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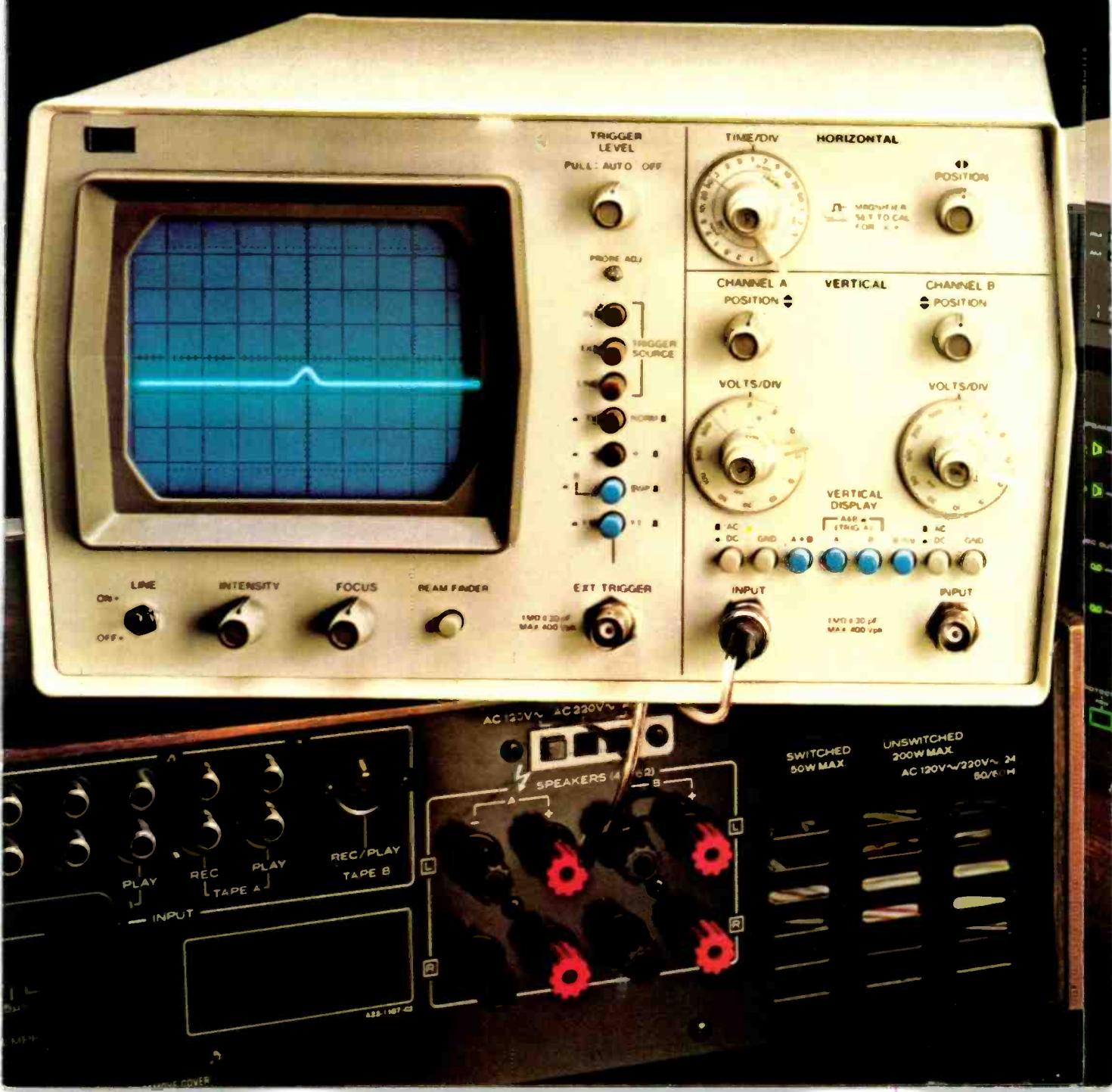
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FEATURES

THE COVER	4
GETTING STARTED IN HI-FI	Harold A. Rodgers 6
STEPPING UP TO HIGHER FI.....	Harold A. Rodgers 13
GLOSSARY OF AUDIO TECHNICAL TERMS	25
DIRECTORY OF MANUFACTURERS	32

DIRECTORY LISTINGS

1. RECEIVERS	37
2. AMPLIFIERS	
Power Amplifiers	55
Preamplifiers	61
Integrated Amplifiers	68
3. TUNERS	76
4. TURNTABLES	84
5. PHONO CARTRIDGES (including TONEARMS)	95
6. CASSETTE TAPE MACHINES	109
7. OPEN-REEL TAPE MACHINES	125
8. VIDEO CASSETTE RECORDERS	129
9. BLANK TAPE	135
10. ACCESSORIES	141
11. SPEAKER SYSTEMS	151
12. HEADPHONES	184
13. MICROPHONES	191
14. SIGNAL PROCESSORS	198
Mixers	209
15. CAR STEREO EQUIPMENT	213

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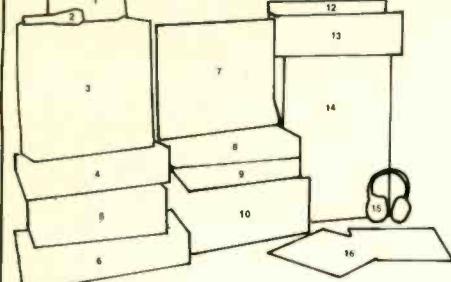
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- THE COVER**
- 1,2 Shure SM85 Microphone
 - 3 Sony TC-399 Open-Reel Tape Deck
 - 4 Kenwood L-07CII Preamplifier
 - 5 Pioneer A-9 Integrated Amplifier
 - 6 Yamaha R2000 AM/FM-Stereo Receiver
 - 7 Mitsubishi LT-5V Turntable
 - 8 Denon TU-900 Digital Tuner
 - 9 Technics SE-A808 Power Amplifier
 - 10 Phase Linear 7000 Series Two Cassette Deck
 - 11 Jensen RE512 In-Dash Receiver/Cassette Deck
 - 12 dbx® Model 224 Noise-Reduction Unit
 - 13 ADC Sound Shaper III IC Stereo Graphic Equalizer
 - 14 JBL L112 Speaker System
 - 15 Koss PRO/4X Stereo Headphones
 - 16 Mobile Fidelity Sound Labs "Tea For The Tillerman" and "Elvis In Memphis" Stereo Records

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STEREO DIRECTORY & BUYING GUIDE



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*FEATURES AND SPECIFICATIONS: 55 watts per channel, continuous power output, both channels driven into 8 Ohms from 20 Hz to 20 kHz, at no more than 0.007% THD/Quartz frequency synthesis, 5-way tuning/Direct Comparator/IC logic function controls/HI-T transistors. ©1981 Sony Corp. of America, 9 W. 57th St., N.Y., NY 10019. Sony is a registered trademark of the Sony Corp.

GETTING STARTED IN HI-FI

By Harold A. Rodgers

Here are guidelines to help take some of the mystique out of choosing your first component stereo system from among the vast number of products competing for your dollar. Your goal will be to narrow the choices of equipment down to a few in each category (speakers, phono cartridges, etc.) and study those fairly intensively. The fruits of such a research-oriented approach should be enough knowledge to purchase a system that will suit your sonic/aesthetic/value needs rather than be virtually dependent on advice from friends or the pressures of salesmanship.

The basic product source material you need is already in your hands—the directory section of this publication, which lists product specifications, features, and the maker's suggested retail price, all neatly sectionalized. Add to this informational tool a few other ingredients, as follows. Read product reviews, such as those that appear in *Stereo Review* and other magazines; examine advertisements to learn what manufacturers tout; discuss hi-fi with people you know who own good stereo systems.

Armed with the foregoing, you will be in a good position to explore buying a stereo system at a retail store.

• **Basic Stereo Systems.** Like any large system, the assemblage of equipment used to reproduce music in the home can be analyzed and broken down into component parts. For example, since music exists in the real world as a series of sound waves, something must project those waves to your ears. Most often that something is a loudspeaker (although headphones are an alternative possibility), so we can start by listing a pair of speaker systems as a basic element of the system.

Next, working backward through the chain, the speaker systems—which can be considered motors of a special kind—must have a source of electric power to run them. In this case, the power source is a power amplifier, the second basic component of the system. Continuing, we find that we must give the power amplifier the information about what it is to make the speaker systems do. This information comes from the preamplifier, which supplies it to the power amplifier in the form of an electrical signal.

Since the preamplifier, or preamp for short, has no means of storing music within itself, it, too, must receive signals from outside. These signals come from such signal sources as a record player, AM/FM tuner, or tape deck. Normally, the preamp incorporates a selector switch that connects these sources into the system one at a time. As the signals require processing and amplification before being applied to the power amplifier, these functions are performed by the preamp, which is aptly named for the task it performs.

A tuner, essentially a radio without a speaker or an amplifier to drive a speaker, is relatively self-contained. Its input signal travels through the air from a radio station, is captured by an antenna, and is finally fed to the correct input connections on the tuner. A tape deck, similarly self-contained, "reads" its input signal as a series of magnetic variations impressed on a tape coated with magnetic material. A record player, on the other hand, can be divided into subcomponents—usually a turntable that holds and turns the record and a pickup cartridge equipped with a stylus that contacts the grooves in the record. Sensing the variations in the grooves, the stylus passes its mechanical motion to an element that translates it into a corresponding

electrical signal that is eventually fed to the preamp. Most often, the turntable and cartridge are supplied separately, although there are exceptions to this rule.

In most basic stereo systems, the power amplifier, preamp, and tuner are combined into a single component known as a receiver. Packaging these elements in this way permits manufacturing economies that are passed along to the consumer in the form of a price that is less than what one might have had to pay for the three elements if they were purchased separately. However, as we shall see when we examine these electronic elements in more detail, a receiver permits less flexibility than is possible with separate components. Nevertheless, a receiver overwhelmingly the most popular choice among stereo-component buyers and even more so among those who buy their first systems.

Regardless of how the system elements are packaged, they must perform the same functions. That is, the power amplifier section of a receiver or integrated amplifier (a power amp and preamp packaged together) does exactly the same job as a separate power amplifier. The same holds true for, say, the preamp section or tuner section of a receiver, compared with the respective separate components. This being the case, let us investigate the electronic elements independently of the way in which they are packaged.

• **Power Amplifiers.** In essence, the job of a power amplifier is to boost the strength of the signal fed to it by the preamp and produce an output with enough power to drive the speaker systems. In simple terms, the more

(continued on page 8.)

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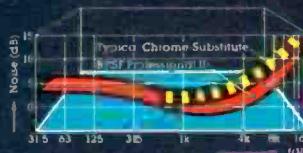
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After all, how would you rather spend your time—looking for your favorite cuts, or listening to them?

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GETTING STARTED...

power the amplifier can supply, the more you pay for it and the louder the speaker systems will play. An additional factor to be considered is the accuracy of the power amplifier in following the signal from the preamp. In other terms, the question is the amount of distortion the amplifier produces with the desired signal. If the distortion level is at all high, the sound of the music from the speaker systems will be unpleasant.

Fortunately, the state of development of power amplifiers has reached a point where distortion is rarely a problem with true hi-fi components. Distortion levels vary and are often widely touted by competing manufacturers, but as a practical matter, the probability of finding a stereo component power amplifier that produces audible distortion is virtually zero.

Distortion is usually expressed as a percentage and, in general, an amplifier that produces 0.1% distortion or less will not sound any better to the listener if the distortion is made lower. Finding an amplifier with distortion as low as or lower than this should not be a problem.

On the other hand, careful attention should be paid to the maximum output power the amplifier can develop without producing excessive distortion. If an amplifier is driven much beyond its ratings, distortion increases very rapidly and becomes extremely unpleasant to the ears. In addition, an overdriven amplifier can very easily damage the speaker systems to which it is connected.

Playing loud music takes more power than playing soft music. However, loudness is not the only criterion for determining your power requirements. Speaker systems vary in the amount of sound they can produce for a given power input, the variation generally in the range of 10:1. It would not be difficult to find speaker A and speaker B that sound equally loud when A is driven by 10 watts and B is driven by 100 watts. This is an important point to consider when choosing a system, because a 100-watt amplifier is far more costly than one that delivers 10 watts.

Perhaps the most difficult point to appreciate about amplifier power is that it does not translate into loudness on a one-for-one basis. This has nothing to do with the equipment. Rather it results from characteristics of the human ear. Subjective loudness increases at a rate proportional to the

logarithm of power. A rate of increase such as this is very slow, as evidenced by the fact that the logarithm of 10 is 1, the log of 100 is 2, and the log of 1000 is 3. Therefore, simply doubling the apparent loudness of a sound requires a tenfold increase in power. It is important to note that to most people, a doubling of power is just barely noticeable!

The upshot of all this is that one should not be impressed by small differences in power. If, say, a 25-watt/channel amplifier is unable to produce a satisfying level of loudness driving a given speaker system, substituting an amplifier rated at 30 watts/channel will be virtually no help. In fact, even a 50-watt/channel amplifier will result in only a marginally louder sound. A significant increase in sound output would probably require at least 100 watts/channel.

Separate power amplifiers are rated for sensitivity, which is the voltage required from the preamp to drive them to full output power. This is hardly a matter of concern, since practically all preamps have an output-voltage range sufficient to drive just about any power amplifier. In receivers and integrated amplifiers, of course, this consideration does not arise at all.

A final characteristic of a power amplifier is the load impedance for which it is rated. Impedance is a somewhat difficult concept to understand, requiring some basic knowledge of electric circuit theory. In a basic system in which the amplifier will drive just one speaker system per channel, there is little cause to concern yourself about it. Only when each channel contains multiple speaker systems is there any potential for problems. What to do in a case like this will be covered in the article on upgrading stereo systems that follows.

Preamplifiers. The principal job of a preamp is that it act as a control center of the system and to route the desired program material to the power amplifier and speakers. Clearly, then, it must accept inputs from all the program sources you will want to have. Generally, most preamps, including the preamp sections of integrated amplifiers and receivers, have inputs for phono, tuner, tape, and auxiliary (AUX) sources as a basic minimum. Frequently, there is also a tape-monitor connection that permits you to record and play back without changing cable connections. For higher cost, there are preamp models with extra inputs (for example a second phono or a second or even third tape recorder, often with switches that allow the recorders to feed each other when tape copying is desired).

You will want to be certain that your console center has enough inputs to suit your further expansion plans, if any. Lacking such exalted ambitions, the beginner is probably best advised to settle for the basic four: phono, tuner, tape, and AUX.

Another function performed by the control center is program equalization via tone controls that either boost or cut the treble or bass. Some designs include one or even two more controls for the midrange, but this probably introduces more complexity than is desired in a basic system. By far, the majority of stereo-system owners get by with just bass and treble controls.

Tone controls tend to be most useful if: (1) they confine their action to the proper part of the audio spectrum (for example, the treble control should have no effect on the bass and very little on the midrange); and (2) their action is smooth and gradual (the best way to check for this is to try the controls and listen to the change in response).

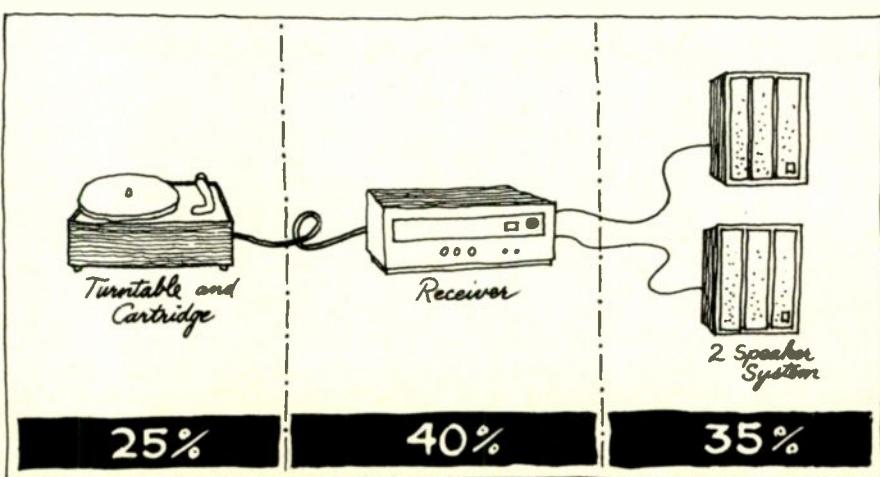
Originally so important that it gave its name to what is now called a preamplifier, the phono input stage is unlike any of the other program-source inputs. Since the signal supplied to it comes from a phono cartridge and is very weak, it must amplify more than so the other inputs. Also, since the signal recorded onto phonograph records is (for technical reasons that need not be discussed here) severely reduced in bass and heavily boosted in treble, the phono input stage must reverse the process and restore this equalized signal to normal.

By and large, you should expect the compensation applied by the phono stage to be accurate to within about ± 0.5 dB (decibel). Most people find a change of 3 dB, equivalent to a doubling in power, the smallest change that can be continuously detected. But since small changes can have subliminal effects and subtly affect sound quality, a good deal of safety

margin is in order. To be sure the original signal from the phono cartridge will not overdrive (overload) the phono stage, this input should be able to safely handle 200 millivolts (mV) or so.

Because it passes any signal it handles through one or more amplifier stages, a preamp, too, is capable of producing distortion. Since distortion from the preamp will be amplified in the power amp, the former must meet more stringent standards than the latter—just about 10 times more stringent. Where 0.1% distortion is acceptable in a power amplifier, no more than 0.01% would be tolerated from a preamp these days. Do not be surprised to find that practically all preamps, even many power amps, meet this requirement by a large margin, but do not be overly impressed by the size of the margin. What you are getting extra is safety factor, not better sound. If you are considering a receiver or integrated amplifier in which the preamp output is not separately accessible, the distortion at this point is, naturally, moot.

Tuners. The job of an FM tuner is to boost the minute signal supplied to it from the antenna, select the information broadcast from a single station, demodulate the selected broadcast to recover the audio signal, and deliver the audio to its output or the preamp or control center. Its principal attributes are *selectivity* (ability to single out a particular station without interference from others) and *sensitivity* (ability to separate very weak signals from background noise or hiss). Another desirable attribute is ability to discriminate against *multipath* signals, which literally bounce around enough to arrive at the tuner along with the multiple "echoes". Multipath, the same phenomenon that gives rise to TV "ghosts", can make indecipherable "hash" out of an FM signal.



GETTING STARTED...

The numerical specifications that describe tuner performance are almost always given in decibels nowadays, and some of their exact meanings are rather subtle. The beginner who lives in an urban or suburban area within 30 miles or so of the FM stations can simplify his research by looking for a sensitivity figure of as few dBf as possible, a selectivity figure of as many dB as possible, and a *capture ratio* figure of as few dB as possible. Sensitivity figures are generally qualified as "minimum usable" or "for 30-dB quieting" or "for 50-dB signal-to-noise ratio". Be sure to compare apples with apples here, noting that minimum usable sensitivity and sensitivity for 30-dB quieting are synonymous. By far the most meaningful sensitivity specification is for "50-dB quieting in stereo". Be sure, too, that you are not comparing one tuner's monophonic rating with another's stereo rating. The mono rating will look decidedly better.

If you buy a receiver, you will have less choice about the tuner section you will get. The manufacturer of the receiver has designed it to be a suitable companion to the power amp and preamp sections. This is not altogether logical, since the quality of FM signals you receive has no necessary connection with how much power your speaker systems need or how flexible your preamp/control center should be. However, that is the way the package is sold.

The one potential buyer who should concern himself about this arrangement is the one who lives in a rural area far from broadcast stations and is on a limited budget. In this case, the tuner section of an inexpensive receiver may very well not suffice and much of the cost of an expensive receiver will go into extra power and a fancier preamp, neither of which will help FM reception. The answer here is not to buy a receiver; rather, buy an inexpensive integrated amplifier and whatever level tuner is necessary to solve your reception problems. This will cost somewhat more than the receiver alone, but it should deliver listenable FM.

Some tuners contain high-technology features, such as digital-numeric displays that are attractive and in many respects convenient, but offer little in the way of performance advantages. While it is true that they might offer slightly more accurate tuning advantages or marginally lower distortion, a tuner with manually oper-

ated tuning will probably sound as good. This is not to say that such features are undesirable, but they can be reasonably categorized as frills.

Taken together, the power amp, preamp, and tuner constitute the electronics package of a stereo system. When combined in the form of a receiver, about 40% of a system's total budget should be applied to their purchase. If you intend to buy separates (integrated amplifier plus tuner or preamp, power amp, and tuner) allow an extra 5% or 10% of the budget.

• **Phono Equipment.** As far as buying decisions are concerned, a record-playing system consists of two units: a turntable/tonearm combination and a pickup cartridge. The main attributes of the turntable are its ability to rotate the record at a steady and precise speed without producing objectionable mechanical rumble and to properly support the cartridge as it crosses the surface of the record.

Wow and flutter, the turntable's speed irregularities, should be as small as possible, preferable on the low side of 0.1%. Note that wow and flutter figures are weighted for audibility and that the weighting systems used are not always the same. Therefore, it is important to compare wow and flutter figures in the same weighting system.

Rumble, usually specified in negative decibels, should be represented by a number of the largest magnitude possible; that is, a rumble of -70 dB is better than one of -60 dB. The same precautions about comparisons of weighted data applies here. Perhaps the most important weighting systems (those that give the best-looking number for the least performance) are the most widely used.

Support of the cartridge with proper geometry is reflected in a parameter called *tracking error*, which should be as small as possible, although as a practical matter there is not much variation between turntables, particularly at the low end of the market. Other things being equal, the tonearm's mass should be as small as possible as well.

Interfacing the cartridge with the tonearm is one of the more critical bits of matchmaking you will be called upon to do. Generally, both the stylus and the records that are played wear less if the downward force on the cartridge is kept small. But if it becomes too small, mistracking tends to occur, with dire consequences on both the sound and the life of the disc. The lightest force that can be used depends on the cartridge chosen, with the added complication that cartridges that track at the lowest forces work best with low-mass tonearms. Beware, therefore, of mating a sophisticated cartridge

with a budget tonearm. Both tonearm and cartridge must be upgraded together.

There is more to a turntable/cartridge combination than just its performance. This is one area where convenience is an important consideration. If you are on a tight budget and are sure-handed as well, a manual turntable that requires you to position the tonearm at the start of a side and pick it up again at the end of play may be your best bet. At the other end of the spectrum are automatic models that execute all the necessary functions at the touch of a single button. Semiautomatic models compromise, generally by requiring a manual start but automatic return of the tonearm to its rest at the end of a side. Most often, cost tends to rise with additional automation.

Turntables are sometimes classified according to how the rotating platter is coupled to its drive motor—by belt or directly. Direct-drive models now predominate, although there are still proponents of belt drive who claim that it produces inherently less rumble than direct drive. Whatever the merits of these claims, they do not seem significant at the low end of the market, and it is questionable whether they are meaningful even at the higher price points.

Some turntables have their speed of rotation referenced to a highly accurate quartz-crystal oscillator, rather than to the ac power line, as has been customary. While there is an undeniable gain in speed accuracy as a result of this move, it does not seem likely to make an audibly noticeable difference. Here, again, is a feature that might well be forgone by anyone on a tight budget.

Up to now, *frequency response*, one of the commonest buzzwords of high fidelity, has hardly been mentioned. That's because turntables have no frequency response and the electronics are very easy to make audibly perfect in that respect. But in the case of phono cartridges, frequency response is a key consideration.

Nowadays, practically all cartridges have frequency responses extending from 20 hertz (cycles per second, abbreviated Hz) to 20,000 Hz, the limits of audible sound. What separates the good from the mediocre is the amount of variation across this range of frequencies. A unit with tight tolerances might vary by as little as ± 0.5 dB, while a budget unit might vary by as much as ± 1.5 or even ± 2.5 dB. Another advanced feature found in midpriced and more expensive cartridges are elliptical and even more sophisticated stylus shapes that lengthen the contact patch between the stylus and disc while keeping it as narrow as

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There's even less doubt about Original Master Recordings. They are the most spectacular-sounding, highest-quality LP's and cassettes available today.

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GETTING STARTED...

possible. Generally speaking, such stylis tend to wear records less and produce less distortion in the reproduced sound.

In most basic systems, just about 25% percent of the total budget should be earmarked for the turntable/cartridge combination. In a system using separate electronics, this proportion should be reduced to about 20%.

• **Tape Decks.** Since the cost of open-reel decks runs into some fairly rarified levels, our discussion will be limited to cassette decks.

A cassette deck falls into two sections: the *transport*, which is the mechanical section that holds and moves the tape, and the electronics package that consists of the heads that record and sense the magnetism of the tape and the circuitry that amplifies and processes the signals as necessary. As with turntables, it is necessary that tape movement be as accurate and stable as possible. Good specifications for wow and flutter are, in fact, about the same for turntables—about 0.1% or, preferably, less. (Weighting factors are used here too, so remember to take them into account.)

Signal-to-noise ratio (S/N), the ratio of the loudest signal the deck can accept without distortion in excess of 3% to the level of residual noise, is an important consideration. (Note that in tape recorders, for some reason, far more distortion is considered acceptable than elsewhere.) Budget decks can generally manage 50 to 55 dB in this department, a level of performance that would usually be considered somewhat marginal. As a result, noise reduction is customarily included in the electronics of the deck.

The system commonly included is Dolby B, which improves the S/N ratio by about 10 dB. The total ratio, now 60 to 65 dB, is thus made adequate. Other noise-reduction systems, such as Dolby C, which reduces noise by 20 dB, and dbx, which in principle doubles the S/N ratio, are often included in higher-priced decks.

The principles of tape recording are far too complicated to discuss in any detail here, so it will not be possible to explain the workings of all the controls and features. Nevertheless, a few basic recommendations can be made:

(1) Look for a deck that can record and play back ferric-oxide and chromium-dioxide tapes (and ferric tapes engineered to have parameters similar to chromium dioxide).

(2) Don't worry about ferrichrome tapes, which are a sort of hybrid between ferric and chrome. It is not often used, and provisions for it are omitted from many machines.

(3) Although there's boasting of low-priced decks being able to record and play metal-particle tapes, don't pay too much attention to this capability. Any deck that can play chrome tapes can play metal tapes, and it is seldom necessary to use metal tape for recording unless you are using a live source that produces unpredictably high levels. If you plan to do this type of recording, you should get a much better deck than a budget one.

(4) Although few decks produce a frequency response that extends fairly flatly to 20 kHz or beyond, such decks are few and expensive. As a practical matter, response extending to 16 kHz or so is sufficient to make copies of records virtually indistinguishable from the original.

(5) Most decks have metering systems to let you monitor the levels of signals recorded onto the tape. It is important to observe these levels, otherwise, the tape may be overloaded (with distortion), or the soft parts of the music may be covered by background noise. Meters are easiest to use, especially for beginners, if they indicate peak levels of the signal rather than average levels.

Speaker Systems. It is not at all an exaggeration to call speakers a stereo system's ambassadors to your ears, since they are the only components that actually make sound. No matter how high the quality of the components ahead of them in the signal path, poor speaker systems will make the entire system sound bad. Unfortunately, the choice of speaker system is the point at which it is easiest to err.

When all is said and done, the only safe way to choose a speaker system is to try it out with the system you have chosen *in your home*. More and more of the better quality audio dealers seem willing to permit this. Generally, the arrangement permits you to return a pair of speaker systems (in good condition, of course) for full-value trade-in on another pair.

If course, an audition is first necessary to select the pair you will want to try at home. To do this, you will have to listen to a number of speaker systems in the dealer's showroom to narrow down the choices. Bear in mind as you listen that the showroom's acoustics will almost certainly be entirely different from those of the room in which you plan to set up your system. Most reputable dealers will be pleased to offer you a trial period in

your home, but check this before making a final decision.

One technique often recommended is to take one or more records that you know well along to an audition to use as program material. If you have been listening on antiquated compact equipment, this is not too good an idea because the level of improvement will be so great that you can mislead yourself into settling for less in equipment quality than you might have if you knew what records sounded like when played through high-quality equipment.

A better idea, if you have willing friends who own good-quality stereo equipment is to buy a new record and listen to it on their systems. This way you will have a better idea what to expect and what to listen for in the actual audition. Lacking friends to assist you in this way, it is probably best to use the dealer's program material. If you do this, make sure the demonstrator plays the type of music you listen to. And while you are at it, make sure the speaker systems can be played loud enough to suit you with an amount of amplifier you can afford.

One speaker specification it pays to consider, especially if you want to keep costs down, is the number of drivers used in the system. By and large, two-way systems offer better value than do three-way systems. This is because the added complexity of the extra driver tends to send costs up faster than performance. Only when three-way systems cost considerably more than two-way systems do their inherent advantages begin to really show.

Choosing A System. As may be obvious by now, you will first select your speaker systems, allotting to them about 40% of your system budget. Next, you will select an electronics package (receiver or separates) that is capable of driving your speakers adequately. Finally, you will choose a turntable and cartridge, remembering that the match between these two items is among the most critical you will have to make.

Now that you have some idea what the entries in the directory mean (and have consulted the Glossary starting on page 25 for more help with technical terms), you should be able to get some idea of what components are within your reach. Remember, though, that prices are often discounted from those given in the directory, especially in the larger cities.

Whatever course you choose in selecting equipment for your hi-fi system, try to get all the information you can every time you are forced with a decision. And take your time here—as in many situations, haste makes waste.

Stepping Up To Higher Fi

By Harold A. Rodgers

It can happen at any time. The beloved stereo system that has served faithfully and given great satisfaction just doesn't seem to be cutting the mustard anymore—and, quite possibly, you aren't even sure why. Has the moment arrived to sell the system you have and start over with something better? Maybe it has. But before you visit your audio dealer, it may pay you to consider the possibility of replacing only *part* of the system, or, perhaps, adding to it. That's what upgrading is all about, and it can save you money.

Audio system upgrades can be divided into two broad classes. In the first, a component whose performance is substandard with respect to the whole is identified and replaced; in the second, a new component or processor is added to the system, providing capabilities that were not there before. Either type requires some analysis—the first to determine which is the malperforming component and what form of replacement will truly be an improvement; the second to be sure that the system can really use the new capability.

Reexamining the System. Probably the first thing you should do in approaching a system that is a candidate for upgrading is to be sure that it is operating correctly and is properly installed in its location. The finest speaker systems cannot satisfy your ear if they are radiating all their high frequencies into an overstuffed chair or if they have been so inappropriately placed that their woofers excite all kinds of nasty resonances in the listening room. Likewise, a phono cartridge cannot do its job properly if its stylus is badly worn. (Incidentally, some cartridge bodies will accept replacement stylus assemblies that are of higher quality than the original.) More serious malfunctions, though not especially common, are possible. If you are in serious doubt, the cost of the services of a maintenance technician can represent money well spent. But do check for

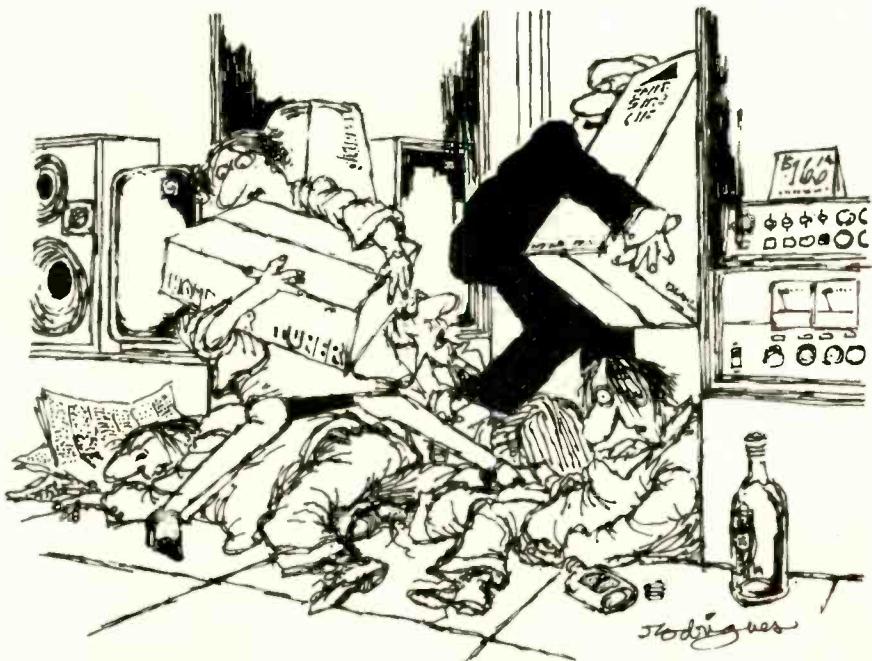
bad connections and inadvertently misadjusted controls.

Assuming that everything is working as it should and the sound is still unsatisfactory, the next task is to determine which component is the culprit. This is not always simple, for it is easy for a fault in one area to seem as if it is somewhere else. For example, what seems like an inadequate speaker could really be an amplifier running out of power during loud passages. Let's take a look at the various system components and see how they might misbehave.

• **Power Amplifiers.** Given a power amplifier of reasonable quality to begin with, and in proper working order, the main reason to replace it would be that it has too little power. In such a case, the amplifier would be driven into clipping each time some loud music passage comes along. If an oscilloscope

is available, checking this is easy. Simply set the level of loudness you like and observe the output waveform across the loudspeaker terminals. Significant flat-topping (or flat-bottoming) of the waveform means the amplifier's output-power capability is too small. Double-check by reducing the volume. If the problem is indeed insufficient power, the clipping should cease at reduced volume.

If you lack a scope—as most of us do—you should arrange to borrow an amplifier with more power. Connect it into the system and, once again, listen at the level of loudness you prefer. A notable improvement in sound means that your amplifier was most likely underpowered. Do not fall into the trap of buying a new amplifier whose output power is the same as or close to that of the one you now have just because the distortion specification is lower. Even the least impressive



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HIGHER FI.....

distortion figures seen these days are much smaller than anything the ear can detect.

There are also some more subtle ways in which an amplifier can cause grief. One is that it may not "like" the load presented by your speakers. In this situation, the amp may clip, break into oscillation, or trip its protection circuitry. Here, too, an oscilloscope will help to pinpoint the problem. Substituting a new amplifier may also help, but if your speakers present an unusual load, it may take an equally unusual amp to drive them happily. You would do well to try an amplifier capable of handling low-impedance loads (down to 2 ohms, if possible) before concluding that the trouble lies elsewhere.

• **Speaker System.** Since even the best speaker systems are not perfect and, therefore, impart some coloration to the reproduced sound, it is possible that a new pair of speakers will put the bloom back into your stereo system. Perhaps your best course here is to visit your friendly dealer and start auditioning speaker systems. We specify a friendly dealer because the only way you will be certain that the new speakers will put the matter right is if you get to take them home on trial. Failing that, if the dealer happens to stock the model you have now, audition the new candidates against a pair of those. Another possibility is that if the dealer will not let you take speakers home to try, he will let you bring yours in to audition them against what he carries.

If you are fortunate, your present amplifier will be just perfect for the new speakers you want to add to your system. But you may also find that it can: (a) overdrive the speakers to the point where the slightest error will reduce the cones to smoking confetti or (b) run itself into clipping trying to drive speakers that demand more power than it has available.

The first problem can be neatly solved by introducing fuses between the amplifier and speakers. If sized correctly--your dealer or the manufacturer can help you with this--they will blow before any harm comes to the speakers. In the second case, however, you must either buy a more powerful amplifier or start to audition speakers whose efficiency is higher. (As a general rule, vented or ported speakers are more efficient than those in sealed cabinets.)

Just as a poor speaker system can hide some of the good things done by the rest of the system, an excellent one can captiously expose faults. This author can recall trading up to a pair of

speakers with bass performance that was soul-stirring rather than merely adequate, only to find that the system was rendered virtually unlistenable by turntable rumble that, previously innocuous, was now reproduced with pristine accuracy. Needless to say, the turntable was soon replaced as well.

• **Record-Playing Equipment.** Probably the best place to upgrade is where corners were cut on the original purchase. All too often, this means the phono cartridge. Few things can give a system the shot in the arm that comes from replacing a cartridge "thrown in" by the dealer or purchased for whatever was left in the budget after the rest of the system was bought. Unfortunately, however, this seemingly simple move can often lead to complications.

The difficulty is that not every cartridge will work with every tonearm. Moreover, the better the cartridge, the more likely it is to be fussy about its tonearm. Mechanical resonance between the combined mass of the tonearm and cartridge body and the compliance of the cantilever suspension is the problem. It is not possible to eliminate this resonance; the best that can be done is to locate it where it does the least harm. The ideal spot is at about 10 Hz, well below audio cutoff (20 Hz), and above the region (6 Hz) where warps are most common.

Cartridges of high quality are most often designed to work at lower track-

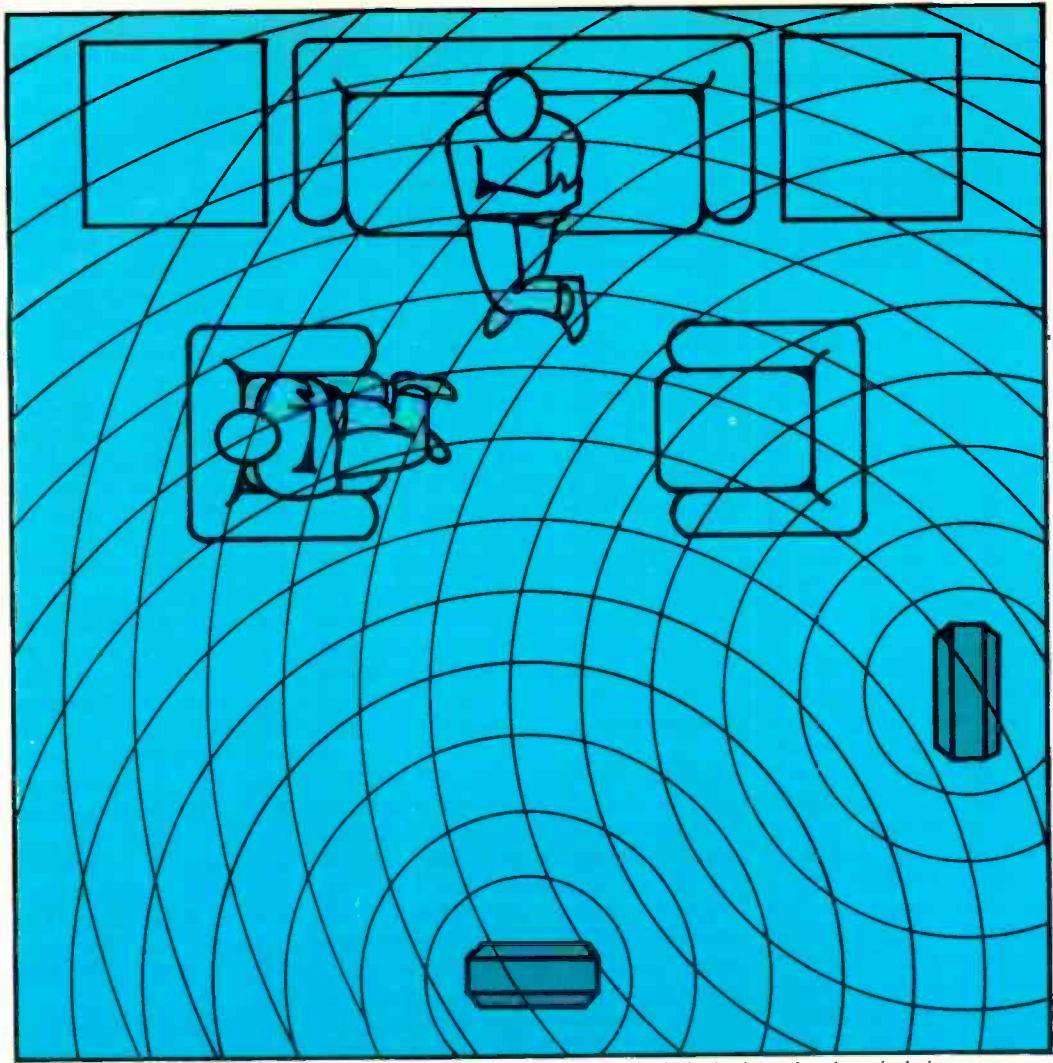
ing forces than their cheaper brethren and, therefore, have styli that are suspended more compliantly. This increase in compliance lowers the resonance and may make the system mechanically unstable, especially when it comes time to track warped records. To offset this problem, a high-compliance cartridge wants a tonearm of lower mass, which will move the resonance back to a more convenient point.

What this all means is that you can probably affix a medium-quality cartridge with moderate compliance to a budget turntable/tonearm combination with good results. If you intend to move close to the top of the line, however, you may well have to get a better turntable (or, at least, a lighter tonearm). Of course, sonic performance is not the only reason to upgrade record-playing equipment. Convenience counts for something, too. In fact, if you have ever had a ham-fisted guest scratch a valued record while fumbling with a manually operated tonearm, you may agree that convenience features such as automatic starting and stopping may be beneficial to the sound of your system after all.

• **FM Tuners.** Generally, what demotes an FM tuner that was previously satisfactory into the ranks of marginal performers is relocation. A tuner that was just fine in the city where stations were nearby may be over its head in a rural area where it must deal with very weak signals. Conversely, a sensitive



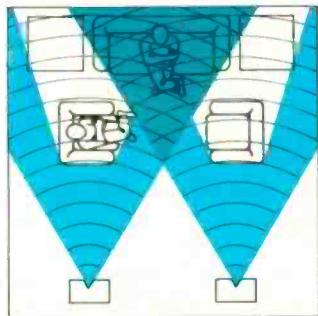
"...THIS HAS TO BE THE TENTH STORE -
DOES THERE HAVE TO BE A LITTLE
ALLIGATOR ON THE GRILL CLOTH?"



BES Sound: Our diaphragm speakers deliver 360° sound on both the horizontal and vertical planes forming a giant sphere of stereo that fills the room.

AT LAST, A DIFFERENCE IN SOUND YOU CAN SEE.

First, look at the small illustration. That's the kind of sound you get from the conventional cone speaker. Stereo in just one section of the room, pieces of it in the others. We'll call that illustration *them*, the makers of about 95% of the speaker systems you can buy.



Conventional Sound:
Cone speakers project sound in only one direction and on only the horizontal plane delivering stereo in just one section of the room.

Now look at the big illustration. That's the kind of sound you get from *us*, BES, because of one critical fact: Our speaker has no cone. We've done away with it because the cone can only project sound in one direction.

The heart of our system is a diaphragm.

It vibrates much like a guitar string projecting sound in every direction simultaneously.

What BES has created is 360° sound. True omni-directional sound. Sound as close to live sound as you can get.

Look at the big illustration again. Where you see the sound from one speaker intersect the sound from the other, you're getting true stereo. And that's virtually everywhere in the room.

Go listen to us.
True stereo you can really hear. Everywhere.



BES SPEAKERS

Bertagni Electroacoustic Systems, Inc. 345 Fischer Street
Costa Mesa, CA 92626 Tel: (714) 549-3833 Telex: 67-8373.

unit that coped well with weak signals that were well-separated in frequency may not be selective enough to separate individual stations in crowded urban airspace.

More and more, however, engineers are mastering the tradeoffs involved in tuner design, so that a good-quality tuner purchased nowadays will probably function adequately--if not in exemplary fashion--in practically any location. Some of this has been accomplished by means of circuits with better basic performance, but "smart" circuits that enable a tuner to adjust its operating parameters for the signal conditions also deserve some of the credit.

Predictably, some of the automatic features found in modern tuners and receivers--digital-numeric displays and synthesized tuning, to name two--are more addressed to convenience and striking appearance than to performance. True, synthesized tuning automatically keeps the tuner locked to the point of minimum distortion in the received sound, but even so, the difference is hardly likely to be audible.

Yet the touches of luxury that such features afford may be entirely worthwhile to some system owners. Synthesized tuning, for example, most often allows you to store your favorite station in memory presets where they can be tuned in at the touch of a button. And if you change stations frequently, it may indeed be useful to be able to verify your choice by means of a digital readout visible from across the room. A final consideration that applies to convenience features in general is that they may make operation of the system less intimidating to members of your household who lack your experience and skill.

Preamplifiers. Finding a preamp whose circuitry does not test out in the "excellent" category these days is not an easy task. There may be minor differences in, say, signal-to-noise ratio, accuracy of equalization in the phono stage, or distortion. However, these will seldom give a solid basis for choosing one unit over another.

A strong case can be made for choosing a preamp on the basis of how well its inputs and outputs and control features suit the system you have in mind. Does it accommodate enough tape decks? Does it permit tape dubbing? Is there provision for feeding in audio from a television receiver or video tape recorder or disc player? How many external processors can it switch in and

out? It seems that considerations such as these are what would engender dissatisfaction or delight with a preamp.

Sometimes a unit may be adequate but have tone controls that don't quite make the grade. In such a case, rather than replacing the preamp, you may find it preferable and more economical to add an outboard equalizer to the system.

• **Moving to Separates.** It may have occurred to you that if you own a receiver, any improvement made to the electronics package of the system means replacement of the receiver in toto. For this reason, audiophiles who are committed to upgrade their systems after a period of time often find it advantageous to choose an electronics package consisting of separates--preamp, power amp, and tuner. Though the initial investment is admittedly more than would be needed for a receiver, the added flexibility is well worth the additional cost. Each element of the system can now be replaced independently of all the others.

• **Adding New Capabilities.** If you are satisfied that the basic performance of your system is up to standard, you may want to consider adding some form of accessory that provides new functions. Imaging devices, for example, can markedly increase the vividness and immediacy of reproduced sound. Such devices are available from sources such as Carver Corporation, Sound Concepts, Omnisonic, and Phase Linear, among others.

Another add-on device that has achieved great popularity in recent years is the time-delay/ambience generator. Acting, in a sense, as the successors to quadraphonic hardware, these devices are designed to submerge the listener in sound, much the way he would be when listening to live music. Additional speakers are required by these devices, but they can--and perhaps should--be of lower quality than the main speakers. They

handle a far narrower range of frequencies at reduced levels and are never noticed by themselves. Many of the time-delay systems, incidentally, incorporate their own power amplifiers. If more elaborate tone controls are what you require, an outboard equalizer may be the answer. These come in two forms--graphic and parametric, with graphic the more popular. If you recognize the limitations of these devices and apply them accordingly, they can be very useful.

The graphic type divides the audio spectrum into bands (most often 10 or so), each about an octave wide, and allows each to be boosted or cut with little effect on any of the others. The parametric type, which is more difficult to adjust, contains several sections, each of which resembles an ordinary tone control except that it is adjustable in more ways. A section of a parametric equalizer can be adjusted for center frequency and width of effective range, as well as for amount of boost or cut.

It is important to remember that the usual run of consumer-grade equalizers will not do much to change the sound of speaker systems that you do not like--although there are professional units that will. Octave bands are too broad to affect the fine detail of speaker frequency response; rather, they just boost or cut whole sections of the response curve intact.

To improve the sound of speakers, you will need an equalizer whose bands are not much more than one-third octave wide. An item such as this is sufficiently expensive that it may make more sense to go right ahead and get better speakers. Octave-band equalization, on the other hand, is fine for touching up program material or room acoustics. The final type of add-on device we will consider is the "black box" that decodes specially encoded records (and tapes). The purpose of this is to reproduce a signal with more dynamic range--as much as 80 to 90 dB in some cases--than can be handled normally. Examples of these are the familiar dbx decoder, which works on discs available from dbx, and the new Cx decoder box introduced by CBS Records to work on some of its newly released discs and some from other sources as well.

Either of these encode/decode systems is capable of stunning results, and since their universes of program material do not intersect, some audiophiles may want to own both. But whatever your choice, be certain that the rest of your system is ready for a heavy-duty workout. Program material of wide dynamic range is an acid test indeed.



A Brand New
Species of
Mitsubishis.

Through a process of selective breeding, evolution, natural selection, and good old fashioned survival-of-the-fittest, there has emerged a new manner of Mitsubishi.

This is the 25/30 Series. It doesn't look like any Mitsubishi system that ever existed before.

For, in fact, these components are the result of a completely new design and engineering effort.

So, where once there were knobs, now there are push buttons. Analog displays and systems have been replaced by digital. Integrated circuitry (IC's), microprocessors, and microcomputers have been exploited to a degree where entire sub-assemblies and elaborate circuitry have been replaced by tiny chips.

By all sleek appearances then, the 25/30 Series Mitsubishi's would seem to represent a major break from the past.

Not at all.

In its fundamental design approach, the 25/30 Series is vintage Mitsubishi.

The DA-P30 Preamplifier, using special printed circuit boards, maintains our traditional dual-monoaural construction. By keeping the two stereo channels both electrically and physically separated, noise and distortion remain phenomenally low.

Paragraphic tone controls allow unusually delicate adjustment of tonal balance while providing a characteristically simple and practical alternative to a graphic equalizer.

A subsonic filter screens out those low frequency signals which, if allowed to

pass through the system, would compromise the output of the components.

Meanwhile, the DA-P30, with its extremely high switching speed and rapid response, transmits subtleties which would be lost on lesser systems.

TRUTH IN AMPLIFYING.

In designing our new DA-A30 Power Amplifier, we built on the successes of our earlier amps with their legendarily low distortion. And introduced some striking innovations.

Of particular note is a linear cross-bias switching system which manages to combine the supposedly incompatible qualities of high efficiency and ultra-low harmonic distortion.

Output transistors are cooled by a special heat pipe assembly. Highly conductive liquids, hermetically sealed in the pipe, replace pounds of bulky radiators and long loops of wiring which can create noise and instability.

The result of these refinements is the most accurate and faithful amplifier we've ever built.

It produces 105 watts per channel RMS. Both channels driven into 8 OHMS from 20HZ to 20KHZ with no more than 0.008% total harmonic distortion.

A NEW DECK MATCHED TO A NEW SYSTEM.

Our DT-25 Stereo Cassette Deck, though rather exotic in its execution is quite accessibly priced.

Some of its highlights are

metal tape capability (of course), costly sendust record/playback heads. Feather-touch microswitch controls with electronic logic monitoring. Fluorescent peak level meters for instantaneous and accurate readouts. And wow and flutter of just 0.004% WRMS.

A SYNTHESIZED TUNING SYSTEM THAT SOUNDS AS ACCURATE AS IT TUNES.

The advantages of digital synthesized tuning have long been obvious: It can't be mistuned, nor will it drift.

Unfortunately, the disadvantages have also been obvious to the ear. A bad, meaning low, signal to noise ratio.

Our DA-F30 Tuner features a quartz crystal phase locked loop frequency synthesizer tuning system. And a solution to the signal to noise problem.

So, along with digitally precise push-button station tuning and display, along with an 8-station memory, the DA-F30 delivers a signal-to-noise ratio of 78 dB (stereo).

Our tuner also provides a superbly graphic LED display of multipath and signal level. So you can adjust your antenna with precision for optimum reception.

For optimum reception of the message of this advertisement, however, you would do well to get closer to the source of the signal.

Pay a visit to one of our select circle of dealers.

There you can observe and study the species at close hand.

Perhaps a Mitsubishi 25/30 Series will be your natural selection.



At Last A Receiver Built Like A Mitsubishi.

On the subject of receivers, we can perhaps be accused of a bit of priggishness.

Having established certain standards in our components, we weren't about to put our name on a receiver if the receivers couldn't measure up.

It wasn't until very recently, in fact, that technological advances brought about a receiver good enough to be called a Mitsubishi.

And now we're introducing a receiver in our new 25/30 series, the R-25.

It owes a great deal to developments incorporated in our separates.

The R-25 features Quartz Synthesized tuning, for hair-splitting tuning accuracy.

Each station is illuminated on a fluorescent digital display. Tap the control bars and it proceeds to lock on to the first available station. Hold the bars down and it will scan up and down the band.

You can pre-select up to seven AM and seven FM stations for storage in memory.

MAKE BETTER STEREO IN THE BLENDER.

FM stereo frequently falls prey to high-frequency noise when stations are weak or far away.

The R-25 has an Automatic Hi-Blend feature which blends stereo signals into monaural in the noisy high-frequency ranges. But it leaves the undisturbed low-frequency signals in the stereo mode.

This removes almost all



MITSUBISHI DA-R25 STEREO RECEIVER

the perceived noise while preserving the broadcast in stereo.

SEPARATING THE STRONG FROM THE WEAK.

Strong signals, by nature, will bully the weak ones, drowning them out, pushing them aside.

Our automatic IF (Intermediate Frequency) switching circuit solves this problem by narrowing the tuning window, thereby excluding interference.

However, since narrowing the window increases distortion, this switching function is introduced—with laudable discretion—only at that precise point where the increased distortion is a lesser evil than signal interference.

As a result of this automatic wizardry, it is a simple

matter to tune the R-25 perfectly. It cannot, in fact, be tuned otherwise.

PEACEFUL CO-EXISTENCE WITH BUILDINGS.

High-rise structures make lovely skylines, but they're hell on signals.

Signals reflected off buildings result in multi-path phenomena, generating audio ghosts.

A signal strength meter on the R-25 functions also as a multi-path indicator. You can measure the amount of reflected signal from any one station. And adjust your antenna accordingly.

The R-25 Pre-Amp section features a continuous loudness control of ten settings. Rather than the usual single

on or off loudness mode. This lets you contour the low and high frequency ranges at low volumes for much richer tonal perception.

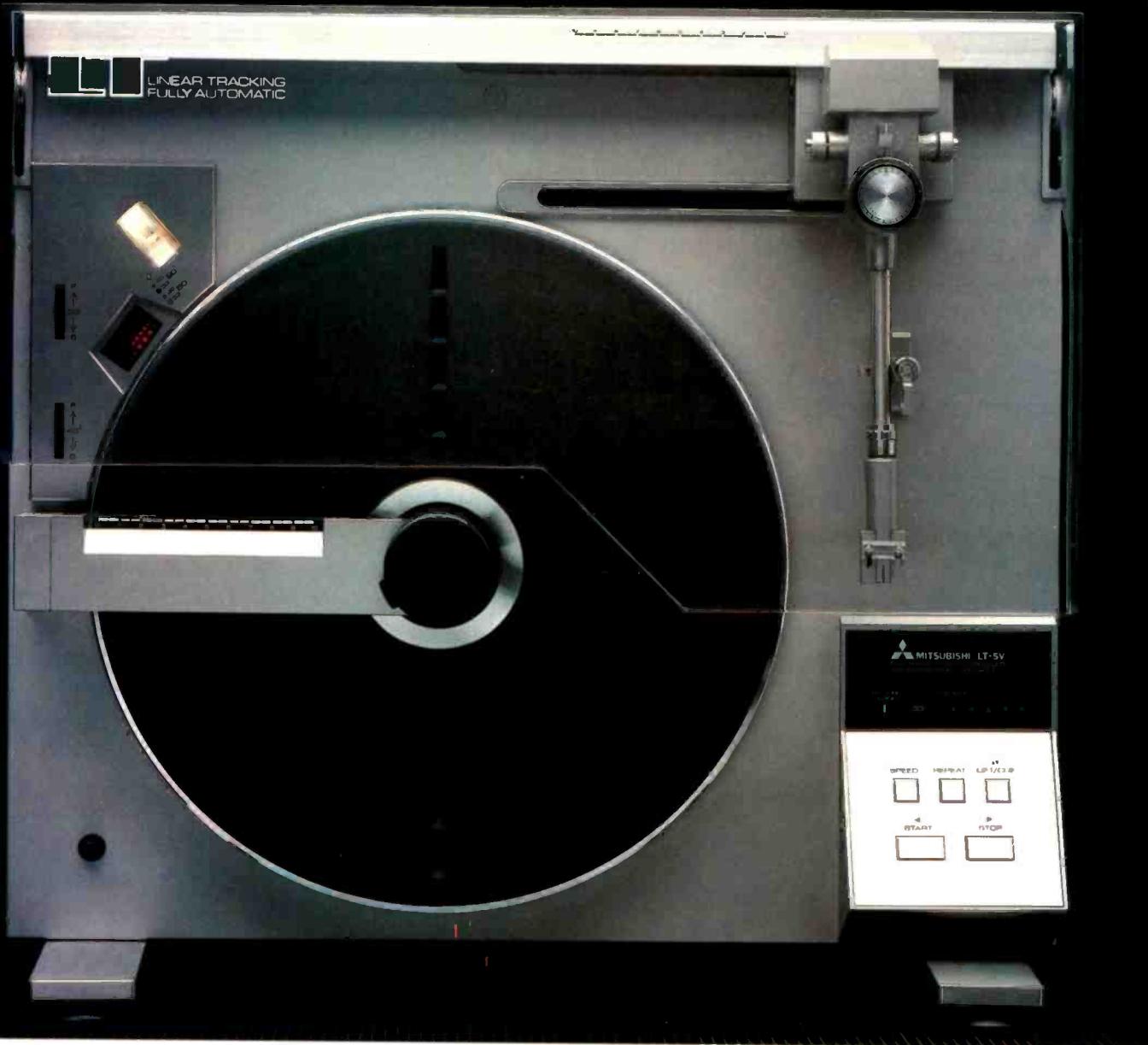
Built into the pre-amp section as well is a moving coil amplifier. A simple push of a switch and you're ready to use a high-grade moving coil cartridge without any other external unit.

Meanwhile, back in the amplifier, cross-over and switching distortion is reduced to negligible levels by a linear switching circuit.

All of which might be considered a rather ambitious array of features for a receiver.

But the reason we include them is simple enough. If it says Mitsubishi, it's got to sound like a Mitsubishi.





Mitsubishi Has Its Ups.

Our famous turntable, the linear tracking LT-5V, rather than rest on all fours, instead stands erect. A pose that is not only striking, but eminently sensible.

Our LT-20, on the other hand, is quite content to take things lying down. In the conventional manner.

But, as it too features linear tracking, it too plays straight with your records. Thus delivering performance

that is decidedly beyond the conventional.

As to which stance you choose, it's partly a question of the depth of your shelf space. And partly a question of your propensity for showmanship. For the LT-5V makes a good show as well as an exceedingly good sound.

Both our upstanding LT-5V and our reclining LT-20 have many extraordinary features in common.

Foremost is the linear tracking mechanism itself. Much superior to ordinary pivoted tone arms in that it plays your records in the same straight line across the disc as the cutting head which made the original master recording.

Tracking errors and unbalanced side forces are therefore virtually non-existent. The result is a dramatic decrease in distortion and false coloration. And a strik-

And Downs.

ingly audible improvement in stereo definition and real-life presence.

Our tone-arm transport system is notably simple, solid and reliable. The entire assembly is moved with smooth precision, guided to exquisitely fine tolerances by two sensitive optical sensors which hold the arm on a perfect tangent course across the disc.

All functions of our LT

turntables are controlled by an extremely advanced Large Scale Integrated (LSI) circuit—one of those fabled "computers on a chip." Lift-up, cueing, starting, and return are all push-button operations.

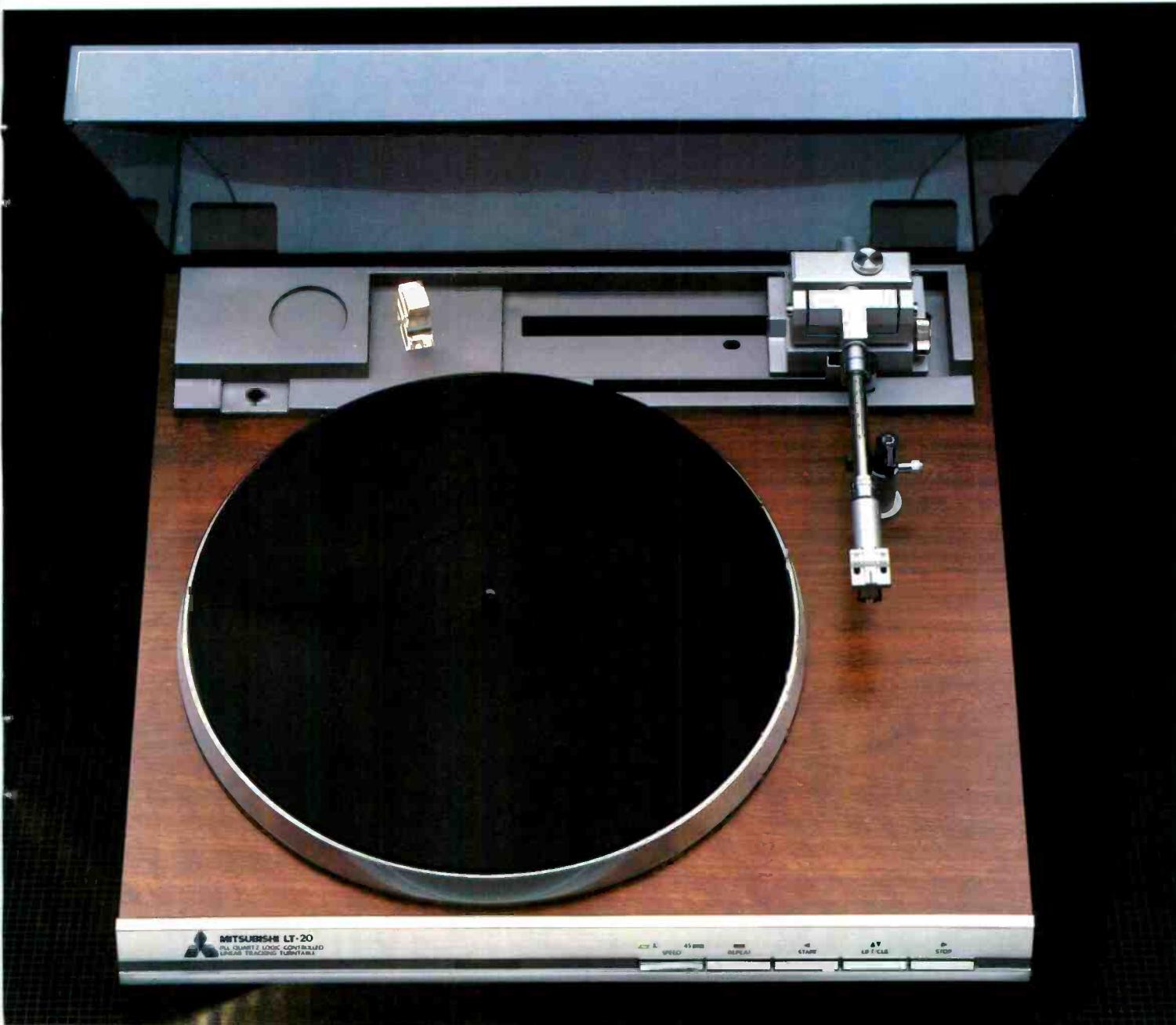
An optical prism device perceives the size of your record and automatically sets the appropriate speed— $33\frac{1}{3}$ or 45.

On the LT-20, that speed is maintained with chrono-

graphic accuracy by a Quartz Crystal Oscillator linked to its direct-drive motor through a frequency generator.

Now, what with computer controls, quartz oscillators, and optically monitored linear tracking, it may seem that we've gone to rather incredible lengths to spin a disc properly.

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Excellence in the extreme can be intimidating. It smacks of drastic expense, requirements of a highly technical education, and tastes on the remote fringes of esoterica.

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While Mitsubishi's are technologically sophisticated, this is translated into simplicity of operation.

And while our standards of performance are demanding in every sense, we've never thought it wise to build equipment whose superiority could be appreciated only by laboratory instruments.

In short, if fine quality sound and finely made equipment mean something to you, then you should investigate Mitsubishi. It may well be that you can't afford to own the best of everything. But if you buy a Mitsubishi, you'll own the best of something.

MITSUBISHI
AUDIO SYSTEMS



Are You Ready For A Mitsubishi?

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., ± 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 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.

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.

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 ± 15 dB, but may be as low as ± 7 dB or as great as ± 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.

Deemphasis: 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 (μV) 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 ($10^{-15} W$), equivalent to 0.55 μV 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.

Antiskating: 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*.

GLOSSARY...

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 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 33½ 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 Noise Reduction: A family of compressor/expander noise-reduction systems. Dolby A, the most elaborate was designed for professional tape recorders and gives 10 dB of noise reduction. Dolby B, also able to reduce noise by 10 dB is a lower-cost system designed for cassette recorders and sometimes used in FM broadcasting as well. Dolby C, the newest system, is also meant for cassette decks but gives 20 dB of noise reduction.

(continued on page 28.)

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GLOSSARY...

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 3½ 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.

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, stan-

dard 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

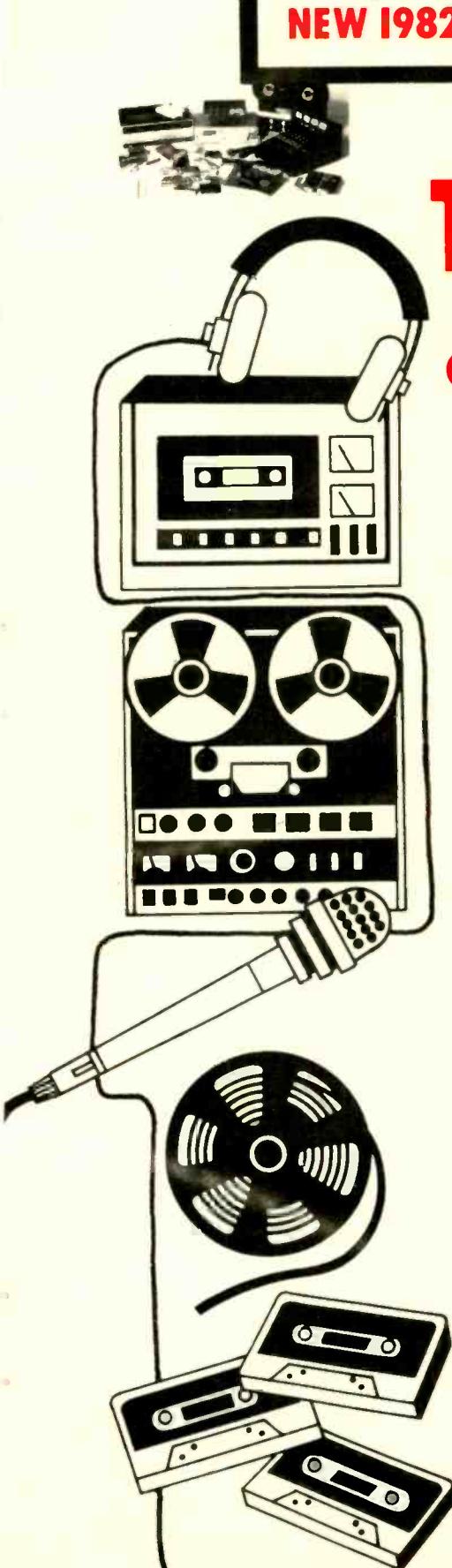


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AUDIO-KARE, Div. of Hammond Industries, Inc.
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AUDIO PRO, Intersearch, Inc.
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AUDIO RESEARCH CORPORATION
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AUDIOSOURCE
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AUDIO STATIC by H & H INTERNATIONAL
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B.E.S., Bertagni Electroacoustic Systems, Inc.
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CERWIN-VEGA INC.
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CLARKE SYSTEMS, INC.
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CLARION CORP. OF AMERICA
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CONCEPT
1601 West Glenlake Ave., Itasca, IL 60143

(continued on page 34.)



Exciting stereo receivers!

In the tradition of their acclaimed Professional Series NIKKO AUDIO stereo receivers.

The NR-1000, for example, is truly a magnificent instrument. Just some of its features include: quartz synthesized digital tuning, six AM & six FM preset selectors + Auto-Tune, DC power amplifier for wide frequency response, two-color LED power level displays, unique Moving Magnet & Moving

Coil cartridge capability, illuminated pushbutton program selectors, full electronic protection circuitry . . . and more.

The NR-800, NR-700 and NR-500 share many of these features, offering superior performance where power requirements are less.

Plus, in the NIKKO AUDIO tradition, these exciting receivers are very affordable—and all are backed by a transferable three-year parts and labor limited warranty.

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CIRCLE NO. 32 ON READER SERVICE CARD

NIKKO AUDIO

DIRECTORY OF MANUFACTURERS

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DB SYSTEMS
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DECCA, Rocolco, Inc.
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1005 Washington St., Grafton, WI 53024

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NY 10553

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110 Shawmut Rd., Canton, MA 02021

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400 South Wyman St., Rockford, IL 61101

GENERAL ELECTRIC
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GENERAL SOUND
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Box 221, Plainview, NY 11803

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60176

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KEF, Intratec Div., British Aerospace, Inc.
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Washington, DC 20041

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Macy St., Los Angeles, CA 90012

MIDLAND INTERNATIONAL CORP.
1690 N. Topping, Kansas City, MO 64120

(continued on page 183.)

Introducing a scientific first in stereophone transducer technology and sound.



New Koss PRO/4X

By combining a solid state piezoelectric tweeter with a rare earth moving coil transducer, Koss engineers have created a new first in hybrid transducer technology. It's the new Koss PRO/4x. And it's the ultimate in both stereophone listening and the Sound of Koss.

The PRO/4x's unique tweeter design features a piezoelectric bimorph disc mounted to an acrylic impregnated cone. Incredibly, the piezoelectric's bimorph disc moves the cone at frequencies from 2,500 Hz to over 40,000 Hz! That means you'll hear the full timbre of each musical instrument without the harmonic distortion found in headphones that peak out at much lower frequencies.



New Koss Hybrid element

But if the PRO/4x's tweeter can give you a spine tingling thrill, wait till you hear the bass and mid-range. The new PRO/4x features a powerful, yet extremely light, samarium cobalt magnet moving coil transducer that reproduces a deep rich bass and a clean, clear midrange. In addition, the PRO/4x's unique floating earplate and Pneumalite[®] earcushion design conforms automatically to the optimum position for both comfort and maximum seal around the ear for bass performance to below audibility.

Visit your Koss dealer so you can hear how Koss has extended the state-of-the-art in stereophone sound and design with the new PRO/4x. Once you've heard it, you'll never settle for less.

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KOSS[®] Stereophones / Loudspeakers / Digital Delay Systems
hearing is believing[®]

INTERNATIONAL HEADQUARTERS: 4129 N. Port Washington Avenue, Milwaukee, Wisconsin 53212 Facilities: Canada, England, France, Germany, Ireland
CIRCLE NO. 26 ON READER SERVICE CARD



Torn between Super-A, quartz tuning and graphic EQ? Why not get all three.

Choosing a receiver can be a painful experience. Especially when the features you want most don't all happen to come in the same package.

But now there's the JVC R-S77. With the sound purity of Super-A amplification. The precision and beauty of quartz tuning. And the flexible control of JVC's 5-band S.E.A. graphic equalizer.

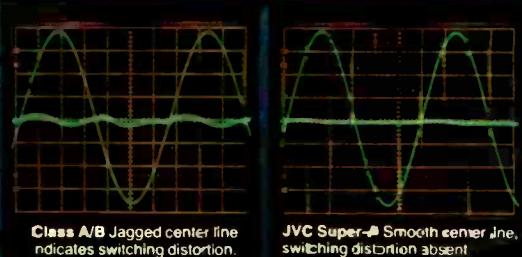
By completely eliminating switching distortion, Super-A allows the subtle details of musical overtones to come through cleanly and naturally. Add a powerful 60 watts per channel into 8 ohms, from 20 Hz to 20 kHz, with no more than 0.005% total harmonic distortion and you have an amplifier that sounds convincingly live on all kinds of music, loud or soft, simple or complex.

The quartz tuning system zeros in perfectly on every FM and AM station. So distortion and noise remain infinitesimally low. And with our pushbutton memory system, you can tune in any of six FM or six AM stations instantly.

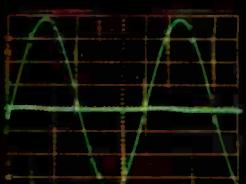
With our built-in S.E.A. graphic equalizer, you can give your system a thousand sound personalities. From flat-accurate for classical. To

bright and punchy for popular. Or anything in between. You can also fix speaker quirks and room acoustics.

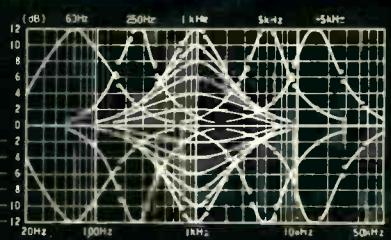
Beauty. Convenience. Control. And stunning sound quality. Now you don't have to choose which you want. Because you get them all in the JVC R-S77 receiver.



Class A/B Jagged center line indicates switching distortion.



JVC Super-A Smooth center line, switching distortion absent.



S.E.A. graphic equalizer permits independent control of 5 tonal regions.

JVC
US JVC CORP.

41 Slater Dr., Elmwood Park, NJ 07407
JVC CANADA INC., Scarborough, Ont.

1

RECEIVERS

ADVENT

350 FM-Stereo Receiver

FM-stereo receiver with upgraded FET phono preamp with infrasonic filter, 50-watt/channel amplifier designed to drive complex loads, and phase-locked-loop (PLL) FM-stereo tuner. Output power 50 W/ch continuous, 20-20,000 Hz at 0.04% THD, 70 W/ch into 4 ohms at no more than 0.06% THD; dynamic headroom 1.85 dB into 8 ohms, 2.0 dB into 4 ohms; damping factor greater than 40; S/N ratio -73 dB phono, -95 dB AUX and tape. Tuner section: sensitivity 12.1 dBf (2.2 μ V) mono; alternate-channel selectivity greater than 60 dB; stereo separation greater than 60 dB; S/N ratio at 65 dBf greater than 70 dB mono, 67 dB stereo; capture ratio less than 2 dB. Features include AUX inputs, tape-1/2 inputs/outputs; tape copy 1 to 2; loudness control; tone control; stereo/mono switch; speaker A and B outputs; backlit FM dial..... \$600

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 μ 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 $\frac{1}{2}$ " H \times 15 $\frac{1}{8}$ " W \times 9 $\frac{1}{8}$ " D (plus 1 $\frac{1}{4}$ " for knob clearance)..... \$300

Advent Response™ Systems

Response 450S Receiving System

Three-piece FM receiving system includes low-silhouette receiver with slide-rule dial, two Advent 402 two-way acoustic-suspension speaker systems. Receiver includes phono, tape, and AUX inputs, tape outputs..... \$300

Response 420S Receiving System

Three-piece FM receiving system includes low-silhouette receiver with slide-rule dial, two Advent 402 acoustic-suspension speaker systems. Receiver includes phono, tape, and AUX inputs, tape outputs..... \$260

Response 410M Receiving System

Two-piece mono FM receiving system consisting of high-quality mono FM receiver and one Advent 402 two-way acoustic-suspension speaker system. Receiver contains tuner-out/AUX-in capability, separate bass and treble controls..... \$150

AIWA

AX-550U Stereo Receiver

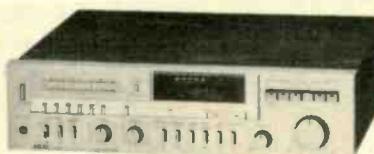
AM/FM-stereo PLL synthesizer mini receiver with 10-station AM/FM preset tuning system, LED tuned-station display, and 7-point LED

peak-power displays. Features electronic one-touch tuning; auto-search tuning; FM muting; loudness control; click-stop bass/treble control; loudness control; signal-strength meter (uses peak-power display LEDs); tape/source monitor; up/down scan tuning. Output power 20 W/channel continuous, both channels driven into 8 ohms at 0.1% THD; damping factor 30; input sensitivity/impedance 2.5 mV/47k ohms phono, 150 mV/47k ohms AUX and tape; S/N ratio 80 dB phono, 95 dB AUX and tape; FM usable sensitivity 2 μ V; 50-dB quieting sensitivity 4 μ V mono, 42 μ V stereo; S/N ratio mono/stereo 75/70 dB; THD mono/stereo 0.1%/0.3%; capture ratio 1.5 dB; alternate-channel selectivity 70 dB; 9 $\frac{1}{2}$ " W \times 11 $\frac{1}{16}$ " D \times 2 $\frac{1}{16}$ " H..... \$400

AKAI

AA-R51 AM/FM-Stereo Receiver

Digital AM/FM-stereo receiver with 62-W/channel minimum rms output power into 8 ohms, 20-20,000 Hz at no more than 0.04% THD. Features AM/FM-auto/manual digital synthesized tuning with 6 AM and 6 FM preset



capability; direct-coupled (dc) amplifier; bass and treble controls; LED power meters; FM Dolby deemphasis switch; tone-defeat switch; tape-monitor loop; tape dubbing capability; subsonic filter. FM sensitivity 1.7 μ V; selectivity greater than 70 dB; 17.3" W \times 16.5" D \times 4.6" H; 26.5 lb..... \$550

AA-R41 AM/FM-Stereo Receiver

Digital AM/FM-stereo receiver with 50-W/channel output power minimum rms into 8 ohms at no more than 0.04% THD. Features AM/FM-auto/manual digitally synthesized tuning with 6 AM and 6 FM station preset capability; direct-coupled (dc) amplifier; LED power meters; FM Dolby deemphasis switch; tone-defeat switch; tape-monitor loop; tape dubbing capability; subsonic filter; loudness control. FM sensitivity 1.8 μ V; selectivity greater than 70 dB; 17.3" W \times 16.5" D \times 4.6" H; 24 lb... \$500

AA-R31 AM/FM-Stereo Receiver

Digital AM/FM-stereo receiver with 38-W/channel minimum rms output power into 8 ohms, 20-20,000 Hz at no more than 0.06% THD. Features digital tuning display; LED power meters; servo-lock tuning; FM Dolby deemphasis switch; tone-defeat switch; detented tone and volume controls; tape-monitor loop; tape dubbing capability; 2-position speaker selector; 2 ac convenience outlets. FM sensitivity 1.9 μ V; selectivity greater than 60 dB; 17.3" W \times 14.6" D \times 4.1" H; 20.9 lb..... \$400

AA-R21. Similar to AA-R31 except output power is 26 W/channel..... \$350

AUDIO PRO by INTERSEARCH

TA-150 Stereo Receiver

AM-FM stereo receiver with interlock, memory, and logic functions performed by microcomputer. 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); phone 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); 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 $\frac{1}{2}$ " H \times 19 $\frac{1}{2}$ " W \times 10 $\frac{1}{4}$ " D..... \$1295

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

BANG & OLUFSEN

Beomaster 8000 FM-Stereo Receiver

Remote-controlled FM-stereo receiver with 9 FM station presets. Remote control of station selection, phono, tape 1, and tape 2, tape dub to Beocord 8002 stereo cassette deck, volume control, active filters, bass, treble, and loudness controls. Features adjustable signal levels for tape 1, tape 2, and phono; tape/line-monitoring facilities for 3-head decks. Output power 150 W rms into 4 ohms with 2 dB headroom, 100 W rms into 8 ohms with 1 dB headroom at 0.05% THD and 0.1% IM distortion; amplifier S/N greater than 75 dB phono; channel separation greater than 55 dB; FM usable sensitivity on stereo with auto channel blend 15 dBf (1.5 μ V) into 75 ohms; FM S/N ratio greater than 76/72 dB mono/stereo at 65 dBf; channel separation greater than 40 dB, 100-10,000 Hz..... \$2400

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 distortion 0.1%; input sensitivity/impedance. 2.2 mV/470,000 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; sidebar 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 23 3/4" W x 11" D..... \$925

Beomaster 2400 FM Receiver

Low-slung design with no visible knobs; electronic touch-control switching; preset FM station capability. 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 μ V) mono; 50-dB quieting sensitivity 38.9 dBf (47 μ V) stereo, 18.5 dBf (4.6 μ V) mono; S/N 70 dB mono, 66 dB stereo at 65 dBf; frequency response 30-15,000 Hz ±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 3/4" D..... \$695

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%; wideband damping factor 45; input sensitivity/impedance 0.55 mV/47k ohms (phono), 55 mV/470k ohms (tape); phono overload 77 mV; frequency response ±1.5 dB from 20-20,000 Hz (phono RIAA), 20-20,000 Hz ±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 μ V/75 ohms; 50-dB quieting at 75 ohms 2.6 μ V (mono), 24 μ V (stereo); S/N 70 dB (mono), 68 dB (stereo); frequency response 30-15,000 Hz ±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 3/4" H x 23 3/4" W x 9 1/2" D..... \$525

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); ±low- and high-frequency slide controls with wide/narrow low-frequency range selector, source and room compensation selector, and low filter; balance slide control; nar-row/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 ±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 μ V) mono, 15.6 dBf (3.3 μ V) stereo; 50-dB quieting 16.11 dBf (3.5 μ V) mono, 36.11 dBf (35 μ 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 μ V/m (ferrite antenna), 25 μ 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 1/2" H x 20 1/2" W x 16 1/2" D..... \$920

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

RS280 Stereo Receiver

Studio Standard quartz PLL digital synthesizer AM/FM-stereo receiver with digital-numeric frequency display and built-in 5-band graphic equalizer. Features fluorescent frequency display; stepped LED signal-strength meter; FM muting; auto-search tuning; 6 AM/6 FM station presets; manual tuning; high and low filters; LED indicators for FM stereo, memory, tuning, and functions. Output power 100 W/channel min rms into 8 ohms, 20-20,000 Hz at no more than 0.05% THD and IM distortion; damping factor greater than 50; preamp frequency response 20-20,000 Hz ±0.5 dB all inputs; input sensitivity/impedance 2.5 mV (MM), 150 mV (tape mon., AUX)/50k ohms (all); phone overload 200 mV; preamp output 150 mV/5k ohms; EQ center frequencies 50, 250, 1k, 4.5k, 15k Hz ±10 dB; subsonic filter response 12 dB/octave below 20 Hz; high filter response 6 dB/octave above 6 kHz; hum and noise 70 dB phono, 90 dB AUX and tape monitors 1 and 2, IHF A weighted, inputs shorted; FM usable sensitivity mono/stereo 10.77 dBf (1.9 μ V)/18.45 dBf (4.6 μ V); S/N ratio mono/stereo 70/65 dB; capture ratio 0.8 dB; alternate-channel selectivity 70 dB ±400 kHz; image/spurious/i-f-response ratios 75/85/90 dB; AM-suppression ratio 50 dB; THD 0.3% mono and stereo; stereo separation at 100/1k/10k Hz 40/40/35 dB; frequency response 20-15,000 Hz ±0.5 dB; AM sensitivity 300 μ V/m; selectivity 40 dB at ±10 kHz; S/N ratio 55 dB; power consumption 420 W; 17 1/2" W x 16" D x 5 1/2" H; 36 lb..... \$630

RS2010 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 ±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 μ V) mono; 50-dB quieting 13.15 dBf (2.5 μ V) mono, 35.9 dBf (34 μ 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

RS270 Stereo Receiver

Amp section: features Class A-II non-switching dc circuitry; dual nine-LED power level indicator display; 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 μ 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 μ V) mono; 50-dB quieting 14.14 dBf (2.8 μ V) mono, 36.78 dBf (38 μ 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..... \$530

RS250. Similar to RS270 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 μ V).....\$430

RS240. Similar to RS250 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

RS245 Stereo Receiver

Studio Standard AM/FM-stereo digital synthesizer receiver with built-in 5-band graphic equalizer and fluorescent digital-numeric frequency display. Features quartz PLL synthesizer; 6 AM/6 FM presets plus auto-search tuning; FM muting; 4-position speakers-selector switch. Output power 30 W/channel min rms into 8 ohms, 20,000 Hz at no more than 0.07% THD and IM distortion; damping factor greater than 40; preamp frequency response 20-20,000 Hz \pm 0.5 dB; input sensitivity/impedance 2.5 mV phono, 150 mV tape monitor and AUX/50k ohms (all); phono overload 130 mV; output voltage/impedance 150 mV/5k ohms; EQ center frequencies 50, 250, 1k, 5.4k, 15k Hz \pm 10 dB; hum and noise phono/AUX and tape monitors 70/90 dB IHF A weighted, inputs shorted; FM usable sensitivity mono/stereo 14.14 dBf (2.8 μ V)/21.45 dBf (6.5 μ V); S/N ratio mono/stereo 66/62 dB; capture ratio 0.8 dB; image/spurious/i-f-response ratios 50/70/90 dB; AM-suppression ratio 55 dB; THD mono/stereo 0.2%/0.4%; alternate-channel selectivity 60 dB at \pm 400 kHz; stereo separation at 100/1k/10k Hz 35/45/30 dB;

frequency response 20-15,000 Hz \pm 1 dB; AM sensitivity 300 μ V/m; S/N ratio 50 dB; selectivity 40 dB at \pm 10 kHz; power consumption 190 W; 17 $\frac{1}{2}$ "W \times 11 $\frac{1}{4}$ "D \times 5 $\frac{1}{4}$ "H; 18 lb\$430

RS 2004A Stereo Receiver

Amp 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 μ V) mono; 50-dB quieting 14.14 dBf (2.8 μ V) mono, 36.78 dBf (38 μ 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 distortion; 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 μ V) mono; 50-dB quieting 14.14 dBf (2.8 μ V) mono, 36.78 dBf (38 μ 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

RS220 Stereo Receiver

Studio Standard AM/FM-stereo receiver with slide-rule tuning dial and built-in 5-band graphic equalizer. Features 5-LED signal-strength display; detented volume and balance controls; flywheel tuning system; loudness-contour switch; tape-monitor switch. Output power 20 W/channel min rms into 8 ohms, 20-20,000 Hz at 0.03% THD and IM distortion; damping factor greater than 40; preamp frequency response 20-20,000 Hz \pm 1 dB; input sensitivity/impedance 2.5 mV phono, 150 mV tape monitor and AUX/50k ohms (all); phono overload 130 mV; EQ center frequencies 50, 250, 1k, 4.5k, 15 kHz \pm 10 dB; hum and noise 70 dB phono, 90 dB AUX and tape monitors IHF A wtd, inputs shorted; FM usable sensitivity mono/stereo 14.14 dBf (2.8 μ V)/21.45 dBf (6.5 μ V); S/N ratio mono/stereo 66/62 dB; capture ratio 1 dB; alternate-channel selectivity 60 dB at \pm 400 kHz; image/spurious/i-f-response ratios 70/85/100 dB; AM-suppression ratio 55 dB; THD mono/stereo 0.2%/0.4%; stereo separation at 100/1k/10k Hz 35/40/30 dB; frequency response 20-15,000 Hz \pm 1 dB; AM sensitivity 300 μ V/m; selectivity 40 dB at \pm 10 kHz; S/N ratio 55 dB; power consumption 120 W; 17 $\frac{1}{2}$ "W \times 11 $\frac{1}{4}$ "D \times 4 $\frac{1}{8}$ "H; 16 lb\$250

RS-110 Stereo Receiver

Studio Standard AM/FM-stereo receiver with slide-rule dial. Features PLL MPX FM decoder; pushbutton switches for AM, FM, tape/source, loudness-contour selection; 3-LED tuning eye on dial pointer for center-of-channel tuning; bass and treble controls; 4-position speakers selector. Output power 20 W/channel min rms into 8 ohms, 20-20,000 Hz at no more than 0.1% THD and IM distortion; damping factor greater than 20; preamp frequency response 20-20,000 Hz \pm 1.5 dB; input sensitivities

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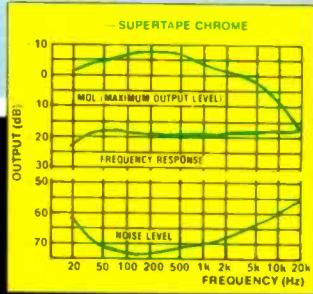
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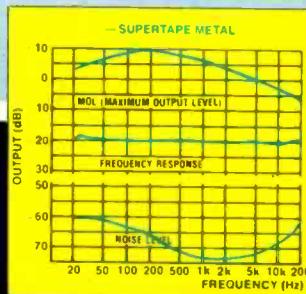
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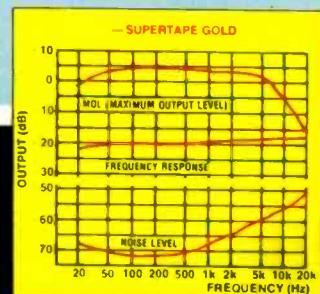
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HARMAN/KARDON

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 65V/ μ 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 μ V); 50-dB quieting 14.8 dBf (3.0 μ V) mono, 36.1 dBf (35 μ 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 \$630

hk580i Stereo Receiver

AM/FM-stereo receiver with 45-watt/channel output power into 8 ohms at less than 0.03% THD. Amplifier section: frequency response less than 1-150,000 Hz +0/-3 dB; slew rate 65 V/ μ sec; hum and noise A weighted -85 dB phono, -90 dB AUX and residual; input sensitivity 2.2 mV phono, 150 mV AUX; phono input impedance 47k ohms; RIAA equalization \pm 0.75 dB. Tuner section: usable FM sensitivity 1.8 μ V mono; FM S/N 75 dB; capture ratio 1.0 dB; alternate-channel selectivity 75 dB; i-f rejection 100 dB; AM rejection 65 dB; stereo separation 48 dB at 1 kHz; FM THD 0.1% stereo at 1 kHz, 100% modulation; AM sensitivity 300 μ V/m; AM image rejection 55 dB; 17 $\frac{1}{2}$ "W \times 14 $\frac{1}{2}$ "D \times 4 $\frac{3}{16}$ "H; 24 lb \$530

hk740 Stereo Receiver

AM/FM-stereo receiver with 30-watt/channel output power into 8 ohms at less than 0.08% THD, 20-20,000 ohms. Amplifier section: frequency response less than 3-120,000 Hz +0/-3 dB at rated output; slew rate 60 V/ μ sec; hum and noise A weighted -83 dB phono, -85 dB AUX and residual; input sensitivity phono/AUX 2.4 mV/170 mV; phono input impedance 47k ohms; RIAA equalization \pm 1 dB. Tuner section: usable FM sensitivity 2.2 μ V; FM noise -70 dB; capture ratio 1.3 dB; alternate-channel selectivity 67 dB; i-f rejection 90 dB; stereo separation 40 dB at 1 kHz; FM THD 0.2% at 1 kHz, 100% modulation in stereo; AM sensitivity 350 μ V/m; AM image rejection 50 dB; 15.2" W \times 12.6" D \times 2.9" H; 17.5 lb \$350

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/ μ 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 μ V); 50-dB quieting 15.1 dBf (3.1 μ V) mono, 36.6 dBf (37 μ 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 \$350

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 μ V); 50-dB quieting 15.6 dBf (3.3 μ V) mono, 37.7 dBf (42 μ 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 \$330

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 40V/ μ sec; S/N 85 dB(phono), 95 dB (aux.); phono overload 100 mV. FM tuner: mono sensitivity 13.2 dBf (2.5 μ V); 50-dB quieting 16.1 dBf (3.5 μ V) mono, 38.3 dBf (45 μ 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 \$250

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 μ V) mono, 16.1 dBf (35 μ V) stereo; 50-dB quieting 13.2 dBf (2.5 μ V) mono, 36.1 dBf (36 μ V) stereo; 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 \times 21 $\frac{1}{2}$ " W \times 16 $\frac{1}{2}$ " D.

AR-1650S Kit. Silver faceplate \$770
AR-1650B. Ebony faceplate \$790

AR-1515 Stereo Receiver

Features digital readout and signal-strength and center-tune meters; secondary controls con-

cealed 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 μ V for 30 dB quieting; capture ratio 1.3 dB. 6 $\frac{3}{16}$ " H \times 21 $\frac{1}{2}$ " W \times 15" D.

