$895 Tower. Has three level controls; 4' 5" H x 22" W x 10 1/2" D..... \$1645

**Crescendo Speaker System**

Five-way floor-standing speaker system with 12-in woofer, 10-in upper woofer, 5-in midrange, and two 1-in dome tweeters; crossovers at 95, 750, 5500, and 22,000 Hz; four level controls; solid walnut trim; 44" H x 18" W..... \$1249

**Nuance Speaker System**

Four-way floor-standing speaker system with 10-in woofer, 5-in midrange, mid-tweeter, and super tweeter; biamp capability; frequency response 35-42,000 Hz; crossovers at 760, 6500, and 15,000 Hz; min. input 35 W; 8-ohm impedance; bass, midrange and tweeter level controls; walnut veneer finish; 34" H x 14" W x 13" D..... \$595

**100 Speaker System**

Two-way bookshelf speaker system with 10-in woofer and four 2 1/4-in tweeters; frequency response 40-22,000 Hz; crossover at 950 Hz; efficiency 105-dB SPL; input range 12-1000 W; nominal impedance 8 ohms; American walnut veneer; 22" H x 12 1/4" W x 9 1/2" D..... \$299

**80 Speaker System**

Two-way bookshelf speaker system with 8-in woofer and two 2 1/4-in tweeters; frequency response 50-22,000 Hz; crossover at 1600 Hz; efficiency 96-dB SPL; input range 7.5-1000 W; nominal impedance 8 ohms; American walnut; 17 3/4" H x 9 1/4" W x 8 1/2" D..... \$209

**FUNDAMENTAL RESEARCH**

**The Punch Disco Subwoofer**

Vented floor-standing subwoofer designed for disco use; incorporates four 12-in woofers; input range 75-300 W; provides power in 35-50 Hz range; choice of 4- or 8-ohm impedance; must be biamped; choice of cabinet finishes; 60" H x 24" W x 18" D..... \$750

**Large Infrasonix Woofer**

Air-suspension floor-standing subwoofer with two 10-in air-suspension loaded woofers; frequency range feeling-200 Hz; impedance 4 ohms; input range 60-400 W max. unclipped; simulated walnut finish (other available finishes); 38.25" H x 15" W x 16" D..... \$450

**Small Infrasonix Woofer**

Air-suspension subwoofer with 10-in air-suspension loaded woofer; frequency range feeling-200 Hz; impedance 8 ohms; input range 60-200 W max. unclipped; simulated walnut finish (other finishes available); 28" H x 13" W x 13" D..... \$299

**GC/AUDIOTEX**

**94-1400 Speaker System**

Three-way acoustic suspension speaker system with 12-in woofer with 12-oz ferrite magnet, 1-in aluminum foam multi-roll voice coil, 4 1/2-in hardback midrange, and 1 1/4-in phenolic ring tweeter; frequency response 35-20,000 Hz; crossovers at 2500 and 5000 Hz; recommended min. input 8 W; handles 45 W continuous power; 8-ohm impedance; walnut vinyl finish with brown knit grille; 24" H x 15" W x 9 3/4" D..... \$100

**GENESIS**

**Genesis 410 Speaker System**

Four-way vented speaker system with 10-in high-compliance butyl-surround cone woofer, 10-in dual-point suspension cone passive radiator, 4 1/2-in vented pole double-compressed-foam-surround midrange, and 1-in ferrofluid-suspension inverted phenolic dome tweeter; frequency response 32-20,000 Hz ±3 dB; crossovers at 45, 1000, and 4000 Hz; sensitivity 88 dB/W/m; input range 25-300 W/ch; impedance 8 ohms; two-position midrange and tweeter level controls; includes 8-in-high speaker stands; natural walnut veneer cabinet with beveled low-diffraction frame black grille; 30.5" H x 15.75" W x 15" D..... \$1000 pr.

**Genesis 3+ Speaker System**

Three-way floor-standing speaker system with 10-in passive radiator, 8-in woofer, 4 1/2-in ferrofluid-suspension cone midrange, and 1-in ferrofluid-suspension inverted phenolic dome tweeter; frequency response 32-20,000 Hz ± 4 dB; crossovers at 800 and 3000 Hz; min. input 20 W; 8-ohm nominal impedance; separate three-position tweeter and

# 11 SPEAKER SYSTEMS

midrange level controls; walnut or oak veneer finish with brown knit grille; 37 1/2" H x 14 1/2" W x 12" D. \$399

## Genesis 2 + Speaker System

Two-way speaker system with 8-in woofer, 10-in passive radiator, and 1-in ferrofluid-suspension inverted dome tweeter; frequency response 32-20,000 Hz ± 4 dB; crossover at 1800 Hz; efficiency 88.5 dB/W/m; input range 15-100 W/ch continuous; nominal impedance 8 ohms; two-position tweeter level control; walnut finish with brown knit grille; 33" H x 14 1/2" W x 10 1/2" D. \$269

## Genesis 2 Speaker System

Two-way bookshelf speaker system with 8-in long-exursion woofer and 1-in ferrofluid-suspension inverted dome tweeter; incorporates 10-in passive radiator; frequency response 32-20,000 Hz ± 4 dB (88.5-dB SPL); max input 100 W; min. input 15 W; 8-ohm impedance; two-position tweeter level switch; walnut vinyl finish with brown grille; 26 1/2" H x 14 1/2" W x 11 1/2" D. \$199

## Genesis 1 + Speaker System

Two-way acoustic-suspension speaker system with 8-in woofer and 1-in ferrofluid-suspension inverted dome tweeter; frequency response 35-20,000 Hz ± 4 dB; crossover at 1800 Hz; efficiency 88.5 dB/W/m; input range 15-80 W/ch continuous; nominal impedance 8 ohms; two-position tweeter level control; walnut vinyl finish with brown knit grille; 22" H x 12 1/2" W x 9 1/2" D. \$149

## Genesis V6 Speaker System

Two-way ported bookshelf speaker system with 6 1/2-in woofer and 1-in ferrofluid-suspension inverted dome tweeter; frequency response 52-20,000 Hz ± 4 dB; crossover at 1800 Hz; efficiency 88 dB/W/m; input range 15-80 W/ch continuous; 8-ohm nominal impedance; walnut vinyl finish with brown knit grille; 18 1/2" H x 10 3/4" W x 7" D. \$119

## GOODMANS by TRUSONIC

### HE Series

#### HE 1 Speaker System

Three-way bass-reflex floor-standing speaker system with woofer, two midrange drivers, and soft-dome tweeter; frequency response 50-20,000 Hz; crossovers at 1000 and 5000 Hz; nine-element multiple filter network using ferrite-cored chokes; 875 mm H x 340 mm W. \$480

#### HE 2 Speaker System

Three-way bass-reflex speaker system with woofer, midrange, and soft-dome tweeter; frequency response 60-20,000 Hz; crossovers at 1000 and 5000 Hz; nine-element multiple filter network using ferrite-cored chokes; 725 mm H x 340 mm W. \$420

### Achromat Series

#### Achromat Sigma Speaker System

Two-way speaker system with long-throw rigid polycone woofer, aux. bass radiator, and soft dome tweeter; frequency response 35-23,000 Hz; 12-element ferrite-core crossover network, fused system; 686 mm H x 327 mm W. \$480  
**Kappa.** Similar to Sigma minus aux. bass radiator; frequency response 45-23,000 Hz; 540 mm H x 272 mm W. \$335

## GREAT WHITE WHALE

### Point 5a Speaker System

Three-way acoustic-suspension floor-standing speaker system incorporates 10-in down-firing floor-coupled flat-piston-radiator cone woofer with

2-lb magnet in 3-cubic-foot wedge-shaped cabinet, 5-in tubular midrange, and Mylar diaphragm ribbon tweeter; frequency response 20-30,000 Hz ± 3 dB; crossovers at 200 and 4200 Hz; sensitivity 92 dB SPL/W/m; input range 30-200 W; impedance 8 ohms; oak or walnut formica cabinet with black cloth grille; 30" H x 17 1/2" W x 12 1/2" D. \$695

### Point 4a Speaker System

Five-way phase-coherent floor-standing speaker system with 10-in down-firing flat-piston-radiator cone woofer in wedge-shaped enclosure and 8-in cone mid/bass, 5-in soft dome midrange, and 1 1/4-in soft dome ribbon tweeter mounted on damped frame and vertically aligned; frequency response 20-30,000 Hz ± 2 dB; crossovers at 80, 375, 3000, and 5000 Hz; sensitivity 90 dB SPL/W/m; input range 50-200 W; impedance 4 ohms; ± 3 dB midrange and tweeter level controls; oiled walnut or oak veneer cabinet; 41 3/4" H x 19 1/2" W x 11 3/4"-6 1/4" D. \$1250 pr.

### Point 3a Speaker System

Three-way three-piece speaker system consisting of subwoofer and two bookshelf satellites; subwoofer incorporates two 10-in down-firing proprietary cone woofers with 2-lb magnets; each satellite incorporates 5-in long-extrusion open-back midrange and Mylar diaphragm ribbon tweeter. System specs: frequency response 20-30,000 Hz ± 3 dB; crossovers at 60/150 and 4200 Hz; sensitivity 92 dB SPL/W/m; input range 20-200 W; impedance 8 ohms; subwoofer has formica top with oak or walnut side panels—doubles as coffee or end table (can be purchased separately); subwoofer 15" H x 25" W x 14" D; satellites 11 1/2" H x 6 3/4" W x 6 1/2" D. \$550

## GRUCCI

### G/36 Speaker System

Five-way acoustical-reflecting horn-loaded floor-standing speaker system with 12-in woofer, adjustable 8-in low-midrange driver, adjustable 6-in midrange in tandem with 5-in upper-midrange direct-radiating driver, and two adjustable 1 1/4-in direct-radiating tweeters; frequency response 20-20,000 Hz; handles 200 W input power; 8-ohm impedance; features LED VU meter with digital readout; LED overload indicator; three-station pushbutton frequency crossover control for midrange and mid-high frequency transducers; choice of Leriex, zebrawood, olive-ash, rosewood, or American walnut hardwood veneers; 36" H x 17 1/2" W x 18" D. \$1500

### G/28 Speaker System

Four-way acoustical-reflecting horn-loaded speaker system with 10-in woofer, adjustable 6-in low-midrange driver in tandem with 5-in upper-mid frequency direct-radiating driver, and two adjustable 1 1/4-in direct-radiating tweeters; frequency response 20-20,000 Hz; input 200 W; 8-ohm impedance; features LED VU meter with digital readout; three-station pushbutton high frequency crossover control; LED overload indicator; choice of Leriex, zebrawood, olive-ash, rosewood, or American walnut hardwood veneers; 28" H x 13 1/2" W x 14 1/2" D. \$1000

### G/21 Speaker System

Three-way acoustical-reflecting horn-loaded speaker system with 8-in woofer, 6-in direct-radiating midrange, and 1 1/4-in direct-radiating tweeter; frequency response 20-20,000 Hz; handles 100 W; 8-ohm impedance; features LED VU meter with digital readout and three-station pushbutton high- and mid-frequency crossover controls; LED overload indicator; choice of Leriex, zebrawood, olive-ash, rosewood, or American walnut hardwood veneers; 21" H x 11 1/4" W x 12 1/2" D. \$650

### G/15 Speaker System

Three-way acoustical-reflecting horn-loaded bookshelf speaker system with 6-in woofer, 5-in direct-radiating midrange, and 1 1/4-in direct-radiating tweeter; frequency response 25-20,000 Hz; handles 75 W; 8-ohm impedance; features three-station pushbutton frequency crossover control for midrange and tweeter; LED overload indicator; Leriex, zebrawood, olive-ash, rosewood, or American walnut hardwood veneers; 15" H x 8 3/4" W x 9 3/4" D. \$450

ix, zebrawood, olive-ash, rosewood, or American walnut hardwood veneers; 15" H x 8 3/4" W x 9 3/4" D. \$450

### G/10 Speaker System

Two-way acoustical-reflecting horn-loaded transducer speaker system with 4-in woofer and 1 1/4-in tweeter; frequency response 30-20,000 Hz; handles 50 W; 8-ohm impedance; LED overload indicator; can be used as satellites; choice of veneers; 10" H x 5 1/4" W x 7" D. \$240  
 Designer stands for G/10; choice of veneers; 36" H. \$125

### G/6 Subwoofer

Incorporates two 6-in woofers; frequency response 25-2500 Hz; handles 100 W; LED overload indicator; recommended for use with G/10 satellites as complete system; 10" H x 15" W x 10" D. \$400

## Custom Commercial Speaker Systems

### G/C96 Speaker System

Six-way acoustical-reflecting horn-loaded floor-standing speaker system with six 15-in woofers, two 12-in low-to-midrange drivers, two 8-in midrange drivers, four 6-in mid-to-upper frequency drivers, four 5-in upper-midrange drivers, and six 1 1/4-in tweeters; frequency response 20-20,000 Hz; handles 2000 W; 8-ohm impedance; features LED VU meter with digital readout, three-station pushbutton frequency crossover for low, mid, and high-frequency transducers, LED overload indicator, and circuit protection; can be wired for triamp, biamp, or normal connection; flat black finish; choice of wood veneers or formica finish optional; 96" H x 48" W x 48" D. \$15,000

### G/C72 Speaker System

Six-way acoustical-reflecting horn-loaded floor-standing speaker system with six 12-in woofers, two 8-in low-to-midrange drivers, two 6-in midrange drivers in tandem with two 5-in upper midrange drivers, and four 1 1/4-in tweeters; frequency response 20-20,000 Hz; handles 1000 W; 8-ohm impedance; LED overload indicator and circuit protection; can be wired for triamp, biamp, or normal connections; optional LED VU meter with digital readout and three-station pushbutton frequency crossovers available; flat black finish; choice of wood veneers or formica finish optional; 72" H x 34" W x 36" D. \$7000

### G/C48 Speaker System

Five-way acoustical-reflecting horn-loaded floor-standing speaker system with 15-in woofer, 8-in lower midrange, 6-in midrange in tandem with 5-in upper midrange, and two 1 1/4" tweeters; frequency response 20-20,000 Hz; handles 300 W; 8-ohm impedance; LED overload indicator and circuit protection; optional LED VU meter with digital readout and three-station pushbutton frequency crossovers available; flat black finish; choice of wood veneers or formica finish optional; 48" H x 23" W x 24" D. \$1300

### G/C36 Speaker System

Five-way acoustical-reflecting horn-loaded floor-standing speaker system with 12-in woofer, 8-in low midrange, 6-in midrange in tandem with 5-in upper midrange, and two 1 1/4" tweeters; frequency response 20-20,000 Hz; handles 300 W; 8-ohm impedance; LED overload indicator and circuit protection; optional LED VU meter with digital readout and three-station pushbutton frequency crossovers available; flat black finish; choice of wood veneers or formica finish optional; 36" H x 17 1/2" W x 18" D. \$1000

### G/C28 Speaker System

Four-way acoustical-reflecting horn-loaded floor-standing speaker system with 10-in woofer, 6-in low midrange, 5-in direct-radiating midrange, and two 1 1/4-in direct-radiating tweeters; frequency response 20-20,000 Hz; handles 200 W; 8-ohm impedance; LED overload indicator and circuit protection; optional LED VU meter with digital readout and three-station pushbutton frequency crossovers



for midrange and tweeter drivers; flat black finish; choice of wood veneers or formica finish optional; 28" H x 13 1/2" W x 14 1/2" D..... \$700

**G/C21 Speaker System**

Three-way acoustical-reflecting horn-loading speaker system with 8-in woofer, 6-in direct-radiating midrange, and 1 3/4-in tweeter; frequency response 20-20,000 Hz; handles 200 W; 8-ohm impedance; LED overload indicator and circuit protection; optional LED VU meter with digital readout and three-station pushbutton frequency crossover for midrange and tweeter drivers; flat black finish; choice of wood veneers or formica finish optional; 21" H x 11 1/2" W x 12 1/2" D..... \$450

**HARTLEY PRODUCTS**

**The Reference**

Four-way floor-standing speaker system with 24-in super woofer, 10-in midrange, 7-in tweeter, and 1-in super tweeter; crossovers at 250, 3000, and 7000 Hz; frequency response 16-25,000 Hz; input range 25-300 W; impedance 5-8 ohms; wood cabinet with removable double-knit grille; 50 1/4" H x 36" W x 24" D..... \$2000

**The Concertmaster**

Four-way floor-standing speaker system with 18-in woofer, 10-in midrange, 7-in tweeter, and 1-in super tweeter; crossovers at 250, 3000, and 7000 Hz; frequency response 16-25,000 Hz; input range 25-300 W; impedance 5-8 ohms; wood cabinet with removable brown grille; 41 1/4" H x 29" W x 18" D..... \$1500

**The Holton Tower**

Two-way floor-standing speaker system with two 10-in woofers and 1-in dome tweeter; crossover at 2000 Hz; frequency response 20-25,000 Hz; input

range 15-150 W; 4-ohm impedance; wood cabinet with removable brown grille; 49 1/2" H x 20" W x 14" D..... \$550

**The Concert Jr.**

Three-way floor-standing speaker system with 10-in full range woofer and 1-in dome tweeter; crossover at 5000 Hz; frequency response 25-25,000 Hz; input range 15-100 W; 5-8 ohm impedance; wood cabinet with removable brown grille and pedestal base; 38 1/2" H x 15" W x 11 3/4" D..... \$425

**Zodiac '78**

Two-way speaker system with 10-in woofer and 1-in tweeter; crossover at 2000 Hz; frequency response 35-25,000 Hz; input range 5-100 W; 8-ohm impedance; walnut cabinet with removable beige grille; 30" H x 15" W x 11 1/4" D..... \$225

**Zodiac 1B**

Two-way speaker system with 10-in woofer and 1-in tweeter; crossover at 2000 Hz; frequency response 40-25,000 Hz; input range 5-100 W; 8-ohm impedance; walnut cabinet with removable beige grille; 21 3/4" H x 14 3/4" W x 8 3/4" D..... \$169

**Zodiac Jr.**

Two-way speaker system with 8-in woofer and 1-in tweeter; crossover at 2500 Hz; frequency response 50-18,000 Hz; input range 5-50 W; 8-ohm impedance; 19" H x 11 1/2" W x 7 1/2" D..... \$120

**HECO by OSAWA**

**Precision 400 Speaker System**

Three-way speaker system with 12-in woofer, 2-in midrange, and 3/4-in tweeter; frequency response 25-25,000 Hz; crossovers at 600 and 3000 Hz; input range 120-200 W; 26" H x 15" W x 10 3/4" D..... \$600

**Precision 300 Speaker System**

Three-way speaker system with 10-in woofer, 2-in midrange, and 3/4-in tweeter; frequency response



25-25,000 Hz; crossovers at 700 and 3000 Hz; input range 100-170 W; 20" H x 12 1/2" W x 10 3/4" D..... \$450

**Precision 200 Speaker System**

Three-way bookshelf speaker system with 9 1/4-in woofer, 2-in midrange, and 3/4-in tweeter; frequency response 30-25,000 Hz, crossovers at 700 and 4000 Hz; input range 80-140 W, 18 1/2" H x 11 1/2" W x 9 1/2" D..... \$380

**Precision 100 Speaker System**

Three-way bookshelf speaker system with 8-in woofer, 1 1/2-in midrange, and 3/4-in tweeter; frequency response 35-25,000 Hz, crossovers at 1000 and 3500 Hz; input range 60-110 W; 16 1/2" H x 10 1/4" W x 8 1/2" D..... \$340

**HECO: SPEAKERS FOR PEOPLE WHO DON'T LIVE IN A LAB**

Most hi-fi speakers are designed in laboratories, then tested under carefully controlled conditions in anechoic chambers and special listening rooms.

But you don't live in a sound laboratory. That's why Heco speakers are Living-Room-Tested to make sure that they'll sound as terrific in your home as they do in our lab.

Four new Living-Room-Tested speakers—the Heco Precision Series—are now available from your Osawa dealer. Their many special features include:

- A unique woofer surrounded by a patented duct that prevents lateral cone excursion. The woofer is made of a special material with just the right combination of elasticity for full cone movement and rigidity for fast transient response.
- Soft-dome tweeters and dome midrange drivers made of an exclusive polymer material that is unaffected by humidity and temperature variations.
- Cabinets that have a density over four times as great as that of other speakers.
- Midrange and high-frequency contour controls that allow you to fine-tune your speakers to the shape and acoustical characteristics of your room.

So if you're buying speakers, be sure to visit your Osawa dealer and listen to our four new Living-Room-Tested Heco speakers—especially if you don't happen to live in a lab.



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 Distributed in Canada by Intersound Electronics, Montreal, Quebec

# 11 SPEAKER SYSTEMS

## HITACHI

### HS-430 Speaker System

Three-way bass-reflex floor-standing speaker system with 30-cm single-sheet aluminum gathered-edge cone woofer, 6.5-cm single-sheet-aluminum gathered-edge cone midrange, and 2.5-cm titanium dome tweeter; frequency response 35-20,000 Hz -15 dB; crossovers at 700 and 4000 Hz; sensitivity 92 dB SPL/W/m; max. input 120 W music; 8-ohm impedance; midrange and tweeter level controls; walnut finish cabinet; 26<sup>1</sup>/<sub>2</sub>" H x 14<sup>1</sup>/<sub>2</sub>" W x 14<sup>1</sup>/<sub>2</sub>" D ..... \$400

### HS-330 MK II Speaker System

Three-way sealed acoustic-suspension speaker system with 10-in gathered-edge metal cone woofer, 2<sup>1</sup>/<sub>2</sub>-in gathered-edge metal cone midrange, and 1<sup>1</sup>/<sub>2</sub>-in metal cone tweeter; frequency response 40-18,000 Hz ±4 dB; crossovers at 900 and 3500 Hz; sensitivity 92 dB SPL/W/m; max. input 100 W; 6-ohm impedance; midrange and tweeter level controls; walnut finish with removable charcoal black grille; 22<sup>3</sup>/<sub>8</sub>" H x 12<sup>3</sup>/<sub>8</sub>" W x 12" D ..... \$250

### HS-3 Speaker System

Three-way acoustic-suspension bookshelf speaker system with 20-cm gathered-edge-suspension cone woofer, 2.5-cm dome tweeter, and 1.4-cm titanium dome super tweeter; frequency response 45-25,000 Hz -15 dB; crossovers at 2700 and 13,000 Hz; SPL 90 dB; input 80 W music; impedance 8 ohms; padouk finish cabinet with brown cloth grille; 16<sup>1</sup>/<sub>4</sub>" H x 9<sup>1</sup>/<sub>2</sub>" W x 8<sup>1</sup>/<sub>4</sub>" D ..... \$300 pr.

### HS-1M Mini Speaker System

Two-way miniature speaker system with 4-in cone woofer and 1-in titanium dome tweeter; frequency response 50-20,000 Hz -15 dB; crossover at 2700 Hz; sensitivity 85 dB SPL/W/m; max. input 50 W; 8-ohm impedance; optional mounting brackets for wall, ceiling, or car shelf installation; black diecast aluminum alloy cabinet with black grille; 7<sup>1</sup>/<sub>4</sub>" H x 4<sup>3</sup>/<sub>4</sub>" W x 4<sup>3</sup>/<sub>4</sub>" D ..... \$200 pr.

## IMAGE ACOUSTICS

### Model 3A Speaker System

Three-way passive-radiator floor-standing speaker system with two 10-in woofers, two 5-in midrange drivers, and two 1-in dome tweeters in dual element arrays on adjacent sides of cabinet; frequency response 30-20,000 Hz ±5 dB; crossovers at 800 and 3300 Hz; sensitivity 91 dB SPL/W/m, dispersion 180 degrees; input range 25-125 W; 4-ohm impedance; oiled walnut veneer with walnut edging; 36" H x 16" W x 16" D ..... \$524

### Model 8A Speaker System

Three-way passive-radiator speaker system with two 8-in woofers, two 5-in midrange drivers, and two 1-in dome tweeters in dual element arrays on adjacent sides of cabinet; frequency response 35-20,000 Hz; crossovers at 800 and 3300 Hz; sensitivity 92 dB SPL/W/m; dispersion 180 degrees; input range 20-125 W; 4-ohm impedance; oiled walnut veneer with walnut edging; 30" H x 15" W x 15" D ..... \$439

### Model 4AX Speaker System

Three-way bottom-loaded passive-radiator floor-standing speaker system with 8-in woofer, 2-in dome midrange, and 3/4-in wide-dispersion soft dome tweeter in phase-coherent alignment; frequency response 40-20,000 Hz; crossovers at 800 and 3300 Hz; sensitivity 91 dB SPL/W/m; input range 20-80 W; 8-ohm impedance; oiled walnut veneer with solid walnut edging; 36" H x 11" W x 10" D ..... \$299

### Model 6A Speaker System

Two-way passive-radiator speaker system with two 6<sup>1</sup>/<sub>2</sub>-in woofers and two 1-in dome tweeters in dual element arrays on adjacent sides of cabinet; bottom-loaded passive radiator; frequency response 45-20,000 Hz; crossover at 2500 Hz; sensitivity 90 dB SPL/W/m; input range 15-50 W; 4-ohm impedance; laminated walnut finish cabinet; 24" H x 13" W x 13" D ..... \$219

### Model 1AX Speaker System

Two-way bottom-loaded passive-radiator bookshelf speaker system with 6<sup>1</sup>/<sub>2</sub>-in long-throw woofer and 3/4-in wide-dispersion soft dome tweeter in phase-coherent alignment; frequency response 40-20,000 Hz ±5 dB; crossover at 2500 Hz; sensitivity 90 dB SPL/W/m; input range 15-50 W; 8-ohm impedance; oiled walnut veneer with walnut edging; 24" H x 10" W x 10" D ..... \$174

### Model 5A Speaker System

Two-way passive-radiator speaker system with two 5-in woofers and two 1-in dome tweeters in dual element arrays on adjacent sides of cabinet; bottom-loaded passive radiator; frequency response 50-20,000 Hz; crossover at 2500 Hz; sensitivity 89 dB SPL/W/m; input range 10-30 W; 4-ohm impedance; laminated walnut finish cabinet; 20" H x 12" W x 12" D ..... \$164

## INFINITY

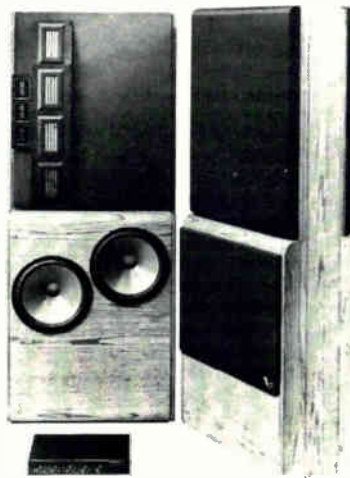
### Reference Standard Speaker System

Modular four-piece three-way floor-standing speaker system consisting of two woofer modules with six 12-in polypropylene cone woofers in feedback loop of servo amplifier (two 1.5-kW woofer amplifiers) and two midrange/tweeter modules with 12 dipole electromagnetic induction midrange drivers and 36 electromagnetic induction tweeters in dipole line-source array (24 front-facing and 12 rear-facing). Features bass variable low-pass filters, low-pass variable damping, woofer level controls, selectable input impedance midrange/tweeter amp control, woofer phase switch, and servo bass on/off circuit; polypropylene capacitors in passive crossover; Monster Cable wiring for midrange and woofer. Frequency response 16-40,000 Hz ±2 dB; crossovers 70 Hz nominal, variable from 60-120 Hz at main control unit (woofer/midrange), 5000 Hz (midrange/tweeter); midrange/tweeter amp input range 100-500 W/ch; oiled and "Grand Piano"-finish Indian Rosewood cabinet; includes 100-ft cable for hookup of midrange/tweeter sections to midrange/tweeter amplifier. Woofer modules: 7'6" H x 18" square/radius corners; midrange/tweeter modules 7'6" H x 40" W (with hollow and sand-filled curved wing sections) ..... \$20,000

### Reference Standard Series Speakers

### Reference Standard 4.5 Speaker System

Three-way bi-amped floor-standing speaker system



includes separate electronic crossover and room equalization control unit. Speaker: incorporates two 12-in dual-drive polypropylene cone woofers, four electromagnetic induction midranges in dipole configuration, and four electromagnetic induction tweeters (one faces rearward); drivers in separate enclosures; frequency response 24-32,000 Hz ±3 dB; crossovers at 200 (adjustable) and 5000 Hz; min. input power 100 W/ch; (single channel), 100 W/ch bass and 75 W/ch midrange and high frequency (biamped); nominal impedance 4 ohms; solid oak veneer cabinet with removable cloth grille. Control unit: features low- and high-pass crossover frequency controls, each adjustable in 5.5-octave steps from 110-440 Hz; low- and high-pass output level controls, adjustable in 22 steps from +6 dB to -14 dB; high-frequency contour control, continuously adjustable ±5 dB at 15,000 Hz; bi-channel/ equalizer, power, and rear-panel equalizer bypass switches. Speaker 64<sup>1</sup>/<sub>2</sub>" H x 26<sup>1</sup>/<sub>2</sub>" W x 14<sup>1</sup>/<sub>2</sub>" D; control unit 2<sup>1</sup>/<sub>4</sub>" H x 14<sup>1</sup>/<sub>2</sub>" W x 10<sup>1</sup>/<sub>2</sub>" D ..... \$3900

### Reference Standard 2.5 Speaker

Three-way floor-standing speaker system with 12-in dual-drive polypropylene cone woofer, two electromagnetic induction midranges in dipole configuration, and two electromagnetic induction tweeters (one faces rearward), frequency response 30-32,000 Hz ±3 dB; crossovers at 300 (adjustable with optional equalizer control unit) and 5000 Hz; recommended input range 100-300 W/ch; 4-ohm impedance; solid oak and veneer finish with cloth grille on removable frame; available as mirror-image pairs; 51" H x 18" W x 11" D ..... \$1050 Electronic crossover/ equalizer for 2.5; has separate woofer, midrange, and tweeter level controls and biamp/single stereo switch ..... \$480

### Reference Standard 1.5 Speaker System

Three-way speaker system with 12-in dual-voice-coil polypropylene cone woofer, 5-in polypropylene cone midrange, and planar-diaphragm EMIT tweeter; frequency response 38-32,000 Hz ±3 dB; crossovers at 350 and 5000 Hz; input range 60-250 W/ch continuous; nominal impedance 4 ohms; oak veneer finish with solid oak corners and dark brown cloth grille; 26.5" H x 15" W x 11" D ..... \$410

## RS Series Speakers

### Reference Studio Monitor

Three-way sealed-box bookshelf studio monitor speaker system with 12-in polypropylene cone woofer, 5-in polypropylene cone midrange, and planar diaphragm EMIT tweeter; frequency response 43-32,000 Hz ±3 dB; crossovers at 500 and 5000 Hz; input range 35-250 W/ch continuous; nominal impedance 4 ohms; midrange and tweeter level controls; oak veneer finish with removable dark brown cloth grille; 26<sup>1</sup>/<sub>2</sub>" H x 15" W x 10" D ..... \$347

### RS<sub>6</sub> Speaker System

Three-way sealed-box bookshelf speaker system with 10-in polypropylene cone woofer, 5-in polypropylene cone midrange, and planar-diaphragm EMIT tweeter; frequency response 45-32,000 Hz ±3 dB; crossovers at 600 and 4000 Hz; input range 25-150 W/ch continuous; nominal impedance 4 ohms; oak veneer finish with removable brown cloth grille; 25" H x 14" W x 10" D ..... \$275

**RS<sub>8</sub>.** Similar to RS<sub>6</sub> except two-way system minus midrange driver; crossover at 3000 Hz ..... \$210

### RS<sub>8</sub> Speaker System

Two-way sealed box speaker system with 8-in polypropylene cone woofer and EMIT tweeter; frequency response 45-34,000 Hz ±2 dB; crossover at 3000 Hz; input range 10-100 W; impedance 4 ohms ..... \$160

## INNOTECH

### D-24 Speaker System

Three-way constant-width asymmetric transmission line speaker system with two 5-in Bextrene woofers, 1<sup>1</sup>/<sub>2</sub>-in Mylar dome midrange, and 1-in Mylar super dome tweeter; frequency response 25-25,000 Hz;



crossovers at 3500 and 8500 Hz; 5-ohm impedance; min. input 35 W; walnut finish; 36 $\frac{1}{2}$ " H x 10 $\frac{1}{2}$ " W x 15 $\frac{1}{2}$ " D.....\$427

## INTER-EGO SYSTEMS

### Super Ego Series

#### SUPEREGO Speaker System

Three-way bass-reflex speaker system with 12-in woofer, dual 10-in passive radiators, 5-in chamber cone midrange, and 1-in Mylar dome tweeter; frequency response 26-23,000 Hz; crossovers at 600 and variable 5000-8000 Hz; sensitivity 97 dB SPL/W/m; input 10-150 W continuous; 4-ohm impedance; midrange and tweeter level controls; dual phase compensation<sup>TM</sup> switches with expand and compress settings; four-digit LED power display; controlled dispersion energizer<sup>TM</sup>; fuse protected; front-mounted crossover panel; removable black knit polyester grille and walnut veneer cabinet; 2-in pedestal included; 30 $\frac{1}{2}$ " H x 18 $\frac{1}{8}$ " W x 11 $\frac{1}{8}$ " D.....\$475

#### SE12 Speaker System

Three-way bass-reflex speaker system with 12-in woofer, 5-in chamber cone midrange, and 1-in Mylar dome tweeter; frequency response 30-23,000 Hz; crossovers at 700 and 4500 Hz; sensitivity 97 dB SPL/W/m; input range 10-100 W continuous; 4-ohm impedance; tweeter brightness control; LED peak level indicator; midrange L-pad; fuse protection; phase compensation<sup>TM</sup> switch; front mounted crossover panel; removable black knit polyester grille; 26 $\frac{3}{4}$ " H x 15 $\frac{1}{2}$ " W x 15 $\frac{1}{4}$ " D.....\$325

#### SE 10 Speaker System

Three-way bass-reflex speaker system with 10-in woofer, 4 $\frac{1}{2}$ -in midrange, and 1-in Mylar dome tweeter; frequency response 32-23,000 Hz  $\pm$  3 dB; crossovers at 700 and variable 5000-8000 Hz; sensitivity 96 dB SPL/W/m; recommended input 10-80 W continuous; 4-ohm impedance; tweeter brightness controls; LED peak level indicator; phase compensation<sup>TM</sup> switch with compress and expand settings; black removable knit polyester grill; 23 $\frac{1}{2}$ " H x 14" W x 11 $\frac{1}{2}$ " D.....\$260

#### SE 8 Speaker System

Three-way bass-reflex speaker system with 8-in woofer, 3 $\frac{1}{2}$ -in midrange, and 1-in tweeter; frequency response 40-20,000 Hz  $\pm$  3 dB; crossovers at 2000 and variable 4000-8000 Hz; sensitivity 95 dB SPL/W/m; input range 10-40 W continuous; 4-ohm impedance; tweeter brightness control; LED peak level indicator; oiled walnut veneer cabinet and black knit polyester grille; 20 $\frac{1}{2}$ " H x 12 $\frac{1}{4}$ " W x 9 $\frac{1}{2}$ " D.....\$155

## JAMO

#### MFB 300 Active Electronic Loudspeaker

Three-way active electronic motion-feedback floor-standing speaker system features built-in power amplifier for each driver and built-in ten-band graphic equalizer; incorporates 12-in woofer powered by 110-W amplifier, 2-in midrange powered by 55-W amp, and tweeter with 55-W amp; frequency response 20-40,000 Hz; crossovers at 450 and 4500 Hz; automatic overload protection for all drivers; equalizer center frequency slide controls at 31, 62, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz,  $\pm$ 12 dB boost or cut; two-layer inner-cabinet coating of polyther foam with  $\frac{1}{2}$ -mm leaden plate between; choice of walnut, Brazilian rosewood, or black-stained ash wood veneer cabinets; 28.74" H x 16.54" W x 12.05" D..\$850

#### J 252 Speaker System

Three-way floor-standing speaker system with 15-in upward-tilted woofer, 50-mm dome midrange, and two 16-mm angled dome tweeters; frequency response 22-40,000 Hz; crossovers at 650 and 5000 Hz; sensitivity 96 dB/W/m; input 250 W music; impedance 4-8 ohms; midrange and two tweeter level controls with automatic overload protection; includes four detachable wheels; walnut, rosewood,

or black-stained ash wood cabinets; 29.9" H x 18.5" W x 13" D.....\$690

#### J 202 Speaker System

Three-way floor-standing speaker system with 13-in upward-tilted woofer, 50-mm dome midrange, and two 25-mm angled dome tweeters; frequency response 22-20,000 Hz; crossovers at 600 and 4600 Hz; sensitivity 96 dB/1.3 W/m; input 200 W music; impedance 4-8 ohms; midrange and two tweeter level controls with automatic overload protection; includes four detachable wheels; walnut, rosewood, or black-stained ash wood cabinet; 27.6" H x 16.9" W x 13" D.....\$530

#### J 152 Speaker System

Three-way speaker system with 13-in woofer, 50-mm dome midrange, and 25-mm dome tweeter; frequency response 22-20,000 Hz; crossovers at 750 and 4000 Hz; sensitivity 96 dB/1.9 W/m; input 150 W music; impedance 4-8 ohms; midrange and tweeter level controls with automatic overload protection; walnut, rosewood, or black-stained ash wood cabinet; 25.6" H x 15.7" W x 9.4" D...\$330

#### J 122 Speaker System

Three-way speaker system with 282-mm woofer, 152-mm midrange, and 25-mm dome tweeter; frequency response 25-20,000 Hz; crossovers at 800 and 4000 Hz; sensitivity 96 dB/2.4 W/m; input 120 W music; impedance 4-8 ohms; midrange and tweeter level controls with automatic overload protection; walnut, rosewood, or black-stained ash wood cabinet; 21.7" H x 13" W x 9.4" D.....\$250

#### J 102 Speaker System

Three-way speaker system with 235-mm woofer, 152-mm midrange, and 25-mm dome tweeter; frequency response 28-20,000 Hz; crossovers at 900 and 4500 Hz; sensitivity 96 dB/2.2 W/m; input 100 W music; impedance 4-8 ohms; midrange and tweeter level controls with automatic overload protection; walnut, rosewood, or black-stained ash wood cabinet; 19.7" H x 11.8" W x 7.9" D...\$200

#### J 72 Speaker System

Two-way bookshelf speaker system with 213-mm woofer and 25-mm dome tweeter; frequency response 35-20,000 Hz; crossover at 1700 Hz; sensitivity 96 dB/1.7 W/m; input 70 W music; impedance 4-8 ohms; tweeter level control with automatic overload protection; walnut, rosewood, or black-stained ash wood cabinet; 16.9" H x 9.4" W x 7.9" D.....\$130

## JANIS AUDIO

#### W-1 Subwoofer

Slot-loading end-table-styled subwoofer with 15-in up-firing woofer coupled in special chamber which progressively becomes duct-like in cross-section; electronic crossover unit recommended; frequency response 30-100 Hz  $\pm$  1 dB; 1% HD; inlaid parquet top with oiled-walnut finish; 17.5" H x 22" W x 22" D.....\$675

**Interphase 1.** Single-channel electronic crossover amp complements W-1 subwoofer; adds one or two subwoofers in summed bass mode to stereo systems without additional power amplifiers; crossover at 100 Hz (18 dB/octave); dist. and noise 0.1% at 60 W into 8 ohms from 20-1000 Hz; damping factor 50; continuously variable phase control on woofer; 4 $\frac{1}{8}$ " H x 10" W x 10" D.....\$495

## JBL

#### Paragon Speaker System

Radial-reflection, dual three-way floor-standing speaker system with two 15-in compression horn woofers, two midrange compression drivers, and two UHF ring radiators; crossovers at 500 and 7000 Hz; recommended amp input range 10-200 W continuous sine wave per channel; 8-ohm impedance; dual midrange and UHF level controls; special dispersion surface to recreate stereo image; oiled walnut finish; 35 $\frac{1}{2}$ " H x 103 $\frac{1}{8}$ " W x 24 $\frac{1}{8}$ " D.....\$5800 pr.

#### L300 Speaker System

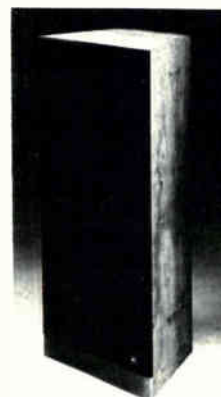
Three-way, ducted port, floor-standing speaker system with 15-in woofer, midrange compression driver with horn/lens assembly, and 077 ultra-high frequency ring radiator; crossovers at 800 and 8500 Hz (12 and 18 dB/octave); recommended amp input range 10-400 W continuous sine wave per channel; 8-ohm impedance; oiled walnut finish with smoked glass top and fabric grille (blue, black, brown, or camel); 31 $\frac{1}{2}$ " H x 23" W x 22 $\frac{1}{2}$ " D.....\$1395

#### L212 Speaker System

Four-way floor-standing speaker system consisting of three elements: two three-way speaker arrays with 8-in woofer, 5-in midrange, and 1-in hemispherical tweeter and self-powered 12-in ultrabass; crossovers at 70, 800, and 3000 Hz; recommended amp input range 10-300 W continuous sine wave per channel; 8-ohm impedance; midrange and tweeter level controls behind grille; oiled walnut finish; ultrabass has smoked glass top; black fabric grille. Ultrabass 19 $\frac{1}{4}$ " H x 18 $\frac{1}{2}$ " W x 18 $\frac{1}{2}$ " D; wide-range systems 38 $\frac{3}{4}$ " H x 17" W x 13" D.....\$2200 set.

#### L222 Disco Speaker System

Three-way floor-standing home disco system has 14-in woofer, 15-in passive radiator, 5-in midrange,



and 076 Ring Radiator tweeter; recommended amp input range 10-400 W continuous sine wave per channel; enclosures are compressed wood with American black walnut veneer finish and black grilles; 48 $\frac{1}{2}$ " H x 20 $\frac{1}{8}$ " W x 15 $\frac{1}{8}$ " D.....\$975

#### L220 Speaker System

Three-way floor-standing speaker system with 14-in woofer, 5-in midrange, and ring radiator horn tweeter; crossovers at 800 and 5000 Hz; 8-ohm impedance; sensitivity 90 dB SPL/W/m; recommended amp input range 10-400 W continuous sine wave/ch; oiled walnut finish with charcoal brown grille; 1225 mm H x 512 mm W x 390 mm D.....\$950

#### L150 Speaker System

Three-way floor-standing speaker system with 12-in woofer with heavy ferrite magnet, 3-in hand-wound copper voice coil, 12-in passive radiator, 5-in stiff cone midrange housed in isolated sub-chamber with  $\frac{1}{8}$ -in voice coil, and 1-in dome radiator; recommended amp input range 10-300 W continuous sine wave per channel; midrange and high-frequency controls; enclosure panels of compressed wood with American black walnut veneer finish and brown, rust, or camel grille; 41 $\frac{1}{2}$ " H x 17" W x 13" D.....\$650

#### L112 Speaker System

Three-way ducted port bookshelf speaker system with 12-in woofer, 5-in midrange, and 1-in dome tweeter; crossovers at 1100 and 3700 Hz; recommended amp input range 10-300 W continuous sine wave per channel; 8-ohm impedance; mirror-imaged pairs; oiled walnut finish with acoustically-transparent brown grille; 24 $\frac{1}{2}$ " H x 14 $\frac{1}{4}$ " W x 13" D.....\$450

#### L110 Speaker System

Three-way, ducted port, bookshelf speaker system

# 11 SPEAKER SYSTEMS

with 10-in woofer, 5-in midrange, and 1-in dome tweeter; crossovers at 1000 and 4000 Hz; recommended amp input range 10-250 W continuous sine wave per channel; 8-ohm impedance; midrange and tweeter level controls behind grille; oiled walnut finish with semi-transparent black fabric grille; 23 $\frac{1}{2}$ " H x 14 $\frac{1}{4}$ " W x 11 $\frac{1}{4}$ " D..... \$430

## LS50 Speaker System

Three-way ducted-port bookshelf speaker system with 10-in woofer, 5-in midrange, and 1 $\frac{1}{2}$ -in tweeter; crossovers at 800 and 3000 Hz, 8-ohm nominal impedance; sensitivity 88 dB SPL/W/m; recommended amp input range 10-200 W continuous sine wave per channel; midrange and tweeter controls; oiled walnut finish with blue, brown, or rust grille; 24 $\frac{1}{2}$ " H x 14 $\frac{1}{4}$ " W x 12 $\frac{1}{2}$ " D..... \$350

## LS40 Speaker System

Two-way, ducted port, bookshelf speaker system with 10-in woofer and 1-in hemispherical tweeter; crossover at 1800 Hz; recommended amp input range 10-150 W continuous sine wave per channel; 8-ohm impedance; tweeter level control behind grille; oiled walnut finish with stretch fabric grille (brown, rust, or tan); 23" H x 15" W x 11 $\frac{1}{4}$ " D..... \$270

## Radiance Series Speakers

Radiance Series models enclosed in walnut-grained vinyl finish with three-dimensional brown grilles and metal Mylar baffles underneath; recommended amp input range 10-250 W continuous sine wave per channel.

**Model 502.** Two-way speaker with 8-in woofer and 3-in tweeter; 21 $\frac{1}{2}$ " H x 13 $\frac{1}{2}$ " W x 11 $\frac{1}{4}$ " D.. \$140

**Model 702.** Three-way speaker with 10-in woofer, 5-in midrange, and 3-in tweeter; 25 $\frac{1}{2}$ " H x 15 $\frac{1}{2}$ " W x 11 $\frac{1}{4}$ " D..... \$190

**Model 902.** Three-way speaker with 12-in woofer, 5-in midrange, and 3-in tweeter; 27 $\frac{1}{2}$ " H x 17 $\frac{1}{2}$ " W x 12 $\frac{1}{2}$ " D..... \$240

**Model 905.** Three-way floor-standing system with 10-in woofer, 10-in passive radiator, 5-in midrange, and 3-in tweeter; 37 $\frac{1}{2}$ " H x 16 $\frac{1}{4}$ " W x 12 $\frac{3}{4}$ " D..... \$300

## L19 Speaker System

Two-way ducted-port bookshelf speaker system with 8-in woofer and 1.4-in direct radiating tweeter; crossover at 2500 Hz; 8-ohm nominal impedance; efficiency 87 dB SPL/W/m; recommended amp input range 10-100 W continuous sine wave per channel; black walnut finish with brown or black grille; 21" H x 13" W x 10" D..... \$180

## JENSEN

### System B Speaker System

Five-way floor-standing speaker system with 12-in woofer, 6-in lower midrange, 1 $\frac{1}{4}$ -in upper midrange, 1-in tweeter and 2-in rear-firing tweeter; frequency response 37-21,000 Hz +2 dB/-4 dB; crossovers at 49, 300, 2000, and 8000 Hz; recommended input range 9-150 W; sensitivity 90 dB SPL/W/m; 8-ohm nominal impedance; dark brown cabinet with dark grille on tilting oak wood-grain base; 33 $\frac{3}{4}$ " H x 16 $\frac{1}{2}$ " W x 11 $\frac{3}{4}$ " D..... \$600

### System C Speaker System

Three-way vented bookshelf speaker system with 10-in closed-cell polyurethane foam-surround woofer, 2-in soft dome midrange, 1-in soft dome front-firing tweeter, and 2-in rear-firing tweeter; frequency response 47-21,000 Hz +2/-4 dB; crossovers at 900 and 5500 Hz; SPL 87 dB/W/m; input range 9-125 W, nominal impedance 8 ohms; continuously adjustable midrange and tweeter level controls; oak veneer cabinet with dark brown grille; 24 $\frac{1}{2}$ " H x 14 $\frac{1}{2}$ " W x 12 $\frac{1}{2}$ " D..... \$400

## LS-6b Speaker System

Three-way four-element acoustic-suspension floor-standing speaker system with 15-in polyurethane foam cone woofer, two 3 $\frac{1}{2}$ -in direct-radiating midranges with Tuned Isolation Chambers™, and 1-in Mylar dome tweeter; frequency response 20-25,000 Hz; efficiency 90 dB/W/m; max. input 100 W continuous; min. input 10 W continuous; 8-ohm nominal impedance; tweeter and midrange level controls; hand-rubbed walnut veneer finish; 30 $\frac{3}{4}$ " H x 18 $\frac{1}{4}$ " W x 16 $\frac{1}{4}$ " D..... \$400

## LS-5b Speaker System

Three-way four-element acoustic-suspension floor-standing speaker system with 12-in polyurethane foam cone woofer, two 3 $\frac{1}{2}$ -in direct-radiating midranges with Tuned Isolation Chambers™, and 1-in Mylar dome tweeter; frequency response 25-25,000 Hz; efficiency 90 dB/W/m; max. input 90 W continuous; min. input 10 W continuous; 8-ohm nominal impedance; tweeter and midrange level controls; wood grained vinyl finish; 26" H x 15 $\frac{3}{4}$ " W x 13 $\frac{3}{4}$ " D..... \$310

## 50 Speaker System

Three-way floor-standing speaker system with 15-in high-compliance woofer, 3 $\frac{1}{2}$ -in high-compliance midrange, and two 2-in direct-radiator cone tweeters; frequency response 45-18,000 Hz  $\pm$ 3 dB; crossovers at 1200 and 4000 Hz; input range 10-70 W continuous; nominal impedance 8 ohms; continuously variable midrange and tweeter level controls, walnut grain veneer cabinet with removable dark brown grille; includes black console base; 30 $\frac{3}{4}$ " H x 18 $\frac{3}{4}$ " W x 13 $\frac{3}{4}$ " D..... \$300

## LS-4b Speaker System

Three-way three-element acoustic-suspension floor-standing speaker system with 10-in polyurethane foam cone heavy duty woofer, 3 $\frac{1}{2}$ -in direct-radiating midrange with Tuned Isolation Chamber™, and 2-in direct-radiating cone tweeter; frequency response 27-22,000 Hz; efficiency 89 dB/W/m; max. input 75 W continuous; min. input 10 W continuous; 8-ohm nominal impedance, midrange/tweeter level control; wood grained vinyl finish; 24 $\frac{1}{2}$ " H x 13 $\frac{1}{2}$ " W x 12 $\frac{1}{4}$ " D..... \$240

## 40 Speaker System

Three-way acoustic-suspension bookshelf speaker system with 12-in high-compliance woofer, 3 $\frac{1}{2}$ -in high-compliance midrange, and 2-in direct radiator tweeter; frequency response 50-18,000 Hz  $\pm$ 3 dB; crossovers at 1200 and 4000 Hz; input range 10-60 W continuous; nominal impedance 8 ohms; continuously variable midrange and tweeter level controls; walnut grain veneer cabinet with dark brown grille; 27" H x 16 $\frac{1}{4}$ " W x 10 $\frac{1}{4}$ " D.. \$230

**30.** Similar to 40 except uses 10-in high compliance woofer, frequency response 60-18,000 Hz  $\pm$ 3 dB; crossovers at 1500 and 4000 Hz; input range 10-50 W continuous; no midrange or tweeter control; 24 $\frac{1}{2}$ " H x 15" W x 10" D..... \$180

## LS-3b Speaker System

Two-way two-element acoustic-suspension floor-standing speaker system with 10-in polyurethane foam cone woofer and 2-in direct-radiating cone tweeter; frequency response 35-20,000 Hz; efficiency 88 dB/W/m; max. input 60 W continuous; min. input 10 W continuous; 8-ohm nominal impedance; tweeter level control; wood grained vinyl finish; 23" H x 12 $\frac{3}{4}$ " W x 10 $\frac{1}{4}$ " D..... \$170

## LS-2b Speaker System

Two-way two-element acoustic-suspension floor-standing speaker system with 8-in polyurethane foam cone woofer and 2-in direct-radiating cone tweeter; frequency response 35-20,000 Hz; efficiency 88 dB/W/m; max. input 50 W continuous; min. input 10 W continuous; wood grained vinyl finish; 18 $\frac{1}{4}$ " H x 11" W x 9 $\frac{1}{4}$ " D..... \$110

## Model 20 Speaker System

Two-way bookshelf speaker system with 8-in cone woofer and 2-in direct radiating tweeter; crossover at 4000 Hz, 8-ohm nominal impedance; usable frequency response 35-20,000 Hz; 160-degree dis-

persion; input range 10-40 W continuous; simulated wood veneer finish; 18 $\frac{1}{2}$ " H x 11" W x 8 $\frac{3}{4}$ " D..... \$100

## JONSON

### Ultimus Speaker System

Three-way three unit floor-standing speaker system designed for digital and direct-to-disc recordings; consists of Pentagon 2000 satellite speakers and two subwoofers; Pentagon 2000 incorporates five 1 $\frac{1}{2}$ -in dome midrange drivers and three 1-in dome tweeters in hemispheric array; bass unit incorporates two 10-in woofers on convex V-shaped baffle and other bass unit incorporates 10-in forward-facing woofer in tandem; frequency response 18-22,000 Hz; crossovers 2400 and 5000 Hz; input range 50-200 W continuous; impedance 8 ohms; oiled walnut and walnut veneer finish with beige cloth grille..... 2400 pr.

### President Speaker System

Three-way two-unit floor-standing speaker system consists of Pentagon 2000 satellites and subwoofer; subwoofer incorporates two 10-in woofers on convex V-shaped baffle; Pentagon 2000 incorporates five dome midrange drivers and three dome tweeters in hemispheric array; frequency response 25-20,000 Hz; crossovers at 250 and 6000 Hz; input range 25-120 W; impedance 15 ohms; walnut veneer cabinet with matching grille... \$1698 pr.

### Statesman Speaker System

Three-way two-unit speaker system consists of Pentagon satellite speakers and subwoofer; subwoofer incorporates four 8-in woofers on convex V-shaped baffle, two drivers/panel; satellites incorporate five midrange drivers and five tweeters in hemispheric array; frequency response 30-20,000 Hz; impedance 4 ohms; walnut veneer cabinet with matching grille; combined units 42" H x 19" W x 20" D..... \$1378 pr.

**Senator.** Similar to Statesman except subwoofer incorporates two 10-in down-firing woofers; input range 20-80 W; 33" H x 24" W x 20" D..... \$780

**Diplomat.** Similar to Senator except has Pentagon Jr. satellite system with five midrange drivers and one tweeter; input range 25-60 W; 27" H x 24" W x 18" D..... \$650

### Ambassador Speaker System

Three-way two-unit speaker system consists of Pentagon 2000 and subwoofer; subwoofer incorporates 10-in woofer; Pentagon 2000 incorporates five dome midrange drivers and three dome tweeters in hemispheric array; frequency response 25-20,000 Hz; crossovers at 250 and 6000 Hz; input range 25-80 W; impedance 15 ohms; walnut veneer cabinet with matching grille..... \$1210 pr.

### Andante 2-10 Speaker System

Two-way speaker system with 10-in woofer/midrange driver and 1-in dome tweeter; frequency response 35-20,000 Hz; crossover at 2400 Hz; input range 20-75 W continuous; impedance 7 ohms; oiled hand-rubbed walnut veneer cabinet with black foam grille; 23 $\frac{1}{4}$ " H x 15 $\frac{3}{4}$ " W x 11 $\frac{1}{4}$ " D..... \$250 pr.

## JUMETITE

### CR 610 Speaker System

Modular two-way acoustic-suspension floor-standing speaker system with separate bass, treble, and crossover modules; biamp capability. Bass module: acoustic-suspension sealed-box enclosure with two 10-in moving-coil woofers; electronics module contains passive crossover network and serves as base for woofer module. Treble module: Hobrough License ribbon speaker driving vertical horn facing reflector. Frequency response 34-18,000 Hz; crossover at 600 Hz; SPL 89 dB/W/m; input range 10-200 W; impedance 8 ohms; treble module 26 $\frac{1}{4}$ " H, bass module 35 $\frac{1}{2}$ " H; crossover 4 $\frac{1}{4}$ " H..... \$1445



## JVC

### SK-1000 II Speaker System

Three-way bass-reflex speaker system with 12-in woofer, 5-in midrange, and 1-in dome tweeter; frequency response 30-20,000 Hz; crossovers at 1000 and 8000 Hz; sensitivity 93-dB SPL/W/m; max. input 150 W music; continuous input 75 W; 8-ohm nominal impedance; midrange and high-frequency level controls; walnut veneer cabinet or silver tone on wood finish; 25 $\frac{1}{2}$ " H  $\times$  15 $\frac{1}{4}$ " W  $\times$  12 $\frac{3}{8}$ " D ..... \$280

### SK-700 II Speaker System

Three-way bass-reflex speaker system with 10-in woofer, 5-in cone midrange, and 1-in dome tweeter; frequency response 35-20,000 Hz; crossovers at 1000 and 10,000 Hz; sensitivity 92 dB/W/m; handles 120 W peak power, 60 W continuous; 8-ohm impedance; continuous controls for mid- and high-range; walnut or silver finish; 22 $\frac{1}{4}$ " H  $\times$  13 $\frac{1}{2}$ " W  $\times$  12 $\frac{3}{8}$ " D ..... \$180

### SK-500 II Speaker System

Two-way bass-reflex bookshelf speaker system with 10-in woofer and 2 $\frac{1}{2}$ -in cone tweeter; frequency response 40-20,000 Hz; crossover at 2000 Hz; efficiency 91 dB/W/m; handles 70 W peak power, 35 W continuous; 8-ohm impedance; tonal transitions employed by Phase Moire Propagation method; walnut or silver finish; 19 $\frac{3}{4}$ " H  $\times$  12 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{4}$ " D .. \$210 pr.

## KEF

### Model 105 Speaker System

Three-way two-enclosure floor-standing speaker system with 12-in woofer, 5-in midrange, and 2-in Mylar dome tweeter; frequency response 38-22,000 Hz  $\pm$  2 dB; crossovers at 400 and 2500 Hz; sensitivity 86 dB SPL/W/m; input range 40-200 W program; 8-ohm nominal impedance; switchable peak-level indicator; separate woofer and midrange enclosures geometrically piled; walnut finish with black grille; 38" H  $\times$  16.3" W  $\times$  17.9" D..... \$1100

### Cantata Speaker System

Three-way speaker system with crossovers at 250 and 3000 Hz; frequency response 35-20,000 Hz  $\pm$  3 dB; max. input 150 W program; min. input 15 W; 8-ohm nominal impedance; sensitivity 8 W for 96 dB at 400 Hz and 1 m; walnut or teak finish with mocha brown grille cloth; also available in kit form; 32.1" H  $\times$  15.4" W  $\times$  13.4" D..... \$650 Kit..... \$390

### Model 104 aB Speaker System

Three-way speaker system; frequency response 50-20,000 Hz  $\pm$  2 dB; max. input 100 W program; min. input 15 W; 8-ohm nominal impedance; sensitivity 12.5 W for 96 dB at 400 Hz and 1 m; walnut or teak finish with black foam grille; also available in kit form; 24.8" H  $\times$  13" W  $\times$  10.2" D..... \$425 Kit..... \$250

### Calinda Speaker System

Three-way speaker system; frequency response 40-30,000 Hz  $\pm$  3 dB; max. input 100 W program; min. input 15 W; 8-ohm nominal impedance; sensitivity 12.5 W for 96 dB at 400 Hz and 1 m; walnut or teak finish with mocha brown grille cloth; 27.5" H  $\times$  13.8" W  $\times$  11" D..... \$375

### Model 304 Speaker System

Two-way closed-box speaker system with two 200-mm woofers in vertical line and tweeter; frequency response 40-25,000 Hz; sensitivity 87 dB SPL/W/m; input range 10-100 W; 8-ohm impedance; designed to be placed at min. 23 cm from floor; satin black plinth cabinet with black cloth grille; 680 mm H  $\times$  280 mm W  $\times$  315 mm D. \$325

### Model 101 Speaker System

Two-way closed-box speaker system with 110-mm woofer and Melinex dome tweeter; frequency response 90-30,000 Hz  $\pm$  2 dB; sensitivity 81 dB SPL/W/m; input range 20-100 W; 8-ohm imped-

ance; teak/walnut cabinet with black/brown grille; 340 mm H  $\times$  180 mm W  $\times$  190 mm D..... \$295

### Coralli Speaker System

Two-way speaker system with crossover at 3500 Hz; frequency response 50-30,000 Hz  $\pm$  3 dB; max. input 50 W program; min. input 25 W; 8-ohm nominal impedance; sensitivity 19 W for 96 dB at 400 Hz and 1 m; walnut or teak finish with mocha brown grille cloth; 18.5" H  $\times$  11" W  $\times$  8.6" D ..... \$225

### Model 303 Speaker System

Two-way closed-box speaker system; frequency response 50-25,000 Hz; sensitivity 86 dB SPL/W/m; input range 10-50 W; 8-ohm impedance; satin black plinth cabinet with black cloth grille; 508 mm H  $\times$  265 mm W  $\times$  230 mm D..... \$185

## KENWOOD

### LS-1900 Speaker System

Three-way floor-standing bass-reflex speaker system with 13-in woofer, 5 $\frac{1}{2}$ -in midrange, and linear-response phase-coherent high frequency driver; midrange- and high-frequency level controls; frequency response 30-21,000 Hz; crossovers at 600 and 5000 Hz; sensitivity 92 dB SPL/W/m; max. input 170 W; 8-ohm impedance; 41 $\frac{1}{32}$ " H  $\times$  22 $\frac{1}{4}$ " W  $\times$  17 $\frac{23}{32}$ " D ..... \$1165

### LS-1600 Speaker System

Three-way floor-standing bass-reflex speaker system with 13-in woofer, 5 $\frac{1}{2}$ -in midrange, and tweeter; features linear-response mid- and high-frequency level controls; frequency response 32-20,000 Hz; crossovers at 900 and 5000 Hz; sensitivity 92 dB SPL/W/m; max. input 120 W; 8-ohm impedance; 27 $\frac{1}{16}$ " H  $\times$  15 $\frac{11}{32}$ " W  $\times$  12 $\frac{23}{32}$ " D..... \$550

### LS-1200 Speaker System

Three-way floor-standing bass-reflex speaker system with 10-in cone woofer, 4-in cone midrange, and 1 $\frac{1}{4}$ -in cone tweeter; features mid- and high-frequency level controls; frequency response 35-20,000 Hz; crossovers at 1000 and 6000 Hz; sensitivity 90 dB/W/m; max. input 100 W; 8-ohm impedance; simulated wood grain finish; 25 $\frac{1}{32}$ " H  $\times$  13 $\frac{23}{32}$ " W  $\times$  12 $\frac{7}{16}$ " D..... \$365

### LS-408C Speaker System

Three-way bass-reflex speaker system with 12-in cone woofer in diecast basket, 4 $\frac{3}{4}$ -in cone midrange in diecast basket, and 1 $\frac{1}{4}$ -in cone tweeter; frequency response 30-20,000 Hz; crossovers at 2000 and 5000 Hz; sensitivity 91 dB/W/m; max. input 160 W; impedance 8 ohms; individual midrange and tweeter level controls; lauan-core mica-sheet front-panel with walnut-grain vinyl side, top, and bottom panels; 29" H  $\times$  16 $\frac{1}{2}$ " W  $\times$  14 $\frac{3}{4}$ " D..... \$330

**LS-407C.** Similar to LS-408C except has 10-in cone woofer in diecast basket; frequency response 40-20,000 Hz; sensitivity 90 dB/W/m; max. input 120 W; 25 $\frac{3}{4}$ " H  $\times$  15" W  $\times$  13" D..... \$275

### LS-405C Speaker System

Two-way bass-reflex speaker system with 10-in cone woofer in diecast basket and 1 $\frac{3}{4}$ -in cone tweeter; frequency response 40-20,000 Hz; crossover at 3000 Hz; sensitivity 90 dB/W/m; max. input 100 W; impedance 8 ohms; lauan-core mica-sheet front panel with walnut-grain-finish cabinet; 23 $\frac{1}{4}$ " H  $\times$  13" W  $\times$  12 $\frac{1}{4}$ " D..... \$189

## KINDEL AUDIO

### Phantom Speaker System

Three-way passive-radiator floor-standing speaker system with two 5 $\frac{1}{4}$ -in woofers, 8-in passive radiator, 1 $\frac{1}{2}$ -in soft dome midrange, and 4 $\frac{1}{4}$ -in EMT planar tweeter; frequency response 45-22,000 Hz  $\pm$  2 dB; crossovers at 1300 and 6500 Hz; efficiency 88 dB; input range 15-200 W; min. impedance 5 ohms; midrange and tweeter level controls; midrange and tweeter fuse protection; 40" H  $\times$  18" W  $\times$  6 $\frac{1}{4}$ " D..... \$425

## KINETIC AUDIO INT'L

### Trapezium Speaker System

Five-way Tapered Acoustical Trapezoidal Line/Labyrinth-designed floor-standing speaker system with 12-in cone woofer and 6 $\frac{1}{2}$ -in bextrene cone mid-woofer in staggered diagonal configuration and 2-in dome mid-tweeter, 1 $\frac{1}{4}$ -in synthetic dome tweeter, and  $\frac{3}{4}$ -in synthetic dome super tweeter in linear phase array; frequency response 14-22,000 Hz  $\pm$  1.5 dB; crossovers at 90, 1000, 3000, and 7000 Hz; sensitivity 90 dB/W/m; input range 45-150 W; nominal impedance 8 ohms; four front-mounted frequency level controls; hand-rubbed Tung-oil-finish walnut veneer cabinets and walnut veneer front cabinet panels with removable black double-knit grille; available in mirror-matched pairs; 60" H  $\times$  16" W  $\times$  20" D ..... \$1999

### Labyrinth

Four-way floor-standing speaker system with 12-in woofer, 6 $\frac{1}{2}$ -in bextrene cone midrange, 1 $\frac{1}{4}$ -in mid-tweeter, and 1-in dome super tweeter; frequency response 18-25,000 Hz  $\pm$  2 dB; crossovers at 90, 2000, and 7500 Hz (12 dB/octave); sensitivity 91 dB SPL/W/m; input range 15-150 W/ch continuous into 8 ohms; 8-ohm nominal impedance; midranges and tweeters adjustable via three super-duty front-mounted T-pads; electronic and passive crossover can be used in conjunction with each other or separately; walnut veneer finish; 52" H  $\times$  16" W  $\times$  18" D ..... \$1299

### Trapezoid SW/Stat

Combined subwoofer and miniature monitor offered as complete speaker system (see respective listings); system frequency response 18-22,000 Hz..... \$798

### Trapezoid

Four-way floor-standing speaker system with 12-in woofer, 5-in bextrene cone midrange, 1 $\frac{1}{4}$ -in dome tweeter, and 1-in dome super tweeter; frequency response 29-25,000 Hz  $\pm$  3 dB; crossovers at 175, 2500, and 7500 Hz; sensitivity 91-dB SPL/W/m; 8 ohm nominal impedance; input 15-150 W/ch continuous into 8 ohms; midrange, tweeter, and super tweeter controls; 40" H  $\times$  16" W  $\times$  14" D. \$699

### Impulse

Three-way floor-standing monitor speaker system with 12-in woofer, 5-in bextrene cone midrange, and 1 $\frac{1}{4}$ -in dome super tweeter; frequency response 20-22,000 Hz  $\pm$  2.5 dB; crossovers at 175 and 2000 Hz; sensitivity 90-dB SPL/W/m; input range 15-150 W/ch continuous into 8 ohms; nominal impedance 8 ohms; midrange and tweeter controls; walnut veneer finish; 26" H  $\times$  14.5" W  $\times$  14" D..... \$499

### Stat

Two-way linear-phase miniature monitor bookshelf speaker system with two 5-in long-throw Bextrene mid/woofers and 1 $\frac{1}{4}$ -in dome tweeter; frequency response 36-22,000 Hz  $\pm$  2.5 dB; crossover at 1800 Hz; sensitivity 94 dB SPL/W/m; input range 10-80 W continuous; nominal impedance 4 ohms; tweeter controls; hand-rubbed Tung-oil-finish walnut veneer cabinet with removable acoustically-transparent black double-knit grille; 17.5" H  $\times$  10.5" W  $\times$  9" D. .... \$399

### 300 Pulse

Three-way floor-standing or bookshelf speaker system with 12-in woofer, 5-in bextrene cone midrange, and 1 $\frac{1}{4}$ -in dome tweeter; frequency response 34-22,000 Hz  $\pm$  2.5 dB; crossovers at 300 and 2500 Hz; sensitivity 93 dB SPL/W/m; input range 10-150 W/ch continuous into 8 ohms; nominal impedance 8 ohms; midrange and tweeter controls; walnut finish; 24" H  $\times$  14 $\frac{1}{2}$ " W  $\times$  9" D. .... \$379

### 200 Imp

Two-way speaker system with 8-in woofer and 1-in dome tweeter; frequency response 36-22,000 Hz  $\pm$  2.5 dB; crossover at 1800 Hz; sensitivity 92 dB SPL/W/m; min. input 15 W; nominal impedance 8 ohms; tweeter control; walnut finish; 17.5" H  $\times$  10.5" W  $\times$  9" D..... \$279

**711 Speaker System**

Two-way linear-phase bookshelf/mobile speaker system with 6 $\frac{1}{2}$ -in long-throw plasticized cone woofer and 1-in dome tweeter; frequency response 45-22,000 Hz  $\pm$  3 dB; crossover at 3000 Hz; sensitivity 93 dB/W/m; input range 25-75 W; impedance 8 ohms; front-mounted tweeter level control; mirror-matched Tung-oil-finish walnut veneer cabinet with black double-knit grille; 15" H  $\times$  7" W  $\times$  9" D.....\$179

**Trapezium Subwoofer**

Tapered Acoustical Trapezoidal Line floor-standing subwoofer with 12-in synthetic-composition cone woofer; frequency response 14-2000 Hz  $\pm$  1.5 dB; crossovers at 65, 100, and 200 Hz; sensitivity 90 dB/W/m; input range 55-200 W, impedance 8 ohms; Tung-oil finish walnut veneer cabinet with removable acoustically-transparent black double-knit grille; 60" H  $\times$  16" W  $\times$  20" D .....\$1299

**Labyrinth Subwoofer**

12-in long excursion woofer with synthetic composition deep cone; frequency response 20-2000 Hz  $\pm$  2.5 dB; crossovers at 40, 90 or 175 Hz, or no internal crossover; 8-ohm impedance; tapered acoustical trapezoidal line labyrinth (p.p.); four built-in sets of terminals in back; bi-amp with or without electronic crossover; 48" H  $\times$  16" W  $\times$  18" D .....\$699

**Trapezoid Subwoofer.** Same as Labyrinth subwoofer except 40" H  $\times$  16" W  $\times$  14" D.....\$399

**Impulse Subwoofer.** Same as Trapezoid subwoofer except 26" H  $\times$  14 $\frac{1}{2}$ " W  $\times$  14" D.....\$299

**KLH****KLH 1 Speaker System**

Three-way twin-computer-controlled vented vertical floor-standing speaker system includes separate Analog Bass Computer™ for extended bass response in conjunction with high-flux motor system. Speaker: incorporates two 8-in diecast frame dynamic polypropylene cone woofers, 4 $\frac{1}{2}$ -in polypropylene cone midrange, and 1-in butyl-loaded synthetic soft-dome tweeter; frequency response 30-20,000 Hz; crossovers at 500 and 4000 Hz; input range 40-200 W/ch continuous; sensitivity 87 dB SPL/W/m; 4-ohm nominal impedance. Computer has low- and high-frequency position compensation, power indicator, tape monitor, and in/out controls; speaker stand included; genuine walnut veneer finish with black removable grille; speaker 30" H  $\times$  11" W  $\times$  10 $\frac{1}{2}$ " D; computer 2 $\frac{1}{2}$ " H  $\times$  10 $\frac{1}{2}$ " W  $\times$  6" D.....\$1200 pr.

**KLH 2.** Similar to KLH 1 except bookshelf speakers that can be placed horizontally or vertically; frequency response 38-20,000 Hz; 21" H  $\times$  10.25" W  $\times$  8.5" D.....\$725 pr.

**KLH 3.** Similar to KLH 2 except two-way speakers using 150-mm polypropylene cone woofer and same tweeter; frequency response 40-20,000 Hz; crossover at 3000 Hz and sensitivity 85 dB SPL/W/m; 12.5" H  $\times$  8.5" W  $\times$  6" D.....\$495 pr.

**KLH 4.** Similar to KLH 3 without the Analog Bass Computer; frequency response 68-20,000 Hz; input range 20-60 W/ch continuous; 12 $\frac{1}{2}$ " H  $\times$  8 $\frac{1}{2}$ " W  $\times$  6" D.....\$320 pr.

**319B Speaker System**

Three-way tuned phase-inverted speaker system with 12-in woofer, 5 $\frac{1}{2}$ -in cone midrange, 1-in soft-dome front tweeter, and 2 $\frac{1}{2}$ -in cone rear tweeter; crossovers at 1100 and 3000 Hz; 4-ohm nominal impedance; frequency response 52.5-22,000 Hz; 95-dB efficiency; input range 10-100 W/ch continuous; rear-mounted variable tweeter and midrange level controls; walnut vinyl cabinet with black pebble vinyl baffle and removable black knit grille; 24 $\frac{1}{2}$ " H  $\times$  14 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{4}$ " D.....\$239

**337 Speaker System**

Three-way acoustic-suspension speaker system with 12-in woofer, 4-in cone midrange, and 2 $\frac{1}{2}$ -in cone tweeter; crossovers at 900 and 3300 Hz; 8-ohm nominal impedance; frequency response 51-18,000 Hz; efficiency 92.5 dB; input range 20-100 W/ch continuous; rear-mounted variable tweeter and midrange level controls; walnut finish with black matte baffle and removable black knit grille; 24 $\frac{1}{2}$ " H  $\times$  14 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{4}$ " D.....\$209

**KLH-150 Speaker System**

Three-way vented speaker system with 8-in high-flux polypropylene cone woofer, 4 $\frac{1}{2}$ -in polypropylene cone midrange, and 1-in soft dome tweeter; crossovers at 1000 and 4000 Hz; efficiency 90 dB SPL/W/m; input range 20-75 W/ch continuous; impedance 8 ohms; vertical or horizontal placement; birch-grain vinyl finish with removable black grille; packed in mirror-image pairs; 21" H  $\times$  10 $\frac{1}{2}$ " W  $\times$  8 $\frac{1}{2}$ " D.....\$380 pr.

**327 Speaker System**

Three-way acoustic-suspension speaker system with 10-in woofer, 4-in cone midrange, and 2 $\frac{1}{2}$ -in cone tweeter; crossovers at 900 and 3600 Hz; 8-ohm nominal impedance; frequency response 55-18,000 Hz; efficiency 90.5 dB; input range 20-80 W/ch continuous; rear-mounted variable tweeter and midrange level controls; walnut vinyl cabinet with black matte baffle and removable black knit grille; 23 $\frac{1}{2}$ " H  $\times$  14" W  $\times$  10 $\frac{1}{2}$ " D. \$189

**317B Speaker System**

Two-way acoustic-suspension bookshelf speaker system with 10-in woofer and 1-in soft dome tweeter; crossover at 1200 Hz; 8-ohm nominal impedance; frequency response 52-22,000 Hz; efficiency 91.5 dB; input range 15-60 W/ch continuous; walnut vinyl finish with black matte baffle and removable black knit grille; 23" H  $\times$  12" W  $\times$  9 $\frac{1}{2}$ " D. \$139

**KH-160 Speaker System**

Two-way acoustic-suspension bookshelf speaker system with 8-in polypropylene cone woofer/midrange and 1-in soft dome tweeter; crossover at 3000 Hz; efficiency 90 dB SPL/W/m; input range 10-50 W/ch; impedance 8 ohms; vertical or horizontal placement; birch-grain vinyl finish with removable black grille; packed in mirror-image pairs; 19 $\frac{1}{4}$ " H  $\times$  10 $\frac{1}{2}$ " W  $\times$  8" D.....\$250 pr.

**331B Speaker System**

Two-way acoustic-suspension speaker system with 8-in woofer and 2 $\frac{1}{2}$ -in cone tweeter; crossover at 3000 Hz; 8-ohm nominal impedance; frequency response 64-18,000 Hz; efficiency 90.5 dB; input range 8-50 W/ch continuous; walnut vinyl finish with black matte baffle and removable black knit grille; 21" H  $\times$  12" W  $\times$  8 $\frac{1}{2}$ " D.....\$109

**KLIPSCH****Belle Klipsch Speaker System**

Three-way speaker system with folded-type horn woofer with 15-in driver and straight-axis horns for high frequencies; frequency response 45-17,000 Hz  $\pm$  5 dB; crossovers at 400 and 6000 Hz; max. input 105 W program; 104-dB SPL at 4 ft with 1 W; 8-ohm nominal impedance; priced according to finish; rosewood lacquer, oil on teak, oak lacquer, or cherry lacquer; 35 $\frac{3}{8}$ " H  $\times$  30 $\frac{1}{8}$ " W  $\times$  18 $\frac{3}{8}$ " D.....\$1119

**Klipschorn Speaker System**

Three-way speaker system with folded-type horn woofer with 15-in driver and straight-axis horns for high frequencies; frequency response 35-17,000 Hz  $\pm$  5 dB; crossovers at 400 and 6000 Hz; max. input 105 W program; 104-dB SPL at 4 ft with 1 W; 8-ohm nominal impedance; priced according to finish; rosewood lacquer, oil on teak, oak lacquer, or cherry lacquer finish; 52" H  $\times$  31 $\frac{1}{4}$ " W  $\times$  28 $\frac{1}{2}$ " D.....\$912

**La Scala Speaker System**

Three-way speaker system with folded-type horn woofer with 15-in driver and straight-axis horns for

high frequencies; frequency response 45-17,000 Hz  $\pm$  5 dB; crossovers at 400 and 6000 Hz; max. input 105 W program; 104-dB SPL at 4 ft with 1 W; 8-ohm nominal impedance; priced according to finish; birch, walnut, or maple plywood-lacquer; 35 $\frac{1}{4}$ " H  $\times$  23 $\frac{1}{4}$ " W  $\times$  24 $\frac{1}{2}$ " D.....\$722

**Cornwall Speaker System**

Three-way speaker system with direct-radiating ducted-port woofer with 15-in driver and straight-axis horns for high frequencies; frequency response 38-17,000 Hz  $\pm$  5 dB; crossovers at 600 and 6000 Hz; max. input 105 W program; 98.5 dB SPL at 4 ft with 1 W; 8-ohm nominal impedance; priced according to finish; rosewood lacquer, oil on teak, oak lacquer, or cherry lacquer; 35 $\frac{3}{4}$ " H  $\times$  25 $\frac{1}{2}$ " W  $\times$  15 $\frac{1}{2}$ " D.....\$531

**Heresy Speaker System**

Three-way speaker system with direct-radiating 12-in woofer and straight-axis horns for high frequencies; frequency response 50-17,000 Hz  $\pm$  5 dB; crossovers at 700 and 6000 Hz; max. input 105 W program; 96-dB SPL at 4 ft with 1 W; 8-ohm nominal impedance; priced according to finish; rosewood lacquer, oil on teak, cherry lacquer, or oak lacquer; 21 $\frac{3}{8}$ " H  $\times$  15 $\frac{1}{2}$ " W  $\times$  13 $\frac{3}{8}$ " D. from \$336

**KM LABORATORIES****205 Speaker System**

Two-way two-piece horn-loaded floor-standing speaker system with two 12-in woofers with long-throw voice coils and Motional Feedback 120-W continuous integral amp circuitry in bass cabinet and HF horn tweeter with built-in 60-W continuous amp circuitry in separate box; frequency response 30 15,000 Hz  $\pm$  4 dB; electronic crossover at 600 Hz; max. SPL 125 dBA; max. input 2 V rms at 10k ohms impedance; switchable tweeter level control (2-dB steps) and red and green LED circuit protection indicators with auto power switching; includes transit wheels at rear of bass cabinet and concealed handle; black textured finish; bass 54 $\frac{1}{4}$ " H  $\times$  19 $\frac{3}{4}$ " W  $\times$  32 $\frac{3}{16}$ " D; tweeter 10 $\frac{7}{16}$ " H  $\times$  19 $\frac{3}{16}$ " W  $\times$  19 $\frac{7}{16}$ " D.....\$3000

**52 Speaker System**

Two-way bass-reflex bookshelf speaker system with 6 $\frac{1}{2}$ -in cone woofer with Motional Feedback 60-W continuous integral amplifier and 1 $\frac{1}{4}$ -in soft dome tweeter; features switched bass and treble controls; frequency response 38-20,000 Hz  $\pm$  3 dB; crossover at 2200 Hz; max. SPL 105 dB at 1 m (A weighted); input level/impedance 0.775 V rms/4.7k ohms (low-level), 7.75 V rms/150 ohms (high-level); choice of natural walnut, rosewood, black walnut, black vinyl, or white vinyl finish; 10.5" H  $\times$  14" W  $\times$  9.5" D.....\$1390 pr.