Kit. \$400
AD-1504. Dolby FM module (kit) \$50

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 μ V (16.1 dBf); capture ratio 1.5 dB. Features two tuning meters, stereo indicator, main and remote speaker selection, and headphone jack. 4 $\frac{3}{4}$ " H \times 20" W \times 13 $\frac{1}{2}$ " 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 \pm 1 dB; FM response 20-15,000 Hz \pm 1 dB; channel separation 40 dB typically, 35 dB min.; sensitivity 2 μ V; capture ratio 2 dB; pre-assembled FM tuner section; stereo light; headphone jack; 3 $\frac{1}{2}$ " H \times 17" W \times 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

HTA-5000 Tuner/Amplifier

Tuner-amplifier combination with AM/FM digital PLL synthesizer tuner, programmable 12-station memory, and super-linear circuit. Features automatic band scanning; fluorescent frequency display; 5-LED signal strength indicator; all-electronic front end; low-noise EQ amp; speaker-protection circuit; speaker selector. Amplifier section: 50 watts/channel min rms, both channels driven into 8 ohms, 20-20,000 Hz with 0.03% THD; input sensitivity/impedance 2.5 mV/47k ohms phono, 150 mV/47k ohms tape, AUX; phono overload 140 mV; S/N 72 dB phono. FM section: usable sensitivity 10.8 dBf mono; S/N at 65 dBf 75 dB mono, 72 dB stereo; frequency response 30-15,000 Hz \pm 1 dB; 17 $\frac{1}{2}$ " \times 4 $\frac{3}{16}$ " \times 14 $\frac{1}{16}$ "; 16 lb 15 oz. \$420

HTA-4000 Tuner/Amplifier

Tuner-amplifier combination with AM/FM digital PLL synthesizer tuner, programmable 12-station preset memory, and super-linear circuit. Features automatic band scanning; fluorescent frequency display; 5-LED power meter; 3-LED signal-strength indicator; all-electronic front end; low-noise EQ amp. Amplifier section: 35 watts/channel min rms both channels driven into 8

ohms, 20-20,000 Hz with 0.03% THD; input sensitivity/impedance 2.5 mV/47k ohms phono, 150 mV/47k ohms tape, AUX; S/N 72 dB phono. FM section: usable sensitivity 10.8 dBf mono; S/N at 65 dBf 75 dB mono, 72 dB stereo; frequency response 30-15,000 Hz; 17 $\frac{1}{2}$ " x 4 $\frac{3}{16}$ " x 14 $\frac{1}{16}$ "; 15 lb 13 oz...\$360

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); phone overload 250 mV; S/N (IHF A) 75 dB (phono), 90 dB (AUX. and tape); frequency response ±0.5 dB from 30-15,000 Hz (phono), 10-40,000 Hz ±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 μV (mono), 5.5 μV (stereo); 50-dB quieting 3.9 μV (mono), 39 μV S/N 74 dB (mono), 68 dB (stereo); frequency response 30-12,000 Hz ±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 $\frac{1}{4}$ "H x 18 $\frac{1}{8}$ "W x 14 $\frac{1}{16}$ "D..\$460

SR-5010 Stereo Receiver

Amplifier section: features Class G power amplifier with LED, incorporating primary and standby amp; low-distortion OCL circuitry; five-LED power meter indicator; two-way speaker switching; bass, treble, and balance controls; subsonic filter; loudness switch; source/tape monitor switch; 25 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% 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 25 at 1000 Hz, 8 ohms; input sensitivity/impedance 3 mV/50k ohms (phono), 150 mV/36k ohms (tape); phone overload 130 mV; frequency response ±0.2 dB from 20-20,000 Hz (phono RIAA), 15-30,000 Hz ±2 dB (tape); S/N (IHF A) 75 dB (phono), 92 dB (tape). Tuner: features PLL FM multiplex IC and FM front end with low-noise FET and 3-gang variable tuning capacitor; FM mode/muting switch; dual five-LED signal-strength indicators. FM section: IHF usable sensitivity 1.9 μV (mono); 50-dB quieting 3.9 μV (mono), 39 μV (stereo); S/N 75 dB (mono), 70 dB (stereo); frequency response 30-12,000 Hz ±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 $\frac{1}{8}$ "H x 17 $\frac{1}{8}$ "W x 11 $\frac{1}{16}$ "D.....\$250

SR-2000 Stereo Receiver

Slim-line AM/FM-stereo receiver with vector tuning system and AM loop antenna. Features 3-stage IC differential amplification and 2 ceramic filters in i-f stage; PLL IC in FM MPX stage; loudness-contour switch; tape-monitor switch; illuminated power switch. Amplifier section: 25 watts/channel min rms, both channels driven into 8 ohms, 20-20,000 Hz with 0.3% THD; input sensitivity/impedance 3 mV/50k ohms phono, 150 mV/30k ohms tape; phono over-

load 120 mV; S/N 70 dB phono. FM section: usable sensitivity 10.8 dBf mono; S/N at 65 dBf 74 dB mono, 68 dB stereo; frequency response 30-12,000 Hz ±2 dB; 17 $\frac{1}{2}$ " x 3 $\frac{1}{4}$ " x 11 $\frac{1}{16}$ "; 12.1 lb.....\$200

JVC

R-S77 Stereo Receiver

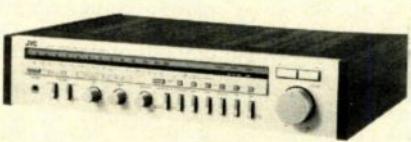
Amplifier section: features Class A-B configuration; dual 8-LED power level indicators; two-speaker switching; five-band SEA graphic equalizer with center frequency slide controls at 40, 250, 1000, 5000, and 15,000 Hz, ±12 dB boost or cut, and SEA record; high filter switch; two-deck tape monitoring/dubbing; 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); phone overload 180 mV at 1000 Hz; frequency response ±0.5 dB from 20-20,000 Hz (phono RIAA), 20-20,000 Hz +0/-0.2 dB (AUX and tape); S/N (IHF A) 88 dB (phono), 98 dB (AUX, tape); frequency response 0.5 dB from 20-20,000 Hz (phono RIAA), 15-50,000 Hz ±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 μV (75 ohms); 50-dB quieting 3.0 μV (mono), 40 μV (stereo); S/N (IHF weighted) 80 dB (mono), 70 dB (stereo); frequency response 30-15,000 Hz +0.5/-0.8 dB; THD at 1000 Hz 0.15% (mono), 0.3% (stereo); alternate channel selectivity 80 dB ±400 kHz; capture ratio 1.0 dB; image rejection 78 dB; i-f rejection 100 dB; stereo separation 45 dB at 1000 Hz; 4 $\frac{1}{4}$ "H x 17 $\frac{1}{4}$ "W x 13 $\frac{1}{16}$ "D.....\$530

R-S33 Stereo Receiver

AM/FM-stereo receiver with analog tuning system, built-in SEA graphic equalizer, and dual 8-LED output-level indicators. Features 3-gang variable capacitor and FET r-f amplifier in tuner; 5-LED signal-strength meter; LED tuning indicators; SEA record capability; high-filter switch; 2-deck tape monitoring/dubbing. Output power 40 W/channel continuous, both channels driven into 8 ohms, 20-20,000 Hz at 0.009% THD; damping factor 45 at 8 ohms; input sensitivity/impedance 2.4 mV/47k ohms phono, 150 mV/50k ohms AUX, tape; frequency response 20-20,000 Hz +0/-0.2 dB; S/N ratio 88 dB phono, 98 dB AUX, tape; FM usable sensitivity 0.9 μV, 75-ohm input; 50-dB quieting sensitivity 3.0 μV mono, 45 μV stereo; S/N 82 dB mono, 70 dB stereo; image rejection 60 dB; 17 $\frac{1}{2}$ "W x 13 $\frac{1}{16}$ "D x 4 $\frac{1}{4}$ "H.....\$345

R-2X Stereo Receiver

AM/FM-stereo receiver with quartz-PLL synthesized tuning system, 6 AM/6 FM station preset tuning, and OCL power amplifier. Features random-access and scan up/down tuning; auto/manual tuning; 3-LED center-channel tuning indicator; 4-LED peak-power indicators; triple



power protection circuits to safeguard receiver and speaker systems. Output power 40 W/channel min rms into 8 ohms, 20-20,000 Hz at no more than 0.03% THD; S/N ratio 74 dB phono, 91 dB tape; FM usable sensitivity 10.3 dBf mono, 38.3 dBf stereo; distortion at

100/6 kHz 0.015% mono, 0.3% stereo/0.4% mono, 0.8% stereo; S/N ratio 83 dB mono, 75 dB stereo; FM frequency response 30-12,500 Hz +0.5/-3.0 dB; AM sensitivity 200 μV/m bar antenna, 40 μV external antenna; selectivity 40 dB ±10 kHz; S/N ratio 50 dB; 17 $\frac{1}{2}$ "W x 13 $\frac{1}{16}$ "D x 3 $\frac{1}{4}$ "H; 13 lb.....\$330

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); phone overload 100 mV at 1000 Hz; S/N (IHF A) 88 dB (phono), 98 dB (AUX, tape); frequency response ±0.5 dB from 20-20,000 Hz (phono RIAA), 15-50,000 Hz ±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 μV (75 ohms); 50-dB quieting 3.0 μV (mono), 45 μV (stereo); S/N (IHF A) 88 dB (phono), 98 dB (aux. and tape); 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 ±400 kHz; capture ratio 1.0 dB; image rejection 60 dB; i-f rejection 90 dB; stereo separation 45 dB at 1000 Hz; 4 $\frac{1}{4}$ "H x 17 $\frac{1}{4}$ "W x 13 $\frac{1}{16}$ "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/μsec; rise time 0.95 μsec; 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, midrange, 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 ±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 μV; mono 50-dB quieting 2.8 μV, stereo 35 μV; S/N 83 dB (mono), 76 dB (stereo); THD 0.07% (mono), 0.08% (stereo); frequency response 20-15,000 Hz ±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 μV/m. Walnut veneer cabinet and silver panel; 6 $\frac{1}{2}$ "H x 23 $\frac{1}{16}$ "W x 18 $\frac{1}{16}$ "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/ μ sec; rise time 0.9 μ sec; damping factor 85 from 20-20,000 Hz. Preamp: features bass, midrange, 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 μ V; mono 50-dB quieting sensitivity 3.2 μ V, stereo 38 μ 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 μ V/m. Simulated walnut grain cabinet; 6 $\frac{1}{4}$ "H \times 22 $\frac{1}{2}$ "W \times 16 $\frac{1}{16}$ "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/ μ sec; rise time 1.0 μ 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 μ V; 50-dB quieting 3.5 μ V (mono), 35 μ 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 $\frac{1}{4}$ "H \times 21 $\frac{1}{16}$ "W \times 14 $\frac{1}{8}$ "D..... \$719

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/ μ sec; rise time 1.0 μ 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 μ V; 50-dB quieting 3.5 μ V (mono), 40 μ 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 $\frac{1}{4}$ "H \times 19 $\frac{1}{2}$ "W \times 13 $\frac{1}{2}$ "D..... \$549

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..... \$435

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 μ 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 μ V, mono 50-dB quieting 4.0 μ V, stereo S/N 71 dB, frequency response 30-15,000 Hz \pm 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 $\frac{1}{16}$ "H \times 18 $\frac{1}{2}$ "W \times 11 $\frac{1}{2}$ "D..... \$349

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 \pm 1/-2 dB..... \$259

KR-80 Stereo Receiver

Power amp: features dc circuitry, five-LED pow-

er 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; mic mixing; 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 μ V; 50-dB quieting 3.5 μ V (mono), 40 μ 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 $\frac{1}{16}$ "H \times 17 $\frac{1}{16}$ "W \times 13 $\frac{1}{2}$ "D..... \$399

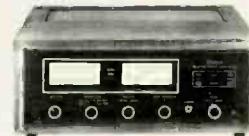
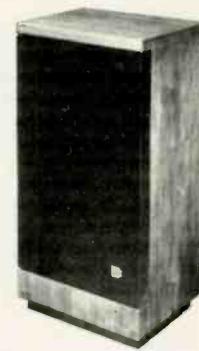
LUXMAN

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)

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86 dB (phono), 106 dB (tuner, aux., tape). FM tuner section: features wide/narrow i-f bandwidth selector; IHF usable sensitivity 1.8 μ V (mono); S/N 75 dB; frequency response 30-15,000 Hz \pm 1 dB; AM suppression 62 dB. 7 $\frac{1}{2}$ " H \times 19 $\frac{1}{2}$ " W \times 16" D..... \$750

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 dB; alternate channel selectivity 65 dB \pm 400 kHz; stereo separation 45 dB at 1000 Hz; 6 $\frac{1}{2}$ " H \times 19 $\frac{1}{2}$ " W \times 12 $\frac{1}{2}$ " D..... \$550

R-3045. Similar to R-3055 except 45 W/ch under same conditions..... \$550

MARANTZ

SR 8100 Stereo Receiver

Quartz-lock frequency synthesizer AM/FM-stereo receiver with built-in 5-band stereo equalizer and digital-numeric tuned-frequency display. Features LED amplifier status indicators; gold-plated input and output jacks; EQ output jack; PLL with pilot canceller; 2 tape monitors with tape copy; low and high filters; dual-gate



MOSFET FM front end; electronic input selector; 8 AM/8 FM station presets; programmable triple timer system; electronic station search; EQ defeat and loudness switches. Output power 90 W/channel continuous average into 4 ohms, 20-20,000 Hz at 0.06% THD and IM distortion; frequency response 10-70,000 Hz \pm 1.2 dB; input sensitivity 2.7 mV phono, 160 mV high-level; phono overload 225 mV at 1 kHz; S/N ratio 90 dB phono, 98 dB high-level; phono RIAA deviation \pm 0.2 dB 20-20,000 Hz; FM 50-dB quieting sensitivity mono/stereo 13.2/36.1 dBf; S/N ratio 50 dB; frequency response 30-15,000 Hz \pm 0.5 dB; mono, -1.0 dB stereo; THD 0.15% mono, 0.2% stereo at 1 kHz; capture ratio 1.0 dB at 65 dB; alternate-channel selectivity 65 dB; stereo separation 45 dB; 16 $\frac{1}{2}$ " W \times 15 $\frac{1}{2}$ " D \times 4 $\frac{1}{2}$ " H..... \$750

SR 7100 Stereo Receiver

Quartz-locked synthesizer AM/FM-stereo receiver with dc amplifier, 8 AM/8 FM station presets, and digital-numeric tuned-frequency display. Features LED power output display; gold-plated input and output connectors; 2-speaker switching; bass, midrange, and treble controls; 8 kHz filter; 2 tape monitors with tape copy; loudness switch; Computuner™ programmable computer system; automatic on; triple timer system; dual tuning meters; dual-gate MOSFET FM front end; PLL with pilot canceller; up/down station scanning; auto/manual tuning. Output power 63 W/channel, both chan-

nels driven into 4 ohms, 20-20,000 Hz at 0.06% THD and IM distortion; damping factor 50 at 20 Hz; input sensitivity/impedance 2.7 mV/47k ohms phono, 160 mV/20k ohms high-level; phono overload 225 mV; S/N ratio 90 dB phono, 98 dB high-level A wtd; frequency response 20-20,000 Hz \pm 0.2 dB phono RIAA, 10-70,000 Hz \pm 1.0 dB high-level; FM IHF usable sensitivity 1.7 μ V mono; 50-dB quieting sensitivity mono/stereo 2.5/35 μ V; S/N ratio 0.15% mono, 0.2% stereo at 1 kHz; frequency response 30-15,000 Hz \pm 0.5 dB mono, -1.0 dB stereo; 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 1 kHz; AM usable sensitivity 20 μ V IHF; S/N ratio 50 dB; 16 $\frac{1}{2}$ " W \times 15 $\frac{1}{2}$ " D \times 4 $\frac{1}{2}$ " H..... \$600

SR 5100 Stereo Receiver

AM/FM-stereo receiver with slide-rule dial, LED output power-level display, and separate bass, midrange, and treble controls. Features LED signal-strength meters; 2-speakers switching; low filter; 2 tape monitors with tape copy; loudness switch; gold-plated input and output connectors; PLL FM stereo demodulator; FM muting; LED tuning meter; dual-gate MOSFET FM front end; Gyro Touch™ tuning. Output power 65 W/channel continuous into 4 ohms, 20-20,000 Hz at 0.09% THD and IM distortion; frequency response 20-20,000 Hz \pm 0.3 dB; input sensitivity 2.7 mV phono, 150 mV high-level; phono overload 130 mV; S/N ratio 88 dB phono, 98 dB high-level; IHF FM 50-dB quieting sensitivity mono/stereo 13.9/36.8 dBf; S/N ratio 50 dB; frequency response 30-15,000 Hz \pm 0.5 dB mono, -1.0 dB; THD mono/stereo 0.15%/0.25% at 1 kHz; capture ratio 1.0 dB; alternate-channel selectivity 65 dB; stereo separation 45 dB at 1 kHz; 18 $\frac{1}{2}$ " W \times 13 $\frac{1}{2}$ " D \times 5 $\frac{1}{2}$ " H; 22 lb..... \$430

SR 3100. Similar to SR 5100 but less low filter and has only one-way dubbing. Output power 44 W/channel; frequency response is at \pm 0.5 dB phono RIAA, 15-50,000 Hz \pm 1.2 dB high-level; S/N 98 dB phono; phono overload 110 mV; IHF FM usable sensitivity 10.8 dBf 1.8 μ V; 50-dB quieting sensitivity mono/stereo 14.2 dBf (2.8 μ V)/37.3 dBf (40 μ V); S/N ratio 50 dB; i-f rejection 90 dB balanced input; 18 $\frac{1}{2}$ " W \times 12 $\frac{1}{2}$ " D \times 5 $\frac{1}{2}$ " H; 17.6 lb..... \$350

MITSUBISHI

DA-R35 Stereo Receiver

Features linear switching circuit, two-speaker relay switching; built-in moving-coil head amp; separate bass and treble controls with tone defeat; 12 dB/oct high and low filters; separate record selector with 2 tape deck duplication; 10-position loudness compensation; peak level indicators; input selector with separate MM and MC switch. Output power 85 W/ch continuous into 8 ohms, 20-20,000 Hz with 0.01% THD and IM dist.; dynamic headroom 2.0 dB; amplifier damping factor 130; input sensitivity/impedance 0.1 mV/100 ohms (phono MC), 2.5 mV/47k ohms (phono MM); 150 mV/47k ohms (AUX, tape); phono overload 20 mV (MC), 250 mV (MM); frequency response \pm 0.3 dB 20-20,000 Hz (phono RIAA), +0.2/-2.0 dB 1-100 kHz (AUX, tape); THD 0.005% (phono MM, MC, AUX, tape); S/N (new IHF) 75 dB (phono MC), 77 dB (phono MM); 106 dB (AUX, tape). Tuner: features quartz synthesizer tuning with fluorescent digital display; 7 AM/7 FM memory presets; auto scan tuning; LED signal-strength and multipath



indicator; auto i-f and high-blend with LED indicators and manual defeat. FM section: usable sensitivity 1.8 μ V (10.3 dBf); S/N 84 dB mono, 79 dB stereo; frequency response \pm 0.5 dB 50-15,000 Hz; THD mono 0.08%, stereo 0.10% (wide), 0.3% mono, 0.5% stereo (narrow); capture ratio 1.5 dB; alternate-channel selectivity 55 dB (wide), 75 dB (narrow); image rejection 85 dB; i-f and spurious rejection 100 dB; separation at 1000 Hz 46 dB; 5 $\frac{1}{2}$ " H \times 18 $\frac{1}{2}$ " W \times 17 $\frac{1}{2}$ " D..... \$650

DA-R25. Similar to DA-R35 minus peak level indicators; amp output 60 W/ch. Under same conditions with 0.015% THD and IM dist. \$540

DA-R15. Similar to DA-R25 minus moving-coil head amp; phono overload 140 mV; amp output 45 W/ch; damping factor 100..... \$440

DA-R8. Similar to DA-R15 minus high filter; amp output 35 W/ch under same conditions; damping factor 40; conventional FM section; touch-sensitive lock tuning; mute and band selector switches; alternate-channel selectivity 65 dB; THD 0.08% mono, 0.2% stereo..... \$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/ μ 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 μ V (mono); 50-dB quieting 3.0 μ V (mono), 35 μ 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 μ V. 5.9" H \times 19.3" W \times 14.2" D..... \$648

7045. Similar to 7080 except 45 W/ch continuous with 0.05% THD and IM dist.; slew rate 20 V/ μ 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/ μ sec; damping factor 50; 4.7" H \times 16.5" W \times 9.5" D..... \$348

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..... \$245

(continued on page 46)

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-
Preamplifier** 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-preamplifier 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-D45 turntable with its low 0.025% 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-57 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

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SANSUI ELECTRIC CO., LTD., Tokyo, Japan
CIRCLE NO. 39 ON READER SERVICE CARD

1

RECEIVERS

NIKKO

NR-1000 Stereo Receiver

AM/FM-stereo receiver with quartz synthesized digital tuning, memory presets, and auto-tune feature. Features electronic protection circuits; dual 14-LED output-power level displays; tone-



defeat switch; adjustable FM muting control on rear panel; built-in head amp. Output power 65 W/channel min rms into 8 ohms, both channels driven 20-20,000 Hz at no more than 0.03% THD; FM usable sensitivity 1.9 μ V.....\$620

NR-800 Stereo Receiver

AM/FM-stereo receiver with quartz synthesized digital tuning, station memory presets, and auto-tune feature. Features electronic protection circuits; dual 10-section LED power level displays; 2-stage FM muting. Output power 50 W/channel min rms into 8 ohms, both channels driven 20-20,000 Hz at no more than 0.04% THD; FM usable sensitivity 2 μ V.....\$520

NR-700 Stereo Receiver

AM/FM-stereo receiver with quartz synthesized digital tuning, station memory presets, auto tuning. Output power 40 W/channel min rms into 8 ohms, both channels driven 20-20,000 Hz at no more than 0.04% THD; FM usable sensitivity 2 μ V.....\$430

NR-500 Stereo Receiver

AM/FM-stereo receiver with servo-lock tuning. Features circuit-breaker protection; 2 tape monitors with dubbing capability; subsonic filter. Output power 35 W/channel min rms into 8 ohms, both channels driven 20-20,000 Hz at no more than 0.05% THD; FM usable sensitivity 2 μ V.....\$330

NR-300 Stereo Receiver

AM/FM-stereo receiver. Features circuit-breaker protection; 2 tape monitors with dubbing capability. Output power 25 W/channel min rms into 8 ohms, both channels driven 20-20,000 Hz at no more than 0.08% THD; FM usable sensitivity 2 μ V.....\$250

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 dis.; 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- μ sec de-emphasis, and EPS selectors; LED quartz-locked and tuned indicators. FM section: usable sensitivity 9.8 dB (1.7 μ 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.....\$720

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 μ V) and capture ratio 1.4

dB.....\$520

TX-6000 Stereo Receiver

AM/FM-stereo receiver with dual super-servo and linear switching amplifier circuitry, full speaker and amplifier protection, IC-based dc circuitry. Features 24-LED peak-power indicators; transient killer circuitry; quartz synthesizer tuning; digital frequency display; permanent memory; 7 AM and 7 FM station presets; manual up/down tuning; 75- μ sec Dolby deemphasis switch; 5-LED signal-strength indicator; FM muting switch. Output power 70 W/channel min rms into 8 ohms, both channels driven 20-20,000 Hz at no more than 0.03% THD and IM distortion; damping factor 50 at 8 ohms; FM usable sensitivity 17.2 dBf (1.8 μ V) in stereo; capture ratio 1.4 dB; image rejection 80 dB; i-f rejection 90 dB; stereo separation 40 dB at 1 kHz.....\$550

TX-4000 Stereo Tuner

AM/FM-stereo receiver with same features as TX-6000 above except only 6 AM and 6 FM presets, 20-LED peak-power output display. Output power 45 W/channel min rms into 8 ohms, both channels driven 20-20,000 Hz at no more than 0.04% THD and IM distortion; damping factor 40 at 8 ohms; FM usable sensitivity 19.2 dBf (5 μ V) in stereo; capture ratio 1.5 dB; image rejection 45 dB; i-f rejection 85 dB; stereo separation 40 dB at 1 kHz.....\$420

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 at 1000 Hz, 8 ohms. FM tuner section: usable sensitivity 11.2 dBf (2 μ 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.....\$360

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 dis.; damping factor 35 at 1000 Hz, 8 ohms. Tuner: features servo-locked tuning with LED locked and tuned indicators; signal-strength meter; FM section: usable sensitivity 12.0 dBf (2.2 μ 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.....\$260

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 fre-



quency 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.....\$450

OPTONICA

SA-5407 Digital-Synthesizer Receiver

Digital synthesizer AM/FM-stereo receiver with zero-switching amplifier and built-in moving-coil head amp. Features 5 AM and 5 FM station presets; automatic/manual scanning; FM air check; 5-LED signal-strength meter; digital tuned-frequency display; FM stereo muting; A/B/A + B speaker switching; 41-step detented volume control; subsonic filter; 2 tape monitors and indicators; tape dubbing with indicators; high filter; 2 ac convenience outlets. Output power 60 W/channel into 8 ohms at 0.04% THD; FM usable sensitivity 1.9 μ V/\$500
SA-5207. Similar to SA-5407 but 40-W/channel



output power; no moving-coil head amp, high filter\$400
SA-5107. Similar to SA-5207 but 25 W/channel output power; single tape monitor; no station presets, auto/manual scanning, FM air check, subsonic filter.....\$250

JC PENNEY

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; \pm 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 \pm 1 dB; RIAA phono deviation \pm 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 \times 19.44" W \times 13" D.....\$480
MCS 3249. Similar to 3260 but with 45 W/channel output; no audio mute, X10 power indicator, MPX/low filter; 19" W \times 12 $\frac{1}{4}$ " D \times 5 $\frac{1}{4}$ " H\$380

MCS 3236 Stereo Receiver

AM/FM-stereo receiver with dual 10-LED output-power indicators. Features 2-speaker system switching; bass, treble, and midrange controls; low and high filters; FM mute; AM/FM/phono/AUX/tape 1/tape 2 input selector; loudness switch. Output power 35 W/channel into 8 ohms, 20-20,000 Hz at 0.04% THD. Tuner section features digital frequency display; flywheel tuning; target tuning; signal-strength meter. 17" W \times 10" D \times 4" H\$330
MCS 3226. Similar to 3236 except has 25-W/channel output power; does not include midrange control, tape 2, and frequency display\$250

PIONEER

SX-7 Stereo Receiver

Computer-controlled AM/FM-stereo digital quartz-synthesizer receiver with 8 AM/8 FM



presets, built-in time-of-day clock, and nonswitching dc amplifier design. Features digital-numeric tuned-frequency display; separate bass, treble, and balance controls; up/down scan tuning; output-power display; tape monitor/copy functions; audio and FM muting; subsonic filter; loudness switch; switching for two pairs of speaker system. Output power 60 W/channel continuous average into 8 ohms, 20-20,000 Hz at no more than 0.009% THD; FM usable sensitivity 10.3 dBf (0.9 μ V) mono; capture ratio 1.0 dB; alternate-channel selectivity 80 dB; FM S/N ratio mono/stereo 80/75 dB at 85 dBf; $16\frac{1}{16}$ "W \times $14\frac{1}{16}$ "D \times $5\frac{1}{8}$ "H; 21 lb 3 oz.....\$550
SX-6. Similar to SX-7 except 45 W/channel output power; 18 lb 12 oz.....\$425

SX-5 Stereo Receiver

Computer-controlled AM/FM-stereo digital quartz synthesizer receiver with 6 AM/6 FM station presets, digital-numeric tuned-frequency display, and nonswitching power amplifier. Features separate bass, treble, balance, and volume controls; up/down scan tuning; loudness, tape, tuning/station-scan, mono/mute-off and loudness switches; front-panel headphones jack. Output power 30 W/channel minimum continuous average into 8 ohms, 20-20,000 Hz at no more than 0.02% THD. FM usable sensitivity 11.2 dBf (1.0 μ V) mono, 75-ohm input; capture ratio 1.0 dB; alternate-channel selectivity 60 dB; FM S/N ratio mono/stereo 75/70 dB at 85-dBf input; $16\frac{1}{16}$ "W \times $12\frac{1}{16}$ "D \times $3\frac{1}{8}$ "H; 12 lb 13 oz.....\$325
SX-4. Similar to SX-5 except output power 20 W/channel; no tuning/station-scan switch; 11 lb 7 oz.....\$250

REALISTIC

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-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 $13\frac{1}{4}$ "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 $12\frac{1}{8}$ 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-530 Stereo Receiver

Amplifier: 16 W/ch continuous into 8 ohms from 20,000,000 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 $17\frac{1}{8}$ "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 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 (phone 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; $5\frac{1}{4}$ "H \times $16\frac{1}{4}$ "W \times 12 D.....\$160

ROTEL

RX-1010 Synthesizer Receiver

AM/FM-stereo quartz synthesizer receiver with 7 AM and 7 FM station presets, direct-coupled OCL complementary output circuits, and multipath switch and indicators. Features tape 1 to tape 2 dubbing; microprocessor control of preset section; auto/manual scan tuning; LED signal-strength and center-tuning indicators; FM PLL MPX circuit; moment hold switch to hold a station for a few seconds during auto scanning; memory back-up facility to prevent accidental erasure of station presets when power is interrupted; digital-numeric tuned-station display. Output power 60 W/channel min rms, both channels driven into 8 ohms, 20-20,000 Hz at no more than 0.03% THD; IM distortion 0.3%; S/N ratio phono/tuner, tape 75/95 dB; FM usable sensitivity mono/stereo 10.8 dBf (1.9 μ V)/36.0 dBf (35 μ V); capture ratio 1.0 dB;



alternate-channel selectivity 70 dB; S/N 75 dB mono; distortion 0.15% mono at 1 kHz, 65 dBf; stereo separation 45 dB at 1 kHz; image-response ratio 80 dB; AM sensitivity 200 μ V/m; $16\frac{1}{16}$ "W \times $13\frac{1}{2}$ "D \times $4\frac{1}{8}$ "H; 19.8 lb.....\$495

RX-700 Synthesizer Receiver

AM/FM-stereo quartz PLL synthesizer receiver with 5 AM and 5 FM presets using microcomputer circuit, auto/manual scan tuning, and facilities for remote control. Features connections for two pairs of speaker systems; tape 1 to tape 2 dubbing; 2 tape-monitor switches; digital-numeric frequency display; LED tuning indication; loudness switch; memory back-up. Output power 35 W/channel, both channels driven into 8 ohms, 20-20,000 Hz at no more than 0.08 THD and IM distortion; S/N ratio phono/tuner, tape 75/90 dB; FM usable sensitivity mono/stereo 11.2 dBf (2.0 μ V)/37.2 dBf (40 μ V); capture ratio 1.0 dB; alternate-channel selectivity 60 dB; S/N 75 dB mono; distortion 0.3% mono, 1 kHz at 65 dBf; stereo separation 40 dB at 1 kHz; image-response ratio 80 dB; AM sensitivity 300 μ V/m; $16\frac{1}{16}$ "W \times $13\frac{1}{2}$ "D \times $4\frac{1}{8}$ "H; 17.8 lb.....\$360

RX-550 AM/FM-Stereo Receiver

Stereo receiver with Darlington direct-coupled (dc) OCL complementary output circuit, advanced FM PLL MPX circuit, and servo lock for accurate tuning. Features split power supply; direct-coupled NF phono equalizer; FM dual-gate MOSFET front end; FM i-f section with IC, 3-phase linear ceramic filters, and quadrature detector; digital fluorescent tuned-station display; tape 1 to tape 2 dubbing; subsonic and loudness switches; peak-power LED indicators. Output power 40 W/channel both channels driven into 8 ohms, 20-20,000 Hz at no more than 0.08% THD and IM distortion; S/N ratio phono/tuner, tape 80/90 dB; FM usable sensitivity mono/stereo 11.2 dBf (1.8 μ V)/36.5 dBf (35 μ V); capture ratio 1.5 dB; alternate-





There is a truism in the marketplace that few of us ever question. It says, you get what you pay for. What it really implies is that more is better, but it will cost you, brother.

In the area of high fidelity stereo equipment, that point of view has been raised to dizzying new heights. And somewhere between the state-of-the-art technology and the state-of-shock prices a sense of value seems to be slipping away.

We're not playing that game at Sherwood.

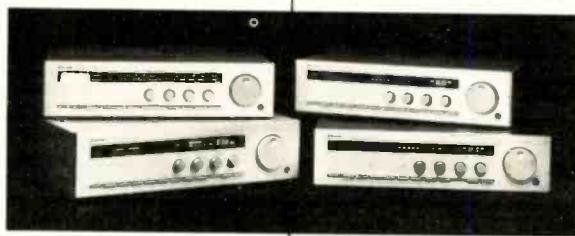
Our design engineers employ proven advances in technology to produce superb sound. Our marketing department helps keep them on planet earth. It's a philosophy that works. Sherwood equipment has been quietly snapped up by critical listeners for more than twenty-five years.

Changes
are not welcome.
Improvements are.

Early this year a panel of scrupulously honest reviewers examined fifteen mid-priced stereo receivers. The results were published in

America's leading consumer research magazine. Sherwood was rated #1, ahead of names that are probably more familiar to you. We tell you that reluctantly,

because a short time later we discontinued that superb model. And replaced it with the S-9600CP. It's better. It's more



Sherwood: For fuss

powerful, more flexible, and has more finesse. And thankfully the price has barely budged.

The new S-9600CP offers 60 watts RMS per channel with no more than 0.05% total harmonic distortion. Its clean power you can monitor with an eight segment logarithmic LED power output display for each channel.

The pre-amplifier has a discrete FET phono section for better cartridge performance, three position tape monitor and copy switching for two decks, and filters and treble squelch to weed out the undesirable little glitches that pop up in even the best of records.

The FM section is remarkable for its clarity and convenience: 1.6uV usable

sensitivity, 75dB stereo signal-to-noise ratio.

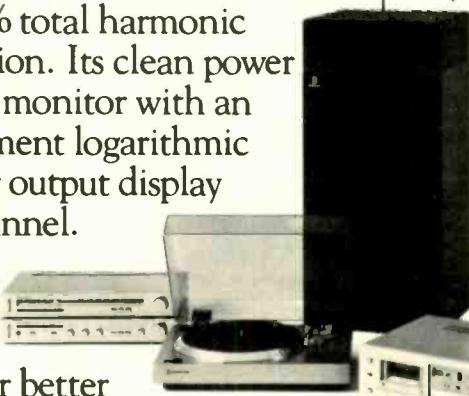
There is

Touch Lock Tuning that senses your touch and automatically fine tunes and locks in your station selection. And a digital display shows the frequencies in 0.1 MHz increments.

The S-9600CP is a statistician's dream. But more importantly, it's for music lovers. Whether your choice is Polonaises or the Pretenders.

We don't brag. We swear.

Most manufacturers spot check a few



We certify our specs.

receivers along the assembly line.

Sherwood is different. We test each and every one. Then we fine tune it and check it again. And again. Until with the final tweaking we know that every receiver not only meets our published specifications, but in most cases exceeds them. You can tell, because the key test results are recorded on a certificate and affixed to that unit's shipping carton. That's Certified Performance — our guarantee that what you see is what you get.

Now more than ever.

Careful production means limited production. But this year we do offer a greater variety of Sherwood than we have in the past.

In addition to our receivers and separates, there are two superb tuners, three semi-automatic turntables, and three metal capable cassette decks. We also have three new speaker systems, from a two-way bookshelf to a three-way time compensated floor system.

Our apologies in advance.

Sherwood just isn't as easy to find as you might like. Well engineered stereo equipment that draws critical praise and remains reasonably priced doesn't hang around on shelves gathering dust.

For the moment, we don't have an acceptable solution. So hurry.



17107 Kingsview Avenue, Carson, CA 90746

pots and skinflints.

1

RECEIVERS

channel selectivity 55 dB; S/N ratio 78 dB mono; distortion 0.1% mono at 1 kHz, 65 dB; stereo separation 45 dB at 1 kHz; image-response ratio 50 dB; AM sensitivity 200 μ V/m; 16 $\frac{1}{16}$ "W \times 13 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "H; 18.9 lb \$315

RX-400 AM/FM-Stereo Receiver

Economy receiver with Darlington direct-coupled (dc) OCL complementary output circuit; linear dial scale, and FM PLL MPX circuit. Features split power supply; direct-coupled NF phono equalizer; FM high-gain, low-noise front end; 5-LED signal-strength indicator; large flywheel tuning mechanism; AM ferrite-bar antenna; speakers A, B, A + B selectors. Output power 20 W/channel, both channels driven into 8 ohms, 20-20,000 Hz at no more than 0.08% THD and IM distortion; S/N ratio phono/tuner, tape 82/90 dB; FM usable sensitivity mono/stereo 10.8 dBf (1.9 μ V)/39 dBf (48 μ V); capture ratio 1.5 dB; alternate-channel selectivity 52 dB; S/N ratio 75 dB mono; distortion 0.15% mono at 1 kHz, 65 dB; image-response ratio 50 dB; AM sensitivity 250 μ V/m; 16 $\frac{1}{16}$ "W \times 13 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "H; 11.9 lb \$200

Micro Component Series

RMX-82 Stereo Receiver

Mini-size AM/FM-stereo receiver. Features fluorescent digital tuned-frequency display; LED tuning indication; 5-LED peak-power display for both channels; MOSFET FM front end; FM PLL MPX circuit. Output power 25 W/channel continuous into 8 ohms, both channels driven, 20-20,000 Hz at 0.08% THD; IM distortion 0.05%; damping factor 35; phono overload 185 mV; hum and noise phono (MM)/tuner, AUX, tape 75/95 dB; FM usable sensitivity mono/stereo 11.2 dBf (2.0 μ V)/36 dBf; S/N ratio 65 dB stereo; harmonic distortion 0.25% stereo; capture ratio 1.0 dB; stereo separation 45 dB at 1 kHz; image/spurious-response ratio 40/70 dB; FM i-f response ratio 75 dB; AM-suppression ratio 55 dB; alternate-channel selectivity 60 dB; AM sensitivity 200 μ V/m; 11" W \times 8 $\frac{1}{2}$ "D \times 4 $\frac{2}{3}$ "H; 9.9 lb \$270

RMX-70 Tuner Amplifier

AM/FM-stereo tuner amplifier (receiver) with compact dimensions for restricted areas. Features illuminate dial pointer; MOSFET FM front end; FM PLL MPX circuit; tape-monitor switch. Output power 40 W/channel min rms, both channels driven into 8 ohms (24 W/ch into 4 ohms), 20-20,000 Hz at no more than 0.08% THD; S/N ratio 90 dB (tuner, tape in); FM sensitivity mono/stereo 11.2 dBf (2.0 μ V)/41 dBf; distortion 0.3% mono at 1 kHz; capture ratio 1.0 dB, AM sensitivity 300 μ V/m; 11" W \times 10 $\frac{3}{4}$ "D \times 4 $\frac{1}{2}$ "H; 10.2 lb \$180

SAE

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 0.5% 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) \$849

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

9900Z Digital Stereo Receiver

Digital dc stereo receiver with 8-band spectrum analyzer and LED peak-power displays. Features touch volume control; 2-way tape dubbing; 3-system speaker selection; switchable loudness and high-frequency filters; quartz PLL synthesizer tuner; 6 AM/6 FM station presets; wide/narrow i-f bandwidth selector; digital-numeric frequency display. Output power from dc servo amplifier 160 W/channel continuous



into 8 ohms, 20-20,000 Hz at no more than 0.015% THD; S/N 80 dB phono; FM sensitivity 10.3 dBf (1.8 μ V); S/N ratio 80 dB mono, 76 dB stereo; alternate-channel selectivity 75 dB \$1130

8900ZDB. Similar to 9900Z except output power 125 W/channel at 0.03% THD; includes Dolby-B FM decoder \$900

7900Z. Similar to 9900Z except 100 W/channel at 0.02% THD \$780

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 dBf; 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 \$500

3900Z. Similar to 4900Z minus LED peak power level indicators; 40 W/ch with 0.05% THD \$400

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 dBf; 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

SANYO

PLUS 130 Stereo Receiver

Power amp section: features full input-to-output dc coupling; fluid convection radiator; dual power supplies; dual 12-LED peak power display with XO.01, XO.1, and X1 power display range selector; three-way speaker switching; 130 W/ch continuous, both channels driven into 4 or 8 ohms from 20-20,000 Hz with 0.025% THD; frequency response 7-100,000 Hz +0/-1 dB; S/N 110 dB (IHF A); damping factor 50; slew rate 150 V/ μ sec. Preamp section: features pre-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 μ 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 bar graph display; narrow/wide i-f bandwidth selector; quartz locked, 25- μ sec, FM deemphasis, and FM muting switches; FM usable sensitivity 1.8 μ V (mono); 50-dB quieting 2.6 μ V (mono), 36 μ 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) \$650

PLUS 75 Stereo Receiver

Power amp: features dc, all-differential drive, and IC circuitry; dual seven-LED peak power bar graph display with XO.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/ μ 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 μ 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 μ V (mono); 50-dB quieting 2.7 μ V (mono), 39 μ 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 μ V/m (ferrite, external antenna). 5 $\frac{1}{2}$ "H \times 18 $\frac{1}{2}$ "W \times 11 $\frac{1}{2}$ "D \$450

2033 Stereo Receiver

Power amp: features complementary Darlington-

connected circuitry; dual power meters; two-way speaker switching; four-way output protection; 33 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 filter; two-deck tape monitoring and dubbing; input selector with LEDs; input sensitivity/impedance 150 mV/4.7k ohms (AUX. and tape), 2.5 mV (phono); frequency response \pm 0.4 dB from 30-15,000 Hz (phono RIAA), 20-40,000 Hz \pm 0.1 dB (AUX. and tape); phono overload 130 mV/S/N (IHF A); 73 dB (phono), 90 dB (AUX. and tape). Tuner: features dual-gate MOS FET front end; signal-strength and tuning meters; mode/FM muting switch; FM usable sensitivity 1.9 μ 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 $\frac{1}{4}$ "W \times 10 $\frac{1}{8}$ "D.....\$230

H.H. SCOTT

385R AM/FM Digital Stereo Receiver

85 watts min. continuous rms output power per channel into 8 ohms, 20-20,000 Hz at no more than 0.03% THD. Digital frequency readout; function indicator lights; dual fluorescent power meters; subsonic and high filters; MM/MC phono preamps; full electronic protection; 2 tape monitors with 2-way copy; wood side panels; can drive three sets of speaker systems.....\$600

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- μ 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- μ 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

SHERWOOD

S-9600CP Stereo Receiver

AM/FM-stereo receiver with Touch Lock Tuning™, fluorescent digital-numeric tuned-frequency display, and dual logarithmic-response 8-segment LED output-power indicators. Features all discrete circuitry throughout audio signal path; 2 linear-phase ceramic i-f filters and double-tuned FM quadrature detector; differential FET input sections in phono preamp and power amp; 40-kHz input buffer filter to power amp; ultra low bass EQ; separate bass, midrange, and treble controls with in/out switch; noise filter; switching for two pairs of speaker systems; mute/servo switch; tape 1 and tape 2 monitoring and dubbing facilities; loudness switch; fluorescent signal-strength and center-tune displays. Output power 60 W/channel min rms, both channels driven into 8 ohms, 20-20,000 Hz at 0.05% THD and IM distortion; clipping/dynamic headroom 1.18/1.54 dB; damping factor 45 at 8 ohms; input sensitivity at 1 kHz for rated output 2.5 mV phono, 150 mV AUX and tape; phono overload 200 mV; frequency response 5-40,000 Hz \pm 0.5 dB; S/N ratio phono/AUX 96/100 dB A wt; FM usable/50-dB quieting sensitivity 1.6 μ V/38 μ V stereo, 3.0 μ V mono; stereo separation 45 dB at 1 kHz; capture ratio 1.2 dB; alternate-channel selectivity 70 dB; image/i-f/spurious response ratios 80/75/85 dB; frequency response 30-15,000 Hz \pm 0.5 dB; THD 1% stereo and mono; AM sensitivity 300 μ V/m; selectivity 25 dB; S/N ratio 45 dB at 30% modulation; ac accessory outlets 1 switched, 1 unswitched; 17 $\frac{1}{2}$ "W \times 15 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "H.....\$480

S-9400CP. Similar to S-9600CP except no tape-dub function, midrange control, second tape-monitor facility; output power 50 W/channel; clipping/dynamic headroom 1.4/1.76 dB; phono overload 160 mV; FM usable sensitivity/mono 50-dB quieting sensitivity 1.7 μ V/3.2 μ V; FM stereo THD 0.15%; 21.5 lb.....\$400

S-9300CP. Similar to S-9400CP except has abbreviated 5-point LED signal-strength and 3-point LED center-tune displays; output power 40 W/channel at 0.06% THD and IM distortion; clipping/dynamic headroom 1.81/2.13 dB; damping factor 50; phono overload 140 mV; phono S/N ratio 91 dB; FM stereo 50-dB quieting sensitivity 40 μ V; FM THD stereo/mono 0.15%/0.12%; 16 $\frac{1}{2}$ "W \times 13 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "H; 18.25 lb.....\$320

S-9200CP. Similar to S-9300CP except has no output-power displays, ultra low bass EQ and mute/servo switches, or noise filter; output power 30 W/channel at 0.08% THD and IM distortion; FM usable sensitivity/mono 50-dB quieting sensitivity 1.8/3.5 μ V; FM THD

stereo/mono 0.2%/0.15%; 17 lb\$250

S-9180CP Stereo Receiver

AM/FM-stereo receiver with back-lighted slide-rule tuning dial and illuminated pointer, FM center-tune meter, and 40-kHz input buffer filter to power amplifier. Features all discrete circuitry throughout the basic audio path; dual-gate MOSFET input to r-f amplifier; linear-phase FM ceramic i-f filters; double-tuned quadrature detector; PLL MPX demodulator; loudness switch; FM mute; switching for two pairs of speaker systems; pushbutton tape-monitor, AM, FM, phono, and AUX functions. Output power 24 W/channel min rms, both channels driven into 8 ohms, 20-20,000 Hz at 0.08% THD and IM distortion; clipping/dynamic headroom 1.53/2.0 dB; damping factor 40 at 8 ohms; input sensitivity 2.5 mV phono, 150 mV tape and AUX; phono overload 140 mV; S/N ratio phono/AUX 91/100 dB; frequency response 8-40,000 Hz \pm 0.5 dB; FM usable/50-dB quieting sensitivity 1.8 μ V/40 μ V stereo, 3.5 μ V mono; THD stereo/mono 0.20%/1.5%; S/N ratio stereo/mono 75/80 dB; stereo separation 45 dB; alternate-channel selectivity 65 dB; image/i-f/spurious-response ratios 65/70/70 dB; capture ratio 1.5 dB; frequency response 30-15,000 Hz \pm 1 dB; AM sensitivity 300 μ V/m; selectivity 25 dB; S/N ratio 45 dB; ac accessory outlets 1 switched, 1 unswitched; 16 $\frac{1}{2}$ "W \times 13 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "H; 16.5 lb.....\$220

SONY

STR-VX6 Stereo Receiver

AM/FM-stereo receiver with quartz frequency synthesis tuning, 5-way tuning flexibility, and MNOS memory IC. Features legato linear dc power amplifier; pulse power supply; high F t output transistors; direct-comparator high signal-to-noise-ratio FM circuit; MC-cartridge facility; switchable phono capacitance; subsonic filter; tape dubbing; thermodynamic cooling; dual tape monitors; preamp-out/power-amp-in option.



Output power 70 W/channel min rms into 8 ohms, 20-20,000 Hz at 0.008% THD; 13 lb 11 oz.....\$670

STR-VX5. Similar to STR-VX6 but without phono-capacitance selector, thermodynamic cooling, pre/power-amp option\$530

STR-VX4 Stereo Receiver

AM/FM-stereo receiver with quartz-locked frequency synthesis tuning, 5-way tuning flexibility, and MNOS memory IC. Features legato linear dc power amplifier; subsonic filter; tape dubbing; dual tape monitors. Output power 40 W/channel min rms into 8 ohms, 20-20,000 Hz at 0.008% THD; 16 lb 12 oz.....\$430

STR-VX3 Stereo Receiver

AM/FM-stereo receiver with acute servo-lock tuning system. Features legato linear dc power amplifier; subsonic filter; tape dubbing; dual tape monitors. Output power 35 W/channel min rms into 8 ohms, 20-20,000 Hz at 0.008% THD; 14 lb 5 oz.....\$330

STR-VX2 Stereo Receiver

AM/FM-stereo receiver with acute servo-lock tuning system. Features full complement of operating controls; LED signal-strength/center-tuning display. Output power 28 W/channel min rms into 8 ohms, 20-20,000 Hz at 0.07% THD; 13 lb 7 oz.....\$260

STR-VX1 Stereo Receiver

AM/FM-stereo receiver with 5 FM-station preset program sensor system, full complement of oper-

1

RECEIVERS

ating controls, and LED signal-strength/center-tuning display. Output power 22 W/channel min rms into 8 ohms, 20-20,000 Hz at 0.08% THD; 13 lb 11 oz \$225

STUDER/REVOX

Revox B780 FM Stereo Receiver

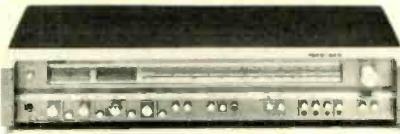
Amplifier section: features ± 8 -dB bass (120 Hz), presence (3000 Hz), and treble (8000 Hz) tone controls with tone defeat; switchable low, high, and low/high filter selections; mono, loudness, and -20 -dB audio muting selectors; phono, tuner, AUX, tape 1 and 2 input selectors; 75 W/ch into 8 ohms from 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 μ V); stereo THD 0.25%; S/N 78 dB; capture ratio 2 dB; alternate channel selectivity 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 $^{\prime\prime}$ H \times 17 $\frac{1}{4}$ $^{\prime\prime}$ W \times 16 $\frac{1}{2}$ 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 μ sec. AM tuner includes two MOS FET's 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; connection 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/ μ sec; rise time 1 μ 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

TR3030 AM/FM-Stereo Receiver

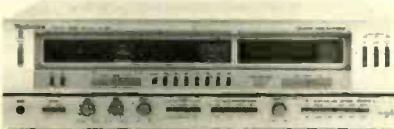
Stereo receiver with AM and FM station presets (4 each) and electronic tuning system, high-speed dc amplifier, and unique 3-stage phono equalizer. Features separate AM and FM band selector switches; volume, bass, treble, balance, and tuning controls; signal-strength and center-tune meters; FM muting; loudness-compensation, mono/stereo, high and low filters, and speakers A and B switches. Output power 30 W/channel into 8 ohms at less than 0.09% THD; hum and noise tape/phono 82/77 dB; 50-dB FM quieting sensi-

tivity mono/stereo 16.2 dBf (1.8 μ V)/37.3 dBf (20 μ V); S/N ratio at 65 dBf mono/stereo 76/74 dB; 51.5cmW \times 32cmD \times 32cmH \$399

TECHNICS

SA-828 AM/FM-Stereo Receiver

Quartz synthesizer AM/FM receiver with 100-watt/channel output into 8 ohms, 20-20,000 Hz at no more than 0.005% THD. Features new class-A dc amplifier section with linear feedback;



quartz synthesizer digital tuning with analog frequency readout; electronic pushbutton tuning with auto scanning; 14-station preset tuning for 7 AM and 7 FM stations with LED indicators and memory; electronic volume control with LED range indicator; space dimension controller with display \$875

SA-626 AM/FM-Stereo Receiver

Slim-profile AM/FM-stereo receiver with 65-watt output into 8 ohms, 20-20,000 Hz at no more than 0.005% THD. Features new class-A, straight dc amplifier section with linear feedback; quartz synthesizer digital tuning with analog frequency readout; electronic pushbutton tuning with automatic scanning; 14-station (7 AM, 7 FM) preset tuning with LED indicators and memory; pushbutton up/down electronic volume control with LED range indicator; audio muting (-20 dB); soft-touch program selectors (tape monitors, loudness, subsonic and high filters, FM muting/mode switch, audio muting); 2 tape monitors with 2-way tape dubbing..... \$585

SA-424. Similar to SA-626 except 45-watt/channel output at no more than 0.007% THD; no audio muting; no pushbutton electronic volume control..... \$435

SA-222. Similar to SA-424 except 30-watt/channel output at 0.04% THD; no class-A dc power amplifier or linear feedback \$320

TOSHIBA

SA-S55 Stereo Receiver

Third-generation AM/FM-stereo receiver with synthesizer tuner with automatic scanning and adjustable scanning sensitivity. Features dc amplifier circuit; audio fade; 2-speaker-system switching; subsonic filter; tone defeat. Output power 55 W/channel continuous, both channels driven into 8 ohms, 20-20,000 Hz at no more than 0.03% THD and IM distortion; frequency response 10-60,000 Hz; S/N ratio 86 dB; phone overload 240 mV; tuner presets 6 AM and 6 FM; IHF FM sensitivity 1.8 μ V; 50-dB quieting sensitivity 45 μ V; S/N ratio 72 dB; distortion stereo/mono 0.15%/0.08%; stereo separation 45 dB at 1 kHz; 17.7 $^{\prime\prime}$ W \times 14.6 $^{\prime\prime}$ D \times 4.6 $^{\prime\prime}$ H; 22 lb \$500

SA-5000 Stereo Receiver

Amplifier section: features dc circuitry; two-speaker switching; ± 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 ± 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 μ V; 50-dB quieting 3.6 μ V (mono), 45 μ 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 re-

sponse 20-15,000 Hz $+0.5/-2$ dB; 4.6 $^{\prime\prime}$ H \times 17.7 $^{\prime\prime}$ W \times 14.6 $^{\prime\prime}$ D \$380

SA-3500 Stereo Receiver

Amplifier section: features dc circuitry; ± 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 ± 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 μ V; 50-dB quieting 3.6 μ V (mono), 45 μ 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 $^{\prime\prime}$ H \times 17.7 $^{\prime\prime}$ W \times 14.6 $^{\prime\prime}$ 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 ± 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 $^{\prime\prime}$ D \$250

SA-R1 Stereo Receiver

AM/FM-stereo receiver features ± 10 -dB bass and treble controls; AUX/video-sound input; LED signal-strength meter; dial pointer that changes color at center-tune. Output power 18 W/channel, both channels driven into 8 ohms, 20-20,000 Hz at 0.09% THD and IM distortion; frequency response 10-40,000 Hz; phono S/N ratio 78 dB; phono overload 150 mV; IHF FM sensitivity 2.3 μ V; S/N ratio mono/stereo 75/69 dB; distortion 0.18% stereo, 0.1% mono at 1 kHz; stereo separation 40 dB at 1 kHz; 16.6 $^{\prime\prime}$ W \times 12 $^{\prime\prime}$ D \times 3.5 $^{\prime\prime}$ H \$200

VECTOR RESEARCH

VRX-9500 Stereo Receiver

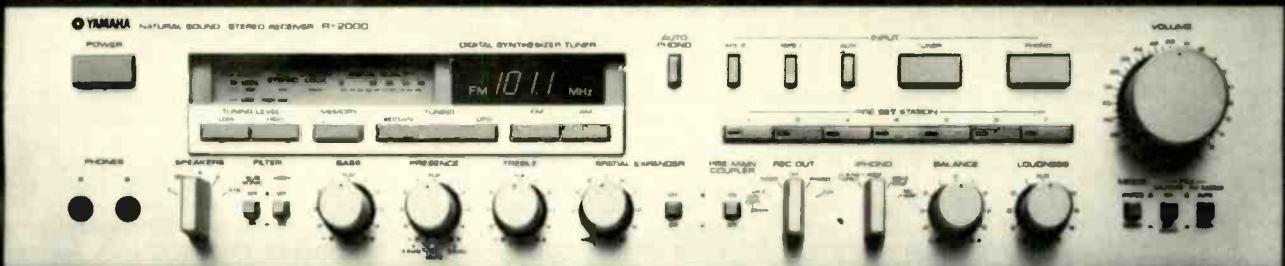
Stereo receiver with built-in dbx®II disc encoder/decoder noise-reduction system, synthesized tuner with programmable timer functions, and relay-controlled input selector. Features moving-coil cartridge head amp; 5-point signal-strength/multipath indicator; 3-band panoramic™ tone control system with selectable frequencies (bass ± 10 dB 65-220 Hz, midrange ± 10 dB 350-2000 Hz, treble ± 10 dB 2.5k-20k



Hz); dual 12-point LED output level indicators; pre/main amp jacks. Audio section: output power 90 W/channel into 8 ohms, 20-20,000 Hz at 0.02% THD; power amplifier input sensitivity/impedance 1 V/47k ohms; IM distortion 0.02% at 8 ohms; S/N ratio 120 dB IHF A weighted at rated output; moving-magnet preamp input sensitivity/impedance 2.5 mV/47 ohms; MM phono S/N ratio 82 dB A weighted. FM tuner section: sensitivity 10.8 dBf (1.9 μ V); S/N ratio 70 dB stereo at 65 dBf; stereo frequency response 20-15,000 Hz ± 1 dB; distortion 0.08% at 65 dBf (at 1 kHz, stereo); stereo separation 50 dB at 1 kHz; 17 $\frac{1}{16}$ "W \times 14 $\frac{1}{16}$ "D \times 5 $\frac{1}{16}$ "H; 30 lb 10 oz..... \$1000

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.

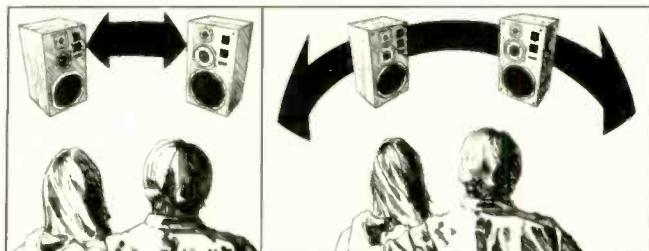


Yamaha's R-2000 receiver. The next step beyond stereo.

Yamaha's new R-2000 takes you a giant step closer to the realism of live music. A unique Spatial Expander recreates the full depth, presence and experience of a live performance.

How the Spatial Expander works.

Normal stereo is limited to the space between the two speakers. Yamaha's Spatial Expander extends the sound field out beyond the speakers to



recreate the space and ambience of a live performance. You'll hear your music like never before. Without adding extra speakers or amplifiers. And the Spatial Expander works with any good stereo source: records, FM or tape.

X-Amplifier. Less is more.

Unlike conventional amplifier designs, Yamaha's new X-Amplifier in the R-2000 and R-1000 runs at full power only when a musical passage calls for it. At other times, the X-Amplifier runs at low power, staying much cooler and significantly increasing component life. A unique (patent pending) comparator circuit applies the precise amount of power to properly reproduce each

musical passage. No more, no less.

And the X-Amplifier of the R-2000 is the most powerful we've ever built into a receiver: 150 watts RMS per channel with 0.015% THD at 8 ohms, from 20 to 20,000 Hz. It can easily handle the wide dynamic range of the newest digital and direct-to-disc recordings.

Station-locking tuning.

The RF signals generated by popular quartz-locked tuning circuits can add distortion to the audio signal. To solve this, we developed a unique microprocessor chip with a memory that stores the exact tuning location of every AM and FM station. You get 100% accurate tuning with no RF signal distortion added.

There are six receivers in the new R-Series line — from the 30-watt-per-channel



R-300 to the top-of-the-line R-2000. All have that famous Yamaha natural sound. And all are backed by a nationwide network of Preferred Customer Service Centers. Whichever R-Series receiver you choose will expand the boundaries of enjoyment and realism you get from your home music system.

For more information, write to: Yamaha Electronics Corporation, USA, Box 6660, Buena Park, CA 90622.

YAMAHA

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1

RECEIVERS

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 ± 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- μ sec Dolby de-emphasis and FM muting switches; LED FM stereo indicator. FM section: IHF usable sensitivity 10.8 dBf (1.9 μ V); 50-dB quieting 19 dBf (mono), 40 dBf (stereo); S/N 75 dB (mono), 70 dB (stereo); frequency response 20-15,000 Hz ± 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; $5\frac{1}{2}''H \times 17\frac{1}{4}''W \times 14\frac{1}{4}''D$ \$750

VRX-8000. Similar to VRX-9000 except 50-W/channel output power \$600

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 ± 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- μ sec FM Dolby de-emphasis and FM muting switches. FM section: IHF sensitivity 10.8 dBf (1.9 μ V); 50-dB quieting 19 dBf (mono), 40 dBf (stereo); S/N 78 dB (mono), 71 dB (stereo); frequency response 30-15,000 Hz ± 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; $5\frac{1}{4}''H \times 17\frac{1}{4}''W \times 14\frac{1}{2}''D$ \$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; $5\frac{1}{4}''H \times 17\frac{1}{4}''W \times 14\frac{1}{4}''D$ \$265

VR-3000 Stereo Receiver

Stereo receiver with discrete output transistors in true push-pull configuration. Features 5-point LED signal-strength indicator; LED tuning indicator; dual 5-point LED output-level indicators; bass and treble controls; loudness switch; tape monitor switch. Audio section: output power 25 W/channel into 8 ohms, 20-20,000 Hz at 0.1% THD; frequency response 10-50,000 Hz ± 0.5 dB at 1-watt output; S/N ratio 82 dB phono, A weighted, at rated output power; input sensitivity/impedance 2.5 mV/47k ohms (phono). FM section: sensitivity 12 dBf (2.2 μ V); frequency response 30-15,000 Hz ± 1.5 dB in stereo; stereo separation 40 dB at 1 kHz; $17\frac{1}{4}''W \times 14\frac{1}{4}''D \times 5\frac{1}{4}''H$; 22 lb \$300

YAMAHA**R-2000 Stereo Receiver**

Natural Sound AM-FM-stereo receiver with Yamaha "X" power amplifier, unique spatial expander, station-locked synthesizer tuning system. Features natural-response tone controls; built-in MC (moving-coil) cartridge head amplifier; auto-phono function; 7 FM/7 AM station presets; ultralinear direct FM detector; fluorescent digital-numeric frequency display; 10-point LED signal-strength indicator; DX/local switch; adjustable loudness control; dc NFB PLL MPX demodulator;



high-Q low-impedance AM loop antenna; pushbutton function switches with lighted indicators; pushbutton search tuning; auto blend; pre/main coupler; switchable subsonic and high filters; dual tape-deck functions with copy capability; speakers A/B/A + B/C selector. Output power 150 W/channel min rms into 8 ohms, 20-20,000 Hz at 0.015% THD; dynamic headroom 3 dB; THD MM/MC/tape and AUX 0.005%/0.01%/0.005%; IM distortion 0.01%; input sensitivity/impedance 2.5 mV/47k ohms, 100 or 220 pF MM, 100 μ V/100 ohms MC, 120 mV/47k ohms AUX, tape, 1 V/47k ohms main in; max input level 250 mV MM, 11 mV MC; output level/impedance 120 mV/470 ohms rec out (phono), 1 V/430 ohms pre out; headphone output 780 mW; S/N ratio MM/MC/AUX, tape/main in 90/84/100/120 dB IHF A wt; residual noise 50 μ V; channel separation AUX and tape/MM 64/64 dB; FM 50-dB quieting sensitivity mono/stereo (DX) 14.2 dBf (2.8 μ V)/33.2 dBf (25 μ V); image/i-f/spurious-response ratios 70/100/100 dB; AM-suppression ratio 65 dB; capture ratio local/DX 1.2/2.5 dB; alternate-channel selectivity local/DX 30/82 dB; S/N ratio mono/stereo 85/81 dB; stereo separation 50/1k/10k Hz 50/50/45 dB; frequency response 30-15,000 Hz $+0.3/-0.5$ dB; AM sensitivity 200 μ V; selectivity 30 dB; S/N ratio 50 dB; power consumption 550 W (U.S. and Canada); 21 $\frac{1}{4}$ "W \times 15 $\frac{1}{4}$ "D \times 4 $\frac{3}{4}$ "H; 29 lb 5

oz \$900

R-1000. Similar to R-200 except 100 W/channel output power \$700

R-900 Stereo Receiver

Natural Sound AM/FM-stereo receiver with unique spatial expander, MC (moving-coil) cartridge input, and station-locked synthesized tuning system. Features continuously variable loudness control; ultralinear direct FM detector; dc NFB PLL MPX demodulator; dc power amplifier; fluorescent digital-numeric frequency display; 10-point signal-quality display; subsonic and high filters; pre/main coupler; 5 AM/5 FM station presets. Output power 70 W/channel min rms into 8 ohms, 20-20,000 Hz at 0.015% THD; dynamic headroom 3 dB; THD MM/MC/AUX, tape/main in 0.005%/0.015%/0.005%/0.005%; damping factor 40; frequency response dc-100,000 Hz -1 dB main in; input impedance sensitivity 2.5 mV/47k ohms, 220 pF MM, 100 μ V/100 ohms MC, 120 mV/47k ohms AUX and tape; 1 V/100k ohms main in; phono overload 200 mV MM, 10 mV MC; S/N ratio MM/MC/AUX and tape/main in 90/76/100/110 dB; residual noise 115 μ V; FM 50-dB quieting sensitivity mono (DX)/stereo(DX, auto blend) 15.3 dBf (3.2 μ V)/33.2 dBf (25 μ V); image/i-f/spurious-response ratios 62/100/100 dB; AM-suppression ratio 65 dB; capture ratio 1.5 dB local/2.2 DX; alternate-channel selectivity 30 dB local, 82 dB DX; S/N ratio mono/stereo 84/80 dB; stereo separation (local) at 50/1k/10k Hz 44/50/45 dB; frequency response 30-15,000 Hz ± 0.5 dB; AM sensitivity 200 μ V; selectivity 30 dB; S/N ratio 50 dB; power consumption 260 W (U.S. and Canada); 18 $\frac{1}{4}$ "W \times 13 $\frac{1}{4}$ "D \times 4 $\frac{3}{4}$ "H; 20 lb 15 oz \$550

R-700. Similar to R-900 except 50 W/channel output power \$450

R-500 Stereo Receiver

Natural Sound AM/FM-stereo receiver with optical balance tuning system. Features ultra-low distortion; continuously variable loudness control; dc NFB PLL MPX demodulator; slide-tube tuning dial with lighted pointer; low-noise phono equalizer; subsonic filter; switching for 2 pairs of speaker systems; listen to one station, record from another capability; dc amplifier design; signal-quality meter; auto blend; tape dubbing. Output power 40 W/channel min rms into 8 ohms, 20-20,000 Hz at 0.015% THD; IM distortion 0.01%; frequency response 10-100,000 Hz -1 dB; S/N ratio phono/AUX and tape 85/100 dB; input sensitivity/impedance 2.5 mV/47k ohms, 220 pF phono, 120 mV/47k ohms AUX and tape; FM 50-dB quieting sensitivity mono/stereo 14.8 dBf (3 μ V)/31.2 dBf (20 μ V); image/i-f/spurious-response ratios 50/90/70 dB; AM-suppression ratio 60 dB; alternate-channel selectivity 55 dB; S/N ratio mono/stereo 84/80 dB; stereo separation at 100/1k/6k Hz 30/40/30 dB; frequency response 30-15,000 Hz $+0.5/-1.5$ dB; AM sensitivity 300 μ V/m; selectivity 30 dB; S/N ratio 50 dB; power consumption 180 W (U.S. and Canada); 17 $\frac{1}{4}$ "W \times 13 $\frac{1}{4}$ "D \times 4 $\frac{3}{4}$ "H; 17 lb 6 oz \$330

R-300. Similar to R-500 except 30 W/channel output power; FM 50-dB quieting sensitivity 37.3 dBf (40 μ V) stereo; power consumption 130 W; 17 lb \$260

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.

2

AMPLIFIERS

ADCOM

GFA-1A Power Amplifier

Fully complementary stereo/bridged-mono power amplifier. Features toroidal transformer; dual power supplies; built-in protection relay and thermal-overload switch; peak power LEDs; high/low-speed fan switch. Output power 200 W/channel continuous both channels driven into 8 ohms, 20-20,000 Hz with 0.05%/0.1% THD/IM distortion; damping factor 200; slew rate 80 V/ μ sec; input sensitivity 1.5 V; cabinet vented on all sides; 10 $\frac{1}{2}$ "W \times 8 $\frac{1}{2}$ "H \times 6 $\frac{1}{2}$ "D.....\$450
GFRP-1/2. Rack panel for 1/2 amplifiers.....36

GFA-2 Power Amplifier

Stereo power amplifier with dual-FET input stage, direct-coupled (dc) design, and separate power supplies for each channel. Features short-circuit and high-temperature protection; automatic reset on all protection circuits with LED indicator; peak LEDs for output power indication; dual outputs (4/channel) to allow use of low-impedance speakers. Output power 100 W/channel into 8 ohms, 20-20,000 Hz at no more than 0.02% THD. Comes complete with rack handles. 19"W \times 13 $\frac{1}{2}$ "D \times 5 $\frac{1}{4}$ "H.....\$360

AIWA

SA-P50U Power Amplifier

Mini stereo power amplifier with direct-coupled (dc) circuitry and heavy-duty toroidal power transformer with large electrolytic filter capacitors. Features 9-LED peak-power indicators; A and B speaker systems selectors; self-resetting protection circuit. Output power 50 W/channel continuous, both channels driven into 8 ohms, 20-20,000 Hz at 0.02% THD; power bandwidth 10-50,000 Hz at 0.05% IHF distortion; S/N ratio 115 dB; damping factor 40 at 1 kHz, 8 ohms; input sensitivity/impedance 800 mV/37k ohms; 9 $\frac{1}{2}$ "W \times 11 $\frac{1}{2}$ "D \times 2 $\frac{1}{2}$ "H.....\$245

AKAI

Mini Component Series

UC-W5 Stereo Power Amplifier

Stereo power amplifier with dc circuitry, pulse power supply, LED output-power indicators with $\times 1/\times 0.1$ range switch, and 2 speaker-system switching. Output power 35 W/channel continuous into 8 ohms, 20-20,000 Hz at 0.01% THD; 11.2"D \times 11"W \times 2.2"H..\$340

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 sup-

ply 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.; frequency response 5-100,000 Hz -3 dB (small signal); slew rate 25 V/ μ 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.....\$499

APT

Apt 1 Power Amplifier

Features dc circuitry; mono bridging; real-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 +0/-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.....\$680

AUDIO INTERNATIONAL

CM Lab Series

CM920 Power Amplifier

Stereo power amplifier with fully complementary output circuitry and LED output-power display. Features front-panel level controls and fuses; relay speaker protection with indicator lights; 5 power main taps; EIA rack mountability; black anodized aluminum finish. Output power 250 W/channel into 8 ohms (400 W/channel into 4 ohms), 20-20,000 Hz at 0.25% THD and 0.1% IM distortion; frequency response 20-20,000 Hz \pm 0.1 dB up to rated power; damping factor 500 at 8 ohms; hum and noise 100 dB below 250 W rms; 17 $\frac{1}{2}$ "W \times 12"D \times 7"H; 47 lb.....\$1099

CM914c Power Amplifier

High-speed stereo power amplifier with direct-coupled (dc) fully complementary output amplifier design. Features LED power-output meters; EIA rack mountability. Output power 150 W/channel into 8 ohms (225 W/channel into 4 ohms), 20-20,000 Hz at 0.1% THD and IM distortion; frequency response 20-20,000 Hz \pm 0.1 dB at full power; damping factor 500 at 8 ohms; sensitivity 1 V dor full output; hum and noise 100 dB below 175 W rms; 17 $\frac{1}{2}$ "W \times 12"D \times 5"H; 37 lb.....\$679
CM914a. Similar to CM914c except no LED out-

put-power meters or input level controls...\$599

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/ μ 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.....\$579
Without rack handles and clipping indicators.....\$529

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.....\$6000

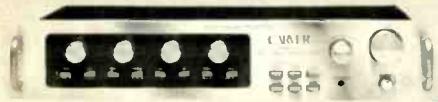
D-400 Power Amplifier

Solid state 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

Now you can add the three-dimensional impact of Sonic Holography to your system three different ways.



The C-4000 Control Console includes Sonic Hologram Generator, full-function stereo pre-amplifier, time-delay system with built-in 40 watt (total) power amplifier. Autocorrelator System that reduces noise up to 8 dB, a peak unlimiter/downward expander that nearly doubles dynamic range.



The C-1 combines the Sonic Hologram Generator with a full-function preamplifier.



The C-9 Sonic Hologram Generator allows you to add Sonic Holography to any system, including one with a receiver.

And when you do, you'll hear what these audio experts heard in their systems:

Hal Rodgers, Senior Editor of Popular Electronics: "When the lights were turned out we could almost have sworn that we were in the presence of a real live orchestra."

Julian Hirsch of Hirsch-Houck Labs: "The effect strains credibility—had I not experienced it, I probably would not believe it... the 'miracle' is that it uses only the two normal front speakers."

Larry Klein, Technical Director of Stereo Review: "...it brings the listener substantially closer to that elusive sonic illusion of being in the presence of a live performance."

High Fidelity put it this way: "...seems to open a curtain and reveal a deployment of musical forces extending behind, between and beyond the speakers... terrific."

And now, whatever components you own, you can hear what all the audio experts have heard and acclaimed: Sonic Holography by Carver.

For literature, test reports and nearest Carver dealer, circle number below. For faster response, write directly to Carver.

CARVER
CORPORATION

P.O. Box 664, 14304 N.E. 193rd Place
Woodinville, Washington 98072

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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. 10½" H × 19" W × 17¼" D \$5000

D-79B 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 -3 dB; IM dist. 0.5% (SMPTE); 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; 10½" H × 19" W × 17¼" D \$3950

D-111 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. 10½" H × 19" W × 17¼" D \$3950

D-120 Power Amplifier

120 W/ch continuous, both channels driven into 8 ohms over 10-20,000 Hz with 0.25% THD and 0.035% IM dist.; S/N 100 dB unweighted; sensitivity 1.5 V rms (high level); load impedance 4 ohms (min.); damping factor 300; 5½" H × 19" W × 10½" D \$2195
WC-4. Walnut-finished wood cabinet for D-100B \$99

D-90 Power Amplifier

Vacuum-tube power amplifier with 90 W/ch continuous, both channels driven into 16 ohms from 25-20,000 Hz with no more than 1% THD; IM less than 0.5%; input sensitivity/impedance 1.2 V/75k ohms; output regulation 0.3 dB, 16 ohm load to open circuit; damping factor 25 \$2195

D-40 Power Amplifier

Vacuum-tube power amplifier with 40 W/ch continuous, both channels driven into 16 ohms from 25-20,000 Hz \$1595

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 +0/-1.5 dB; slew rate 35 V/μsec for 86

V p-p; input sensitivity 1.577 V rms for 70 W, 8 ohms; ½-in black anodized aluminum chassis with ¼-in front panel and black rack-mount handles; 11" H × 19" W × 16" D \$1695

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/-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 × 17¾" W × 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 ±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; 5½" H × 19" W × 12" D \$775
CMA-1-80. Mono version of CMA-2-80; frequency response 20-20,000 Hz ±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% (SMPTE); damping factor 100 at 20 and 1000 Hz; rise time 3 μsec; S/N 90 dB unweighted; input sensitivity 0.6 V; 5½" H × 19" W × 10½" 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/μsec; 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 × 19" W × 13.5" 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 × 19" W × 10" D \$525

CARVER

C-500 Power Amplifier

Stereo power amplifier with FET input and extra output transistors, dual switchable peak/peak-hold LED bar-graph display with VU characteris-

tics. Features left/right sensitivity controls with 15-dB sensitivity display switch; LED overload indicator. Power output 252 W/channel continuous into 8 ohms, 20-20,000 Hz with 0.05% THD; IM distortion 0.06% at 200 watts; frequency response 1-250,000 Hz ±0.25 dB; S/N ratio 110 dB A weighted; slew rate 80 V/μsec; brushed-gold with brown trim or charcoal-gray finish; 19" W × 9½" D × 6½" H \$775

M-500 Power Amplifier

Stereo power amplifier with super-efficient Magnetic Field circuitry in slim-line cabinet. Features peak-responding power meters; cool operation; no bulky power transformer, heat sinks, electrolytic capacitors; brushed-gold with brown trim or charcoal-gray finish. Output power 250 W/channel into 8 ohms, 20-20,000 Hz at 0.05%/0.06% THD/IM distortion; frequency response 1-250,000 Hz ±0.25 dB; S/N ratio 100 dB A weighted; slew rate 40 V/μsec. \$550

M400 Power Amplifier

Stereo power amplifier with Magnetic Field Circuitry that eliminates over-size heat sinks, power transformers, and electrolytic capacitors. Features dual vertical LED peak-level display



with VU-meter ballistics; brushed-gold with brown trim or charcoal-gray finish. Output power 200 W/channel into 8 ohms, 20-20,000 Hz at 0.05%/0.06% THD/IM distortion; frequency response 1-250,000 Hz ±0.25 dB; S/N ratio 100 dB A weighted; slew rate 40 V/μsec; 6¾" W × 6¾" H × 6¾" D \$399

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 ±0.5 dB; S/N 90 dB \$3850

MV75a 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 ±0.5% dB; S/N 90 dB \$1345

MV45-1. Similar to MV75-1 except 45 W/ch under same conditions \$799

CROWN

M-600 Power Amplifier

Monaural power amplifier features peak/average power meter with LEDs and adjustable thresholds; changeable input control modules; short, mis-match, 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 ±1 dB (1 W); input sensitivity 3.46 V rms ±1% for 600 W continuous into 8 ohms; hum and noise 120

dB below rated output; phase response +0/-15 degrees (0-20,000 Hz, 1 W into 8 ohms); damping factor greater than 800; input impedance 25,000 ohms ±30% (standard input); 8½" H × 19" W × 16½" 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 ±1 dB (1 W into 8 ohms); input sensitivity 3.16 V rms ±1% for 2000 W into 8 ohms; hum and noise 115 dB below rated output; phase response +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); 17½" H × 19" W × 16½" 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 +0/-1.5 dB; S/N 110 dB (A weighted); 7" H × 19" W × 14½" D \$1799

Power Line Two Amplifier

Features detented level controls; mono/stereo switch; Dynamic Analyzing Display, including IOC™ all-distortion and signal-present indicators; three bands reported for each channel; Multi-Mode™ circuit that uses a 3-stage output design to eliminate distortion; 50 watts per channel into 8 ohms from 20-20,000 Hz, with no more than 0.04% THD; 1½" front panel \$479

Power Line Three. Similar to Power Line Two except 90 watts per channel. Features frequency analyzing display that provides information about spectral balance of amplifier output signal \$799

Power Line Four. Similar to Power Line Three except 165 watts per channel \$1199

DB SYSTEMS

DB-6 Power Amplifier

Able to drive 1 ohm loads, 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 +0/-1 dB; input sensitivity/impedance 1 V/50,000 ohms; S/N 112 dB at 1 V (A weighted); A96 dB at 1 W into 8 ohms (a weighted); slew rate 15 V/μsec; damping factor greater than 400 from 20-1000 Hz, 40 at 20,000 Hz. 4.9" H × 16" W × 12.8" D \$560

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 30V/μsec \$560

Mono conversion of DB-6 to DB-6M \$35

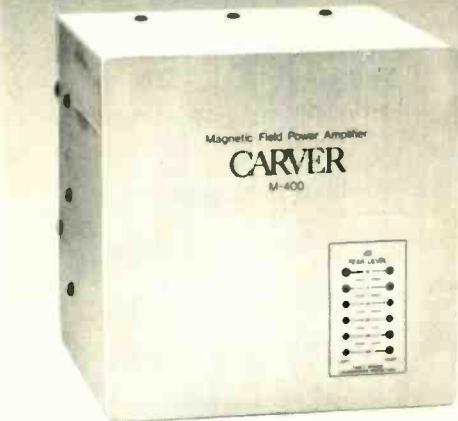
DENON

POA-3000 Power Amplifier

Class A stereo power amplifier with five power transistors/side, real bias circuitry, cascode emitter follower drive circuit. coupling



"It is hardly conceivable that a small, inexpensive, lightweight cube such as this could deliver as much clean power as any but a few of the largest conventional amplifiers on the market—but it does!" Julian Hirsch, Hirsch-Hauk Labs



The Carver M-400
Magnetic Field Amplifier

The cube that impressed Julian Hirsch is indeed small: less than 7 inches. And it is very light: less than 10 pounds. And very inexpensive: suggested retail price, \$399.

As for its clean power: 201 watts per channel in stereo and 500 watts mono! That, of course, is RMS into 8 ohms, from 20 to 20kHz with no more than 0.05% total harmonic distortion.

As for its sound, Leonard Feldman reported in Audio: "Music reproduction was superb and completely free of any false bass coloration or muddiness... none of that brittle quality that one often detects from amplifiers that are beginning to strain."

In short, the M-400 is musical and accurate.

And now here's good news for everyone with a receiver. The M-400 can be added to it easily—with our new Z-1 coupler. So if you now have a 20-watt receiver, it can be a 201-watt (per channel) receiver!

For literature, test reports and nearest Carver dealer, circle number below. For faster response, write directly to us.

CARVER
CORPORATION

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Woodinville, Washington 98072
CIRCLE NO. 11 ON READER SERVICE CARD

2

POWER AMPLIFIERS

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 ±3 dB; S/N 122 dB (IHF 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

POA-8000 Power Amplifier

Class-A monaural power amplifier with non-negative feedback circuit; high-constant output transistor bias; peak-reading output metering system; polished bronze-gold end caps. Output power 200 W continuous channel; THD 0.003%; power bandwidth 5 Hz-100 kHz; S/N 122 dB; 48.4 lb.....\$2300

ESPRIT by SONY

TA-N900 Power Amplifier

Nonswitching mono power amplifier with total absence of NFB loop from power stage. Features power MOSFET transistors; pulse-locked power supply; switchable 2/4/8-ohm speaker impedance; unique heat-pipe/cross-flow linear brushless slotless motor cooling system; electronic relay protection; nonmagnetic chassis. Output power 200 W/channel min rms, monaural channel driven into 8 ohms, 20-20,000 Hz at 0.05% THD; frequency response dc-100,000 Hz -3 dB; S/N ratio 110 dB; 23 lb 2 oz.....\$1750

EUMIG USA

M-1000 Power Amplifier

Time-processed dc circuitry with high-speed transistors in driver and output stages; switchable capacitor 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 ±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.....\$695

FISHER

BA 6000 Power Amplifier

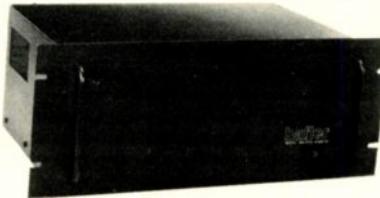
Features dc circuitry; dual illuminated power meters with LED peak-reading indicators and 0/-20 dB meter range selector; four-position speaker selector; input level control. 100 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.01% THD and IM dist.; damping factor 50.....\$550

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

DAVID HAFLER

DH-500 Power Amplifier

Will deliver in excess of 250 watts/channel at less than 0.025% distortion into 8 ohms; in excess of 400 watts into 4 ohms. Can be bridged, using optional bridging kit, to deliver in excess of 800 watts into an 8-ohm load. Circuit employs MOSFETs on compact enclosed heat sink cooled by a multispeed fan. Back-panel speaker fuses and a relay protects speakers against turn-on thumps or dc shifts; amplifier protective circuits are not necessary with the self-protective capability of the MOSFETs.



Kit.....\$600
Factory assembled.....\$750

DH-200 Power Amplifier Kit

Features class A output stages and symmetrical mirror-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/μsec; input time 2.5 μsec; sensitivity/impedance 1/5 V rms/22,000 ohms; available in kit or assembled form. Kit.....\$330

HARMAN/KARDON

700-Series High-Technology Separates

hk775 Power Amplifier

Stereo power amplifier with 130-watt rms output power/channel into 8 ohms, 20-20,000 Hz at less than 0.03% THD. THD 0.006% at 1 kHz, rated output; frequency response less than 1-300,000 Hz +0/-3 dB; S/N ratio 123 dB IHF A weighted; input impedance 24k ohms; input sensitivity 1.2 V for rated output; 15.2" W × 12.6" D × 2.9" H; 22.2 lb.....\$850

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/μsec into 8 ohms; S/N 123 dB (IHF A); input sensitivity/impedance 1.2 V/35k ohms; 2.9" H × 15.2" W × 12.6" D.....\$420

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 ±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 × 19" W × 16.75" D. Kit.....\$585

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 ±1 dB; hum and noise -100 dB; 7½" H × 19" W × 13" D.

Kit.....\$350

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; 3½" H × 12¾" W × 12" D. Kit.....\$155

HITACHI

HMA-7500 Mk II Power Amplifier

MOS FET power amplifier with pure complementary dc OCL and two-stage differential circuit 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; 6½" H × 18½" W × 14" D.....\$570

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 × 17½" W × 12½" D.....\$330

KENWOOD

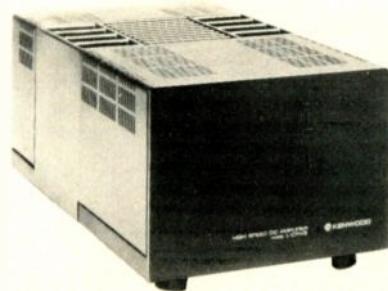
Audio Purist Group

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 μV; S/N 120 dB; triple push-pull class AB full complementary symmetry circuitry; chimney-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; 6½" H × 19" W × 16½" 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/ μ sec; rise time 0.55 μ sec at \pm 1, 20, or 40 V; input sensitivity/impedance 1 V/50k ohms; $6\frac{1}{2}$ "H \times $7\frac{1}{4}$ "W \times $15\frac{1}{2}$ "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

LUXMAN

M-400A Power Amplifier

Direct-coupled dc stereo power amplifier features dual power meters and dual-LED peak level indicators with peak indicator on/off and 0/-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 \times $19\frac{3}{4}$ "W \times $15\frac{1}{2}$ "D.....\$1500

M-300 Power Amplifier

Power amplifier features Duo-Beta and Plus-X circuitry. 0.005% THD as Class A amplifier and 0.008% THD as Class AB amplifier. In the Class A mode, produces 40 W/ch min continuous power, both channels driven into 8 ohms from 20-20,000 Hz; in the Class AB mode, produces 150 W/ch min continuous power, both channels driven into 8 ohms from 20-20,000 Hz; protection circuits for both the amplifier and speakers are provided; 19.1" \times 8.6" \times 19.4"; 70.4 lb.....\$1500

MQ-68C Power Amplifier

Zero feedback tube amplifier featuring Duo-Beta circuitry. Provides 30 W/ch min continuous power into 8 ohms or 4 ohms loads, or 25 W/ch with both channels driven into 8 ohm loads at any frequency from 50-15,000 Hz; THD less than 0.04% at 16 NFB 16.1" \times 6.3" \times 7.2"; 30 lb.....\$800

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 \times $17\frac{1}{4}$ "W \times $13\frac{1}{2}$ "D.....\$700

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/ μ sec; damping factor min. 200; input sensitivity/impedance 2.0 V/10k ohms. 7.87" \times 18.9" \times 18.5"D.....\$1600

M-200 Power Amplifier

Features illuminated power averaging meters

calibrated 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/ μ sec; damping factor min. 175 at 100 Hz into 8 ohms; input sensitivity/impedance 1.4 V/10,000 ohms. 5.875" \times 19" \times 13"D.....\$650

MITSUBISHI

DA-A30 Power Amplifier

Dual-monaural dc amplifier with linear cross-bias, four power supply sections, comprehensive protection and indication, and ac or dc amplification. Power output 105 watts/channel min. rms into 8 ohms, 20-20,000 Hz with no more than 0.008% THD; dynamic headroom 2.0 dB; damping factor 100; slew rate 200 V/ μ sec at 100 V p-p; input 1 V (variable)/50k ohms; separation 100 dB at 1 kHz; S/N 122 dB (IHF-A, closed circuit); power consumption 400 watts; $18\frac{1}{2}$ " \times 5%" \times 14".....\$550

M-A04 Micro Power Amplifier

Stereo power amplifier with 50 watts min. rms output into 8 ohms, 20-20,000 Hz, with no



more than 0.02% THD. Features double protection; A/B/A+B speaker operation. Dynamic headroom 1.0 dB; damping factor 55; slew rate 120 V/ μ sec; S/N 118 dB (A weighted, closed circuit); $10\frac{1}{2}$ " \times 5%" \times 9%".....\$330

NAIM by AUDIOPHILE SYSTEMS

NAP 300 Power Amplifier

Power amplifier intended for professional applications produces rated power into 2.5-ohm loads indefinitely. Features fan cooling; fully independent power supplies. Output power 70 watts continuous into 8 ohms, 20-20,000 Hz at no more than 0.02% THD; transient power 400 VA; frequency response 5-40,000 Hz \pm 3 dB; can drive reactive loads with -90° to 90° phase angles with no appreciable distortion change; dynamic headroom 4.6 dB; THD and IM distortion 0.02%; 17" \times 12" \times 7" H; 43 lb.....\$2250

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" \times 17" \times 12".....\$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

NAP 110 Power Amplifier

Power amplifier with 40-watt continuous output

power into 8 ohms, 20-20,000 Hz at no more than 0.02% THD. Transient power capability VA 150 VZ; dynamic headroom 4.5 dB; reactive-load response, distortion, and response same as for NAP 300\$750

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; $7\frac{1}{2}$ "H \times 19" \times 18%"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" \times 19" \times 18"D.....\$1000

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/ μ sec; matte black finish; 5.4" \times 19" \times 13.5"D.....\$530

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

PHASE LINEAR

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" \times 19" \times 10"D.....\$1120
 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" \times 19" \times 10"D.....\$840
 Walnut side panels\$50

2

POWER AMPLIFIERS

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 +0/-1 dB; S/N 110 dB (IHF A weighted); damping factor 330; slew rate 110 V/μsec; rise time 1.0 μsec (small signal); input sensitivity/impedance 0.88 V rms/49k ohms; 3½" H × 19" W × 11½" D.....\$615

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 × 340.5 mm W × 195 mm D.....\$675

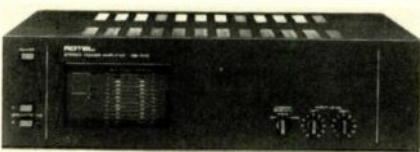
Quad 303 Power Amplifier

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 × 120 mm W × 324 mm D.....\$395

ROTEL

RB-1010 Power Amplifier

Stereo nonswitching dc servo power amplifier with independent relay switching for each speaker switch, dual multipoint vertical output-power-level displays, and dependable electronic protection circuit. Features dc servo differential-integral circuit to hold voltage drifts to zero and withstand any speaker load at low frequencies; advanced well-regulated power supply with



large toroidal transformer, extra-hefty filter capacitors, and high-*f*t type regulation transistors to assure wide dynamic range at very low distortion and low impedance. Output power 100 W/channel min rms into 8 ohms, both channels driven 20-20,000 Hz at no more than 0.006% THD and IM distortion; frequency response 5-100,000 Hz +0/-0.5 dB; input sensitivity/impedance 1.0 V/20k ohms; damping factor 100; hum and noise 120 dB; crosstalk 70 dB; power consumption 730 W; 16½" W × 11½" D × 4½" H; 22 lb.....\$495

SAE

A1001 Power Amplifier

Stereo power amplifier rated at 500 W/channel continuous, both channels driven into 8 ohms, 20-20,000 Hz at 0.25% THD and IM distortion (750 W/ch into 4 ohms at 0.025% THD). Features high current capability and fully complementary speaker circuitry. Frequency response 20-20,000 Hz +0/-0.3 dB; S/N ratio

125 dB A weighted; input sensitivity 2.5 V; 19" W × 17½" D × 8¾" H.....\$1900

A501 Power Amplifier

Stereo power amplifier with 250-W/channel continuous output power, both channels driven into 8 ohms, 20-20,000 Hz at 0.025% THD and IM distortion. Features relay protection for speakers; volt/amp limiting; complementary series-connected output stages; LED level display; feedback level control. Frequency response 20-20,000 Hz +0/-0.5 dB; S/N ratio 125 dB A weighted; input sensitivity 2.24 V; damping factor 50; 19" W × 12½" D × 7" H; 47 lb.....\$1050

A310 Power Amplifier

Stereo power amplifier with 175-W/channel continuous output power, both channels driven into 8 ohms, 20-20,000 Hz at 0.025% IM and THD distortion. Features high current capability; fully complementary circuitry; toroidal power supply; full protection; LED displays for output monitoring. Frequency response 20-20,000 Hz +0/-0.3 dB; S/N ratio 120 dB A weighted; input sensitivity 1.87 V; 19" W × 12½" D × 5½" H; 35 lb.....\$800

A201 Power Amplifier

Stereo power amplifier with 100-W/channel continuous output power, both channels driven into 8 ohms, 20-20,000 Hz at 0.025% THD and IM distortion. Frequency response 20-20,000 Hz +0/-0.3 dB; S/N 110 dB A weighted; sensitivity 1.42 V rms for rated output power; features LED output power display; 19" W × 12½" D × 3½" H; 28 lb.....\$650

SAE Two P10 Power Amplifier

Stereo power amplifier with 100-W/channel continuous output power, both channels driven into 8 ohms, 20-20,000 Hz at 0.025% THD and IM distortion. Features high current capability; individual peak-power indicators; speaker switching. Frequency response 20-20,000 Hz +0/-0.5 dB; S/N ratio 100 dB A weighted; input sensitivity 1.5 V; 18½" W × 14½" D × 5½" H; 28 lb.....\$399

SAE X Series

X-25A Power Amplifier

Stereo power amplifier with 250-W/channel continuous output power, both channels driven into 8 ohms at 0.025% THD and IM distortion. Features LED-type true power-level display; wide/narrow-band inputs; gray anodized aluminum finish. Class-A frequency response 20-20,000 Hz +0/-0.5 dB; S/N ratio 125 dB A weighted; input sensitivity 2.24 V; 19" W × 12½" D × 7" H; 47 lb.....\$1500

X-15A. Similar to X-25A except output power 150 W/channel; input sensitivity 1.87 V/\$1100

X-10A. Similar to X-15A except output power 100 W/channel; input sensitivity 1.42 V...\$900

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; 3½" H × 18½" W × 14½" D.....\$1200

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 oper-

ation. 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

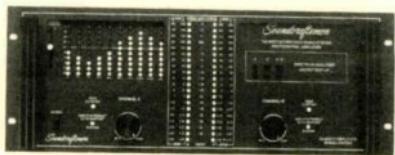
SOUNDCRAFTSMEN

RA7501 Power Amplifier

Class H bridged mono/stereo power amplifier. Features auto-buffer for continuous 2-ohm operation; channel A and B level controls; true 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/μsec; dynamic headroom 2 dB; 19-in rack mount with handles.....\$849

RA7502. Same as RA7501 but includes highly accurate 20-LED metering system for each channel to display 0-1000-W output power (±3 dB at 4 ohms).....\$949

RA7503. Same as RA7502 but includes 100-



LED realtime frequency spectrum bar-graph display for continuous monitoring of actual output power in discrete-octave bands.....\$1149

MA5002A Power Amplifier

Class-H Vari-Proportional circuitry with patent-pending Autobuffer for continuous operation into 2 ohms. Output power 250 W/channel into 8 ohms, 375 W into 4 ohms continuous rms, 20-20,000 Hz at less than 0.09% THD; S/N ratio better than 105 dB; slew rate greater than 50 V/μsec; TIM less than 0.02%; dynamic headroom, better than 2 dB; auto-crowbar protection circuit for output protection without current limiting; 20 LED/ch metering system to display output power from 0-1000 watts ±3 dB at 4 ohms; front-panel speaker switching (2 pr); true clipping indicators; input level controls; walnut end panels included. \$849

LA2502. Same as MA5002A but power output is 125 W/ch (8 ohms), 190 W/ch (4 ohms)

continuous rms; LED power-output metering system displays output power from 0-500 watts ±3 dB at 4 ohms.....\$649

PA5001A. Same as MA5002A without input level controls, LED output display, and speaker switching.....\$749

LA2501. Same as LA2502 without input level controls, LED output display; and speaker switching.....\$549

SONY

STUDER/REVOX

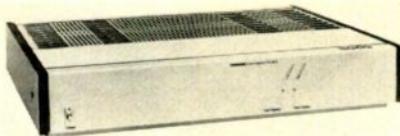
A740 Power Amplifier

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 × 17" W × 14" D.....\$1949

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

THRESHOLD

STASIS 1 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- μ 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 -3dB; group propagation delay 1.5 μ sec; slew rate 50 V/ μ sec; gain factor +26.6 dB; rise time 3 μ sec; damping factor 100 from 0-20,000 Hz; hum and noise -106 dB unweighted below full power; min. load impedance 4 ohms; 8 $\frac{7}{16}$ "H \times 19"W \times 17 $\frac{7}{16}$ "D.....\$3790
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 $\frac{3}{32}$ "H \times 19"W \times 17 $\frac{7}{16}$ "D.....\$2790
STASIS 3. Similar to STASIS 2 but uses 32 power transistors in output stage; 125 W/ch under same conditions; damping factor 60 under same conditions; hum and noise -103 dB unweighted.....\$1890

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/ μ sec; hum and noise -90 dB unweighted.....\$990

TOSHIBA

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 \times 10.1"W \times 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; pow-

er 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 \times 16 $\frac{1}{2}$ "W \times 9 $\frac{1}{2}$ "D\$180
SC-335MK II. Matte black version of SC-335 with LED power output indicators.....\$200

YAMAHA

M-2 Power Amplifier

DC power amplifier features dual FET with cascode bootstrap circuit in input stage and three-stage emitter-follower complementary triode 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 $\frac{1}{4}$ "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 $\frac{3}{4}$ "H \times 17 $\frac{1}{2}$ "W \times 14 $\frac{1}{4}$ "D.....\$650

B-6 Stereo Power Amplifier

Natural Sound stereo power amplifier with Yamaha "X" power-supply and power-amplifier design. X power supply eliminates distortion resulting from switching regulator. Output power 200 W/channel min rms into 8 ohms, 20-20,000 Hz at 0.003% THD and IM distortion; power bandwidth 10-100,000 Hz into 8 ohms at 100 W; damping factor greater than 200 at 8 ohms, 1 kHz; frequency response dc-100,000 Hz 0/-0.5 dB; input sensitivity/impedance 1.41 V/25k ohms; S/N ratio better than 127 dB input shorted; channel separation at 20/1k/20k Hz better than 95/92/72 dB; power consumption 200 W (U.S.); 11 $\frac{1}{2}$ "W \times 11 $\frac{1}{2}$ "D \times 6 $\frac{1}{2}$ "H (truncated-pyramid-configuration enclosure; 19 lb 13 oz (U.S.).....\$950



ACOUSTAT

RP-2 Preamplifier

Reference preamplifier with solid-state circuitry. Features straight-thru-phase head amp; muting; buffered outputs; high-accuracy gain control; infrasonic and ultrasonic filtering; power failure protection. Frequency response 10-80,000 Hz -3.0 dB (phono and head amp). 20-20,000 Hz \pm 0.2 dB (high-level); input impedance 50k ohms (MM phono, high-level, tape in), 1000 ohms (head amp); phono overload 125 mV at 1 kHz; 0.002% SMPTE IM distortion; 3 $\frac{1}{2}$ "H \times 19"W \times 11"D; 10 lb\$650

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.....\$350

Hegeman Hapi 2 Preamplifier

Stereo preamplifier with wide bandwidth, extremely low distortion and noise, and passive equalization for equal time delay of all elements in musical spectrum. Features input selector for variety of signal sources; gain and balance controls; stereo/mono mode selector; tape-monitor loop; 6-dB at 100 Hz loudness compensation (9 o'clock position on volume control); low-cut filter (-3 dB at 20 Hz); 5-sec mute at start-up. Bandwidth 2-350,000 Hz; noise less than 3 μ V at phono input, referred to 20-kHz input bandwidth; THD and IM distortion less than 0.03%; square-wave rise time 0.5 μ sec at 8 V p-p output; 19"W \times 9"D \times 1 $\frac{1}{4}$ "H.
Kit.....\$479
Wired.....\$650

AIWA

SA-C50U Stereo Preamplifier

Stereo preamp with built-in moving-coil (MC) cartridge head amplifier; separate bass and treble controls with center defeat; low-filter switch; audio muting; tape/source monitoring with tape-1 to tape-2 dubbing; loudness switch; input selectors with LEDs. Frequency response 20-20,000 Hz \pm 0.2 dB phono RIAA, 10-100,000 Hz +0/-3 dB AUX and tape; input sensitivity/impedance 2.5 mV/47k ohms MM phono, 0.25 mV/100 ohms MC phono, 150 mV/47k ohms tuner, AUX, and tape; S/N ratio 89 dB MM, 73 dB MC, 105 dB tuner, AUX, and tape; THD 0.008% 20-20,000 Hz tuner, AUX, and tape, 0.002% MM at 1 kHz; low-filter characteristic 6 dB/octave; audio muting -20 dB; 9 $\frac{1}{2}$ "W \times 10 $\frac{1}{2}$ "D \times 2 $\frac{1}{2}$ "H.....\$155

AKAI

Mini Component Series

UC-A5 Stereo Preamplifier

Stereo preamp with FET input circuitry; built-in moving-coil (MC) head amp; bass and treble controls; 4-position loudness control. Frequency response 20-20,000 Hz \pm 2 dB phono RIAA,

2

PREAMPLIFIERS

2-100,000 Hz ± 2 dB tuner, tape, and AUX; S/N ratio 82 dB IHF A wtd; 11.1" D \times 11" W \times 2.2" H \$270

AMBER

Control Center Preamplifier

Control center preamp with totally passive RIAA phono equalization and discrete high-level circuitry. Features beefed-up power supply that allows use of ultralinear transistors; tone circuitry that operates only in feedback loops and provide moderate boost and out (hinge points are at 300 and 3k Hz, with max change of 6 dB); 2 tape-recording loops (tape 2 has priority in signal path and should be used for signal processing); tape dubbing in both directions; switchable subsonic filter; headphone jack connected to a class-A amplifier; full phono cartridge loading facilities. Subsonic filter characteristics 18-Hz hinge frequency, 6-dB/octave slope; output impedance 4 ohms; phono overload 360 mV; output level 22 V rms max \$469

APT

Holman Preamplifier

Features dc phono preamp with FET/bipolar differential pair-input configuration; optional plug-in pre-preamp for moving-coil cartridges (step-up transformer 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 ± 0.5 dB; input sensitivity/impedance 5 mV rms/47,000 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 \$575

AUDIO INTERNATIONAL

CM Lab Series

CM301a Preamplifier

FET stereo preamplifier with tube sound and transistor life. Features 22-position level attenuators; accurate channel-channel tracking; ultrawide bandwidth; 3-position input selector; tape-monitor control; stereo/mono switch; low filter; balance control; black anodized aluminum finish. Frequency response 2-80,000 Hz 0.5 dB high-level, +0.25 phono RIAA; output level 2 V into IHF load; input impedance high-level-phono 250k/47k ohms; THD 0.05%; IM distortion 0.02% SMPTE; channel separation 70 dB at 1 kHz; S/N ratio high-level/phono 100 dB below rated output/75 dB below 10-mV input; phono overload 150 mV at 1 kHz; 17 $\frac{1}{2}$ " W \times 7 $\frac{1}{2}$ " D \times 1 $\frac{1}{2}$ " H; 5.2 lb \$399

CM301aCX. Similar to CM301a except includes CBS CX decoder \$499

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 ± 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 ± 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 $\frac{1}{2}$ " H \times 19" W \times 7 $\frac{1}{2}$ " D \$849

AUDIO RESEARCH

SP-6C 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 ± 0.25 dB (high level), RIAA phono deviation ± 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 $\frac{1}{4}$ " H \times 19" W \times 10 $\frac{1}{4}$ " D \$2195

WC/OC-4. Walnut or oak finished wood cabinet for SP-6B \$99

SP-8. Similar to SP-6C except vacuum-tube electronic regulation and simplified automatic muting \$1495

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 ± 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 ± 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

1 B 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 50 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 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 40 W combined amp and user-selectable 35/50 msec initial delay with variable echo density; third-generation Audio-Correlator noise-reduction system and Peak Unlimiter; 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 ± 0.25 dB from 20-20,000 Hz (phono RIAA), 5-20,000 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 20-200 Hz, 10 dB from 2000-20,000 Hz. Sonic Hologram™ image resolution 5° arc in horizontal plane, 20° arc in vertical plane. Peak Unlimiter total dynamic range recovery 6 dB. Time delay: delay time 50 msec max.; dist. 0.2%; bandwidth 20-10,000 Hz, feed forward to 19,000 Hz. 6 $\frac{1}{2}$ " H \times 19" W \times 8" D \$960

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; moving coil phono input; 18-dB/octave infrasonic filter; tape/source monitoring with two-way tape dubbing; provision for external processor; input selector. Frequency response ± 0.25 dB "extended" curve (phono RIAA), 5-20,000 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 \$550

CONRAD-JOHNSON

Premier Two Preamplifier

Vacuum-tube-type preamplifier with cascode circuitry. Constructed with low-noise precision metal-film resistors, polypropylene and polystyrene capacitors in audio circuitry. Features 800- μ F power-supply capacitance; facilities for 2 tape recorders, 2-way dubbing, phono, tuner, and AUX inputs, 2 amplifier outputs; front-panel mute control. Frequency response 2-100,000 Hz bandpass, 20-20,000 Hz ± 0.25 dB phono RIAA; S/N ratio 70 dB below 10 mV phono, 84 dB below 2.5 V output (high-level); THD and IM distortion 0.05%; gain 35 dB phono, 28 dB high level; maximum output 25 V; phono overload 500 mV at 1 kHz; 14" W \times 11 $\frac{1}{4}$ " D \times 4 $\frac{1}{4}$ " H \$1585

PV2 Preamplifier

Vacuum-tube stereo preamplifier features low-

noise metal film resistors, and polypropylene and polystyrene capacitors 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), ± 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; $4\frac{3}{4}$ " H \times 14" W \times 11 $\frac{1}{4}$ " D \$585

PV3 Preamplifier

Basic preamplifier with simple vacuum-tube circuitry. Frequency response 10-100,000 Hz bandpass, 20-20,000 Hz ± 5 dB phono RIAA; S/N ratio 70 dB below 10 mV phono, 84 dB below 2.5 V high-level output; THD and IM distortion 0.05%; gain 34 dB phono, 24 dB high level; maximum output 10 V; phono overload 400 mV at 1 kHz; $10\frac{1}{2}$ " W \times 7" D \times $3\frac{3}{4}$ " H \$399

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 ± 0.1 dB and 1-100,000 Hz ± 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 ± 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 ± 0.2 dB/100k ohms; output impedance 50 ohms; three-circuit, $\frac{1}{4}$ -in headphone jack with 1-ohm min. impedance, 17 V rms max. output, and frequency response from 10-50,000 Hz ± 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 ± 0.2 dB adjustment over 50-dB range; $7\frac{1}{2}$ " H \times 17" W \times 14" D. Power Supply: Seven switched and two unswitched ac outlets; two dc outlets; $3\frac{1}{2}$ " H \times 17" W \times $7\frac{1}{2}$ " D. Phono Module A: frequency response into 10,000 ohms 20-20,000 Hz ± 0.25 dB (RIAA), 10-30,000 Hz ± 0.1 dB (flat); phase response into 10,000 ohms 20-20,000 Hz ± 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; $3\frac{1}{2}$ " H \times $1\frac{1}{4}$ " W \times $6\frac{1}{2}$ " 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..... \$2695

Straight-Line Two Preamplifier

Straight-wire-signal-path preamplifier with automatic muting. Features tuner, phono, AUX 1, AUX 2, tape 1, tape 2, processor signal-source selector; 6 outputs, including headphone monitor; detented level, loudness, detented bass

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SD 82

2 PREAMPLIFIERS



and treble ± 10 -dB boost/cut; tape-copy, tape-monitor, balance, mode, low-frequency filter, and phono-level controls; rumble, signal-present, overload, tone-activated indicators; $1\frac{3}{4}$ "H front panel.....\$479

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 ± 0.07 dB, (high level) 2-50,000 Hz $+0, -1$ dB; S/N (IHF A weighted) 89 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); 8.5" \times 3.2" \times 7".....\$445
DB-1Au. Same as DB-1A except with gold jacks.....\$462
DBR-1A. Same as DB-1A except mounted in standard rack; with DB-2 power supply.....\$482

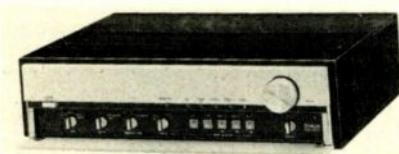
DBR-15A & 2 Preamplifier

Rack mount precision preamplifier and tone control with power supply; combines DB-1A and DB-5 in a 19" rack unit. Auxiliary cable included.....\$775

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 mechanism. 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 ± 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



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 ± 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

ESPRIT by SONY

TA-E900 Reference Preamplifier

All-stage-dc reference preamp with straight-path signal design. Features dual-monoaural preamplifier stages with sub-isolated separate voltage-regulated power supplies; selectable phono impedance and capacitance; built-in head amplifier; high-rigidity, low-resonance chassis construction; cascode-connected dual FETs and bipolar transistors in equalizer amplifier and buffer amplifier stages; bidirectional tape-copy

control; 2 tape monitors; subsonic filter. Frequency response dc-300,000 Hz $+0/-1$ dB tuner, tape AUX inputs; S/N ratio 84 dB phono, IHF A wtd, re: 2.5-mV MM input, 72 dB re: 0.2-mV MC input, 105 dB tuner, tape, AUX, re: 150 mV input; THD 0.005% max at 10-V output; phono RIAA accuracy -0.2 dB; subsonic filter characteristics 12 dB/octave at 15 kHz; 28 lb 11 oz.....\$3200

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 ± 1 dB (overall), ± 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.....\$495

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 μ V/22 ohms (phono MC), 150 mV/100k (tuner, AUX, tape 1, 2); frequency response ± 0.2 dB (phono RIAA), ± 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/ μ 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 ± 0.5 dB (phono), 20-20,000 Hz $+0/-0.25$ dB (high level); gain 34 dB (phono, 1 kHz), 20 dB ± 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; ± 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 ± 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/ μ sec; 2.9" H \times 15.2" W \times 12.6" D.....\$330

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 turnover 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.....\$370

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 ± 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 $\frac{1}{2}$ " W \times 13 $\frac{1}{4}$ " D.....\$370

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 ± 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 $\frac{1}{16}$ " H \times 17 $\frac{1}{16}$ " W \times 10 $\frac{1}{16}$ " D.....\$200

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 cascade



differential buffer amplifier circuitry; bass and treble tone controls; 18-Hz subsonic filter; output switch; two-way tape dubbing; input selector. Frequency response ± 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), 70 dB (phono 2), 108 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 $\frac{1}{16}$ " H \times 18 $\frac{1}{16}$ " W \times 13 $\frac{1}{16}$ " D.....\$900

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 ± 0.2 dB (RIAA phono), 40-10,000 Hz ± 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 3.5-6" H \times 19" W \times 10.5" D; chassis with handles 4.75" H \times 19" W \times 10.5" D....\$995

SP-100 Preamplifier

Straight-line signal path preamplifier with cascode differential amplifier stages. Features gold-plated phono inputs; monolithic FET inputs to phone and main amplifiers; optional moving coil (MC) module; tape-to-tape dubbing; monitor/source facility; subsonic filter; automatic switch-on mute and mute facility button; optional drop-in processing boards; integral power supply with toroidal transformer and 3 switched outlets for 10 amps. max. Phono section: input resistance 50k ohms $\pm 1\%$ (MM), 100 ohms $\pm 1\%$ (MC); RIAA accuracy ± 0.1 dB (MM and MC); input sensitivity at 1 kHz 2.5 mV rms (MM), 2.25 mV (MC); channel separation 70 dB; THD at 0.5 V $\pm 0.001\%$ (MM), $\pm 0.002\%$ (MC); S/N A weighted 87 dB (MM), 84 dB (MC); phono overload 420 mV rms (MM), 42 mV rms (MC). Amplifier section: gain 20 dB; frequency response 3.5-20,000 Hz +0/-3 dB; slew rate 110 V/ μ sec S/N 107 dB; 2.38" \times 19" \times 10 $\frac{1}{2}$ "; 11 $\frac{1}{4}$ lb.....\$699
Moving coil modules (2).....\$99
Moving magnet modules (2).....\$75

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 ± 0.2 dB from 20-20,000 Hz (phono RIAA), 1-150,000 Hz ± 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 $\frac{1}{2}$ " H \times 19 $\frac{1}{2}$ " W \times 13 $\frac{1}{2}$ " D.....\$1400

C-300 Preamplifier/Control Center

Preamplifier/control center combines Duo-Beta cir-

cuitry in audio signal path with new Plus-X circuitry in power supply. Features moving-coil cartridge head preamp; variable turnover-frequency control; MM/MC phono input selector; tone-control defeat switch; recorder-out/tone-control switch; dual tape-monitoring facilities; tape dubbing; gold-plated input connectors. S/N ratio 148 dB (MC), 80 dB (MM), 100 dB overall for high-level inputs; 19.1" W \times 15.4" D \times 6.5" H; 19.8 lb\$1000

CL-34 Preamplifier

Tube-type preamp with solid-state Duo-Beta circuitry, designed to accompany MQ-68C power amplifier but easily interfaces with any modern solid-state amp. Features gold-plated input connectors; tape monitoring and dubbing capability; tone-control defeat; low-cut filter; attenuator. S/N ratio 80 dB phono 1/2, 100 dB AUX; 17.3" W \times 12.7" D \times 3.1" H; 14 lb\$700

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 μ V/390 ohms (MC), 130 mV/60k ohms (AUX., tuner, tape); phono overload 300 mV; frequency response ± 0.3 dB from 20-20,000 Hz (phono RIAA), 10-80,000 Hz ± 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 $\frac{3}{16}$ " H \times 17 $\frac{1}{4}$ " W \times 11 $\frac{1}{16}$ " D.

METRON

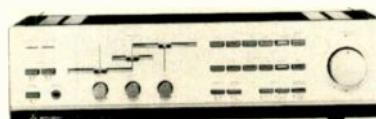
PR-1 Preamplifier

Features multiple-gang stepped attenuator volume control adjustable in 2-dB increments; separate stepped bass and treble controls ± 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 ± 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 \times 18.9" W \times 14.2" D.....\$500

MITSUBISHI

DA-P30 Preamplifier

Features dual-monaural construction; 4 power-supply voltage regulator circuits; wire operated



remote switches; built-in head amp; MM equalizer amp with dc-optimized negative feedback; low noise, high-capacity, rapid response power supply circuits; muting circuit; subsonic filter; tone-by-pass switch; docking, speaker selection, and protection-circuit indication; input

sensitivity/impedance 0.13 mV/10 ohms (phono MC), 2.8 mV/47k ohms (phono MM), 150 mV/47k ohms (tuner, AUX, Play 1,2); output level/impedance 1V/600 ohms; S/N 92 dB (phono MC, new IHF, 0.5-mV input), 81 dB (MM), 97 dB (tuner, AUX, play 1,2); THD at -20 dB 0.004% (MC), 0.002% (MM), 0.0015% (tuner, AUX, Play 1,2); channel separation 75 dB at 20 kHz (MC, MM), 80 dB (tuner, AUX, play 1,2); frequency response 20 Hz-20 kHz ± 2 dB; 18 $\frac{1}{2}$ " \times 5 $\frac{3}{8}$ " \times 9 $\frac{1}{2}$ "\$450

M-P04 Micro Preamplifier

Features built-in head amp; two phono inputs with MM/MC switching on front panel; tape-duplication and monitoring facilities; subsonic filter; loudness compensation; illuminated program selector switches; ultrawide dynamic range. Input sensitivity/impedance 2.5 mV/50k ohms (phono 1, 2, MM), 0.1 mV/10 ohms (phono 2, MC), 150 mV/50k ohms (tuner, AUX, play 1,2); output level/impedance 1V/600 ohms; S/N 78 dB (new IHF 5mV input, phono MM), 85 dB (phono MC), 89 dB (tuner, AUX, play 1,2); THD 0.005% (phono MM), 0.01% (phono MC), 0.005% (tuner, AUX, play 1,2); frequency response 20 Hz-20 kHz ± 2 dB; 10 $\frac{1}{2}$ " \times 2 $\frac{3}{4}$ " \times 9 $\frac{1}{4}$ "\$260

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 ± 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 $\frac{1}{2}$ " H \times 19" W \times 6" D.....\$500
System Preamp II. Similar to System Preamp but with second RIAA phono-preamp circuit to allow 2 turntables to be selected independently..\$550

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 ± 0.25 dB from 20-20,000 Hz (phono RIAA), 10-40,000 Hz ± 0.25 dB (line); THD 0.005% at 0 dB, 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 (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; optional rack-mount ears available; 1 $\frac{1}{4}$ " H \times 19" W \times 6" D\$350

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 \times 8" W \times 12" D\$920

(continued on next page.)

2

PREAMPLIFIERS

NAC 42 Preamplifier

Features input selector for moving-magnet/moving-coil phono cartridges, tape, and tuner. Frequency response 20 Hz-20 kHz ± 0.5 dB; THD and IM 0.02%, sensitivity 0.1 mV MC phono/2.0 mV MM phono, 75 mV high level; overload 10 mV MC phono, 200 mV MM phono; 3" H \times 8" W \times 12" D; 6 lb.....\$560

PNAG Moving Coil Preamp

Frequency response 20 Hz-20 kHz ± 0.5 dB; sensitivity 0.1 mV; 3 lb.....\$320

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 $\frac{1}{4}$ " H \times 19" W \times 13" D.....\$470

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 $\frac{1}{4}$ " H \times 19" W \times 13" D.....\$300

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

PHASE LINEAR**3500 Series Two Preamplifier**

Features parametric tone controls; moving-coil (MC) phono input requiring no external transformer; moving-magnet (MM) phono input; subsonic filter; twin tape deck copying; loudness contour switch; muting; stereo/mono switch; headphone amp with front panel jack; frequencies

can be boosted or attenuated anywhere in the range of 20-20,000 Hz. Rated output 2.0 V rms; THD at rated output less than 0.003%; frequency response 20-20,000 Hz ± 0.1 dB (phono MM and MC RIAA); S/N 92 dB (MM and MC); slew rate 10 V/ μ sec; channel separation 80 dB at 1 kHz; 21.4" W \times 6.3" H \times 15.4" D; 14.5 lb..\$725

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/ μ sec; 2 $\frac{1}{2}$ " H \times 19" W \times 16" D.....\$450

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 \times 19" W \times 10" D.....\$425. Walnut side panels.....\$50

PICKERING**P-20 Preamplifier**

Preamp designed to amplify low-level signals from low-impedance cartridges to level of conventional magnetic cartridges. Flat response down to 5 Hz and insensitive to hum pick-up. Voltage gain 26 dB; frequency response 10-100,000 Hz -0.5 dB; THD less than 0.08% at 200-mV output; channel separation 60 dB min; max input level 0.03 V rms at 1 kHz; max output 0.8 V rms; input impedance 1.2k ohms at 1 kHz; requires 3 C cells; 1.2 lb.....\$189

QUAD**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), ± 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 ± 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 de-

feat; 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 ± 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

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 ± 10 dB from 100-10,000 Hz; four-gang attenuated volume control; independent recording selector; subsonic and supersonic 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 $\frac{1}{2}$ " H \times 19" W \times 16 $\frac{1}{2}$ " D \$1600

RC-1010 Control Amplifier

Stereo straight-line dc control amplifier (preamp) with no output coupling capacitors. Features flat amplifier with dual-FET cascode bootstrap differ-



ential input stage and Darlington-connected OCL pure complementary class-A push-pull output circuitry; high-conductance, low-noise dual-FET cascode bootstrap differential moving-magnet (MM) phono equalizer amplifier input circuit; new symmetrical differential moving-coil (MC) phono equalizer circuit using low-noise transistors; no tone controls. Frequency response dc-100,000 Hz; harmonic distortion 0.03%; hum and noise 110 dB; input sensitivity/impedance 2.5 mV/35k, 50k, 70k ohms MM phono, 100 μ V/100 ohms MC phono, 150 mV/140k ohms tuner, AUX, tape; phono overload MM/MC 300/10 mV; residual noise 1.4 mV; filter slope 12 dB/octave at 15 kHz; power consumption 26 W; 16 $\frac{1}{2}$ " H \times 11 $\frac{1}{2}$ " D \times 3 $\frac{1}{2}$ " W; 9.9 lb.....\$350

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, ± 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 $\frac{1}{2}$ " H \times 16 $\frac{1}{2}$ " W \times 11 $\frac{1}{2}$ " D ..\$320

SAE**X-1P Direct-Line Preamplifier**

Features touch switching with computer control, adjustable R and C; moving-coil input, external power supply. Frequency response 20-20,000 Hz ± 0.1 dB; maximum output 17 V; THD and IM

distortion 0.01%; MM phono sensitivity 7 mV; MM phono overload 250 mV; 19" W × 9" D × 3" H; 12 lb.....\$1200

2100 Parametric Preamplifier

Serves as complete control center; incorporates parametric equalizer; frequency response 20-20,000 Hz ±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 × 19" W × 8½" 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

SAE P101 Preamplifier

Computer direct-line preamplifier. Features touch switching with computer control; adjustable R and C; phase switching; moving-coil input. Frequency response 20-20,000 Hz ±0.1 dB; maximum output 11 V; 19" W × 12½" D × 3½" H\$650

2900 Parametric Preamplifier

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 Hz ±0.25 dB (phono and high level); S/N 78 dB (phono), 95 dB (AUX.); 5.25" H × 19" W × 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 ±0.25 dB; THD and IM dist. 0.02%; S/N 72 dB (phono), 85 dB (AUX.); 5½" H × 19" W × 3½" D\$350
WMC-4. Unassembled walnut cabinet.....\$60

SAE Two PA-10 Preamplifier

Preamplifier with moving-coil phono input with adjustable R and C, and 3-band tone controls. Frequency response 20-20,000 Hz ±0.5 dB; THD and IM distortion 0.01%; S/N ratio 95 dB AUX, 80 dB MC, 74 dB MM; 18.25" W × 14.3" D × 3.5" H; 12 lb.....\$350

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 µV/100 ohms (phono MC), 150 mV/47k ohms (AUX. and tape); frequency response ±0.2 dB from 20-20,000 Hz (phono RIAA), 10-40,000 Hz ±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; 1¾" H × 19" W (with handles) × 10½" D.....\$250

SONY

TA-E88B 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 ±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); 3½" H × 18½" W × 14½" D\$1300

TA-D88B Preamplifier

Stereo preamplifier with 2-, 3-, and 4-way system capability and plug-in filter modules. Features Bessel-function filters; independent left- and right-channel configuration with isolated power supply; gold-plated jacks and connectors; gunmetal-gray finish. Crossover frequency points 140-225 or 280 Hz module 1, 500-800 or 1000 Hz module 2, 1250-2000 or 2500 Hz module 3, 5k-8k or 10k Hz module 4; frequency response dc-100,000 Hz +0/-1 dB; S/N ratio 110 dB min; input sensitivity 1 V; max output 7 V; THD 0.003% at 1 V output\$1000

TA-E86B Preamplifier

Features direct-coupled; 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 ±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: ±15. dB control/octave; spectrum-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

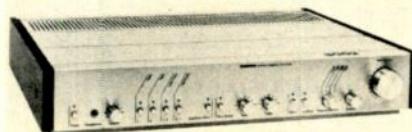
SP4001 Signal Processor/Preamp

Combination preamplifier and ten-band stereo octave equalizer. Preamp features two-deck tape monitoring 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, ±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

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

THRESHOLD

SL 10 Preamplifier

Direct-coupled cascode/class A stereo preamplifier features built-in moving-coil preamp with separate power supply; discrete design with tantalum and polystyrene capacitors in signal path; 20,000-µF supply regulation; individually adjustable rear-panel impedance and capacitance settings for phono input; tape monitor switch; channel balance control. Frequency response ±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 20-50,000 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/µsec; 2.62" H × 19" W × 8" D\$1290

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 ±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 × 10.1" W × 8.2" D\$300
C15B. Black finish\$310

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 ±0.5 dB (phono), 20-40,000 Hz ±1 dB (AUX.); S/N 80 dB ("A" weighted); three ac outlets. 3½" H × 16½" W × 9½" D\$120
SY-335MK II. Matte black version of SY-335. \$140

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 µV/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 ±0.2 dB from 20-20,000 Hz (phono RIAA, MM), 0.3 dB from 20-20,000 Hz (MC), 10-100,000 Hz ±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); 2½" H × 17" W × 12½" 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

2

PREAMPLIFIERS

two phono cartridge load resistance/capacitance selectors; two sets of preout terminals on rear panel with front-panel switches. Input sensitivity/impedance 2.5 mV/100, 33k, 47k, 68k, and 100k ohms (phono MM), 100 μ 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 $\frac{1}{2}$ "H \times 17 $\frac{1}{2}$ "W \times 14 $\frac{3}{4}$ "D \$550

C-6 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 headphones 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 μ 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 mV (MM 1 and 2), 89 dB at 500 μ V(MC), 102 dB (aux., tuner, tape); 4 $\frac{1}{2}$ "H \times 14 $\frac{3}{4}$ "W \times 13 $\frac{1}{2}$ "D \$450

2

INTEGRATED AMPLIFIERS

AIWA

AA-8500U Integrated Amplifier

Stereo integrated amplifier with newly designed DSL (Dynamic Super Loudness) circuit for effective reproduction of low-range sound. Features moving-coil (MC) cartridge head amplifier; tone-defeat switch; direct-coupled (dc) amplifier design. Output power 50 W/channel into 8 ohms, 20-20,000 Hz at 0.008% THD \$335

SA-A60U Integrated Amplifier

Mini stereo integrated amplifier with DSL (Dynamic Super Loudness) circuit; moving-coil cartridge head amp; -20 -dB audio mute switch; low filter; peak-output-power LED display. Output power 30 W/channel into 8 ohms, 20-20,000 Hz at 0.05% THD \$245

SA-A150U Integrated Amplifier

Mini stereo integrated amplifier that can be operated on 117-V ac line or 12-V dc power. Features LED peak-output-power indicators; loudness switch; built-in phono equalizer. Car power adaptor DC-123 optional. Output power 11 W/channel into 4 ohms, 50-20,000 Hz at 1.5% THD \$140

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 \$400

AM-U04. Similar to AM-U06 minus moving-coil head amp, magnetic cartridge impedance selector, and audio muting; 48 W/ch under same conditions \$330

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 \$280

Mini Component Series

UC-U2 Integrated Amplifier

Stereo integrated amplifier with dual LED output-power indicators; bass and treble controls; and 2-deck tape-monitoring and dubbing facilities. Output power 23 W/channel into 8 ohms, 20-20,000 Hz at 0.06% THD; 11.3"D \times 11.5"W \times 2.2"H \$260

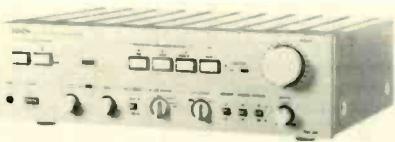
DENON

PMA-950 Integrated Amplifier

Stereo integrated amplifier with pure class-A circuitry, dual moving-coil (MC) preamplifier, and 2 complete phono sections. Features record-output selector; adjustable-impedance headphone amplifier; brushed metal finish; rosewood end plates. Output power 80 W/channel; speaker impedance 8 ohms; THD 0.004%; S/N ratio 90 dB MM phono, 74 dB MC phono, 108 dB AUX; RIAA EQ accuracy within 0.2 dB of ideal; 35.2 lb \$995

PMA-550 Integrated Amplifier

Stereo integrated amplifier with switchable direct coupling (dc) operation. Features electronic



switching input selectors; record-output selector; subsonic filter; defeatable tone controls; switching for two pairs of speaker systems; brushed-silver finish. Output power 100 W/channel into 8 ohms, both channels driven 20-20,000 Hz at less than 0.005% THD; S/N ratio 89 dB MM phono; RIAA EQ accuracy within \pm 0.2 dB of ideal; tone-control turnover points at 100 and 10k Hz (\pm 8-dB range);

17"W \times 16"D \times 5 $\frac{1}{2}$ "H \$595

PMA-530 Integrated Amplifier

Integrated stereo amplifier with capacitorless direct dc servo system. Power amp: features FET differential 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/ μ sec; rise time 0.6 μ 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-preamp 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

CA880 Stereo Integrated Amplifier

Stereo integrated amplifier with dual power meters supplemented by peak-level indicator and Panel Logic mode display. Features loudness switch; A/B/A + B speaker-systems selector; mic mixing control. Output power 100 W/channel min rms into 8 ohms, 20-20,000 Hz at no more than 0.09% THD and IM distortion; damping factor greater than 20; preamp frequency response 20-20,000 Hz \pm 0.5 dB; input sensitivity/impedance 2.5 mV/50k ohms, 150 mV/50k ohms AUX, tape monitors, and tuner; phono overload 150 mV; hum and noise 70 dB phono, 95 dB AUX, tuner, and tape monitor IHF A wtd; power consumption 400 W; 17 $\frac{1}{2}$ "W \times 13"D \times 5 $\frac{1}{2}$ "H; 27 lb \$450

CA550 Integrated Amplifier

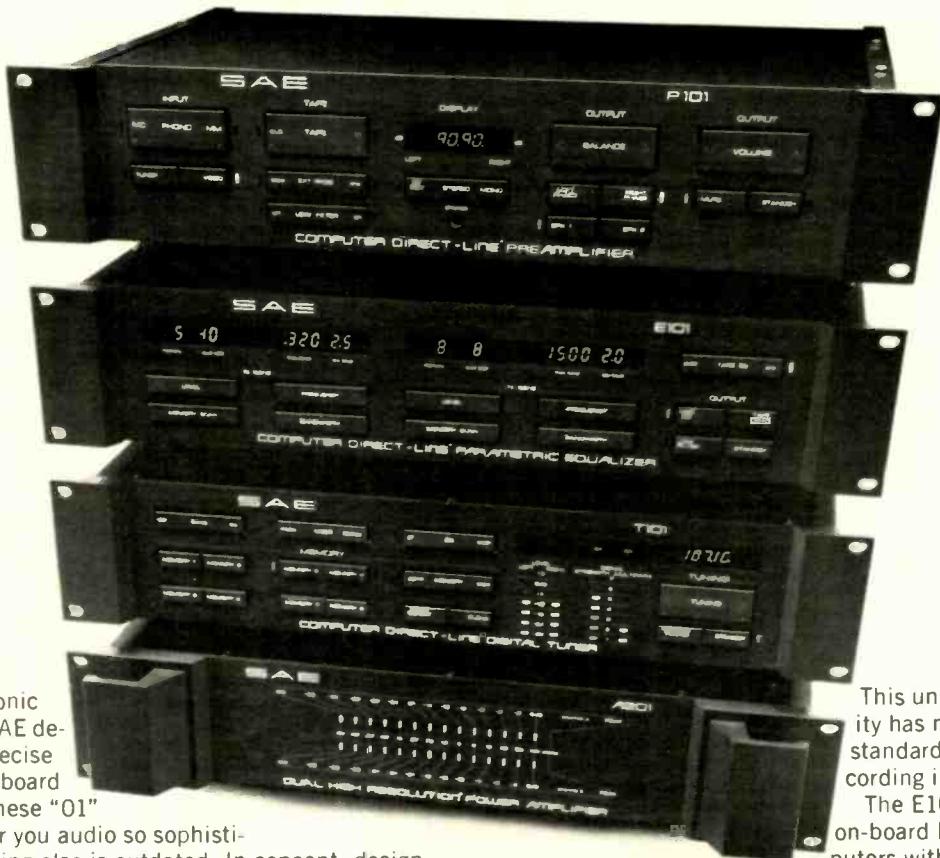
Studio Standard stereo integrated amplifier with two 9-LED power-level meters. Features class-A-II dc power amplifier and indicator; pushbutton function selectors with LED indicators; 4-position speaker-systems selector switch; bass and treble controls; loudness-contour, subsonic-filter, and high-filter switches. Output power 70 W/channel min rms into 8 ohms, 20-20,000 Hz at no more than 0.009% THD and IM distortion; damping factor greater than 50; preamp frequency response 20-20,000 Hz \pm 0.5 dB; input sensitivity/impedance 250 μ V/22 ohms MC phono, 2.5 mV/50k ohms MM phono, 150 mV/50k ohms tape monitors, tuner, AUX; phono overload MC/MM 6/180 mV; subsonic-filter response 12 dB/octave below 10 Hz; hum and noise MC/MM/tape monitor, tuner, AUX 65/75/100 dB; preamp output 1000 mV/1.5k ohms; power consumption 320 W; 17 $\frac{1}{2}$ "W \times 14 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "H; 20 lb \$450

CA350 Integrated Amplifier

Stereo integrated amplifier with class-A-II dc power amplifier and indicator. Features dual 9-LED power-level meters; volume/balance and tone controls; 4-position speaker-systems selector; loudness-contour and subsonic-filter switches. Output power 50 W/channel min rms into 8 ohms, 20-20,000 Hz at no more than 0.009% THD and IM distortion; damping factor greater than 50; preamp frequency response 20-20,000 Hz \pm 0.5 dB; input sensitivity/impedance 2.5 mV/50k ohms, 150 mV/50k ohms all others; phono overload 180 mV; subsonic-filter response 12 dB/octave be-

SAE's '01' SYSTEM—

All it has in common with other components is...nothing.

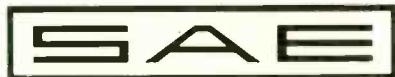


From the sonic accuracy of SAE design to the precise control of on-board computers, these "01" products offer you audio so sophisticated everything else is outdated. In concept, design, function & performance...there is nothing conventional about the new SAE "01" System.

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The A201 Power Amp. Like all "01" amplifiers, it offers clean, "real world" power—the kind it takes to drive today's complex speakers. A high current supply and more than enough output devices to deliver all the music. Fully complementary circuitry can handle any musical passage. A powerful natural damping factor aids the performance of any speaker. It delivers 100 watts per channel.* "01" amps are also available in 150, 250, and 500 watt* versions.

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low 15 Hz; hum and noise phono/all others 75/100 dB; preamp output 1000 mV/1.5k ohms; power consumption 230 W; 17½" W × 14½" D × 4½" H; 18 lb..... \$400

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 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 ±0.5 dB..... \$300

CA250 Integrated Amplifier

Stereo integrated amplifier with dual 9-LED peak-level displays. Features loudness-contour switch; mode selector for stereo and mono; 4-position speaker-systems selector; tape monitors 1 and 2; volume, balance, bass, treble, and tone controls; panel logic display for tuner, phono, tape, and AUX inputs. Output power 30 W/channel min rms into 8 ohms, 20-20,000 Hz at no more than 0.09% THD and IM distortion; damping factor greater than 20; preamp frequency response 20-20,000 Hz ±0.5 dB; input sensitivity/impedance 2.5 mV/50k ohms phono, 150 mV/50k ohms all others; high-filter response 6 dB/octave above 6 kHz; phono overload 150 mV; hum and noise 72 dB phono, 95 dB all others; power consumption 170 W; 17½" W × 13½" D × 4½" H; 15 lb..... \$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 ±0.5 dB..... \$250

HARMAN/KARDON

700 Series High Technology Separates

hk 750 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 -3 dB; IM dist. 0.05% and TIM dist. 0.01% at rated out; slew rate 60 V/μsec. 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..... \$350

HITACHI

HA-4700 Integrated Amplifier

Stereo integrated amplifier with super-linear circuit, low noise phono EQ amp, and LED power meters. Features subsonic filter; tape dubbing; speaker-protection circuit; speaker-selector switches; tone-defeat switch; loudness control; independent bass, treble, and balance controls; headphone jack. 50 watts/channel min rms, both channels driven into 8 ohms, 20-

20,000 Hz with 0.02% THD; frequency response 30-15,000 Hz ±0.5 dB phono, 10-70,000 Hz +0.5/-3.0 dB tuner, tape, AUX; input sensitivity/impedance 2.5 mV/47k ohms phono MM, 0.15 mV/100 ohms phono MC, 150 mV/47k ohms tuner, tape, AUX; S/N 90



dB MM, 73 dB, MC, 100 dB tape; damping factor 40 at 50% rated output; 17½" × 3½" × 12½"; 14 lb 1 oz..... \$300

HA-3800. Similar to HA-4700 except 35 watts/channel with 0.05% THD. No tape dubbing, phono MC. Frequency response 20-70,000 Hz tuner, AUX; S/N 80 dB phono; damping factor 30; 17½" × 3½" × 11½"; 12 lb 2 oz. \$220

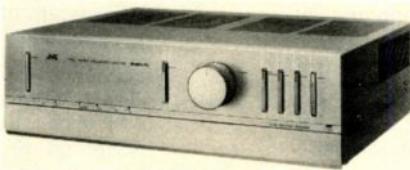
HA-2800 Integrated Amplifier

Stereo integrated amplifier with LED power meters, subsonic filter, and loudness switch. Output power 25 W/channel min rms, both channels driven into 8 ohms with 0.1% THD; frequency response 20-20,000 Hz ±0.5 dB phono, 20-40,000 Hz +1/-3 dB, tuner, AUX; input sensitivity/impedance 2.5 mV/47k ohms phono, 150 mV/40k ohms tape; S/N 72 dB phono, 93 dB tuner, AUX; damping factor at 50% rated output 20; 17½" × 3½" × 9½"; 10 lb 9 oz..... \$180

JVC

A-X7 Stereo Integrated Amplifier

Integrated amplifier with Super A amplification and pure negative-feedback (NFB) circuit for high efficiency and high output with low distortion across entire audio spectrum. Features direct 2-stage dc amplifier construction that eliminates need for separate tone-control amplifier; facilities for both moving-coil (MC) and moving-magnet (MM) cartridges through high-gain dc-servo phono equalizer; direct power supply that places transformers and filter



capacitors as close as possible to amplifying circuits to ensure low impedance across entire audio spectrum; inputs for 2 turntables, 2 cassette decks, and tuner; bass, treble, volume, and loudness-compensation controls; switching for 2 pairs of speaker systems; tape monitor with dubbing, tuner, phono, AUX, and stereo/mono switches. Output power 90 W/channel min rms, both channels driven into 8 ohms, 20-20,000 Hz at no more than 0.003% THD and IM distortion; transient intermodulation distortion (TIM) and switching distortion nonexistent; phono gain 50 dB MC, 38 dB MM. 17½" W × 16½" D × 5½" H; 24.6 lb..... \$630

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 +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, ±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 μV/100 ohms (phono MC), 150 mV/47k ohms (tuner, AUX, tape); phono overload 220 mV (MM), 15 mV (MC); phono RIAA equalization ±0.3 dB from 20-20,000 Hz (MM), ±0.5 dB from 30-20,000 (MC); S/N (IHF A) 84 dB (MM), 67 dB (MC), 109 dB (tuner, AUX, tape); 4¾" H × 18½" W × 13½" 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 +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 ±0.5 dB from 20-15,000 Hz; 4½" H × 16½" W × 12½" D..... \$260

A-X1. Similar to A-X2 minus S.E.A. graphic equalizer; has bass and treble controls; 30 W/ch under same conditions..... \$215

A-S3 Stereo Integrated Amplifier

Stereo integrated amplifier with split dual-voltage power supply and 2-stage OCL power-amplifier circuit. Features class-A phono equalizer; low-silhouette design; human-engineered front panel. Output power 20 W/channel min rms, both channels driven into 8 ohms, 20-20,000 Hz at no more than 0.08% THD. \$150

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 ±230 V/μsec; rise time 0.8 μsec; frequency response 0-400,000 Hz +0/-3 dB (dc coupled on), 1-400,000 Hz +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 ±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; 6½" H × 18½" W × 18½" 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 ±150 V/μsec; rise time 0.8 μsec; frequency response 0-400,000 Hz -3 dB (dc coupled on), 18-400,000 Hz -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 ± 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 $3\frac{1}{2}$ "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 ± 120 V/ μ sec; rise time 0.9 μ 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 ± 110 V/ μ sec; S/N 87 dB (phono), 105 dB (tuner, AUX, tape); phono RIAA frequency response ± 0.3 dB from 20-20,000 Hz..... \$399

KA-400 Integrated Amplifier

Stereo integrated amplifier with zero-switching, high-speed, dc design. Features reduced magnetic distortion; tape B jacks on front panel; switching for two pairs of speaker systems; op-amp differential equalizer section. Output power 45 W/channel min rms, both channels driven into 8 ohms, 20-20,000 Hz at no more than 0.035% THD. Frequency response dc-100,000 Hz $+0/-3$ dB; power bandwidth 5-55,000 Hz at 0.05% THD; THD 0.035% AUX, 0.01% phono at rated power; IM distortion 0.005% at rated power into 8 ohms; damping factor 50; speaker impedance 4-16 ohms; input sensitivity/impedance 2.5 mV/50k ohms phono, 150 mV/50k ohms all other inputs; S/N ratio 78/84/90 dB for 2.5/5.0/10 mV phono input, 105 dB for 150-mV all other inputs; phono overload 220 mV rms at 1 kHz, 0.05% THD; output level/impedance 150 mV/330 ohms tape rec; subsonic filter characteristic 6 dB/octave at 18 Hz; power consumption 230 W at full power; accessory outlets 2 switched, 1 unswitched; $15\frac{3}{4}$ "W \times $13\frac{1}{2}$ "D \times $5\frac{1}{2}$ "H; 14.7 lb \$249

Remote-Control Series

KA-500 Integrated Amplifier

Stereo integrated amplifier with dual LED bar-graph output-power indicators. Features ± 10 -dB bass, treble, and balance slide controls; mic mixing; loudness and audio-mute switches; phono/tuner/AUX/tape input selectors; up-/down volume control with LED 0-10 level indicators. Output power 43 W/channel continuous, both channels driven into 8 ohms, 20-20,000 Hz at 0.1% THD and 0.03% IM distortion; frequency response 10-80,000 Hz -3 dB; input sensitivity/impedance 2.5 mV/50k ohms phono, 150 mV/30k ohms AUX, tuner, and tape; S/N ratio phono/mic/tuner, AUX, tape 75/67/105 dB IHF A wtd; phono overload 80 mV; $17\frac{1}{2}$ "W \times $11\frac{1}{2}$ "D \times $5\frac{1}{4}$ "H \$285

Slimline Series

KA-80 Integrated Amplifier

Stereo integrated amplifier with direct-coupled (dc) design. Features tape/source, AUX/tuner/phono input buttons; volume control; hidden controls behind hinged panel; mic mixing, dc-coupled/subsonic-filter switch. Output power 48 W/channel continuous, both channels driven into 8 ohms, 20-20,000 Hz at 0.02% THD; frequency response dc-450,000 Hz -3 dB with dc-coupling activated; S/N ratio 86 dB

phono, 106 dB AUX, tuner, tape (IHF A wtd); phono overload 230 mV rms; $17\frac{1}{2}$ "W \times $13\frac{1}{2}$ D \times $3\frac{1}{2}$ "H \$310

Audio Purist Series

KA-1000 Integrated Amplifier

High-speed stereo integrated amplifier with Sigma drive and true direct-coupling (dc) design. Features nonmagnetic structure; external dynamic power supply; touch-sensor fader with preset volume control; human-engineered front-panel layout; built-in moving-coil (MC) phono head amp; 5 separate power supplies; tone controls with "bypass-direct" off switch; rec-out input selector; balance-off switch; dc-coupled/subsonic-filter switch; tape dubbing; selectable moving-magnet (MM) phono impedance; loudness switch; low-noise/distortion phono preamp with wide dynamic range. Output power 100 W/channel minimum rms, both channels driven into 8 ohms, 20-20,000 Hz at no more than 0.005% THD; IM distortion 0.007% at rated power into 8 ohms; damping factor 600 at 100 Hz, end of sigma cable; rise time 0.9 μ sec; slew rate ± 120 V/ μ sec; frequency response dc coupling on/off dc-400,000 Hz $+0/-3$ dB/18-400,000 Hz $+0/-3$ dB; speaker impedance 4-16 ohms; input sensitivity/impedance 2.5 mV/33k, 47k, or 100k ohms MM phono, 0.2 mV/100 ohms MC phono, 150 mV/47k ohms all other inputs; S/N ratio for 2.5/5.0/10-mV input 87/93/99 dB MM phono, for 0.2/0.4-mV input 67/73 dB MC phono, for 150-mV input 105 dB all other inputs; phono overload at 1 kHz 270 mV rms MM, 15 mV rms MC, ref. 0.003% THD; output level/impedance 150 mV/330 ohms tape rec; phono RIAA frequency response 20-20,000 Hz ± 0.2 dB; subsonic filter characteristics 6 dB/octave at 18 Hz; accessory ac outlets 2 switches, 1 unswitched; power consumption 5 A; $17\frac{1}{2}$ "W \times $14\frac{3}{4}$ "D \times $4\frac{1}{2}$ "H amplifier, $14\frac{1}{2}$ "W \times $14\frac{1}{2}$ "D \times $4\frac{1}{2}$ "H power supply; combined weight 31.7 lb \$795
KA-900. Similar to KA-1000 except output power 80 W/channel; damping factor 500; S/N ra-

0.06-0.18 mV/100 ohms (MC), 240 mV/40k ohms (tuner and aux.); frequency response ± 0.3 dB from 20-20,000 Hz (phono RIAA), 10-100,000 Hz -1 dB (tuner, aux.); S/N (IHF A weighted) 90 dB (phono), 100 dB (tuner and aux.); $7\frac{1}{2}$ "H \times $18\frac{1}{2}$ "W \times $14\frac{1}{2}$ D \$800

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 -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 μ V/100 ohms (MC), 190 mV/50k ohms (tuner and aux.); frequency response ± 0.3 dB from 20-20,000 Hz (phono RIAA), 10-100,000 Hz -1 dB (tuner and aux.); S/N (IHF A weighted) 94 dB (MM), 70 dB (MC), 105 dB (tuner and aux.); $5\frac{1}{2}$ "H \times $18\frac{1}{2}$ "W \times $13\frac{1}{2}$ D \$500

MARANTZ

PM700 Integrated Amplifier

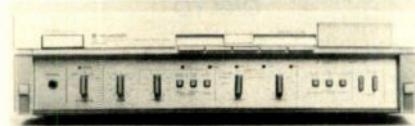
Power amp: features dc circuitry; dual LED power output logarithmic displays; two-speaker switching; 70 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.025% THD and IM dist.; damping factor 60 at 20 Hz. Preamp: features built-in moving-coil cartridge head amplifier; built-in five-band stereo graphic equalizer with center frequencies set at 50, 200, 800, 3200, 12,800 Hz, ± 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); phone overload 220 mV (MM), 16 mV (MC); S/N (A weighted) 92 dB (phono MM), 98 dB (high level); frequency response ± 0.2 dB from 20-20,000 Hz (phono), 10-70,000 Hz ± 1 dB (high level); dynamic range 123 dB (phono MM), 112 dB (MC); $5\frac{1}{2}$ "H \times $16\frac{1}{2}$ "W \times 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 ± 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 ± 0.5 dB; phono S/N 87 dB (A weighted); phono dynamic range 109 dB; high level frequency response 15-50,000 Hz ± 1 dB; $5\frac{1}{2}$ "H \times $16\frac{1}{2}$ "W \times $9\frac{1}{2}$ 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/ μ sec; damping factor 120 at 8 ohms, 50 Hz; S/N 104 dB (A weighted); frequency response 5-50,000 Hz $+0/-3$ dB;



tio 86/92/98 dB MM, 66/72 dB MC; power consumption 4A; combined weight 22 lb. \$520
KA-800. Similar to KA-900 except 50 W/channel; THD 0.009%; IM distortion 0.007%; damping factor 100; rise time 1.0 μ sec; slew rate ± 100 V/ μ sec; high-end frequency response to 350 kHz; S/N ratio 84/90/96 dB MM, 64/70 dB MC; phono overload at 1 kHz MM/MC/200/10 mV at 0.005% THD; RIAA phono frequency response 30-20,000 Hz ± 0.3 dB; power consumption 3 A; combined weight 18.7 lb \$395

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/ μ sec; rise time 0.6 μ sec; frequency response 10-100,000 Hz -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),

input sensitivity/impedance 1.2 V/10k 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 ± 0.3 dB (phono RIAA), 20-20,000 Hz ± 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
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/ μ sec; damping factor 75; main amp input sensitivity 0.85 V; S/N (A weighted) 101 dB (main amp), 92 dB (high level) \$350

3140 Integrated Amplifier

Power amp section: features high-voltage high-current output stage using 20-ampere 200-W output transistors; soft clippingTM 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 ultra-sonic 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 ± 0.3 dB; 3.8" H \times 16.5" W \times 11.4" D \$398

3202 Integrated Amplifier

Power amp: features five-LED peak-reading display; soft clippingTM 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/ μ 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 ± 0.3 dB (phono RIAA), 20-20,000 Hz ± 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 \$218

NIKKO

NA-2090 Integrated Amplifier

Stereo integrated amplifier with dc nonswitching circuitry. Features moving-magnet (MM) and

moving-coil (MC) phono preamp stages; 2 tape monitors and bidirectional tape dubbing; separate record-output selectors to permit listening to one source while taping from another; tone controls with bypass switch; loudness-contour and high-filter switches; 12-dB/octave subsonic filter to eliminate rumble and record-warp effects; self-illuminating pushbutton function switches; dual 11-LED output-power displays in two colors (indicate from 0.5 to 100 W); class-A amplifier circuitry; protection system for speaker systems and output transistors. Output power 85 W/channel min rms into 8 ohms, 20-20,000 Hz at no more than 0.015% THD; 16.5" W \times 13.5" D \times 4.7" H \$430
NA-1090. Similar to NA-2090 except output power is 63 W/channel; 16.5" W \times 13.25" D \times 4.75" H \$350

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 ± 0.5 dB from 30-15,000 Hz (phono RIAA), 10-50,000 Hz ± 0.5 dB (high level); phono S/N 82 dB; phono overload 200 mV at 1000 Hz; rack-mountable; 3" H \times 16.5" W \times 12.5" D \$280

NA-500 Integrated Amplifier

Stereo integrated amplifier with 10-section LED output power displays and 2 monitor switches to allow tape-to-tape dubbing. Features loudness-compensation switch; subsonic filter to eliminate low-frequency rumble and record-warp effects; speakers A/B/A + B switch; circuit-breaker speaker-protection system. Output power 40 W/channel min rms into 8 ohms, both channel driven 20-20,000 Hz at no more than 0.08% THD; 17.3" W \times 9.9" D \times 3.8" H. \$250
NA-700. Similar to NA-500 except output power 60 W/channel; 11.6" D \$300

ONKYO

A-65 Integrated Amplifier

Integrated amplifier with dual Super Servo circuitry. Features 2 moving-coil (MC) and one moving-magnet (MM) modes; 32-click-stop volume control; 2 sets of phono input terminals; 4



heavy-duty 12,000- μ F electrolytic capacitors; LED power meters; linear switching. Output power 100 W/channel minimum rms into 8 ohms, 20-20,000 Hz at no more than 0.015% THD; damping factor 50 at 8 ohms; 16.5" W \times 15.5" D \times 5.5" H \$650

A-45 Integrated Amplifier

Amplifier with dual Super Servo circuitry. Features LED power meters; linear switching; MC cartridge preamp; support of up to 2 turntables and 2 speaker systems simultaneously; 41-click-stop volume control. Output power 70 W/channel min rms into 8 ohms, both channels driven 20-20,000 Hz at no more than 0.018% THD; damping factor 50 at 8 ohms; 16.5" W \times 15.5" D \times 4.5" H \$450
A-35. Similar to A-45 except 55 W/channel \$330

A-25 Integrated Amplifier

Stereo integrated amplifier with built-in moving-coil phono-cartridge head amp. Features dual super-servo circuitry; dual output-power meters;

and MM/MC (moving-magnet/moving-coil) input selector. Output power 40 W/channel min rms, both channels driven 20-20,000 Hz at no more than 0.04% THD; 16.5" W \times 11" D \times 3.5" H \$235

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 \times 16.5" W \$180

OPTONICA

SM-9005 Integrated Amplifier

Class-A direct-coupled (dc) amplifier with 0% switching distortion; 100 watts per channel, 20-20,000 Hz into 8 ohms at no more than



0.0095% THD; record-out selector; MC head amp; S/N (AUX) 106 dB; frequency response DC of 70 kHz +0, -3 dB (pre-out); IM distortion 0.0095% at rated power \$530

SM-4305 Integrated Amplifier

Power amp: has two-way speaker switching; 40W/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 ± 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

SM-3300 Integrated Amplifier

Features ITL/OCL circuitry; 30 watts per channel with 0.08% THD into 8 ohms; 2 \times 6 LED power meter; A/B/A+B speaker switching; bass, treble and balance controls; 41-step volume control; subsonic filter; loudness contour; function indicators for phono, tuner, and AUX (tape 2); tape 1 monitor; tape dubbing; mode switch; headphone jack; 2 ac convenience outlets \$200

JC PENNEY

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 ± 1 dB, IM dist. 0.03%. Preamp section: features ± 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 \$250

MCS 3830 Micro-Mini Integrated Amp

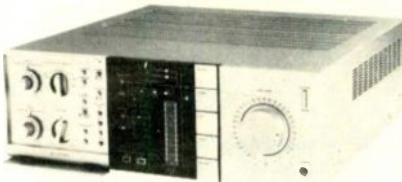
Compact integrated stereo amplifier with 30-W/channel output power into 8 ohms, 20-20,000 Hz at 0.08% THD. Features 5-LED output-power-level indicator; 2-speaker selector; bass and treble controls; concentric volume/balance control; tape 1/tape 2/tuner/phono input selector switch; loudness-compensation switch;

matches MCS 3730, 3530, and 8230;
11 $\frac{1}{4}$ "W x 9 $\frac{1}{4}$ "D x 2 $\frac{1}{4}$ "H \$200

PIONEER

A-9 Integrated Amplifier

Stereo integrated amplifier with nonswitching dc-servo amplifier with pictographic output-pow-



er display. Features concentric treble level/turnover and bass level/turnover controls; rec out selector with tape-copy function; balance and calibrated volume controls; push-type phono, tuner, AUX, tape-1, and tape-2 switches; MM/MC phono, loudness, subsonic-filter, MC-load, straight-line on/off, MM-load, and speakers A and B pushbutton switches; all controls except input selector, power, and volume hidden behind hinged panel. Output power 110 W/channel min continuous average into 8 ohms, 20-20,000 Hz at no more than 0.003% THD; IM distortion 0.005% at continuous rated power; frequency response 20-20,000 Hz ± 0.2 dB phono MM, RIAA EQ, 5-200,000 Hz $\pm 0/-3$ dB power amp; damping factor 60 at 20-20,000 Hz, 8 ohms; 16 $\frac{1}{16}$ "W x 17 $\frac{1}{16}$ "D x 5 $\frac{1}{8}$ "H; 35 lb 4 oz \$800

A-8. Similar to A-9 except output power 90 W/channel; no phono-load selector; 30 lb 7 oz..... \$550

A-7. Similar to A-8 except 70 W/channel... \$450

A-6 Integrated Amplifier

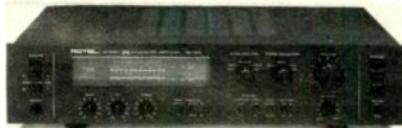
Stereo integrated amplifier with nonswitching amplifier and pictographic output-power display. Features separate bass, treble, and volume controls; push-type input selector switches; front-panel headphones jack. Output power 60 W/channel min continuous average into 8 ohms, 20-20,000 Hz at no more than 0.008% THD; frequency response 20-20,000 Hz ± 0.2 dB phono RIAA; 16 $\frac{1}{16}$ "W x 14 $\frac{1}{16}$ "D x 3 $\frac{1}{8}$ "H; 15 lb 7 oz \$325

A-5. Similar to A-6 except output power 35 W/channel at 0.009% THD; phono RIAA frequency response ± 0.5 dB; 14 lb 5 oz \$225

ROTEL

RA-1010 Integrated Amplifier

Direct-coupled stereo integrated amplifier with direct-coupled OCL complementary outputs, 16-LED/channel peak-power indicators, and electronic protection. Features bass, midrange



and treble controls; MC head amp for moving-coil cartridges; input impedance selector for moving-magnet (MM) cartridges; tape 1 to tape 2 and tape 2 to tape 1 dubbing facilities; tone-defeat, audio-mute, and high-filter switches; facilities for connection of two pairs of speaker systems. Output power 60 W/channel continuous, both channels driven into 8 ohms, 20-20,000 Hz at 0.03% THD and 0.02% IM distortion; damping factor 50; input sensitivity/impedance 2.5 mV/35, 50, or 70 ohms MM phono, 0.12 mV/30 ohms MC phono, 150 mV/30k ohms tuner, AUX, tape; MM phono overload 240 mV at 1 kHz; hum and noise 76 dB phono MM, 92 dB tuner, AUX, tape; power consumption 490 W;

16 $\frac{1}{16}$ "W x 11 $\frac{1}{32}$ "W x 3 $\frac{7}{32}$ "H; 16.5 lb \$350

RA-700 Integrated Amplifier

Nonswitching dc servo stereo integrated amplifier with remote-control facility. Features 8-band graphic equalizer; MC phono cartridge input; subsonic-filter, loudness, and mode switches; facilities for connecting two pairs of speaker systems; tape 1 to tape 2 dubbing with 2 tape-monitor switches. Output power 40 W/channel into 8 ohms, both channels driven 20-20,000 Hz at 0.009% THD and IM distortion; damping factor 50; input sensitivity/impedance 2.5 mV/47k ohms phono MM, 0.2 mV/100 ohms phono MC, 150 mV/39 k ohms tuner, AUX, tape; hum and noise 87 dB phono MM, 98 dB tuner, AUX, tape; power consumption 250 W; 16 $\frac{1}{16}$ "W x 11 $\frac{1}{2}$ "D x 3 $\frac{1}{16}$ "H; 15.9 lb. \$300

RA-560 Integrated Amplifier

Nonswitching duo-NFB stereo integrated amplifier. Features Darlington direct-coupled OCL complementary outputs; split power supply; fluorescent peak-power meters; tape 1 to tape 2 dubbing; subsonic-filter and loudness switches; facilities for connecting two pairs of speaker systems. Output power 40 W/channel into 8 ohms at 0.03% THD and IM distortion; damping factor 50; input sensitivity/impedance 2.5 mV/47k ohms phono, 150 mV/33k ohms tuner, AUX, tape; phono overload 130 mV; hum and noise 80 dB phono, 95 dB tuner, AUX, tape; power consumption 300 W; 16 $\frac{1}{16}$ "W x 11 $\frac{1}{16}$ "D x 3 $\frac{1}{16}$ "H; 15.4 lb..... \$235

Accessory Remote Controller

RR-700 Remote-Control Center

Remote-control center with transmitter unit for RP-700, RA-700, RT-700, RX-700, and RD-700. Features infrared wireless remote-control system; electronic soft-touch buttons for input functions; volume up/down control; audio muting; handy transmitter box for controlling turntable play/reject, cassette record/play operations, tuner presets, volume, muting, power on/off; infrared sensor eye..... \$235

Micro Component Series

RMA-90 Integrated Amplifier

Nonswitching duo-NFB stereo integrated amplifier designed for limited spaces and to match Micro 90 system components. Features separate LED peak-power indicators for each channel; LED indicators for tape and function switches; LED indicator for protection circuit. Output power 30 W/channel continuous into 8 ohms, both channels driven 20-20,000 Hz at 0.03% THD and IM distortion; damping factor 50; input sensitivity/impedance 2.5 mV/47k ohms phono, 150 mV/33k ohms tuner, AUX, tape; phono overload 130 mV at 1 kHz; hum and noise 75 dB phono, 95 dB tuner, AUX, tape; power consumption 275 W; 11" W x 10 $\frac{1}{16}$ "D x 2 $\frac{1}{32}$ "H; 9.9 lb..... \$250

RMR-90 Remote-Control Center

Adds convenience of infrared wireless remote control to Micro 90 system..... \$200

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/channel continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD..... \$799

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/channel continuous, both channels driven into 8 ohms

from 20-20,000 Hz with 0.05% THD..... \$499

SANSUI

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 -3 dB; slew rate 400 V/ μ 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 300V/ μ sec; tubular heat sinking \$650

AU-D7 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 -0.5% THD; slew rate 220 V/ μ 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

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2**INTEGRATED AMPLIFIERS**

AU-D5. Similar to AU-D7 except output power 65 W/channel \$420

SANYO**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/μsec. 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 μV/100 ohms (phono MC), 150 mV/47k ohms (AUX and tape); frequency response ±0.2 dB from 20-20,000 Hz (phono RIAA), 20-20,000 Hz ±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; 3½" H × 19" W × 10%" D \$220

H.H. SCOTT**458A Integrated Amplifier**

65 W/channel min rms, both channels driven into 8 ohms, 20-20,000 Hz at no more than 0.05% THD. Features dual-range fluorescent power-level indicators calibrated in watts using "auto-range" circuitry for accurate readout from 0.001 watt to full power; MM and MC phono preamplifiers; accessory input and front-



panel switch for equalizer and/or noise reduction unit; bass, mid, and treble controls; subsonic and high filters; 2 pairs of speaker drive capability; LED protection indicator; center-detent tone and balance controls. Input sensitivity 0.25 mV (MC phono), 2.5 mV (MM phono), 150 mV (others); S/N weighted input shorted 70 dB (MC phono), 86 dB (MM phono), 102 dB (others); frequency response 20-20,000 Hz ±0.5 dB; channel separation 65 dB (phono MM), 70 dB (others) at 1 kHz; damping factor 60; 3.5" H × 17" W × 8.7" D \$350

438A Integrated Amplifier

45 W/channel min rms, both channels driven into 8 ohms, 20-20,000 Hz at no more than 0.05% THD. Features dual-range fluorescent power-level indicators; subsonic and high filters; 2 tape monitors with 2-1 dubbing; 2 pairs of speaker drive capability; center-detent tone and balance controls. Input sensitivity 2.5 mV (phono MM), 150 mV (others); S/N 80 dB (phono), 100 dB (others); frequency response 20-20,000 Hz ±0.5 dB; channel separation 60 dB (phono), 65 dB (others) at 1 kHz; damping factor 50; 3.5" H × 17" W × 8.7" D \$265

428A Integrated Amplifier

35 W/channel min rms, both channels driven into 8 ohms, 20-20,000 Hz at no more than

0.05% THD. Features dual-range fluorescent power-level indicators; subsonic filter; two pairs of speaker drive capability; center-detent tone and balance controls. Input sensitivity 2.5 mV (phono), 150 mV (others); S/N 80 dB (phono), 100 dB (others); frequency response 20-20,000 Hz ±0.5 dB; channel separation 55 dB (phono), 60 dB (others) at 1 kHz; damping factor 40; 3.5" H × 17" W × 8.7" D \$225

418A Integrated Amplifier

30 W/channel min rms, both channels driven into 8 ohms, 20-20,000 Hz at no more than 0.08% THD. Features subsonic filter; two switched and one unswitched ac outlet. Input sensitivity 2.5 mV (phono), 150 mV (others); S/N 80 dB (phono), 100 dB (others); frequency response 20-20,000 Hz ±0.5 dB; channel separation 55 dB (phono), 60 dB (others) at 1 kHz; damping factor 40; 3.5" H × 17" W × 8.7" D \$165

405A Slimline Amplifier

25 W/channel min rms, both channels driven into 8 ohms, 20-20,000 Hz at no more than 0.05% THD. Features direct-coupled (dc) OCL power amplifier with fully complementary output stages; electronic protection circuitry; high-performance low-noise IC phono preamp; center-detent treble/bass/balance controls; loudness contour; subsonic filter; tape monitor. Input sensitivity 2.5 mV (phono), 150 mV (others); S/N 75 dB (phono), 90 dB (others); frequency response 20-20,000 Hz ±0.5 dB; channel separation 50 dB (phono), 55 dB (others) at 1 kHz; damping factor 40; 3.5" H × 17" W × 8" D \$150

SHERWOOD**S-620CP Integrated Amplifier**

Stereo integrated amplifier with 5-stage, FET differential input phono preamp, 12-segment output-power displays, and subsonic and high filters. Features 4-stage FET tone amplifier; tone-defeat switch; front-panel microphone jack; audio muting; detented volume, balance, bass, and treble controls; mic mixing control; 2 tape-deck monitoring and tape dub; support for 2 turntables; relay amplifier/speaker protection system. Output power 60 W/channel min rms into 8 ohms, 20-20,000 Hz at 0.03% THD and IM distortion; clipping/dynamic headroom 1.30/1.88 dB; damping factor 50; input sensitivity 2.5 mV phono, 150 mV AUX, tuner, and tape; phono overload 220 mV; S/N ratio 96 dB phono, 105 dB all other inputs; frequency response dc-120,000 Hz -3 dB; RIAA phono EQ 30-20,000 Hz ±0.5 dB; audio mute -20 dB; power consumption 280 W; 17½" H × 13½" D × 4½" H; 24 lb \$300

S-302CP. Similar to S-602CP except has no muting, subsonic filter, mic-mixing capability.

Output power 40 W/channel; clipping/dynamic headroom 1.48/1.90 dB; phono overload 150 mV; frequency response 6-120,000 Hz -3 dB; power consumption 200 W; 23.5 lb \$230

S-202CP Integrated Amplifier

Stereo integrated amplifier with low-profile styling, complementary direct-coupled (dc) power amplifier, and dual 6-point LED output-power display. Features detented volume, balance,

bass, and treble controls; high-filter, stereo/mono, loudness, and tape-monitor switches. Output power 25 W/channel min rms into 8 ohms, 20-20,000 Hz at 0.08% THD and IM distortion; clipping/dynamic headroom 1.2/1.93 dB; damping factor 50; input sensitivity 2.5 mV phono, 150 mV all others; S/N ratio 86/95 dB phono/all other inputs; frequency response 8-60,000 Hz -3 dB; RIAA phono equalization 30-20,000 Hz ±0.5 dB; power consumption 150 W; 17½" H × 11½" D × 2½" H; 13.5 lb \$160

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 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 MV), 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 ±0.2 dB; S/N (IHF A) 88 dB (MM), 78 dB (MC), 105 dB (tuner, aux., tape); 6½" H × 17" W × 16½" D \$725

TA-F55 Integrated Amplifier

Features dc circuitry; multiplicity of mini transistors in output transistor; pulse power supply; thermodynamic 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; 3½" H × 17" W × 12½" D \$420

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; 13½" D \$310

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; 3½" H × 17" W × 13½" D \$220

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.

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), 1V/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 × 17½" W × 13¾" D.....\$999

TECHNICS

SU-V9 Integrated Amplifier

Integrated stereo amplifier with 120 watts/channel rms output power into 8 ohms from 20 to 20,000 Hz at no more than 0.003% THD. Features new class-A power amplifier with linear feedback circuit and straight direct coupling (dc) to output terminals and Super Bass control with 2-position turnover frequency selector.....\$650

SU-V7 Integrated Amplifier

Integrated stereo amplifier with 80 watts/channel rms output into 8 ohms from 20 to 20,000 Hz at no more than 0.003% THD. Features straight direct coupling and new class-A amplifier.....\$450

SU-V5 Integrated Amplifier

Slim-profile integrated stereo amplifier with 60-watt/channel rms output power into 8 ohms, 20-20,000 Hz at no more than 0.007% THD. Features fluorescent power meters with range selector; new class-A power amplifier with linear feedback circuit; straight direct coupling.....\$350
SU-V3. Similar to SU-V5 except 40 watts/channel output power.....\$280

YAMAHA

A-1060 Integrated Amplifier

Stereo integrated amplifier with "X" power supply, high-gain dc main amplifier, and pure-current-servo moving-coil (MC) head amplifier and equalizer. Features exclusive linear-transfer bias system; main direct and disc priority switches; continuously variable loudness control; rec-out selector; unique listening-level monitor that consists of slide-type control with LED in control-set bar and can be preset for desired output power level (LED flashes on when power level is reached by program); selectable tone-control turnover frequencies; slide-type listening-level, bass, treble, loudness, and balance controls; gold-plated phono-input connectors; facilities for listening to one program while recording another; audio muting; switchable subsonic and high filters; LED function indicators; speakers A + B/A/B/ off selector. Output power 140 W/channel min rms into 8 ohms 20-20,000 Hz at 0.005% THD; damping

factor 200 at 1 kHz, 8 ohms; THD MM/MC/AUX, tape, tuner 0.003%/0.003%/0.005%; IM distortion at rated power/1 W into 8 ohms 0.002%/0.01% AUX, tape, tuner; frequency response dc-100,000 Hz +0/-1 dB AUX, tape, tuner; input sensitivity/impedance 2.5 mV/100, 33k, 47k, 100k ohms (selectable) MM, 100 µV/100, 10k ohms (selectable) MC, 150 mV/47k ohms AUX, tape, tuner; S/N ratio MM/MC/AUX, tape, tuner 100/78/103 dB; residual noise main direct on/off 80/500 µV; channel separation at 1 kHz, volume set to -30 dB, inputs shorted MM/MC/tuner 70 dB (all); slew rate 200 V/µsec; headphone output 115 mV into 8 ohms at 0.01% THD (U.S. and Canada); power consumption 470 W (U.S. and Canada); power consumption 470 W (U.S. and Canada); 17½" W × 16¾" D × 5⅓" H; 27 lb 9 oz.....\$800

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 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. 4¾" W × 17½" W × 15"D.....\$630

A-960 Integrated Amplifier

Stereo integrated amplifier with "X" power supply, pure-current servo equalizer amplifier, and direct MC cartridge input capability. Features high-gain dc main amplifier; main direct and disc priority switches; continuously variable loudness control; rec-out selector; unique listening-level monitor (see A-1060 above); selectable tone-control turnover frequencies; slide-type listening level monitor, bass, treble, loudness, and balance controls; gold-plated phono terminals; switchable subsonic and high filters; speakers A + B/A/B/ off selector. Output power 100 W/channel into 8 ohms, 20-20,000 Hz at 0.01% THD; damping factor better than 55; THD MM/MC/AUX, tape, tuner 0.003%/0.006%/0.005%; IM distortion into 8 ohms at 100/1 W output 0.002%/0.01% AUX, tape, tuner; frequency response dc-100,000 Hz +0/-2 dB; input sensitivity/impedance MM/MC/AUX, tuner, tape 2.5 mV/100, 33k, 47k, 100k ohms (selectable), 160 µV/100 ohms; 150 mV/47k ohms; phono overload MM/MC 250/15 mV rms; S/N ratio MM/MC/others 93/77/103 dB A wtd; residual noise 220 µV A wtd; channel separation at 1 kHz, -30-dB volume setting, inputs shorted MM/MC/tuner 70 dB (all); slew rate 200 V/µsec; power consumption 360 W (U.S. and Canada); 17½" W × 14¾" D × 5¼" H; 23 lb 2 oz.....\$495

A-760 Integrated Amplifier

Stereo integrated amplifier with "X" power supply, pure current servo equalizer amplifier, and

unique listening-level monitor (see A-1060 above). Features high-gain dc main amplifier; direct MC cartridge input capability; main direct and disc priority switches; continuously variable loudness control; rec-out selector; gold-plated phono connectors; switchable high filter; speakers A + B/A/B/ off selector. Output power 80 W/channel into 8 ohms, 20-20,000 Hz at 0.01% THD; damping factor better than 55; frequency response dc-100,000 Hz +0/-2 dB; THD MM/MC/ other inputs 0.003%/0.006%/0.005%; IM distortion 0.002% AUX, tuner, tape; input sensitivity/impedance 2.5 mV/47k ohms MM, 250 µV/100 ohms MC, 150 mV/47k ohms AUX, tape, tuner; phono overload MM/MC 180/18 mV rms; S/N ratio MM/MC/others 98/76/103 dB A wtd; residual noise 165 µV A wtd; power consumption 350 (U.S.); 17½" W × 14¾" D × 4¾" H; 20 lb 1 oz.....\$420

A-560 Integrated Amplifier

Stereo integrated amplifier with low-distortion power amplifier, direct MC cartridge input capability, and continuously variable loudness control. Features dc-configuration power amplifier; independent recording and listening selection; switchable subsonic and high filters; easy tape dubbing; center-defeat tone controls; gold-plated phono inputs; independent speakers A and B selectors. Output power 55 W/channel into 8 ohms, 20-20,000 Hz at 0.015% THD; damping factor 80; frequency response 20-20,000 Hz -0.2 dB; THD MM/MC/ other inputs 0.005%/0.01%/0.01%; input sensitivity/impedance 2.5 mV/47k ohms, 220 pF MM, 160 µV/100 ohms MC, 150 mV/40k ohms others; phono overload MM/MC 150/8 mV rms; S/N ratio MM/MC/others 98/76/100 dB; residual noise less than 120 µV; channel separation 80 dB all inputs; power consumption 200 W (U.S. and Canada); 17½" W × 11¾" D × 4¾" H; 15 lb 7 oz.....\$300

A-460. Similar to A-560 except has no MC-cartridge facility; output power 35 W/channel; residual noise less than 160 µV; power consumption 150 W; 12 lb 9 oz.....\$220

A-550 Integrated Amplifier

Power amp section: features dc OCL design with pure complementary SEPP, current mirror, and bipolar 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); 4½" H × 17½" W × 13¾" 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); 4¾" H\$195

(TUNERS follows immediately.)

3

TUNERS

ADCOM

GFT-1 AM/FM-Stereo Tuner

AM/FM-stereo tuner with quartz-referenced, digitally synthesized tuning, auto up/down scan and instant-recall preset tuning, and LED digital frequency display. Features up to 6 AM and 6 FM station presets; 5-LED signal-strength display; recording calibration tone (400 Hz at 50% FM modulation); high-blend switch; mono/mute switch. Tuning accuracy 0.00025%; FM usable sensitivity 2 μ V; S/N ratio 75 dB mono, 70 dB stereo; THD 0.15% mono, 0.22% stereo at 1 kHz, 100% modulation; alternate-channel selectivity 70 dB; FM stereo separation 40 dB at 1 kHz; 19" W \times 11 $\frac{1}{2}$ " D \times 3" H \$375

AIWA

AT-9500U Stereo Tuner

Digital synthesizer AM/FM-stereo tuner with 6 AM/6 FM station presets. Features digital-numeric tuned-frequency display; auto/manual tuning; variable muting level control; pulse-swallow counter system in PLL prescaler; soft-touch control..... \$275

ST-R50U Stereo Tuner

PLL quartz-synthesizer AM/FM-stereo tuner with 6 AM/6 FM station presets. Features auto/manual up/down scan tuning; LED digital-numeric tuned-frequency display; MF-mute, high-blend, mono/stereo, and AM/FM switches; 5-LED signal-strength meter. FM usable sensitivity 1.9 μ V; S/N ratio mono/stereo 75/72 dB; frequency response 30-15,000 Hz +0.5/-1.5 dB; THD mono/stereo 0.1%/0.2% at 1 kHz; capture ratio 1.5 dB; alternate-channel selectivity 70 dB at -400 kHz; image/spurious- and i-f-response ratio 80/90 dB; stereo separation 45 dB at 1 kHz; 9 $\frac{1}{2}$ " W \times 11 $\frac{1}{2}$ " D \times 2 $\frac{1}{2}$ " H \$280

ST-R30U Stereo Tuner

Mini Am/FM-stereo tuner with LED digital-numeric tuned-frequency display. Features 5-LED signal-strength meter; high-blend, mute/afc, and AM/FM switches. FM usable sensitivity 1.9 μ V; S/N ratio 73 dB mono, 70 dB stereo; stereo distortion 0.025%; capture ratio 1.5 dB; alternate-channel selectivity 70 dB at \pm 400 kHz; i-f rejection 80 dB; stereo separation 45 dB at 1 kHz; 8 $\frac{1}{2}$ " W \times 9" D \times 2 $\frac{1}{2}$ " H \$175

ST-R10U Stereo Tuner

Mini AM/FM-stereo tuner with 117-V ac and 12-V dc power options. Features input noise-blanking system for suppressing interference from vehicle ignition system; auto-blend circuit; 3-LED bow-tie style tuning indicator; variable muting level control. Car adaptor DC-123 optional..... \$210

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 μ V); capture ratio 1.2 dB; stereo separation 65 dB; 3" H \times 17.3" W \times 13.1" D \$330

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 μ V); capture ratio 1.2 dB; stereo separation 52 dB; 3.1" H \times 17.3" W \times 13.4" D \$280

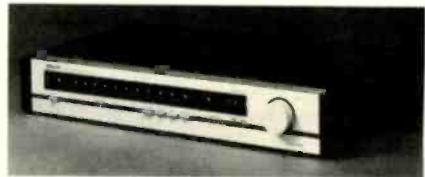
CROWN

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- μ sec de-emphasis; carrier band filter and muting selectors. IHF usable sensitivity 10.8 dBf (mono); 50-dB quieting 2.75 μ V (mono), 35 μ 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 $\frac{1}{2}$ " H \times 19" W \times 15" D \$995

FM Two Tuner

FM-stereo tuner with JFET front end and 6-station preset memory tuning. Features linear



with pilot canceller; 5-LED signal-strength meter; muting, mono/auto mode, and rec level switches; servo lock, just tuning, and stereo indicators. Usable sensitivity 1.7 μ V (9.8 dB); effective selectivity 50 dB wide, 90 dB narrow at \pm 400 kHz; S/N ratio 88 dB mono, 85 dB stereo; THD 0.025% mono, 0.035% stereo; capture ratio 1.0 dB wide, 1.5 dB narrow; AM suppression/image rejection/i-f rejection 70/90/100 dB; frequency response 20-15,000 Hz +0.2/-1.5 dB; stereo separation 60 dB wide, 45 dB narrow at 1 kHz; power consumption 14 W; 600 mmW \times 341 mmD \times 83 mmH; 6.1 kg \$590

TU-750 Synthesizing Tuner

AM/FM frequency synthesizing tuner with automatic fine tuning (aft); up to 14 station presets (7AM/7FM), and quartz-locked frequency synthesis tuning system. Features digital readout; recording level check circuit; AM loop antenna; automatic station scanning; panel illumination dimmer switch; interstation muting. Sensitivity 1.8 μ V; alternate-channel selectivity 60 dB; S/N 76 dB stereo; THD 0.008% stereo; stereo separation 55 dB; 17.1" \times 2.95" \times 9.8"; 11 lb. \$295

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 μ 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 μ V/m and THD 0.4%; 99 mm H \times 434 mm W \times 364 mm D \$260

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 μ V (mono); 50-dB quieting 12 dBf (mono), 36.1 dBf (stereo); stereo separation 50 dB at 1000 Hz; matte black or



ceramic filters; pulse-counting digital circuit; crystal-controlled phase-locked-loop (PLL) tuning system; digital tuned-frequency display; signal-strength display; stereo and mono indicators; scan/tune, dim/bright, stereo/mono, mute, high-blend filter, equalization, scan/lock switches..... \$599

DENON

TU-900 FM-Stereo Tuner

Precision Audio Component FM-stereo tuner with slide-rule dial and digital-numeric tuned-frequency display and auto-servo-lock touch-tuning system. Features high-sensitivity front end; wide/narrow i-f bandwidth selector; MPX circuit

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 frequency 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 μ V) mono, 17.9 dBf (4.3 μ V) stereo; 50-dB quieting 13.2 dBf (2.5 μ V) mono, 35.9 dBf (34 μ 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 μ V/m; selectivity 45 dB; S/N 55 dB. 3 $\frac{1}{2}$ "H \times 17 $\frac{1}{2}$ "W \times 13 $\frac{1}{2}$ D.....\$400

FM660 Stereo Tuner

AM/FM-stereo synthesizer tuner with fluorescent digital-numeric display and 5 AM/5 FM station presets. Features quartz PLL digital synthesizer; auto/manual scan tuning; 5-LED signal-strength meter; slim-line push-bar switches for all functions; touch-bar tuning; memory, stereo, and manual indicators. FM usable sensitivity mono/stereo 10.77 dBf (1.9 μ V)/18.45 dBf (4.6 μ V); S/N ratio 72 dB mono, 68 dB stereo; capture ratio 1 dB; alternate-channel selectivity 70 dB; image/spurious/i-f-response ratios 70/85/100 dB; AM-suppression ratio 85 dB; THD at 50 dB quieting mono/stereo 0.3%/0.4%; stereo separation at 100/1k/10k Hz 40/46/36 dB; frequency response 20-15,000 Hz \pm 1 dB; AM sensitivity 300 μ V/m selectivity 42 dB; S/N ratio 55 dB; power consumption 20 W; 17 $\frac{1}{2}$ "W \times 11 $\frac{1}{2}$ "D \times 3 $\frac{1}{2}$ "H; 12 lb.....\$380

FM550 Stereo Tuner

AM/FM-stereo quartz PLL digital synthesizer tuner with fluorescent digital-numeric frequency display. Features 6 AM/6 FM station presets; auto/manual tuning; 5-LED signal-strength indicator; push switches for all functions; touch-bar tuning; memory, stereo, and manual indicators. FM usable sensitivity mono/stereo 10.77 dBf (1.9 μ V)/18.45 dBf (4.6 μ V); S/N ratio mono/stereo 75/70 dB; capture ratio 1 dB; alternate-channel selectivity 75 dB; image/spurious/i-f-response ratios 80/100/100 dB; AM-suppression ratio 65 dB; THD mono/stereo 0.3%/0.4%; stereo separation at 100/1k/10k Hz 40/46/35 dB; frequency response 20-15,000 Hz \pm 1 dB; AM sensitivity 300 μ V/m; selectivity 45 dB; S/N ratio 55 dB; power consumption 13 W; 17 $\frac{1}{2}$ "W \times 13 $\frac{1}{2}$ "D \times 2 $\frac{1}{2}$ "H; 8 lb.....\$350

FM130 Stereo Tuner

AM/FM-stereo quartz PLL digital synthesizer tuner with 6 AM/6FM presets and fluorescent digital-numeric frequency display. Features auto search tuning system; LED signal-strength meter; MPX filter; FM muting. FM usable sensitivity 14.14 dBf (2.8 μ V) mono, 20 dBf (5.5 μ V) stereo; S/N ratio mono/stereo 70/65 dB; capture ratio 1 dB; alternate-channel selectivity 60 dB; image/spurious/i-f-response ratios 60/70/100 dB; AM-suppression ratio 60 dB; THD mono/stereo 0.4%/0.5%; stereo separation 100/1k/10k Hz 40/40/35 dB; frequency response 20-15,000 Hz \pm 1 dB; AM sensitivity 300 μ V/m; selectivity 42 dB; S/N ratio 55 dB; power consumption 10 W; 15 $\frac{3}{4}$ "W \times 7 $\frac{1}{2}$ "D \times 5 $\frac{1}{2}$ H; 8 lb.....\$300

FM350 Stereo Tuner

AM/FM-stereo tuner with servo-lock tuning. Features MPX filter; mode/FM muting switch; 5-LED signal-strength meter; 3-LED center-tuning

indicator; AM, FM, and FM stereo LEDs; illuminated slide-rule tuning dial; dynamically balanced low-friction flywheel tuning mechanism. FM usable sensitivity mono/stereo 10.77 dBf (1.9 μ V)/18.45 dBf (4.6 μ V); S/N ratio mono/stereo 75/70 dB; capture ratio 1 dB; alternate-channel selectivity 60 dB; image/spurious/i-f-response ratios 60/85/110 dB; AM-suppression ratio 60 dB; THD mono/stereo 0.3%/0.4%; stereo separation 100/1k/10k Hz; frequency response 20-15,000 Hz \pm 1 dB; AM sensitivity 300 μ V/m; selectivity 45 dB; S/N ratio 55 dB; power consumption 14 W; 17 $\frac{1}{2}$ "W \times 13 $\frac{1}{2}$ "D \times 2 $\frac{1}{2}$ "H; 8 lb.....\$200

FM440 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 μ V) mono, 20 dBf (5.5 μ V) stereo; 50-dB quieting 20.76 dBf (6.0 μ V) mono, 38.26 dBf (45 μ 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

FM120 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 μ V) mono; 50-dB quieting 20.76 dBf (6.0 μ V) mono, 38.26 dBf (45 μ 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 circuit. FM section: IHF usable sensitivity 1.7 μ V; 50-dB quieting 3.0 μ V (mono), 34 μ 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.....\$380

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 μ V; 50-dB quieting 3.5 μ V (mono), 37 μ 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.....\$250

HEATH

AJ-1600 AM-FM Stereo Tuner

Features digitally-synthesized tuning with LED digital frequency readout display; wide/narrow i-f bandwidth 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 μ V (mono), 3.5 μ 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 $\frac{3}{4}$ "H \times 19 $\frac{1}{2}$ "W \times 14 $\frac{1}{2}$ D. Kit.....\$440

HITACHI

FT-5500 AM/FM Stereo Tuner

Digital synthesizer AM/FM-stereo tuner with FCCS reception. Features station brightener MPX; programmable 10-station random-access memory; rec level check; high-gain AM loop antenna; dual function signal-strength/FCCS reception indicator; 4-element ladder-type ceramic filters. Usable sensitivity 10.8 dBf mono; S/N at (65 dBf) 85 dB mono, 38.2 dB stereo; frequency response 20-15,000 Hz \pm 0.5 dB; capture ratio 1.0 dB; stereo separation 60 dB; 17 $\frac{1}{2}$ "H \times 2 $\frac{1}{2}$ "W \times 12 $\frac{1}{2}$ D; 8 lb 13 oz.....\$350
FT-4500. Similar to FT-5500 except microcomputer controlled instead of FCCS reception, no record level switch; 12 station presets. S/N 80 dB mono, 75 dB stereo; frequency response 30-15,000 Hz +0.5-1.0 dB; stereo separation 55 dB; 17 $\frac{1}{2}$ "H \times 3 $\frac{1}{2}$ "W \times 9 $\frac{1}{2}$ D; 8 lb 6 oz.....\$250

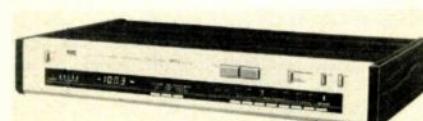
FT-3500 AM/FM Stereo Tuner

Slim-line AM/FM-stereo tuner with vector tuning system and high-gain AM loop antenna. Features antibirdie filter; FM stereo indicator; FM mode switch. Usable sensitivity 10.8 dBf mono; S/N 77 dB mono, 70 dB stereo; frequency response 30-12,000 Hz \pm 2 dB; capture ratio 1.0 dB; stereo separation 45 dB at 1 kHz; 17 $\frac{1}{2}$ "H \times 3 $\frac{1}{2}$ "W \times 9 $\frac{1}{2}$ D; 7 lb 8 oz.....\$170

JVC

T-X6 Stereo Tuner

Quartz-synthesized PLL AM/FM-stereo tuner with 7 AM/7 FM station presets and fluorescent digital-numeric frequency display. Features auto-scan and memory tuning; nonswitching fluorescent display circuit to eliminate interference; Phase Tracking Loop (PTL) FM detector circuit to improve tuner selectivity; Quieting Slope Control that automatically doubles 50-dB quieting sensitivity when FM signal drops below 30- μ V level; LED stereo indicator; 5-LED signal-strength meter; FM muting; LED indicators for determining tuned preset stations. 17 $\frac{1}{2}$ "H \times 14 $\frac{1}{2}$ "D \times 3 $\frac{1}{4}$ "H; 9 lb.....\$350



ence; Phase Tracking Loop (PTL) FM detector circuit to improve tuner selectivity; Quiet Slope Control that automatically doubles 50-dB quieting sensitivity when FM signal drops below 30- μ V level; LED stereo indicator; 5-LED signal-strength meter; FM muting; LED indicators for determining tuned preset stations. 17 $\frac{1}{2}$ "H \times 14 $\frac{1}{2}$ "D \times 3 $\frac{1}{4}$ "H; 9 lb.....\$350

T-X2 Stereo Tuner

Digital synthesizer AM/FM-stereo tuner fluorescent digital-numeric tuned-frequency display. Features auto and memory tuning; PLL MPX circuit with 2-pole filter; LED stereo indicator; combined mono/stereo muting switch; optional remote-control capability. 16 $\frac{1}{2}$ "W \times 10 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ H; 8.8 lb.....\$310

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 μ V; 50-dB quieting 1.8 μ V (mono), 9.8 μ V (stereo with quieting), 19 μ V

3

TUNERS

(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 dB; alternate channel selectivity 70 dB; image and i-f rejection 80 dB; spurious rejection 90 dB; stereo separation 50 dB at 1000 Hz; $3\frac{1}{2}''H \times 18\frac{1}{16}''W \times 14\frac{1}{16}''D$ \$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 μ V (mono), 22.5 μ 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; $4\frac{1}{4}''H \times 16\frac{1}{16}''W \times 10\frac{3}{16}''D$ \$180

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 bandwidths 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-empha-



sis switch; antenna switching; output control. Usable sensitivity 1.9 μ V; 50-dB quieting 3.4 μ V (mono), 40 μ 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; $6\frac{1}{2}''H \times 18\frac{1}{16}''W \times 18\frac{1}{16}''D$ \$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 μ V; 50-dB quieting sensitivity 3.4 μ V (mono), 40 μ 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 μ V; S/N 55 dB. $6\frac{1}{16}''H \times 17\frac{1}{16}''W \times 15\frac{3}{16}''D$ \$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 $\pm 0.2/-1.5$ dB, spurious rejection 105 dB, image rejection 85 dB, i-f rejection 100 dB; AM usable sensitivity 13 μ 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 μ V; 50-dB quieting 4.0 μ V (mono), 40 μ 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 μ V; S/N 48 dB. $5\frac{1}{2}''H \times 15\frac{1}{16}''W \times 11''D$ \$250

KT-400 Stereo Tuner

AM/FM-stereo tuner with junction-FET front end, 2 ceramic i-f filters, and PLL MPX circuit. Features 5-LED signal-strength indicator. FM usable sensitivity 10.8 dBf (1.9 μ V); 50-dB quieting sensitivity 17.2 dBf (4.0 μ V) mono, 37.2 dBf (40 μ V) stereo; S/N ratio 71/68 dB mono/stereo; THD at 100/1k/6k Hz 0.15%/0.2%/0.35% mono, 0.3%/0.3%/0.35% stereo; mono THD 50-10,000 Hz 0.6%; capture ratio 1.5 dB; stereo separation 35 dB, 50-10,000 Hz; frequency response 30-15,000 Hz +0.5/-2.0 dB; spurious/image/i-f-response ratios 80/47/95 dB; AM-suppression ratio 60 dB; alternate-channel selectivity 77 dB; antenna inputs 300 ohms balanced, 75 ohms unbalanced; output level/impedance 0.8 V/3.5k ohms at 1 kHz, 100% modulation; AM sensitivity 15 μ V; S/N ratio 51 dB; THD 0.5%; power consumption 8 W; $15\frac{1}{2}''W \times 11\frac{1}{16}''D \times 5\frac{1}{2}''H$; 7.7 lb..... \$450

Remote-Control Series

KT-80 FM-Stereo Tuner

FM-stereo tuner with pulse-count detector, servo-lock tuning, rec cal oscillator, mode/mute and lock switches, and 5-LED signal-strength display and LED stereo and tuned/locked indicators. FM usable sensitivity 1.9 μ V; 50-dB quieting sensitivity 3.3 μ V mono; S/N ratio 83 dB mono, 80 dB stereo; THD 0.07% at 1 kHz; capture ratio 1.5 dB; $17\frac{1}{16}''W \times 13\frac{1}{16}''D \times 3\frac{1}{16}''H$ \$209

Audio Purist Series

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 μ V; 50-dB quieting 3.0 μ V (mono), 40 μ 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; $3\frac{1}{16}''H \times 18\frac{1}{16}''W \times 13\frac{1}{16}''D$ \$625

KT-1000 Stereo Tuner

Touch-sensor servo-lock AM/FM-stereo tuner with pulse-count FM detector. Features direct r-f conversion for eliminating interference from neighboring stations; double i-f conversion for improved FM S/N ratio; sample-and-hold MPX decoder; nonmagnetic design; wide/narrow bandwidth selector; separate signal-strength and center-tuning meters; slide-rule tuning dial; stereo and servo-lock Indicators; switchable FM rec-cal oscillator; normal/direct FM r-f selector; lock/auto blend/mute on/off switch. FM usable sensitivity 10.3 dBf (1.8 μ V) normal, 23.3 dBf (8.0 μ V) direct; 50-dB quieting sensitivity mono/stereo 16.4 dBf (3.6 μ V) normal, 29.3 dBf (16 μ V) direct/37.3 dBf (40 μ V) normal, 49.5 dBf (166 μ V) direct; S/N ratio mono/stereo 90/85 dB; THD 50-10,000 Hz mono/stereo 0.08% wide, 0.3% narrow/0.12% wide, 0.6% narrow; capture ratio mono/stereo 0.8/2.0 dB; alternate-channel selectivity wide/narrow 45/65 dB; stereo separation 50-10,000 Hz wide/narrow 47/35 dB; frequency response 15-15,000 Hz ± 0.5 dB; spurious/image/i-f-response ratios 120/90/110 dB; AM-suppression ratio 70 dB; output level/impedance at 1 kHz, 100% modulation 0.75 V/2.2k ohms fixed, 0-1.5 V/2.2k ohms variable; AM sensitivity 10 μ V; S/N ratio 52 dB; selectivity wide/narrow 30/50 dB; output level at 400 Hz, 30% modulation 0.25 V/2.2k ohms fixed, 0-0.5 V/2.2k ohms variable; power consumption 0.18 A; $17\frac{1}{16}''W \times 15\frac{1}{2}''D \times 4\frac{3}{16}''H$; 14.3 lb..... \$450

KT-900 Stereo Tuner

Servo-lock AM/FM-stereo tuner with pulse-count FM detector and double i-f conversion for improved FM S/N ratio. Features both slide-rule dial and digital-numeric (fluorescent) tuned frequency displays; fluorescent bow-tie center-tune and 7-point signal-strength indicators; nonmagnetic design; wide/narrow bandwidth selector; switchable rec-cal oscillator; stereo, narrow, servo-lock, AM, and FM indicators; touch-sensor servo-lock tuning. FM usable sensitivity 10.8 dBf (1.9 μ V); 50-dB quieting sensitivity mono/stereo 16.4 dBf (3.6 μ V)/37.3 dBf (40 μ V); S/N ratio mono/stereo 88/83 dB; THD 50-10,000 Hz wide/narrow 0.04%/0.3% mono, 0.18%/0.6% stereo; capture ratio wide/narrow 1.0/2.0 dB; alternate-channel selectivity wide/narrow 45/65 dB; stereo separation 50-10,000 Hz wide/narrow 45/35 dB; frequency response 30-15,000 Hz +0.2/-0.8 dB; spurious/image/i-f-response ratios 120/90/100 dB; AM-suppression ratio 70 dB; output level/impedance 0.75 V/1.8k ohms; AM sensitivity 13 μ V; S/N ratio 52 dB; selectivity 58 dB; output level/impedance 0.15 V/2k ohms at 400 Hz, 30% modulation; power consumption 0.25 A; $17\frac{1}{16}''W \times 15\frac{1}{2}''D \times 3\frac{1}{16}''H$; 11.2 lb..... \$350

KT-800 Stereo Tuner

Quartz-synthesizer AM/FM-stereo tuner with 4 FM/4 AM station presets and fluorescent digital-numeric tuned-frequency display. Features nonmagnetic design; microprocessor-controlled synthesizer; MOSFET front end; tuned-status display; time-of-day display; auto/mono mute switch. FM usable sensitivity 10.8 dBf (1.9 μ V); 50-dB quieting sensitivity mono/stereo 16.4 dBf (3.6 μ V)/38.4 dBf (46 μ V); S/N ratio mono/stereo 74/71 dB; THD 50-10,000 Hz mono/stereo 0.12%/0.14%; capture ratio

NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 32.