**KOSS****CM/1030 Speaker System**

Four-way, four-bandpass, dual-port, floor-standing speaker system with 10-in woofer, two 4-in mid-



range drivers, 1-in dome treble tweeter, and 1-in



dome tweeter; crossovers at 300, 2500, and 7000 Hz; bandpass response 3 dB down point (f<sub>3</sub>) at 29 Hz (low frequency), 3 dB down point at 19,000 Hz (high frequency), 6 dB down points from 26-19,500 Hz (overall); efficiency 94-dB SPL/W/m; input range 15-200 W/ch; 5-ohm nominal impedance; midrange, treble, and tweeter spectrum-shaped controls ±3 dB range; 38 7/8" H × 16 1/2" W × 14 1/2" D ..... \$550

#### CM/1020 Speaker System

Three-way, three-bandpass, vented box, floor-standing speaker system with 10-in woofer, 4 1/2-in midrange, and 1-in dome tweeter; crossovers at 300 and 3500 Hz; bandpass response 3 dB down point (f<sub>3</sub>) at 31 Hz (low frequency), 3 dB down point at 18,500 Hz (high frequency), 6 dB down points from 27-19,000 Hz (overall); efficiency 92-dB SPL/W/m; input range 15-150 W/ch; 5-ohm nominal impedance; midrange and tweeter controls; 33" H × 15 1/2" W × 13 3/4" D ..... \$450

#### CM/1010 Speaker System

Two-way, two-bandpass, vented box, floor-standing speaker system with 8-in woofer, 10-in passive radiator, and 1-in dome tweeter; crossover at 3500 Hz; bandpass response 3 dB down point (f<sub>3</sub>) at 35 Hz (low frequency), 3 dB down point at 17,500 Hz (high frequency), and 6 dB down points from 32-18,500 Hz (overall); efficiency 90-dB SPL/W/m; input range 15-100 W/ch; 6-ohm nominal impedance; tweeter spectrum-shaped control ±3 dB; 28" H × 15 1/2" W × 11" D ..... \$350

#### CM/530 Speaker System

Two-way, two-bandpass bookshelf speaker system with 8-in woofer, 8-in passive radiator, and 1-in dome tweeter; crossover at 3000 Hz; bandpass response 3 dB down point (f<sub>3</sub>) at 36 Hz (low frequency), 3 dB down point at 17 Hz (high frequency), 6 dB down points from 30-20,000 Hz (overall); efficiency 88-dB SPL/W/m; input range 15-75 W/ch; 7-ohm nominal impedance; tweeter spectrum-shaped control ±3 dB range; 24" H × 13 3/4" W × 11 1/4" D ..... \$230

### LANCER

#### Lancer SC-9T Speaker System

Three-way dynamic acoustic-suspension system with 10-in woofer, 5-in midrange, and two 1-in dome tweeters; frequency response 20-20,000 Hz; crossovers at 500 and 4500 Hz; min. input 10 W; max. input 100 W; impedance 8 ohms; midrange and high-frequency controls; multi-radiational tower design; oiled-walnut veneer cabinet; removable black double-knit grille; 38" H × 12" W × 12" D ..... \$250

**SC-7A.** Similar to SC-9T except 12-in woofer, 5-in midrange, one 1-in dome tweeter; frequency response 20-20,000 Hz ±5 dB; removable brown knit grille; 25 1/2" H × 15" W × 11 3/4" D ..... \$270

#### Lancer SC-4A Speaker System

Three-way dynamic acoustic-suspension system with 12-in woofer, 5-in midrange, and 2 1/4-in tweeter; frequency response 20-20,000 Hz; crossovers at 750 and 6000 Hz; min. input 10 W; max. input 50 W; impedance 8 ohms; midrange and high-frequency controls; oiled-oak veneer cabinet; removable brown double-knit grille; 23 1/2" H × 15" W × 12 1/2" D ..... \$230

**SC-10A.** Similar to SC-4A except two-way system with 10-in woofer and 2 1/4-in tweeter; crossover at 2500 Hz; high-frequency control; oiled-walnut finish; 20 1/4" H × 12 1/2" W × 10" D ..... \$150

### LEAK by ERCONA

#### 2075 Speaker System

Four-way transmission-line floor-standing speaker system with 380-mm woofer in 125-liter transmission-line chamber, and 170-mm lower midrange, 100-mm upper midrange, and 25-mm dome tweeter in own chamber; frequency response 40-20,000 Hz ±2 dB; crossovers at 450, 2000, and 5000 Hz; handles 100 W DIN; nominal imped-

ance 6 ohms; walnut finish; 47" H × 19.75" W × 14.75" D ..... \$875

#### 2060 Speaker System

Three-way sealed acoustic-suspension speaker system with 300-mm sandwich woofer, 100-mm midrange with rear-loading tube, and 25-mm dome tweeter; frequency response 45-20,000 Hz ±2 dB; crossovers at 600 and 3500 Hz; handles 50 W DIN; nominal impedance 6 ohms; walnut finish; 25.5" H × 15" W × 13" D ..... \$325

#### 2030 Speaker System

Three-way bass-reflex bookshelf speaker system with 200-mm sandwich woofer, 100-mm viscous-damped plastic cone midrange, and 25-mm dome tweeter; frequency response 50-20,000 Hz ±2 dB; crossovers at 700 and 3500 Hz; handles 35 W DIN; nominal impedance 6 ohms; walnut finish; 19.75" H × 11" W × 10.25" D ..... \$195

#### 2020 Speaker System

Two-way acoustic-suspension bookshelf speaker system with 170-mm sandwich woofer/midrange and 30-mm lightweight plastic cone tweeter; frequency response 55-20,000 Hz ±3 dB; crossover at 3500 Hz; handles 25 W DIN; nominal impedance 6 ohms; walnut finish; 15.75" H × 9.875" W × 9.25" D ..... \$135

### LINN by AUDIOPHILE SYSTEMS

#### DMS Isobarik Speaker System

Three-way Isobarik-loading floor-standing speaker system with two 12 × 9-in woofers, two 5-in midrange drivers, and two 1-in dome tweeters; frequency response 16-20,000 Hz ±1.5 dB; crossovers at 375 and 3000 Hz; instantaneous dynamic range 54 dB; 4-ohm impedance; input range 50-500 W; 30" H × 15" W × 16 1/2" D ..... \$3740 pr.

#### S.A.R.A. Isobarik Speaker System

Two-way Isobarik-loading bookshelf speaker system with two 8-in woofers and 1-in dome tweeter; frequency response 40-20,000 Hz ±2 dB; 4-ohm impedance; laminated PVC construction; 17" H × 13" W × 10" D ..... \$1590 pr.

#### KAN Speaker System

Two-way acoustic-suspension bookshelf speaker system with 5-in woofer and 1-in dome tweeter; frequency response 60-20,000 Hz ±3 dB; impedance 8 ohms; 12" H × 7 1/2" W × 6 1/2" D ..... \$590 pr.

### MAGNEPAN

#### Magneplanar Tympani 1-D Speaker

Two-way planar permanent magnetic field speaker system with 1/8-in-thick film diaphragm stretched over two three-section screens; frequency response 40-20,000 Hz ±3 dB; internal crossover at 1200 Hz, 6 dB/octave; sensitivity 84 dB at 1 W, 500 Hz; handles up to 200 W/ch continuous power; resistive impedance 4 ohms; off-white or black decorator-fabric coverings; each section 72" H × 16" W × 1" D ..... \$1550

#### MG-IIA Speaker System

Two-way floor-standing speaker system with 500-in<sup>2</sup> woofer and 68-in<sup>2</sup> tweeter; frequency response 45-16,000 Hz ±4 dB; crossover at 2100 Hz; sensitivity 82-dB SPL/W/3 ft; input range 25-200 W; 6-ohm impedance; mirror-image pair; oak frame with off-white or black grille; 71" H × 22" W × 2" D ..... \$825 pr.

#### MG-I Speaker System

Two-way floor-standing speaker system with 428-in<sup>2</sup> woofer and 68-in<sup>2</sup> tweeter; frequency response 50-16,000 Hz ±4 dB; crossover at 2400 Hz; sensitivity 82-dB SPL/W/3 ft; input range 25-200 W; 5-ohm impedance; mirror-image pair; oak frame with off-white or black grille; 60" H × 22" W × 2" D ..... \$495 pr.

### MANHATTAN PACIFIC AUDIO

#### RF-5 Speaker System

Four-way sealed air-suspension floor-standing

speaker system with 12-in butyl-rubber-surround cone woofer, 4 1/2-in cone midrange, 1-in textile dome tweeter, and samarium-cobalt ribbon super tweeter; frequency response 29-40,000 Hz; crossovers at 500, 2950, and 12,500 Hz; efficiency 86 dB SPL/W/m; impedance 8 ohms; midrange and tweeter level controls; oiled walnut veneer with black cloth grille; 45" H × 17" W × 12" D ..... \$499

#### RF-7 Speaker System

Three-way sealed air-suspension floor-standing speaker system with 12-in butyl-rubber-surround cone woofer 4 1/2-in cone midrange, and 1-in recessed textile dome tweeter; frequency response 29-22,000 Hz; crossovers at 500 and 2950 Hz; efficiency 87 dB SPL/W/m; impedance 8 ohms; midrange and tweeter level controls; oiled walnut veneer with black cloth grille; 35" H × 17" W × 12" D ..... \$375

### MARANTZ

#### Precision Plus Series

##### M-16 Speaker System

Four-way focused-field floor-standing speaker system with 12-in woofer, 5-in midrange, 1 1/2-in LPF tweeter, and 1-in LPF dome super tweeter; frequency response 20-20,000 Hz; crossovers at 700, 2400, and 5500 Hz; input range 5-250 W; impedance 8 ohms; 45" H × 19" W × 12 1/4" D ..... \$699

##### M-10 Speaker System

Three-way focused-field floor-standing speaker system with 12-in woofer, 5-in midrange, and 1 1/2-in LPF dome tweeter; frequency response 25-21,000 Hz; crossovers at 750 and 2400 Hz; input range 5-200 W; impedance 8 ohms; 29.5" H × 16.5" W × 11.75" D ..... \$429

##### M-2 Speaker System

Two-way focused-field bookshelf speaker system with 6 1/2-in hard cone woofer and 1-in dome tweeter; frequency response 30-20,000 Hz; crossover at 2400 Hz; input range 30-200 W; impedance 4 ohms; 8 7/8" H × 13 1/2" W × 7 1/2" D ..... \$179

#### Marantz Series

##### 600 Speaker System

Four-way focused-field floor-standing speaker system with 10-in woofer, 5-in midrange, 1 1/2-in LPF tweeter, and 1-in LPF dome super tweeter; frequency response 25-28,000 Hz; crossovers at 700, 2400, and 5500 Hz; input range 50-150 W; impedance 8 ohms; 36" H × 14.25" W × 14.25" D ..... \$599

##### 400 Speaker System

Three-way focused-field speaker system with 10-in woofer, 5-in midrange, and 1 1/2-in LPF dome tweeter; frequency response 30-21,000 Hz; crossovers at 800 and 2400 Hz; input range 5-150 W; impedance 8 ohms; 25" H × 14 3/8" W × 11 1/2" D ..... \$299

##### 200 Speaker System

Three-way focused-field bookshelf speaker system with 8-in woofer, 3 1/2-in hard cone midrange, and 1-in dome tweeter; frequency response 36-20,000 Hz; crossovers at 2000 and 8000 Hz; input range 7-50 W; impedance 8 ohms; 20 1/4" H × 12 1/4" W × 8 1/2" D ..... \$189

#### High Definition Series

##### HD880 Speaker System

Four-way floor-standing speaker system with 12-in woofer, 5-in midrange, 1 1/2-in wide-dispersion dome tweeter, and 1-in dome super tweeter; frequency response 30-22,000 Hz ±3 dB; crossovers at 750, 2300, and 5000 Hz; sensitivity 90 dB SPL/W/m; max. input 250 W program; 8-ohm impedance; midrange, tweeter, and super tweeter level controls; 40 1/4" H × 16" W × 12" D ..... \$420

##### HD770 Speaker System

Four-way bookshelf speaker system with 12-in woofer, 5-in midrange, 1 1/2-in wide-dispersion

# 11 SPEAKER SYSTEMS

dome tweeter, and 1-in dome super tweeter; frequency response 33-22,000 Hz  $\pm$  3 dB; crossovers at 750, 2300, and 5000 Hz; sensitivity 90 dB SPL/W/m; max. input 200 W program; 8-ohm impedance; midrange, tweeter, and super tweeter level controls; 26 $\frac{1}{2}$ " H  $\times$  15" W  $\times$  11 $\frac{1}{2}$ " D..... \$330

## HD660 Speaker System

Three-way bookshelf speaker system with 10-in woofer, 5-in midrange, and 1 $\frac{1}{2}$ -in wide-dispersion dome tweeter; frequency response 35-20,000 Hz  $\pm$  3 dB; crossovers at 750 and 2500 Hz; sensitivity 88 dB SPL/W/m; max. input 125 W program; 8-ohm impedance; midrange and tweeter level controls; 24 $\frac{1}{2}$ " H  $\times$  14 $\frac{1}{8}$ " W  $\times$  11 $\frac{1}{2}$ " D..... \$270

## HD550 Speaker System

Three-way bookshelf speaker system with 8-in woofer, 5-in midrange, and 1 $\frac{1}{2}$ -in wide-dispersion dome tweeter; frequency response 40-20,000 Hz  $\pm$  3 dB; crossovers at 800 and 3000 Hz; sensitivity 88 dB SPL/W/m; max. input 75 W program; 8-ohm impedance; midrange and tweeter level controls; 22 $\frac{1}{2}$ " H  $\times$  12 $\frac{3}{4}$ " W  $\times$  9 $\frac{1}{2}$ " D..... \$200

## MASTERCRAFT

### SP-MK I Sound Panels

Two-way acoustic-suspension floor-standing speaker system with 8-in Bextrene woofer and 1-in cloth dome tweeter; time/phase-compensated tweeter position; frequency response 40-27,000 Hz; crossover at 2600 Hz; input range 30-150 W; impedance 8 ohms; oiled walnut wood veneer cabinet; 26" H  $\times$  11 $\frac{1}{2}$ " W  $\times$  6 $\frac{1}{2}$ " D..... \$298  
**SP-8.** Speaker stands..... \$23

## MATRECS

### MA-216 Speaker System

Three-way bass-reflex floor-standing speaker system with two 12-in woofers, 6-in midrange in own sub-enclosure, two 1-in polycarbonate dome tweeters, and rear-firing 2  $\times$  5-in crystal-driver piezoelectric horn; frequency response 20-22,000 Hz; crossovers at 1000 and 5000 Hz; input range 8-150 W continuous program; impedance 4 ohms; midrange and tweeter level controls; Imperial walnut-grain vinyl cabinet; 50" H  $\times$  15" W  $\times$  15" D..... \$399

### MA-206 Speaker System

Three-way air-suspension floor-standing speaker system with two 10-in woofers, 6-in midrange, and 1-in polycarbonate dome tweeter; frequency response 25-22,000 Hz; crossovers at 1000 and 5000 Hz; input range 8-75 W continuous program; impedance 4 ohms; midrange and tweeter level controls; 32" H  $\times$  14" W  $\times$  11" D..... \$249  
**MA-136.** Similar to MA-206 except uses one 12-in woofer; 8-ohm impedance; has tweeter level control; 24" H  $\times$  15" W  $\times$  10 $\frac{1}{2}$ " D..... \$199

### MA-156 Speaker System

Three-way bass-reflex speaker system with 15-in woofer, 4-in midrange, and two 3 $\frac{1}{2}$ -in phenolic ring tweeters; frequency response 30-22,000 Hz; crossovers at 2500 and 5000 Hz; input range 8-55 W continuous program; impedance 8 ohms; 28" H  $\times$  19" W  $\times$  10 $\frac{1}{2}$ " D..... \$169

## MESA

### Disco Series

#### Disco Duo Speaker System

Three-way two-section portable disco speaker system consists of woofer unit incorporating two 12-in woofers and auxiliary unit with 2  $\times$  5-in piezoelectric

horn tweeter and two piezoelectric horn super tweeters; frequency response 45-40,000 Hz; crossovers at 2500 and 4500 Hz; SPL 100 dB at 1m; 200 W/ch continuous; impedance 8 ohms; black vinyl cabinet with flush-mount carrying handles and aluminum-plated steel corner mounts; woofer 29 $\frac{1}{2}$ " H  $\times$  18" W  $\times$  14" D; aux. speaker 7 $\frac{1}{2}$ " H  $\times$  18" W  $\times$  10 $\frac{1}{2}$ " D..... \$449

#### Disco 1 Speaker System

Two-way bass-reflex portable disco speaker system with 15-in bass-reflex woofer, two 3  $\times$  9-in piezoelectric horn midrange/tweeters, and two 4-in piezoelectric super tweeters; frequency response 40-35,000 Hz; crossover at 2500 Hz; SPL 98 dB at 1 m; max. input 200 W/ch continuous; impedance 8 ohms; black vinyl cabinet with flush-mount carrying handles and aluminum-plated steel corner mounts; 29 $\frac{1}{2}$ " H  $\times$  18" W  $\times$  14" D..... \$399

### Tower Series

#### T-200 Tower Speaker System

Four-way bass-reciprocator floor-standing speaker system with two 12-in woofers, 12-in rear-facing bass reciprocator, 5-in high-compliance midrange, and 3-in Prismadome tweeter; frequency response 40-20,000 Hz; crossovers at 65, 900 and 6000 Hz; SPL 92 dB/W/m; input range 15-200 W/ch continuous; impedance 8 ohms; dual VICOM control for ten-dB adjustment of tweeter and midrange frequencies; built-in automatic resettable circuit breaker; Alagash walnut vinyl finish; 43" H  $\times$  14 $\frac{1}{2}$ " W  $\times$  13 $\frac{1}{2}$ " D..... \$425

#### MS-80 Subwoofer

Subwoofer contains 10-in active bass driver with 10-in Mesa Bass Reciprocator driver; frequency response 30-115 Hz; input range 5-100 W/ch continuous; impedance 8 ohms; level control to balance satellite speaker volume with subwoofer. 16" H  $\times$  18" W  $\times$  16" D..... \$270

### Bass Reciprocator Series

#### Mesa 125 Speaker System

Four-way vented speaker system with 12-in rear-facing bass reciprocator, 12-in active woofer, 5-in midrange in mini-enclosure, and 3-in Prismadome tweeter; frequency response 30-22,000 Hz; crossovers at 65, 900, and 6000 Hz; input range 15-125 W/ch continuous; 8-ohm impedance; 11-position midrange/tweeter VICOM control with  $\pm$  5 dB range; built-in circuit breaker with automatic reset; walnut vinyl finish with acoustically-transparent black cloth grille; 27 $\frac{1}{2}$ " H  $\times$  16" W  $\times$  13" D..... \$305

#### Mesa 85 Speaker System

Four-way vented speaker system with 12-in rear-facing bass reciprocator, 10-in active woofer, 5-in midrange in mini-enclosure, and 3-in Prismadome tweeter; frequency response 36-22,000 Hz; crossovers at 65, 900, and 6000 Hz; input range 15-85 W/ch continuous; 8-ohm impedance; 11-position midrange/tweeter VICOM control with  $\pm$  5-dB range; built-in circuit breaker with automatic reset; walnut vinyl finish with acoustically-transparent black cloth grille; 25 $\frac{1}{2}$ " H  $\times$  14 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{2}$ " D..... \$249

#### Mesa 65 Speaker System

Three-way vented speaker system with 10-in rear-facing bass reciprocator, 10-in active woofer, and 3-in Prismadome tweeter; frequency response 40-22,000 Hz; crossovers at 80 and 2500 Hz; input range 15-65 W/ch continuous; 8-ohm impedance; 11-position tweeter VICOM control with  $\pm$  5-dB range; built-in circuit breaker with automatic reset; walnut vinyl finish with acoustically-transparent black cloth grille; 23" H  $\times$  12 $\frac{1}{2}$ " W  $\times$  10 $\frac{1}{2}$ " D..... \$185

#### Mesa 45 Speaker System

Three-way vented speaker system with 8-in rear-facing bass reciprocator, 8-in active woofer, and 3-in Prismadome tweeter; frequency response 45-22,000 Hz; crossovers at 85 and 3000 Hz; input range 15-45 W/ch continuous; 8-ohm imped-

ance; 11-position tweeter VICOM control with  $\pm$  5-dB range; built-in circuit breaker with automatic reset; walnut vinyl finish with acoustically-transparent black cloth grille; 21" H  $\times$  11 $\frac{1}{2}$ " W  $\times$  9 $\frac{1}{2}$ " D..... \$129

### Mini-Mesa Series

#### Mini-Mesa 75 Speaker System

Three-way acoustic-suspension bookshelf speaker system with 6 $\frac{1}{2}$ -in rubber surround woofer, 3 $\frac{1}{2}$ -in midrange, and 1-in Prismadome tweeter; frequency response 50-25,000 Hz; crossovers at 800 and 4000 Hz; input range 10-90 W/ch continuous; impedance 4 ohms; Black Moroccan or African walnut vinyl finish with acoustically-transparent black cloth grille; 12 $\frac{1}{2}$ " H  $\times$  9 $\frac{1}{2}$ " W  $\times$  7 $\frac{1}{2}$ " D..... \$175  
**Mini-Mesa 60.** Similar to 75 except two-way system using 5 $\frac{1}{2}$ -in foam-surround woofer; frequency response 50-20,000 Hz; crossover at 4000 Hz; 8-ohm impedance; 10 $\frac{1}{2}$ " H  $\times$  6 $\frac{1}{2}$ " W  $\times$  6 $\frac{1}{2}$ " D..... \$139

#### Mini-Mesa 50 Speaker System

Three-way acoustic-suspension bookshelf speaker system with 5-in foam-suspension woofer, 3-in midrange, and 25  $\times$  12-mm horn tweeter; frequency response 50-25,000 Hz; crossovers at 1800 and 9000 Hz; input range 10-80 W/ch continuous; 4- or 8-ohm impedance; walnut vinyl cabinet with black cloth grille; 9 $\frac{1}{2}$ " H  $\times$  6 $\frac{1}{2}$ " W  $\times$  4 $\frac{1}{2}$ " D..... \$324 pr.

## MICRO-ACOUSTICS

### FRM-1ax Speaker System

Three-way acoustic-suspension speaker system with 10-in woofer and four 1 $\frac{1}{2}$ -in dispersion tweeters with super tweeter mounted in pentaxial array; dispersion 180 degrees, horizontal and vertical at 10,000 Hz; frequency response 30-22,000 Hz; crossovers at 1500 and 2000 Hz; input range 18-180 W continuous; 8-ohm impedance; continuously variable tweeter level and dispersion controls; walnut vinyl cabinet with brown, black, blue, sandalwood, or orange cloth polyester stretch knit grille; 25 $\frac{1}{2}$ " H  $\times$  15 $\frac{1}{2}$ " W  $\times$  12 $\frac{1}{2}$ " D..... \$235

### FRM-2ax Speaker System

Two-way acoustic-suspension speaker system with 10-in woofer and two 1 $\frac{1}{2}$ -in dispersion tweeters with super tweeter mounted in triaxial array; dispersion 160 degrees; frequency response 30-20,000 Hz; crossover at 1800 Hz; input range 12-120 W continuous; 8-ohm impedance; continuously variable tweeter level control; walnut vinyl with brown foam grille; 25 $\frac{1}{2}$ " H  $\times$  15 $\frac{1}{2}$ " W  $\times$  12 $\frac{1}{2}$ " D... \$185

### FRM-3ax Speaker System

Two-way twin-ducted-port bookshelf speaker system with 8-in woofer and 2-in rim-damped tweeter pivoted on vari-axis dispersion assembly; dispersion 140 degrees; frequency response 33-20,000 Hz; crossover at 2500 Hz; input range 7-80 W continuous; 8-ohm impedance; mechanical vari-axis control; sold as matched pairs only; walnut vinyl cabinet with brown acoustical foam grille; 12 $\frac{1}{2}$ " H  $\times$  21 $\frac{1}{2}$ " W  $\times$  9 $\frac{1}{2}$ " D..... \$279 pr.

## MICRON BY GENERAL SOUND

### 633 Speaker System

Compact three-way time-aligned bookshelf speaker system with 6 $\frac{1}{2}$ -in high-compliance woofer, 2 $\frac{1}{2}$ -in soft cone midrange, and 1-in hemispherical-diaphragm hard dome tweeter; frequency response 70-20,000 Hz  $\pm$  5 dB; crossovers at 3800 and 13,000 Hz; SPL 87 dB/W/m; input range 10-200 W/ch; nominal impedance 4-8 ohms; can be used in mobile situations with optional universal swivel horizontal/vertical mounting brackets available; glazed white cabinet with matching cloth grilles accented by brushed brass-finished borders; 11 $\frac{1}{2}$ " H  $\times$  7 $\frac{1}{2}$ " W  $\times$  7 $\frac{1}{2}$ " D..... \$200  
**632.** Black-glazed version of 633 with matching grille..... \$200  
**631.** Hand-rubbed oiled walnut veneer version with brown grille..... \$200



### 523 Speaker System

Compact two-way time-aligned bookshelf speaker system with 5/4-in high-compliance woofer and 1-in hemispherical-diaphragm soft dome tweeter; frequency response 100-20,000 Hz  $\pm$  5 dB; crossover at 5500 Hz; SPL 87 dB/W/m; input range 10-120 W/ch; nominal impedance 4-8 ohms; can be used in mobile situations with optional universal swivel horizontal/vertical mounting brackets available; glazed white cabinet with matching cloth grille and brushed brass-finished borders; 9" H  $\times$  5 7/8" W  $\times$  7 1/8" D..... \$150

522. Black-glazed version of 523 with matching grille..... \$150

521. Walnut veneer version of 523 with brown grille..... \$150

### 1011 Bass-Extender

Vented tuned-port subwoofer with 10-in dual voice-coil low-mass sub-bass driver; frequency response 32-250 Hz  $\pm$  5 dB; crossover at 200 Hz; SPL 91 dB/W/m; input range 20-250 W/ch; nominal impedance 8 ohms; oiled walnut veneer cabinet; 19" H  $\times$  18" W  $\times$  18" D..... \$350

## MITSUBISHI

### MS-40 Speaker System

Three-way acoustic air-suspension floor-standing speaker system with 12-in glass-fiber-reinforced plastic honeycomb-cone woofer, 4-in cone midrange, and 1 1/2-in hybrid dome tweeter; frequency response 25-20,000 Hz  $\pm$  4 dB; crossovers at 600 and 5000 Hz; sensitivity 87 dB SPL/W/m; max. input 150 W; 6-ohm impedance; four-step midrange and tweeter level controls; overload protection circuit; mirror image pairs; walnut cabinet and detachable grille; 34 3/8" H  $\times$  15 1/8" W  $\times$  14 3/8" D..... \$550

### MS-30 Speaker System

Three-way acoustic air-suspension bookshelf speaker system with 12-in glass-fiber-reinforced plastic honeycomb-cone woofer, 4-in cone midrange, and 1 1/2-in dome tweeter; frequency response 30-20,000 Hz  $\pm$  4 dB; crossovers at 800 and 5000 Hz; efficiency 88-dB SPL/W/m; max. input 150 W; 6-ohm nominal impedance; 12-dB/octave slope; four-step attenuated midrange and high level controls; detachable grille and walnut cabinet; 26 1/8" H  $\times$  15 1/8" W  $\times$  13 1/2" D..... \$395

### MS-20 Speaker System

Two-way acoustic air-suspension bookshelf speaker system with 12-in glass-fiber-reinforced plastic honeycomb-cone woofer and 2 1/2-in cone tweeter; frequency response 35-20,000 Hz  $\pm$  4 dB; crossover at 1500 Hz; efficiency 88-dB SPL/W/m; max. input 120 W; 12-dB/octave slope; nominal impedance 6 ohms; four-step attenuated high-level control; detachable grille and walnut cabinet; 24 3/8" H  $\times$  14 1/8" W  $\times$  11 1/8" D..... \$275

### MS-10 Speaker System

Two-way acoustic air-suspension bookshelf speaker system with 10-in glass-fiber-reinforced plastic honeycomb-cone woofer and 2 1/2-in cone tweeter; frequency response 35-20,000 Hz  $\pm$  4 dB; crossover at 1500 Hz; efficiency 87-dB SPL/W/m; max. input 100 W; nominal impedance 6 ohms; four-step tweeter level control; walnut cabinet with detachable grille; 22 1/2" H  $\times$  12 1/2" W  $\times$  11 1/8" D..... \$165

## M & K

### Satellite-1 Speaker System

Two-way acoustic-suspension speaker system with two 5-in woofers and 1-in tweeter; frequency response 55-22,000 Hz; crossover at 1785 Hz; input range 7.5-200 W; 4-ohm impedance; midrange and tweeter adjustments; walnut finish with black grille; 21" H  $\times$  7 1/2" W  $\times$  6 3/4" D..... \$215

### The Volkwoofer Subwoofer

Servo-feedback 60 W internal amp subwoofer with

12-in woofer and bass crossover frequency adjustment; frequency response 14-100 Hz; crossover at 100 Hz; input range 7.5-400 W; walnut finish with black grille; 16 1/2" H  $\times$  18" W  $\times$  18" D..... \$465

### Satellite-Volkwoofer System

Combines two Satellite-1 speakers and Volkwoofer..... \$895

### Goliath 2 Cube Subwoofer

Acoustic-suspension subwoofer with 12-in woofer and internal adjustable crossover network; frequency response 26-300 Hz; input range 30-150 W; walnut finish; 16 1/2" H  $\times$  18" W  $\times$  18" D... \$250

### Bottom End 2 Cube Subwoofer

Acoustic-suspension subwoofer with 12-in woofer; designed for bi-amplification or with external crossover; frequency response 26-300 Hz; input range 30-150 W; walnut finish; 16 1/2" H  $\times$  18" W  $\times$  18" D..... \$190

## MODULAR ACOUSTICS

### 3800 Speaker System

Four-way closed-cabinet floor-standing speaker system with two 10-in woofers firing downward and acting as subwoofer, 8-in mid-bass coupler, 2-in dome midrange, and 1-in soft textile dome tweeter; three separate enclosures with two woofers in lower compartment, and two upper cabinets for remaining drivers with high-outer-corner midrange placement and dome tweeter at top; frequency response 22-20,000 Hz; crossovers at 125, 700, and 6000 Hz; rated input 200 W continuous peak; impedance 4 ohms; midrange and high-frequency level controls; oiled walnut finish cabinet; 46.75" H  $\times$  23.75" W  $\times$  12.75" D..... \$640

### 3400 Mini Tower

Three-way columnar closed-cabinet floor-standing speaker system with two 8-in butyl-surround woofers, 2-in soft textile dome midrange, and 1-in soft textile dome tweeter; frequency response 32-20,000 Hz; crossovers at 700 and 6000 Hz; rated power 125 W continuous; impedance 4 ohms; midrange and high-frequency level controls; oiled walnut finish cabinet; 36.75" H  $\times$  12.25" W  $\times$  11" D..... \$410

### 3200 Z Speaker System

Three-way slant-back-designed closed cabinet floor-standing speaker system with 10-in woofer, 2-in dome midrange, and 1-in dome tweeter; has built-in base; frequency response 35-20,000 Hz; crossovers at 700 and 5000 Hz; rated input 100 W continuous; impedance 8 ohms; lacquered walnut finish cabinet; 39.75" H  $\times$  16" W  $\times$  16" D..... \$400

### 3000 Helmholtz Speaker System

Two-way dual-tuned-port floor-standing speaker system with 8-in woofer and 1-in soft dome tweeter; frequency response 27-20,000 Hz; crossover at 2000 Hz; efficiency 89 dB at 27 Hz 1 W/m; input range 10-100 W continuous; impedance 8 ohms; walnut veneer finish cabinet; 26.5" H  $\times$  19" W  $\times$  12.25" D..... \$250

### 2800 Speaker System

Two-way closed-cabinet bookshelf speaker system with 8-in butyl-surround woofer and 1-in soft textile dome tweeter; frequency response 40-20,000 Hz; crossover at 2200 Hz; rated input 75 W continuous; impedance 8 ohms; oiled walnut finish cabinet; 19.25" H  $\times$  11.25" W  $\times$  9.75" D..... \$140

### 2000 Subwoofer

Closed-cabinet floor-standing subwoofer with two 10-in woofers; frequency response 22-150 Hz; crossover at 125 Hz; passive crossover network; rated input 200 W/ch continuous peak; impedance 8 ohms; oiled walnut finish cabinet; designed to match 2200 satellites (2200 also works with any subwoofer); 22.5" H  $\times$  25.5" W  $\times$  15.25" D... \$410

2200. Slimline closed-cabinet satellites with 5-in extended-range woofer and 1-in soft dome tweeter; frequency response 65-20,000 Hz, 125-20,000

Hz through subwoofer; crossover at 2000 Hz; rated input 50 W continuous, 200 W through subwoofer; impedance 8 ohms; oiled walnut finish cabinet; 13.5" H  $\times$  8.25" W  $\times$  6.25" D..... \$154

P/N SSB. Metal stands for 2200; available in 18- or 28-in heights..... \$35 pr.

### 2600 Subwoofer

Compact cubical tuned-port subwoofer with two 8-in butyl-surround woofers; frequency response 32-125 Hz; crossover at 125 Hz; rated input 125 W/ch continuous; impedance 8 ohms; lacquered walnut cabinet; 18.75" H  $\times$  16.75" W  $\times$  16.75" D..... \$250

## MORDAUNT-SHORT

### Signifer Speaker System

Three-way acoustic-suspension floor-standing speaker system with 300-mm woofer, 135-mm midrange, and 25-mm wide-dispersion synthetic dome tweeter; frequency response 38-20,000 Hz  $\pm$  2 dB; crossovers at 500 and 4000 Hz; sensitivity 96 dB/4.5 W/m; input range 25-250 W/ch; THD less than 1.0%; includes matching stands; teak or walnut finish; 31 1/8" H  $\times$  15 1/8" W  $\times$  12 1/8" D..... \$1740 pr.

### Pageant Series 2

Two-way speaker system with 140-mm woofer/midrange and 25-mm wide-dispersion synthetic dome tweeter; frequency response 65-20,000 Hz  $\pm$  3 dB; crossover at 3500 Hz; sensitivity 6.5 V rms (5.3 W) for 96 dB at 1 m; continuous program rating 20 V rms (50 W); recommended amp power 15-100 W/ch; 8-ohm impedance; midrange and tweeter level controls; teak or walnut veneer finish (others optional) with deep brown woven grille; optional stands available; 21" H  $\times$  13" W  $\times$  9" D.... \$545 pr. Black stands..... \$80 pr.

### Festival Series 2

Two-way bookshelf speaker system with 140-mm woofer/midrange and 19-mm wide-dispersion synthetic dome tweeter; frequency response 75-20,000 Hz  $\pm$  3 dB; crossover at 3500 Hz; sensitivity 6.7 V rms (5.6 W) for 96 dB at 1 m; continuous program rating 19 V rms (45 W); recommended amp power 10-90 W/ch; 8-ohm impedance; teak or walnut veneer finish with deep brown woven fabric grille; 17 1/8" H  $\times$  11" W  $\times$  7 1/8" D..... \$425 pr.

### Carnival Series 2

Two-way bookshelf speaker system with 140-mm woofer/midrange and 68-mm paper cone tweeter; frequency response 85-17,000 Hz  $\pm$  3 dB; crossover at 3500 Hz; sensitivity 6.9 V rms (6 W) for 96 dB at 1 m; continuous program rating 18 V rms (40 W); recommended amp power 10-80 W/ch; 8-ohm impedance; teak or walnut finish with deep brown woven fabric grille; 15 1/8" H  $\times$  9 1/2" W  $\times$  5 1/8" D..... \$305 pr.

## NORMAN LABORATORIES

### System Twelve Speaker System

Two-way bi-amplified acoustic-suspension floor-standing speaker system with two 10-in woofers and five 1-in dome tweeters with built-in high-frequency amplifier and parametric equalizer; frequency response 30-20,000 Hz  $\pm$  2 dB; crossover at 1500 Hz; impedance 4 ohms; midrange and tweeter level controls; fuse and circuit breaker controls; walnut finish with black cloth grille; 53 1/2" H  $\times$  28" W  $\times$  14" D..... \$1800

### Nine Speaker System

Two-way acoustic-suspension floor-standing speaker system with three 10-in woofers (including switchable driving or passive-radiator rear-firing woofer) and three 1-in dome tweeters; frequency response 35-20,000 Hz  $\pm$  3 dB; crossover at 1500 Hz; impedance 4 ohms; midrange and tweeter level controls; two circuit breakers; walnut finish with smoked glass top and black cloth grille; 45 1/2" H  $\times$  15 1/2" W  $\times$  15" D..... \$500

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## Ten A Speaker System

Two-way acoustic-suspension floor-standing speaker system with two 10-in woofers and two 1-in dome tweeters; frequency response 40-20,000 Hz  $\pm$  3 dB; crossover at 1500 Hz; impedance 4 ohms; tweeter level control; two circuit breakers; walnut finish with brown cloth grille; 37 $\frac{1}{2}$ " H  $\times$  15" W  $\times$  12" D ..... \$350

**Eleven.** Similar to Ten A except uses one 10-in woofer; 8-ohm impedance; 23 $\frac{1}{2}$ " H  $\times$  15 $\frac{1}{2}$ " W  $\times$  12" D ..... \$260

## OAKTRON

### Comeste II C-4000 Speaker

Three-way ported air-suspension speaker system with 12-in foam-surround free-edge woofer, 5-in midrange, and 3-in tweeter; frequency response 75-18,000 Hz  $\pm$  5 dB; crossovers at 1000 and 6000 Hz; 40 W continuous, 80 W peak power capacity; 8-ohm impedance; walnut woodgrain vinyl finish; 24" H  $\times$  15 $\frac{1}{2}$ " W  $\times$  10" D ..... \$105

## OHM ACOUSTICS

### Model F Speaker System

Floor-standing speaker system with 12-in diameter Walsh radiator and 16-in tweeter with 33.6-oz Al-



nico V-7, 10 $\frac{1}{4}$ -lb magnet; frequency response 37-19,000 Hz  $\pm$  4 dB; input range 75-250 W; 4/3.7-ohm min. impedance; oiled walnut cabinet; 44" H  $\times$  17 $\frac{3}{4}$ " W  $\times$  17 $\frac{3}{4}$ " D (tapers to 13" W  $\times$  13" D at top) ..... \$1125

### Model I Speaker System

Four-way dual-vented floor-standing speaker system with 12-in subwoofer with 72-oz ferrite magnet, 8-in woofer with 32-oz magnet, 1.5-in soft dome tweeter, and two 1-in soft dome supertweeters; frequency response 32-21,000 Hz  $\pm$  3.5 dB; crossovers at 100, 2000, and 10,000 Hz; input range 10-1000 W continuous; nominal impedance 4 ohms; walnut veneer cabinet on  $\frac{3}{4}$ -in flakeboard stock; 33 $\frac{3}{4}$ " H  $\times$  15 $\frac{1}{4}$ " W  $\times$  15 $\frac{1}{2}$ " D at bottom, tapers to 13 $\frac{1}{4}$ " W  $\times$  13 $\frac{1}{4}$ " D at top ..... \$775

### Model H Speaker System

Three-way floor-standing vented speaker system with 8-in woofer, 2-in midrange, and 1-in dome tweeter; frequency response 32-20,000 Hz  $\pm$  4 dB; crossovers at 1700 and 5000 Hz; input range 10-100 W; 8-ohm impedance; three-position tweeter level control;  $\frac{3}{4}$ -in stock oiled walnut finish; 26 $\frac{1}{2}$ " H  $\times$  15" W  $\times$  10 $\frac{1}{4}$ " D ..... \$395

### Model C<sub>2</sub> Speaker System

Three-way speaker system with 10-in woofer, 2-in tweeter, and 1-in super dome tweeter; frequency

response 37-20,000 Hz  $\pm$  4 dB; crossovers at 1700 and 5000 Hz; input range 10-100 W; 8/6-ohm impedance; three-position tweeter level control switch; oiled walnut finish on  $\frac{3}{4}$ -in stock with black Formica back; 25" H  $\times$  14" W  $\times$  9 $\frac{1}{4}$ " D. \$300

### Model L Speaker System

Three-way speaker system with 8-in woofer, 2-in low tweeter, and 2-in high cone tweeter; frequency response 42-20,000 Hz  $\pm$  4 dB; crossovers at 1700 and 10,000 Hz; input range 8-100 W continuous; 8/4-ohm nominal impedance; three-position tweeter level control; input range 8-100 W; efficiency 100-dB SPL at 3 ft; oiled walnut finish on  $\frac{3}{4}$ -in stock; 20" H  $\times$  12" W  $\times$  9 $\frac{1}{4}$ " D ..... \$210

### Model M Speaker System

Two-way vented speaker system with 4-in woofer and 1-in cloth dome tweeter; frequency response 120-20,000 Hz  $\pm$  4 dB; crossover at 3500 Hz; input range 5-100 W; impedance 4 ohms; cast aluminum cabinet; 7 $\frac{1}{8}$ " H  $\times$  4 $\frac{1}{2}$ " W  $\times$  4 $\frac{1}{2}$ " D ..... \$145

### Model E Speaker System

Two-way speaker system with 8-in woofer and 2-in tweeter; crossover at 1700 Hz; impedance 6-8 ohms; frequency response 65-19,000 Hz  $\pm$  4 dB; input range 7-50 W; three-position tweeter level control; walnut-grained vinyl finish on  $\frac{3}{8}$ -in stock; 21 $\frac{1}{2}$ " H  $\times$  11 $\frac{1}{2}$ " W  $\times$  7 $\frac{1}{4}$ " D ..... \$130

### Model N Subwoofer

Dual-vented subwoofer incorporates two 8-in woofers with 32-oz magnets; frequency response 32-140 Hz; input range 10-100 W; nominal impedance 8 ohms; walnut veneer; 15" H  $\times$  16" W  $\times$  15" D ..... \$385

## OLSON ELECTRONICS

### SP-580 Speaker System

Three-way sealed air-suspension floor-standing speaker system with two 8-in half-roll cloth suspension woofers, two 5-in sealed-back midrange drivers, and two 2 $\frac{1}{4}$ -in sealed-back tweeters; frequency response 60-22,000 Hz; max. input 100 W; impedance 8 ohms; LC-type crossover with mid- and high-frequency rolloff controls; laminated walnut vinyl finish cabinet with removable front grilles; 40 $\frac{1}{4}$ " H  $\times$  12 $\frac{3}{4}$ " W  $\times$  11 $\frac{1}{4}$ " D ..... \$630 pr.

### SP-585 Speaker System

Three-way sealed air-suspension speaker system with 12-in half-roll cloth suspension woofer, 5-in sealed-back midrange, and 2 $\frac{1}{4}$ -in tweeter; frequency response 30-22,000 Hz; max. input 100 W continuous; impedance 8 ohms; L.C. crossover network with midrange and tweeter level controls; walnut vinyl finish cabinet; 24 $\frac{1}{4}$ " H  $\times$  14 $\frac{1}{2}$ " W  $\times$  12" D ..... \$396 pr.

**SP-579.** Similar to SP-585 except has 10-in woofer; frequency response 40-22,000 Hz; max. input 75 W continuous; 22 $\frac{1}{4}$ " H  $\times$  13 $\frac{1}{4}$ " W  $\times$  10 $\frac{1}{2}$ " D ..... \$305 pr.

## ONKYO

### F-5000 Speaker System

Three-way air-suspension floor-standing speaker system with 12.2-in polyurethane/paper-laminated plane woofer, 4-in polyurethane/paper-laminated plane midrange, and 1.95-in direct-drive membrane samarium cobalt tweeter in phase-aligned array; midrange and tweeter level controls; frequency response 28-20,000 Hz; crossovers at 1200 and 5000 Hz; input 200 W peak program; matched stereo pairs; includes two 4-in feet; African rosewood veneer finish ..... \$500

### F-3000 Speaker System

Three-way acoustic-suspension floor-standing speaker system with 11-in polyurethane/felted paper planar woofer, 4-in polyurethane/felted paper planar midrange, and 2  $\times$   $\frac{3}{4}$ -in direct-drive polyamide-membrane tweeter in phase-aligned array; frequency response 35-20,000 Hz; crossovers at 1300 and 5000 Hz; input range 40-80 W continuous; includes 4-in feet; rosewood vinyl cabinet with

black vinyl baffle; 26 $\frac{3}{4}$ " H  $\times$  16 $\frac{1}{4}$ " W  $\times$  10 $\frac{3}{4}$ " D ..... \$350

### M-240 Speaker System

Three-way acoustic-suspension floor-standing speaker system with 15-in high-compliance woofer, 4-in carbon-fiber cone midrange, and 1-in titanium-foil dome tweeter; midrange and tweeter level controls; frequency response 35-20,000 Hz; crossovers at 700 and 4500 Hz; SPL 93 dB/W/m; max. input 100 W; 8-ohm impedance; rosewood-grain vinyl finish; 27" H  $\times$  16 $\frac{1}{2}$ " W  $\times$  13" D ..... \$260

### E-200 Speaker System

Three-way air-suspension speaker system with 11-in Fiber-Aligned™ woofer, 4-in carbon-fiber midrange, and 2  $\times$   $\frac{3}{4}$ -in direct-drive membrane tweeter; frequency response 35-70,000 Hz; efficiency 90 dB/W/m; input range 20-100 W/ch; Aztec rosewood vinyl finish ..... \$230

**E-100.** Similar to E-200 except two-way system using 8-in Fiber-Aligned™ woofer; frequency response 40-40,000 Hz; efficiency 89 dB/W/m; input range 15-80 W/ch ..... \$130

### M-160 Speaker System

Two-way acoustic-suspension floor-standing speaker system with 12-in paper cone woofer and 2 $\frac{1}{4}$ -in duralumin dome tweeter; tweeter level control; frequency response 35-20,000 Hz; crossover at 2000 Hz; SPL 91 dB/W/m; input 80 W; 8-ohm impedance; 22" H  $\times$  13 $\frac{1}{2}$ " W  $\times$  12 $\frac{1}{4}$ " D ..... \$175

## OPTONICA

### CP-2121 Speaker System

Two-way floor-standing speaker system with 10-in woofer, 10-in passive radiator, and 3-in tweeter; frequency response 40-20,000 Hz; max. input 35 W; min. input 10 W; 8-ohm impedance; rosewood vinyl with removable grille; 28.7" H  $\times$  14.6" W  $\times$  12.1" D ..... \$210

## PANASONIC

### SB-700 Thrusters Speaker System

Two-way passive-radiator speaker system incorporates high-efficiency woofer and 2 $\frac{1}{2}$ -in tweeter with diffuser with twin 7-in wide-range drivers and 10-in convex drone cone; crossover at 4200 Hz (active), 25 Hz (passive radiator); max. input 50 W; 8-ohm impedance; simulated wood cabinet; 25 $\frac{1}{2}$ " H  $\times$  16 $\frac{3}{4}$ " W  $\times$  11 $\frac{1}{4}$ " D ..... \$165-185 pr.

## JC PENNEY

### MCS 8228 Speaker System

Three-way air-suspension floor-standing speaker system with 12-in woofer with 54-oz ferrite magnet, two 2-in soft dome midrange drivers with 25-oz ferrite magnets, and three 1-in soft-dome tweeters with 10-oz ferrite magnet; crossovers at 600 and 2000 Hz; input range 50-150 W continuous; 8-ohm impedance; three-position tweeter and midrange level controls; rosewood woodgrain vinyl cabinet with removable brown grille; 36 $\frac{1}{2}$ " H  $\times$  16" W  $\times$  10 $\frac{1}{2}$ " D ..... \$400

**MCS 8227.** Similar to MCS 8228 except 12-in woofer has 38-oz ferrite magnet; input range 25-100 W continuous; 27" H  $\times$  15 $\frac{3}{4}$ " W  $\times$  11 $\frac{1}{2}$ " D ..... \$300

### MCS 8265 Speaker System

Three-way bass-reflex floor-standing speaker system with 12-in woofer and 20-oz ferrite magnet, 5 $\frac{1}{4}$ -in midrange with 6.4-oz ferrite magnet, and horn tweeter with 1.3-oz Alnico magnet; input range 10-70 W continuous; 8-ohm impedance; tweeter level control; rosewood vinyl cabinet with grille; 25 $\frac{1}{2}$ " H  $\times$  14 $\frac{3}{4}$ " W  $\times$  12 $\frac{1}{4}$ " D ..... \$600 pr.

## PETROFF LABS

### Matrix I Speaker System

Two-way acoustic-suspension bookshelf speaker system with 8-in vinyl-surround polypropylene cone



woofer, slot-chambered ribbon tweeter, and rear-facing slot-chambered ribbon ambient tweeter in field matrix configuration (decodes ambient components from left and right channels, applying two additional ambient field channels to rear-facing ribbon tweeter); frequency response 40-40,000 Hz  $\pm$  2 dB; crossover at 2000 Hz; sensitivity 88 dB SPL/W/m; input range 50-200 W; impedance 4 ohms; tweeter and matrix level controls; trapezoidal cabinet with oiled oak veneer finish and sculptured dark brown grille; 18" H  $\times$  13 $\frac{1}{2}$ " W  $\times$  9" D..... \$490 pr.

## PHILIPS

### RH567 Speaker System

Motional feedback three-way speaker system with two built-in amplifiers; 10-in woofer powered by 40-W amp (0.2% THD), 2-in dome midrange and 1-in dome tweeter powered by 20-W amp (0.2% THD); frequency response 27-20,000 Hz; crossovers at 500 and 3500 Hz; 4- and 8-ohm impedance; input sensitivity 1-20 V variable; 21 $\frac{1}{2}$ " H  $\times$  13" W  $\times$  10 $\frac{3}{4}$ " D..... \$400

### AH477 Speaker System

Three-way air-suspension speaker system with 12-in woofer, 2-in dome midrange, and 1-in dome tweeter; frequency response 32-20,000 Hz; crossovers at 1500 and 5500 Hz; 8-ohm impedance; max. input 80 W continuous, recommended min. input 20 W/ch; midrange and tweeter level controls; oiled walnut veneer finish with removable black grille; 27 $\frac{1}{8}$ " H  $\times$  15 $\frac{3}{8}$ " W  $\times$  14 $\frac{11}{32}$ " D..... \$320

### AH476 Speaker System

Three-way air-suspension speaker system with 10-in woofer, 2-in dome midrange, and 1-in dome tweeter; frequency response 35-20,000 Hz; crossovers at 1500 and 5500 Hz; 8-ohm impedance; max. input 60 W continuous, recommended min. input 20 W/ch; midrange level control; oiled walnut finish with removable black grille; 26" H  $\times$  13 $\frac{3}{4}$ " W  $\times$  11 $\frac{1}{16}$ " D..... \$250

### RH541 Speaker System

Motional feedback two-way speaker system with one built-in amplifier; 6-in woofer and 1-in dome tweeter powered by 30-W amplifier (0.4% THD); frequency response 35-20,000 Hz; crossover at 1400 Hz; 4-ohm impedance; input sensitivity 1 V at 10,000 ohms, 19 V at 100 ohms; 11 $\frac{1}{2}$ " H  $\times$  9" W  $\times$  7" D..... \$200

### SJ2932 Speaker System

Three-way tuned-port speaker system with 10-in woofer, two 5-in cone midrange drivers, and 1-in dome tweeter; frequency response 46-20,000 Hz; crossovers at 2000 and 6000 Hz; 8-ohm impedance; max. input 60 W; walnut vinyl finish with removable black grille; 27" H  $\times$  14 $\frac{1}{2}$ " W  $\times$  12 $\frac{1}{2}$ " D..... \$140

## PIONEER

### HPM-150 Speaker System

Four-way bass-reflex floor-standing speaker system with 15 $\frac{3}{4}$ -in woofer, 4-in cone midrange, 1 $\frac{3}{4}$ -in cone tweeter, and omnidirectional horn-loaded high polymer film super tweeter; frequency response 25-40,000 Hz; crossovers at 750, 2600, and 8500 Hz; sensitivity 92.5 dB/W/m; nominal input 125 W; min. input 10 W; 6.3-ohm impedance; grain finish; 38 $\frac{3}{32}$ " H  $\times$  17 $\frac{11}{16}$ " W  $\times$  17 $\frac{11}{16}$ " D..... \$550

### HPM-900 Speaker System

Four-way bass-reflex bookshelf speaker system with 12-in cone woofer, 4-in cone midrange, 1 $\frac{3}{4}$ -in cone tweeter, and high polymer molecular film super tweeter; frequency response 30-50,000 Hz; input range 100-200 W; 8-ohm impedance..... \$376

### CS-99AA Speaker System

Three-way bass-reflex bookshelf speaker system with 15-in cone woofer, 4 $\frac{1}{2}$ -in cone midrange, and 3-in cone tweeter; frequency response 25-22,000

Hz; input range 50-100 W; 8-ohm impedance..... \$350

### HPM-700 Speaker System

Four-way bass-reflex bookshelf speaker system with 10-in cone woofer, 4-in cone midrange, 1 $\frac{3}{4}$ -in cone tweeter, and high polymer molecular film super tweeter; frequency response 35-50,000 Hz; input range 60-120 W; 8-ohm impedance..... \$275

### HPM-500 Speaker System

Three-way bass-reflex bookshelf speaker system with 10-in cone woofer, 1 $\frac{3}{4}$ -in cone tweeter, and high polymer molecular film super tweeter; frequency response 35-50,000 Hz; input range 40-80 W; 8-ohm impedance..... \$195

### Promusica 120 Speaker System

Three-way, ducted port, bookshelf speaker system with 10-in cone woofer, 5-in cone midrange and 1 $\frac{7}{8}$ -in cone tweeter; frequency response 30-20,000 Hz; max. input 60 W; 8-ohm impedance..... \$145

## PLASMATRONICS

### Hill Type-1 Plasma Speaker System

Three-way floor-standing speaker system with 14-in subwoofer, 6 $\frac{1}{2}$ -in low midrange driver, and laser-like phase-coherent incandescent lavender plasma high-frequency driver with spherical radiation pattern; system must be bi-amped. Features separate interface unit with LED VU meter display, high-low test and balancing, and selectable crossover point controls; electronic crossover; built-in vacuum tube Class A amplifiers; built-in helium tank with automatic LEDs on built-in monitor panel indicating when tanks must be exchanged (approx. every 300 listening hours). Frequency response 30-20,000 Hz  $\pm$  3 dB; crossovers at 130 and user-selectable 700 or 1000 Hz; HD 1.0% at 90-dB SPL at 10 ft; max. steady-rate acoustical power 107 dB at 1 m SPL. Requires high-quality full-range preamp and 100-200 W/ch continuous power amp; solid walnut cabinet; interface unit 4 $\frac{1}{8}$ " H  $\times$  19" W, speaker 57 $\frac{1}{2}$ " H  $\times$  34 $\frac{1}{2}$ " W  $\times$  18 $\frac{1}{2}$ " D..... \$8000

## POLK AUDIO

### R.T.A. 12 Monitor Speaker System

Three-way real-time-array floor-standing speaker system with 12-in low readout, low-resonance



molded foam subwoofer, two 6 $\frac{1}{2}$ -in polymer laminated bass midrange drivers, and 1-in open-mounted moving-coil soft dome tweeter; frequency response 19-25,000 Hz; crossovers at 40 and 2000 Hz; input range 10-500 W/ch; 6-ohm impedance; walnut or rosewood grain finish; 34" H  $\times$  16" W  $\times$  12" D..... \$385  
Speaker stands for R.T.A. 12..... \$50 pr.

### TenA Speaker System

Three-way sub-bass radiator/sealed floor-standing

speaker system with 10-in fluid-coupled subwoofer, two 6 $\frac{1}{2}$ -in plasticized bass/midranges, and 1-in soft-dome tweeter; frequency response 22-25,000 Hz; crossovers at 60 and 3000 Hz; input range 10-200 W/ch; 6-ohm impedance; walnut or rosewood woodgrain finish; 28" H  $\times$  16" W  $\times$  11 $\frac{1}{2}$ " D..... \$280

### SevenB Speaker System

Three-way sub-bass radiator/sealed bookshelf speaker system with 10-in subwoofer, 6 $\frac{1}{2}$ -in plasticized bass/midrange, and 1-in soft-dome tweeter; frequency response 26-25,000 Hz; crossovers at 60 and 3000 Hz; input range 10-100 W/ch; 8-ohm impedance; walnut or rosewood woodgrain finish; 24" H  $\times$  14" W  $\times$  9 $\frac{1}{4}$ " D..... \$200

**FiveA.** Similar to SevenB but with 8-in subwoofer; frequency response 31-25,000 Hz; input range 10-60 W/ch; 21 $\frac{1}{2}$ " H  $\times$  10 $\frac{1}{2}$ " W  $\times$  8 $\frac{1}{2}$ " D..... \$150

### Reference Monitor Low Frequency System

Modular bass loudspeaker with two 6500-mW tri-laminate polymer drivers fluid-coupled to low-resonance 12-in foam-laminated planar sub-bass radiator; designed for home or studio systems; built-in low-pass filter network (can be added as single dual-channel woofer unit or as one of stereo pair of bass modules); crossover bypassing for connection to bi- and tri-amplified systems; input range 20-250 W/ch; walnut or rosewood woodgrain vinyl cabinet..... \$270

## PSB SPEAKERS

### Beta IIa Speaker System

Two-way acoustic-suspension floor-standing speaker system with motional feedback bass unit, 8-in long-throw woofer, and 1-in soft dome tweeter with ferrofluid; frequency response 25-20,000 Hz  $\pm$  2 dB; crossover at 1500 Hz; handles 40 W/ch contin-

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uous power; 4-ohm nominal impedance; fuse protected; rear panel of speaker has five-position subsonic frequency roll-off switch, eleven-position amplifier matching switch, and on/off switch; LED "power on" indicator located under black grille cloth; walnut veneer finish; 23" H x 12" W x 10 1/2" D..... \$595

### Summit Eleven Speaker System

Two-way pyramid-shaped floor-standing speaker system with 200-mm long-throw Bextrene cone woofer, 250-mm Bextrene passive radiator, and 25-mm Audax textile dome tweeter; flat on-axis frequency response; phase-compensated crossover; 38" H x 12" D..... \$580

**Summit Nine.** Similar to Summit Eleven except with 200-mm Bextrene passive radiator; 33" H x 11" D..... \$495

### Passif Ila Speaker System

Two-way 10-in passive radiator floor-standing speaker system with 8-in long-throw woofer and 1-in dome tweeter; frequency response 42-20,000 Hz  $\pm$  2 dB; crossover at 2000 Hz; power range 15-60 W continuous; 8-ohm nominal impedance; walnut veneer finish with black cloth grille; 29 1/4" H x 13 1/2" W x 12 1/4" D..... \$280

### Passif I Speaker System

Two-way 8-in passive radiator floor-standing speaker system with 8-in long throw woofer and 1-in soft dome tweeter; frequency response 50-20,000 Hz  $\pm$  2 dB; crossover frequency 2000 Hz; input range 15-50 W continuous; 8-ohm nominal impedance; walnut veneer finish with black cloth grille; 26" H x 12" W x 10 1/4" D..... \$230

### Avante Speaker System

Two-way bass-reflex bookshelf speaker system with 8-in woofer and 1-in dome tweeter; frequency response 60-20,000 Hz  $\pm$  2 dB; crossover at 1500 Hz; input range 8-45 W continuous; 8-ohm nominal impedance; walnut veneer finish with black cloth grille; 14 1/2" H x 8 1/2" W x 8" D..... \$160

## QUAD by ACOUSTICAL MFG.

### Quad Electrostatic Loudspeaker

Full-range electrostatic loudspeaker incorporates closely-coupled moving elements 200 times lighter than diaphragms of moving-coil speakers; bandwidth 45-18,000 Hz; dispersion 70 degrees horizontal, 15 degrees vertical; sensitivity 93 dB at 2 meters on axis in free space; impedance 15-30 ohms; expanded aluminum, bronze or black metal grille with polished wood end frames and feet; 790 mm H x 880 mm W x 270 mm D..... \$890

## REALISTIC

### Optimus T-200 Speaker System

Three-way floor-standing speaker system with two 10-in woofers, 6 1/2-in midrange, and 2-in cone tweeter; frequency response 50-20,000 Hz; 8-ohm impedance; max. input 150 W; midrange and treble L-pad controls; oiled walnut finish with removable grille; 34" H x 12 1/2" W x 12 1/2" D..... \$260

### Mach One LC Speaker System

Three-way floor-standing speaker system with 15-in woofer, multi-cell midrange horn, and high-compliance tweeter horn; frequency response 20-20,000 Hz; crossovers at 800 and 8000 Hz; 8-ohm impedance; LC crossover network; walnut veneer cabinet with acoustically transparent grille cloth; 28 3/4" H x 17 1/4" W x 12" D..... \$240

### Optimus T-100 Tower Speaker System

Two-way floor-standing speaker system with two

8-in woofers and 3-in cone tweeter; frequency response 55-18,000 Hz  $\pm$  3 dB; crossover at 3500 Hz; 8-ohm impedance; max. input 75 W peak program; treble adjustment control; phono jack and screw terminal connections; oiled walnut veneer cabinet; 35 1/2" H x 13" W x 12 1/4" D..... \$180

### Optimus-10 Speaker System

Two-way speaker system with 8-in woofer, 10-in passive radiator, and 3 1/4-in cone tweeter; frequency response 42-20,000 Hz  $\pm$  3 dB; crossover at 2500 Hz; max. input 75 W peak program; 8-ohm impedance; tweeter level control; phono jack and screw terminal connections; oiled walnut veneer with removable grille; 25" H x 15 3/4" W x 10 3/4" D..... \$140

### Optimus 25 Speaker System

Sealed three-way acoustic-suspension speaker system with 12-in woofer, 4-in midrange, and 2 1/2-in tweeter; frequency response 45-20,000 Hz; 8-ohm impedance; max. input 75 W; midrange and treble switches in hi-normal/lo-midrange and treble modes; walnut finish with removable grille; includes phono jacks and screw terminals; 25" H x 14" W x 11 1/2" D..... \$140

### Nova-10 Speaker System

Two-way sealed speaker system with 8-in high efficiency woofer with complementary passive radiator and 2 1/2-in cone tweeter; frequency response 80-18,000 Hz; crossover at 3000 Hz; max. input 50 W; 8-ohm impedance; includes phono jacks and screw terminals; oiled walnut finish with latticed grille; 22" H x 12 1/4" W x 10 1/4" D..... \$130

## REFERENCE by QUADRAFLEX

### 312L Speaker System

Three-way linear-phase acoustic-suspension floor-standing speaker system with 12-in woofer, 6 1/2-in cone midrange, and 1-in soft dome tweeter; frequency response 32-22,500 Hz  $\pm$  4 dB; crossovers at 600 and 4000 Hz; min. input 10 W; 8-ohm impedance; black and teak vinyl finish with gray cloth grille; 31 1/4" H x 18" W x 13" D..... \$270

### 310L Speaker System

Three-way linear-phase acoustic-suspension speaker system with 10-in woofer, 6 1/2-in cone midrange, and 1-in Mylar dome tweeter; frequency response 38-20,000 Hz  $\pm$  4 dB; crossovers at 600 and 4000 Hz; min. input 10 W; 8-ohm impedance; black and teak vinyl cabinet with gray cloth grille; 28 3/4" H x 16" W x 11 3/4" D..... \$180

### 228L Speaker System

Two-way linear-phase passive-radiator speaker system with 8-in woofer, 8-in passive radiator, and 1-in Mylar dome tweeter; frequency response 45-20,000 Hz  $\pm$  4 dB; crossover at 3000 Hz; min. input 10 W; 8-ohm impedance; black and teak vinyl cabinet with gray cloth grille; 26 3/4" H x 15" W x 10 1/4" D..... \$130

## REYNOLDS ADVANCE

### C-2 Speaker System

Two-way floor-standing speaker system with 10-in high-compliance woofer, 12-in passive radiator, and 1-in dome tweeter; frequency response 27-20,000 Hz  $\pm$  4 dB; crossover at 2000 Hz; sensitivity 92 dB SPL/W/m; handles 100 W; impedance 8 ohms; walnut cabinet; 35" H x 15" W x 11 1/2" D..... \$350

## ROGERS by REFERENCE MONITOR

### The Reference Monitor System

System comprises pair of LS 3/5A speakers, XA 75 electronic crossover/amplifier, and pair of L 35B bass system speakers; frequency response (anechoic) 45-20,000 Hz  $\pm$  2 dB; handles 150-170 W

continuous, 200 W peak program; sensitivity 96 dB SPL/12.5 W pink noise/m; XA 75 crossover at 150 Hz normal; bass system has 8-ohm nominal impedance, LS 3/5A has 15-ohm nominal impedance. L35B has 12.5-in paper pulp woofer and 1.5-in four-layer voice coil; teak or walnut finish; 32.4" H x 18" W x 16.5" D.

**XA 75/L35B.** Electronic crossover/amplifier and bass system speakers; teak or walnut finish..... \$2200 pr.

**LS 3/5A.** Monitor speakers..... \$599 pr.

### Monitor 2 Speaker System

Two-way monitor speaker with 8-in woofer, Celestion HF 1300 derivative tweeter and HF 2000 super tweeter; frequency response 40-20,000 Hz  $\pm$  3 dB; handles 200 W continuous at 400 Hz, 200 W speech and music; 8-ohm impedance; teak or walnut veneer finish with black grille cloth; 25" H x 12" W x 12" D..... \$950 pr.  
Rosewood/black finish..... \$1080 pr.

### The Compact Monitor Speaker

Two-way monitor speaker with 8-in woofer and 1.9-in butyl damped fabric dome tweeter; frequency response 50-20,000 Hz  $\pm$  3 dB; handles 100 W continuous at 400 Hz, 200 W speech and music; 8-ohm nominal impedance; teak or walnut veneer finish with black grille cloth; 20" H x 11" W x 10 3/4" D..... \$700 pr.  
Rosewood/black finish..... \$830 pr.

### LS 3/5A Monitor Speaker

Two-way 1B enclosure monitor speaker based on BBC design; has 4-in plastiflex doped bextrene cone woofer and 3/4-in dome tweeter; frequency response 70-20,000 Hz; crossover at 3000 Hz; handles 25 W speech and music; 15-ohm nominal impedance; 12" H x 7 1/2" W x 6 5/8" D; teak, walnut or black finish..... \$599 pr.  
Rosewood/black finish..... \$650 pr.

## ROGERSOUND LABS

### Grande Speaker System

Four-way active-damping floor-standing speaker system with 12-in cone woofer, 8-in bextrene cone lower midrange, 4-in cone upper midrange, and 1-in soft dome tweeter in time-aligned column; frequency response 21-25,500 Hz; crossovers at 125, 4000, and 8000 Hz; input range 50-250 W; nominal impedance 8 ohms; solid-state tweeter protection circuit; genuine walnut cabinet finish; 61 1/2" H x 13 1/2" W x 15" D..... \$750

### 6600H Speaker System

Three-way bass-reflex floor-standing speaker system with two 12-in cone woofers, two 5-in cone midrange drivers, and compression horn tweeter; frequency response 25-20,000 Hz; crossovers at 800 and 5000 Hz; input range 10-175 W; nominal impedance 4 ohms; solid-state tweeter protection circuit; genuine walnut cabinet finish; 46" H x 18" W x 11" D..... \$575

### Nevada Speaker System

Three-way acoustic-suspension floor-standing speaker system with 12-in and 8-in cone woofers, 5-in cone midrange, and compression horn tweeter; frequency response 29-20,000 Hz; crossovers at 800 and 5000 Hz; input range 10-150 W; nominal impedance 4 ohms; solid-state tweeter protection circuit; genuine walnut cabinet finish; 26 1/2" H x 17" W x 13 1/2" D..... \$522  
Black lacquer finish..... \$444

### Sierra Speaker System

Three-way passive-radiator floor-standing speaker system with 12-in cone woofer with complementary passive radiator, 5-in cone midrange, and 1-in mylar dome tweeter; frequency response 32-21,500 Hz; crossovers at 800 and 3800 Hz; input range 10-150 W; nominal impedance 8 ohms; genuine walnut or oak finish; 40" H x 14 1/2" W x 12 1/2" D..... \$410

### 3600 Monitor Speaker System

Three-way bass-reflex speaker system with 12-in cone woofer, 5-in cone midrange, and 1-in dome tweeter; frequency response 35-22,000 Hz; cross-



overs at 800 and 4000 Hz; input range 12-125 W; nominal impedance 8 ohms; genuine walnut finish; 25" H x 14 1/2" W x 11 1/2" D..... \$321  
 Black lacquer finish..... \$276  
**3300 Monitor.** Similar to 3600 Monitor except uses 3/4-in dome tweeter; frequency response 35-21,000 Hz; walnut finish..... \$282  
 Black lacquer finish..... \$245

### Formula 60 Speaker System

Three-way passive-radiator floor-standing speaker system with 12-in cone woofer with complementary passive radiator, 5-in cone midrange, and 1 1/2-in cone tweeter; frequency response 35-20,000 Hz; crossovers at 1200 and 4000 Hz; input range 10-60 W; nominal impedance 8 ohms; walnut vinyl finish; 38" H x 15" W x 11" D..... \$234

**Formula 40.** Similar to Formula 60 except bass-reflex enclosure using 2 1/2-in cone tweeter; frequency response 40-20,000 Hz; walnut vinyl finish; 23 1/2" H x 14 1/4" W x 11 1/4" D..... \$171  
 Genuine walnut finish..... \$192

**Formula 20.** Similar to Formula 40 except uses 2 1/2-in ring radiator tweeter; frequency response 40-19,000 Hz; walnut vinyl finish; 25 1/2" H x 14 1/4" W x 11" D..... \$140

## RTR INDUSTRIES

### DR-1 Speaker System

Electrostatic dual-tandem speaker system with two 10 in woofers and one 12-in woofer; frequency response 28-375 Hz; power handling 125 W continuous, 250 W peak; crossover at 325 Hz; 8-ohm impedance. Electrostatic system: 27-element circumaxial, variable area radiator; frequency response 375-40,000 Hz  $\pm$  2 dB. Direct-drive power amp: frequency response 375-30,000 Hz; drives electrostatic element, woofer system requires 75-150 W power amp. Woofer system and electrostatic amp housed in one cabinet plus one electrostatic cabinet; volume and tweeter control; hand-rubbed walnut veneer finish with black fabric grille; 49" H x 16 1/2" W x 16 1/2" D..... \$1495

### 600 D Speaker System

Three-way acoustic-suspension speaker system with two 12-in woofers, 1 1/2-in dome midrange, and two 1-in soft dome super tweeters; frequency response 32-20,000 Hz; crossovers at 950 and 10,000 Hz; 4-ohm nominal impedance; recommended amp power 25-120 W continuous; has continuously variable midrange and tweeter level controls, resettable circuit breaker protection, and five-way binding post connectors; Corinthian column design with walnut veneer finish and black doubleknit grille; 48" H x 16 1/2" W x 16 1/2" D..... \$600

### 800D Speaker System

Four-way acoustic-suspension phased speaker system with 8-in and 10-in woofers, 1 1/2-in soft dome midrange, and 1-in soft dome tweeter; frequency response 36-20,000 Hz  $\pm$  2 dB; crossovers at 150, 1500, and 9000 Hz; efficiency 90.5-dB SPL/W/m; min. input 25 W; 6-ohm impedance; woofer, midrange, and tweeter level controls; oiled walnut finish with black knit grille; 37 1/2" H x 13 1/4" W (bottom) and 4" W (top) x 23 3/4" D..... \$600

### 300D Speaker System

Three-way acoustic-suspension speaker system with two 10-in woofers, 1 1/2-in dome midrange, and 1-in soft dome super tweeter; frequency response 36-20,000 Hz; crossovers at 1250 and 10,000 Hz; 4-ohm nominal impedance; recommended amp power 25-100 W continuous; has continuously variable midrange and tweeter level controls, resettable circuit breaker protection, and five-way binding post connectors; Corinthian column design with walnut veneer finish and black doubleknit grille; 42" H x 14 1/2" W x 12 1/2" D..... \$400

### PS/1 Speaker System

Three-way acoustic-suspension speaker system with 8-in woofer, 1 1/2-in soft dome midrange, and 1-in soft dome tweeter; frequency response 65-20,000 Hz  $\pm$  2 dB; crossovers at 1500 and 9000 Hz; efficiency 90.5-dB SPL/W/m; min. input 25 W; 6-ohm

impedance; pyramid-shaped satellite designed for use with DAC/1; tweeter high-pass level control; oiled walnut finish with black knit grille; 21 1/4" H x 12 1/4" W (bottom) and 5" W (top) x 8" D..... \$325

### G-200 Speaker System

Two-way mass-tuned passive radiator modified-vent speaker system with 10-in woofer, 1 1/2-in high-temperature voice coil, total emission dampener impregnated cone 1-in soft dome wide-dispersion tweeter; frequency response 25-25,000 Hz  $\pm$  3 dB; crossover at 2500 Hz; input range 10-120 W continuous unclipped; sensitivity 91 dB SPL/W pink noise/m; 4-ohm nominal impedance; tweeter level control and color-coded pushbutton connectors; walnut veneer finish; 36" H x 14 1/2" W x 12 1/2" D..... \$279

### ESR-6 Speaker System

Electrostatic speaker system; frequency response 1500-20,000 Hz; incorporates six HF-50 electrostatic radiators; crossover frequency 1500 Hz; 8-ohm nominal impedance; recommended amp power 15-60 W/ch continuous; has continuously variable tweeter level control, resettable circuit breaker protection, surge voltage protection, and five-way binding post connectors; hand-rubbed walnut finish; 14 1/2" H x 14 1/4" W x 12" D..... \$250

### G-80 Speaker System

Two-way passive-radiator speaker system with 8-in woofer with 10-in passive radiator and 1-in soft dome tweeter; frequency response 32-25,000 Hz; crossover at 2500 Hz; sensitivity 90 dB/W/m; input range 10-100 W continuous; impedance 4 ohms; continuously variable tweeter level control and circuit breaker protection; 25" H x 14 1/4" W x 11 1/2" D..... \$179

**G-40.** Similar to G-80 except woofer has 8-in passive radiator; frequency response 35-22,000 Hz; 23" H x 12" W x 9 1/2" D..... \$129

### DAC/1 Subwoofer

Differential ac subwoofer with one 12-in and two 15-in woofers; frequency response 16-150 Hz  $\pm$  1.5 dB; crossover at 120 Hz; 6-ohm nominal impedance; min. input 40 W; includes casters; oiled walnut finish with black knit grille; 21 1/4" H x 29 1/2" W x 28" D..... \$575

## SANSUI

### SP-L750 Speaker System

Three-way bass-reflex floor-standing speaker system with 12-in woofer and complementary passive ra-



diator, 3-in rear-driven horn-loaded tweeter, and 1 1/2-in horn supertweeter; frequency response 30-40,000 Hz; sensitivity 94 dB SPL/W/m; max. input 200 W; impedance 8 ohms; tweeter and supertweeter frequency contour controls; walnut veneer cabinet on casters..... \$650

**SP-L550.** Similar to SP-L750 minus passive radiator and casters; frequency response 35-40,000 Hz

sensitivity 93 dB SPL/W/m; max. input 150 W..... \$500

### SP-X9900 Speaker System

Five-way seven-driver bass-reflex floor-standing speaker system with 17-in woofer, 8-in midrange, two 6 1/4" x 2-in horn tweeters, 1 1/2-in cone supertweeter, and two 1 3/4-in horn supertweeters; frequency response 22-23,000 Hz; sensitivity 100 dB SPL/W/m; max. input 280 W; 8-ohm impedance; three-step sound balance control; simulated walnut grain cabinet with hand-carved Kumiko grille. \$400

**SP-X8900.** Similar to SP-X9900 except four-way six-driver speaker system with three 1 1/2-in cone supertweeters; max. input 220 W..... \$350

### SP-X7900 Speaker System

Four-way bass-reflex floor-standing speaker system with 16-in woofer, 4 1/2-in midrange, 6 1/4" x 2-in horn tweeter, and two 1 1/2-in cone supertweeters; frequency response 30-22,000 Hz; sensitivity 97 dB SPL/W/m; max. input 160 W; 8-ohm impedance; three-step sound balance control; simulated walnut grain cabinet with hand-carved Kumiko grille..... \$310

**SP-X6900.** Similar to SP-X7900 except uses 13-in woofer; max. input 130 W..... \$260

### J33 Mini Speaker System

Two-way air-suspension mini bookshelf speaker system with 8 1/2-in seamed-sheet cone woofer and 1-in soft-dome tweeter; frequency response 45-20,000 Hz; crossover at 2000 Hz; max. input 60 W; sensitivity 90 dB/W/m (JIS); 6-ohm impedance; matched stereo pair; deep piano-black finish; 16 1/4" H x 9 1/4" W x 7 1/4" D..... \$450 pr.

### S-50 Speaker System

Three-way bass-reflex speaker system available as part of Super Compo 900 Series; incorporates 12 1/4-in woofer, 4 1/4-in midrange, and 2 1/4-in cone tweeter; frequency response 28-23,000 Hz; sensitivity 94 dB SPL/W/m; 8-ohm impedance; sound balance control..... \$400 pr.

### J11 Mini Speaker System

Two-way paperback-book-sized speaker system with 4-in cone woofer, 4-in concave passive radiator, and 1-in soft-dome tweeter; frequency response 45-20,000 Hz; crossover at 2500 Hz; max. input 60 W; sensitivity 85 dB/W/m; 5-ohm impedance; silver-finished aluminum enclosure with precision-punched metal grille; matched stereo pairs; 11 1/4" H x 4 1/4" W x 5 1/4" D..... \$290 pr.

### SPA-3700 Speaker System

Three-way speaker system with 12-in woofer, 5 1/2-in midrange, and oval piezoelectric tweeter; frequency response 30-25,000 Hz; input range 20-100 W; impedance 8 ohms; midrange and tweeter level controls and circuit breaker..... \$180

### SPA-2700 Speaker System

Three-way bass-reflex speaker system with 10-in woofer, 5 1/4-in midrange, and cone tweeter; frequency response 35-18,000 Hz; input range 10-55 W; impedance 8 ohms..... \$260 pr.