1.5 dB; alternate-channel selectivity 60 dB; frequency response 30-15,000 Hz +0.2/-2 dB; image/spurious/i-f-response ratios 110/80/90 dB; AM-suppression ratio 60 dB; output level/impedance at 1 kHz, 100% modulation 0.75 V/5.6k ohms; AM sensitivity 18 μ V; S/N ratio 50 dB; selectivity 50 dB; power consumption 0.1 A; 17 $\frac{1}{16}$ "W \times 9 $\frac{23}{32}$ "D \times 2 $\frac{1}{2}$ "H; 4.8 lb.....\$275

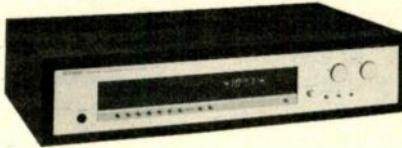
LUXMAN

T-14 Digital FM Tuner

Digital FM-stereo tuner with synthesized tuning system and memory preset facilities. Features antibirdie filter; tuning is 50-kHz increments. Usable sensitivity 10.3 dBf (1.8 μ V); S/N ratio 72 dB; frequency response 30-15,000 Hz \pm 1 dB; THD 0.08% mono, 0.15% stereo at 1 kHz; capture ratio 1.0 dB; i-f/image rejection 95/100 dB; stereo separation 48 dB at 1 kHz; 17 $\frac{1}{16}$ "W \times 13 $\frac{3}{4}$ "D \times 3 $\frac{1}{16}$ "H\$800

T-115 AM/FM-Stereo Tuner

Digital PLL frequency-synthesized AM/FM tuner with 12-station memory, dual-gate MOSFET amplifier, and manual/automatic tuning. Features circuitry that isolates and locks in stations by digital code, even in highly congested areas on the dial; LED stereo and signal-strength



indicators; test-tone control; muting level control; mono/muting-off and AM/FM mode selectors. Capture ratio 1.4 dB at 65 dBf; S/N ratio/75 dB at 65 dBf; distortion 0.12% mono, 0.3% stereo at 1 kHz; frequency response 30-15,000 Hz \pm 1 dB; FM spurious-response/image ratios 85/70 dB; i-f-response ratio/85 dB; 17.3" W \times 12.3" D \times 3.3" H\$500

T-450 AM/FM Stereo Tuner

AM-FM stereo tuner with PLL tuning lock system; features test tone oscillator; mono switch; local/distant and muting threshold switch; accurate touchoff tuning; three-LED signal-strength indicators; LED tuning and stereo indicators. FM section: IHF usable sensitivity 1.8 μ V; 50-dB quieting 3.0 μ 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 $\frac{1}{16}$ "H \times 18 $\frac{1}{4}$ "W \times 12 $\frac{1}{16}$ "D\$400

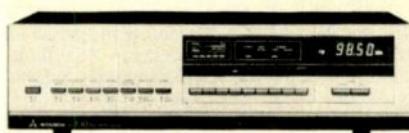
T-400 AM-FM Stereo Tuner

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 μ 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 $\frac{1}{2}$ "W \times 18 $\frac{1}{16}$ "H \times 12 $\frac{1}{2}$ "D\$300

MITSUBISHI

F30 Digital FM Stereo Tuner

Quartz crystal phase-locked-loop frequency synthesizer tuning system with pulse swallow counter and with dual modulus prescaler. Features auto tuning; 8 preset stations; linear-phase ceramic filters; automatically switched selectivity; hi-blend function; multi-path signal-level indicator. Usable sensitivity 10.3 dBf; alternate-channel selectivity 45 dB (wide), 75 dB (narrow); S/N 78 dB (stereo); THD 0.08% (stereo); stereo separation 20 dB at 1 kHz with hi-blend on; frequency response 30-



16,000 Hz +0.5/-1 dB; image-response, i-f-response ratio, spurious response ratio 100 dB; capture ratio 1.0 dB (wide); output level/impedance 600 mV/1 k ohms; 18 $\frac{1}{2}$ " \times 5 $\frac{1}{2}$ " \times 10 $\frac{1}{4}$ "; 11 lb.....\$400

M-F04 AM/FM Stereo Tuner

Micro-tuner with advanced front-end circuitry and touch-sensor tuning. Features two-color tuning scale and interstation muting mode selection; Usable sensitivity 11.2 dBf; alternate-channel selectivity 60 dB; S/N 73 dB (stereo); THD 0.4% at 1 kHz 65 dBf; stereo separation 40 dB at 1 kHz; frequency response 40-15,000 Hz \pm 3 dB; capture ratio 1.5 dB; 10 $\frac{1}{2}$ " \times 2 $\frac{3}{4}$ " \times 10 $\frac{1}{4}$ "\$270

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 μ V (mono); 50-dB quieting 3.0 μ V (mono), 35 μ 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; selectivity 70 dB \pm 400 kHz; image rejection 70 dB; i-f rejection 80 dB; stereo separation 40 dB at 1000 Hz. AM sensitivity 300 μ V; 5.5" H \times 17.7" W \times 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 μ V (mono); 50-dB quieting 3.5 μ V (mono), 40 μ V (stereo); S/N (A weighted) 75 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 1.5 dB; selectivity 65 dB; image rejection 50 dB; i-f rejection 75 dB; stereo separation 42 dB at 1000 Hz. AM sensitivity 250 μ V; 3.8" H \times 16.5" W \times 9.5" D\$218

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 μ V); 50-dB quieting 33 μ V stereo; S/N 86 dB (mono), 78 dB (stereo); THD 0.02% (mono), 0.08% (stereo); rack-mountable with matte black finish; 2 $\frac{1}{4}$ "H \times 19" W \times 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 μ V); 50-dB quieting 33 μ V stereo; S/N 75 dB (mono), 65 dB (stereo); THD 0.02% stereo; frequency response 50-15,000 Hz \pm 0.5 THD; capture ratio 1.5 dB; alternate channel selectivity 70 dB; rack-mountable with matte black finish; 2 $\frac{1}{4}$ "H \times 19" W \times 13" D\$379

NT-990 Stereo Tuner

AM/FM-stereo tuner with digital-numeric frequency display and quartz accuracy. Features memory tuning presets (6 AM, 6 FM); quartz

synthesized tuning system; separate up and down tuning buttons; AM/FM and stereo/mono switches; 5-step LED tuning indicator for signal strength; high-blend switch. 16.5" W \times 12.75" D \times 3.6" H\$320

NT-700 Stereo Tuner

AM/FM-stereo tuner with digital quartz synthesizer tuning circuitry, digital-numeric frequency display, and 6 AM/6 FM station presets. Features 3-section LED signal-strength indicator; AM/FM and stereo/mono switches; separate up and down scan tuning buttons. Size 17.3" W \times 11.6" D \times 3.8" D\$300

NT-550 Stereo Tuner

AM/FM-stereo tuner with slide-rule dial and large tuning knob. Features LED signal-strength tuning indicators; 3-LED center-tuning indicator; signal and stereo indicators; illuminated dial and lighted dial pointer; AM/FM and stereo/mono switches. Size 17.3" W \times 9.9" D \times 3.8" H\$180

ONKYO

T-9060 Stereo Tuner

Quartz digitally synthesized stereo tuner with preset memories (7 AM/7 FM); selectable i-f bandwidth; auto high blend; LED signal and deviation indicators; switchable deemphasis; output level control. FM sensitivity 1.7 μ V IHF; THD less than 0.15% (stereo); black matte panel\$400

T-35 AM/FM-Stereo Tuner

Quartz synthesized AM/FM-stereo tuner with direct-recall system features digital-numeric tuned-frequency display. FM usable sensitivity 17.2 dBf (4.0 μ V) in stereo; capture ratio 1.0 dB; image/i-f rejection 85/100 dB; S/N ratio



72 dB stereo; THD 0.15% stereo; frequency response 30-15,000 Hz +0.5/-1.5 dB; stereo separation 40 dB at 1 kHz; 16 $\frac{1}{2}$ "W \times 10 $\frac{1}{2}$ "D \times 2 $\frac{1}{2}$ "H\$380

T-25 AM/FM-Stereo Tuner

Quartz synthesized AM/FM-stereo tuner with 6 AM/6 FM memory presets and digital-numeric tuned-frequency display. FM usable sensitivity 17.2 dBf (4.0 μ V) in stereo; capture ratio 1.5 dB; image/i-f rejection 45/85 dB; S/N ratio 65 dB stereo; THD 0.25% stereo; frequency response 30-15,000 Hz \pm 1.5 dB; stereo separation 40 dB at 1 kHz; 16 $\frac{1}{2}$ "W \times 10 $\frac{1}{2}$ "D \times 2 $\frac{1}{2}$ "H\$250

T-15 AM/FM-Stereo Tuner

Servo-locked tuner with built-in touch-sensor system that automatically locks onto station; 5-LED signal-strength meter; LED tuning indicators; FM mono and auto muting and AM selectors. FM usable sensitivity 11.2 dBf (2 μ V); 16 $\frac{1}{2}$ "W \times 3" H\$140

OPTONICA

ST-4406 AM/FM-Stereo Tuner

AM/FM-stereo quartz PLL synthesizer tuner with quadrature detector. Features FM muting circuitry; auto tuning system; 10-station, 2-band presettable memory; microprocessor-controlled soft-push switches; air check calibrator; digital frequency display; 5-LED signal-strength meter; hi-blend switch; "last station" memory; LED function indicators and memory back up system. Frequency response 30-15,000 Hz \pm 2 dB; usable sensitivity 9.8 dBf (1.7 μ V); S/N 70 dB (stereo)\$260

3 TUNERS

ST-3300 AM/FM-Stereo Tuner

AM/FM-stereo tuner featuring digital readout, flywheel tuning; 5-LED signal strength meter; FM center station indicator; FM stereo indicator; FM stereo muting; 1.9 μ V usable sensitivity \$200

JC PENNEY

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 $\frac{1}{2}$ "H \times 18"W \times 13.6"D \$200

MCS 3730 Micro Mini AM/FM Stereo Tuner

Features LED digital AM/FM frequency readout and analog tuning dial scale; signal-strength meter and 5 AM/FM mechanical presets; FM mute; AM/FM selector; FM section: frequency response 40-15,000 Hz; S/N 70 dB; capture ratio 1.5 dB; selectivity 60 dB; stereo separation 45 dB at 1000 Hz; matches MCS 3830, 3530, and 8230; 11 $\frac{1}{16}$ "W \times 9 $\frac{1}{2}$ "D \times 2 $\frac{1}{4}$ "H \$200

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 μ sec de-emphasis switch. FM section: usable sensitivity 1.9 μ V (mono); 50·dB quieting 3.2 μ V (mono), 41.1 μ 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 μ V/m (IHF, ferrite antenna) and S/N 50 dB. 3 $\frac{1}{2}$ "H \times 19"W \times 12"D \$500

PIONEER

F-9 Stereo Tuner

Digital quartz synthesizer AM/FM-stereo tuner with 6 AM/6 FM station presets. Features digital-numeric tuned-frequency display; drop-down



hinged front panel that hides all controls except AM and FM push-type and preset-station selector buttons; LED signal-strength meter; up-/down scan tuning; rec-cal oscillator; wide/narrow bandwidth selector. FM usable sensitivity 10.8 dBf (0.95 μ V) mono, 75-ohm input; S/N ratio mono/stereo 90/85 dB at 85 dBf; capture ratio wide/narrow 1.0/2.5 dB; alternate-channel selectivity wide/narrow 40/85 dB; stereo separation 55 dB at 1 kHz wide, 48 dB 50-10,000 Hz wide; 16 $\frac{1}{16}$ "W \times 14 $\frac{1}{16}$ "D

\times 2 $\frac{1}{2}$ "H; 9 lb 15 oz \$425

FM-7. Similar to F-9 but minus wide/narrow selector; FM S/N ratio mono/stereo 85/80 dB; capture ratio 1.0 dB; alternate-channel selectivity 60 dB; stereo separation 50 dB at 1 kHz, 40 dB 50-10,000 Hz \$325

F-5 Stereo Tuner

Servo-locked digital AM/FM-stereo tuner with digital-numeric tuned-frequency display. Features up/down scan tuning; LED signal-strength meter; FM stereo LED indicator. FM usable sensitivity 10.8 dBf (0.95 μ V) mono, 75-ohm input; FM S/N ratio mono/stereo 75/70 dB at 85 dBf; capture ratio 1.0 dB; alternate-channel selectivity 60 dB; stereo separation 40 dB at 1 kHz, 30 dB 30-10,000 Hz; 16 $\frac{1}{16}$ "W \times 14 $\frac{1}{16}$ "D \times 2 $\frac{1}{2}$ "H; 9 lb 15 oz \$225

QUAD

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 \times 260 mm W \times 165 mm D \$395

ROTEL

RT-1010 Synthesizer Tuner

AM/FM-stereo quartz PLL synthesizer tuner with 7 AM and 7 FM station preset-tuning sys-



tem, high-performance triple-tuned AM section, and digital numeric tuned-frequency display. Features auto/manual scan tuning; LED digital signal-strength and center-tuning indicators; FM PLL MPX circuit; multipath switch and indicators (uses signal-strength indicators); momentary hold switch to hold a station a few seconds during auto scan; mode, high-blend/muting switches; memory back-up to prevent loss of presets when ac power is interrupted; super-sensitive twin variable capacitors in FM section. FM usable sensitivity 11.2 dBf (2.0 μ V) mono, 36 dBf stereo; S/N ratio 75 dB mono; harmonic distortion 0.2%; capture ratio 1.0 dB; image/spurious/i-f-response ratios 86/100/100 dB; stereo separation 45 dB at 1 kHz; AM-suppression ratio 62 dB; alternate-channel selectivity 60 dB; AM sensitivity 300 μ V/m; S/N ratio 50 dB; selectivity 40 dB; power consumption 15 W; 16 $\frac{1}{16}$ "W \times 11 $\frac{1}{16}$ "D \times 3 $\frac{1}{2}$ "H; 9.5 lb \$325

RT-700 Synthesizer Tuner

AM/FM-stereo quartz PLL synthesizer tuner with 6 AM and 6 FM station presets, fluorescent digital-numeric tuned-frequency display, and remote-control jack for RR-700 controller. Features FM PLL MPX circuit; electronic soft-touch buttons for up/down scan tuning; LED tuning indicators; memory back-up to prevent loss of presets if ac power is interrupted. FM usable sensitivity mono/stereo 11.2 dBf (1.9 μ V)/36 dBf; S/N ratio 75 dB; harmonic distortion 0.2% stereo; capture ratio 1.0 dB; stereo separation 48 dB at 1 kHz; image/spurious/i-f-response ratios 70/90/110 dB; AM-suppression ratio 58 dB; alternate-channel selectivity 60 dB; AM sensitivity 300 μ V/m; S/N 50 dB; selectivity 40 dB; power consumption 9 W; 16 $\frac{1}{16}$ "W \times 11 $\frac{1}{16}$ "D \times 4 $\frac{1}{2}$ "H; 8.58 lb \$275

RT-560 Synthesizer Tuner

AM/FM-stereo quartz PLL synthesizer tuner with 5 AM and 5 FM station presets and fluorescent digital-numeric tuned-frequency display. Features manual scan tuning; LED signal-strength indicators; FM PLL MPX circuit; mode switch. FM usable sensitivity mono/stereo 11.2 dBf (2.0 μ V)/37.2 dBf; S/N ratio 75 dB; harmonic distortion 0.2% stereo; capture ratio 1.0 dB; stereo separation 48 dB at 1 kHz; image/spurious/i-f-response ratios 70/90/110 dB; AM-suppression ratio 58 dB; alternate-channel selectivity 60 dB; AM sensitivity 300 μ V/m; S/N ratio 50 dB; selectivity 40 dB; power consumption 9 W; 16 $\frac{1}{16}$ "W \times 11 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "H; 8.58 lb \$250

Micro Component Series

RMT-90 Synthesizer Tuner

AM/FM-stereo quartz PLL synthesizer tuner with mini dimensions for limited spaces and to complement Micro 90 system components. Features 5 AM and 5 FM station presets; FM mute/mode switch; FM auto/manual scan tuning; electronic soft-touch buttons for up/down tuning and function selection. FM usable sensitivity mono/stereo 11.2 dBf (2.0 μ V)/37.2 dBf; S/N ratio 73 dB mono; harmonic distortion 0.2% stereo; capture ratio 1.0 dB; channel separation 45 dB at 1 kHz; image/spurious/i-f-response ratios 70/80/110 dB; AM-suppression ratio 58 dB; alternate-channel selectivity 60 dB; AM sensitivity 300 μ V/m; S/N ratio 50 dB; selectivity 35 dB; power consumption 9 W; 11"W \times 10 $\frac{1}{16}$ "D \times 2 $\frac{1}{2}$ "H; 5.94 lb \$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 μ 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 \times 19"W \times 11"D.... \$800

T101 AM/FM Tuner

Direct line AM/FM tuner with digital read-out and memory \$650

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)..... \$599

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 μ V); 50-dB quieting sensitivity 37.2 dBf (40 μ 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)..... \$429

T6 AM/FM Stereo Tuner

Features digital frequency readout; bar-graph signal strength display; 50 dB quieting 36.11 dBf (stereo) S/N 67dB (stereo); THD 0.25% (stereo) 0.10% (mono)..... \$329

SANSUI

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-S5 AM/FM-Stereo Tuner

Stereo tuner with pulse-count discriminator that uses digital pulses for high S/N ratio and low distortion. Features both digital-numeric and analog (slide-rule) station-frequency displays with tuning pointer/LED tuning indicator in analog system; servo-lock tuning system; silver or black matte finish; rack-mounting adaptors for black-finish model. FM sensitivity 10.8 dBf (1.9 μ V); THD 0.07% stereo; S/N ratio 78 dB stereo; capture ratio 1.0 dB; 17" W \times 12 $\frac{3}{4}$ " D \times 3 $\frac{3}{4}$ " H\$290

SANYO

PLUS T55 AM-FM Stereo Tuner

Features four varactor tuning diodes in FM front 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 μ V (mono); 50-dB quieting 3.0 μ V (mono), 36 μ 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 + 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 μ V/m (ferrite, external antenna); S/N 45 dB. Includes rack-mount handles; 1 $\frac{1}{2}$ " H \times 17 $\frac{1}{2}$ " W (19" with handles) \times 10 $\frac{1}{2}$ " D.....\$250

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.....\$200

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; fly-wheel tuning. FM section: IHF usable sensitivity 10.8 dBf (1.9 μ 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 μ V/m; selectivity 43 dB; S/N 65 dB; im-

age rejection 50 dB; i-f rejection 48 dB; built-in antenna. 5 $\frac{1}{2}$ " H \times 16 $\frac{1}{2}$ " W \times 13 $\frac{3}{4}$ " D.....\$100

H.H. SCOTT

558T Tuner

Quartz PLL Synthesizer tuner with 7 AM/7 FM preset tuning, touch-control memory, and full-function fluorescent display. Features auto scan up and down tuning; active high-blend filter for minimum noise on FM-stereo; 4-gang electronic front end; 1.7- μ V IHF usable sensitivity; 0.8- μ V



DIN sensitivity; S/N 75 dB (mono) at 65 dBf; distortion 0.08% (mono) at 65 dBf; frequency response 30-15,000 Hz \pm 0.5 dB; capture ratio 1.2 dB; stereo separation 55 dB at 1 kHz; 1.7" H \times 17" W \times 11.8" D\$280

528T Tuner

AM/FM-stereo tuner with 5 position LED signal-strength indicator, accurate 3-LED center-tuning indicators on dial pointer for easy and precise tuning. Features heavy metal flywheel; linear FM dia; 1.8- μ V IHF usable sensitivity, 1.2- μ V DIN sensitivity; S/N (mono) 72 dB at 65 dBf; distortion (mono) 0.15% at 65 dBf; frequency response 30-15,000 Hz \pm 0.5 dB; capture ratio 1.2 dB; stereo separation 50 dB at 1 kHz; 3.5" H \times 17" W \times 8.7" D\$160

515T Slimline Tuner

Features 3-gang AM/FM gear-driven variable capacitor; PLL MPX circuit; digital IC controlled 5-position LED signal strength indicator; accurate 3-LED center-tuning indicators; mute and mode

switches; heavy-mass metal flywheel; 1.9- μ V IHF sensitivity; S/N (mono) 72 dB, 66 dB (stereo) at 65 dBf; distortion 0.15% (mono), 0.30% (stereo) at 65 dBf; frequency response 25-15,000 Hz \pm 2 dB; capture ratio 1.25 dB; stereo separation 45 dB at 1 kHz; 3.5" H \times 17" W \times 8" D\$150

SHERWOOD

S-43CP Stereo Tuner

AM/FM-stereo tuner with Touch Lock Tuning™, PLL FM multiplex demodulator, and slide-rule dial whose lighting changes color when Touch Lock Tuning system is engaged. Features 5-LED signal-strength and bow-tie center-tune indicators; dual-gate MOSFET, 4-gang FM front end; switchable MPX filter; 6-element linear-phase FM i-f ceramic filters. FM usable/50-dB quieting sensitivity 1.7 μ V/2.8 μ V mono, 38 μ V stereo; THD mono/stereo 0.08%/0.1%; S/N ratio mono/stereo 87/73 dB; stereo separation 50 dB at 1 kHz; capture ratio 1 dB; frequency response 20-15,000 Hz \pm 0.5 dB; audio output 600 mV; AM selectivity 25 dB; S/N ratio 55 dB; audio output 180 mV; power consumption 10-15 W; 17 $\frac{1}{16}$ " W \times 13 $\frac{3}{4}$ " D \times 4 $\frac{1}{16}$ " H; 17 lb.....\$220

S-41CP Stereo Tuner

AM/FM-stereo tuner with double-tuned quadrature FM detector; PLL MPX decoder, and linear-phase FM i-f ceramic filters. Features slide-rule dial; 3-gang FM front end with junction-FET r-f input stage; 5-segment LED signal-strength and FM center-tune stereo displays; rec-cal switch; FM mute mode selector. FM usable/50-dB quieting sensitivity 1.9 μ V/3 μ V mono, 45 μ V stereo; THD mono/stereo 0.1%/0.15%; S/N ratio mono/stereo 78/73 dB; stereo separation 50 dB at 1 kHz; capture ratio 1.5 dB; alternate-channel selectivity 65

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3

TUNERS

dB; frequency response 20-15,000 Hz ±1 dB; FM audio output 600 mV; AM selectivity 25 dB; S/N ratio 55 dB; audio output 250 mV; power consumption 10-12 W; 17 $\frac{1}{16}$ "W × 11 $\frac{1}{4}$ "D × 2 $\frac{3}{16}$ "H; 9 lb.....\$180

SONY

ST-J88B Stereo Tuner

Quartz-crystal-lock frequency-synthesis FM-stereo tuner with Varactor-diode/MOSFET front end. Features uniphase filters; PLL MPX decoder; 3-way tuning; auto/manual step tuning; 7-station memory presets; MNOS memory; separate narrow- and wide-bandwidth i-f circuits; fluorescent digital-numeric frequency display; LED signal-strength meter. S/N ratio 80 dB mono, 85 dB stereo; THD 0.04% mono, 0.07% stereo; image rejection 110 dB; 14 lb 9 oz.....\$900

ST-J75 Stereo Tuner

Quartz-crystal frequency-synthesis FM-stereo tuner with direct comparator. Features Varactor-diode tuning system; MOSFET front



end; 4-way tuning using MNOS memory IC; uniphase i-f filters; 8 station presets; 114-kHz beat-cut filter; test tone oscillator; 2-position muting level; 10 lb 2 oz.....\$450

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 $\frac{1}{8}$ "H × 17 $\frac{1}{8}$ "W × 12 $\frac{1}{4}$ "D.....\$310

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 $\frac{1}{8}$ "H × 17 $\frac{1}{8}$ "W × 16 $\frac{1}{8}$ "D.....\$200

SOUNDCRAFTSMEN

ST6001 AM/FM-Stereo Digital Tuner

Tuner with frequency-synthesized tuning system and highly stable quartz crystal oscillator. Fea-



tures 14-station microcomputer memory system; 3-way automatic scan tuning; power back-up to hold preset stations in memory when power is off; LED signal-strength/multipath me-

ter; walnut end panels. FM sensitivity 10.8 dBf (1.9 μV); capture ratio 1.0 dB; stereo separation 45 dB; THD 0.1% mono; S/N ratio 75 dB; spurious rejection 100 dB; image rejection 86 dB; antenna inputs 75 and 300 ohms; 19"W × 12"D × 3 $\frac{1}{2}$ "H.....\$449

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 μV; capture ratio 2 dB at 65 dB; 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 dB; rotor-antenna position memory; can be used with European, Asian, and U.S. station allocations and deemphasis curves and with any standard ac line voltages; 6" H × 17 $\frac{1}{8}$ " W × 13 $\frac{3}{4}$ " D.....\$1649

Revox B739 FM Tuner/Preamplifier

Tuner and preamp sections in this unit are identical to those in B780 receiver. Preamp section includes additional line amplifiers for 2 different levels (A and B), with output connections for XLR and RCA phono (2/4 V, 220 ohms, unbalanced). Input signals are conveniently and reliably switched by a microprocessor via noncontacting FET switches, allowing independent selection of recording circuits while listening to any other source; selected functions are indicated on a digital display.

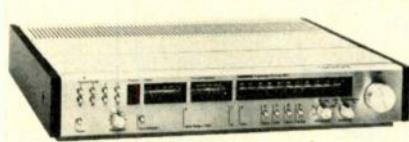


Frequency response 20-70,000 Hz +0/-0.7 dB; THD less than 0.02% at 1 kHz, 2 V output; 17 $\frac{1}{8}$ " W × 13 $\frac{3}{4}$ " D × 6" H.....\$2399

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 × 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

TPT3011 Programmable Tuner

Computerized FM-stereo tuner with 8 programmable station presets and automatic servo tuning released by touch sensor in tuning knob. Features 5-ganged electronic tuning circuits; 12-bit microprocessor pretuning and

memory system; high selectivity. FM sensitivity for 50 dB quieting mono/stereo 14.8 dBf (1.5 μV)/37.3 dBf (20 μV); S/N ratio at 65 dB mono/stereo 78/75 dB; distortion at 50 dB quieting mono/stereo 0.3%/0.3%; capture ratio 0.9 dB; alternate-channel selectivity greater than 100 dB; spurious-response ratio greater than 70 dB; AM-suppression ratio greater than 70 dB; 43.5 cm W × 35 cm D × 8.3 cm H.....\$850

TECHNICS

ST-S6 AM/FM Digital Tuner

Quartz synthesized AM/FM-stereo tuner. Features dc stereo tuner; dc peak/sampling/hold multiplex circuit; 16-station full random-access



preset memory tuning; automatic station memory; digital display for signal strength indication; LED multipath/signal-strength indicator; normal/narrow i-f band width selector; slim body.....\$380

ST-S4 AM/FM Digital Tuner

Quartz synthesized AM/FM-stereo tuner with 16-station full random-access tuning and automatic scanning tuning. Features automatic station memory; full digital display; digital display of signal strength; normal/narrow i-f bandwidth selector; slim body.....\$280

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 μV; 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 × 10.1"W × 7.7"D.....\$360

F15B. Black finish.....\$370

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 μV); 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 ±1 dB. AM section: sensitivity 300 μV/m; S/N 45 dB; selectivity 25 dB. 3 $\frac{1}{8}$ "H × 16 $\frac{1}{2}$ "W × 10 $\frac{1}{2}$ "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 μV); 50-dB quieting sensitivity 13.2 dBf (2.5 μV) mono, 34.2 dBf (28 μV) 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 $\frac{3}{4}$ "H x 17 $\frac{1}{2}$ "W x 13 $\frac{1}{4}$ "D \$750

T-7 AM/FM-Stereo Tuner

Natural Sound AM/FM-stereo tuner with ultralinear direct FM detector, real-time direct CMOS DC NFB PLL multiplex demodulator, and 5 AM/5 FM station preset tuning. Features selectable auto DX/local modes; slide-rule dial with lighted pointer/center-tune indicator; rec-cal switch; signal-quality display; auto blend; uniresonance ceramic filters; optical balance tuning; Optimum Tuning System (OTS) to help achieve best stereo separation; high-Q low-impedance AM loop antenna; selectable AM selectivity; variable output-level control. FM 50-dB quieting sensitivity mono (DX)/stereo (DX, blend off) 15.3 dBf (3.2 μ V)/ 36.8 dBf (38 μ V); image/i-f/spurious-response ratios 100 dB (all); AM-suppression ratio 67 dB; alternate-channel selectivity local/DX 55 dB IHF (30 dB DIN)/90 dB IHF (70 dB DIN); distortion mono at 100/1k/6k/10k Hz 0.03% local, 0.1% DX/0.04% local, 0.3% DX/0.07% local, 0.07% DX/0.05% local, 0.01% DX, stereo 0.04%, 0.5%/0.04%, 0.05%/0.07%, 0.08%/0.08%, 1.5%; IM distortion mono/stereo 0.04% local, 0.5% DX/0.04% local, 1.0% DX; stereo separation 2 kHz-10 kHz 52 dB local, 25 dB DX; frequency response 20-15,000 Hz +0.3/-0.5 dB; AM sensitivity 15 μ V; selectivity 17 dB local, 27 dB DX; S/N ratio 52 dB; audio output level/impedance 1 V/600 ohms fixed, variable max on FM, 300 mV/600 ohms fixed, variable max on AM, power consumption 16 W; 17 $\frac{1}{2}$ "W x 13 $\frac{1}{4}$ "D x 3 $\frac{3}{4}$ "H; 11 lb 7 oz..... \$410

T-1060 AM/FM-Stereo Tuner

Stereo tuner with computer servo locked tuning system with 5 AM/5 FM station presets. Features r-f servo gain control; auto DX switching; ultralinear direct FM detector; real-time direct CMOS dc NFB PLL multiplex demodulator; anti-interference PLL system; digital-numeric (fluorescent) frequency display; signal-Q display; tracking-type pure-pilot canceller; initial-station set button; pushbutton auto-search tuning; manual single-step tuning; high-Q low-impedance AM loop antenna; selectable AM selectivity; built-in recording calibration oscillator. FM 50-dB quieting sensitivity mono/stereo DX 14.7 dBf (3.0 μ V)/35.3 dBf (32 μ V); image/i-f/spurious-response ratios 85/100/100 dB; AM-suppression ratio 65 dB; capture ratio local/DX 1.2/2.5 dB; alternate-channel selectivity 25 dB local, 85 dB DX; S/N ratio mono/stereo 88/83 dB; IM distortion mono/stereo 0.03% local, 0.3% DX/0.04% local, 0.6% DX; stereo separation at 50/1k/10k Hz DX 28/28/25, local 60/60/50 dB; frequency response 30-15,000 Hz +0.3/-0.5 dB; AM sensitivity 10 μ V; selectivity 17 dB local, 27 dB DX; S/N ratio 50 dB; output level/impedance 500 mV/2.2k ohms FM, 150 mV/2.2k ohms AM; power consumption 12 W; 17 $\frac{1}{2}$ "W x 12 $\frac{1}{2}$ "D x 2 $\frac{1}{2}$ "H; 8 lb 13 oz \$350

T-760 AM/FM-Stereo Tuner

Stereo tuner with unique station-locked synthesizer tuning system with 5 AM/5 FM station

presets. Features ultralinear direct FM detector; digital-numeric (fluorescent) frequency display; auto DX and blend; pushbutton search tuning; rec-cal oscillator; station-locked indicator; high-Q low-impedance AM loop antenna. FM 50-dB quieting sensitivity mono/stereo DX 17.3 dBf (4 μ V)/33.9 dBf (27 μ V); image/i-f, spurious-response ratios 62/100 dB; AM-suppression ratio 65 dB; alternate-channel selectivity 25 dB local, 70 dB DX IHF; capture ratio 1.5 dB; S/N ratio mono/stereo 82/79 dB; IM distortion mono/stereo 0.05% local, 0.5% DX/0.08% local, 1.0 DX; stereo separation 45 dB local, 2k-10k Hz; frequency response 30-15,000 Hz \pm 0.5 dB; AM sensitivity 15 μ V; selectivity 26 dB; S/N ratio 46 dB; output level/impedance 500 mV/2.4k ohms FM, 150 mV/2.4k ohms AM; power consumption 11 W; 17 $\frac{1}{2}$ "W x 10 $\frac{1}{2}$ "D x 2 $\frac{1}{2}$ "H; 6 lb 13 oz..... \$290

T-560 AM/FM-Stereo Tuner

Stereo tuner with optical balance tuning and superior AM-reception quality. Features slide-rule tuning dial; dc NFB PLL multiplex decoder; tracking-type pilot pure canceller; high-Q AM loop antenna; improved ceramic filter; switchable AM/FM muting; FM auto-stereo/mono selection; signal-quality meter; rec-cal oscillator. FM 50-dB quieting sensitivity mono/stereo 14.8 dBf (3 μ V)/37.3 dBf (40 μ V); image/i-f/spurious-response ratios 65/100/90 dB; AM-suppression ratio 60 dB; capture ratio 1.5 dB; alternate-channel selectivity 65 dB; S/N ratio mono/stereo 86/84 dB; IM distortion mono/stereo 0.05%/0.1%; frequency response 30-15,000 Hz +0.5/-1.0 dB; AM sensitivity 10 μ V; selectivity 27 dB; S/N ratio 55 dB; output level/impedance 500 mV/5.2k ohms FM, 180 mV/5.2k ohms AM; power consumption 8 W; 17 $\frac{1}{2}$ "W x 12"D x 3 $\frac{3}{4}$ "H; 8 lb 2 oz..... \$230

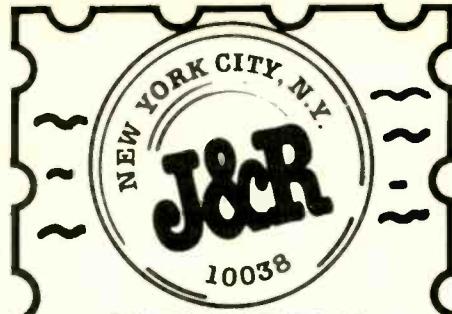
T-460. Similar to T-560 except no signal-quality meter, rec-cal oscillator, FM stereo indicator. FM 50-dB quieting sensitivity mono/stereo 15.1 dBf (3.1 μ V)/37.7 dBf (42 μ V); image/i-f/spurious-response ratios 50/100/80 dB; alternate-channel selectivity 55 dB; frequency response 30-15,000 Hz +0.5/-1.5 dB; output level/impedance 500 mV/5k ohms FM, 180 mV/5k ohms; power consumption 7 W; 17 $\frac{1}{2}$ "W x 12"D x 3 $\frac{3}{4}$ "H; 8 lb 2 oz..... \$180

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/mono switch, AM/FM switch; AM loop antenna. FM section: usable sensitivity 0.85 μ V (IHF, 300/75 ohms); 50-dB quieting 3 μ V (mono), 40 μ 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 μ V and S/N 52 dB; 3 $\frac{1}{2}$ "H x 17 $\frac{1}{2}$ "W x 13 $\frac{1}{4}$ "D..... \$190

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4

TURNTABLES

ADC

3001-DD Turntable

Two speed (33⅓ and 45 rpm) direct-drive turntable without tonearm; dc brushless motor; strobe with ±5% speed adjustment; wow and flutter 0.035% (DIN 45-507); rumble -70 dB (DIN B); 3" H × 18¾" W × 14½" D \$250

AIWA

AP-D50U Automatic Single-Play

Two-speed (33⅓ 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; 8½-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; 4½" H × 17¾" W × 14½" D \$000

AP-D60U Automatic Single-Play

Fully automatic linear-motor direct-drive turntable. Features automatic record-size selector;



±6% speed pitch control; world's lowest profile (2½" H); moving-magnet cartridge included \$245

AP-D30H Semiautomatic Single-Play

Two-speed (33⅓ 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 antiskating; ±3% speed control adjustment; all control operations accessible with dustcover down; wow and flutter 0.035% wrms \$220

AP-D35H Semiautomatic Turntable

Semiautomatic belt-driven turntable with ac synchronous motor. Features straight tonearm; front-mounted controls; moving-magnet cartridge included. Wow and flutter 0.04% wrms \$135

AKAI

AP-L95 Linear-Tracking Turntable

Microcomputer-programmable linear-tracking turntable with quartz-lock direct drive, RPSS (Random Program Search System) and SKIP



search system. Features fully automatic operation; feather-touch controls; fast-forward/fast-reverse tonearm; dc brushless motor. Wow and flutter 0.025%; rumble -75 dB; 17.3" W × 16.1" D × 4.9" H \$575

AP-L45 Linear-Tracking Turntable

Linear-tracking, quartz-locked direct-drive fully automatic turntable. Features feather-touch operation; fast-forward/fast-reverse tonearm; dc brushless motor. Wow and flutter 0.025% wrms; rumble -75 dB; 17.3" W × 16.1" D × 4.9" H; 24.3 lb \$400

AP-Q60 Automatic Single-Play

Two-speed (33⅓ and 45 rpm) quartz PLL direct-drive turntable with automatic tonearm; dc servo-motor; 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 × 17.3" W × 15.8" D \$230

AP-Q50. Similar to AP-Q60 except semi-automatic with auto return arm; wow and flutter 0.05% DIN \$200

AP-D40 Automatic Single-Play

Two-speed (33⅓ 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 × 17.3" W × 15.8" D \$180

AP-D30. Similar to AP-D40 except semi-automatic with auto return arm; wow and flutter 0.05% DIN; rumble -70 dB (DIN B) \$160

AP-B20 Semi-Automatic Single-Play

Two-speed (33⅓ and 45 rpm) belt-drive turntable with auto return tonearm; 4-pole synchronous motor; low-resonance S-shaped arm with oil-damped cueing, antiskating 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 × 17.3" W × 14" D \$115

AUDIONICS of OREGON

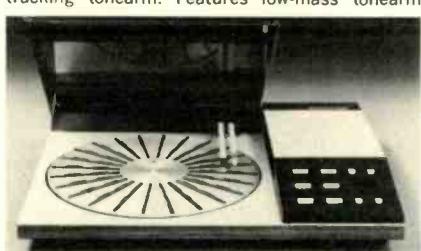
LK-1 Single Play

Precision belt-drive turntable without arm. Features Hall-effect motor with PLL speed control; 2 speeds; individual speed controls; inert acoustical urethane platter with 3-point suspension. Rumble -70 dB; wow and flutter 0.03%; standard base and dustcover \$749
With decorator base of oak solids, veneers and acrylics \$829

BANG & OLUFSEN

Beogram 8000 Turntable

Tangential-drive 2-speed (33⅓ and 45 rpm) turntable with patented light/shutter tangential-tracking tonearm. Features low-mass tonearm



and Bang & Olufsen MMC-20CL stereo phono cartridge with patented leaf-spring/pendulum suspension system. Wow and flutter ±0.04% DIN; rumble greater than 70 dB DIN \$1100

Beogram 1700 Turntable

Two-speed (33⅓ and 45 rpm) electronically controlled belt-driven turntable with low-mass tonearm with Bang & Olufsen MMC-20EN phono cartridge. Features one-touch automatic start and 3-point suspension system. Wow and flutter 0.045% DIN; rumble -65 dB \$395

Beogram 3404 Automatic Single-Play

Two-speed (33⅓ 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; 3½" H × 17¾" W × 14½" D \$495

Beogram 1600 Automatic Single-Play

Two-speed (33⅓ and 45 rpm) belt-drive turntable with automatic lift/shutoff tonearm; single master control for all operations; servo-controlled, dc motor; automatic anti-skating and speed adjustment ±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

BENJAMIN ELECTROPRODUCTS

BE-41—Linear-Tracking Turntable

Phase-locked-loop-controlled linear-tracking turntable with belt drive and fully automatic operation. Features photo-optical set-down detection; automatic record-absence detection; bidirectional cueing; photo-optical end-of-record detection with auto stop; dc PLL-controlled motor/tachometer; front-panel control keys; stylus cleaning brush; illuminated strobe; LED



speed indicators; adjustable leveling feet; front loading; dynamically balanced linear-tracking interchangeable tonearm/headshell assembly. Rumble greater than -70 dB (DIN B); wow and flutter 0.02% wrms; tracking error angle within $\pm 0.05^\circ$; effective tonearm length $4\frac{3}{4}\text{ in}$; $18\frac{1}{4}\text{W} \times 16\text{D} \times 5\frac{1}{4}\text{H}$; 20 lb \$600

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 QT-X-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; 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-record 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

75MX Automatic Multiple-Play

Multiple-play turntable with cue and pitch controls; strobe; ADC QLM 32 MK II mounted phono cartridge; removable hinged dustcover. Speeds 33 $\frac{1}{3}$ and 45 rpm \$100

65SX. Similar to 75MX except semiautomatic single-play operation \$90

72MX. Similar to 75MX except no strobe or

pitch control	\$90
65SX. Similar to 72MX except semiautomatic single-play operation	\$80
20CX Automatic Multiple-Play	
Automatic multiple-play turntable with tonearm and ceramic phono cartridge. Features cue/pause control and removable hinged dust cover	\$65

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 -75 dB (DIN B); includes 100 V, 50 VA ac output stepdown transformer; optional cabinets available; 140 mm H \times 376 mm dia \$860

DK-100. Walnut wood veneer cabinet for DP-80 and DP-6000 \$210

DK-300. Compressed beechwood cabinet for DP-80 and DP-6000 \$400

DK-2300. Compressed beechwood cabinet with two-arm base for DP-80 and DP-6000 \$690

DP-60L Semiautomatic 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 (0.0002 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-55K Single-Play Turntable

Direct-drive, quartz-locked turntable with ac servo motor. Speed deviation less than 0.002%; wow and flutter less than 0.015% wrms; rumble less than -78 dB; platter 300-mm die-cast aluminum; power consumption 15 W; 510 mm W \times 425 mm D \times 185 mm H \$425

DP-33F Automatic Turntable

Direct-drive fully automatic quartz-locked single-

A DISTINCTIVELY DIFFERENT LINEAR TRACKING TURNTABLE



The Benjamin 4100 is the first linear tracking turntable which allows you to load records from the front, when headroom is limited. It offers quiet belt-drive, completely automated operation, phase lock loop electronic speed regulation, tracking accuracy within ± 0.05 degrees, and excellent acoustic isolation. No detail has been spared to provide a turntable that will flawlessly track and faithfully reproduce what is on the record.

Referring to other more expensive radial or servo-driven tonearm record players they have tested, *Stereo Review* said that "the 4100... will match any of them in actual record-playing performance and probably surpass any of them in versatility of operation and installation."* (Write for a copy of the complete report.)

Available at selected audio salons. **Benjamin Electroproducts, Inc., Hicksville, NY 11801.** *© July 1981 Ziff-Davis Publishing Co. All rights reserved.

BENJAMIN

BENJAMIN LINEAR TRACKING TURNTABLE
CIRCLE NO. 7 ON READER SERVICE CARD

play turntable with ac servo motor. Speed variation less than 0.002%; wow and flutter less than 0.015% wrms; rumble less than -78 dB; tonearm static balanced S shaped; effective tonearm length 220 mm; tracking range 0.2-5 g; power consumption 15 W; 450 mm W × 446 mm D × 140 mm H..... \$395

DP-1250 Single-Play

Two-speed (33½ and 45 rpm) direct-drive turntable without arm; ac servomotor; 30-cm aluminum alloy diecast platter; ±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 × 510 mm W × 417 mm D..... \$340

DP-32F Single-Play Turntable

Direct-drive automatic single-play turntable with quartz-locked dc servo system, spring-plate turntable suspension, and statically balanced straight tube tonearm. Rumble -78 dB; wow and flutter less than 0.012%; speed accuracy within 0.002%; 16.7" W × 15"D × 5.1"H; 13.2 lb..... \$325

DP-31L Similar to DP-32F except semiautomatic operation..... \$225

DP-30LS Semiautomatic Single-Play

Two-speed (33½ 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 ULM (ultra low mass) straight-line tubular tonearm. Less than 8 grams total effective mass, with (optional) ULM cartridge. Tonearms dynamically balanced and require no critical leveling of chassis. Tracking as low as 0.25 gram. Vernier-adjustable counterbalance; tracking force applied around vertical pivot; anti skating calibrated for all stylus types; 33½ and 45 rpm speeds (plus 78 rpm with model 608); illuminated strobe and variable-pitch control. Cue control damped in both directions to prevent bounce. All models (except 1258) also feature: 4 acoustic isolators instead of conventional feet back and external shock; Dust cover with retracting hinges; tonearms suspended in 4-point gyroscopic gimbal. Dimensions (except 1269 and 1258) 17½" × 15½" × 5½", including cover.

Single-Play, Direct-Drive Turntables

741Q. Fully automatic, featuring hydrodynamic suspension system that floats tonearm; motor and platter as one unit on 4 accordion-like viscous-damped cylinders; antiresonance filter in counterbalance tunable to mass and compliance of any cartridge; quartz PLL motor is brushless dc, using Hall-effect feedback control and regulated power supply; heavy cast platter; variable-pitch control with ±6% calibrated LED array. Rumble -80 dB; wow and flutter ±0.015%..... \$500

728Q. Fully automatic, quartz PLL turntable featuring antiresonance filter and hydrodynamic system; 11% pitch control. Rumble -78 dB; wow and flutter ±0.025%..... \$370

708Q. Semi-automatic quartz PLL turntable featuring antiresonance filter and hydrodynamic system; 11% pitch control; lead-in groove sensor. Rumble -78 dB; wow and flutter ±0.025%..... \$350

608. Semiautomatic turntable featuring antires-

onance filter and hydrodynamic system; 11% pitch control; 33½, 45, and 78 rpm lead-in groove sensor. Rumble -75 dB; wow and flutter ±0.03%..... \$330

627Q. Fully automatic, quartz PLL turntable featuring antiresonance filter. Rumble -78 dB; wow and flutter ±0.025%..... \$260

607. Semiautomatic turntable featuring antiresonance filter. Rumble -75 dB; wow and flutter ±0.03%..... \$220

Vario-Belt Drive Models

528. Fully automatic, single play turntable. Rumble -70 dB; wow and flutter ±0.04%..... \$180

508. Semiautomatic, single play turntable. Rumble -70 dB; wow and flutter ±0.04%..... \$160

Single Play/Multiple Play

1268. Fully automatic multiple-play turntable features elevator-action changer spindle that holds up to 6 records and interchanges with rotating single play spindle. Rumble -70 dB; wow and flutter ±0.04%; 17½" × 15½" × 7½"..... \$200

1258. Fully automatic, multiple play turntable with elevator-action changer spindle that holds up to 6 records and interchanges with rotating single play spindle; dynamically balanced ULM tonearm; vernier-adjustable counterbalance; tracking force applied around vertical pivot; antiskating calibrated for all stylus types; illuminated strobe; 6% pitch control; cueing damped in both directions. Rumble -68 dB; wow and flutter ±0.05%; 16¾" × 4½" × 7¼"..... \$150

FISHER

MT6360 Automatic Single-Play

Two-speed (33½ 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 × 17½" W × 14½" D..... \$350

MT6455 Automatic Single-Play

Two-speed (33½ and 45 rpm) quartz-lock direct-drive turntable with automatic arm; 120-pole linear ac servomotor; low-mass straight tonearm with viscous-damped cueing, antiskating, and stylus over-hang 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 × 17½" W × 14½" D..... \$280

MT6455C. 6455 with cartridge..... \$300

MT6435. Similar to 6455 except semiautomatic operation with auto tonearm return/shutoff; 5½" H..... \$230

MT6435C. 6345 with cartridge..... \$260

MT6430. Similar to 6435 but minus quartz-lock circuitry..... \$190

MT6430C. 6430 with cartridge..... \$220

MT650 Automatic Turntable

Fully automatic quartz-locked direct-drive turntable with straight low-mass tonearm. Features direct-drive brushless-dc servo motor; detachable cartridge shell; heavy cast-aluminum platter; viscous-damped cueing mechanism; adjustable calibrated antiskate control; up front controls. Wow and flutter 0.035% wrms; rumble -70 dB (DIN 45539B); tracking-force range 0.6-3.5 g; speeds 33½ and 45 rpm; silver finish; 45-rpm adapter included; power consumption 7 W; 17½" W × 14½" D × 4½" H; 13.2 lb..... \$230

MT650C. 650 with cartridge..... \$260

MT640 Automatic Turntable

Fully automatic direct-drive turntable with straight low-mass tonearm. Features direct-drive brushless dc servo motor; pitch control; heavy cast-aluminum platter; viscous-damped cueing mechanism; adjustable calibrated antiskate

control; removable cartridge shell. Wow and flutter 0.035% wrms; rumble -70 dB (DIN B); speed variation/control range 0.5%/±3%; tracking-force range 0.6-3.5 g; tonearm resonance less than 10 Hz; effective tonearm mass without cartridge 6.5 g; max tracking error ±1.8%; power consumption 6 W; silver finish; 45-rpm adaptor supplied; 17½" W × 14½" D × 4½" H; 13 lb..... \$180

MT6420 Semiautomatic Turntable

Semiautomatic direct-drive turntable with precision low-mass straight tonearm. Features direct-drive dc servo motor; detachable cartridge shell; strobe and individual 33½- and 45-rpm speed-adjust controls; viscous-damped cueing mechanism; auto tonearm return/shut-off. Wow and flutter 0.035% wrms; rumble -68 dB (DIN B); speed variation/adjustment range ±0.5%/±3%; tracking-force range 0.6-3.5 g; tonearm resonance less than 10 Hz; effective tonearm mass without cartridge 6.5 g; max tracking error ±1.8%; power consumption 6 W; silver finish; supplied with 45-rpm adaptor; 17½" W × 14½" D × 5½" H; 12 lb..... \$150

MT6420C. 6420 with cartridge..... \$180

MT6410. Similar to 6420 except belt driven; wow and flutter 0.04% wrms; rumble -68 dB (DIN B); max tracking error ±2.0%; power consumption 4 W; 10.2 lb..... \$120

MT6410C. 6410 with cartridge..... \$150

MT6117 Semiautomatic Turntable

Belt-driven semiautomatic turntable with stereo cartridge. Features automatic tonearm return/shut-off; heavy cast-aluminum platter; viscous-damped cueing mechanism; adjustable antiskate control. Wow and flutter 0.08% wrms; rumble -55 dB (DIN B); speed variation ±1%; speeds 33½ and 45 rpm; max tracking error ±3°. MG-28 cartridge static/dynamic compliance 26 × 10⁻⁶ cm/dyne. Power consumption 8 W; silver finish; 45-rpm adaptor supplied; 17½" W × 13¾" D × 5½" H; 9.5 lb..... \$120

GARRARD U.S.A.

Direct-Drive Series

D-35 Fully Automatic Turntable

Fully automatic direct-drive turntable with quartz-lock-controlled slotless and coreless dc servo motor. Features auto repeat; variable



pitch control; illuminated strobe; 9.9-g ultra-low-mass tonearm; single-plane-pivot system (SPPS); reduced tonearm pivot height; detachable headshell/tonearm-tube assembly; adjustable vertical tracking angle headshell; mineral-filled plastic-resin base; reduced-overhang dust cover; front-mounted feather-touch controls, including cue; low-silhouette design; deluxe platter mat; simplified automatic mechanism. Wow and flutter 0.025% wrms; rumble -75 dB (DIN B); 17½" W × 14½" D × 5" H..... \$260

D-30. Similar to D-35 except semiautomatic operation; fixed quartz lock; standard detachable headshell; no adjustable vertical tracking angle..... \$210

D-20. Similar to D-30 except no quartz lock, no variable-pitch control, no strobe..... \$180

Belt-Drive Series

B-35 Fully Automatic Turntable

Fully automatic belt-driven turntable with T.G., dc servo motor and auto repeat. Features variable pitch control; illuminated strobe; 9.5-g ultra-low-mass tonearm; single-plane-pivot system (SPPS); reduced tonearm-pivot height; detachable tonearm/headshell assembly; headshell vertical tracking angle adjustable; mineral-filled plastic-resin base; reduced-overhang dust cover; front-mounted feather-touch controls, including cue; low-silhouette design; deluxe platter mat; simplified automatic mechanism. Wow and flutter 0.045% wrms; rumble -70 dB (DIN B); 17 $\frac{1}{4}$ "W \times 14 $\frac{1}{4}$ "D \times 5"H..... \$195

B-30. Similar to B-35 except semiautomatic operation, standard headshell (detachable), and no adjustable vertical tracking angle \$165

B-20. Similar to B-30 except has ac synchronous motor, no pitch control..... \$130

GEM by SUMIKO

GEM Turntable

Belt-driven turntable integrated with Grace 707 II tonearm. Features 4-point suspension combined with mass loading for dynamic stability; inverted saphire thrust bearing; platter mass concentration and belt contact at rim for best flywheel effect; low-resonance platter mat; vibration isolation..... \$725

With Grace 747 toneram with detachable headshell..... \$800

HARMAN/KARDON

hk720 Turntable

2-speed, belt-driven, semiautomatic turntable with high torque FG, dc servo motor; pitch adjustable range $\pm 3\%$; wow and flutter 0.045% wrms; less than -65dB (DIN-B) rumble; 7g (plus mass of cartridge) effective tonearm mass; phono capacitance 160, 250, or 350 pF; tracking force 0.3 g; 15.2" W \times 5.3" H \times 14.2" D; 11 lb..... \$230

HITACHI

HT-500 Automatic Single-Play

Two-speed, quartz-lock, direct-drive turntable with brushless, coreless, slotless Unitorque motor and dc motor for tonearm movement. Features gimbal support photo-sensor straight, tubular tonearm; controls on front panel; hi-tech damping; heavy wooden cabinet. S/N 78 dB (DIN B); wow and flutter 0.025% wrms; tracking error $\pm 2\%$; tracking force range 0.3 g; acceptable cartridge weight 4.9 g; 17 $\frac{1}{4}$ " \times 6 $\frac{1}{2}$ " \times 15 $\frac{1}{4}$ "; 16 lb 8 oz..... \$330

HT-60S. Similar to HT-500 except no hi-tech damping. Static balance tonearm; acceptable cartridge weight 4.10 g; 17 $\frac{1}{4}$ " \times 14 $\frac{1}{4}$ " \times 4 $\frac{1}{4}$ "; 13 lb 3 oz..... \$200

HT-61S. Similar to HT-60S except has auto size/



speed selection..... \$240

HT-50S. Similar to HT-60S except no photo sensor; semiautomatic. S/N 75 dB; wow and flutter 0.03%; acceptable cartridge weight 4.9 grams; 17 $\frac{1}{4}$ " \times 4 $\frac{1}{4}$ " \times 14 $\frac{1}{4}$ "; 12 lb 2 oz..... \$179

HT-41S Semiautomatic Single-Play

Two-speed (33 $\frac{1}{3}$ and 45 rpm) quartz-lock direct-drive turntable with auto return/cut tonearm; brushless coreless slotless Unitorque

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 $\frac{1}{4}$ "H \times 17 $\frac{1}{4}$ "W \times 14 $\frac{1}{4}$ "D \$170

HT-40S. Similar to HT-41S except has dc servo drive system and 3% pitch control with LED stroboscope..... \$140

HT-20S Semiautomatic Single-Play

Two-speed belt-drive, semiautomatic turntable with dc servo motor. Features auto return/off; front-panel controls; viscous-damped cueing; straight static-balance tonearm with dual magnet (MT-35) cartridge. S/N 70 dB; wow and flutter 0.05%; tracking error $\pm 20\%$; tracking-force range 0.3 g; acceptable cartridge weight 4.9 g; 17 $\frac{1}{4}$ " \times 14 $\frac{1}{4}$ " \times 4 $\frac{1}{4}$ "; 8 lb 13 oz..... \$100

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 $\frac{1}{2}$ "H \times 18 $\frac{1}{4}$ "W \times 17 $\frac{1}{4}$ "D \$450

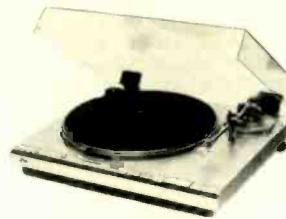
QL-Y3F. Similar to QL-Y5F minus manual arm controls; arm is statically-balanced with one motor controlling horizontal movement \$360

L-E5 Automatic Single-Play

Fully automatic single-play linear-tracking turntable with short low-mass tonearm. Features linear tracking with no-contact optical sensor to keep tonearm 90° tangential to record groove..... \$350

QL-F61 Quartz-Locked Turntable

Quartz-locked direct-drive turntable with low-mass straight tonearm, double-servo control, and cog-free coreless dc servo motor; fully



automatic operation; 6% speed pitch control; auto repeat. Wow and flutter 0.025% wrms; S/N ratio better than 75 dB DIN-B wtd.... \$240

QL-A51 Semiautomatic Single-Play

Quartz-locked direct-drive semiautomatic turntable with straight low-mass tonearm. Features auto return/shut-off of tonearm/player; repeat function. Wow and flutter 0.025% wrms; S/N ratio better than 75 dB DIN-B wtd..... \$220

L-F41 Automatic Single-Play

Fully automatic direct-drive turntable with straight low-mass tonearm. Features cog-free coreless dc servo motor; speed pitch controls.

Wow and flutter less than 0.03% wrms.... \$190

L-A31. Semiautomatic version of L-F41; includes cueing and auto return/shut-off..... \$160

L-A21 Semiautomatic Single-Play

Belt-driven semiautomatic turntable with straight low-mass tonearm. Features auto return/shut-off; cueing; up-front controls; synchronous motor. Wow and flutter less than 0.06% wrms; S/N ratio greater than 63 dB DIN-B wtd..... \$110

KENWOOD

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..... \$369

KD-4100 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$ and 45 rpm) direct-drive turntable with electronically-controlled automatic arm; coreless and slotless dc servomotor and 2-pole 3-slot dc micro motor; 12 $\frac{1}{4}$ -in aluminum alloy diecast platter; 8 $\frac{1}{2}$ -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 $\frac{1}{2}$ "H \times 17 $\frac{1}{4}$ "W \times 14 $\frac{1}{4}$ "D \$279

KD-4100R. Same as KD-4100 except accepts optional RC-500 remote control unit with disc size selector. play/cut, and repeat operations \$279

RC-500. Infrared beam remote control unit with separate receiver section; see Section for other series components..... \$250

KD-50F Automatic Single-Play

Quartz-PLL direct-drive turntable with static-balanced straight tubular tonearm. Features separate motor for automatic functions; automatic lead-in/return/cut/repeat; illuminated quartz-lock and play indicators; antiskating device; oil-damped cueing mechanism; disc-size selector; 45-rpm adaptor and stand; die-cast aluminum-alloy platter; Anti-Resonance Base (ARB) construction. Wow and flutter 0.025% wrms; rumble better than -75 dB DIN wtd; effective tonearm length 8 $\frac{1}{2}$ "; overhang $\frac{1}{16}$ "; tracking error $\pm 1.5\%$; stylus pressure range 0-3 g; usable cartridge weight 4-10 g; power consumption 10 W; 17 $\frac{1}{4}$ "W \times 14 $\frac{1}{4}$ "D \times 5 $\frac{1}{2}$ "H; 10.6 lb \$219

KD-2100 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$ and 45 rpm) belt-drive turntable with automatic arm; FG servo dc motor; 12 $\frac{1}{4}$ -in aluminum alloy diecast platter; 8 $\frac{1}{2}$ -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 $\frac{1}{2}$ "H \times 17 $\frac{1}{4}$ "W \times 14 $\frac{1}{4}$ "D \$189

KD-40R Semiautomatic Single-Play

Direct-drive semiautomatic single-play turntable with static-balanced straight tubular tonearm. Features automatic tonearm return/cut; speed pitch control; 3 LED indicators; antiskating device; oil-damped cueing mechanism; 45-rpm adaptor and stand; dc servo motor. Wow and

4

TURNTABLES

flutter 0.03% wrms; rumble better than -73 dB DIN wt; speed pitch control range $\pm 3\%$; effective tonearm length $8\frac{1}{8}$ " overhang $\frac{1}{16}$ "; tracking error $\pm 1.5\%$; stylus pressure range 0-3 g; usable cartridge weight 4-10 g; power consumption 8 W; $17\frac{1}{16}$ "W $\times 14\frac{3}{4}$ "D $\times 5\frac{1}{8}$ "H; 10.1 lb \$182

KD-1600MII Semiautomatic Single-Play

Two-speed (33 $\frac{1}{3}$ and 45 rpm) belt-drive turntable with auto-return tonearm; 4-pole synchronous motor; 12-in aluminum alloy diecast platter; $8\frac{1}{4}$ -in statically-balanced straight arm with headshell, antiskating and direct readout stylus pressure; controls include play/cut with LED play indicator oil-damped cueing mechanism, 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; $5\frac{1}{8}$ "H $\times 17\frac{1}{16}$ "W $\times 14\frac{3}{4}$ "D \$145

Audio Purist Group**KD-650 Turntable**

Quartz-locked direct-drive turntable with S-shaped tonearm \$400
KD-600. Similar to KD-650 but less tonearm \$350

KD-500 Turntable

Direct-drive turntable without tonearm \$250

Turntable Accessories

DS-20. Outer disc stabilizer \$150
DS-21. Inner disc stabilizer \$40
TS-10. Turntable sheet \$160

KM LABORATORIES**Transcriber Turntable**

Two-speed (33 $\frac{1}{3}$ 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 \times 450 mm W \times 365 mm D \$339

LINN SONDEK**by AUDIOPHILE SYSTEMS****LP12 Manual Single-Play**

One-speed (33 $\frac{1}{3}$ 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 kilndried hardwood base. Wow and flutter 0.04% wrms; rumble -60 dB unweighted; speed accuracy $\pm 0.04\%$; optional 45-rpm adaptor available; $5\frac{1}{2}$ "H $\times 17\frac{1}{2}$ "W $\times 14"$ D \$960

LUXMAN**PD-555 Single-Play**

Three-speed (33 $\frac{1}{3}$, 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 $\pm 2.5\%$ rotation range; feathertouch top-mounted operations switches. Wow and

flutter 0.03% wrms; rumble -72 dB; solid diecast aluminum high-inertia cabinet \$2900

PD-375 Stabilizer Turntable

Quartz-lock dc-servo fully automatic vacuum disc stabilizer turntable that "bonds" record to heavy diecast aluminum platter. Features vacuum-pump system; integrated platter spindle receptacle and low-mass straight tonearm that are isolated from base. Wow and flutter 0.03%; S/N ratio better than 60 dB; 19.3"W \times 15.4"D \times 7.9"H; 25 lb \$600

PD277 Automatic Single-Play

Two-speed (33 $\frac{1}{3}$ 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 $\pm 4\%$ pitch control. Wow and flutter 0.03%; rumble -60 dB; 6"H \times 18.5"W \times 13.5"D \$400

PD-264 Semiautomatic Single-Play

Two-speed (33 $\frac{1}{3}$ 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 antiskating, tonearm height, and stylus height adjustments; mirror-reflex LED stroboscope with $\pm 6\%$ 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-freestop hinged acrylic resin dustcover 4.15"H \times 17.5"W \times 14.5"D \$300

MARANTZ**TT 6200 Automatic Single-Play**

Automatic single-play turntable with PLL/quartz-locked direct-drive system and automatic tonearm. Features repeat function; viscous-damped cueing system; front-panel control; strobe and speed pitch controls; platter and tonearm on subchassis suspension system; straight low-mass tonearm; die-cast-aluminum platters; removable hinged dust cover; gold-plated output plugs and headshell terminals. Wow and flutter 0.03%; rumble 74 dB DIN B; speeds 33 $\frac{1}{3}$ and 45 rpm; speed pitch control range $\pm 3\%$; 16.5"W \times 14.5"D \times 5.5"H; 11.5 lb \$310

TT 4200 Automatic Single-Play

Automatic quartz-locked direct-drive turntable with dc servo motor. Features repeat function; strobe; speed pitch control; damped shock-absorbent feet. Wow and flutter 0.04%; rumble 72 dB DIN B; speed pitch control range $\pm 3\%$; 16.5"W \times 14.5"D \times 5.5"H; 11.5 lb \$250

TT 2200 Semiautomatic Single-Play

Semiautomatic turntable with dc servo motor direct-drive platter system and tonearm. Features automatic tonearm return; strobe; speed pitch control. Wow and flutter 0.04%; rumble 70 dB DIN B; speed pitch control range $\pm 3\%$; dimensions and weight same as TT 6200. \$200

TT 1200 Semiautomatic Single-Play

Semiautomatic belt-driven turntable with ac synchronous motor; tonearm; damped cueing mechanism. Wow and flutter 0.06%; rumble 68 dB DIN B; power consumption 10 W; 16.5"W \times 14.5"D \times 5.5"H; 10.9 lb \$130

MESA

All Mesa turntables are multiple-disc players and come with phono cartridge, walnut-veneer wood base with storage compartment, hinged tinted dust cover, audio cables, automatic 45-rpm spindle, and stub spindles for 33 $\frac{1}{3}$ - and 45-rpm single play.

65SV. Plays up to 6 records automatically and features removable spindle for single play; viscous-damped cueing; quick-disconnect tonearm headshell; adjustable counterweight;

stylus pressure gauge; antiskate mechanism \$85 70SV. Same as 65SV except semiautomatic single play \$85

2600SV. Features automatic play of up to 6 records; removable spindle for single play; viscous-damped cueing; stylus pressure adjust screw \$70

MICRO SEIKI by SAE**RX 5000 Turntable**

Aramid-fiber-belt-drive turntable with remote motor unit. Features 35-lb copper platter; oil-bath bearing system; resonance-absorbing metal base; adjustable height via brass feet; accommodates up to 4 tonearms simultaneously. Wow and flutter 0%; rumble -90 dB; 135 lb \$4000

BL 111 Turntable

Belt-driven turntable with rigid coupling of platter system. Features shaft assembly and tonearm mount; 25-lb gun-metal platter; aramid-fiber drive belt; brass tonearm base; solid-wood base; cutless-core transformer. Wow and flutter 0.01%; rumble -90 dB; 135 lb \$2500

RX 3000 Turntable

Aramid-fiber-belt-driven turntable with remote motor and oil-bath bearing system. Features adjustable height via brass feet; 22-lb copper platter; metal base; accepts up to 3 tonearms simultaneously. Wow and flutter 0.01%; rumble -90 dB; 95 lb \$2500

DQX-1000 Automatic Turntable

Direct-drive quartz-lock automatic single-play turntable that accepts up to 3 tonearms simultaneously. Tonearms can be either transcription



or standard length. Features external power supply; pitch control with quartz-lock override; 3 height-adjustable isolation feet. Wow and flutter 0.025%; rumble -72 dB \$999

BL-91 Manual Turntable

Belt-driven armless manual turntable. Features brushless servo-controlled motor; multilaminar natural-wood base; oil-bath bearing system; anti-feedback feet; brass tonearm mounting plate. Wow and flutter 0.025%; die-cast aluminum platter weight 6 lb; pitch control range $\pm 6\%$; 26 lb \$799
BL-91L. Same as BL-91 but accepts transcription-length tonearms \$1299

DQX-500 Turntable

Direct-drive, quartz-lock manual turntable with remote electronics and dynamically balanced straight tonearm. Features metal base. Wow and flutter 0.025%; rumble -70 dB; 30 lb \$649

BL-51 Turntable

Belt-driven armless turntable. Features solid-wood base with ebony finish; oil-bath bearing system; anti-feedback feet; 5-lb die-cast aluminum platter; dc servo-controlled motor. Speed variable up to $\pm 3\%$ \$499

DQ3 Manual Turntable

Direct-drive, dc servo-controlled manual turntable with quartz lock. Wow and flutter 0.025%; rumble -70 dB; tracking-force range 0.5-3 g; 31 lb \$499

MB38 Fully Automatic Turntable

Belt-driven fully automatic turntable with repeat function. Features separate motors for platter and tonearm; low-mass straight tonearm; exclusive Micro Seiki oil-ball bearing system; pitch control and strobe; ebony finish; FG servo motor. Wow and flutter 0.025%; rumble -72 dB; 16.5 lb.....\$469

DD31 Turntable

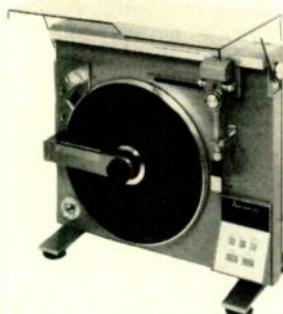
Direct-drive turntable with auto-lift mechanism. Features dc servo-controlled motor; strobe; pitch control. Wow and flutter 0.025%; rumble -72 dB; pitch control range $\pm 3.5\%$; 26 lb.....\$399

MB18 Semiautomatic Turntable

Belt-driven semiautomatic turntable with low-mass tonearm and carbon-fiber headshell. Features FG servo motor; damped cue control; pitch control and strobe. Wow and flutter 0.025%; rumble -72 dB; control range $\pm 3.5\%$ 15.4 lb.....\$279

MB14ST Semiautomatic Turntable

Belt-driven semiautomatic turntable with dual-construction straight tonearm. Features precision synchronous motor; precision cast platter; molded rubber feet; damped cue control; ebony finish. Wow and flutter 0.05%; rumble -65



dB; 13.2 lb.....\$209

MB12AT Semiautomatic Turntable

Belt-driven turntable with low-mass straight tonearm. Features carbon-fiber headshell; decoupled counterweight; spring-mounted rubber antifeedback feet; damped cue control; 4-pole synchronous motor. Wow and flutter 0.055%; rumble -62 dB.....\$149

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 $\frac{1}{4}$ -in aluminum diecast platter with 14-oz SBR mat; 6 $\frac{1}{2}$ -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; ± 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 20g); includes height-adjustable feet and detachable dustcover; 5 $\frac{1}{4}$ "H \times 19 $\frac{1}{4}$ "W \times 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 alu-

minum diecast platter; 7 $\frac{1}{2}$ -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 \times 18 $\frac{1}{4}$ "W \times 7 $\frac{1}{2}$ "D.....\$450

LT-20 Automatic Single Play

Two-speed (33 $\frac{1}{3}$ and 45 rpm) linear-tracking PLL quartz crystal direct-drive turntable with automatic tonearm. Features precision DC servomotor; 12" diecast aluminum platter; 6 $\frac{1}{2}$ " effective length straight, static balance tonearm; auto lead-in/auto return; free-access lead-in; auto repeat; free travel, quick response, stylus protection; speed selector switch; start, stop, lift/cue, repeat controls; light and rigid GFRP headshell for cartridges up to 18 grams. Wow and flutter 0.025% wrms; S/N 75 dB (DIN-B); effective tonearm mass 13.9 g (without cartridge); overhang 0 mm; offset angle 0°; tracking angle error max 0.1%; 16 $\frac{1}{4}$ " \times 5 $\frac{1}{2}$ " \times 16 $\frac{1}{4}$ ".....\$410

DP-EC8 Automatic Single Play

Two-speed electronically controlled fully automatic PLL quartz dc servomotor direct-drive turntable. Features 12" die-cast aluminum platter; balanced 8 $\frac{1}{2}$ " straight tonearm; photoelectric speed sensors; full stylus protection; pushbutton speed, repeat, start, stop, lift, cue controls; acoustic filter feet. Wow and flutter 0.025% wrms; S/N 75 dB (DIN B); overhang 14 mm; offset angle 22°; tracking error angle +3°/-1°; GFRP headshell 3.7 g; cartridge weight range 8.7-12.7 g with headshell; 16 $\frac{1}{4}$ " \times 5 $\frac{1}{2}$ " \times 14 $\frac{1}{4}$ ".....\$300

DP-6 Semiautomatic Single Play

Two-speed direct-drive quartz-controlled semiautomatic turntable with dc servomotor and straight, statically balanced 8 $\frac{1}{2}$ " tonearm and 12" aluminum die-cast platter. Wow and flutter 0.03% wrms; S/N 70 dB; overhang 11 mm; offset angle 23°; tracking error +3°/-1°; 3 g ABS headshell; cartridge weight range 7-11 g with headshell; 16 $\frac{1}{4}$ " \times 5 $\frac{1}{2}$ " \times 14 $\frac{1}{4}$ ".....\$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 $\frac{1}{2}$ revolution to full speed; ABS base; 6"H \times 18.5"W \times 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 strode and pitch control; has 4-pole synchronous motor; arm same as 5080; wow and flutter 0.06% wrms; rumble -65 dB (DIN B).....\$198

NIKKO

NP-800 Direct-Drive Turntable

Quartz-crystal-controlled direct-drive turntable



with tonearm. Features 33 $\frac{1}{3}$ - and 45-rpm speeds; dc servo motor; straight low-mass tubular tonearm; front-panel controls; direct-reading tracking-force gauge and calibrated antiskating control; viscous-damped cueing system; $\pm 4\%$ speed pitch control; illuminated strobe; hinged dust cover; matte-black base finish. Size 16.5"W \times 15"D \times 5.2"H.....\$220

NP-500 Belt-Drive Turntable

Belt-driven turntable with tonearm. Features 4-pole synchronous motor; straight low-mass tubular tonearm; direct-reading tracking-force gauge and calibrated antiskating control; viscous-damped cueing mechanism; dust cover; matte-black base finish. Size 16.5"W \times 15"D \times 5.2"H.....\$130

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 $\frac{1}{2}$ -in low-mass statically-balanced carbon-fiber straight angular-ply tubular tonearm with detachable ADC-type carbon-fiber headshell, antiskating, 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.....\$330

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).....\$250

CP-1027F Automatic Single Play

Direct drive automatic turntable with microcomputer controlled tonearm functions and soft-touch front-mounted controls. Features two motors; optical shutoff sensor; low-mass straight-line tonearm with detachable carbon-fibre headshell; high-density polymer chassis and insulated feet. Wow and flutter 0.028% wrms; rumble -72 dB (DIN B).....\$190

4

TURNTABLES

CP-1015A Semiautomatic Single-Play

Two-speed (33 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 ±2% pitch adjustment; wow and flutter 0.035% wrms; rumble -78 dB (DIN B); high-density polymer base with triple-insulated feet \$160

CP-1012F Automatic Single-Play

Belt-driven fully automatic turntable with straight-line low-mass tonearm with detachable carbon-fibre headshell. Features adjustable antiskate; LED speed indicator; triple-insulated feet; high density polymer cabinet. Wow and flutter 0.05% wrms; S/N 67 dB (DIN B). \$150

CP-1011F Automatic Single-Play

Belt-driven fully automatic turntable with straight-line low-mass tonearm with detachable carbon-fiber headshell. Features LED speed indicator; triple-insulated feet; high-density polymer cabinet. Wow and flutter 0.05% wrms; S/N 67 dB (DIN B) \$145

CP-1000A Semiautomatic Single-Play

Belt-driven semiautomatic turntable with straight-line low-mass tonearm with detachable headshell. Features adjustable antiskate; front-mounted controls; Wow and flutter 0.08% wrms; rumble 62 dB (DIN B) \$125

OPTONICA**RP-3300 Semiautomatic Single Play**

Direct-drive turntable featuring stroboscope with variable pitch control; straight low-mass tonearm; antiskating control; front-panel control design; mounted cartridge \$170

JC PENNEY**MCS 6701 Automatic Multiple Play**

Two-speed (33 1/3 and 45 rpm) direct-drive dc servo-controlled single/multi play turntable with automatic arm operation. Speed deviation 0.06%; speed control; strobe; s-shaped tonearm; front-mounted controls; cue/pause; antiskating control. Arm length 9.06"; wow and flutter 0.03% wrms; rumble -73 dB (A weighted); tracking error 3.5%; universal cartridge head; 45-rpm adaptor; dust cover; 17 1/2" W × 14 1/2" D × 7" H \$250

MCS 6603. Similar to MCS 6701, except semiautomatic single play \$190

MCS 6720 Quartz Lock Turntable

Two-speed (33 1/3 and 45 rpm) direct-drive turntable with brushless dc motor, quartz phase lock speed control, and single play, fully automatic operation. Features strobe; s-shaped tubular arm 9.06". Wow and flutter 0.02% wrms; -78 dB rumble; front-mounted controls; damped cue/pause; antiskate; adjustable stylus tracking force; universal cartridge head; removable dust cover; 16 3/4" W × 5 1/4" H ×

14 1/2" D \$240

MCS 6710 Semiautomatic Single-Multi/Play

Two-speed (33 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 ±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 1/2" H × 16 1/4" W × 14" D \$180

MCS 6503 Semiautomatic Single-Play

Two-speed (33 1/3 and 45 rpm) belt-drive dc servo-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; woodgrain vinyl cabinet; 5 1/4" H × 16 3/4" W × 13 3/4" D \$140

PHASE LINEAR**8000 Series Two Automatic Single-Play**

Two-speed (33 1/3 and 45 rpm) PLL quartz-locked direct-drive turntable with manual/automatic tonearm; PLL Hall-effect motor; 12.2-in aluminum die-cast 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 × 19.4" W × 17.5" D \$649

PIONEER**PL-L800 Automatic Single-Play**

Fully automatic quartz-PLL direct-drive tangential-tracking turntable. Features coreless dc-servo Stable Hanging Rotor™ Hall motor; direct-induction linear-motor-drive static-balanced



tangential-tracking low-mass Polymer Graphite™ straight-pipe tonearm; PC-4MC moving-coil (MC) cartridge; metal-like resin cabinet; dust cover. Speeds 33 1/3 and 45 rpm; wow and flutter 0.012% measured directly from FG output, 0.025% wrms; S/N ratio 78 dB DIN B; usable cartridge weight 3-8 g; 16 1/4" W × 15 1/4" D × 4 1/4" H; 18 lb 5 oz \$450

PL-8 Automatic Single-Play

Quartz-PLL fully automatic direct-drive turntable with static-balanced low-mass Polymer Graphite™ straight-pipe tonearm. Features coreless dc-servo Stable Hanging Rotor™ Hall motor; metal-like resin cabinet; dust cover; front-mounted controls. Speeds 33 1/3 and 45 rpm; wow and flutter 0.012% measured directly at FG output, 0.025% wrms; S/N ratio 78 dB DIN B; usable cartridge weight 3-8 g; 16 1/4" W × 15 1/4" D × 4 1/2" H; 13 lb 11 oz \$300

PL-7. Similar to PL-8; 16 1/4" W × 14 1/4" D × 4 1/4" H; 13 lb \$200

PL-4. Similar to PL-7 except wow and flutter 0.014% measured directly as FG output,

0.025% wrms. \$180

PL-4 Semiautomatic Single-Play

Auto-return quick-start direct-drive turntable with static-balanced low-mass Polymer Graphite™ straight-pipe tonearm. Features coreless dc-servo Stable Hanging Rotor™ Hall motor; metal-like resin cabinet; dust cover. Speeds 33 1/3 and 45 rpm; wow and flutter 0.014% measured directly at FG output, 0.025% wrms; S/N ratio 78 dB DIN B; usable cartridge weight 3-8 g; 16 1/4" W × 14 1/4" D × 4 1/4" H; 12 lb 13 oz \$160

PL-2. Similar to PL-4 except belt driven; dc servo motor; wow and flutter 0.05% wrms; S/N ratio 68 dB DIN B; 11 lb 4 oz \$130

REALISTIC**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

ROTEL**RP-1010 Fully Automatic Turntable**

Fully automatic quartz-lock PLL direct-drive stereo turntable with front-panel controls. Features full-automatic operation, including auto-start, auto-return, auto-repeat; statically balanced high-performance straight tonearm; carbon-fiber headshell and tonearm; strobe with speed controls; wood cabinet of insulating particle board; antiskating control; oil-damped cueing mechanism; spring-loaded insulator feet. Wow and flutter 0.025%; S/N ratio 63 dB IEC B, 73 dB DIN; stylus force range 0.5-3 g; 17 1/2" W × 14 1/2" D × 5 1/4" H; 19.8 lb \$250

RP-700 Fully Automatic Turntable

Direct-drive stereo turntable with front-panel controls and remote-control jack. Features dc servo motor; full automatic operation, including auto-return, auto-off, auto-repeat; strobe with speed controls; statically balanced low-mass high-performance straight tonearm; disc size collector; wood cabinet of insulating particle board; spring-loaded insulator feet. Wow and flutter 0.03%; S/N ratio 63 dB IEC-B, 73 dB DIN B; stylus force range 0.75-3 g; 17 1/2" W × 14 1/2" D × 5 1/4" H; 14.3 lb \$220

RP-550 Semiautomatic Turntable

Direct-drive semiautomatic turntable with front-panel controls, statically balanced straight tonearm and glass-fiber headshell. Features dc coreless servo motor; strobe system; electronic

speed controls for 33 and 45 rpm; semiautomatic operation that includes auto-return, auto-off; antiskating device; oil-damped cueing mechanism; die-cast aluminum platter with strobe markings; wood cabinet of insulating particle board; flat-surface acoustically damped mat; insulator feet; free-stop, detachable dust cover. Wow and flutter 0.03% wrms; S/N ratio 60 dB IEC B, 70 dB DIN B; stylus force range 0.75-3 g; $17\frac{1}{2}^{\prime\prime}$ W \times $14\frac{1}{8}^{\prime\prime}$ D \times $5\frac{1}{8}^{\prime\prime}$ H; 14.3 lb.....\$210

RP-400 Belt-Drive Turntable

Semiautomatic belt-driven turntable with auto-return and auto-off operation, statically balanced straight tonearm, and glass-fiber headshell. Features 4-pole hysteresis synchronous motor; oil-damped cueing mechanism; die-cast aluminum platter; molded cabinet of high-insulation characteristics; flat-surface acoustically damped turntable mat; spring-loaded insulator feet; free-stop, removable dust cover. Wow and flutter 0.05%; S/N ratio 55 dB IEC B, 65 dB DIN B, stylus force range 0.75-3 g; $17\frac{1}{2}^{\prime\prime}$ W \times $14\frac{1}{8}^{\prime\prime}$ D \times $5\frac{1}{8}^{\prime\prime}$ H; 10.6 lb.....\$120

SANSUI

XR-Q11 Automatic Single-Play

Two-speed (33 $\frac{1}{2}$, and 45 rpm) quartz PLL direct-drive turntable with automatic "Dyna Optimum Balanced" 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)..\$680

XR-Q9 Automatic Single-Play

Two-speed (33 $\frac{1}{2}$, 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.....\$525

FR-D55 Automatic Single-Play

Fully automatic 33 $\frac{1}{2}$, and 45-rpm computer-controlled FG-servo direct-drive turntable with straight Dyna Optimum Balanced tonearm. Features programmable track sequencing; 2.2-lb die-cast aluminum platter; strobe; $\pm 3\%$ speed pitch control; light-touch front-mounted controls; 20-pole 30-slot brushless dc drive motor; separate cueing motor. Wow and flutter 0.025% wrms; S/N ratio 72 dB DIN-B wtd. Comes with user-substitutable cartridge \$400

FR-D45 Automatic Single-Play

Fully automatic 33 $\frac{1}{2}$, and 45-rpm computer-controlled FG-servo direct-drive turntable with S-shaped Dyna Optimum Balanced tonearm. Features optical disc-size sensor; 2.2-lb die-cast aluminum platter; strobe; $\pm 3\%$ speed pitch control; light-touch front-mounted controls; 20-pole 30-slot brushless dc drive motor; separate cueing motor. Wow and flutter 0.025% wrms; S/N ratio 72 dB DIN-B wtd.....\$270

FR-D35 Semiautomatic Single-Play

Semiautomatic 33 $\frac{1}{2}$ - and 45-rpm direct-drive turntable with low-friction S-shaped tonearm. Features automatic return/shut-off; front-mounted controls; 20-pole 30-slot dc brushless motor; strobe; $\pm 3\%$ speed pitch control. Wow and flutter 0.025% wrms; S/N ratio 72 dB DIN-B wtd.....\$175

FR-D25 Semiautomatic Single-Play

PLL belt-driven semiautomatic 33 $\frac{1}{2}$ - and 45-rpm turntable with low-friction S-shaped

tonearm. Features automatic return/shut-off; dc motor; front-mounted controls; $\pm 3\%$ speed pitch control.....\$130

SANYO

PLUS Q60 Automatic Single-Play

Two-speed (33 $\frac{1}{2}$, 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); $6\frac{1}{2}^{\prime\prime}$ W \times $17\frac{1}{2}^{\prime\prime}$ W \times $14\frac{1}{8}^{\prime\prime}$ D.....\$450

PLUS Q50. Similar to PLUS Q60 without LED readouts\$200

PLUS Q40 Automatic Single-Play

Two-speed (33 $\frac{1}{2}$, 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); $6\frac{1}{2}^{\prime\prime}$ W \times $17\frac{1}{2}^{\prime\prime}$ W \times $14\frac{1}{8}^{\prime\prime}$ D.....\$150

TP1012A Semiautomatic Single-Play

Two speed (33 $\frac{1}{2}$, 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 counter-balanced arm; anti-skating; cueing control; reject control. Wow and flutter 0.04% wrms; rumble -70 dB; tracking error ± 1.5 degrees; tracking force range 0-3 g; $5\frac{1}{8}^{\prime\prime}$ H \times $17\frac{1}{2}^{\prime\prime}$ W \times $14\frac{1}{8}^{\prime\prime}$ D.....\$140

TP1012AC. Similar to TP1012A except includes unmounted Pickering magnetic stereo cartridge\$150

TXP-1 Semiautomatic Turntable

Dc-servo belt-driven semiautomatic single-play turntable with low-mass tonearm. Features self-



damping; viscous-damped up/down cueing; adjustable antiskating; full-size platter; automatic tonearm return/shut-off; adjustable stylus tracking force. Comes with hinged dust cover and cables.....\$90

TPX-1C. TPX-1 with cartridge\$100

TPX-1S. Similar to TPX-1 but includes variable speed control and strobe\$100

TPX-2. Fully automatic version of TPX-1. Features detachable headshell and massive die-cast

platter\$120

TPX-3. Similar to TPX-2 but with dc-servo direct drive and fully automatic operation. Features detachable headshell, automatic continuous repeat. Wow and flutter 0.05% wrms; rumble -67 dB\$150

H.H. SCOTT

PS-78 Semiautomatic Single-Play

Two speed (33 $\frac{1}{2}$, 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; $7\frac{1}{2}^{\prime\prime}$ H \times $17.25^{\prime\prime}$ W \times $13.75^{\prime\prime}$ D.....\$220

PS-68. Similar to PS-78 minus quartz-locked PLL reference system\$180

PS-48 Semiautomatic Single-Play

Two-speed (33 $\frac{1}{2}$, 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 $\pm 3\%$ 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; $5.5^{\prime\prime}$ H \times $17.25^{\prime\prime}$ W \times $13.75^{\prime\prime}$ D.....\$150

PS-28 Semiautomatic Single-Play

Two-speed (33 $\frac{1}{2}$, and 45 rpm) belt-drive turntable with auto return/shut-off. Features 4-pole ac synchronous motor; straight tonearm; 12" aluminum die-cast platter; viscous damped cueing; direct readout stylus pressure; antiskating; pushbutton speed change. Wow and flutter 0.07%; S/N 52 dB; $5\frac{1}{2}^{\prime\prime}$ H \times $17^{\prime\prime}$ W \times $13\frac{1}{2}^{\prime\prime}$ D.....\$135

SHERWOOD

ST-902 MTD Semiautomatic Single-Play

Single-play belt-driven 33 $\frac{1}{2}$, and 45 rpm turntable with low-mass straight tonearm and frequency generator, dc servo-controlled motor. Features auto return/cut; independent speed controls with $\pm 3\%$ trim adjustment range; illuminated strobe; easy-access up-front controls; heavy cast-aluminum platter; detachable lightweight headshell with ADC-type connector; damped cueing in both directions; double-isolated spring-loaded rubber feet; antiskate control; hinged removable dust cover. Wow and flutter 0.05% wrms; rumble 70 dB DIN B; effective tonearm length 225 mm; offset angle 24.5°; tracking error 3°/-1°; suitable cartridge weight 4-10 g; tracking-force adjustment range 4 g with 6-g cartridge; power consumption 3 W; $17\frac{1}{2}^{\prime\prime}$ W \times $14\frac{1}{8}^{\prime\prime}$ D \times $4\frac{1}{8}^{\prime\prime}$ H.....\$160

ST-901 MTD. Similar to ST-902 MTD but with synchronous motor; has no speed-trim controls or illuminated strobe; wow and flutter 0.075% wrms; rumble 66 dB DIN B.....\$130

SONY

PS-X800 Automatic Single-Play

Fully automatic quartz-locked direct-drive turntable with biotracer linear unimotion tonearm system. Features brushless slotless motor; magnedisc servo control; total-electronic tonearm tracking, damping, transport, and repeat control; automatic tonearm zero balance; 4-way disc detection system; electromagnetic braking; height-adjustable gel-filled feet. Wow

4

TURNTABLES

and flutter -0.025% wrms; A/N ratio -78 DIN B; 24 lb 4 oz.....\$850

PS-X600 Automatic Single-Play

Fully automatic quartz-locked direct-drive turntable with biotracer tonearm system. Features brushless slotless motor; magnedisc servo system; total-electronic tonearm tracking, damping, transport, and repeat control; manual tonearm zero-balance setting; 4-way disc detection system; electromagnetic braking; gel-filled feet. 18 lb 12 oz.....\$400

PS-X500 Manual Single-Play

Quartz-locked manually operated direct-drive turntable with biotracer tonearm system. Features brushless slotless motor; magnedisc servo control; total-electronic tonearm tracking and damping control; manual tonearm zero balance setting; 3-way disc detection system; electromagnetic braking; adjustable gel-filled feet. Wow and flutter -0.025% wrms; S/N ratio -78 dB; 18 lb 5 oz.....\$350

PS-X555 Automatic Single-Play

Quartz-locked automatic direct-drive turntable with straight low-mass tonearm. Features brushless slotless motor; magnedisc servo control; separate servo motor for tonearm operations; repeat function; 4-way disc detection system; electromagnetic braking; microprocessor-controlled operation; Wow and flutter -0.025% wrms; 17 lb 10 oz.....\$300

PS-LX5 Automatic Single-Play

Quartz-locked fully automatic direct-drive turntable with straight low-mass tonearm. Features



brushless slotless motor; magnedisc servo control; repeat function; 3-way disc detection system; record setting guides; electromagnetic braking. Wow and flutter -0.025%; S/N ratio -78 dB; 13 lb 14 oz.....\$220

PS-LX3 Automatic Single-Play

Servo-locked fully automatic direct-drive turntable with straight low-mass tonearm. Features brushless slotless motor; magnedisc servo control; repeat function; 3-way disc detection; record setting guides. Wow and flutter -0.025%; S/N ratio -75 dB; 13 lb 7 oz.....\$200

PS-LX4 Semiautomatic Single-Play

Quartz-locked semiautomatic direct-drive turntable with straight low-mass tonearm. Features brushless slotless motor; magnedisc servo control; record setting guides; electromagnetic braking. Wow and flutter -0.025%; S/N ratio -78 dB; 13 lb 4 oz.....\$190

PS-LX2 Semiautomatic Single-Play

Servo-locked semiautomatic direct-drive turntable with brushless slotless motor and straight low-mass tonearm. Features magnedisc servo control; record setting guides. Wow and flutter -0.025%; S/N ratio -95 dB; 12 lb 13 oz.....\$150

STANTON

8005 Semiautomatic Single-Play

Two-speed (33 1/3 and 45 rpm) slow-speed, syn-

chronous 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 × 14 1/4" W × 16 3/4" 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 3/4" H × 17 1/4" W × 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-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 3/4" H × 17 1/4" W × 15" D.....\$649

TECHNICS

Linear-Tracking Turntables

SL-15 Programmable Turntable

Linear-tracking turntable with automatic selection of program material, built-in optical infrared sensor for music selections, and straight-line tracking. Features dynamic balanced tonearm gimbal suspension; ac/12-volt dc operation; auto repeat; speed auto cueing; auto speed selection; auto stop/repeat/return; phase-locked direct drive assembly. Replacement cartridge/stylus EPC-P205CMK3/EPC-P205ED-3.....\$875

SL-10 Turntable

Record-size turntable with straight-line tracking, built-in switchable moving-coil pre-preamplifier, MC-310 moving-coil cartridge. Features ac/12-volt dc operation; gimbal suspension; auto repeat/stop/return/cueing; quartz-controlled di-

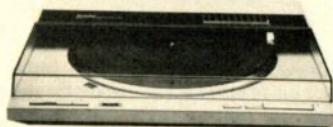
rect-drive motor system. Replacement stylus/cartridge EPS-310MC.....\$620

SL-7 Turntable

Record-size turntable with straight-line tracking. Features dynamic balanced tonearm/gimbal suspension; ac/12-volt dc operation; auto repeat; 2-speed auto cueing/auto return/auto stop; quartz-controlled phase locked direct-drive assembly. Replacement cartridge Ortofon TM-14 moving magnet.....\$400

SL-DL-1 Turntable

Fully automatic linear-tracking, direct drive turntable with full-size straight-line tracking. Features dynamic balanced tonearm/gimbal sus-



pension; Technics premounted phono cartridge; dc motor; ±10% variable pitch control and strobe; auto speed selection; front-panel controls. Replacement cartridge/stylus EPC-P23/EPS-23ES (elliptical) or EPS-23CS (conical).....\$360

Linear-Tracking Turntable Stand

SH-B10. 45° angle turntable stand for use on SL-7, SL-10, SL-15, and SL-DL-1 turntables \$32

Quartz Direct-Drive Turntables

SL-1500MKII Fully Automatic Turntable

Variable quartz-crystal-controlled direct-drive automatic single-play turntable for 33 1/3 and 45 rpm play. Features isolated dual suspension system; infrared control for automatic selection of record size and set-down; quick start-up and electronic braking; push-up stylus illuminator; ±6% pitch control and LED indicators; 4-line strobe calibration; gimbal suspension tonearm with variable height adjustment; double cueing control (front and tonearm base). Wow and flutter 0.025%

SL-1700MKII Semiautomatic Turntable

Variable quartz-crystal-controlled direct-drive semiautomatic turntable. Features 33 1/3 and 45 rpm operation; isolated dual suspension system; quick start-up and electronic braking; push-up stylus illuminator; ±6% pitch control with LED indicators; 4-line strobe calibration; gimbal suspension tonearm with variable height adjustment; front panel cueing control.....\$390

SL-1800MKII. Similar to SL-1700MKII except has cueing control at base of tonearm

\$340

SL-5350 Automatic Changer

Direct-drive automatic turntable/changer with quartz-locked phase control. Features MemoGram multidisc and/or repeat play; high-torque motor with full-cycle detection frequency generator; ±6% variable pitch control; feedback-suppressing double TNRC base; low-friction gimbal-suspension tonearm with 2-way damped cueing; front-panel controls; illuminated stroboscope; prism stylus illuminator; vibration-absorbing turntable mat.....\$340

SL-Q303 Direct-Drive Turntable

Fully automatic quartz direct-drive turntable. Features quartz-locked phase control, low-profile design; front-panel controls, including cueing; automatic size selection; soft-touch controls; continuous repeat switch.....\$240

SL-Q202. Similar to SL-Q303 except semiautomatic operation

\$220

Remote-Control Turntable

SL-D33 Turntable

Remote-controlled turntable with one-chip IC-controlled direct drive. Features fully automatic

operation; B-FG servo control; infrared sensor; auto disc size selector; microcomputer tonearm control; safeguard auto start; quick repeat play; integral rotor platter construction; auto tonearm set-down, return, turntable shut-off; 33 1/3- and 45-rpm operation with electronically variable pitch control; resonance-damping base material; audio isolator legs; low-friction, gimbal-suspended S-shaped tonearm; 2-way viscous-damped cueing; built-in stroboscope; front-panel controls; hinged removable dustcover.....\$290

Disco Turntable

SL-1200MKII Disco Turntable

Quartz-controlled, direct-drive disco-type manual turntable with tonearm. Features 33 1/3 and 45-rpm operation; ±8% quartz-locked variable slide-type pitch control; quick start-up/braking; pop-up stylus illuminator; gimbal-suspended tonearm with height adjustment; brushless dc motor; aluminum diecast cabinet; antiresonant visco-elastic main base. Wow and flutter 0.025%.....\$400

Turntables Without Tonearms

SP-10MKII Direct-Drive Turntable

Designed to operate at 33 1/3, 45, and 78 rpm, direct-drive turntable comes up to full speed in 0.25 second (25° of rotation) and brakes to full stop in 0.3 second (30° of rotation) at 33 1/3 rpm. Features quartz-controlled phase-locked servo circuit for ±0.002% speed stability. Start-up torque 6 kg/cm; wow and flutter 0.025% wrms; rumble 50 dB DIN A, 70 dB DIN B weighted.....\$1100

SP-15 Direct-Drive Turntable

Quartz-synthesized direct-drive turntable without tonearm. Features 33 1/3, 45-, 78-rpm speeds; full speed in 0.4 second (40° of rotation); brake to full stop in 0.4 second (40° of rotation) at 33 1/3 rpm; ±9.9% quartz-locked pitch control. Wow and flutter 0.025% wrms; rumble 56 dB DIN A, 78 dB DIN B weighted.....\$700

SP-25. Similar to SP-15 except no 78-rpm speed, ±6% pitch control.....\$400

Turntable Bases

SH-15B2. Base for SP-25 and SP-15 turntables. Has heavy acoustic rubber base with simulated wood.....\$280

SH-15B3. Similar to SH-15B2 except heavy acoustic rubber base only.....\$280

SH-10B3. Base for SP-10MKII.....\$520

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-126III C Semiautomatic 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 1/16" H × 19 1/2" W × 15 1/2" D.....\$800

TD-126III B. Same as TD-126C MKIII, but without arm.....\$645

TD-126III SME. Same as TD-126 III C but with 3009 Series III tonearm mounted and incorporated into shut-off system.....\$1175

TD-115 Semiautomatic Single-Play

Two-speed (33 1/3 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 antiskating device; wow and flutter 0.05%; rumble -48 dB unweighted, -68 dB weighted; 11 1/16" in platter; arm length 8 3/4" in; tonearm mass 7.5 g; 5 1/4" H × 17 1/2" W × 14 1/4" D.....\$435

TD-110. Same as TD-115C except no auto cue and shut-off\$350

TD160 Armless Turntable

Two-speed (33 1/3 and 45 rpm) belt-drive turntable without tonearm; 16-pole two-phase synchronous motor; 12-in dynamically-balanced non-ferrous diecast platter. Wow and flutter 0.04% (DIN 45507); rumble -65 dB (unweighted); 6 1/2" H × 17 1/2" W × 14 1/4" D.....\$395

TD105 Semiautomatic Single-Play

Two-speed (33 1/3 and 45 rpm) servo-controlled electronic belt-drive turntable with auto return tonearm; 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 (±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 × 17 1/2" W × 15 1/2" D.....\$335

TD-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 readout; front-mounted controls (accessible when dustcover is down). Wow and flutter 0.025%; S/N 75 dB (DIN B); acoustic-isolation feet; 4.9" H × 16.6" W × 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 × 16.6" W × 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 × 16.6" W × 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 × 16.6" W × 15" D.....\$140

SR-F102. Same as SR-F100 except includes magnetic cartridge.....\$160

SR-B150 Semiautomatic Single Play

Two-speed (33 1/3 and 45 rpm) belt-drive turntable with auto return/shutoff arm; straight statically balanced tonearm; synchronous motor; front-mounted controls; acoustic isolation feet. Wow and flutter 0.07%; S/N 60 dB (DIN B); 16.6" W × 5.1" H × 15" D.....\$115

SR-B152. Similar to SR-B150 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 automatic/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; ±1/8" 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 1/8" H × 19 1/8" W × 16 1/8" D.....\$900

PX-2 Automatic Single-Play

Linear-tracking logic-controlled automatic turntable with optimum-mass, minimum-resonance symmetrical straight tonearm. Features direct-drive coreless Hall-effect motor; full cartridge interchangeability; light-touch logic-controlled automatic operation; high-density feed-back resistant BMC base; tonearm height adjustment; 2-speed tonearm cueing; forged aluminum headshell; top-quality cable with gold-plated connectors; optoelectronic tracking-error sensor and coreless dc servo motor tonearm drive system. Wow and flutter 0.015% wrms; effective tonearm length 7 1/2"; suitable cartridge weight 5-11 g, 10-16 g with subweights; tracking-force range 0-2.5 g in 0.1-g increments; tangential tracking error ±0.15° max; arm height-adjustment range ±1/8"; cable capacitance 130 pF; S/N ratio 77 dB DIN B wtd; power consumption 24 W; 18 1/2" W × 16 1/8" D × 5 1/8" H; 26 lb 6 oz.....\$360

P-850 Automatic Single-Play

Direct-drive quartz-lock PLL turntable with dc brushless, coreless 8-pole motor, independent



tonearm motor to drive straight tubular tonearm. Features resin and 20% carbon-fiber headshell; microcomputer-controlled fully automatic operation; light-touch controls; front-panel operation; 2-speed tonearm cueing; replay muting; BMC vibration-damping base. Speeds 33 1/3, and 45 rpm; wow and flutter 0.015% wrms; effective tonearm length 8 1/4"; overhang 16 mm; offset angle 23°; tracking-force range 0-3 g in 0.1-g steps; effective tonearm mass without cartridge 11 g; horizontal tracking error

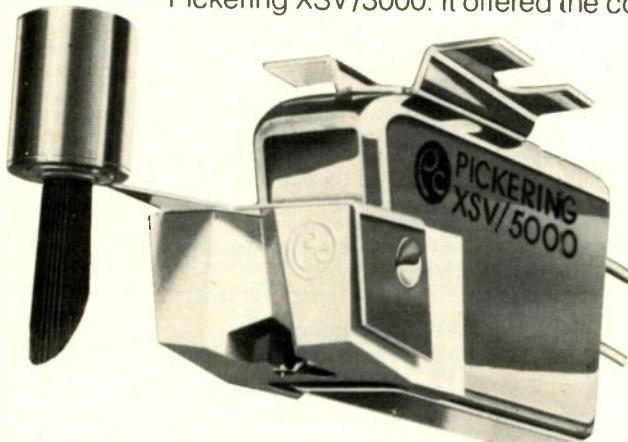
(continued on page 133.)

The best for both worlds

The culmination of 30 years of Audio Engineering leadership—the new Stereohedron®

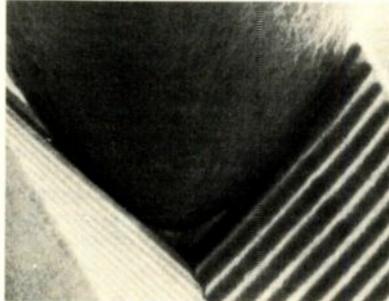
XSV/5000

One of the most dramatic developments of cartridge performance was the introduction of the Pickering XSV/3000. It offered the con-



sumer a first generation of cartridges, combining both high tracking ability and superb frequency response. It utilized a new concept in stylus design—Stereohedron, coupled with an exotic samarium cobalt moving magnet.

Now Pickering offers a top-of-the-line Stereohedron cartridge, the XSV/5000, combining features of both the XSV/3000 and the XSV/4000. It allows a frequency response out to 50,000 Hz.



The Exclusive Stereohedron Tip

The new XSV samarium cobalt magnet accounts for an extremely high output with the smallest effective tip mass. The Stereohedron tip design is the result of long research in extended frequency response for tracing of high frequency modulations. The patented Dustamatic® brush and stylus work hand in hand with the rest of the cartridge assembly to reproduce with superb fidelity all frequencies contained in today's recordings.

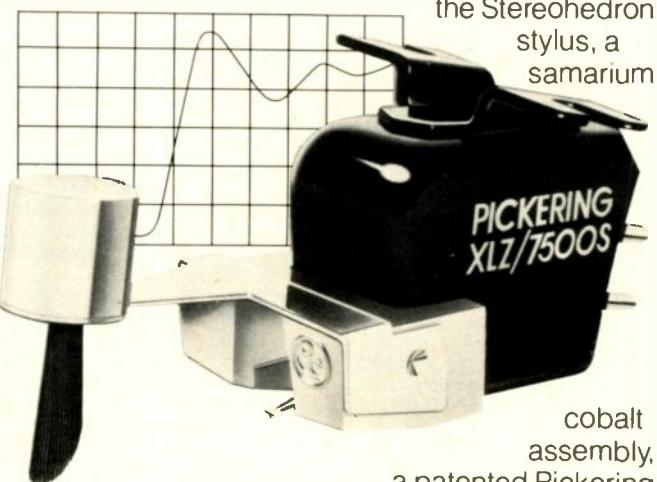
Pickering is proud to offer the XSV/5000 as the best effort yet in over 30 years of cartridge development.

A fresh new breakthrough in cartridge development designed specifically as an answer for the low impedance moving coil cartridge—

XLZ/7500S

The advantages of the XLZ/7500S are that it offers characteristics exceeding even the best of moving coil cartridges. Features such as an openness of sound and extremely fast risetime, less than 10μ seconds, to provide a new crispness in sound reproduction. At the same time, the XLZ/7500S provides these features without any of the disadvantages of ringing, undesirable spurious harmonics which are often characterizations of moving coil pickups.

The above advantages provide a new sound experience while utilizing the proven advantages of



the Stereohedron stylus, a samarium cobalt assembly, a patented Pickering

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PHONO CARTRIDGES (includes Tonearms)

ADC

Astrion Phono Cartridge

Handcrafted phono cartridge with 0.0015×0.00025 -in square nude modified elliptical diamond stylus tip and sapphire crystal cantilever; output 0.9 mV/cm/sec; frequency response $20\text{-}20,000$ Hz ± 1 dB; channel balance/separation 1 dB/ 30 dB at 1000 Hz; tracking force 1.2 g ± 0.2 g; load capacitance 300 pF; load resistance $47,000$ ohms; 5.7 g.....\$235

MC1.5 Phono Cartridge

Stereo moving-coil (MC) cartridge with 0.0002×0.0007 -in nude diamond stylus in titanium cantilever. Frequency response $20\text{-}20,000$ Hz ± 1.5 dB; stylus tip resonance 50 kHz; stylus force 1.5 ± 0.3 g; channel separation at $1/10/20$ kHz $25/18/15$ min; coil resistance 90 ohms/channel; sensitivity 0.2 mV/cm/s; load resistance 200 ohms or less resistive; weight 5 g.....\$235

ZLM Improved Phono Cartridge

Induced-magnet omni-pivotal phono cartridge; output 1 mV at 1 cm/sec; frequency response $10\text{-}20,000$ Hz ± 1 dB; channel separation 30 dB (1 kHz); tracking force $0.5\text{-}1.25$ g; 0.0002×0.0015 -in nude Alipic tapered cantilever stylus assembly; supplied with stylus brush, screwdriver, signed frequency response curve, and all mounting hardware.....\$150

XLM Mk III Improved Phono Cartridge

Induced-magnet omni-pivotal phono cartridge; output 1 mV at 1 cm/sec; frequency response $10\text{-}20,000$ Hz ± 1 dB; channel separation 28 dB (1 kHz); tracking force $0.3\text{-}1.2$ g; nude 0.2×0.7 mil elliptical tapered cantilever stylus assembly; supplied with stylus brush, screwdriver, signed specifications card, and all mounting hardware.....\$125

XLM Mk II Improved Phono Cartridge

Induced-magnet omni-pivotal phono cartridge; output 1.1 mV at 1 cm/sec; frequency response $15\text{-}24,000$ Hz ± 2 dB; separation 26 dB at 1000 Hz; tracking force range $0.3\text{-}1.2$ g; 0.3×0.7 -mil Diasa elliptical diamond tip stylus.....\$110

QLM 36 Mk III Improved Phono Cartridge

Induced-magnet omni-pivotal phono cartridge; output 1.1 mV at 1 cm/sec; frequency response $15\text{-}20,000$ Hz ± 2 dB; channel separation 26 dB (1 kHz); tracking force $0.3\text{-}1.2$ g; Diasa (nude) 0.3×0.7 mil straight cantilever stylus assembly; supplied with screwdriver and all mounting hardware.....\$90

QLM 34 Mk III Phono Cartridge

Induced-magnet phono cartridge; output 1.6 mV at 1 cm/sec; frequency response $20\text{-}20,000$ Hz ± 2 dB; channel separation 24 dB (1 kHz); tracking force $1.5\text{-}3$ g; bushed 0.3×0.7 mil elliptical straight cantilever stylus as-

sembly; supplied with all mounting hardware.....\$70

QLM 33 Mk III Phono Cartridge

Induced-magnet phono cartridge; output 1.2 mV at 1 cm/sec; frequency response $20\text{-}20,000$ Hz ± 2 dB; separation 24 dB at 1000 Hz; tracking force range $1\text{-}2$ g; 0.7 -mil spherical diamond-tip stylus.....\$60

QLM 32 Mk III Phono Cartridge

Induced-magnet phono cartridge; output 1.5 mV at 1 cm/sec; frequency response $20\text{-}18,000$ Hz ± 2 dB; channel separation 20 dB (1 kHz); tracking force $2\text{-}4$ g; bushed 0.4×0.7 mil elliptical straight cantilever stylus assembly; supplied with all mounting hardware.....\$55

QLM 30 Mk III Phono Cartridge

Induced-magnet phono cartridge; output 1.5 mV at 1 cm/sec; frequency response $20\text{-}18,000$ Hz ± 3 dB; channel separation 20 dB (1 kHz); tracking force $3\text{-}5$ g; bushed 0.7 mil spherical straight cantilever stylus assembly; supplied with all mounting hardware.....\$50

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. 0.0002×0.0007 -in rectangular nude elliptical diamond stylus mounted to tapered cantilever; frequency response $10\text{-}20,000$ Hz ± 1 dB; channel separation 28 dB at 1000 Hz; tracking force 1.2 ± 0.3 g; 12 g.....\$135

XLM II. 0.0003×0.0007 -in nude Diasa elliptical stylus mounted to hollow cantilever; frequency response $15\text{-}24,000$ Hz ± 2 dB; channel separation 26 dB at 1000 Hz; tracking force 1.2 ± 0.3 g; 12 g.....\$120

XLM I. 0.0004×0.0007 -in bushed elliptical diamond stylus mounted to hollow cantilever; frequency response $20\text{-}20,000$ Hz ± 2 dB; channel separation 24 dB at 1000 Hz; tracking force 1.5 ± 0.4 g; 12 g.....\$80

ST Series

Same as Integra Series above except cartridges are mounted in low-mass nonresonant carbon-fiber headshells for ADC type straight tonearms. Cartridges have same specifications, features as above.