## SARAS OF AMERICA

### ST 200 Speaker System

Three-way acoustic-suspension floor-standing speaker system with two 10-in cone woofers, 5-in full-range dome midrange in own sub-enclosure, and 1-in convex tweeter, all vertically aligned; frequency response 30-18,000 Hz  $\pm$  3 dB; crossovers at 500 and 5000 Hz; sensitivity 90 dB SPL/W/m; input range 40-200 W into 8 ohms; nominal impedance 8 ohms; features LED peak level indicator; walnut finish with removable starlight brown grille panel; 43" H x 14 1/2" (bottom) W x 8" (top) - 12" (bottom) D..... \$600

### 30 Speaker System

Three-way acoustic-suspension speaker system with 12-in ultra-high-compliance long-throw woofer, 5-in high-compliance midrange in own sub-enclosure, and 1-in hyperbolic tweeter; frequency re-

# 11 SPEAKER SYSTEMS

sponse 30-18,000 Hz  $\pm 3$  dB; crossovers at 500 and 5000 Hz; min. input 25 W continuous; nominal impedance 8 ohms; walnut finish with removable cloth grille panel; 25" H  $\times$  15 $\frac{1}{2}$ " W  $\times$  12 $\frac{1}{4}$ " D..... \$350

## 22 Speaker System

Two-way acoustic-suspension speaker system with 12-in ultra-high-compliance long-throw midrange and 1-in hyperbolic tweeter; frequency response 30-18,000 Hz  $\pm 3$  dB; crossover at 1800 Hz; min. input 25 W continuous; nominal impedance 8 ohms; walnut finish with removable brown cloth grille panel; 25" H  $\times$  15 $\frac{1}{2}$ " W  $\times$  12 $\frac{1}{4}$ " D..... \$270  
**11.** Similar to 22 except uses 10-in woofer; frequency response 35-18,000 Hz  $\pm 4$  dB; 24" H  $\times$  13 $\frac{1}{4}$ " W  $\times$  12" D..... \$220

## SAS ELECTRONICS

### Spectrum IV Monitor Speaker System

Three-way vented floor-standing speaker system with two 12-in woofers, 10-in horn midrange, and two 3-in piezoelectric super tweeters; frequency response 36-40,000 Hz  $\pm 3$  dB; crossovers at 575 and 5000 Hz; input range 25-200 W; impedance 4-8 ohms; features LED power display, midrange level control, and auto-reset thermal circuit breaker; 34" H  $\times$  18" W  $\times$  15" D..... \$600

### Spectrum III Speaker System

Four-way bass-reflex floor-standing speaker system with 15-in woofer, 5-in midrange, 1-in Mylar dome tweeter, and 3-in piezoelectric super tweeter; frequency response 28-40,000 Hz  $\pm 3$  dB; crossovers at 575, 5000, and 16,000 Hz; input range 6-175 W; impedance 4-8 ohms; tweeter level control and self-resetting thermal breaker; 26.75" H  $\times$  18" W  $\times$  15" D..... \$425

### Audio Spectrum II Speaker System

Three-way bass-reflex speaker system with 12-in woofer, 5-in cone midrange, 1-in Mylar dome tweeter, and 3-in piezoelectric horn super tweeter; frequency response 30-40,000 Hz  $\pm 3$  dB; crossovers at 575 and 5000 Hz; input range 6-125 W; impedance 4-8 ohms; tweeter level control and self resetting thermal circuit breaker; 25.25" H  $\times$  15" W  $\times$  12.25" D..... \$325

### Audio Spectrum I Speaker System

Three-way bass-reflex bookshelf speaker system with 10-in woofer, 5-in cone midrange, and 1 $\frac{1}{4}$ -in Mylar dome tweeter; frequency response 34-22,000 Hz  $\pm 3$  dB; crossovers at 1800 and 5000 Hz; input range 6-65 W; impedance 4-8 ohms; self-resetting thermal circuit breaker; 24" H  $\times$  14" W  $\times$  11.25" D..... \$250

### Beta Audio Spectrum Speaker System

Two-way bass-reflex bookshelf speaker system with 8-in woofer and 1-in Mylar dome tweeter; frequency response 37-22,000 Hz  $\pm 3$  dB; crossover at 4000 Hz; input range 6-55 W; impedance 4-8 ohms; self-resetting thermal circuit breaker; 22" H  $\times$  13" W  $\times$  11.5" D..... \$150

### Dynamo Speaker System

Miniature two-way passive-radiator speaker system with 5-in woofer and 1-in dome tweeter; frequency response 42-20,000 Hz  $\pm 3$  dB; crossover at 3200 Hz; input range 10-55 W; impedance 4 ohms; self-resetting thermal circuit breaker; 9" H  $\times$  6" W  $\times$  4 $\frac{1}{4}$ " D..... \$129

## H. H. SCOTT

### Pro-100B Speaker System

Three-way bi-directional air-suspension floor-standing monitor speaker system with 15-in woofer, two

4 $\frac{1}{2}$ -in midrange drivers and two 1-in dome tweeters; frequency response 36-20,000 Hz  $\pm 4$  dB; crossovers at 700 and 3500 Hz; efficiency 94-dB SPL/W/m; input range 20-300 W; 4-ohm controlled impedance; three-position tweeter and midrange level controls and bi-directional control; oiled walnut finish with two removable grilles; 29 $\frac{1}{4}$ " H  $\times$  19" W  $\times$  14 $\frac{1}{2}$ " D..... \$660

### 197B Speaker System

Three-way air-suspension floor-standing speaker system with 15-in woofer, 4 $\frac{1}{2}$ -in midrange, and 1-in dome tweeter; frequency response 38-20,000 Hz  $\pm 4$  dB; crossovers at 750 and 3500 Hz; efficiency 95-dB SPL/W/m; input range 15-150 W; controlled impedance 6-8 ohms;

three-position tweeter and midrange level controls; walnut vinyl with removable grille; 27 $\frac{1}{4}$ " H  $\times$  16 $\frac{1}{4}$ " W  $\times$  13 $\frac{1}{4}$ " D..... \$330

**196W.** Similar to 197B except uses 12-in woofer; efficiency 96-dB SPL/W/m; crossovers at 800 and 3500 Hz; input range 15-120 W; oiled walnut finish; 25 $\frac{1}{4}$ " H  $\times$  15" W  $\times$  10 $\frac{1}{4}$ " D..... \$330

**196B.** Similar to 196W except walnut vinyl finish..... \$300

### 312 Speaker System

Three-way air-suspension bookshelf speaker system with 12-in woofer, 4 $\frac{1}{2}$ -in midrange, and 1 $\frac{1}{4}$ -in tweeter; frequency response 45-18,000 Hz  $\pm 4$  dB; crossovers at 1100 and 3500 Hz; sensitivity 96 dB SPL/W/m; input range 10-90 W; impedance 6-8 ohms; midrange and tweeter level controls; hickory vinyl finish; 24 $\frac{1}{2}$ " H  $\times$  14 $\frac{1}{2}$ " W  $\times$  11 $\frac{1}{4}$ " D..... \$300

**310.** Similar to 312 except uses 10-in woofer; input range 10-70 W; 23" H  $\times$  12 $\frac{1}{2}$ " W  $\times$  10 $\frac{1}{2}$ " D..... \$250

### 188T Speaker System

Three-way air-suspension floor-standing speaker system with 10-in woofer, 4 $\frac{1}{2}$ -in midrange, and 1-in dome tweeter; frequency response 38-20,000 Hz  $\pm 4$  dB; crossovers at 900 and 3500 Hz; efficiency 95.4-dB SPL/W/m; input range 10-100 W; controlled impedance 6-8 ohms; three-position tweeter and midrange level controls; walnut vinyl finish with removable grille; 33 $\frac{1}{8}$ " H  $\times$  13 $\frac{1}{8}$ " W  $\times$  10 $\frac{1}{2}$ " D..... \$280

**186B.** Similar to 188T except bookshelf system with 95-dB SPL/W/m efficiency; 24" H  $\times$  13 $\frac{1}{2}$ " W  $\times$  10 $\frac{1}{2}$ " D..... \$250

### 166 Speaker System

Two-way air-suspension bookshelf speaker system with 6 $\frac{1}{2}$ -in woofer and 1-in textile dome tweeter; frequency response 55-20,000 Hz  $\pm 4$  dB; crossover at 2200 Hz; sensitivity 92.5 dB SPL/W/m; impedance 7-8 ohms; power range 10-100 W; hickory vinyl cabinet with removable knit grille; 13" H  $\times$  7 $\frac{1}{8}$ " W  $\times$  6 $\frac{1}{2}$ " D..... \$130

### 176B Speaker System

Two-way bass-reflex bookshelf speaker system with 8-in woofer and 1 $\frac{1}{4}$ -in dome tweeter; frequency response 60-18,000 Hz  $\pm 4$  dB; crossover at 3500 Hz; efficiency 93.5-dB SPL/W/m; input range 5-60 W; impedance 6-8 ohms; walnut vinyl finish with removable grille; 18" H  $\times$  10 $\frac{1}{2}$ " W  $\times$  8 $\frac{1}{2}$ " D..... \$110

## SERVOLINEAR AUDIO PROD.

### SL VII Speaker System

Five-way vented phase inverter fresto conical floor-standing speaker system with 15-in dynamic planar subwoofer, 12-in dynamic planar upper woofer, 10-in dynamic planar woofer, 8-in low-mass midrange, 4 $\frac{1}{2}$ -in low-mass tweeter, and five lens-mounted solid-state piezoelectric supertweeters; features constant K unbalanced bridge audio servo circuit and biamp switching; frequency response 20-20,000 Hz  $\pm 2.5$  dB; recommended input 400 W continuous; impedance 8 ohms  $\pm 1.5$  ohms; 52 $\frac{1}{2}$ " H  $\times$  23 $\frac{1}{2}$ " W  $\times$  23 $\frac{1}{2}$ " D..... \$1100  
 Sand grille cloth..... \$50  
 Special cabinet finish..... \$50

### The Audiograph Speaker System

Four-way floor-standing speaker system comprised

of woofer and satellites; woofer has two 8-in bass woofers, 12-in passive acoustic matrix radiator, and 12-in slot-loaded acoustic matrix radiator; satellites have 8-in light cone upper bass driver, 1 $\frac{1}{2}$ -in dome cone dynamic tweeter, and 2 $\frac{1}{2}$ -in piezoelectric tweeter; overall frequency response 25-20,000 Hz; sensitivity 100 dB; recommended input 55 W..... \$1000

### SL VI Speaker System

Four-way vented phase inverter fresto conical floor-standing speaker system with 12-in dynamic planar subwoofer, two 10-in dynamic planar woofers, 8-in low-mass midrange, 4 $\frac{1}{2}$ -in low-mass tweeter, and three lens-mounted solid-state piezoelectric super tweeters; features phase lock servo circuit and biamp switching; frequency response 25-20,000 Hz  $\pm 2.5$  dB; recommended input 300 W continuous; impedance 8 ohms  $\pm 1.5$  ohms; sand grille cloth and special cabinet vary in price according to model; 46 $\frac{1}{2}$ " H  $\times$  19 $\frac{1}{2}$ " W  $\times$  19 $\frac{1}{2}$ " D..... \$880

**SL V.** Similar to SL VI except has 10-in dynamic planar subwoofer and 10-in and 8-in woofers; frequency response 30-20,000 Hz  $\pm 2.5$  dB; recommended input 250 W continuous; 43" H  $\times$  18" W  $\times$  18" D..... \$660

### SL IV Speaker System

Three-way vented phase inverter fresto conical floor-standing speaker system with 10-in planar dynamic subwoofer, 8-in planar dynamic woofer, 4 $\frac{1}{2}$ -in low-mass midrange, 1 $\frac{1}{4}$ -in cone tweeter, and three lens-mounted solid-state piezoelectric super tweeters; features phase lock servo circuit and biamp switching; frequency response 35-20,000 Hz  $\pm 2.5$  dB; input range 75-200 W continuous; impedance 8 ohms  $\pm 1.5$  ohms; sand grille cloth and special cabinet finish available at extra cost; 34" H  $\times$  17" W  $\times$  17" D..... \$440

**SL III.** Similar to SL IV except has 8-in cone woofer and one lens-mounted solid-state piezoelectric tweeter; frequency response 40-20,000 Hz  $\pm 2.5$  dB; input range 50-150 W continuous; 31 $\frac{1}{2}$ " H  $\times$  16" W  $\times$  16" D..... \$330

### SL II Speaker System

Three-way ducted port speaker system with 10-in planar dynamic woofer, 4 $\frac{1}{2}$ -in midrange, 1 $\frac{1}{4}$ -in cone tweeter, and lens-mounted solid-state piezoelectric tweeter; features phase lock servo circuit and biamp switching; frequency response 45-10,000 Hz  $\pm 2.5$  dB; input range 25-100 W continuous; impedance 8 ohms  $\pm 1.5$  ohms; 26.5" H  $\times$  14.5" W  $\times$  14.5" D..... \$220  
 Sand grille cloth..... \$10  
 Special cabinet finish..... \$10

## SHAHINIAN ACOUSTICS

### Obelisk Speaker System

Two-way folded double-prism 48-in hybrid transmission line speaker system with 8-in asymmetrically-placed shallow-cone woofer with 2B-oz ceramic magnet, 10-in mass-loaded-membrane, viscous-damped passive radiator, and four 1-in Mylar dome tweeters; frequency response 32-21,000 Hz  $\pm 2$ -3 dB; crossover at 2000 Hz; 6-ohm nominal impedance; 150 W average music program; walnut or oak enclosure; 27" H  $\times$  14" W  $\times$  12" D..... \$433

Finland birch..... \$445  
 Brazilian rosewood..... \$576

## SHARP

### SP 7000 Speaker System

Three-way passive-radiator floor-standing speaker system with 8-in woofer with complementary passive radiator, 4-in midrange, and 2 $\frac{1}{2}$ -in tweeter; frequency response 40-20,000 Hz; crossovers at 1200 and 5000 Hz; max. input 35 W continuous; 8-ohm impedance; circuit breaker protection; tweeter level control; simulated walnut-grain vinyl cabinet with removable grilles; 32" H  $\times$  12" W  $\times$  11" D..... \$280 pr.



## S.K.S. by H&H INTERNATIONAL

### Intaglio Speaker System

Two-way infinite-baffle bookshelf speaker system with 8-in doped paper cone woofer and 1-in soft dome tweeter; frequency response 35-35,000 Hz; crossover at 4000 Hz; efficiency 96 dB/W/m; input range 15-350 W/ch; teak veneer cabinet with sculptured foam grille; 20" H x 11" W x 12" D. \$996 pr.

## SNELL ACOUSTICS

### Type A Speaker System

Three-way floor-standing speaker system with 10-in fused woofer placed very close to floor and rear wall, 4-in fused midrange, and 1-in fused and ferrofluid-induced tweeter; frequency response 36-18,000 Hz  $\pm$  1.5 dB (on axis and up to 25° off axis); crossovers at 275 and 2500 Hz; min. input 80 W/ch continuous; 4-ohm impedance; hand-rubbed walnut cabinet; 46.5" H x 23.75" W x 13" D. \$1880 Oak veneer cabinet ..... \$1980 pr.

## SONY

### APM-8 Speaker System

Four-way computer-assisted bass-reflex floor-standing speaker system utilizing accurate piston motion



in-line drivers employing flat, rigid square diaphragms with honey-comb aluminum cores and thin carbon-fiber/aluminum membrane bonded to either side; designed for PCM digital recordings and other high-fidelity program sources; woofer incorporates four-point system with four voice coils located at node where split vibration occurs on diaphragm, with passive bobbin at center of driver; remaining drivers employ single voice coil whose diameter contacts diaphragm at nodes of split vibration; high-precision film-type capacitors in crossover network; midrange and tweeter level controls; individual input terminals for each driver for multi-amp set up; nominal impedance 8 ohms; 43 $\frac{1}{2}$ " H x 25 $\frac{1}{2}$ " W x 17 $\frac{1}{2}$ " D ..... \$8000

### SS-56X Speaker System

Two-way acoustic-suspension bookshelf speaker system with 5-in cone woofer and 1-in dome tweeter; frequency response 65-20,000 Hz +4/-8 dB; crossover at 1500 Hz; sensitivity 86 dB/W/m; max. input 100 W; 8-ohm nominal impedance; diecast magnesium driver frame; walnut-finish cabinet; 9 $\frac{1}{2}$ " H x 6 $\frac{1}{2}$ " W x 8 $\frac{1}{2}$ " D ..... \$600 pr.

### SS-U60 Speaker System

Three-way acoustic-suspension bookshelf speaker system with 8-in woofer, 2-in polyurethane-foam-surround midrange, and polyurethane-foam-surround direct-drive ribbon tweeter in in-line driver arrangement on baffle board; midrange and woofer designed by NASTRAN computer; frequency response to 50,000 Hz; midrange and tweeter level controls; 23 $\frac{3}{4}$ " H x 13" W x 12 $\frac{1}{4}$ " D ..... \$360 pr.

## SOUND DYNAMICS by API

### 15S Speaker System

Two-way computer-tuned bass-reflex floor-standing

speaker system with floating port, 15-in long-throw felted-cone woofer, and 1-in horn-loaded phenolic dome diecast aluminum 5.375-in lens tweeter; crossover at 2000 Hz; sensitivity 102 dB SPL/W/m; dispersion 120 degrees; input range 15-120 W continuous; nominal impedance 8 ohms; tweeter level control; walnut finish with removable black grille; 36 $\frac{1}{2}$ " H x 10" W x 18 $\frac{1}{4}$ " D ..... \$450  
**120S.** Similar to 15S except uses 12-long-throw felted-cone woofer; frequency response 26-20,000 Hz  $\pm$  3 dB; crossover at 2050 Hz; sensitivity 101.5 dB SPL/W/m; input range 12-150 W continuous; 33" H x 16 $\frac{1}{2}$ " W x 13" D ..... \$360  
**12S.** Similar to 120S minus floating port; frequency response 28-20,000 Hz  $\pm$  3 dB; crossover at 2100 Hz; sensitivity 101 dB SPL/W/m; input range 10-125 W continuous; 27" H x 15 $\frac{1}{8}$ " W x 12 $\frac{1}{4}$ " D ..... \$300  
**10S.** Similar to 12S except 10-in long-throw felted-cone woofer; frequency response 30-20,000 Hz  $\pm$  3 dB crossover at 2200 Hz; sensitivity 100 dB SPL/W/m; input range 8-60 W continuous; 25 $\frac{1}{2}$ " H x 14 $\frac{1}{2}$ " W x 12 $\frac{1}{8}$ " D ..... \$225

### 100S Speaker System

Two-way computer-tuned bass-reflex bookshelf speaker system with 10-in long-throw soft felted-cone woofer and 1-in horn-loaded phenolic dome diecast aluminum 5.375-in lens tweeter; frequency response 40-20,000 Hz  $\pm$  3 dB; crossover at 2250 Hz; sensitivity 98 dB SPL/W/m; input range 6-55 W continuous; nominal impedance 8 ohms; walnut finish with removable black grille; 20" H x 12 $\frac{1}{8}$ " W x 10" D ..... \$180  
**8S.** Similar to 100S except uses 6-in woofer, crossover at 2300 Hz; sensitivity 96 dB SPL/W/m; input range 5-50 W continuous; tweeter level control; black finish with removable grille; 14 $\frac{7}{8}$ " H x 9 $\frac{1}{4}$ " W x 9" D ..... \$150

## SOUND OF O

### Gabriel Speaker System

Four-way ported floor-standing speaker system with 15-in subwoofer, 10-in lower midrange, 6-in upper midrange, and 0.5 x 1.5-in bi-polar ribbon tweeter in time aligned array; upper midrange and tweeter are free-air mounted; crossovers at 250, 800, and 4000 Hz; sensitivity 95 dB/W/m; French-polished teak or Brazilian rosewood finish; 49" H x 24" W x 24" D ..... \$3500 pr.  
**Lorelei.** Similar to Gabriel except three-way system using 12-in woofer and minus lower midrange driver; crossovers at 600 and 4000 Hz; teak, Brazilian rosewood, or matte white formica finish; 40" H x 19" W x 16" D ..... \$2500 pr.

## SOUND RESEARCH

### 1243 Studio Monitor

Three-way bass-reflex floor-standing monitor speaker with 12-in woofer, 4.5-in midrange in critically-damped subchamber, and 1-in polycarbonate hard dome tweeter; designed for studio, sound reinforcement, playback monitoring, or home use; frequency response 22-22,000 Hz; crossovers at 800 and 6000 Hz; sensitivity 99 dB SPL/W/m; input 125 W continuous music program; midrange and tweeter level controls; auto speaker protection circuitry; walnut hardwood cabinet; 25" H x 14 $\frac{1}{2}$ " W x 11 $\frac{1}{2}$ " D ..... \$260

### 843 Studio Monitor

Two-way bass-reflex monitor speaker with 8-in woofer and 1-in polycarbonate hard dome tweeter; frequency response 30-22,000 Hz; crossover at 1500 Hz; sensitivity 96 dB SPL/W/m; input 80 W continuous music program; tweeter level control; auto speaker protection circuitry; walnut hardwood cabinet; 22" H x 12" W x 9 $\frac{1}{2}$ " D ..... \$200

### XII Monitor Speaker

Three-way bass-reflex monitor speaker with 12-in woofer, 4.5-in midrange in critically-damped subchamber, and 1-in polycarbonate hard dome tweeter; designed for playback monitoring or home use; frequency response 22-22,000 Hz; crossovers at

800 and 6000 Hz; sensitivity 99 dB SPL/W/m; input 125 W continuous music program; midrange and tweeter level controls; auto speaker protection circuitry; oak-grain vinyl cabinet; 25" H x 24 $\frac{1}{2}$ " W x 11 $\frac{1}{2}$ " D ..... \$180

### G-Series Speaker Systems

Bass-reflex systems with 1 $\frac{1}{2}$ -in aluminum high-temperature voice coils in woofer and direct-radiator perforated dome tweeters; crossover networks are LC type combining high power level controls, non-polar electrolytic capacitors, and heavy-gauge chokes for extended high power usage; dispersion 105° horizontal, 60° vertical; cabinets are tangle-wood birch wood grain vinyl finish with removable transparent black-knit grilles.

**1200-G.** Three-way floor-standing system with 12-in woofer and 5 $\frac{1}{2}$ -in sealed back midrange; frequency response 25-20,000 Hz; crossovers at 1000 and 3000 Hz; sensitivity 91 dB SPL/W/m; input range 75-125 W continuous program; midrange and tweeter level controls; 25 $\frac{1}{2}$ " H x 15" W x 10 $\frac{3}{4}$ " D ..... \$146  
**1000-G.** Two-way floor-standing system with 10-in woofer; frequency response 32-20,000 Hz; crossover at 2000 Hz; sensitivity 90 dB SPL/W/m; input range 50-75 W continuous program; tweeter level control; 21 $\frac{1}{4}$ " H x 12 $\frac{1}{4}$ " W x 10 $\frac{1}{4}$ " D ..... \$100

### K-412 Speaker System

Three-way bass-reflex rear-vented speaker system with 12-in woofer with 1 $\frac{1}{2}$ -in aluminum voice coil, 4 $\frac{1}{2}$ -in closed-back midrange with 1-in aluminum voice coil, and two dual 3-in direct radiator tweeters in phased array; frequency response 30-21,000 Hz; crossovers at 1200 and 6000 Hz; sensitivity 95 dB SPL/W/m; input range 80-135 W continuous program; midrange and tweeter level controls; auto speaker protection circuit; walnut woodgrain vinyl cabinet with removable grille; 27" H x 15" W x 10 $\frac{1}{8}$ " D ..... \$130

### K-310 Speaker System

Three-way bass-reflex rear-vented speaker system with 10-in woofer with 1 $\frac{1}{2}$ -in aluminum voice coil, 4 $\frac{1}{2}$ -in closed-back midrange with 1-in aluminum voice coil, and 3-in direct-radiator tweeter; frequency response 35-19,000 Hz; crossovers at 1200 and 6000 Hz; sensitivity 93 dB SPL/W/m; input range 50-80 W continuous program; midrange and tweeter level controls; auto speaker protection circuit; walnut woodgrain vinyl cabinet with removable grille; 22 $\frac{1}{2}$ " H x 13" W x 10 $\frac{3}{8}$ " D ..... \$110

## SOUND SOURCE

### Monitor B Speaker System

Three-way acoustic-suspension floor-standing speaker system with 12-in woofer, 4 $\frac{1}{2}$ -in cone midrange, and 1-in dome tweeter; frequency response 30-22,000 Hz; crossovers at 900 and 5000 Hz; sensitivity 94 dB SPL/W/m; min. input 5 W; nominal impedance 8 ohms; midrange and tweeter level controls; walnut vinyl finish with black cloth grille; 32" H x 15" W x 12 $\frac{1}{2}$ " D ..... \$350  
**Monitor A.** Similar to Monitor B except tube-vented system using 10-in woofer; frequency response 40-22,000 Hz; 28" H x 15" W x 11 $\frac{1}{4}$ " D ..... \$275

### 12W Speaker System

Three-way tube-vented reflex speaker system with 12-in woofer, 5-in cone midrange, and 2-in cone tweeter; frequency response 40-18,000 Hz; crossovers at 1200 and 5000 Hz; sensitivity 98 dB SPL/W/m; min. input 5 W; nominal impedance 8 ohms; tweeter level control; walnut vinyl finish with black cloth grille; 28" H x 15" W x 11 $\frac{3}{4}$ " D ..... \$200  
**10W.** Similar to 12W except uses 10-in woofer; frequency response 45-18,000 Hz; no tweeter level control; 24 $\frac{3}{8}$ " H x 15" W x 10 $\frac{3}{4}$ " D ..... \$160

### 8W Speaker System

Two-way acoustic-suspension bookshelf speaker system with 8-in woofer and 2-in cone tweeter; frequency response 50-18,000 Hz; crossover at 3000 Hz; sensitivity 94 dB SPL/W/m; min. input 5 W;

nominal impedance 8 ohms; walnut vinyl finish with  
lack cloth grille; 21 1/2" H x 11 1/2" W x 8" D. \$110

## SPEAKERLAB

### S-1000 Speaker System

Three-way acoustic-suspension speaker system consisting of separate subwoofer and satellites. Subwoofer incorporates 12-in subwoofer with 130-W subwoofer amplifier with internal electronic crossover (variable crossover points available at 40, 60, 100, 120, 140, and 180 Hz), equalizer, and volume control. Satellites incorporate two 6-in mid-bass/midrange drivers and 1-in recessed dome tweeter with three-position tweeter level control. Crossovers at 140 and 2500 Hz; input range 15-100 W; sensitivity 94 dB SPL/W/m; 8-ohm impedance; comes with 29-in stand for satellite speakers; oak finish; 13" H x 7 1/2" W x 7 1/2" D (satellites); 16" H x 20" W x 20" D (subwoofer) ..... \$1350  
Kit. Amplifier is assembled ..... \$1090

### S-50 Speaker System

Four-way bi-amplified floor-standing speaker system with 12-in and 10-in Nestorovic double-layer cone woofers, 6-in mid-bass/midrange driver, 1 1/2-in dome upper midrange, and leaf-type samarium-cobalt tweeter; crossovers at 350, 1500, and 8000 Hz; sensitivity 93 dB SPL/W/m; input range 15-350 W; impedance 8 ohms; midrange and tweeter level, woofer damping, and biamp in/out controls; wired for full-range or biamp operation; 8" H x 16" W x 12 1/2" D ..... \$890

### S-100 Speaker System

Three-way folded-horn floor-standing speaker system with 15-in woofer, 17-in x 6-in (mouth) horn midrange, and 4-in x 8 3/4-in wide-dispersion wave aperture™ tweeter; crossovers at 400 and 5000 Hz; efficiency 99 dB SPL/W/m; input range 10-250 W; 8-ohm impedance; midrange and tweeter level controls; oiled-walnut finish with brown grille cloth; 50 1/2" H x 32 1/4" W x 28" D ..... \$799  
FW. Kit ..... \$579

### S-7WA Speaker System

Three-way acoustic-suspension floor-standing speaker system with 10-in and 12-in "Nestorovic" double-layer cone woofers (driven in parallel), 14 1/2-in x 4 1/2-in wide-dispersion wave aperture™ horn mid-range, and 4 x 8 3/4-in wide-dispersion wave aperture™ tweeter; crossovers at 1000 and 5000 Hz; efficiency 92 dB SPL/W/m; input range 15-250 W; 4-ohm impedance; midrange and tweeter level controls; oiled-walnut finish with brown grille cloth; 36" H x 18" W x 13" D ..... \$550  
Vinyl kit ..... \$349

### S-6WA Speaker System

Three-way acoustic-suspension floor-standing speaker system with 12-in double-layer cone woofer, 4 3/4-in x 4 3/4-in wide-dispersion wave aperture™ midrange, and 4-in x 8 3/4-in wide-dispersion wave aperture™ tweeter; crossovers at 1000 and 5000 Hz; efficiency 91-dB SPL/W/m; input range 15-200 W; 8-ohm impedance; midrange and tweeter level controls; oiled-walnut finish with brown grille cloth; 27 1/2" H x 15 1/2" W x 11 1/2" D ..... \$409  
Vinyl kit ..... \$299

### S-300 Speaker System

Three-way floor-standing speaker system with 8-in and 10-in "Nestorovic" double-layer cone woofers in separate enclosures, 5-in cone midrange, and 1-in recessed dome tweeter; crossovers at 750 and 4000 Hz; efficiency 91 dB SPL/W/m; input range 25-350 W; 8-ohm impedance; three-position woofer damping switch; midrange and tweeter level controls; oiled walnut finish with brown cloth grille;

available only as kit; 31" H x 13" W x 10 3/4" D ..... \$359  
Vinyl kit ..... \$319

### S-4 Speaker System

Three-way acoustic-suspension floor-standing speaker system with 12-in double-layer cone woofer, 6-in double-layer cone midrange, and 4-in x 8 1/4-in wide-dispersion wave aperture™ tweeter; crossovers at 600 and 5000 Hz; efficiency 91 dB SPL/W/m; input range 15-200 W; 8-ohm impedance; midrange and tweeter level controls; oiled-walnut finish with brown grille cloth; 27 1/2" H x 15 1/2" W x 11 1/2" D ..... \$355  
Vinyl kit ..... \$229

**S3.** Same as S4 except has 1-in dome tweeter; crossovers at 600 and 4000 Hz ..... \$320  
Vinyl kit ..... \$199

### S-2.5 Speaker System

Three-way acoustic-suspension floor-standing speaker system with 10-in double-layer cone woofer, 6-in double-layer cone midrange, and 1-in dome tweeter; crossovers at 600 and 4000 Hz; efficiency 91 dB SPL/W/m; input range 15-150 W; 8-ohm impedance; midrange and tweeter level controls; oiled walnut finish with brown cloth grille; 26 1/2" H x 15 1/2" W x 10 3/4" D ..... \$245  
Vinyl kit ..... \$169

### S-2 Speaker System

Two-way acoustic-suspension floor-standing speaker system with 10-in double-layer cone woofer and 1-in recessed dome tweeter; crossover at 2000 Hz; efficiency 92 dB SPL/W/m; input range 10-100 W; 4-ohm impedance; tweeter level control; oiled-walnut finish with brown grille cloth; 26 1/2" H x 15 1/2" W x 10 3/4" D ..... \$185  
Vinyl kit ..... \$125

### S-1 Speaker System

Two-way acoustic-suspension bookshelf speaker system with 8-in double-layer cone woofer and 1-in recessed dome tweeter; crossover at 2500 Hz; efficiency 92 dB SPL/W/m; input range 10-75 W; 8-ohm impedance; tweeter level control; oiled-walnut finish with brown grille cloth; 20 3/4" H x 11 1/2" W x 8 3/4" D ..... \$125  
Vinyl kit ..... \$85

### O.1 Speaker System

Two-way acoustic-suspension mini speaker system with 6-in double-layer cone woofer and 1-in dome tweeter; crossover at 2500 Hz; efficiency 88 dB SPL/W/m; input range 15-50 W, 4- and 8-ohm impedance; tweeter level control; oiled walnut finish with brown cloth grille; 10" H x 7" W x 5" D ..... \$115  
Vinyl kit ..... \$79

## SPECKMAN

### S-415 Titus Speaker System

Four-way cylindrical-column acoustic-suspension floor-standing speaker system with 15-in subwoofer, 4-in lower midrange, two 2-in dome midrange drivers, and two 1-in dome tweeters; frequency response 19-20,000 Hz ± 2 dB; crossovers at 450, 2000, and 6000 Hz; input range 25-250 W; impedance 8 ohms; midnight black flat finish with interchangeable pecan legs; chain package available for hanging; 36" H x 18" dia. with legs ..... \$1025

### S-412 Galation Edition

Four-way cylindrical-column floor-standing speaker system with 12-in subwoofer, 4-in lower midrange, 2-in dome midrange, and 1-in dome tweeter; frequency response 25-20,000 Hz ± 2 dB; crossovers at 500, 2000, and 6000 Hz; input range 25-150 W; impedance 8 ohms; midnight black flat finish with interchangeable pecan legs; chain package available for hanging; 39" H x 14 1/2" dia. with legs ..... \$559

### S-310 Galation Edition

Three-way cylindrical-column acoustic-suspension floor-standing speaker system with 10-in subwoofer, 4 1/2-in midrange, and 1-in dome tweeter;

frequency response 29-20,000 Hz ± 2.5 dB; crossovers at 650 and 6500 Hz; input range 15-125 W; impedance 8 ohms; available in variety of finishes with pecan legs; chain package available for hanging; 30" H x 12 1/2" dia. .... \$345

**S-103.** Similar to S-310 except mini cylindrical speaker system; frequency response 50-20,000 Hz ± 4 dB; crossovers at 600 and 6000 Hz; input range 15-70 W; 13 1/2" H x 10 1/2" dia. .... \$195

### S-82 Speaker System

Two-way cylindrical column acoustic-suspension speaker system with 8-in woofer and 1-in dome tweeter; frequency response 70-20,000 Hz ± 2 dB; crossover at 2500 Hz; input range 15-45 W; impedance 8 ohms; midnight black flat finish with interchangeable pecan legs; chain package available for hanging; 24" H x 10 1/2" dia. with legs ..... \$129

### S-15 Titus Subwoofer

Cylindrical column incorporates 15-in extended-range woofer; frequency response 19-100 Hz ± 2 dB; passive crossover 100 Hz; input range 25-250 W; impedance 8 ohms; midnight black flat finish with interchangeable pecan legs; chain package available for hanging; 48" H x 18" dia. with legs ..... \$650

## SPENDOR by RCS AUDIO

### BC-3 Speaker System

Four-way modified-reflex floor-standing speaker system with 12-in Spendor woofer, 8-in Spendor midrange, Celestion 1300 tweeter, and Celestion 2000 super tweeter; frequency response 50-14,000 Hz ± 2 dB; crossovers at 700, 3000, and 13,000 Hz; input range 50-80 W; impedance 8 ohms; walnut finish; 31 1/2" H x 15 1/2" W x 15 1/2" D ..... \$1900 pr.

### BC-1 Speaker System

Three-way modified-reflex floor-standing speaker system with 8-in Spendor woofer, Celestion 1300 tweeter, and STC 4001G supertweeter; frequency response 60-14,000 Hz ± 3 dB; crossovers at 3000 and 13,000 Hz; input range 25-55 W; impedance 8 ohms; walnut finish; 25" H x 12" W x 12" D ..... \$850 pr.

### SA-1 Mini Monitor Speaker System

Two-way dynamic bookshelf speaker system with 6-in woofer and Son Audax HD 12.8 D25 tweeter; frequency response 70-14,000 Hz ± 3 dB; crossover at 3000 Hz; input range 20-40 W; impedance 8 ohms; walnut finish; 12" H x 9" W x 9" D ..... \$550 pr.

## STRELIOFF

### TS-1 Speaker System

Bi/tri-amplified three-way acoustic-suspension floor-standing speaker system with two 10-in cast aluminum frame woofers, six 1 1/2-in dome midrange drivers, and six 1-in dome tweeters; frequency response 38-18,000 Hz ± 4 dB; crossovers at 800 and 5000 Hz; sensitivity 87 dB SPL/W/m; input range 100-500 W; impedance 5 ohms at 500 Hz; low-frequency rolloff mode switches and 10-dB attenuation rotary controls for each frequency range; custom finishes available; 66" H x 36" W x 18" D ..... \$7000 pr.

### MS-1 Monitor Speaker System

Three-way exponentially-loaded acoustic-suspension bookshelf speaker system with two 5 1/4-in cast aluminum frame piston cone woofers, two 1 1/2-in dome midrange drivers, and two 1-in dome tweeters; woofers loaded into infinite baffle enclosure and midrange and tweeter drivers operate in horizontal array; frequency response 70-18,000 Hz ± 4 dB; crossovers at 800 and 5000 Hz; sensitivity 78 dB SPL/W/m; input range 50-200 W; impedance 5 ohms at 500 Hz; 180-degree horizontal dispersion at specified response; custom finishes available; 19" H x 7 1/2" W x 7 1/2" D ..... \$1250 pr.

**MX-1.** Same as MS-1 except includes separate PX-1 passive crossover unit with switched attenuation (variable impedance) and four variable crossover points; input range 50-300 W ..... \$2000 pr.



### TE-1 Transducer Bass Extender

Multichamber infinite-baffle floor-standing subwoofer incorporates 18-in cast aluminum frame woofer; requires EX-1 electronic crossover; frequency response 21-125 Hz  $\pm$  4 dB; crossovers at 10 and 150 Hz (filter network); sensitivity 84 dB SPL/W/m; input range 50-250 W; impedance 8 ohms at 70 Hz; high-density 1 1/2-in thick walls and internal bracing; custom finishes available; 32" H  $\times$  28" W  $\times$  40" D.....\$3000 pr.

### ME-1 Monitor Bass Extender

Acoustic-suspension floor-standing subwoofer incorporates two 10-in cast aluminum frame woofers in separate chambers; PX-1 passive or EX-1 electronic crossover unit recommended; frequency response 35-150 Hz  $\pm$  4 dB; crossovers at 20 and 200 Hz (filter network); sensitivity 78 dB SPL/W/m; input range 50-200 W, impedance 8 ohms at 70 Hz; individual input terminals for mono/stereo applications; 1 1/2-in thick walls and internal bracing; custom finishes available; 48" H  $\times$  24" W  $\times$  24" D.....\$1250

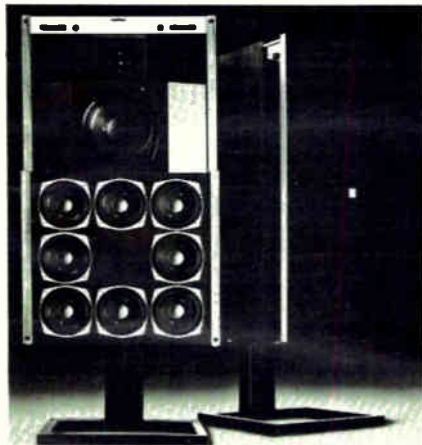
## STUDER/REVOX

### Revox Triton Speaker System

Four-way speaker system consisting of floor-standing subwoofer module and two three-way bookshelf satellite speakers; subwoofer incorporates two 9.7-in spring-supported bass drivers; each satellite incorporates 6.9-in low/midrange driver, 1.2-in dome midrange, and 0.75-in dome tweeter; frequency response 30-25,000 Hz; crossovers at 150, 1300, and 3200 Hz; input range 20-110 W; nominal impedance 4 ohms; subwoofer 13" H  $\times$  42" W  $\times$  18" D; satellites 12" H  $\times$  19" W  $\times$  7.5" D. \$1599

### Revox BX 4100 Speaker System

Three-way phase-corrected acoustic-radiation floor-standing speaker system incorporating driver with



specially-treated internally-damped cones; frequency response 45-25,000 Hz; crossovers at 600 and 4000 Hz; sensitivity 85 dB/W/3.3 ft; input range 20-200 W; nominal impedance 4 ohms; separate room-acoustics-adaption switches; walnut or scratch-proof Nextel-coated cabinet with cast-aluminum chassis; 31" H  $\times$  18" W  $\times$  17" D.....\$1199

### Revox BR 530 Speaker System

Three-way critically-damped bass-reflex floor-standing speaker system with 12.4-in woofer, 2-in dome midrange, and 3/4-in dome tweeter; frequency response 48-25,000 Hz  $\pm$  3 dB; crossovers at 750 and 3000 Hz; sensitivity 87 dB/W/3.3 ft; input range 20-110 W; nominal impedance 4 ohms; walnut or scratch-proof Nextel-coated cabinet with acoustically transparent cloth grille; 24" H  $\times$  15" W  $\times$  13 1/2" D.....\$399

### Revox BX 350 Speaker System

Two-way phase-corrected acoustic-radiation speaker system with 4.8-in woofer/midrange and 1-in dome tweeter; frequency response 50-20,000 Hz; crossover at 3200 Hz; sensitivity 84 dB/W/3.3

ft; input range 10-80 W; nominal impedance 4 ohms; room-acoustics-adaptation switches; walnut or scratch-proof Nextel-coated cabinet with cast aluminum speaker chassis; 20 1/2" H  $\times$  14" W  $\times$  12" D.....\$395

## SYNERGISTICS

### S-92 Speaker System

Sealed three-way acoustic-suspension floor-standing speaker system with two 12-in woofers in computer-designed bass commode, six 4 1/2-in midrange drivers in linear array, and two flat-film, wide-band, bipolar samarium-cobalt tweeters; frequency response 24-20,000 Hz; crossovers at 140 and 2000 Hz; efficiency 91 dB/W/m; max. input 600 W/ch continuous; impedance 4 ohms; midrange and tweeter level controls; external electronic crossover for bi-amp; designed to accommodate digital recording/playback; screens 61" H  $\times$  23" W  $\times$  4" D; commode 19 1/2" H  $\times$  38" W  $\times$  18" D.....\$2000

### S-70 Speaker System

Three-way passive-radiator floor-standing speaker system with 12-in woofer with 12-in passive radiator, 1.5-in soft dome tweeter, and 2  $\times$  0.5-in ribbon tweeter; frequency response 34-30,000 Hz  $\pm$  3 dB; crossovers at 1900 and 9000 Hz; sensitivity 91 dB/W/m; input range 15-200 W; impedance 8 ohms; 38" H  $\times$  18" W  $\times$  11" D.....\$475

### S-60 Speaker System

Three-way passive radiator floor-standing speaker system with 10-in woofer with 10-in passive radiator, 4 1/2-in midrange, and 2  $\times$  0.5-in ribbon tweeter; frequency response 36-30,000 Hz  $\pm$  3 dB; crossovers at 1000 and 9000 Hz; sensitivity 91 dB/W/m; input range 15-150 W; impedance 8 ohms; 34" H  $\times$  14 1/2" W  $\times$  12 1/2" D.....\$375

### S-50 Speaker System

Two-way passive-radiator floor-standing speaker system with two 6 1/2-in woofers with 12-in passive radiator and 1-in soft dome tweeter; frequency response 38-20,000 Hz  $\pm$  3 dB; crossover at 2900 Hz; sensitivity 90 dB/W/m; input range 15-150 W; impedance 4 ohms; 30" H  $\times$  14 1/2" W  $\times$  11" D.....\$300

### S-40 Speaker System

Two-way passive-radiator speaker system with 8-in woofer with 10-in passive radiator and 1-in soft dome tweeter; frequency response 42-20,000 Hz  $\pm$  3 dB; crossover at 2500 Hz; sensitivity 90 dB/W/m; input range 10-100 W; impedance 8 ohms; 25 1/2" H  $\times$  14 1/2" W  $\times$  10 1/2" D.....\$225

### S-30 Speaker System

Two-way passive-radiator speaker system with 6 1/2-in woofer with 8-in passive radiator and 1-in soft dome tweeter; frequency response 55-20,000 Hz  $\pm$  3 dB; crossover at 2000 Hz; sensitivity 90 dB/W/m; input range 10-60 W; impedance 8 ohms; 22 1/2" H  $\times$  13" W  $\times$  10 1/2" D.....\$150

### S-20 Speaker System

Two-way vented bookshelf speaker system with 6 1/2-in woofer and 1-in soft dome tweeter; frequency response 70-20,000 Hz  $\pm$  4 dB; crossover at 3000 Hz; sensitivity 90 dB/W/m; input range 10-60 W; impedance 8 ohms; 17 1/2" H  $\times$  9 1/2" W  $\times$  8" D.....\$100

## TECHNICS

### SB-L300 Speaker System

Three-way linear-phase vented bookshelf speaker system with 12-in cone woofer, 4-in cone midrange, and tapered-flare radial horn tweeter; 130 W music power, 90 W continuous; 8-ohm impedance; tweeter and midrange level controls; resettable thermal protectors; simulated wood finish with removable brown cloth grille.....\$250

### SB-L200 Speaker System

Three-way linear-phase tube-vented bookshelf

speaker system with 10-in cone woofer, 4-in cone midrange, and tapered-flare radial horn tweeter; 100 W music power, 65 W continuous; 8-ohm impedance; tweeter level control; resettable thermal protectors; simulated wood-grain finish with removable brown cloth grille.....\$200

### SB-L100 Speaker System

Two-way linear-phase tube-vented bookshelf speaker system with 10-in cone tweeter and tapered-flare radial horn tweeter; 75 W music power, 50 W continuous; 8-ohm impedance; resettable thermal protectors; simulated wood-grain finish with removable brown grille.....\$150

### SB-L70 Speaker System

Three-way linear-phase bass-reflex floor-standing speaker system with 11-in cone woofer, 4-in cone midrange, and 2 1/2-in cone tweeter; crossovers at 4000 and 9000 Hz; frequency response 45-20,000 Hz  $\pm$  10 dB; input 90 W music; sensitivity 94 dB/W/m; impedance 8 ohms; simulated walnut grain enclosure; 27" H  $\times$  14 1/4" W  $\times$  11" D.....\$240 pr.

## Professional Series

### SB-7070 Speaker System

Four-way linear-phase floor-standing speaker system with 13 1/2-in woofer, 4-in cone midrange, soft-dome tweeter, and super tweeter; frequency response 30-32,000 Hz  $\pm$  10 dB; sensitivity 92 dB SPL/W/m; thermal relay protection, resettable by pushbutton; simulated wood cabinet.....\$450

### SB-6060 Speaker System

Three-way linear-phase floor-standing speaker system with 12-in woofer, 4-in free-edge cone midrange, and soft dome tweeter; frequency response 32-32,000 Hz  $\pm$  10 dB; sensitivity 92 dB SPL/W/m; thermal relay protection, resettable by pushbutton; simulated wood cabinet.....\$350

## Micro Series

### SB-F3 Speaker System

Two-way linear-phase bookshelf speaker system with 6 1/2-in cone woofer and horn tweeter; crossover at 3000 Hz; frequency response 45-20,000 Hz  $\pm$  16 dB; input 90 W music; sensitivity 89 dB/W/m; impedance 8 ohms; reset button for thermal protection relays; heavy diecast aluminum alloy enclosure; hangers for wall mounting; 12 1/2" H  $\times$  7" W  $\times$  7 1/2" D.....\$340 pr.

**SB-F2.** Similar to SB-F3 except with 5-in cone woofer; crossover at 3500 Hz; frequency response 48-20,000 Hz  $\pm$  16 dB; input 75 W music; sensitivity 88 dB/W/m; 10" H  $\times$  5 1/2" W  $\times$  6 1/2" D.....\$280 pr.

**SB-F1.** Similar to SB-F2 except with 4-in cone woofer; crossover at 4000 Hz; frequency response 50-20,000 Hz  $\pm$  16 dB; input 60 W music; sensitivity 86 dB/W/m; 8 1/2" H  $\times$  4 1/2" W  $\times$  5" D.....\$220 pr.

## THIEL

### Model O3a Speaker System

Three-way coherent-source speaker system with 10-in woofer, 5-in midrange, and 1-in soft dome tweeter; frequency response 30-20,000 Hz  $\pm$  2 dB; crossovers at 400 and 4000 Hz; sensitivity 90 dB/W/m; input range 20-250 W; 4-ohm impedance; walnut finish; rosewood, teak, or oak finishes optional; 38" H  $\times$  12" W  $\times$  12" D.....\$975 pr.

### Model O4 Speaker System

Two-way coherent-source floor-standing system with 8-in bass radiator, 6 1/2-in woofer-midrange, and 1-in soft dome tweeter; frequency response 37-20,000 Hz  $\pm$  2 dB; crossover at 4000 Hz; sensitivity 87 dB/W/m; input range 20-150 W; 8-ohm impedance; walnut, rosewood, teak, or oak cabinet finishes; 36" H  $\times$  10" W  $\times$  10" D.....\$500 pr.

### Model O2 Speaker System

Two-way ported bookshelf speaker system with 6 1/2-in woofer and 1-in cloth dome tweeter; frequency

response 45-20,000 Hz  $\pm 3$  dB; crossover at 2500 Hz; sensitivity 92 dB/W/m; input range 10-100 W; walnut, rosewood, teak, or oak cabinet finishes with double knit black polyester grille; 19" H  $\times$  11" W  $\times$  9.5" D ..... \$280 pr.

### 3D ACOUSTICS

#### 3D Speaker System

Three-piece speaker system comprised of two acoustic-suspension bookshelf satellite systems with 6-in midrange drivers and 1-in cloth dome tweeters and resistively loaded/tuned port floor-standing bass module system with 10-in high-compliance low-resonance woofer; system frequency response 32-20,000 Hz; crossovers at 100 and 2000 Hz; input range 30-150 W/ch continuous; impedance 8 ohms nominal; oiled walnut veneer cabinet; satellites 14" H  $\times$  7.25" W  $\times$  8.5" D; woofer 24" H  $\times$  13.75" W  $\times$  16" D ..... \$400  
Stands for satellite system ..... \$65 pr.

### TRI-DELTA

#### Tri-Delta III Speaker System

Three-way air-suspension tetrahedron-designed floor-standing speaker system with two 10-in cone woofers, 5-in cone midrange, and 4-in dome tweeter; frequency response 20-23,000 Hz  $\pm 3$  dB; crossovers at 500 and 5000 Hz; SPL 90 dB/W/m; input range 15-200 W; impedance 8 ohms; 29" H (33" on edge)  $\times$  34"  $\times$  28" D ..... \$398

#### Tri-Delta IIB Speaker System

Three-way vented tetrahedron-designed floor-standing speaker system with 12-in cone woofer, 5-in cone midrange, and 4-in dome tweeter, can be used in acoustic-suspension or direct-reflecting applications; frequency response 20-24,000 Hz  $\pm 3$  dB; crossovers at 600 and 5000 Hz; SPL 95 dB/W/m; input range 10-175 W; impedance 8 ohms; two Tri-Acoustical Value™ controls; 27"  $\times$  H (30" on edge)  $\times$  31"  $\times$  W  $\times$  25"  $\times$  D ..... \$350

#### Tri-Delta I Speaker System

Three-way acoustic-suspension tetrahedron-designed speaker system with 10-in cone woofer, 5-in cone midrange, and 4-in dome tweeter; frequency response 25-22,000 Hz  $\pm 3$  dB; crossovers at 700 and 2500 Hz; SPL 92 dB/W/m; input range 10-75 W; impedance 8 ohms; 24"  $\times$  H (27" on edge)  $\times$  28"  $\times$  W  $\times$  23"  $\times$  D ..... \$260

### TRINITY AUDIO

#### Cathedral System Speakers

Speaker system has two main panels with an array of 12 drivers and two separate 12-in woofers in internally braced isothermal infinite baffles; frequency response 20-20,000 Hz; crossovers at 100 and 2600 Hz; input power range 50-250 W; 8-ohm nominal impedance; panels are finished in oak, natural or stain with black or white cloth grilles, oak formica, natural or stain woofer cases with charcoal foam grilles; panels: 72"  $\times$  H  $\times$  21"  $\times$  W  $\times$  5" D; woofers: 29" H  $\times$  15"  $\times$  W  $\times$  14" D ..... \$850

#### Trinity Speaker System

Three-way acoustic-suspension floor-standing speaker system with 12-in butyl rubber suspension woofer with 8.7-lb magnet assembly and high temperature copper voice coil, 5-in resin roll suspension midrange with 1.8-lb magnet assembly, 1-in soft dome tweeter with 1.5-lb magnet assembly; frequency response 40-20,000 Hz  $\pm 3$  dB; crossovers at 600 and 5000 Hz; input power range 35-250 W; 8-ohm nominal impedance; walnut or rosewood finish with charcoal foam grille (not removable); 40.5" H  $\times$  15.5" W  $\times$  14" D ..... \$400

#### Model Two Speaker System

Two-way floor-standing speaker system with two 8-in butyl rubber woofers with 3.5-lb magnet assemblies and 1"  $\times$  voice coils; 1-in impregnated cloth open dome tweeter with 1-in copper voice coil and 0.75-lb magnet assembly; frequency response 40-20,000 Hz  $\pm 3$  dB; crossover at 2600 Hz; input power range 15-180 W; 8-ohm impedance; walnut or rosewood finish with charcoal foam grille; woofer: 25.5" H  $\times$  15.5" W  $\times$  11" D; tweeter: 6" H  $\times$  10.5" W  $\times$  4" D ..... \$225

#### Monitor Speaker System

Two-way speaker system with two 5"  $\times$  in butyl rubber woofers with 1.6-lb magnet assemblies, 1-in long throw voice coils, and 1-in short horn loaded dome tweeter; frequency response 60-20,000 Hz  $\pm 3$  dB; input power range 35-200 W; 8-ohm impedance; tweeter level control; rosewood or walnut finish with charcoal foam grille; 13.5" H  $\times$  14.5" W  $\times$  7.5" D ..... \$200

### UNITRONEX

#### Impact Series

##### Model 8 Speaker System

Three-way floor-standing balanced ducted-port speaker system with 12-in woofer, 7-in midrange, and 2  $\times$  5-in horn tweeter; frequency response 30-23,000 Hz; crossovers at 300 and 7000 Hz; input range 10-150 W continuous power; sensitivity 105 dB SPL/W/m; 8-ohm nominal impedance;  $\pm 3$  dB tweeter and midrange level controls; oak veneer finish with chocolate-brown double-knit polyester stretched over removable wood frame; 26.8" H  $\times$  17.3" W  $\times$  12.6" D ..... \$399

##### Model 6 Speaker System

Three-way floor-standing balanced ducted-port speaker system with 10-in woofer, 5-in midrange, and 2.5-in horn tweeter; frequency response 45-22,000 Hz; crossovers at 800 and 8000 Hz; sensitivity 104 dB SPL/W/m; input range 10-100 W continuous power;  $\pm 3$  dB tweeter and midrange level controls; oak veneer finish with chocolate-brown double-knit polyester stretched over removable wood frames; 25.2" H  $\times$  16.6" W  $\times$  11.2" D ..... \$299

##### Model 4 Speaker System

Two-way balanced ducted-port speaker system with 10-in woofer/midrange and 2.5-in horn tweeter; frequency response 50-20,000 Hz; crossover at 2500 Hz; input range 5-70 W continuous power; sensitivity 97 dB SPL/W/m; 8-ohm nominal impedance;  $\pm 3$  dB tweeter level control; oak veneer finish with chocolate-brown double-knit polyester stretched over removable wood frame; 22.7" H  $\times$  14" W  $\times$  9.8" D ..... \$199

##### Model 2 Speaker System

Two-way balanced ducted-port speaker system with 8-in woofer/midrange and 2.5-in horn tweeter; frequency response 60-20,000 Hz; crossover at 3500 Hz; input range 5-50 W continuous power; sensitivity 98 dB SPL/W/m; oak veneer finish with chocolate-brown double-knit polyester stretched over removable wood frame; 21.3" H  $\times$  11.6" W  $\times$  9.1" D ..... \$149

#### Audio Lab Consort Series



##### AL-60 Speaker System

Three-way acoustic-suspension speaker system with 12-in woofer, 7-in cone midrange, and 1-in phenolic dome tweeter; frequency response 32-20,000

Hz; crossovers at 300 and 7000 Hz; input range 10-140 W continuous power; 8-ohm nominal impedance; three-position midrange and tweeter level controls; mahogany veneer finish with snap-on black acoustic front panel; 26.8" H  $\times$  17.3" W  $\times$  12.6" D ..... \$359

##### AL-40 Speaker System

Three-way passive radiator speaker system with 10-in woofer, 10-in passive radiator, 5-in cone midrange, and 1-in phenolic dome tweeter; frequency response 40-20,000 Hz; crossovers at 800 and 8000 Hz; input range 10-90 W continuous power; 8-ohm nominal impedance; three-position tweeter level control; mahogany veneer finish with snap-on black front panel; 25.2" H  $\times$  16.6" W  $\times$  11.2" D ..... \$259

##### AL-30 Speaker System

Two-way passive radiator bookshelf speaker system with 8-in cone woofer, 8-in passive radiator, and 1-in phenolic dome tweeter; frequency response 55-20,000 Hz; crossover at 4000 Hz; input range 10-60 W continuous power; 8-ohm nominal impedance; three-position tweeter level control; mahogany veneer finish with snap-on black acoustic front panel; 22.7" H  $\times$  14" W  $\times$  9.8" D ..... \$159

##### AL-20 Speaker System

Two-way acoustic suspension bookshelf speaker system with 8-in cone woofer and 1-in phenolic dome tweeter; frequency response 60-20,000 Hz; crossover at 4000 Hz; input range 10-50 W continuous; 8-ohm nominal impedance; three-position tweeter level control; mahogany veneer finish with snap-on black acoustic front panel; 21.3" H  $\times$  11.6" W  $\times$  9.1" D ..... \$129

### VISONIK

#### Euro 7 Speaker System

Three-way floor-standing speaker system with two 7-in woofers, 1"  $\times$  in midrange, and 1-in soft dome tweeter; power response 45-18,000 Hz  $\pm 2$  dB; crossovers at 550 and 4000 Hz; 4-ohm impedance; input range 20-70 W/ch; walnut finish with brown knit grille; 23" H  $\times$  13" W  $\times$  9"  $\times$  D ..... \$360

#### David 9000 Speaker System

Three-way speaker system with 7-in woofer, 1"  $\times$  in midrange, and 3"  $\times$  in tweeter; frequency response 35-25,000 Hz  $\pm 4$  dB; crossovers at 900 and 4500 Hz; input range 20-120 W/ch; impedance 4 ohms; nextel grey or simulated walnut finish; 14"  $\times$  H  $\times$  9"  $\times$  W  $\times$  9"  $\times$  D ..... \$300

#### David 803BL Speaker System

Compact three-way speaker system with 6"  $\times$  in woofer, 1"  $\times$  in dome midrange, and 3"  $\times$  in dome tweeter; frequency response 30-30,000 Hz; crossovers at 700 and 4600 Hz; recommended amp power 25-90 W; impedance 4-8 ohms; grey cabinet with black grille; 12"  $\times$  H  $\times$  7"  $\times$  W  $\times$  7"  $\times$  D ..... \$260  
**David-803WN.** Same as D-803 but walnut cabinet. .... \$280

#### D-702BL Speaker System

Two-way compact speaker system with 6"  $\times$  in woofer and 3"  $\times$  in dome tweeter; frequency response 30-25,000 Hz; impedance 4-8 ohms; max. input 90 W. LED overload indicator, grey cabinet with black grille ..... \$210  
**D-702WN.** Same as D-702BL except walnut finish with brown knit grille ..... \$230

#### Euro 5 Speaker System

Two-way air-suspension bookshelf speaker system with 8-in woofer and 1-in sealed soft-dome tweeter; frequency response 30-25,000 Hz  $\pm 4$  dB (DIN); crossover at 1300 Hz; input range 10-60 W/ch; 4-ohm impedance; walnut finish with brown knit grille. 19" H  $\times$  11" W  $\times$  9"  $\times$  D ..... \$200

#### David 7000 Speaker System

Two-way speaker system with 5-in woofer and 1-in tweeter; frequency response 40-25,000 Hz; crossover at 2500 Hz; input range 15-70 W; 4-ohm



impedance; nextel grey or simulated walnut finish; 9 7/8" H x 6 1/2" W x 6 3/8" D ..... \$185

**D-602 Speaker System**

Compact two-way speaker system with 5 1/4-in woofer and 1-in dome tweeter; frequency response 38-25,000 Hz; crossover at 1600 Hz; recommended amp power 18-80 W; impedance 4-8 ohms; LED overload indicator; grey cabinet with black grille; 9 1/8" H x 5 3/4" W x 5 3/4" D ..... \$160

**D-602WN.** Same as D-602 but walnut cabinet with brown metal grille ..... \$170

**David 6000 Speaker System**

Two-way speaker system with 4-in woofer and 1-in tweeter; frequency response 45-25,000 Hz; crossover at 2500 Hz; input range 10-60 W; 4-ohm impedance; nextel grey or brown finish; 7 3/4" H x 5" W x 5 1/4" D ..... \$150

**Sub-2.** Subwoofer designed for use with 6000; 10-in woofer extends total system frequency response down to 25 Hz; adds 150-Hz crossover; input 30-120 W; 19" H x 14 1/2" W x 12 1/2" D... \$300

**David 5000 Speaker System**

Compact two-way speaker system with 4-in woofer and 1-in soft dome tweeter; frequency response 50-25,000 Hz; crossover at 2500 Hz; recommended amp power 12-50 W; impedance 4-8 ohms; nextel-finished, wedge metal cabinet; 6 3/4" H x 4 1/2" W x 4 1/2" D ..... \$130

Brackets for car mount ..... \$25 pr.

**Sub-1 Subwoofer**

Floor-standing subwoofer with 12-in woofer and matrix crossover at 160 Hz; frequency response 16-200 Hz; 6-ohm impedance; input range 50-300 W/ch continuous; walnut finish with brown knit grille; designed for use with David speakers 23 3/4" H x 17" W x 13 3/4" D ..... \$400

**WALD SOUND**

**Verit Series RL**

**RL-X 5A Speaker System**

Three-way passive-radiator floor-standing speaker system with 12-in woofer, 12-in passive radiator, 5-in midrange in own subenclosure, and 2 x 5-in tweeter; frequency response 24-30,000 Hz ± 5 dB; crossovers at 700 and 3000 Hz; input range 20-146 W continuous program; impedance 8 ohms; midrange and tweeter level controls; deep-grain birch vinyl cabinet; 39" H x 14.5" W x 14.25" D ..... \$460

**RL-X 4A.** Similar to RL-X 5A except frequency response 30-30,000 Hz ± 5 dB; input range 15-136 W continuous; 25.25" H x 14.25" W x 14.5" D ..... \$320

**RL-X 3A.** Similar to RL-X 4A except with 10-in woofer and passive radiator; frequency response 35-30,000 Hz ± 5 dB; input range 10-72 W continuous; 22" H x 12.25" W x 13.75" D ..... \$260

**RL-X 1A Speaker System**

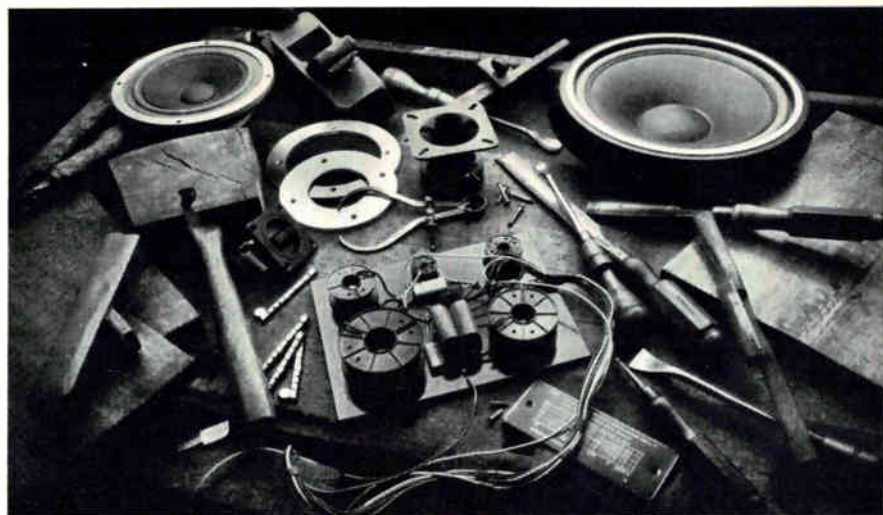
Two-way passive-radiator bookshelf speaker system with 8-in woofer, 9-in passive radiator, and 2 x 5-in tweeter; frequency response 40-30,000 Hz ± 5 dB; crossover at 1500 Hz; input range 10-68 W continuous program; impedance 8 ohms; tweeter level control; deep-grain birch vinyl cabinet; 19" H x 10" W x 10.75" D ..... \$170

**Verit Series II**

**514 Speaker System**

Four-way tuned-port floor-standing speaker system with 12-in woofer, 5-in upper- and 5-in lower-midrange drivers in own subenclosure, and 2 x 5-in tweeter; frequency response 32-30,000 Hz ± 5 dB; crossovers at 600, 1500, and 5000 Hz; input range 10-106 W continuous program; impedance 8 ohms; lower-midrange, upper-midrange, and tweeter level controls; deep-grain hickory vinyl cabinet; 31" H x 14.25" W x 14.25" D ..... \$290

**512.** Similar to 514 except three-way system with one 5-in sub-enclosed midrange; crossovers at 700



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**Impact 8**

By using components like these and assembling them with extraordinary skill and care, Unitronex has created speakers that will please both your eyes and ears for a long time to come. That's why Unitronex has extended the limited warranty on Impact speakers beyond the usual five years to cover a full decade.

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Unitronex Corporation, 1171 Landmeier Road, Elk Grove Village, Illinois 60007. Branch Office: Unitronex West, 16400 Ventura Blvd., Suite 323, Encino, California 91436.

and 4000 Hz; input range 10-96 W continuous; midrange and tweeter level controls; 25" H x 14.5" W x 14.25" D ..... \$230

**510.** Similar to 512 except with 10-in woofer; frequency response 38-30,000 Hz  $\pm$  5 dB; input range 8-68 W continuous; tweeter level control; 22" H x 12.25" W x 13.75" D ..... \$200

### 508 Speaker System

Two-way tuned-port bookshelf speaker system with 8-in woofer and 2 x 5-in tweeter; frequency response 45-30,000 Hz  $\pm$  5 dB; crossover at 2000 Hz; input range 5-46 W continuous; impedance 8 ohms; deep-grain hickory vinyl cabinet; 19" H x 10" W x 10.75" D ..... \$130

## WHARFEDALE

### TSR Series

#### TSR1 12 Speaker System

Four-way computer-optimized acoustic-suspension floor-standing speaker system with two 10-in paper-



cone woofers, 8-in mineral-filled homopolymer moving-coil midrange in separate subenclosure, and 1-in soft dome tweeter in phase-coherent array; frequency response 45-20,000 Hz  $\pm$  3 dB; crossovers at 100, 800, and 3500 Hz; sensitivity 90 dB/W/m; input range 15-190 W; nominal impedance 6 ohms; continuously variable midrange and tweeter level controls; walnut veneer cabinet with acoustically transparent black knit grille; 42 $\frac{1}{2}$ " H x 15" W x 15 $\frac{1}{2}$ " D ..... \$950

#### TSR1 10 Speaker System

Three-way computer optimized acoustic-suspension floor-standing speaker system with two 8-in mineral-filled homopolymer moving-coil bass/midrange drivers and 1-in soft dome tweeter in phase-coherent array; frequency response 50-20,000 Hz  $\pm$  3 dB; crossovers at 300 and 3500 Hz; sensitivity 90 dB/W/m; input range 15-140 W; nominal impedance 6 ohms; continuously-variable tweeter level control; walnut veneer finish with acoustically-transparent black knit grille; 27 $\frac{1}{2}$ " H x 13" W x 13 $\frac{1}{4}$ " D ..... \$475

**TSR108.** Similar to TSR110 except two-way bass-reflect system using one 8-in bass/midrange driver; crossover at 3500 Hz; input range 15-80 W; 22 $\frac{1}{2}$ " H x 12 $\frac{1}{2}$ " W x 11 $\frac{1}{4}$ " D ..... \$375

### E Series

#### E. 90 Speaker System

Four-way computer-optimized bass-reflex floor-

standing speaker system with two low-mass 10-in woofers, two 4-in high-flux midrange drivers, and 1-in compression-drive tweeter; frequency response 30-18,000 Hz  $\pm$  3 dB; crossovers at 150, 800, and 7000 Hz; sensitivity 95 dB/W/m; 8-ohm impedance; input range 15-200 W continuous; five-position midrange and tweeter level controls; supplied with casters; walnut-grain-finish cabinet with open-mesh black grille ..... \$850

#### E. 70 Speaker System

Three-way computer-optimized bass-reflex floor-standing speaker system with 10-in woofer, two 4-in midrange drivers, and 1-in horn tweeter; frequency response 50-18,000 Hz  $\pm$  3 dB; crossovers at 800 and 7000 Hz (6 and 12 dB/octave network); efficiency 94-dB SPL/W/m; input range 15-150 W; 8-ohm impedance; high- and low-frequency contour controls; hand-finished walnut veneer with black cloth grille; 32" H x 13 $\frac{1}{2}$ " W x 14" D ..... \$560

#### E. 50 Speaker System

Three-way computer-optimized bass-reflex speaker system with 10-in woofer, 4-in cone midrange, and 1-in compression-drive horn tweeter; frequency response 55-18,000 Hz  $\pm$  3 dB; crossovers at 800 and 7000 Hz; efficiency 94-dB SPL/W/m; input range 3-70 W continuous; 8-ohm impedance; high- and low-frequency contour controls; walnut finish with semi-opaque grille; 26" H x 13 $\frac{1}{2}$ " W x 13 $\frac{1}{2}$ " D ..... \$460

#### E. 30 Speaker System

Two-way computer-optimized bass-reflex speaker system with two 6.7-in bass/midrange drivers and horn tweeter; frequency response 63-18,000 Hz  $\pm$  3 dB; crossover at 4000 Hz; sensitivity 94 dB SPL/W/m; input range 15-75 W continuous; 8-ohm impedance; tweeter level control; hand-finished walnut veneer matched pairs; 22.8" H x 13.2" W x 10.3" D ..... \$340

#### E. 20 Speaker System

Two-way computer-optimized bass-reflex speaker system with 7 $\frac{1}{2}$ -in low-mass cone woofer and 1-in compression horn-loaded tweeter; frequency response 62-18,000 Hz; crossover at 4000 Hz; sensitivity 95 dB SPL/W/m; input range 15-60 W/ch continuous; impedance 8 ohms; tweeter level control; walnut veneer cabinet with translucent black knit grille; sold as matched stereo pairs; 22 $\frac{1}{2}$ " H x 12" W x 9 $\frac{1}{2}$ " D ..... \$600 pr.

### Laser Series

#### Laser 100 Speaker System

Three-way computer-optimized acoustic-suspension speaker system with 10-in woofer, 4-in mineral-filled homopolymer midrange, and  $\frac{3}{4}$ -in dome tweeter; frequency response 55-20,000 Hz  $\pm$  3 dB; sensitivity 88 dB SPL/W/m; input range 15-105 W/ch; walnut veneer cabinet; 22 $\frac{1}{2}$ " H x 12" W x 9 $\frac{1}{2}$ " D ..... \$240

**Laser 80.** Similar to Laser 100 except bookshelf system using 8-in woofer; frequency response 60-20,000 Hz  $\pm$  3 dB; input range 15-80 W/ch; 18 $\frac{1}{4}$ " H x 10 $\frac{1}{2}$ " W x 9 $\frac{1}{2}$ " D ..... \$185

#### Laser 60 Speaker System

Two-way computer-optimized acoustic-suspension bookshelf speaker system with 8-in woofer and  $\frac{3}{4}$ -in dome tweeter; frequency response 63-20,000 Hz  $\pm$  3 dB; sensitivity 88 dB SPL/W/m; input range 15-75 W/ch; walnut veneer cabinet; 16 $\frac{1}{2}$ " H x 10 $\frac{1}{2}$ " W x 9 $\frac{1}{2}$ " D ..... \$135

## YAMAHA

#### NS-1000 Speaker System

Three-way speaker system with 11.8-in woofer, 3.46-in midrange, and 1.18-in tweeter; drivers are vapor-deposition beryllium dome type; frequency response 40-20,000 Hz; crossovers at 500 and 6000 Hz; 90 dB SPL/W/m; max. input 100 W; 8-ohm impedance; midrange and tweeter level controls; ebony enclosure with polyurethane finish; sold

in mirror-image pairs only; 28" H x 15 $\frac{1}{2}$ " W x 14 $\frac{1}{2}$ " D ..... \$950

**NS-1000 M.** Same as NS-1000 but with semi-gloss black finish and detachable black grille; 26 $\frac{1}{2}$ " H x 14 $\frac{1}{2}$ " W x 12 $\frac{1}{2}$ " D ..... \$650

#### NS-890 Speaker System

Four-way sealed floor-standing speaker system with 12-in cone woofer, 4 $\frac{1}{2}$ -in cone mid-bass driver, 2-in beryllium dome mid-high driver, and 1 $\frac{1}{2}$ -in beryllium dome tweeter; frequency response 40-20,000 Hz; crossovers at 600, 2000, and 6000 Hz; sensitivity 92 dB SPL/W/m; input range 40-80 W; 8-ohm impedance; continuously variable mid-high and tweeter level controls; oak finish cabinet with removable black fabric grille; 19 $\frac{1}{2}$ " H x 14 $\frac{1}{2}$ " W x 12 $\frac{1}{2}$ " D ..... \$550

#### NS-690II Speaker System

Three-way speaker system with 12-in woofer, 3-in midrange, and 1 $\frac{1}{2}$ -in tweeter; frequency response 35-20,000 Hz; crossovers at 800 and 6000 Hz; max. input 80 W; 8-ohm impedance; midrange and tweeter level controls; may be multiamped via separate driver terminals; walnut finish; 24 $\frac{1}{2}$ " H x 13 $\frac{1}{2}$ " W x 11 $\frac{1}{2}$ " D ..... \$400

#### NS-590 Speaker System

Three-way sealed speaker system with 12-in cone woofer, 4 $\frac{1}{2}$ -in cone midrange, and 1 $\frac{1}{2}$ -in beryllium dome tweeter; frequency response 40-20,000 Hz; crossovers at 700 and 6000 Hz; sensitivity 91 dB/W/m; input range 35-70 W; 8-ohm impedance; continuously variable midrange and tweeter level controls; polished oak finish cabinet with black cloth grille; 26 $\frac{1}{2}$ " H x 14 $\frac{1}{4}$ " W x 12 $\frac{1}{4}$ " D ..... \$350

#### NS-344 Speaker System

Three-way acoustic-suspension bookshelf speaker system with 10-in cone woofer, 4 $\frac{1}{2}$ -in cone midrange, and 1 $\frac{1}{2}$ -in soft-dome tweeter; frequency response 50-38,000 Hz; crossovers at 700 and 6000 Hz; sensitivity 90 dB SPL/W/m; max. input 70 W; impedance 8 ohms; midrange and tweeter level controls; particleboard enclosure with black grille; sold as matched pairs only; 22" H x 13" W x 12" D ..... \$260

**NS-244.** Similar to NS-344 except two-way system without midrange driver; crossover at 2000 Hz; max. input 60 W; has tweeter level control; 21" H x 12 $\frac{1}{2}$ " W x 11 $\frac{1}{2}$ " D ..... \$200

#### NS-8 Speaker System

Three-way acoustic-suspension bookshelf speaker system with 10-in long-throw cone woofer, 1 $\frac{1}{2}$ -in soft-dome midrange, and 1-in soft-dome tweeter flush-mounted on flush-mount baffle board; frequency response 40-20,000 Hz  $\pm$  3.5 dB; crossovers at 700 and 3000 Hz; sensitivity 91 dB SPL/W/m; min. input 10 W; impedance 8 ohms; midrange and tweeter level controls; walnut woodgrain vinyl enclosure with acoustically-transparent black knit snap-off grille; 26" H x 14 $\frac{1}{2}$ " W x 10 $\frac{1}{2}$ " D ..... \$230

#### NS-10M Speaker System

Two-way acoustic-suspension bookshelf speaker system with 7-in cone woofer and 1 $\frac{1}{2}$ -in soft-dome tweeter; frequency response 60-20,000 Hz; crossover at 2000 Hz (12 dB/octave); efficiency 90 dB/W/m; max. input 50 W peak; 8-ohm impedance; black wood finish; packaged in pairs; 15" H x 8 $\frac{1}{2}$ " W x 7 $\frac{1}{2}$ " D ..... \$155

## ZENITH

#### MC4000 Allegro Speaker System

Three-way tuned-port floor-standing speaker system with 12-in cone woofer with 2-in phenolic voice coil, 5-in cone midrange in own sub-enclosure, and 3.5-in horn tweeter with phasing plug; frequency response 35-20,000 Hz; crossovers at 600 and 2000 Hz; sensitivity 91.5 dB/W/m; max. input 100 W continuous; 8-ohm nominal impedance; midrange and treble level controls; walnut wood veneer cabinet; 28" H x 17" W x 13.18" D ..... \$225



**DIRECTORY OF MANUFACTURERS**

(Continued from p. 27)

**SOUND SOURCE, INC.**  
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**SPARKOMATIC CORP.**  
Milford, PA 18337

**SPATIAL, INC.**  
3633 Long Beach Boulevard, Suite C, Long Beach, CA 90807

**SPEAKERLAB, INC.**  
735 North Northlake Way, Seattle, WA 98103

**SPECKMAN, J.W.S. Acoustic Design Corp.**  
11407A Route 14, Harvard, IL 60033

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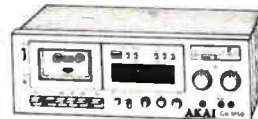
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# 12

# HEADPHONES

## AKG

### K-340 Stereo Headphones

Two-way electrostatic/dynamic headphones incorporating fixed-charge electrostat transducer/dy-



amic moving-coil transducer with passive diaphragm in each earcup; connects directly to headphone jack of receiver or amplifier or across speaker output terminals. Frequency response 16-25,000 Hz; SPL 104 dB from 200-2000 Hz with 1.0% THD; nominal impedance 400 ohms each channel; max. continuous input 200 mW/ch at 117 dB SPL; includes three 9.8-ft four-conductor cables with three-conductor 1/4-in stereo phone plug; 13.5 oz less cable..... \$189

### K-240 Free-Field Headphones

Free-field stereo headphones; dynamic moving-coil transducer and six passive radiators in each circum-aural cup; frequency response 16-20,000 Hz; 600 ohms  $\pm$ 20% impedance over 16-20,000 Hz; max. SPL 125 dB; supplied with 9.8-ft four-conductor cable and 1/4-in phone plug; 10 oz..... \$89

### K-141 Monitor Headphones

Supra-aural stereo dynamic professional monitoring headphones with moving-coil transducers; frequency response 20-20,000 Hz; max. SPL 120 dB; matches 4-600 ohm output impedance; includes 9.8-ft four-conductor cable and standard three-conductor stereo phone plug; 9 oz..... \$69

### K-140S Stereo Headphones

Supra-aural stereo headphones with dynamic moving-coil transducers; frequency response 20-20,000 Hz; max. SPL 119 dB; 600 ohms  $\pm$ 20% impedance over 20-20,000 Hz; supplied with 9.8-ft four-conductor cable and 1/4-in phone plug; 8 oz..... \$59

### K-40 Stereo Headphones

Ultra-lightweight supra-aural stereo headphones with dynamic moving-coil transducers; frequency

response 30-18,000 Hz; max. SPL 117 dB; matches 4-200 ohm outputs; 9.8-ft four-conductor cable; three-conductor stereo phone plug; 4 1/2 oz..... \$29

## ARISTA

### 301 Stereo Headphones

Hi-velocity Mylar diaphragm stereophones; frequency response 20-22,000 Hz; 8-ohm impedance; 10-ft coiled cord..... \$33

### 300 Stereo Headphones

Headphones feature slide volume controls and stereo/mono switch; frequency response 25-17,500 Hz; 8-ohm impedance; 10-ft coiled cord..... \$30

### 288 Stereo Headphones

Headphones feature padded earcushions; frequency response 25-17,500 Hz; 8-ohm impedance; 10-ft coiled cord..... \$22

### 285 Open-Vented Stereo Headphones

Features individual volume controls and stereo/mono switch; frequency response 20-20,000 Hz; 8-ohm impedance; 10-ft coiled cord..... \$19

## AUDIO-TECHNICA U.S.

### ATH-7 Stereophones

Electret condenser stereophones; frequency response 20-22,000 Hz  $\pm$ 2 dB; sensitivity 98 dB SPL at 1 kHz (0 dB=0.002  $\mu$ bar/V); impedance 4-16 ohms; includes impedance-matching adapter with headphone/speaker switching and normal/high-level LED indicators; 8 1/4-ft cord; adapter size 3 1/2" H x 2 1/4" W x 7" D; headset weight (less cord) 7.4 oz..... \$150

### ATH-6 Stereophones

Electret condenser stereophones; frequency response 40-22,000 Hz  $\pm$ 3 dB; sensitivity 98 dB SPL at 1 kHz; impedance 4-16 ohms; includes impedance-matching adapter with headphone/speaker switching; 8 1/4-ft cord; adapter size 1 1/4" H x 3" W x 3 1/4" D; headset weight (less cord) 7.4 oz..... \$100

### ATH-5 Stereophones

Dynamic moving-coil stereophones; frequency response 20-20,000 Hz; sensitivity 96 dB SPL at 1 kHz; impedance 4-16 ohms; 11 1/4-ft cord; 7.25 oz..... \$85

### ATH-3 Stereophones

Dynamic moving-coil stereophones; frequency response 25-20,000 Hz; sensitivity 94 dB SPL at 1 kHz; impedance 4-16 ohms; 11 1/4-ft cord; 7.25 oz..... \$65

### ATH-2 Stereophones

Dynamic planar moving-coil stereophones; frequency response 30-20,000 Hz; sensitivity 93 dB SPL at 1000 Hz; impedance 4-16 ohms; HD 0.7% max. at 110-dB SPL; 8.25-ft cord; 7 oz..... \$50

## ATH-1 Stereophones

Dynamic planar moving-coil stereophones; frequency response 30-20,000 Hz; sensitivity 93 dB SPL at 1 kHz; impedance 4-16 ohms; 8 1/4-ft cord; 4.75 oz..... \$30

## BANG & OLUFSEN

### U-70 Headphones

Orthodynamic stereo headphones; frequency response 16-20,000 Hz; sensitivity 8 mW for 94-dB SPL; continuous load 2 W; dist. 1% max.; 140-ohm impedance; 10-ft straight cord with three-conductor phone jack; 10.6 oz..... \$95

## BEYER/DYNAMIC

### ET-1000-S Electrostatic Headphones

Electrostatic headphones; frequency response 10-25,000 Hz; sensitivity 100 dB SPL with 2 mV input; 4-8 ohm impedance; max. power 115 mW; comes with sintered bronze cover plates, 8-ft cord, and power supply capable of driving two sets of ET-1000 headphones..... \$279

ET-1000. Same as ET-1000-S without power supply; 13 oz..... \$160

### DT-444S Wireless Infrared Headphones

Battery-powered headphones with ISS 76 infrared transmitter; frequency response 20-20,000 Hz; has



separate volume controls/cup and stereo/mono switch; rechargeable NiCd batteries..... \$230

### DT-48 Dynamic Headphones

Moving-coil dynamic headphones; frequency response 16-20,000 Hz  $\pm$ 2 dB; supplied with 10-ft straight cord..... \$190

DT-48K. Same as DT-48 but with coiled cord.. \$195

### DT-480 Dynamic Headphones

Moving-coil dynamic headphones; frequency response 20-18,000 Hz; sensitivity 1 mW at 400 Hz

# 12 HEADPHONES

for 115-dB SPL; impedance 5, 100, 400, and 2000 ohms; max input 1 W/phone ..... \$115

## DT-100 Dynamic Headphones

Moving-coil dynamic headphones; frequency response 30-18,000 Hz; sensitivity 1 mW at 400 Hz for 110-dB SPL; impedance 5, 100, 400, and 2000 ohms; max. input 1 W/phone ..... \$90

## DT-96 Dynamic Headphones

Moving-coil dynamic headphones; frequency response 30-17,000 Hz; sensitivity 1 mW at 400 Hz for 110-dB SPL; impedance 5-200 ohms; max. input 100 mW/phone; 5-ft cord; 8 oz. .... \$75

## DT-440 Dynamic Headphones

Open high-velocity dynamic headphones with polyvinyl chloride diaphragm in Novodur housing; frequency response 20-20,000 Hz; sensitivity 1 mW for 100-dB SPL; impedance 600 ohms; chrome-plated finish ..... \$65  
**DT-441.** Similar to DT-440 but with different casing style; professional matte black finish ..... \$75

## DT-220 Dynamic Headphones

Closed-ear dynamic headphones; frequency response 20-20,000 Hz; sensitivity 1 mW for 100 dB; 600-ohm impedance; max. input 42 mW (for 116-dB SPL); 260 g (without cable) ..... \$65

## DT-302 Lightweight Headphones

Open-air high velocity dynamic headphones connect directly to high- or low-impedance outputs; frequency response 20-20,000 Hz; rated power 7 mW (2.1 V) for 600 ohms; sponge ear cushions; stereo phone jack plug; 2.3 oz (without cord) ..... \$30

## DT-109 Moving-Coil Mic/Headphone

Lightweight moving-coil stereo headphones with cardioid broadcast-quality moving-coil microphone; SPL 120 dB; left and right channels may be independently wired; removable ear cushions; high-impact plastic and stainless steel construction; field serviceable ..... \$106

## DT-108 Moving-Coil Mic/Headphone

Moving-coil stereo headphones with noise-canceling microphone; frequency response 40-12,000 Hz; SPL 120 dB; mic rotates 180 degrees; foam-filled-ear cushions and padded headband; field serviceable ..... \$90

## CONCEPT

### CEH Stereo Headphones

Orthodynamic stereo headphones; frequency response 20-25,000 Hz; impedance 150 ohms; sensitivity 96 dB SPL/mW; max. input 3 W; THD 0.25% at 95-dB SPL; includes 12-ft flat and coiled cords; 10.5 oz. .... \$85

## GC ELECTRONICS

### 90-108 Stereo Headphones

Lightweight open-air stereo headphones with combined condenser/dynamic element traits; has 39-mm Mylar diaphragm; frequency response 20-20,000 Hz; sensitivity 98 dB/1 mW; impedance 4-16 ohms; 6-ft straight cord; 7.5 oz ..... \$35

### 90-106 Stereo Headphones

Open-air stereo headphones with ultra-thin, high-velocity 37.5-mm Mylar diaphragm; frequency response 20-20,000 Hz; sensitivity 100 dB/1 V; impedance 4-16 ohms; lightweight double headband; 6-ft straight cord ..... \$18

### 90-104 Stereo Headphones

Dynamic stereo headphones with 3-in element; fre-

quency response 30-18,000 Hz; impedance 4-8 ohms; separate tone and volume slide controls/cup; adjustable padded headset; 10-ft coiled cord with 1/4-in phone plug ..... \$16  
**90-102.** Similar to 90-104 except lightweight version minus tone controls; has stereo/mono switch ..... \$13

## JVC

### HM-200E Headphone/Microphone

Designed for binaural recording and monitoring; matched electret condenser mike with simulated auricle in each earpiece; mikes powered by AA cells contained in earpieces; three-way headphone level selector; mike tone selector; supplied with dummy head for off-the-operator recording. Mikes: sensitivity -67 dB  $\pm$  2 dB; output impedance 600 ohms; S/N 45 dB; frequency response 50-10,000 Hz  $\pm$  10 dB. Headphone: 8-ohm impedance; 96-dB sensitivity; frequency response 50-10,000 Hz; 2-m cord with two phone-type mike plugs and stereo-type headphone plug; mike stand screw sockets (3/16", 3/8", 3/4", PF 1/2", 1/4"); 1.32 lb. .... \$100  
**BM-5.** Biphonic processor for HM-200E; processes binaural sources through stereo speaker ..... \$280

## KOSS

### ESP/10 Electrostatic Stereophones

Electrostatic circumaural design with energizer. Headset bandpass response 20-22,000 Hz  $\pm$  2 dB;



sensitivity for 100-dB SPL 1.9 V rms at 1 kHz into E/10 energizer, 2.0 V rms pink noise; THD at 1 kHz and 100 dB SPL 0.38%; radiating surface area of electrostatic element 25 cm<sup>2</sup>/ch; black with silver accents; includes 10-ft cord. Energizer bandpass response 3 dB down at 15 Hz and 24 kHz; hum and noise 75 dB below sensitivity reference level (100 dB SPL); phase response at 20 Hz -30 degrees, at 15 kHz -30 degrees; input impedance 3 ohms min. at 20 Hz and 20 kHz, 180 ohms max. at 800 Hz; min. recommended amp power 35 W/ch; overload voltage (for relay cut-out) 5.3 V rms pink noise into energizer; semi-peak-reading VU meters; LED overload indicators; automatic overload detector; wood-grain trim ..... \$300

### PRO/4AAA Dynamic Stereophones

Frequency response 10-22,000 Hz; dist. less than 0.5% at 1 kHz, 100-dB SPL; sensitivity 0.7 V rms sine wave at 1000 Hz, 0.24 V rms pink noise; impedance 220 ohms at 1 kHz; features Pneumalite ear cushions for noise isolation; 10-ft coiled cord; 15.5 oz ..... \$85

### TECH/VFR Stereophones

Dynamic stereo headphones with variable-frequency-response controls; slide-type controls at base of each earcup permit fine tuning of shape of response curve; frequency response 10-22,000 Hz; THD 0.3% at 1 kHz (100-dB SPL); sensitivity for 100-dB SPL 0.6 V rms sine wave at 1000 Hz, 0.275 V rms pink noise; nominal impedance 245 ohms at 1000 Hz; features Pneumalite ear cushions to exclude outside sounds; wide vinyl headband with self-adjusting yoke; black and chrome; equipped with boom microphone mount for professional applications; 4-conductor coiled cord; 16.8 oz (less cord) ..... \$80

### HV/XLC Stereophones

Lightweight high-velocity stereophones; frequency

response 15-35,000 Hz; sensitivity for 100-dB SPL 1.0 V rms sine wave at 1000 Hz, 0.7 V rms pink noise; impedance 85 ohms at 1000 Hz; features separate volume and balance controls/cup; variable density contoured circumaural earcushions with twist lock mechanism for easy removal; 10-ft coiled cord; 8.4 oz less cord ..... \$80  
**HV/X.** Same as HV/XLC without volume and balance controls; impedance 90 ohms at 1000 Hz; 7.7 oz less cord ..... \$70

## TECH/2 Stereophones

Dynamic stereo headphones with 2-in polyester driver elements; frequency response 10-22,000 Hz; nominal impedance 245 ohms at 1000 Hz; sensitivity for 100-dB SPL 0.7 V rms sine wave at 1000 Hz, 0.3 V rms pink noise; THD 0.3% at 1000 Hz, 100 dB SPL; adjustable cushioned vinyl headband with adjustable stainless-steel yokes and slidebars and Pneumalite ear cushions; includes 10-ft coiled cord; 15.9 oz less cord ..... \$60

## K/145 Dynamic Stereophones

Slimline dynamic stereophones with 1.5-in polyester driver; frequency response 20-20,000 Hz; impedance 87 ohms at 1 kHz; sensitivity at 100-dB SPL 0.25 V rms sine wave at 1 kHz, 0.10 V rms pink noise; THD 0.5% at 1 kHz for 100-dB SPL; volume balance controls; Pneumalite ear cushions; padded simulated leather earcups, adjustable brushed stainless-steel yokes and slidebars; 10-ft coiled Y cord; molded plug; weight (less cord) 13.6 oz ..... \$55

**K/135.** Similar to K/145 except has 2.5-in dynamic elements, response 10-18,000 Hz; impedance 98 ohms at 1 kHz; sensitivity at 100-dB SPL 0.09 V rms sine wave, 0.11 V rms pink noise; THD 1% at 1 kHz for 100-dB SPL; weight (less cord) 13.4 oz ..... \$40

## HV/1A Stereophones

High-velocity stereophones with low-mass "Decilite" driver elements for 15-30,000 Hz coverage; will operate from outputs of 3.2 to 600 ohms; dist. 0.5% at 100-dB SPL; sensitivity 0.9 V rms for 100-dB SPL, will handle 5 V rms continuous with provision for 14-dB SPL transient peaks; 157-ohm impedance; acoustical sponge ear cushions; extendable headband with self-adjusting, pivoting yokes and soft padded vinyl cover; 3-conductor coiled cord (10-ft extended); 10.1 oz ..... \$50  
**HV1LC.** Same as HV/1A except volume/balance control per earcup; sensitivity 1.1 V rms for 100-dB SPL; impedance 132.5 ohms; 10.8 oz ..... \$60

## HV/1 Dynamic Stereophones

High-velocity stereophones with 2-in dia. drivers; operates from 3.2 to 600 ohm outputs; response 20-20,000 Hz; sensitivity 0.8 V rms for 100-dB SPL; impedance 168 ohms; capacity 5 V continuous with provision for 14-dB SPL transient peaks; 10.1 oz; 10-ft coiled cord ..... \$50

## KO/727B Dynamic Stereophones

Frequency response 10-18,000 Hz; THD 1.0% at 100-dB SPL; sensitivity 0.08 V rms for 100-dB SPL; 100-ohm impedance; 10-ft coiled cord; 16.5 oz; black ..... \$40

## K/6ALC Dynamic Stereophones

Frequency response 10-16,000 Hz; THD less than 1% at 1 kHz, 100-dB SPL; sensitivity 0.14 V rms for 100-dB SPL; impedance 100 ohms at 1 kHz; individual volume controls; supplied with 10-ft coiled cord; 14 oz ..... \$40  
**K/6A.** Same as K/6ALC but without volume controls; sensitivity 0.15 V rms for 100-dB SPL ..... \$30

## MURA

### SP-205 Headphones

Dynamic stereo headphones with Mylar cone elements; features separate volume and tone controls on each earcup and stereo/mono switch; frequency response 30-20,000 Hz  $\pm$  5 dB; impedance 8 ohms; adjustable padded headband with cushioned earcups; 15-ft coiled cord with plug ..... \$70



**SP-805.** Same as SP-205 with stereo separation control.....\$80

**HV-300 Stereo Headphones**

Vented high-velocity stereo headphones with tapered mylar film drivers with cobalt magnets; fea-



tures stereo separation control, individual volume controls, and stereo/mono switch; frequency response 20-20,000 Hz; impedance 8 ohms; 10-ft lightweight coiled cord .....\$50

**Red Set III Stereo Headphones**

High-velocity stereo headphones with Mylar diaphragms and subminiature ultra-lightweight samarium cobalt magnets; incorporates anoxic copper wire designed to reduce signal attenuation; frequency response 20-20,000 Hz; sensitivity 98 dB at 1000 Hz; max. input 0.2 W; matching impedance 4-25 ohms; 6.6-ft cord with 1/4-in 3-conductor stereo plug; 1.6 oz less cord.....\$40

**SP-800 Stereo Headphones**

Isolation-style stereo headphones designed for mixer and tape monitor use; features stereo separation control, sliding volume and tone controls, and stereo/mono switch; frequency response 20-20,000 Hz; 10-ft coiled cord .....\$40

**HB-1500 Headphones**

Open-air stereo headphones with high-polymer diaphragm drivers; max. input 0.1 W; sensitivity 100 dB SPL at 1 mW; frequency response 18-22,000 Hz; impedance 8 ohms; 10-ft coiled cord with plug; 4 oz .....\$30

**HV-230 Stereo Headphones**

Vented high-velocity stereo headphones with lightweight polymer film diaphragms; individual volume knob controls; frequency response 20-20,000 Hz; impedance 8 ohms; lightweight 10-ft coiled cord with plug.....\$40

**HV-180.** Similar to HV-230 minus volume controls; ultralightweight.....\$30

**SP-504 Headphones**

Stereo headphones with 3-in dynamic drivers; features separate volume and tone slide controls on each earcup and stereo/mono switch; frequency response 30-18,000 Hz; impedance 8 ohms; adjustable padded headband; 10-ft coiled cord with plug.....\$25

**SP-503.** Similar to SP-504 minus tone controls.....\$20

**SP-502.** Similar to SP-503 minus stereo/mono switch; has 2 1/4-in dynamic drivers.....\$18

**SP-500.** Similar to SP-502 minus volume controls; frequency response 35-15,000 Hz; 8-ft cord with plug.....\$15

**HV-100 Stereo Headphones**

Lightweight vented high-velocity stereo headphones with thin mylar diaphragms; features individual volume controls and stereo/mono switch; frequency response 30-15,000 Hz; 10-ft coiled cord with plug.....\$23

**SP-294 Stereo Headphones**

Stereo headphones with 2 1/4-in dynamic drivers; frequency response 40-15,000 Hz; impedance 8 ohms; individual volume knob controls and stereo/mono switch; adjustable soft leatherette padded headband and earcups; 10-ft coiled cord .....\$17

**SP-194.** Similar to SP-294 minus stereo/mono switch.....\$15

**SP-94 Headphones**

Lightweight dynamic stereo headphones with 2.25-in drivers; frequency response 40-15,000 Hz; impedance 8 ohms; 8-ft cord with plug.....\$11

**OLSON ELECTRONICS**

**PH-500 Stereophones**

Lightweight two-way stereo headphones with separate woofer and tweeter; frequency response 18-22,000 Hz; wide headband with padded ear cushions; 10 oz .....\$60

**PH-441 Stereophones**

High-velocity dynamic stereo headphones with featherweight polymer film diaphragms; frequency response 20-20,000 Hz; impedance 8 ohms; separate volume controls/cup; includes 10-ft coiled cord.....\$38

**PICKERING**

**OA-7 Headphones**

Lightweight open-audio design; REE used in permanent magnet compound; foam-cushioned headband; earpiece yokes incorporate pivoting system enabling snug fit; nominal input impedance 100 ohms; frequency response 20-22,000 Hz  $\pm$  5 dB; sensitivity 110-dB SPL at 0.2 V; max. input 0.1 W continuous; dist. 0.5% at 110-dB SPL; supplied with flat 10-ft cord; 6 oz .....\$70

**OA-5A Headphones**

Lightweight open-audio stereo headphones with 1.5-in samarium cobalt dynamic drivers; input



impedance 100 ohms  $\pm$  10% at 1000 Hz; max. input 0.25 W/ch continuous; sensitivity 110 dB SPL at 0.2 V in, 1000 Hz/ch; frequency response 20-22,000 Hz; dist. 0.25% at 110-dB SPL; adjustable padded vinyl headband with pivot yokes and nylon tricort-covered foam ear cushions; 10-ft 4-conductor cord with no-break connector; includes adapter plug for use with portable radios, TVs, and tape recorders; 5 oz less cord .....\$60

**OA-4 Headphones**

Lightweight stereo headphones with 3/4-in dynamic high-velocity drivers with synthetic film diaphragms and samarium cobalt magnets; frequency response 10-20,000 Hz; dist. 0.5% at 100-dB SPL, 1000 Hz; sensitivity 105 dB at 1000 Hz/ch; input impedance 40 ohms at 1000 Hz; adjustable lightweight headband with silver-dollar-sized multi-density polyurethane foam earpieces; includes adapter and

**IT'S JUST LIKE BEING THERE**



**AKG K-340 ELECTROSTAT DYNAMIC HEADPHONES**



**AKG ACOUSTICS, INC.**  
77 SELLECK STREET  
STAMFORD, CT 06902

# 12 HEADPHONES

7-ft Y-type straight cord with plug; 2 oz less cord.....\$50

## OA-3A Headphones

Lightweight open-audio design; 15 ohms  $\pm$  10% at 1 kHz; input 0.2 W/channel continuous; sensitivity 100 dB SPL at 0.10 V input at 1 kHz for each channel; frequency response 20-20,000 Hz; dist. less than 0.5% at 110 dB SPL; comes with extended-adjustable headband with pivot yokes and padded vinyl cover; 10-ft four-conductor cord with molded no-break connector; 8.5 oz.....\$45

## OA-202 Headphones

Open-audio stereo headphones with dynamic high-velocity drivers with 1-in polyester diaphragms; frequency response 10-20,000 Hz; dist. 0.5% at 110-dB SPL, 1000 Hz; sensitivity 100 dB SPL at 0.25 V in, 1000 Hz/ch; input impedance 50 ohms at 1000 Hz; max. input 0.2 W/ch continuous; adjustable padded vinyl headband with soft vinyl-covered foam earcushions; includes 7-ft Y-type straight cord with plug and special adapter plug for use with portable radios, TV sets, and tape recorders; 6 oz less cord .....\$30

## PIONEER

### SE-700 Stereo Headphones

Features high-polymer driver elements; frequency range 20-20,000 Hz; matching impedance 4 to 16 ohms; sensitivity 100 dB/3 V .....\$100

### Monitor 10 Stereo Headphones

Dynamic type covering a frequency range of 20-20,000 Hz, with 2 $\frac{1}{4}$ -in free-edged polyester-film cone speaker in each earpiece; sensitivity 100 dB/mW; max. input power 700 mW/ch; comes with 16-ft, 5-in coiled cord; 23 oz .....\$80

### SE-505 Headphones

Two-way stereo dynamic design with a woofer and tweeter in each phone; 8 ohms each channel; response 20-20,000 Hz; sensitivity 108 dB/0.3 V; features both tone and volume controls on each phone; max. input 500 mW each phone; 16-ft coiled cord .....\$75

### SE-6 Stereo Headphones

Dynamic open-air stereo headphones feature samarium cobalt magnets in 25-micron polyester film dome diaphragms; 150-ohm impedance; sensitivity 102 dB/mW at 1000 Hz; max. input 200 mW/ch; frequency response 20-20,000 Hz; includes 9 ft, 5-in cord and Y-type cord with  $\frac{1}{4}$ -in short plug; 8.8 oz.....\$70

### SE-405 Stereo Headphones

Dynamic type covering a frequency range of 20-20,000 Hz; 8-ohm impedance; input power 500 mW each channel; unit features polyester-film diaphragm; special earpads with sliding-type adjusting headband and clickstops for easy listening; volume controls for both left and right channels; 16 $\frac{1}{2}$ -ft coiled cord .....\$55

### SE-4 Hear-Through Headphones

Features super-thin polyester film dome drivers; frequency range 20-20,000 Hz; hear-through earpads; impedance 250 ohms; sensitivity 96 dB/mW (1000 Hz); max. input power 200 mW/channel; comes with 9-ft, 5-in Y-type cord; weight 7 $\frac{3}{4}$  oz without cord, 9 $\frac{1}{2}$  oz with .....\$50

### SE-305 Stereo Headphones

Dynamic type covering a frequency range of 20-20,000 Hz; 8-ohm impedance each channel; matching impedance 4 to 16 ohms; max. input power 500 mW each channel; comes with 16-ft, 5-in coiled cord; 15 oz.....\$45

### SE-2 Stereo Headphones

Dynamic stereo headphones feature ferrite magnetic circuits in 25-micron polyester film dome diaphragms; 150-ohm impedance; sensitivity 99 dB/mW at 1000 Hz; max. input 200 mW/ch; frequency response 20-20,000 Hz; includes 8 ft, 2 in cord and Y-type cord with  $\frac{1}{4}$ -in plug; 9 oz .....\$30

### SE-205 Stereo Headphones

Dynamic type covering a frequency range of 20-20,000 Hz; cone-type speaker in each earpiece; matching impedance 4 to 16 ohms; max. input power 500 mW each channel; comes with 8.2-ft cable; 16 oz.....\$30

## PML by ERCONA

### D-42 Headphones

Dynamic stereo/mono headphones; supplied with detachable, washable soft rubber ear cushions; frequency response 30-20,000 Hz; output impedance 2  $\times$  200 ohms (stereo), 100 or 400 ohms (mono); power/voltage at normal listening 0.3 mW/0.25 V; 100-dB SPL with 0.3 mW input; 5 mW max. power with 2% dist.; supplied with 6-ft unterminated 2  $\times$  2 cable; 9.5 oz .....\$45

### RDF-224 Dynamic Headphones

Dynamic stereo/mono headphones; removable soft-foam-padded vinyl ear cushions; supplied with 8-ft coiled cable and three-conductor phone plug; frequency response 20-18,000 Hz; output impedance 8 ohms  $\pm$  20% (1 kHz); output level 100 dB (1 kHz); max. input 100 mW; 12 oz .....\$30

## QUADRAFLEX

### Q45 Stereo Headphones

Dynamic stereo headphones; frequency response 20-20,000 Hz  $\pm$  2 dB; 80-ohm impedance; sensitivity 95 dB SPL/1mW; max. input 1800 mV; THD 1.0% at 95 dB SPL; includes 10-ft coiled cord; 10 oz.....\$55

### Q25 Stereo Headphones

Dynamic stereo headphones; frequency response 20-18,500 Hz  $\pm$  3.5 dB; impedance 34.5 ohms; sensitivity 96 dB SPL/mW; max. input 1250 mV; THD 2.0%; includes 10-ft coiled cord; 10 oz...\$30

### Q12 Stereo Headphones

Dynamic stereo headphones; frequency response 50-14,000 Hz  $\pm$  4 dB; impedance 50 ohms; sensitivity 90 dB SPL/mW; max. input 850 mV; THD 2.5%; includes 10-ft coiled cord; 8 oz.....\$18

## REALISTIC

### PRO-11A Stereo Headphones

Professional headphones with 12 sq in mylar diaphragm speakers and 1-in voice coils; adjustable padded headband with air-filled ear cushions; frequency response 10-22,000 Hz; comes with 10-ft coiled cord and standard  $\frac{1}{4}$ -in plug; 4-16 ohms impedance; 19 oz .....\$50

### LV-10 Stereo Headphones

High-velocity vented back headphones with 2-in dynamic elements; frequency response 20-20,000 Hz; dist. 0.5%; 4-16 ohm impedance; acoustic foam earpieces and soft vinyl-covered headband with self-adjusting yokes; 10-ft coiled cord and plug.....\$42

### PRO-30 Stereo Headphones

Lightweight uniform-phase stereo headphones with low-mass planar driver and rare-earth magnets; lightweight coiled cord .....\$40

### NOVA-PRO Stereo Headphones

High-acoustic-isolation stereo headphones with low-mass polyester drivers; volume controls on each earcup; frequency response 20-20,000 Hz; 4-16 ohm impedance; cushioned headband; 10-ft coiled cord .....\$37

### PRO-20 Stereo Headphones

Low-angle dynamic drivers; frequency response 20-16,000 Hz; 4-16 ohm impedance; snap-fit padded headband with foam vinyl earcushions; 10-ft coiled cord .....\$30

### NOVA-40 Stereo Headphones

3 $\frac{1}{2}$ -in dynamic drivers; frequency response 30-18,000 Hz; 4- to 16-ohm impedance; soft cushion earcups; padded adjustable headband; 10-ft coiled cord and  $\frac{1}{4}$ -in plug.....\$25

### NOVA-10 Stereo Headphones

High-efficiency 2-in speakers; adjustable vinyl headband with cushioned earpads; frequency response 50-15,000 Hz; has 10-ft cord and  $\frac{1}{4}$ -in plug.....\$15

**NOVA-16.** Similar to NOVA-10 except has separate Glide Path<sup>®</sup> level controls.....\$20

## RECOTON

### ST-33 Stereo Headphones

High-velocity stereo headphones with super thin diaphragms; leather adjustable headband; frequency response 20-20,000 Hz; 50-ohm impedance; 4-150 ohms matching impedance; sensitivity 103 dB at 1000 Hz; max. input 20 mW; 10-ft coiled cord with stereo phone plug; 5 oz.....\$37

### ST-22 Stereo Headphones

Dynamic stereo headphones; all aluminum ear cases; leathery-soft ear cushions and headband; volume control for each channel; frequency response 20-22,000 Hz; 8-ohm impedance; 4-16 ohms matching impedance; sensitivity 110 dB at 1000 Hz with 1 mW; max. input 0.5 W; 3-in dynamic speakers; 10-ft coiled cord with stereo phone plug.....\$30

### ST-16 Stereo Headphones

Volume control for each channel; stereo-mono slide switch; frequency response 20-18,000 Hz; 8-ohm impedance; soft adjustable padded headband; soft ear cushions; 10-ft coiled cord with stereo phone plug.....\$20

## SANSUI

### SS-40 Headphones

Thin polyester 2 $\frac{1}{4}$ -in wide dynamic drivers; frequency response 20-20,000 Hz; 25-ohm impedance; max. input 500 mW; sensitivity 108 dB/mW; 6.6-ft cord; 13.1 oz.....\$42

### SS-30 Headphones

Thin polyester 2 $\frac{1}{4}$ -in wide dynamic cones; frequency response 20-20,000 Hz; max. input 500 mW; 8-ohm impedance; 11.5 oz.....\$30

## SENNHEISER

### HD 224 Headphones

Dynamic stereo headphones; frequency response 16-20,000 Hz; SPL 94 dB at 1 mW; THD 1.0%; 200-ohm nominal impedance; double-walled circumaural foam earpads cover entire ear; includes steel-stranded detachable 3000-mm cable; 252 g.....\$144

### HD 430 Headphones

"Open-aire" design dynamic headphones; frequency response 16-20,000 Hz; sensitivity 94 dB with 1 mW input, nominal SPL at 1000 Hz; HD 0.5%; impedance 600 ohms/ch; padded earpad rims and adjustable suspension strap; includes 10-ft cable; 7 oz .....\$126

### HD 424 Headphones

Deluxe "open-aire" design dynamic headphones; frequency response 15-20,000 Hz; sensitivity 17.7  $\mu$ bar/V; 1 mW (1.41 V) per channel for SPL of 102 dB; dist. 1% at 22 V, 1 kHz; 2000-ohm impedance per channel; removable head and ear cushions; 10-ft cable; 6.5 oz (without cable) .....\$115



### HD 420 Headphones

"Open-aire" design dynamic headphones; frequency response 18-20,000 Hz; sensitivity 94 dB with 1 mW input, nominal SPL at 1000 Hz; HD 1.0%; impedance 600 ohms/ch; adjustable suspension strap and cushioned earpads; includes 10-ft cable; 4 oz ..... \$89

### HD 414 Headphones

"Open-aire" design dynamic headphones; frequency response 20-20,000 Hz; sensitivity 17.7  $\mu$ bar/V; 1 mW (1.41 V) per channel for SPL of 102 dB; dist. 1% at 22 V, 1 kHz; 2000-ohm impedance per channel; 10-ft cable; 5 oz (without cable) .. \$79

### HD 400 Headphones

"Open-aire" design dynamic headphones; frequency response 20-18,000 Hz; sensitivity 1 mW for SPL of 88 dB; 600-ohm impedance per channel; 10-ft cable; 3 oz (without cable)..... \$46

## SIGNET DIVISION, A. T. U. S., INC.

### TK33 Stereophones

Dipolar electret condenser stereophones with power adapter. Stereophones feature high-compliance



film moving diaphragm 45 mm diameter and 2 microns thick; suede-finish inner headband construction and pivotal porous vinyl ear pads. Passive impedance matching transformer adapter features stereophonespeaker operation and hi/lo stereophonesensitivity switches; two dual-color LED arrays in groups of six, first four indicating medium-to-loud normal reproduction and last two indicating high level peaks; no external power required; can accommodate two headsets. Frequency response 20-22,000 Hz  $\pm$  2 dB; sensitivity 100 dB at 1 V, 1000 Hz; THD 0.1% at 110-dB SPL; matching impedance 4-16 ohms; includes 8.2-ft cord with special plug and 3.9-ft adapter cable with four-conductor plug. Stereophone 9.7 oz with cord; adapter 4 lbs; adapter 5.5" H x 2.4" W x 8.7" D..... \$250  
**TK33S.** Additional stereophone only for TK33. \$100

### TK22 Stereophones

Moving-coil dynamic stereophones feature high-compliance polyester dome diaphragm 20 microns thick and 45 mm diameter with 40-micron self-supporting silver/copper voice coil and FXD magnet; full-swivel foam earpieces and soft suede-finish inner headband; frequency response 20-20,000 Hz; sensitivity 96 dB at 1 mW, 1000 Hz; THD 0.4% at 110-dB SPL; matching impedance 4-16 ohms; includes 11 1/2-ft cord with plug; 9.2 oz with cord. \$80

## SONY

### ECR-500 Electrostatic Headphones

Uni-electret open-back electrostatic stereo headphones with asymmetrical pentagon-shaped diaphragm; frequency response 20-20,000 Hz; sensitivity 91-dB SPL at 1 V rms (600 Hz); max. 114-dB SPL; HD less than 0.03% at 4 V rms, 1000 Hz in; lightweight construction; adjustable headband; push-pull driver system; includes adaptor with 30-ohm input impedance and 12-V max. input level; 3 1/2" H x 3 7/8" W x 7 7/8" D; cable 7 ft, 6 in; weight 12 oz ..... \$120

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# 12 HEADPHONES

## Z Series Stereo Headphones

Stereo headphones feature lightweight palladium-coated construction, uniform piston action across diaphragm surface, 30-mm diameter voice coils, magnets with copper-coated yoke and thin copper-clad aluminum wire, litz wire, and SBMC grille material; 110-ohm impedance; sensitivity 104 dB/mW; 50-mW rated input; include 2-m cord.

**DR-27.** Frequency response 20-25,000 Hz; THD



0.03% at 1000 Hz, 93 dB SPL; 420 g with cord..... \$100

**DR-26.** Similar to DR-27 except 400 g..... \$85

**DR-25.** Similar to DR-26 except frequency response 20-22,000 Hz; THD 0.1%; 360 g..... \$70

## MDR Series Headphones

Ultra lightweight open-air stereo headphones with samarium cobalt magnets, high-excursion driver elements, oxygen-free litz wire cables, and minimal headband pressure.

**MDR-7.** Frequency response 16-22,000 Hz; sensitivity 101 dB/mW; impedance 55 ohms; 55 g less cable..... \$80

**MDR-5A.** Frequency response 18-22,000 Hz; sensitivity 98 dB/mW; impedance 32 ohms; 50 g less cable..... \$65

**MDR-3.** Frequency response 20-20,000 Hz; sensitivity 96 dB/mW; impedance 32 ohms; 40 g less cable..... \$50

**MDR-2.** Similar to MDR-3..... \$40

## DR-M5 Stereo Headphones

Fold-up mini stereo headphones for live or off-the-air sound monitoring; frequency response 15-22,000 Hz; sensitivity 106 dB/mW; rated input 10 mW; 32-ohm impedance; 2-m cord; 260 g..... \$65

## S Series Stereo Headphones

Stereo headphones feature 70-mm speaker, vinyl ear enclosures, rugged housing, and long curled cord; impedance 14 ohms; sensitivity 102 dB/mW; 100-mW rated input; frequency response 20-20,000 Hz; 3-m curled cord.

**DR-S5.** Volume and tone controls; 385 g..... \$50

**DR-S4.** Volume control; 375 g..... \$40

**DR-S3.** 350 g; no volume or tone control..... \$30

## DR-2 Stereo Headphones

Impedance 10 ohms; sensitivity 104 dB/mW; rated input 100 mW, frequency response 20-20,000 Hz; 2-m cord; 300 g..... \$22

## STANTON

### Stereo/Wafers XXI Headphones

Ultra-lightweight professional-standard headphone; frequency response 20-22,000 Hz  $\pm$  4 dB; sensitivity 2 V for 100 dB SPL; max. power input 0.1 W continuous; dist. 0.5% at 200-dB SPL; 100-ohm impedance at 1 kHz; brushed blue denim finish; supplied with 10-ft flat cord with heavy-duty plug; 5.9 oz..... \$70

## Dynaphase 55 Headphones

Lightweight open-audio stereo headphones with 1.5-in samarium cobalt dynamic drivers; input impedance 100 ohms  $\pm$  10% at 1000 Hz; max. input 0.25 W/ch continuous; sensitivity 110 dB SPL at 0.2 V in, 1000 Hz/ch; frequency response 20-22,000 Hz; dist. 0.25% at 110-dB SPL at 1000 Hz; adjustable padded-vinyl headband with pivot yokes and nylon tricort-covered foam ear cushions; 10-ft 4-conductor cord with no-break connector; includes adapter plug for use with portable radios and tape recorders; 5.5 oz less cord..... \$60

## Micro/Wafer XII Headphones

Super-lightweight open-audio stereo headphones with 3/4-in dynamic high-velocity drivers with syn-



thetic film diaphragms and samarium cobalt magnets; frequency response 10-20,000 Hz; dist. 0.5% at 100 dB SPL/mV at 1000 Hz; sensitivity 105 dB SPL/mV at 1000 Hz/ch; input impedance 40 ohms at 1000 Hz; max. input 0.15 W/ch continuous; adjustable lightweight headband with multi-density polyurethane foam earcushions; includes adapter plug for use with portable radios, TV sets, and tape recorders; 7-ft Y-type straight cord with plug; 2 oz less cord..... \$50

## Dynaphase 35 Headphones

Dynamic headphones with open-audio construction and 1 1/2-in Mylar diaphragm; 15-ohm impedance; frequency response 20-20,000 Hz; sensitivity 0.1 V for 100-dB SPL at 1 kHz; 0.5% dist. at 110-dB SPL; max. input 0.2 W/channel continuous; extend-adjustable headband with pivot yokes, padded vinyl cover, and vinyl-covered foam cushions; supplied with 10-ft cord and molded connector; 7 oz (less cord)..... \$45

## Dynaphase 25 Headphones

Lightweight open-audio stereo headphones with dynamic high-velocity drivers with 1-in polyester diaphragms; frequency response 10-20,000 Hz; dist. 0.5% at 110 dB SPL, 1000 Hz; sensitivity 100 dB SPL at 0.25 V in, 1000 Hz/ch; input impedance 50 ohms at 1000 Hz; max. input 0.2 W/ch continuous; adjustable padded vinyl headband with soft vinyl-covered foam earcushions; includes adapter plug for use with portable radios, TV sets, and tape recorders; 7-ft Y-type straight cord with plug; 6 oz less cord..... \$30

## STUDER/REVOX

### RH 310 Stereo Headphones

Open-type lightweight headphones designed for amplifiers rated for 4-600 ohm load impedances; frequency range 20-20,000 Hz..... \$80

## SUPEREX

### PEP-81 Electrostatic System

Consists of PEP-81 headphones and CC-81 control console; headphone frequency response 15-18,000 Hz  $\pm$  2 dB, 10-22,000 Hz  $\pm$  5 dB; dist.

0.2%; impedance-matched to CC-81 for 4-16 ohms; isolation-type headphones with fully adjustable vinyl-covered headband and foam cushions and 15-ft coiled cord; control console has level controls for both channels (20-dB range), speaker/phone rocker, on/off switch; can accommodate two sets of headphones; requires 5 W per channel min. drive; console size 11" x 3 1/2" x 6 1/2"..... \$150

### PEP-79E Electrostatic System

Consists of PEP-74 headphones and CC-79E control console; headphone frequency response 15-18,000 Hz  $\pm$  2 dB, 10-22,000 Hz  $\pm$  5 dB; negligible dist.; impedance-matched to CC-79E for 4-16 ohms; trans-air lightweight headphones with fully adjustable vinyl-covered headband and foam cushions and 15-ft coiled cord; control console is designed for use with main amp level controls, has self-protecting circuits; console size 2 1/2" H x 7" W x 4" D..... \$90

### SM-700 Headphones

Dynamic headphones with 2 3/4-in Mylar diaphragm; 35-ohm impedance; frequency response 10-20,000 Hz  $\pm$  3 dB; sensitivity 10 mW (0.6 V) for 110 dB at 400 Hz; 0.25% dist. at 400 Hz, 110-dB SPL; padded, fully adjustable steel and aluminum headband with foam-filled vinyl cushions; supplied with 15-ft cable, clothing clip, and molded stereo plug; 10 oz (less cable)..... \$70

### PRO B VI Stereophones

Each earcup features dynamic woofer, ceramic tweeter, and L/C crossover; impedance 4-16 ohms; frequency response 15-22,000 Hz; fully adjustable, vinyl-covered and padded spring steel headband with vinyl covered urethane foam cushions; includes 10-ft coiled cord and plug..... \$60

### Classic CL-1 Headphones

Lightweight, isolating-type headphones; frequency response 10-20,000 Hz; 35-ohm impedance; 0.3% dist. at 110-dB SPL (400 Hz); sensitivity 10 mW (0.6 V) for 110-dB SPL at 400 Hz; padded fully adjustable steel and aluminum headband with foam-filled vinyl cushions; 15-ft (extended) retractable cable with clothing clip and molded stereo plug; 10.6 oz (without cable)..... \$60

### TRL-99 Headphones

Dynamic headphones with 2 3/4-in Mylar diaphragm; 35-ohm impedance; frequency response 15-20,000 Hz  $\pm$  4 dB; sensitivity 6 mW for 100-dB SPL; 0.4% dist. at 400 Hz, 110-dB SPL; padded, fully adjustable, aluminum and steel headband with fabric-faced, foam-filled cushions; supplied with 15-ft cable, clothing clip, molded plug, and strain relief; 10 oz (less cable)..... \$55

### TRL-88 Trans-Linear Headphones

Featherweight open-air stereo headphones with 1.75-in micro-Mylar transducers; frequency response 18-24,000 Hz  $\pm$  5 dB; dist. 0.5%; 7-ft Y cord with molded plug; 4.25 oz..... \$50

### TRL-3 Trans-Linear Headphones

Open design headphones; frequency response 40-20,000 Hz  $\pm$  5 dB, 5-dB bass boost between 70 and 200 Hz; 80-ohm impedance; 0.6% dist. at 110 dB (400 Hz); sensitivity 6 mW for 100-dB SPL; max. input 5 V; padded, fully adjustable aluminum and steel headband; urethane foam, snap-on cushions; 15-ft (extended) retractable cable with clothing clip, molded plug, and strain relief; 8.5 oz (without cable)..... \$45

### TRL-77 Trans-Linear Headphones

Open design headphones; frequency response 45-20,000 Hz; 80-ohm impedance; max. input 5 V; adjustable, continuous padded stainless steel headband and open foam, snap-on cushions; 7-ft Y cord with molded plug and strain relief; 11.5 oz (without cable)..... \$35

### DP-903 Monitor Phone

Single hand-held earphone with swivel grip; blends left and right channels into single earphone; frequency response 20-19,000 Hz; 180-ohm imped-



ance; brown with gold trim; 7-ft cord with stereo plug.....\$20

**TRL-66 Headphones**

Dynamic headphones with 6-mm transducer; 8-ohm impedance; frequency response 40-15,000 Hz; high impact unbreakable plastic headband with padding and foam-filled vinyl cushions; 7-ft Y cord with molded plug; 9 oz (less cable) ..... \$20

**TECHNICS**

**EAH-830 Linear-Drive Headphones**

Low-distortion high-power-handling capacity; frequency range 15-35,000 Hz; max. input power 3000 mW; 125-ohm impedance; 0.3% dist.; 3-meter coiled cord; Supra-Aural ear pads; precise-fit, soft leather head pads; 450 g ..... \$80

**EAH-820 Linear-Drive Headphones**

High-power-handling capacity; frequency range 15-30,000 Hz; max. input power 3000 mW; 125-ohm impedance; 0.3% dist.; 3-meter coiled cord; Supra-Aural ear pads; precise fit, soft, wide-contact leather head pads; 430 g ..... \$60

**EAH-810 Linear-Drive Headphones**

Open-environment waveform response at eardrum; frequency range 20-25,000 Hz; max. input power 1000 mW; 63-ohm impedance; 0.5% dist. at 100 dB; 3-meter cord; Supra-Aural ear pads; precise-fit, soft, wide-contact leather head pads; 230 g..... \$40

**EAH-T805 Stereo Headphones**

Response 20-20,000 Hz; max. input 200 mW; SPL 100 dB/mW; impedance 125 ohms ..... \$30

**TOSHIBA**

**HR-811 Headphones**

Complementary back electret push-pull, full-face drive system; 2.5-micron diaphragm; frequency response 20-30,000 Hz; 8.4 oz; comes with adaptor plugs.....\$75

**HR-X1 Headphones**

Complementary back electret push-pull, full-face drive system; 2.5-micron diaphragm; frequency response 20-20,000 Hz; 5.6 oz; comes with adaptor plugs.....\$65

**HR-F1 Headphones**

Complementary back electret push-pull, full-face drive system; 2.5-micron diaphragm; frequency response 20-20,000 Hz.....\$50

**UHER by WALTER ODEMER**

**Featherweight Stereo Headphones**

Lightweight (2.2 oz) mono/stereo headphones with 8-ft coiled cord; frequency response 20-20,000 Hz; 200-ohm impedance (1 kHz); has lightweight adjustable headband and yellow foam-cushioned earpieces.

**W675.** With five-pin plug for Uher cassette recorders .....\$84

**W 775 Stereo Headphones**

Dynamic stereo headphones with one active and six aux. membranes per system; half-open design; frequency response 16-20,000 Hz; SPL 94 dB; nominal impedance 600 ohms/system; nominal loading capacity 200 mW; dist. 1.0%; auto strap adjustment; gimballed earcups; 3-m cable; 330 g... \$184

**WHARFEDALE**

**ID-2 Isodynamic Headphones**

Acoustically-damped ported isodynamic headphones with printed-circuited-on-polyester-sheet diaphragm; frequency response 20-20,000 Hz ±3 dB; sensitivity 90 dB SPL for 1 mW in, 0.3% dist.; max. SPL 120 dB; 60 ohms nominal impedance; supplied with straight cord; 12 oz (less cord).. \$120

**YAMAHA**

**YH-1000 Stereo Headphones**

Orthodynamic-design headphones with 12.7-micron 30-mg polyester film diaphragm between cerium cobalt disc magnets; frequency response 20-20,000 Hz; output 103 dB/mW SPL; 3 W rated input, max. input 10 W; HD -50 dB at 90-dB SPL, -30 dB at 120-dB SPL; impedance 100 ohms; urethane foam-padded earcups, leather-finish head strap, universal ball-joint tilt adjustment, and lockable height-adjusting sliders; includes 7.9-ft cord with stereo plug; 19 oz. with cord ..... \$220

**YH-100 Stereo Headphones**

Orthodynamic stereo headphones with lightweight polyester film diaphragms in dual-support drive unit with mutually opposed anisotropic ferrite magnets; frequency response 20-20,000 Hz; output 98 dB/

mW SPL at 106 dB/V; rated input 3 W, 10 W max.; HD 0.3% at 90-dB SPL; impedance 150 ohms; double padded headband with supra-aural earcups; includes 8-ft straight cord; 340 g less cord..... \$95

**YH-1 Stereo Headphones**

Lightweight orthodynamic design featuring sintered ferrite disc magnets with combination voice-coil diaphragm between; frequency response 20-20,000 Hz; output 94 dB/mW SPL; 3 W rated input, max. input 10 W; HD 0.3% at 90 dB SPL, 3.0% at 120 dB SPL; impedance 150 ohms; soft leather strap distributes weight over entire head; supra-aural pads; 8-ft straight cord; weight 10.2 oz with cord.....\$65

**YH-2.** Same as YH-1 except output 93 dB/mW SPL; weight 8.1 oz with cord .....\$50

**YH-3.** Similar to YH-2 except 1 W rated input, 3 W max.; 7.4 oz with cord .....\$35

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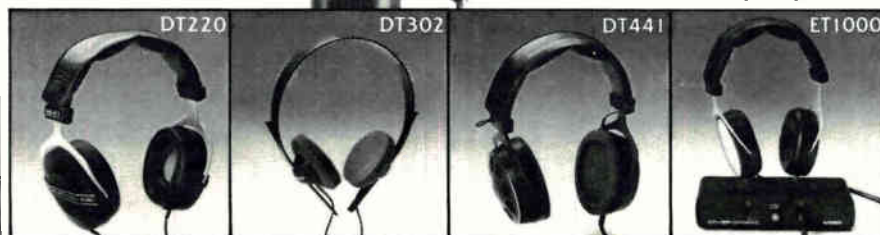
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To find out why Beyer has such an awesome appeal to musicians, engineers, and audiophiles throughout the world, visit your Beyer dealer. Listen to our full line of high-performance headphones. Then you'll know why Beyer is better.



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# 13

# MICROPHONES

## AKG

### D-330BT Hyper Cardioid Microphone

Hyper cardioid dynamic microphone with elastomer shock-suspended plug-in field-replaceable transducer system; designed for the professional vocalist; features dual-band, three-position equalizer switches and hum and noise rejection systems; frequency response 50-20,000 Hz; sensitivity -60 dBm; impedance 200 ohms; dual windscreen/pop filter; nickel-plated zinc alloy die-cast housing; includes SA-31 stand adapter and case; 2" dia. x 7.25" L; 12 oz. .... \$185

### D-2000E Super Cardioid Microphone

Super cardioid dynamic microphone with elastically shock-mounted transducer; for the professional entertainer or recording studio; frequency range 35-17,000 Hz  $\pm 3$  dB; sensitivity -52 dBm ASA; 200-ohm impedance; adjustable bass response via B-M-off switch; wire-mesh grille with integral pop filter; includes SA-12/1 stand adapter and case; nickel-plated finish; 2" dia. x 6 1/2" L; 11 oz. ... \$165

### D-320B Hyper Cardioid Microphone

Hyper cardioid dynamic microphone with elastomer shock-suspended field-replaceable transducer; designed for professional entertainer; features three-position EQ switch and hum rejecter; frequency response 80-18,000 Hz; sensitivity -57 dBm; impedance 200 ohms; dual windscreen/pop filter; nickel-plated zinc alloy diecast housing; includes SA-31 stand adapter and case; 2" dia. x 7.5" L; 10.5 oz. .... \$145

### D-120E Two-way Cardioid Microphone

Cardioid dynamic two-way microphone for the semi-professional recordist and musician; frequency range 25-16,000 Hz  $\pm 3$  dB; sensitivity -56 dBm ASA; dist. 0.5%; 200-ohm impedance; supplied with SA-20 stand adapter and case; wire mesh grille and cotton-fiber screen; 1.5" dia. x 7" L; 8 1/2 oz. .... \$135

### D-310S Cardioid Microphone

Cardioid dynamic microphone with elastomer shock-suspended transducer; designed for vocal music coverage in the home, studio, or on stage; frequency response 80-18,000 Hz; sensitivity -58 dBm; impedance 200 ohms; features integral on/off switch, windscreen/pop filter, and hum rejecter; nickel-plated zinc alloy diecast housing; includes SA-30 stand adapter and case; 1.75" dia. x 7.5" L; 8.5 oz. .... \$115

**D-310.** Same as D-310S without integral on/off switch ..... \$110

### D-1000E Cardioid Microphone

Cardioid dynamic microphone with elastomer shock-mounted transducer; doubles as studio mike and in-the-field mike; has B-M-S mode switch which provides up to 13 dB bass rolloff at 100 Hz and up to 6 dB midrange shelf attenuation at 1000 Hz; frequency range 40-17,000 Hz  $\pm 3$  dB; sensitivity -52 dBm; 200-ohm impedance; sintered bronze windscreen; nickel-plated housing; supplied with SA-12 stand adapter and case; 1.5" dia. x 6.25" L; 8 1/2 oz. .... \$110

### D-190E Cardioid Microphone

Cardioid dynamic microphone for speech or music performing and recording; frequency range 30-15,000 Hz; sensitivity -52 dBm; 200-ohm impedance; sintered bronze windscreen; nickel-plated housing; supplied with SA-11 stand adapter and case; 1.5" dia. x 6.25" L; 6 1/2 oz. .... \$95

**D-190ES.** Same as D-190E with integral on/off switch ..... \$100

### D-160E Omnidirectional Microphone

Omnidirectional dynamic microphone designed for semi-professional recordist; frequency response 40-20,000 Hz; sensitivity -58 dBm; impedance 250 ohms; W-20 windscreen; nickel-plated finish; supplied with SA-23/2 stand adapter and case; 7/8" dia. x 5 1/2" L; 4.5 oz. .... \$95

### D-130E Omnidirectional Microphone

Omnidirectional dynamic microphone with shock-suspended transducer; designed for newsfilm and ENG applications; frequency response 50-15,000 Hz; sensitivity -54.5 dBm; impedance 200 ohms; hum rejecter and sintered bronze windscreen; nickel-plated zinc alloy diecast housing; includes SA-30 stand adapter and case; 1.75" dia. x 7" L; 9 oz. .... \$80

### D-125E Cardioid Microphone

Cardioid dynamic microphone with shock-suspended transducer; for general-purpose applications; hum rejecter and heavy-duty wire-mesh windscreen; frequency range 100-18,000 Hz; sensitivity -53.5 dBm; 200-ohm impedance; supplied with SA-30 stand adapter and case; 1.75" dia. x 7" L; 8 oz. .... \$80

### Stereo-Pair Microphones

**D-120SPL.** Low-impedance package. Includes two D-120E cardioid dynamic microphones with stand adapters and cases, two KM-231/1 collapsible-tripod table stands, and two 15-ft low-impedance cable assemblies (female XLR-transformer with phone plug) ..... \$175

**D-120SPH.** Same as D-120SPL except high-impedance package with two 15-ft high-impedance cable assemblies (female XLR-transformer with phone plug) ..... \$190

**D-190SPL.** Low-impedance package; includes two D-190E cardioid dynamic microphones with stand adapters and cases; two KM-231/1 collapsible-tripod table stands; and two 15-ft low-impedance cable assemblies (female XLR-phone plug) ..... \$205

**D-190SPH.** Same as D-190SPL except high-impedance package with two 15-ft high-impedance cable assemblies (female XLR-transformer with phone plug) ..... \$220

### C-414EB Polydirectional Condenser Mic

FET condenser microphone with large-diaphragm capsule; features selectable omni, cardioid, hypercardioid, or figure-eight pattern, three-position (flat/75-Hz/150-Hz) bass roll-off switch, and 0/-10/-20 dB attenuator switch. Frequency response 20-20,000 Hz (all patterns); sensitivity -43.5 dBm; max. SPL 138 dB with 0.4% THD; impedance 200 ohms; 12/48 V phantom powered; supplied with SA-18/3 stand adapter, W-26 wind-

screen, and case; 1.75" dia. x 5.5" L; 12 oz. \$695

**C-414E1.** Same as C-414EB except has nine selectable polar patterns via phantom-powered remote control; remote control unit can operate two microphones independently; includes one microphone, S-42E1 remote control, MK-23/20 66-ft cable, W-26 windscreen, SA-18/3 stand adapter, and case .....

### C-450 Modular Condenser Mic System

Modular system consists of five interchangeable preamps, nine interchangeable small-diaphragm capsules, and associated accessories. All C-450 FET preamps have 5-30,000 Hz frequency range, 200-ohm source impedance, and 500-ohm load impedance; C-452E preamp has 48-V power and C-451E preamp 9-52 V; C-451EB and C-452EB have two-position bass roll-off; choice of matte-nickel or satin-black finish. All capsules are condenser-designed and have frequency range of 20-20,000 Hz. Capsules available are CK-1 cardioid, CK-1S cardioid with rising response, CK-4 figure-eight, CK-5 cardioid with shock-suspended transducer and integrated windscreen/pop filter, CK-8 short shotgun, CK-9 long shotgun, and CK-22 omnidirectional with built-in pop filter. Preamps and capsules available either separately or in combinations.

C-451E preamp .....	\$323
C-451EB preamp .....	\$344
C-452EB preamp .....	\$225
CK-1 cardioid .....	\$100
CK-1S cardioid .....	\$100
CK-4 figure-eight .....	\$235
CK-5 cardioid .....	\$187
CK-8 short shotgun .....	\$187
CK-9 long shotgun .....	\$220
CK-22 omnidirectional .....	\$106

### Stereo Condenser Microphone Systems

#### C-422 Condenser Mic/FET Preamp

Large-diaphragm stereo condenser microphone with FET preamplifier; features nine polar patterns per channel selected via remote control for M-S or X-Y recording techniques; 0/-10/-20-dB pre-attenuator; 9-52 V phantom powered; LED aiming lights. Frequency response 20-20,000 Hz; sensitivity -45 dBm; impedance 200 ohms; includes S-42E remote control, MK-42/20 66-ft cable, W-42 windscreen, H-15/9 suspension mount/stand adaptor, and foam-lined carrying case; 1.5" dia. x 9.25" L; 15.5 oz. .... \$2100

#### C-34 Condenser Mic/FET Preamp

Small-diaphragm stereo condenser microphone with FET preamplifier; features nine polar patterns per channel selected via remote control for M-S or X-Y recording techniques; phantom powering 9-52 V. Frequency response 20-20,000 Hz; sensitivity -43.5 dBm; impedance 200 ohms; includes S-42 remote control, MK-42/20 66-ft cable, W-34 windscreen, H-15/6 suspension mount/stand adapter, and foam-lined carrying case; 1.5" dia. x 7.75" L; 9.75 oz. .... \$1450

**C-33.** Same as C-34 except for selectable polar patterns; cardioid capsules for X-Y stereo recording with one capsule fixed to main housing and other rotatable through 0-180-degree angle; includes



MK-32/20 66-ft cable, W-34 windscreen, H-15/6 suspension mount/stand adapter, and foam-lined carrying case..... \$850

## ARISTA

### Cardioid Microphones

**663.** Cardioid electret microphone; frequency response 40-15,000 Hz; attachable windscreen; stand adapter; 20-ft cable; 10<sup>1</sup>/<sub>4</sub>" x 7<sup>1</sup>/<sub>8</sub>" dia ..... \$47  
**605.** Dual impedance cardioid dynamic microphone; frequency response 40-15,000 Hz; 600 and 50,000 ohm impedances; mike stand adapter; 20-ft black shielded cable; triple mesh windscreen ..... \$39

### Omnidirectional Microphones

**666.** Ultra-miniature lavalier electret microphone; frequency response 30-16,000 Hz; 600-ohm impedance; plug assembly houses FET pre-amp; 20-ft cord..... \$44  
**651.** Dynamic "night club" effect omnidirectional reverberation microphone features variable echo; frequency response 55-10,000 Hz, -74 dB output; 20 ft cord; stand included ..... \$55

## AUDIO-TECHNICA U.S.

### AT814 Unidirectional Microphone

Moving-coil dynamic cardioid microphone designed for professional recording and broadcasting studios; frequency response 50-16,000 Hz; sensitivity -56 dB (0 dB-1 mW/10 dynes/cm<sup>2</sup>); EIA sensitivity -150 dB; 600-ohm nominal impedance; features high-efficiency windscreen and balanced low-impedance output; includes 16.5-ft cable with XLR/A3F professional connector with 1/4-in phone plug, tapered slip-in stand clamp, and carrying case ..... \$120

**AT814/XLR.** AT814 with XLR/A3M connector on output end of cable..... \$124

### AT813 Unidirectional Microphone

Incorporates electret condenser permanently polarized element; 6-micron polymer diaphragm; frequency response 20-20,000 Hz; sensitivity -55 dB; 600-ohm nominal impedance; max. input SPL 125 dB; S/N 50 dB (1 kHz, 1 μbar); AA penlight battery powered; supplied with 16.5-ft cable with professional XLR/A3F connector with 1/4-in phone plug, slip-in stand clamp, carrying case, and battery..... \$105

**AT813/XLR.** AT813 with XLR/A3M connector on output end of cable..... \$109

### AT812 Unidirectional Microphone

Incorporates moving-coil dynamic element; frequency response 50-18,000 Hz; sensitivity -60



dB; 600-ohm nominal impedance; supplied with 16.5-ft cable with professional XLR/A3F connector, slip-in stand clamp, and carrying case..... \$95

**AT812/XLR.** AT812 with XLR/A3M connector on output end of cable..... \$99

### AT811 Unidirectional Microphone

Incorporates electret condenser permanently polarized element; frequency response 50-20,000 Hz; sensitivity -56 dB; 600-ohm nominal impedance; max. input SPL 130 dB; S/N 50 dB (1 kHz, 1 μbar); battery powered; supplied with 16.5-ft cable with professional XLR/A3F connector with 1/4-in phone plug, slip-in stand clamp, carrying case, and

battery..... \$90  
**AT811/XLR.** AT811 with XLR/A3M connector on output end of cable..... \$94

### AT803S Sub-Miniature Omni Mic

Electret condenser permanently charged element; omnidirectional pattern; 5-micron polymer diaphragm; frequency response 50-15,000 Hz; sensitivity -57 dB; 600-ohm impedance; balanced output; battery holder/belt clip with on/off switch; uses AA penlight battery; includes clothing clip, windscreen, battery, and carrying case; 16<sup>1</sup>/<sub>2</sub>-ft cable; mic 0.4" diameter x 0.8" L ..... \$90

**AT803S/XLR.** AT803S with XLR/A3M connector on output end of cable..... \$94

### AT802 Omnidirectional Microphone

Incorporates moving-coil dynamic element; frequency response 50-16,000 Hz; sensitivity -56 dB; 600-ohm nominal impedance; supplied with 16.5-ft cable with professional XLR/A3F connector, slip-in stand clamp, and carrying case..... \$80

**AT802/XLR.** AT802 with XLR/A3M connector on output end of cable..... \$84

### AT801 Omnidirectional Microphone

Incorporates electret condenser permanently polarized element; frequency response 40-18,000 Hz; sensitivity -48 dB; 600-ohm nominal impedance; max. input SPL 125 dB; S/N 50 dB (1 kHz, 1 μbar); AA penlight battery powered; supplied with 16.5-ft cable with professional XLR/A3F connector, slip-in stand clamp, carrying case ..... \$75

**AT801/XLR.** AT801 with XLR/A3M connector on output end of cable..... \$79

### AT805S Miniature Omni Mic

Electret condenser permanently charged element; omnidirectional pattern; frequency response 50-15,000 Hz; sensitivity -57 dB; 600-ohm impedance; unbalanced output; built-in on/off switch; uses E675 battery; includes clothing clip, lavalier cord, windscreen, belt clip, battery, carrying case, and 16<sup>1</sup>/<sub>2</sub>-ft cable with 1/4-in phone plug; mic 0.6" diameter x 2" L..... \$55

### AT816/2 Unidirectional Microphone

Stereo pair of unidirectional moving-coil dynamic microphones designed for home stereo recording; frequency response 60-15,000 Hz; sensitivity -62 dB; nominal impedance 600 ohms (matches 150-1000 ohm inputs); includes slip-on desk stands and 13-ft cables with 1/4-in phone plugs..... \$60 pr.

### Artist Series Microphones

#### ATM91 Unidirectional Microphone

Cardioid microphone with permanently polarized fixed-charge condenser element; 4-micron gold vaporized diaphragm; designed for vocal applications; frequency response 70-18,000 Hz; sensitivity -56 dB; EIA sensitivity -150 dB; 600-ohm nominal impedance; max. input SPL 130 dB; S/N 50 dB at 1000 Hz, 1 μbar; leakproof UM3 AA battery-powered; includes slip-in stand clamp and carrying case ..... \$170

#### ATM41 Unidirectional Microphone

Cardioid microphone with moving-coil dynamic element; frequency response 50-16,000 Hz; sensitivity -56 dB; EIA sensitivity -150 dB; 600-ohm impedance; includes slip-in stand clamp and carrying case ..... \$165

#### ATM21 Unidirectional Microphone

Cardioid microphone with moving coil dynamic element; designed for instrumental applications; frequency response 50-18,000 Hz; sensitivity -60 dB; EIA sensitivity -154 dB; 600-ohm impedance; includes slip-in stand clamp and carrying case ..... \$145

**ATM21SM.** Same as ATM21 except supplied with shock mount and windscreen in fitted case .... \$170

#### ATM31 Unidirectional Microphone

Cardioid microphone with permanently polarized fixed-charge condenser element; 4-micron gold vaporized diaphragm; frequency response 40-20,000

Hz; sensitivity -55 dB; EIA sensitivity -149 dB; 600-ohm impedance; max. input SPL 125 dB; S/N 60 dB at 1000 Hz, 1 μbar; leakproof AA battery-powered; includes slip-in stand clamp and carrying case..... \$138

### ATM11 Unidirectional Microphone

Cardioid microphone with permanently polarized fixed-charge condenser element; designed for instrumental applications; frequency response 50-20,000 Hz; sensitivity -56 dB; EIA sensitivity -150 dB; 600-ohm impedance; max. input SPL 130 dB; S/N 50 dB at 1000 Hz, 1 μbar; leakproof UM3 AA battery-powered; includes slip-in stand clamp and carrying case..... \$138

**ATM11SM.** Same as ATM11 except supplied with shock mount and windscreen in fitted case.... \$163

**ATM10.** Similar to ATM11 but omnidirectional pattern; frequency response 40-18,000 Hz; sensitivity -48 dB; EIA sensitivity -142 dB; max. input SPL 125 dB..... \$120

**ATM10SM.** Same as ATM10 except supplied with shock mount and windscreen in fitted case.... \$145

## BEYER DYNAMIC by BURNS

### M-130 Bi-Directional Ribbon Microphone

Figure-8 bidirectional ribbon microphone incorporating two 0.012-in aluminum ribbons that move



one above the other with 0.020-in separation; designed for studio broadcasting or recording; frequency response 40-18,000 Hz; polar pattern provides 3-dB attenuation at 90 degrees; ribbon design protects from overload or mechanical shock; supplied with standard three-pin Switchcraft connector; 5.04" L..... \$389

### M-160 Super Cardioid Ribbon Mic

Super-cardioid dynamic double-ribbon microphone; frequency response 40-18,000 Hz ±2.5 dB; sensitivity -152 dBm (EIA); 200-ohm impedance; low sensitivity at 120 degrees to axis; suitable for stereo recording; Cannon XLR termination ..... \$334

### M-88 Super Cardioid Moving-Coil Mic

Super-cardioid dynamic type; frequency response 30-20,000 Hz ±2.5 dB; sensitivity -144 dBm (EIA); special transducer mounting eliminates body noise; will withstand rough handling, humidity and temperature changes; for studio work, recording artists, and instrumentalists..... \$299

### M-500 Super Cardioid Ribbon Mic

Super-cardioid dynamic design; frequency response 40-18,000 Hz ±2.5 dB; sensitivity -153 dBm (EIA); 200-ohm impedance; has four-stage integral blast filter and Cannon XLR termination; specially designed for rock vocals; low pop and breath noises even when singer's lips touch microphone..... \$199

### M-260-S Super Cardioid Ribbon Mic

Super-cardioid dynamic design; frequency response 50-18,000 Hz ±2.5 dB; sensitivity -153 dBm (EIA); high-energy ribbon; 200-ohm impedance; suitable for speech, music, or vocals; has on/off switch and Cannon XLR termination..... \$189

### M-101 Omnidirectional Moving-Coil Mic

Omnidirectional type; frequency response 40-20,000 Hz; sensitivity -150 dBm (EIA); 200-ohm impedance; withstands pressures associated with modern music (modulated voltages up to 2 V); low handling noise; 4<sup>1</sup>/<sub>2</sub>" x 7<sup>1</sup>/<sub>8</sub>"; Cannon XLR termination..... \$189

### M-201 Super Cardioid Moving-Coil Mic

Super-cardioid dynamic type; frequency response 40-18,000 Hz; sensitivity -149 dBm (EIA); 200-ohm impedance; 6" x 1<sup>1</sup>/<sub>4</sub>"; Cannon XLR termination; comes with clamp and case ..... \$179

# 13 MICROPHONES

## M-111 Omnidirectional Lavalier Mic

Miniature omnidirectional dynamic lavalier microphone with filter providing flat frequency response when unit is suspended over chest; designed for TV broadcasting; frequency response 60-15,000 Hz (decreases 6 dB between 700-800 Hz and rises to 8 dB from 1000-10,000 Hz); output -62 dBm; 200-ohm impedance; spring-mounted inner casing suspended within outer housing; available with standard Cannon three-pin connector or one-meter cable and 6-pin connector for use with company's TS 73 or TS 83 wireless pocket transmitter; clamp and cord in black leatherette case; black matte finish; 3.35" L ..... \$169

**M-112.** Similar to M-111 minus chest filter; zinc-alloy diecast case ..... \$145

## MCE-5 Omnidirectional Microphone

Broadcast-quality clip-on omnidirectional electret condenser microphone designed for on-camera applications; frequency response 20-20,000 Hz; S/N 62 dB; max. SPL 116 dB at 1000 Hz; EIA sensitivity -141 dBm; electrical impedance 700 ohms; load impedance 2500 ohms; supplied with detachable windscreens and one-meter cable with 6-pin male connector; battery-powered with T3400 (or equiv.), Varta 4023, or Mallory Px23 battery or 12-/48-V phantom-powered; 60-hr battery life; non-reflecting dark surface; 6.5 g ..... \$160

## M-69 Cardioid Moving-Coil Microphone

Dynamic cardioid design; frequency response 50-16,000 Hz  $\pm 3$  dB; sensitivity -144 dBm (EIA); 200-ohm impedance; for indoor/outdoor applications; unaffected by temperature or humidity ..... \$150

**M-69-SM.** Same as M-69 but with on/off and bass-cut switch ..... \$160

## M-400 Moving-Coil Cardioid Microphone

Moving-coil dynamic super-cardioid type; frequency response 50-15,000 Hz; sensitivity -146 dBm (EIA); 200-ohm impedance; on-off switch; three-pin XLR termination; built-in blast filter; 24.6-ft cable; black anodized aluminum case and clamp ..... \$119

**M-400S.** Same as M-400 except with on/off switch ..... \$121

## M-818 Matched-Pair Microphone

Cardioid dynamic matched-pair microphones; frequency response 150-16,000 Hz; output level -55.8 dBm; 500-ohm impedance; front-to-back separation 18 dB; comes with attached 6.5-ft cables with 1/4-in phone plug, two table stands, mic clamps, stereo adaptor cable, mounting bar, and presentation case; 5.47" L ..... \$150 pr.

## CERWIN-VEGA

### Professional Series

#### UE-1 Cardioid Microphone

Uni-electret microphone for stage instruments; frequency response 80-20,000 Hz; dual 600- and 10,000-ohm impedances; sensitivity -70 dB  $\pm 3$  dB into 600 ohms (0 dB = 1 V/1  $\mu$ bar); built-in pop filter; on-off and tone impedance switches; includes 16-ft cable with 1/4-in three-conductor phone plug and Cannon XLR-3-11C equivalent connector; 1.930" x 7.914" ..... \$125

#### UD-1 Cardioid Microphone

Unidirectional dynamic microphone for live vocal application or studio use; frequency response 70-15,000 Hz; 600-ohm impedance; sensitivity -73 dB  $\pm 3$  dB (0 dB = 1 V/1  $\mu$ bar); built-in pop filter; on-off switch; includes 16-ft cable with 1/4-in three-conductor phone plug and Cannon XLR-3-11C equiv. connector; 1.575" x 7.323" ..... \$100

## CROWN

### Pressure Zone Microphones

Hemispherically-patterned electret microphones engineered to respond to coherent wave front at surface of acoustic boundary, thus eliminating comb filtering; designed for television, theater, concert, and PA applications. Features reduced pressure-calibrated electret modules mounted within a few millimeters of rigid surface and facing a boundary; need for fewer channels; simplified design for easier set up; handles 150-dB SPL. Equipped with standard power supply of combination transformer, battery, and phantom power supply arranged in 3-inch square metal cube or phantom power supply in cylindrical metal tube with XLR connectors; four models available in gold or black.