XLM III.....\$135

XLM II.....\$120

XLM I.....\$80

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 $4\text{-}11$ g; damped cueing and adjustable antiskating.....\$150

ADCOM

XC-van den Hul Phono Cartridge

High-output moving-coil (MC) stereo phono cartridge with closest practical approximation of cutter yet devised. Features $3.5\text{-}\mu$ contact radius; vertical groove extended to 85μ ; thin-walled aluminum cantilever; crosscoil armature. Output 2.5 mV at 5 cm/sec; frequency response $20\text{-}20,000$ Hz ± 1 dB; channel balance within 1 dB; effective tip mass 0.27 mg; tracking force 1.8 g; square-wave rise time 10 msec; channel separation $200\text{-}10,000$ Hz, 20 dB $10\text{-}20$ kHz; 4.7 g.....\$400

LC-van den Hul. Similar to XC version except output 0.3 mV at 5 cm/sec.....\$400

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 $20\text{-}20,000$ Hz ± 1 dB; channel separation 28 dB at 1000 Hz; tracking force 1.8 g; effective tip mass 0.35 mg; weight 4.7 g.....\$260

XC-E. Same as XC-LT except has elliptical stylus.....\$220

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 $20\text{-}20,000$ Hz ± 1 dB; channel separation 28 dB at 1000 Hz; tracking force 1.8 g; 4.7 g.....\$220

LC-E. Same as LC-LT except has elliptical stylus.....\$180

HC-E Phono Cartridge

High-output moving-coil (MC) stereo phono cartridge with elliptical stylus. Features thin-wall aluminum cantilever; crosscoil armature. Output 2.5 mV at 5 cm/sec; frequency response $20\text{-}15,000$ Hz $+1.5/-1$ dB, $20\text{-}20,000$ Hz $+2.5/-1$ dB; channel balance within 1.5 dB; tracking force 2 g; effective tip mass 0.35 mg; 4.7 g.....\$130

AKG

P-25MD Phono Cartridge

Variable-reluctance, induced-magnet phono cartridge with patented diamond-technology transverse-suspension system and cylindrical magnet design. Features frequency-response/crosstalk curve; universal adjustment gauge; carbon-fiber stylus brush; screwdriver; antiresonance compound. Output 2.7 mV at 3.54 cm/sec rms; frequency response $10\text{-}28,000$ Hz; channel separation ± 1 dB; tracking-force range $0.75\text{-}1.25$ g; diamond "Analog-Six" stylus mass 0.015 mg; total cartridge weight 3.5 g.....\$250

P-15MD Phono Cartridge

Variable-reluctance, induced-magnet phono cartridge with patented diamond-technology

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PHONO CARTRIDGES

transverse-suspension system and cylindrical magnet. Features frequency-response/crosstalk curve; adjustment mirror; carbon-fiber stylus brush; screwdriver; antiresonance compound. Output 3.4 V rms at 3.54 cm/sec; frequency response 10-23,000 Hz; channel separation ± 1.5 dB; tracking force 1.0-1.5 g; elliptical diamond stylus; stylus mass 0.018 mg; total cartridge weight 3.5 g.....\$165

P-10ED Phono Cartridge

Variable-reluctance, induced-magnet phono cartridge with patented transverse suspension and cylindrical magnet. Features carbon-fiber stylus brush; screwdriver; antiresonance compound. Output 5.8 mV rms at 3.54 cm/sec; frequency response 20-20,000 Hz; channel separation ± 2 dB; tracking force 1.25-2.0 g; elliptical diamond stylus; stylus mass 0.25 mg; total cartridge weight 3.5 g.....\$115

ANDANTE by SUMIKO

FGV Phono Cartridge

Stereo phono cartridge with stylus configuration virtually identical to cutting stylus shape. Features extended line contact diamond stylus modified to prevent accidental recutting of grooves; nude diamond stylus mounted on aluminum-alloy tubular cantilever; micro-mass magnet; hand-wound coils. Output 5.0 mV; frequency range 10-35,000 Hz; channel separation 30 dB at 1 kHz; compliance 20×10^{-6} cm/dyne; tracking-force range 0.75-1.5 g; input impedance 47k ohms; weight 6 g.....\$200

E Phono Cartridge

Micro-mass magnetic phono cartridge with aluminum-alloy tubular cantilever and 0.2×0.8 -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 20×10^{-6} cm/dyne; tracking force range 1.1-1.9 g; input impedance 47,000 ohms; 6 g.....\$100
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 18×10^{-6} cm/dyne; tracking force range 1.2-2.5 g.....\$75
H. Similar to S except output 10 mV; frequency response 18-23,000 Hz; channel separation 27 dB at 1000 Hz; compliance 15×10^{-6} cm/dyne.....\$50

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 50×10^{-6} cm/dyne; tracking force 1.25 g ± 0.25 g; user replaceable stylus; 5.5 g.....\$268
MF100H. Premounted headshell.....\$290

MF200 Phono Cartridge

Moving-flux phono cartridge with Shibata-type parabolic 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 ± 0.25 g; user-replaceable stylus.....\$160
MF200H. Premounted headshell.....\$183

MF300 Phono Cartridge

Moving-flux phono cartridge with 0.3×0.7 -mil elliptical diamond stylus; output 42 mV at 5 cm/sec, 1 kHz; channel balance/separation 2 dB/20 dB at 1 kHz; compliance 35×10^{-6} cm/dyne; tracking force 1.75 g ± 0.25 g; user-replaceable stylus.....\$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 35×10^{-6} cm/dyne; tracking force 2 g ± 0.5 g; user-replaceable stylus.....\$80
MF400H. Premounted headshell.....\$103

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 0.2×0.7 -mil nude-mounted elliptical stylus on 0.12-mm square shank nude diamond.....\$300

AT35E Phono Cartridge

Stereo phono cartridge with user-replaceable Moving MicroCoil™ stylus assembly. Features low-mass design; 0.2×0.7 -mil nude-mounted BiRadial square-shank diamond stylus. Output 0.4 mV at 5 cm/sec; frequency range 15-50,000 Hz; channel balance/separation 0.5/30 dB at 1 kHz; tracking force 1.2-1.8 g.....\$250

AT152LP Phono Cartridge

Direct-plug-in stereo phono cartridge for SL series turntables. Features extremely stiff but



lightweight beryllium cantilever and nude-mounted square-shank Linear Contact™ diamond stylus.....\$225

AT31E Phono Cartridge

Stereo phono cartridge with user-replaceable Moving MicroCoil™ stylus assembly. Features square-shank 0.2×0.7 -mil biradial diamond stylus. Output 0.4 mV at 5 cm/sec; frequency range 15-50,000 Hz; channel balance/separation 1/29 dB at 1 kHz; tracking force 1.2-1.8 g.....\$175

AT132EP Phono Cartridge

Direct-plug-in stereo phono cartridge for SL series turntables. Features Vector-aligned™ dual-magnet system with tapered alloy cantilever; 0.2×0.7 -mil nude-mounted biradial diamond stylus.....\$135

AT30HE Phono Cartridge

Stereo phono cartridge with user-replaceable Moving MicroCoil™ stylus assembly. Features high output that eliminates need for transformer; 0.3×0.7 -mil nude-mounted diamond stylus. Output 2 mV; frequency range 15-30,000 Hz; separation 29 dB at 1 kHz; tracking-force 1.4-1.8 g.....\$135

AT55XE Phono Cartridge

Low-mass stereo phono cartridge that mounts in any standard headshell. Features 0.3×0.7 -mil nude-mounted diamond stylus. Output 3.5 mV at 5 cm/sec; frequency range 15-25,000 Hz; channel balance/separation 1/28 dB at 1 kHz; tracking force 1.2-1.8 g; weight 2.8 g.....\$125
AT57XE. Similar to AT55XE except integral

headshell design to fit all universal bayonet tonearms.....\$145
AT59XE. Similar to AT57XE except designed for straight tonearms.....\$145

"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 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; para-toroidal coil 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; 0.2×0.7 -mil BiRadial nude mounted diamond stylus; Vector-Aligned dual magnet; 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 1.1-1.8 g; Vector-Aligned dual magnet; 0.3×0.7 -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; 0.4×0.7 -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 0.2×0.7 -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-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)..... \$125

AT-S. Plug-in shell \$8
AT-L2. Optional hydraulic arm lift \$19

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

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 20-20,000 Hz ±1 dB; channel separation 30 dB at 1000 Hz; dynamic compliance 30 μm/mN; sensitivity 0.6 mV/47k ohms; tracking force 10 mN/1 g..... \$240

MMC 20EN. Aluminum cantilever with 5 x 17 μm 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 ±2 dB; channel separation 25 dB at 1000 Hz; dynamic compliance 25 μm/mN; sensitivity 0.6 mV/47k ohms; tracking force 12 mN/1.2g..... \$140

MMC 20E. Aluminum cantilever with 5 x 17 μm elliptical diamond stylus (0.5 mg effective tip mass); output 2.12 mV/47k ohms; frequency response 20-20,000 Hz ±2.5 dB; channel separation 20 dB at 1000 Hz; dynamic compliance 20 μm/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 ±3 dB..... \$55

SP-12 Phono Cartridge

Moving-iron type; output 1 mV/cm/sec; frequency response 15-25,000 Hz ±3 dB; has 0.2 x 0.7-mil elliptical stylus; tracking force 1 to 1½ g; 15-degree tracking angle; channel separation 25 dB at 1000 Hz; compliance 25 x 10⁻⁶ cm/dyne; replacement stylus 5430..... \$95

CONRAD-JOHNSON

Argent MC110 Moving-Coil Cartridge

Phono cartridge with elliptical diamond stylus. Output 0.2 mV; impedance 3 ohms; tracking angle 20°; channel balance within 1 dB at 1 kHz; channel separation 25 dB at 1 kHz; tracking force 2.0 ±0.2 g; weight 9 g..... \$385

DB SYSTEMS

DB-4A MC Pre-Preamplifier

Moving-coil cartridge pre-preamplifier utilizes low-noise cascode amplifiers and diode-protected inputs; 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 +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 μV/45 mV at high setting, 28 dB/80 μV/80 mV (medium setting), 22 dB/160 μV/90 mV (low setting); channel balance ±0.2 dB..... \$175

DECCA

MK VI Elliptical Cartridge

Stereo cartridge with elliptical stylus; tracking force 1 ½ 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 stylus; tracking force 2 g; 7 ½ 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 antiskating, 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 ¼-3 g; cable capacitance 120 μF/ch; cartridge weight range 5-12 g; pivot-to-stylus distance 9 ½-in; height

All styli are not created equal.



When you select a phono cartridge, the cost will be strongly influenced by which stylus design you choose. Least expensive is the UniRadial (spherical or conical). A simple design, simply made. Or you can opt for better high frequency tracing with a BiRadial (elliptical) tip. Its more complex shape takes longer to make so costs more. Best performance comes with a Line Contact (Shibata) tip whose shape permits the best high frequency tracing, yet with long, narrow bearing face reduces groove pressure for longer record and stylus life. Add a positively-indexed square shank, plus laser-beam alignment of micro-polished surfaces and you have the finest stylus design available today. Make your choice with Audio-Technica. You'll hear the difference.



audio·technica®

CIRCLE NO. 5 ON READER SERVICE CARD

5

PHONO CARTRIDGES

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 × 10⁻⁶ cm/dyne; weight 5.8 g \$565

DL-303 Moving-Coil Cartridge

Lightweight moving-coil phono cartridge with double-contracted aluminum tapered pipe cantilever and 0.1 × 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 × 10⁻⁶ cm/dyne; stylus force 1.2 ± 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 +0/-1 dB; dist. 0.05% from 20-20,000 Hz, 40 ohms; channel balance 0.5 dB; 70 mm H × 155 mm W × 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 × 10⁻⁶ cm/dyne; tracking force 1.5 - 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 × 10⁻⁶ cm/dyne; tracking force 2.5 ± 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 ± 1 dB; 50k-ohm load impedance; 38 mm H × 51 mm W × 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 × 10⁻⁶ cm/dyne; tracking force 1.8 ± 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 × 10⁻⁶ 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 10-10,000 Hz ± 1 dB; 65 mm H × 97 mm W × 155 mm

D \$160
AU-310. Similar to AU-320 except with 20-40,000 Hz ± 1 dB frequency response; 53 mm H × 51 mm W × 181 mm D \$95

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

HA-1000 Cartridge Head Amplifier

MC-type cartridge head amplifier; frequency response 8-600,000 Hz +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 × 125 mm W × 292 mm D (power supply 68 mm H × 107 mm W × 141 mm D) \$440

HA-500 Cartridge Head Amplifier

Frequency response 10 Hz-600 kHz +0/-1 dB; input noise level -157 dB/V rms; input

10X2 Moving-Coil Cartridge

Output 2.3 mV (3.45 cm/sec); channel balance ± 0.65 dB; channel separation 20 dB at 1000 Hz; 85-ohm dc coil resistance; 0.6-mil non-re-



placeable spherical stylus on aluminum cantilever; tracking force 2.5 g; weight 9.5 g; 1/2-in mounting center \$126

DV-505 Tonearm

Bi-axis inertia-controlled dynamic balance-type tonearm; arm has two pivots; dynamic damping system to eliminate arm resonance; electromagnetic 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°; overhang 15 mm; height adjustable over 38-70 mm; suitable cartridge weights 9-35 g; supplied with 1.2m cable \$700

EMPIRE

EDR.9 Phono Cartridge

Low-mass linear moving-iron/variable-reluctance phono cartridge with tapered aluminum cantilever and 0.3 × 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 × 10⁻⁶ cm/dyne; tracking force range 1-2 g; 5.2 g \$200



impedance 100 ohms; for MC type; IM and HD less than 0.008%; crosstalk less than 70 dB; 126 mm W × 71 mm H × 305 mm D \$250

DYNAVECTOR

DV/100K Moving-Coil Phono Cartridge

Moving-coil phono cartridge with 0.4 × 0.4 × 2.5-mm oblique cut nude diamond cantilever and 0.1 × 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 × 10⁻⁶ cm/dyne; tracking 24 × 10⁻⁶ cm/dyne; force 1.5 g +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 \$290

DV/20A Mark 2 Moving-Coil Cartridge

Moving-coil phono cartridge with 0.3 × 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 × 10⁻⁶ cm/dyne; tracking force 1.8 g; polyester-reinforced glass-fiber main frame; 5.3 g \$240

DV/20B Mark 2. Similar to DV/20A except has straight solid beryllium cantilever \$298

800UFR Phono Cartridge

Cartridge designed for those who need documented performance. Individual cartridge calibration traceable to National Bureau of Standards. Diamond stylus 0.2 × 0.7 biradial; frequency response 20-20,000 Hz ± 1 dB; output 3 mV at 3.54 cm/sec; channel balance 1.0 dB; channel separation 30 dB at 1 kHz; effective tip mass 0.18 mg; load/channel 300 pF/47k ohms; tracking range 0.75-1.5 g \$150

Dynamic Interface Series

600LAC Phono Cartridge

Low-mass three-magnet four-coil phono cartridge with two samarium-cobalt magnets, tapered vaporized 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 \pm 1.75 dB; channel/balance/separation \pm 1.0 dB/30 dB at 1000 Hz; input load 47,000 ohms; load capacitance 150 pF; dynamic compliance 20×10^{-6} cm/dyne; tracking force range 1-2 g; stylus replacement S600LAC black; 5.3 g.....\$175
500ID. Similar to 600LAC except uses 0.2×0.7 -mil bi-radial diamond stylus; frequency response 20-23,000 Hz \pm 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 \pm 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 0.2×0.7 -mil bi-radial 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 \pm 3 dB; channel balance/separation \pm 1.5 dB/27 dB at 1000 Hz; load resistance 47k ohms; load capacitance 150-400 pF; dynamic compliance 17×10^{-6} cm/dyne; tracking force range 1-2.5 g; replacement stylus S300ME smoked; 5.3 g.....\$70
200E. Similar to 300ME except uses 0.3×0.7 -mil elliptical stylus; output 5.5 mV at 3.54 cm/sec, 1000 Hz; channel separation 25 dB at 1000 Hz; dynamic compliance 14×10^{-6} 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 10×10^{-6} cm/dyne; tracking force range 2.5-5 g; stylus replacement S100S yellow.....\$40

BC200 Phono Cartridge

Cartridge designed for broadcast, studio, and disco applications. Features rugged aluminum-alloy cantilever with front tie-wire for extra strength in back-cueing applications. Frequency response 20-20,000 Hz \pm 1.2 dB; output 4.5 mV at 3.54 cm/sec, 1 kHz; channel balance 1 dB; separation 20 dB at 1 kHz; tracking range 1.5-3.5 g; nude diamond stylus.....\$70
BC100. Similar to BC200 but frequency response 20-20,000 Hz \pm 1.5 dB; titanium bonded stylus; tracking range 2.0-3.5 g.....\$45

ESPRIT by SONY

XL-88D Phono Cartridge

Stereo phono cartridge with laser-cut one-piece diamond stylus/cantilever design. Features figure-8 moving-coil (MC) voltage-generating system; air-core armature; high-efficiency samarium-cobalt magnet and parmedumpolepiece construction. Frequency range 10-50,000 Hz; channel separation better than 33 dB at 1 kHz; output 0.4 mV; compliance 20×10^{-6} cm/dyne; weight 6.9 g without headshell.....\$1000

GOLDRING by AUDIOSOURCE

G900/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 \pm 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.....\$240

G920/IGC Phono Cartridge

Low-mass moving-magnet phono cartridge with van den Hul fine-line diamond stylus. Output 6.5 mV rms \pm 2 dB at 1 kHz, 5 cm/sec; frequency response 20-20,000 Hz \pm 2 dB;



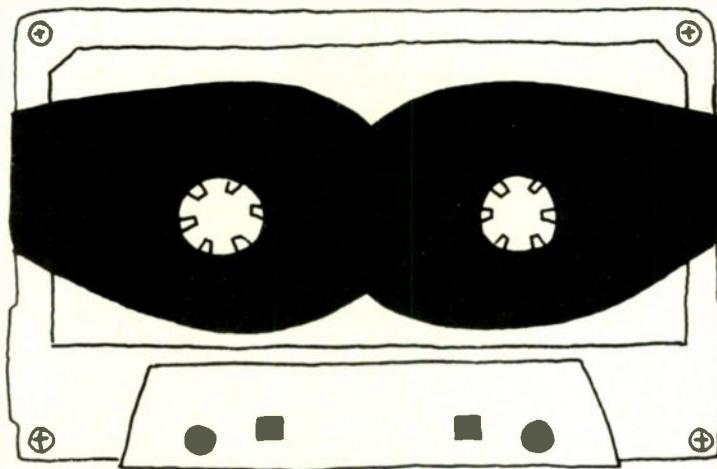
channel balance within 2 dB; channel separation 20 dB; equivalent tip mass 0.45 mg; vertical tracking angle 24°; static compliance 24 mm/N lateral, 16 mm/N vertical; load resistance 47k ohms; load capacitance 150-200 pF; weight 4.25 g.....\$125

G900E Phono Cartridge

Low-mass phono cartridge; output 6.5 mV at 5 cm/sec; frequency response 20-20,000 Hz \pm 3 dB; channel separation 20 dB at 1000 Hz; tracking force 1-3 g; 0.7 \times 0.3-mil elliptical stylus\$65

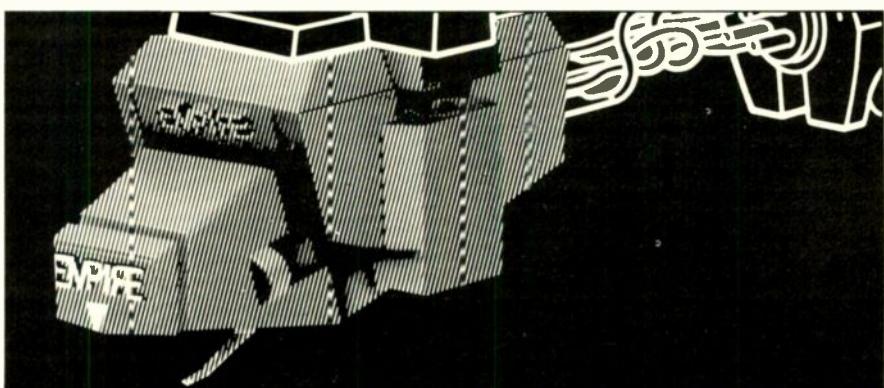
G950 Phono Cartridge

Stereo cartridge with spherical or elliptical diamond stylus. Features flip guard and mu-



IF YOU DON'T RECOGNIZE THE MUSIC ON YOUR TAPES, CHECK THE NAME ON YOUR CARTRIDGE.

The best cassette can't make up for a bad phono cartridge. So when you're taping from your records, start with a cartridge that's recognized for its high performance.



EMPIRE PHONO CARTRIDGES

THERE'S A NEW SOUND WAITING IN YOUR SYSTEM.
CIRCLE NO. 18 ON READER SERVICE CARD

5

PHONO CARTRIDGES

metal can. Frequency response 20-10,000 Hz ±2 dB; channel balance within 2 dB; channel separation 20 dB; sensitivity 6 mV rms; static compliance 20 mm/N lateral and vertical; equivalent tip mass 1.2 mg; vertical tracking angle 20°; load resistance 47k ohms; load capacitance 400-400 pF; vertical tracking force range 1.5-5.0 g spherical 1.0-3.0 g elliptical; weight 5 g.....\$40

GRACE by SUMIKO

F-11L Phono Cartridge

Moving-coil stereo cartridge with hand-wound precision coils. Features extremely low mass boronized cantilever with Advanced Luminal Trace stylus combining long contact line with reduced-mass Vital mounting. Compliance 20×10^{-6} cm/dyne; output 0.75 mV; vertical tracking force range 1.3-2.3 g; weight 8.6 g.....\$600

F-9E Phono Cartridge

Wide bandwidth stereo moving Samarium cobalt magnet cartridge with unique Omni Axial pivot for reduced longitudinal drag distortion. Features line-contact elliptical stylus shaped from reduced-mass Vital diamond for extremely low effective moving mass. Compliance 20×10^{-6} cm/dyne; output 3.5 mV; effective moving mass 0.35 mg; vertical tracking force 1.2 g; weight 6 g.....\$200
F-9L. Similar to F-9E except has Advanced Luminal Trace stylus with long, narrow contact line similar to original cutter diamond; Vital mount for total effective moving mass of 0.3 mg; 5.5-mV output. Recommended load capacitance 350 pF.....\$180

F-8L Phono Cartridge

Matrical-flux stereo moving micro-magnet with Advanced Luminal Trace stylus similar to that in F-9L. Vertical tracking force range 0.75-2.5 g; output 5 mV; effective tip mass 0.4 mg; weight 6.5 g.....\$125

Tonearms

G-1040 Tonearm

Moderate-mass high-rigidity S-shaped tonearm with detachable carbon-fiber universal headshell. Features precision orthogonal gimbal bearings; antiskating-force control; oil-damped cueing mechanism. Effective length 237 mm; cartridge weight range 3-14 g.....\$330

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.....\$300

707II Tonearm

Low-mass highly-rigid aluminum tubular straight tonearm with acrylic headshell; orthogonal gim-



bal 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.....\$225

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 × 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 × 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 × 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

IMS/NAGATRON

1400ER Universal-Mount Phono Cartridge

2-channel induced magnet cartridge with a 0.6 × 0.6-mil cross-grain-crystal natural diamond stylus and AL5052 Aluminum alloy cantilever with special permalloy micro tubular armature and permalloy case. Frequency response 20-22,000 Hz; 0.52-mg effective mass; 1.75-2.25 g tracking force range.....\$55
1440E. Similar to 1400ER except 0.4 × 0.7-mil elliptical cross-grain-crystal-natural diamond stylus, and 0.48 mg effective mass.....\$65
1466E. Similar to 1440E except has boron bonded stylus, and 0.45-mg effective mass; UT-58 alloy cantilever with permalloy microtubular armature; 1.5-2.0-g tracking force range.....\$80
1460IE. Similar to 1440E except cartridge in integrated headshell for low-mass tonearm.....\$90

JVC

MC-2E Phono Cartridge

Micro moving-coil cartridge with direct-coupled transducer and duralumin cantilever; 0.07 × 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 8×10^{-6} cm/dyne at 1000 Hz; optimum tracking force 1.5 ±0.15 g; frequency response 10-25,000 Hz; weight 8.7 g.....\$200

LINN by AUDIOPHILE SYSTEMS

Tonearms

Ittok LV-II Tonearm

Tonearm with 11½" overall length, 9" stylus-pivot distance, and damped cueing mechanism. Features radial ball bearings. Effective mass 12 g; total cable capacitance 100 pF; cartridge weight range 3-12 g.....\$650

Basik LV-V Tonearm

Tonearm with 11¼" overall length, 9" stylus-pivot distance, and damped cueing mechanism. Features radial ball bearings and comes with

magnetic cartridge. Total cable capacitance 100 pF; cartridge weight range 3-11 g.....\$149

Cartridge

Asak DC2100K Moving-Coil Cartridge

Stereo moving-coil cartridge with 0.2 × 0.8-mil modified elliptical stylus. Frequency response 10-50,000 Hz ±3 dB; channel separation 27 dB; output 0.2 mV; impedance 3.5 ohms; compliance 12×10^{-6} cm/dyne; tracking angle 20°; tracking force 1.5-1.9 g; weight 6 g.....\$450

LUSTRE by SUMIKO

GST-801 Tonearm

Moderate-mass tonearm with dual gimbal bearings. Features magnetic application of vertical tracking force; adjustable tracking angle during play via precision helicoid mechanism; high-rigidity stainless-steel antiresonant-material-filled tonearm tube; pure silver with Teflon coating internal wiring; magnesium headshell with silver wiring.....\$500

LUXMAN

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; 3½" H × 5¾" W × 12" D.....\$200

MAGNEPAN

Unitrac I Tonearm

Low-mass universal tracking tonearm with unipivot design and detachable carbon fiber headshell. Features thin-walled carbon fiber tube; vertical tracking angle adjustment; optimum arm geometry; gold connectors; low-capacitance cable. Pivot/stylus distance 9.5"; effective mass 8 g; bearing friction less than 5 mg; headshell offset 22.8"; cartridge weight range 7-12 g with auxiliary weight, 3-7 g without weight; stylus overhang 0.675"; max tracking error 1.77".....\$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); 2½" H × 5" W × 6" D.....\$130
PPA-1h. Same as PPA-1 except input impedance 10 ohms and gain 34 dB.....\$130

Tonearm

Straight tube, damped unipivot, medium-low mass tonearm with knurled locking screws and a built-in ball level. Features direct-reading stylus weight mechanism; direct-reading antiskating system; damped cueing; gold plated contacts. Effective length 240 mm; offset angle 22.9°; tracking force range 0-3 grams; weight range 4-12 grams; fixed headshell\$140

MICRO-ACOUSTICS

System II Series

630 Phono Cartridge

Ultra-low-mass direct-coupled electret phono cartridge with Micro-Point II diamond stylus, Micro-Fine beryllium cantilever, twin-pivot revolver, and ultra-lightweight carbon-fiber headshell. Designed for wide dynamic range and digital recordings. Features internal warp stabilizer damping system; microcircuit that automatically matches cartridge output to any existing cable capacitance and preamp input resistance; Vari-Balance™ system; independent damping and suspension systems; dynamic feedback damping system; 24-carat gold wiring. Output 3.5 mV; frequency response 5-20,000 Hz ± 1 dB (individual calibration curve supplied); separation 30 dB at 1 kHz; tracking-force range 0.7-1.4 g; rise time 4.5 μ sec; cable capacitance/load resistance 25-1500 pF/5k-100k ohms; cartridge weight 2.5-4 g, adjustable with Vari-Balance.....\$265
3002. Similar to 630 minus iridium-platinum axial damper and calibrated frequency response curve; frequency response 5-20,000 Hz ± 1.25 dB; rise time 5.0 μ sec.....\$170
382. Similar to 3002 except uses elliptical diamond stylus with standard beryllium cantilever; minus Vari-Balance; frequency response 5-20,000 Hz ± 1.5 dB; tracking force range 0.75-1.5 g; rise time 6 μ sec; cartridge weight 4 g.....\$140

309 Phono Cartridge

Direct-coupled electret stereo phono cartridge. Features electret transducer; universal-match microcircuit and dynamic feedback dampers; matching capability to any playback system. Response rise time 7 μ sec.....\$120

100-e Phono Cartridge

Stereo phono cartridge with direct-coupled electret transducers. Features independent suspension and damping systems; advanced microcircuit to insure compatibility with virtually any tonearm/preamplifier combination.....\$99

Status Phono Cartridges

Stereo phono cartridges featuring direct scanning.
S-1.....\$200
S-2.....\$150
S-3.....\$115

MICRO SEIKI by SAE

Phono Cartridges

LF-7 Phono Cartridge

Stereo moving-flux phono cartridge with user-replaceable elliptical stylus.....\$100

LC40W Phono Cartridge

Improved moving-coil stereo cartridge with 0.3 \times 0.7-mil elliptical stylus. Frequency response 10-45,000 Hz ± 1 dB; channel separation 30 dB at 1 kHz, 20 dB at 10 kHz; output 0.12 mV; recommended tracking force 1.7 g; recommended load resistance 3-100 ohms; weight 7.5 g.....\$225

LC80W Phono Cartridge

Improved moving-coil stereo cartridge with hyperelliptical stylus and individual response curve. Frequency response 10-45,000 Hz ± 1 dB; channel separation 30 dB at 1 kHz, 25 dB at 10 kHz; output 0.09 mV at 1 kHz; recommended tracking force 1.7 g; load resistance 3-100 ohms.....\$400

Tonearms

MAX 282 Tonearm

Transcription-length dynamically balanced tonearm with interchangeable tubes. Features solid-

brass bearing system, brass stabilizers; double-collet chuck system; gyroscopic mount; micro patented vertical and lateral bearings; fluid damping. Stylus-pivot distance 11.1"; tracking-force range 0.5-3 g; cartridge-weight range 4-33 g.....\$1000

MAX 505II Tonearm

S-shaped dynamically balanced tonearm with fluid damping, needle bearing, universal head shell, and dual lateral bearing. Stylus-pivot distance 9.3"; tracking-force range 0.5-3 g; cartridge-weight range 4-16 g.....\$375

CFX 1 Tonearm

Dynamically balanced carbon-fiber tonearm with needle vertical bearing, dual-radial lateral bearing, and decoupled counterweight. Stylus-pivot distance 9.3"; tracking-force range 0.5-3 g; cartridge-weight range 4-12 g.....\$225

CFX 2 Tonearm

Carbon-fiber tonearm with decoupled counterweight, needle vertical bearing, and dual-radial lateral tracking. Stylus-pivot distance 9"; tracking-force range 0.5-3 g; cartridge-weight range 4-12 g.....\$160

NAD (USA)

9000 Phono Cartridge

Moving-coil phono cartridge with 0.4 \times 0.7-mil elliptical stylus; output 1.8 mV at 5 cm/sec, 1000 Hz; frequency response 20-20,000 Hz ± 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 \times 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 ± 2 dB; channel balance/separation 1.5 dB/26 dB at 1000 Hz; tracking force 1.2 g ± 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 \times 0.0007-in Diassa elliptical stylus; frequency response 15-20,000 Hz ± 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 ± 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

AU2000 Ribbon Stereo Phono Cartridge

Fine-wire-ribbon stereo magnetic phono cartridge with 2.2 \times 3.6-mil modified delta stylus, diamond cantilever, and solid-gold wiring. Features constant dc magnetic flux; no internal coil; one-point support for stylus cantilever. Output 0.04 mV at 5 cm/sec, 1 kHz; frequency response 10-30,000 Hz minimum; channel balance/separation 1.0/2.5 dB at 1 kHz; output impedance 3 ohms at 1 kHz; nominal dynamic compliance 7×10^{-6} cm/dyne \$2000

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 1.0/2.5 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 9×10^{-6} cm/dyne; static compliance 20×10^{-6} cm/dyne.

360CEX. Hand-selected 0.3 \times 0.7 mil shaped elliptical nude diamond stylus with tapered carbon-fiber cantilever; effective mass 0.60 mg.....\$215

360CE. 0.3 \times 0.7 mil shaped elliptical nude diamond stylus; effective mass 0.6 mg.....\$185

350E. 0.3 \times 0.7 mil elliptical nude diamond stylus with aluminum UT-58 cantilever; effective mass 0.65 mg.....\$125

344DE. 0.3 \times 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 8×10^{-6} cm/dyne/100 Hz; weight 6 g.....\$95

340S. 0.5 mil spherical diamond stylus; aluminum UT-58 cantilever; effective mass 0.85 mg.....\$75

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\$70

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 8×10^{-6} cm/dyne at 1000 Hz; static compliance 20×10^{-6} cm/dyne.

220CE. 0.3 \times 0.7 mil shaped elliptical nude diamond stylus with tapered carbon-fiber cantilever; effective mass 0.60 mg.....\$150

210E. 0.3 \times 0.7 mil elliptical nude diamond stylus with aluminum UT-58 cantilever; effective mass, 0.65 mg.....\$110

244DE. 0.3 \times 0.7 mil elliptical, grain-oriented diamond stylus with UT-58 aluminum cantilever with special permalloy micro tubular armature; 0.68 mg effective mass.....\$85

200S. 0.5 mil spherical diamond stylus with aluminum UT-58 cantilever; mass 0.85 mg.....\$65

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 8×10^{-6} cm/dyne at 1000 Hz; static compliance 20×10^{-6} cm/dyne; aluminum cantilever.

195IE. 0.3 \times 0.7 mil elliptical diamond stylus; integral head shell\$75

185E. 0.3 \times 0.7 mil elliptical diamond stylus; universal mount\$65

175IS. 0.5 mil spherical diamond stylus; integral headshell\$65

165S. 0.5 mil spherical diamond stylus; universal mount\$55

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 ± 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\$425

(continued on next page.)

5

PHONO CARTRIDGES

NAKAMICHI

MC-1000 Reference Pickup

Moving-coil pickup with low-mass single-crystal 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 16×10^{-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 7×10^{-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 10-10,000 Hz +0/-0.5 dB, 22-dB gain setting; requires PS-100 Power Supply; $2\frac{1}{2}$ "H $\times 7\frac{1}{2}$ "W $\times 4$ "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 8.5×10^{-6} cm/dyne; load impedance 24 ohms $\pm 20\%$; tracking force 1.8 g ± 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 ± 1 dB; channel balance 1 dB; channel separation 25 dB at 1000 Hz; dynamic compliance 13 $\mu\text{m}/\text{mN}$ vertical and horizontal; load impedance 47,000 ohms/channel stereo; tracking force 1.5 g; 6- μm stylus tip radius; weight 7 g. \$695

MC20 MkII Phono Cartridge

Moving-coil pickup cartridge with 0.14×0.07 -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 ± 1 dB; channel balance/separation 1.5 dB/25 dB at 1000 Hz; dynamic compliance 12 $\mu\text{m}/\text{mN}$ at 10 Hz; 8 \times 40- μm stylus tip; tracking force

1.7 g; weight 7 g \$295

MC10 MkII Phono Cartridge

Moving-coil (MC) stereo phono cartridge with elliptical stylus. Vertical tracking angle 20°; output 0.09 mV at 1 kHz, 5 cm/sec; channel balance 1.5 dB at 1 kHz; frequency response 20-20,000 Hz ± 1 dB; recommended tracking force 1.5 g; internal impedance 3 ohms; FIM distortion less than 1%; weight 7 g \$195

Mk II Magnetic Cartridge

FF15XE MkII Phono Cartridge

Variable magnetic shunt phono cartridge with 8- μm 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 $\mu\text{m}/\text{mN}$ (horizontal and vertical); tracking force range 1.5-3 g; replacement stylus NF15XE Mk II; weight 5 g..... \$60

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 25×10^{-6} cm/dyne lateral, 28×10^{-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 25×10^{-6} cm/dyne vertical, 20×10^{-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 $\mu\text{m}/\text{mN}$ (vertical), 15 $\mu\text{m}/\text{mN}$ (lateral)..... \$100

Concord STD Phono Cartridge

Variable magnetic shunt stereo phono cartridge with elliptical diamond stylus. Output 5 mV; equivalent stylus tip mass 0.6 mg; channel separation 20 dB at 1 kHz; recommended tracking force 2.0 g; tracking-force range 1.7-2.3 g; vertical tracking angle 20°; weight 15 g \$90

Concord EC10 Phono Cartridge

Variable magnetic shunt stereo phono cartridge with elliptical diamond stylus. Output 5 mV; equivalent tip mass 0.7 mg; channel separation 20 dB at 1 kHz; recommended tracking force; tracking-force range 1.7-2.3 g; weight 15 g \$65

VMS Series

VMS 30 MkII Phono Cartridge

Variable magnetic shunt stereo phono cartridge with axially oriented fine-line diamond stylus. Output 5 mV at 1 kHz, 5 cm/sec; equivalent stylus tip mass 0.45 mg; channel separation 27 dB at 1 kHz; tracking-force range 1.0-1.6 g; recommended tracking force 1.3 g; vertical tracking angle 20°; weight 5 g \$175
VMS 20 E MkII. Similar to VMS 30 MkII except has elliptical diamond stylus; equivalent tip mass 0.5 mg; channel separation 25 dB; tracking-force range 0.8-1.2 g; recommended tracking force 1.0 g..... \$150
VMS 10 E MkII. Similar to VMS 20 E MkII except equivalent tip mass 0.65 mg; recommended tracking force 2.0 g; tracking-force range 1.7-2.3 g..... \$125
VMS 5 E MkII. Similar to VMS 10 E MkII except equivalent tip mass 0.8 mg; output 6 mV;

tracking-force range 1.5-3.0 g \$75

LM 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 $\mu\text{m}/\text{mN}$ (lateral); tracking force range 12-18 mN; weight 2.6 g. \$185
LM30H. Same as LM30 except designed for recent turntables with ultra-low-mass tonearms; frequency response 20-20,000 Hz; dynamic compliance 35 $\mu\text{m}/\text{mN}$; tracking force range 8-12 mN..... \$185

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 $\mu\text{m}/\text{mN}$; tracking force range 15-21 mN; weight 2.6 g \$150
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 $\mu\text{m}/\text{mN}$; tracking force range 8-12 mN..... \$150

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 $\mu\text{m}/\text{mN}$; tracking force range 15-21 mN; weight 2.6 g \$115
LM10. Similar to LM15 except designed for heavier tonearms in older models; output 5.0 mV at 5 cm/sec, 1000 Hz; chnnel separation 20 dB at 1000 Hz; dynamic compliance 15 $\mu\text{m}/\text{mN}$; tracking force range 17-23 mN..... \$85

Tonearm/Cartridge Combo

Ortofon/SME 30 H Cartridge/Arm

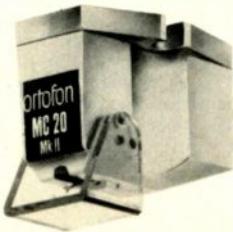
Coupling of Ortofon's Concorde 30 low-mass cartridge/headshell with SME's Series III and IIS low-mass tonearms; uses solid nude fine-line diamond stylus and specially-hardened aluminum alloy cantilever in S-shaped arm. Output 3 mV at 5 cm/sec, 1000 Hz; frequency response 20-20,000 Hz; channel balance/separation 1.5 dB/25 dB at 1000 Hz; dynamic compliance 35 $\mu\text{m}/\text{mN}$; tracking force range 0.8-1.2 g; tonearm resonant frequency 13 Hz; hum sensitivity 0.2 $\mu\text{V}/\text{A/m}$ at 50 Hz; weight 10.5 g \$275

T-30 Moving-Coil Step-Up Device

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 μsec ; 40mmH \times 80mmW \times 142mmD \$575

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); 40mmH x 80mmW x 140mmD \$235

OSAWA

MP-50 Phono Cartridge

Incorporates lightweight boron cantilever with ultra-lightweight triangle-tip super elliptical diamond stylus; 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 double boron cantilever with triangle-tip 0.4 x 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 9×10^{-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 x 0.7-mil precision-bonded elliptical diamond stylus; frequency response 20-20,000 Hz; channel separation 24 dB at 1000 Hz; dynamic compliance 8×10^{-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 x 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

OS-1001 Phono Cartridge

Induced-magnet phono cartridge with aluminum alloy cantilever and diamond (bonded) conical



0.5-mil stylus. Output 2.5 mV; frequency response 20-20,000 Hz +3 dB/-2 dB; tracking force 1.5 to 2.2 grams \$60
OS-2001. Similar to OS-1001 except uses diamond (bonded) elliptical 0.4 x 0.7-mil stylus; frequency response 18-22,000 Hz; tracking force 1.3 to 2.0 grams \$80
OS-3001. Similar to OS-1001 except uses diamond (nude) elliptical 0.4 x 0.7-mil stylus; frequency response 15 Hz to 30 kHz; tracking force 1.0 to 1.8 grams \$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 2.2-2.5 g \$60
Premounted in Osawa High Performance headshell \$80

Ultracraft AC-300 MKII 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

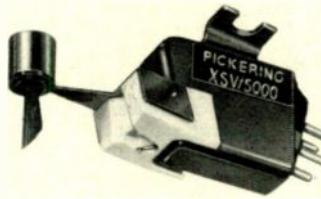
PICKERING

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 \$220

XSV/4000. Similar to XSV/5000 except frequency response 10-36,000 Hz; tracking force 1 g ±0.25 g; replacement stylus D4000 \$180

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 \$140

XV-15/1200E Phono Cartridge

Output 4.4 mV at 5.5 cm/sec; frequency response 10-30,000 Hz; 0.2 x 0.7 mil elliptical stylus; tracking force 0.5-1.25 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D1200 \$110

XV-15/750E Phono Cartridge

Output 4.4 mV at 5.5 cm/sec; frequency response 10-25,000 Hz; 0.3 x 0.7 mil elliptical stylus; tracking force 0.5-1.5 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D750 \$90

XV-15/625E Phono Cartridge

Output 4.4 mV at 5.5 cm/sec; frequency response 10-25,000 Hz; 0.3 x 0.7 mil elliptical diamond stylus; tracking force 0.75-1.5 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D625 \$80

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 x 0.7-mil elliptical stylus \$75

XV-15/400E Phono Cartridge

Output 5.5 mV at 5.5 cm/sec; frequency response 10-25,000 Hz; 0.4 x 0.7 mil elliptical stylus; tracking force 1-1.5 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D4000 \$70

XV-15/200E Phono Cartridge

Output 8 mV at 5.5 cm/sec; frequency response 10-25,000 Hz; 0.4 x 0.7 mil elliptical stylus; tracking force 2-4 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D200 \$65

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 \$55

XV-15/140E Phono Cartridge

Output 8 mV at 5.5 cm/sec; frequency response 10-20,000 Hz; 0.5 x 0.7 mil elliptical stylus; tracking force 3-5 g; channel separation 35 dB; has Dustamatic brush; replacement stylus D140 \$50

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 \$50

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 \$45

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 x 0.7 mil elliptical stylus; tracking force 1-2 g; channel separation 30 dB; features Dustamatic brush; replacement stylus DIV-AME \$65

V-15 Micro IV ATE Phono Cartridge

Output 6.5 mV at 5.5 cm/sec; frequency response 20-18,000 Hz; 0.4 x 0.7 mil elliptical stylus; tracking force 2-4 g; channel separation 28 dB; features Dustamatic brush; replacement stylus DIV-ATE \$50

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 \$45

V-15 Micro IV ACE Phono Cartridge

Output 8 mV at 5.5 cm/sec; frequency response 20-17,000 Hz; 0.5 x 0.7 mil elliptical stylus; tracking force 3-5 g; channel separation 26 dB; features Dustamatic brush; replacement stylus DIV-ACE \$40

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 \$40

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 \$35

4-Channel

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

(continued on next page.)

5

PHONO CARTRIDGES

PIONEER

Phono Cartridges

PC-70MC. Moving-coil (MC) phono cartridge	\$300
PC-4MC. Moving-coil phono cartridge	\$200
PC-50MC. Moving-coil phono cartridge	\$125
PC-145. Moving-magnet (MM) phono cartridge	\$45
PC-135. Moving-magnet phono cartridge	\$40

PREMIER by SUMIKO

LMX Phono Cartridge

Low-mass moving-coil stereo phono cartridge with hand-wound coils and rare-earth Samarium-cobalt magnetic structure. Features cutter analog FGVII diamond stylus with extremely long and narrow contact line for decreased high-frequency mistracking and reduced pickup of groove noise. Output 0.3 mV.....	\$200
LME. Similar to LMX except has 0.3 × 0.8 mil elliptical diamond stylus.....	\$149
LMS. Similar to LME except has 0.6-mil spherical stylus.....	\$109

SATIN by OSAWA

M-20 Phono Cartridge

Moving-coil phono cartridge with "double parallel damping" to eliminate high frequency peaks. Features aluminum alloy cantilever and 0.2 × 0.08-mil elliptical diamond stylus. Output 2.8 mV; frequency response 10-30,000 Hz +2 dB; tracking force 1.0-2.5 grams.....	\$400
M-21. Similar to M-20 except output 1.8 mV; frequency response 8-30,000 Hz; tracking force 1.0-2.0 grams.....	\$550
M-21B. Similar to M-20 except uses Berryllium (0.35%) cantilever; 0.15 × 3-mil line-contact stylus; 1.2-mV output; frequency response 8-45,000 Hz; tracking force 0.75-2.0 grams.....	\$850
M-21P. Similar to M-21B except has 0.1 × 3-mil line-contact stylus; 0.6-mV output; frequency response 8-50,000 Hz; tracking force 0.5-1.5 grams.....	\$1200

M-117G Phono Cartridge

Moving-coil phono cartridge with fixed-point pivot; output 3 mV; frequency response 20-25,000 Hz; compliance 12 × 10 ⁻⁶ 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

MV30HE Cartridge/Tonearm Carrier

Phono cartridge integrated with SME carrier designed exclusively for use with SME 3009 Series III and IIIS tonearms. Similar in performance to Shure's V15 Type IV cartridge...\$230

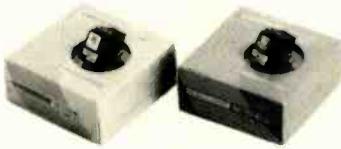
V15 Type IV Phono Cartridge

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.....\$191
V15 Type IV-G. Same as V15 Type IV except with 0.6-mil spherical tip stylus; replacement stylus VN4G.....\$184

V15LT Phono Cartridge

Made especially for use in the Technics SL15, SL10, and SL7 turntables; 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 1.25 grams; hyperelliptical stylus; replacement stylus VN45LT.....\$181

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 VN35HE.....\$133

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 0.75-1.5 g; hyperelliptical stylus; features viscous-damped dynamic stabilizer and side-guard stylus deflector; replacement stylus N97HE.....\$118

M97LT Phono Cartridge

Made especially for use in the Technics SL15, SL10, and SL7 turntables; 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 1.25 grams; hyperelliptical stylus; replacement stylus N97LT.....\$115

M97ED. Same as M97HE except with 0.2 × 0.7-mil biradial (elliptical) tip; replacement stylus N97ED.....\$110

M97GD. Same as M97HE except with 0.6-mil spherical tip; replacement stylus N97GD.....\$93

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.....\$93

M97B. Same as M97EJ except with 0.6-mil spherical tip stylus; replacement stylus N97B.....\$86

M97HE-AH Cartridge/Headshell

Integrated cartridge/headshell with 4-pin bayonet connector. Performance same as M97HE.....\$126

M97EJ-AH. Similar to M97HE-AH except performance same as M97EJ.....\$101

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 MASART™ tip and SIDE-GUARD stylus deflector; replacement stylus SS39ED.....\$116

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.....\$81

SC39B. Same as SC39EJ except with 0.7-mil spherical tip stylus; replacement stylus SS39B.....\$70

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.....\$114

M95ED. Same as M95HE except with biradial (elliptical) tip; replacement stylus N95ED.....\$98

M95EJ. Same as M95ED except channel separation 20 dB at 1 kHz; tracking force 1.5-3 g; replacement stylus N95EJ.....\$78

M75HE Type 2 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 at 1000 Hz; tracking force 0.75-1.5 gram; hyperelliptical stylus; replacement stylus N75HE Type 2.....\$92

M75ED Type 2. Similar to M75HE Type 2 except with 0.2 × 0.7-mil biradial (elliptical) stylus; replacement stylus N75ED Type 2.....\$84

M75G Type 2. Similar to M75HE except has 0.6 mil spherical stylus; replacement stylus N75G Type 2.....\$63

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.....\$84

M91GD. Same as M91ED but with 0.6 mil spherical stylus; replacement stylus N91GD \$72

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.....\$65

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.....\$57

M70B. Same as M70EJ but with 0.6 mil spherical stylus; replacement stylus N70B.....\$53

M75HE J Type 2 Phono Cartridge

Moving-magnet type. Output 5 mV at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; channel separation 20 dB (1 kHz); tracking force 1.25-2.5 g; hyperelliptical stylus; replacement stylus N75HE-J Type 2.....\$79

M75B Type 2. Similar to M75HE-J Type 2 except with a 0.6 mil spherical stylus; tracking force 1.5-3 grams; replacement stylus N75B T2.....\$57

M75EJ Type 2. Same as M75HE-J Type 2 but with

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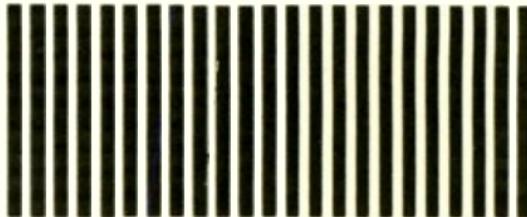
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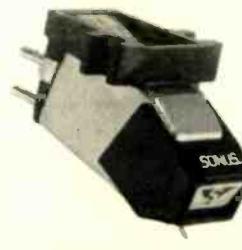
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with 0.4 × 0.7 mil biradial (elliptical) stylus; tracking force 1.5-3 gram; replacement stylus N75EJ Type 2.....	\$71
M55E Phono Cartridge	
Moving-magnet type; output 6.2 mV at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; tracking force 0.75-2 g; channel separation 20 dB (1 kHz); 0.2 × 0.7 mil biradial (elliptical) stylus, replacement stylus N55E	\$53
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	\$46
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.....	\$41
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	\$31
4-Channel	
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 ±10%, 50/60 Hz, 5 W.....	\$93
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.....	\$309
SME3009 Series III-S. Performance same as Series III without adjustable fluid damper (optional F.D. III-S \$44.50); simplified arm adjustments.....	\$252
SIGNET	
TK100LC Phono Cartridge	
Limited-edition phono cartridge with hollow tapered ruby cantilever and Straight Line-Contact™ stylus.....	\$1200
TKN100LC. Replacement stylus.....	\$500
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 × 0.7 mil nude mounted elliptical diamond stylus; beryllium cantilever; weight 4.8 g.....	\$325
MK112E. Same as MK111E except cartridge is integrated into own headshell with molded finger lift and adjustment for overhang dimension.....	\$300
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
TK9LCA Phono Cartridge	
Stereo phono cartridge with Linear Contact™ miniature nude diamond stylus and tapered	
beryllium cantilever. Frequency range 5-35,000 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.....	\$295
TKN9LCA. Replacement stylus.....	\$195
TK9EA Phono Cartridge	
Stereo phono cartridge with 0.2 × 0.7-mil elliptical square-shank nude diamond stylus and tapered beryllium cantilever. Frequency range 10-25,000 Hz; output 2.2 mV at 5 cm/sec; tracking force 0.8-1.6 g; channel balance/separation 0.5/35 dB	\$275
TKN9EA. Replacement stylus.....	\$175
TK7SU 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 1000 Hz; tracking force ¾-1½ g; nude square-shank miniature Shibata stylus; micromass tapered tube cantilever; replacement stylus TKN3 (\$100).....	\$200
TK7E Phono Cartridge	
Frequency response 5-30,000 Hz; output 2.7 mV at 5 cm/sec; channel balance/separation 0.75 dB/32 dB at 1000 Hz; tracking force ¾-1½ g; 0.2 × 0.7-mil nude square-shank miniature elliptical stylus; micro-mass tapered tube cantilever; replacement stylus TKN2 (\$75).....	\$180
TK5E. Phono Cartridge	
Frequency response 10-30,000 Hz; output 4.2 mV at 5 cm/sec; channel balance/separation 1.0/29 dB at 1000 Hz; tracking force ¾-1½ g; 0.2 × 0.7-mil nude square-shank elliptical stylus; tapered cantilever; replacement stylus TKN1 (\$50)	\$120
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 1-1½ g; 0.3 × 0.7 mil elliptical nude diamond stylus; thin-walled tube cantilever; replacement stylus TK22 (\$25).....	\$40
TK1E/H. Same as TK1E except mounted on universal aluminum headshell.....	\$48
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 stylus; tracking force adjust 1/10 g; increments 0.1-6 g; overhang adjust 5 mm; tracking error ±1½ max.; total arm and cable capacitance 80 pF; weight 9.5 g.....	\$400
XKSP1. Extra integral tonearm tube to XK50/S60	
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 ±1 dB, 20-40,000 Hz +2/-5 dB; compliance 50 cms/dyne × 10⁻⁶; channel balance/separation ±1 dB/30 dB at 1000 Hz; tracking force range 1-1.5 g; weight 5.5 g.....	\$250
Replacement stylus.....	\$125
Calibrated Dimension 5. Similar to Dimension 5 except hand calibrated	\$350
Replacement stylus.....	\$175
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 × 10⁻⁶; channel balance ±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 ¾-1½ g; weight 5.5 g.	
Blue Label. Modified-line-contact ellipsoid stylus for extended high-frequency response quadraphonic recordings; frequency response 10-20,000 Hz ±1.5 dB (replacement stylus \$87)	\$165
Red Label. Biradial (elliptical) stylus; response 10-20,000 Hz ±1.5 dB (replacement stylus \$82)	\$160
Green Label. Precision spherical stylus; response 10-20,000 Hz ±1.5 dB (replacement stylus \$77)	\$155
Bronze Phono Cartridge	
Moving-iron magnetic cartridge with nude diamond line-contact ellipsoid stylus operates in any modern lightweight tonearm; low mass high compliance balanced dynamic system; output at 1 kHz 0.8 mV ±2 dB; frequency response 10-20,000 Hz ±1.5 dB; compliance 42 cm/dyne × 10⁻⁶; tracking angle 20° nominal; channel balance ±2 dB; cartridge weight 5.5 grams; tracking force 1.0-1.5 grams; features uni-pivot suspension; channel separation 30 dB at 1 kHz; recommended load impedance 47k ohms/channel	\$130
Silver Phono Cartridges	
Similar in principal characteristics to Gold series; output 1.0 mV/cm/sec at 1000 Hz; compliance 40 cms/dyne × 10⁻⁶; nominal balance ±2 dB; channel separation 30 dB at 1000 Hz, 20 dB from 20-20,000 Hz; load impedance 47,000 ohms; tracking force range 1-1½ g; weight 5.5 g.	
Silver "P". Modified-line-contact ellipsoid stylus suitable for quadraphonic recordings; frequency response 10-20,000 Hz ±1.5 dB (replacement stylus \$50)	\$100
Silver "E". Biradial (elliptical) stylus (replacement stylus \$45); response 10-20,000 Hz ±1.5 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 ±1 dB, 10-20,000 Hz +2/-1 dB; channel balance/separation ±2 dB/25 dB at 1000 Hz; compliance 30 × 10⁻⁶ cm/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
Formula IV Tonearm	
Universal tonearm can accommodate cartridges weighing 3-10 grams, with compliance of 9.80 cm/dyne × 10⁻⁶. Features 4-gram arm tube with high rigidity integrated headshell to eliminate coupling resonance and adjustable bias compensation	\$265
SONY	
XL-55 Pro Phono Cartridge	



5

PHONO
CARTRIDGES

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 15×10^{-6} 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-44L Phono Cartridge

Figure 8 moving-coil phono cartridge with nude super elliptical diamond stylus attached directly to cantilever; frequency response extends to 40,000 Hz \$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 \$90

VL-5 Phono Cartridge

Moving-magnet cartridge with low-mass aluminum cantilever and low-distortion moving system \$50

STANTON

981 LZS Phono Cartridge

Low-impedance cartridge, fully calibrated for exact precision, with nude stereohedron diamond stylus. Comes with mounted "longhair" brush. Output 0.06 mV at 3.54 cm/sec; frequency response 10-50,000 Hz ±2 dB; channel separation 35 dB; weight 5.5 g \$250

981 HZS Phono Cartridge

High-impedance stereo cartridge with nude stereohedron diamond stylus, fully calibrated. Comes with mounted "longhair" brush. Output 0.8 mV at 3.54 cm/sec; frequency response 10-50,000 Hz ±2 dB; channel separation 35 dB at 1 kHz; weight 5.5 g \$250

980 HZS Phono Cartridge

High-impedance stereo cartridge with nude stereohedron diamond stylus and mounted "longhair" brush. Output 0.8 mV at 3.54 cm/sec; frequency response 10-50,000 Hz; tracking force 0.5-1.5 g; channel separation 35 dB at 1 kHz; weight 5.5 g \$225

980 LZS Phono Cartridge

Low-impedance phono cartridge with nude stereohedron stylus tip; output 0.06



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 D98S \$225

681 Triple-E Phono Cartridge

Output 0.7 mV/cm/sec ±2 dB; frequency response 10-12,000 Hz ±1.5 dB; channel bal-

ance/separation ±2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 0.75-1.5 g; 0.2 x 0.7 mil elliptical diamond stylus; weight 5.5 g with self-supporting (1 g) brush; replacement stylus D6800EEE, D 6810 for LP's, D6827 for 78's \$116

681 Triple-E S Type

Output 0.7 mV/cm/sec ±2 dB; frequency response 10-12,000 Hz ±0.5 dB; channel balance/separation ±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 \$138

680SL Disco Cartridge

Output 1.1 mV/cm/sec ±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 3-6 g with brush; weight 5.5 g \$109

680EL Disco Cartridge

Output 0.82 mV/cm/sec ±2 dB; frequency response 20-18,000 Hz; channel balance/separation ±2 dB/30 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 2.5 g; 0.4 x 0.7 mil elliptical diamond stylus; weight 5.5 g; replacement stylus D6800EL \$106

681EE Phono Cartridge

Output 0.82 mV/cm/sec ±2 dB; frequency response 10-10,000 Hz ±2 dB; channel balance/separation ±2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 0.75-1.5 g; 0.2 x 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 \$97

681SE Phono-Cartridge

Output 1 mV/cm/sec ±2 dB; frequency response 10-10,000 Hz ±0.5 dB; channel balance/separation ±2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 2-4 g; 0.4 x 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 \$97

681A Phono Cartridge

Output 1 mV/cm/sec ±2 dB; frequency response 10-10,000 Hz ±0.5 dB; channel balance/separation ±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 \$88

680EE Phono Cartridge

Output 0.82 mV/cm/sec ±2 dB; frequency response 20-20,000 Hz; channel balance/separation ±2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 0.75-1.5 g; 0.3 x 0.7 mil elliptical diamond stylus; weight 5.5 g with self-supporting (1 g) brush; replacement stylus D680 \$76

600EE Phono Cartridge

Output 1 mV/cm/sec ±2 dB; frequency response 20-20,000 Hz ±2.5 dB; channel balance/separation ±2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 1.2 g; 0.3 x 0.7 mil elliptical diamond stylus; weight 5 g; replacement stylus D6003EE, D6010 for LP's, D6027 for 78's \$62.50

600E. Similar to 600EE but frequency response

20-20,000 Hz ±2 dB; 0.4 x 0.7 mil elliptical diamond stylus; tracking force 1.5-3 g; replacement stylus D6004E \$56.50

600A. Similar to 600E but with 0.7 mil stylus; tracking force range 2-4 g; replacement D6071A \$51.50

500EE Phono Cartridge

Output 1 mV/cm/sec ±2 dB; frequency response 20-10,000 Hz ±1 dB; channel balance/separation ±2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 1-2 g; 0.3 x 0.7 mil elliptical diamond stylus; weight 5 g; replacement stylus D5100EE, D5110 for LP's, D5127 for 78's \$42.50

500AA Phono Cartridge

Output 1 mV/cm/sec ±2 dB; frequency response 20-10,000 Hz ±1 dB; channel balance/separation ±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 \$36.75

500E Phono Cartridge

Output 1 mV/cm/sec ±2 dB; frequency response 20-10,000 Hz ±1 dB; channel balance/separation ±2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 2-5 g; 0.4 x 0.7 mil elliptical diamond stylus; weight 5 g; replacement stylus D5100E, D5110 for LP's, D5127 for 78's \$36.75

500A Phono Cartridge

Output 1 mV/cm/sec ±2 dB; frequency response 20-10,000 Hz ±1 dB; channel balance/separation ±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 \$31.50

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) ±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 \$179

881E. Similar to 881S except has 0.0002 x 0.0007-in elliptical diamond stylus; frequency response 10-22,000 Hz (individually calibrated to 20,000 Hz); replacement stylus D81E. \$158

880S Phono Cartridge

Phono cartridge with nude stereohedron diamond stylus tip; output 0.9 mV/cm/sec; frequency response 10-25,000 Hz; channel separation 35 dB; tracking pressure 1 g ±0.25 g; load impedance/capacitance 47,000 ohms/275 pF; silver with white handle and white brush; 5.7 g; replacement stylus D80S \$147

880E. Similar to 880S except has 0.0002 x 0.0007-in elliptical diamond stylus; response 10-22,000 Hz; replacement stylus D80E. \$126

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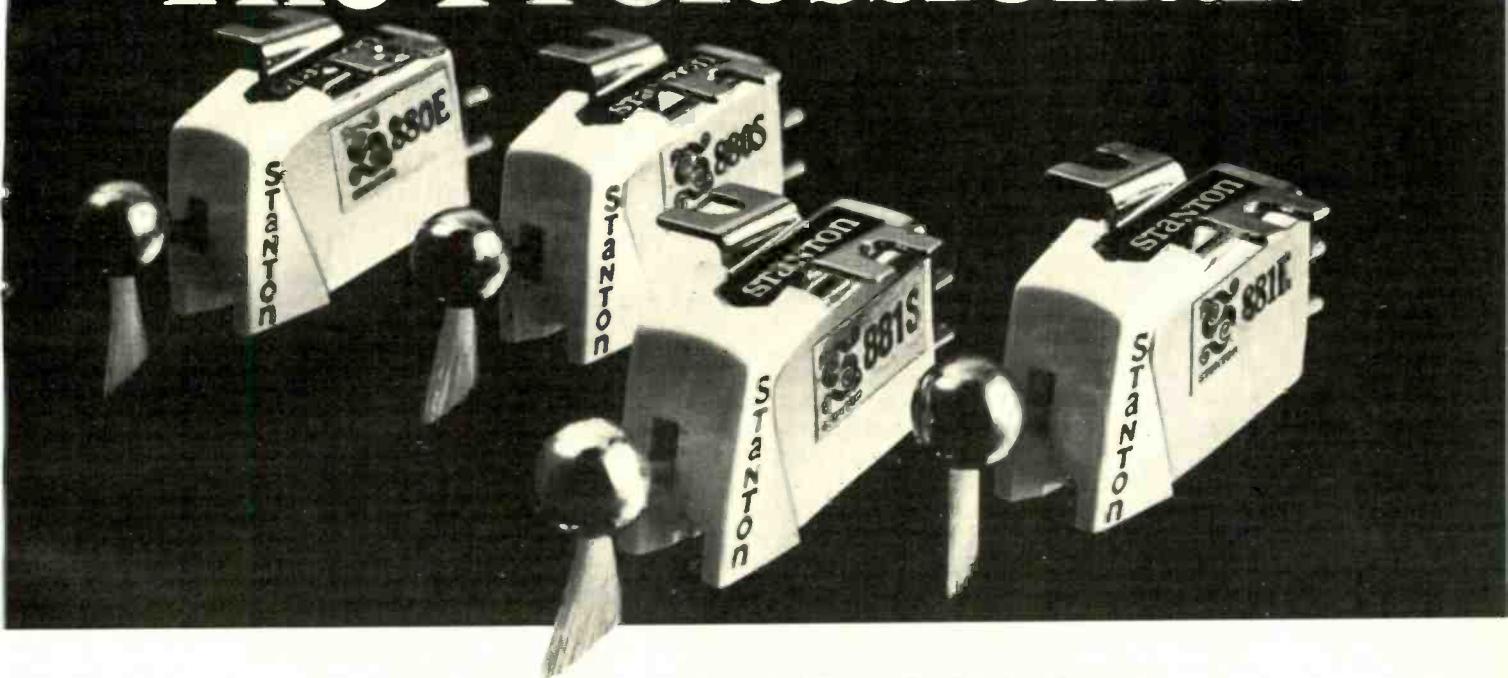
MDC-800 Tonearm

Totally handmade low-mass dynamic-balance tonearm with orthogonal gimbal bearings. Features rigidity guaranteed by pressure and temperature bonding; decoupled unique multiple

(continued on page 133)



The Professionals



A complete, new line of cartridges built to the exacting standards of professional requirements

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6

CASSETTE TAPE MACHINES

AIWA

AD-3600U Cassette Deck

Front-loading 3-head stereo cassette deck with dual capstans, Dolby HX and double Dolby noise-reduction system. Features tension-



stabilized capstans; feather-touch microprocessor-controlled transport; A.D.M.S. (Automatic De-Magnetizing System); micrograin processing capstan; illuminated mode indicators; LH-bias fine adjust control; automatic repeat; 3-color, 12-LED peak signal-level display; metal-tape capability. Wow and flutter 0.029% wrms $\times 460$

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/CrO₂ 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 (CrO₂), 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 \times 17.75" W \times 10.75" D.....\$450

AD-3500U Cassette Deck

Front-loading stereo cassette deck with 3-head, soft-touch dc-servo-motor-controlled transport and double-Dolby noise-reduction system. Features Dolby B and C circuits; A.D.M.S. (Automatic De-Magnetizing System); 3 heads (DX combination record/play and double-gap Sendust erase heads); cue and review; 3-color, 12-segment LED signal-level indicators; LH-bias fine adjust control. Wow and flutter 0.035% wrms; frequency response +2/-3 dB 25-13,000 Hz LH, to 15 kHz CrO₂, to 17 kHz metal tape; S/N ratio 65 dB with metal tape, Dolby B on, 75 dB with Dolby C on; 16%" W \times 9%" D \times 4%" H; 12.1 lb.....\$395

AD-3300 Cassette Deck

Stereo cassette deck with DX PB record head, Dolby C noise-reduction system, remaining tape time indicator, and new Auto Tune switch. Features a flywheel-assisted motorized system that automatically loads cassette into playing position; feather-touch IC-logic transport controls; MPX filter; slide-type input signal-level controls; 3-color optical peak signal level display; LH-bias fine adjust; rec mute; timer record/play standby; metal-tape capability. Wow and flutter 0.06% wrms; frequency response 30-16,000 Hz CrO₂, to 17 kHz metal tape; S/N ratio 74 dB with Dolby C on.....\$370

AD-3200 Cassette Deck

Front-loading, two-head stereo cassette deck with Dolby B and C noise-reduction systems, "micrograin" capstan, and DX record/playback head. Features Stable Tape Transport Mechanism; multicolored LED peak-signal-level displays; LH-bias fine control; soft-touch transport controls; cue and review; oil-damped cassette eject; LH/CrO₂/metal tape bias/EQ selector. Wow and flutter 0.038% wrms; frequency response 20-18,000 Hz metal, to 17 kHz CrO₂ tape; S/N ratio with metal tape Dolby B/C on 62/73 dB.....\$295

AD-3100 Cassette Deck

Stereo cassette deck with exclusive DX record/play tape head, "micro-grain" capstan, and Dolby B noise-reduction system. Features metal-tape capability; dc servo motors; 3-color optical peak signal-level display; soft-touch transport controls; 3-position tape bias/EQ selector; timer standby record/play; oil-damped cassette eject; MPX filter; 4%" H cabinet...\$240

AKAI

GX-F95 Deluxe Stereo Cassette Deck

Deck has concealed cassette well, Dolby noise-reduction circuitry, digital numeric tape counter (four digits). Features Super GX combo head; tape/source monitoring; computerized Bias Equalization and Sensitivity tuning (B.E.S.T.) for all tape formulations; built-in memory; full-logic, feather-touch-transport controls; 24-segment fluorescent two-color switchable peak/VU meters with peak hold; electronic tape/real time counter; record cancel; standby blinker. Wow and flutter less than 0.025% wrms; frequency response 20-21,000 Hz ± 3 dB with metal tape; S/N ratio better than 72 dB A weighted with metal tape and Dolby on; distortion less than 0.6% at 1 kHz, 0 VU with metal tape; 17.3" W \times 14.2" D \times 6.4" H; 29.7 lb.....\$1195

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 feathertouch logic solenoid tape function controls. Wow and flutter 0.03% wrms; frequency response 25-21,000 Hz ± 3 dB with metal tape; dist. 0.6% at 1000 Hz, 0 VU with metal tape; S/N 62 dB without Dolby, 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.....\$675

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.....\$550

GX-F60R Delux Bidirectional Deck

Front-loading bi-directional record/play metal-compatible stereo cassette deck with Dolby noise-reduction system and super GX twin-field records-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 ± 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.....\$570

GX-F35 Stereo Cassette Deck

Front-loading cassette deck with Instant Program Search System (IPSS), Dolby noise reduction, two-color, 16-segment fluorescent peak/VU meters with hold. Features twin field super GX head; 19 program selector; sensor full-logic feather-touch transport controls; four-position tape selector (includes metal); memory rewind/auto play; auto mute; timer record/play capability; remote-control plug. Wow and flutter less than 0.04% wrms; frequency response 30-19,000 Hz ± 3 dB with metal tape; S/N ratio better than 70 dB with metal tape, Dolby on; distortion less than 0.7% at 1 kHz, 0 VU; 17.3" W \times 11.2" D \times 4.6" H; 15.2 lb.....\$400

GX-F25. Similar to GX-F35 except has only 12-segment display; no IPSS; weighs 15.0 lb. \$340

CS-FII. Similar to GX-F25 except has only three-position tape selector (includes metal); no memory rewind/auto play, auto mute, or output volume control; frequency response 30-18,000 Hz.....\$400

CS-F33R Stereo Cassette Deck

Bi-directional record/play stereo cassette deck with Dolby noise-reduction system and metal-tape capability. Features quick-reverse operation; auto/manual record/play; automatic

6

CASSETTE
TAPE MACHINES

continuous play; 3-position tape selector; 2-motor full-logic feather-touch-control transport; 2-color LED bar-graph signal level meters; MPX filter; timer record/play capability. Wow and flutter 0.04% wrms; frequency response 30-18,000 Hz ±3 dB using metal tape; S/N ratio better than 60 dB with metal tape, peak level at 3% THD (improves up to 10 dB beyond 5



kHz with Dolby on); distortion less than 0.7% at 0 VU, 1 kHz; 17.3" W × 10.6" D × 4.6" H; 16.5 lb..... \$400

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 ±3 dB (metal); S/N 61 dB using metal tape without Dolby; 6.3" H × 11" W × 10.9" D..... \$535

UC-F3 Cassette Deck

Mini stereo cassette deck with Instant Program Location System (IPLS) and metal-tape capability. Features built-in Dolby noise-reduction system; feather-touch transport controls; 12-LED signal-level meters; rec mute; timer record/play capability; 11" W × 10.2" D × 4.1" H..... \$325

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 ±3 dB (metal tape); S/N 56 dB using metal tape without Dolby; 4.8" H × 11" W × 11.1" D \$320

BANG & OLUFSEN

Beocord 8002 Cassette Deck

Dual-microcomputer-controlled metal-compatible top-loading cassette deck with Dolby noise-reduction and Dolby HX (headroom extension) systems. Features combination record/play Sendust head; electronic time measurement of tape travel in all operating modes, shown on digital display; precise measurement accomplished by microcomputer calibration based on tape length, type, and thickness of magnetic coating (cal data erased on eject); automatic bias/EQ selection; auto search that locates any time-in-dexed selection; timer on/off record/playback function; auto memory returns to beginning of last recorded segment; automatic 4-second pause; dual 8-LED peak level displays; built-in electronic timer that displays time; automatic tape head demagnetization. Wow and flutter ±0.1% DIN; frequency response 20-20,000 Hz ±3 dB with chrome

tape; S/N ratio 68 dB meta, 65 dB chrome, 63 dB normal tape; input sensitivity/impedance 1 mV/10k ohms radio, 120 mV/1.2M ohms receiver, 0.1 mV/2.2k ohms mic; output level/impedance 800 mV/2k ohms receiver, 9 V/56 ohms headphones; 20%" W × 11%" D × 5%" H..... \$1100

Beocord 1900 Cassette Deck

Top-loading stereo cassette recorder with Dolby noise-reduction system and single Sendust record/play head. Features memory, Dolby, bias touch controls; sliding input signal-level control 2 illuminated peak-level VU meters; channel balance control; above-surface-mount tape function keys; 3-digit tape counter with memory. Fast-wind time 90 sec; wow and flutter ±0.15% (DIN); frequency response 30-15,000 Hz ±3 dB chrome tape; S/N ratio 64 dB with chrome tape, Dolby on; input sensitivity/impedance 2 mV/22k ohms (DIN), 0.175 mV/2.2k ohms mic; output level/impedance 700 mV/22k ohms; 15%" W × 9%" D × 3%" H..... \$525

Beocord 1600 Stereo Cassette Deck

Stereo cassette deck with peak-reading record indication after Dolby noise reduction and record boost. Features automatic demagnetization of tape head; Sendust record/playback head; balance control for record levels; auto selection between normal and chrome/chrome-equivalent tapes. Frequency response 30-16,000 Hz ±2.5 dB with built-in MPX filter; S/N ratio 68 dB; channel separation 35 dB..... \$550

Beocord 1700 Cassette Deck

Top-loading, metal-compatible cassette deck has built-in Dolby noise-reduction circuitry and Sendust record/play head. Features illuminated tape counter, fast acting peak LED "meters" that are active during both record and playback; memory and reset functions; automatic bias and alignment for all tape formulations plus separate manual selector for metal tapes. Tape head is automatically demagnetized after every recording to assure better signal-to-noise ratio and high-frequency response. Specifications: frequency response 30-16,000 Hz ±2.5 dB with MPX filter for all tape formulations; wow and flutter less than 0.15%; S/N 64 to 68 dB with Dolby on, 56 to 60 dB with Dolby off; channel separation better than 35 dB; fast-forward/rewind time 90 sec for C60 cassette; 16" W × 10%" D × 4" H; 11 lb..... \$495

BENJAMIN ELECTROPRODUCTS

Lenco RAC 10 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 × 252 mm × 210 mm..... \$850

DENON

DR-320 Cassette Deck

Front-loading, three-head cassette deck with Dolby noise-reduction system, PLL dc servo capstan and dc reel motors, and source/tape monitoring capability. Features F-alloy heads for record and playback, double-gap ferrite head for erase; dual VU meters; instantaneous-acting LED peak level indicators; normal/FeCr/CrO₂/metal tape selector; cue forward and reverse controls; separate input and output level controls; three-digit tape counter; timer record and play buttons; provisions for optional wired remote-control accessory. Frequency response 20-22,000 Hz metal, 25-20,000 Hz L.H. tape; S/N ratio more than 67 dB with Dolby; wow and flutter less than 0.04% wrms; fast wind time 85 sec (C-60); crosstalk -65 dB at 1 kHz; power consumption 25 W at 120 V ac,

60 Hz and 220 V ac, 50/60 Hz; 17.1" W × 11.8" D × 4.6" H; 15.4 lb..... \$425



DR-330. Same as DR-320 except has MPX filter, bias fine adjust control..... \$500

DR-240 Stereo Cassette Deck

Moderately priced stereo cassette deck with IC-controlled full-logic transport, separate capstan and reel-drive motors, and automatic cueing system that searches for silent spaces between recordings. Features nonslip reel-drive mechanism; Sendust-alloy record/play head; VU-type signal-level meters and 3-LED peak-reading array; normal/chrome-type/FeCr/metal tape selector; cue/review; switchable MPX filter; dc-servo-controlled capstan and dc-powered reel motors. Wow and flutter 0.04% wrms; frequency response ±3 dB 30-15,000 Hz normal, to 17 kHz CrO₂, to 19 kHz metal tape; S/N ratio greater than 65 dB with Dolby on; fast-wind time 90 sec (C-60); 17.1" W × 11.8" D × 4.6" H; 15.4 lb..... \$350

DUAL

C844 Cassette Deck

Front-loading, metal-compatible stereo cassette deck with Dolby B and C noise-reduction systems. Two-speed (1½" and 3½ ips), two-motor, dual-capstan closed-loop drive system. Sendust record/playback and ferrite erase heads; direct load and lock transport with photoelectric stop switches; automatic head shield; electronic fade/edit with playback monitoring; electronic 4-digit tape counter with memory set, stop, play; automatic music finder; auto spacing; auto repeat; 6-position tape selector; equalized VU meters; switchable MPX filter; provisions for optional extended timer and 12-command remote control. Specifications at 1½ ips: frequency response 20-19,500 Hz with ferrichrome tape (20-20,000 Hz with metal tape) ±3 dB; S/N 76 dB with ferrichrome tape and Dolby C on; harmonic distortion 0.04%; wow and flutter 0.03% wrms. Specifications at 3½ ips: frequency response 20-20,000 Hz with ferrichrome and metal tapes; S/N 78 dB with ferrichrome and metal tapes and Dolby C on; harmonic distortion 0.3%..... \$700

C830 Cassette Deck

Front-loading, metal-compatible stereo cassette deck with Dolby noise-reduction system, three heads with true monitoring capability, and direct load-and-lock transport system with four-point tape guide and automatic head protection. Logic-controlled inter-mode switching; phase-locked-loop dc servo motor with integral frequency generator; twin-belt drive system; electronic tape motion sensor/protection; switchable MPX filter; switchable limiter; two-way memory stop; mic/line mixing; headphone level controls; easy access to tape heads for cleaning. Frequency response 20-17,000 Hz ±3 dB with ferric (normal) tapes and 18,000 Hz with CrO₂ tapes; wow and flutter 0.035% wrms..... \$500

C828 Cassette Deck

Front-loading, metal-compatible slim-line stereo cassette deck with Dolby noise-reduction system, auto-reverse in record and playback with friction resistance 4/4-track M + X head and double-gap ferrite erase head, and two-motor, dual-capstan drive system. Direct load-and-lock tape transport with photoelectric stop switches; microcomputer-controlled drive function using

There's More to Noise Reduction Than Silence.

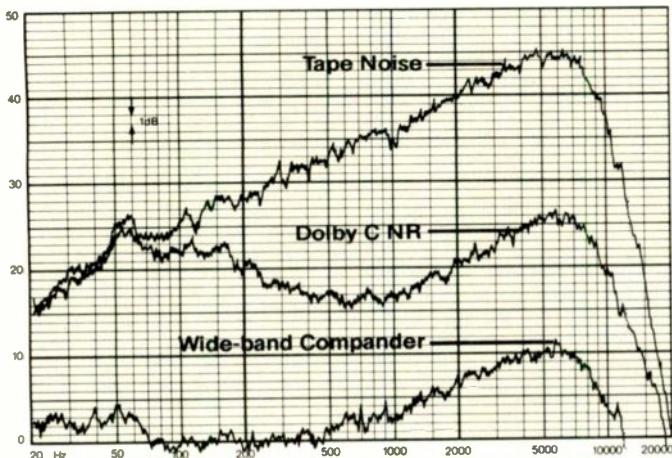


FIGURE 1: NOISE AND NOISE REDUCTION IN THE ABSENCE OF MUSIC.

Noise from biased cassette tape without noise reduction, the effects of Dolby C-type noise reduction, and the effects of a wide-band compander are shown in the absence of any signal.* Dolby C's noise reduction effect results in an overall perceived noise level below the ambient noise of many listening rooms, even at high playback levels. In the absence of signals, the conventional wide-band compander provides still more electrical noise reduction (but usually no more audible noise reduction).

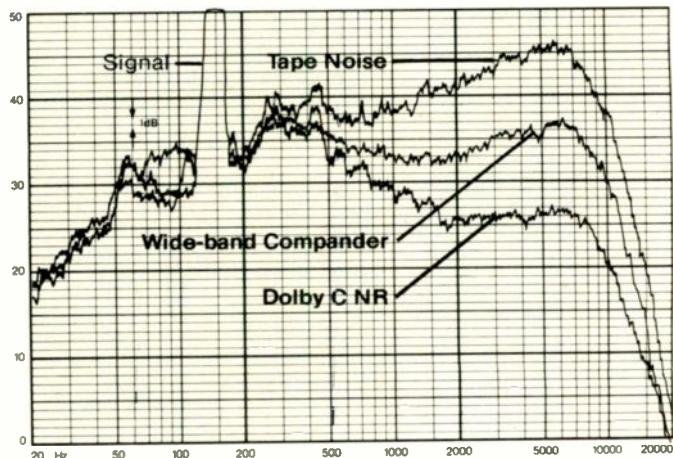


FIGURE 2: NOISE AND NOISE REDUCTION IN THE PRESENCE OF MUSIC.

In the presence of a signal (148 Hz, D below middle C on the piano, recorded at Dolby level), in all cases noise in the region of the signal will be masked by it. However, at higher frequencies, especially between 2 kHz and 10 kHz where tape hiss is clearly audible, Dolby noise reduction provides almost as much noise reduction as if the signal weren't there, while the compander allows the noise to increase to a considerably higher level than with Dolby C.

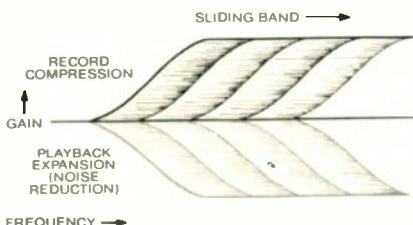


FIGURE 3: THE SLIDING BAND PRINCIPLE.

Dolby noise reduction operates over a band of frequencies which slides up out of the way of the music, resulting in noise reduction just where there is no musical signal to hide the noise. Thus the perceived noise level is consistently low at all times.

Providing noise reduction on silence is not all that difficult. For years, conventional wide-band companders have been available which dramatically reduce noise — between selections on a tape or record.

Yet it is just as important to have noise reduction when there is music playing. While music will mask noise part of the time, there are times when it won't. A bass drum note, for example, cannot hide tape hiss, no matter how loud the drum is: the ear can detect both simultaneously.

Conventional noise reduction systems effect noise reduction at the time of playback by turning down the volume when there is little or no music present. This turns down the noise as well. But they also turn the volume back up again on louder music, and so turn the noise back up at the same time. Thus the bass drum note is accompanied by a burst of tape hiss — hiss which is audible if there is no music at higher frequencies to hide it.

This problem is called noise modulation. It means that with a conventional NR system, the noise level is constantly shifting up and down with changes in the level of the music. But Dolby noise reduction, on the other hand, is free of noise modulation on virtually any type of music (Figures 1 and 2).

Unlike conventional companders, Dolby noise reduction operates over a constantly changing, or sliding band of frequencies (Figure 3). The band extends low enough to provide very effective noise reduction on silence. But in the presence of music, the band slides up just out of the way of the music, so that noise at frequencies above the music is almost as effectively reduced as if the music weren't there.

Both Dolby B-type and Dolby C-type noise reduction are sliding-band systems. With the standard B-type system, noise reduction begins at 500 Hz and increases to 10 dB at 4 kHz and above, while with the new C-type system, noise reduction begins at 100 Hz and increases to 20 dB at 1 kHz and above. With either system, the presence of music does not prevent noise reduction from occurring where it is still needed.

*70μs equalization, measured with a constant-bandwidth wave analyzer, and weighted (CCIR/ARM) to reflect the ear's sensitivity to noise and noise reduction effects.

Dolby®

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solenoids and logic system; automatic head shield; switchable MPX filter; four-position tape-type selector; one-control record-ready system; equalized peak-reading record level system; three digit tape counter with memory; illuminated cassette shaft. Frequency response ± 3 dB 30-19,000 Hz with metal tape; wow and flutter 0.04% wrms \$500
C822. Similar to C828 except no auto reverse..... \$375

C814 Cassette Deck

Front-loading slim-line stereo cassette deck with Dolby noise-reduction system, direct load-and-lock transport, electronic tape-motion sensor/protector. Friction-resistant M + X record/playback head with automatic protective head guard; soft-touch drive control with direct-mode switching; switchable MPX filter; automatic tape-type switchover; automatic input selector; peak-reading equalized meters with double scales..... \$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 opto-electronic 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; speed accuracy 15,000 times/sec. Wow and flutter 0.035% wrms; frequency response 20-20,000 Hz ± 3 dB (metal and CrO₂), 30-18,000 Hz ± 3 dB (ferric); S/N 72 dB (metal), 68 dB (CrO₂), and 66 dB (ferric); rack-mountable \$1550

FISHER**DD450 Cassette Deck**

Three-head, direct-drive cassette deck with separate tape-hub motor, Dolby noise-reduction system, full-logic IC solenoid transport controls. Dolby system is dual process. Features three Sendust heads; normal/CrO₂/FeCr/metal tape switching with separate fine bias control (concentric with motor pitch control); memory/auto-repeat function; fluorescent peak-level auto-hold meters. Wow and flutter 0.04% wrms; frequency response ± 3 dB 30-14,000 Hz normal, to 16 kHz CrO₂ and FeCr, and to 18 kHz metal tape; S/N 62 dB with Dolby on; THD at 0 VU 1.5%; fast-forward/rewind time 90 seconds for C-60 cassette; 17" W \times 10½" D \times 4" H; 15.5 lb \$580

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, CrO₂, 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 feathertouch controls with LEDs; timer standby with external audio timer. Wow and flutter 0.04%; frequency response 30-18,000 Hz ± 3 dB (metal tape); S/N 62 dB with Dolby; 5½" H \times 17½" W \times 9½" D ... \$399
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 ± 3 dB; optional RC 80 full-function remote control unit available; 4" H \times 17½" W \times 10½" D \$400

CR150 Cassette Deck

Studio Standard three head cassette deck with dual-process Dolby noise-reduction system, power-assisted soft-touch transport controls, and bias fine-adjustment control. Features MPX filter; independent left and right input level controls; output level control; normal/CrO₂/metal tape selectors; dual lighted VU meters plus peak-level LEDs; tape/source monitoring; MPX filter. Wow and flutter 0.06% wrms; frequency response ± 3 dB 30-14,000 Hz normal tape, to 16 kHz CrO₂ tape, to 18 kHz metal tape; S/N 62 dB, Dolby on; THD 1.5% at 0 VU; fast-forward/rewind time 90 sec. for C-60 cassette; 17½" W \times 10½" D \times 4" H; 13 lb \$350

DD350 Cassette Deck

Studio Standard direct-drive cassette deck with full-logic transport control, metal-tape compatibility, Dolby noise-reduction system, peak indicators, and timer standby. Features separate motor for tape reels; normal/CrO₂/metal bias/EQ switches; MX/ferrite heads; two large dual-scale VU meters; three peak-level LED indicators; three bias/EQ switches; timer standby switch; low-impedance mic inputs. Wow and flutter 0.04% wrms; frequency response ± 3 dB 40-14,000 Hz normal, to 15 kHz CrO₂ and metal tapes; S/N ratio 62 dB with Dolby on; THD 1.5% at 0 VU; fast-forward/rewind time 90 sec. for C-60 cassettes; 17½" W \times 10¾" D \times 4" H; 13 lb \$300

DD280 Stereo Cassette Deck

Studio Standard direct-drive stereo cassette deck with metal-tape capability and Dolby noise-reduction system. Features direct-drive servo capstan motor; MX/ferrite heads; full-logic solenoid transport controls; dual-scale illuminated VU meters with 3 peak-level LEDs; 3-position bias/EQ tape selector switch; LED function indicators; timer standby switch; low-impedance mic inputs. Wow and flutter 0.04% wrms; frequency response ± 3 dB 30-14,000 Hz normal, to 15 kHz CrO₂ and metal tapes; S/N ratio 62 dB off/on 54/62 dB; THD 1.5%; fast-wind time 90 sec (C-60); input sensitivity/impedance 1 mV/10k ohms mic, 100 mV/50k ohms line; output level at 0 VU/impedance 500 mV/5k ohms line; power consumption 37 W; black vinyl cabinet; 17½" W \times 10½" D \times 4" H; 13 lb \$300

CR130 Cassette Deck

Studio Standard cassette deck with power-assisted transport controls, Dolby noise-reduction system, and dc governor-controlled motor. Features Auto Search Function (ASF); normal/CrO₂/metal tape bias/EQ selectors; two large VU meters with three peak-level LEDs; hard Permalloy record/playback head; separate input level and single output level controls; full automatic stop. Wow and flutter 0.06% wrms; frequency response ± 3 dB 30-14,000 Hz normal tape, to 15 kHz CrO₂ and metal tape; S/N ratio 62 dB, Dolby on; THD 1.5% at 0 VU; fast-forward/rewind time 90 sec. with C-60



cassette; 17½" W \times 10½" D \times 4" H; 11 lb \$270
CR125. Similar to CR130 but less ASF, peak LEDs, output level control \$250

CR125 Stereo Cassette Deck

Studio Standard stereo cassette deck with metal-tape capability and Dolby noise-reduction system. Features front loading; illuminated VU meters; 3-position tape bias/EQ selector; low-impedance mic inputs; dc-governor-controlled motor; hard permalloy record/play head; full auto stop. Wow and flutter 0.06% wrms; frequency response ± 3 dB 30-14,000 Hz normal, to 15 kHz CrO₂ and metal tapes; S/N ratio Dolby off/on 52/62 dB; THD 1.5% at 0 VU; channel separation 40 dB; crosstalk 70 dB; fast-wind time 90 sec. (C-60); input sensitivity/impedance 1 mV/10k ohms mic, 100 mV/50k ohms line; output level at 0 VU/impedance 500 mV/5k ohms line; power consumption 14 W; gray cabinet; 17½" W \times 10½" D \times 4" H; 11 lb \$250

CR120 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 for normal, CrO₂, 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 ± 3 dB with metal; S/N 60 dB with Dolby; 4¾" H \times 15½" W \times 8" D \$200
CR 110. Similar to CR 120 minus auto search, peak-reading LEDs, and mic/line input selector \$170

Mini Cassette Decks**CRM300 Cassette Deck**

Direct-drive servo capstan motor cassette deck with Dolby noise-reduction system, full-logic solenoid transport controls, and auto repeat. Features normal/metal CrO₂ bias/EQ selectors; two large dual-scale VU meters; timer standby function. Wow and flutter 0.05% wrms; frequency response ± 3 dB 30-14,000 Hz normal tape, to 15,000 Hz CrO₂ and metal tape; S/N ratio 62 dB, Dolby on; THD 1.5% at 0 VU; 11½" W \times 8½" D \times 4" H; 11 lb \$350

CRM200 Cassette Deck

Deck offers power-assisted transport controls, Dolby noise-reduction system, and large dual-scale VU meters. Features normal/CrO₂/metal bias/EQ selectors; record mute switch; timer standby function; line/mic input selector; separate left and right record level controls. Wow and flutter 0.06% wrms; frequency response ± 3 dB 40-12,000 Hz normal tape, to 14 kHz CrO₂ tape, to 15 kHz metal tape; S/N 60 dB, Dolby on; THD 1.5% at 0 VU; 11½" W \times 9½" D \times 4½" H; 10 lb \$250

CR4013M Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, dc governor motor, metal-tape capability, and two super permalloy/ferrite heads. Features LED record level meters; manual/CrO₂ tape selector; separate left/right record level controls; auto stop. Wow and flutter 0.1% wrms; frequency response 40-12,000 Hz ± 3 dB with CrO₂; S/N 58 dB with Dolby; 5½" H \times 15½" W \times 9" D \$150
CR4012. Similar to CR4013 minus Dolby noise-

reduction system; S/N 48 dB \$120

Microcassette Deck

CRM500 Microcassette Deck

Microcassette deck with metal-tape capability, Dolby HX noise-reduction system, and LED bar-graph recording-level display and peak level readings. Features two coreless motors; Sendust heads; full-logic solenoid transport controls; metal/normal bias/EQ selectors; remote-control jack; timer standby function; dubbing control system (optional). Wow and flutter 0.07% wrms; frequency response ± 3 dB 40-8,000 Hz normal, to 12 kHz metal tape; S/N ratio 56 dB, Dolby on; THD 1.6% at 0 VU; $8\frac{1}{2}$ "W \times $10\frac{1}{2}$ "D \times $2\frac{1}{4}$ "H; 8 lb \$480

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, CrO₂, 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 ± 3 dB with FeCr and CrO₂ low-noise tapes; S/N 68 dB with Dolby, A weighted; mic impedance 600-50,000 ohms \$680

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, CrO₂, 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 ± 3 dB with FeCr and CrO₂ low-noise tape; S/N 67 dB with Dolby, A weighted; mic impedance 600-50,000 ohms \$480

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 ± 3 dB with FeCr and CrO₂ low-noise tape; S/N 65 dB with Dolby, A weighted; mic impedance 600-50,000 ohms \$350

hk100m Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system with switchable multiple 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 ± 3 dB with low-noise CrO₂; S/N 63 dB with Dolby, A weighted; mic impedance 600-50,000 ohms \$280

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, CrO₂, 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 ± 3 dB from 20-19,000 Hz (metal), to 18,000 Hz (CrO₂ 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 \$450

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 pushbutton test, four memory, tape formulation (CrO₂, 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 ± 3 dB in manual position using Hitachi tape 30-18,000 Hz (normal and FeCr), to 19,000 Hz (CrO₂, and metal), in test position of Automatic Tape Response System using other tapes 30-18,000 Hz (normal and FeCr), to 20,000 Hz (CrO₂, 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 $\frac{1}{2}$ "H \times 17 $\frac{1}{2}$ "W \times 12 $\frac{1}{2}$ "D \$1000

D-3300MB. 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; CrO₂ and metal tape frequency response 30-20,000 Hz ± 3 dB; input sensitivity/impedance 85 mV/100k ohms (line), 0.5 mV/300-5000 ohms (mic); 6.5"H \times 17"W \times 10"D \$750

D-1100M. Similar to D-3300M except wow and flutter 0.038%; frequency response ± 3 dB 20-19,000 Hz normal and FeCr, to 21 kHz CrO₂, and metal tapes (fixed), 30-19,000 Hz normal, to 17,000 Hz FeCr, to 18,000 Hz CrO₂, to 19,000 Hz metal tape (ATRS); 17 $\frac{1}{2}$ "W \times 10 $\frac{1}{2}$ "D \times 5 $\frac{1}{2}$ "H; 16.5 lb \$600



D-E95 Stereo Cassette Deck

Microcomputer-controlled cassette deck with metal-tape capability, close-gap metal record/play head, recording calibration and bias adjustment, auto and memory rewind play/stop, and dual 16-LED peak-hold meter displays. Features double Dolby noise-reduction system; switchable peak-hold function; dual-capstan transport with feather-touch controls; auto rec mute. Wow and flutter 0.038% wrms; frequency response ± 3 dB 30-17,000 Hz normal and FeCr, to 18 kHz CrO₂, to 19 kHz metal tape; S/N ratio 69 dB Dolby on, 61 dB Dolby off; 17 $\frac{1}{2}$ "W \times 10 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "H; 13 lb 3 oz \$350

D-E55. Similar to D-E95 except SL permalloy record/play head and double-gap ferrite erase head; no recording calibration and bias adjustment; no auto and memory rewind play/stop function; includes auto rec-mute and dual 12-LED peak meters; no peak-hold, remote-control, timer-capability features; wow and flutter 0.04% wrms; frequency response ± 3 dB 30-15,000 Hz normal and FeCr, to 16 kHz CrO₂, to 17 kHz metal tape; S/N ratio 59 dB Dolby off, 67 dB Dolby on; 4 $\frac{1}{2}$ "H; 10 lb 2 oz \$260

D-E25 Stereo Cassette Deck

Stereo cassette deck with metal-tape capability, soft-touch transport controls, rec mute. Features metal/CrO₂/normal tape selector; dual 6-LED record-level indicators; independent left-and right-channel record level controls; full auto-stop; play and record LED indicators. Wow and flutter 0.05% wrms; frequency response ± 3 dB 30-14,000 Hz normal, to 15 kHz CrO₂, to 16 kHz metal tape; S/N ratio 58 dB Dolby off, 66 dB Dolby on; 17 $\frac{1}{2}$ "W \times 10 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "H; 6 lb 3 oz \$180

D-E10 Stereo Cassette Deck

Stereo cassette deck with metal-tape compatibility, Dolby noise-reduction system, full auto-stop. Features dual VU meters; front-loading, air-damped cassette door; record level and balance controls. Wow and flutter 0.07% wrms; frequency response ± 3 dB 30-14,000 Hz normal, to 15 kHz CrO₂, to 16 kHz metal tape; S/N ratio 57 dB Dolby off, 64 dB Dolby on; 17 $\frac{1}{2}$ "W \times 8"D \times 4 $\frac{1}{2}$ "H; 7 lb 1 oz. \$150

JVC

DD-9 Cassette Deck

Front-loading stereo cassette deck with ANRS, Dolby B, and Dolby C noise-reduction systems.



Features B.E.S.T. tuning system that automatically sets up bias, equalization, and sensitivity for any tape to achieve a flat response; pulse-servo direct-drive transport with feather touch controls; 3 heads (X-cut Sen-Alloy play/record and 2-gap SA erase); 2-color fluorescent displays with peak-hold function; memory stop/ play; auto rewind/play; combined output/phones control; electronic input volume control with up/down buttons; digital tape index counter/clock/stopwatch display; rec mute; lockable timer standby function; optional R50-E remote control. Wow and flutter 0.019% wrms; 17 $\frac{1}{2}$ "W \times 12 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "H \$900

DD-7. Similar to DD-9 except no B.E.S.T. system, electronic volume control, digital display ... \$600

DD-5. Similar to DD-7 except 2-head design. Wow and flutter 0.021%; SA Sen-Alloy record/play head; 16 $\frac{1}{2}$ "W \times 11 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "H .. \$390

KD-D4 Cassette Deck

Front-loading stereo cassette deck with Metaperm record/play tape head, Super ANRS

(Automatic Noise Reduction System), and multi-function digital counter display. Features Music Scan system that operates in both fast forward and rewind; fluorescent Spectro Peak Indicator that displays record levels for 7 frequency zones; memory stop/play; cue; review; timer standby; $6\frac{1}{2}''W \times 11\frac{1}{2}''D \times 4\frac{3}{8}''H$ \$330
KD-D3. Similar to KD-D4 except has no digital counter display, memory stop/play, cue, or review. Features 7-LED multi-peak indicator (-20 to +9 dB); soft-touch controls; rec mute; dual-ball cassette holder to align cassettes properly..... \$215
KD-D2. Similar to KD-D3 except has no soft-touch controls or dual-ball cassette holder. Features separate bias and EQ switches; automatic input select switch in microphone circuit; mechanical tape counter with reset button; damped cassette door \$180

Cassette-Deck Accessories

RM-30. Remote-control unit for KD-A8 and KD-A77 cassette decks..... \$50
R-50. Remote-control unit for DD-9, DD-7, KD-A66, and DD-5 cassette decks \$50

KENWOOD

KX-2060 Cassette Deck

Front-loading metal-compatible stereo cassette deck with dual Dolby noise-reduction system, electronically-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, CrO₂, 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 ± 3 dB 25-17,500 Hz (normal), to 18,000 Hz (CrO₂ and metal); S/N with Dolby 66 dB (normal), 69 dB (CrO₂), 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; $6\frac{1}{2}''H \times 17\frac{1}{8}''W \times 14\frac{3}{8}''D$ \$685

KX-1000D Stereo Cassette Deck

Direct-drive stereo cassette deck with 3 heads and 2 motors. Features Dolby noise-reduction and Dolby HX (headroom extension) systems; metal-tape capability; IC logic control; auto rewind/repeat; auto lead-in; normal/CrO₂/FeCr/metal tape selector; tape/source monitor switch; rec mute; fluorescent peak-hold meters; fine-bias control; one-touch recording; timer standby in record and play; pause control; MPX filter; ferrite heads; FG servo capstan motor and dc reel-drive motor. Wow and flutter 0.035% wrms, ± 0.145 DIN; frequency re-

sponse ± 3 dB 20-19,000 Hz metal, to 18 kHz all other types of tape; S/N ratio Dolby on/off 67/57 dB normal, 69/59 dB CrO₂ and FeCr, 70/60 dB metal tape; harmonic distortion less than 0.3% at 1 kHz, 0 VU, metal tape; input sensitivity/impedance 77.5 mV/50k ohms line, 0.25 mV/10k ohms mic; output level/impedance 390 mV at 0 VU/100k ohms line, 50 mV/8 ohms headphones; power consumption 25 W; $17\frac{1}{8}''W \times 14\frac{1}{8}''D \times 4\frac{1}{8}''H$; 16.7 lb. Supplied with head-cleaning set, audio cable..... \$595

KX-900 Stereo Cassette Deck

Two-motor stereo cassette deck with memory storage and random access of up to 15 programs, program search by microprocessor, amorphous alloy head, and metal-tape capability. Features Dolby noise-reduction system; fluorescent peak-hold meters; normal/CrO₂/FeCr/metal tape selector; fine-bias control; logic-controlled transport; rec mute; full auto-shutoff; timer standby in record and play. Wow and flutter 0.04% wrms, ± 0.15 DIN; frequency response ± 3 dB 25-16,000 Hz normal, to 17 kHz CrO₂ and FeCr, to 18 kHz metal tape; S/N ratio Dolby on/off 67/57 dB normal, 67/57 dB CrO₂ and FeCr, 68/58 dB metal tape; harmonic distortion less than 0.8% at 1 kHz, 0 VU, metal tape; input sensitivity/impedance 77.5 mV/50k ohms line, 0.25 mV/10k ohms mic; output level/impedance 390 mV (0 VU)/100k ohms line, 50 mV/8 ohms headphones; power consumption 25 W; fast-wind time 90 sec (C-90); $17\frac{1}{8}''W \times 14\frac{1}{8}''D \times 4\frac{1}{8}''H$; 15.2 lb. Supplied with head-cleaning set and audio cable..... \$475

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, CrO₂, and metal with bias fine adjust; dual VU meters with 0, +3, +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 ± 3 dB 40-14,000 Hz (normal), to 15,000 Hz (CrO₂, FeCr, and metal); S/N with Dolby 62 dB (normal), 64 dB (CrO₂, FeCr, and metal); input sensitivity/impedance 77.5 mV/50k ohms (line), 0.1 mV/k ohms (DIN), 0.2 mV/10k ohms (mic); $5\frac{1}{4}''H \times 17\frac{1}{8}''W \times 11\frac{1}{8}''D$ \$285

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, CrO₂, and metal tapes with bias fine adjust; record mute switch; dual fluorescent bargraph 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 ± 3 dB 40-14,000 Hz (normal), to 15,000 Hz (CrO₂, FeCr, and metal); S/N with Dolby 62 dB (normal), 64 dB (CrO₂, 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); $5\frac{1}{4}''H \times 15\frac{1}{4}''W \times 11\frac{1}{8}''D$ \$255

KX-40 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system, normal and metal tape capability. Features hard Permalloy record/playback head, ferrite erase head; electronically controlled dc motor; full auto-off mechanism in all modes; 7-LED peak level me-

ters (-20 to +6 dB; timer standby mechanism; 3-digit tape counter. Wow and flutter 0.06% wrms; frequency response ± 3 dB 40-13,000 Hz normal, to 15 kHz metal; S/N ratio 60 dB normal, 62 dB metal with Dolby on; fast wind time 85 seconds with C-60 cassette; $17\frac{1}{8}''W \times 9\frac{1}{8}''D \times 4\frac{1}{8}''H$; 9.5 lb. Comes with head-cleaning set \$184
KX-50. Similar to KX-40 except has permalloy record/playback head; CrO₂ capability; -15 to +5 dB LED peak meters; frequency response ± 3 dB 35-15,000 Hz with all tape formulations; wow and flutter 0.05% wrms; S/N 67 dB normal and CrO₂, 68 dB metal with Dolby on; fast wind time 105 sec \$225

KX-70 Cassette Deck

Front-loading deck with Dolby noise-reduction system, DPSS (Direct Program Search System) for full repeat and one music repeat and one music repeat, electronically controlled dc capstan and dc reel motors. Features normal/CrO₂/metal bias/EQ selector; 7-LED peak level meter; full shut-off mechanism in all modes; amorphous alloy record/playback and double-gap ferrite erase heads. Wow and flutter 0.04% wrms; frequency response ± 3 dB 30-16k Hz normal and CrO₂, to 17 kHz metal tape; S/N ratio 67 dB normal and CrO₂, 68 dB metal tapes with Dolby on; harmonic distortion less than 1.0% at 1 kHz, 0 VU with metal tape; fast wind time 90 sec with C-60 tape; $17\frac{1}{8}''W \times 10\frac{1}{4}''D \times 4\frac{1}{8}''H$; 11.5 lb. Comes with head-cleaning set and audio connection cord \$349

LUXMAN

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, CrO₂, 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 (CrO₂) 65 dB (LH); frequency response 30-18,000 Hz (CrO₂), to 16,000 Hz (LH), both ± 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; $5\frac{1}{4}''H \times 17\frac{1}{8}''W \times 14\frac{1}{8}''D$ \$2000

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, CrO₂, 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 ± 3 dB 30-16,000 Hz (LH), to 17,000 Hz (CrO₂), to 18,000 Hz (metal); S/N 65 dB with metal,

Dolby on; rosewood vinyl cabinet; $4\frac{1}{16}$ "H \times $17\frac{1}{4}$ "W \times $14\frac{1}{16}$ "D \$899

K8 Cassette Deck

Front loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc servo motor, and two sendust heads. Features solenoid tape function controls; three-position bias and equalization for LH, CrO₂, 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; $5\frac{1}{16}$ "H \times $18\frac{1}{4}$ "W \times $11\frac{1}{2}$ "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; $5\frac{1}{2}$ "H \times $17\frac{1}{4}$ "W \times $10\frac{1}{2}$ "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) \$250

MARANTZ

SD9000 Stereo Cassette Deck

Two-speed (1 $\frac{1}{8}$ and 3 $\frac{3}{4}$ ips), three-head Compudeck stereo cassette deck with total programmability. Features Sendust-alloy tape heads; double-Dolby noise-reduction system; metal-tape capability; 24-karat gold plated input and output jacks; LED peak level display meters; soft-touch electronic transport controls; Electronic tape-mode controls; automatic bias and EQ control; fine bias control; digital-numeric timer/tape counter/time-of-day display; MPX filter; microprocessor programming and selection circuitry for direct keyboard entry of up to 19 music selections; tape/source monitor switch; separate mic and line controls for each channel; timer-set/counter/program/clock/clock-set switch; repeat/single/off program mode switch; timer rec/off/play switch. Wow and flutter 0.03 wrms at 3 $\frac{3}{4}$ ips, 0.05% at 1 $\frac{1}{8}$ ips; frequency response at 3 $\frac{3}{4}$ ips ± 3 dB 25-23,000 Hz metal, to 22 kHz FeCr, to 20 kHz CrO₂, to 20 kHz normal; frequency response at 1 $\frac{1}{8}$ ips 25-23,000 Hz metal, to 18 kHz FeCr, to 17 kHz Cro₂, to 20 kHz normal; frequency response at 1 $\frac{1}{8}$ ips 25-23,000 Hz metal, to 18 kHz FeCr, to 17 kHz Cro₂, to 16 kHz normal; S/N ratio at 3 $\frac{3}{4}$ ips 62 dB Dolby off, 72 dB beyond 5 kHz Dolby on; S/N ratio at 1 $\frac{1}{8}$ ips 59 dB Dolby off, 72 dB beyond 5 kHz Dolby on; $16\frac{1}{8}$ "W \times $11\frac{1}{8}$ "D \times $5\frac{1}{8}$ "H; 22 lb 1 oz \$830

SD5010 Stereo Cassette Deck

Slim-line front-loading cassette deck with motorized linear-skating cassette drawer mechanism. Features metal-tape capability; 24-karat gold plated input and output connectors; LED peak level meters; Dolby B noise-reduction system; soft-touch electronic control transport system; electronic tape mode controls; super-hard metal-alloy heads. Wow and flutter 0.05% wrms; frequency response ± 3 dB 35-18,000 Hz metal, to 16 kHz FeCr, to 17 kHz CrO₂, to 15 kHz normal tape; S/N ratio 54 dB Dolby off, 64 dB beyond 5 kHz Dolby on; $16\frac{1}{8}$ "W \times $12\frac{1}{2}$ "D \times $2\frac{1}{8}$ "H; 13 lb 4 oz \$450

SD3030 Stereo Cassette Deck

Stereo cassette deck with both Dolby B and C noise-reduction systems and super-hard metal-alloy tape heads. Features metal-tape capability; LED peak level display meters; soft-touch electronic transport controls; 24-karat gold plated input and output connectors; electronic tape-mode controls. Wow and flutter 0.05% wrms; frequency response ± 3 dB 35-18,000 Hz metal, to 16 kHz FeCr, to 17 kHz CrO₂, to 15 kHz normal tape; S/N ratio 54 dB Dolby off, 74 dB Dolby C on; $16\frac{1}{8}$ "W \times $11\frac{1}{8}$ "D \times $4\frac{1}{8}$ "H; 13

lb 4 oz \$395

SD2030 Stereo Cassette Deck

Front-loading stereo cassette deck with Dolby B noise-reduction system, metal-tape capability, and super-hard metal-alloy heads. Features 24-karat gold plated input and output connectors; soft-touch electronic transport controls; electronic tape-mode controls; dual VU meters; fine bias control; total shut-off mechanism. Wow and flutter 0.07% wrms; frequency response ± 3 dB 35-17,000 Hz metal, to 15 kHz FeCr, to 16 kHz CrO₂, to 14 kHz normal tape; S/N ratio 54 dB Dolby off, 64 dB beyond 5 kHz Dolby on; $16\frac{1}{8}$ "W \times $11\frac{1}{8}$ "D \times $4\frac{1}{8}$ "H; 13 lb 4 oz \$275

SD1015 Stereo Cassette Deck

Front-loading stereo cassette deck with Dolby B noise-reduction system and super-hard metal-alloy tape heads. Features metal-tape capability; 24-karat gold plated input and output connectors; dual VU meters; total mechanism shutdown. Wow and flutter 0.08% wrms; frequency response ± 3 dB 35-17,000 Hz metal, to 15 kHz FeCr, to 16 kHz CrO₂, to 14 kHz normal tape; S/N 53 dB Dolby off, 63 dB beyond 5 kHz Dolby on; $16\frac{1}{8}$ "W \times $9\frac{1}{16}$ "D \times $5\frac{1}{8}$ "H; 12 lb 2 oz \$200

MITSUBISHI

DT-25 Stereo Cassette Deck

Metal-tape-compatible stereo cassette deck with Dolby noise-reduction system and front-loading system. Features FeCr/normal/special/metal tape selector; Sendust record/play and ferrite erase heads; feather-touch transport controls with logical interlock; rec mute; memory-play function; rec/play timer function; fluorescent peak-level meters; MPX filter; lighted cassette compartment with pneumatically damped door. Wow and flutter 0.04% wrms; frequency response ± 3 dB 30-16,000 Hz normal, to 18 kHz special and FeCr, to 19 kHz metal tape; S/N ratio Dolby on/off 66/58 dB; crosstalk at 1 kHz 35 dB between channels, 65 dB between tracks; harmonic distortion 1% FeCr and normal, 0.9% metal and special tapes at 400 Hz, 160 pWb/mm; input sensitivity/impedance 0.3 mV/2.2k ohms mic, 100 mV/47k ohms line; output level/impedance 440 mV/22k ohms line, 0.8 mW/8 ohms; power consumption 18 W; $11\frac{1}{8}$ "W \times $8\frac{1}{2}$ "D \times $5\frac{1}{8}$ "H; 14 lb 5 oz \$370

Microcomponents Series

M-T04 Stereo Cassette Deck

Compact metal-compatible stereo cassette deck with feather-touch controls and Dolby noise-reduction system. Features direct front loading; metal/special/normal/FeCr tape selector; multielement LED peak-level meters; two-motor-drive transport; Automatic Spacing Pause System (ASPS); timer standby in record and playback. Wow and flutter 0.05% wrms; frequency response ± 3 dB 35-15,000 Hz normal, to 16 kHz all other tape formulations; S/N ratio Dolby on/off 64/56 dB; crosstalk between channels/tracks 30/60 dB; THD 0.9% normal, metal, FeCr tape, 1.2% special; input sensitivity/impedance 0.3 mV/22k ohms mic, 90 mV/50k ohms line; output level/impedance 440 mV/22k ohms line, 0.8 mW/8 ohms headphones; power consumption 30 W; $10\frac{1}{8}$ "W \times $9\frac{1}{8}$ "D \times $5\frac{1}{2}$ "H; 14 lb \$460

NAD (USA)

6150C Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby C 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, CrO₂, 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 ± 3 dB 35-16,000 Hz (normal), to 17,000 Hz (CrO₂ and FeCr), to 19,000 Hz (metal); S/N 72 dB with Dolby C metal tape (A weighted); input sensitivity/impedance 0.5 mV/10k ohms (mic), 35 mV/50k ohms (line), 6 mV/25k ohms (DIN); $4\frac{1}{8}$ "H \times $16\frac{1}{2}$ "W \times $11\frac{1}{2}$ D \$469

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, CrO₂, 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 ± 3 dB (CrO₂, 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); $4\frac{1}{8}$ "H \times $16\frac{1}{2}$ "W \times 9 D \$279

NAKAMICHI

1000ZXL 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- μ 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-driven 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 ± 3 dB; THD 0.8% with metal tape; S/N 66 dB at 3.0% THD 400 Hz, with Dolby; EIA rack-mounting; $10\frac{1}{8}$ "H \times $20\frac{1}{4}$ "W \times $12\frac{1}{16}$ D \$3800

700ZX-E Cassette Deck

Front-loading auto-tuning stereo cassette deck with automatic calibration of azimuth, bias, and level for each cassette and a RAMM (automated playback) system that counts silent sections between programs. Features 3-head, dual-capstan, CMOS-logic-controlled transport; 4-digit LED digital tape counter; LED bargraph signal-level meters (-40 to +10 dB) with peak-hold function; 3 microphone inputs (left, right, center "blend") that can be mixed with line inputs; subsonic filter; 400-Hz, 0-dB test tone to calibrate noise-reduction system; direct-coupled record and playback amplifiers; timer record/playback function; high-output headphone jack; Dolby B noise-reduction system plus facilities for switching in and out an external NR system; alarm indicator; 70/120- μ sec EQ selector; fine bias adjust control; pitch control; memory stop/ play and MPS on/off switches; sealed secondary-control panel. Wow and flutter less than 0.08% wrms; frequency response 20-20,000 Hz ± 2 dB with Nakamichi EX, EXII, SX, ZX tapes; S/N ratio better than 66 dB at

6

CASSETTE
TAPE MACHINES

3% THD, Dolby B on; THD less than 0.8% ZX tape, 1.0% SX, EXII tape; separation better than 37 dB at 1 kHz, 0 dB; crosstalk better than 60 dB at 1 kHz, 0 dB; power consumption 50 W; 19¹/₁₆"W × 10¹/₁₆"H × 9²⁷/₃₂"D; 30 lb 4 oz.....\$3000
700ZXL. Similar to 700ZXE except less sophisticated automatic-calibration system.....\$2400

682ZX Stereo Cassette Deck

Discrete 3-head stereo cassette deck with Dolby B and C noise-reduction systems, Auto-Azimuth Alignment system for extended frequency response, and 9-program Random Access Music Memory (RAMM) system. Features auto azimuth alignment/auto record-level calibration; bias calibration controls with twin-tone oscillator;



dual-gap ferrite/Sendust erase head; separate tape and EQ switches for ZX, SX, and EX cassettes; dc recording amplifiers with double NF circuitry; assymmetrical dual-capstan, diffused-resonance transport with motor-driven cam, dual-slot guides, and tape-pad lifter; PLL capstan motor; CMOS-logic controls with 2-speed cueing, high-speed shut-off, and slack-tape takeup; peak-responding fluorescent signal-level meters; master and separate-channel input level controls; output level control; rec mute; high-output headphone jack; tape-start memory with 3-digit counter; timer record/playback capability; remote-control capability with optional RM-200 controller. Wow and flutter less than 0.08% wtd peak, 0.04% wtd rms; frequency response ±3 dB 20-22,000 Hz at -20-dB record level using ZX tape, to 20 kHz with SX and EXII tape; S/N ratio Dolby B/C on better than 72/66 dB at 400 Hz, 3% THD A wtd, using ZX tape; THD at 400 Hz, 0-dB recording level using ZX/SX and EXII tape 0.8%/1.0%; separation/crosstalk at 1 kHz, 0-dB recording level 37/60 dB; input sensitivity/impedance 50 mV/50k ohms; output level/impedance at 400 Hz, 0-dB recording level, level control at max 1 V/2.2k ohms line, 48 mW/8 ohms headphone; dc output ±10 V at 125 mA max; power consumption 36 W max; 19" W × 13¹/₁₆"D × 5¹/₂"H; 19 lb 13 oz.....\$1800
681ZX. Same as 682ZX except lacks tape-monitoring function of 682ZX.....\$1600

680ZX Cassette Deck

Front-loading two-speed (1¹/₁₆ and 10¹/₁₆ 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, crystalloy 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 ±3 dB at 1¹/₁₆ ips 10-22,000 Hz, at 10¹/₁₆ ips 10-

15,000 Hz; THD with metal tape 0.8% at 1¹/₁₆ ips, 1.5% at 10¹/₁₆ ips; S/N with Dolby at 400 Hz, 3.0% THD 66 dB at 1¹/₁₆ ips, 60 dB at 10¹/₁₆ ips; EIA 19-in rack mount; 5¹/₂"H × 19" W × 13³/₈"D.....\$1550

680 Cassette Deck

Front-loading two-speed (1¹/₁₆ and 10¹/₁₆ 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 (1¹/₁₆ ips), 0.08% wrms (10¹/₁₆ ips); frequency response ±3 dB, at 1¹/₁₆ ips 10-22,000 Hz, at 10¹/₁₆ ips 10-15,000 Hz; THD with metal tape 0.8% at 1¹/₁₆ ips, 1.5% at 10¹/₁₆ ips; S/N with Dolby at 400 Hz, 3% THD 66 dB at 1¹/₁₆ ips, 60 dB at 10¹/₁₆ ips; 4¹/₂"H × 19" W × 12¹/₈"D.....\$1350

582ZX Stereo Cassette Deck

Discrete 3-head stereo cassette deck with Dolby B and C noise-reduction systems, electronic metering, and rec-mute function. Features 2-way Dolby NR systems; dual-gap serrite/Senduct erase head; separate tape and EQ switches for ZX, SX, and EX cassettes; bias and record-level calibration controls with twin-tone oscillator and high-resolution display; dc recording amplifiers with double NF circuitry; assymmetrical dual-capstan diffused-resonance transport with motor-driven cam, dual-slot guides, and tape-pad lifter; CMOS IC logic controls with 2-speed cueing, high-speed shut-off, and slack-tape takeup; peak-responding electronic metering; record, balance, and output-level controls; tape-start memory with 3-digit counter; unattended record/play with accessory timer; total remote-control option with RM-200 controller; high-output headphone jack; dc power outlet for Blackbox series modules. Wow and flutter less than 0.10% wtd peak, 0.05% wtd rms; frequency response 20-20,000 Hz ±3 dB at -20-dB recording level; S/N ratio at 400 Hz, 3% THD, A wtd, using ZX tape Dolby B/C on 66/72 dB; THD at 400 Hz, 0-dB recording level, using ZX/SX or EXII tapes less than 0.8%/1.0%; separation/crosstalk better than 37/60 dB at 1 kHz, 0-dB recording level; input level/impedance 50 mV/50k ohms; output level at 400 Hz, 0-dB recording level, output-level control at max 1 V/2.2k ohms line, 45 mW/8 ohms phones; dc output ±10 V at 125 mA max; power consumption 30 W max; 19¹/₁₆"W × 13³/₈"D × 5¹/₂"H; 18 lb 5 oz.....\$1250
581Z. Same as 582Z but with 1-way Dolby NR only and no off-tape monitoring facility....\$1150

482Z Stereo Cassette Deck

Discrete 3-head stereo cassette deck with Dolby B and C noise-reduction systems and off-tape monitoring facilities. Features wide-range peak-responding signal-level meters; bias-trim control; high/low-efficiency headphone selector; Crystalloy record and play heads; assymmetrical dual-capstan diffused-resonance transport; dual-slot cassette guides; controlled tape tension; tape-pad lifter; motor-driven cam that gently and precisely positions heads and pressure rollers, engages/disengages brakes, and performs complete transport control functions; remote-control capability with optional RM-100 controller. Wow and flutter wtd peak/rms less than 0.11%/0.06%; frequency response 20-20,000 Hz at -20-dB recording level; S/N ratio Dolby B/C on better than 69/63 dB at 400

Hz, 3% THD, A wtd, using ZX tape; THD at 400 Hz, 0-dB recording level using ZX/SX or EXII tape less than 0.9%/1.0%; separation/crosstalk at 1 kHz, 0-dB recording level better than 36/60 dB; input level/impedance 50 mV/30k ohms; output level 600 mV/2.2k ohms line, 10 mW/8 ohms phones at 400 Hz, 0-dB recording level; power consumption 30 W max; 17³/₃₂"W × 11¹/₈"D × 5¹/₂"H; 14 lb 2 oz.....\$950
481Z. Same as 482Z except no off-tape monitoring facilities.....\$850
480Z. Same as 481Z except has narrow-gap Sendust record/play head; S/N ratio Dolby B/C on better than 68/62 dB; THD less than 1.0%/1.2% with ZX/SX and EXII tapes; black or silver panel.....\$595
480. Similar to 480Z except has only Dolby B NR system; S/N ratio Dolby on, 70-μsec EQ at 400 Hz, 3% THD better than 62 dB; THD at 400 Hz, 0-dB recording level ZX and EXII/SX tape less than 1.0%/1.2%; power consumption 23 W max; silver or black panel.....\$395

Remote-Control Units

RM-580. Wireless remote-control system for 580Z series, 680, 700ZXE.....\$190
RM-300. Wired remote-control unit for ZX series cassette decks. Controls record, playback, fast forward, rewind, and stop and features cueing and muting, all RAMM operations, and 4-digit LED tape counter with reset button.....\$190
RM-200. Wired remote control duplicates control systems of 580Z series, 680ZX series, 700ZXE cassette decks; includes record, 2-speed cueing, and RAMM functions; 15-ft cable.....\$45
RM-100. Wired remote control unit duplicates all tape function controls for 480Z series and 480 cassette decks; 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, CrO₂, 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, CrO₂, and metal); S/N with Dolby HX and B on 66 dB (normal and special); input sensitivity/impedance 300 μV/2k ohms (mic), 80 mV/200k ohms (high-level line), 3 mV/10k ohms (low-level line); silver or black suede finishes; 8.9" H × 17.5" W × 6.1"D.....\$1195

NIKKO**ND-1000 Stereo Cassette Deck**

3-head, 2-motor stereo cassette deck with computerized tape-evaluation system. Features



source/tape monitoring; full-logic transport controls; facility for optional remote-control unit; normal/metal/CrO₂ EQ selector; dual 12-section LED peak-level displays; output level control; Dolby B noise-reduction system; MPX filter; auto memory stop/play function; timer record/play capability. Compu-Tecs automatic

bias and sensitivity adjustment circuit. 17.3" W X 9.9" D X 4.7" H.....\$650

ND-800 Stereo Cassette Deck

Stereo cassette deck with 2-motor, direct-drive transport operated by full IC logic controls. Features facility for optional remote-control unit; dual 12-section LED peak-level displays; output level control; standard Dolby B noise-reduction system; MPX filter; bias/EQ switch for normal/CrO₂/metal tapes; auto rewind; auto memory stop/play at preselected points on tape; timer record/play facility. 17.3" W X 9.9" D X 4.7" H.....\$450

ND-700 Stereo Cassette Deck

Stereo cassette deck with dbx® and Dolby noise-reduction systems. Features memory rewind; dual 9-section LED peak-level displays; power-assisted soft-touch tape-function buttons; one-button recording system; output level control; Cue and Review for fast location of recording; MPX filter; 2-way dbx NR system that also features expanded dynamic range; removable cassette-compartment door. 17.3" W X 9.9" D X 4.7" H.....\$320

ND-500 Stereo Cassette Deck

Stereo cassette deck with dual 7-section LED peak-level displays, output level control, and power-assisted transport controls. Features one-button recording convenience, Cue and Review for fast location of recordings; Dolby B noise-reduction system; removable cassette-compartment door. 17.3" W X 9.9" D X 4.7" H.....\$250

ONKYO

TA-2090 Stereo Cassette Deck

Three-head stereo cassette deck with 3-motor design (2 direct drive, one for engaging head) and computerized Accu-Bias with memory and manual override. Features Sendust heads; feather-touch transport controls; double dbx® disc decode and Dolby B and C noise-reduction systems; real-time counter; 2-color fluorescent metering with 2-sec peak-hold function; automatic spacing rec mute; record calibration; timer



rec/play; memory stop/play; remote-control capability; black matte front panel. Wow and flutter 0.021%; frequency response ±3 dB 20-16,000 Hz normal, to 18 kHz CrO₂, to 20 kHz metal tape; S/N ratio no NR/Dolby B/Dolby C/dbx 60/70/80/92 dB with metal tape.....\$750

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 ±3 dB with metal tape; S/N 60 dB without Dolby.....\$450

TA-W80 Dubbing Cassette Deck

Two cassettes in one offer high-speed and normal-speed dubbing. Features continuous playback of tape 1, then tape 2, and simultaneous playback; servo-controlled dc soft-touch transport controls; metal/high-bias/metal tape switching; Dolby noise reduction; rec mute; full

auto stop; timer rec/play; LED metering. Wow and flutter 0.06% wrms; frequency response 30-15,000 Hz ±3 dB with metal and high-bias tapes; S/N ratio 65 dB with Dolby on, metal tape.....\$370

TA-630DM Cassette Deck

Front-loading stereo cassette deck with dual-Dolby circuitry, PLL dc servomotor in two-belt drive transport, hyperbolic S&S Sendust head, and metal-tape capability. Features "Accu-Bias" with built-in 400- and 10,000-Hz oscillators with Accu-bias adjust; three-position bias and equalization for CrO₂, 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 CrO₂); to 19 kHz (metal); 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/50k ohms (DIN); output level/load impedance 0.775 V/50k ohms (line and DIN); headphone impedance 8-200 ohms; 6½" H X 16½" W X 12" D.....\$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 "Accu-Bias" 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 ±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/50k ohms (mic), 50 mV/50k ohms (line); 4.75" H X 16.5" W X 10.63" D.....\$300

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 "Accu-Bias" 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 ±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/50k ohms (mic), 50 mV/50k ohms (line); 4.75" H X 16.5" W X 10.625" D.....\$225

TA-1500 Stereo Cassette Deck

Cassette deck with metal-tape capability and soft-touch transport controls. Features full auto stop; dc servo motor; 3-position bias/EQ switch; Dolby noise-reduction system; hard permalloy head. Wow and flutter 0.07% wrms; frequency response 30-15,000 Hz ±3 dB with metal and high-bias tapes; S/N ratio 58 dB Dolby off.....\$195

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, CrO₂, 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

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.

RT-6605 Two-Transport Deck

Front-loading stereo cassette deck with two transports, each with its own FG servo dc motor, for dubbing from one to another tape. Features dual Dolby noise-reduction system; opto peak level display with peak hold; direct dubbing; MPX filter; FeCr/CrO₂/normal/metal bias and EQ selector with separate bias-adjust control; APSS (Automatic Program Search System); individualized editing; soft-touch controls for Tape 1 and 2; LED function indicators; one-touch start; narrow-gap Sendust head for record/playback in both transports, double-gap ferrite head in Tape 2 for erase (Tape 1 is playback only, Tape 2 record/playback). Wow and flutter 0.045% wrms; frequency response 30-16,000 Hz normal, to 18 kHz CrO₂, to 19 kHz FeCr, to 20 kHz metal tapes; S/N 70 dB with Dolby on; 16 1/16" W × 12 1/16" D × 4 1/2" H; 16.5 lb.....\$550

RT-6405 Stereo Cassette Deck

Direct-drive, two-motor stereo cassette deck with Dolby noise-reduction system, microprocessor full-logic solenoid transport controls, and opto peak level displays with peak-hold. Features FeCr/CrO₂/normal/metal bias and EQ selector; APSS (Automatic Program Search System); automatic spacing pause control; soft eject cassette holder with detachable cover; timer recording standby system; output level control; LED indicators for record, playback, pause/auto-spacing, Dolby on; MPX filter; Sendust record/play head, double-gap ferrite head. Wow and flutter 0.038% wrms; frequency response ±3 dB 30-15,000 Hz normal, to 17 kHz CrO₂, to 18 kHz FeCr and metal tapes; S/N 67 dB with CrO₂ tape, Dolby on; 17" W × 12 1/16" D × 3 3/4" H; 13.2 lb.....\$380

RT-6207. Similar to RT-6405 except not direct drive; wow and flutter 0.055% wrms; frequency response to 14 kHz normal, 16 kHz CrO₂, 17 kHz FeCr and metal; hard Permalloy head.....\$330

PEARLCORDER by OLYMPUS**S802 Microcassette Recorder/Player**

Two-hour two-speed pocket microcassette recorder with capstan drive. Features 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 × 2.6" W × 1" D.....\$150

S801. Similar to S802 except has built-in LCD digital tape counter and count-down memory functions; two-speed rewind; smaller size (4.3" H × 2.5" W × 0.9" D). Count-down memory can be preset to locate any tape section in seconds.....\$190

JC PENNEY**3575 Cassette Deck**

Stereo cassette deck with front-loading cassette well, Dolby noise-reduction system, metal-tape capability. Features hard Permalloy record/play head with Sendust guard; MPX filter; peak signal level LED indicators (-30 to +6 dB). Wow and flutter 0.04% wrms; frequency response 40-18,000 Hz ±3 dB; THD 1.2% at 200 nWb; fast-forward/rewind time 90 sec (C-60).....\$300

3530 Cassette Deck

Front-loading stereo cassette deck with Dolby

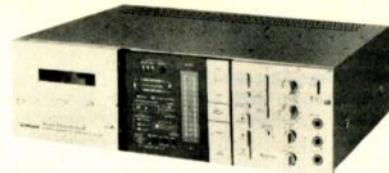
noise-reduction system and metal tape capability. Features hard Permalloy record/play tape head with Sendust guard; memory auto stop; soft eject mechanism; direct function change; input selector switch; peak signal level LED indicators (-15 to +5 dB). Wow and flutter 0.05% wrms; frequency response 40-14,000 Hz ±3 S/N ratio Dolby in/out 64/58 dB; THD 1.2% at 200 nWb; fast-forward/rewind time 100 sec (C-60).....\$250

3554 Cassette Deck

Front-loading cassette deck with Dolby noise-reduction system. Features hard Permalloy record/play tape head with Sendust guard; soft-touch transport controls; soft cassette eject; direct function change; input selector switch; large VU meters; metal-tape capability. Wow and flutter 0.05% wrms; frequency response 40-14,000 Hz ±3 dB; S/N ratio Dolby in/out 63/57 dB; THD 1.2% at 200 nWb; fast-forward/rewind time 95 sec (C-60).....\$190

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 Micro-Scan system that automatically



mechanical index counter; wow and flutter 0.035%.....\$575

CT-7R. Similar to CT-8R except auto-reverse operates in record and playback; no auto Dolby; wow and flutter 0.04%; frequency response to 20 kHz; S/N 79 dB; 3 1/2" H; 12 lb 2 oz...\$450

CT-6R. Similar to CT-7R except auto-reverse in playback only.....\$350

CT-5 Stereo Cassette Deck

Stereo cassette deck with Dolby B/C noise reduction and IC full-logic transport control system, and dc-servo motor. Wow and flutter 0.05% wrms; frequency response 20-18,000 Hz with metal tape at -20 dB; S/N ratio 78 dB at 5 kHz with Dolby C on; 16 1/16" W × 9 1/16" D × 3 1/16" H; 9 lb 11 oz.....\$280

CT-4. Similar to CT-5 except no full-logic control system; frequency response to 17 kHz; 9 1/8" D × 4 1/4" H.....\$200

JT-216 Wired Remote Controller

Wired remote controller for CT-9R, CT-8R, CT-7R, and CT-6R computer-controlled cassette decks.....\$50

REALISTIC**SCT-21 Cassette Deck**

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system and hard Permalloy record/play 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 (CrO₂), 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, CrO₂, 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 (CrO₂), 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, CrO₂, and metal tapes; digital tape counter. Wow and flutter 0.15% wrms; frequency response ±3 dB 30-12,000 Hz (ferric and CrO₂), to 14,000 Hz (metal); S/N 64 dB with metal tape, Dolby on (3.0% THD, CCIR weighted).....\$150

REVOX**B710 Cassette Deck**

Three-head, four-motor, front-loading deck has microprocessor-activated controls and counter display. Features dual direct-drive, crystal-controlled capstan and separate servo-controlled reel motors; constant-speed fast-forward/rewind with electrical braking; pneumatically damped solenoid controlled head assembly; four-digit electronic counter with run-up button and real-time clock with internal tim-

er switching for both B710 and external equipment; automatic bias/ equalization sensing for metal, CrO₂, ferrichrome, and ferric tape formulations, with manual override; mic/line mixing; separate playback level control; peak-reading LED record/playback level displays with 1-dB resolution from -10 to +6 dB and 2-dB intervals from -30 to -10 dB; full plug-in modular construction with optional rack-mounting adapt-

ters; metal/normal/special tape selector; full auto off. Wow and flutter 0.07% wrms, 0.1% DIN; frequency response ± 3 dB 30-14,000 Hz normal and LH, to 15 kHz CrO₂, to 17 kHz metal tape; S/N ratio Dolby on/off 64/55 dB; $16\frac{1}{16}$ "W \times $10\frac{1}{16}$ "D \times $4\frac{3}{32}$ "H; 10.1 lb \$180

Micro Cassette Decks

RMD-90 Stereo Cassette Deck

Cassette deck with 2-motor, full-logic transport and Dolby noise-reduction system. Features LED peak signal-level indicators; metal/normal/special tape selector; 2-motor, 2-solenoid drive; high B permalloy laminated record/play and double-gap ferrite-core erase heads. Wow and flutter 0.05% wrms, 0.1% DIN; frequency response ± 3 dB 30-14,000 Hz normal and LH, to 15 kHz CrO₂, to 16 kHz metal; S/N ratio Dolby on/off 63/55 dB; $11\frac{1}{16}$ "W \times $10\frac{1}{16}$ "D \times $4\frac{1}{32}$ "H; 8.58 lb \$300

RMD-82 Stereo Cassette Deck

Direct-load stereo cassette deck with Dolby noise-reduction system and high B super-hard permalloy record/play head. Features soft-touch power-assisted transport controls; metal/normal/special tape selector; full auto off; 5-LED peak-signal level indicators. Wow and flutter 0.05% wrms, 0.1% DIN, frequency response ± 3 dB 30-14,000 Hz normal and LH, to 15 kHz CrO₂, to 17 kHz metal tape; S/N ratio Dolby on/off 64/55 dB; $11\frac{1}{16}$ "W \times $8\frac{1}{16}$ "D \times $4\frac{3}{32}$ "H; 7 lb \$240

RMD-70 Stereo Cassette Deck

Miniature stereo cassette deck with metal-tape capability and Dolby noise-reduction system. Features 5-LED peak-signal level displays; high B permalloy laminated record/play head; metal/normal/special tape selector. Wow and flutter 0.05% wrms, 0.1% DIN; frequency response ± 3 dB 30-14,000 Hz normal and LH, to 15 kHz CrO₂, to 16 kHz metal tape; S/N ratio Dolby on/off 64/55 dB; $11\frac{1}{16}$ "W \times $8\frac{1}{32}$ "D \times $4\frac{1}{32}$ "H; 6.8 lb \$180

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 0.037% wrms, 0.13% DIN; frequency response ± 3 dB 30-15,000 Hz normal and LH, to 16 kHz CrO₂, to 17 kHz metal tape; S/N ratio Dolby on/off 64/55 dB; $11\frac{1}{16}$ "W \times $11\frac{1}{2}$ "D \times $4\frac{1}{16}$ "H; 12.5 lb \$599

Remote One. Remote control unit for C4 and C3D \$50

SANSUI

D-550M Cassette Deck

"Direct-O-Matic" front-loading three-head cassette deck with Tension Servo Mechanism for constant tape tension and Dyna-Scrape Filter to minimize modulation noise. Features full IC-logic transport controls; double-Dolby noise reduction; FG servo direct-drive capstan and electronically-controlled dc reel motors; 16-segment peak-reading LED record/playback indicators; metal/CrO₂/ferric selector with $\pm 20\%$ bias-adjust control; memory rewind with automatic play/replay modes; external timer activation; switchable MPX filter; "Tape Lead-In" to bypass leader; separate playback level control; provisions for optional remote controller. Wow and flutter 0.035% wrms; frequency response ± 3 dB 25-21,000 Hz with metal, 25-17,000 Hz with CrO₂, 25-16,000 Hz with ferric tapes; S/N 70 dB with metal tape,

Dolby on; black (rack mount) or silver finish; $16\frac{1}{16}$ "W \times $11\frac{1}{16}$ "D \times $5\frac{1}{16}$ "H \$520

D-350M. Similar to D-550 M, except has only two heads, no output level control. Frequency response goes to 18 kHz (metal), 16 kHz (CrO₂), 15 kHz (ferric); S/N 69 dB \$420

D-300M Cassette Deck

Front-loading cassette deck with Automatic Music Program Search for easy selection of recorded segments. Features electronically-controlled dc motor and full IC-logic transport controls; 24-segment peak-reading LED record/playback indicators; separate bias/EQ switches for metal, CrO₂, and ferric tapes; external timer or optional remote-control operation; Hi-B permalloy record/playback head and double-gap ferrite erase head; black or silver finish. Wow and flutter 0.05% wrms; frequency response ± 3 dB 30-17,000 Hz with metal, to 16,000 Hz with CrO₂, and to 14,000 Hz with ferric tapes; S/N 68 dB with metal tape, Dolby on; $16\frac{1}{16}$ "W \times $9\frac{1}{8}$ "D \times $5\frac{1}{16}$ "H \$320

D-150M Stereo Cassette Deck

Metal-compatible, front-loading stereo cassette deck with soft-touch transport controls and Automatic Music Program Search (AMPS) sys-



tem for cueing/selection location. Features electronically controlled dc motor; high-Bs record/play head; 18-segment peak-indicating LED level displays; separate bias/EQ switches for metal, CrO₂, and normal tapes; separate record-level controls; dual-gap erase head; Dolby B noise-reduction system; soft-eject cassette door; black or silver finish. Wow and flutter 0.05% wrms; frequency response ± 3 dB 30-15,000 Hz metal and CrO₂, to 14 kHz normal tape; S/N ratio 68 dB with metal tape, Dolby on; $16\frac{1}{16}$ "W \times $9\frac{1}{8}$ "D \times $5\frac{1}{16}$ "H \$240

D-95M Cassette Deck

Metal-compatible, front-loading cassette deck with 18-segment peak-reading LED record/playback indicators. Features direct-change transport mode controls with single-button record activation; separate bias/EQ switches for metal/CrO₂/ferric tapes; separate channel record-level controls; Hi-B permalloy record/playback and double-gap ferrite erase heads; black or silver finish. Wow and flutter 0.07% wrms; frequency response ± 3 dB 30-15,000 Hz with metal and CrO₂, 30-14,000 Hz with ferric tapes; S/N 68 dB with metal tape, Dolby on; $16\frac{1}{16}$ "W \times $9\frac{1}{8}$ "D \times $5\frac{1}{16}$ "H \$200

SANYO

RD10 Stereo Cassette Deck

Front-loading cassette deck with metal-tape capability and Dolby noise-reduction system. Features dc governor motor; LED signal-level meters; auto-stop at end of play; damped cassette door; illuminated record-mode indicator; digital tape counter; 2 patch cords. Frequency response with metal tape 30-14,000 Hz ± 3 dB \$100

RD8. Similar to RD10 except no Dolby noise reduction; CrO₂ and normal tape capability. Frequency response 30-12,500 Hz normal, to 14 kHz ± 3 dB metal tape \$85

Plus Series

D65 Cassette Deck

Front-loading metal-compatible auto-reverse cassette deck with Dolby noise-reduction system,

ors. Wow and flutter 0.08% DIN, 0.035% wrms; frequency response +2-3 dB 22-22,000 Hz metal, 22-16,000 Hz ferric; S/N 68 dB at 3% THD, 1 kHz, A weighted, Dolby on, 60 dB at 0 dB VU, 1 kHz, Dolby on; $17.8\frac{1}{16}$ "W \times $13.85\frac{1}{16}$ "D \times $6\frac{1}{16}$ H \$1899

ROTEL

RD-1010 Stereo Cassette Deck

Three-head cassette deck with double-Dolby noise-reduction system and tape-monitor facility. Features electronic-governor dc motor; Sendust tape heads; full-logic solenoid-controlled transport; metal/FeCr/CrO₂/normal tape selector; auto rewind/repeat; timer record/play; memory rewind; auto repeat; 16-point/channel LED signal-level displays with peak function; adjustable bias control; MPX filter; output level control; rec mute; record, play, pause indicators. Wow and flutter 0.045%



wrms, 0.1% DIN; frequency response ± 3 dB 30-17,000 Hz normal and LH, to 18 kHz CrO₂, to 19 kHz FeCr and metal tapes; S/N ratio Dolby on/off 64/56 dB; $16\frac{1}{16}$ "W \times $11\frac{1}{16}$ "D \times $4\frac{1}{32}$ "H; 13.6 lb \$425

RD-700 Stereo Cassette Deck

Cassette deck with 2-motor, full-logic transport and Dolby noise-reduction system. Features Sendust record/play head; metal/special/normal tape selector; feather-touch controls; memory stop/play; LED peak signal-level displays; full auto off; play, rec, pause, Dolby NR, and metal indicators; remote-control jack. Wow and flutter 0.037% wrms, 0.13% DIN; frequency response ± 3 dB 30-15,000 Hz normal and LH, to 16 kHz CrO₂, to 17 kHz metal tape; S/N ratio Dolby on/off 70/63 dB; $16\frac{1}{16}$ "W \times $11\frac{1}{2}$ "D \times $4\frac{1}{16}$ "H; 12.5 lb \$300

RD-560 Stereo Cassette Deck

Stereo cassette deck with soft-touch controls and built-in Dolby noise-reduction system. Features electronically controlled dc motor; direct-loading mechanism; power-assisted soft-touch controls; Sendust record/play head, low-interference shielded ferrite/permalloy erase head; full auto shut-off; fluorescent peak signal-level indicators; MPX filter. Wow and flutter 0.07% wrms, 0.1% DIN; frequency response ± 3 dB 30-15,000 Hz normal and LH, to 16 kHz CrO₂, to 17 kHz metal tape; S/N ratio Dolby on/off 64/55 dB; $16\frac{1}{16}$ "W \times $9\frac{1}{16}$ "D \times $4\frac{1}{32}$ "H; 11 lb \$225

RD-400 Stereo Cassette Deck

Stereo cassette deck with Dolby noise-reduction system and High B super-hard permalloy laminated record/play head. Features electronically controlled dc motor; front loading; twin VU me-

Sendust Alloy record/playback and ferrite erase heads, and dc servo capstan and dc governor reel motors. Features, separate bias and equalization for metal, CrO₂, FeCr, and normal tapes; defeatable FM multiplex filter; auto stop; edit record mute control; digital tape counter with reset; timer stand-by 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 ± 3 dB 20-18,000 Hz (metal), to 16,000 Hz (CrO₂ and FeCr), to 13,000 Hz (normal); S/N with Dolby 70 dB (metal), 69 dB (FeCr), 67 dB (CrO₂), and 66 dB (normal); THD 0.8% (metal), 1.5% (CrO₂); input sensitivity/impedance 0.3 mV/400-10,000 ohms (mic), 50 mV/50 ohms (line); line output level/load 0.53 V/7 khz; channel separation 42 dB; crosstalk -70 dB; 5 $\frac{1}{4}$ "H \times 16 $\frac{1}{2}$ "W \times 10 $\frac{1}{2}$ "D.....\$330

D64 Stereo Cassette Deck

Front-loading stereo cassette deck with metal-tape capability, built-in Dolby noise-reduction system, and Programmable Automatic Music Select System (AMSS). Features Sendust-alloy record/play head; auxiliary noise-reduction switching and connectors; mic/line mixing; output level controls; fluorescent peak-hold meters; defeatable FM MPX filter; rec mute control; full-logic transport control; dc servo capstan drive; mechanical tape tension servo; auto-stop system; timer standby; removable damped cassette door; optional rack mounting. Wow and flutter 0.04% wrms; frequency response ± 3 dB 20-20,000 Hz metal, to 17 kHz FeCr and CrO₂, to 14 kHz normal tape; S/N ratio (Dolby on/off) 70/62 dB metal, 67/59 dB CrO₂, 69/61 dB FeCr, 66/58 dB normal tape; THD CrO₂/metal tape 1.5%/0.8%; separation 42 dB; crosstalk -70 dB; 17 $\frac{1}{2}$ "W \times 11 $\frac{1}{2}$ "D \times 5 $\frac{1}{4}$ "H....\$300

D56 Stereo Cassette Deck

Front-loading stereo cassette deck with metal-tape capability, Automatic Music Select System (AMSS), IC-logic transport controls, and built-in Dolby noise-reduction system. Features 2-color, 12-segment peak level meters; permalloy record/play and ferrite erase heads; timer operation in both record and playback modes; normal/CrO₂/metal tape selector switches. Wow and flutter 0.05% wrms; frequency response ± 3 dB 30-19,000 Hz metal, to 17 kHz CrO₂, to 14 kHz normal tape; S/N ratio (Dolby on/off) 67/59 dB metal, 65/57 dB CrO₂, 63/55 dB normal tape; THD metal/CrO₂ tape 0.8/1.5%; separation 40 dB; crosstalk -70 dB; 17 $\frac{1}{2}$ "W \times 10 $\frac{1}{2}$ "D \times 4 $\frac{1}{4}$ "H.....\$280

H.H. SCOTT

675DM 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, CrO₂, and metal tapes; dual fluorescent peak level indicator display; full logic feathertouch 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 control unit available; fast forward/rewind time 80 sec (C-60). Wow and flutter 0.045% wrms; frequency response ± 3 dB 25-16,000 Hz (normal), to 17,000 Hz (CrO₂), to 18,000 Hz (metal); S/N 66 dB with Dolby, metal tape; input sensitivity 3 mV (mic), 100 mV (line); op-

tional 19-in rack mount; 4 $\frac{1}{2}$ "H \times 17 $\frac{1}{2}$ "W \times 10 $\frac{1}{2}$ "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

SHARP

RT-32 Stereo Cassette Deck

Stereo cassette deck with Dolby noise-reduction system, soft-touch controls, 9-position Auto Program Locate Device (APLD) and indicators. Features normal/CrO₂/metal tape capability; Sharpscan 16-LED, two-color peak level display; dual-concentric record-level controls; full automatic stop; damped eject; mic/line input selector; hard Permalloy record and triple-gap erase heads; digital tape counter; 16 $\frac{1}{2}$ "W \times 8 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "H.....\$210
RT-31. Similar to RT-32 but with Auto Program Search System instead of APLD.....\$190

RT-30 Cassette Deck

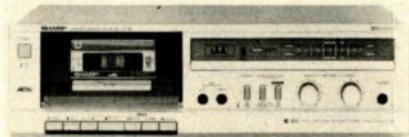
Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronic-controlled dc motor, and hard permalloy record/play and ferrite erase heads. Features auto program search system in fast forward or rewind; Sharpscan peak-level display; bias and equalization for normal, CrO₂, 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 (CrO₂ and FeCr), to 17,000 Hz (metal) S/N 66 dB with Dolby; 5 $\frac{1}{2}$ "H \times 16 $\frac{1}{2}$ "W \times 9 $\frac{1}{2}$ "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, electronic tape counter, and time counter; bias and equalization for normal, CrO₂, 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 $\frac{1}{2}$ "H \times 15 $\frac{1}{2}$ "W \times 8 $\frac{1}{2}$ "D.....\$190

RT-12 Stereo Cassette Deck

Stereo cassette deck with Dolby noise-reduction system, metal-tape capability, and Auto Program Search System (APSS). Features soft-touch transport controls; Sharpscan 10-LED



peak level indicator; independent left/right record level controls; full auto stop; line/mic selector; hard Permalloy record and triple-gap ferrite erase heads; damped eject; tape counter; 15 $\frac{1}{2}$ "W \times 8"D \times 4 $\frac{1}{2}$ "H.....\$160

RT-10 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, electronic-controlled dc motor, and hard permalloy record/play and ferrite erase heads. Features LED peak level display; tape selector for normal, CrO₂, 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 (nor-

mal), to 16,000 Hz (metal); S/N 62 dB with Dolby; silver finish; 5 $\frac{1}{2}$ "H \times 15 $\frac{1}{2}$ "W \times 8 $\frac{1}{2}$ "D.....\$130

SONY

TC-K77 Stereo Cassette Deck

Reference Standard three-head deck with Sendust and ferrite Independent Suspension record and play heads and ferrite erase head. Metal-tape capable; quartz-locked direct-drive closed-loop dual-capstan transport; feather-touch solenoid transport controls; fine tuning controls for bias and level trim with built-in test-tone generators; electronic metering system for professional-grade display of recording levels; automatic/manual peak reset; digital linear "real-time" tape counter for accurate count even in fast-forward and reverse modes. Wow and flutter 0.025% wrms; frequency response ± 3 dB 20-20,000 Hz types III and IV, to 18 kHz types I and II; S/N 60 dB A weighted with Dolby off; 17 $\frac{1}{2}$ "W \times 15 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "H.....\$950
RM-50. Wired remote control.....\$55
RM-80. Wireless infrared remote control.....\$120
RM-65. Recording synchronizer for use with selected Sony turntables.....\$25
MX-1000. Low-noise microphone amplifier/mixer for mixing four channels down to two.....\$300

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, CrO₂, 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; autospace 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 ± 3 dB 30-17,000 Hz (metal and FeCr), to 16,000 Hz (CrO₂), to 15,000 Hz (normal); S/N 59 dB with FeCr tape, Dolby off (IHF A weighted); 6 $\frac{1}{2}$ "H \times 17" W \times 12 $\frac{1}{2}$ "D.....\$600

TC-K81 Stereo Cassette Deck

Three-head, front-loading, metal-compatible stereo cassette deck with Dolby noise-reduction system, BSL servo capstan, and dc reel motors. Features separate independent-suspension Sendust/ferrite record and play heads; four-gap ferrite-and-ferrite erase head; separate bias and EQ slide controls for normal, FeCr, CrO₂, and metal tapes with bias and separate left/right record calibration (8kHz/400 Hz) controls for all tape types; dual 16-segment peak-reading bargraph display with manual/auto peak-hold reset buttons and bias/rec-level calibration switch; auto play after fast forward/rewind or memory rewind; IC logic transport controls; auto space rec mute; line/out phones level control; timer record/play with external timer. Wow and flutter 0.04% wrms; frequency response ± 3 dB 20-18,000 Hz FeCr and metal, to 17 kHz CrO₂, to 15 kHz normal; S/N 60 dB A weighted with FeCr tape, Dolby off; fast-forward/rewind time 80 sec with C-60 cassette; 17" W \times 11 $\frac{1}{2}$ "D \times 5 $\frac{1}{2}$ "H.....\$580
TC-K71 Same as TC-K81 but without built-in test oscillators; features bias fine adjust for type I tape.....\$450

TC-FX7 Slimline Cassette Deck

Ultraslim design nearly the height of a standard cassette tape with new direct-drive quartz-

locked magnedisc servo system. Features BSL two-motor transport; Sendust-and-ferrite record play head; metal-type compatibility; linear "real-time" counter that indicates actual tape time even in fast forward and rewind; peak program meters with hold capability; rewind-auto-play; memory rewind; timer operation. Wow and flutter 0.05% wrms; frequency response ± 3 dB 30-14,000 Hz type I; S/N 59 dB with type III and IV tape, Dolby off; $17\frac{1}{2}$ "W $\times 13\frac{1}{8}$ "D $\times 3\frac{1}{8}$ "H \$550

TC-FX6C Stereo Cassette Deck

Cassette deck with Sendust-and-ferrite record/play head, new Dolby C and B noise-reduction



system, BSL transport with two motors. Features metal-tape capability, feather-touch solenoid-logic transport controls; auto-space rec mute; timer standby operation; linear "real-time" tape counter; playback with memory function; AMS; repeat play; auto play; switchable FM MPX filter; headphone level control; peak program meters with hold capability; full-function RM-50 and RM-80 remote-control option and turntable sync RM-65 option; $17\frac{1}{2}$ "W $\times 10\frac{1}{8}$ "D $\times 4\frac{1}{4}$ "H \$420

TC-FX6. Similar to TC-FX6C except only Dolby B noise-reduction system \$380

TC-FX5C Stereo Cassette Deck

Stereo cassette deck with Sendust-and-ferrite record/play head, new Dolby B and C noise-reduction system. Features two-motor dc-servo transport; metal-tape compatibility; feather-touch solenoid-logic transport controls; auto play; switchable FM MPX filter; RM-50 and RM-80 remote-control and RM-65 turntable sync options; $17\frac{1}{2}$ "W $\times 10\frac{1}{8}$ "D $\times 4\frac{1}{4}$ "H \$350

TC-FX4 Stereo Cassette Deck

Two-motor dc-servo transport recorder with Sendust record/play head, Dolby B noise-reduction system, and metal-tape capability. Features feather-touch solenoid-logic transport controls; auto-space rec mute; timer standby operation; peak program meters with hold capability; $17\frac{1}{2}$ "W $\times 9\frac{1}{8}$ "D $\times 4\frac{1}{4}$ "H \$250

TC-FX2 Stereo Cassette Deck

Stereo deck with SD record/play head, two-motor dc-servo transport, Dolby B noise-reduction system, and metal-tape capability. Features four-position tape selector; soft-touch transport controls; timer standby operation; twin VU meters with LED peak indicator; $17\frac{1}{2}$ "W $\times 9\frac{1}{8}$ "D $\times 4\frac{1}{4}$ "H \$190

TC-D5M Portable Cassette Deck

Lightweight, metal-compatible stereo cassette deck specially designed for high-quality field recording with anti-roll transport for stable recording on the run. Features Dolby noise-reduction system; coreless motor with FG servo control and dc-to-dc converter power supply; Sendust-ferrite record/play head; dual VU meters with LED peak indicator; switchable limiter; monitor level control; low-impedance microphone input; line inputs and outputs; stereo headphone jack with level control; 4-hour operation on two D cells; $9\frac{1}{8}$ "W $\times 6\frac{1}{8}$ "D $\times 1\frac{1}{8}$ "H; 13 lb 2 oz \$780

AC-61. AC adaptor \$35
LC-D5. Carrying case \$30
DR-M5. Fold-up high-efficiency headphones...\$65

TC-PB5 Playback-Only Deck

Stereo playback-only cassette deck with

Sendust and ferrite head, 2-motor dc-servo transport, Dolby noise-reduction system. Features solenoid logic feather-touch controls; 2-position tape selector, including metal; random music sensor; mic mixing; headphone level controls; dubbing capability with selected Sony tape decks using optional RM-65. 7 lb 12 oz \$220

Limited-Edition Audio Lab Series

TC-K88B Stereo Cassette Deck

Power-loading, metal-compatible stereo cassette deck with Dolby B 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 four-position tape selector; auto music sensor system; LCD peak-reading meter display with auto/manual peak-hold reset buttons; auto stop, play; auto-space rec mute; feather-touch transport controls; punch-in recording; tape-remaining scale; optional remote-control provision; dc head/playback amplifier. Wow and flutter 0.003% wrms; frequency response ± 3 dB 30-17,000 metal and FeCr, to 16 kHz CrO₂, to 15 kHz normal; S/N 60 dB with FeCr, Dolby off; fast forward/rewind time 60 sec with C-60 cassette; $18\frac{1}{8}$ "W $\times 15\frac{1}{8}$ "D $\times 3\frac{1}{8}$ "H \$1200

wireless remote control available. Frequency response 20-20,000 Hz ± 3 dB; S/N 70 dB ("A" weighted); anodized matte black finish; $4\frac{1}{8}$ "H $\times 18\frac{1}{8}$ "W $\times 8\frac{1}{8}$ "D \$995

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 ± 3 dB; THD 3.0% (metal), 2.0% (ferric and chrome); S/N with metal tape 68 dB (IECA); 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); $4\frac{1}{8}$ "H $\times 18\frac{1}{8}$ "W $\times 8\frac{1}{8}$ "D \$850

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

TCD 3004 Cassette Deck

Two-motor, logic-controlled transport. Features cue and record mute; peak-reading equalized meters; Dyneq® and Actilinear® headroom extension systems; instant-access loading. Dust cover for cassette compartment optional. Accommodates metal tape. Frequency response 10-20,000 Hz ± 3 dB \$600

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 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 ± 3 dB (CrO₂), 31.5-16,000 Hz ± 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; $6\frac{1}{8}$ "H $\times 19\frac{1}{8}$ "W $\times 13\frac{1}{8}$ "D \$1350

C-3RX Stereo Cassette Deck

Cassette deck with built-in dbx noise-reduction system and 3-head, 2-motor transport. Features

double dbx NR system; tape/source monitor selector; Dolby noise-reduction system; 3-step independent bias and EQ selectors; built-in timer function; memory play/stop; independent input level controls; independent output level control; adjustable bias/record calibration; optional rack-mount kit, remote controller, test-tone oscillator. Wow and flutter 0.04% NAB weighted; frequency response 20-20,000 Hz metal, to 19 kHz CrO₂/CO, to 16 kHz normal tapes; S/N ratio 60 dB NR out, 91 dB dbx on; fast-wind time 100 sec (C-60); power consumption 19 W; 17" W × 11.9" D × 4.9" H; 15.4 lb.....\$690

V-95RX Stereo Cassette Deck

Stereo cassette deck with bidirectional record/play function, 3-head/2-motor transport, and built-in dbx noise-reduction system. Fea-



tures quick-reverse function; Computomatic Program System; block repeat function; 4-digit LED tape counter; LED bar-graph level meter; electric-control output level (up/down, 2-step, slow/fast); L/R balanced output level control; remote-control capability (CPS, start/stop memory capability); timer function capability. Optional accessories include remote-control unit, timer control unit.....\$625

V-3RX Stereo Cassette Deck

Stereo cassette deck with built-in dbx noise-reduction system, CA (cobalt amorphous) head claimed to be twice as good as permalloy, twice as hard as Sendust heads. Features block repeat function; LED tape counter; Dolby noise-reduction system; 3-step bias/EQ selector; memory-stop function; peak level meter; timer record/play and rec mute functions. Optional accessory, RC-320 timer control. Wow and flutter 0.03% NAB weighted; frequency response 20-20,000 Hz metal, to 19 kHz CrO₂/CO, to 17 kHz normal tapes; S/N ratio 60 dB no NR, 92 dB dbx on; fast-wind time 90 sec (C-60); power consumption 14 W; 17.2" W × 10.3" D × 4.4" H; 19.8 lb.....\$470

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 CrO₂ 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 (CrO₂); 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 × 16 1/8" W × 11 1/2" D.....\$450

V-7 Stereo Cassette Deck

Stereo cassette deck with 3-head, feather-touch logic-control transport. Features block repeat function; LED digital tape counter; Dolby noise-reduction system; tape/source monitor selector;

mechanical tape-tension servo function; rec mute; auto spacer; 3-step bias/EQ selectors; memory-stop function; timer capability; output level control; remote-control capability. Optional accessories include RC-90 remote-control unit and RC-320 timer unit. Wow and flutter 0.04% NAB weighted; frequency response 30-20,000 Hz metal, to 18 kHz CrO₂/CO, to 16 kHz normal tapes; S/N ratio 60 dB no NR, 70 dB Dolby on; fast-wind time 100 sec (C-60); power consumption 19 W; 17" W × 11.9" D × 4.9" H; 15.4 lb.....\$430

V-9 Cassette Deck

Front-loading deck has Electroload head loading system that smoothly and gently loads and retracts the heads using a dedicated motor everytime transport controls are touched. Three-head deck features pushbutton selection of normal, CrO₂, metal bias and equalization; Dolby noise-reduction system; separate left- and right-channel peak-reading incandescent-type VU "Spectro-Meters" that are color coded to indicate recording and playback levels; logic-controlled transport; fullview cassette window; rec mute; timer control. Wow and flutter 0.04% wrms; frequency response 30-20,000 Hz metal, to 19 kHz CrO₂, and to 17 kHz normal tape; S/N ratio 59 dB weighted with metal tape, Dolby out; fast-wind time for C-60 cassette 90 seconds; 16 1/4" W × 10 1/8" D × 4 1/8" H; 12 lb 2 oz.....\$399

CX-400 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc servo-motor, and three heads. Features bias and equalization selectors for normal, CrO₂, 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 1/8" H × 16 1/8" W × 11 1/8" D.....\$340

V-50 Stereo Cassette Deck

Stereo cassette deck with Dolby noise-reduction system, built-in condenser microphone, and metal-tape capability. Features 3-step bias/EQ selector; LED bar-graph signal-level meter; output level control; input level controls; line/mic/built-in mic input selector; rec mute; rec/play timer standby function. Wow and flutter 0.06% NAB weighted; frequency response 30-17,000 Hz metal and CrO₂/CO, to 15 kHz normal tapes; S/N ratio 57 dB no NR, 67 dB Dolby on; distortion 1.0% at 400 Hz; fast-wind time 110 sec (C-60); 17" W × 10" D × 4.3" H; 12 lb.....\$270

V-40. Similar to V-50, including microswitch soft-touch transport control, but less built-in microphone and output level control.....\$240

V-30 Stereo Cassette Deck

Stereo cassette deck with Dolby noise-reduction system and Brilliant switch for improving frequency response. Features LED bar-graph level meter; 3-step bias/EQ selector (includes metal-tape capability); timer record/play function. Wow and flutter 0.06% NAB weighted; frequency response 30-17,000 Hz metal and CrO₂/CO, to 15 kHz normal tapes; S/N ratio 57 dB no NR, 67 dB Dolby on; distortion 1.0%; fast-wind time 110 sec (C-60); 17" W × 10" D × 4.3" H; 12 lb.....\$210

TECHNICS

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, CrO₂, and metal tapes with bias fine adjust; microprocessor tape counter with memory play/rewind/stop; optional RP-9690-P or RP-070 remote control unit available; black metal cabinet.....\$1400

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 autostop; 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 (CrO₂ 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 1/8" H × 19" W × 15 1/8" D.....\$520

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, CrO₂, 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 (CrO₂ 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 1/8" H × 11 1/8" W × 9" D.....\$750

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, CrO₂, 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, CrO₂ 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.....\$330

RS-M04A. Same as RS-M04 except 110, 125, 220, 240 V operation.....\$335

RS-M07 Cassette Deck

Soft-touch, auto-tape-select stereo cassette deck with Dolby noise-reduction system and analog-type signal-level meters. Features MX record/playback and double-gap ferrite erase heads; automatic mic/line selection; precision-calibrated VU meters; separate left and right input-level controls; single-touch recording; full auto stop; oil-damped soft load/unloading; re-

movable cassette-well door. Wow and flutter 0.048%; frequency response 20-18,000 Hz metal and CrO₂, to 17 kHz normal tape; S/N ratio 67 dB Dolby on, 57 dB Dolby off; fast-forward/rewind time 90 sec (C-90); power consumption 10 W; 11¹/₁₆"W × 9¹/₁₆"D × 4¹/₈"H; 7 lb 11 oz.....\$250

dbx® Cassette Decks

RS-M270X Cassette Deck

Stereo cassette deck with dbx and Dolby noise-reduction systems built in, direct-drive capstan, and soft-touch solenoid transport controls. Features peak-hold fluorescent level displays; rec mute, metal/FeCr/CrO₂/normal tape selector, and mic/line switches; timer-assisted record/playback; rewind auto play; cue and re-



view; output level control; full auto-stop transport; oil-damped cassette loading/unloading; removable cassette well; Sendust record/play head. Wow and flutter 0.035% wrms; frequency response ±3 dB 30-17,000 Hz metal, to 16 kHz FeCr and CrO₂, to 15 kHz normal tape; S/N ratio 92 dB dbx in, 68 dB beyond 5 kHz Dolby in, 58 dB Dolby out (all peak A weighted using CrO₂ tape); dynamic range 110 dB at 1 kHz using dbx; fast-forward/rewind time 85 sec (C-60); power consumption 40 W; 16¹/₈"W × 13¹/₈"D × 3¹/₈"H; 15 lb 7 oz.....\$500

RS-M240X. Similar to RS-M270X except S/N 91 dB with dbx, 67 dB with Dolby; wow and flutter 0.048%; frequency response to 18 kHz metal and CrO₂, to 17 kHz normal tape; no remote-control option; no output level control; 9¹/₁₆"D × 4¹/₈"H; 10 lb 2 oz.....\$350

Spectra Series Decks

RS-M260 Cassette Deck

Stereo cassette deck with Dolby noise-reduction system 3-head, soft-touch transport, and single-motor, 3-belt drive. Features peak-hold fluorescent meters; metal/FeCr/CrO₂/normal tape selector; rewind auto play; timer control; output level control; cue and review; full auto stop; rec mute; single-touch recording; tape/source monitor switch; removable cassette-well door; front cassette loading. Wow and flutter 0.05% wrms; frequency response ±3 dB 25-19,000 Hz metal, to 18 kHz FeCr and CrO₂, to 16 kHz normal tape; S/N ratio 67 dB Dolby on, 57 dB Dolby off; fast-forward/rewind time 90 sec (C-90); SX (Sendust Xtra) record and play and Sendust/ferrite double-gap erase heads; power consumption 16 W; 16¹/₈"W × 11¹/₁₆"D × 4¹/₈"H; 11 lb 3 oz.....\$380

RS-M260A. Same as RS-M260 except 110, 125, 220, 240 V operation.....\$390

RS-M250 Cassette Deck

Microprocessor-controlled stereo cassette deck with digital tape counter, logic-controlled transport, and fluorescent peak-hold meters. Features Dolby in/out, MPX filter, line/mic input, and counter-reset switches; metal/FeCr/CrO₂/normal tape selector; 2-motor transport; dual-concentric input-level controls; full auto stop; oil-damped soft loading and ejection; illuminated cassette compartment. Wow and flutter 0.04% wrms; frequency response ±3 dB 30-17,000 Hz metal, to 16 kHz FeCr and CrO₂, to 15 kHz normal tape; S/N ratio 67 dB Dolby on, 57 dB Dolby off; fast-forward/rewind time 80 sec (C-60); SX (Sendust Xtra) record/play and double-gap ferrite erase heads; power consumption 20 W; 16¹/₈"W × 11¹/₂"D × 4¹/₈"H; 11 lb 3 oz.....\$350

RS-M250A. Same as RS-M250 except 110, 125, 220, 240 V operation.....\$360

Standard Series Decks

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, CrO₂, 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, CrO₂, and FeCr), to 15,000 Hz (normal); S/N 67 dB with Dolby; 11.9 cm H × 43 cm W × 27 cm D.....\$420

RP-9624. Wired remote-control box for use with RS-M51 and RS-M24. Rec mute and pause functions.....\$16

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, CrO₂, 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 (CrO₂ 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); 3¹/₈"H × 16¹/₈"W × 13¹/₈"D.....\$375

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.....\$290

RP-9645. Wired remote control unit for RS-M45, RS-M250, and RS-M270X; has full-function tape transport controls.....\$35

RS-M225 Cassette Deck

Spectra Series soft-touch auto-tape select front-loading stereo cassette deck with Dolby noise-reduction system. Features music select and autotape selector; peak-hold fluorescent level meters; single-touch recording; timer-assisted record/playback; cue and review; mic/line and rec mute switches; output-level and dual-concentric input-level controls; oil-damped cassette loading/unloading; removable cassette-well door; MX record/play and double-gap ferrite erase heads. Wow and flutter 0.048% wrms; frequency response ±3 dB 20-18,000 Hz metal and CrO₂, to 17 kHz normal tape; S/N ratio 67 dB Dolby on, 57 dB Dolby off; fast-forward/rewind time 90 sec (C-60); power consumption 28 W; 16¹/₈"W × 9¹/₁₆"D × 4¹/₁₆"H; 9 lb 8 oz.....\$260

RS-M218 Cassette Deck

Stereo cassette deck with Dolby noise-reduction system, peak-hold metering, and auto tape select. Features soft-touch transport controls; fluorescent level meters; MX record/play and double-gap erase heads; separate left and right input level controls; mic/line switch; single-

touch recording; timer-assisted record/play; full auto stop; oil damped cassette load/unload; removable cassette-well door. Wow and flutter 0.05% wrms; frequency response 20-17,000 Hz metal, to 16 kHz CrO₂, to 15 kHz normal; S/N ratio 66 dB Dolby on, 56 dB Dolby off; fast-forward/rewind time 90 sec (C-60); power consumption 12 W; 16¹/₈"W × 8¹/₂"D × 4¹/₁₆"H; 8 lb 13 oz.....\$200

RS-M205 Cassette Deck

Spectra Series stereo cassette deck with metal-tape compatibility, soft-touch transport controls, and dual analog VU meters. Features built-in Dolby noise reduction system; separate left and right input level controls; mic/line switch; oil-damped soft loading and unloading of cassette; removable cassette-well door. Wow and flutter 0.05% wrms; frequency response 20-17,000 Hz metal, to 16 kHz CrO₂, to 15 kHz normal tape; S/N ratio 66 dB Dolby on, 56 dB Dolby off; fast-forward/rewind time 90 sec (C-60); MX record/play and double-gap ferrite erase heads; power consumption 10 W; 16¹/₈"W × 8¹/₂"D × 4¹/₁₆"H.....\$165

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 ease heads. Features bias and equalization selectors for normal, CrO₂, 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; 4³/_{8"H × 16¹/₁₆"W × 11"D.....\$400}

PC-X33 Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system with multiplex filter. Features IC logic feathertouch 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 ±3 dB; S/N 60 dB (metal, Dolby off); 16¹/₈"W × 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 ±3 dB with metal; S/N 60 dB (metal, Dolby off); 4³/₈"H × 16¹/₁₆"W × 11"D.....\$250

PC-G2 Cassette Deck

Two-motor solenoid-operated stereo cassette deck with metal-tape capability. Features Dolby-B noise-reduction system; peak-reading LED signal-level meters; timer function in record and play; 4-position tape selector. Wow and flutter; frequency range 25-18,000 Hz; S/N ratio 68 dB Dolby on; 16.6" W × 11" D × 4.3" H; 11 lb.....\$220

(continued on next page.)

PC-X15 Cassette Deck

Front-loading, metal-compatible stereo cassette deck with Dolby noise-reduction system and multiplex filter. Features include twin 11-segment peak-reading LED "meters," dual concentric level controls, cue/review tape transport, dc servo motor, super-hard Aurex permalloy and Aurex ferrite heads, and three-position tape-select switch. Wow and flutter 0.05% wrms; frequency response 25-18,000 Hz with metal tape; S/N 68 dB with Dolby on; THD 0.09% with metal tape at 400 Hz, 0 dB; input level/impedance 0.25 mV/600 ohms mic, 70 mV/50k ohms line; $16\frac{1}{16}$ "W \times $10\frac{1}{16}$ "D \times $4\frac{1}{16}$ "H \$200

PC-X10M Cassette Deck

Front-loading metal-compatible stereo cassette deck with Dolby noise-reduction system, dc servo-motor, 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 ± 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 mV/600 ohms (mic), 100 mV/50k ohms (line); $5\frac{1}{16}$ "H \times $16\frac{1}{16}$ "W \times $8\frac{1}{16}$ "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 ± 3 dB; S/N 68 dB with Dolby, metal tape; $4.2\frac{1}{16}$ "H \times $10\frac{1}{16}$ "W \times $8.4\frac{1}{16}$ "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 ± 3 dB; S/N 60 dB without Dolby, metal tape; $4.2\frac{1}{16}$ "H \times $10\frac{1}{16}$ "W \times $8.4\frac{1}{16}$ "D \$270

PC-D10B. Matte black version of PC-D10 ... \$280

UHER by WALTER ODEM**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, CrO₂ and FeCr), 65 dB (Dolby on, Fe₂O₃); 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 $2\frac{1}{2}$ " \times $7\frac{1}{4}$ " \$1489

CR-240AV. Audio-visual version of CR-240 \$1576

**VECTOR RESEARCH****VCX-800 Cassette Deck**

Front-loading cassette deck with 3 heads, 2 motors, and dual capstans. Features dbx II, Dolby B and C, and Dolby FM noise-reduction and Dolby HX headroom-extension systems; microprocessor-controlled Compu-counter that automatically selects tape length, shows remaining time in min and sec, and searches for any location on a tape; sweep oscillator that allows adjustment for flattest response; two memory circuits; auto rewind/play; rec mute; feather-touch transport controls. Wow and flutter 0.04%; frequency response ± 3 dB 30-19,000 Hz normal, to 20 kHz CrO₂, to 21 kHz metal tapes; S/N ratio no NR/Dolby B on/Dolby C on 56/65/75 dB; $17\frac{1}{16}$ "W \times $14\frac{1}{16}$ "D \times $5\frac{1}{16}$ "H \$1000

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 ± 3 dB 30-16,000 Hz (normal), to 18,000 Hz (Co/CrO₂), 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; $5\frac{1}{16}$ "W \times $17\frac{1}{16}$ "H \times $14\frac{1}{16}$ "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 ± 3 dB 30-15,000 Hz (normal), to 17,000 Hz (Co/CrO₂), to 19,000 Hz (metal) \$400

VRC-2. Wired remote control for VCX-500/600 \$75

YAMAHA**K-960 Cassette Deck**

High-end deck contains both Dolby and dbx noise-reduction systems (providing up to 30 dB of noise suppression with dbx system). Features Sendust record/playback and double-gap ferrite erase heads; two-motor transport with IC logic control; fluorescent bar-graph meter; continuously adjustable bias control; timer recording

switch; subsonic and MPX filters; low-noise equalizer preamp; focus switch to extend high-end frequency response. Wow and flutter rated at 0.028% wrms \$495

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 bargraph display; LED LH, CrO₂, 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, CrO₂, 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 with external timer; two mic jacks. Wow and filter 0.028% wrms (JIS); frequency response ± 3 dB 30-17,000 Hz (LH), to 19,000 Hz (CrO₂), to 22,000 Hz (metal); S/N 60 dB with CrO₂; 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, CrO₂, and metal tape selection with auto switching between LH and CrO₂ 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 shutdown; 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 ± 3 dB 30-16,000 Hz (LH), to 18,000 Hz (CrO₂), to 19,000 Hz (metal); S/N 60 dB with CrO₂; Dolby off (JIS weighted); input sensitivity/impedance 0.3 mV/5k ohms (mic), 50 mV/100k ohms (line); silver faceplate and wood cabinet; $5\frac{1}{16}$ "H \times $17\frac{1}{16}$ "W \times $12\frac{1}{4}$ "D \$360

K-550 Stereo Cassette Deck

Stereo cassette deck with 2-motor transport, metal-tape compatibility, and direct tape-loading with flip-up mechanism cover. Features low-impedance pure Sendust record/play head; direct mode-to-mode switching; full auto shut-off; Dolby noise-reduction system; full-logic transport controls with remote-control option; one-touch recording; peak level VU-type meters with +3- and +8-dB peak LEDs; CrO₂, metal, and Dolby indicators. Wow and flutter 0.04% wrms; frequency response ± 3 dB 40-16,000 Hz LH, to 18 kHz CrO₂, to 20 kHz metal tape; S/N ratio better than 60 dB with Dolby off, CrO₂

(continued on page 133.)

7

OPEN-REEL TAPE MACHINES

AKAI

GX-747 Open-Reel Deck

Four-track, two-channel auto reverse record/play stereo/mono open reel deck with $10\frac{1}{2}$ " reel capacity and EE tape capability. Features 2-color LED peak-hold meters; full-logic feather-touch transport controls; tape/source monitoring; automatic tension-arm lock system; electronic digital real-time counter with memory function; cue and review; timer record/play capability; auto mute; remote-control capability. Wow and flutter less than 0.03% wrms; S/N ratio better than 65 dB at $7\frac{1}{2}$ ips, DIN 45500 std.; frequency response 25-33,000 Hz ± 3 dB at $7\frac{1}{2}$ ips; distortion less than 0.4% at $7\frac{1}{2}$ ips; $19.4^{\prime\prime}\text{H} \times 17.3^{\prime\prime}\text{W} \times 10.1^{\prime\prime}\text{D}$; 51.2 lb \$1260

1722II Stereo Tape Deck

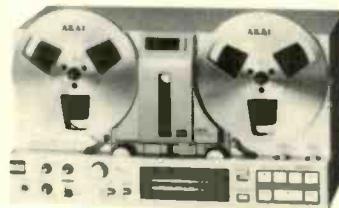
Two-speed ($7\frac{1}{2}$ and $3\frac{3}{4}$ ips), $\frac{1}{4}$ -track, two-channel stereo tape system with record/playback and erase heads and two-speed induction motor; handles up to 7-in. reels. Features low noise/wide range tape selector switch; three-way speaker switch for mute/recording monitor, 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 ($7\frac{1}{2}$ ips), 0.18% rms ($3\frac{3}{4}$ ips); frequency response ± 3 dB at $7\frac{1}{2}$ ips 30-21,000 Hz (wide-range tape), to 18,000 Hz (low-noise), at $3\frac{3}{4}$ ips 40-15,000 Hz (wide range), to 13,000 Hz (low-noise); dist. 2.0% at 1000 Hz; 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/100 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); $14.1^{\prime\prime}\text{H} \times 14^{\prime\prime}\text{W} \times 9.8^{\prime\prime}\text{D}$ \$540

GX-625 Stereo Tape Deck

Two-speed ($3\frac{3}{4}$ and $7\frac{1}{2}$ ips) $\frac{1}{4}$ -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 $10\frac{1}{2}$ 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 $7\frac{1}{2}$ ips; frequency response 30-26,000 Hz ± 3 dB at $7\frac{1}{2}$ ips; S/N 62 dB weighted, with low-noise tape and peak recording level at 3% THD; $17.6^{\prime\prime}\text{H} \times 17.3^{\prime\prime}\text{W} \times 9.5^{\prime\prime}\text{D}$ \$850

GX-77 Open-Reel Tape Deck

Four-track, two-channel auto-reverse record/play stereo/mono 7" open-reel tape deck with EE tape capability. Features 2-color



LED peak-hold meters; full-logic feather-touch transport controls; tape/source monitoring; power loading system; digital electronic real-time counter; fine bias-adjust control; cue and review; timer record/play capability; remote-control capability. Tape speeds $7\frac{1}{2}$, $3\frac{3}{4}$ ips; wow and flutter less than 0.03% wrms at $7\frac{1}{2}$ ips; S/N ratio better than 63 dB at $7\frac{1}{2}$ ips, DIN 45500 std.; frequency response 25-33,000 Hz ± 3 dB at $7\frac{1}{2}$ ips; distortion less than 0.5% at $7\frac{1}{2}$ ips; $17.2^{\prime\prime}\text{W} \times 9.6^{\prime\prime}\text{H} \times 8.9^{\prime\prime}\text{D}$; 37.5 lb \$775

GX-4000D Compact Tape Deck

Contains GX record and playback and separate erase heads and accommodates reels up to 7 in. dia. Features tape/source monitoring; mic/line mixing; sound-on-sound and sound-with-sound; track selector; auto-stop; output level control; VU meters. Tape speeds $7\frac{1}{2}$ and $3\frac{3}{4}$ ips; wow and flutter less than 0.08% rms at 7 ips; frequency response 30-24,000 Hz ± 3 dB at $7\frac{1}{2}$ ips; S/N ratio better than 60 dB weighted at wide range tape setting with peak level at 3% THD; distortion less than 1% at 1 kHz, 0 VU; $17.3^{\prime\prime}\text{W} \times 12.4^{\prime\prime}\text{H} \times 9.1^{\prime\prime}\text{D}$; 29 lb \$450

DENON

DH-510 2-Track Tape Deck

3-motor, 2-speed tape deck with direct-drive capstan and $10\frac{1}{2}$ " reel capacity. Features Direct Tension Servo to constantly maintain tape tension at a specified level; 2-track stereo record/play; rationalized system with rapid response; all aluminum die-cast frame; hard permalloy recording and playback heads and ferrite erase head; wide dynamic range amplifier circuit; continuously variable bias/EQ; IC logic control of transport; rec-mute/pause mechanism; automatic safety switch; timer record/play; remote-control capability; compatibility with low-to-high-impedance headphones; horizontal or vertical operation. Wow and flutter less than 0.025% wrms at 38 cm/sec, 0.03% at 19 cm/sec; frequency response ± 3 dB 30-30,000 Hz at 38 cm/sec, 20-25,000 Hz at 19 cm/sec; S/N ratio more than 66 dB ref. to max recording level (514

nWb/m); more than 58 dB ref. to operating level (200 nWb/m); THD less than 0.5% at 1 kHz; 3rd-harmonic distortion less than 0.1% at 1 kHz using Scotch 250 tape; channel separation more than 50 dB at 1 kHz; input impedance/level 50k ohms unbalanced/0.2 mV min (-72 dB) mic, 100k ohms unbalanced/62 mV min (-22 dB); output impedance/level 100 ohms unbalanced (600 ohms optimum)/755 mV line, more than 8 ohms headphone; power consumption 85 W; $475\text{mmH} \times 455\text{mmW} \times 210\text{mmD}$; 22 kg \$1350

NEAL-FERROGRAPH (USA)

SP7 Tape Recorder

Three-speed (choice of 15, $7\frac{1}{2}$, and $3\frac{3}{4}$ high, $7\frac{1}{2}$, $3\frac{3}{4}$ and $1\frac{1}{2}$ medium, or $3\frac{3}{4}$, $1\frac{1}{2}$, and $1\frac{1}{16}$ low ips) tape recorder with three motors, 250- μ in record, 80- μ in replay, and erase heads; choice of mono full-track or half-track or stereo half-track or quarter-track heads; max. reel capacity $10\frac{1}{2}$ 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% ($7\frac{1}{2}$), 0.17% ($3\frac{3}{4}$), at medium speed 0.08% ($7\frac{1}{2}$), 0.15% ($3\frac{3}{4}$), 0.2% ($1\frac{1}{2}$), at low speed 0.15% ($3\frac{3}{4}$), 0.2% ($1\frac{1}{2}$), 0.4% ($1\frac{1}{16}$); frequency response 30-20,000 Hz ± 2 dB (15), 30-17,000 Hz ± 2 dB ($7\frac{1}{2}$), 40-14,000 Hz ± 3 dB ($3\frac{3}{4}$), 50-7000 Hz ± 3 dB ($1\frac{1}{2}$), 60-3000 Hz ± 3 dB ($1\frac{1}{16}$); S/N 60 dB ($\frac{1}{2}$ track, Dolby out), 58 dB ($\frac{1}{4}$ track, Dolby out); $16\frac{1}{2}^{\prime\prime}\text{H} \times 18\frac{3}{4}^{\prime\prime}\text{W} \times 10^{\prime\prime}\text{D}$.

SP7A1. Mono line in/line out.....	\$1707
SP7A3. Mono line in/line out with mic.....	\$1993
SP7A2. Stereo line in/line out.....	\$1850
SP7A4. Stereo line in/line out with mic.....	\$2279
Balanced lines (per channel).....	\$357
Power amp and speaker (per channel).....	\$214
Cannon XLR sockets (per channel).....	\$71
Rack-mounting brackets.....	\$214

OTARI

MX-5050-B Stereo Tape Recorder

Two-channel $\frac{1}{2}$ -track ($\frac{1}{4}$ -track reproduce) three-speed (internally switchable pairs of 15 and $7\frac{1}{2}$ ips or $7\frac{1}{2}$ and $3\frac{3}{4}$ ips) compact professional tape recorder with variable three-speed ($\pm 7\%$) dc servo capstan and two induction torque reel motors and four plug-in rugged Permalloy head stacks ($\frac{1}{2}$ track erase, record and reproduce and $\frac{1}{4}$ -track reproduce); handles 10- $\frac{1}{2}$ -in EIA or NAB reels and 5- or 7-in plastic reels; $\frac{1}{2}$ in tape. Features dual VU meters with +9-dB peak-reading LEDs; adjustable bias; record equalization for high and low speeds for each channel; two-speed operation button in

7

OPEN-REEL
TAPE MACHINES

speed pairs; four-digit tape counter with reset and selection locator memory that recues machine to zero setting; cue control; selective reproduce; TTL-IC edit control; logic noise-free punch-in/punch-out record; motion-sensing play mode directly from fast forward or rewind; fixed output level control; two line/mic input level controls; LED flashing record; built-in 1000-Hz test oscillator; rewind time 90 sec for 2500-ft reel. Wow and flutter (NAB weighted) 0.05% (15 ips), 0.06% (7½ ips), 0.01% (3¾ ips); frequency response ±2 dB 30-22,000 Hz (15 ips at 0 VU), 25-20,000 Hz (7½ ips at -10 VU), 30-12,000 Hz (3¾ ips at -10 VU); dist. 1.0% at 1000 Hz, 250 nWb/m; S/N (weighted) 65 dB (15 and 7½ ips), 64 dB (3¾ ips); crosstalk 55 dB at 1000 Hz on adjacent tracks; line inputs 15 dBm, 50k ohms unbalanced and 600 ohms balanced; mic input -70 dBm, 50k ohms unbalanced; line output 4 dBm/-10 dBm (fixed level, switch selectable); max. output +28 dBm; headroom +24 dBm before clipping; load impedance 600 ohms balanced, output impedance 50 ohms balanced; headphone jack -24 dBm, 8-ohm impedance; standard 3-pin XLR connector. Includes 10½-in NAB reel, precision hold down knob, and NAB reel shims; vinyl wooden cabinet; vertical or horizontal operating position; 21½" H × 21½" W × 8½" D.....\$2295

4/8 Channel

Mark II Four-Channel Recorder

Incorporates features of MX-5050 plus separately packaged transport and electronics, dc capstan servo with pitch control, plug-in electronics complete accessibility to electronics adjustments, and interface jack for adding dbx or Dolby noise-reduction system; tape speeds 15 and 7½ ips; three four-track heads in line stacks for erase, record, reproduce; wow and flutter 0.05% at 15 ips, 0.06% at 7½ ips; frequency response 50-20,000 Hz ±2 dB, 35-25,000 Hz ±3 dB (15 ips at 0 VU), 50-18,000 Hz ±2 dB, 40-20,000 Hz ±3 dB (7½ ips at -10 dB); 600-ohm balanced output; 10½ in NAB reels; ½-in tape, 0.075-in track width; 25¼" × 19" standard rack mount.....\$3895

Two-Channel. Same as Mark II but uses ¼-in tape; will handle 5- and 7-in plastic reels or 10½-in EIA or NAB; 21¼" × 19" standard rack mount.....\$2495

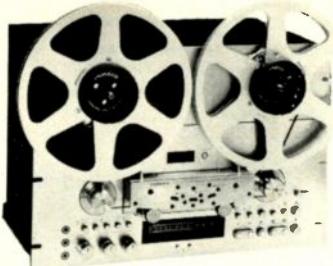
OF5050BQ Series II Recorder

Four-channel, ¼-in. recorder has motion-sensing control logic, variable-speed dc capstan servo motor, built-in test and cue oscillator, and plug-in head assembly. Features 15 and 7½ ips speeds; selective reproduce; easily accessible electronics adjustments; proprietary microprocessor to govern transport logic; electronic real-time counter with numeric LED display; automatic monitor switching; selectable 20-dB mic input attenuator; selectable track headphone monitoring; peak-reading indicators on each channel; separate mic/line mixing on each channel.....\$2995

PIONEER

RT-909 Stereo Tape Deck

Two-speed (3¾ and 7½ ips), ¼-track, three-motor, four-head stereo tape deck; FG dc servo dual-capstan motor and two six-pole inner rotor reel motors; accepts both 10½- and 7-in reels. Features two-step bias and equalization selector with variable bias; Fluroscan 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 in-put level controls; output level control. Wow and flutter 0.04% at 7½ ips, 0.08% at 3¾ ips; frequency response 20-28,000 Hz ±3 dB (7½ ips), 20-18,000 Hz ±3 dB (3¾ ips); S/N 60 dB (7½ ips), 55 dB (3¾ ips); 13¾" H × 18¾" W × 12½" D.....\$895

RT-707 Stereo Tape Deck

Auto-reverse playback stereo reel to reel tape deck; two speed (3¾ and 7½ ips); speed accuracy ±0.5%; three-motor, four-head, ¼-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 (7½ ips), 0.08% wrms (3¾ ips); S/N 58 dB; dist. 1% max. (7½ ips); fast rewind 100 sec (7-in reel); frequency response 30-24,000 Hz ±3 dB (7½ ips), 30-16,000 Hz ±3 dB (3¾ ips); crosstalk -50 dB; channel separation 50 dB; pitch control ±6% (playback only); 9½" H × 18²³/₃" W × 14¹/₃" D.....\$695

SONY

TC-766-2 Open-Reel Deck

Half-track stereo record/playback with ¼-track playback option. Features Ferrite-and-Ferrite discrete 4-head design; patented dc head/playback FET amplifier; 3-motor ac servo closed-loop, dual-capstan tape drive system; 15 and 7½ ips tape speeds with electronic speed change and tension regulation system; feather-touch IC logic transport controls; punch-in recording; 10½" reel capability; RM-30 remote-control unit. 20¾" H × 17½" W × 9½" D; 85 lb 7 oz.....\$1350

TC-765 Open-Reel Deck

Quarter-track stereo record playback deck with Ferrite-and-Ferrite tape heads and 7½- and 3¾-ips speeds. Features discrete 3-motor ac servo closed-loop, dual-capstan tape drive system; electronic speed change and tension regulation system; feather-touch IC logic transport controls; punch-in recording; 10½" reel capacity. RM-30 remote-control unit optional. 20¾" H × 17½" W × 9½" D; 58 lb 7 oz.....\$1250

TC-399 Open-Reel Deck

Quarter-track stereo record/playback deck with Ferrite-and-Ferrite heads in three-head design and head/playback amplifier. Features ac induction motor drive system; 7½, 3¾, and 1¾ ips tape speeds; servo back-tension device; scrape flutter filter; all-mode automatic stop; 7" reel capacity. 17¼" H × 16¾" W × 7½" D; 27 lb 13 oz.....\$520

STUDER/REVOX

B67 Mark II Stereo Tape Recorder

Three-speed (choice of 3¾, 7½, and 15 ips or 7½, 15, and 30 ips) two-channel tape recorder with three servo-controlled ac motors; designed for professional use. Electronics console fea-

tures 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 .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 × 19" W × 10.5" Dfrom \$3910

B77 Stereo Tape Recorder

Two-speed (choice of 3¾ and 7½ ips, 7½ and 15 ips, 1½, and 1¾ ips, or 1¾ and 3¾ ips) stereo tape recorder with three motors; reel capacity 10½ 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/IEEE 193-1971) 0.06% (15 ips), 0.08% (7½ ips), 0.1% (3¾ ips); frequency response +2/-3 dB 30-22,000 Hz (15 ips), to 20,000 Hz (7½ ips), to 16,000 Hz (3¾ ips); S/N on ¼-track 63 dB (15 ips and 7½ ips), 60 dB (3¾ ips), on ½-track 67 dB (15 and 7½ ips), 64 dB (3¾ 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 × 17.8" W × 8.14" D.....\$1649

B77 Self Sync. Same as B77; available in 3¾ and 7½ ips or 7½ and 15 ips speeds with playback possibility from record head.....\$1749

B77 Autostart. Same as B77 except with VOX control.....\$1899

B77 Slide Sync. Same as B77 except with additional head for slide projector control.....\$1799

PR99 Stereo Tape Dec

Two-speed (15/7½ or 7½/3¾ ips) half-track stereo recorder with direct-drive, servo-controlled capstan and electrically-controlled reel motors; 10½-in. reel capacity. Features balanced (XLR) line-in/out and switched cal/uncal level settings; high- or low-impedance microphone input (balanced, XLR option); 2-way Self-Sync with complete tape editing facilities including tape dump; logic-controlled transport; true VU meters with LED peak indicators; tape/source monitoring; safe/ready record switches; 4-digit tape counter; manual/remote-control/fader-start operation. Wow and flutter (DIN) 0.06% at 15 ips, 0.08% at 7½ ips, 0.1% at 3¾ ips; frequency response +2/-3 dB 30-22,000 Hz at 15 ips, 30-20,000 Hz at 7½ ips, 30-16,000 Hz at 3¾ ips; S/N 66 dB

at 15 and 7½ ips, 63 dB at 3¾ ips; case or 19-in. rack mount; 19" W × 15.7" H × 7.9" D.....\$2095

TANDBERG

TD20A "Baron" Open-Reel Deck

Features Actilinear recording system; active transconductance 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:

7½ and 3¾ ips; ¼-track \$1295
15 and 7½ ips; ¼-track \$1295
15 and 7½ ips; ½-track \$1295

TD20A SE. Similar to TD20A except black-on-black styling; new record equalization curves allow 80-dB or better S/N without noise reduction system (EQ switchable to NAB standard); Dyneq® and Actilinear® headroom extension systems; phase corrected circuitry for pinpoint imaging.....\$

Series 15 Open-Reel Recorder

Three-speed (7½, 3¾, 1½ ips) mono record/play open-reel recorder; wow and flutter 0.1% at 7½ ips; frequency response 40-18,000 Hz ±2 dB at 7½ 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; 6¾" H × 13¾" W × 11¾" D.