**General Purpose.** XLR connector, electret capsule, and mike cantilever mounted on 1/4-in aluminum plate 5 x 6 in; wall or floor positioning or suspension above choir or orchestra ..... \$350

**Low Profile.** Cantilever holding electret capsule, mounted on 2 x 3-in aluminum plate; XLR connector at end of several feet of cable; suitable for conference rooms or television programming ..... \$350

**Flush Mount.** All connections at section of mike extending below level of capsule, ensuring invisibility of mike; suitable for mounting into podium, lectern, or pulpit; cantilever capsule protected from objects or papers by three small metal pegs ..... \$350

**Lavalier.** Smallest model of PZMTM; designed to be worn on tie, scarf, or coat ..... \$350

## ELECTRO-VOICE

### 644 Cardiline Microphone

Cardiline very directional dynamic microphone; flat response 40-12,000 Hz; -53 dB output; switchable high and low impedance; on/off switch; MC4F-type mike connector and 15-ft cable with matching connector; gray finish ..... \$186

### 1777 Cardioid Microphone

Cardioid microphone with electret element; frequency response 60-18,000 Hz; -54 dB output; 150-ohm impedance; EIA sensitivity -144 dB; powered by 4.5 V internal battery or 24-28 V phantom supply; built-in Acoustifoam filter; supplied with 15-ft cable, A3F connector, and stand adapter; zinc and aluminum with non-reflecting gray finish ..... \$147

### 1776 Cardioid Microphone

Single-D cardioid electret condenser microphone; frequency response 60-18,000 Hz; -50 dB output; low impedance; on/off switch; A3F-type mike connector and 15-ft cable with matching connector; supplied with stand adapter; nonreflective gray finish ..... \$122

**1776P.** Same as 1776 but with 25-ft cable with two professional connectors ..... \$129

### 670A Cardioid Microphone

Single-D cardioid dynamic microphone; shaped response 60-14,000 Hz; -61 dB output (hi-Z), -60 dB output (lo-Z); switchable high and low impedance; on/off switch; A3F-type mike connector and 15-ft cable with matching connector; supplied with stand clamp; gray finish ..... \$111

### 636 Omnidirectional Microphone

Omnidirectional dynamic microphone; flat response 60-13,000 Hz; -58 dB output; switchable high and low impedance; on/off switch; MC4F-type mike connector and 15-ft cable with matching connector; satin chrome finish ..... \$107

### 671A Cardioid Microphone

Single-D cardioid dynamic microphone; shaped response 60-14,000 Hz; -56 dB output (hi-Z), -57 dB output (lo-Z); switchable high and low impedance; on/off switch; A3F-type mike connector and 15-ft cable with matching connector; supplied with stand clamp and integral windscreens/pop filter; satin chrome finish ..... \$98

**671AP.** Same as 671A but with 25-ft cable with two professional connectors ..... \$101

### 660 Super Cardioid Microphone

Continuously Variable-D super cardioid microphone; shaped response 90-13,000 Hz; -56 dB output; switchable high and low impedance; A3F-type mike connector and 15-ft cable with matching connector; supplied with stand clamp; satin chrome finish ..... \$94

**660A.** Same as 660 with gray finish ..... \$94

**660P.** Same as 660 but with 25-ft cable with two professional connectors ..... \$98

### 647A Omnidirectional Microphone

Omnidirectional dynamic microphone; shaped response 60-12,000 Hz; -60 dB output; high- and low-impedance models available; integral cable; supplied with lavalier neckcord, belt clip, and stand clamp; gray finish ..... \$87

### 630 Omnidirectional Microphone

Omnidirectional dynamic microphone; flat response 60-11,000 Hz; -55 dB output; switchable high and low impedance; on/off switch; MC4F-type mike connector and 15-ft cable with matching connector; satin chrome finish ..... \$87

### 627C Cardioid Microphone

Single-D cardioid dynamic microphone; shaped response 60-13,000 Hz; -58 dB output; switchable high and low impedance; on/off switch; A3F-type mike connector and 15-ft cable with matching connector; supplied with stand clamp; satin chrome finish ..... \$78

**627CP.** Same as 627C but with 25-ft cable with two professional connectors ..... \$84

### 631B Omnidirectional Microphone

Omnidirectional dynamic microphone; frequency response 80-13,000 Hz; -56 dB output; switchable high and low impedance; on/off switch; A3F-type mike connector and 15-ft cable with matching connector; satin chrome finish ..... \$74

**631BP.** Same as 631B but with 25-ft cable with two professional connectors ..... \$78

### 607L Noise-Cancelling Microphone

Noise-cancelling dynamic microphone; shaped response 200-4000 Hz; -54 dB output; cancels sound more than 1/4-in from face; low-impedance; MC1M-type connector and 15-ft cable with matching connector; gray finish ..... \$71

### 626A Cardioid Microphone

Single-D cardioid dynamic microphone; shaped response 70-12,000 Hz; -56 dB output; switchable high and low impedance; on/off switch; integral cable; supplied with stand clamp; non-reflective fawn beige finish ..... \$65

**626AP.** Same as 626A but with 25-ft cable with two professional connectors ..... \$68

### 634B Omnidirectional Microphone

Omnidirectional dynamic microphone; shaped response 70-10,000 Hz; -57 dB output; high- and low-impedance models available; integral cable; gray finish ..... \$44

## Professional Microphone Systems

### CL42S Condenser Shotgun System

Cardiline hypercardioid (distributed front above 1 kHz) microphone with electret element; frequency response 90-12,000 Hz; -33 dB output; 250 ohm impedance; A3F-type connector and small coil cord; supplied with shock mount, handle, and Acoustifoam windscreens; fawn beige micromatte finish ..... \$640

### CH15S Hypercardioid Microphone

Hypercardioid microphone with electret element; frequency response 55-13,500 Hz; 150 ohm impedance; supplied with miniature shock mount, utility storage case, and windscreens; fawn beige micromatte finish ..... \$493

### DL42 Cardiline Microphone

Cardiline very directional dynamic microphone; shaped response 50-12,000 Hz; -50 dB output; long-reach pickup; low impedance; integral cable;



supplied with carrying case, windscreen, shock mount, and handle; fawn beige finish..... \$450

### 667A Cardioid Microphone

Continuously Variable-D cardioid dynamic microphone; shaped response 40-10,000 Hz; -51 dB output; boom or fishpole use; low impedance; passive equalizer switch provides three LF and two HF variations; A3F-type mike connector and 15-ft cable with matching connector; supplied with integral windscreen/pop filter and shock mount; gray.. \$420

### RE20 Cardioid Microphone

Continuously Variable-D cardioid dynamic microphone; flat response 45-18,000 Hz; -57 dB output; built-in shock mounting and electrical shield; low impedance; bass tilt-down switch; A3F-type mike connector and 15-ft cable with matching connector; supplied with metal carrying case and stand adapter; nonreflective fawn beige finish..... \$405

### C015P Condenser Omni Microphone

Omnidirectional phantom-powered electret condenser microphone; designed for up-close studio and stage miking and distant pickups; frequency response 20-20,000 Hz; impedance 150 ohms; output -45 dB; max. SPL 145 dB at 1000 Hz, 1% THD; equiv. noise level -26 dB SPL, A weighted; includes 15-ft cable, 315A windscreen, 310A clamp, and metal carrying case; fawn gray micromatte finish; 7.5 oz ..... \$257

### RE18 Cardioid Microphone

Variable-D dynamic cardioid microphone; flat response 80-15,000 Hz; 150-ohm impedance; -57 dB output; integral shock mount; low-profile blast filter; A3F-type mike connector with 15-ft cable; supplied with stand adapter and vinyl carrying pouch..... \$248

### CS15P Cardioid Microphone

Single-D cardioid dynamic microphone; shaped response 40-18,000 Hz; -45 dB output; remote powering; low impedance; A3F-type mike connector and 15-ft cable with matching connector; supplied with windscreen, stand clamp, and metal carrying case; nonreflective fawn beige finish..... \$239

### RE55 Omnidirectional Microphone

Omnidirectional dynamic microphone; flat response 40-20,000 Hz; -55 dB output; low impedance; A3F-type mike connector and 15-ft cable with matching connector; supplied with stand clamp and metal case; nonreflective fawn beige finish... \$235

### RE16 Super-Cardioid Microphone

Continuously Variable-D super cardioid dynamic microphone; shaped response 80-15,000 Hz; -56 dB output; low impedance; bass tilt down switch; A3F-type mike connector and 15-ft cable with matching connector; supplied with stand clamp, metal carrying case, and integral windscreen/pop filter; nonreflective fawn beige finish ..... \$231

### RE15 Super-Cardioid Microphone

Variable-D dynamic super-cardioid microphone; designed for broadcast and high-quality sound reinforcement; frequency response 80-15,000 Hz; impedance 150 ohms; output -56 dB; EV acoustic alloy diaphragm; includes 15-ft cable, 310A clamp, and metal carrying case; fawn beige micromatte finish; 6 oz. .... \$222

### RE51 Omnidirectional Microphone

Omnidirectional dynamic microphone; shaped response 60-10,000 Hz; output -54 dB; hands-free use; amplifier clips on belt; cough button, battery light, level adjustment, and on/off switch; low impedance; A3F-type mike connector and 15-ft cable with matching connector; supplied with preamplifier and headband; black finish ..... \$186

### C085A Omni "Tie-Tac" Microphone

Omnidirectional condenser element, electret microphone; shaped response 70-16,000 Hz; -56 dB output; battery housing/cable connector may be clipped to belt; low impedance; A3F-type mike connector and 15-ft cable with matching connector; supplied with windscreen, belt clip, tie clasp as-

sembly, and metal carrying case; nonreflective fawn beige finish..... \$166

### RE11 Super-Cardioid Microphone

Continuously Variable-D super cardioid dynamic microphone; shaped response 90-13,000 Hz; -56 dB output; bass tilt down switch; low impedance; A3F-type mike connector and 15-ft cable with matching connector; supplied with stand clamp, metal carrying case, and integral windscreen/pop filter; nonreflective fawn beige finish ..... \$155

### RE5D Omnidirectional Microphone

Omnidirectional dynamic microphone; shaped response 80-13,000 Hz; -55 dB output; double-wall, shock-isolated case and special cable for noise-free operation; low impedance; A3F-type mike connector and 15-ft cable with matching connector; supplied with stand clamp, metal carrying case, and integral windscreen/pop filter; nonreflective fawn beige finish ..... \$132

### DS35 Cardioid Microphone

Single-D cardioid dynamic microphone; shaped response 60-17,000 Hz; -61 dB output; low impedance; A3F-type mike connector and 15-ft cable with matching connector; supplied with stand clamp, metal carrying case, and integral windscreen/pop filter; nonreflective fawn beige finish ..... \$125

### C090 Miniature Omni Microphone

Miniature omnidirectional microphone with electret element; frequency response 40-15,000 Hz; -57 dB output; 150 ohm impedance; EIA sensitivity -148 dB; battery powered; supplied with windscreen, belt clip, storage pouch, tie clasp, and 6-ft cable; fawn beige micromatte finish..... \$125

### RE85 Omnidirectional Microphone

Omnidirectional dynamic microphone; shaped response 90-10,000 Hz; -61 dB output; isolated shock-mounted construction and cable for noise-free operation; low impedance; integral cable; supplied with lavalier neckcord, tie clasp assembly, carrying pouch, and belt clip; champagne finish ..... \$118

### 635A Omnidirectional Microphone

Omnidirectional dynamic microphone; shaped response 80-13,000 Hz; -55 dB output; low impedance; A3F-type mike connector and 15-ft cable with matching connector; supplied with stand clamp; nonreflective fawn beige finish ..... \$79

## GC/AUDIOTEX

### Electret Condenser Cardioid Mic

Unidirectional pattern to minimize pickup from rear and sides; on/off slide switch; frequency response 50-13,000 Hz; impedance 600 ohms; sensitivity -69 dB (1 kHz); comes with 20-ft cable, desk stand, black vinyl storage case. 30-2316. .... \$57

### Dynamic Cardioid Microphone

For recording groups and soloists; cardioid pattern; wide, flat frequency response 50-17,000 Hz; output -58 dB (on high impedance); rugged construction; built-in windscreen; 20-ft cable with standard phone plug and adapter for floor or desk stand; built-in volume control with on/off switch; dual (hi/lo) impedance. 30-2314..... \$42

### Cardioid Microphone

Response 10-10,000 Hz; output -64 dB (on high impedance); rugged construction; comes with 15-ft cable, standard phone plug, swivel holder, on/off slide switch, and windscreen for outdoor use; dual (hi/lo) impedance. 30-2312. .... \$37

### Cardioid Microphone

Response 100-12,000 Hz; dual impedance; comes with 10-ft cable with standard phone plug, on/off slide switch, desk stand; sensitivity -54 dB (high impedance). 30-2310..... \$34

### Tie Tack Lapel Microphone

For PA and voice taping; frequency response

20-20,000 Hz; impedance 1000 ohms; sensitivity -72 dB  $\pm$  3 dB; comes with 13-ft cord, tie-tack holder, mercury battery. 30-2318. .... \$25

## GC/CALECTRO

### Q4-152 Cardioid Microphone

Cardioid dynamic microphone; frequency response 50-17,000 Hz; output -58 dB  $\pm$  3 dB at 1000 Hz; impedance 30,000 ohms; 16.5-ft cord with connector and lavalier strap included..... \$34

### Q4-157 Omnidirectional Microphone

Lightweight omnidirectional dynamic microphone with satin silver finish; frequency response 100-10,000 Hz; dual impedance 250/50,000 ohms; output -78 dB (low), -60 dB (high); swivel holder and 15-ft cable included ..... \$30

### Q4-158 Cardioid Microphone

Unidirectional dynamic microphone; frequency response 100-12,000 Hz; sensitivity -73 dB/600 ohms, -54 dB/50,000 ohms; dual impedance 600 ohms and 50,000 ohms; includes stand holder, base, and 10-ft cable with plug..... \$29

### Q4-170 Matched-Pair Omni Mics

Omnidirectional matched-pair stereo microphones for voice and stereo recording applications; on/off switch; windscreen; frequency response 100-10,000 Hz; impedance 500 ohms; sensitivity -74 dB  $\pm$  3 dB; includes desk stand and 4-ft cord with plug..... \$17

### Q4-142 Lavalier Microphone

Hand-held lavalier microphone; frequency response 70-12,000 Hz; output -57 dB; impedance 30k ohms; includes 3-ft cord with mini phone plug. \$14

## HME

### 22E Wireless Microphone System

VHF high-band wireless microphone system with dynamic expansion; designed for motion picture, broadcasting, and theatrical uses; dynamic range extended to more than 100 dB typically; pocket-sized for use with lapel microphone ..... \$2195

## JVC

### M-510 Electret Condenser Microphone

Super-directional/unidirectional pattern; frequency response 40-20,000 Hz; sensitivity -68 dB (super), -71 dB (uni); S/N better than 50 dB; 13-dB gain loss in passive mode ..... \$190

### M-201 Electret Condenser Microphone

Frequency response 40-18,000 Hz; sensitivity -71 dB; S/N better than 47 dB at 1000 Hz; output impedance 600 ohms ..... \$60

## MURA

### DX-30V Cardioid Microphone

Battery-powered electret condenser microphone; frequency response 20-18,000 Hz; sensitivity -48 dB (high impedance), -62 dB (low impedance); impedance 600 and 50,000 ohms; on/off switch; supplied with 20-ft cable with 1/4-in phone plug, battery, mic holder, and styrofoam case with sleeve ..... \$76

### DX-20V Cardioid Microphone

Slimline design; frequency response 60-15,000 Hz; sensitivity -56 dB (high impedance), -74 dB (low impedance); impedance 600 and 50,000 ohms; on/off switch; supplied with 20-ft cable with 1/4-in phone plug, mic holder, and styrofoam case with sleeve ..... \$50

### DX-129 Cardioid Microphone

Ball-type dynamic microphone with built-in pop and blast filters; frequency response 40-14,000 Hz;

# 13 MICROPHONES

sensitivity -58 dB at 1000 Hz; impedance 600 and 50,000 ohms; on/off switch; supplied with 20-ft cable and stand adapter; black satin and chrome finish.....\$50

## DX-247 Omnidirectional Microphone

Dynamic microphone with removable windscreen; for vocals and recording; frequency response 50-14,000 Hz; sensitivity -57 dB at 1000 Hz; impedance 600 and 50,000 ohms; on/off switch; includes 20-ft cable with 1/4-in phone plug; black satin and chrome finish.....\$39

## DX-235 Omnidirectional Microphone

Omnidirectional single-impedance microphone; frequency response 50-15,000 Hz; sensitivity -78 dB at 1000 Hz; impedance 600 ohms; on/off switch; includes stand, styrofoam case with sleeve, 1/4-in adapter plug, and 6-ft cable with attached miniature plug.....\$28

## EX-2798 Omnidirectional Lapel Mike

Electret condenser lapel microphone with clothing clip; frequency response 30-16,000 Hz; impedance 600 ohms; supplied with 10-ft cable with mini-plug and battery.....\$26

## V-100 Video Recorder Microphone

Compatible with all video cassette and tape recorders with mic inputs and with video cameras and auto dub and voice-over recordings; on/off switch; frequency response 60-12,000 Hz; sensitivity -70 dB at 1000 Hz; impedance 500 ohms; includes stand, adapter plug, and 5-ft cable with miniature plug.....\$8

## NAKAMICHI

### DM-1000 Dynamic Cardioid Mic

Cardioid moving-coil microphone with low-mass diaphragm and voice coil for extended high-end response; designed especially for vocals; triple metal screen pop, blast, and wind filter; double casing and foam suspension reduce sensitivity to vibration; immune to hum and magnetic fields; frequency response 30-20,000 Hz  $\pm 3.5$  dB; sensitivity -76 dB at 1 kHz (0 dB = 1 V/ $\mu$ bar); impedance 250 ohms; supplied with Cannon-type XLR-3 connector; anodized black matte finish; 10.4 oz.....\$280

### CM-300 Electret Condenser Microphone

Studio-type system with interchangeable capsules; basic set comes with CP-1 cardioid and CP-2 omnidirectional capsules, windscreen, 15-ft cable, XLR connector, battery, and stand adapter; built-in 10-dB attenuator pad; low-cut proximity effect compensator; frequency response 30-18,000 Hz (CP-1), 20-15,000 Hz (CP-2), 20-18,000 Hz (CP-3), 30-20,000 Hz (CP-4), all  $\pm 3.5$  dB; impedance 200 ohms balanced; sensitivity -76 dB,  $\pm 2.5$  dB (CP-1, CP-2, CP-4), -74 dB,  $\pm 2.5$  dB (CP-3); 138-dB SPL max. (CP-1, CP-2), 136-dB SPL max. (CP-3), 118-dB SPL max. (CP-4), all with 3% dist.; dynamic range 114 dB (CP-1, CP-2), 107 dB (CP-3), 94 dB (CP-4).....\$165  
**CP-3.** Optional small-diameter, super omnidirectional capsule.....\$40  
**CP-4.** Super-directional (shotgun) capsule.....\$60  
**CM-300T.** Tri-microphone system with three CM-300 microphone sets; designed for use in company's tri-microphone recording system; supplied with carrying case with space for headphones, cables, and accessories.....\$440  
**CM-100.** Similar to CM-300 but powered by 1.5-V cell; 118-dB SPL max. with 3% dist.; dynamic range 94 dB; supplied with CP-1 cardioid capsule; accepts CP-2, CP-3, and CP-4.....\$100

### DM-500 Super Cardioid Microphone

Dynamic moving-coil microphone; built-in wind-

screen; super cardioid polar pattern; frequency response 50-15,000 Hz  $\pm 5$  dB; impedance 250 ohms; sensitivity -73 dB,  $\pm 2.5$  dB.....\$100

## OLSON ELECTRONICS

### EO-300 Electret Condenser Microphone

Miniature tie-clip electret condenser microphone designed for hands-free PA use; frequency response 70-13,000 Hz; output -66 dB; low impedance; ultra-thin cord with mercury battery in plug.....\$37

### MM-301 Cardioid Microphone

Cardioid dynamic microphone with netted ball; designed for PA and recording uses; frequency response 100-12,000 Hz; output -54 dB (high Z), -73 dB (low Z); dual impedance 600 and 50,000 ohms; on-off switch; includes 20-ft cable with 1/4-in plug and stand adaptor; 6 1/2" x 1 3/4".....\$30

### MK-175 Omnidirectional Microphone

Omnidirectional dynamic microphone designed for PA or recording use; impedance 50,000 ohms; heavy-duty high-impact plastic body with netted ball; on-off switch; includes 12-ft cable with molded 1/4-in plug and desk stand.....\$20

## PML by ERCONA

### DC-63 Condenser Microphone

Condenser microphone designed for professional recording studios; features two ring switches built around four reed switches and potentiometer providing selection of 44 desired directional response patterns. Frequency response 30-20,000 Hz; sensitivity -48 dB/Pa (cardioid A), -52 dB/Pa (cardioid B, bi-directional, omnidirectional); output 4.0 mV/Pa (cardioid A), 2.5 mV/Pa (cardioid B, bi, and omnidirectional); noise 21 dB re  $2 \times 10^{-5}$  Pa (A weighted); dynamic range 126 dB (cardioid A), 130 dB (others); output impedance 200 ohms balanced; includes \*3003 microphone cable and stand adaptor; +48 +6/-8-V operation; satin chrome finish; 11 1/2 oz.....\$740

### TC-4V Condenser Microphone

Features two field effect transistors and variable pattern selection; frequency response 30-20,000 Hz; sensitivity -40 dB/Pa; output 10.0 mV/Pa; noise 24 dB re  $2 \times 10^{-5}$  Pa, A weighted; dynamic range 118 dB; output impedance 200 ohms balanced; blasted chrome finish; 215 g.....\$599

### DC-21 Cardioid Microphone

Cardioid condenser microphone; SYMSI 48 powering; frequency response 30-20,000 Hz  $\pm 3$  dB; sensitivity -44 dB/Pa (over 200 ohms at 1 V); output 6.3 mV/Pa (over 200 ohms at 1 V); noise 25 dB (re  $2 \times 10^{-5}$  Pa, A wtd.); 122-dB dynamic range; output impedance 200 ohms; operating voltage +48 +6/-8; satin chrome finish; supplied with stand adaptor and 33-ft cable.....\$230  
**DC-20.** Similar to DC-21 but omnidirectional design; sensitivity -46 dB/Pa; output 5 mV/Pa; noise 26 dB; 124-dB dynamic range.....\$220

## REALISTIC

### 33-1085 Electret Condenser Microphone

One-point stereo microphone with two back electret elements (two mics in one) in rotatable capsules; frequency response 30-18,000 Hz with selectable low-frequency contour; includes stand adapter; 16.5-ft cable with dual 1/4-in plugs.....\$60

### 33-1080 Cardioid Microphone

Professional back electret design; cardioid pattern; switchable low-frequency contour; frequency response 20-20,000 Hz; 600-ohm impedance with low-impedance balanced option; includes foam windscreen and stand adapter; 16.5-ft heavy-duty cable with XLR connector; uses "AA" battery...\$50

### 33-984 Highball Cardioid Microphone

Unidirectional dynamic microphone; frequency re-

sponse 80-13,000 Hz; switchable impedance 600 (low) and 10,000 (high) ohms (low-impedance balanced option); on/off switch; ball screen pop and blast filter; rubber anti-shock ring; Cannon XLR-type connector; 16.5-ft cable with plug.....\$48

### 33-919 Dual Pattern Microphone

Stereo electret condenser microphone with two internal condenser capsules; features switchable wide and normal pickup patterns; frequency response 30-15,000 Hz; sensitivity -72 dB  $\pm 3$  dB; 600-ohm impedance; requires "AA" battery....\$40

### 33-1045 Cardioid Microphone

Cardioid electret condenser microphone; frequency response 30-15,000 Hz; 600-ohm impedance; supplied with 10-ft cord, 1/4-in plug, desk stand adapter, mike stand adaptor, and foam windscreen; requires "AA" battery.....\$30

## RECOTON

### MM-630 Cardioid Microphone

Unidirectional cardioid electret microphone designed for music groups, recording studio, TV, and radio work; sensitivity -66 dB; frequency response 30-16,000 Hz; low impedance (200-600 ohms); operates on 1.5-V AA battery; supplied with 18-ft shielded cable, XL type connector, swivel mike stand, and vinyl case; satin gold finish.....\$60

### MM-660 Cardioid Microphone

Unidirectional electret condenser stereo microphone designed for outdoor use; 1.5-V battery-powered; sensitivity -68 dB at 1000 Hz; frequency response 50-16,000 Hz; impedance 600 ohms; includes windscreen and 3-m cord; aluminum casing; 295 g.....\$50

### MM-620 Cardioid Microphone

Unidirectional cardioid electret microphone designed for performing, broadcast, PA, and home recording; sensitivity -68 dB; frequency response 30-16,000 Hz; low impedance (200-600 ohms); operates on 1.5-V AA battery; supplied with 18-ft shielded cable with standard phone plug, swivel mike adapter, and vinyl case; satin gold finish..\$45

### MM-330 Cardioid Microphone

Unidirectional dynamic cardioid microphone designed for performers; features built-in hi/lo and on/off switch; bull-head design; triple-mesh construction; includes 18-ft shielded cable with standard phone plug, swivel mike adapter, and vinyl case; silver finish.....\$38

### MM-760 Omnidirectional Microphone

Omnidirectional tie clip electret microphone; output level 65 dB; frequency response 30-16,000 Hz; powered by 1.5-V AA battery (incorporated in plug assembly); includes 15-ft shielded cable, standard phone plug, and vinyl case; brush gold finish; 3/8" diameter x 3/8" long.....\$32

## SANSUI

### DM11 Cardioid Microphone

Unidirectional dynamic microphone; frequency response 100-15,000 Hz; 600-ohm output impedance; -76 dB sensitivity (frontal); meshed windscreen eliminates popping; ideal as vocal microphone; 6 meter cord.....\$110

### EM1 Cardioid Microphone

Unidirectional electret condenser microphone; frequency response 50-15,000 Hz; 600-ohm output impedance; sensitivity -71.5 dB (frontal); music/vocal/off switch; three urethane foam windscreens in orange, blue and black for quick channel identification; includes holder, desk stand, 1.5 V dc "AA" penlight battery, and 6-m cord with plug.....\$80

### MS1 Multi-Purpose Mic Stand

Microphone boom stand with arm for stereo pairing; mike-mount holes at both ends of adjusting boom; boom is 35 1/8-in long and rotatable over 360 de-



greens; supplementary bar is included to extend boom to 43 1/4-in; collapsible stand; four mike-mounting screws (3/16", 3/8", 5/8", 1/2"); matte black finish .....\$200

## SCHOEPS

### Collette Series Microphones

Studio condenser microphones with interchangeable capsules and amplifiers. Can be 12 V phantom or parallel powered, or 48 V phantom powered. Transformerless construction gives low output impedance; insulated transducer and polarization voltage of 60 V.

**CMC 38 MK 8.** Figure-eight microphone; frequency response 40-16,000 Hz; sensitivity 1.0 V/ $\mu$ bar; S/N 75 dB; 132 dB SPL at 0.5% dist.; 80 g; 100-ft cable included; 5.67" x 0.79" dia .....\$440

**CMC 341 MK 41.** Hypercardioid microphone; frequency response 40-20,000 Hz; sensitivity 1.3 mV/ $\mu$ bar; S/N 77 dB; 130 dB SPL; 80 g; 100-ft cable included; 5" x 0.79" dia .....\$390

**CMC 34 MK 4.** Cardioid microphone; frequency response 40-20,000 Hz; sensitivity 1.2 mV/ $\mu$ bar; S/N 76 dB; 131 dB SPL; 80 g; 100-ft cord; 5" x 0.79" dia .....\$300

**CMC 33 MK 3.** Special omnidirectional microphone designed for direct field placement; frequency response 20-20,000 Hz; sensitivity 1.0 mV/ $\mu$ bar; S/N 76 dB; 132 dB SPL; 80 g; 100-ft cord; 5" x 0.79" dia .....\$300

## SENNHEISER

### MD 441 U Super Cardioid Microphone

Super cardioid dynamic microphone; frequency response 30-20,000 Hz; sensitivity 0.2 mV/ $\mu$ bar  $\pm$  3 dB; brilliance switch for nominal 5-dB boost at 5 kHz; five-position bass attenuator; front-to-back ratio 20 dB, -3 dB; supplied with cable and quick-release mount for floor stand or MZT-441 table stand; takes MZW-441 windscreen; 1.3" H x 1.4" W x 9.6" L.

With low-impedance cable .....\$455  
With high-impedance cable .....\$487

### MD 211 U Omnidirectional Microphone

Omnidirectional dynamic microphone; frequency response 40-20,000 Hz; sensitivity -58 dBm (0.13 mV/ $\mu$ bar)  $\pm$  2.5 dB; supplied with Cannon XLR connector and cable; 1" diameter x 4 3/4" L.

With low-impedance cable .....\$356  
With high-impedance cable .....\$388

### MD 431 U Super Cardioid Microphone

Super cardioid dynamic vocal microphone; frequency response 40-16,000 Hz; sensitivity 1.4 mV at 94-dB SPL; output -55.5 dB at 1 mW/10 dynes/cm<sup>2</sup>; 200-ohm source impedance at 1000 Hz; built-in bass/proximity cut-off and pop filters; on-off switch with lock; metal housing with replaceable stainless-steel grille screen; double-housed and shock-mounted; can be used in mobile situations; includes quick-release clip with lock, XLR connector, 16-ft cable, and phone plug .....\$352

### MD 421 U Cardioid Microphone

Cardioid dynamic microphone; 200-ohm impedance; frequency response 30-17,000 Hz  $\pm$  5 dB; sensitivity 0.2 mV/ $\mu$ bar  $\pm$  3 dB at 1 kHz; EIA rating -145.8 dB; output level -53 dBm (1 mW/10 dynes/cm<sup>2</sup>); front-to-back ratio 18 dB, -2 dB; variable bass attenuator; supplied with XLR connector and cable; 7" x 1 7/8" x 1 13/16" .

With low-impedance cable .....\$327  
With high-impedance cable .....\$358

### MD 416 U Cardioid Microphone

Cardioid dynamic microphone; designed for close miking; frequency response 50-15,000 Hz; sensitivity 0.13 mV/ $\mu$ bar  $\pm$  3 dB; 200-ohm impedance; built-in isolation system to eliminate handling noise; built-in pop filter, outdoor pop filter; supplied with Cannon XLR connector, threaded stand mount with quick-release clip, and cable.

With low-impedance cable .....\$300  
With high-impedance cable .....\$332

### MD 402 Super Cardioid Microphone

Super cardioid dynamic microphone; frequency response 50-15,000 Hz; output level -57 dBm at 94 dB SPL; includes windscreen, 15-ft cable, and quick-release clamp .....\$80

### Electret Condenser Mike System

One common powering module in balanced version (K3U) or unbalanced version (K1) serves three different compact heads: ME20 omnidirectional head, response 50-15,000 Hz, sensitivity 49 dBm, S/N 64 dBm min.; ME40 super-cardioid head, response 50-15,000 Hz, sensitivity 49 dBm, S/N 64 dBm min.; ME80 shotgun head, response 50-15,000 Hz, sensitivity 45 dB, S/N 70 dB min.

K3U. Powering module .....\$147  
K1. Powering module .....\$122  
ME20. Omnidirectional head .....\$87  
ME40. Super-cardioid head .....\$123  
ME80. Shotgun head .....\$172  
ME88. Spot microphone head .....\$255

## SHURE

### 330 Supercardioid Ribbon Mic

Supercardioid ribbon microphone; built-in impedance selection rotary switch; frequency response 30-15,000 Hz; switchable impedance 50, 150, and 250 ohms; output power level -59 dB at 50 ohms and -58.5 dB at 150 and 250 ohms; includes detachable 20-ft two-conductor shielded cable with three-pin female professional audio connector and swivel and shock mount assembly; chrome diecast case; 1 1/2 lbs less cable .....\$180

### 300 Ribbon Microphone

Power level -59 dB (0 dB = 1 mW/10 microbar); response 40-15,000 Hz; user selects high or low impedance; bi-directional; swivel mount to stand; use for speech and music; has 20-ft cable and connector; gray .....\$166

### 546 UNIDYNE® III Cardioid Mic

Dynamic cardioid type; power level -57.5 dB; response 50-15,000 Hz; dual low impedance; swivel mount to stand; use for speech, rock vocals, and music; comes with 20-ft cable and connector; chrome finish .....\$146

### 548SD UNIDYNE® IV Cardioid Mic

Dynamic cardioid type; power level -58 dB; response 40-15,000 Hz; dual impedance; hand-held with slip-in stand attachment; use for speech and music; has on-off switch, 15-ft cable, and connector; chrome finish .....\$115  
548. Same as 548SD minus on/off switch .....\$110

### 565D UNISPHERE® I Cardioid Mic

Dynamic cardioid type; power level -57 dB; response 50-15,000 Hz; dual impedance; swivel mount to stand; use for speech, rock vocals, and music; has pop or blast filter, 15-ft cable, and connector; chrome finish .....\$105  
565SD. 565D with on-off switch .....\$107  
565SH. Similar to 565D with swivel mount to stand and on-off switch .....\$107  
566. Similar to 565D except with dual low impedance and shock mount .....\$157

### 516EQ E-QUALIDYNE® Cardioid Mic

Unidirectional dynamic equalizer microphone designed for tape recording; complete equalization and response-shaping control; four switches (on mike handle) provide up to 16 different combinations of special effects, ranging from eliminating nasal and sibilant sounds to emphasizing various instruments; frequency response 50-15,000 Hz; impedance 150 ohms for connection to mike inputs rated at 100 to 3000 ohms; comes with foam windscreen, swivel adapter, cable, mini-plug adapter cable, and carrying case .....\$101  
516EQ-PR. Two 516EQ microphones .....\$182

### 55SH UNIDYNE® II Cardioid Mic

Power level -56.5 dB; frequency response

50-15,000 Hz; dual impedance; cardioid pattern; swivel mount to stand; designed for speech and music; supplied with three-pin connector and 15-ft cable .....\$101

### 545D UNIDYNE® III Cardioid Mic

Dynamic cardioid type; power level -58.5 dB; response 50-15,000 Hz; dual impedance; with slip-in stand attachment and swivel mount to stand; designed for speech, music, and tape recording; includes 15-ft cable; chrome finish .....\$95  
545SD. Same as 545D with on-off switch on microphone barrel .....\$97  
545SH. Similar to 545D with swivel mount to stand and on-off switch .....\$97  
545L. Similar to 545D but has low impedance; supplied with lavalier cord, clip, and permanently attached cable .....\$75

### 578 OMNIDYNE® Omni Microphone

Omnidirectional pattern; power level -61 dB; response 50-15,000 Hz; dual impedance; hand-held; use for speech and music; has on-off switch, a 15-ft cable, and connector; chrome finish .....\$86

### 579SB "Vocal Sphere" Omni Mic

Omnidirectional pattern; power level -57 dB; response 50-15,000 Hz; low impedance; has snap-in stand attachment, on-off switch, pop or blast filter; use for speech, rock vocals, and music; supplied with 20-ft cable and connector; chrome finish .....\$73

### UNISPHERE® A Cardioid Mic

Cardioid pattern; power level -57 dB; response 50-13,000 Hz; hand-held with slip-in stand attachment; use for speech, rock vocals, and music; have pop or blast filter, on-off switch; supplied with 15-ft cable and connector; chrome finish.

585SA. High impedance .....\$73  
585SB. Low impedance .....\$73  
585SAV. Similar to 585SA but has volume control on microphone barrel .....\$80

### 589S UNIDYNE® C Cardioid Mic

Unidirectional dynamic type; power level -61 dB; response 90-13,000 Hz; dual impedance; built-in on-off switch with lockplate; internal rubber vibration-isolator shockmount; 15-ft two-conductor shielded cable with 3-pin female connector; diecast housing with silver-metallic finish, stainless-steel grille; 7" x 1 1/8"; 12 oz less cable .....\$73

### UNISPHERE® B Cardioid Microphones

Cardioid pattern; power level -59 dB; response 80-13,000 Hz; hand-held with slip-in stand attachment; use for speech, rock vocals, and music; have pop or blast filter, on-off switch; come with 15-ft cable and connector; chrome finish.

588SA. High impedance .....\$62  
588SB. Low impedance .....\$62

### 515SB-G 18 UNIDYNE® B Cardioid Mic

Cardioid dynamic microphone designed for gooseneck applications; shock-mounted cartridge; built-in non-locking push-to-talk switch; low impedance; frequency response 80-13,000 Hz; output power level -60 dB (0 dB = 1 mW/10  $\mu$ bars); impedance 150 ohms; includes 18-in flexible gooseneck and mounting flange and 51-in four-conductor two-shielded cable extending from gooseneck; silver-finish diecast case with black ARMO-DUR® grille and stainless-steel screen; 2.25 lbs with gooseneck .....\$51

### 575S Omnidirectional Microphone

Omnidirectional dynamic microphone designed for wall/panel-mount, on desk or floor stand, or for lavalier or handheld use; built-in slide-to-talk locking on-off switch; high impedance; frequency response 40-15,000 Hz; output power level -56 dB (0 dB = 1 mW/10  $\mu$ bars); includes stand adapter, lavalier assembly, and 7-ft single-conductor shielded cable; black ARMO-DUR® with satin anodized cap and stainless-steel grille; 5 oz .....\$27

## Semi-Professional Microphones

### SM7 Dynamic Cardioid Microphone

Unidirectional microphone with flat, bass rolloff,

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presence boost, and bass rolloff/presence boost response tailoring; power level -57 dB (0 dB = 1 mW/10  $\mu$ bar); frequency response 40-16,000 Hz; impedance 150 ohms for inputs rated at 19-300 ohms; dark gray foam windscreen and dark gray enamel finish ..... \$369

## SM81 Condenser Cardioid Microphone

Unidirectional low-noise, low-distortion microphone; power level -39.5 dB; frequency response 20-20,000 Hz; impedance 150 ohms; low r-f susceptibility; selectable 10-dB attenuator; three-position low frequency response switch; range of power sources 12 to 48 volts; supplied with attenuator lock, windscreen, swivel adapter and cable; metallic vinyl finish ..... \$250

## SM53 Dynamic Cardioid Microphone

Unidirectional microphone with built-in shock mount and hum rejection system; bass rolloff switch; power level -60 dB; frequency response 70-16,000 Hz; impedance 150 ohms; supplied with 20-ft cable and swivel adapter; neutral matte metallic finish ..... \$246

**SM54.** Similar to SM53 except designed for use in difficult close-talking and hand-held situations; pop-and-breath-blast immunity ..... \$261

## SM33 Ribbon Super Cardioid Mic

Supercardioid ribbon microphone for speech, instrumental and vocal recordings; bass response selector switch; power level -58 dB; frequency response 40-15,000 Hz; dual impedances 38 and 150 ohms; dark gray non-glare finish ..... \$241

## SM76 Omnidirectional Microphone

Omnidirectional dynamic microphone designed for studio and remote TV, radio, and professional recording uses in or outdoors; hand-held or stand-mounted; output power level -61 dB at 1000 Hz (0 dB = 1 mW/10  $\mu$ bars); frequency response 45-20,000 Hz; dual impedances 38 and 150 ohms; includes detachable 20-ft two-conductor shielded cable with professional three-pin female audio connector and snap-in swivel adapter (adjustable up to 90 degrees from vertical to horizontal); dark gray enamel finish; 7 oz less cable .. \$193

## SM59 Dynamic Cardioid Microphone

Unidirectional microphone with cartridge shock mount design; built-in pop filter; power level -61 dB; frequency response 50-15,000 Hz; impedance 150 ohms; aluminum, zinc, and stainless-steel construction; champagne enamel finish ..... \$158

## SM58 Dynamic Cardioid Microphone

Unidirectional microphone designed for close-working studio recording; built-in spherical windscreen; power level -57 dB; frequency response 50-15,000 Hz; dual impedances 38 and 150 ohms; dark gray finish ..... \$152

## SM57 Dynamic Cardioid Microphone

Cardioid microphone for percussion instruments, pianos and string basses; power level -57 dB; frequency response 40-15,000 Hz; dual impedances 38 and 150 ohms; non-glare dark gray finish . \$119

## SM63-CN Dynamic Omni Microphone

Miniature lightweight omnidirectional microphone with built-in humbucking coil, shock mount, and breath and pop filter; output power level -56.5 dB; frequency response 50-20,000 Hz; impedance 150 ohms; Veraflex<sup>®</sup> grille damage-resistant to drops and impact, rust, moisture, and corrosion; champagne finish aluminum case; 2.8 oz. .... \$100

## SM17 Dynamic Omni Microphone

Miniature omnidirectional microphone designed for acoustic stringed and other instruments; power level -64 dB; frequency response 50-15,000 Hz;

impedance 150 ohms; supplied with expansion and clip-mounting options, cable clips, and 10-ft attached cable ..... \$77

## Accessories

### A15 Series In-Line Adapters

Modifies mic response; three-pin male output and female input connectors.

<b>A15AS.</b> Microphone attenuator .....	\$28
<b>A15PRS.</b> Phase reverser .....	\$24
<b>A15MP.</b> High-pass filter .....	\$24
<b>A15LP.</b> Low-pass filter .....	\$24
<b>A15PA.</b> Presence adapter .....	\$24
<b>A15RS.</b> Response shaper .....	\$24
<b>A15LA.</b> Line input adapter .....	\$24
<b>A15BT.</b> Bridging transformer .....	\$24
<b>A15TG.</b> Tone generator .....	\$32

### A95 Series Line Matching Transformers

Connect low-impedance microphone to high-impedance input or vice versa; for use with most microphones and input jacks.

<b>A95A.</b> Lo-Z: 3-pin male; Hi-Z: Amphenol-type male .....	\$20
<b>A95F.</b> Lo-Z: 3-pin female; Hi-Z: Amphenol-type female .....	\$23
<b>A95P.</b> Lo-Z: 3-pin male; Hi-Z: 1/4-in phone plug .....	\$22
<b>A95FP.</b> Lo-Z: 3-pin female; Hi-Z: 1/4-in phone plug .....	\$25
<b>A95D.</b> Lo-Z: 3-pin male; Hi-Z: 1/4-in phone jack .....	\$22
<b>A95FD.</b> Lo-Z: 3-pin female; Hi-Z: 1/4-in phone jack .....	\$25
<b>A95U.</b> Lo-Z: 3-pin male; Hi-Z: 1/4-in plug and jack .....	\$22
<b>A95UF.</b> Lo-Z: 3-pin female; Hi-Z: 1/4-in plug and jack .....	\$25

## SONY

### C-48 Condenser Microphone

Professional switchable omni/uni/bidirectional condenser microphone designed for critical studio recording applications. Features dual-diaphragm capsule design; LED directivity indicator; low-noise high-gain FET preamp and transformer; 10-dB PAD switch (prevents overload at SPLs above 128 dB); low-cut switch; two-way power source (ac/dc power supply or battery operation). Frequency response 30-16,000 Hz; output impedance 150 ohms  $\pm$ 20%; S/N 70 dB at 1000 Hz, 10  $\mu$ bar; max. SPL 138 dB; dynamic range 104 dB; XLR-3-12C type mic connector; includes carrying case, 006P battery, and screw adaptor; 9"H x 2 1/4"W x 1 1/4"D ..... \$795

### C-76 Condenser Cardioid Microphone

Unidirectional gun-type condenser microphone designed for theatrical use; frequency response 40-16,000 Hz; 250-ohm impedance; S/N 60 dB; sensitivity -58 dB; max. SPL 126 dB; dynamic range 112 dB; low-cut switch; battery-powered with optional external ac/dc power supply provision; LED battery indicator; XLR-3 mic connector; includes urethane windscreen; 1" diameter x 26 1/4" L . \$795

**C-74.** Similar to C-76 except designed for media use; 1" diameter x 16 1/4" L ..... \$675

### C-38B Condenser Microphone

Professional condenser microphone with switchable omnidirectional or unidirectional characteristics; features directivity switch and five-position function switch for mic adjustment; internal battery or phantom power; frequency response 30-16,000 Hz  $\pm$ 2.5 dB; 250-ohm output impedance; S/N 70 dB; max. SPL 140 dB; dynamic range 116 dB; high-cut switch; pad switch; FET circuit; windscreen and shock mounting; fixed mike connector; 20 ft cable; comes with carrying case; 3" dia. x 8 1/4" L ... \$545

**C-37P.** Similar to C-38B without high-cut switch and internal battery power; max. SPL 154 dB; dynamic range 130 dB; 1 1/4" dia. x 7 3/4" L ..... \$495

### ECM-53FP Cardioid Microphone

Unidirectional cardioid back electret condenser microphone designed for desk or podium use; fre-

quency response 40-15,000 Hz; 250-ohm output impedance; S/N 66 dB; max. SPL 126 dB; dynamic range 98 dB; movable head; battery-powered (optional ac/dc operation available); fixed mic connector; 10-ft cable; XLR-3 mic connector; includes windscreen, carrying case, battery, and stand adaptor; 1 3/4" diameter x 10 3/4" L ..... \$295

### ECM-56F Cardioid Microphone

Back electret condenser microphone; unidirectional; frequency response 20-20,000 Hz; 250-ohm output impedance; S/N 66 dB; max. SPL 134 dB; dynamic range 106 dB; low-cut switch; external phantom power system or battery power; battery check lamp; 90 degree adjustable angle; rubber cushion in mounting reduces vibration; fixed mic connector; 20-ft cable; 2" dia. x 8 1/4" L .. \$265

### F-660 Dynamic Cardioid Microphone

Unidirectional dynamic microphone for vocal/orchestral recording; frequency response 100-10,000 Hz; 250-ohm output impedance; safety lock; XLR-3 mike connector; includes double windscreens and mic holder; 1 1/2" dia. x 6 1/2" L ..... \$250

### ECM-65F Cardioid Microphone

Hand-held professional back electret condenser microphone for stage, broadcasting, or studio use; unidirectional; frequency response 70-20,000 Hz; 250-ohm output impedance; S/N 66 dB; max. SPL 137 dB; dynamic range 109 dB; double windscreen; phantom power system or battery power; XLR-3 mike connector; 20-ft cable; 1 1/2" diameter x 7" L ..... \$235

**ECM-64P.** Similar to ECM-65F except omnidirectional mike for outdoor use; frequency response 40-20,000 Hz ..... \$235

### ECM-50PS Omnidirectional Mic

Professional omnidirectional electret condenser microphone with miniature design; frequency response 40-14,000 Hz; 250-ohm output impedance; S/N 66 dB; max. SPL 126 dB; dynamic range 98 dB; phantom power supply or internal battery; non-reflective satin nickel finish; comes with windscreen, carrying case and tie clip; fixed mike connector; 10-ft cable; 7/16" diameter x 1 3/4" L ..... \$225

### F-115 Omnidirectional Microphone

Omnidirectional dynamic microphone for outdoor use in all weather conditions; built-in waterproof screen; also has double-structured accessory windscreen; frequency response 40-12,000 Hz; 600-ohm output impedance; vibration-proof rubber mounting; balanced output with "Cannon" plug; fixed mike connector; 20-ft cable; 1 3/4" diameter x 6 7/8" L ..... \$160

### ECM-990F Cardioid Microphone

Single-point stereo back electret condenser microphone for studio-quality performance; unidirectional; frequency response 40-16,000 Hz; 200-ohm output impedance; S/N 64 dB; max. SPL 126 dB; dynamic range 96 dB; back electret/FET impedance translator; axis selector to adjust directional quality; low-cut switch; LED battery power indicator; Sony type mike connector; 10-ft cable; includes windscreen and mic holder; 3/4" diameter x 8 1/4" L ..... \$150

### ECM-30 Condenser Omni Microphone

Professional omnidirectional condenser microphone with ultra-miniature design; frequency response 50-14,000 Hz; 250-ohm output impedance; S/N 60 dB; max. SPL 117 dB; dynamic range 83 dB; battery power; balanced output with "Cannon" XLR; fixed mike connector; 10-ft cable; includes carrying case, windscreen, and tie clip; 1 1/32" diameter x 1 7/32" L ..... \$115

### ECM-23F Cardioid Mike

Unidirectional back electret condenser microphone; 20-20,000 Hz frequency response; 250-ohm output impedance; S/N 44 dB; max. SPL 126 dB; dynamic range 96 dB; output for both balanced and unbalanced circuit; FET impedance translator; battery power; low-cut switch; pad switch; comes with windscreen, carrying case, mike cable, and mike holder; XLR-3 mike connector; 20-ft cable; 1 1/4"



diameter x 7/16" L..... \$115  
**ECM-33F.** Similar to ECM-23F except battery or phantom powered; S/N 66 dB; max. SPL 130 dB; dynamic range 102 dB; 1 1/16" dia. x 6 1/16" L. \$195

#### **ECM-41 Cardioid Microphone**

Unidirectional electret condenser microphone designed for studio interviews; telescopic design; frequency response 50-13,000 Hz; 250-ohm output impedance; S/N 63 dB; max. SPL 126 dB; dynamic range 95 dB; satin nickel finish; fixed mic connector; 8-ft cable; XLR-3 connector; battery-powered; includes windscreen and mic holder; 3/4" diameter x 10 1/2-19 1/16" L adjustable ..... \$100

#### **F-520 Dynamic Cardioid Microphone**

Unidirectional microphone for vocal and instrument reinforcement; frequency response 80-12,000 Hz; output impedance 250 ohms; 16-ft cable with fixed phone plug connector; 2" dia. x 6 1/2" L..... \$100  
**F-420.** Similar to F-520 except designed for public address and recording applications; frequency response 100-12,000 Hz ..... \$74

#### **ECM-170A Omnidirectional Mike**

Omnidirectional electret condenser microphone for semi-professional use; good for recording or lecturing outdoors; frequency response 20-16,000 Hz; 200-ohm output impedance; S/N 64 dB; max. SPL 126 dB; dynamic range 96 dB; low-cut switch; output for balanced and unbalanced circuits; detachable windscreen; FET impedance translator; easy-to-hold grip; satin nickel finish; Sony type mike connector; 16-ft cable; includes mic cable, mic holder, and carrying case; 1" dia. x 6 1/16" L ..... \$75

#### **ECM-150 Omnidirectional Mike**

Omnidirectional electret condenser microphone with miniature design; frequency response 40-13,000 Hz; 250-ohm output impedance; S/N 60 dB; max. SPL 117 dB; dynamic range 83 dB; plug adaptor for mini and phone connections; on/off switch; includes windscreen, case with mike stand, tie clip, and battery; fixed mike connector; 6-ft 5-in cable; 1 1/16" diameter x 1 1/2" L..... \$65

#### **ECM-260F Cardioid Microphone**

Unidirectional back electret condenser microphone; frequency response 50-14,000 Hz; 200-ohm output impedance; S/N 66 dB; max. SPL 126 dB; dynamic range 98 dB; battery-powered; 16-ft cable with phone cable plug; includes windscreen, battery, mic holder, stand adaptor, and carrying case; 1 1/16" diameter x 7 1/16" L..... \$65  
**ECM-220FA.** Similar to ECM-260F except has fixed cable and 1/4-in phone plug termination ..... \$50

#### **ECM-99A Cardioid Microphone**

One-point stereo electret condenser microphone for semi-professional and amateur stereo recording; two unidirectional microphone capsules in one housing; frequency response 50-12,000 Hz; 250-ohm output impedance; S/N 60 dB; comes with windscreen, carrying case, mike holder and battery; satin nickel finish; fixed mike connector; 10-ft cable; 2 1/4" diameter x 7 1/16" L..... \$65

#### **ECM-31M Cardioid Microphone**

Unidirectional electret condenser microphone designed for indoor/outdoor interviews; telescopic design; frequency response 50-13,000 Hz; 250-ohm output impedance; battery-operated; 8-ft cable with mini cable plug; includes urethane windscreen and mic holder; 3/4" diameter x adjustable 10 1/2-19 1/16" L..... \$55

#### **F-400A Dynamic Cardioid Microphone**

Unidirectional microphone recommended for pop and rock vocals; frequency response 100-12,000 Hz; 250-ohm output impedance; fixed phone plug connector, 8-ft cable; 2 1/4" dia. x 7 1/16" L..... \$50

#### **ECM-16 Omnidirectional Microphone**

Omnidirectional electret condenser lavalier microphone designed for interviews or conferences; features FET impedance translator; frequency response 50-13,000 Hz; 250-ohm output impedance; 6-ft cable; battery-operated; includes clip holder; 3/16" diameter x 1 1/16" L..... \$40

#### **F-320A Dynamic Cardioid Microphone**

Unidirectional microphone for general use and speech applications; frequency response 100-12,000 Hz; output impedance 250 ohms; 8-ft cable with fixed phone plug connector; 2 1/4" dia. x 7 1/16" L..... \$38

#### **ECM-210M Cardioid Microphone**

Unidirectional electret condenser microphone for general-purpose recording; frequency response 50-12,000 Hz; output impedance 200 ohms; S/N 64 dB; battery powered; fixed mike connector; mini plug fits most portable tape recorders; 8-ft cable; 1 1/16" diameter x 7 1/16" L..... \$35

**ECM-210S.** Similar to ECM-210M except has dual-pin plug for use with tape recorders that offer remote start and stop capability..... \$38

#### **F-99M Stereo Dynamic Microphone**

One-point stereo dynamic microphone for hi-fi recording; frequency response 80-12,000 Hz; 200-ohm output impedance; mini-plugs connect to hi-fi system mic inputs; fixed mike connector; 5-ft cable; 1 1/16" diameter x 6 1/4" L ..... \$35

#### **F-500 Dynamic Cardioid Microphone**

Unidirectional microphone for general use; frequency response 80-12,000 Hz; 320-ohm output impedance; mini-plug connections; fixed mike connector; 8-ft cable; 1 1/16" diameter x 7 1/16" L..... \$23  
**F-500S.** Similar to F-500 except has dual plugs for connection to recorders that feature remote start and stop capability; start/stop switch is on microphone body..... \$25

### **STUDER/REVOX**

#### **M3500 Dynamic Cardioid Microphone**

Dynamic unidirectional moving-coil type; hypercardioid pattern; response 40-18,000 Hz; impedance 600 ohms; comes with windscreen, clamp, table stand, and case; Cannon XLR connector; each unit supplied with own frequency-response curve; all-metal construction with matte black chromium finish..... \$160

### **SUPERSCOPE by MARANTZ**

#### **EC-9P Cardioid Microphone**

Cardioid electret condenser microphone; frequency response 30-17,000 Hz; output -62 dBm at 94 dB SPL; impedance 250 ohms; low-cut filter; 10-dB pad; optional power operation; standard Cannon connector..... \$110

#### **EC-15P Omnidirectional Microphone**

Omnidirectional electret condenser tie-clasp microphone utilizing IC-FET electronics; frequency response 70-16,000 Hz; output -58 dBm at 94 dB SPL; impedance 250 ohms; optional power operation; standard Cannon connector..... \$100

#### **EC-33S Uni/Bidirectional Microphone**

Electret condenser microphone with pull-apart design to function as one-point stereo mic or two separate mono mics; frequency response 50-15,000 Hz; output -52 dBm re 94 dB SPL; impedance 1000 ohms; remote start/stop switch ..... \$66

#### **EC-7 Cardioid Microphone**

Cardioid electret condenser microphone; frequency response 40-16,000 Hz; output -58 dBm at 94 dB SPL; impedance 250 ohms; low-cut filter and on/off switch; includes floorstand adapter ..... \$64

### **TEAC**

#### **ME-120 Dynamic Microphone**

Cardioid or omnidirectional dynamic electret microphone; two-position response switch, 40-18,000 Hz (cardioid), 30-16,000 Hz (omnidirectional); supplied with stand attachment, two windscreens, and 15-ft cable..... \$120  
**ME-80.** Same as ME-120 except response 50-16,000 Hz..... \$90

**ME-50.** Same as ME-80 except cardioid; unbalanced or balanced 10,000 or 200 ohms; response 50-14,000 Hz..... \$50

### **TECHNICS**

#### **RP-3540E Cardioid Microphone**

Electret-condenser cardioid microphone; 600-ohm output impedance; -68 dB sensitivity; frequency response 40-14,000 Hz; requires "AA" batteries; comes with stand, mike holder, 1/4-in adaptor, and 5-meter cable; 42 x 227 mm ..... \$70

#### **RP-3330 Cardioid Microphone**

Dynamic cardioid microphone; 400-ohm output impedance; -78 dB sensitivity; frequency response 50-12,000 Hz; comes with stand, mike holder, 1/4-in adaptor and 3-meter cable; 50 x 165 mm ... \$30

### **TELEDYNE by OLSON**

#### **MK-105 Omnidirectional Microphone**

Miniature lavalier electret-condenser microphone with FET preamp and battery; designed for hands-free PA use; frequency response 20-20,000 Hz; output -70 dB; impedance 6000 ohms; includes thin-diameter 16-ft cable with 1/4-in phone plug, battery, and case..... \$30

#### **MK-080 Cardioid Microphone**

Cardioid electret-condenser microphone with FET preamp; low impedance; on-off switch; built-in battery supply uses one "AA" cell; includes 18-ft cable with 1/4-in phone plug and windscreen/stand adaptor ..... \$26

### **TOSHIBA**

#### **EM-420 Cardioid Microphone**

Unidirectional back electret condenser microphone; low cut switch for music or voice; frequency response 50-20,000 Hz; S/N 45 dB; long battery life; supplied with windscreen ..... \$70

#### **EM-220 Electret Condenser Microphone**

Back electret condenser microphone; frequency response 50-18,000 Hz; S/N 45 dB; long battery life ..... \$40

### **UHER by WALTER ODEMER**

#### **M 646 Cardioid Microphone**

Electret condenser cardioid microphone; frequency response 30-20,000 Hz; sensitivity 3.5 mV/Pa; 280-ohm impedance; supplied with table stand and windscreen; powered by internal primary battery or from recorder's mike cable with 8-pole plug... \$203

#### **M 634 Cardioid Microphones**

Stereo-pair dynamic shot-gun-type cardioid microphones with stereobar; all-metal design; frequency response 50-16,000 Hz; sensitivity 2.3 mV/Pa; low-resistive impedance; includes collapsible table stand and storage case ..... \$194  
**M 534.** Similar to M 634 except single microphone for desk use ..... \$98

### **VIDAIRE ELECTRONICS**

#### **942 Dynamic Cardioid Ball Microphone**

Dual impedance dynamic ball cardioid microphone; frequency response 80-15,000 Hz; switchable 600/50,000 ohm impedance; sensitivity -54 dB at 50,000 ohms. -72 dB at 600 ohms; 20 ft shielded cable ..... \$48

#### **730 Omnidirectional Microphone**

Omnidirectional electret condenser microphone; frequency response 30-18,000 Hz; 600-ohm impedance; sensitivity -65 dB at 1000 Hz; 20-ft shielded cable; 1.5 V battery, mike holder, and wind screen included ..... \$45

# 14

## SIGNAL PROCESSORS (includes Mixers)

### ACE AUDIO

#### 5000 Subwoofer Electronic Crossover

Designed to operate with subwoofers or mini speaker systems; consists internally of precision metal film resistors and polystyrene capacitors mounted on single PC board; has level control and defeat switches; crossover 18 dB/octave at 100 Hz; noise -90 dB; dist. 0.025% at 2 V out, 0.01% typically; 2 1/2" H x 6" W x 4 3/8" D.

Kit. Construction time 1.5-3 hrs. .... \$88  
Assembled and tested ..... \$141

#### 6000 Electronic Crossover Kit

Designed for bi- or tri- (with two 6000s) amping; features plug-in frequency module; built-in power supply; choice of 15 crossover frequencies from 200-10,000 Hz at 12-dB/octave; has two tweeter level controls. THD or IM dist. 0.02%. input impedance 220k ohms; output impedance 100 ohms; hum and noise -90 dB. 2 1/2" H x 6" W x 4 3/8" D.

Kit ..... \$65  
Wired ..... \$90  
Plug-in frequency module ..... \$28

### ADC PROFESSIONAL PRODUCTS

#### Sound Shaper Three MkII Paragraphic EQ

Three 12-band parametric graphic equalizer controlling up to 36 frequency ranges per channel,



ranging from 26-21,500 Hz  $\pm 12$  dB; graphic equalizer center frequency LED slide controls set at 32, 56, 100, 180, 320, 560, 1000, 1800, 3200, 5600, 10,000, and 18,000 Hz  $\pm 12$  dB with rear-panel defeat switch. Features internal switching and monitoring with line/record and tape monitor controls, EQ bypass, 24 linear potentiometers, and two vertical LED signal level meters with LED output level meter ..... \$500

#### Sound Shaper Two MkIII Equalizer

Twelve-band stereo frequency equalizer with center frequency LED slide controls set at 30, 50, 90, 160, 300, 500, 900, 1600, 3000, 5000, 9000, and 16,000 Hz,  $\pm 12$  dB boost or cut, with rear-panel defeat switch; each band/ch has linear potentiometer control with center detent. Features internal switching and monitoring with pushbutton line/record and two-deck tape monitoring with two-way dubbing; pushbutton equalization bypass; dual seven-segment  $\pm 12$  dB LED meter with 1-dB adjust switch and two channel LEDs; rear-panel variable frequency spectrum level balancing controls/ch; two main and two tape monitor inputs; two main and two tape outputs. Frequency response 5-100,000 Hz  $\pm 1$  dB; unity gain  $\pm 1$  dB; output 9 V rms into 10k ohms; HD and IM dist. 0.02%; hum and noise -85 dB; output impedance 10 ohms at

1000 Hz; input impedance 75k ohms; 6 1/4" H x 16 3/8" W x 6 3/4" D ..... \$330

#### Sound Shaper One Ten MkII Equalizer

Ten-band stereo frequency equalizer with center frequency LED slide controls set at 31, 62, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz,  $\pm 12$  dB boost or cut, with rear-panel defeat switch; each band/ch has linear sliding controls with center detent. Features power, line/record, tape monitor, and EQ bypass pushbutton controls; two main and two tape monitor inputs; two main and two tape outputs. Frequency response 5-100,000 Hz +0/-1 dB; unity gain  $\pm 1$  dB; output 10 V rms min. into 10k ohms; HD and IM dist. 0.02%; hum and noise -80 dB; output impedance 10 ohms at 1000 Hz; input impedance 75k ohms; 6 1/4" H x 14 3/4" W x 6 3/4" D ..... \$230

**Sound Shaper One MkII.** Similar to One Ten except five-band, two channel equalizer with center frequency LED slide controls set at 60, 240, 1000, 3500, and 10,000 Hz, frequency response 5-100,000 Hz +0.5/-1 dB; no line/record or EQ bypass control; 5 3/4" H x 10 1/2" W x 6 1/4" D ..... \$120

### ADS

#### ADS 10 Digital Time Delay System

Digital time-delay system with built-in amplifier (100 W/ch continuous into 4 ohms, 20-20,000 Hz, 0.08% THD), matching 2-way speakers. Delay section: three initial delays, first delay variable 10-40 msec, longest delay variable up to 100 msec; reverberation decay time 0-1.6 sec (variable 0 to -60 dB); controls include ambience-channel bandwidth, stage depth (first delay), hall size (remaining delays), extra outputs for additional amplifier-speaker systems; "Source Ambience Discriminator" extracts ambience in recordings, reduces reverberation of FM announcer voices; can be driven from line-level (preamp or tape out) or speaker terminals (using optional cables); LED delay indicators; ambience outputs, 30-13,000 Hz, +1/-3 dB, less than 0.3% THD+noise, 83 dB dynamic range. Power amplifier section: 94 dB S/N (A-weighted), frequency response 30-20,000 Hz  $\pm 0.5$  dB. Model L10 speakers: 2-way (7-in woofer and 1-in soft-dome tweeter); frequency response 48-18,000 Hz  $\pm 3$  dB, 38-20,000 Hz  $\pm 5$  dB; efficiency 90 dB/watt; input range 50-100 W. Delay/amplifier dimensions 3 1/2" H x 15 3/4" W (19" W optional rack mount) x 12" D. Speakers 15" H x 9 3/4" W x 6 1/2" D ..... \$1150

**10 01.** Similar to ADS 10 minus built-in power amplifier and matching speakers; optional bolt on rack handles (extends to standard 19 in) and walnut side panels available; black satin finish ..... \$700

### ADVENT

#### 500 SoundSpace Control

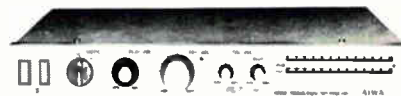
Designed to enhance home acoustics through control of room size and reverberation; features short/long reverb and +/- size controls; sensitivity

switch; LED digital initial delay/msec display; dual LED operating level bar indicators; volume, balance, bass, and treble controls; rear-channel direct/reverb/off switch; front channel on/off control. Rear-channel frequency response 20-20,000 Hz; dist. 0.1% for 1.5 V at 1000 Hz; dynamic range 80 dB; input impedance/sensitivity 150k ohms/0.3, 1, and 3 V for full output; output impedance/sensitivity 3.5k ohms max./3 V; 3 1/2" H x 15 3/4" W x 10 3/4" D ..... \$799

### AIWA

#### HR-50U High-Com™ Noise Reduction Unit

Level compression/expansion noise-reduction unit designed to improve S/N, recording headroom, and



dynamic range; operates on separate wavebands for entire audio frequency spectrum; compatible with any cassette or open-reel deck using RCA connectors. Features subsonic and multiplex filters; dual 12-LED peak level indicators; separate left/right calibration volume controls; tape play and record volume controls; pass switch for use on tapes not encoded by High-Com™. Compression to expansion ratio 1/3, 2; S/N improvement 20-25 dB; input level 150 mV (reproduction in); output level 300 mV (line), 150 mV (record out); frequency response 20-20,000 Hz  $\pm 1$  dB; 1 3/4" H x 9 1/4" W x 9 1/4" D ..... \$230

### AKAI

#### EA-G80 Stereo Graphic Equalizer

Ten-band stereo graphic equalizer with LED-indicated center frequency slide controls at 31.5, 63, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz,  $\pm 10$  dB boost or cut; built-in relay muting circuit for connection to dc amplifier; defeat switch; rec/out terminals. Frequency response 10-100,000 Hz  $\pm 1$  dB; THD 0.005% at 1 V out, 20-20,000 Hz; S/N 100 dB at 1 V, 47k ohms; walnut vinyl cabinet; 3.8" H x 17.3" W x 11.6" D ..... \$340

#### EA-G40 Stereo Graphic Equalizer

Eight-band stereo graphic equalizer with center frequency slide controls at 25, 63, 160, 400, 1000, 2500, 6300, and 16,000 Hz,  $\pm 10$  dB; has defeat switch, built-in relay muting circuit, and rec/out terminals; frequency response 10-100,000 Hz  $\pm 1$  dB; THD 0.005% at 1 V out, 20-20,000 Hz; S/N 100 dB at 1 V, 47k ohms; walnut vinyl cabinet; 2.8" H x 17.3" W x 11.4" D ..... \$230

### ALLISON

#### The Electronic Subwoofer

Two-channel bottom-octave equalizer and bandpass filter; rolloff 24 dB/octave below 20 Hz and 18 dB/



octave above 20,000 Hz; turnover frequencies at +3 dB at 41 Hz, 35.5 Hz, 48 Hz (extends Allison loudspeakers flat to 20 Hz); FILTER ONLY position; S/N 100 dB min. ("A" weighted); used in tape monitor loop, external processor loop of preamp/control unit, integrated amp, or receiver; 2" H x 14 1/2" W x 4 3/4" D.....\$290

## ASHLY

### SC-66A Stereo Parametric Equalizer

Four-band stereo parametric equalizer for feedback control, acoustical tuning, tape-to-disc transfer, hum filtering, dialog equalization, and special effects. Each channel features low, low-mid, hi-mid, and high frequency band controls covering 16-800, 48-2400, 160-8000, and 480-24,000 Hz, respectively, with  $\pm 15$  dB boost or cut controls/band, 3.3-0.05 octave bandwidth controls/band, and defeat switches for each band;  $\pm 15$  dB master gain control with master defeat switch and LED peak overload on each channel. Input impedance 10k ohms, active balanced bridging; output impedance 50 ohm term, with 600 ohms or more; max. in-out level +20 dBm; frequency response 20-20,000 Hz  $\pm 0.5$  dB; THD 0.05% at +10 dBV, 20-20,000 Hz; hum and noise -87 dBV (EQ in); rack-mount steel chassis; 5.25" H x 19" W x 6" D.....\$599

**SC-63.** Three-band mono version of SC-66A minus low-mid frequency control and defeat switches for each band; 1.75" H.....\$369

### SC-55 Stereo Peak-Limiter/Compressor

Stereo peak limiter/compressor features bypass switch to limited or non-limited signal;  $\pm 30$ -dB gain control; 2:1-infinity ratio, 200  $\mu$ sec-20 msec attack, and 100 msec-2 sec release controls; balance control; separate left/right output controls; gain reduction LED display at -20, -10, -6, and -3 dB; left and right threshold LEDs. Input impedance 10k ohms, balanced bridging; output impedance 50 ohm term, with 600 ohms or more; max. in-out level +20 dBm; frequency response 20-20,000 Hz  $\pm 0.5$  dB; THD 0.05% at 0 dBV, 20-20,000 Hz; hum and noise -90 dBV, unity gain; rack-mount steel chassis; 3.5" H x 19" W x 6" D.....\$499

**SC-50.** Mono version of SC-55; features detector patch point for connection of equalizer in detector loop to produce frequency selective limiting; 1.75" H.....\$299

## AUDIO CONTROL

### C-101 Equalizer/LED Spectrum Analyzer

Ten-band two-channel graphic equalizer features 101 LED spectrum analyzer display. LED spectral display operates on various levels: shows controllable peak-reading modes (fast or slow); horizontal LEDs which indicate sound pressure level with external microphone or VU meter readings; switchable calibration levels from 2 dB/LED (analyzes pink noise and microphone) to 4 dB/LED (displays wider dynamic range). Center frequencies set at 32, 60, 120, 480, 960, 1920, 3840, 7680, and 15,500 Hz with  $\pm 15$  dB range, -1 dB subsonic rolloff at 25 Hz, -3 dB rolloff at 20 Hz, and -21 dB rolloff at 10 Hz. Other features include continuously variable input level sensitivity with calibration; automatic mic/line input switching; built-in pink noise generator; stereo paired equalizer sliders; equalization tape button; 18-dB/octave subsonic filter; phase correlation rumble reducer circuit. Frequency response 3-100,000 Hz  $\pm 0.75$  dB; dist. 0.025% at 1 V from 20-20,000 Hz; hum and noise -96 dB at 1 V, 10,000-Hz bandwidth; max. input 7 V; input impedance 100k ohms; output impedance 150 ohms; 3.5" H x 19" W x 6.5" D.....\$549

### C-22 Octave Equalizer

Ten-band two-channel octave equalizer with center frequencies set at 32, 60, 120, 480, 960, 1920, 3840, 7680, and 15,500 Hz with  $\pm 15$  dB range, -1 dB subsonic rolloff at 25 Hz, -3 dB rolloff at 20 Hz, -21 dB rolloff at 10 Hz. Features stereo paired sliders, 18 dB/octave subsonic filter, equalization tape button, and phase correlation rumble

reducer circuit. Frequency response 3-100,000 Hz  $\pm 1$  dB; dist. 0.04% at 1 V from 20-20,000 Hz; hum and noise -96 dB at 1 V; max. input 7 V; input impedance 100k ohms; output impedance 150 ohms; 3.5" H x 19" W x 6.5" D.....\$249

### D-11 Equalizer/Pink Noise Analyzer

Unit combines ten-band octave graphic equalizer, built-in pink noise generator/analyzer, and measurement microphone. Features center frequency slide controls at 31.5, 63, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz  $\pm 12$  dB boost or cut; stereo pink noise source adjustable to each band center via rotary switch and two-position range buttons; -20 to +3 dB lighted meter registering mic input; 18 dB/octave subsonic filter; source/tape monitoring. Frequency response 3-100,000 Hz  $\pm 1$  dB; THD 0.04%; input impedance 100,000 ohms; output impedance 150 ohms; pink noise 100 mV; S/N 90 dB; ebony faceplate with oak end panels.....\$229

**010.** Similar to D-11 minus built-in pink noise generator/analyzer and mic measurement.....\$169

### Richter Scale™

Unit combines five-band half-octave bass equalizer, pink noise generator/analyzer, electronic crossover,



and measurement microphone; designed to enhance bass response. Features center frequency slide controls at 31.5, 45, 63, 90, and 125 Hz,  $\pm 12$  dB; stereo pink noise source adjustable to each center band via rotary switch; -20 to +3 dB lighted meter registering mic input; 18 dB/octave subsonic filter; source/tape monitoring; equalize program; low-frequency (12 dB/octave at 200 Hz) summing circuit for rumble reduction; ultra-low-boost (+15 dB at 36 Hz) switch; 100/1000-Hz (12 dB/octave) electronic crossover circuit for subwoofer and bi-amplification modes. Frequency response 3-100,000 Hz  $\pm 1$  dB; THD 0.04%; input impedance 100,000 ohms; output impedance 150 ohms; pink noise 100 mV; S/N 90 dB; ebony faceplate with oak end panels.....\$189

### 520B Equalizer/Speaker Control System

Five-band equalizer/speaker control system with 18 dB/octave subsonic filter. Center frequencies set at 36, 60, 120, 1000, and 15,500 Hz; equalization range  $\pm 12$ -15 dB. Features tape monitor loop and separate function switches; l/r tape inputs/outputs and l/r main inputs/outputs. Frequency response 15-30,000 Hz  $\pm 1$  dB; dist. 0.04% from 20-20,000 Hz, 1 V; hum and noise -96 dB at 2 V out, -90 dB at 1 V; max. input 7.5 V rms; input impedance 470k ohms; output impedance 150 ohms; 2.6" H x 12.3" W x 5" D.....\$119

## AUDIONICS OF OREGON

### Space and Image Composer

Class "A" SQ quadrasonic decoder designed to control space within original recording environment and spatial imaging of performance; recreates symphonic and jazz performances, accentuates studio effects, and reproduces SQ<sup>2</sup> records and tapes; uses Tate directional-enhancement system. Features input level and balance controls and five pushbutton input source switching for stereo bypass and enhance, discrete four-channel, SQ, and axial tilt engage/defeat; stereo enhance and separation controls; separate front-back, left and right back, and left and right front balance controls; solo null switch; output level control; dual-tracking power supply; LED display for balance, input overload, input balance (for solo null), and on operations; high-level stereo and discrete four-channel inputs and main four-channel and tape monitor outputs. Main outputs: frequency response 10-20,000 Hz  $\pm 0.5$  dB; max. level 2 V rms (10k ohms); THD 0.1% at 0.5 V rms, 20-20,000 Hz; S/N -80 dB max.; static separation 40 dB (front to back), 50 dB (front, left

to right);  $\pm 7^\circ$  axial tilt correction; black anodized front panel; 3.5" H x 19" W x 9" D.....\$1095

## AUDIO PULSE

### 1000 Digital Time Delay System

Digital time delay system with built-in dynamic range expander with LED gain display; features delay/decay time digital display; rear-panel jacks for remote ambience defeat switch; extra external long/short outputs for 6- or 8-channel operation; LED input level display; automatic defeat of ambience system; built-in headphone amplifier with ambience mix control; ambient signal mix in front channels; tape monitor facilities; separate rear-channel ambience control; individual secondary input/output level controls. Six initial delays continuously variable from 7-95 msec; ambience control 0.0-1.2 sec variable; frequency response 20-10,000 Hz  $\pm 3$  dB (delay mode); THD 0.5% at 1000 Hz; S/N 75 dB (IHF). Dynamic range expander: expansion ratio 1.0-1.5; S/N 80 dB (IHF); headphone output 100 mW at 8 ohms; 110/220 V dc; black anodized finish; 3 1/2" H x 17" W x 12" D.....\$1000

**AP102.** Secondary ducted-port speaker system designed for use with 1000; has two 6-in high-excursion woofer/midrange drivers, 2.25-in cone tweeter, and 2.25-in rear-firing cone tweeter; square column enclosure; frequency response 40-30,000 Hz; 8-ohm impedance; max. input 100 W music power; walnut end caps with wrap-around grille; 35" H x 8 3/4" W x 8 3/4" D.....\$375 pr.

### Model Two Digital Time-Delay System

Recreates multidimensional paths of live sound by electronically duplicating delayed reflected sounds; audio signals encoded digitally and fed into random access memory device at three different stages to recover audio signal. Features built-in 25-W/ch integrated amplifier for precise adjustment of secondary channels and bass and treble controls; input and output level controls with LED peak level indicators; long/short delay and direct/defeat function selector. Short initial delay 19, 33 and 51 msec, long delay 39, 66, and 103 msec; reverb decay time variable from 0.1-0.6 sec; input sensitivity for 0 dB 50 mV-3.3 V variable at 1000 Hz (low level), 1.2-60 V variable at 1000 Hz (high level); input impedance 47,000 ohms (low level), 470,000 ohms (high level); output 0-1.5 V/16,000 ohms (aux.); output noise from 20-20,000 Hz unweighted -80 dB below rated out (direct), -72 dB below rated out (delayed); bass tone control  $\pm 2.5$ -12.5 dB at 70 Hz; treble tone control +4/-7 dB at 7000 Hz; 3 1/2" H x 15" W x 19 1/2" D.....\$680

## AUDIO RESEARCH

### EC-22 Electronic Crossover

Vacuum-tube electronic crossover features ten-position low and high frequency selectors; low-channel level control; test oscillator/mode switch for low and high channels and mute/operate modes; crossover power switch with LED; outlets power switch with LED; front-panel selectable 0 or -6-dB gain switch. Frequency response 1-50,000 Hz  $\pm 0.25$  dB; HD 0.005% at 2 V rms out, 20-20,000 Hz; max. input 10 V rms above 10,000 Hz (high channel), overload proof (low channel); input impedance 50,000 ohms nominal; max. output 50 V rms (low channel); output impedance 500 ohms; noise -90 dB below 2 V rms out/in; includes rack-mount handles; 5 1/2" H x 19" W x 10 1/2" D.....\$1500

### EC-21 Electronic Crossover

Vacuum-tube low-frequency and passive high-frequency electronic crossover; features individual low-channel level controls; 9-dB max. gain automatic warmup muting; fixed frequency capacitor kits available. Input impedance 100k ohms; THD 0.003%; outputs match Audio Research's power amplifiers; 5.25" H x 19" W x 6" D.....\$650

## BGW

### 20 Electronic Stereo Crossover

Professional electronic stereo crossover provides

# 14 SIGNAL PROCESSORS

stereo two-way, stereo two-way with mono sub-bass output, stereo two-way with mono center channel, and mono three or four-way configurations at eight selectable frequencies; subsonic filters on both inputs; Switchset™ 18 dB/octave Butterworth filters; fixed 15 Hz high-pass filter on sub-bass channel; electronic active balanced inputs with provision for plug-in input transformers; short-circuit-protected outputs; XLR-type input/output connectors and 1/4-in tip-sleeve phone jacks for sub-bass patch point; front-panel screwdriver-adjustable high-pass, low-pass, and sub-bass channel output level controls; turn-on time delay relay muting on all outputs; toroidal power transformer. Input impedance 15,000 ohms balanced or unbalanced (with or without transformer); output impedance 44 ohms balanced, 22 ohms unbalanced; center-channel gain 16 dB balanced, 10 dB unbalanced; hi/lo-pass gain 6 dB balanced, 0 dB unbalanced; output headroom balanced 16.4 dB (600 ohms), 18.8 dB (15k ohms), 12 dB (200 ohms), unbalanced 11 dB (600 ohms), 12.7 dB (15k ohms), 9.9 dB (200 ohms); THD 0.02% from 20-20,000 Hz at nominal output; stereo output noise 40 µV balanced (unweighted, 600 ohms in), 20 µV unbalanced; center-channel output noise 70 µV balanced (80-Hz sub-bass pass-band), 35 µV unbalanced; black anodized aluminum front panel; 1 1/4" H x 19" W x 11" D..... \$599

## 10 Electronic Crossover

Mono bi-amp configuration; features 18 dB/octave low-pass, high-pass, and subsonic filters with 120 adjustable rolloff frequencies via Switchset™ (inside chassis); front-panel screwdriver-adjustable high and low-pass level controls; XLR and 1/4-in phone jack connectors; plug-in input and output transformer provision. Input impedance 15,000 ohms; output impedance 68 ohms (drives 600-ohm loads or higher without transformer); gain unity ±0.2 dB; THD 0.05% from 20-20,000 Hz; output noise 20 µV max. from 20-20,000 Hz, 600-ohm terminated input; frequency response 20-20,000 Hz ±0.5 dB; black anodized aluminum front panel; 1 1/4" H x 19" W x 5 1/4" D..... \$199

## BIAMP

### SR/240 Stereo Reverberation System

Stereo reverberation system with two type-9 Accutronics three-spring assemblies. Features automatic hard limiter with LED; two-position reverb-send attack limiter switch; transformerless balanced or unbalanced outputs; EQ blend system includes four frequency controls. THD 0.01% dry signal; slew rate 13 V/µsec dry signal; S/N at unity gain -89 dB from 20-100,000 Hz, 0 dB, -76 dB at 0 dB with blend control at max. reverb, all EQ controls set at 50%; input impedance 10k ohms min.; decay time 2.5 sec; 3 1/2" H x 19" W x 10" D..... \$559

### EQ/270A Graphic Equalizer

27-band 1/3-octave graphic equalizer with center frequencies set from 40-16,000 Hz with ±12 dB boost or cut. Features EQ bypass switch; LED overload indicator; transformer-type connectors and phone jacks on inputs and outputs; transformerless balanced lines in and out; combining filters. Frequency response 10-90,000 Hz ±1 dB, 15-30,000 Hz ±0.1 dB; THD and IM dist. 0.0075%; hum and noise -90 dB at 0 dB V reference, 115 dB below rated output; filter bandwidth 1/3 octave at 3-dB point with 6 dB attenuation; frequency tolerance ±2% of band centers; input impedance 600 ohms/500 ohms switchable; max. input +24 dB; slew rate 8 V/µsec; 3 1/2" H x 19" W x 10" D..... \$539

### EQ/210 Graphic Equalizer

Ten-band two-channel graphic equalizer with center frequencies at 32, 64, 125, 250, 500, 1000,

2000, 4000, 8000, and 16,000 Hz, ±15 dB boost or cut. Each channel has ten sliders, gain slider, EQ bypass switch, and LED overload indicator; four 1/4-in phone jacks/ch for unbalanced/balanced input/output lines. Frequency response 6-45,000 Hz +0/-1 dB (control set flat); THD and IM dist. 0.005%; gain -3 dB unbalanced, 0 dB balanced; slew rate 1 V/µsec; output load impedance 600 ohms; input impedance 50,000 ohms, balanced or unbalanced; max. output +24 dBm at 8 V, unbalanced; S/N 84 dB below 1 V out; rack-mountable; 3 1/2" H x 19" W x 5 1/4" D..... \$299  
EQ/110R. One-channel version of EQ/210..... \$195

## Quad Limiter

Multi-channel limiter/compressor features four front-panel threshold controls with LED for four independent channels. Threshold variable from -40 to +18 dB; output impedance 600 ohms unbalanced or balanced; input impedance 25k ohms unbalanced, 50k ohms balanced; frequency response 20-25,000 Hz ±0.5 dB; THD 0.03% at 1000 Hz; attack time 1 msec; release time 150 msec to 1.5 sec; S/N 102 dB; slew rate 8 V/µsec; 1 1/4" H x 19" W x 5 1/2" D..... \$269

## BOSE

### Spatial Expander

Charge-couple device time delay unit designed to complement pair of 901 Direct/Reflecting speaker systems, Spatial Control receiver, and auxiliary pair of Direct/Reflecting speakers in recreating three-dimensional sound; 901 combined with receiver simulates space of live performance with control for user to adjust spaciousness of music, while the Spatial Expander delays sound from rear speakers to enhance space and ambience of music. Front-panel controls include sliding dimension and spatial balance levers and in/out expander and mode switches..... \$449

## BOZAK

### 902S Time Delay System

Analog electronically-controlled time-delay system with built-in 35-W power amplifier and separate pair of speakers. Timer delay: features delay time, delay remix, signal blend, treble contour, and output level controls; delay 30-130 msec continuously variable; high-frequency EQ ±12 dB; THD + N 1.0%, delay line; frequency response 30-7700 Hz +0/-3 dB. Power amp: features auto-ranging peak-reading LED vertical bar graph display; frequency response 20-20,000 Hz +0/-0.5 dB; THD and IM dist. 0.01% at 1000 Hz. Loudspeakers; incorporates indirect-radiating full-range driver; frequency response 41-10,000 Hz; 8-ohm impedance; input 70 W program. Delay system 2 1/2" H x 17 1/4" W x 9 1/4" D; speaker 20" H x 13" W x 11" D..... \$975  
902. Same as 902S without speakers..... \$795

## CARVER

### C-9 Dynamic Range Expansion

Autocorrelation noise-reduction/dynamic range expansion unit; autocorrelator removes random noise (steady hiss) in 2000-20,000-Hz range while non-random low-frequency noise (hum and rumble) removed by voltage-controlled filter operating below 200 Hz; peak unlimiter circuit restores gain and headroom during initial peak signals..... \$350

## CERWIN-VEGA

### GE-2 Stereo Graphic Equalizer

Covers 13 frequency bands (from 31.5 Hz to 16,000 Hz) ±12 dB; response 20-20,000 Hz ±1 dB with equalizer controls at center detent; rated output 2 V rms (2000 ohms or greater load impedance); control accuracy within 1 dB of calibrations; hum and noise less than 100 mV equivalent input noise; distortion (harmonic or IM) less than 0.05%; inputs: two each source and tape input, line; tape

output (phono jack); half-octave control below middle C, octave control above; 5 1/4" H x 19" W (rack mount) x 17 1/4" D (incl. knobs)..... \$600

## CX-2 Electronic Crossover

Passive electronic crossover designed for home subwoofer systems; crossover frequencies available in 100, 150, and 250 Hz fixed frequencies; 12 dB/octave slope; requires no power supply. Dist. unmeasurable at or below 2.5 V out; insertion loss 1 dB max.; nominal input impedance 3.3k ohms; recommended output impedance 5k ohms; channel-to-channel crosstalk -70 dB at 20,000 Hz; max. input voltage 11 V; 1 1/4" H x 7" W x 2 1/4" D..... \$100

## DB-10 Bass Turbocharger

Incorporates 18 dB/octave subsonic filter to eliminate subsonic noise below 20 Hz; frequency response ±0.25 dB; rated output 2 V rms; max. output 8 V rms; HD or IM dist. 0.025%..... \$90

## CROWN

### EQ-2 Synergistic Equalizer

Eleven-band two-channel 1/2-octave (on octave centers) equalizer with center frequencies set at 20, 40, 80, 160, 320, 640, 1250, 2500, 5000, 10,000, and 20,000 Hz, ±15 dB boost or cut; each channel features octave frequency adjust controls; ±20 dB tone controls with bass hinge points adjustable from 180-1800 Hz and treble hinge points adjustable from 1000-10,000 Hz; equalizer cancel and tone cancel master controls; and overload indicators. Rear panel has unbalanced inputs, balanced inputs with switchable unity/+10 dB gain selection, screwdriver-adjusted attenuation controls, and normal/inverted outputs. Frequency response 10-100,000 Hz ±0.3 dB, 20-20,000 Hz ±0.1 dB, controls flat with IHF load; hum and noise 90 dB below rated output, 20-20,000 Hz bandpass; IM dist. 0.01% at rated output; rated output 2.5 V rms into IHF load; input impedance 25k ohms unbalanced, 20k ohms balanced (transformerless); output impedance 300 ohms (normal), 600 ohms (balanced); satinized aluminum front panel with grey Lexan inlay; 7 1/2" H x 19" W x 14 1/2" D \$1195

### VFX-2A Crossover

Solid-state filters used for crossover or bandpass functions; two-channel, two filters/ch (high pass, low pass at 18 dB each) from 20-20,000 Hz ±0.1 dB; filter rolloff at 18 dB/octave. Stereo: 0-15.5 dB variable gain bridging input/channel along with unbalanced unity gain input; output impedance 300 ohms (inverted and non-inverted), 6 V max. output into 600 ohms; IM dist. 0.01% at rated output; hum and noise 100 dB below rated output with 0 dB gain. Mono: functions as combined bandpass/two-way crossover, or as three-way crossover (tri-amping); mono jack combines two input signals to form mono output; mono bass output combines low pass section of two filters which feeds the output jack. Satinized aluminum front panel with plexiglass cover; 3 1/2" H x 19" W x 5 1/4" D..... \$429

## DAHLQUIST

### DQ-LPI Variable Low Pass Filter

Low-pass electronic crossover for bi-amp bass speaker applications, including external low bass reproducers; each channel continuously variable from 40-400 Hz; low-pass cutoff slope at 18 dB/octave; controls adjustable from flat to 5 dB boost at 20 Hz; outputs: choice or combination of mixed center-channel and stereo bass; separate level controls for system balance and up to 15 dB gain; satin-brushed panel with walnut end blocks; 2 1/4" H x 12 3/4" W x 5 1/4" D..... \$315

### DQ-MX1 Passive Matrixing Crossover

Connects power amplifier to 8-ohm stereo speakers and subwoofer and combines low frequencies from both channels; stereo separation maintained for main speakers; includes three-position bass-level switch, 60-80 Hz crossover frequency switch, and phase switch; left and right inputs from power amp or receiver outputs; outputs to left and right speak-



ers and to mixed-channel bass module; 3 $\frac{1}{2}$ " H  $\times$  8 $\frac{1}{2}$ " W  $\times$  7" D ..... \$145

## DB SYSTEMS

### DB-3 Active Crossover

Designed for bi- and tri-amplified speaker systems; asymptotic slope 12 dB/octave Gaussian or 18 dB/octave Butterworth; fixed crossover frequencies (to be specified on order); available as two- or three-way crossover (for common bass channel, designation is 1 $\frac{1}{2}$ - or 2 $\frac{1}{2}$ -way, respectively); individual channel gains screwdriver adjustable; THD 0.0008% from 20-20,000 Hz; noise -100 dB (shorted input); frequency response of summed output within 1 dB 5-50,000 Hz.