1521F. ¼-track or ½-track; includes foot control \$750
1521. 1521F without foot control \$650

TASCAM by TEAC

80-8 Recorder/Reproducer

½-in, 8-tracks; will take up to 10½-in reels NAB hub only; 15 ips and 7½ 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 O 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. O VU; overall THD 3.0% at 10 dB above O VU; crosstalk greater than 45 dB at 400 Hz; 21" H × 17½" W × 12" D.....\$3900

40-4 Recorder/Reproducer

Four-track, ½-in recorder/reproducer; will take up to 10½-in reels NAB hub only; 15 and 7½

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% rms 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 (7½ ips); S/N 63 dB weighted, 58 dB unweighted at 15 ips, 65 dB weighted, 60 dB unweighted at 7½ ips; overall dist. 1% at 400 Hz, 0 VU at 9 dB; crosstalk greater than 50 dB at 400 Hz; 21" H × 17½" W × 12" D.....\$2100

35-2B Studio Series Recorder

Half-track ¼" recorder with 10½" reel capacity, capable of playing back ¼-track tapes with optional head. Has built-in dbx® Type I noise-reduction system. Features dc-servo controlled capstan and induction reel motors; touch-button logic control system with motion-sensing direct mode changes; four high-density Permaflux heads; ±6% range speed pitch control; punch-in recording; cueing and editing functions; flip-up head cover; six-step bias selector and variable EQ control; source/cal/output monitor switch; independent left and right input and output level controls; wide-excursion VU meters with peak LED indicators; separate transport and electronics packages. Tape speeds/accuracy 15 ips/0.05%, 7½ ips/0.08% peak IUEC/ANSI weighted; frequency response 40-22,000 Hz ±3 dB at 15 ips, 0 VU (40-20,000 Hz at 7½ ips); THD 0.8% at 0 VU, 1 kHz, 185 nWb/m; S/N ratio 92 dB A weighted (NAB) with dbx on at both speeds; record/playback amplifier headroom better than 23 dB above 0 VU; 18½" W × 16½" H × 10½" D transport, 18½" W × 9¾" H; 86 lb combined weight.....\$1990

Creative Series

22-4 Recorder/Reproducer

Four-channel system offers 7" reel capacity and 15 and 7½ ips recording/playback capacity. Features mixer interface; function and output select; punch-in recording; removable head housing; logic-controlled transport functions; headphone monitor selectors; expanded-scale VU meters; independent level controls; memory stop function; pitch control (±6% range); manual cueing. dbx® Type I interface optional. Tape format ¼"; tape speeds 15 and 7½ ips ±0.5%; frequency response 40-22,000 Hz at 15 ips, 40-16,000 Hz at 7½ ips, both ±3 dB at 0 VU; THD 1.0% at 0 VU, 1 kHz, 185 nWb/m; S/N ratio 61 dB at 15 ips, 60 dB at 7½ ips A weighted (NAB) (increases to 88 dB in both cases with dbx); headroom for recording/playback amplifiers 23 dB above 0 VU; 16½" W × 16½" H × 10½" D; 40 lb.....\$1425

32-2B Recorder/Reproducer

Two-speed (15 and 7½ ips) two-track two-channel ¼-in recorder/reproducer with FG servo capstan and two dc solenoidless reel motors and three heads; 10½-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% (7½ ips); frequency response ±3 dB at 0 VU 40-20,000 Hz (15 ips), to 18,000 Hz (7½ 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; 17½" H × 17" W ×

10½" D.....\$1300

22-2 Half-Track Recorder/Reproducer

Three-motor, three-head ¼" tape recorder/reproducer that accepts 7½" reels and operates at 15 or 7½ ips. Features expanded-scale -2 to +5 dB VU meters; independent monitor and record ready controls for



each channel; mic/line mixing; detachable head housing; precision moulded reel tables and spring-loaded reel holders. Fully independent electronics permit source or tape monitoring and record or reproduce mode to be selected independently for either track. Wow and flutter 0.07% peak DIN/IEC/ANSI weighted at 15 ips, 0.04% rms JIS/NAB weighted at 15 ips (0.09% and 0.05%, respectively, at 7½ ips); frequency response 40-22,000 Hz ±3 dB at 0 VU and 15 ips, 40-18,000 Hz at 7½ ips; THD 1.0% at 0 VU, 1 kHz, 185 nWb/m; S/N ratio 66 dB NAB A weighted at 15 ips, 64 dB at 7½ ips; headroom better than 26 dB above 0 VU at 1 kHz for recording amplifier, 38 dB for playback amplifier; 16½" W × 12½" H × 9½" D; 30.8 lb.....\$775

TEAC

X-20R Open-Reel Deck

Stereo open-reel deck with built-in dbx noise-reduction system and EE (Extra Efficiency) tape bias/equalization selector. Features bidirectional record/play function; 10½" reel capacity; closed-loop dual-capstan servo drive; motion-sensing mechanism to prevent tape jamming; automatic repeat for continuous play\$1400

A-3300S-2T Tape Deck

Two-speed (15, 7½ ips); ½-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 10½-in reels. Wow and flutter 0.04% (15 ips), 0.06% (7½ 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 7½ 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; 17½" H × 17½" W × 8¾" D.....\$1050

Audio Specialist Series

X-10 Stereo Tape Deck

Two-speed (7½ and 3¾ ips) ¼-track two-channel tape recorder with three dc motors in closed-loop dual-capstan drive system and erase, record, and playback heads; 10½-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% (7½ ips), 0.04% (3¾ ips), frequency response 30-28,000 Hz (7½ ips), to 20,000 Hz (3¾ ips); S/N 63 dB; 17½" H × 17" W × 10½" D.....\$1050
X-10R. Same as X-10 except bi-directional

7

OPEN-REEL
TAPE MACHINES

record/playback with six heads (two each erase, record, and playback).....\$1200

X-7 Stereo Tape Deck

Two-speed (7½ and 3¾ ips) ¼-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% (7½ ips), 0.04% (3¾ ips); frequency response 30-28,000 Hz (7½ ips), to 20,000 Hz (3¾ ips); S/N 63 dB; 14½" H × 17" W × 10½" D.....\$750

X-7R. Same as X-7 except has bi-directional record/playback and auto repeat.....\$850

X-3 Stereo Tape Deck

Two-speed (7½ and 3¾ ips) ¼-track two-channel tape recorder with dc servo capstan and two induction 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 7½ ips, 0.06% at 3¾ ips; overall frequency response 30-28,000 Hz (7½ ips), to 20,000 Hz (3¾ ips); overall S/N 58 dB at 3.0% THD, weighted; 12½" H × 16½" W × 9½" D.....\$580

X-3R Stereo Tape Deck

4-track, 2-channel open-reel tape deck with auto-reverse play mode and auto repeat. Fea-



tures noise-suppressed solenoid operation; soft-lock transport controls; three tape heads; mic/line mixing; 2-step bias/EQ selectors; tape/source monitor switch; one-touch reel clamps; removable head housing; large-scale VU meters; independent L/R input and output level controls. Wow and flutter 0.05% at 7½ ips, 0.07% at 3¾ ips wrms; frequency response 30-28,000 Hz at 7½ ips, to 20 kHz at 3¾ ips; S/N ratio 63 dB (3% THD weighted); distortion 0.9% at normal operating level; channel separation 55 dB at 1 kHz; fast-wind time 100 sec (1800 ft); input level/impedance 60 mV/100k ohms line, 0.25 mV (-72 dB)/200 ohms or more mic; output 0.45 V at 10k ohms line, 8 ohms headphone; power consumption 85 W; 16.2" W × 12.8" H × 8.4" D; 30.8 lb.....\$650

TECHNIKS

RS-1520US Open-Reel Deck

Compact professional tape deck; ½-track, two-channel recording/playback and ¼-track, two

channel playback; four head system; three speeds (15, 7½, 3¾ 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 functions; 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 (7½ ips); fast-winding time 150 sec with 2500-ft tape; frequency response 30-30,000 Hz ±3 dB (15 ips), 30-25,000 Hz ±3 dB (7½ 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; 17½" H × 18" W × 10½" D.....\$2100

RS-1506US. Similar to RS-1520US except ¼-track, two-channel recording/playback and ½-track, two-channel playback.....\$1500

RS-1700US. Similar to RS-1506US except autoreverse in both recording and playback modes; ½-track, two-channel recording/playback modes; ¼-track, two-channel recording/playback with six-head system.....\$2100

RS-1500US Open-Reel Deck

Three-speed (15, 7½, and 3¾ ips) ½-track two-channel record, playback, and erase and ¼-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, ½- and ¼-track playback, and erasure; max. reel capacity 10½ 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 time 150 sec (2500-ft, 1.5-mil tape). Wow and flutter 0.018% wrms (15 ips), 0.03% wrms (7½ ips); frequency response ±3 dB 30-30,000 Hz (15 ips), 20-25,000 Hz (7½ ips), 20-15,000 Hz (3¾ ips); S/N (NAB weighted) 60 dB (15 and 7½ ips), 58 dB (3¾ 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; 17½" H × 19¾" W × 10½" D.....\$1600

RS-1506US. Similar to RS-1500US except 4-track 2-channel playback/record and 2-track 2-channel playback.....\$1600

RS-1700. Similar to RS-1506US except automatic reversing 4-track 2-channel record/playback, no 2-track 2-channel playback.....\$1600

TELEX

Telex/Magnecord 1400 Series

Three-speed (15, 7½, 3¾, 1½ ips) open-reel tape recorder. Accepts reel sizes up to 8½". Available with a variety of head configurations for single-, two-, or four-track operation. Features brushless dc servo ball-bearing drive system. Wow and flutter 0.35% at 3¾ ips, 0.24% at 7½ ips, 0.17% at 15 ips, all DIN weighted, or 0.25% at 3¾ ips, 0.17% at 7½ ips, 0.12% at 15 ips, all unweighted rms; S/N ratio 60 dB NAB weighted; frequency response 30-10,000 Hz ±3 dB at 3¾ ips, to 18 kHz at 7½ ips; 35-22,000 Hz at 15 ips (two-track); crosstalk 50 dB at kHz (two-track head); inputs 150-ohm microphone, balanced bridge, unbalanced bridge, mixing bridge, aux bridge;

outputs 150/600 ohms balanced, +4 dBm aux A and B unbalanced. Features VU meters; separate microphone and line-input controls; master gain control; catenary head block design; hyperbolic heads to ensure intimate tape-head contact: 110/130 volts ac, 50/60 Hz; 180 Wattsfrom \$2500

Telex/Magnecord 3000 Series

Professional-style three-motor ¼" system that offers option of purchasing transport, electronics package, and accessories separately or as a package and choice of speeds and head formats. Accepts up to 10½" reels with NAB Type A or B hubs and fits 19" racks. Features transformer-isolated CMOS-logic transport controls; automation capability; Automatic Cue Release (AQR) switch; interchangeable head blocks for variety of head configurations; snap-on head cover with mu-metal shield; heavy-gauge head assembly plate that accommodates up to four heads and contains tape guides, head selector switch, and optical infrared sensor. Wow and flutter 0.22% DIN, 0.15% wrms at 3¾ ips to 0.15% DIN, 0.1% wrms at 15 ips; speeds 3¾ and 7½ ips or 7½ and 15 ips; record/play frequency response ±3 dB 50-20,000 Hz at 15 ips, 30-18,000 Hz at 7½ ips, 20-12,000 Hz 3¾ ips with adjustments optimized for 3M 176 tape; S/N 60 dB or better NAB weighted with half-track head, 3M 176 tape; record/play THD at 1 kHz 1% or less at 0 dB with 60-ohm line output termination; equalization adjustable for most standard or high-output, low-noise tapes; crosstalk rejection 50 dB or better at 1 kHz; fast-forward/rewind times 90 sec or less for 10½" 2400-ft tape, 80 sec for 7" 1200-ft tape. Transport: 19" W × 12½" H × 10" D; 46 lb. Record/play electronics: 19" W × 5¾" D × 3½" H; 5.5 lb\$1990-\$2470

4200 Report Monitor Recorder

Four-speed (7½, 3¾, 1½, 1½ 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% (7½), 0.2% (3¾), 0.25% (1½); S/N 62 dB (rms A curve); frequency response (DIN 45500) 20-25,000 Hz (7½), 20-16,000 Hz (3¾), 25-13,000 Hz (1½), 25-5000 Hz (1½); 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

UHER by WALTER ODEM

SG-631 Logic Open-Reel Deck

Three-speed (7½, 3¾, 1½ 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 (7½ ips), to 16,000 Hz (3¾ ips), to 12,500 Hz (1½ ips); S/N 65 dB (two-track at 7½ ips). Features built-in strobe disc; speed control; peak-reading meter; built-in "Dia-Pilot" for recording 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; 10½-in reel, max\$2357

(continued on page 133.)

8

VIDEO CASSETTE TAPE RECORDERS

AKAI

VPF-7350 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.....\$1695

FISHER

FVH520 Videocassette Recorder

VHS-format 2/4/6-hr VCR with 7-day/1-program-per-day timer, 5-mode playback, and 13-function remote controller. Features soft-touch controls; soft eject; cue, review, still, frame-by-frame, and slow-motion playback; record, play, stop, rewind, fast-forward, pause, fast-playback, fast-reverse, still, slow-playback, triple-speed playback, frame-by-frame playback, and audio-dubbing remote-control functions; automatic playback switching; VHF/UHF electronic tuner; 14 preset channels; auto rewind; dew-protection system with dew indicator; 12-hour clock display with AM/PM indicator; 4-digit fluorescent timer display. Video output level 1 V p-p at 600 ohms; audio output level -6 dBm; video input level 0.5-2.0 V p-p at 75 ohms; video S/N greater than 45/42/40 dB on SP/LP/EP; audio S/N ratio more than 43/41/40 dB on SP/LP/EP; audio bandwidth SP/LP/EP 50-10,000/80-8000/100-6000 Hz; power consumption 45 W; 19.2" W x 13.6" D x 5.2" H; 22 lb.....\$1200

FVH510. Similar to FVH520 except no 13-function remote-control system; remote-pause control only.....\$1000

GENERAL ELECTRIC

IVCR2014W Videocassette Recorder

VHS six-hour computer-programmable color vid-

eocassette recorder. Features electronic memory bank with eight 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); 14-channel pushbutton electronic tuning for any combination of VHF/UHF channels; three-digit tape counter with memory and program search; 12-function infra-red wireless remote control; pause control; standard standard/long/extended play tape speed selector; special video effects including slow and quick motion, freeze frame, frame advance; tracking control; includes 75-ohm coaxial cable, two 300 ohm UHF leads, 300/75 ohm transformer, 75/300 ohm transformer, and terminal block; high impact plastic construction with woodgrain finish. 18" W x 5 1/2" H x 14" D.....\$1439

1VCR2002X Videocassette Recorder

VHS two or six hour video cassette recorder. Features built-in 24-hr digital clock/timer display with preselected auto start/stop; extended/standard play recording selector; built-in VHF/UHF tuner; tape counter with memory switch and program search; remote pause control for use within 16 feet; tracking control; audio dubbing; 17" W x 5 1/2" H x 14" D.....\$989

1VCR1006X Videocassette Recorder

Six hour three-speed VHS color video cassette recorder. Features built-in digital clock/timer for 10-day advance programming; built-in 12-channel electronic tuner; standard/long/extended play recording selector; 10x normal speed video scan in forward and reverse; tracking control; audio dubbing; remote pause control for use within 16 feet; 17 1/2" W x 5 1/2" H x 13" D.....\$1049

1CVP2020X Portable VCR System

VHS six-hour computer-programmable color video cassette recorder; tuner/timer unit and portable deck with battery; tuner features electronic memory bank with eight program select LED indicators, auto start, stop and channel change, repeat program button; 9x normal speed video scan in extended play mode; 4-function remote control for use within 16 feet; audio dubbing; tracking control; portable deck for use with VCR color video camera. Features include built-in rechargeable battery for 1 hour of recording before recharging. Includes 75 ohm coaxial cable, 300 ohm lead cable, 75/300-ohm matching box, 300/75 ohm antenna adapter, line adapter, battery connection cord. Deck: 12" W x 4 1/2" H x 9 1/16" D. Tuner: 11 1/16" W x 4 1/2" H x 9 1/16" D.....\$1399

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 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 13/16" H x 18 1/2" W x 13 1/4" D.....\$1350

HR-2200U Videocassette Recorder

Portable VHS VCR microprocessor that provides full-logic control over tape operations and solenoid-operated pushbuttons for the transport. Features ESC (Edit Start Control) that automatically aligns start of segment being recorded with end of previous recorded segment; Shuttle Search (x 10) In forward and reverse; slow-motion playback (variable from 1/4 to 1/30



normal speed); freeze capability; single-frame advance; quartz-controlled brushless direct-drive drum motor; servo-controlled capstan motor; reel motor; loading motor; lightweight glass-fiber reinforced plastic chassis; low-power-consumption LCD (liquid-crystal display) electronic tape counter with memory function; LED displays indicate tape running, battery warning, moisture condensation. Power consumption 9.6 watts. Can be run on ac, car battery, or optional battery pack. 11 1/16" W x 10 1/16" D x 4 1/16" H; 11.4 lb.....\$1100

TU-22U. TV tuner/ac adaptor/battery charger/timer for HR-2200U VCR. Features 12-channel pre-tunable electronic tuner; timer facility for preset up to 10 days in advance; quick recharging of optional NiCd battery pack NB-PI. Stacks under HR-2200U.....\$320

(continued on next page.)

MITSUBISHI

HS-3000 Video Cassette Recorder

Programmable six-hour two-speed VHS color video cassette recorder with five computer-controlled direct-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 $\frac{1}{3}$ - and $\frac{1}{10}$ -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 $\frac{1}{4}$ "H x 19 $\frac{1}{8}$ "W x 13 $\frac{1}{2}$ "D.....\$1350
Remote control unit for HS-3000\$100

PANASONIC

Omnivision Table Models

PV-1770 VHS Videocassette Recorder

New 6-hour programmable super-long-play (SLP) VCR with full-function wireless infrared remote controller and 14-position (105-channel, including cable) electronic tuner. Features "Omnisearch" in all modes (SP, LP, SLP); 8-program/14-day tuner/timer; soft-touch controls with total electronic tuning; auto rewind at end of play; compatibility with other 2/4- and 2/4/6-hr VHS VCRs; four video heads; direct-drive video head cylinder and capstan motor; channel lock to prevent accidental change of channel during recording; 1-hr battery backup for digital clock; memory counter; audio dubbing; tracking control; dew detector that shuts off deck automatically under damp conditions; special motion features in SP and SLP modes with remote controller. Remote controller features full rewind, stop, fast forward, play, record, pause, frame advance, $\times 2$ playback speed, Omnisearch, various slow-motion, and channel-change functions. Supplied with all accessories to hook up to all types of TV receivers and antennas and one NV-T60 blank videocassette.....\$1595
PV-1750. Similar to PV-1770 except has only two hot-pressed ferrite heads.....\$1495

PV-1470 VHS Videocassette Recorder

Omnivision 6-hr programmable super-long-play (SLP) VCR with 105-channel (including CATV band) tuning capability and 9-position remote controller. Features Omnisearch in LP and SLP modes; 8-program/14-day tuner-timer; soft-touch controls with electronic tuning; auto rewind at end of play; switchable to LP 4-hr and standard 2-hr record; compatible with other 2/4- and 2/4/6-hr VHS systems; 2 hot-pressed ferrite heads; direct-drive video head cylinder and capstan motor; channel lock to prevent channel changes while recording; auto backup of tape in pause while recording to eliminate picture skip; 1-hr battery backup for digital clock; memory counter; audio dubbing; tracking control; dew detector. Remote controller optional. Supplied with complete accessories to hook up to any TV receiver and antenna system and one NV-T60 blank videocassette.....\$1295

PV-1370 VHS Videocassette Recorder

Super-long-play (SLP) VCR with Omnisearch in LP and SLP modes, still-frame in SLP mode, and 9-position remote control. Features soft-touch controls and total electronic tuning; auto rewind at end of play; switchable to LP 4-hr and SP 2-hr recording; compatibility with other 2/4- and 2/4/6-hr VHS systems; 2 hot-pressed ferrite heads; 1-program/24-hour tuner-timer; direct-drive video head cylinder and capstan motors; channel lock to prevent channel change while recording; memory counter; audio dubbing; tracking control; dew detector. Supplied with complete accessories for hook up to all TV receivers and antenna systems and one blank NV-T60 videocassette.....\$1145

PV-1210 Videocassette Recorder

Two/four/six-hour programmable VHS color video cassette recorder with solid-state integrated circuitry, dc 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.....\$895

Portable/Home Series

PV-4500 Videocassette Recorder

Lightweight 6-hour super-long-play videocassette recorder with Omnisearch. VHS VCR features ac/dc/car-battery powering options (rechargeable battery pack included); 2/4/6-hr recording capability; soft-touch button operation which activates dc motor drives instead of solenoids; audio dubbing hot-pressed ferrite heads; still frame with frame advance in SLP; direct-drive video head cylinder motor; audio dubbing; built-in digital clock (8 programs/14 days); small built-in VHF/UHF tuner; 1-hr operation on LCR-1812P battery when using optional color camera; remote-control capability through optional color camera; tracking and remote pause control; digital memory counter with auto stop at end of rewind; dew detector. Includes accessories for TV receiver/antenna hookup and one NV-T60 blank videocassette tape.....\$1400
PV-4100. Similar to PV-4500 except lacks built-in clock and timer.....\$1195
PV-A35P. Optional tuner/timer for PV-4100; provides full 8-program/14-day timing capability.....\$395

PHILCO/GTE

V1011 Videocassette Recorder

Table-model VHS-format videocassette recorder with 2-knob vhf/uhf tuner. Features electronic functions; limited on-only timer; wired remote-control pause switch; 75/300-ohm balun antenna connectors. 19"W x 14 $\frac{1}{2}$ "D x 5 $\frac{1}{2}$ "H; 21 lb.....\$849

V1441 Videocassette Recorder

Table-model VHS-format videocassette recorder with 24-hour timer. Features all-electronic functions; scan 4/6 hr; 6-hour record capability; wired still/channel-change/scan remote controller; 75/300-ohm balun antenna connectors. Comes with T-60 videocassette and wired 4-mode remote controller. 19"W x 14"D x 5 $\frac{1}{2}$ "H; 26.5 lb.....\$1049

V1551 Videocassette Recorder

Table-model VHS-format videocassette recorder with 14-day timer. Features all-electronic operation; scan $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ hr; 6-hour record capability; simplified still; wired remote still/channel-change/scan/mid and super band controller;

75/300-ohm balun antenna connectors. Comes with T-60 videocassette and 4-mode remote controller. 19"W x 14"D x 5 $\frac{1}{2}$ "H; 26 $\frac{1}{2}$ "L.....\$1199

V1720 Videocassette Recorder

Two-piece portable VHS-format videocassette recorder with 24-hour timer. Features all-electronic operation; scan 6 hr; still 6 hr; frame advance 6 hr; wired still/frame-advance/scan remote controller; 75/300-ohm balun antenna connectors; earphone; shoulder strap; battery; connectors for ac adaptor, microphone plug, and battery cable. Comes with T-60 videocassette and wired remote controller. VCR deck 12"W x 9 $\frac{3}{4}$ "D x 4 $\frac{1}{2}$ "H; 14 lb. Tuner 11 $\frac{1}{2}$ "W x 9 $\frac{3}{4}$ "D x 4 $\frac{1}{2}$ "H; 10 lb.....\$1349

QUASAR

VH5610 Videocassette Recorder

6-hr table-model videocassette recorder with 105-channel VHF/UHF tuning capability. Fea-



tures 13-function wireless remote controller; 4 heads; 8-program/14-day programmable timer; picture search function.....\$1685
VH5310. Similar to VH5610 but wired or wireless remote-control unit optional.....\$1325
VH5210. Similar to VH5310 except 1-program/24-hour programmability.....\$1140

VH5410 Portable VCR

Portable 6-hour VHS-format videocassette recorder with picture-search capability. Features slow motion; still frame; frame advance; camera remote-control capability that allows VCR functions to be controlled directly by optional camera.....\$1075

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 overdub, 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

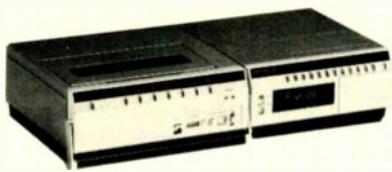
VH5011 Videocassette Recorder

VHS-format videocassette recorder with mechanical tuner. Features synchro-touch controls and 1-program/24-hour programmable timer.....\$850

RCA

VFP170 Portable VCR

Six-hour, three-speed portable VHS VCR with direct-drive capstan and head-wheel motors; powered by built-in battery for 1½ hrs recording time, cigarette lighter socket with optional dc power cord, or ac line power. Includes microprocessor-controlled tuner/timer module that can be programmed to record up to 5 different programs on different channels over 7-day period. Features soft-touch transport controls; audio dubbing; three-digit tape counter with memory button; LED battery monitors; power saver that switches recorder automatically to standby after 5-min pause; air-damped cassette insert/eject; tracking control. Tuner/timer module features LED digital timer/clock display; electronic touchbutton tuning for channels 2-83; built-in ac power adaptor and battery charger. VCR 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. Module output 1.0 V p-p ±0.5 V. VCR measures 11¾" D × 10¼" W × 4¾" H, weighs 15 lb \$1400



controls; audio dubbing; three-digit tape counter with memory button; LED battery monitors; power saver that switches recorder automatically to standby after 5-min pause; air-damped cassette insert/eject; tracking control. Tuner/timer module features LED digital timer/clock display; electronic touchbutton tuning for channels 2-83; built-in ac power adaptor and battery charger. VCR 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. Module output 1.0 V p-p ±0.5 V. VCR measures 11¾" D × 10¼" W × 4¾" H, weighs 15 lb \$1400

VFT450 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 programmer (programs up to eight different programs on eight different channels over two-week period) with LED digital timer/clock readout; picture search (9 × normal speed) in fast forward or rewind (LP or SLP modes); electronic touchbutton tuning of VHF/UHF channels 14-82; can be programmed for up to 35 CATV channels; 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; 5½" H × 18½" W × 14" D \$1200

VET250. Similar to VET450 except has built-in 24-hr electronic clock/timer with auto stop..... \$1075

VET650 Videocassette Recorder

VHS VCR with up to 6 hrs recording time, picture search and variable-speed special effects, and automatic TV/VCR switching. Features full-function remote control (pause, picture search, special effects, channel change); touch-button electronic VHF/UHF tuning; tape rewind; tape counter with memory switch; soft-touch transport controls; 14-day electronic programmer; LP/SP/SLP selector; scene transition stabilizer; audio dub; double-speed, slow-motion, stop-action capability; single-frame advance. Video recording system 4-head helical scan; antennas 75-ohm VHF, 300-ohm UHF; fast-forward rewind time 4 min. with VK250 (6-hr) cassette; power consumption 62 W at 110-130 V ac, 60 Hz; 19" W × 14¾" D × 6¾" H; 33 lb..... \$1400

SANYO

VCR Videocassette 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 (15 × 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 hand-held remote control unit, vinyl dustcover, L500 videocassette, and connector cables and input transformers; 6.3" H × 17.6" W × 14.6" D \$995

VTC9100A Videocassette 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 × 19.5" W × 14.6" D \$695

VCR4200 Videocassette Recorder

Beta-format table-model VCR with 3-day programmable recording, 2-speed operation, and remote pause control. Features 3-motor quartz-locked tape drive; fluorescent display that gives time of day when VCR is not being programmed; advanced noise-cancelling circuitry; miniaturized all-electronic Varactor tuner; 12 channel-selector buttons for any combination of vhf and uhf stations; LED tuned-channel display; automatic rewind at conclusion of automatic record; sleep function that automatically shuts off entire unit; automatic fine tuning (aft); digital tape counter with memory; microphone input jack; audio and video inputs for optional camera or second VCR; audio and video output jacks; single F-type antenna connector; extra-compact design; TV system NTS standard; video chrominance/luminance S/N ratio 35/43 dB; audio S/N ratio 42 dB; wow and flutter 0.2% wrms (Beta II); power consumption 40 W; 18½" W × 13¾" D × 5½" H; 22 lb.... \$895

VCR4300. Similar to VCR4200 except has 7-day programmability; full remote-control facilities; high-speed Betascan search; instant freeze frame; power consumption 33 W \$995

Mini Components

VPR4800. Portable Beta-format videocassette recorder with NiCd battery that recharges in only 1 hr. Features Betascan high-speed search;



feather-touch controls; 2-speed operation; moisture sensor and heater; audio dubbing; remote pause control; digital tape counter with memory; soft eject; 2-head, 3-motor transport. Power consumption 9.6 W at 120 V ac, 60 Hz; 10¾" W × 10½" D × 4" H; 8.75 lb..... \$1045

VTT481. Tuner/timer with 12-switch all-electronic Varactor vhf/uhf tuner and 7-day programmability. Features fluorescent display of program timing and time of day; LED power-on, charging, channel-selected displays; clock and timer set buttons; automatic fine tuning (aft); TV/VCR switch; audio and video inputs and outputs; antenna inputs and outputs. Power consumption 60 W at 120 V ac, 60 Hz; F-type antenna in/out; 10¾" W × 10½" D × 4" H; 16½" lb..... \$350

SEARS

5360 Portable VCR

Portable 4-head Beta-format videocassette re-

corder with 5-hr Beta II/III record capability, 91-channel VHF/UHF tuner, and 8-program/14-day programmable timer. Features micro-touch controls; audio dub; soft eject; clean edit; dew-protection sensor; tape counter; TV/VCR selector; audio and video outputs; tuning LED; 2-speed BetaScan; time on/off presets; fluorescent timer display; LED-type channel display. Includes wired 11-function remote-control unit for BetaScan forward/reverse at 5 × normal speed; slow-motion playback at ½ to ½ normal speed; frame-by-frame advance; pause/still functions. Power consumption 13.2 W on battery; 10.9" W × 10.4" D × 4.5" H..... \$1195

5322 Videocassette Recorder

Sears-Best table-model Beta-format videocassette recorder with Beta II/III 5-hr record time, 91 channel VHF/UHF tuner, and 8-program/14-day programmable timer. Features micro-touch controls; audio dub; soft eject; TV/VCR selector; clean edit; automatic program search; automatic rewind; dew-protection sensor; tape counter; audio and video outputs; automatic input selector; tuning LED; 2-speed BetaScan; frame-by-frame advance; stop motion; time on/off preset; fluorescent time/timer display; LED channel display; 11-function wired remote-control unit; standard and slow-motion playback; pause/still control. Power consumption 53 W; 18.3" W × 14.2" D × 6" H; 30.4 lb..... \$995

5314 Videocassette Recorder

Beta-format videocassette recorder with 82-channel VHF/UHF tuning capability, using locking pushbuttons. Features up to 5 hours recording time; selectable Beta II/III; audio dub; soft eject; automatic rewind at end of play; dew-protection sensor; tape counter; TV/VCR selector; audio and video outputs; automatic input selector; tuning LED; 1-program/3-day programmable timer; timer on/off presets; fluorescent timer display; LED channel display; remote pause. Power consumption 19.2" W × 14" D × 5.4" H \$785

5310 Videocassette Recorder

Beta-format videocassette recorder with Beta II/III 5-hour recording capability and 82-channel VHF/UHF tuner. Features micro-touch controls; soft eject; dew-protection sensor; tape counter; TV/VCR selector; tuning LED; audio and video outputs; automatic input selector; 1-event/24-hour programmable timer; time-on preset; fluorescent timer display; LED channel display; remote pause. Power consumption 40 W; 19.2" W × 14" D × 5.4" H; 22.2 lb..... \$685

SHARP

VC-2250 2-Hour Portable Videocassette Recorder

One-piece ac/dc home portable VHS videocassette recorder with built-in timer/tuner and self-contained ac power pack. Features visual search at 5 times normal speed forward; still-frame stop action; built-in 24-hour one event programmable timer; vertical front-loaded air-damped cassette system; built-in vhf/uhf 12-position tuner/timer; MPU-controlled solenoid soft-touch transport; 2-hour record/play capability on battery; conventional 10-pin camera jack; built-in carrying handle and shoulder strap included; audio dubbing; 3-digit tape counter; dew warning light; dew prevention heater. Video signal system EIA standard, NTSC color; tape speed 1.31 ips; record/play time 120 min with T-120 tape; rewind/fast-forward time less than 5 minutes with T-120 tape; output channel 3 or 4; 75-ohm unbalanced vhf, 300-ohm balanced uhf antenna impedance; audio input -20 dB, 50 ohm balanced; mic input -70 dB, 2.2k ohm unbalanced; video output 1.0-V p-p, 1k ohms unbalanced; horizontal resolution 240 lines; video S/N ratio 46 dB; audio frequency response 50-10,000 Hz; S/N ratio 40 dB; 15½" W × 11½" H ×

8 VIDEO CASSETTE TAPE RECORDERS



**6½" D; 19.8 lb. with ac adaptor.....\$1000
BT-3200. Optional rechargeable battery pack for VC-2250 VCR\$43**

VC-7400 Videocassette 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 soleid function controls; tape remaining LED indicator; four-digit tape counter; one-touch recording; includes hand-held remote pause control operable within 20-ft radius\$795

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); 3× normal speed fast play; stop—1/2 normal speed variable slow motion; freeze-frame and frame-by-frame viewing; auto tab mark (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, 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 cassettesapprox. \$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 backup system (automatically advances clock and keeps programming instructions for 10 minutes during power outage); BetaScan (searches in fast forward or reverse up to 13× normal speed); tabmarker electronic signal on beginning of each recorded program on tape); microprocessor direct mode-to-mode tape transport controls; 14-pushbutton UHF/VHF express tuning; 3× fast play; freeze frame with 15-ft cord; 6½" H × 19½" W × 14¾" 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; 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 50-7,000 Hz. Includes —26-dB earphone, antenna switch and 2-m cable, and shoulder strap; 8.5 kg with tape and battery; 127 mm H × 296 mm W × 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

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; 3× 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), 100-70,000 Hz (Beta III). Includes cassette tape, channel indicators, antenna connectors, 75-ohm coaxial cable, and 300-ohm twin lead cable; 33 lbs; 6½" H × 19¾" W × 15" D\$1250

TOSHIBA

V-9035 Beta Videocassette Recorder

5-hour portable VCR in Beta format. Features two speeds for up to five hours recording time; quad track-4 head for super, still, variable slow motion forward and reverse; frame-by-frame slow motion with no electronic noise; programmability for up to 8 programs over a 2-week period; touch reference solenoid logic controls; wired remote control; Comput-R-Tune electronic tuning; visual cue and review picture search with Beta scan and 2× scanning \$1545

V8500 Videocassette Recorder

Programmable 5-hour Beta-format VCR. Features dual-speed recording; quad track-4 head for super still, variable slow motion, frame-by-frame slow motion with no electronic noise; programmability for eight programs over two-week period; solenoid logic controls; audio dubbing; wired remote control; Comput-R-Tune electronic touch tuning; visual cue and review; put on search with Beta scan; super scan; 2× scanning\$1495

V8035 Portable VCR

Two-speed portable Beta-format VCR offers up to 5 hours of recording time. Features visual cue and review Beta scan; touch reference

control; audio dubbing; remote pause; memory counter; direct hookup for Toshiba color cameras; tuner/timer with charge function and programmable one program per day\$1345

ZENITH

VR9750J Video Director VCR

Beta-format videocassette recorder offers noise-free and jitter-free frame and variable-speed slow motion. An extra tape head repeats half of the picture image to eliminate jitter. Features speed search in forward and reverse at 10× normal speed; pause/stop action (still frame); two speeds to provide up to five hours of recording and playing time; audio dub; electronic timer that can be set to record up to four different programs on four different channels over a 14-day period; daily or weekly repeat; automatic rewind at end of tape; frame-by-frame advance; Remote Video Action control\$1350

6 CASSETTE TAPE MACHINES

(continued from page 124.)

tape; overall distortion LH/CrO₂/metal tape 1.0%/1.5%/1.0%; input sensitivity/impedance 0.3 mV/5k ohms mic, 60 mV/80k ohms line; output level 340 mV/1k ohm line, 60 mV/80k ohms phones; power consumption 23 W; 17¾" W × 11½" D × 5" H; 12 lb 9 oz\$300

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, CrO₂, 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 ±3 dB 40-14,000 Hz (LH), to 15,000 Hz (CrO₂), to 18,000 Hz (metal); S/N 57 dB with CrO₂; Dolby off; input sensitivity/impedance 0.3 mV/5k ohms (mic), 50 mV/80k ohms (line); silver faceplate and wood cabinet; 5¾" H × 17⅓" W × 10½" 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 CrO₂ tapes; left/right record level control; piano-key tape function controls; three-digit tape counter. Wow and flutter 0.08% wrms (JIS); frequency response ±3 dB 40-13,000 Hz (normal), to 14,000 Hz (CrO₂), to 15,000 Hz (FeCr); HD 1.5%; S/N with Dolby 62 dB using normal tape over 5000 Hz, 66.5 dB using CrO₂ tape over 5000 Hz; fast-winding time 85 sec (C-60); 5.98" H × 16.77" W × 9.33" D\$250

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.

4

TURNTABLES

-1° to 3°; suitable cartridge weight 2.5-10 g; cable capacitance 100 pF; power consumption 10 W; 17½" W × 14¾" D × 5⅓" H; 16.5 lb \$360

P-850 Automatic Single-Play

Natural Sound direct-drive turntable with microcomputer-controlled operation, quartz-lock PLL servo system, and straight optimum-mass tonearm. Features independent tonearm positioning and cueing motors; brushless dc servo direct-drive motor; light-touch controls; front-panel operation; 2-speed tonearm positioning; pre-play muting; optoelectronic sensor in tonearm system; 2 resin and 20% carbon-fiber cartridge headshells; spring-type antiskating control. Wow and flutter 0.015% rpm; speeds 33⅓ and 45 rpms; S/N ratio better than 77 dB DIN B, 98 dB IEC A wtd; effective tonearm

length 8¾"; overhang 16 mm; offset angle 23°; tracking-force range 0.3 g in 0.1-g increments; effective tonearm mass 11 g without cartridge; horizontal tracking error -3° to 3°; suitable cartridge weight 2.5-10 g; cable capacitance 100 pF; power consumption 10 W; 17½" W × 14¾" D × 5⅓" H; 16.5 lb \$270

P-750 Automatic Single-Play

Two-speed (33⅓ 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; 8½-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; ±0.1-in tonearm height adjustment;

adjustable antiskating 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 insulator feet and removable hinged dustcover; silver finish; 5⅓" H × 17½" W × 14¾" 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

5

PHONO CARTRIDGES

counterweight system filled with lead for high energy absorption; nonremovable headshell milled from solid aluminum, temperature bonded to tempered-aluminum drawn tubing filled with antiresonant foam; silverplated copper internal wiring with Mil-spec connectors and pure silver patch cord \$1200

SUPEX by SUMIKO

SDX-1000 Phono Cartridge

Low-mass moving-coil phono cartridge with 0.3 × 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-900E+ Super Phono Cartridge

Low-mass moving-coil phono cartridge with 0.3 × 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 10-50,000 Hz \$225
SD-901 E+. Similar to SD-900E+ except output level 2 mV, allowing use with step-up device; frequency response 10-35,000 Hz \$135

(continued from page 106.)

TECHNICS

Linear-Tracking Turntable Cartridges

EPC-23. Moving-magnet cartridge \$70
EPS-310MC. Moving-coil cartridge. Replacement for SL-10 turntable \$130
EPC-P205CMK3. Moving-magnet cartridge \$210

Replacement Styli

EPS-P205ED3. Elliptical stylus \$115
EPS-23ES. Elliptical stylus \$25
EPS-23CS. Conical stylus \$15

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 ±0.2 g; 0.1-mm square pure diamond stylus with special-contour 8 × 40-micron elliptical tip; replacement stylus by factory; weight 18.5 g ±0.1 g \$270
MC-1S. Same as MC-1X except has universal unmounted headshell; weight 7.8 g ±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 × 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 ±0.3 g; dynamic compliance 15×10^{-6} cm/dyne; high-impact plastic housing; weight 5.7 g \$120

MC-5 Phono Cartridge

Lightweight moving-coil cartridge with high-efficiency linear output, low distortion and crosstalk. 8 × 40-micron elliptical diamond stylus. Features special vertical-horizontal matrix system with cross-shaped Sendust core; tapered tubular beryllium cantilever; precision one-point cantilever suspension. Total equivalent stylus mass 0.167 mg; output 0.03 mV at 1 kHz, 5 cm/sec; channel balance within 1 dB at 1 kHz; impedance 30 ohms (purely resistive); frequency range 10-20,000 Hz (capability to 60 kHz); recommended tracking force 1.2 g ±0.2 g; compliance static/dynamic $28 \times 10^{-6} \times 10^{-6}$ cm/dyne; vertical tracking angle 22° ±2°; cartridge weight 12.7 g; accessories stylus brush, 2 hex nuts, stylus cover \$180

7

OPEN-REEL TAPE MACHINES

(continued from page 128.)

SG 561 Royal Open-Reel Deck

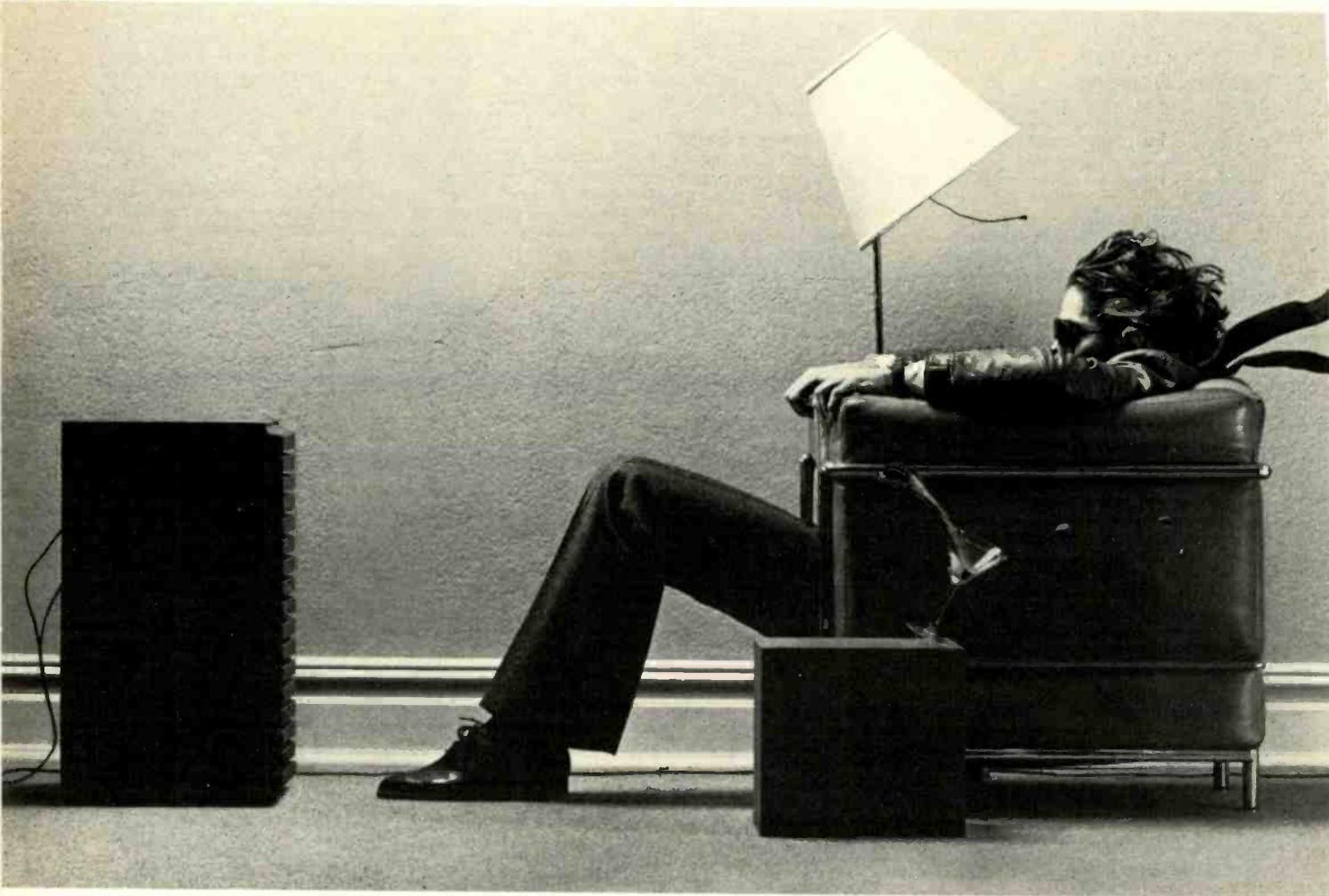
Four speed (7½, 3¾, 1¾, 1⅓ ips) two- or four-track mono/stereo record/play deck with interchangeable two- or four-track tape head mount with Recovac longlife heads and built-in stereo amplifier with mixing facility; 7-in reel capacity. Features "Synchro-Play" sound-with-sound, "Multi-Play" sound-on-sound, 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%

(7½ ips), 0.1% (3¾ ips), 0.2% (1⅓ ips); frequency response 20-20,000 Hz (7½ ips), to 15,000 Hz (3¾ ips), to 9000 Hz (1⅓ ips); S/N (weighted, DIN 45500) on two-track 67 dB (7½ ips), 66 dB (3¾ ips), 65 dB (1⅓ ips), on four-track 65 dB (7½ ips), 64 dB (3¾ ips), 61 dB (1⅓ ips); crosstalk -60 dB (mono), -45 dB (stereo); 13.9" H × 18" W × 7.5" D \$1785

FOR LOCATIONS OF SECTION STARTS,
SEE TABLE OF CONTENTS ON PAGE 3.

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

9

BLANK TAPE

AMPEX

MPT (Metal Particle Tape) Cassette

Pure iron microparticles; metal bias; 70- μ sec equalization.

367-C60. 60 min.....\$9.99

GMI (Grand Master II) Series Cassettes

Cobalt-modified gamma ferric oxide; high bias; 70- μ 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- μ 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- μ 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- μ 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. 2400-ft, 10½-in NAB reel, 1.5 mil.....\$26.99

357-1731JA. 3600-ft, 10½-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

Videocassette 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

AVANTI PRODUCTS

Hi Energy Alpha Cassettes

Normal bias, 120- μ sec equalization; packed in hard Philips box; also available on blister display card (HEB designated).

HEC-60. 60 min.....\$1.49

HEC-60. 60 min.....\$1.65

HEC-90. 90 min.....\$1.95

HEC-90. 90 min.....\$2.10

Philips box in polybag.

HEC2/C-90. Two 90 min.....\$3.95

HEC3/C-60. Three 60 min.....\$4.15

HEC3/C-90. Three 90 min.....\$5.55

Ultra Low Noise 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 on blister card (LNC designated).

LNC-40. 40 min.....\$0.90

LNC-40. 40 min.....\$1.10

LNC-60. 60 min.....\$1.10

LNC-60. 60 min.....\$1.25

LNC-90. 90 min.....\$1.50

LNC-90. 90 min.....\$1.65

LNC-120. 120 min.....\$1.89

LNC120. 120 min.....\$1.65

In polybags; no boxes.

LNC2/C-90. Two 90 min.....\$1.99

LNC3/C-60. Three 60 min.....\$1.99

LNC3/C-90. Three 90 min.....\$2.99

BASF

Metal IV Cassette

60 min.....\$9.79

Professional I Series Cassettes

Ferric-oxide formulation matched for Type I/normal/ferric positions.

60 min.....\$3.99

90 min.....\$5.49

Professional II Series Cassettes

Pure chromium-dioxide formulation for Type II/chrome/high-bias position.

60 min.....\$4.49

90 min.....\$5.99

Professional III Series Cassettes

Double-layer formulation of chromium dioxide and ferric oxide; recommended for car stereos.

60 min.....\$4.29

90 min.....\$5.79

Performance Series Cassettes

Normal/Type I/ferric position.

60 min.....\$2.79

90 min.....\$3.99

Ferro Series Open-Reel Tape

Low-noise/high-output formulation exceeds professional recording studio requirements. Complete with sleeve and dust-proof box.

1800-ft, 7-in. reel.....\$12.99

2400-ft, 7-in. reel.....\$16.99

Music Box

Black plastic storage cabinet holds up to 40 cassettes; can be mounted on wall or set on shelf.

\$15.00

Videocassette Tape

Betamax Format

Chrome formulation

L-500. 1-2 hrs.....\$21.95

VHS Format

Chrome formulation.

T-120. 2-4 hours.....\$29.95

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

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

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 dropout; high-precision cassette shells and matrix sheets; 70- μ sec equalization.
C60. 60 min. \$8.60

DX-7 Series Cassettes

Chrome-position double-coated cobalt-doped tape for music programs; 70- μ 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- μ 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

DX 1 Series Cassettes

Normal cassette tape with newly developed ferrite formulation has high sensitivity and high MOL. For normal bias and EQ.
C-90. 90 min. \$3.85
C-60. 60 min. \$2.75

FISHER

Microcassette Tapes

MC-46ME. Metal-particle microcassette with new formulation of metal particles to produce wide dynamic range, high output, flat response across audio spectrum with high S/N ratio. Playing time 46 min; 4 per pack \$29.95/pk
MC-60. Normal-bias low-noise, high-output microcassettes for general-purpose use; 4 per pack \$19.95/pk

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 μ sec equalization; packaged in hinged plastic box.

C46. 46 min.	\$8.30
C60. 60 min.	\$9.10
C90. 90 min.	\$12.00

FX-1 Premium Cassette Series

Pure Ferric coating with polyester base and backing; normal bias; 120 μ 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 μ sec equalization; packaged in hinged plastic box.
C46FX-II. 46 min. \$4.40
C60FX-II. 60 min. \$5.10
C90FX-II. 90 min. \$6.95

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

Videocassette Tape

VHS Format

Fine-grain Beridox; high-impact ABS housing. T-120. 2-6 hr.	\$29.65
T-90. 1 1/2-4 1/2 hr.	\$26.70
T-60. 1-3 hr.	\$21.65
T-30. 1/2-1 1/2 hr.	\$19.45

Beta Format

Fine-grain Beridox; high-impact ABS housing. L-750. 1 1/2-4 1/2 hr.	\$26.95
L-500. 1-2 hr.	\$21.60
L-370. 1/2-1 1/2 hr.	\$18.10
L-250. 1/2-1 hr.	\$15.45
L-125. 1/4-1/2 hr.	\$14.00

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	\$3.30
261-C90-3PA-HK. 90 min; 3/bag	\$4.50

In flip-top plastic box.

2000-C30. 30 min.	\$1.50
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2000-C60. 60 min.	\$1.75
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2000-C90. 90 min.	\$2.15
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In flip-top plastic box and polybag.

2000-C60B. 60 min.	\$1.90
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2000-C90B. 90 min.	\$2.30
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Low-Noise, Extended-Range

Cassettes

Flip-top plastic box.

700 C-60. 60 min.	\$2.10
700 C-90. 90 min.	\$2.70

8-Track Cartridges

In dustcover.

8T45 DC. 45 min.	\$3.40
8T60 DC. 60 min.	\$3.65
8T90 DC. 90 min.	\$4.70

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	\$12.15
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277-151. 1800-ft, 7-in reel	\$15.25
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251-151. 2400-ft, 7-in reel \$17.40

Videocassette Tape

Betamax Videocassettes

L250-10X. 1/2-1 hr.	\$15.95
L500-10X. 1-2 hr.	\$19.95

VHS Videocassettes

T-60 1-2 hr.	\$17.95
T-120. 2-4 hr.	\$24.49

JVC

ME Metal Tape

Metal-particle-formulation cassette designed for the serious amateur recordist requires high bias and 70- μ sec EQ and delivers 4500-gauss flux density.

ME-46. 46 min.	\$9.50
ME-60. 60 min.	\$11.00

ME-P Metal Cassette

Metal-particle-formulation cassette designed for the advanced audiophile requires high bias and 70- μ sec EQ and delivers 4800-gauss flux density.

ME-P-46. 46 min.	\$11.50
ME-P-60. 60 min.	\$13.00

Videocassette Tape

T-30. 1/2-1 hr.	\$15.00
T-60. 1-2 hr.	\$17.00
T-120. 2-4-6 hr.	\$26.00

KENWOOD

MD Series Cassettes

Designed for metal bias/70- μ sec equalization.

C-90. 90 min.	\$15.00
C-60. 60 min.	\$12.00

CD Series Cassettes

Cobalt-absorbed gamma ferric oxide formulation designed for high bias/70- μ sec equalization.

C-90. 90 min.	\$7.50
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C-60. 60 min.	\$5.50
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ND Series Cassettes

Premium ferric-oxide formulation designed for normal bias/120- μ sec equalization. Particle shape, size, uniformity, and dispersion are controlled to yield maximum output level and low noise across frequency spectrum. High frequency response is 4 to 7 dB over conventional normal-bias tapes. Recommended for portable and car-stereo tape players.

C-90. 90 min.	\$6.50
C-60. 60 min.	\$4.50

N Series Cassettes

High-grained ferric-oxide formulation with a high-frequency sensitivity of up to 4 dB over conventional low-noise/high-output tapes; designed for low-noise and low distortion on equipment with or without bias/equalization controls.

C-90. 90 min.....	\$4.50
C-60. 60 min.....	\$3.50

LORANGER

Loran Ferric-Oxide Cassettes

Designed for normal bias, 120- μ sec equalization settings.

C-46. 46 min.....	\$4.55
C-60. 60 min.....	\$5.55
C-90. 90 min.....	\$7.65

Loran Chrome Cassettes

Chromium-dioxide formulation designed for use with CrO₂ settings.

C-60. 60 min.....	\$5.75
C-90. 90 min.....	\$7.95

LUX

XM-IV Metal-Particle Tape

Premium tape for metal bias, 70- μ sec equalization.

C-90. 90 min.....	\$14.95
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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

XL II-S Epitaxial Cassettes

High-level bias; 70- μ sec equalization.

XL II-S 60. 60 min.....	\$6.40
XL II-S 90. 90 min.....	\$8.65

XL I-S Epitaxial Cassettes

Normal bias; 120- μ sec equalization.

XL I-S 60. 60 min.....	\$6.40
XL I-S 90. 90 min.....	\$8.65

UD-XL-I Epitaxial Cassettes

Normal bias; 120- μ sec equalization.

C-60. 60 min.....	\$5.49
C-90. 90 min.....	\$7.59

UD-XL-II Epitaxial Cassettes

Chrome type; high-level bias; 70- μ sec equalization.

C-60. 60 min.....	\$5.49
C-90. 90 min.....	\$7.59

Ultra-Dynamic Cassettes

Normal bias.

UD-46. 46 min.....	\$3.89
UD-60. 60 min.....	\$4.19
UD-90. 90 min.....	\$6.19
UD-120. 120 min.....	\$8.29

Low-Noise Cassettes

Normal bias.

LN-46. 46 min.....	\$2.59
LN-60. 60 min.....	\$2.85
LN-90. 90 min.....	\$4.29
LN-120. 120 min.....	\$5.59

8-Track Cartridges

Normal bias; low noise.

LN8T-46. 46 min.....	\$4.15
LN8T-60. 60 min.....	\$4.59
LN8T-90. 90 min.....	\$5.19

Ultra-Dynamic Open-Reel Tape

Ultra-dynamic, high-energy type, normal bias.

1.5 mil polyester UD50-60. 1200-ft, 7-in reel.....	\$10.75
UD50-120. 2500-ft, 10 $\frac{1}{2}$ -in reel.....	\$30.55
1-mil polyester UD35-90. 1800-ft, 7-in reel.....	\$13.45

UD35-180. 3600-ft, 10 $\frac{1}{2}$ -in reel.....	\$34.45
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Professional Epitaxial Open-Reel Tape

Back-coated, ultra-dynamic, high energy, normal bias type.

1.5-mil polyester UD-XL 50-60B. 1200ft, 7-in reel.....	\$13.45
UD-XL 50-120B. 2500-ft, 10 $\frac{1}{2}$ -in reel.....	\$36.45
1-mil polyester UD-XL 35-90B. 1800-ft, 7-in reel.....	\$15.10
UD-XL 35-180B. 3600-ft, 10 $\frac{1}{2}$ -in reel.....	\$41.60

Microcassettes

MC-60 (three per card).....	\$17.50
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Tape Accessories

7-in plastic reel.....	\$4.75
7-in precision metal reel.....	\$10.99
10.5-in precision metal reel.....	\$17.29
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
Wand demagnetizer (WMD-110).....	\$16.95
Cassette demagnetizer (HE-44).....	\$29.95

Videocassette Tape

90 min.....	\$4.09
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Accessories

8-track head/capstan cleaner.....	\$3.59
cassette cleaning kit.....	\$3.19
8-track head cleaner.....	\$1.99
Cassette head cleaner.....	\$1.99

Videocassette Tape

VHS Videocassettes

High Chroma, high r-f output for brilliant life-like color, excellent picture clarity and stability; features dustproof plastic storage case.

T-60. 1-2-3 hrs.....	\$16.99
T-90. 1 $\frac{1}{2}$ -3 $\frac{1}{2}$ -4 $\frac{1}{2}$ hrs.....	\$18.99
T-120. 2-4-6 hrs.....	\$24.99

Betamax Premium Videocassettes

High Chroma, high r-f output for brilliant life-like color, excellent picture quality and stability.

L-250.....	\$12.45
L-500.....	\$16.95
L-750.....	\$20.95

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 μ sec equalization.

C60.....	\$9.75
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SX Cassette Tapes

Single-coated; ionized cobalt and ferric oxide formulation; high coercivity permits use of CrO₂ bias and equalization (70 μ 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 μ sec) as EX tape; extra-low noise, high output.

C60.....	\$6.00
C90.....	\$7.80

OSAWA

MX Metal-Particle Cassettes

Metal-particle Professional Series cassettes; require metal bias 70 μ sec EQ.

MX 46. 46 min.....	\$9.95
MX 60. 60 min.....	\$11.49

CR High-Bias Cassettes

Dual-coat high-bias Professional Series chrome-type ferri-cobalt cassettes; require high bias, 70 μ sec EQ.

CR 60. 60 min.....	\$4.49
CR 90. 90 min.....	\$6.99

FC Ferri-Chrome Cassettes

Dual-layer ferri-chrome Professional Series cassettes; require high bias, 70 μ sec EQ.

FC 60. 60 min.....	\$4.99
FC 90. 90 min.....	\$6.99

PANASONIC

Videocassette Tape

VHS Videocassettes

NV-T60. 1-2-3 hr.....	\$17.95
NV-T120. 2-4-6 hr.....	\$24.95

QUASAR

Videocassette Tape

VHS-Format

VC-T160. 1-2-3 hrs.....	\$14.50
VC-T120. 2-4-6 hrs.....	\$19.95

(continued on next page.)



RCA

Videocassette Tape

VHS-Format Videocassettes	
VK125. 3 hr.....	\$13.95
VK250. 6 hr.....	\$18.95

REALISTIC

Supertape Metal Cassette	
44-960. 60 min.....	\$9.95

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

RECOTON

Audio 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-μsec equalization; housed in five-screw polystyrene shell with chrome notch.	
C-60. 60 min.....	\$4.49
C-90. 90 min.....	\$5.99

Broadcast I Cassettes	
Ferric formulation; normal bias; 120 μsec equalization; housed in five-screw polystyrene shell.	
C-60. 60 min.....	\$3.99
C-90. 90 min.....	\$5.49

Xtra Dynamic Cassettes	
Ferric bias; for home recording.	
C-45. 45 min.....	\$2.49
C-60. 60 min.....	\$2.99
C-90. 90 min.....	\$3.99

Videocassette Tape

ColorChrome Videocassettes	
Beta and VHS formats; packaging features dustprotector sleeve and color-coded filing system for home storage.	
L-250. ½-1½ hrs.....	\$12.95
L-500. 1-3 hrs.....	\$16.95
L-750. 1½-4½ hrs.....	\$20.95
T-60. 1-2 hrs.....	\$17.95
T-120. 2-4 hrs.....	\$24.95
T-180. 3-6 hrs.....	\$29.95

SANYO

Videocassette Tape

Betacord videocassettes	
L250.....	\$10.95
L500.....	\$13.95
L750.....	\$16.95
L830.....	\$22.95

SCOTCH

Metalfine Cassettes	
Fine metal magnetic particle formulation; deliv-	

ers 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 μsec equalization position; album or "C-Box" (40 cents additional) packaging; improved shell for critical mechanical performance 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 CrO₂ or 70 μsec equalization position; improved cassette shell for critical mechanical performance and three-head recorder equipment; 3-dB S/N improvement over current CrO₂ 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 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 7½ ips, 1 mil.....	\$13.39
10½-in metal reel, 120 min at 7½ 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 7½ ips, 1.5 mil.....	\$7.99
207. 7-in reel, 90 min at 7½ ips, 1.0 mil.....	\$9.99

Dynarange Open-Reel Tapes

Provides high-fidelity recording even at 3¾ 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 7½ ips, 1.5 mil.....	\$4.09
212. 5-in reel, 45 min at 7½ ips, 1.0 mil.....	\$4.89
90 min, 7-in reel.....	\$8.39
213. 7-in reel, 120 min at 7½ ips, 0.5 mil tensilized.....	\$12.59
214. 5-in reel, 90 min at 7½ 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 7½ ips, 1.5 mil.....	\$5.49
229 7-in reel, 90 min at 7½ ips, 1.0 mil.....	\$7.59

Videocassette Tape

VHS-Format Videocassettes

T-30. ½-1 hr.....	\$18.45
T-60. 1-2 hrs.....	\$21.75
T-120. 2-4 hrs.....	\$27.95

Beta-Format Videocassettes

L-250. ½-1 hr.....	\$14.95
L-500. 1-2 hrs.....	\$18.95
L-750. 1½-3 hrs.....	\$23.95

Videocassette Head Cleaners

Head-clearing 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-μsec 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; 7-μsec 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 μsec 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-μsec 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 μsec 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

(continued on page 140.)



SA-X. HIGH BIAS IS RICHER FOR IT.

The greatest honor a cassette can receive is to be held in higher esteem than the one now setting the high bias standard. SA-X has already gone beyond SA in frequency response, sensitivity, and resolution. It was intended to. With its ultra refined dual layer of Super Avilyn and the Laboratory Standard Mechanism, nothing less was possible. TDK believes sound reproduction should have no set barrier. No limit.

For us, high bias was a limit to be surpassed. SA-X has won three international audio awards to date. It will no doubt win others. But we take awards philosophically. They represent our continuing effort to create the machine for your machine. In that, we could not be happier with SA-X.

 **TDK**
The Machine For Your Machine

CIRCLE NO. 43 ON READER SERVICE CARD



9

BLANK TAPE

LNX Series Cassettes

Normal bias; normal or 120 μ sec equalization.	
LNX-46. 46 min.....	\$2.05
LNX-60. 60 min.....	\$2.25
LNX-90. 90 min.....	\$3.20
LNX-120. 120 min.....	\$4.15

Microcassette

Ferric oxide; three to a package.	
3MC. 60 min.....	\$3.80

Elcasets

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

Videocassette 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.....	\$12.45
L-500. 60/120/180 min.....	\$16.95
L-750. 90/180/270.....	\$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

631 Magnetic Tape

New Revox tape with improved maximum output level at low frequencies. For 3% distortion, flux on tape reaches 1200 nWb/m, representing an S/N of 78 dB. Bias adjustment compatible with 621 tape.....\$36

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- μ 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.....	\$11.89
MA-R C90. 90 min.....	\$15.99

"MA" (Metal Alloy) Cassettes

Metal bias; 70- μ sec equalization; housed in precision molded plastic shell housing and laboratory standard mechanism.

MA-C60. 60 min.....	\$8.49
MA-C90. 90 min.....	\$11.49

"SA-X" (Super Avilyn-Extended) Cassettes

Double-coated Super-Avilyn-particle tape; high bias; 70- μ 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- μ sec equalization; extended frequency response and low noise; super precision mechanism.

SA-C60. 60 min.....	\$4.39
SA-C90. 90 min.....	\$6.19

"OD" (Optimum Dynamic) Cassettes

Optima Ferric magnetic particle formulation; for mastering and critical recording needs; normal bias; 120- μ sec equalization; high MOL and wide dynamic range; super precision mechanism.

OD-C60. 60 min.....	\$3.99
OD-C90. 90 min.....	\$5.49

"AD" (Acoustic Dynamic) Cassettes

Linear ferric oxide particle formulation for normal bias; 120- μ sec equalization; high-end response and output level; for home and car decks.

AD-C60. 60 min.....	\$3.09
AD-C90. 90 min.....	\$4.49

"D" (Dynamic) Cassettes

Normal bias; 120- μ sec equalization; precision mechanism.

D-C30. 30 min.....	\$2.09
D-C46. 46 min.....	\$2.29
D-C60. 60 min.....	\$3.39
D-C90. 90 min.....	\$3.99
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 shutoff 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

GX Open-Reel Tape

Extremely high output level, extended range, low noise, low distortion tape for mastering and

all critical recording applications. Back treated for smooth running and stable winding. Available in 35- and 50-micron thicknesses.

GX35-90B. 1800 ft, 7" plastic reel.....	\$12.95
GX35-180BM. 3600 ft, 10 $\frac{1}{2}$ " metal reel.....	\$34.95
GX50-60B. 1200 ft, 7" plastic reel.....	\$10.95
GX50-120BM. 2500 ft, 10 $\frac{1}{2}$ " metal reel.....	\$29.95

LX Open-Reel Tape

High output level, extended range, low noise, low distortion tape for professional and all critical recording applications. Available in 35- and 50-micron thicknesses. Back treated (except for LX 35-90 and LX35-180M)

LX35-90. 1800 ft, 7" plastic reel.....	\$9.95
LX35-180M. 3600 ft, 10 $\frac{1}{2}$ " metal reel.....	\$27.95
LX35-180BM. 3600 ft, 10 $\frac{1}{2}$ " metal reel.....	\$30.95
LX50-60B. 1200 ft, 7" plastic reel.....	\$9.95
LX50-120BM. 2500 ft, 10 $\frac{1}{2}$ " metal reel.....	\$27.95

Microcassettes

MA-MC60B Microcassettes

Same metal-alloy tape formulation as standard-size cassettes. High-MOL, high-coercivity tape for critical music recording in metal-compatible microcassette recorders.

MA-MC60B. 60 min.....	\$8.99
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AD-MC60B2 Microcassettes

Same acoustical dynamic formulation as standard-size cassettes. High-output, extended-range, low-noise tape for music and speech recording. Packed in twos.

AD-MC60B3. 60 min each.....	\$9.99
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Videocassette 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 $\frac{1}{2}$ hr.....	\$22.00
VAT-60. 1-2-3 hr.....	\$19.00
VAT-30. 1 $\frac{1}{2}$ -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. 1 $\frac{1}{2}$ -1 $\frac{1}{2}$ hr.....	\$13.50
BAL-750. 1 $\frac{1}{2}$ -3 $\frac{1}{2}$ hr.....	\$24.50

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

NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 32.

10

ACCESSORIES

ADC

PRO-GRIPTM 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

PRO/GRAM™ Stylus-Force Gauge

Digital stylus-force gauge that accurately measures tracking force of tonearms in $\frac{1}{10}$ -gram increments. Battery operated with LED display \$29.95

ADCOM

Record Care System

Record cleaning system contains two weighted unidirectional 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 remove dust from records or film \$14.95

Carbon Fiber Headshell

Low-resonance low-mass carbon fiber headshell with non-tarnishing gold plated terminal pins \$14.95

GFS-1 Speaker Selector

Features the ability to switch speaker systems with amplifiers up to 200 watts/channel; usable with conventional or bridged amplifiers; handles up to 3 pairs of speakers with built-in load protection for low-impedance loads; headphone output provided; $7\text{''W} \times 5\frac{1}{4}\text{''D} \times 2\frac{3}{4}\text{''H}$ \$89

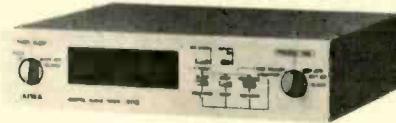
AIWA

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; $1\frac{1}{16}\text{''H} \times 9\frac{1}{8}\text{''W} \times 10\frac{1}{16}\text{''D}$ \$165.00

MT-3H Audio Timer

Digital audio timer with on/off electronic beeper, display brightness control. Can be set



in 1-min intervals. Can be used with Aiwa mini systems M-301, M-302, and M-162 \$100

AKAI

Tape Recording Accessories

AH-15. Head demagnetizer for GX tape heads	\$39.95
AS-3. Tape splicer	\$7.50
CHR-1. Head-cleaning fluid.....	\$3.50
D-100. DIN/DIN cable.....	\$8.50
DR-100. DIN/RCA cable	\$10.50
DT-120S. Digital display timer.....	\$85.00
FP-210. Felt-pad tape cleaners.....	\$3.00
R-7M. 7" aluminum empty reel	\$10.50
R-10M. $10\frac{1}{2}$ " empty aluminum reel.....	\$17.50
RM-10. $10\frac{1}{2}$ " NAB reel hub	\$11.95
RM-12. $10\frac{1}{2}$ " NAB reel holders.....	\$34.50/pr
ST-20. Sensing tape (6").....	\$5.95
3R-100. Rubber reel retainers.....	\$2.50/pr

Phono Accessories

HS-10. Headshell for AP-B10C turntable.	\$11.95
HS-20. Headshell for AP-B20 turntable....	\$11.95
HS-60. Headshell for AP-D30/D40/Q50/Q60 turntables	\$17.50
HS-80. Headshell for AP-Q80 turntable....	\$17.50

ALLSOP

Allsop 3 VHS Cleaner Kit

Wet-cleaning system that removes dust and dirt from audio and video heads, capstans, and



rollers; includes cleaning solution; case; replaceable cartridge..... \$29.95

Allsop 3 Beta Cleaner. Similar to Allsop 3 VHS cleaner except for Beta format VCRs \$29.95

Allsop 3 Ultraline Audio Cassette Deck Cleaner

Auto-reverse cassette deck cleaner featuring wet cleaning system. Includes dual cleaning pads; replacement cleaning pads in a smoked plastic box; cleaning solution; supra leather case..... \$14.95
Without case..... \$9.95

APRES AUDIO

Oriental Audio Cabinet

Black-lacquer-finished cabinet with dragon motif has slide-out tray for turntable, 2 adjustable-height shelves, removable vented back panel, cassette drawer, and roll-around casters. Other custom finishes and designs available. $50\frac{1}{2}\text{''H} \times 25\frac{1}{8}\text{''W} \times 20\frac{1}{8}\text{''D}$ \$1200

CF-3 Audio Armoire

Full-size armoire for audio components features brass accents, 2 adjustable-height shelves, pull-out tray for turntable, and vented back panel. Solid oak construction with solid oak raised-panel double doors for record-storage section. Large drawer provided for tape and accessories storage. Available in choice of 3 finishes. $68\text{''H} \times 27\frac{1}{2}\text{''W} \times 19\frac{3}{4}\text{''D}$ \$1100

CF-2 Audio Petite Armoire

Solid oak petite armoire for audio components features solid-brass accents; finest oak construction; solid oak raised-panel doors on record-storage compartment; 2 adjustable-height shelves; pull-out tray for turntable. Available in choice of 3 finishes. $46\frac{1}{2}\text{''H} \times 27\frac{1}{2}\text{''W} \times 19\frac{3}{4}\text{''D}$ \$769

CF-1 Three-Tier Commode

Commode-style audio-equipment cabinet features solid oak construction and brass accents; accommodation for either audio or video equipment; solid oak raised-panel doors conceal storage area for records or video recorder; removable back panel (vented for heat dissipation). Available in choice of 3 finishes. $32\text{''H} \times 27\frac{1}{2}\text{''W} \times 19\frac{3}{4}\text{''D}$ \$559

L'Original Audio Cabinet

Radial-corner, oak-finished audio cabinet on casters (concealed by chrome apron) features smoked acrylic, oak-framed door with bolt-and-cylinder lock; 2 vented rear panels that remove; 2 adjustable-height shelves; fully extended tape drawer. Available in choice of finishes. $53\text{''H} \times 23\frac{1}{8}\text{''W} \times 19\frac{3}{4}\text{''D}$ \$759

Le Starr Audio Equipment Rack

Art-studio-designed furniture made of high-grade polished acrylic with 4 shelves for audio equipment and compartment for record storage. S-shaped cabinet is accented with chrome supports. $28\frac{1}{4}\text{''H} \times 46\frac{1}{2}\text{''W} \times 15\frac{1}{2}\text{''D}$ \$529

L'Etagere Audio/Video Rack

Open-on-all-sides shelf arrangement for TV receiver, VCR, video-disc player, audio components, accessories. Features 2" solid oak railings; brass accents; 5 Formica shelves. Available in either natural oak or walnut finish with chocolate-brown Formica shelves. $72\text{''H} \times 31\text{''W} \times 20\text{''D}$ \$389

Le Cart Video Cart

Roll-around cart designed to accommodate TV receiver on top shelf, VCR or disc player on

second shelf, and tapes, discs, and accessories on bottom shelf. Features 2"-wide solid oak railings; heavy-duty casters; natural-oak or walnut finish with chocolate-brown Formica shelves. 34"H x 31"W x 20"D.....\$200

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

Anti-Static Record Sleeves

Anti-static, anti-dust, tearproof record sleeve constructed of paper on outside and high-density polyvinyl on inside with transparent poly-vinyl material covering center hole; ten sleeves/package.....\$2.50

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-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

AT6015 TechniClean™

Audiophile record maintenance system cleans record surface and reduces static at the same time.....\$24.95

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

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

\$29.95

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.....\$27.95

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 records.....\$12.95
LSR-6. 6-oz refill.....\$14.95

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-CF3. Low mass, carbon fiber headshell for straightarm tonearms; grid pattern helps in alignment

\$15.95

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

AUDIO TECHNOLOGY

510B 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 3/4"H x 7 1/2"W x 5 1/2"D

\$159.95

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 510B but for mobile use; operates on 12 V

\$169.95

511. Same as 510B but includes peak-hold circuitry

\$199.95

BIB

Audiofile Edition

24-AE Cassette Tape Splicer

1 1/8-in. cassette tape splicer suitable for recording tape of any thickness; makes diagonal or butt splices

\$15.95

90-AE Tape Head Demagnetizer

Designed for cassette, 8-track, reel-to-reel recorders; built-in auto-off switch when not in use; includes two removable probes

\$24.95

115-AE Tape Head Cleaning Kit

Multiangled tape head cleaning tools for use on all tape recorders; includes inspection mirror with cleaning brush, cleaning fluid, and replacement tips

\$14.95

122-AE Tape Head Cleaning Fluid

Professional fluorocarbon formula; cleans tape heads, capstans, pinch rollers; residue-free, safe for all recorder surfaces

\$3.45

Videophile Edition

VE-2 Video Maintenance Kit

Comprises five VE-5 cleaning tools, VE-7 head cleaning fluid, VE-4 dust-away air blast, inspection mirror, antistatic cleaning cloth, maintenance manual for VHS- and Beta-format recorders

\$24.95

VE-3 Video Tape Eraser

Instantaneously erases recorded material from video tape; erasure capability —78 dB; thermal-protected circuit

\$44.95

VE-4 Dust-Away Air Blast

Compressed air spray blaster removes dust, dirt, oxide from tape travel path; moisture-free, temperature constant

\$5.95

VE-5 Maintenance Cleaning Tools

Tools have lint-free pads at tip; clean video, audio heads, tape guides pinch rollers; pkg of five

\$4.95

VE-6 Tape Head Demagnetizer

Demagnetizes heads and guides of all video recorders; off switch; comes with two removable probes

\$24.95

VE-7 Video Tape Head Cleaning Fluid

2-oz cleaning fluid in glass bottle; cleans video and audio heads, capstans, tape guides of all video machines; nontoxic and nonflammable

\$4.95

VE-9 Video Tape Splicing Kit

Repairs broken video tape easily and accurately

\$39.95

VE-11 Head Cleaning Cassettes

Removes harmful debris from tape path in 15 seconds; safe and nonabrasive; for VHS-format machines

\$26.95

VE-12. Same as VE-11 except for Beta-format machines

\$26.95

VE-13 Video Lens Care Kit

Cleaning fluid, special brush with dust cap and antistatic cloth in handy carry-along wallet

\$8.95

VE-15 Antistatic TV Screen Treatment

Retards attraction of dust and dirt by preventing static build-up on TV screen; removes smudges and fingerprints

\$7.95

BoleC

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; $4\frac{1}{4}$ "H \times $14\frac{1}{2}$ "W \times $14\frac{1}{4}$ "D..... \$99.95
FM8. 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; $3\frac{1}{2}$ "H \times $12\frac{1}{2}$ "W \times 14 "D..... \$59.95
FM6. Basic electronically directable FM antenna with beam direction control; no tuning control or bandwidth selector; $2\frac{1}{4}$ "H \times $12\frac{1}{2}$ "W \times 14 "D..... \$29.95

CARVER

Z-1 Low Impedance Z-Coupler

Use with magnetic field amplifier to transform minimum 10W receiver into 400W receiver \$49

CROWN

RTA-2 Real-Time Audio Analyzer

Real-time spectrum analyzer in $\frac{1}{3}$ - and full-octave bands, switch selectable; consists of 32 single-pole-pair $\frac{1}{3}$ -octave bandpass filters centered on $\frac{1}{3}$ -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 1.52 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 ($\frac{1}{4}$ -in phone jack front and rear panel connector); $7\frac{1}{2}$ "H \times $19\frac{1}{2}$ "W \times $15\frac{1}{2}$ D\$2295

DISCWASHER

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 dustcover; additional spaces in tray for headshells, screwdriver, etc \$55.00

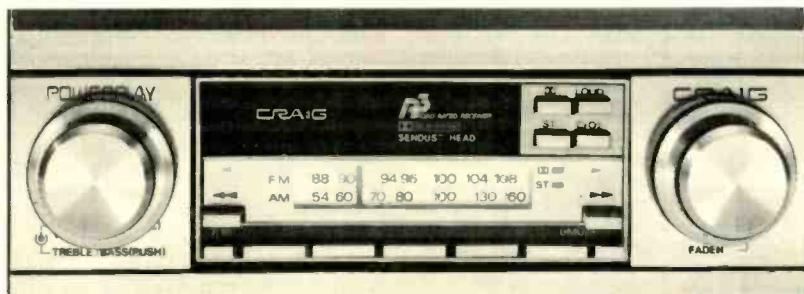
D4 Record Care System

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

CRAIG



WANTS YOU TO KEEP IT CLEAN



Craig Road Rated™ car stereo cassette decks are known around the world for their solid construction. Their state of the art design makes them virtually maintenance free. The heads, capstan and pinch roller need to be kept free of dust, pollutants, and tape oxides.

The Allsop 3 audio cassette deck cleaner is just about the fastest and easiest way to keep your Craig or other cassette deck operating at its peak. Simply moisten the Allsop 3 with Allsop's specially formulated solution and insert into the deck like a standard cassette.

In seconds, the Allsop's virgin wool pads gently clean, leaving your deck ready to produce sounds that will make your ears tingle. The Allsop 3 cleans quickly and safely which is why it is recommended by leading makers of high quality audio products.

ALLSOP **3**™
WE KEEP IT CLEAN

ALLSOP, INC., POST OFFICE BOX 23, BELLINGHAM, WASHINGTON 98227

bonded pad with hand-milled walnut handle	\$16.50
1 1/4 oz replacement fluid	\$2.50
6 oz replacement fluid	\$10.00
16 oz replacement fluid	\$17.00
DC-1. Brush designed to clean Dishwasher Record Care pad; available free of charge with all Dishwasher Systems and Dis Kits; 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.\$15.00

D'Stat II Mat

Very thin fiber turntable mat which polarizes record surface to reduce static during playback

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 stylus 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

DiscSet™ Essentials

Includes D4 Record Care System and SC-2 Stylus Care System; both packaged in a milled walnut base

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

ESPRIT by 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 ±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 phone jack (headphone); supplied with 75-ohm coaxial cable with phono plugs, RK-112 connecting cord, power cord, and demo tape; 7 1/8" H × 18 1/8" W × 15 3/4" D.....\$4200

FIDELITONE**8503 Video Cassette Storage Chest**

Solid walnut lacquer-finished partitioned storage chest holds up to 24 VHS video cassettes; thumb-slot opener, kerf-mounted hinge, and dado lid stop

\$83.95
3143. Similar to 8503 except holds up to 12 VHS or Beta video cassettes

\$57.95

3135-01 Audio Cassette Storage Chest

Solid walnut lacquer-finished cassette chest holds up to 24 cassettes; has flocked-vacuum-formed insert, thumb-slot opener, kerf-mounted hinge, and dado lid stop

\$45.95

3135. Same as 3135-01 except holds up to 36 cassettes

\$52.95

8509. Similar to 3135 without lid; holds up to 36 cassettes

\$21.95

8508. Similar to 8509 except holds up to 24 cassettes

\$19.95

8506. Similar to 8507 except holds up to 12 cassettes

\$15.95

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

**FISHER****CB550/REM550 Remote-Control Unit**

Control center/infrared wireless remote-control module designed for use with Fisher MT9000 programmable turntable/CA250 or CA350 amplifier system or CA250 amplifier/FM550 tuner/DD350 cassette-deck system. Controls power on/off; volume; AM/FM band selection; up to 6 AM and 6 FM station preset selections; tape-monitor function; cassette-deck play, record, pause, rec-mute, stop, rewind, and fast-forward functions; turntable automatic program-selection, start, and reject functions. Has 3 switched ac accessory outlets on receiver. Power consumption 4 W (timer only); 1 1/8" W × 13 3/4" D × 2 1/8" H; 7 1/4 lb (6 oz remote)...\$330

TR3000 Digital Timer

Can be programmed to turn on and off complete hi-fi system at any preset time in 24-hr period. Permits unattended recording off the air. Features wake-up alarm; up to 59-min sleep timer; fluorescent digital-numeric time display; automatic dimmer that adjusts to room lighting levels; 2 switched ac accessory outlets; quartz-crystal oscillator. Power consumption 5 W (timer only); 1 1/8" W × 5 1/8" D × 1 1/4" H; 3 lb

\$190

GARRARD U.S.A.**Dustmaster**

Lo-mass tonearm-styled record-cleaning device with brush composed of 40,000 carbon fibers at end; removes microdust from record grooves without applying fluids; contacts surface by way of selfstick pad; built-in arm rest and finger lift; black with chrome accents.....\$19.95

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 or 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 1/4" in thick sides; 6 1/2" H × 27" W × 20 1/4" D.....\$300.00

1990 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

cabinet with upper slide-out shelf for VCR and lower section for videocassette storage; gallery top shelf can support turntable, etc.; 46" H × 21 1/2" (left side) × 27" (right side) W × 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 × 23 3/4" (left) × 21 1/2" (right) W × 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 × 21 1/2" W × 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 × 27" W × 20 1/4" D.....\$200.00

HITACHI**AD-093 Record Cleaner**

Battery-operated, rotating-brush record cleaner that attaches to record player spindle and automatically removes dust and dirt from grooves; can be used with LP and EP-size records

\$29.95

AD-091 Electronic Head Demagnetizer

Demagnetizes cassette tape deck/recorder heads in one second; cassette shape can fit into any unit; powered by one silver-oxide or alkaline cell; good for 500 demagnetizes

\$24.95

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 × 440 mm W × 160 mm D.....\$167.00

MITSUBISHI

DA-M30 Power-Level Meter

Designed for docking with the A30 power amplifier. Features fluorescent display and advanced digital logic circuitry; risetime typically 300 µsec, (max. 1 msec); recovery time 1.5 sec;



sec; bar-graph display format; each channel has 24, five-bar groups of fluorescent elements, every fifth blanked; calibrated in watts and dB; 48 driver circuits; circuitry is outside signal path; remote-control cable.....\$250

DR-730 Audio Equipment Rack

Vertical or horizontal format; twin glass double doors; generous record storage; 4 shelves \$225

MURA

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

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-µ-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

HC-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

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 1/8-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

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 shutdown 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

NAKAMICHI

T-100 Audio Analyzer

Measures and verifies performance of audio

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CAR STEREO

PIONEER KP-5500	\$125
PIONEER KP-8500	\$138
PIONEER KP-7500	\$179
PIONEER KE-5100	CALL
PIONEER TS-695	\$82 pr
BLAUPUNKT CR-4000	\$240
BLAUPUNKT CR-5001	\$328
CRAIG CAR STEREO	CALL
SANYO CAR STEREO	CALL
JENSEN CAR STEREO	CALL

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Technics



SA-424 AM/FM Receiver

45 watts per channel, Quartz-Digital tuning with 14-station presets, New Class A Amp with ultra-low distortion.....CALL

RS-M270X Cassette Deck

Dolby and DBX, two motors, Direct Drive system, solenoid soft-touch controls.....CALL

SL-B101 Turntable

Belt Drive, strobe, pitch control Front panel controls.....\$74

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PIONEER



CT-6R Cassette Deck—
Dolby C, Automatic Re-
verse, Ribbon Sendust
heads.....\$239

SX-6 AM/FM Receiver—
45 watts per channel,
Digital-Quartz tuning,
soft-touch function con-
trols.....CALL

PL-7 Turntable—
Direct Drive, Quartz-lock
Fully automatic.....\$138

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PIONEER MODELS

AKAI



GX-F25 Cassette Deck—
Twin Field GX Heads,
Solenoid soft-touch
controls, Memory re-
wind.....\$215

CS-F11 Cassette Deck—
Solenoid soft-touch
controls, two color LED
meters.....\$171

AT-V04 AM/FM Tuner—
Digital Synthesizer, 14-
station presets.....CALL

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AKAI MODELS

SONY



STR-VX5 AM/FM Receiver—
55 watts per channel,
Digital-Quartz tuning
with 16-station pre-
sets.....CALL

TC-FX6C Cassette Deck—
Dolby C, Solenoid soft-
touch controls, two
motors.....CALL

PS-X55S Turntable—
Direct Drive, Quartz-lock,
Fully automatic, two
motors.....CALL

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10

ACCESSORIES

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 μ V. Features non-mechanical bar-graph display and logic-controlled FET switching; 9.5 lbs. Includes carrying case; 3 $\frac{1}{2}$ "H \times 13 $\frac{1}{2}$ "W \times 9 $\frac{1}{2}$ "D.....\$850.00

LA-100 Line Amplifier

Corrects line-level mismatches between components from different manufacturers. Would typically be connected between preamp and either power amp or tape deck to provide additional gain; offers choice of 0/+6/+12/+18 dB gain; at 0 dB gain, acts as buffer amplifier for impedance mismatches.....\$100.00

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 $\frac{1}{2}$ "H \times 7 $\frac{1}{2}$ "W \times 4"D\$95.00

BA-150 Bridging Adaptor

Inserts between preamp and 2 stereo power amps to provide bridged stereo operational designed specifically for use with Nakamichi 620 and 420 power amps to take advantage of their Complete Mirror design\$85.00

DM-10 Head Demagnetizer

Slim-line, easy-to-use recorder head demagnetizer, specially designed for company's cassette decks.....\$28.00

RS-730 Speaker Selector

Speaker-selector box for 730 receiver....\$45.00

OLSON ELECTRONICS**HF-761 Stylus Microscope**

Magnifies stylus tip to detect wear; specially constructed tip-guard assures proper position and distance for optimum focus; $\frac{5}{8}$ "D \times 1 $\frac{1}{2}$ "L\$6.98

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 8.5V;

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 -8 dBV; 4.25"H \times 10"W \times 6"D.....\$199

801A Imager™. Similar to The Imager 801 except for car-stereo systems. Operates from 12-volt dc, negative-ground power sources; can be bracket or Velcro mounted under most dashboards or inside glove compartment; max. output level 2 V; THD less than 0.03%, 10-20,000 Hz; 5 $\frac{1}{4}$ "D \times 4 $\frac{1}{4}$ "W \times 1 $\frac{1}{2}$ "H; 12.5 oz.....\$150

ONKYO**RC-5T Remote Controller**

Remote-control unit designed for Onkyo TA-2040, TA-2050, TA-2060 cassette decks and CP-1130F and CP-1150F turntables\$49.95

SH-21 Replacement Headshell

Carbon-fiber, low-mass black-anodized-trim headshell for CP-1030F turntable.....\$12.00

AT-80 Timer

Slim-line digital system timer with multimode



operation\$129.95

CK-50 Storage Cabinet

Storage cabinet for records and cassettes\$49.95

TK-80. Mounting bracket for CK-50 and SR-25 rack\$8.95

RL-1. Accessory system lamp\$24.95

OSAWA**QC-205 Tape-Deck Cleaning Kit**

Kit contains separate solutions for tape heads and rubber pinch rollers (11 ml each), mirror, and cotton swabs\$7.99

TC-1 Tape-Head Cleaner

Spray-on nonflammable cleaning solution for tape heads, pinchrollers. Includes extension tube and 10 cotton swabs\$5.99

QC-209 Head-Cleaning Cassette

Removes oxide build-up and other debris from



tape heads without causing excessive wear. Safe for all types of tape heads\$7.99

PC-507 Cassette-Repair/Maintenance Kit

Kit contains precision splicing block with 90° and 60° slots and tape hold-downs; Phillips and slot-head screwdrivers; scissors and tweezers; splicing and sensing tape; tape probe; replacement pressure pads, screws\$24.99

CW-402 Pocket Cassette Winder

Battery-powered cassette winder rewinds C-60 cassette in 35 seconds; has automatic shut-off for safe end-of-tape handling; requires two 1.5-V AA cells\$19.99

CT-406 Cassette Winder

Manual cassette winder with 7:1 gear ratio for rapid winding\$9.99

PC-501 Index-Label Book

Contains 100 replacement labels and 156 color-coded identification tabs for cassettes. \$4.99

PC-502 Index-Card Book

24 color-coded cassette replacement liners with 100 self-adhering identifying tabs\$4.99

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 push-button 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 omnidirectional 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 $\frac{1}{2}$ "H \times 19"W \times 8"D\$670

220 CBS CX Decoder

Provides up to 85 dB dynamic range; removes 20 dB surface noise. THD + noise at 0.5 V less than 0.08%; S/N (A weighted) 85 dB; input impedance 50k ohms; input level 150 mV rms average; max output 10 V rms into 10k ohms; 8.1"W \times 2 $\frac{1}{4}$ "H \times 6 $\frac{1}{4}$ "D; 3 lb.....\$100

190 Speaker Switching Module

Accommodates 3 pairs of speakers in any combination; handles 50,000 watts peak power; accepts amplifiers up to 500 watts. Continuous current 5.0 amps rms, 200 watts into 8 ohms; pulsed peak current 80.0 amps (51.2 kW into 8 ohms); contact resistance 0.05 ohm; contact material silver plate; 8.1"W \times 2 $\frac{1}{4}$ "H \times 6 $\frac{1}{4}$ "D\$99.95

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

CFB-80 Carbon-Fibre Record Brush

Manufactured from new aerospace quality carbon fibers to eliminate shedding. Contains



500,000 filaments/side, each filament 8-microns (0.0003") dia. to follow exactly record groove as it removes all dust particles; less than 1-ohm natural electrical resistance of each fiber easily conducts away electrical charges to keep records static-free\$10.95

SC4 Stylus Cleaning System

Kit combines specially formulated stylus cleaning fluid that is safe for delicate stylus parts and unique cleaning brush with controlled-penetration bristles to dissolve and remove stylus contaminants. 5X magnifier (included) for examining stylus, cartridge mounting, and headshell electrical connections.....\$7.95

PIONEER

DT-510 Digital Timer/Clock

Digital timer/clock for use with hi-fi audio equipment. Can turn on and off tape deck for unattended recording and playback. Features wake-up preprogrammability; Fluroscan™ digital-numeric time display, including AM/PM indication. 16 $\frac{1}{8}$ "W x 5 $\frac{1}{8}$ "D x 2 $\frac{1}{8}$ "H; 3 lb 12 oz.....\$120

Tape Accessories

PR-101. Empty 10 $\frac{1}{2}$ " metal tape reel with NAB hub.....\$18.00
PR-100. Empty 10 $\frac{1}{2}$ " metal tape reel with NAB hub, boxed.....\$18.00
PR-85. Empty 7" metal tape reel, boxed.....\$15.00
PP-220A. 10 $\frac{1}{2}$ " reel adaptor.....\$11.00
JC-9. DIN connector.....\$10.00

RECODER CARE/NORTRONICS

QM333 The Splicer

Edits, repairs, or adds leaders to magnetic tape; designed for $\frac{1}{4}$ -in reel-to-reel, 8-track cartridge, and cassette tapes; slits tape; has pop-out tape guide.....\$21.00

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 $\frac{1}{4}$ " X 1" X 5 $\frac{1}{16}$ ".
QM-311. For $\frac{1}{4}$ -in tapes.....\$23.00
QM-312. For 0.150-in cassette tapes.....\$23.00
QM-313. For $\frac{1}{2}$ -in video and audio tapes.....\$26.80

Reel Tabs

Pre-cut Mylar or metal tabs in dispenser box; comes in quantities of 50, 200, or 1000; $\frac{1}{2}$ -in Mylar tabs in quantities of 200 or 1000 also available.
QM-521. $\frac{1}{4}$ -in reel tabs; 50/package.....\$5.00
QM-522. Cassette reel tabs; 50/package.....\$5.00
QM-524. $\frac{1}{4}$ -in metal-sensing reel tabs; 50/package.....\$5.00

QM-707 Handlap

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.....\$93.50
QM-702. Coarse lapping paper; black.....\$7.00
QM-703. Medium lapping paper; yellow.....\$7.00
QM-704. Fine lapping paper; pink.....\$13.20

QM-230 Cassette Bulk Eraser

Self-powered hand-held unit completely erases cassette tapes; requires no batteries or external power source; contoured Cyclocase with wood grain finish.....\$35.20

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 $\frac{1}{2}$ -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 Cyclocase; coiled cord.....\$56.80
QM-212. 220-V professional bulk eraser.....\$59.80

QM-250 Professional Bulk Tape Eraser

Demagnetizes professional cassette, $\frac{1}{4}$ -in, $\frac{1}{2}$ -in, and 1-in open-reel, broadcast 8-track cartridge, and $\frac{1}{2}$ -in VHS/Beta video cassette tapes; holds

up to 10 $\frac{1}{2}$ -in reel sizes; 3.25" H X 10" W X 7"D.....\$336.40

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; Cyclocase.....\$22.80
QM-203. 220-V professional head demagnetizer.....\$23.20

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.....\$24.00

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.....\$4.00
QM-182. 8-track head/capstan cleaner.....\$4.00

Alignment Tapes

AT210B. For cassette recorders.....\$14.40
AT-200B. Master recording provides zero reference, azimuth alignment, and DIN frequency response tests; includes 3000-Hz tone for speed and flutter.....\$52.00
AT-820. For 8-track; 8-min cycle.....\$12.00
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.....\$55.20
AT-120. $\frac{1}{4}$ -in reel-to-reel 7.5-ips master recording tape.....\$51.80

Cassette Storage/Carrying Cases

Burl walnut vinyl book-like cassette case; cassettes and hubs lock in place.
QM408. Holds max. 8 cassettes.....\$9.00
QM412. Holds max. 12 cassettes.....\$10.80
QM416. Holds max. 16 cassettes.....\$12.80

VCR Maintenance Products

VCR-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.....\$31.20
VCR-95. VCR maintenance kit includes spray head cleaner, cellular foam swabs, anti-static dustcloth, and screwdriver that removes headcover screws.....\$17.00
VCR-100. Dubbing kit includes all cables and connectors required for dubbing $\frac{1}{2}$ -in Beta or VHS-format videocassette tapes; can also be used for duplication or editing in real time.....\$13.40
VCR-103. Tape head cleaner spray for VCR heads, pinch rollers, and capstans; 3 oz.....\$4.80
VCR-105. Tape head cleaner liquid removes dust, dirt, and tape oxide deposits from VCR heads and parts; 3.2 fl oz.....\$4.60

VCR-109. High-velocity jet air stream Super Blast Spray cleaner eliminates loose tape oxide dirt and dust; 10 oz.....\$5.20
VCR-205. Head demagnetizer with angled tip; removes residual magnetism from heads, rollers, and guides.....\$25.20
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; Cyclocase; Includes ac power cord for 110-120 V ac operation, 50-60 Hz.....\$56.80

QM-313. Grooved anodized aluminum splicing block for repairing or editing $\frac{1}{2}$ -in video cassettes; two deep slits for straight or diagonal cuts; includes double-backed adhesive.....\$26.80
VCR-506. Illuminated inspection mirror for dark,

illinois audio



SAVE

- money
- time
- freight

CASSETTE TAPES

SONY ERH-90 HIGH BIAS TAPE	.....	28.00/10
SONY FER-90 HIGH BIAS PREMIUM	.....	28.00/10
TDK MA-C90 METAL CASSETTE TAPE	.....	\$64.00/10
TDK SA-C90 NEW PREMIUM TAPE	.....	44.00/10
TDK OD-C90 OPTIMUM STD. BIAS	.....	35.00/10
TDK SA-C90 SUPER AVALIN TAPE	.....	29.50/10
TDK CD-C90 SUPER AVALIN TAPE	.....	22.50/10
TDK C-90AD NEW AUDIA TAPE	.....	22.00/10
BASF C-90 PROFESSIONAL TYPE I	.....	\$26.50/10
BASF PRO IT OR III C-90 SPECIFY	.....	29.00/10
MARVELL C-90 LN LOW NOISE TAPE	.....	\$23.50/12
MARVELL C-60U ULTRA DYNAMIC	.....	23.00/12
MARVELL C-90U ULTRA DYNAMIC	.....	29.50/12
MARVELL UD-XL-C60 TYPE I OR II	.....	29.50/12
MARVELL UD-XL-C90 TYPE I OR II	.....	39.50/12
SOUTCH C-90 MASTER TYPE 2 OR 3	.....	31.50/10
REEL TO REEL TAPE		
TDK LX-35-90 NEW 7IN.	.....	\$60.00/10
TDK LX-35-180M NEW 10 1/2 IN	.....	170.00/10
MARVELL UD-35-90 ULTRA DYNAMIC 7"	.....	57.50/10
MARVELL UD-35-180 SAME ON 10 1/2"	.....	153.00/10
MARVELL UD-XL-180 SAME ON 10 1/2"	.....	69.50/10
MARVELL UD-XL-180B SAME ON 10 1/2"	.....	198.50/10
SOUTCH 207 R-180 10 1/2 IN	.....	55.00/10
SOUTCH 207 R-180 10 1/2 IN	.....	170.00/10

VIDEO TAPE

SONCH L-500 BETA TYPE	.....	\$105.00/10
SONCH L-750 BETA TAPE	.....	130.00/10
SONCH T-120 VHS TYPE	.....	140.00/10

NOTE: #1111 NOW IN STOCK AT LOW PRICES !!!!!

AUDIO TECHNICA CARTS.

MODEL 155-LC	\$105.00	STANTON CARTRIDGES
MODEL 140-LC	60.00	MODEL BRI-3 \$82.50
MODEL 125-LC	40.00	681-EES 60.50

SHURE CARTRIDGES

V-15 TYPE 4 WRITE!	.....	EMPIRE CARTRIDGES
V-15 TYPE 3HE	70.00	EDR-9 \$110.00
M-97 HE	49.50	LAC-600 80.00
		2000E-3 25.00

SHURE 90565 S20 WITH TURNTABLE PURCHASE !!!!

AUTOMOTIVE STEREO

PIONEER KE-5100 ELECTRONIK HEADOUT	.....	\$210.00
PIONEER KP-5100 AM-FM CASSETTE	.....	140.00
TS-695 6x9 3-WAY SPKR. SYSTEMS	.....	82.00
TS-696 6x9 2-WAY SPKR. SYSTEMS	.....	64.00
WRITE FOR ALL PIONEER AUTOMOTIVE PRICES !!!!!		
JENSEN R-405 AM-FM IN DASH CASS..	.....	168.00
JENSEN J-1033 6x9 TRIAX 11 SPKRS.	.....	79.00
JENSEN J-1037 6x9 CO-AX 11 SPKRS.	.....	60.00
WRITE OR CALL FOR OTHERS INCLUDING SONY!!!!!!		

HEADPHONES

KOSS MODEL HV-K STEREOHEADPHONES	.....	\$41.50
KOSS MODEL HV-KLC	.....	49.50
KOSS PRO-4 AAA	47.50
SENNHEISER HD-414 HEADPHONES	\$45.00
SONY KDR-5 LIGHTWEIGHTS	32.00

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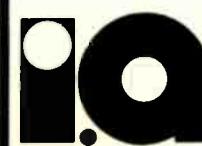
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CIRCLE NO. 21 ON READER SERVICE CARD

hard-to-reach areas of VCR	\$7.40
VCR-512. Cellular foam cleaning swabs for VCR heads and surfaces	\$4.80
VCR-130. Convenient drop-in cassette which cleans the entire tape path using a unique, completely non-abrasive wet system. For VHS tape decks, provides 40 cleanings	\$30.00
VCR-135. Same as VCR-130 except for Beta tape decks	\$30.00

Car Tape Maintenance Products

AS-9. 3-oz spray cleaner and 100 six-in cotton swabs.....	\$6.80
AS-141. Cassette life extender features non-abrasive cleaning belt; includes liquid cleaner	\$3.80
AS-183. 8-track head/capstan cleaner; designed for use every ten hrs; includes liquid cleaner	\$4.40
AS-206. 8-track/cassette head demagnetizer; plugs into car cigarette lighter	\$32.00

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.....	\$59.95
42-105. Similar to 42-110 without filter system and woodgrain case; has built-in 45-rpm adapter	\$44.95
42-100. Similar to 42-105 except uses two-conductor cable.....	\$39.95

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.....	\$22.95
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"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	\$9.60
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"Whiskee" Record Cleaner Kit

Record cleaning kit includes portable record cleaner; stylus cleaner and fluid. #40-061	\$9.15
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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.....	\$5.15
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"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
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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.....	\$22.00
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40-002 Robolite-Turntable Light

Battery operated; uses 2 D cells, not included	\$22.00
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Stylus Pressure Gauge

Measures phono stylus pressure to within $\frac{1}{10}$, g. #41-073	\$3.75
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Tape Recorder Head Demagnetizer

Reduces residual magnetism which causes noise build-up; interchangeable tips accommodate	
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open-reel, cassette, and cartridge equipment; built-in switch; 110-120 V ac; #25-023 UL listed	\$16.50
Economy Model. Features plastic-shielded probe. #25-013; UL listed	\$11.00

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	\$7.20
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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	\$5.50
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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
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24-016 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"	\$37.55
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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	\$27.50
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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	\$6.25
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41-042 Rob-O-Stat II

With dual emission chambers for wide-angle dispersion and greater effectiveness; velvet record cleaner incorporated into top section; use to remove dust and other matter from records after static charge has been removed.....	\$20.25
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24-017V Economy VCR Eraser

Works on VHS, Beta, and Technicolor cassettes	\$44.50
34-050 "L" Videodisc and record storage rack	\$7.75

Video Products**CAT 29-500 VCR Head Cleaning Kit**

Includes powerful but safe, Broad Spectrum, Freon TF-based cleaner that removes plasticizers and dirt; long-reach thin applicators with specially angled chamois-like tips; reduces abrasion; 5 applicators and 1-oz bottle of cleaning formula.....	\$11.20
CAT 29-501. Wide Spectrum Head Cleaner formula with Freon TF for all Video/Audio heads	\$4.85

CAT 29-502. Chamois-type applicators; package of 5	\$5.80
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CAT 29-503. Video lint-free cleaning cloths; approx. 75 pcs packed in permanent storage box	\$5.25
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CAT 24-001 Video Cassette Eraser

Restores magnetic qualities of cassettes to like-	
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new blank-tape quality; erases virtually all signals; works on any VCR format and all audio tapes; no tape contact or wear; built-in momentary-contact switch; 110-120 V ac intermittent duty: 1-min on/20 min off; 6 amps; 5" x 3 1/2"; 4 lb.	\$58.50
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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
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Pre-Cut Tabs

SPT-7/32-36. 36 pre-cut 1.0-mil polyester splicing tabs	\$1.39
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SST-7/32-18. 18 pre-cut aluminized sensing tabs	\$1.39
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SK-7/32. 12.5 ft of 1.9 mil polyester splicing tape in dispenser kit	\$2.29
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Head Cleaners

S-C-HC. Cassette head cleaner	\$1.79
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S-8TR-HC. 8-track head cleaner	\$2.99
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Record Care System

Applicator with pad and special fluid meters controlled amount of anti-stats, oil removers and friction reducers onto disc to clean and protect records. Applicator attaches to turntable spindle.	
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Total System	\$27.99
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Sound Life fluid/pad	\$9.99
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Sound Life Fluid	\$8.19
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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
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SIGNET

SK301. Liquid stylus cleaning formula	\$3.95
SK305. Electronic stylus cleaner	\$29.95
SK306. Replacement liquid cleaner for SK305	\$3.95
SK305. Vibration Damping compound	\$6.95
SK401. Maximum transfer high-conductivity cable assembly	\$24.95
SK405. Maximum transfer head shell wire set	\$7.95
SK501. Automatic tonearm lift	\$22.95
SK503. Disc stabilizer	\$22.95
SK505. Straight-arm headshell	\$15.95

SONY**MX-100 Microphone Amplifier**

Four-channel microphone amplifier with input selector, pan pots, and low-cut filter. Designed for use with Sony TC-K777 cassette deck but can be used with all Sony home decks	\$300.00
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RM-80 Remote Controller

Full-function wireless infrared remote-controller for Sony TC-K77, TC-K77R, TC-K81, TC-K71, FX-7, FX6C, FX-6, FX-5C, FX-4 cassette decks; will also work with Sony TC-K75, TC-K65, TC-K61, and TC-K55II decks	\$120.00
RM-50. Wired remote-control with same functions as RM-80	\$55.00

RM-65 Recording Synchronizer

Automatically cues select Sony turntables with select Sony tape decks. For use with PS-X800, PS-X600, PS-X55S, LX-5, and LX-3 turntables and same cassette decks as RM-80/RM-50.....\$25.00

PT-77 Programmable Timer

8-event/7-day programmable timer with 60-min sleep function. Features 2 switched ac outlets rated 1000 W max; built-in 10-min backup battery; designed to complement Sony ST-J75 programmable tuner but can be used as a control center for an entire hi-fi system.....\$195.00

PT-55 Programmable Timer

1-event/1-day programmable timer with 60-min sleep function. Features 2 switched ac outlets rated at 500 W max.....\$95.00

BE-100 Cassette Eraser/Winder

Silently removes all magnetic recordings from all cassettes, including metal with better than 65 dB erasure. Wind time within 170 sec (C-60).....\$70.00

AN-300 Outboard FM Antenna

Highly sensitive tunable outboard FM antenna with 90° rotation flexibility. Accepts automatic control signal from Sony STR-VX6, STR-VX5, and STR-VX4 receivers, while manual override allows usage other separate tuners and receivers.....\$80.00

WS-300 Speaker Stands

Deluxe speaker stands designed for Sony SSU-60 and SSU-50 speaker systems.....\$70.00/pr

SB-5335 Control Center

Control center for multiple-component hi-fi systems. Features connection for selection of turntables, tuners, and auxiliary units for total of 3 amperes; sources: tape recorders, 2 external adaptors, 5 speaker systems.....\$300.00

SB-500 Tape Deck Switcher

Tape deck switching unit with copying facility for up to 3 decks.....\$75.00

SB-300. Tape deck switcher/copier for up to 3 decks.....\$75.00

SOUND GUARD**Total Record Care System**

Includes Record Preservation Kit and Record Cleaner Kit.....\$18.95

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, buffering pad, and grooming pad; one kit treats about 30 LPs both sides.....\$10.95

2-oz Record Preservation refill.....\$5.49

6-oz refill.....\$14.99

Record Cleaner Kit

For both heavy-duty record cleaning and light touchup 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

6-oz Record Cleaner refill.....\$10.50

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

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, buffering 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-fl-oz liquid record cleaner and brush; noise-free operation.....\$14.95

Stylus Cleaning & Inspection Kit

Consists of 2-fl-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

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-10MHz.....\$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 1/4" H x 6 1/4" W x 4 1/4" D.....\$50.00

TDK**LCL30/TCL-30 Head Cleaners**

Nonabrasive head-cleaning cassettes for Beta- and VHS-format recorders; cleans video and audio heads in 30 seconds and can be used up to 200 times; maintenance record on cassette label.