1 $\frac{1}{2}$ -way Butterworth crossover ..... \$295  
2-way Gaussian crossover ..... \$225  
2-way Butterworth crossover ..... \$300  
3-way Gaussian crossover ..... \$270  
3-way Butterworth crossover ..... \$420  
Additional bass (Butterworth) crossover ..... \$15  
**DB-3-100.** Similar to DB-3 except two-way electronic subwoofer crossover with 18 dB/octave Butterworth crossover at 100 Hz; must be used with DB-2 power supply ..... \$252  
**DB-2.** Power supply for DB-3 and DB-3-100 ..... \$62

## dbx

### dbx Tape Noise Reduction Systems

Provides 30 dB noise reduction and 10 dB additional headroom when recording with open-reel, cartridge, or cassette recorders; eliminates tape hiss and noise in live recording; prevents additional noise build-up in tape duplicating or recording off-the-air; also decodes dbx encoded discs.

**Model 128.** Two-channel switchable record or play plus linear and above-threshold expander/compressor ..... \$450

**Model 224 Type II Recording Technology Series.** Two channel simultaneous record/play; also decodes dbx discs ..... \$275

### 155 Noise-Reduction System

Professional format, 4-channel tape noise-reduction system gives 30 dB of tape noise reduction at all levels over the entire audio spectrum with an additional 10 dB recording level; true rms detection for accurate encode/decode tracking; linear decibel compression/expansion over 100 dB range; no pilot tones or level match adjustments necessary; front-panel record and play level adjust; user-changeable modular circuit boards for each channel (spares available) ..... \$550

### Dynamic Range Expanders

Permits listener to restore up to 20 dB of the dynamic range missing from records, tapes, or FM broadcasts. Dynamic range 110 dB (peak signal to weighted background noise); frequency response 20-20,000 Hz  $\pm$  0.5 dB; THD 0.1% at 1.0 expansion; SMPTE IM dist. 0.15% typical; input impedance 50k ohms.

**3bx.** Three-band linear expander with 30 gain-change LEDs in -20 to +12 dB range; expansion ratio continuously adjustable to 1.5; 3 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  10 $\frac{1}{2}$ " D ..... \$699

**3bx-R.** Remote control for 3bx; provides remote control of transition level, release time, and expansion ratio; system master volume; fade control ..... \$149

**2bx.** Two-band linear expander with 20 gain-change LEDs and program-dependent release rate; expansion ratio 1.0-1.5; 3 $\frac{1}{2}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  10 $\frac{1}{2}$ " D ..... \$499

**1bx.** Single-band linear expander with ten gain-change LEDs and program-dependent release rate; expansion ratio 1.0-1.5; 3 $\frac{1}{2}$ " H  $\times$  11" W  $\times$  10 $\frac{1}{2}$ " D ..... \$259

**11B.** Compressor/expander with peak limiting/unlimiting capability; allows recordist to make full dynamic range tapes on moderately-priced recorders and obtain 20 dB or more improved (S+N)/N; LED indicator light ..... \$219

### 100 Subharmonic Synthesizer

Synthesizes frequencies between 50 and 100 Hz to

recreate signals in bottom octave (25-50 Hz); can be inserted in tape monitor circuit of receiver or amplifier; synthesizes and low-frequency boost controls plus bypass switch; input impedance 47,000 ohms; output level 7 V rms; frequency response 20-20,000 Hz  $\pm$  1 dB; THD 0.1%; 3 $\frac{1}{2}$ " H  $\times$  7 $\frac{1}{4}$ " W  $\times$  10 $\frac{1}{4}$ " D ..... \$219

### 21 Disc/Tape Decoder

Linear decibel compression and expansion system that encodes musical signal going onto record and decodes dbx-encoded disc or tapes upon playback; features noise reduction and tape/source monitor buttons; level match control; frequency response 15-30,000 Hz  $\pm$  0.5 dB (Dolby off); max. output 4 V rms into 10,000-ohm load; THD 0.2% at 1000 Hz; hum and noise -94 dBV; 2 $\frac{1}{2}$ " H  $\times$  8 $\frac{1}{2}$ " W  $\times$  6 $\frac{1}{8}$ " D ..... \$109

## DRACO LABS

### Lab Series Dynamic Range Expander

Features LED spectrum display for bass, midband, and treble frequencies over -20 to +10 dB range; expansion ratio slide control; unity gain level control; post/pre, source/tape, and process/bypass controls. Expansion 1.0:1.6 dB; frequency response 20-20,000 Hz  $\pm$  0.5 dB; HD and IM dist. 0.1%; dynamic range 110 dB; expansion linearity error 5%; channel balance  $\pm$  0.5 dB; input noise -90 dB below 1 V; input impedance 50k ohms; output impedance 600 ohms; max. output 9 V rms at 1000 Hz; 3" H  $\times$  17" W  $\times$  12" D ..... \$600

## DYNACO

### SIE-1 Stereo Image Enhancer

Operates on principle of phase coherence between channels to sharpen and localize individual instruments; adjustable front-panel dimension, compensation, and volume controls; bypass switch; LED power on indicator. Frequency response 20-20,000 Hz  $\pm$  0.5 dB (bypass); S/N 100 dB (bypass), 30 dB (active); input sensitivity 1 V, unity gain max.; input impedance 1:1 out (bypass), 47k ohms (active); output impedance 1:1 in (bypass), 1k ohms (active); headroom 6 dB at 1 V in; 3 $\frac{1}{4}$ " H  $\times$  16 $\frac{1}{2}$ " W  $\times$  8" D ..... \$200

## EVENTIDE

### 1745M Digital Delay System

Electronically-controlled RAM digital delay system features Signal Doubling (doubles voice or instrument sound signals by insertion of 12-40 msec delay) and Audio Recirculation (traps and continuously repeats 640-msec of signal) switches; front-panel instant-zeroing switches of all delays; input level control; optimum level indicator; two solid-state digital readouts for two outputs (up to three additional outputs are available). Delay 320 msec/output in 20- $\mu$ sec steps; frequency response 30-16,000 Hz  $\pm$  1 dB (standard delay), 30-8000 Hz (double delay); 90-dB dynamic range; dist. 0.3% at 1000 Hz; input signal level from -10 dBm to +24 dBm; output impedance 150 ohms nominal, 300 ohms driving; S/N 78 dB; 115 V ac, 50-60 Hz  $\pm$  5% or 230 V ac, 50-60 Hz; 5 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  15" D ..... \$4100  
**03.** Extra outputs, fully switchable ..... \$550 ea.  
**08.** Variable pitch/delay output with high-resolution readout ..... \$850  
**09.** Remote control, GPIB compatible ..... \$550

### JJ193 Digital Delay

CMOS-logic digital delay line designed for recording studio, concert hall, auditorium, or radio station; produces signal doubling, realistic echo effects, synchronization of sound reinforcement speakers, and pre-echo delay. Features RAMs; variable time delay switches (0-max. in 2-dB steps); four outputs and one input; six-LED input level indicators; input level control. Input impedance 20k ohms balanced, 10k ohms unbalanced; input level -10 to +3 dBm (full dynamic range); output impedance 300 ohms electronically balanced; max. output level +22

dBm; dist. 0.2% at 1000 Hz; dynamic range 90 dB from clipping to noise floor; response 30-12,000 Hz  $\pm$  1 dB; 1.75" H  $\times$  19" W  $\times$  9" D ..... \$1195  
**CD254.** Similar to JJ193 except has two outputs; 0-254 msec time delay controllable by internal switches; no front-panel controls ..... \$895

### HM-80 Harmonizer

Compact portable harmonizer features  $\pm$ 1-octave pitch control, 270-msec delay, word or short riff repeat, time reversal, and dry vs. effect output mix, and feedback controls; dynamic range 80 dB; 2.25" H  $\times$  10.5" W  $\times$  8.25" D ..... \$775

### FL201 Instant Flanger

Oscillator, manual, remote, and envelope controls may be used in any configuration; features time delay circuitry, effect modifier block (designed to imitate motor or servo hunting bounce), and depth control (effects percentage of direct vs. delayed signal and relative phase of each); line in/out control and LED indicator; high level input and output (optional balanced line in/out); LED mode indicators. Frequency response 50-15,000 Hz +1 dB (direct channel), 50-10,000 Hz +1.5 dB (delayed channel); dist. 0.05% below clipping (direct channel), 1.0% from 0 to +8 dBm input (delayed); dynamic range 112 dB at 15,000 Hz (direct), 75 dB (delayed); delay time between 200  $\mu$ sec-10 msec; input/output level 0 to +4 dBm; input impedance 10k ohms unbalanced; 3.5" H  $\times$  19" W  $\times$  9" D ..... \$700

### 2830 Omnipressor

Dynamic modifier combines functions of compressor, expander, noise gate, and limiter. Features continuously variable expansion/compression control (10:1 gate to -10:1 abrupt reversal); attenuation and gain limit controls (60 dB to  $\pm$ 1 dB); variable time constant controls (1000:1); bass/cut switch; logarithmic input/output/gain meter; in/out bypass switch. Frequency response 20-16,000 Hz +0/-0.5 dB; input/output level 0 to +8 dBm nominal; input impedance 10k ohms electronically balanced; output impedance 600 ohms nominal; gain unity, +10, +20 dB (agc disabled); compression continuously variable from 1:1 to unity to 10:1; expansion continuously variable from 1:1 to 10:1; S/N -90 dBm at unity gain; attack time continuously variable 100  $\mu$ sec-100 msec; release time continuously variable from 1 msec-1 sec; 3.5" H  $\times$  19" W  $\times$  9" D ..... \$700

## GARRARD

### MRM 101 Music Recovery Module

Impulse noise suppression device with phono pre-amplifier; electronically detects clicks and pops, reducing output level to 30 dB below program level in 2.7 msec; gradual attenuation (0.5-0.75 msec) to -30 dB level; output gain stage boosts signal voltage to drive aux. inputs of phono preamp; nominal output 300 mV; rated output at 1.0% distortion 2.5 mV; dist. 0.01% (phono preamp), 0.1% (suppression circuitry); channel balance better than 2 dB; S/N 100 dB (phono preamp), 85 dB (suppression circuitry); input impedance 47,000 ohms; includes front-panel LED for suppression circuitry, LED indicator when suppression circuitry is in signal path, and defeat switch for suppression circuitry so unit can be used as phono preamp only; 2 $\frac{1}{4}$ " H  $\times$  15" W  $\times$  12" D ..... \$220

## GLI

### EQ-1500 BI-FET Graphic Equalizer

Ten-band stereo graphic equalizer with center frequencies at 30, 60, 120, 240, 500, 1000, 2000, 4000, 8000, and 16,000 Hz,  $\pm$ 12 dB boost or cut. Features high-speed operational amplifier Bi Fet IC circuitry; 20 slide controls (10/ch) with center detent; EQ defeat switch with LED status indicator; main, aux., and tape monitor input switches; power switch with LED. Frequency response 20-20,000 Hz  $\pm$  0.5 dB (EQ flat), 0-500,000 Hz  $\pm$  0.1 dB (EQ bypassed); dist. 0.05% at 1 V rms out; THD and IM dist. 0.005% from 20-20,000 Hz

# 14 SIGNAL PROCESSORS

at 5 V; slew rate 14 V/ $\mu$ sec; S/N 90 dB below 2 V rms; max. output 10 V before clipping; 19" rack-mountable. .... \$250

## HEATH

### AD-1706 Audio Processor

Incorporates dynamic range expander and noise-reduction circuit increasing total dynamic range up to 17 dB (any program source processed through unit gains up to 7 dB of dynamic range expansion and 10-dB of noise reduction); front-panel 12-dB/octave (7000 Hz) high filter switch; built-in tape monitoring; LED noise-reduction and dynamic range expansion indicators; connects between tape output and tape monitor jacks of preamp, integrated amp, or receiver. Rated input 200 mV; input impedance 100k ohms; gain 0 dB (expander off), +0.25 dB (expander on); frequency response 20-20,000 Hz; sensitivity 500  $\mu$ V; hum and noise -70 dB from 20-20,000 Hz; output impedance 500 ohms; input overload 5 V rms at 1000 Hz; black cabinet; 5.75" H x 19" W x 14" D. .... \$250

### AD-1304 Audio Processor

Separate expander (7-dB dynamic range to program) and noise-reducer (up to 10 dB) circuit for 17-dB total dynamic range; front-panel high-filter switch (12 dB/octave at 7000 Hz linear phase); front-panel LEDs; front-panel controls; rear-panel tape monitor facilities; rated input/impedance 200 mV/100k ohms; output impedance 500 ohms; gain  $\pm$ 0.5 dB (expander off), -3 dB/+4 dB (expander on); frequency response 20-20,000 Hz +0/-0.2 dB; THD 0.1% from 20-20,000 Hz; 12 lbs.; 4 1/2" H x 17 1/2" W x 8 1/2" D. Kit ..... \$200

### AD-1305 Stereo Equalizer Kit

Five-band, two-channel graphic equalizer kit; matches Heath AP-1615 preamp; HD and IM less than 0.05%; hum and noise 90 dB below rated output; slide control switches for tone flat and tape monitor; 4 1/2" H x 17 1/2" W x 8" D. .... \$135

## INTEGREX

### Four-Ch Dolby B Noise Reducer Kit

Stereo unit incorporates four Dolby channels for simultaneous encoding/decoding for three-head tape machines; designed to reduce hiss in magnetic-tape recording machines; decodes commercially-available Dolby B-encoded cassettes or Dolby B FM radio broadcasts and/or encodes blank tapes from any source; cannot be used for discrete 4-channel encoding or decoding. Noise reduction 9 dB weighted (CCIR/ARM); min. sensitivity 35 mV rms (tape and Dolby FM tuner inputs), 40 mV rms (aux. input); impedance 47k ohms (all inputs), 300 ohms variable (all outputs); max. variable output level 580 mV rms (Dolby level); overload 18 dB above Dolby level for 0.3% THD; dist. 0.05% (all outputs at Dolby level); S/N unweighted, ref. Dolby level, at monitor output 76 dB (from aux. in), 80 dB (from tape and tuner in, Dolby on), 69 dB (from tuner in), at tape output 69 dB (from aux. and tuner in), 76 dB (from tuner in, Dolby FM on). Kit includes two-color fiberglass printed circuit board with component locations, all alignment circuits, and solid mahogany cabinet; assembly time approx. 10 hrs; 2.75" H x 15.5 W x 6.75" D. .... \$137  
**Dolby Calibration Tapes.** Specify reel or cassette .. \$39

### DFM Dolby Noise Reducer

Decodes Dolby B-encoded cassette or reel tapes and Dolby-encoded FM broadcasts; front-panel on/off and Dolby-decoding in/out switches; rear-panel input level calibration, output level, and 25/75  $\mu$ sec de-emphasis input select controls. Noise reduction 9 dB weighted (CCIR/ARM); sensitivity 35 mV rms

min.; variable output level 580 mV at Dolby level, overload 18 dB above Dolby level for 0.3% THD; dist. 0.05% ref. Dolby level; separation tape input 58 dB at 2000 Hz, Dolby on; S/N 79 dB Dolby level (CCIR/ARM); aluminum anodized case; 2.5" H x 8.5" W x 4" D ..... \$100

## INTERSOUND

### PRV-1 Parametric Equalizer-Reverb

Accutronics Type 9 mechanical delay line single-channel reverberation system with two-band parametric equalization. Reverb: features input gain control with 0, -3, -6, and -12 dB LED reverb drive signal display; output level control; EQ/flat line and reverb routing controls; reverb and line level controls; balanced and unbalanced inputs and outputs requiring no transformers; provision for optional footswitch for reverb selection with LED; nominal input level, balanced and unbalanced, 0.80 V rms at 0 dBV; reverb decay time 3.0 sec; reverb S/N 68 dB; dry stage (reverb off) frequency response 20-20,000 Hz  $\pm$ 1 dB and S/N 90 dB at 0 dB; THD 0.05% from 20-20,000 Hz; nominal output level 0.80 V rms (0 dBV) into 1k ohms (unbalanced) and 1.0 V rms (+2 dBV) into 600 ohms (balanced); nominal overall gain 0 dB (EQ flat), +26 dB max. Equalizer: features 12-dB/octave variable lo-cut filter; frequency controls ranging from 80-1800 Hz and 500-12,000 Hz; two bandwidth controls ranging from 0.25-3.0 octaves/band; separate  $\pm$ 14-dB boost/cut controls; variable lo-cut turnover frequency from 150-1200 Hz; steel rack-mount chassis; 3.5" H x 19" W x 11" D. .... \$399

## JVC

### SEA-80 Graphic Equalizer

Ten-band stereo graphic equalizer with center frequencies set at 31.5, 63, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz,  $\pm$ 12 dB boost or cut. Features fluorescent analyzer display with left/right mode switch, memory, and level control (covers 32-16,000 Hz frequency range over 0-26-dB level range); built-in pink noise generator; -6-dB SEA switch (doubles input sensitivity to accommodate high inputs without distortion); SEA record switch (transmits signal to tape deck); tape monitor switch; -20-dB mic switch. Input impedance 47k ohms (SEA and tape monitor in); output impedance 100 ohms (SEA and tape rec out); rated output 2 V rms; frequency response 10-100,000 Hz +0/-1 dB; THD and IM dist. 0.003%; gain 0 dB/-6 dB; 6 1/4" H x 17 1/4" W x 12 1/4" D. .... \$600

### SEA-50 Graphic Equalizer

Ten frequency "tone-zone" control ranges (one per octave) with  $\pm$ 12 dB boost or cut; uses resonant circuits composed of resistors, capacitors and semiconductor inductors, one for each "tone zone" or frequency range band ..... \$290

### SEA-20GL Graphic Equalizer

Seven frequency "tone zone" control ranges (one per 1 1/2 octave); each slide control covers 60, 150, 400, 1000, 4000, 6000, or 15,000 Hz tone zone; includes defeat, record, tape monitor, and input attenuator (0 dB/-6 dB) ..... \$190

### BN-5 Biphonic Processor

Binaural processor for binaural effects through speakers; input terminals Line In/Tape Play at 80 mV/-20 dB, 100 ohms input impedance; output terminals Line Out at 300 mV, -8 dB output level, 3.5k ohms Tape Rec output impedance; consumes 7 W; 3 1/4" H x 15 1/4" W x 9 1/2" D. .... \$280

## KENWOOD

### GE-80 Stereo Graphic Equalizer

Five-band stereo graphic equalizer with center frequency slide controls at 50, 200, 800, 3200, and 13,000 Hz  $\pm$ 10 dB; features low-distortion band-pass filter, EQ record, EQ defeat, and -6-dB attenuation switch. Frequency response 10-60,000 Hz

+0/-1 dB; HD 0.006% from 20-20,000 Hz; max. output 5 V at 1000 Hz; S/N 110 dB (short-circuited, IHF A); input impedance 47k ohms; gain 0 dB  $\pm$ 11 dB; 74 mm H x 440 mm W x 160 mm D. .... \$165

### RA-80 Reverberation Amplifier

Stereo reverberation amplifier features continuously variable depth control from 0-2.5 sec, monitored on LED display panel; tape monitoring; reverb and reverb recording selectors; effects control; -6-dB attenuation switch. Frequency response 15-60,000 Hz +0/-1 dB; HD 0.008% from 20-20,000 Hz; S/N 100 dB (IHF A); 74 mm H x 440 mm W x 160 mm D. .... \$179

## KLARK-TEKNIK

### DN70 Digital Time Processor

652-msec max. time delay system features digital readout in msec of each output (three main outputs) and quasi 15-bit analogue-to-digital converter with 3k ROM and 448k RAM capacity. Additional features include front-panel mixing and regeneration controls plus mixed output; delay-setting memory for permanent or semi-permanent installations; lockout switch; remote capability. Analog section: input impedance 10k ohms nominal (electronically balanced); input level at limiting +4-+30 dBm adjustable; output impedance 20 ohms nominal (electronically balanced); output level at limiting +4-+20 dBm adjustable; dynamic range 90 dB; frequency response 30-15,000 Hz  $\pm$ 1 dB; total dist. products 0.1% at 1000 Hz full drive. Digital section: sampling frequency 50,000 Hz; MRA connector has 15-bit data control bus, 6-bit data timing control, write inhibit, and 12-bit user-definable controls. 115 V or 230 V ac, 50-60 Hz; 3" H x 19" W x 10.5" D. .... \$4900  
 323-msec version with 3k ROM and 224k RAM capacity ..... \$4750  
 163-msec version with 3k ROM and 112k RAM capacity ..... \$4600

### DN36 Analogue Time Processor

Dual-channel voltage-controlled time delay system with manual or automatic controls and built-in modulator. Each channel features input, feedback, cross-channel feedback, and master gain levels with LED array level indicators; delay control; modulator switch; modulator depth control. Output section has two clean feed outputs and one mixed output with pan control. Modulator has rate control and waveform and invert "A" switches. Delay time 0.5-50 msec, continuously variable; frequency response 20-15,000 Hz; internal modulator range 0.1-10 Hz continuously variable; dynamic range 90 dB; dist. at 1000 Hz 0.2% typically, 0.5% at 3 dB below clipping; input impedance 10k ohms (balanced or unbalanced); input sensitivity -10-+20 dBm; output impedance 50 ohms; output level adjustable to +22 dBm at clipping ..... \$1600

### DN22 Graphic Equalizer

Eleven-band two-channel stereo graphic equalizer features eleven slide potentiometers/channel,  $\pm$ 12 dB boost or cut at eleven center frequencies with center detent, separate low and high pass filters/channel, bypass switch/channel, level controls (up to 6-dB gain), and LED power. Center frequencies set at 50, 90, 160, 300, 500, 900, 1600, 3000, 5000, 9000, and 16,000 Hz with  $\pm$ 2% center frequency accuracy; frequency response 20-20,000 Hz  $\pm$ 0.5 dB; output clipping +21 dBm into 600 ohms; dist. 0.01% at 1 kHz at +4 dBm into 600 ohms, 0.05% from 20-20,000 Hz at +18 dBm into 600 ohms; input noise -95 dBm; input impedance 10k ohms nominal; output source impedance 10 ohms, short circuit protected; 200-240 V ac, 50-60 Hz; 5.4" H x 19" W x 8.4" D ..... \$840  
**DN22B.** Balanced version of DN22 ..... \$1075

### DN27 Graphic Equalizer

27-band one-third-octave graphic equalizer features 27 slide potentiometers with  $\pm$ 12 dB boost or cut and center detent, bypass switch, level control (up to 6-dB gain), and power switch with LED. Cen-



ter frequencies set at 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10,000, 12,500, and 16,000 Hz with accuracy better than  $\pm 2\%$ ; frequency response 20-20,000 Hz  $\pm 0.5$  dB; output clipping +21 dBm into 600 ohms; dist. 0.01% at 1000 Hz at +4 dBm into 600 ohms, 0.05% from 20-20,000 Hz at +18 dBm into 600 ohms; equivalent input noise -90 dBm from 20-20,000 Hz; input impedance 10k ohms; output source impedance 10 ohms, short circuit protected; 200-240 V ac, 50-60 Hz; 5.4" H  $\times$  19" W  $\times$  8.4" D ..... \$780  
**DN27B**. Balanced version of DN27 ..... \$900

## KLH

### DNF 1201A Dynamic Noise Filter

Processes any two-channel or matrix encoded material from turntable, tape deck, cassette deck, receiver or tuner; pushbutton controls select proper noise reduction; sensitivity control with LED readouts; frequency response (min. bandwidth) -3 dB at 500 Hz, -10 dB at 1 kHz, -20 dB at 2.5 kHz; (max. bandwidth)  $\pm 0.5$  dB max. 10 Hz to 20 kHz, -3 dB at 30 kHz, -25 dB at 100 kHz; attenuation rate 9 dB/octave; noise reduction levels up to 30 dB above 5 kHz, 14 dB above 400 Hz; HD 0.2% max.; 0.0 dB gain at 1 kHz adjustable to 10 dB; internal noise 100  $\mu$ V rms 20 Hz to 20 kHz; has 8 phono jacks and tape deck connectors; 2 $\frac{1}{8}$ " H  $\times$  17 $\frac{1}{2}$ " W  $\times$  8 $\frac{1}{4}$ " D ..... \$379

### TNE 7000 Transient Noise Eliminator

Impulse suppressor reduces or eliminates medium and small clicks, pops and ticks from turntable or tape deck; blanking duration 100-600 millionths of a second; blanking period filled by transition voltage; has defeat, tape monitor, threshold, and sensitivity controls; LED indicators for transient noise elimination and high-frequency calibration; frequency response 20-20,000 Hz  $\pm 0.5$  dB; distortion 0.1% (THD), 0.5% (IM); internal noise 40  $\mu$ V rms; 2 $\frac{1}{8}$ " H  $\times$  16 $\frac{3}{4}$ " W  $\times$  7 $\frac{3}{4}$ " D ..... \$329

## KM LABORATORIES

### A.I.R.S. 8 Processor

Frequency-dependent phase processor of stereo signals designed to reproduce multidimensional sound, thus eliminating envelope intermodulation distortion. Features A.I.R. system in/out with LED, balance set/zero calibration selector, and LED peak input indicator; source/monitor tape selector; center-detent balance control; switchable level control. Frequency response 20-20,000 Hz  $\pm 1.5$  dB; THD 0.1% at max. level; S/N 100 dB weighted; input level/impedance 2.5 V rms/47k ohms (phono), 2.5 V rms/330 ohms (line); output level/impedance 4 V rms/27 ohms; 60 mm H  $\times$  380 mm W  $\times$  190 mm D ..... \$349

## KOSS

### K/4DS Digital Delay System

Designed to recreate concert hall sound in home environment; stores in digital format 17,000 bits of



information of live performances from club, theater, concert hall, and auditorium employing 16,384-bit computer circuitry and RAM; automatically delays recorded material to conform with optimized ideal room stored in computer; hooks into any stereo system; second set of speakers required. Features built-in 15 W/ch amplifier; switchable speaker selector for 4th dimension, stereo only, and phones and left/right speaker dimension control; EQ switch (enhances bass response of ambience speakers and rolls off bass response below 50 Hz); min./max.

gain set with LED limit indicator; stereophones level, dimension, and 4th dimension/stereo comparator controls with two phone jacks ..... \$399

## LOGICAL SYSTEMS

### 8801 Dynamic Noise Filter

Variable bandpass filter designed to eliminate hiss and rumble from existing program material; also eliminates tape, record, and radio reception noise without interfering with music; no encoding or decoding necessary. Features mono bass circuit with 150-Hz crossover at 6-dB/octave; dynamic low-end 6-dB/octave filter; on-off/threshold, tape monitor, and hiss and rumble reduction defeat controls; tri-color LEDs indicating break frequencies from 3000-10,000 Hz. Hiss reduction 15 dB at 10,000 Hz; rumble reduction 20 dB at 10 Hz; program-dependent attack and release times; frequency response 20-20,000 Hz; S/N 75 dB below 2 V rms out, 20-20,000 Hz; THD 0.1% at rated output; IM dist. 0.01% at rated output; max. output 10 V into 10k ohms; input impedance 47k ohms, single-ended; output impedance 600 ohms; 1.75" H  $\times$  19" W  $\times$  7" D ..... \$289

**8800**. Similar to 8801 except variable low-pass 9 dB/octave filter; minus hiss and rumble reduction defeat controls; has system defeat; does not work on existing program material; tri-color LEDs start at 1500-Hz break frequency; output impedance 100 ohms; 2.5" H  $\times$  9.75" W  $\times$  6.5" D ..... \$199

### 318 Silencer Noise-Reduction Kit

Eliminates hiss from tapes, records, AM/FM in playback/record through FET control circuitry design. Features on-off/threshold, tape monitor, and system defeat controls; tri-color LEDs indicating break frequencies from 1500-10,000 Hz; variable gyrotor-type low-pass 9 dB/octave filter; no encoding or decoding. Hiss reduction 15 dB at 10,000 Hz; program-dependent attack and release times; frequency response 20-20,000 Hz; S/N 75 dB below 2 V rms out, 20-20,000 Hz; THD 0.1% at rated output; IM dist. 0.01% at rated output; max. output 10 V rms into 10k ohms; input impedance 47k ohms, single ended; output impedance 100 ohms. Kit includes circuit-board-mounted components, custom chassis, American black walnut end pieces, and manual; 2.5" H  $\times$  9.75" W  $\times$  6.5" D ..... \$129

## LT SOUND

### PEQ Parametric Equalizer

Four-band stereo parametric equalizer covers 25-3000, 100-10,000, and 175-20,000 Hz bands; boost/cut band variable between 0.15 and 2.0 octaves,  $\pm 15$  dB range. Features LED peak indicator, overall bypass switch, and bypass on each band. Frequency response 20-20,000 Hz  $\pm 0.5$  dB; THD 0.007% and IM dist. 0.002%; S/N 90 dB below 1 V; slew rate 13 V/ $\mu$ sec; input impedance 47,000 ohms; balanced and unbalanced line inputs and outputs can drive 600-ohm loads; 3.5" H  $\times$  19" W  $\times$  7" D ..... \$475

### ECC Echo Control Center

Single-channel unit functions as preamplifier for two low-impedance microphones and two low-level low-impedance line level aux. inputs; three-band equalizer, and echo and reverb control for mic level, EQ, and echo; features bi-FET op amp circuitry, relay on/off transient protection, and mu metal shielding for reverb unit. Delay dynamic range 85 dB below 1 V; dist. 0.5% at 1000 Hz, 0.775-V out; delay range 20-240 msec; frequency response of delay  $\pm 1.5$  dB; mic input impedance 2000 ohms for 600-ohm or lower mic; aux. input impedance 47k ohms; output impedance 200 ohms for 2k-ohm loads; EQ range  $\pm 18$  dB for bass, midrange, and treble; rack-mountable; 2" H  $\times$  19" W  $\times$  7" D. \$420  
**RCC**. Reverb control center similar to ECC without echo capability; frequency response 10-40,000 Hz  $\pm 0.5$  dB direct, 20-5500 Hz reverb; dynamic range 72 dB below 1 V; THD and IM 0.05% ... \$195

### RV-2 Stereo Reverberation Unit

Reverb unit for line-level inputs only; features

-6-dB and peak amplitude LEDs; three equalization controls; direct, reverb, reverb drive controls; send-receive buss. Frequency response 2-40,000 Hz  $\pm 0.5$  dB (direct); reverb 20-5500 Hz; reverb time 2.5 sec; input impedance 47k ohms; output impedance 200 ohms for 2k-ohm loads; S/N 90 dBm (direct); 2" H  $\times$  19" W  $\times$  7" D ..... \$305

### ECU-2 Electronic Crossover

For stereo bi/tri-amplification (front panel switchable); high slew rate bi-FET ICs in all circuits; switchable 1.5/30-Hz rumble filter; has low-level, low-pass, mid-level and high-pass with X10-range selector, and high-level controls for each channel; low frequency crossover point continuously variable from 75-1100 Hz, mid-high from 75-1100 Hz in X1 range and 750-11,000 Hz in X10 range. S/N 90 dB below 1 V; THD 0.007%; IM dist. 0.003%; input impedance 47k ohms; output impedance 200 ohms; 2" H  $\times$  19" W  $\times$  7" D ..... \$295

### NR-2 Noise-Reduction/Range Enhancer

Two-channel unit provides 2:1 compander noise-reduction system and dynamic range enhancement system; for dual or independent tracking. Frequency response 20-20,000 Hz  $\pm 0.75$  dB; S/N 90 dBm; dist. 0.2% at 1000 Hz; input impedance 47,000 ohms; output impedance 200 ohms for 2k-ohm loads; 2.5" H  $\times$  12.75" W  $\times$  6.15" D ..... \$195

### NR-4 Four-Ch Noise-Reduction Compander

Can switch four channels of noise reduction from record to play mode using two inputs simultaneously or two-channel simultaneous record and tape monitor decode; has bypass switches. Frequency response 20-20,000 Hz  $\pm 0.75$  dB; THD 0.2% (compressed and expanded); slew rate 13 V/ $\mu$ sec; expander noise output -95 dBm; max. input level +26 dBm; 2.5" H  $\times$  12.75" W  $\times$  6.15" D ..... \$185

**NR-8**. Same as NR-4 except provides eight channels of individually switchable record/play and bypass noise reduction or four-channel simultaneous record and tape monitor decode ..... \$370

## LUX

### Luxman G-120A Graphic Equalizer

Ten-band stereo graphic equalizer with center frequency slide controls at 28, 55, 110, 220, 440, 880, 1800, 3500, 7000, and 14,000 Hz,  $\pm 12$  dB boost or cut; features normal/bypass/record function selector, input attenuator selector, tape monitor switch, and LED overlevel indicator. Frequency response 10-100,000 Hz -1.5 dB; THD and IM dist. 0.01% at 1 V out; S/N 110 dB (IHF A weighted); input sensitivity/impedance 1 V/65k ohms; 4 $\frac{1}{8}$ " H  $\times$  17 $\frac{1}{4}$ " W  $\times$  10 $\frac{1}{8}$ " D ..... \$325

## MARANTZ

### EQ-10 Graphic Tone Equalizer

Ten-band graphic tone equalizer with center frequency slide controls at 30, 60, 120, 240, 500, 1000, 2000, 4000, 8000, and 16,000 Hz  $\pm 10$  dB; has tone defeat, tape monitor in/out, and tape/line pushbutton selectors; 2 $\frac{1}{8}$ " H  $\times$  16 $\frac{3}{8}$ " W  $\times$  7 $\frac{1}{2}$ " D ..... \$200

## MTI

### 100 Stereo Crossover

Active stereo crossover unit designed for bi-amplification. Features time-aligned amp circuitry, hand-adjusted zero-gain active filters, separate level controls for each output, center-channel low-pass output, and phase-inverting control for left-channel low-pass output; 18-dB/octave model recommended for bi-amplifying in low-frequency applications and 12-dB/octave model for bi-amplifying in midrange region. Crossover frequency adjustment range 62.5-200 Hz at 18 dB/octave, 400-1500 Hz at 12 dB/octave; insertion gain  $\pm 0.5$  dB; max. output 9 V rms; rated output 3 V rms; dist. 0.01%; 1.75" H  $\times$  12.5" W  $\times$  6" D ..... \$395

# 14 SIGNAL PROCESSORS

## MXR

### One-Third Octave Equalizer

31-discrete-band one-channel 1/3-octave equalizer with center frequencies set at 20, 25, 31.5, 40,



50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10,000, 12,500, 16,000, and 20,000 Hz,  $\pm 12$  dB boost or cut; EQ in/out switch; dynamic range 108 dB; THD and IM dist. 0.01% at 0 dBV; frequency response 10-20,000 Hz  $+0/-1$  dB; max. slew rate 7 V/ $\mu$ sec; max. input level +18 dBV; input impedance 20k ohms; output impedance 100 ohms; equiv. input noise -90 dBV; optional rack mount ears available; walnut side panels..... \$350

### Fifteen-Band Stereo Equalizer

Fifteen-band stereo graphic equalizer, spaced 2/3-octave apart, with center frequencies set at 25, 40, 63, 100, 160, 250, 400, 630, 1000, 1600, 2500, 4000, 6300, 10,000, and 16,000 Hz,  $\pm 12$  dB boost or cut; tape monitor and in/out switches; THD 0.02% at 0 dBV from 20-20,000 Hz, IM dist. 0.01% at 0 dBV (60 Hz/7 kHz, 4:1); frequency response 20-20,000 Hz  $+0/-1$  dB; max. input +18 dBV; input impedance 20k ohms;

output impedance 100 ohms; equiv. input noise -95 dBV; max. slew rate 7 V/ $\mu$ sec; optional rack mount ears available; walnut side panels..... \$325

### Stereo Graphic Equalizer

Ten-band two-channel graphic equalizer with center frequencies 31, 62, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz; eight rear-panel phono jacks; two inputs, two low-impedance outputs, two tape-record outputs, two tape-monitor inputs; two switches control tape monitor function and equalizer bypass. Dynamic range 110 dB; control range  $\pm 12$  dB; gain: unity  $\pm 1$  dB (controls centered); max. output level: +18 dBV (10k ohms); input impedance 20k ohms; equivalent input noise -95 dBV; frequency response 20-20,000 Hz  $\pm 1$  dB at 0 dBV; THD 0.05% at 0 dBV (20-20,000 Hz); IM 0.05% at 0 dBV (60/7000 Hz, 4:1) .. \$220

### Dynamic Expander

Linear dynamic expander provides up to 8 dB of upward expansion and 21 dB of downward expansion; features front-panel release time control; adjustable expansion control (1:1 to 1.6:1); LED gain change and noise-reduction display; level control; in/out, monitor/normal, and pre/post switching. Max. input level +12 dBV; max. output +18 dBV; input impedance 40k ohms; output impedance 100 ohms; max. dynamic range 110 dB; max. slew rate 7 V/ $\mu$ sec; frequency response 20-20,000 Hz  $+0/-1$  dB; attack time 5 msec max. (depending on program material); release time variable between 50-500 msec; optional rack-mount ears ..... \$300

### Compressor

Can be used with open-reel and cassette decks; dynamic range 100 dB; output impedance will drive 600 ohms or higher; equivalent input noise -88 dBV (20-20,000 Hz); input impedance 100k; compress/expand ratio 2:1; tracking accuracy  $\pm 1$  dB per 20 dB; frequency response 30-20,000 Hz  $\pm 1$

dB at 0 dBV, 3 dB down at 20 Hz and 40 kHz; THD 0.15% at 0 dBV (200 Hz-20 kHz), 0.75% at 0 dBV (50-200 Hz); IM 0.75% at 0 dBV (60 Hz/7 kHz, 4:1); level match control; bypass switch for cutting unit out of system; black anodized aluminum housing with walnut side panels ..... \$150

## NAKAMICHI

### High-Com II Noise-Reduction System

Designed to improve dynamic range of high-quality cassette decks; compressor/expander with two independent frequency bands and 2:1 ratio for max. suppression of noise pumping; 20-dB reduction of noise plus 3-7 dB headroom improvement; built-in 400-Hz calibration tone; two wide-range peak level meters; defeatable subsonic and multiplex filters; removable 19-in rack mount adaptors ..... \$480

### EC-100 Electronic Crossover

Designed for stereo bi-amplification; two additional EC-100's allow tri-amplification, etc.; 19 crossover frequency bands at fixed 12 dB/octave slope; phase correction; THD less than 0.005%, 20-10,000 Hz; requires PS-100 Power Supply; 2 1/2" H x 7 1/2" W x 4" D ..... \$140

**PS-100 Power Supply.** Provides  $\pm 10$  volts dc to operate EC-100 and other Nakamichi BlackBox Series components; powers up to six components .... \$100

## NIKKO

### ATD-1 Time Delay Synthesizer

Designed to recreate concert hall sound in any acoustical environment. Features three pushbutton selectors for acoustics of small, medium, and large halls; three pushbutton selectors for hall character; five pushbutton selectors for degree of reverberation from 100 msec-2 sec; stage distance or front-to-

# Control your reality.

Let's face it. Nobody has to tell you what sounds good. You know what you like to hear. But sometimes that can be a problem. You're listening in a room with poor acoustics, bad speakers, or inferior program source quality. You need some way to control the sound so you can hear the music the way you like it.

The MXR Stereo 10-Band Graphic Equalizer gives you that control. With it you can alter tone, get rid of noise, or bring out a part in the music that you really like. The Stereo 10-Band

Graphic Equalizer enables you to adjust the music to meet your special tastes. It lets you control your reality.

MXR Innovations, Inc., 740 Driving Park Ave., Rochester, New York 14613, (716) 254-2910

**MXR** Consumer Products Group





rear balance control; master output control; tape monitor and delay defeat switches; adjustable input level control with LEDs; two-/four-channel switch. Delay time 17-128 msec; reverb decay time 100 msec-2 sec; frequency response 20-7000 Hz  $\pm 3$  dB (delay), 20-20,000 Hz  $+0/-0.1$  dB (main); THD 0.5% (delay), 0.05% (main); S/N (A weighted) 60 dB (delay), 80 dB (main); input level/impedance 100 mV/100k ohms; max. output 0.775 V (delay), 1.2 V (main); 2 1/2" H  $\times$  19" W  $\times$  11 3/8" D..... \$450

#### EQ-1 Graphic Equalizer

Ten-band stereo graphic equalizer ( $\pm 12$ -dB boost or cut per band) with detented five-step boost/cut slider controls; frequency bands set at 31.5, 63, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz; tape monitor switch; equalizer gain switch ( $-6$  dB, 0 dB,  $+6$  dB); pre + post EQ and tape monitor switch; LED equalizer in/out switch, LED power on switch. Frequency response 10-50,000 Hz  $\pm 1$  dB; THD 0.007%; S/N 105 dB (IHF "A"); 3 1/2" H  $\times$  19" W  $\times$  9" D..... \$300

#### EQ-2 Graphic Equalizer

Six-band stereo graphic equalizer with center frequencies set at 40, 125, 400, 1250, 4000, and 12,500 Hz,  $\pm 12$  dB boost or cut. Features tape monitor switch; EQ in/out with LED; 12-position EQ slider control; power-on with LED. Frequency response 10-50,000 Hz  $\pm 1$  dB; THD 0.05% from 20-20,000 Hz (IHF A); input impedance 100k ohms; output level/impedance 1 V, 5 V/560 ohms; gain 0 dB; rack mountable..... \$200

### ONKYO

#### E-30 Audio Equalizer

Nine-band stereo equalizer with center frequencies set at 63 (45/32 switchable), 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz; max.

switchable range  $\pm 5$  or  $\pm 10$  dB in 0.5 or 1 dB steps; THD and IM dist. 0.01%; S/N 100 dB (IHF A); African wood veneer over Lauan plywood; 3 1/4" H  $\times$  17 1/4" W  $\times$  14 7/8" D..... \$550

### OPAMP LABS

#### 1155 Mono Reverb Spring System

Comprised of dual 14-in reverb spring assembly for line-level operation; bandwidth 50 cycles to 6000 Hz; input fed to amplitude limiter and constant current generator; insertion loss amplifier uses mic preamp; bipolar 24-V Model 522 power supply operates system; aluminum enclosure; 3 1/4" H  $\times$  17" W  $\times$  9" D..... \$275

### PACKBURN ELECTRONICS

#### 303 Audio Noise Suppressor

Designed to suppress surface noises in the reproduction of mono or stereo 78-rpm records. Features three-way switcher (selects between sum signal and signal from either of two groove walls); blanker (clips amplitude of positive- or negative-going pulsation of noise transient); continuous noise suppressor (8 dB/octave low-pass filtering device determines opening or closing of cutoff frequency) with cutoff frequency meter and fixed, max., and min. adjust controls; control dynamics control; input/output selector; dual VU meters; rear-panel selector switch for 600 ohms  $+4$  VU line balanced (transformerless), single-ended high-impedance (100k ohms) input, high level, and single-ended high impedance (100k ohms) input, low level. Frequency response  $\pm 0.5$  dB from 10 Hz to beginning of high-frequency cutoff (variable from 3000-15,000 Hz depending on program material and nature of surface noise); IM dist. 0.05% at 60 and 7000 Hz 4:1 at  $+4$  VU; clipping level  $+12$  VU

at 3 V; S/N 75 dB at  $+12$  VU (unweighted); includes three-contact professional and RCA phono connectors; 5.25" H  $\times$  19" W  $\times$  10" D..... \$1950

### JC PENNEY

#### MCS 3030 Stereo Frequency Equalizer

Five-band stereo graphic equalizer with center frequency slide controls/channel at 60, 240, 1000, 2500, and 10,000 Hz,  $\pm 12$  dB boost or cut. Features power and EQ on/off toggle switches with LEDs; tape/source monitor switch; left and right input/output, rec out, and playback jacks. Frequency response 10-50,000 Hz; THD 0.05%; S/N 95 dB nominal; 3 1/2" H  $\times$  16 1/8" W  $\times$  9 1/8" D..... \$150

### PHASE LINEAR

#### 1100 Series Two Parametric Equalizer

Five-band stereo parametric equalizer with center frequencies set at 63, 250, 1000, 4000, and 16,000 Hz,  $\pm 12$  dB boost or cut; separate gain controls and overload indicators for each channel; tape monitor loop with status indicator; bypass switch. Frequency response 20-20,000 Hz  $+0/-1$  dB; THD and IM dist. 0.02% at rated output; rated output 2.0 V rms; input sensitivity/impedance 1.0 V rms/50k ohms; S/N 100 dB at 2 V; gain  $+6$  dB max.; 5 1/2" H  $\times$  19" W  $\times$  8" D..... \$650

#### 6000 Series Two Analog Delay System

Touchbutton operation recreates sonic and spatial signatures of various acoustical environments; 15 and 60 msec initial delays adjustable by clock control to 20 and 90 msec; five discrete delay paths available; reverb delay time adjustable from 200 msec to 4 sec; THD 0.1% (direct), 0.5% at 0 dB (delayed); input impedance 47,000 ohms; max. input 5 V (direct), 2.5 V (indirect); output impedance

# Perfect your reality.

It's pretty annoying to listen to music under imperfect conditions. Speaker colorations, inferior program source quality, and poor room acoustics can distort the sound and obscure your favorite parts. If you demand perfection, you need MXR's Stereo Fifteen Band graphic equalizer.

With two channels, each having fifteen frequency bands spaced 2/3 octave apart, MXR's Stereo Fifteen Band graphic equalizer provides precision control over your stereo system. The Stereo Fifteen Band graphic

equalizer enables you to modify tonal qualities, roll off noise, and let important passages in the music come through loud and clear.

MXR Innovations, Inc., 740 Driving Park Ave., Rochester, N.Y., 14613, (716) 254-2910

**MXR** Consumer Products Group



# 14 SIGNAL PROCESSORS

less than 5000 ohms (direct and delayed); output level 8.0 V (direct), 4.0 V (delayed); output noise level from 20-20,000 Hz (A weighted) less than 100  $\mu$ V (direct), less than 80  $\mu$ V (delayed); frequency response 5-20,000 Hz  $\pm$ 0.1 dB (direct), 40-6000 Hz (delayed, short primary), 40-2500 Hz (delayed, long primary); 5 1/2" H  $\times$  19" W  $\times$  10" D.....\$600

## 1000 Series Two Noise Reducer

Combines features of dynamic-range-recovery system with a correlation noise-reduction system, reduces noise and improves dynamics without pre-encoding; works in the tape monitor of a receiver or preamp; provides 10 dB noise reduction; 7.5 dB of increased dynamic range; adjustable dynamic low filter for reducing rumble and hum; total distortion less than 0.09%; input impedance 50,000 ohms; input level 250 mV rms; max. output voltage 8 V rms, better than 3 V rms into 2000 ohms; frequency response 20-20,000 Hz  $\pm$ 1 dB; high-frequency noise reduction begins at 2 kHz and is 3 dB, reaching 10 dB from 4 kHz to 20 kHz; low-frequency noise reduction begins at 200 Hz, ultimately reaching 20 dB at 20 Hz; passive subsonic filter rejection of -35 dB at 5 Hz; weighted overall noise reduction is -10 dB from 20 to 20,000 Hz; 3 1/2" H  $\times$  19" W  $\times$  8 1/2" D.....\$400

## PIONEER

### SG-9800 Audio Frequency Equalizer

12-band stereo graphic octave equalizer with center frequencies at 16, 32, 64, 125, 250, 500, 1000, 2000, 4000, 8000, 16,000, and 32,000 Hz; level control range  $\pm$ 10 dB; frequency response 5-100,000 Hz  $\pm$ 0/-3 dB; S/N 92 dB; output impedance 600 ohms max.; THD 0.006% at 1 V from 20-20,000 Hz; max. output 7.5 V; 5 1/2" H  $\times$  16 1/2" W  $\times$  14" D.....\$395

### RG-2 Dynamic Range Expander

Dynamic processor improves dynamic range of reproduced music and tape and record noise reduction levels; automatic operation; max. output 6.5 V; THD 0.05% at 1 V; dynamic expansion 4, 7, 10, 13, 16 dB; impulse response: attack time 0.3 msec; release time 120 msec; input impedance 50,000 ohms; output impedance 300 ohms; residual noise 10  $\mu$ V; S/N 100 dB (1 kHz, dynamic expansion 16 dB); twin Fluorescan meters; 3 1/2" H  $\times$  16 1/2" W  $\times$  13 1/2" D.....\$195

### SR-303 Reverberation Amp

Bucket Brigade Device breaks analog signal in segments and passes each through a sequence of storage bits; reverb time 0.3 sec (eff. 1400 Hz) or 25-100 msec (eff. 2400 Hz); HD 0.05% at 1000 Hz, depth control min., output 1 V.....\$195

## PSB

### InfraSonic Barrier

Designed to eliminate infrasonic frequencies below 20 Hz; 36-dB/octave rolloff. Frequency response 20-100,000 Hz  $\pm$ 0.25 dB; max. input 3 V; input impedance 10,000 ohms; output impedance 50 ohms; gain unity; S/N 100 dB (unweighted); channel balance 0.5 dB; THD 0.008%.....\$109

## REFERENCE by QUADRAFLEX

### 210EQ Graphic Equalizer

Ten-band stereo graphic equalizer with center frequencies set at 31, 62, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz,  $\pm$ 12 dB boost or cut; has EQ/defeat output and rec out switches; source/tape monitor switch; rated output

2 V rms; THD 0.05%; S/N 85 dB; 7" H  $\times$  15 1/2" W  $\times$  6 3/4" D.....\$200

## RG DYNAMICS

### Pro-20 Dynamic Processors

Feature automatic Programmed Attack<sup>®</sup> circuitry providing variable rate of processing to invert variety of compression curves used in recording industry; combine upward and downward processing with peak unlimiting to restore transients and fine detail; provide up to 20-dB dynamic expansion; continuously variable expansion 4-20 dB; 12-element stereo LED display shows expansion ratios in 4-dB steps for each channel and noise reduction; two-position slope switch; selectable noise reduction; switchable tape output expanded or non-expanded. IM dist. 0.05% max.; THD 0.05% at 1 V (1000 Hz); attack time 600  $\mu$ sec; hum and noise -86 dB at 1 V; designed for insertion in tape monitor or accessory loop; includes replacement tape monitor function.

**Pro-20W.** Dynamic processor with silver extruded panel, black finish case with hand-rubbed solid walnut end plates; 3 1/2" H  $\times$  12" W  $\times$  12" D.....\$419

**Pro-20B.** Dynamic processor with black extruded panel, black finish case, standard 19-in rack mount; 3 1/2" H  $\times$  19" W  $\times$  12" D.....\$399

**Pro-20BW.** Dynamic processor with black extruded panel, black finish case with hand-rubbed solid walnut end plates; 3 1/2" H  $\times$  18" W  $\times$  12" D.....\$419

### Pro-16 Dynamic Processors

Provide up to 16 dB dynamic expansion; continuously variable expansion (4-16 dB); 10-element stereo LED display shows expansion ratios in 4-dB steps for each channel as well as noise reduction; two-position slope switch; 0.1% IM max.; 0.08% THD (1 V, 1 kHz); attack time 600  $\mu$ sec; hum and noise -80 dB (1 V); designed for insertion in tape monitor or accessory loop; includes replacement tape monitor function.

**Pro-16W.** Dynamic processor with silver extruded panel, black finish case with hand-rubbed solid walnut end plates; 3 1/2" H  $\times$  18" W  $\times$  12" D.....\$335

**Pro-16B.** Dynamic processor with black extruded panel, black finish case, standard 19-in rack mounting; 3 1/2" H  $\times$  19" W  $\times$  12" D.....\$315

**Pro-16BW.** Dynamic processor with black extruded panel, black case with hand-rubbed solid walnut end plates; 3 1/2" H  $\times$  18" W  $\times$  12" D.....\$335

### RG X-15 Dynamic Processor

Semi-automatic operation requires no level-matching by user; provides up to 15-dB dynamic expansion; four-position expansion switch in 4-dB steps with two positions featuring special circuit configurations optimized for tape recording; eight-LED stereo display tracks dynamic expansion rate on each channel; built-in noise reduction; switchable expanded/non-expanded tape output; designed for insertion in tape monitor loop of amplifier or receiver; built-in replacement tape monitor function. IM dist. 0.12% max.; THD 0.1% max. at 1 V, 1000 Hz; attack time 600  $\mu$ sec; hum and noise -80 dB at 1 V; silver extruded panel and metal case; 2" H  $\times$  13" W  $\times$  9" D.....\$255

## ROTEL

### RE-2000 Stereo Equalizer

Ten-band stereo octave equalizer with center frequencies at 32, 63, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz,  $\pm$ 12 dB boost or cut. Features coil-less circuitry; metalized film capacitor for output coupling; AMP-type constant voltage limiter in addition to current limiter circuits in power supply; tape dubbing facility; record/play and EQ bypass switches. Frequency response 10-100,000 Hz  $\pm$ 0/-1 dB; THD 0.005%; S/N 100 dB (IHF "A"); input sensitivity/impedance 0.775 V/56,000 ohms; 5 1/2" H  $\times$  19" W  $\times$  13 1/2" D.....\$370

### RE-1010 Stereo Graphic Equalizer

Ten-band stereo graphic equalizer with center fre-

quency slide controls/ch at 32, 63, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz,  $\pm$ 12 dB boost or cut. Features inductor-less circuitry, two tape monitors with dubbing, EQ record function, and bypass switch. Frequency response 15-45,000 Hz  $\pm$ 0/-1 dB; HD 0.009% from 20-20,000 Hz, 1 V; input sensitivity/impedance 1.0 V/50k ohms (line and tape monitor 1, 2); output sensitivity/impedance 1.0 V/600 ohms (line and tape monitor 1, 2); hum and noise -108 dB; 3 7/8" H  $\times$  16 1/2" W  $\times$  11 1/2" D.....\$250

### RE-700 Stereo Graphic Equalizer

Seven-band stereo graphic equalizer with center frequencies at 40, 125, 400, 1000, 2500, 6000, and 15,000 Hz,  $\pm$ 12 dB boost or cut; features tone defeat and tape monitor switch; frequency response 10-100,000 Hz  $\pm$ 0/-2 dB; THD 0.009%; S/N 100 dB; input sensitivity/impedance 0.775 V/55k ohms; output sensitivity/impedance 0.775 V/600 ohms; 5 1/2" H  $\times$  16 1/2" W  $\times$  10" D.....\$190

## RUSSOUND/FMP

### IH-1 Stereo Image Enhancer

Functions as stereo image enhancer and stereo field synthesizer. Image enhancer operates on stereo program source to expand or contract width of sound field; single control decreases, increases, or maintains stereo separation of signal source. Field synthesizer processes low-frequency portion of program below 200 Hz from one stereo channel to other; eliminates stationary sources of low-frequency sound.....\$450

## SAE

### 2800 Stereo Parametric Equalizer

Four-band parametric equalizer system with control over cut/boost plus bandwidth frequency; separate controls for each channel; input level controls and peak indicators; tape equalization facilities for pre-equalized tape recordings; control functions are divided into four frequency bands (LO, LO-MID, HI-MID, HI); continuously variable frequency adjustment within each band covering 10-320 Hz, 40-1200 Hz, 240-7600 Hz, 1200-15,000 Hz; each band has slider control that adjusts gain over  $\pm$ 16 dB range, detent at center (0-dB) setting; bandwidth adjustment is slider control calibrated in octaves from 0.3-3.6; each channel has master-level slider providing up to 70 dB of attenuation; max. output before clipping 9 V into 10,000 ohms; input impedance 100,000 ohms; output impedance 500 ohms; nominal rated output 2.5 V; frequency response (controls at flat) 20-12,000 Hz  $\pm$ 0.25 dB; clipping level 8.5 V at 1000 Hz; THD 0.01% at 2.5 V, 0.028% at 8.5 V; -0.9 dB gain; front panel 8 3/4"  $\times$  19"; chassis depth 3 1/2-in.. \$700

**1800.** Two-band version of 2800 with lo band covering 40-1200 Hz and hi covering 1200-20,000 Hz; 5.25" H  $\times$  19" W  $\times$  3.5" D.....\$400

**C-6.** Unassembled walnut cabinet for 2800.....\$60

**C-4.** Unassembled walnut cabinet for 1800.....\$60

### 180 Parametric Equalizer

Two-band stereo parametric equalizer with adjustable bandwidth (0.3-3.6 octaves) and center frequency in each control group; features tape equalization and level match controls; frequency response 20-20,000 Hz  $\pm$ 0.25 dB; THD and IM 0.02%; S/N 90 dB; 4 1/4" H  $\times$  17 1/2" W  $\times$  3 1/2" D.....\$300

### 4100 Time Delay Ambience System

Time-delay ambience system features short, medium, and long time delay level slide controls from -70 to 0 dB; input and output level slide controls with LED peak level indicator; regeneration slide control from 0-10 msec; in/out direct, discrete, and blend controls. Frequency response 20-20,000 Hz  $\pm$ 0/-0.5 dB; THD and IM dist. 0.5%; S/N 95 dB (front), 60 dB (rear); rated output 2.5 V, 6-V output at clipping; input impedance 50k ohms; output source impedance 500 ohms; output load impedance 600 ohms; insertion loss less than 1 dB with controls centered; 2.75" H  $\times$  15" W  $\times$  8" D.....\$500



## 4000 Electronic Crossover

Two-band crossover with independent high-low balance controls for each channel; independent high-pass and low-pass controls; THD and IM dist. 0.02%; S/N 95 dB; frequency response 20-20,000 Hz  $\pm 0.25$  dB; insertion loss 1 dB; 75,000-ohm input impedance; 600-ohm output impedance; rack mountable; 3 1/2" H  $\times$  19" W  $\times$  3 1/2" D..... \$275

## 5000A Impulse Noise Reduction System

Impulse noise reduction system for reducing clicks and pops (impulse noise) on phonograph records; THD and IM dist. 0.1%; S/N 90 dB; frequency response 20-20,000 Hz  $\pm 1$  dB; insertion loss 1 dB; 2 1/2" H  $\times$  10" W  $\times$  8" D..... \$275

## SANSUI

### SE-7B Graphic Equalizer

Ten-band graphic equalizer with center frequencies set at 32, 63, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz,  $\pm 12$  dB boost or cut; features two-deck tape monitoring and dubbing, stereo output level control, and equalizer defeat/on/record controls. Frequency response 10-100,000 Hz  $+0/-1$  dB; THD 0.08%; hum and noise  $-110$  dB; matte black finish; 6 1/4" H  $\times$  19" W (with detachable handles for rack mounting)  $\times$  11 3/4" D..... \$300

**SE-7S.** Same as SE-7B but with brushed aluminum finish faceplate and rosewood cabinet; 6 1/4" H  $\times$  17 1/4" W  $\times$  11" D..... \$300

### SE-5B Graphic Equalizer

Eight-band graphic equalizer with center frequencies set at 80, 160, 315, 630, 1250, 2500, 5000, and 10,000 Hz,  $\pm 12$  dB boost or cut; frequency response 0-100,000 Hz  $+0/-1$  dB; features tape monitor switch, equalizer defeat/on/record controls, and output level control; matte black finish; 4 3/4" H  $\times$  19" W (with removable rack-mounting handles)  $\times$  11 3/4" D..... \$230

### RA-700 Reverberation Amplifier

Continuously adjustable reverb time with visual indication; can handle two tape recorders simultaneously; adds echo effects during recording or playback; frequency response 20-30,000 Hz  $\pm 2$  dB (at reverb time min.); 20-30,000 Hz  $\pm 10$  dB (at reverb max.); S/N 65 dB at 300-mV output; reverb time 1.9-3.2 sec (at 1000 Hz); input/output jacks; tape recording A and B, tape playback A and B; load impedance 100,000 ohms; simulated walnut-grain enclosure; 4 1/4" H  $\times$  11 1/4" W  $\times$  10 1/4" D... \$190

## SANYO

### PLUS N55 Noise-Reduction System

Features Sanyo's "Super D" tape noise-reduction system designed to keep maximum separation between low and high frequencies with minimum distortion; fluorescent peak-reading signal level meters; multiplex filter, super D, tape/source monitor, and record calibration switches; left/right play level and left/right record level controls. Dynamic range 100 dB; THD 0.08% at 1000 Hz; frequency response 10-30,000 Hz  $\pm 1$  dB; noise reduction 40 dB max. (using tape deck with 50-dB min. S/N); record/playback input level/impedance 350 mV/50k ohms; record/playback output level/impedance 350 mV/330 ohms; 1 1/4" H  $\times$  17 3/8" W (19" with handles)  $\times$  11 3/4" D..... \$360

## H. H. SCOTT

### 825Z Stereo Graphic Equalizer

Ten-band stereo graphic equalizer with center frequency slide controls at 32, 64, 125, 250, 500, 1000, 2000, 4000, 10,000, and 15,000 Hz  $\pm 12$  dB. Features 13 dual low-noise operational amplifiers; advanced variable active bandpass/bandstop filters; equalizer bypass; tape monitor switch. Frequency response 10-45,000 Hz  $\pm 0.5$  dB; THD 0.01% at 1 V out; S/N 87 dB (IHF A); input impedance 50k ohms; output impedance 300 ohms; optional 19-in rack mount; 3.5" H  $\times$  17" W  $\times$  10" D..... \$275

## SHURE

### SR107 Audio Equalizer

Ten-octave audio equalizer; rotary controls for each octave (15-dB boost or cut) at 31, 63, 125, 250, 1000, 2000, 4000, 8000, and 16,000 Hz; 15-dB master level control; LED overload indicator; 20-dB additional adjustable gain; equalizer bypass switch; designed for balanced or unbalanced line input, balanced microphone output, balanced/unbalanced line level output, and unbalanced aux. level output..... \$297

### M63 Audio Master<sup>DR</sup>

Combination equalizer, noise-reducer, and dynamic range enhancer system; two high-level inputs and five outputs (high-impedance high-level, high-impedance mic, low-impedance mic, 600-ohm balanced line, and headphone); high-pass and low-pass (6 dB/octave) filters; separate bass and treble (boost and cut) controls; output VU meter; 120 V ac  $\pm 10\%$ , 50/60 Hz, 3 W; 2 1/4" H  $\times$  11 1/4" W  $\times$  6" D..... \$176

## SONTEC

### HF-230 Stereo Parametric Equalizer

Three-band discrete parametric equalizer with separately-tuned 10-800/100-8000/400-25,000 Hz ranges; infinitely variable slope from 4-14 dB/octave; infinitely variable amplitude  $\pm 12$  dB in mirror image; switchable upper and lower sections; no transformers, capacitors, or ICs in signal path; usable dynamic range 110 dB; noise 84 dB below 1 V out; THD and IM dist. 0.002% from  $-30$  to 24 dBV; slew rate 200 V/ $\mu$ sec; black anodized rack mount aluminum; 1 1/2" H  $\times$  19" W  $\times$  6" D..... \$990

## SONY

### PCM-10 Digital Audio Processor

Two-channel analog-to-digital pulse-code modulation system using NTSC-standard TV signals; complies with 14-bit EIAJ-standard format and can be used with any Beta, U-matic, or VHS series home record/playback VTR. Features LCD peak program meter display with auto and manual peak-hold reset and clip level indicators; emphasis and de-emphasis circuits; audio line input and external audio output jacks; cyclic redundancy check code circuitry (CRCC) corrects up to 32 horizontal TV lines with subsequent errors compensated for by linear interpolation. Sampling frequency 44,056 kHz; recording density 2643M bits/sec; code 128 bits/1 TVH (includes 16 bits for CRCC and 28 bits for error correcting); data 14 bits/ch; dynamic range 85 dB; HD 0.03%; frequency response 0-20,000 Hz  $\pm 1$  dB; inputs  $-10$  dB, 50k ohms unbalanced, using Cannon XLR-3-13 or phono jacks (line), 1 V p-p, 75 ohms unbalanced using phono jack (video); outputs  $-10$  dB, 300 ohms unbalanced, using Cannon XLR-3-14 or phono jacks (line),  $-10$  dB, 3.3k ohms unbalanced with phono jacks (external line), 1 V p-p, 75 ohms unbalanced with phono jack (video),  $-10$  dB at 8-ohm load with stereo phono jack (headphone); supplied with 75-ohm coaxial cable with phono plugs, RK-112 connecting cord, power cord, and demo tape; 7 1/8" H  $\times$  18 1/8" W  $\times$  15 1/2" D..... \$5500

## SOUND CONCEPTS

### S0550 Ambience Restoration System

Dual-channel audio delay system; continuous delay variation from 5 to 100 msec; continuous reverb variation from 0 to 100%; high frequency rolloff from  $-3$  to  $+6$  dB; front mix level from 0 to 100%; rear level 0 to 100%; 50 or 100 msec delay range; rear output delay or quad direct; front output direct or delay mix; input front or quad rear; input impedance 60,000 ohms min.; output impedance 300 ohms max.; frequency response 20-10,000 Hz  $+1$ ,  $-3$  dB with 5 msec delay and zero dB high frequency rolloff; dynamic range 90 dB min.; S/N 85 dB min., 90 dB weighted; 1% max. dist. at 1 kHz

and 1 V rms, consisting almost entirely of 2nd harmonic; 3 1/2" H  $\times$  15 1/2" W  $\times$  9" D..... \$700

### IR2100 Image Restoration System

Expands stereo image beyond confines of space between speakers to reproduce sonic image presented to recording microphones; loudspeaker/listener angle continuously adjustable from 20-100 degrees; continuous adjustment of perimeter to central sound level balance; master volume control; connects in tape loop or between pre- and power amp; S/N 80 dB; dist. 0.1% max.; handheld with 15-ft remote cable; 6" H  $\times$  3" W  $\times$  1.5" D..... \$250

## SOUNDCRAFTSMEN

### EA5003 Power Amp-Equalizer

Incorporates Class "H" integrated amplifier and ten-band two-channel graphic octave equalizer. Equalizer: center frequencies set at 30, 60, 120, 240, 480, 960, 1920, 3840, 7680, and 15,360 Hz,  $\pm 12$  dB boost or cut; 18-dB zero-gain level controls/ch; EQ defeat; HD and IM dist. 0.01% at 2 V; S/N 105 dB at 10 V output. Amplifier: analog logic design; each channel features LED clipping, vari-portional, and overload indicators and gain controls; speaker switching; non-limiting circuitry and "Auto-Crowbar" protection circuitry with auto reset; output 250 W continuous into 8 ohms; THD 0.1%, IM dist. 0.05%, TIM dist. 0.02%; S/N 105 dB; frequency response 20-20,000 Hz  $\pm 0.25$  dB; slew rate 50 V/ $\mu$ sec; damping factor 100; input sensitivity/impedance 1.28 V rms/15-50,000 ohms. Includes environmental test record and Computone charts; walnut-grain side panels; rack handles; 7" H  $\times$  19" W  $\times$  15" D..... \$949

### SP4002 Signal Processor/Preamp

Ten-band two-channel graphic equalizer/preamplifier. Equalizer: center frequencies set at 30, 60,

## YOU PROBABLY HAVE NEVER HEARD THE FULL POTENTIAL OF STEREO PHONIC REPRODUCTION



You may have wondered why all the sound from your stereo seems to come from the space between your speakers when you know that speakers project sound in all directions. In a conventional stereo system, the speakers act as sonic barriers to the stereo image. They actually become obvious sources for the sounds that were originally recorded beyond the angle that they enclose.

The IR2100 Image Restoration Control can effectively remove this barrier and allow your stereo to reproduce the full breadth and depth of the original performance. The IR2100 is also uniquely adjustable from the listening position for a wide range of speaker locations and source material, so you can easily tune it to get the most out of your stereo and your recordings. The impact of the IR2100 will be to expand your stereo sound stage and give greater localization of the individual instruments and voices while restoring the original open feeling of a live performance.

For complete information write to Sound Concepts c/o Box 135, Brookline, MA 02146 or call (617) 566-0110.



FIDELITY IN SPATIAL REPRODUCTION

# 14 SIGNAL PROCESSORS

120, 240, 480, 960, 1920, 3840, 7680, and 15,360 Hz,  $\pm 15$  dB boost or cut; features LED input-to-output balancing indicators and 18-dB zero-gain control; HD and IM dist. 0.01% at 2 V; S/N 114 dB at 10 V out, 100 dB at 2 V output. Preamp: features two stereo or four mono phono preamps, each with inputs, outputs, and independently variable  $\pm 20$  dB gain stage; accepts moving-coil, variable-reluctance, or moving magnet cartridges with 0.28-300 mV output; 0-750 pF variable cartridge loading; pushbutton switching from one to six input sources through subsonic filter, two external processing loops, equalizer, and mono A+B mixer to two tape or two line outputs; three-way tape dubbing; two amplified headphone outputs from 8-2000 ohms;  $\pm 20$  dB stepped level control; frequency response 5-100,000 Hz  $\pm 0.25$  dB (hi level), 20-20,000 Hz  $\pm 0.5$  dB (phono); THD and IM dist. 0.01% at 1 V; phono impedance 47k or 100k ohms switchable; phono S/N 97 dB at 10 mV in. Includes environmental test record and Computone charts; rack-mount brushed aluminum black and silver panel; 7" H  $\times$  19" W  $\times$  11" D. \$699

## T63044-R Third-Octave Equalizer

Third-octave stereo equalizer with 15 center frequencies set at 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, and 1000 Hz on  $\frac{1}{3}$  octave and six center frequencies set at 1600, 2500, 4000, 6300, 10,000, and 16,000 Hz on alternate  $\frac{1}{3}$  octaves, 22 dB boost or cut (controls full), 15 dB boost or cut (controls flat); features pushbutton EQ defeat, lo-shelf, and separate monitor input and output controls; LED unity gain input-to-output balancing indicators; separate zero-gain level controls; THD and IM dist. 0.01% at 2 V; S/N 114 dB at 10 V out, 100 dB at 2 V out; input impedance 47k ohms; output impedance 600 ohms (balanced); in/out voltage 12 V; black anodized aluminum front panel; 5 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  11" D. \$550

## AE2420-R Analyzer/Equalizer

Incorporates dc differential/comparator circuitry for EQ analysis and equalizer; comparator converts wave shapes of pink noise input signal and speaker output signal to dc levels with 0.1-dB accuracy; eliminates precisely-calibrated pink noise generator and provides user with complete system analysis and automatic cartridge adjustment. Ten-band stereo graphic equalizer with center frequencies set at 30, 60, 120, 240, 480, 960, 1920, 3840, 7680, and 15,360 Hz,  $\pm 12$  dB boost or cut with zero-gain slide controls; includes pink noise generator, 12-in pink noise test record, and Computone charts. \$499

## T62245 Stereo Octave Equalizer

Ten-band stereo octave equalizer. Features six signal-processing pushbutton switches for subsonic filter, low shelving, high shelving, effects-tape loop, EQ defeat, and EQ effects/tape in each section; 600-ohm balanced and unbalanced operation; zero-gain LEDs (0.1-dB balancing accuracy); two front-panel line-in line-out  $\frac{1}{4}$ -in phone jacks. S/N 114 dB at full output; THD 0.01% at 1 V; black anodized aluminum front panel with optional walnut veneer hardwood end panels; 3 $\frac{1}{2}$ " H  $\times$  19" rack mount  $\times$  10" D. \$399

## RP2215-R Equalizer

Provides front-panel pushbutton control of line or tape equalization for conventional hi-fi systems or separate stereo outputs for multiple-system equalization; tape monitor circuit provides monitoring equalized program material during use. Features environmental test record for listening environment equalization; four LEDs for front-panel display controlled by zero-gain level controls for input vs output level balancing. S/N 114 dB; THD 0.01% at 2 V, 0.05% at 1 V (typical);  $\pm 15$  dB boost or cut each

octave; 600 ohm output; black anodized aluminum panel; 5 $\frac{1}{4}$ " H  $\times$  19" W  $\times$  11 $\frac{1}{4}$ " D. \$370  
**RP2201-R.** Similar to RP2215-R without LED/zero-gain balancing circuit; has 18-dB zero-gain controls; S/N 105 dB at 10 V out;  $\pm 12$  dB boost or cut each octave. \$299  
**SE450.** Same as RP2201-R without environmental test record, Computone charts, and line equalization; S/N 100 dB; available in brushed aluminum silver or black front panel with black vinyl cabinet; not rack-mountable. \$249

## SOUND WORKSHOP

### 262 Stereo Reverb

Stereo reverb system designed for professional interface. Input section: features balanced transformerless amplifier input circuitry, input mix without external patching, and +2 to -12 dB LED display indicators; impedance 10k ohms; -20 dBV (min.) and +20 dBV (max.) levels. Output section: features separate left and right dry/reverb mix with LEDs; source impedance 47 ohms; nominal level -2 dBm into 600 ohms. EQ section: features low and high slide controls/ch covering 50-1000 Hz (low) and 500-10,000 Hz (high) ranges at  $\pm 15$  dB. Other features include bi-FET preamp circuitry; noise level -80 dBm from 20-20,000 Hz, unweighted; nominal decay time 2.5 sec; 3 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  11" D. \$750

### 242C Stereo Reverb

Designed to interface with latest 4- and 8-track recording systems. Input section: features separate left/right level controls with peak-reading LEDs and input mix; impedance 10k ohms; -20 dBV min. and +20 dBV max. levels. Output section: left/right reverb level controls; source impedance 47 ohms; nominal level -8 dBm into 10k ohms. EQ section: left/right variable controls;  $\pm 10$  dB at 4300 Hz. Noise level -76 dBm from 20-20,000 Hz unweighted; decay time 2.5 sec; RCA phono jacks; 3 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  11" D. \$425

## STRELIOFF

### EX-1 Electronic Crossover

Four-way electronic crossover with crossovers at 125, 800, and 5000 Hz; features independent level controls for each bandpass; modular design employing discrete devices on plug-in circuit boards; requires RS-1 regulated power supply; 3 $\frac{1}{2}$ " H  $\times$  19" W. Rack-mountable. \$1000

### PX-1 Passive Crossover

Four-way passive crossover with crossovers at 125, 800, and 5000 Hz with optional one-half octave higher switch for each range available; features high or low attenuation switches for each range (5 dB nominal); discrete switch functions; fusing at inputs and for each output range; specifications refer to 8-ohm loads but impedance options are available; 5 $\frac{1}{4}$ " H  $\times$  19" W  $\times$  12" D. \$1000

## SUPEREX

### GEM-7 Parametric Equalizer

Eight-band BiFET stereo parametric equalizer with four infinitely-selectable frequency slide controls per channel with each pair covering 30-820 Hz and 820-16,000 Hz; each frequency control has  $\pm 18$ -dB gain and 0.16-2-octave bandwidth controls; other features include tape monitor, tape record EQ, and tape play EQ switches. THD 0.01%; IM dist. 0.005%; S/N 89 dB (A weighted); 5 $\frac{1}{2}$ " H  $\times$  19" W  $\times$  8 $\frac{1}{4}$ " D. \$450

### GEM-3 Graphic Equalizer

Ten-band stereo graphic equalizer with center frequency slide controls/ch at 31, 63, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz,  $\pm 14$  dB; has separate volume and balance slide controls and on/off monitor switch. Frequency response 20-20,000 Hz  $\pm 0.25$  dB; HD 0.008%; S/N 95 dB (A weighted); input impedance 68k ohms; output

impedance 600 ohms; rack-mount handles included; 5 $\frac{1}{4}$ " H  $\times$  19" W  $\times$  8 $\frac{1}{4}$ " D. \$240

### GEM-2 Graphic Equalizer

Five-band graphic equalizer with center frequency slide controls at 38, 68, 240, 1600, and 15,000 Hz; features tape monitor, tape record EQ, and tape play EQ switches. Frequency response 10-150,000 Hz  $\pm 0.5$  dB; dist. 0.02% at 2 V rms; S/N 92 dB; dynamic range 8.5 V; anodized front panel; 5 $\frac{1}{4}$ " H  $\times$  14 $\frac{1}{4}$ " W  $\times$  7 $\frac{1}{2}$ " D. \$120

### GEM-1 Graphic Equalizer

Five-band stereo graphic equalizer module with center frequencies set at 60, 240, 1000, 3500, and 10,000 Hz,  $\pm 12$  dB boost or cut. Features two-deck switching with tape record/play EQ and tape monitor controls; programmable capability with optional Superex program cards. Frequency response 10-150,000 Hz  $\pm 0.5$  dB; HD 0.02% at 0 dB gain; rated output 2 V rms; dynamic range 8.5 V; S/N 92 dB. \$90

## SYMMETRIC SOUND SYSTEMS

### EQ-2K Stereo Graphic Equalizer Kit

12-band stereo graphic equalizer with center frequency slide controls at 27, 51, 89, 160, 270, 510, 890, 1600, 2700, 5100, 8900, and 16,000 Hz,  $\pm 10$  dB boost or cut; has EQ in/out switch. Frequency response 10-100,000 Hz  $\pm 3$  dB; THD 0.02% at 1000 Hz; S/N 92 dB at rated output; rated output 2 V rms; max. output 8.5 V rms; input impedance 50k ohms; output impedance 600 ohms. Kit includes 5% polyester film capacitor filters, 5% carbon film resistors (except three/ch 1% metal film), G-10 glass epoxy PC boards with tinned traces, and lubricated slide potentiometers; brushed aluminum chassis and unfinished walnut end panels; 3 $\frac{1}{2}$ " H  $\times$  10" W  $\times$  4 $\frac{1}{2}$ " D. \$100  
**EQ-2PA.** Assembled version of EQ-2K; wired for installation between preamp and power amp; S/N 100 dB; max. output 2.5 V rms; input impedance 150k ohms; oiled walnut end panels. \$165  
**EQ-2TM.** Same as EQ-2PA except wired for installation in tape monitor circuit. \$165

## SYMMETRY AUDIOPHILE

### ACS-1 Electronic Crossover

Active crossover incorporates class A circuitry and FET input modules; features variable frequency control (infinitely adjustable between 45-450 and 450-4500 Hz); X1 and X10 Hz switch; variable gain and attenuator control; crossover defeat; mono/stereo switch; 12 dB/octave low-pass filter. Input impedance 100k ohms; noise -100 dB below 3 V; out at unity gain; THD and IM dist. 0.001% at 3 V; slew rate 200 V/ $\mu$ sec; high-pass gain 20 dB. \$750  
**ACS-2.** Similar to ACS-1 with infinitely adjustable variable crossover between 20-20,000 Hz. \$1040

## TAPCO

### 4400A Reverb System

Two-channel reverb system features four-band reverb equalizer/channel, input mute, reverb mix controls, reverb in/out switches, input and output level controls, and dual VU meters; can be connected at mixer output, with channel patching, or effects buss; inputs and outputs unbalanced. Frequency response 10-25,000 Hz; S/N 80 dB; THD and IM dist. 0.05%. \$495

### C-201 Graphic Equalizer

Ten-band stereo graphic equalizer features ten ISO center frequency slide controls,  $\pm 15$  dB boost or cut, gain control, and EQ in/out for each channel and LED overload indicators; balanced and unbalanced inputs and outputs (outputs balanced with auto ground loop compensation). Frequency response 20-20,000 Hz  $\pm 1$  dB; THD and IM dist. 0.05%; S/N 110 dB; max. input level +20 dBm; max. output level +20 dBm; 3.5" H  $\times$  19" rack mountable. \$395



## 2200 Graphic Equalizer

Ten-band stereo graphic equalizer with ten center frequency slide controls, EQ in/out, and output level meters with level adjust for each channel; balanced and unbalanced inputs and outputs. Frequency response 20-20,000 Hz  $\pm$  1 dB; 6.25" H x 19" W ... \$340

## TEAC

### GE-20 Graphic Equalizer

Ten-band two-channel graphic equalizer with center frequencies set at 31.5, 63, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz,  $\pm$ 10 dB boost or cut; each channel has 12 dB/octave high- (at 31.5 Hz) and low-pass (at 16,000 Hz) filters, input level control, and LED input overload indicator; unit features output level meter with output level control; operational amplifier-synthesized inductors. Frequency response 20-30,000 Hz  $\pm$ 0.5 dB; THD 0.03%; S/N 85 dB; input sensitivity/impedance 0.3 V, unbalanced/100k ohms .... \$350

## TECHNICS

### SH-9010 Frequency Equalizer

Stereo universal frequency equalizer offers variable center frequencies; five slide pots provided for each channel (60 Hz variable between 20-180 Hz, 240 Hz variable between 80-720 Hz, 1 kHz variable between 333-3000 Hz, 4 kHz variable between 1.3-12 kHz, 16 kHz variable between 5.3-48 kHz); equalizer in/out switch; power on/off switch; one pair input and two pair output jacks provided; rated output voltage/impedance 1 V/300 ohms (1 kHz); THD 0.02%; input sensitivity/impedance 1 V/47k ohms (1 kHz); frequency response 10-70,000 Hz  $\pm$ 0, -3 dB; gain 0  $\pm$  1 dB; S/N 90 dB; 3<sup>1</sup>/<sub>2</sub>" H x 19" W x 14<sup>1</sup>/<sub>2</sub>" D ..... \$540

### SH-8020 Stereo Frequency Equalizer

Twelve-band stereo octave equalizer with center frequency slide controls at 16, 31.5, 63, 125, 250, 500, 1000, 2000, 4000, 8000, 16,000, and 32,000 Hz,  $\pm$ 12 dB boost or cut, with LEDs on slide pots and  $\pm$ 12 dB (green) and  $\pm$ 3 dB (yellow) variable control range LED display with switch; additional features include switches for tape/source monitoring, source/rec out EQ position, normal/reverse, and EQ on/off with LEDs. Frequency response 5-100,000 Hz  $\pm$ 3 dB; THD 0.01% from 20-20,000 Hz; S/N 100 dB; input sensitivity/impedance 0.5 V/47k ohms; overall gain 0  $\pm$  1 dB; 6<sup>1</sup>/<sub>2</sub>" H x 16<sup>1</sup>/<sub>2</sub>" W x 9<sup>1</sup>/<sub>2</sub>" D ..... \$350

### SH-8010 Graphic Equalizer

Five-band stereo graphic equalizer with center frequencies set at 100, 330, 1000, 3300, and 000 Hz,  $\pm$ 10 dB boost or cut; EQ on/off bypass and tape/source monitor switches ..... \$180

## TRINITY AUDIO

### BWF Mod I Electronic Crossover

Electronic crossover with choice of preset frequency at 75, 100, or 125 Hz; features high- and low-pass level controls, stereo/mono switch, full-range or filtered switch, 18 dB/octave filter slopes, Mylar capacitors, metal film resistors, and conductive plastic pots ..... \$299

## URSA MAJOR

### Space Station SST-282 Digital Reverb

Digital reverb, multi-tap digital delay, and delay-effects system using PCM circuitry with RAM. Features reverb processors and adjustable controls for reverb parameters including initial delay pattern, decay time, and high- and low-frequency decay time; eight audition delay taps; built-in mixer; 16 programs of delay times; reverb/echo feedback. Frequency response 20-7000 Hz; dist. 0.1%; dynamic range 80 dB; delay time 256 msec; reverb decay 3.5 sec; echo decay 10 sec ..... \$1995

## WHITE INSTRUMENTS

### 4301 1/2-Octave Active Equalizer

Active monitor equalizer comprised of 28 1/2-octave bands from 40-894 Hz and 13 1/3-octave bands from 1000-16,000 Hz,  $\pm$ 10 dB boost or cut. Features front-panel EQ in/out bypass switch; high-pass filter variable from 20-160 Hz at 12 dB/octave rolloff; front-panel-accessible mid- and high-frequency output trimmer and input attenuation control (variable to 20 dB); transformer isolated 20,000-ohm input; three-buffered single-ended outputs for tri-amp operation; all negative feedback circuitry. Frequency response 20 (-3 dB) to 20,000 (-2 dB) Hz; dist. 0.2% to +18 dBV; noise -90 dBV at 20,000 Hz; max. output +18 dBV into 600 ohms; 115/230 V ac, 50-60 Hz; 5<sup>1</sup>/<sub>2</sub>" H x 19" W x 9<sup>1</sup>/<sub>2</sub>" D ..... \$1300

4303. Same as 4301 except has three transformer isolated 300-ohm outputs; max. output level +15 dBV into 600 ohms, +18 dBV into 5000 ohms ..... \$1375

### 4004 1/3-Octave Passive Equalizer

Passive 1/3-octave equalizer with 24 ISO center frequency bands from 63-12,500 Hz, 15 dB cut; filters are double-tuned constant-K sections with two precision LC pairs. Features plug-in crossover network socket for bi-amp output; high-cut and low-cut adjustable finishing filters; calibrated logging and resetting dials. Frequency response 0-20,000 Hz, flat setting; dist. 0.1% to +18 dBm in 1/3-octaves; low-cut filter adjustable from flat-40-160 Hz, 15-dB/octave cut; high-cut filter adjustable from flat-16,000-10,000 Hz, 18 dB/octave cut; impedance 600-600 ohms, less than 1 dB insertion loss; 3<sup>1</sup>/<sub>2</sub>" H x 19" W x 9" D ..... \$1250

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# 14 MIXERS

## AUDIOKIT by AUDIOMARKETING

### Audiokit 62 Mixer

Six in/two out stereo mixing console. Input section features variable gain from mic to line, +16 dB boost and cut treble (16,000 Hz) and bass (80 Hz) controls, foldback pre-fader aux. mix cue, effects post-fade aux. mix echo, left-to-right pan, and straight-line fader control; output section features aux. return, master level fader control, and VU meters. Sensitivity -60 dBm variable; output level 0 dBm at 600 ohms (main), -20 dBm into 10k ohms (echo/cue), -20 dBm (max.), dist. 0.1%, aux. input -10 dBm at 15k ohms, output noise -65 dBm unweighted. Kit includes complete assembly of printed circuits and components plus ac power supply; assembly time approx. 8 hrs ..... \$265  
Assembled version..... \$395

## BIAMP

### 1642 Professional Mixing Console

Professional mixing console comprised of 16 inputs, four equalization bands, four separate echo/line channel returns, four submaster outputs, two main outputs, three auxiliary busses, and headphone monitoring. Input section includes low-impedance mic/high-impedance line switching, trim rotary controls continuously variable from 0 to -40 dB, aux. buss pre/post switch, aux. buss control, post-fader, post-EQ echo buss, monitor (adjustable to pre-fader, pre-EQ monitor buss); equalization controls set at 12,500, 3700, 250, and 80 Hz with -18 dB boost or cut; post-fader and post-EQ solo; mute, channel assignment switches, pan (auto odd-even scheme), dual-color LED indicators; input channel fader; wrist pad. Submaster section channel inputs (17-20) with own level control; line record switch, sub send control; left right program solo; sub master faders, sub master pan. Left main section aux. buss, echo, and monitor solo and level controls, meter 3 assign; left main solo and fader controls. Right main section phantom power (+48 V of power to mic inputs of 16 channels), headphone level control; meter 4 assign, right main solo. Other features include four lighted VU meters, LED overload indicators for each channel, mute on each channel, and priority solo system for instant monitoring. Frequency response 15-33,000 Hz  $\pm$  1 dB, THD 0.02%, IM dist. 0.01%; slew rate 8 V/ $\mu$ sec. S/N 80 dB; 9 1/2" H  $\times$  36 1/2" W  $\times$  31 1/2" D..... \$3595

### 6702 Stereo Mixing Console

Stereo mixing console with six inputs/stereo outputs, two-band equalizer, prefader pre-EQ monitor, and built-in Accutronics reverb. Input channels feature rotary fader, pan, monitor, low and high EQ, reverb/effects, and attenuation controls. Left/right main master sections feature monitor effects send and reverb and aux. level/pan controls. Right and left main (unbalanced) rear panel features monitor unbalanced, effects send, aux. in pan, left and right aux. in, low-impedance transformer inputs, and high-impedance line input. Has lighted VU meter. Frequency response 15-45,000 Hz  $\pm$  1 dB, THD 0.02%, IM dist. 0.01%, slew rate 8 V/ $\mu$ sec. S/N 80 dB from 20-20,000 Hz balanced, crosstalk 75 dB at 1000 Hz; max. input level -10 dB (low impedance), +30 dB (line in), output levels 9 V rms into 10,000 ohms, 6 V rms into 600 ohms (unbalanced). 6" H  $\times$  19" W  $\times$  12" D..... \$599

**6702B.** Balanced version of 6702, output levels 8 V rms into 600 ohms, 17 V rms into 10k ohms.. \$625

## BOZAK

### CMA-10-2 Stereo Mixer

All-silicon solid-state ten-in/two-out stereo mixer,

each input has individual level control, speech/music switch, and 10-dB input attenuator in mic mode, switchable at front panel to left or right output or both; modular design accepts variety of plug-in low- and high-level circuit cards. Output channels have separate bass and treble controls with 10 dB boost or cut, VU meter, and independent range switch, master gain control. Gain 78 dB max. with A 1002E card and CMA-481 transformer, frequency response 20-20,000 Hz  $\pm$  0.25 dB, power output +24 dBm; input impedance 200 ohms (with mic transformer), 100k ohms (low-level direct), 47k ohms (magnetic phono), 50k ohms (high level), load impedance 600 ohms balanced (with CMA-558 transformer) or unbalanced; dist. 0.25% at -24 dBm; noise -125 dBm, 7" H  $\times$  19" W  $\times$  12" D..... \$1275  
**CMA-10-1.** Similar to CMA-10-2 except has mono output; gain 90 dB with A-1002E card and CMA-481 transformer; output hum and noise -70 dB, 5 1/4" H  $\times$  19" W  $\times$  5 1/4" D..... \$875

### CMA-10-2DL Stereo Mixer/Preamp

All-silicon solid-state mixer/preamplifier with two low-level phono magnetic and two high-level high-impedance stereo inputs with own fader and balance controls, two mic/line mono outputs switchable for use with high- or low-impedance microphones. Phono preamp input has RIAA equalization, input 47k ohms, overload 100 mV, low-level mic preamp input for low-impedance (200-ohm) mic. Two output channels with own bass and treble controls and adjustable master gain control; phone jack with level control, signal processing loop; output +24 dBm unbalanced or 12 V into 600 ohms. Frequency response 20-20,000 Hz  $\pm$  0.25 dB; gain dBV (phono), 25 dBV (aux.), 85 dB (mic); noise -125 dBm; satin-anodized aluminum front panel; 5 1/4" H  $\times$  19" W  $\times$  17" D..... \$860

## CARVIN

### MX1602-EQ Mixing Console

16 balanced in/5 main out stereo mixing console. Each input features three equalization controls with center frequencies at 100, 2500, and 10,000 Hz,  $\pm$  18 dB and utilizing active filters with feedback design, 36 dB feedback pad, 20-dB mic pad; monitor 1 and 2 level controls; effects/reverb send level control; pan pot; solo switch, 90-mm slide fader control. Includes four separate built-in nine-band graphic equalizers with center frequency slide controls at 60, 120, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz  $\pm$  15 dB with EQ defeat switch. Output section features A & B main slide controls, two monitor slide controls, and summed A = B main level control with effects send, receive, and pan and reverb send, receive, and pan controls, A and B playback level controls, talkback system, control room level control with selector, and solo level control. Additional features include phantom power supply switch delivering +48 V for condenser mic with LED indicator, heavy duty power switch with LED, and four VU meters for A and B main and two monitors. Input impedance 150-600 ohms (balanced); attenuation -56 dB variable, hum and noise -125 dBV, S/N 72 dB master fader at nominal level; main output voltage 10 V rms max. into 600 ohms, output headroom 18 dB above -4 dBm, frequency response 10-30,000 Hz  $\pm$  2 dB; THD 0.015% nominal; voltage gain 70 dB (all main outputs); black epoxy-finished steel chassis with 1-in walnut sides, 7" H  $\times$  42 1/2" W  $\times$  25 1/2" D..... \$1745  
**MX1202-EQ.** Similar to MX1602-EQ except has 12 inputs ..... \$1345

## CERWIN-VEGA

### DM-1 Audio Mixer

For pro and semi-pro recording setups; frequency response 20-20,000 Hz  $\pm$  1 dB (RIAA phono inputs), 20-20,000 Hz  $\pm$  0.5 dB (line inputs), THD 0.05% at rated output at any frequency; IM 0.05% at rated output (SMPTE standard), noise (ASA standard "A" weighting, shorted inputs) high-level inputs 85 dB, phono inputs 80 dB both below full output, impedance 47k (RIAA phono inputs), 100k

(line inputs); output level/impedance 2.5 V rms (program and monitor), clipping level 8.7 V rms (-21 dBm), load impedance 2k, output source impedance 100 ohms or less; tone controls  $\pm$  10 dB at 50 Hz and 5k, turnover frequency 500 Hz; Autofade rate variable from 2 to 20 sec typically; talkover/mute: mute level 0-20 dB typically, on/off rate 2 sec typically, headphone output 1 W into 4 ohms; meter calibration +3 dB at 2.0 V rms at program output; illuminated VU meters for both output channels; bass/treble/stereo balance controls, 1 1/2" H (less feet and knobs)  $\times$  19" W  $\times$  8" D.. \$714

## DUBIE

### CD-10 Sound Control System

Sound control system integrates up to six recorders and receiver/amplifier through one-time patch cord hookup; dubs, records, plays back, mixes sound-on-sound, monitors, and fades; six solid-state four-position recorder controls; eight-position monitor select control; two fade controls; rear-panel connections for recorders and amplifier/receiver. Max. input signal 10 V at 1000 Hz; frequency response 0-100,000 Hz on all functions; 4" H  $\times$  13 1/2" W  $\times$  5 3/4" D..... \$150  
**CD-5.** Similar to CD-10 except three-recorder capacity, 4" H  $\times$  9 3/4" W  $\times$  4 7/8" D..... \$100

## GLI

### 3990 Preamplifier/Mixer

Preamp/mixer designed for creative audio, disco, and disco-format broadcast use. Phono/aux. section features two sets of line and phono inputs with own rotary level control and crossfader transition slide; special-effects third set of line/phono inputs; master level control with complete cueing capabilities; two sets of stereo main outputs and mono output, frequency response 20-20,000 Hz  $\pm$  0.25 dB (phono and aux.); HD and IM 0.01% (phono and aux.), S/N 80 dB below 10 mV unweighted (phono), 90 dB (aux. inputs 1 and 2), 96 dB (aux. input 3); overload 320 mV at 1000 Hz (phono), 7 V (aux.); slew rate 9 V/ $\mu$ sec (phono and aux.); input impedance 47,000 ohms (phono), 40,000 ohms (aux. inputs 1 and 2), 50,000 ohms (aux. input 3), phono subsonic filter 18 dB/octave at 18 Hz. Microphone section features balanced differential input, bass equalization, and optoelectronic talkover with adjustable program mute attenuator; frequency response 20-20,000 Hz  $\pm$  0.25 dB; bass equalization  $\pm$  8 dB at 80 Hz; S/N 80 dB below 10 mV; HD and IM dist. 0.01%; gain 60 dB (signal processor out), 80 dB (main out), 32 dB (input), 20 dB (equalizer gain), 6 dB (mix), 20 dB (line amp), overload 315 mV; slew rate 9 V/ $\mu$ sec; program attenuation talkover 2 to -20 dB. Signal processor section features switchable signal processor loop; input S/N 100 dB below 100 mV; input impedance 100k ohms; output 1.75 V at 600 ohms and 10 V at 10k ohms, output impedance 500 ohms; output S/N 107 dB below 2 V out; output dist. 0.005%. Audition output section can be directly connected to integrated or power amplifier; output 2 V at 600 ohms and 7 V at 10k ohms; HD and IM dist. 0.01% from 20-20,000 Hz; talkover muting 10.5 dB with audition output muted. Headphone amp S/N 95 dB below 2 W into 9 ohms; max. output 3 W continuous into 8 ohms with 0.1% HD and IM, slew rate 12 V/ $\mu$ sec, frequency response 20-20,000 Hz  $\pm$  0.1 dB, rack mountable 7" H  $\times$  19" W..... \$850

### PMX-9000 Mixer/Equalizer

Combination mixer/graphic equalizer. Mixer features two sets of switchable line and phono inputs each with slide level control and crossfader transition slider and mic input channel with standby and talkover; complete cueing facilities with level and selector controls; S/N 76 dB below 10 mV (phono), 75 dB below clipping (mic), 85 dB (aux.), max. input 220 mV at 1000 Hz (phono), 200 mV (mic), 10 V (aux.), input impedance 47k ohms (phono), 600 ohms (mic); phono subsonic filter 18 dB/octave at 30 Hz; mic talkover 14 dB program level reduction. Five-band graphic equalizer with center



frequencies at 60, 250, 1000, 3500, and 12,000 Hz,  $\pm 12$  dB boost or cut, has bypass switch and switchable signal processor loop. Other features include illuminated VU meters with calibrated sensitivity control ( $-20$  to  $+3$  dB range); master level control; two sets of stereo main outputs; preset level indicators for all inputs and main outputs; rack mountable  $8\frac{3}{4}''$  H  $\times$   $19''$  W..... \$435

## JVC

### MI-5000 Master Mixer

Six-channel master mixer; each channel features 10-dB input level slide controls with 20-dB master input level control, independent pan pots, LED overload indicators, four-position mic/att/phone/line select switches, and echo switches with three-sec variable echo level control. Additional features include mix out/tape in monitor select switch; two VU meters; input jacks for phono, line, tape, and mic; recording, monitor, and headphone jacks. Min. input/impedance 0.2 mV/200-5000 ohms (six-channel mix), 1.4 mV/47k ohms (phono), 80 mV/100k ohms (line and tape); rated output level/impedance 0.3 V/600 ohms (rec and monitor), 0.3 mW/8-1000 ohms (headphones), frequency response 20-30,000 Hz  $-3$  dB (mic and line), 30-20,000 Hz  $\pm 0.5$  dB (phono RIAA), 10-25,000 Hz  $-1$  dB (tape in); dist. 0.5%; S/N (IHF A) 56 dB (mic), 67 dB (line), 65 dB (phono)..... \$430

### MI-E60 Microphone Mixer

Six-channel microphone mixer with reverberator. Frequency response 30-25,000 Hz  $-3$  dB; reverberation time about 3 sec from 200-2,000 Hz, gain loss in passive mode 13 dB min..... \$250

## KM LABORATORIES

### MP 1 Mixing Preamplifier

Mixer preamplifier designed for home, disco, or studio use. Features six input slide level controls including turntable power switches (incorporated in Phono 1 and 2); prelistening input selector; bass, treble and balance controls with master fader slide control; dual output meters with normal/ $-20$ -dB meter range switch and adjustable preset mic roll-off controls; headphones volume control; tape 1 and 2/source monitor switch; mono/stereo mode switch. Max. input level/input impedance 90 mV at 1000 Hz/47k ohms (phono 1 and 2), 6 V rms/20k ohms (tape and aux. 1, 2), 25 mV rms/47k ohms (mic), gain 37 dB at 1000 Hz (phono 1, 2), 0 dB (tape and aux. 1, 2), 48 dB at 1000 Hz (mic); frequency response  $\pm 0.2$  dB (RIAA phono), 40-10,000 Hz  $\pm 2$  dB (phono, tape, aux.); THD at 1000 Hz 0.033% (phono 1 and 2), 0.03% (other inputs at 3.1 V rms out); max. output level 1.8 V rms into 600-ohm load, 7.75 V rms into high-impedance load, 10 mW continuous into 8 ohms and 40 mW continuous into 600 ohms (headphone amp); available in sloping console or 19-in rack mount design; console  $3.5\text{-}6''$  H  $\times$   $19''$  W  $\times$   $10.5''$  D; chassis with handles  $4.75''$  H  $\times$   $19''$  W  $\times$   $10.5''$  D..... \$995

## NAKAMICHI

### MX-100 Microphone Mixer

Provides three inputs (left, right, and blend) and two outputs; input 10,000 ohms for low to medium impedance mics; sensitivity 0.2 mV, overload 1 V ( $-74$  dB); THD less than 0.05% up to 10,000 Hz; requires PS-100 Power Supply;  $2\frac{1}{2}''$  H  $\times$   $7\frac{1}{2}''$  W  $\times$   $4''$  D..... \$110

## OLSON ELECTRONICS

### RA-606 Stereo Disco Mixer

Stereo disco turntable mixer features volume controls for two turntables, aux., mic., and headphones with cue controls and talkover switch, low filter switch, crossfade slide control, RIAA equalization for magnetic phono cartridges, and automatic music level reduction; mic input impedance 10,000 ohms;  $4''$  H  $\times$   $9\frac{1}{4}''$  W  $\times$   $5\frac{1}{2}''$  D..... \$180

## OPAMP LABS

### 1204RS Recording Studio Console

12-in/4-out, four echo buss, 8-track mixdown-monitor system; input channels mix slide pot (film type) with 90-dB attenuation; input select 0,  $-10$ ,  $-20$ ,  $-30$  dB and mike level, line 1, 2, and 3; 12 echo send, four echo return, four echo return assign controls for four echo busses; low-frequency equalization ( $+12$  dB) 1500 Hz (peaking), 3000 Hz (peaking), 5000 Hz (peaking), and 10,000 Hz (shelf); four output assign lighted alternate action switches; four  $4\frac{1}{2}$ -in lighted VU meters for output assign channels, two  $4\frac{1}{2}$ -in lighted VU meters for stereo mixdown; four master pots; eight mono ear-phone pots; eight mixdown concentric pan-gain pots; talkback and slate pushbuttons; mike gain controls; built-in 1000 Hz oscillator; stereo record and monitor amps. external rack-mounted power supplies. Kit..... \$6100  
1204RS. Wired version..... \$9700

## PIONEER

### MA-62A 6-Channel Mixer

Has input facilities for up to six mikes; each channel has alternative terminal for line or phono inputs; two channels equipped with pan pots, four with location switches; mike attenuators for each channel; low cut filters for mike input; portable design; two stereo output terminals; pointer-index markers for each of six long-throw faders (plus master volume faders);  $5\frac{3}{8}''$  H  $\times$   $15\frac{3}{4}''$  W  $\times$   $10\frac{3}{8}''$  D..... \$295

## SANSUI

### MA-7 Monitor Console

Monitor console features dual-function peak-hold meters reading watts or VU dBs and separate left/right full-range cue monitor speakers; has adjustable input sensitivity buttons ( $-20$  to  $+20$  dB) with variable level control; monitor level control; built-in 400 and 10,000 Hz calibration oscillator with oscillator level control; amplifier for headphones or speakers; rack-mountable..... \$330

### AX-7 Mixer/Recording Console

Four-input stereo mixer with built-in reverb unit features monitor selector (source, mixing out, tape 1, 2, 3); front-panel jacks for connection of portable stereo tape deck, etc.; recording mode (tuner, AM/FM, mixing out, source/tape, three-position tape copy); mixing selector (source, tape 1, 2, 3, and off); mixing balance control, master volume control; reverberation selector permits addition of "reverb" to input connected microphones, guitars, and/or line sources; reverberation control (0-3.2 sec); input selector (line, guitar, and mic with sensitivities 1 mV, 20 mV, 150 mV); panpots left and right for each channel; level controls; attenuator; low-cut switch. Frequency response (source/tape) 20-20,000 Hz  $+0$  dB,  $-0.5$  dB, (mic/guitar/line) 20-20,000 Hz  $+0$  dB,  $-1$  dB; THD 0.1% at or below 2 V rms; IHF hum and noise (mic) 61 dB, (guitar) 58 dB, (line) 69 dB, (source) 78 dB; channel separation 70 dB at 1000 Hz (source and tape); max. output 5 V into 47k ohms at 0.1% THD;  $4\frac{3}{8}''$  H  $\times$   $16\frac{1}{8}''$  W  $\times$   $11\frac{1}{2}''$  D..... \$300

## SHURE

### 700 PRO MASTER™ Sound System

Six balanced low-level transformer-coupled dual-impedance microphone input channels, each with pre-fader monitor send, effects/reverb send, high- and low-frequency equalization, pan pot, input attenuator, LED clipping indicator, and volume control; master controls; handles condenser microphones through built-in 24-V simplex power supply; two additional aux. level inputs for channels 7 and 8. Feedback Finder™ ten-band stereo equalizer with ISO center frequencies set at 63, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz  $\pm 13$  dB boost or cut. LED status, peak-reading, power amp overload, and temperature warning indi-

cators; rear-panel Patch Block™; twin 200-W power amplifiers; frequency response 40-20,000 Hz  $\pm 2$  dB..... \$1100  
701. Speaker system for 700; has 15-in woofer and high-frequency horn; handles 150 W continuous; SPL 102 dB at 1 m with 1 W; high-frequency horn has 60-degree long-throw or 120-degree wide-angle dispersion;  $\frac{5}{8}$ -in plywood and structural foam enclosure..... \$495

### SE30 Gated Compressor/Mixer

High-quality gated memory compressor combined with a self-contained portable three-input mixer and remote amplifier; frequency response 30-20,000 Hz  $\pm 2$  dB; gain below compression threshold, output terminated, (line) 600 ohms, (microphone) 150 ohms, (aux.) 47k ohms; input noise  $-129.5$  dBV; dist. 0.5% THD at  $-15$  dBm output, 30-20,000 Hz; compression ratio 10:1 typical from 10 to 20 dB compression, 5:1 min. from 10 to 30 dB compression; compression threshold (mike)  $-96$  dBV at max. input gain, (line)  $-48$  dBV, recovery time adjustable from 100 msec to 8 sec; attack time same as recovery time for increases up to 12 dB, gated memory less than 20 dB gain recovery after 1 min in "hold" condition; 108-132 V ac, 50/60 Hz,  $3\frac{1}{2}''$  H  $\times$   $15''$  W  $\times$   $10''$  D..... \$541

### M67 Professional Mixer

Professional mixer provides four low-impedance transformer-coupled balanced microphone inputs (one convertible to line input); balanced 600-ohm line and microphone level outputs; illuminated VU meter calibrated for  $+4$  and  $+10$  dB output; extremely low noise and r-f susceptibility design; 108-132 V ac, 50/60 Hz;  $2\frac{3}{4}''$  H  $\times$   $11\frac{3}{8}''$  W  $\times$   $7\frac{1}{2}''$  D..... \$277

### M677 Accessory Mixer

Transistorized six-input accessory mixer for use with Shure models M67 and SE30; obtains power from associated Shure mixer or battery power supply..... \$258

### Microphone Mixers

All models have independent volume controls and a master volume control which simultaneously controls the gain of all inputs;  $2\frac{1}{4}''$  H  $\times$   $11\frac{3}{8}''$  W  $\times$   $5\frac{1}{4}''$  D; weight 4 lb.

M68. Input connections are male professional three-pin audio connectors for 120 V ac  $\pm 10\%$ , 50/60 Hz..... \$162

M68FC. Input connections are female professional three-pin connectors for 120 V ac  $\pm 10\%$ , 50/60 Hz..... \$162

M68FCE. Similar to M68FC, but for both 105-130 V ac, 50/60 Hz and 210-260 V ac, 50/60 Hz with three conductor cable..... \$166

## SONY

### MX-20 Professional Microphone Mixer

Eight-channel in/four-channel out microphone mixer for studio or sophisticated amateur recordings. Features three-position mic input attenuator; balanced mic input and output with XLR connectors; cascade connector for coupling two MX-20's to produce 16-channel input mixer; five-step equalization control in channels one through six; pan pot and dead center controls; slide master fader; slanted front panel with carrying handle; four VU meters; abundant output level. Mic input sensitivity  $-72$  dB (0.2 mV), low impedance, line-in impedance 100,000 ohms, sensitivity 22 dB (60 mV), mike attenuation off,  $-15$  dB,  $-30$  dB,  $-45$  dB, output impedance (line-out) 600 ohms balanced, 10,000 ohms unbalanced; output impedance (headphone) 8 ohms; frequency response 30-20,000 Hz  $+0$  dB  $-1.5$  dB; S/N 65 dB;  $7\frac{3}{8}''$  H  $\times$   $18\frac{1}{8}''$  W  $\times$   $16\frac{1}{2}''$  D..... \$1275

### MX-670 Microphone Mixer

Six-in/two-out microphone mixer with full panning capability; for semi-professional or advanced amateur stereo recording; has ac/dc power operation for on-location or studio recording. Features pan pot control; two-position mic input attenuator; preset

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indicators, cascade connector; built-in oscillator, master fader Mic input sensitivity 72 dB at 0.2 mV (low impedance); line-in impedance 100,000 ohms, sensitivity 22 dB at 60 mV, phono in impedance 50,000 ohms, sensitivity 51 dB at 2.2 mV, mic attenuation off, 15 dB, 30 dB, output impedance (line out) 600 ohms (low), 10,000 ohms (high), headphone output impedance 8 ohms, frequency response 30-25,000 Hz; S/N 60 dB; 3<sup>1</sup>/<sub>2</sub>" H x 17<sup>1</sup>/<sub>2</sub>" W x 10" D ..... \$425

## MX-650 Microphone Mixer

Six in/two out-channel microphone mixer for sophisticated two-channel recording, each input channel can be set to feed left or right line output and each output channel can be Y-ed to left and right line outputs simultaneously. Features pan pot control, two-position mic input attenuator, pre-set indicators, cascade connector, built-in oscillator, master fader. Mic input sensitivity 72 dB (0.2 mV), low impedance; 100,000 ohms line-in impedance, sensitivity 22 dB (60 mV); phono in impedance 50k ohms, sensitivity 51 dB (2.2 mV); mic attenuation off, 15 dB, -30 dB; output impedance (line-out) low, more than 600 ohms, high, more than 10,000 ohms; output impedance (headphone) 8 ohms, frequency response 30-25,000 Hz, S/N 60 dB; 3<sup>1</sup>/<sub>2</sub>" H x 17<sup>1</sup>/<sub>2</sub>" W x 10" D ..... \$310

## MX-510 Microphone Mixer

Five channel inputs, two channel outputs. Features two-way (battery/ac current) power source, five mic inputs for low impedance mikes, three line inputs for tape recorder, tuner or amplifier, two phono inputs for record player, pan pot control; slide master fader control; pre-set indicators; two VU meters. Sensitivity -72 dB at 0.2 mV (mic in, low impedance), -22 dB at 60 mV (line in), 51 dB at 2.2 mV (phono in, RIAA); impedance 100k ohms (line in), 50k ohms (phono in), mic attenuation off 20 dB; output level impedance 5 dB at 0.435 V/10k ohms (line), -24 dB at 49 mV/8 ohms (headphone), frequency response 30-25,000 Hz, S/N 60 dB; 3" H x 13<sup>1</sup>/<sub>2</sub>" W x 9<sup>1</sup>/<sub>2</sub>" D ..... \$225

## MX-7 Microphone Mixer

Six-in/two-out microphone mixer for semi-professional. Features preset indicators for reference during temporary level changes, auto input selector, distributor switch, and line input. Mic input sensitivity -51 dB at 2.2 mV (low impedance), line-in impedance 82,000 ohms, sensitivity 5 dB at 435 mV, line out load impedance 1000 ohms, level out 60 dB at 0.775 mV, 1<sup>1</sup>/<sub>2</sub>" H x 10<sup>1</sup>/<sub>2</sub>" W x 6<sup>1</sup>/<sub>2</sub>" D ..... \$70

**MX-5.** Similar to MX-7 except three-in/one-out mic mixer for mono recordings, 2<sup>1</sup>/<sub>2</sub>" H x 9" W x 5<sup>1</sup>/<sub>2</sub>" D ..... \$45

## SOUND WORKSHOP

### Series 30 Recording Console

Modular control center of in-line input/output design, designed for 8, 16, or 24 track studio, choice of 8-36 inputs and 8-24 outputs. Common features include proprietary active differential mic preamp, state/talkback/cue, independent studio monitor selector, echo return to monitor and cue, and internal oscillator. LED meter display of all outputs including bus, aux sends, and mixdown; switchable phantom power bus for condenser mics, pre and post fader patch points, direct outputs on all channels, interface via Molex; nominal +4 dBm operating level, switchable to match 10 dBm level. Series 30 A includes pedestal base, three-band/three-frequency equalizer, 100-mm long throw carbon faders, one cue send and one echo send bus, additional send bus available during mixdown. Series 30 B includes pedestal base; three-band equalizer with sweepable 20-1 frequency selection/band; switchable low-cut filters; Penny & Giles conductive plastic

faders, two echo send busses, stereo cue send bus; fully-wired TT-type patch bay. Other options, such as VCA input subgrouping and ARMS automation, also available.

**3012.** 12-in mainframe providing from 8 in/8 out to 12 in/8 out configurations with A or B selection ..... \$4445-\$8660

**3020.** 20-in mainframe providing from 8 in/8 out to 20 in/16 out configurations with A or B selection ..... \$4725-\$12,855

**3028.** 28-in mainframe providing from 8 in/8 out to 28 in/24 out configurations with A or B selection ..... \$4985-\$17,035

**3036.** 36-in mainframe providing from 8 in/8 out to 36 in/24 out configurations with A or B selection ..... \$5250-\$21,220

## TAPCO

### Catalina Series C-12 II Mixing Console

12-in/four sub-group direct out/stereo and mono out sound reinforcement/mixing console. Features mic/line switching, front-panel patching system, switchable metering of all outputs; two pannable effects returns, three separate sub-busses comprising monitor, pre EQ/channel gain, pre or post aux, buss, and post effects buss; full priority solo system, headphone monitor system, +18 dB bass, +12 dB midrange, and +18 dB treble EQs/input channel; 100-mm slide-gain controls; front-panel mounted patchbay; +48-V phantom power for high-quality condenser microphone. New input channel features four-button subgroup assign switches, mute switch, and direct-to-main switch; new pan pots and solo capability on submaster. Frequency response 20-20,000 Hz +1 dB, THD and IM dist. 0.02%; equiv. input noise -128 dBV, output noise -80 dBV; max. input level 0 dBm at 0.775 V rms (mic), +30 dBm at 25 V rms (line); crosstalk -70 dB; solid oak end panels optional, 7.5" H x 27" W x 26.5" D ..... \$2695

**C-8E II.** Expands C-12 to 20, 28, or more inputs, self-powered with LED indicator and ac accessory receptacle ..... \$1795

### Panjo 7212 Mixing Console

12 in/2 out stereo mixing console with transformerless electronically-balanced input circuitry; also available with 8, 16, 24, and 32 input channels. Features three-knob four-frequency equalization controls, +24-V phantom power, solo, pan pots, channel patching, slide faders, aux., monitor, and effects send busses with master level controls, gain trim control, overload LED, mic/line switch, internal headphone amplifier, and VU meters with meter switching. Frequency response 20-20,000 Hz ±1 dB, slew rate 13 V/μsec; THD and IM dist. 0.02%; equiv. input noise 130 dBV, max. input level +6 dBm at 1.5 V rms (mic), +24 dBm at 12 V rms (line); crosstalk 70 dB, 8.5" H x 21.5" W x 16" D ..... \$1795

**7416.** Similar to 7212 except has 16 in/4 subgroup direct out/stereo and mono out format, also available with 8, 24, and 32 channels, 8.5" H x 31.5" W x 16" D ..... \$3195

### 8201B Stereo Mixer

8 in/2 out stereo mixer with balanced inputs, expandable to 24 inputs with monitor and effects. Features two-knob two-frequency equalization; transformer balanced mic and unbalanced line level inputs, monitor and effects buss, VU meters, +48-V phantom power; pan pots, patching with separate in/out jacks, mic/line switch with mic equalization, rumble filter. Frequency response 20-20,000 Hz, THD and IM dist. 0.05%, S/N 83 dB, max output +18 dBm ..... \$995

**8201B.** Similar to 8201B except 6 in/2 out stereo mixer and expandable to 22 inputs with monitor and effects ..... \$725

**8201REB.** Stereo expander with reverb for 8201B and 8201B; has eight balanced inputs, internal reverb with two-knob, two-frequency equalizer and pan pot, Accutronics type 9 tank for expander and master unit, monitor and effects send, +48-V phantom power, and pan pots ..... \$975

## TASCAM by TEAC

### Model 5B Mixing Console

8-in/4-out mixing console. Input module 0, 20, or 40 dB of mic padding; 0-20 dB mic, tape, or line trim; foldback pre EQ and fader cue, foldback post EQ and fader echo, 15 dB boost or cut at 3 or 10 and 75 or 200 Hz; pan automatically engages for multi-output assignment, LED overload indicator, straight-line fader. Submaster module: buss tape monitor, tape cue, monitor gain and pan, echo receive, submaster fader. Master module 400-Hz test tone, four-channel monitor, studio monitoring, control room monitoring, solo level control, master fader, VU-type level averaging meters and peak-indicating LEDs, optional talkback module available. Frequency response 30-20,000 Hz +2 dB; S/N 75 dB weighted (one input, mic or line), 65 dB weighted (8 inputs, mic or line), crosstalk 60 dB at 1 kHz; 7<sup>1</sup>/<sub>2</sub>" H x 23<sup>1</sup>/<sub>2</sub>" W x 24<sup>1</sup>/<sub>2</sub>" D ..... \$1990

**Model 5BEX.** expander for Model 5B ..... \$1400

### Model 1 Mixer

8-in/2-out line level mixer, independent gain and pan for each input channel, master gain; foldback for each channel; aux. outputs in parallel with line outputs; separate buss inputs; contains 1-W amp with level control for two stereo headphone feeds. Line in (x8) and buss in (x2) impedance 30k ohms and nominal input level -10 dB; line out/aux. out (x2) and cue out (x8) load impedance 10k ohms and nominal output level -10 dB; headphones (x2) load impedance 8 ohms; S/N 78 dB weighted; frequency response 30-20,000 Hz ±1 dB; crosstalk -50 at 1 kHz; 0.3% THD max.; 117-V ac, 60 Hz, 8W; 4<sup>1</sup>/<sub>2</sub>" H x 17<sup>1</sup>/<sub>2</sub>" W x 4" D ..... \$200

## Creative Series

### 144 Mixer/Cassette Recorder

Unit combines mixing console with porta-studio cassette recorder. Mixer features four mic/line inputs with trim, aux. send, +10-dB bass and treble, pan, and slide fader controls. Master section has buss monitoring with cue and review, track-to-track, dubbing without reconnecting, mixdown from four-to-two-channel stereo, Simul-Sync monitoring with separate cue mix system, and master fader controls, mic input -60 dB unbalanced, line input -10 dB (unbalanced 60k ohms), frequency response 20-20,000 Hz -1 dB, S/N 68 dB weighted. Recorder features two-motor logic control transport, two-channel record/four-track playback, +15% pitch control, double-action pinch roller for real-time pause, and built-in full-time Dolby noise-reduction system, tape speed 3<sup>1</sup>/<sub>2</sub> rps, wow and flutter 0.04% weighted, frequency response 20-18,000 Hz, S/N 63 dB, crosstalk 50 dB at 1000 Hz ..... \$1200

## TEAC

### Model 2A Audio Mixer

Features six inputs (mike or line in any combination), four outputs, level controls for each input channel, master output level control, cue out jack on each input channel; accessory send/receive patch points on each output buss for reverb units, graphic equalizer, limiters, compressors, noise-reduction units, other signal processing equipment, four aux. outputs in parallel with four line outputs, selectable high-cut filters at 5 kHz or 10 kHz, low-cut filters at 100 Hz or 200 Hz, color-coded push-push channel assignment buttons with pan on each channel, 3<sup>1</sup>/<sub>2</sub>" H x 13<sup>1</sup>/<sub>2</sub>" W x 14<sup>1</sup>/<sub>2</sub>" D ..... \$475

## TELEDYNE by OLSON

### RA-868 Disco Mixer

Sound control center combines disco mixer and five-band graphic equalizer. Mixer features two turntable and two line inputs, volume controls for channels 1 and 2, mike 1 and 2, and master level control with preset level indicators, fader and cue controls, talkover switch, and line out level control. Equalizer has center frequencies at 60, 250, 1000, 3500, and 12,000 Hz, 15<sup>1</sup>/<sub>2</sub>" W x 12<sup>1</sup>/<sub>2</sub>" D ..... \$260



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## CAR STEREO EQUIPMENT

### AIKO by TZL

#### ACS-9000 AM-FM/Cassette Player

In-dash AM-stereo FM radio and stereo cassette player with auto reverse, locking fast forward and rewind, pushbutton eject and tape direction indicators. Radio features LED stereo indicator, local/distant switch and fader/tone control; input for auto motorized antenna. Wow and flutter 0.3% wrms; frequency response 40-10,000 Hz; output power 4.5 W/ch; S/N 43 dB; 13.2 V dc negative ground; adjustable shafts; 1<sup>7</sup>/<sub>8</sub>" H x 7" W x 6<sup>1</sup>/<sub>2</sub>" D ..... \$200

#### ACS-4500 AM-FM/Cassette Player

In-dash AM-stereo FM radio and stereo cassette player with pushbutton eject; fast forward pushbutton; local/distant and AM/FM pushbutton controls; LED stereo indicator; rotary tuning/balance and volume/tone controls. Wow and flutter 0.45%; frequency response 50-10,000 Hz; output 6 W/ch continuous power; S/N 45 dB; impedance 4 or 8 ohms; adjustable shafts and interchangeable front panels (black leatherette or wood grain); 2<sup>1</sup>/<sub>4</sub>" H x 7<sup>1</sup>/<sub>4</sub>" W x 6<sup>1</sup>/<sub>2</sub>" D ..... \$100

#### ACS-4000 Stereo Cassette Player

Mini underdash stereo cassette player with auto reverse, locking fast forward/rewind, manual eject, channel direction indicator light, and slide volume, balance and tone controls; gravity load cassette insertion system; wow and flutter 0.2%; output 5 W/ch continuous power; 12 V dc; 1<sup>7</sup>/<sub>8</sub>" H x 4<sup>3</sup>/<sub>4</sub>" W x 6<sup>1</sup>/<sub>4</sub>" D ..... \$100

### AI/RHAPSODY

#### RY-703 AM-FM/Cassette Player

In-dash stereo cassette player with AM-stereo FM radio; adjustable shafts; lighted slide-rule dial; slide-in cassette; fast forward and eject buttons; balance and tone controls; pushbutton AM/FM and local/distant controls; LED AM, FM, and stereo indicators; front-end head alignment; antenna trimmer; mounting hardware and universal face trim plates included; optional RY-10 and RY-16 speakers available; 7" x 4<sup>3</sup>/<sub>4</sub>" x 2" ..... \$80

#### RY-873 AM-FM/8-Track Player

In-dash stereo 8-track player with AM-stereo FM radio; lighted slide-rule dial on tape opening cover; automatic and pushbutton track changer with LED number indicators; pushbutton AM/FM, local/distant, and power on/off controls; balance and tone controls; front-end alignment; antenna trimmer; mounting hardware and universal face trim plates available; optional RY-10 and RY-16 speakers available; 7" x 4<sup>3</sup>/<sub>4</sub>" x 2" ..... \$80

### ALPINE

#### 7308 AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio with digital PLL frequency synthesizer tuner, metal-compatible stereo cassette deck with Dolby noise-reduction system and hard permalloy head, and LED digital

frequency/tape counter readout with tape memory and clear buttons; designed to fit most domestic and imported cars; hooks up with company's components through DIN jack. Cassette deck features music sensor system (scans tape for beginning of desired selection); cassette glide electromechanical lock-in insertion of cassette and electronic glide eject (hands tape to listener outside window); FeCr/CrO<sub>2</sub>/metal tape selector; locking fast forward and rewind; auto eject at end of tape and fast forward; auto replay at end of rewind. Radio features electronic feathertouch five-station AM/FM memory preset with auto scan and seek, scan sense, FM, tuner, and noise-eliminator switches; built-in muting; sliding bass, treble, balance, and four-way fader controls; output 6 W/4 ch continuous; 2" H x 7<sup>1</sup>/<sub>4</sub>" W x 6<sup>1</sup>/<sub>4</sub>" D ..... \$700

#### 7206 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio and cassette player with Dolby noise-reduction system, hard permalloy tape head, and cassette and electronic glide eject; CrO<sub>2</sub>/FeCr tape selector; auto replay at end of rewind and auto eject at end of play or fast forward; music sensor in fast forward/rewind; wow and flutter 0.09%; tape frequency response 40-12,000 Hz; tape S/N 65 dB (Dolby on). Radio features five-station preset, four-way fader/balance control; feather-touch controls for mute, loudness contour, and noise eliminator switches; separate bass and treble controls; output 20 W/ch continuous; FM usable sensitivity 1.4 μV; FM S/N 72 dB (Dolby on); FM capture ratio 1.5 dB; dist. 0.8% at 10 W continuous ..... \$400

**7205.** Similar to 7206 without CrO<sub>2</sub>/FeCr switch and music sensor ..... \$350

**7204.** Similar to 7205 without four-way fader/balance control ..... \$300

#### 7307 Preamp/Tuner/Cassette Deck

In-dash AM-stereo FM tuner/preamplifier/stereo cassette deck. Cassette deck features Dolby noise-reduction system, CrO<sub>2</sub>/FeCr selector button, ignition-key off and cassette glide eject, auto replay at end of rewind, auto eject at end of play/fast forward, and music sensor in fast forward and rewind; wow and flutter 0.09%; tape frequency response 40-16,000 Hz; S/N 65 dB (Dolby on). Radio features five-station pushbutton preset, noise eliminator switch, separate bass and treble controls, mute switch, loudness contour, DIN connector, and tone-by-pass switch; FM usable sensitivity 1.4 μV; FM S/N 72 dB (Dolby on); FM capture ratio 1.5 dB ..... \$380

#### 7203 AM-Stereo FM/Cassette Deck

In-dash AM-stereo FM radio/stereo cassette deck. Cassette features Dolby noise-reduction system; hard permalloy tape head; cassette and electronic glide eject; CrO<sub>2</sub>/FeCr tape selector; auto replay at end of rewind; auto eject at end of play/fast forward; wow and flutter 0.13%; tape frequency response 40-12,000 Hz; S/N 65 dB (Dolby on). Radio features four-way fader/balance control; noise eliminator switch; separate bass and treble controls; mute switch; loudness contour; output 20 W/ch continuous; FM usable sensitivity 1.4 μV; FM S/N 72 dB (Dolby on); FM capture ratio 1.5 dB; dist. 0.8% at 8

W continuous ..... \$380

**7213.** Similar to 7203 without permalloy tape head; auto reverse cassette; wow and flutter 0.14%; tape response 40-11,000 Hz ..... \$410

**7212.** Similar to 7213 without CrO<sub>2</sub>/FeCr tape selector and noise eliminator switch ..... \$360

**7202.** Similar to 7212 without auto reverse; cassette has auto replay at end of rewind and auto eject at end of play or fast forward; tape response 40-12,000 Hz; wow and flutter 0.13% ..... \$330

**7201.** Similar to 7202 without Dolby noise-reduction system and four-way fader/balance ..... \$280

#### 7123 AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and metal-compatible stereo cassette deck with Dolby noise-reduction system and hard permalloy head. Cassette deck features music sensor system (scans for desired tape selection on tape); cassette glide lock-in insert and electronic glide eject system; FeCr/CrO<sub>2</sub>/metal tape selector; locking fast forward and rewind; auto eject at end of play and fast forward; auto replay at end of rewind. Radio features five-station memory preset; separate bass and treble controls; muting; auto local/distant switch; built-in afc; balance control; 6 W/ch continuous; preamp/deck capability through DIN jack; 2" H x 7<sup>1</sup>/<sub>4</sub>" W x 5<sup>3</sup>/<sub>4</sub>" D ..... \$320

#### 7128 AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio with PLL digital frequency synthesizer tuner, metal-compatible stereo cassette deck with hard permalloy head, and LED digital clock/station frequency display. Cassette features cassette glide lock-in insert; auto reverse at end of play, fast forward, or rewind; metal/chrome/ferro bias switch; locking fast forward and rewind; wow and flutter 0.1% wrms; frequency response 40-15,000 Hz ± 3 dB (all tapes); S/N 50 dB. Radio features five-station AM/FM preset with memory; auto local/distant; built-in afc; manual up/down tuning (200-Hz increments on FM, 10-kHz on AM); adjustable Tone Tenor control (±10 dB at 10,000 Hz); max. output 2.2 W/ch continuous into 4 ohms from 70-20,000 Hz with 0.8% THD; FM usable sensitivity 2.2 μV/75 ohms, selectivity 50 dB, and S/N 55 dB; accepts variety of 3000 Series components through DIN jack connection; 2" H x 7" W x 5.25" D ..... \$300

#### 7327 AM-FM Tuner/Preamp/Cassette

In-dash unit combines AM-stereo FM tuner/preamp and metal-compatible stereo cassette deck with Dolby noise-reduction system and sencore head; designed to fit X-body cars. Cassette deck features automatic music sensor (scans to next selection in fast forward, replays same song in rewind); metal/chrome/ferro bias switch; auto cassette glide lock-in insert mechanism; auto eject at end-of-play and fast forward; key-off eject; locking fast forward and rewind; LED tape indicator; wow and flutter 0.09% wrms; frequency response 40-18,000 Hz ± 3 dB with metal; S/N 65 dB without Dolby. Tuner features separate bass and treble controls, feather-touch loudness, mute, and AM/FM switches, auto local/distant, built-in afc, and LED stereo indicator; FM usable sensitivity 1.8 μV/75 ohms, selectivity 60 dB, and S/N 72 dB with Dolby; preamp/deck

# 15 CAR TAPE MACHINES

capability through DIN jack; 2" H x 6.25" W x 4.5" D.....\$280

## 7121 AM-Stereo FM/Cassette Deck

In-dash unit incorporates AM-stereo FM radio and metal-compatible stereo cassette deck with Dolby noise-reduction system and hard permalloy head; can add any of company's 3000 Series components through DIN jack connector. Cassette deck features auto reverse at end-of-play, fast forward, and rewind; bias switch for metal, chrome, and ferro tape; auto cassette glide lock-in insert system; fast forward and rewind; tape direction indicators; key-off eject; wow and flutter 0.1% wrms; frequency response 40-15,000 Hz  $\pm$  3 dB with metal; S/N 65 dB with Dolby. Radio features pushbutton loudness, stereo, mute, and AM/FM; auto local/distant switch; adjustable Tone Tenor ( $\pm$  10 dB at 10,000 Hz); built-in afc; FM usable sensitivity 1.8  $\mu$ V/75 ohms, selectivity 60 dB, S/N 72 dB with Dolby, stereo separation 35 dB at 1000 Hz, and capture ratio 2 dB; output 2.2 W/ch continuous into 4 ohms from 70-20,000 Hz with 0.08% THD; 2" H x 7" W x 5.25" D.....\$270

**7120.** Similar to 7121 without cassette Dolby noise-reduction system and key-off eject; tape S/N 55 dB.....\$210

**7124.** Same as 7120 except designed for all cars, including X-body models; no built-in afc; 2" H x 6.25" W x 4.5" D.....\$200

## 7100 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio and cassette player with cassette glide, locking fast forward and rewind, and auto stop at end of play or fast forward; radio has five-station preset, local/distant switch, and tone control; wow and flutter 0.09%; tape S/N 55 dB; FM sensitivity 1.6  $\mu$ V; FM selectivity 70 dB; FM S/N 62 dB; auto afc and power antenna lead.. \$200

## ARTHUR FULMER

## 16-6800 AM-Stereo FM/Cassette Deck

In-dash AM-stereo FM radio and auto reverse stereo cassette deck. Cassette features locking fast forward and rewind. Radio features microprocessor controlled digital tuning with auto/manual scan tuning and 14-station AM/FM preset; dimmable LED readout; mono/stereo; local/distant; separate bass and treble buttons; volume up/down pushbuttons; four-way pushbutton fading; 14 W/ch continuous.....\$400

## 16-6100 AM-Stereo FM/Cassette Deck

In-dash unit features AM-stereo FM radio and stereo cassette deck. Cassette features locking fast forward/tape eject button; tape/stereo light. Radio features local/distant; AM/FM; five-station AM/FM preset pushbuttons; rotary balance, fader, volume, and tuning controls; 4 W/ch continuous both channels driven into 4 ohms with 1.0% THD; frequency response 40-14,000 Hz  $\pm$  3 dB; FM stereo separation 32 dB; walnut grain and black leatherette faceplates included; 2 1/8" H x 7" W x 4 1/4" D.....\$160

**16-6300.** Similar to 16-6100 except with 8-track player; dial-in-the-door; program lights; frequency response 4.5-15,000 Hz; 2 1/8" H x 7 1/8" W x 5 1/4" D.....\$160

## AUDIOVOX

## ID-950/D6C-20 AM-FM/Cassette Player

In-dash modular AM/FM stereo radio with auto reverse cassette player; DIN-specified for imported and built-in LED digital quartz clock/radio frequency display with "display priority" switch for constant frequency or time readout and dimmer.

Features include electronically-controlled tuning with green LED digital display; as many as six AM and six FM stations can be preset; auto scan searches and stops at next available station; push-button stereo/mono and local/distant switches; cassette locking fast forward and rewind; tape direction indicators. Wow and flutter 0.35% wrms; frequency response 50-10,000 Hz; max. output 6.5 W/ch with 10% THD; FM stereo separation 25 dB; 2" H x 7 1/8" W x 6" D.....\$442

## IM-SPC AM-FM/Cassette Deck

In-dash modular AM/FM stereo radio with auto reverse cassette player; DIN-specified for imported cars. Unit features locking fast forward and rewind; Dolby noise reduction; separate bass and treble controls; FM muting.....\$340

## CP-775 AM-FM/Cassette Deck

Pushbutton AM-stereo FM radio and auto reverse cassette player with built-in noise suppression circuitry; locking fast forward and rewind; DIN nose-piece, shaft spacing and chassis.....\$320

## CAS-600A AM-Stereo FM/Cassette

In-dash unit combines AM-stereo FM radio, stereo cassette player with Dolby noise-reduction system, and built-in 40-W power amplifier. Features locking fast-forward/rewind, auto/manual cassette eject, bass, treble, mono/stereo, local/distant, four-way balance, and power booster on/off controls and LED tape and stereo FM indicators.....\$304

## IM-CXP AM-FM/Cassette Deck

In-dash DIN-specified pushbutton AM-stereo FM radio with cassette player. Unit features locking fast forward and rewind, stereo/mono, and four-way balancing.....\$290

## ID-900/D6C-5 AM-FM/Cassette Player

In-dash AM-stereo FM radio and cassette with quartz clock and digital frequency and time display. Features fast forward and eject and four-way balance controls; radio has local/distant and AM/FM pushbutton controls.....\$260

## ID-800/DGT-500 AM-FM/8-Track Player

In-dash digital readout AM-stereo FM radio/8-track player/quartz clock features LED program indicators, manually tuned AM-stereo FM with green LED digital readout of station frequency and time, and pushbutton FM local/distant and stereo/mono. Wow and flutter 0.25% wrms; frequency response 50-10,000 Hz; max. output 6 W/ch with 10% THD; 2" H x 7 1/8" W x 5 1/2" D.....\$260

## ID-685 AM-Stereo FM/Cassette/Equalizer

In-dash unit combines AM-stereo FM radio and stereo cassette deck with five-band graphic equalizer. Cassette features locking fast forward/eject control. Radio features front-to-rear fader; FM mute; mono/stereo; balance. Equalizer center frequencies set at 60, 250, 1000, 3500, and 10,000 Hz  $\pm$  10 dB boost or cut. Max output 20 W/ch, 16 W/ch with 10% THD; frequency response 50-10,000 Hz; FM sensitivity 5  $\mu$ V at 30 dB S/N; FM separation 25 dB; 2" H x 7" W x 5 1/8" D.. \$260

## ID-675/CAS-350 AM-FM/Cassette

In-dash "Super Power" AM-stereo FM radio, stereo cassette player, and built-in 40-W power amplifier. Cassette features side-load cassette mechanism, auto and manual eject, tape play indicator light, and locking fast forward/rewind control. Radio features pushbutton mono/stereo and local/distant controls, slide-bar band selector, four-way stereo balance control, and separate bass and treble controls. Wow and flutter 0.35% wrms; frequency response 50-10,000 Hz; max. output 20 W/ch; FM separation 25 dB; 2" H x 7 1/8" W x 5 1/2" D.... \$250

**ID-475/TM-3500.** Similar to ID 675/CAS-350 except with 8-track player; wow and flutter 0.25% wrms; frequency response 50-15,000 Hz; FM separation 30 dB; 2 1/8" H x 7 1/8" W x 5 1/2" D. \$250

## ID-500E AM-Stereo FM/8-Track Player

In-dash unit combines AM-stereo FM radio and

8-track player. Radio features dial-in-the-door manual tuning; front-to-rear fader, balance, local/distant, and AM/FM controls; LED FM stereo and tape program indicators; tone and channel select controls; five-station preset tuning; 12 W max. output; frequency response 50-10,000 Hz; 2 1/8" H x 7 1/8" W x 6" D.....\$190

## ID-725 AM-Stereo FM/Cassette Player

In-dash pushbutton AM-stereo FM radio and stereo cassette player features locking fast forward and pushbutton eject control, dial-in-door, LED tape indicator, and four-way balance control. Radio has pushbutton local/distant and tuning controls and slide-bar band selection. Wow and flutter 0.3% wrms; frequency response 50-10,000 Hz; max. output 6 W/ch; FM stereo separation 20 dB; 12 V dc negative ground; 2 1/8" H x 7 1/8" W x 6" D. \$190

## ID-605A AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and stereo cassette deck; designed for imported, X-body and Citation cars. Cassette features locking fast forward/eject control; wow and flutter 0.35% wrms. Radio features local/distant, tone and balance controls, and AM/FM; LED stereo indicator; 4.5 W/ch power amplifier; frequency response 50-10,000 Hz; FM sensitivity 5  $\mu$ V at 30 dB S/N; supplied with two nosespieces for vertical or horizontal use; three-way trimplate; compact chassis; fully adjustable shafts; 1 3/4" H x 6 1/4" W x 4 1/2" D.....\$158

## HI-COMP Line

### HCM-0010 AM-Stereo FM/Cassette Deck

In-dash modular biamplified unit combines AM-stereo FM electronic tuner/preamp, stereo cassette deck with Dolby noise-reduction system and hard permalloy head, and LED digital quartz clock/radio frequency display with LED dimmer; requires external amplifier. Cassette deck features auto reverse, CrO<sub>2</sub> tape selector, pushbutton fast forward, rewind, and eject, and LED Dolby and tape direction indicators. Radio features twelve-station pushbutton preset with memory, auto station seek control, electronic motor-driven fader control, sliding four-way stereo balance, bass, and treble controls, FM muting, and pushbutton biamp, loudness, local/distant, and mono/stereo controls; preamp and RCA output jacks.....\$650

### HCM-005 AM-Stereo FM/Cassette Deck

In-dash modular biamplified unit combines AM-stereo FM electronic tuner/preamp, stereo cassette deck with Dolby noise-reduction system and hard permalloy head, and LED digital clock/frequency display; requires external amplifier. Cassette deck features CrO<sub>2</sub> tape selector, auto reverse, pushbutton fast forward, rewind, and eject, and LED Dolby and tape direction indicators. Radio features 12-station pushbutton preset with memory, loudness, AM/FM, local/distant, mono/stereo, and separate bass and treble controls, and electronic motor-driven fader; preamp output.....\$550

### HCC-1100 AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM receiver, stereo cassette deck, and LED digital quartz clock/radio frequency display with dimmer. Cassette deck features sliding fast forward/eject/rewind control; radio features 12-station pushbutton preset with memory, auto station seek control, four-way balance control, pushbutton mono/stereo, local/distant, and AM/FM controls, and preamp output jacks; frequency response 50-12,000 Hz; speaker impedance 8 ohms.....\$450

### HCC-1030 AM-Stereo FM/Cassette Deck

In-dash AM-stereo FM radio/stereo cassette deck. Deck features Dolby noise-reduction system, auto reverse, CrO<sub>2</sub> tape selector, pushbutton eject, and locking fast forward and rewind. Radio features pushbutton tuning, FM Dolby, separate bass and treble controls, four-way balance, local/distant, and mono-stereo switches, and built-in 40 W power booster. Output 13 W/ch continuous with 1.0% THD; frequency response 40-15,000 Hz.....\$420



### HCC-1025 AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and auto reverse stereo cassette deck with Dolby noise reduction. Cassette features locking fast forward and rewind; side-load cassette mechanism; tape program select; manual eject; tape equalization switch for 70 and 120  $\mu$ sec; wow and flutter 0.25% wrms; frequency response 30-15,000 Hz; S/N 50 dB (Dolby off), 59 dB (Dolby on). Radio features pre-amp output jacks; AM/FM, mono/stereo, FM mute, and local/distant pushbuttons; front-to-rear fader; separate bass and treble, tuning, volume, and balance controls; 13 W/ch with 1% THD; frequency response 40-15,000 Hz -3 dB; S/N 65 dB (Dolby off), 69 dB (Dolby on); FM image rejection 65 dB; FM i-f rejection 80 dB; stereo separation 35 dB; supplied with 105-mm nosepiece ..... \$380

### HCM-003 AM-Stereo FM/Cassette Deck

In dash DIN specification AM-stereo FM radio and auto reverse, metal compatible cassette deck with Dolby noise-reduction system. Unit features locking fast forward and rewind; four-way balance; separate bass and treble, stereo hi blend, loudness ..... \$350

### HCC-1020 AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and stereo cassette deck with dual Dolby noise reduction. Cassette features locking fast forward and rewind; hard permalloy head; solenoid actuated auto eject at end-of-play and power-off; dc motor with electronic speed governor circuit; wow and flutter 0.25% wrms; S/N 50 dB (Dolby off), 58 dB (Dolby on). Radio features PLL demodulator, dual ceramic filters; dual gate MOS FET front end tuning circuitry; pre-amp output jacks; mono/stereo; local/distant; front-to-rear and left-to-right balance; separate bass and treble controls  $\pm$  10 dB; 20 W/ch with 10.0% THD; frequency response 50-13,000 Hz; S/N 45 dB (Dolby off), 48 dB (Dolby on); stereo separation 25 dB; fully adjustable shafts; 2 1/4" H x 7 1/8" W x 6" D ..... \$310

### HCC-565 AM-Stereo FM/Cassette Deck

In-dash DIN specification AM-stereo FM radio and auto reverse cassette deck features locking fast forward and rewind; four-way balance; separate bass and treble; stereo hi blend; pushbutton tuning ..... \$300

### HCC-550 AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and stereo cassette deck; DIN-spec nosepiece designed for imported cars. Cassette features auto reverse, locking fast forward and rewind, pushbutton eject, and tape program indicators; radio features AM/FM, local/distant, mono/stereo, and extended-range tone controls and low-distortion preamp output jacks; output 6 W/ch continuous max.; frequency response 50-10,000 Hz ..... \$210

### HCC-500 AM-Stereo FM/Cassette Deck

In-dash AM-stereo FM/cassette deck designed for imported cars. Cassette features locking fast forward/eject control; wow and flutter 0.35% wrms. Radio features dual ceramic filters; PLL multiplex demodulator; preamp output jacks; local/distant balance; LED stereo indicator; AM/FM selector; tone and volume; 5 W/ch continuous with 10% THD; frequency response 50-10,000 Hz; FM sensitivity 5  $\mu$ V for 30 dB S/N; stereo separation 25 dB; 1 1/4" H x 6 1/4" W x 4 1/4" D ..... \$150

## B-I-C

### C-1 Cassette Deck

Underdash two-speed (1 1/4 and 3 3/4 ips) metal-compatible car stereo cassette deck with Dolby noise-reduction system. Features speed selector with LED; illuminated peak level meter; equalization selector for all tapes with LED; volume, balance, bass and treble controls; tape eject; loudness selector with LED; tape end indicator; preamp output, 24 W continuous; supplied with quick-disconnect mounting bracket ..... \$200

## BLAUPUNKT

### Berlin US AM-FM/Cassette Player

Flexible-mount electronic remote control AM-stereo FM/LW/SW eight band radio with fast forward/rewind control. Comes with in-dash stereo cassette player/recorder; features pushbutton fast forward, rewind, record, playback, mic, radio and pause controls. 5 W/channel ..... \$1240

### Bamberg 'E' US AM-FM/Cassette Player

Unit combines electronic AM-stereo FM/LW/SW eight band radio with pushbutton stereo cassette player with record/playback. Radio features preset electronic station selection. 5 W/ch; DIN std. nose-piece; 130 mm shaft spacing ..... \$844

### CR-5001 AM-Stereo FM/Cassette Deck

Flat nose in-dash unit combines AM-stereo FM radio and metal-compatible auto reverse stereo cassette deck with Dolby noise reduction. Cassette features Sendust head; locking fast forward and rewind; tape program selector; tape bias and equalization switch; wow and flutter 0.15% wrms; frequency response 40-14,000 Hz; S/N 54 dB at 1000 Hz, 0 dB; THD 1.0% at 1000 Hz, 10 dB; fast forward/rewind time (C-60) 63 sec. Radio features manual tuning with digital frequency display; LED clock; photo electric eye to adjust brightness of LED display; local/distant; company's ASU noise suppression system; mono/stereo; band switch; fader control; five-station AM-FM preset pushbuttons; loudness contour; separate bass and treble; balance control; stereo power amplifier rated at 15 W/ch; FM sensitivity 1.8  $\mu$ V; FM image rejection 60 dB; FM i-f rejection 80 dB; FM stereo separation 38 dB; FM S/N 58 dB at 1 mV input; 2 1/2" H x 5" W x 5 1/4" D ..... \$450

**CR-3001.** Features are similar to CR-5001 except amplifier rated at 23 W/4 ch ..... \$630

### CR-4000 AM-Stereo FM/Cassette Deck

In-dash AM-stereo FM radio and metal compatible cassette deck with Dolby noise reduction. Cassette deck features locking fast forward and rewind; metal/regular tape bias/equalization switch; tape program; tape eject; wow and flutter 0.15% wrms; frequency response 40-14,000 Hz; S/N 53 dB at 1000 Hz, 0 dB; THD 1.0% at 1000 Hz, 10 dB; fast forward/rewind time (C-60) 63 sec. Radio features volume; balance; company's ASU noise suppression system; separate bass and treble; loudness contour; stereo/mono; local/distant; AM/FM; fader control; 7 W/4 ch continuous power amplifier; frequency response 40-15,000 Hz; FM sensitivity 1.8  $\mu$ V; FM image rejection 55 dB; FM i-f rejection 80 dB; FM stereo separation 38 dB; FM S/N 60 dB; 2 1/4" H x 7 1/2" W x 5 1/8" D ..... \$344

### CR-2000D AM-FM/Cassette Player

In-dash AM-stereo FM radio/stereo cassette player. Cassette: features Dolby noise-reduction system with Dolby FM circuitry, auto reverse, power eject, locking fast forward and rewind, and program select switch; fast forward/rewind time 65 sec (C-60); wow and flutter 0.15% wrms (JIS); frequency response 35-14,000 Hz -10 dB; THD 1.0% at 1000 Hz, 10 dB; S/N 53 dB at 1000 Hz, 0 dB; crosstalk -53 dB at 1000 Hz, 0 dB; channel separation 38 dB at 1000 Hz, 10 dB. Radio features variable tone control, stereo balance control, FM muting, mono/stereo switch, manual tuning control, waveband select and local/distant switch; has company's ASU noise suppression circuitry for FM broadcast reception; max. sensitivity 0.8  $\mu$ V; S/N 68 dB at 1 mV in; i-f rejection 80 dB; image rejection 46 dB; THD 1.5%; frequency response 40-15,000 Hz  $\pm$  6 dB. Fits most imported cars with adjustable shafts for domestic cars; 1 1/4" H x 7 1/8" W x 5 1/8" D ..... \$303

**CR-2001.** Similar to CR-2000D except with five station preset pushbutton tuning ..... \$351

**CR-2000.** Same as CR-2000D without Dolby noise reduction circuitry ..... \$275

### Essen AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio/stereo cassette player. Cassette features power eject, locking fast forward and rewind, and cassette eject; fast forward/rewind

time 90 sec (C-60); wow and flutter 0.25%; THD 2.0% at 1 W; crosstalk -33 dB. Radio features variable tone control, balance control, stereo/mono switch, manual tuning controls, station frequency indicators, and ASU noise suppression circuit for FM reception; sensitivity 1  $\mu$ V for 1 W out; image ratio 50 dB; stereo separation 32 dB; 1 1/4" H x 7" W x 5 1/4" D ..... \$251

### CR-8000 AM-Stereo FM/8-Track

In-dash AM-stereo FM radio/8-track tape player. 8-track features tape program selector and tape eject; wow and flutter 0.25% wrms (JIS); frequency response 35-14,000 Hz -10 dB; THD 1.0% at 1000 Hz, 10 dB; S/N 50 dB at 1000 Hz, 0 dB; crosstalk -55 dB at 1000 Hz, 0 dB; channel separation 40 dB. Radio features variable tone control, balance control, waveband select and local/distant switch, and ASU noise suppression circuitry. Unit designed for imported cars and has adjustable shafts for domestic car installation; 1 3/4" H x 7" W x 5 3/4" D ..... \$192

**CR-4095.** Similar to CR-8000 except with stereo cassette recorder/playback; microphone provided for monaural dictation; 7 W/ch ..... \$240

## CLARION

### PE-959A AM-Stereo FM/Cassette Deck

In-dash unit combines AM-PLL stereo FM tuner, metal-compatible stereo cassette deck and LED digital clock/radio frequency display; requires separate power amplifier. Cassette deck features equalization selector for metal and CrO<sub>2</sub> tapes, auto reverse, locking fast forward and rewind, and pushbutton eject. Programmable tuner features five-station AM/FM pushbutton memory preset with electronic scanning; signal actuated stereo control circuit (SASC); Dolby B circuitry (FM and cassette) with LED; pushbutton local/distant; separate electronically controlled bass and treble controls; stereo/mono; loudness and program cancel switches; electronic balance control; designed to fit all domestic and imported cars; DIN output jacks and nosepiece, optional hi-power fader; 2" H x 7" W x 5 1/4" D ..... \$900

### PE-958A AM-Stereo FM/Cassette Deck

In-dash unit combines AM-PLL stereo FM tuner, metal-compatible stereo cassette deck, and LED digital clock/radio frequency display; requires separate power amplifier. Cassette deck: features super permalloy heads, equalization selector for metal and CrO<sub>2</sub> tapes, auto reverse, locking fast forward and rewind, and pushbutton eject; wow and flutter 0.13% wrms; frequency response 30-15,000 Hz. Tuner features five-station AM/FM pushbutton tuning with seek and scan, Dolby B with LED, pushbutton local/distant, and separate bass and treble controls; 2.75" H x 6" W x 5.5" D ..... \$430

**PE751C.** Similar to PE958A except with 10 W/ch power amplifier, sendust heads, front-to-rear fader, and balance controls; power antenna lead; is not electronically tuned; 2" H x 7" W x 6 1/4" D ..... \$390

**GA-302E.** Power amplifier for PE-958A or PE959A; 24 W/ch continuous into 4 ohms from 45-20,000 Hz with 1.0% THD; speaker protection circuitry; 2" H x 6" W x 5.5" D ..... \$130

**GA-301E.** Power amplifier for PE-958A or PE959A; 12 W/ch continuous into 4 ohms from 20-20,000 Hz with 1.0% THD; 1" H x 4" W x 5.5" D ..... \$55

### PE-956B AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio, stereo cassette deck, and LED digital quartz clock/frequency display; DIN nosepiece for imported cars. Cassette features auto reverse, locking fast forward/rewind, pushbutton eject, and tape direction indicators. Radio features voltage-synthesizer FM electronic tuning, two AM/four FM pushbutton preset with memory, seek tuning, loudness, local/distant, and stereo/mono switches; LED station indicators; 1.75" H x 5.75" W x 7" D ..... \$490

### PE-751B AM-Stereo FM/Cassette Player

In-dash unit combines AM-stereo FM radio with

stereo cassette player. Features five pushbutton tuning; Dolby noise-reduction; auto reverse; locking fast forward and rewind; separate bass and treble controls; 12 W/ch continuous; front-to-rear fader; left-to-right balance control; FET front end; cassette eject button; stereo indicator light; cassette program change button; Dolby indicator lights; smaller chassis fits over 90% of U.S. and foreign cars. Tape wow and flutter 0.13% wrms and frequency response 30-15,000 Hz; 2" H x 7" W x 6.25" D..... \$390

#### PE-758B AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and stereo cassette deck; DIN nose-piece for imported cars. Cassette features auto reverse, locking fast forward and rewind, pushbutton eject, and tape direction indicators. Radio features five-station pushbutton tuning, IC circuitry, FET front end in tuner section, pushbutton AM/FM and local/distant selectors, LED stereo indicator, and power antenna lead; 4 W/ch continuous; 1.75" H x 6" W x 7" D... \$308

#### PE-765A AM-Stereo FM/Cassette Deck

In-dash AM-stereo FM radio/stereo cassette deck; designed for domestic and imported cars. Cassette: features auto reverse, locking fast forward/rewind, and pushbutton eject; wow and flutter 0.13% wrms; frequency response 30-15,000 Hz. Radio: features five-pushbutton AM/FM tuning, pushbutton AM/FM and local/distant switches, program and stereo lights, program selector, and balance control; output 4 W/ch continuous; adjustable shafts; power antenna lead; 2" H x 5.5" W x 7" D..... \$285

#### PE-550A AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and stereo cassette deck. Cassette features auto reverse, locking fast forward/rewind, pushbutton eject, tape direction indicators, and dial-in-door; wow and flutter 0.2% wrms; frequency response 40-15,000 Hz. Radio: features FET front end tuning with Dolby FM circuitry, low-level line output, local/distant and AM/FM selector, auto stereo/mono switching, front-to-rear fader, balance, and LED Dolby and stereo indicators; 4 W/ch continuous; adjustable shafts; 2" H x 6.25" W x 7" D..... \$279

#### PE-684A Stereo FM/Cassette Player

Underdash unit combines stereo FM radio with stereo cassette player. Features 10 W/ch continuous power amplifier; auto reverse; Dolby on both FM and cassette; locking fast forward and rewind; pushbutton eject; punch sound; auto stereo/mono; local/distant; Dolby and stereo indicator lights; program indicator lights; separate bass and treble controls; front-to-rear fader; left-to-right balance control; 2/4-ohm speaker impedance selector; FET front end in FM tuner section. Tape wow and flutter 0.12% wrms and frequency response 40-15,000 Hz; 2" H x 7.5" W x 6.5" D..... \$254

PE-838A. Similar to PE-684A less FM tuner .. \$227

#### PE-560A AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and stereo cassette deck. Cassette: features auto reverse, locking fast forward and rewind, pushbutton eject, dial-in-door, and tape direction indicators; wow and flutter 0.2% wrms; frequency response 50-10,000 Hz. Radio: features AM/FM and local/distant switch, FET front end tuner, front-to-rear fader, auto stereo/mono and balance controls; stereo indicator light; 4 W/ch continuous; adjustable shafts; 2" H x 7.125" W x 5.5" D..... \$216

PE-559A. Similar to PE-560A without tape auto reverse and direction indicators and auto stereo/mono switching; has auto eject..... \$185

#### PE-703A AM-Stereo FM/8-Track

In-dash AM-stereo FM radio and 8-track tape deck. 8-track: features dial-in-door, tape eject, program

selector with four program LEDs, and vertical head tracking; wow and flutter 0.3% wrms; frequency response 30-10,000 Hz. Radio: features five-station pushbutton tuning, AM/FM slide bar switch, auto stereo/mono, front antenna adjustment, front-to-rear fader and balance controls, and LED stereo indicator; 4 W/ch continuous; adjustable shafts (5<sup>3</sup>/<sub>16</sub> to 6<sup>3</sup>/<sub>16</sub> in); 2<sup>1</sup>/<sub>8</sub>" H x 7<sup>1</sup>/<sub>8</sub>" W x 6<sup>7</sup>/<sub>8</sub>" D..... \$195

PE-623B. Similar to PE-703A minus pushbutton tuning; has FET front end tuner, local/distant switch; tape frequency response 50-10,000 Hz; 2" H x 7.125" W x 4.75" D ..... \$151

#### PE554A AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and stereo cassette deck; compact chassis for imports. Cassette features locking fast forward. Radio features FET front end tuner; local/distant; 3.5 W/ch continuous; 1<sup>7</sup>/<sub>8</sub>" H x 6<sup>1</sup>/<sub>4</sub>" W x 4<sup>3</sup>/<sub>4</sub>" D ..... \$156

#### PE-453A 8-Track Player

Underdash stereo 8-track player features 10-W/ch continuous power amplifier; separate bass and treble controls; left-to-right balance control; program change switch; program repeat switch; punch sound; muting; loudness button. Tape wow and flutter 0.1% and frequency response 40-12,000 Hz; 2" H x 7.5" W x 6.5" D..... \$127

#### PE 828A Cassette Player

Underdash stereo auto-reverse cassette player features 4 W/ch continuous power amplifier; locking fast forward and rewind; eject pushbutton; program indicator light; 1<sup>7</sup>/<sub>8</sub>" H x 5<sup>1</sup>/<sub>2</sub>" W x 5<sup>7</sup>/<sub>8</sub>" D ..... \$127

## FUJITSU TEN

#### EP-820 "Dashboard Wizard"

Microprocessor controlled AM-stereo FM radio with preamp and auto reverse cassette player with Dolby noise-reduction system. Unit features built-in five-band graphic equalizer with center frequencies set at 60, 250, 1000, 3500, and 10,000 Hz,  $\pm 3$  dB; quartz clock and electronic tuning for constant digital frequency readout and pushbutton digital time display; preset channel selector that memorizes up to seven AM and seven FM stations for instant recall with search up/down and scan function. Cassette features Life Time Metal tape head, equalizer switch for chrome and ferri-chrome tape, and locking fast forward and rewind. Radio features FM noise blanker, FM muting, and four-way fader control. Frequency response 40-14,000 Hz ..... \$600

#### EP-750 AM-FM/Cassette Player

In-dash AM-stereo FM radio with electronic digital tuner and stereo cassette player with auto reverse, locking fast forward/rewind slide control and program indicator. Unit features digital frequency and time display; quartz clock; preset pushbutton Memory Write tuning up to five AM and five FM channels with instant recall; auto search and lock into next station; pushbutton local/distant and AM/FM selectors; stereo indicator. Wow and flutter 0.15%; frequency response 40-14,000 Hz ..... \$396

#### GP-7881 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio and cassette player with Dolby noise-reduction system and auto reverse; features locking fast forward and rewind, five AM or five FM pushbutton tuning, four-way bass fader, and built-in noise blanker; front/rear fader control and balance, bass, treble and volume controls. Wow and flutter 0.15%; frequency response 40-14,000 Hz; output 5 W/ch continuous power, max. output 20 W; tape S/N 48 dB; FM stereo separation 20 dB; FM sensitivity 18 dB ..... \$250

DP-7872. Similar to GP-7881 without Dolby system; adjustable shafts for American cars ..... \$175

DP-7871. Similar to DP-7872 except has DIN specs and fixed shafts to fit foreign cars ..... \$175

DP-7874. Similar to GP 7881 except without Dolby noise reduction and four separate amps ..... \$170

All four radio/cassette players can utilize any one of Fujitsu Ten's plug-in preamp, power and control options.

#### DP-644 AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and metal-compatible stereo cassette deck with LTM head; designed for small cars. Cassette features auto reverse, locking fast forward/rewind, equalization for chrome and metal tapes, cassette eject, and tape direction indicators; wow and flutter 0.2% wrms; frequency response 40-10,000 Hz  $\pm 3$  dB; S/N 52 dB; stereo separation 40 dB. Radio features separate bass and treble controls with DSS bass boost, FM muting, built-in noise blanker, and stereo FM LED; output 16 W/ch into 4 ohms from 30-20,000 Hz at 10.0% THD; FM tuner usable sensitivity 20 dBf, 50-dB quieting 24 dBf, selectivity 64 dB at 400 kHz, stereo separation 35 dB, and frequency response 30-15,000 Hz  $\pm 3$  dB; 1<sup>7</sup>/<sub>8</sub>" W x 7" W x 5<sup>3</sup>/<sub>16</sub>" D ..... \$220

#### DP-1006 AM-Stereo FM/Cassette Deck

In-dash miniature AM-stereo FM/cassette deck. Cassette player features locking fast forward/eject; chrome tape compatibility; tape end indicator light; wow and flutter 0.15% wrms; frequency response 60-12,500 Hz  $\pm 3$  dB; S/N 50 dB. Radio features 5 W/ch into 4 ohms from 30-20,000 Hz with 10.0% THD; frequency response 30-10,000 Hz  $\pm 3$  dB; dial-in-the-door; separate bass and treble controls, loudness; local/distant switch; FM muting; LED stereo indicator light; FM 50 dB quieting sensitivity 23 dBf; image rejection 70 dB; FM i-f rejection 65 dB; stereo separation 35 dB. Adjustable shafts fit most Asian, European, and American cars. 1<sup>3</sup>/<sub>8</sub>" H x 6<sup>1</sup>/<sub>4</sub>" W x 4<sup>1</sup>/<sub>2</sub>" D ..... \$165

#### DP-620 AM-Stereo FM/Cassette Deck

In-dash AM-stereo FM radio/stereo cassette deck; designed for small imported and domestic cars. Cassette features locking fast forward and rewind, tape direction indicators, and power-off eject; wow and flutter 0.12% wrms; frequency response 60-8000 Hz  $\pm 3$  dB; S/N 50 dB; stereo separation 35 dB. Radio features stereo/mono, LED stereo FM, and balance and tuning/select controls; output 5 W/ch into 4 ohms from 150-20,000 Hz with 10.0% THD; FM tuner 50-dB quieting 24 dBf, selectivity 64 dB at 400 kHz, stereo separation 30 dB, and frequency response 30-15,000 Hz  $\pm 3$  dB; 1<sup>7</sup>/<sub>8</sub>" H x 7" W x 5<sup>3</sup>/<sub>16</sub>" D ..... \$150

## Component System

AT-7831. AM/FM tuner with auto-search tuning; bass and treble tone controls; local/distant and stereo/mono pushbutton switches ..... \$239

AT-372/EX-1. Stereo FM tuner with auto-search tuning ..... \$230

SP-711. Cassette deck with auto reverse and Dolby noise-reduction system, slide-bar bass and treble tone controls; wow and flutter 0.15%; frequency response 30-14,000 Hz; S/N 50 dB ..... \$171

CA-2000. Five-band preamp/graphic equalizer features Level Attenuator System switch, remote control for tape program and search tuning, illuminated front panel, fader control, and pushbutton defeat. Center frequencies set at 60, 250, 1000, 3500, and 15,000 Hz,  $\pm 10$  dB; frequency response 20-40,000 Hz; THD 0.1%; S/N 60 dB ..... \$120

PA-150. Four-channel power amp with 80-W output ..... \$104

CA-100. Control amplifier ..... \$83

RV-130-EX-1. Electronic stereo graphic timer delay with LED 500, 1500, 3000 msec; fader/volume, reverb, and pushbutton power controls. .... \$150

## JENSEN

#### R430 AM-Stereo FM/Cassette Player

In-dash bi-amplified AM-stereo FM receiver/cassette player with Dolby noise-reduction system and separate power amplifiers. Features cassette door/tuner dial; pushbutton eject; locking fast forward/rewind switch; automatic flashing tape alarm reminds you when ignition is turned off to remove cassette; LED cassette and stereo indicators; individual bass/treble and balance/fader; other controls include pushbutton remote power amplifier, bi-amplification, loudness compensation, muting, AM/



# Music sculptor.



Meet the music sculptor. The new EQ400 car stereo graphic equalizer. Sensitive. Perceptive. And remarkably precise. Simply connect it between your stereo source and power amplifier.

Then reshape the response of your music to your own taste. Enhanced mid-bass... a little more sheen to the strings... a bit more bite on the brass. Contour, mold, enhance the music until it's just right for your ears.

## 15 bands:

### total control.

That's right. A full *fifteen* bands are at your command with this graphic equalizer. To shape your music like no other car equalizer can.

Looking at the EQ400 you'll see five sliding controls with a  $\pm 12$  dB range. Look closer, and for each control lever there's a selector for three different bands. Fifteen in all.

Center frequencies controlled are:

60 Hz	80 Hz	125 Hz
160 Hz	250 Hz	400 Hz
630 Hz	1000 Hz	1600 Hz
2400 Hz	3500 Hz	5000 Hz
7000 Hz	10,000 Hz	14,000 Hz

### Even more precision.

Our desire for precision doesn't stop with the fifteen bands.

The EQ400 offers you more precise tuning *within* each band as well.

The top-mounted sliding scales on the EQ400 are physically almost twice as long as the short, front-mounted controls on most other equalizers. Which means far better resolution. For much more precise adjustments... and much more precise sound.

You can instantly compare any boost or attenuation you

the dash equalizer.

The EQ400 rests unassumingly under the dashboard. That is, until you're ready to use it.

Then... a slight pull slides it out to reveal a full, top-mounted illuminated control panel.

The top-mounted controls are easier to see, easier to reach and easier to use.

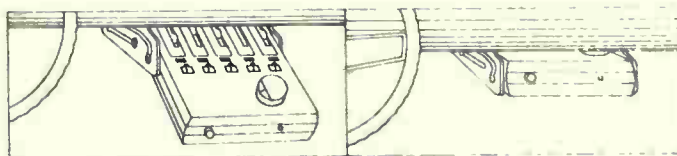
When you're finished adjusting, just slide the unit back under the dash. That way the controls aren't exposed where they can be accidentally bumped out of position. And meanwhile, an LED on the front glows to indicate the unit is on.

The same bracket can also be used to mount the equalizer right at your fingertips, between the bucket seats of smaller cars and vans.

### Your own kind of sound.

No longer do you have to settle for someone else's interpretation of your music.

Because now you can shape it and enhance it with music sculptor. The Jensen EQ400 graphic equalizer. Or the EQA3000 5-Band Graphic Equalizer with built-in dual 12-watt power amplifiers. Hear what they can do... soon.



The EQ400 has a special under dash mounting. This enables you to slide it out for easy adjustment. When you're finished, slide it back. The controls then can't be accidentally knocked out of adjustment.

make with the equalization defeat switch. A front-to-rear fader control offers additional flexibility. And with its switchable 10/47 ohm input impedance, the EQ400 can be connected to any low impedance stereo source.

### Slide out, tune in.

This is no ordinary under

# JENSEN

SOUND LABORATORIES

AN ESMARK COMPANY

CIRCLE NO. 23 ON READER SERVICE CARD

FM, local/distant, and tuner. Wow and flutter 0.15%; S/N 73 dB (FM Dolby); frequency response 30-15,000 Hz; THD 0.4% at 52 W; output 30 W;



ch continuous; FM sensitivity 1.0  $\mu$ V; FM alternate channel rejection 75 dB; FM stereo separation 30 dB; capture ratio 1.5 dB; bi-amplifier output 25 W ch (bass), 5 W/ch (treble); bi-amp crossover 1000 Hz..... \$470

**R420.** Similar to R430 without separate power amplifier and remote power amplification control; THD 1.0% at 16 W; bi-amplifier output 5 W/ch (bass), 5 W/ch (treble); output 10 W/ch continuous..... \$370

**R410.** Similar to R420 without bi-amplification; output 5 W/ch continuous, THD 1.0% at 8 W. \$300

#### T415 AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and auto reverse metal-compatible stereo cassette deck with Dolby noise reduction. Cassette features Syntox<sup>®</sup> ceramic tape heads; locking fast forward and rewind; eject and program buttons; wow and flutter 0.15% wrms; frequency response 50-10,000 Hz  $\pm$  1.5 dB. Radio features five-button AM/FM preset tuning; high blend circuitry; separate bass and treble controls; mono/stereo, loudness, Dolby on/off, and rotary balance and fader controls; usable sensitivity 15 dBf; 50-dB quieting sensitivity 19 dBf, capture ratio 1.5 dB; requires separate power amplifier..... \$300

**R406.** Similar to T415 without Dolby; has 10-W power amplifier; wow and flutter 0.23% wrms; tape response 50-12,000 Hz; FM usable sensitivity 14.8 dBf (1.5  $\mu$ V); overall frequency response 30-15,000 Hz..... \$290

#### R405 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio/stereo cassette player designed for imported cars. Cassette features auto reverse and auto replay, cassette door/tuner dial, pushbutton eject, and locking fast forward/rewind; radio features loudness compensation, muting, automatic local/distant, stereo/mono switch, separate bass/treble and balance/fader controls, and four-way fading; LED cassette and stereo indicators; wow and flutter 0.15%; frequency response 30-15,000 Hz; THD 1.0% at 8 W; output 5 W/ch continuous..... \$280

**R402.** Similar to R405 without cassette auto reverse and auto replay; chassis less than 5 in deep..... \$240

**R400.** Similar to R402 minus separate bass/treble and balance/fader controls and four-way fader; has loudness-compensated volume control..... \$200

### J. I. L.

#### 634E AM-Stereo FM/Cassette Player

In-dash computer-programmed AM-stereo FM radio and cassette player with auto reverse. Cassette features auto eject, locking fast forward/rewind, and LED tape direction indicators. Radio features fluorescent digital time and frequency readout; pushbutton tuning for four AM and four FM channels with scan/pause and seek/lock-in functions, auto

FM muting; local/distant button; hour/min adjust; treble/bass tone control; power boost "power pumper" switch; FET front end and adjustable shafts; max. output 20 W/ch continuous; 2" H  $\times$  7" W  $\times$  7" D..... \$490

**633.** Similar to 634E without computer programming and digital clock/frequency display; has LED stereo indicator, 2" H  $\times$  7" W  $\times$  6" D..... \$325

**632.** Similar to 633 without "power pumper" power booster; has max. output 10 W/ch continuous; 2" H  $\times$  7" W  $\times$  6" D..... \$275

**631.** Similar to 632 without auto reverse and eject; has auto stop; max. output 6 W/ch continuous; 2" H  $\times$  7" W  $\times$  5" D..... \$190

#### 607 Cassette Player

Underdash stereo cassette player with pushbutton fast forward, rewind, and eject controls; left-to-right balance control; play indicator light; 1" H  $\times$  5" W  $\times$  6" D..... \$100

#### 874E AM-Stereo FM/8-Track Player

In-dash computer-programmed AM-stereo FM radio and 8-track player with dial-in-door. Unit features LED frequency readout and time display, hour-minute adjust; auto FM muting; LED stereo indicator; pushbutton tuning for four AM and four FM channels with scan/pause and seek/lock-in functions; AM/FM selector button; treble/bass tone controls; power boost "power pumper" switch; FET front end and adjustable shafts; max. output 20 W/ch continuous; 2" H  $\times$  7" W  $\times$  7" D..... \$415

**873.** Similar to 874E without computer programming; has program indicator lights; 1" H  $\times$  7" W  $\times$  6" D..... \$270

**872.** Similar to 873 without "Power Pumper" power booster; has AM/FM slide bar selector; max. output 6 W/ch continuous..... \$175

#### 517 Stereo FM/8-Track Player

Underdash stereo FM radio and 8-track player with channel selector, numerical program indicator; balance, tone, and volume controls; repeat play; radio/tape switch; 2" H  $\times$  6" W  $\times$  6" D..... \$145

**515.** Similar to 517 without FM radio; has LED program indicator..... \$90

#### 707 AM-Stereo FM Radio

In-dash AM-stereo FM radio with five-preset pushbutton tuning; 5 W/ch continuous output; adjustable shafts; 1" H  $\times$  7" W  $\times$  3" D..... \$174

### KENWOOD

#### KRC-711 AM-FM Tuner/Cassette Deck

In-dash unit combines AM-FM tuner with FM Dolby and auto noise-reduction circuitry, cassette deck with Dolby, and four-digit PLL quartz clock/radio frequency display. Tuner features ten-channel preset (five AM and FM); bass, treble, balance, and fader controls; auto stereo/mono and local/distant switches; powered antenna connection; low-level preamp output jacks; stereo FM LED; S/N 70 dB; selectivity 65 dB; FM stereo separation 40 dB. Cassette deck features auto bi-directional tape advance (locates gaps between selections); cassette standby for indefinite cue-up and programmed to activate any time radio reception is below acceptable limits, auto reverse; fast forward and rewind; auto eject; cassette door illumination; wow and flutter 0.12% wrms; S/N 52 dB; frequency response 30-16,000 Hz; amplifier boosting 4 W/ch continuous to front-mounted speakers and 15 W/ch continuous to rear-deck speakers..... \$449

**KRC-721.** Same as KRC-711 without built-in power amplifier..... \$399

**KRC-511.** Similar to KRC-711 without bi-directional tape advance; amp output 4 W/ch..... \$379

**KRC-411.** Similar to KRC-511 except local/distant switch and metal compatibility replace loudness, key off eject, Dolby, and separate bass and treble; X-body size, 1" H  $\times$  7" W  $\times$  4" D..... \$339

#### KRC-311 AM-FM/Cassette Deck

In-dash unit combines AM-FM stereo receiver and cassette deck. Receiver features analog tuning with 10-station preset; balance, tone, and fader con-

trols; LED stereo indicator; auto mono/stereo; amp output 4 W/ch continuous; FM S/N 63 dB; selectivity 70 dB; stereo separation 30 dB. Cassette deck features auto reverse; key-off eject; fast forward and rewind; cassette standby; wow and flutter 0.12% wrms; S/N 52 dB; frequency response 30-16,000 Hz..... \$269

#### KXC-757 Cassette Deck

Underdash metal-compatible stereo cassette deck with Dolby noise-reduction system and Sendust heads for metal tape playback. Features cassette standby (in operation with KTC-767 tuner); auto reverse; fast forward and rewind with LEDs, separate bass and treble controls; cassette door illumination; auto eject; bi-directional tape advance; 70- $\mu$ sec equalization (accepts chrome and metal tapes); headphone jack; Wow and flutter 0.12% wrms; frequency response 30-16,000 Hz (normal); S/N 60 dB with Dolby; 2" H  $\times$  6" W  $\times$  6" D..... \$269

**KTC-767.** Underdash electronic PLL-synthesis AM-FM stereo tuner with digital quartz clock/radio frequency display; 12-station memory preset (six AM and FM); auto noise-reduction circuit with FM signal monitoring capability that automatically switches to next sequence of alternate reception modes; auto broadcast search system (replaces weak AM or FM signal for stronger signal); scan/seek and up/down switches; LED stereo indicator; bass and treble controls; output for powered antenna. FM section: S/N 70 dB (mono), 65 dB (stereo); alternate channel selectivity 80 dB; separation 40 dB; 2" H  $\times$  6" W  $\times$  6" D..... \$299

### KRACO

#### LED-501 AM-Stereo FM/Cassette Player

In-dash/underdash AM-stereo FM radio/stereo cassette player with LED digital clock/radio frequency display with selector switch and clock hr/min adjustment. Cassette features fast forward/eject and LED tape play indicator. Radio features variable fader and tone controls; sliding stereo balance control; weather band, bass boost, and mute on/off; stereo/mono switch; LED AM, FM, and stereo FM indicators; manual tuning..... \$250

#### KID-589 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio/automatic reverse cassette player. Cassette features locking fast forward and rewind, manual tape eject, tape program selector switch, LED tape play and tape direction indicators. Radio features stereo balance, tone, and fader controls, FM stereo/mono switch, mute on/off, and LED stereo FM, AM, and FM indicators..... \$208

**KID-588.** Similar to KID-589 without mute on/off, fader, and stereo/mono switch; has fast forward/rewind switch and local/distant control; in-dash or underdash installation..... \$160

#### KGE-801 Radio/Tape Player/EQ/Amp

In-dash/underdash unit combines stereo cassette player, AM-stereo FM radio, weather band, five-band graphic equalizer, and 20-W/ch power amplifier. Equalizer has center-frequency slide controls set at 60, 250, 1000, 3500, and 10,000 Hz and EQ bypass/on switch with LED; cassette player has locking fast forward/eject button, built-in auto stop, and LED tape play/end indicators; radio features pushbutton FM mute, AM/FM with LEDs, and stereo/mono controls, rotary balance/volume and tuning/fader controls, and separate weather band; illuminated AM/FM dial scale also functions as cassette door; includes adjustable shafts..... \$200

**KGE-800.** Same as KGE-801 except with 8-track player and without weather band..... \$200

#### KID-587 AM-Stereo FM/Cassette Player

In-dash/underdash AM-stereo FM radio/stereo cassette player. Cassette features fast forward and eject and LED tape run indicator. Radio features five AM and FM pushbuttons; variable tone control; LED FM stereo indicator; local/distant and AM/FM; sliding balance and variable fader control..... \$176

#### KID-575A AM-Stereo FM/8-Track Player

In-dash/underdash unit combines AM-stereo FM radio



and stereo 8-track player. Unit features channel selector; AM, FM, and channel indicator LEDs; sliding balance; AM/FM; local/distant; variable fader; five pushbutton AM/FM preset tuning; rotary volume and tone ..... \$170

## MARANTZ

### CAR-427 CompuTuner/Cassette Deck

In-dash unit incorporates stereo CompuTuner/pre-amplifier/auto reverse cassette deck with digital quartz clock/radio frequency display. Cassette features Dolby noise-reduction system with tape and FM Dolby buttons, Sendust-alloy tape head, tape equalization for special tape (includes metal-particle), memory preset tape eject and power off auto eject, and locking fast forward and rewind. Tuner/pre-amplifier features front-to-rear preamp fader control; atmospheric interference rejection; quartz-locked synthesized tuning with ten electronic memory preset buttons and electronic station search; center-detented bass, midrange and treble controls; loudness compensation; FM muting; FM impulse-noise blanker. Wow and flutter 0.15% wrms; tape frequency response 40-15,000 Hz at -3 dB; FM sensitivity 1.0  $\mu$ V, 75 ohms; stereo separation 30 dB at 1000 Hz; 2 $\frac{1}{4}$ " H  $\times$  7 $\frac{1}{4}$ " W  $\times$  5 $\frac{1}{4}$ " D; nose piece 2" H  $\times$  4 $\frac{1}{4}$ " W ..... \$625

### CAR-400 CompuTuner/Cassette Deck

In-dash unit combines stereo CompuTuner, built-in stereo amplifier, and cassette deck with digital quartz clock/radio frequency display. Cassette features Dolby noise-reduction system, auto eject, and locking fast forward and rewind. Radio features quartz-locked synthesized tuning with 12-station electronic memory preset buttons and electronic station search; atmospheric interference rejection; center detented bass and treble controls; fader control; FM muting. Wow and flutter 0.15% wrms; tape frequency response 40-13,000 Hz at -3 dB; output 2.5 W/ch into 4 ohms from 50-20,000 Hz with 0.9% THD; FM sensitivity 1.8  $\mu$ V into 75 ohms; stereo separation 30 dB at 1000 Hz; 2 $\frac{1}{4}$ " H  $\times$  7 $\frac{1}{4}$ " W  $\times$  5 $\frac{1}{4}$ " D; nose piece 2" H  $\times$  4 $\frac{1}{4}$ " W ..... \$500

### CAR-410 AM-FM/Cassette Player

In-dash unit combines AM/FM radio and stereo cassette player; AM/FM stereo Computuner with quartz controlled synthesized digital tuning and microprocessor which provides electronic station search plus instant access to 12 user-programmable stations (six AM and six FM); auto-eject cassette player with locking fast forward and rewind; wow and flutter 0.15%; tape frequency range 40-13,000 Hz; output 4 W/ch continuous into 4 ohms with 0.9% THD; FM sensitivity 1.1  $\mu$ V at 75 ohms (12 dBf); capture ratio 1.5 dB; FET r-f amplifier; PLL for stereo separation; FM muting; local/distant switch; tone control; antenna trimmer; power antenna wire; adjustable control shaft spacing; quartz clock; 1 $\frac{3}{4}$ " H  $\times$  7 $\frac{1}{4}$ " W  $\times$  5 $\frac{1}{4}$ " D; nose dimensions 1 $\frac{1}{2}$ " H  $\times$  4 $\frac{1}{4}$ " W (DIN standard) ..... \$390

### CAR-302 Tuner/Cassette Deck

In-dash unit combines AM-FM stereo tuner and stereo cassette deck. Cassette features Dolby noise-reduction system, super hard permalloy tape head, auto eject, and fast forward and rewind. Radio features five-station preset; atmospheric interference rejection; separate bass and treble controls; volume control; LED FM stereo indicator; front-to-rear speaker fader. Wow and flutter 0.15% wrms; tape response 40-13,000 Hz at -3 dB; output 2.5 W/ch into 4 ohms from 50-20,000 Hz with 0.9% THD; FM sensitivity 1.8  $\mu$ V; 2 $\frac{1}{4}$ " H  $\times$  7 $\frac{1}{4}$ " W  $\times$  4 $\frac{1}{4}$ " D; nose piece 1 $\frac{3}{4}$ " H  $\times$  4 $\frac{1}{4}$ " W ..... \$300

### CAR-301 Tuner/Preamp/Cassette Deck

In-dash unit combines AM-FM stereo tuner/pre-amplifier/cassette deck. Cassette deck features Dolby noise-reduction system, super hard permalloy tape head, auto eject, and fast forward and rewind. Radio features five-station pushbutton preset; atmospheric interference rejection; separate bass and treble controls; LED FM stereo indicator; preamp front-to-rear speaker fader ..... \$270

### CAR-330 Amp/Tuner/Cassette Deck

In-dash unit combines power amp, AM-stereo FM tuner, and stereo cassette deck. Cassette deck: wow and flutter 0.15% wrms; frequency response 40-13,000 Hz; S/N 48 dB. Amp output 4 W/ch continuous into 4 ohms at 1000 Hz with 0.9% dist., max. output 16 W. FM tuner section: usable sensitivity 1.8  $\mu$ V at 75 ohms; 50-dB stereo quieting 50  $\mu$ V at 75 ohms; capture ratio 2 dB at 65 dBf; selectivity 65 dB  $\pm$  400 kHz; stereo separation 30 dB at 1000 Hz; frequency response 40-14,000 Hz  $\pm$  3 dB; S/N 60 dB ..... \$250

## MARUME

### M-P544 AM-Stereo FM/Cassette Deck

In-dash AM-stereo FM radio and stereo cassette deck. Unit features five pushbutton tuning, fader, locking fast forward and rewind, local/distant, FM muting, and mono/stereo; has company's own noise suppression system; 14 W/ch; short chassis .. \$170

### M-P550 AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and stereo cassette deck. Unit features five pushbutton tuning, fader, local/distant, FM muting, and stereo/mono; 8 W/ch; short chassis ..... \$130

### M-P880 AM-Stereo FM/8-Track Player

In-dash Am-stereo FM radio and stereo 8-track player. Has five pushbutton tuning; local/distant; FM muting; 8 W/ch; short chassis ..... \$100

## METROSOUND

### MS-9655 Ultra-Fi Radio/Cassette Deck

In-dash digitally microprocessor-controlled AM-stereo FM radio/auto reverse stereo cassette player. Cassette features Sendust head; locking fast forward and rewind; pushbutton eject and tape direction; LED tape direction indicator; wow and flutter 0.25%; frequency response 25-20,000 Hz. Radio features touch sensor volume, balance, bass, treble, up/down scan, station enter, and four-way fader electronic controls; full memory scan (can program up to ten stations); LED digital frequency readout; pushbutton AM/FM, local/distant, and dimmer/lock; LED AM, FM, and station enter mode indicators; can be used as preamplifier with addition of external amp; output 12 W/ch continuous with 1.0% THD, both channels driven, into 4 ohms at 1000 Hz; frequency response 25-20,000 Hz  $\pm$  1 dB; breakout trimplate; supplied with adjustable dummy shafts; 2 $\frac{1}{4}$ " H  $\times$  7" W  $\times$  5 $\frac{1}{4}$ " D ..... \$500

### MS-8650 U/F Ultra-Power Radio/Cassette

In-dash AM-stereo FM radio/auto reverse stereo cassette player with sendust head. Cassette features locking fast forward and rewind; pushbutton eject; wow and flutter 0.25%; frequency response 30-20,000 Hz  $\pm$  1 dB; tape S/N 50 dB. Radio features FET front end; separate bass and treble controls; loudness and AM/FM slide switches; FM muting pushbutton; stereo indicator light; built-in afc; rear panel outputs for power amplifier and graphic equalizer; output 50 W continuous with 0.1% THD; frequency response 30-20,000 Hz  $\pm$  1 dB; FM usable sensitivity 20 dB/ $\mu$ V; supplied with DIN nose-piece and adjustable shafts; choice of small knobs for imports/compacts and large knobs for domestic cars; 1 $\frac{3}{4}$ " H  $\times$  6 $\frac{1}{4}$ " W  $\times$  5 $\frac{1}{4}$ " D ..... \$300

### MS-7460 Ultra-Power AM-FM/Cassette

In-dash AM-stereo FM/cassette deck with Sendust head. Cassette features locking fast forward and rewind; pushbutton eject; wow and flutter 0.3%; frequency response 30-20,000 Hz; S/N 53 dB. Radio features outputs for amplifier and graphic equalizer; AM/FM, local/distant, FM muting, and loudness pushbuttons; separate bass and treble, balance, tuning, and volume; 40 W continuous output; frequency response 30-20,000 Hz  $\pm$  1 dB; FM usable sensitivity 4  $\mu$ V, i-f rejection 60 dB, stereo separation 33 dB at 1000 Hz, and S/N 55 dB ..... \$288

MS-7600. Same as MS-7460 except with 15 W continuous output ..... \$250

### MS-7750 Ultra-Fi Pre-Amp/Cassette

In-dash AM-stereo FM/cassette player with Dolby noise reduction and Sendust head. Cassette features locking fast forward and rewind; pushbutton eject and auto-eject at end of tape; automatic switchover to radio mode at end of tape; wow and flutter 0.15%; S/N 50 dB. Radio features dial-in-the-door; MOS FET front end; separate bass and treble controls; FM muting; local/distant; stereo/mono; outputs for amplifier and equalizer; frequency response 30-20,000 Hz  $\pm$  1 dB; S/N 57 dB; FM image rejection 60 dB; FM i-f rejection 85 dB; stereo separation 35 dB at 1000 Hz; FM S/N 57 dB; supplied with OEM gasket and adjustable shafts (to 160-mm pitch); 2" H  $\times$  7 $\frac{1}{4}$ " W  $\times$  5 $\frac{1}{4}$ " D .. \$263

MS-7700. Same as MS-7750 but without Dolby noise reduction ..... \$250

### MS 8585 AM-FM/Cassette Deck

In-dash AM-stereo FM/auto reverse cassette deck. Cassette features locking fast forward and rewind; tape direction indicators; tape program select; manual and automatic eject. Radio features dial-in-the-door; AM/FM; local/distant; front-to-rear fader; stereo/mono; FM indicator light; tuning, balance, tone, and volume controls; FM muting; frequency response 50-10,000 Hz; 6 W/ch continuous; supplied with 105  $\times$  44-mm nosepiece, special electric antenna lead-in, and adjustable shafts (to 160-mm pitch); 1 $\frac{3}{4}$ " H  $\times$  7" W  $\times$  5 $\frac{1}{4}$ " D ..... \$230

### MS-817-F AM-Stereo FM/8-Track Player

In-dash AM-stereo FM/8-track player. 8-track features channel select and track indicator lights. Radio features front-to-rear fader; AM/FM slide bar; tuning, tone, balance, volume/power knobs; FM stereo light; afc; PLL IC circuitry; 4.5 W/ch continuous; frequency response 50-10,000 Hz; 105  $\times$  44-mm polished chrome nosepiece; dial-in-the-door; supplied with OEM gasket and adjustable shafts (from 5 $\frac{1}{4}$ " to 6 $\frac{1}{2}$ "); 1 $\frac{3}{4}$ " H  $\times$  6 $\frac{1}{4}$ " W  $\times$  4 $\frac{1}{4}$ " D ..... \$123

## MIDLAND INTERNATIONAL

### 63-445 CB/AM-FM/Cassette Player

In-dash unit incorporates 40-channel CB transceiver, AM-stereo FM radio, and stereo cassette player. Cassette: electronically-controlled capstan drive motor; auto stop; locking fast forward button; pushbutton eject; LED tape mode indicator; wow and flutter 0.35% rms. CB transceiver: dual conversion superheterodyne receiver with switchable ANL; PLL 40-channel tuning; lighted signal power meter (also reads as tuning meter for radio); separate underdash-mounted 500-ohm dynamic microphone with LED channel readout and "on air" indicator with dimmer switch, channel change, and squelch controls; monitor switch; output 4 W; receiver sensitivity 0.5  $\mu$ V for 10-dB S/N; adjacent channel selectivity 70 dB; squelch range 0.5-1000  $\mu$ V. Radio features pushbutton AM/FM selectors; FM stereo light; local/distant switch; tone control; fader and balance controls, FM 30-dB quieting sensitivity 5  $\mu$ V; FM i-f rejection 75 dB; FM image rejection 40 dB; FM stereo separation 28 dB at 1000 Hz; output 5 W/ch continuous; load impedance 4 ohms; 2 $\frac{1}{4}$ " H  $\times$  7 $\frac{1}{4}$ " W  $\times$  6 $\frac{1}{4}$ " D ..... \$300

63-545. Same as 63-445 except has 8-track player with auto/manual program change and LED program lights ..... \$300

### 67-390 AM-Stereo FM/Cassette Player

Compact in-dash AM-stereo FM/auto-reverse cassette deck with dyna-alloy head and Dolby noise reduction. Cassette deck features Dolby switch; LED Dolby, tape direction, AM, FM, and FM stereo indicators; 120/70  $\mu$ sec EQ switch; fast forward, rewind, and eject pushbuttons; wow and flutter 0.25% rms; frequency response 40-14,000 Hz -6 dB; S/N 50 dB. Radio features full electronic tuning with quartz crystal clock; autoscans and manual tuning knob; five AM/FM memory preset; hour/minute set buttons; balance and fader controls; local/dis-

# 15 CAR TAPE MACHINES

tant; separate bass and treble; 15 W/ch continuous with 10% THD; frequency response 100-25,000 Hz; 4-ohm impedance; FM usable sensitivity 3  $\mu$ V; FM image rejection 60 dB; FM i-f rejection 70 dB; FM separation 30 dB; FM S/N 65 dB; 40 x 90-mm nosepiece; shafts adjustable 130 mm-148 mm; 1 7/8" H x 6 1/8" W x 5 1/8" D ..... \$300

### 67-475 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM/auto reverse cassette deck. Cassette deck features locking fast forward and rewind; wow and flutter 0.25% rms; S/N 45 dB; 60 sec rewind time. Radio features FET front end; stereo/mono; local/distant; 5 AM/FM tuning preset buttons; front-to-rear fader; LED stereo indicator; frequency response 100-10,000 Hz -6 dB; 4.8 W driven into 4 ohms with 10% THD; FM usable sensitivity 5  $\mu$ V; FM image rejection 55 dB; FM i-f rejection 70 dB; FM stereo separation 30 dB; FM S/N 60 dB; leads provided for power antenna and dimmer; shafts adjustable 130 mm to 160 mm; 1 1/8" H x 7" W x 4 1/8" D ..... \$179

### 67-557 AM-Stereo FM/8-Track Player

In-dash AM-stereo FM/8-track player. 8-track features program lights. Radio features dial-in-the-door; local/distant; stereo light; tone, balance, and fader controls; 5 W/ch continuous; shafts adjustable 130 mm to 160 mm; 2 1/8" H x 7 1/8" W x 5 1/8" D ..... \$130

## MITSUBISHI CAR AUDIO

### CZ-747 AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and auto reverse metal-compatible stereo cassette deck; has compact dual chassis designed to fit almost any



domestic or foreign car. Cassette deck: features Dolby noise-reduction system, sendust head, tape program search in either direction, tape switch for normal, chrome, and ferrichrome tape, fast forward, rewind, and eject buttons, and LED Dolby and metal tape indicators; wow and flutter 0.15% wrms; frequency response 40-15,000 Hz with metal; S/N 57 dB with Dolby; 35-dB stereo separation. Radio: features five-pushbutton AM/FM electronic tuning with memory, auto electronic tuning and manual electronic scanning, LED digital frequency/clock display with auto dimmer, FM Dolby noise-reduction, separate bass and treble, fader, and balance controls; FM S/N 60 dB with Dolby, selectivity 80 dB, frequency response 30-15,000 Hz at 3 dB, stereo separation 35 dB at 1000 Hz, and capture ratio 2 dB; AM S/N 53 dB at 1  $\mu$ V and selectivity 36 dB. Unit also features ignition noise killer, pinch-off mechanism at tape end and power off, and low-level connectors for separate 8, 20, or 40-W/ch power amplifiers; 2" H x 7 1/8" W x 4 3/4" D ..... \$480

**CZ-692.** Similar to CZ-747 but designed for most domestic cars; less LED digital frequency/clock display with auto dimmer, auto electronic tuning, electronic scan, and electronic memory pushbutton tuning; AM selectivity 40 dB; 4 3/4-in chassis ..... \$300

### RX-2 AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and auto reverse stereo cassette deck. Cassette deck: features program selector, locking fast forward/rewind, and auto eject at power off. Radio: features six-pushbutton AM/FM electronic tuning with memory;

auto electronic tuning and manual electronic scan; LED digital frequency/clock display; mono/stereo, local/distant, and AM/FM pushbuttons; tone and fader controls; built-in 8-W/ch amp ..... \$400

### RX-691 AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM radio and auto reverse stereo cassette deck. Cassette deck: features locking fast forward and rewind, eject, program selector, and pinch-off tape mechanism at tape end or power off; wow and flutter 0.15% wrms; S/N 50 dB; frequency response 50-12,000 Hz. Radio: features five-pushbutton AM/FM tuning, FM noise killer, dual-color dial illumination for AM and FM, pushbutton AM/FM and local/distant controls, fader and balance controls, power antenna lead, and built-in 8-W/ch amplifier; FM S/N 50 dB, selectivity 80 dB, frequency response 30-15,000 Hz at 5 dB, stereo separation 35 dB at 1000 Hz, and capture ratio 2 dB; AM S/N 53 dB at 1  $\mu$ V; 2.75" H x 7.5" W x 4.75" D ..... \$260

**RX-752.** DIN model designed to fit most imported cars; similar to RX-691 minus local/distant and fader controls; FM selectivity 86 dB, frequency response 30-15,000 Hz at 2 dB, and capture ratio 3 dB; AM S/N 54 dB at 1  $\mu$ V ..... \$240

**RX-723.** Super compact version of RX-691 minus pushbutton tuning, program selector, tape rewind, auto reverse, and noise killer circuitry; cassette deck features auto stop; FM selectivity 70 dB, AM S/N 49 dB at 1  $\mu$ V and 33-dB selectivity; includes nosepiece and faceplate for horizontal or vertical installation in almost any car currently on market; 1 3/4" H x 6 3/8" W x 4 1/2" D ..... \$150

### RX-79 AM-FM/Cassette Player

In-dash AM-stereo FM radio/stereo cassette player with auto reverse; features locking fast forward and rewind; four-speaker capability; separate bass and treble controls; tuning, balance, and fader controls with five-station pushbutton preset; stereo/mono switch; pushbutton program selector; AM/FM LEDs; 18 W/ch ..... \$260

**RX-69.** Similar to RX-79; has five-station pushbutton preset, stereo/mono switch, dual-color-mode dial illumination, bass booster switch, and fader and balance controls for four-speaker 8-ohm system; dist. 0.5%; selectivity 35 dB ..... \$240

**RS-67.** Similar to RX-69 except has 8-track player with one-touch program selector; wow and flutter 0.2% wrms; S/N 50 dB ..... \$230

### RX-73 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio/stereo cassette player features pushbutton AM/FM, tuning/fader control with five-station pushbutton preset; locking fast forward and eject; left and right balance controls; local/distant switch; has low-level outputs for 30-W CV-23 amp/equalizer; 4.75-in chassis ..... \$180

### RX-103 Stereo FM/Cassette Deck

Underdash unit combines stereo FM radio and stereo cassette player. Cassette deck features hard permalloy head, eject, fast forward, and play selector, and auto eject. Radio features built-in 7-W/ch continuous amp, separate bass and treble controls, balance control, and FM ignition noise killer .. \$160

### GX-102 Cassette Deck

Underdash auto-reverse cassette deck features locking fast forward and rewind; tape program selector; hard permalloy head; separate bass and treble; low-level DIN connector output; metal/chrome equalization; 7 W/ch at 4 ohms ..... \$150

**GX-101.** Similar to GX-102 except without separate bass and treble or locking rewind ..... \$100

### Car Stereo Components

**CV-21.** 20 W/ch power amplifier with balanced transformerless circuit; loudness control; separate bass and treble controls; fader and balance controls; attenuation switch; dimmer control connection ..... \$140

**CJ-20.** AM-stereo FM tuner with noise-killer circuitry, local/distant switch, muting circuit, and illuminated tuning meter ..... \$140

**CJ-22.** AM-stereo FM tuner features five-pushbutton AM/FM memory tuning, electronic auto search and

manual scan tuning, LED digital frequency/clock display with dimmer, FM noise killer, pushbutton mono/stereo, mute and local/distant ..... \$270

**CX-20.** Cassette deck with auto eject, hard permalloy heads, level controls, and dimmer control connections; wow and flutter 0.15%; S/N 55 dB; frequency response 30-14,000 Hz ..... \$100

**CX-21.** Same as CX-20 except has noise-reduction switch, locking fast forward/rewind, program selector switch, and auto reverse ..... \$140

## PANASONIC

### Cockpit RM-610 Tuner/Cassette Deck

Ceiling-mounted modular control unit incorporates stereo cassette deck, FM stereo tuner, and preamplifier with plug-in power amplifier. Tape deck: has switchable Dolby noise-reduction system; auto reverse; locking fast forward and rewind; auto eject; tape selector for normal and CrO<sub>2</sub> tapes; LED tape direction indicator; volume control; wow and flutter 0.2% wrms; frequency response 30-14,000 Hz; S/N 60 dB with Dolby; crosstalk -57 dB; stereo separation 40 dB at 1000 Hz. FM tuner: automatic multipath noise suppressor, r-f amplifier, and double-balanced mixer circuitry; three-pushbutton preset or manual electronic FM tuning; auto FM stereo/mono switch; FM stereo indicator; LED dial frequency indicators; muting switch; local/distant switch; noise blanker; usable sensitivity 16 dBf; S/N 65 dB; image rejection 70 dB; i-f rejection 80 dB; frequency response 30-15,000 Hz. Preamp: separate center-detent bass and treble controls; balance and fader controls; 21 click-stop volume control; loudness switch; ten-LED output power indicators. Plug-in power amplifier: hidden mount (behind dash, under seat, or in trunk); 60 W total output into 4 ohms with 0.5% THD from 20-20,000 Hz; frequency response 20-40,000 Hz -3 dB; S/N 82 dB. Optional speakers and equalizer available with Cockpit system; 1 1/2" x 27 1/4" x 9 1/4" ..... \$1000

**RMS-610.** Rear-deck surface-mount two-way air-suspension speaker system with urethane-edged 4 3/4-in woofer and 2-in tweeter; max. input 50 W; frequency response 60-20,000 Hz; 4-ohm input impedance; 5 7/8" x 9 1/2" x 7 1/8" ..... \$210 pr.

**RME-610.** Five-band equalizer with  $\pm$ 12-dB boost or cut ..... \$230

### CQ-8700 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM electronic tuner, digital frequency, clock readout, and cassette player with Dolby noise-reduction system and auto reverse; requires separate power amplifier. Cassette features locking fast forward/rewind, manual eject, and LED tape direction indicator. Tuner features five-memory buttons for five AM and five FM station selections, seek control that stops on strong frequencies, manual frequency scan, quartz-controlled PLL frequency synthesizer, built-in impulse noise quieting circuit, LED frequency and time display on cassette door, LED stereo and flashing signal/strength indicators, and local/distant, Dolby, and bi-amp switches; electric antenna and dimmer leads. Wow and flutter 0.2%; tape frequency response 30-12,500 Hz; S/N 53 dB (Dolby off), 62 dB (Dolby on); FM frequency response 30-15,000 Hz; FM S/N 60 dB; THD 0.2%; adjustable shafts and trimplates ..... \$650

**CJ-5000.** 100-W solid-state two-speaker power amplifier for CQ-8700, CQ-7600, and CQ-7400 units; output 50 W/ch with 0.05% THD; frequency response 15-40,000 Hz -3 dB; S/N 84 dB; preamp and booster inputs ..... \$230

**CJ-4000.** 40-W (20 W/ch with 0.08% THD) four-speaker power amp for same models; frequency response 20-40,000 Hz -3 dB; S/N 82 dB ..... \$190

**CJ-3000.** 30-W (15 W/ch with 0.9% THD) four-speaker power amp for the same models; frequency response 30-40,000 Hz -3 dB; S/N 80 dB ..... \$110

### Cockpit FM-310 Receiver/Cassette Deck

Ceiling-mount modular control unit incorporates AM-stereo FM radio, Repeatrack cassette deck, built-in 20-W power amplifier, and three-band room sound equalizer. Cassette deck: has locking fast for-



# AUTO MODULES

TM



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The CZ-747 with its super-compact chassis, contains the in-dash module tape transport and tuning sections. It features a Sendust head, metal tape switch and an electronic tuning system with memory, scan and auto-search. Time-of-day and tuning frequency are digitally displayed and both tape and FM feature Dolby® Noise Reduction.

There's also the CZ-692. It features five AM or five FM pushbutton tuning, Sendust head and metal tape



equalization. It too has Dolby® Noise Reduction on tape and FM sections.

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**MITSUBISHI**  
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SOUND US OUT

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CIRCLE NO. 30 ON READER SERVICE CARD

# 15 CAR TAPE MACHINES

ward/rewind, auto replay after rewind, and end-of-tape/ignition-key-off automatic eject; wow and flutter 0.15% wrms. Tuner: features impulse noise quieting circuit switch with LED, local/distant switch, and muting and auto stereo switches with LEDs. Preamp/power amp has left/right LED level meter tuning display, loudness and hi filter switches and built-in fader control; equalizer has center frequency slide controls at 50, 250, and 10,000 Hz,  $\pm 6$  dB boost or cut. Also features two-beam dome light and universal fitting kit ..... \$600

**CQ-7600 AM-Stereo FM/Cassette Player**  
In-dash preamplifier/AM-stereo FM tuner, Repeat-track cassette player with Dolby noise-reduction system, and built-in five-band graphic equalizer; requires separate power amp. Features locking fast forward/rewind; eject button; bi-amp, Dolby, and local/distant switches; FM muting; quartz-controlled PLL frequency synthesizer; stereo indicators; built-in INQ circuit; electric antenna and dimmer leads; equalizer center frequencies set at 60, 250, 1000, 3500, 10,000 Hz at  $\pm 12$  dB. Wow and flutter 0.02% wrms; tape frequency response 30-12,500 Hz at  $-3$  dB; S/N 63 dB (Dolby on); adjustable shafts and trimplates ..... \$360  
**CQ-7400.** Similar to CQ-7600 except without Dolby noise-reduction, quartz-controlled PLL frequency synthesizer, and bi-amp switch; has equalizer center frequencies set at 80, 250, 1000, 3500, 10,000 Hz at  $\pm 12$  dB ..... \$300

## Supreme Series In-Dash Units

**CQ-S900 AM-Stereo FM/Cassette Deck**  
Compact in-dash pushbutton AM-stereo FM radio and metal compatible auto-reverse cassette deck with Dolby noise reduction system and hard permalloy heads. Cassette deck features locking fast forward and rewind; metal/CrO<sub>2</sub> tape selector; wow and flutter 0.18% wrms; frequency response 40-12,500 Hz  $\pm 3$  dB; S/N 50 dB (Dolby off), 60 dB (Dolby on). Radio features seek/scan electronic tuning with six AM and six FM preset pushbuttons and digital time/frequency display; FM optimizer circuit; INQ circuit designed to suppress impulse noise on FM band; local/distant; fader; separate bass and treble; pre-amp output leads 1.0V at 2000 ohms; 4W/ch continuous at 400 Hz, both channels driven into 4-ohms with 1.0% THD; usable sensitivity 19 dBf; frequency response 30-15,000 Hz  $\pm 3$  dB;  $i-f$  rejection 80 dB; stereo separation 35 dB at 1000 Hz; 2 1/4" H x 7" W x 5 3/4" D ..... \$430  
**CQ-SB20.** Similar to CQ-S900 without Dolby; repeat track instead of auto reverse; seek only; five station preset electronic tuning; single tone control... \$340

**CQ-S780 AM-Stereo FM/Cassette Deck**  
In-dash pushbutton AM-stereo FM radio/metal-compatible auto-reverse cassette deck with Dolby noise-reduction system and Sendust alloy magnetic head. Cassette deck has metal/CrO<sub>2</sub> tape selector with LED, fast forward/rewind buttons with push program and LED indicators, and Dolby LED. Radio: features MOS-FET tuner, four AM/FM pushbutton tuning, separate bass and treble controls, four-way balance control, preamp out, FM optimizer switch, and motor antenna relay control lead. Supplied with universal nosepiece and adjustable shaft to fit most domestic and imported cars ..... \$290  
**CQ-S740.** Similar to CQ-S780 minus Sendust alloy head and LED metal/CrO<sub>2</sub> indicator ..... \$250  
**CQ-S710.** Similar to CQ-S740 minus pushbutton tuning ..... \$230  
**CQ-S700.** Similar to CQ-S710 except Repeat-track cassette player without Dolby and metal compatibility; has impulse noise quieting circuit, LED output meter display, and pushbutton tuning ..... \$210  
**CQ-S680.** Similar to CQ-S700 minus LED output

display and separate bass and treble; has LED stereo and tape indicators and tone control.... \$190

## PIONEER

**KE-5000 AM-Stereo FM/Cassette Player**  
In-dash unit combines AM-stereo FM Supertuner, metal compatible stereo cassette player with dual-Dolby noise-reduction system, and LED digital



clock/frequency readout. Cassette features auto replay and eject, locking fast forward and rewind, and metal/CrO<sub>2</sub> tape selector. Tuner features double diffusion MOS FET front end, electronic PLL frequency synthesizer tuning with pushbutton scan tuning and digital readout for station frequency and time with clock button; random access memory allows pre-setting up to five AM and five FM stations through electronic feather-touch buttons; scan/stop and seek buttons for station selection; built-in PNS noise suppression, FM Dolby, muting and stereo/mono switches, AM/FM and local/distant switches, and built-in fader control. Wow and flutter 0.28%, tape frequency response 50-12,000 Hz  $\pm 3$  dB; S/N 53 dB (Dolby on), 45 dB (Dolby off); output 2.7 W/ch continuous from 50-15,000 Hz; FM usable sensitivity 1.1  $\mu$ V into 75 ohms (12 dBf); FM 50-dB quieting sensitivity 1.4  $\mu$ V into 75 ohms (14.3 dBf); selectivity 65 dB; capture ratio 3 dB; 3" H x 7 1/8" W x 5 1/8" D ..... \$350  
**KE-3000.** Similar to KE-5000 without Dolby noise-reduction system, digital clock, and metal/CrO<sub>2</sub> tape selector; muting switch; 2" H x 7 1/8" W x 7 1/8" D ..... \$300  
**KE-2100.** Similar to KE-3000 without PNS noise suppression, electronic PLL synthesizer, and scan tuning; LED electronic pointer display; AM local/distant switch ..... \$250

**KE-2002 AM-Stereo FM/Cassette Deck**  
In-dash AM-stereo FM Supertuner and stereo cassette player. Cassette features auto replay and eject and locking fast forward and rewind. Tuner features dual-gate FET front end; electronic PLL frequency synthesizer tuning; random access memory allows pre-setting up to five AM and five FM stations through electronic feather-touch buttons; manual tuning; built-in PNS noise suppression system; FM stereo/mono, local/distant, and muting switches; LED AM/FM and station indicators; center-detent balance. Tape frequency response 50-12,000 Hz,  $\pm 3$  dB; S/N 45 dB (Dolby off); output 3.2 W/ch continuous from 50-15,000 Hz with 5.0% THD; FM usable sensitivity 14.3 dBf; FM selectivity 74 dB; designed for European cars; 2" H x 7 1/8" W x 6 3/8" D ..... \$300

**KEX-20 AM-Stereo FM/Cassette Player**  
In-dash AM-stereo FM/cassette deck with Dolby noise reduction. Cassette features locking fast forward and rewind; auto eject at end of tape; auto replay at end of rewind; metal/chrome selector. Supertuner II electronic tuner features 15 station (5 AM, 10 FM) electronic feather-touch preset tuning; LED station indicator; loudness; PNS noise suppressor; automatic stereo/mono; auto muting on FM stereo; separate bass and treble; balance. Tape response 30-15,000 Hz; S/N 60 dB (Dolby on), 52 dB (Dolby off); FM sensitivity 19.2 dBf for 50 dB quieting; FM selectivity 74 dB; requires separate amplifier; 2" H x 7 1/8" W x 7 1/8" D ..... \$300

**KP-7500 AM-Stereo FM/Cassette Player**  
In-dash AM-stereo FM Supertuner and auto-reverse cassette player with permalloy head and Dolby noise reduction. Cassette features metal/chrome selector; locking fast forward and rewind; automatic tape slack canceller. Radio features PNS noise suppression; automatic muting; loudness; auto stereo/mono; balance, volume, tone, and fader controls; playback response 50-12,000 Hz; S/N 53 dB

(Dolby on), 45 dB (Dolby off); 2.9 W/ch continuous, both channels driven into 4 ohms from 50-15,000 Hz with 5.0% THD; FM sensitivity 19.2 dBf for 50 dB quieting; FM selectivity 74 dB; 2" H x 7 1/8" W x 7 1/8" D ..... \$260  
**KP-6500.** Similar to KP-7500 except without Dolby and auto reverse; five-station preset tuning; auto eject and replay ..... \$220  
**KP-5500.** Similar to KP-6500 except without auto muting, fader, and built-in PNS; muting switch; FM sensitivity 14.3 dBf for 50 dB quieting ..... \$180  
**KP-4500.** Similar to KP-5500 except without auto eject, stereo/mono, and station preset buttons; has auto reverse and auto muting; 3.2 W/ch continuous; FM sensitivity 19.2 dBf for 50 dB quieting; FM selectivity 50 dB ..... \$160  
**KP-2500.** Similar to KP-4500 less automatic tape slack canceller, loudness, auto reverse, and auto muting; has auto eject and stereo/mono ..... \$140  
**KP-1500.** Similar to KP-2500 except designed for Japanese imports and X-body cars; mini chassis; FM muting; locking fast forward; 2.5 W/ch continuous; FM sensitivity 20.7 dBf for 50 dB quieting; 1 3/4" H x 6 3/8" W x 5 3/8" D ..... \$120

**KPX-9500 AM-Stereo FM/Cassette**  
In-dash AM-stereo FM PLL Supertuner and electronically governed stereo cassette player with dual-Dolby noise-reduction circuitry; LED stereo and Dolby indicators. Cassette features auto replay and eject, and locking fast-forward and rewind. Radio features five-station preset pushbutton tuning, stereo/mono switch, loudness control, auto muting, separate bass and treble controls with center detent, and volume and balance controls. Wow and flutter 0.13% wrms; tape frequency response 30-15,000 Hz  $-3$  dB; S/N 60 dB (Dolby on); FM usable sensitivity 1.1  $\mu$ V into 75 ohms (12 dBf) mono; FM 50-dB quieting sensitivity 1.4  $\mu$ V into 75 ohms (14.3 dBf); selectivity 74 dB; capture ratio 1.7 dB; 3" H x 7 1/8" W x 7 1/8" D ..... \$250

**KPX-9000 AM-Stereo FM/Cassette**  
In-dash AM-stereo FM Supertuner and electronically governed stereo cassette player; volume and balance control; auto eject; rewind/fast-forward lever; separate bass and treble controls; loudness contour switch; five-station preset pushbutton tuning; LED stereo and tape play indicators; FM muting; FM stereo/mono switch; tuner capture ratio 1.7 dB; FM usable sensitivity 1.1  $\mu$ V into 75 ohms (12 dBf) mono. Tape player: fast-winding time 120 sec (C-60); wow and flutter 0.13% wrms; response 30-15,000 Hz  $-3$  dB; S/N 52 dB; 2" H x 7 1/8" W x 7 1/8" D; nose 1 3/4" H x 4 1/8" W x 1 1/8" D ..... \$220

**KP-8000 AM-Stereo FM/Cassette**  
In-dash AM-stereo FM Supertuner and cassette player designed for European cars. Features auto-eject and replay, and locking fast forward and rewind; five-station (2 AM, 3 FM) preset tuning; volume/tone/balance controls; muting switch; stereo/mono switch; playback response 50-12,000 Hz  $\pm 3$  dB; 3 W/ch continuous from 50-15,000 Hz with 5.0% THD; S/N 45 dB; FM usable sensitivity 1.1  $\mu$ V at 75 ohms (12 dBf); 50-dB quieting sensitivity 1.4  $\mu$ V at 75 ohms (14.3 dBf); alternate channel selectivity 74 dB; capture ratio 1.7 dB; FET r-f amplifier; wow and flutter 0.28% wrms; 2" H x 7 1/8" W x 6 1/2" D; nose dimensions 1 1/8" H x 4 1/8" W x 3/8" D; shaft spacing 5/16" ..... \$220

**KP-7076 Cassette Deck**  
Underdash cassette deck with Dolby noise-reduction system, electronic governor motor, and ferrite head. Features auto eject and auto reverse with auto tape slack eliminator; metal/CrO<sub>2</sub> tape selector; audio muting switch; feather-touch direction, fast forward, and rewind tape controls; loudness control; tape direction indicators; separate bass, treble, balance, and volume controls with center detent. Wow and flutter 0.13% wrms; tape frequency response 30-15,000 Hz at  $\pm 3$  dB; S/N 60 dB (Dolby on), 52 dB (Dolby off); 2" H x 6" W x 6 1/8" D ..... \$200

**KP-4502 AM-Stereo/FM Cassette Player**  
In-dash AM-stereo FM/auto-reverse cassette player designed for European cars. Cassette features lock-



ing fast forward and rewind and automatic tape slack canceller. Radio features built-in PNS noise suppressor; mono/stereo; loudness; local/distant; attenuator. Tape playback response 50-12,000 Hz; S/N 45 dB; output 3.2 W/ch continuous both channels driven into 4 ohms from 50-15,000 Hz with 5.0% THD; FM sensitivity 19.2 dBf for 50 dB quieting; FM selectivity 50 dB; 1 3/4" H x 7 1/8" W x 6 1/8" D ..... \$200

#### KP-8500 AM-Stereo FM/Cassette Player

In-dash Supertuner AM-stereo FM radio and cassette player with dual-Dolby noise reduction system. Features auto eject, and locking fast forward and rewind. Radio features five-station preset pushbutton tuning, stereo/mono and local/distant switches, auto FM muting, and volume, tone and balance controls. Wow and flutter 0.28% wrms; tape frequency response 50-12,000 Hz; S/N 53 dB (Dolby on), 45 dB (Dolby off); FM usable sensitivity 1.1  $\mu$ V into 75 ohms; 50 dB quieting sensitivity 1.4  $\mu$ V into 75 ohms; alternate channel selectivity 74 dB; 2" H x 7 1/8" W x 7 1/8" D; nose dimensions 1 3/4" H x 4 1/8" W x 1 1/8" D ..... \$200

#### KP-500 Stereo FM/Cassette

Underdash FM stereo PLL Supertuner and cassette player. Features automatic eject; fast forward and rewind; stereo/mono switch; loudness and muting switches; separate bass and treble controls; 6 W/ch continuous from 50-10,000 Hz; FM usable sensitivity 1.1  $\mu$ V; 50-dB quieting sensitivity 1.4  $\mu$ V; alternate channel selectivity 74 dB; capture ratio 1.7 dB; wow and flutter 0.3%; frequency response 50-10,000 Hz; S/N 50 dB; brushed aluminum panel; 3" H x 7 3/8" W x 7 1/2" D ..... \$190  
**KP-250.** Similar to KP-500 except separate balance/tone/volume control; 2" H x 6 1/8" W x 6 3/8" D ..... \$145

#### KP-3500 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio and cassette player designed to fit European cars. Unit features built-in PNS noise suppression system, auto eject and replay, locking fast forward and rewind, stereo/mono and local/distant switches, and volume, tone and balance controls. Wow and flutter 0.28% wrms; tape frequency response 50-12,000 Hz; max. output 6 W continuous; S/N 45 dB; FM usable sensitivity 1.1  $\mu$ V (23.2 dBf), FM 50-dB quieting sensitivity 1.4  $\mu$ V; selectivity 50 dB; capture ratio 4 dB; 2" H x 7 1/8" W x 6 3/4" D; nose dimensions 1 3/4" H x 4 1/8" W x 3/4" D ..... \$180

#### KPX-600 Stereo FM/Cassette

Underdash FM stereo Supertuner and stereo cassette player. Features automatic replay and eject; locking fast forward and rewind; tape-play indicator; electronic governor motor; center detented volume, bass, treble, and balance controls; FM muting; loudness contour switch; FM stereo indicator; FM stereo/mono switch. FM tuner: S/N 68 dB; capture ratio 1.7 dB; stereo separation 32 dB (65 dBf, 1 kHz); FM sensitivity 14.3 dBf; FM selectivity 74 dB. Tape player: fast-winding time 120 sec (C-60); wow and flutter 0.13% wrms; frequency response 30-15,000 Hz  $\pm$  3 dB; S/N 52 dB; 2 3/8" H x 7 1/8" W x 6 1/8" D ..... \$170

#### KP-776 Cassette Deck

Underdash cassette deck with electronic governor motor features auto reverse with auto tape slack eliminator, locking fast forward and rewind, CrO<sub>2</sub>/metal tape selector, audio muting switch, loudness control, tape direction indicators, and separate bass, treble, balance and volume controls with center detents. Wow and flutter 0.13%; frequency response 30-15,000 Hz at  $\pm$  3 dB; S/N 52 dB; 2" H x 6" W x 6 3/8" D ..... \$140

#### KP-886 Cassette Player

Underdash stereo cassette player with Dolby noise-reduction system and electronic governor motor. Features automatic replay and eject; loudness contour switch; locking fast forward and rewind; Dolby on/off switch; separate bass and treble controls; balance control; Dolby on and tape play indicators; fast-winding time 120 sec (C-60); wow and flutter

0.13% wrms; frequency response 30-15,000 Hz  $\pm$  3 dB; S/N 60 dB (Dolby on), 52 dB (Dolby off); 2" H x 6" W x 6 3/8" D ..... \$140  
**KP-886.** Similar to KP-88G except without Dolby; 2" H x 4 1/8" W x 6 1/8" D ..... \$110

#### KP-575 Cassette Player

Underdash cassette player has auto reverse with auto tape slack eliminator, locking fast forward and rewind, tape direction indicators, loudness control, and volume, tone and balance controls. Wow and flutter 0.25% wrms; tape frequency response 50-10,000 Hz; S/N ratio 45 dB; max. output 6 W continuous; 2" H x 6 1/8" W x 4 3/4" D ..... \$130  
**KP-373.** Similar to KP-575 except without auto reverse; has auto replay and slide volume control; 2" H x 4 3/4" W x 6 1/8" D ..... \$115

#### TP-900 FM Stereo/8-Track Player

Under dash unit combines stereo FM Supertuner with 8-track player. 8-track features fast forward and eject buttons. Radio features FET front end circuitry; FM stereo/mono; local/distant; muting; loudness; separate bass, treble, and balance controls; frequency response 50-10,000 Hz  $\pm$  3 dB; S/N 50 dB; 3 W/ch; FM sensitivity 14.3 dBf; FM selectivity 74 dB; 3" H x 7 3/8" W x 7 1/2" D ..... \$180  
**TP-727.** Similar to TP-900 except without FM section; automatic and manual program change. \$105

#### TP-7007 AM-Stereo FM/8-Track Player

In-dash AM-stereo FM radio and 8-track player with auto and manual program change, five-station preset pushbutton tuning, stereo/mono switch, LED FM and stereo indicators, and volume, balance and tone controls. Wow and flutter 0.3% wrms; tape frequency response 50-10,000 Hz; S/N 45 dB; max. output 3 W/ch continuous from 50-15,000 Hz; 2" H x 7 1/8" W x 7 1/2" D ..... \$150  
**TP-6006.** Similar to TP-7007 without five-station preset tuning; 2" H x 7 1/8" W x 7 1/2" D ..... \$130

### RCA

#### 12R812 AM-Stereo FM/Cassette Player

In-dash unit combines AM-stereo FM radio, auto reverse cassette player, and LED digital station frequency/clock display with dimmer and radio/clock switch. Radio features five electronically-tuned touch buttons with memory, electronic scan with hold, local/distant, fader and balance controls, FM mono switch, and LED FM, stereo, and AM indicators; cassette has locking fast forward and rewind with indicators and pushbutton eject; output 5.5 W/ch continuous into 4 ohms with 10.0% THD; 3" H x 7 1/8" W x 5 1/4" D ..... \$414  
**12R712.** Similar to 12R812 except has 8-track player with tape program selector and program LEDs; 6" D ..... \$388

#### 12R807 AM-Stereo FM/Cassette Player

In-dash unit combines AM-stereo FM radio and automatic reverse cassette player. Radio features five AM/FM pushbutton tuning, FM mono/stereo switch, LED stereo FM, auto power antenna activator lead, and tone/balance and tuning/fader rotary controls; cassette has locking fast forward and reverse with LED indicators and pushbutton eject; output 4.5 W/ch continuous into 4 ohms with 10.0% THD; 1 3/4" H x 7" W x 5 1/8" D ..... \$226  
**12R806.** Similar to 12R807 minus pushbutton tuning and power antenna activator lead ..... \$180

#### 20C505 AM-Stereo FM/Cassette Player

In-dash unit combines AM-stereo FM radio and stereo cassette player. Features AM/FM slidebar switching; five quick-set pushbutton tuning; local/distant switch; automatic frequency control; stereo balance control; fader control; dial light dimmer control lead; automatic power antenna activator lead. 4.5 W/ch into 4 ohms with 10.0% THD; frequency response 30-20,000 Hz; adjustable shafts; 2 1/8" H x 7" W x 6" D ..... \$165

#### 12R704 AM-Stereo FM/8-Track Player

In-dash unit combines AM-stereo FM radio and stereo 8-track player. Features radio dial in car-

tridge door; five quick-set tuning pushbuttons; cartridge eject; local/distant switch; stereo fader and balance controls; dial light dimmer control lead; afc; program indicator lights; FM stereo indicator light. 4.5 W/channel into 4 ohms with 10.0% THD; frequency response 30-20,000 Hz; -3.8 ohm impedance; adjustable shafts; 2 1/8" H x 7" W x 6" D ..... \$159

#### 12R711 AM-Stereo FM/8-Track Player

In-dash unit combines AM-stereo FM radio and stereo 8-track player. Features radio dial in cartridge door; short chassis only 4 3/4-in deep; AM/FM slidebar switching; local/distant switch; stereo fader and balance controls; tape program indicator lights. 5.5 W/channel into 4 ohms with 10.0% THD; frequency response 30-10,000 Hz; adjustable shafts; 1 3/4" H x 6 1/8" W x 4 1/8" D ..... \$110

### REALISTIC

#### 12-1889 AM-Stereo FM/Cassette Player

In/underdash unit combines AM-stereo FM radio, stereo cassette player, and LED digital radio frequency/clock display with LED dimmer switch. Cassette features key-off eject and locking fast forward and rewind; radio has stereo/mono switch; includes speaker and speaker cables; 7 W/ch, 12 V dc negative ground ..... \$180

#### 12-1886 AM-Stereo FM/Cassette Player

In/underdash AM-stereo FM radio/cassette player features auto eject with electronic manual eject, adjustable shafts, locking fast-forward/rewind, stereo/mono switch, separate controls for bass, treble, and loudness, and LED tape on and stereo FM indicators; includes speaker cables; 12 W/channel; 12 V dc negative ground ..... \$180  
**12-1887.** Same as 12-1886 except has 8-track player ..... \$180

#### 12-1891 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio with cassette player. Cassette features full auto stop and locking fast forward and rewind; radio features five AM/FM pushbutton tuning and tone control; includes speaker cables; 4 W/ch, 12 V dc negative ground ..... \$130

#### 12-1892 Stereo Cassette Player

In-dash stereo cassette player designed for X body and import cars; has locking fast forward and auto stop in play mode; includes speaker cables; 4 W/ch, 12-V dc negative ground ..... \$100

#### 12-1884 AM-Stereo FM/Cassette Player

In/underdash AM-stereo FM radio and cassette player features adjustable shafts, locking fast forward/rewind, auto stop, LED end-of-tape indicator, and separate controls for bass, treble, and loudness; includes speaker cables; 4 W/ch, 12 V dc negative ground ..... \$100  
**12-1885.** Same as 12-1884 except has 8-track player ..... \$100

### SANYO

#### FT2200 AM-Stereo FM/Cassette Deck

In-dash unit combines AM-stereo FM tuner/preamp and metal-compatible cassette deck with Dolby noise-reduction system and built-in digital quartz clock; designed for small foreign and American subcompact cars; separate power amplifier required. Cassette features Sendust Alloy record/playback head, bias head switch for normal, CrO<sub>2</sub>, FeCr and metal tapes, and automatic/manual reverse, locking fast forward and rewind; wow and flutter 0.07% wrms; frequency response 40-19,000 Hz; S/N 62 dB. Electronic-varactor tuner features ten-station touchbutton memory tuning, LED frequency and time display, and manual FM stereo/mono and local/distant switches; frequency response 30-15,000 Hz at  $\pm$  3 dB; stereo separation 32 dB at 1000 Hz. Preamp features output jacks, bass and treble controls, loudness switch, rotary on/off/master volume control and balance control, frequency response 30-25,000 Hz at  $\pm$  3 dB; 2" H x

# 15 CAR TAPE MACHINES

## SPARKOMATIC

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6 1/4" W x 5" D ..... \$320  
**FT1498.** Similar to FT2200 except bi-amplified with 14 W/ch woofer and 2.7 W/ch tweeter amps at 5% THD; 33 W continuous output power; 4-8 ohm impedance; wow and flutter 0.08% wrms; FM frequency response 60-14,000 Hz at ±3 dB; 3" H x 7" W x 6" D ..... \$300

### FT1670 AM-Stereo FM/Cassette Player

In-dash unit combines AM-FM stereo radio, cassette player, digital clock, and elapsed timer; has auto eject transport; biamp with 12 W/ch woofer amps and 2 W/ch tweeter amps; LED display for elapsed time and station frequency; auto up/down for electric antennas; separate woofer and tweeter controls; remote scanning with hold button; locking fast-forward/rewind. Receiver: 28 W continuous output power; FM usable sensitivity 1.0 μV into 75 ohms; frequency response 30-16,000 Hz; selectivity 55 dB; capture ratio 1.5 dB; stereo separation 30 dB; speaker impedance 4 or 8 ohms; operating voltage 12 V dc neg. ground, 13.8 V dc nominal. Cassette: wow and flutter 0.2% wrms; S/N 45 dB. 3" H x 7" W x 6" D ..... \$200

**FT1495.** Similar to FT1670 without digital clock; features Dolby noise-reduction system and Dolby-encoded FM broadcasting; full auto reverse with auto repeat; five-station preset pushbutton tuning; wow and flutter 0.08% wrms; 33 W continuous output power, S/N with Dolby 62 dB ..... \$220

### FT412 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio and stereo cassette player designed for foreign and American sub-compact cars. Features automatic eject and tape replay; locking fast forward and rewind; memory tuning for up to five AM and five FM stations; local/distant and FM muting switch; separate balance and tone controls; lighted stereo and tape indicators; wow and flutter 0.2% wrms; frequency response 50-10,000 Hz; S/N 45 dB; 4 W/ch continuous output power at 5% THD; selectivity 55 dB; FM stereo separation 30 dB; 12 V dc negative ground; pigtail for automatic electric antennas; 1 3/4" H x 6 1/2" W x 5" D ..... \$160

### FT1400 Biamp/Cassette Play

Underdash unit combines biamp and auto reverse cassette player with slide in/out bracket; biamp with 14 W/ch woofer and 2.7 W/ch tweeter amps at 5% THD; separate woofer and tweeter controls; loudness switch; locking fast-forward and rewind. Amp: 33 W continuous total output power; speaker impedance 4 or 8 ohms. Cassette: wow and flutter 0.08% wrms; S/N 46 dB. 12 V dc neg. ground, 13.8 V dc nominal; 2 1/2" H x 7" W ..... \$120

### FT1877 AM-FM Stereo Biamp/8-Track

In-dash AM-FM bi-amplified stereo receiver and 8-track player with Dolby noise-reduction system and five pushbutton preset stations; biamp with 14 W/ch woofer amp and 2.7 W/ch tweeter amp; separate woofer and tweeter controls; locking fast-forward; dual gate MOS FET front end; PLL multiplex decoder; automatic up/down for electric antennas. Receiver: 33 W continuous total output power; FM usable sensitivity 2.0 μV into 75 ohms; frequency response 30-16,000 Hz; selectivity 55 dB; capture ratio 1.5 dB; FM stereo separation 30 dB; speaker impedance 4 or 8 ohms. Cassette: wow and flutter 0.15% wrms; S/N 55 dB with Dolby. Operating voltage 12 V dc neg. ground, 13.8 V dc nominal; 3" H x 7" W x 6" D ..... \$150

**FT874.** Similar to FT1004 but in-dash unit with AM-FM radio and five-station preset pushbutton tuning; no biamp with woofer and tweeter controls or 8-track player; 8 W continuous output power; frequency response 50-10,000 Hz; capture ratio 1.5 dB; 3" H x 7" W x 6" D ..... \$100

### SR-3400 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio/stereo cassette player with digital clock. Features auto stop; pushbutton eject; electronic loudness, muting, high filter, and AM/FM controls; local/distant control; elapsed timer and reset controls; locking fast forward and rewind; bass, treble, balance, and fader controls; LED stereo indicator. Wow and flutter 0.3% rms, S/N 40 dB; channel separation 45 dB; audio output 40 W continuous at 1.0% THD; frequency response 20-20,000 Hz; 1 3/4" H x 7" W x 5 1/2" D ..... \$270

**SR-2400.** Same as SR-3400 except has 8-track player with program selector and LEDs instead of cassette; no fast forward and rewind; wow and flutter 0.25% rms; 5 1/8" D ..... \$270

**SR-3300.** Similar to SR-3400 except auto-reverse cassette player with tape direction control and LED indicator; no digital clock with elapsed time and reset controls ..... \$250

**SR-3100.** Similar to SR-3300 minus auto reverse with tape direction control and LED ..... \$220

**SR-2100.** Same as SR-3100 except has 8-track player with program selector and indicator lights instead of cassette; wow and flutter 0.25% rms; 5 1/8" D ..... \$220

### SR-340 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio/stereo cassette player with digital clock. Features elapsed timer and reset controls; electronic loudness, muting, high filter, and AM/FM controls; local/distant control; automatic end-of-tape and pushbutton eject; locking fast-forward and rewind; bass, treble, balance, and fader controls; LED stereo indicator. Wow and flutter 0.3% rms; S/N 40 dB; channel separation 45 dB; audio output 10 W at 1.0% THD; frequency response 40-15,000 Hz; 1 3/4" H x 7" W x 5 1/2" D ..... \$240

**SR-240.** Same as SR-340 except has 8-track player with program selector and LED indicators instead of cassette; wow and flutter 0.25% rms; 5 1/8" D ..... \$240

**SR-330.** Similar to SR-340 except auto reverse player with tape direction control and indicator; no digital clock ..... \$220

**SR-310.** Similar to SR-330 less auto reverse.. \$190

**SR-210.** Same as SR-310 except has 8-track player with program selector and indicator lights instead of cassette; wow and flutter 0.25% rms; 5 1/8" D. \$190

### SR-303 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio/stereo cassette player. Cassette player features continuous play auto reverse, auto key-off and pushbutton eject, and locking fast forward and rewind buttons with LEDs; wow and flutter 0.3% rms; S/N 38 dB. Radio: features pushbutton local/distant, program, and AM/FM controls, balance and fader controls for four-way speaker adjustment, and rotary volume, tone, and tuning controls; audio output 8 W at 1.0% THD; frequency response 60-12,000 Hz; FM sensitivity 7 μV for 30-dB S/N; 1 3/4" H x 6 1/8" W x 4 1/2" D ..... \$160

### SR-302 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio/stereo cassette player. Cassette has fast forward and eject switch; wow and flutter 0.3% rms; S/N 38 dB. Radio features five AM/FM programmable pushbutton tuning, separate balance and fader controls for four-way speaker adjustment, local/distant, and LED multiplex, AM, and FM indicators; output 8 W at 1.0% THD; frequency response 60-12,000 Hz; FM sensitivity 7 μV for 30-dB S/N; 2 1/8" H x 7 1/8" W x 4 7/8" D \$160

**SR-202.** Same as SR-302 except has 8-track player instead of cassette ..... \$160

### SR-301 AM-Stereo FM/Cassette Player

In-dash AM-stereo FM radio/stereo cassette player with AM/FM, muting, local/distant, and mono/stereo switches; auto shutoff; pushbutton eject and fast forward and rewind; separate balance and fader controls; tone control. Wow and flutter 0.3% rms; S/N 38 dB; channel separation 42 dB; audio output 8 W at 1.0% THD; frequency response 60-12,000 Hz; 1 3/4" H x 6 1/8" W x 4 1/2" D ..... \$120

**SR-201.** Same as SR-301 except has 8-track player with program selector and LEDs ..... \$120

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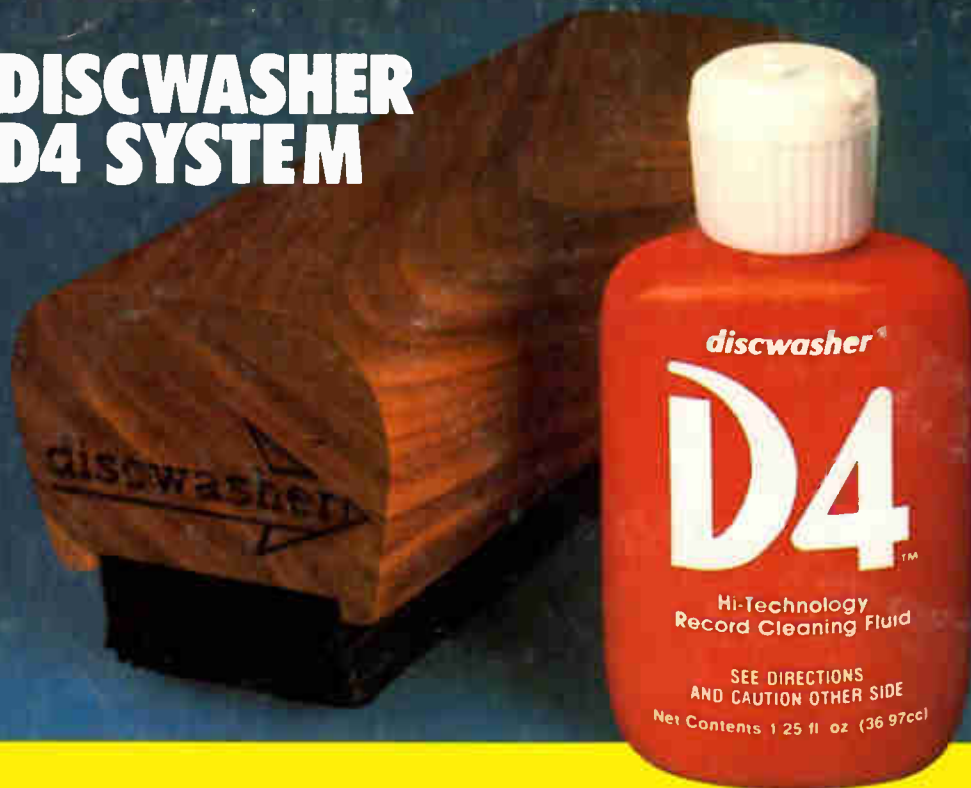
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