LCL-30 for Beta VCRs.....\$25.00

TCL-30 for VHS VCRs.....\$25.00

CP-36 Cassette Cabinet

Holds up to 36 audio cassettes in 3 separate drawers that hold 12 cassettes each.....\$39.99

HD-11 Tape Head Demagnetizer

Portable hand-held universal tape head demagnetizer designed for open-reel or cassette tape decks; operating time less than one second; red LED "on" indicator and green LED "ready-to-use" indicator; side-mounted activator switch; plastic-covered metal tips; includes two 1.5 V dry-cell batteries.....\$43.75

HD-01 Head Demagnetizer

Automatic head demagnetizer with less than one-second operating time; housed in transparent cassette shell with surface-mount LED indicator to show demagnetization is taking place; self-contained battery.....\$30.00

HC-1 Head Cleaner

Non-abrasive cassette tape machine head cleaner.....\$2.25

Empty Tape Reels

AR-7M. 7" metal reel.....\$8.99
AR-10M. 10 1/2" metal reel.....\$13.99

TEAC**E-2 Bulk Eraser**

Handles 7" and 10 1/2" reels and features built-in pilot light and circuit breaker.....\$100.00

E-3 Tape-Head Demagnetizer

Removes residual magnetism from tape heads and guides.....\$29.50

RMK Recorder Maintenance Kit

Kit includes 3-oz bottle of HC-1 tape-head cleaner, 3 oz bottle of rubber cleaner, 3-oz bottle of stainless polish, cotton swabs, cleaning cloth.....\$9.95

HC-2. 11-oz tape-head cleaner.....\$6.50

RC-2. Rubber cleaner (7 oz).....\$6.50

SP-2. 11 oz stainless polish.....\$6.50

PB-64 Patch Bay

Has 64 RCA phono connectors on both front and rear panels and is compatible with low-loss cables.....\$100.00

Metal Reels and Hubs

RE-1002. 10 1/2" NAB metal reel for 1/4" tape.....\$15.00

TZ-612B. 1/4" NAB hub adaptors; quick lock.....\$17.50/pr

TECHNICS**Component Racks**

SH-940A. Home audio-system component cabinet with 3 equipment compartments and 2 adjustable shelves. Features bottom record storage compartment with full-length glass door, simulated walnut-grain finish.....\$200

SH-515A. Similar to SH-940A except has only 2 equipment compartments. Recommended for Technics Micro Component series equipment.....\$150

Universal Headshells

SH-90S. Cartridge shell for plug-in type cartridges.....\$30

SH-100. Die-cast aluminum universal plug-in headshell with calibrated overhang cursor and gold-plated contacts. For Technics turntables.....\$16

TRANSCRIBER**Sound Saver Record Care**

Classic I. Attractive wood-style handle; comes with 1 1/4-oz size bottle of Cleaner One Fluid, storage tray and cover; utilizes humidification cleaning process.....\$15.00

The Cylinder. Cylindrical cleaner with plastic storage tube and 1 1/4-oz size bottle of Cleaner One Fluid.....\$6.95

Cleaner One. Record Cleaning Fluid; product of advanced technology filtration system;

1 1/4-oz bottle.....\$2.25

4-oz bottle.....\$6.00

16-oz bottle.....\$16.00

Omega One. 100% carbon fiber mat rids records of noise-causing static.....\$12.95

Stylus performance fluid. 1/2-oz size bottle of fluid with brush; effectively cleans damaging debris from stylus without pressure.....\$3.95

At least not in the showroom. Chances are they've already heard them—or at least heard all about them. From a friend. From a consumer magazine. Or perhaps from an audiophile publication. When you've sold over 1/2 million, the word gets around.

What's made the EPI 100 such a classic?

The fact that for our modest price they can give you EPI's amazing "Linear Sound." Sound that's remarkably accurate, uncolored and that's delivered to every part of the room. Because of their F.S.T. "Air Spring" tweeter, you get nearly hemispherical dispersion with EPI 100's.

The highs come across sharp and clear; the lows deep and smooth. And unlike nearly every speaker, you can listen for hours without suffering listening fatigue. There's virtually no distortion.

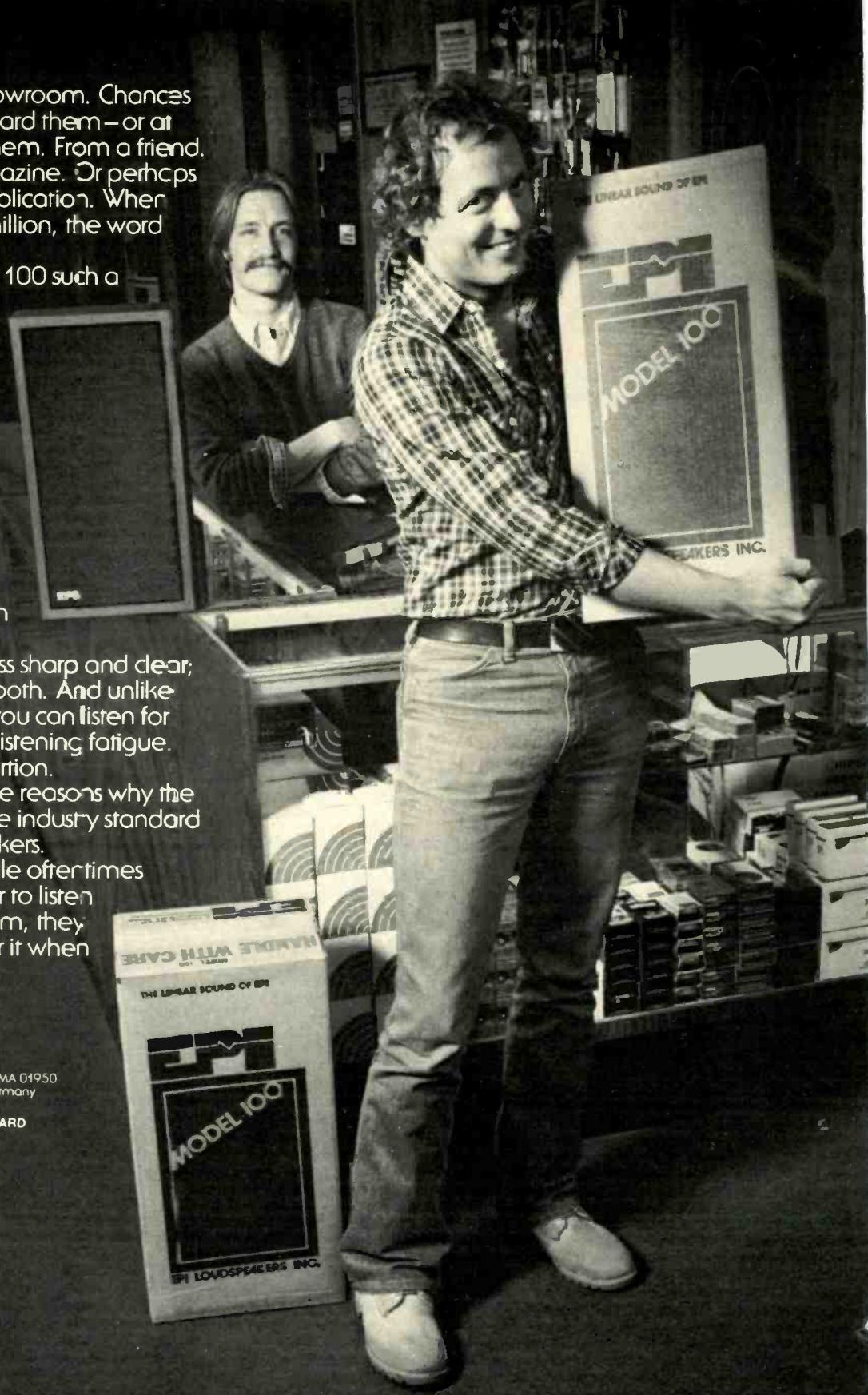
These are some of the reasons why the EPI 100 has become the industry standard for bookshelf loudspeakers.

And rest assured, while oftentimes people may not bother to listen to them in the showroom, they more than make up for it when they get them home.

EPI 100.

Epicure Products Incorporated, Newburyport, MA 01950
Epicure Products Europa, Simich, Munich, Germany
A Pennel Company

CIRCLE NO. 19 ON READER SERVICE CARD



**MOST PEOPLE WHO BUY EPI 100'S
DON'T EVEN ASK TO LISTEN TO THEM.**

11

SPEAKER SYSTEMS

AAL

Road Systems

RS-450 Speaker System

Stage speaker system with twin 15" woofers with 2" high-temperature aluminum voice coils and 40-oz magnets plus wide-dispersion horn tweeter with compression-type high-frequency driver. Input power 10-250 W rms; tonal range 38-15,000 Hz ± 3 dB; 40½" H × 20" W × 15½" D; 125 lb \$450

RS-350 Speaker System

Keyboard speaker system with 15" woofer and wide-dispersion horn tweeter with compression-



type high-frequency driver. Input power 10-150 W rms; frequency response 42-15,000 Hz ± 4 dB; 25" H × 20" W × 15½" D; 65 lb \$350

RS-250 Speaker System

Stage monitor speaker system with 12" woofer with 2" high-temperature aluminum-alloy voice coil and 40-oz magnet plus wide-dispersion horn tweeter with compression-type high-frequency driver. 21½" H × 16" W × 16" D; 44 lb \$250

Impression Series

IM 920 Speaker System

Three-way floor-standing speaker system with two 10-in foam-surround woofers, 4½-in isolated midrange, and 1-in soft-dome tweeter in vertical alignment; frequency response 35-22,000 Hz ± 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" H × 14½" W × 11½" 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 × 16" W × 11½" D \$249

IM 910. Similar to IM 912 except has 10-in woofer; frequency response 38-22,000 Hz ± 3 dB; input range 5-60 W continuous program; 23½" H × 14½" W × 11½" 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 re-

sponse 42-22,000 Hz ± 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 × 12" W × 9½" D \$129

IM 96 Speaker System

Acoustic-suspension, compact bookshelf speaker system with soft-dome tweeter and foam-surround woofer in vertical alignment. Features rosewood-grain vinyl-laminated cabinet; 6" passive radiator; 16-oz woofer magnet and 1½" woofer voice coil. Frequency response 40-22,000 Hz; impedance 8 ohms; input power 5-60 W; 14½" H × 9" W × 9" D; 16 lb. \$239/pr

Studio Series

Studio 500 Speaker System

Three-way speaker system with 15-in woofer, dual 5½-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 × 18" W × 11½" D \$259

Studio 400. Similar to Studio 500 except with dual 10-in woofers and 5½-in cone midrange; frequency response 25-25,000 Hz; input range 10-75 W continuous; 35" H × 14½" W × 11½" D \$239

Studio 300. Similar to Studio 400 except 12-in woofer; input range 10-50 W continuous program; 27½" H × 16½" W × 11½" 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; 24½" H × 14½" W × 11½" D \$159

Equation Series

EQ7 Speaker System

Two-way speaker system with 6½" foam surround woofer with 1" voice coil plus 2" cone-type phenolic-ring tweeter. Features vinyl-laminated cabinet. Frequency range 50-22,000 Hz; impedance 8 ohms nominal; crossover at 4 kHz; sensitivity 89 dB at 1 kHz, 1 W; input power 5-25 W rms; 12¾" H × 7¾" W × 7" D; 20 lb \$150/pr

EQ9 Speaker System

Two-way speaker system with 8" foam-surround woofer with 1" voice coil plus 2" cone-type tweeter. Features vinyl-laminated cabinet. Frequency range 35-22,000 Hz; impedance 8 ohms nominal; crossover at 4 kHz; input power 5-25 W; 21" H × 12" W × 8½" D; 24 lb \$178/pr

EQ11 Speaker System

Two-way speaker system with 10" foam-surround woofer with 1½" voice coil plus 2" cone-type tweeter. Features vinyl-laminated cabinet. Frequency range 27-22,000 Hz; impedance 8

ohms nominal; crossovers at 1000 and 5000 Hz; sensitivity 92 dB at 1 kHz, 1 W; input power 5-50 W; 23" H × 14½" W × 11" D; 34 lb \$270/pr

EQ13 Speaker System

Three-way acoustic-suspension speaker system with 12" foam-surround woofer with 1½" voice coil, 5½" cone-type midrange driver with 1" voice coil, and 2" cone-type double tweeter. Frequency range 25-22,000 Hz; impedance 8 ohms nominal; crossovers at 1 kHz and 5 kHz; sensitivity 93 dB at 1 W, 1 kHz; input power 5-50 W; 24" H × 18½" W × 11" D; 42 lb \$350/pr

EQ15 Speaker System

Three-way speaker system with 15" foam-surround woofer with 1½" voice coil, 5½" cone-type midrange driver with 1" voice coil, and 2" cone-type double tweeter. Frequency range 20-20,000 Hz; impedance 8 ohms nominal; crossovers at 1 kHz and 5 kHz; sensitivity 95 dB at 1 W, 1 kHz; input power 5-65 W; 28" H × 19" W × 11" D; 47 lb \$398/pr

EQ17 Speaker System

Three-way speaker system with dual 8" foam-surround woofers with 1" voice coils, 5½" cone-type midrange driver with 1" voice coil, and 2" cone-type tweeter. Frequency range 25-22,000 Hz; impedance 4 ohms nominal; crossovers at 1 kHz and 5 kHz; sensitivity 96 dB at 1 W, 1 kHz; input power 5-65 W; 32½" H × 14" W × 11" D; 42 lb \$370/pr

EQ21 Speaker System

Three-way acoustic-suspension speaker system with dual 10" foam-surround woofers with 1½" voice coils, 5½" cone-type midrange driver, and 2" cone-type tweeter. Frequency range 25-22,000 Hz; impedance 4 ohms nominal; sensitivity 96 dB at 1 W, 1 kHz; power input 5-75 W; 34½" H × 15½" W × 11" D; 50 lb. \$438/pr

EQ25 Subwoofer

Dual 8" foam-surround woofers with 1½" voice coil in a subwoofer system. Frequency range 10-250 Hz; impedance 8 ohms nominal; sensitivity 87 dB at 1 W, 200 Hz; input power 5-100 W; 16½" H × 16" W × 16" D; 50 lb. \$249

ACCULAB by RTR INDUSTRIES

950 Speaker System

Four-way, passive-radiator speaker system with two 10" woofers, 12" mass-tuned passive radiator, two 5" midrange drivers, 1" soft-dome tweeter, and piezoelectric super tweeter. Housed in oiled-walnut column enclosure; 10-150 W; 4 ohms; 18" H × 45" W × 13" D. \$650

840 Speaker System

Three-way, passive-radiator speaker system with 10" woofer, 12" mass-tuned passive radiator, 5" midrange driver, and 1" soft-dome tweeter. Housed in oiled-walnut column enclosure; 10-

100 W; 8 ohms; 16" W × 36" H × 12" D \$425

480A Speaker System

Four-way, passive-radiator speaker system with 12" woofer, 12" passive radiator, 3½" midrange driver, 2½" tweeter, and piezoelectric super tweeter. Housed in vinyl tower enclosure; 5-60 W; 8 ohms; 15" W × 38" H × 10¾" D.....\$325

440A Speaker System

Four-way acoustic-suspension speaker system with 12-in woofer, 3½-in cone midrange, 2½-in cone tweeter, and 3½-in solid-state super tweeter; frequency response 33-30,000 Hz ±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; 25½" H × 14½" W × 11" D.....\$275

340A Speaker System

Three-way acoustic-suspension speaker system with 12-in woofer, 3½-in cone midrange, and 2½-in cone tweeter; frequency response 33-18,500 Hz ±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; 25½" H × 14½" W × 11" D.....\$225

320A Speaker System

Three-way acoustic-suspension speaker system with 10-in woofer, 3½-in cone midrange, and 2½-in cone tweeter; frequency response 40-18,500 Hz ±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; 22½" H × 13" W × 10½" D.....\$150
220A. Similar to 320A except two-way system minus midrange driver; crossover at 6500 Hz; efficiency 89.9 dB SPL/W/m; input range 4-20 W.....\$125

ACOUSTAT

Slimline Series

Model Four Speaker System

Full-range electrostatic speaker system with MK-121 Magne-Kinetic Interface Drive. Frequency response 28-20,000 Hz ±2 dB; sensitivity 115 dB SPL at 22 ft.; min power 50 watts; nominal impedance 4 ohms; high frequency balance control; 59" × 36" × 4"; 86 lb.....\$1995/pr

Model Three. Similar to Model Four except frequency response 30-20,000 Hz; sensitivity 110 dB SPL at 18 ft.; 59" × 28" × 3½"; 75 lb.....\$1595/pr

Model Two. Similar to Model Four except frequency response 35-20,000 Hz; sensitivity 105 dB SPL at 15 ft.; min power 100 watts; 58" × 20" × 3½"; 64 lb.....\$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, 1½-in dome upper midrange driver from 1200-7000

Hz, and ½-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; maximum recommended amplifier power 400 W/ch continuous; 4-ohm nominal impedance; three 3-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; 52¾" H × 15" W × 15½" D.....\$900

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 subclosure, 1½-in high-temperature hemispherical-dome upper midrange, and ½-in high-temperature hemispherical-dome tweeter in vertical array; crossovers at 200, 1200, and 7000 Hz; sensitivity 87 dB SPL/W/m; maximum recommended amplifier power 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; 43¾" H × 14½" W × 15½" D.....\$700

AR91 Speaker System

Three-way acoustic-suspension floor-standing speaker system with 12-in woofer, 1½-in liquid-cooled dome midrange with semi-horn, and ½-in liquid-cooled dome tweeter in vertical array; crossovers at 700 and 7500 Hz; sensitivity 87 dB SPL/W/m; maximum recommended amplifier power 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; 31½" H × 14" W × 11½" D.....\$425
AR92. Similar to AR91 except with 10-in woofer; walnut-grain vinyl veneer cabinet; 31½" H × 14" W × 11½" 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 subclosure and 1½-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; maximum recommended amplifier power 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; 30¾" H × 14" W × 10½" D.....\$260

AR94. Similar to AR93 except has three vertically-aligned drivers consisting of one 8-in front-firing woofer, 8-in woofer/midrange driver, and 1½-in liquid-cooled cone tweeter.....\$220

AR48S Speaker System

Three-way acoustic-suspension bookshelf/floor standing speaker system with 10" woofer, 4" cone midrange driver in its own subclosure, and 1" liquid-cooled dome tweeter in vertical array. Low frequency response -3 dB at 45 Hz; crossover at 400 and 2500 Hz; efficiency 87 dB SPL/W/m; maximum recommended amplifier power 100 watts continuous; 6-ohm nominal impedance; walnut grain vinyl veneer finish with brown cloth grille; 25" H × 13½" W × 10½" D.....\$200

AR38S Speaker System

Two-way acoustic-suspension speaker system with 10" woofer and 1½" liquid-cooled cone tweeter in vertical array. Low frequency re-

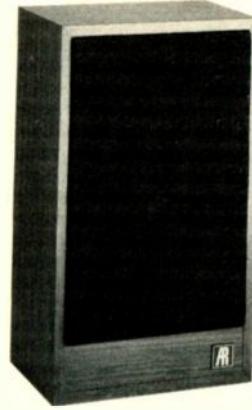
sponse -3 dB at 45 Hz; crossover at 2000 Hz; efficiency 88 dB SPL/W/m; maximum recommended amplifier 100 watts continuous; 8-ohm nominal impedance; walnut grain vinyl veneer finish with brown cloth grille; 24" H × 13½" W × 10½" D.....\$150

AR28S Speaker System

Two-way acoustic-suspension bookshelf/floor standing speaker system with 8" woofer and 1" liquid cooled dome tweeter in vertical array. Low frequency response -3 dB at 50 Hz; crossover at 2000 Hz; efficiency 87 dB SPL/W/m; maximum recommended amplifier 100 watts continuous; 6-ohm nominal impedance; walnut-grain veneer finish with brown cloth grille; 21½" H × 11¾" W × 7½" D.....\$125

AR18S Speaker System

Two-way acoustic-suspension bookshelf speaker system with 8" woofer and 1½" liquid cooled cone tweeter in vertical array. Low frequency



response -3 dB at 62 Hz; crossover at 2000 Hz; efficiency 88 dB SPL/W/m; maximum recommended amplifier 100 watts continuous; 8-ohm nominal impedance; walnut-grain vinyl veneer finish with brown cloth grille; 16½" H × 9¾" W × 6½" D.....\$90
with brown or black cloth grille; 24" H × 14½" W × 10½" D; 30 lb.....\$120

Wedge Series

TW-8-3S Speaker System

Three-way phase-aligned transmission-line vented speaker system with 8" polystyrene woofer, 1½" dome-type midrange driver, and 1" dome tweeter. Frequency response 22-22,000 Hz ±3 dB; input power 30 W min; impedance 8 ohms; crossovers at 1.2 and 6.5 kHz; sensitivity 90 dB SPL/W/m; 29¾" H × 17" W × 14" D; 60 lb.....\$360

TW-12-3 Speaker System

Three-way phase-aligned acoustic-suspension speaker system with 12" woofer, 5" midrange driver, and 1" dome tweeter. Frequency response 24-22,000 Hz ±3 dB; input power 30 W min; impedance 8 ohms; crossovers at 1.5 and 6.5 kHz; sensitivity 90 dB SPL/W/m; 29¾" H × 17" W × 14" D; 50 lb.....\$360

W-12-3 Speaker System

Three-way phase-aligned acoustic suspension speaker system with 12" woofer, 5" midrange driver, and 1" dome tweeter. Frequency response 24-22,000 Hz ±3 dB; input power 30 W min; impedance 8 ohms; crossovers at 1.5 and 6.5 kHz; sensitivity 90 dB SPL/W/m; 24" H × 18" W × 18" D; 50 lb.....\$350

TW-10-3 Speaker System

Three-way phase-aligned acoustic-suspension speaker system with 10" woofer, 5" midrange driver, and 1" dome tweeter. Frequency response 30-22,000 Hz ±3 dB; input power 30 W min; impedance 8 ohms; crossovers at 2.5

In 27 years, most of the world's hi-fi manufacturers have copied our woofers, our tweeters, and just about everything else in our speakers. Except the sound.

We invented the acoustic suspension woofer, and they copied that. We invented the hemispheric dome tweeter, and they copied that. What they can't copy is the sound whose bass *Stereo Review* calls "deeper, flatter and cleaner than that of any other we have tested." The sound *High Fidelity* says "will satisfy the discriminating listener long after others have lost their charm." See your local AR dealer and hear for yourself. *Stereo Review* on the AR 9, July, 1978. *High Fidelity* on the AR 28s, July, 1981.



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and 6.5 kHz; sensitivity 90 dB SPL/W/m; 26" H × 15" W × 13" D; 40 lb..... \$300

W-10-3 Speaker System

Three-way phase-aligned acoustic-suspension speaker system with 10" woofer, 5" midrange driver, and 1" dome tweeter. Frequency response 28-22,000 Hz ±3 dB; input power 30 W min; impedance 8 ohms; crossovers at 2.5 and 6.5 kHz; sensitivity 88 dB SPL/W/m; 21½" H × 16" W × 16" D; 40 lb..... \$260

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 fullrange system; frequency response 65-17,000 Hz ±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 × 10" W × 9%" D..... \$185

312 Speaker System

Three-way speaker system with 12" woofer with 1½" voice coil, 4" ferrofluid midrange driver, and 1¾" ferrofluid cone-type tweeter. Features tweeter and midrange controls; narrow cabinet design with back-firing port to allow coupling to wall in bass range; removable grille formed of perforated styrene covered by openweave grille cloth. Frequency response 38-18,000 Hz ±3 dB; input power 10-150 W; impedance 8 ohms; sensitivity 90 dB SPL/W/m; crossovers at 700 and 3.5k Hz; 29" H × 18" W × 10%" D; 45 lb..... \$199
310. Similar to 312 except has 10" woofer; frequency response 45-18,000 Hz; 26" H × 15" W × 8½" D; 35 lb..... \$149

MS650 Speaker System

Two-way acoustic-suspension mini speaker system with 6½-in high-compliance woofer and 1-in polyamide soft dome tweeter; frequency re-



sponse 75-17,000 Hz ±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 × 6½" (top) × 8½" (bottom) W × 7½" (bottom) D..... \$145

MS10W Subwoofer

Subwoofer with 10" ferrofluid long-throw woofer with 54-oz magnet. Features acoustic-suspension design; dual voice coils; separate crossover networks for each channel. Frequency response 30 Hz (-3 dB) to crossover frequen-

cy; crossover frequency 75 Hz; input power 18-150 W; impedance 4 ohms; sensitivity 87 dB W/m; pecan-grain vinyl finished enclosure with removable acoustic-foam grille; 16" H × 10" W × 9%" D (less grille); 24 lb..... \$360

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 22-150Hz ±3 dB; crossover at 150 Hz at 12 dB/octave with Braun L200 speakers; impedance 4 ohms; power 100 W DIN; 15½" H × 17½" W × 17½" D. Vinyl veneer walnut finish..... \$230
Genuine walnut veneer finish..... \$290

ELF-100 Car Speaker System

Two-way car speaker system with long-throw cast frame 4" woofer and soft dome tweeter; all drivers mirror imaged and mounted in die-cast aluminum cabinets. Frequency response 45-20,000 Hz; crossover at 1500 Hz; power handling 40 watts DIN, 60 watts peak; impedance 4 ohms; black matte finish; 5" H × 8" W × 6%" D..... \$229

ADS

L2030 Monitor Speaker

Three-way acoustic-suspension floor-standing professional monitor speaker system with two 14-in high-compliance Stifflite 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 ±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%" H × 27½" W × 13½" D..... \$1995
L1530. Similar to L2030 except uses two 10-in Stifflite cone woofers in separate chambers and has no auxiliary midrange drivers or midrange level control; frequency response 25-20,000 Hz ±3 dB; power rating 150 W nominal, 300 W peak program; available in mirror-symmetrical matched pairs only; 50%" H × 23½" W × 12½" D..... \$1095

L1230 Monitor Speaker

Three-way acoustic suspension floor-standing professional monitor speaker system with two 8-in high-compliance Stifflite cone woofers in separate chambers, 2-in soft dome midrange driver, and ¾-in soft dome tweeter; frequency response 30-20,000 Hz ±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%" H × 19½" W × 9%" D..... \$675

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 Stifflite 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: 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 ±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 × 22½" W × 23½" D; C-1500: 2" H × 17" W × 10" D; 400: 11½" H × 7½" W × 6½" D.

SubSat 2300 System. Includes one pair of ADS 400 minispeakers..... \$1649
PB-1500/C-1500. Powered bass module and bass system control only..... \$1349
F400. Floor stands for ADS 400 minispeakers..... \$38

L810 Speaker System

Three-way acoustic-suspension speaker system with two 8-in high-compliance Stifflite cone woofers in separate chambers, 2-in soft dome midrange, and ¾-in soft dome tweeter; drivers are diffraction-corrected flush mounted; frequency response 35-23,000 Hz ±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; 25½" H × 14½" W × 11½" D..... \$449
F800. Black metal base for L810..... \$40
L710. Similar to L810 except uses two 7-in Stifflite woofers; frequency response 40-23,000 Hz ±3 dB; efficiency 93 dB SPL/W/m; power rating 75 W nominal, 150 W peak program; 21½" H × 12½" W × 10½" D..... \$399
F700. Black metal base for L710..... \$40

L730 Speaker System

Three-way acoustic-suspension speaker system with 10-in high-compliance long-excursion Stifflite cone woofer, 1½-in soft dome midrange, and ¾-in soft dome tweeter; drivers are diffraction-corrected flush-mounted; frequency response 30-23,000 Hz ±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; 25½" H × 14½" W × 11½" D..... \$399
F800. Black metal base for L730..... \$40

L620 Speaker System

Two-way acoustic suspension speaker system with 10-in high-compliance long-excursion Stifflite cone woofer and 1-in soft dome tweeter; frequency response 30-20,000 Hz ±3 dB; crossover at 1500 Hz; efficiency 92 dB

Bring your music into focus...

with the
B&W
Model 802.



Like a photograph that is out of focus, a loudspeaker that presents a hazy, blurred image will never make music sound real.

In a camera, exact optical focus is achieved by the combination of advanced design and exacting constructional standards. B&W Loudspeakers achieve musical focus by adhering to the same strict standards. Their advanced technology includes crossover designs optimized by computer and cone inspection performed by laser interferometry. B&W's flawless construction is evidenced throughout—from massive cast-alloy frames to exquisite wood veneer finishes.

B&W Loudspeakers reproduce much more than just the notes and overtones of a performance. By revealing the subtlest details of the music, they add a sense of depth and clarity that brings one much closer to the experience of listening to a live performance. Serious music listeners use a variety of terms to describe this elusive quality. We at B&W call it focus.

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B&W

Model 802

The 802 is the domesticated version of B&W's famous 801 Studio Reference Monitor. It incorporates the same new Fibrecrete head assembly and APOC automatic overload protection circuit as the 801—coupled to a somewhat smaller, more slender bass enclosure. Virtually all the performance that made the 801 a standard listening instrument at EMI and Decca studios is incorporated in the 802—yet it will integrate beautifully with virtually any home living area.

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 $\frac{1}{2}$ "H \times 14 $\frac{1}{2}$ "W \times 11 $\frac{1}{4}$ "D \$249
F800. Black metal case for L620 \$40
L520. Similar to L620 but uses 8-in Stifflite woofer; frequency response 35-20,000 Hz \pm 3 dB; power rating 50 W nominal, 100 W peak program; 21 $\frac{1}{2}$ "H \times 12 $\frac{1}{2}$ "W \times 10 $\frac{1}{2}$ "D \$199
F700. Black metal base for L520 \$40
L420. Similar to L520 but uses 7-in Stifflite woofer; frequency response 48-20,000 Hz \pm 3 dB; available in pairs only; 17 $\frac{1}{2}$ "H \times 11 $\frac{1}{4}$ "W \times 7"D \$159

400 Miniature Speaker System

Two-way acoustic-suspension speaker system with 7-in high-compliance ultra-long-excursion Stifflite 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 $\frac{1}{4}$ "H \times 7 $\frac{1}{8}$ "W \times 6 $\frac{1}{8}$ "D \$189
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 \$40 ea.

300 Miniature Speaker System

Two-way miniature acoustic-suspension speaker system with 5 $\frac{1}{4}$ -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 \times 5.9"W \times 5.7"D \$154
300C. Same as 300; includes quick-disconnect swivel bracket and all hardware for car installation surface mounting; black finish; 8 $\frac{1}{2}$ "H \times 5 $\frac{1}{8}$ "W \times 5 $\frac{1}{4}$ "D \$159

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 $\frac{1}{4}$ "H \times 4 $\frac{1}{4}$ "W \times 4 $\frac{1}{2}$ "D \$124
200C. Same as 200 except includes swivel bracket and all accessories for car installation surface mounting; black finish \$129

B2001 Stereo Bi-Amplification System

Three-piece biamplication system consisting of two P-1000 "Power Plate" 1-kW biamp modules and C-2000 biamp 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; frequency response 5-100,000 Hz \pm 0.2 dB; S/N 90 dB (A weighted); input

sensitivity 2.0 V; slew rate 100 V/usec. C-2000: has custom-tailored crossover positions for L2030, L1530, and L910 speakers plus programmable position for other speakers suitable for high-powered biampification; 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 \times 20 $\frac{1}{4}$ "W \times 4"D \$2500

ADVENT**Powered Advent Loudspeaker**

Two-way acoustic-suspension, biampified 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 $\frac{1}{2}$ "H \times 14 $\frac{1}{2}$ "W \times 11 $\frac{1}{8}$ "D \$499

5012 Speaker System

Two-way acoustic-suspension bookshelf speaker system with Advent woofer and 1" dome tweeter. Cabinet finish available in genuine walnut or oak veneer, solid wood front moldings. Frequency response 40-23,000 Hz \pm 2.5 dB on-axis; crossover at 1.8 kHz; sensitivity 87 dB/W/m; nominal impedance 8 ohms; 26 $\frac{1}{2}$ "H \times 14 $\frac{1}{2}$ "W \times 11 $\frac{1}{4}$ "D \$250

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 \times 14.25"W \times 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 $\frac{1}{2}$ "H \times 13 $\frac{1}{4}$ "W \times 9 $\frac{1}{8}$ "D \$170

3002 Speaker System

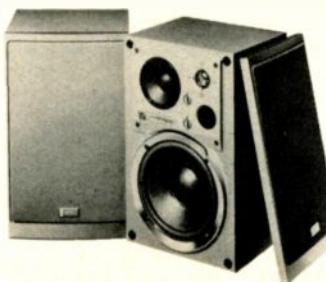
Two-way acoustic-suspension bookshelf speaker system with woofer and 1-in dome tweeter; frequency response 48-23,000 Hz \pm 3 dB; crossover at 2800 Hz; sensitivity 88 dB/W/m; nominal impedance 8 ohms; walnut grain vinyl finish; 20"H \times 12"W \times 8.5"D \$130

2002 Speaker System

Two-way acoustic-suspension bookshelf speaker system with woofer and 1 $\frac{1}{2}$ " direct-radiator tweeter. Frequency response 50-23,000 Hz \pm 3 dB; crossover at 3.2 kHz; sensitivity 88 dB/W/m; nominal impedance 8 ohms; walnut-grain vinyl finish; 18 $\frac{1}{2}$ "H \times 11"W \times 8"D \$110

AIWA**Mini Speaker Systems****SC-E50Y Speaker System**

Three-way mini speaker system with midrange and treble controls, bass-reflex design. Frequency range 45-40,000 Hz; max input power 70 W. Designed to be used with Aiwa mini systems



M-301, M-501, M-502, M-505, and M-606 \$330/pr

SC-E60Y Speaker System

Bookshelf bass-reflex speaker system with 7" woofer and 2-layer metallized-dome tweeter. Features adjustable tweeter control; removable grille; 60-W max input-power capacity. Can be used with Aiwa mini systems M-301, M-302, M-502, M-505, and M-606 \$250/pr

SC-E35Y Speaker System

Two-way speaker system with 6 $\frac{1}{2}$ " woofer and 2" cone-type tweeter and max input-power rating of 35 W. Can be used with Aiwa mini systems M-301, M-302, M-502, M-505, and M-606 \$170/pr

SC-E11-A Speaker System

Two-way compact speaker system with built-in power-overload/warning LED. Frequency range 60-20,000 Hz; impedance 8 ohms; 7 $\frac{1}{2}$ "H \times 4 $\frac{1}{4}$ "W \times 10 $\frac{1}{8}$ "D; 6.4 lb. Can be used with Aiwa mini systems M-301, M-302, M-502, and M-505 \$165/pr

SC-E1Y Speaker System

Carry Compo speaker system designed to be used with Aiwa mini system M-101 \$100/pr

AKAI**CW-T77 Speaker System**

3-way speaker system with 12" woofer, 4" midrange driver, and 1 $\frac{1}{4}$ " tweeter. Features tweeter and midrange controls and walnut-grain vinyl cabinet. Impedance 8 ohms; max input power 120 W; frequency range 30-20,000 Hz; crossovers at 1.5k and 9k Hz; 29.5"H \times 15.5"W \times 11.2"D; 40 lb \$270

CW-T55 Speaker System

3-way speaker system with 10" woofer, 4" midrange driver, and 1 $\frac{1}{4}$ " tweeter. Features midrange control and walnut-grain vinyl cabinet. Impedance 8 ohms; max input power 70 W; frequency range 40-20,000 Hz; crossovers at 1.5k and 8k Hz; 26.4"H \times 13.4"W \times 8.9"D; 28 lb \$200

CW-T33 Speaker System

2-way speaker system with 10" woofer and 1 $\frac{1}{4}$ " tweeter. Features walnut-grain vinyl cabinet. Impedance 8 ohms; max input power 50 W; frequency range 45-20,000 Hz; crossover at 5 kHz; 22.8"H \times 11.8"W \times 8.5"D; 40 lb/pr \$270/pr

Miniatuer Speaker System**SW-7II Speaker System**

2-way miniature speaker system with 5" woofer and 1 $\frac{1}{2}$ " dome-type tweeter. Impedance 8 ohms; max input power 40 W; frequency range 55-22,000 Hz; crossover at 5 kHz; 8.9"H \times 5.5"W \times 4.9"D; 24 lb/pr \$195/pr

ALLISON**Model One Speaker System**

Stabilized radiation loading design with two 10-in woofers, two 3 $\frac{1}{2}$ -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); bi-amplification capability using internal crossover; 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 $\frac{1}{2}$ acoustic watt minimum over full frequency range, with 70-W input; system resonance 45 Hz nominal; sealed oiled walnut enclosure 40"H \times 19"W \times 10 $\frac{1}{2}$ "D, internal volume 2550 cubic inches \$590

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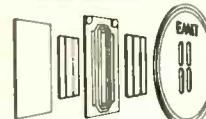
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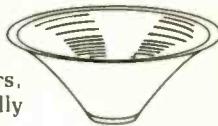
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Model Two. Same as Model One except has two 8-in woofers, two 3½-in convex midrange, and two 1-in convex tweeters; system resonance 52 Hz nominal; sealed oiled walnut enclosure 36" H × 16" W × 9¾" D, internal volume 1775 cubic inches \$510

Model Three. Stabilized radiation-loading system with 10-in woofer, 3½-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 × 15½" W × 10" D (occupies 10% wall space min.) \$395

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-veneer high-density particle board, oiled finish; 11" H × 19¾" W × 10" D..... \$280

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 × 18½" W × 10" D..... \$195.00

Model Six. Same as Model Five except has 59-Hz resonance; walnut-grain vinyl finish; 11½" H × 11½" W × 11½" D \$160 ea. White or black lacquer..... \$172.00

ALTEC LANSING

19 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 × 30" W × 21" D (including base and grille)..... \$1000

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 × 21" W × 16½" D..... \$580

Santana II Speaker System

Two-way floor-standing vented enclosure with

12-in bass driver and 5-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; 25½" H × 19" W × 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 ±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 × 16.5" W × 14" D \$450

6. Similar to 8 except uses 10-in woofer; frequency response 60-20,000 Hz ±2.5 dB; sensitivity 90 dB SPL; 25.5" H × 15.5" W × 13.5" D \$350

4. Similar to 6 except two-way system minus midrange driver; frequency response 60-20,000 Hz ±3 dB; crossover at 2000 Hz; sensitivity 88 dB SPL; 23" H × 14" W × 12½" 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 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

Duplex Series

4B Super Duplex Speaker System

Two-way speaker system. Frequency response 60-18,000 Hz ±5 dB; sensitivity 95 dB SPL/W/m; input power 5-150 watts; max output 114 dB; nominal impedance 4 ohms; crossover at 5000 Hz; 6½" × 9¾" × 3¾"; 6 lb 10 oz..... \$240

4A Duplex Speaker System

Two-way speaker system. Frequency response 80-18,000 Hz ±6 dB; sensitivity 95 dB SPL/W/m; input power 5-100 watts; max output 111 dB; nominal impedance 4 ohms; crossover at 5000 Hz; 6½" × 9¾" × 3½"; 3 lb 13 oz..... \$170

4C Duplex II Speaker System

Two-way speaker system. Frequency response 90-16,000 Hz ±6 dB; sensitivity 94 dB SPL/W/m; input power 5-100 watts; max output 109 dB; nominal impedance 4 ohms; crossover at 5000 Hz; 7½" × 9¾" × 3½"; 3 lb 13 oz..... \$120

AUDIO PRO by INTERSEARCH

A4-14 Biampified Speaker System

Three-way biampified bass-reflex bookshelf speaker system incorporates Ace-Bass™ subwoofer using two 5-in down-firing rear-mount woofers and own amplifier and flush-mount 4½-in cone midrange and 1-in soft dome tweeter with separate amplifier; frequency response 30-20,000 Hz ±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 pushbutton, bass-blend pushbutton control, and power on/off signal-actuated in automatic mode; walnut or black-ash finish; 20½" H × 12½" W × 10½" D \$1750 pr.

B2-50 Amplified Subwoofer

Bass-reflex port design incorporates two long-throw 6½-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 ±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; 21½" H × 18¾" W × 17½" D \$995

B2-40 Amplified Subwoofer

Bass-reflex port design incorporates two long-throw 5½-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 ±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 × 14.75" W × 14.75" D \$695

S2-7 Satellite Speakers

Two-way wall-mount satellites with 7-in mid-range and 1-in soft dome tweeter; frequency response 100-20,000 Hz ±2 dB (when mounted against wall); high efficiency; walnut or black-ash finish with grille; 15.5" H × 9" W × 5.75" D \$495 pr.

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 mid-



range, and 1-in fabric dome tweeter; frequency response 35-20,000 Hz ±3 dB; crossovers at 575 and 5000 Hz; input range 15-250 W continuous (program); nominal impedance 8 ohms; two front-mounted midrange and high-frequency balance switch controls; walnut veneer cabinet with dark brown solid grille; 30¾" H × 17" W × 10½" D \$450

Model H/200. Speaker stands..... \$60 pr.

Model 232 Speaker System

Bookshelf air-suspension speaker system with 10" woofer, 2" dome midrange driver, and 1" dome-type tweeter. Features walnut-grain vinyl finished enclosure. Frequency response 45-20,000 Hz -3 dB; impedance 6 ohms nominal; input power 15-200 W continuous; crossovers as 850 and 5k Hz; 25" H × 15" W × 10" D; 44 lb \$275

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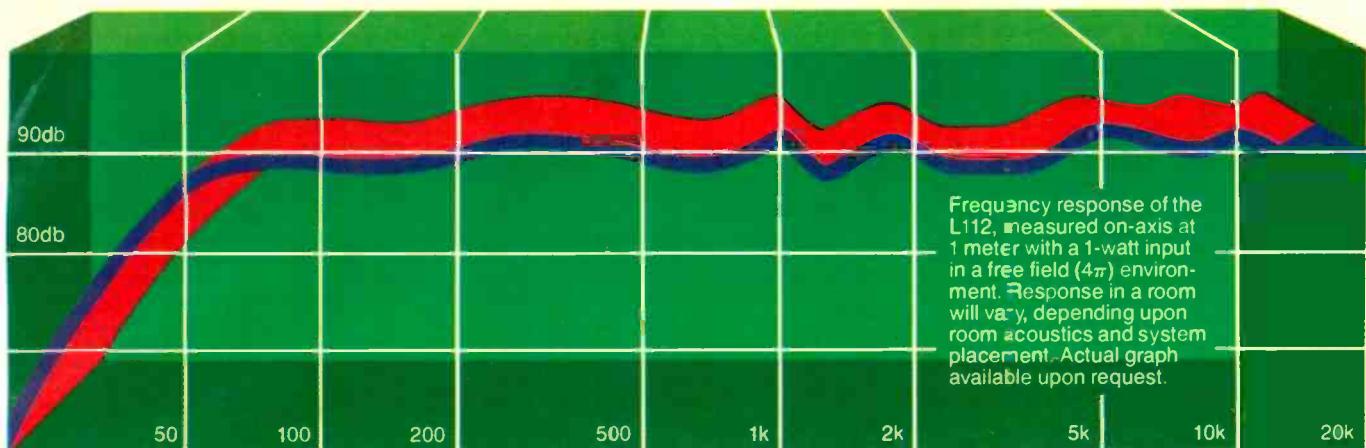
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Frequency response of the L112, measured on-axis at 1 meter with a 1-watt input in a free field (4π) environment. Response in a room will vary, depending upon room acoustics and system placement. Actual graph available upon request.

Any loudspeaker system this flat deserves a fair hearing.

JBL

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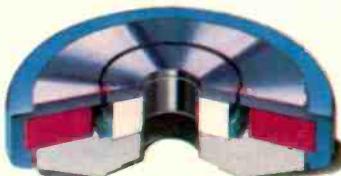


If you like the flatness of our L112 frequency response curve (above), you'll be even more impressed by the smooth, natural, uncolored sound that goes with it.

The L112 is a perfect example of JBL's advanced engineering design philosophy at work. Lasers, holography, computers and the human ear interfacing toward one end: The flattest, most accurate sound reproduction in JBL bookshelf history. The kind of pure, uncompromised sound quality that's made JBL the longstanding choice of audio professionals worldwide.

The overall performance quality of the L112 bookshelf system is the result of many precision-engineered components working together to achieve sound so natural there's no sense of a speaker at all—only the music.

Lower. Higher. Faster, too.
The L112's Symmetrical Field Geometry (SFG) 12"



woofer contributes cleaner, deeper, more powerful bass. A laser-developed 1" dome tweeter adds more high frequency detail. And a new High Resolution Dividing

Network delivers superior transient response.

Crafted in the U.S.A., the L112 is also a beautiful example of JBL's longtime commitment to fine craftsmanship and unrelenting quality control.



Go see the audio specialists at your nearest authorized JBL dealer and listen to the L112 bookshelf system for yourself. For the name of the dealer nearest you, write: James B. Lansing Sound, Inc., 8500 Balboa Boulevard, P.O. Box 2200, Northridge, CA 91329.

Comparison Analysis now available. Recently, we conducted a very enlightening series of performance tests comparing the L112 against several competitive speakers. For a copy of the documented results, as well as reprints of recently published L112 reviews, please write us, attention: L112 Comparison Analysis.

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11

SPEAKER SYSTEMS

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 ±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^{1/2}"H × 15"W × 9^{1/2}"D.....\$189

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 at ±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^{1/2}"H × 12^{1/4}"W × 9^{1/2}"D.....\$149

Model 80a Speaker System

Air-suspension speaker system with 8" woofer and wide-dispersion 1^{1/4}" tweeter. Features walnut-grain vinyl finished enclosure. Frequency response 55-17,000 Hz ±3.5 dB; input power 8-60 W continuous; impedance 8 ohms nominal; crossover at 3 kHz; 19^{1/2}"H × 12"W × 8^{1/2}"D; 18 lb.....\$100

Model 6.5 Speaker System

Compact speaker system with 6" woofer and 1" fabric-dome tweeter. Features walnut-grain vinyl finished enclosure. Frequency response 55-20,000 Hz ±3 dB; impedance 7 ohms nominal; input power 10-80 W; crossover at 2.2 kHz; 13^{3/4}"H × 8^{3/4}"W × 7^{1/2}"D; 14 lb.....\$100

B&W LOUDSPEAKERS LTD

801F Speaker System

Floor-standing 3-way acoustic-suspension speaker system features vertically aligned drivers to minimize interunit time delays; crossover system; Audio Powered Overload Circuit (APOC) to prevent damage to drivers due to excessive power; choice of enclosure finishes. Frequency response 45-20,000 Hz ±2 dB; input power 50 W min. (no upper limit due to action of APOC); nominal impedance 8 ohms; 37.3"H × 22"D × 17"W; 97 lb.
Walnut, teak, black ash finish.....\$1635
Rosewood finish.....\$1875

802F Speaker System

Acoustic-suspension floor-standing speaker system with two 165-mm woofers, 100-mm mid-range driver, and 26-mm tweeter. Features Butterworth Squared crossover networks; Audio Powered Overload Circuit (APOC) to prevent damage to drivers due to excessive power; choice of enclosure finishes. Frequency response 55-20,000 Hz ±2 dB; input power 50 W min. (no upper limit due to action of APOC); 2nd and 3rd harmonic distortion less than 3% 20-100 Hz, less than 1% 100-20,000 Hz for 95 dB SPL; sensitivity 85 dB SPL/W/m at 300 Hz; 41"H × 14^{1/2}"D × 11^{1/4}"W; 70 lb.
Walnut, teak, black ash finish.....\$1195
Rosewood finish.....\$1375

DM-16 Speaker System

Floor-standing acoustic-suspension speaker system with 220-mm ultra-long-throw woofer, 100-mm midrange driver, and 26-mm tweeter. Features Butterworth Squared crossover networks; Audio Powered Overload Circuit (APOC) to protect drivers from damage due to excessive power; choice of enclosure finishes. Frequency response 65-20,000 Hz ±2 dB; input power 15 W min. (no upper limit due to action of

APOC); impedance 8 ohms; second/third-harmonic distortion less than 2%/less than 1% 20-20,000 Hz; sensitivity 87 dB SPL/W/m at 300 Hz; 37.5"H × 16.3"D (max.) × 13.2"W; 77 lb.

Walnut, teak, black ash finish.....\$895
Rosewood finish.....\$985

DM7/II Speaker System

Floor-standing acoustic-suspension speaker system with 160-mm bass/midrange driver and 26-mm tweeter. Features 14-element computer-optimized crossover network; audio-powered overload protection circuit; choice of enclosure finishes. Frequency response 80-20,000 Hz ±2 dB; input power 40 W min. (no upper limit due to action of protection circuit); impedance 8 ohms; 2nd/3rd-harmonic distortion 3%/2% for nominal 95 dB SPL; sensitivity 86 dB SPL/W/m; 35^{1/2}"H × 15"D × 10^{1/2}"W; 64 lb.
Walnut, teak, black ash finish.....\$655
Rosewood finish.....\$730

DM14 Speaker System

Acoustic-suspension speaker system with 150-mm bass/midrange driver and 26-mm tweeter. Features overload protection system and choice of enclosure finishes. Frequency response 80-20,000 Hz ±2 dB; input power 15 W min. (no upper limit due to action of protection system); impedance 8 ohms nominal; distortion less than 3% 30-200 Hz, less than 1% 200-20,000 Hz 2nd harmonic/less than 3% 30-200 Hz, less than 0.5% 200-20,000 Hz 3rd harmonic; sensitivity 86 dB SPL/W/m; 22^{1/2}"H × 11^{1/2}"D × 10"W; 35 lb.

Walnut, teak, black ash finish.....\$495
Rosewood finish.....\$570

DM12 Speaker System

Compact acoustic-suspension speaker system with 150-mm bass/midrange driver and 26-mm tweeter. Features overload protection system and choice of enclosure finishes. Frequency re-



sponse 85-20,000 Hz ±2 dB; input power 15 W min. (no upper limit due to action of protection system); impedance 8 ohms nominal; distortion less than 3% 60-600 Hz, less than 1% 600-20,000 Hz 2nd harmonic/less than 1% 60-150 Hz, less than 0.5% 150-20,000 Hz 3rd harmonic; sensitivity 85 dB SPL/W/m; 14"H × 10^{1/2}"D × 8^{3/4}"W; 21 lb.
Walnut, teak, black ash finish.....\$325
Rosewood finish.....\$365

DM22 Speaker System

Acoustic-suspension speaker system with 160-mm bass/midrange driver and 26-mm tweeter. Features 5-element crossover and filter network that provides complementary high- and low-pass 3rd-order Butterworth configuration. Frequency response 70-20,000 Hz ±3 dB; input power 10-100 W; impedance 8 ohms nominal; sensitivity 87 dB SPL/W/m; 2nd and 3rd harmonic distortion less than 3% below 250 Hz, less than 1% above 250 Hz; 19^{3/4}"H × 10"W × 10"D; 21.5 lb.....\$225

BANG & OLUFSEN

Beovox MS-150 Speaker System

Four-way speaker system with built-in subwoofer to handle frequencies below 150 Hz and ported reflex cabinet tuned to Bessel function for optimum room matching. Features 10" subwoofer, 8" woofer, 3" dome-type midrange driver, and 1" tweeter; baffle moldings and speaker mount designed for minimum diffraction; acoustic centers of drivers aligned on common axis to eliminate phase distortion; crossover network with minimum phase shift; automatic protection for drivers; rosewood-veneer cabinet finish (other finishes available). Frequency range 30-22,000 Hz; power-handling ability 150 W rms; impedance 8 ohms; distortion 0.5%; dispersion 100°. Supplied with speaker stands.....\$1995/pr

Beovox M-150 Speaker System

Three-way speaker system in ported cabinet tuned to Bessel function for optimum room matching has 8" woofer, 3" dome-type phase-link midrange driver, and 1" tweeter. Features baffle moldings and speaker mount designed for minimum diffraction; acoustic centers of drivers aligned on common axis to eliminate phase distortion; crossover network with minimum phase shift; automatic protection for drivers; rosewood-veneer cabinet finish (other finishes available). Frequency range 40-22,000 Hz; distortion 0.5%; dispersion 100°. Supplied with speaker stands.....\$1500/pr

Beovox S-120 Speaker System

Three-way speaker system in ported cabinet tuned to Bessel function for optimum room matching with 8" woofer, 3" dome-type midrange driver, and 1" tweeter. Features baffle moldings and speaker mount designed for minimum diffraction; acoustic centers of drivers aligned on common axis for minimum phase distortion; crossover network with minimum phase shift; automatic protection for drivers; rosewood-veneer cabinet finish (other finishes available). Frequency range 42-22,000 Hz; power-handling ability 120 W rms; distortion 0.5%; dispersion 100°.....\$995/pr

Beovox S-80 Speaker System

Three-way speaker system in infinite-baffle cabinet with 8" woofer, 3" dome-type phase-link midrange driver, and 1" tweeter. Features baffle moldings and speaker mounting designed for minimum diffraction; acoustic centers of drivers aligned on common axis to eliminate phase distortion; crossover network with minimum phase shift; automatic protection for drivers; rosewood-veneer cabinet finish (other finishes available). Frequency range 50-22,000 Hz; power-handling ability 80 W rms; distortion 0.7%; dispersion 100°.....\$795/pr

Beovox S-50 Speaker System

Two-way speaker system in infinite-baffle cabinet with 8" woofer and 1" tweeter. Features baffle moldings and speaker mounting designed for minimum diffraction; acoustic centers of drivers aligned on common axis to eliminate phase distortion; crossover network with minimum phase shift; automatic protection for drivers; rosewood-veneer cabinet finish (other finishes available). Frequency range 50-20,000 Hz; distortion 1%; dispersion 90°.....\$550/pr

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 ±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^{1/2}"H × 13^{1/2}"W × 5^{1/2}"D.....\$575

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 ±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; 12½" H × 4¾" W × 7⅓" D \$525

Beovox Phase-Link S-45-2 System

Two-way shelf- or wall-mount speaker system with 8-in woofer, 3½-in Phase-Link filler driver, and 1-in dome tweeter; frequency response 49-20,000 Hz ±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; 18¾" H × 10¼" W × 8½" D \$395

Beovox Phase-Link P-30 System

Two-way pressure chamber wall-mount panel speaker system with 6½-in woofer and 1-in dome tweeter; frequency response 58-20,000 Hz ±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; 21½" H × 11½" W × 4½" D \$375

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 ±4 dB; crossover at 2500 Hz; dist. 1.0%; input 40 W music; 6-ohm impedance; 90° dispersion; brushed aluminum finish; 12½" H × 4¾" W × 5¾" D \$250

BENJAMIN ELECTROPRODUCTS

Benjamin/Vieta B-10,000 System

Floor-standing omnidirectional speaker system with 9 drivers. Features cotton-pulp woofer to produce symmetrical pattern of low-frequency energy; backwave reinforcement of woofer; remaining 8 drivers arranged in alternating tweeter/midrange-driver configuration in circular array to create omnidirectional performance; 20 coats of hand-rubbed black lacquer \$3500/pr

Benjamin/Vieta 4300 Speaker System

Floor-standing speaker system with phase-corrected 3-way speaker design utilizing same drivers in B-10,000 speaker system \$1200/pr

Benjamin/Vieta B-4200 Speaker System

Compact speaker system designed for high-quality sound reproduction in limited space \$600/pr

B.E.S.

SM300 Speaker System

Four-way floor-standing speaker system with three dynamic drivers and one piezoelectric 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 × 22" W × 6.75" D \$640

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 × 22" W × 6.75" D \$450

SM255 Speaker System

Two-way speaker system with two drivers activating 850-sq-in polymer diaphragm pulsat-



Since their introduction in 1976, Cizek Audio Loudspeakers have earned a reputation for innovation, excellence and value...

The transient response of the Cizek is exceptionally good. . . . The overall listening room response is strikingly wide, as indicated by vivid reproduction of brushed cymbals and well defined . . . bass."

High Fidelity Magazine.

"Just on the basis of our limited exposure to . . . (the Cizek speakers) if anyone asked us about accurate speakers for less than \$400 a pair, we'd be inclined to send him to Cizek."

The Audio Critic.

"The Cizek is a remarkably clean and open sounding bookshelf speaker. . . . The speaker sounds several times bigger than its size would suggest . . . tremendous care is evident in the construction and assembly. . . . In sum, if I were not able to own a pair of (expensive speakers) then the Cizek would unquestionably be the speaker of my choice. I know of no other speaker system costing \$200 or even \$300 that sounds as accurate, uncolored and musically right as the Cizek."

'Absolute Sound Magazine.'



The Sound Window™ System is the latest innovation from Cizek, featuring two wide range Sound Windows™ and a compact Subwoofer. Deep tight bass and open, crystal highs, in a flexible and attractive package transforms an ordinary stereo into a true Audiophile System. All at an exceptionally low price.

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CIRCLE NO. 12 ON READER SERVICE CARD

ing 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..... \$320

SM250 Speaker System

Geostatic two-way speaker system with two drivers activating 850 in² 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..... \$250

BOSE

901 Direct/Reflecting Speaker System

Direct/reflecting acoustic-matrix floor-standing speaker system with Active Equalizer. Eight rear-facing and one front-facing 4½-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 2½" H x 11" W x 5" D; speaker 12¾" H x 21" W x 13" D.. \$600 Without equalizer..... \$500
901 Speaker Pedestals. Slim, contemporary speaker stands designed for 901 Series IV speakers.
Black..... \$60/pr.
Chrome..... \$80/pr.

601 Series II Speaker System

Two-way direct/reflecting floor-standing speaker system with four 3" tweeters and 2 8" long-ex-



cursion woofers; tweeters and one woofer mounted above main enclosure in Free Space™ array configuration for lifelike stereo imaging; subport enclosure system; dual-frequency™ crossover at 1.5 and 2.5 kHz; 8-ohm impedance; power input range 20-150 watts; automatic tweeter protection circuitry; sold only in matched stereo pairs; walnut-grain vinyl veneer cabinet; 29½" H x 14" W x 13" D..... \$420

501 Speaker System

Two-way direct/reflecting acoustic-suspension

floor-standing speaker system with 10-in long-excursion woofer and two 3½-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 14½" W x 14½" D..... \$282

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; 10½" H x 17" W x 9½" D..... \$165

BOSTON ACOUSTICS

A200 Speaker System

Three-way acoustic-suspension floor-standing speaker system with 10-in woofer mounted close to floor, 4½-in front-panel flush-mount cone midrange in sealed subenclosure, and 1-in front-panel flush-mount polyamide dome tweeter with ferrofluid; 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 6¾" D... \$375 Oak veneer cabinet with wheat-colored grille..... \$375

A150 Speaker System

Three way acoustic suspension speaker system with 10" woofer, 4½" flush-mount cone midrange driver with ferrofluid in sealed enclosure and 1" flush mount polyamide soft-dome tweeter with ferrofluid; crossovers at 550 and 3000 Hz; sensitivity 90 dB/W/m; min input 15 W; impedance 6 ohms nominal; oak veneer cabinet with removable wheat colored grille; includes integral black pedestal base; 32" H x 16½" W x 8" D..... \$275

A100 Speaker System

Two-way acoustic-suspension floor-standing speaker system with 10-in woofer and 1-in polyamide soft dome tweeter with ferrofluid; 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; 30½" H x 16½" W x 8¾" D..... \$195 Oak veneer cabinet with wheat-colored grille..... \$220

A70 Speaker System

Two-way acoustic-suspension speaker system with 8" woofer and 1" polyamide soft-dome tweeter with ferrofluid. Frequency response 40-20,000 Hz ±3 dB; crossover at 2000 Hz; sensitivity 90 dB/W/m; min input 15 W; impedance 6 ohms nominal; woodgrain vinyl finish with removable acoustically transparent black cloth grille; 24" x 14" x 7¾" D..... \$135

A60 Speaker System

Two-way acoustic-suspension speaker system with 8" woofer and 1½" cone tweeter with ferrofluid. Frequency response 55-20,000 Hz ±3 dB; crossover at 3000 Hz; sensitivity 90 dB/W/m; min input 10 W; impedance 8 ohms nominal; woodgrain vinyl finish with removable acoustically transparent black cloth grille; 18" x 11½" x 7½" D..... \$100

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.... \$1399
CS-410CL Same as CS-310B except Classic cabinet..... \$1499
CS-410M. Same as CS-310B except Moorish styling..... \$1549

Symphony No. 1 CS-4000A Modern

Infinite-baffle, three-way floor-standing system incorporating two 12-in woofers, 6½-in midrange, and eight 2-in tweeters in vertical column; frequency response 35-20,000 Hz; crossover at 400 and 2500 Hz at 6 dB/octave; 8-ohm impedance; max. input 150 W program; walnut enclosure; 44½" H x 26¾" W x 15¾" D..... \$895
CS-4000 CL Same as CS-4000A with Classic styling..... \$995
CS-4000M. Same as CS-4000A with Moorish styling..... \$1049
CS-4005A. Same as CS-4000A except low-boy enclosure; 27¾" H x 36" W x 20" D..... \$895

Concerto VII CS-501A Speaker System

Three-way floor-standing system with 12-in high-compliance bass driver, 6½-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 20½" W x 16" D..... \$595

LS-330A 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; 25½" H x 18" W x 13¼" D..... \$359
LS-250A. Similar to LS-400A except uses 4½-in cone midrange; frequency response 45-20,000 Hz; crossovers at 500 and 2000 Hz; 23¾" H x 14½" W x 12¾" D..... \$239

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; 12½" H x 7¾" W x 7½" 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"..... \$189

LS-220A Speaker System

Two-way "Tower" speaker system with 8-in. aluminum woofer and 1-in. soft-dome tweeter. Frequency response 60-20,000 Hz; crossover 3 kHz at 18 dB/octave; power capacity 100 W continuous; 36" H x 11½" W x 9½" D.... \$189

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; 20½" H x 11¾" W x 10¾" D..... \$145

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 4½-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 × 22¾" W × 15¾" D \$1399
CM-109-23W. Same as CM-109-23AW except for biamplifier operation \$1279

BRAUN by ADCOM

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 × 12.2" W × 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 × 10.53" W × 9" D \$500/pr.

L300 Speaker System

Three-way bookshelf speaker system with 5½-in woofer, 2-in hemispherical dome midrange, and ¾-in hemispherical dome tweeter; crossovers at 600 and 3000 Hz; 8-ohm impedance; frequency response 35-25,000 Hz; input range 10-50 W; black matte finish; 10" H × 6½" W × 6¾" D \$479/pr.

IC-1003 Speaker System

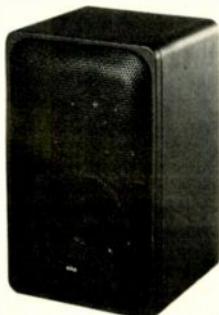
Three-way bookshelf speaker system with 8.3-in cone woofer, 2-in cone midrange, and 0.75-in dome tweeter; crossovers at 500 and 3000 Hz, 12 dB/octave; input 70 W continuous, max. 120 W; frequency response 28-25,000 Hz; 8-ohm impedance; black matte finish with black aluminum grille; 15.9" H × 9.25" W × 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; black matte finish with black aluminum grille; 13.6" H × 8.86" W × 7.09" D \$360/pr.

L200 Speaker System

Miniature two-way air-suspension speaker system with 5½-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 8 ohms; curved and perforated aluminum grille; 10" H × 6½" W × 5¾" D \$359/pr.



dome tweeter. Frequency response 50-25,000 Hz DIN; crossover at 1500 Hz; power handling 35 watts rms/50 watts peak; nominal impedance 8 ohms; black matte finish with black aluminum grille; 4½" × 6¾" × 4¾" D \$299/pr.

BSR

153 Speaker System

Acoustic-suspension speaker system with 15" woofer, 4" ferrofluid-cooled midrange driver, and exponential-horn tweeter. Features midrange and tweeter controls. Input power 15-90 W \$200

123B Speaker System

Acoustic-suspension speaker system with 12" woofer, 4½" ferrofluid-cooled midrange driver, and 3" tweeter. Maximum input power 65 W \$130

103B Speaker System

Acoustic-suspension speaker system with 10" woofer, 4½" ferrofluid-cooled midrange driver, and 3" tweeter. Maximum input power 45 W \$100

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 ±1.5 dB; crossovers at 520 and 4000 Hz; sensitivity 85.5 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; 26¾" H × 15¼" W × 13" D \$369

210 Speaker System

Two-way acoustic-suspension bookshelf speaker system with 10-in long-throw high-compliance woofer and 1½-in midrange/tweeter; frequency response 38-20,000 Hz ±1.5 dB; crossover at 950 Hz; sensitivity 87 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 × 14" W × 12" D \$209

208 Speaker System

Two-way tuned-port bookshelf speaker system with 8-in woofer and 1-in dome tweeter; frequency response 50-20,000 Hz ±2 dB; crossover at 2000 Hz; sensitivity 94 dB SPL/W/m; input 100 W peak, 50 W music; impedance 5.5 ohms nominal, 4.6 ohms from 30-20,000 Hz; variable tweeter level control; oiled walnut veneer cabinet with black knit grille; soft-edge™ baffle 18¾" H × 11" W × 10¾" D \$149

206 Speaker System

Two-way tuned port bookshelf speaker system with 6" woofer and 1" dome tweeter; frequency response 56-20,000 Hz ±3 dB; crossover at 2000 Hz; sensitivity 92 dB SPL/W/m; input 80 W peak, 45 W music; impedance 8 ohms nominal, 6 ohms from 30-20,000 Hz; soft-edge baffle; oiled walnut veneer cabinet with black knit grille; 17" H × 9¾" W × 8" D \$109

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 ±3 dB; crossovers at 700 and 4500 Hz; input range 20-160 W; 8-

ohm impedance; oiled American walnut or elm finish; 41¾" H × 15¾" W × 11½" 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; 28½" H × 15½" W × 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 ±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 × 15¾" W × 11½" D \$475

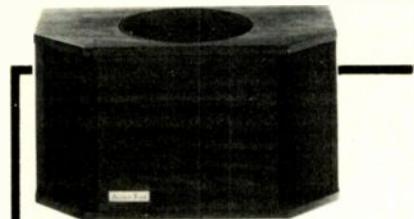
Ditton 300 Speaker System

Three-way acoustic-suspension speaker system with ULTRATM dome tweeter, 5" midrange, 10" long-throw PVC-surround woofer; vertical alignment; flush-mount drivers; walnut cabinet; 24¾" H × 13¾" W × 10½" D \$400

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

Astonishing.



"The sound of this diminutive speaker is nothing less than astonishing."

"Listen to the Four if you possibly can. It is worth hearing — even if you are not shopping for a speaker — just for a demonstration of how good a small box can sound."

STEREO REVIEW June, 1978
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For literature and information call
(800) 225-4791 or send coupon.

The Allison: Four — costs \$280 each in oiled walnut, \$290 in oiled oak cabinet.

ALLISON ACOUSTICS

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ferrite magnet, 5.1-in cone midrange, and hot pressed polymer dome tweeter; frequency response 50-20,000 Hz ± 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

Ditton 200 Speaker System

Unique 3-way passive-radiator speaker system with ULTRATM 1" dome tweeter, 8" passive radiator/midrange driver, and 8" PVC-surround woofer; vertical driver alignment; flush-mount drivers; walnut cabinet; 23 $\frac{1}{2}$ "H \times 13"W \times 10 $\frac{1}{2}$ "D.....\$325

Ditton 150 Speaker System

Two-and-a-half-way passive-radiator speaker system with ULTRATM 1" dome tweeter, 8" passive radiator for enhanced bass; 6 $\frac{1}{2}$ " midbass woofer; vertical alignment; flush-mount drivers; walnut vinyl cabinet; 21 $\frac{1}{2}$ "H \times 11"W \times 8 $\frac{3}{4}$ "D.....\$270

Ditton 130 Speaker System

Two-way acoustic-suspension speaker system with ULTRATM dome tweeter, 8" long-throw PVC-surround woofer; vertical alignment; flush-mount drivers; walnut vinyl cabinet; 19"H \times 10"W \times 9 $\frac{1}{2}$ "D.....\$215

Ditton 110 Speaker System

Two-way acoustic-suspension speaker system with ULTRATM dome tweeter, 8" woofer, high efficiency design; vertical alignment; flush-mount drivers; walnut vinyl cabinet; 16 $\frac{1}{2}$ "H \times 9 $\frac{1}{2}$ "W \times 8 $\frac{3}{4}$ "D.....\$175

Ditton 100 Speaker System

Compact 2-way acoustic-suspension speaker system with 1" ULTRATM tweeter, 6 $\frac{1}{2}$ " PVC-surround woofer; vertical alignment; flush-mount drivers; walnut vinyl cabinet; 13"H \times 8 $\frac{1}{4}$ "W \times 7 $\frac{3}{4}$ "D.....\$130

CERWIN-VEGA

31R 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 ± 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 SuperDhorm tweeter, and rear-reflecting 1-in voice-coil horn accent tweeter; frequency response 28-20,000 Hz ± 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 Dhorm tweeter; frequency response 28-20,000 Hz ± 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 ± 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 Dhorm tweeter; frequency response 38-20,000 Hz ± 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

Hed Series 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 ± 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 ± 4 dB; sensitivity 98 dB/W/m; input range 5-60W\$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 ± 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 Dhorm tweeter; frequency response 42-20,000 Hz ± 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 ± 4 dB; crossover at 150 Hz; sensitivity 90 dB/W/m; input range 5-100 W continuous; impedance 8 \times 2 ohms.....\$322

CIZEK

Model 1 Speaker System

Two-way acoustic-suspension speaker system with 10" woofer and 1" hemispherical-dome tweeter. Features switchable Q (1.0 or 0.6); internally braced panels to minimize resonances; tweeter level and contour controls; oiled-walnut enclosure finish; acoustically transparent foam grille. Frequency response 35-17,000 Hz ± 1.5 -2 dB (Q = 1.0); input power 15-200 W; impedance 4.25 ± 0.25 ohms, 150-15,000 Hz at Q = 0.6, 7.25 ± 0.25 ohms at Q = 1.0; crossover at 1.5 kHz; sensitivity 88 dB SPL at 1 W into 4.25 ohms and Q = 1.0; 25"H \times 15 $\frac{1}{2}$ "W \times 9 $\frac{1}{4}$ "D; 48 lb.....\$249 East/\$259 West

Model 2. Similar to Model 1 except has 8" woofer, no tweeter contour control, Q switchable for 0.9 or 0.57, and hickory-grain vinyl enclosure finish (oiled walnut optional). Frequency response 38-17,000 Hz ± 2 dB; 21"H \times 13"W \times 9"D; 38 lb.....\$185 East/\$195 West

Model 3. Similar to Model 2 except Q switchable for 0.8 or 0.5 and no optional walnut finish; input power 100 W max; frequency response 48-



17,000 Hz ± 2 dB; 19"H \times 11 $\frac{3}{4}$ "W \times 7 $\frac{1}{2}$ "D; 25 lb\$139 East/\$149 West

Model 727 Speaker System

Two-way acoustic-suspension speaker system with 8" heavy-duty woofer with long-throw voice coil and 2 $\frac{1}{2}$ " tweeter. Frequency response 60-17,000 Hz ± 3 dB; input power 10-100 W; impedance 4 ohms nominal; crossover at 3 kHz; sensitivity 89 dB SPL/W/m; 15 $\frac{1}{2}$ "H \times 10 $\frac{1}{2}$ "W \times 5 $\frac{3}{4}$ "D; 15 lb. \$97 East/\$105 West

Classic Series

Classic Speaker System

Consists of full-range mini speaker system and KA-20X electronic equalizer/crossover unit and 1 or 2 KA-20 subwoofers. KA-20 Classic Subwoofer features 2 long-throw voice coil 10" woofers in Koa-wood enclosure. KA-20X features front-panel controls for subwoofer phase reversal, subwoofer defeat, continuously adjustable bass level for low-pass outputs; left-channel, right-channel, and summed L + R outputs on rear panel. KA-20: near-field frequency response with KA-20X crossover -3 dB at 20 Hz; impedance 8 ohms/channel, 4 ohms min with both channels in parallel; input power 50-600 W; crossover at 100 Hz; 22 $\frac{1}{2}$ "H \times 22 $\frac{1}{2}$ "W \times 18 $\frac{1}{2}$ "D; 89 lb. KA-20X: high-pass filter characteristics -3 dB at 100 Hz, unity gain (second-order Bessel function); low-pass filter characteristics 24 dB/octave at 100 Hz with near-field SPL of combination flat down to -3 dB at 20 Hz, followed by rapid 24-dB/octave rolloff; distortion + noise high-pass/low-pass filter greater than 88/80 dB below 1 V reference at 20 kHz/100 Hz; distortion + noise summed outputs greater than 77 dB below 1 V; gain variable to 26 dB at 20 Hz; power consumption 20 W\$1395 East/\$1410 West

KA-1 Speaker System

Two-way acoustic-suspension speaker system with 6 $\frac{1}{2}$ -woofer and 1" hemispherical-dome tweeter. Features 1"-thick AcuthaneTM molded speaker baffle, Koa-wood enclosure, and transparent foam grille. Frequency response 100 Hz through audible range ± 1.5 dB, -3 dB at 70 Hz; input power 15-200 W; impedance 4 ohms nominal; system Q = 0.7; sensitivity 86 dB SPL/W/m; 13 $\frac{1}{2}$ "H \times 9"W \times 8 $\frac{3}{4}$ "D\$295 East/\$305 West

Sound WindowTM Series

Sound Window Speaker System

System consists of 2 full-range-driver systems and subwoofer. Full-range systems feature 6 $\frac{1}{2}$ " heavy-duty woofer and 2" cone tweeter; frequency response 100-17,000 Hz ± 3 dB; input power 100 W/channel max; impedance 4 ohms; system Q = 0.9; sensitivity 90 dB SPL/W/m; 12"H \times 12"W \times 3"D; 8 lb. Subwoofer system tures 10" woofer with dual voice coil; frequency response 58-120 Hz ± 3 dB; impedance 4 ohms nominal; input power

15-150 W/channel; sensitivity 90 dB SPL/W/m; 13½" D × 13½" W × 16½" H; 32 lb	\$444 East/\$464 West
Sound Window full-range speakers	\$98 East/\$103 West
Sound Window subwoofer	\$249 East/\$259 West

CLARKE SYSTEMS

Precedent Speaker System

Three-way floor-standing infinite-baffle speaker system with 12" plastic-coated woofer, 5" line-loaded midrange driver, and 1" ferrofluid-filled Mylar dome tweeter; computer-grade Mylar-film crossover network. Frequency response 30-20,000 Hz; input 10-100 watts continuous; efficiency 89 dB/W/m; crossovers at 500 and 4200 Hz; rosewood cabinet with black fabric grille; 31½" H × 15" W × 14" D; 70 lb.....\$299

Premiere Speaker System

Three-way infinite-baffle speaker system with 10" plastic-coated woofer, 5" line loaded midrange driver, and 1" ferrofluid-filled Mylar dome tweeter; computer grade Mylar-film crossover network. Frequency response 35-20,000 Hz; rosewood cabinet with black fabric grille; 26" H × 13" W × 11" D; 45 lb.....\$229

Encore II Speaker System

Two-way bookshelf bass-reflex speaker system with special 8" polypropylene woofer with 2-lb magnet and 1" ferrofluid-filled Mylar dome tweeter; computer-grade Mylar film crossover with air-core inductors. Frequency response 40-20,000 Hz; input 10-60 watts continuous; efficiency 89 dB/W/m at 1000 Hz; rosewood cabinet with black fabric grille; 22" H × 12" W × 11" D; 40 lb.....\$175

Prestige Speaker System

Two-way bookshelf bass-reflex speaker system with 8" polypropylene woofer, and ¾" specially treated dome tweeter; computer grade Mylar-film crossover network with 100% pure air-core inductors. Crossover at 5000 Hz 12 dB per octave; frequency response 45-20,000 Hz; efficiency 91 dB/W/m at 1000 Hz; input 10-45 watts continuous; rosewood cabinet with black fabric grille; 18" H × 10" W × 9.5" D; 26 lb.....\$125

Satellite/Subwoofer Speaker System

Satellite Speaker. Two-way transmission line with 4" long-throw woofer and ribbon tweeter; computer grade Mylar-film crossover network with 100% pure air-core inductors. Frequency response 85-35,000 Hz; rosewood cabinet; 13" H × 6" W × 7.5" D; 15 lb.....\$175
Subwoofer. Two 10" plastic treated woofers firing downward in single, dual-chambered cabinet on casters. Frequency response 30-150 Hz; rosewood cabinet; 31" D × 13" H × 15" W; 75 lb.....\$250

DAHLQUIST

DQ-10 Speaker System

Five-way Phased Array moving-coil speaker system with 10-in woofer in sealed air-suspension enclosure, 5-in midbass driver, 2-in soft-dome midrange, ¾-in dome tweeter, and piezoelectric ceramic super tweeter; frequency response 37-27,000 Hz; crossovers at 400, 1000, 6000, and 12,500 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, 31½" H × 30½" W × 9" D.....\$500
ST-10 stand\$80/pr

DQ-1 W Subwoofer

Incorporates 13-in woofer in heavy cast frame mounted in walnut enclosure; recommended ap-

"From the first, we were impressed..."

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*"...by the effortless quality of its sound with any type of program material. This is one of those speakers which we could listen to indefinitely without the urge to switch to something else."**

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plication 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.....\$350

Dynamic Tracking Studio Monitors

DQM-9 Speaker System

Dual rear-firing tuned-port speaker system with 11" cone woofer with wound-ribbon voice coil,



5" cone midrange driver with wound-ribbon voice coil, and 1" dome tweeter. Frequency response 28-22,000 Hz; 25 W min, 200 W max power; sensitivity 95 dB at 1 kHz; crossovers at 450 and 3500 Hz; impedance 8 ohms nominal; 14½" W x 25" H x 13¼" D; 65 lb..\$600

DQM-7 Speaker System

Dual rear-firing tuned-port speaker system with 9" cone woofer with wound ribbon voice coil, 4" cone midrange, and 1" dome tweeter. Frequency response 35-22,000 Hz; 25 W min, 140 W max power; sensitivity 94.5 dB at 1 kHz; crossovers at 550 Hz and 4000 Hz; impedance 8 ohms nominal; 13½" W x 25" H x 11½" D; 55 lb.....\$400

DQM-5 Speaker System

Dual rear-firing-ports speaker system. Frequency response 37-22,000 Hz; 25 W min, 120 W max power; sensitivity 94 dB at 1 kHz; crossovers at 550 and 3200 Hz; impedance 8 ohms nominal; 12½" W x 21¾" H x 11¼" D; 35 lb.....\$289

ST-9. Accessory Stand.....\$79.50/pr

DCM

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.....\$792/pr

Time Window Speaker System

Two-way floor-standing speaker system with cylindrical back and triangular prism front; optimized for minimum time-dispersion error; incorporates two proprietary 6½" low/mid-frequency drivers and 2 dome tweeters symmetrically placed on two angled front faces of prism; frequency response 25-20,000 Hz; input range 10-200 W continuous; impedance 6-8 ohms nominal; dispersion 180° horizontal, 60° vertical; 36" H x 14¾" W x 11¾" D.....\$720/pr

QED Speaker System

Two-way floor-standing speaker system with woofer and tweeter; frequency response 25-18,000 Hz; sensitivity 91 dB/W/m; input range 20-100 W continuous; impedance 8 ohms nominal; 36" H x 11¾" W x 9¾" D.....\$504/pr

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

DA-30 Three-Piece Speaker System

Consists of 2 satellite speakers and 1 low-frequency cabinet. Satellite speakers are low-diffraction design with a 5" midrange driver and a 1" dome tweeter; 12" dual coil long throw woofer; power requirements 35 W and 250 W; 8-ohm impedance.....\$595

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 1½-in cone tweeters; frequency response 35-18,000 Hz ±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 16½" W x 11" D.....\$425

D-6A Speaker System

Three-way vented acoustic-suspension floor-standing speaker system with 10-in woofer, 5-in damped cone midrange, and five 2½-in cone tweeters; frequency response 30-15,000 Hz ±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; 24½" H x 16½" W x 13¾" D.....\$395

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 ±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 16½" W x 12¾" D.....\$695

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 ±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; 11½" H x 7¾" W x 5½" D.....\$195

DYNACO

A350 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, ½-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 ±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 14½" D.....\$399

A250 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 ±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 14½" W x 14½" D.....\$265

A100 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 ±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; 11½" H x 6¾" W x 7¾" D.....\$179

A150 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 ±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-gain vinyl cabinet with dark brown grille; 22" H x 12½" W x 12½" D.....\$165

ELECTRO-VOICE

Interface: D Series II Speaker System

Three-way vented floor-standing speaker system with 12-in downward-firing woofer, 6½-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 21½" W x 15½" D.....\$1000 Equalizer.....\$110

Link 10 Speaker System

Three-way optimally vented design speakers with two 8" low-frequency radiators, 8" mid-range/woofer, and 1½" super dome tweeter with acoustic lens in vertical array. Frequency response 34-20,000 Hz ±3 dB; input power 3.6-250 watts; sound pressure level 72 dB; crossovers at 57 Hz acoustic, 1500 Hz

electrical; impedance 8 ohms nominal; walnut, oak veneer, or ebony cabinet; $59\frac{1}{2}''H \times 11''W \times 11''D$; $42\frac{1}{2}$ lb \$800

Interface: C Series II Speaker System

Three-way vented floor-standing speaker system with 10-in woofer, $6\frac{1}{2}$ -in vented midrange, and $1\frac{1}{2}$ -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; $31\frac{1}{2}''H \times 20''W \times 12\frac{1}{2}''D$ \$520 Equalizer..... \$110

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 ± 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.; $28\frac{1}{2}''H \times 20''W \times 11\frac{3}{4}''D$...\$400 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; $2''H \times 8''W \times 8''D$ \$110

Interface: B Series III

Two-way vented speaker system with 12-in low-frequency radiator, 8-in midrange/woofer, and $1\frac{1}{2}$ -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; $29\frac{1}{4}''H \times 16''W \times 11''D$...\$360 Equalizer..... \$110

Interface: A Series III

Two-way vented bookshelf speaker system with 12-in low-frequency radiator, 8-in midrange/woofer, and $1\frac{1}{2}$ -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; $24\frac{1}{2}''H \times 15\frac{1}{4}''W \times 8\frac{1}{4}''D$...\$300 Equalizer..... \$110

Interface: 3 Series II Speaker System

Two-way speaker system with 12-in low-frequency radiator, 8-in midrange/woofer, and $1\frac{1}{2}$ -in super dome tweeter with acoustic lens; frequency response 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; $25\frac{1}{4}''H \times 14\frac{1}{4}''W \times 13\frac{1}{8}''D$ \$250

Interface: 2 Series II Speaker System

Two-way speaker system with 10-in low-frequency radiator, 8-in midrange/woofer, and $1\frac{1}{2}$ -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; $24\frac{1}{4}''H \times 13\frac{3}{4}''W \times 13\frac{3}{4}''D$ \$180

$10\frac{1}{16}''D$ \$210

Sentry 100A Professional Monitor System

Two-way vented studio monitor super-dome tweeter and 8" direct-radiator woofer with optimally vented Butterworth tuning. Crossover at 2



kHz; frequency response 45-18,000 Hz ± 3 dB; impedance 6 ohms nominal; SPL/W/m 91 dB; EIA sensitivity 41.8 dB; power 30 watts continuous maximum; black matte vinyl cabinet with gray cloth grille; $17.25''H \times 12''W \times 11''D$; 28 lb..... \$200

Interface: 1 Series II Speaker System

Two-way speaker system with 8-in midrange/woofer and $1\frac{1}{2}$ -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; $21\frac{1}{4}''H \times 11\frac{3}{8}''W \times 9\frac{1}{16}''D$ \$150

EPI

A500 Speaker System

Three-way floor-standing speaker system with 10-in "Focused Field" woofer reinforced with two 12-in passive radiators, 4-in acoustically isolated 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 20-250 W continuous; 4-ohm impedance; oiled walnut and ebony vinyl finish with acoustically transparent black cloth grille; $36''H \times 12''W \times 14''D$ \$450

A300 Speaker System

Three-way bookshelf/floor-standing speaker system with 6" long-transverse woofer reinforced with 8" passive radiator and 1" air-spring tweeter. Frequency response 38-20,000 Hz ± 3 dB; crossover at 1800 Hz; input range 20-100 W continuous; nominal impedance 8 ohms; 3-position tweeter level switch; oiled-walnut finish with acoustically transparent black cloth grille; $24''H \times 13\frac{1}{2}''W \times 9''D$ \$220

140 A Speaker System

Two-way bookshelf/floor-standing speaker system with 6-in long-tranverse 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 20-100 W; nominal impedance 8 ohms; three-position tweeter level control; oiled-walnut finish with acoustically transparent black cloth grille; $24''H \times 13\frac{1}{2}''W \times 9''D$ \$220

A120 Speaker System

Two-way speaker system with 10-in long-tranverse woofer and 1-in air-spring tweeter; frequency response 38-20,000 Hz ± 3 dB; crossover at 1800 Hz; input range 15-90 W continuous; 8-ohm nominal impedance; 3-position tweeter level switch; wood-grain vinyl cabinet with black acoustically transparent grille; $25''H \times 15''W \times 11''D$ \$180

100 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 15-90 W; 8-ohm nominal impedance; woodgrain vinyl finish with black cloth grille; $21''H \times 11''W \times 9''D$ \$120

81 Mini Speaker System

Two-way mini-bookshelf speaker system with 4 $\frac{1}{2}$ " long-traverse woofer and 1" air-spring tweeter. Frequency response 95-20,000 Hz ± 3 dB; crossover at 2600 Hz; input range 15-70 W continuous; 4 ohms nominal impedance; cabinet has pebbled surface with perforated plastic grille; $7\frac{1}{8}''H \times 5\frac{1}{8}''W \times 5\frac{1}{8}''D$...\$115

A 70 Speaker System

Two-way bookshelf speaker system with 6" long-traverse woofer and 1" air-spring tweeter. Frequency response 58-20,000 Hz ± 3 dB; crossover at 1800 Hz; input range 15-80 W continuous; 8 ohms nominal impedance; woodgrain vinyl finish with acoustically transparent black cloth grille; $16''H \times 10\frac{1}{2}''W \times 7\frac{1}{4}''D$ \$89

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; $41\frac{1}{8}''H \times 17\frac{1}{2}''W \times 8\frac{1}{2}''D$ \$550

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 ± 3 dB; crossover at 2000 Hz; nominal impedance 6 ohms; includes integral stand; $34''H \times 10\frac{1}{4}''W \times 12\frac{1}{4}''D$ \$335

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 ± 3 dB; crossover at 2000 Hz; nominal impedance 6 ohms; diffraction-controlling foam front cabinet; $14\frac{1}{2}''H \times 10\frac{1}{4}''W \times 8''D$ \$185

ESPRIT by SONY

AMP-8 Speaker System

Bass-reflex speaker system with flat-diaphragm drivers with high-rigidity honeycomb core and carbon-fiber and aluminum membrane in 4-way design. Features 4-point driving method for woofer; heavy-duty low-resonance cabinet with internal bracing and damping; input terminals for full-range and multiple-amplifier operation; in-line driver arrangement. Nominal impedance 8 ohms; sensitivity 92 dB SPL/W/m; $43\frac{1}{8}''H \times 25\frac{1}{8}''W \times 17\frac{1}{4}''D$; 203 lb..... \$6000

ESS

AMT Series

Transar II Speaker System

System consists of midrange/tweeter drivers with separate subwoofer module; frequency response 20.6-20,000 Hz ± 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 $45''H \times 27\frac{1}{2}''W \times 15''D$ \$3995

(continued on next page.)

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 in² Heil air motion transformer with polyester articulated silicon-edged diaphragm; frequency response 30-23,000 Hz ±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 × 15.63" W × 15.88" D \$750

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 in² Heil air motion transformer with polyester articulated silicon-edged diaphragm; frequency response 35-23,000 Hz ±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 × 16.25" W × 16.25" D \$635

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 in² Heil air motion transformer with polyester articulated silicon-edged diaphragm; frequency response 40-23,000 Hz ±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 × 14" W × 14" D \$550

AMT II Speaker System

Vented speaker system with 10" woofer and Heil Air-Motion Transformer tweeter/midrange driver. Features walnut-veneer enclosure. Input power 15-300 W; nominal impedance 6 ohms; crossover at 900 Hz; sensitivity 92 dB SPL/W/m; rise time 15 μsec; 33½" H × 15½" W × 15½" D; 68 lb..... \$495

Classic Series**CS-2 Speaker System**

Two-way tuned-port floor-standing speaker system with two 8-in resin-impregnated cone woofers and 10.4 in² Heil air-motion transformer midrange/tweeter; frequency response 42-23,000 Hz ±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; 31¾" H × 13¾" W × 13" D \$485

CS-3 Speaker System

Two-way tuned-port bookshelf speaker system with 10-in resin-impregnated cone woofer and 10.4 in² Heil air-motion transformer midrange/tweeter; 120° horizontal dispersion, 40° vertical dispersion; frequency response 50-23,000 Hz ±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 × 15" W × 13½" D \$378

CS-6 Speaker System

Vented speaker system with 8" woofer, 3½" midrange driver, and 1" Mylar-dome tweeter.

Features birch vinyl cabinet finish. Frequency range 55-22,000 Hz; input power 10-50 W; impedance 6 ohms nominal; crossovers at 1 and 3 kHz; sensitivity 90 dB SPL/W/m; 21" H × 11½" W × 10" D; 27 lb \$198

High Dynamic Range Series**HD 1500 Speaker System**

Speaker system with 15" woofer with paper cone and foam surround, 1" dynamic horn midrange driver, and 2" × 5" piezoelectric tweeter. Features walnut-grain vinyl finished cabinet with dark-brown grille. Frequency range 24-23,000 Hz; input power 10-100 W; impedance 4 ohms nominal; crossovers at 1.5 and 8 kHz; sensitivity 97 dB SPL/W/m; 30" H × 20" W × 12" D; 54.4 lb \$319

HD 1200 Speaker System

Speaker system with 12" woofer with paper cone and foam surround, 1" voice coil dynamic horn midrange driver, and 2" × 5" piezoelectric tweeter. Features walnut-grain vinyl finished cabinet and dark-brown grille. Frequency range 28-23,000 Hz; input power 10-75 W; impedance 4 ohms nominal; crossovers at 1.5 and 8 kHz; sensitivity 96 dB SPL/W/m; 25" H × 14½" W × 12" D; 38.3 lb \$249

HD 1000 Speaker System

Speaker system with 10" woofer with paper cone and foam surround, 1" voice coil midrange driver, and 2" × 5" piezoelectric tweeter. Features walnut-grain vinyl finished enclosure and dark-brown grille. Frequency range 30-23,000 Hz; input power 10-50 W; impedance 4 ohms nominal; crossovers at 1.5 and 8 kHz; sensitivity 95 dB SPL/W/m \$199

Performance Series**PS5B Speaker System**

Passive-radiator speaker system with 10" woofer and Heil tweeter/midrange driver. Features walnut-grain finished enclosure with dark-brown cloth grille. Frequency response 40-22,000 Hz ±3 dB; input power 15-140 W; impedance 4 ohms nominal; crossover at 2.4 kHz; sensitivity 93 dB SPL/W/m; 24.12" H × 14" W × 14" D; 36 lb \$300

PS 5A Speaker System

Two-way bookshelf speaker system with 10-in fibercone woofer, 10-in fiberslate passive radiator, and 10.4 in² Heil air-motion transformer midrange/tweeter; frequency response 40-22,000 Hz ±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; 24½" H × 14" W × 14" D \$278

PS8B Speaker System

Passive-radiator speaker system with 8" woofer and Heil tweeter/midrange driver. Features tweeter level control; walnut-grain finished cabinet; dark-brown cloth grille. Frequency response 50-22,000 Hz ±3 dB; input power 15-100 W; nominal impedance 6 ohms; crossover at 2.4 kHz; sensitivity 93 dB SPL/W/m; 22" H × 12.25" W × 10.62" D; 30 lb \$250

PS 8A Speaker System

Two-way bookshelf speaker system with 8-in fibercone woofer, 10-in fiberslate passive radiator, and 10.4 in² Heil air-motion transformer midrange/tweeter; frequency response 50-22,000 Hz ±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 × 12½" W × 10½" D \$205

PS 9A Speaker System

Two-way bookshelf speaker system with 8-in fiber cone woofer and 10.4 in² Heil air-motion transformer; frequency response 55-22,000 Hz ±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; 19½" H × 11½" W × 9½" D \$175

FISHER**STE2000 Speaker System**

Floor-standing bass-reflex speaker system with 15" woofer, 8" porous-metal cone upper-bass/midrange driver, 5" alumina hard-cone midrange driver, and two polyamide-plane-diaphragm tweeters. Features lower-midrange, midrange, and tweeter controls; walnut-veneer enclosure with removable grille. Frequency range 30-40,000 Hz; impedance 8 ohms; input power 25-150 W (300 W peak music); cross-over frequencies 600, 1.5k, 6 kHz; sensitivity 92 dB SPL/W/m; 42½" W × 31½" H × 19½" D; 176 lb \$4500

STE1200 Speaker System

Floor-standing bass-reflex speaker system with 12" porous-metal woofer; 2¾" aluminum hard-dome midrange driver, and 1½" metal-ring tweeter. Features tweeter and midrange level controls; walnut-veneer finish and removable grille. Frequency range 30-30,000 Hz; impedance 8 ohms; crossovers at 500 and 5k Hz; input power 20-100 W (200 W peak music); sensitivity 92 dB SPL/W/m; 35½" H × 17½" W × 16" D; 112 lb \$895

STE1150 Speaker System

Bass-reflex speaker system with 12" porous-metal cone woofer, 1½" aluminum hard-dome midrange driver, and 1¼" aluminum hard-dome tweeter. Features tweeter and midrange level controls; walnut veneer cabinet with removable grille. Frequency range 40-20,000 Hz; impedance 8 ohms; input power 15-75 W (150 W peak music); crossovers at 500 and 5k Hz; sensitivity 92 dB SPL/W/m; 30½" H × 16½" W × 14½" D; 66 lb \$695

ST925 Speaker System

Bass-reflex speaker system with 15" woofer, 6" ferrofluid-damped midrange driver, and 4" ferrofluid-damped horn tweeter. Frequency range 40-20,000 Hz; impedance 8 ohms; input power 25-130 W; crossovers at 1.5 and 7 kHz; sensitivity 90 dB SPL/W/m; tweeter and midrange level controls; candlelight hickory vinyl finished cabinet with removable grille; 31½" H × 18½" W × 13½" D; 51 lb \$450

STE1110 Speaker System

Compact bass-reflex speaker system with 12" porous-metal woofer and 1¼" aluminum hard-dome tweeter. Frequency range 40-20,000 Hz; impedance 8 ohms; crossover at 2 kHz; input power 10-50 W (100 W peak music); sensitivity 91 dB SPL/W/m; tweeter level control; walnut veneer cabinet with removable grille; 23½" H × 15" W × 12½" D; 41 lb \$395

ST920 Speaker System

Bass-reflex speaker system with 12" woofer, 5" ferrofluid-damped midrange driver, and 4" ferrofluid-damped horn tweeter. Frequency range 45-20,000 Hz; impedance 8 ohms; crossovers at 1.5 and 6 kHz; input power 20-90 W; sensitivity 94 dB SPL/W/m; midrange and tweeter level controls; candlelight hickory vinyl finished enclosure with removable grille; 28" H × 16" W × 12½" D; 41 lb \$390

ST460 Speaker System

Bass-reflex speaker system with 15" woofer, two 5" midrange drivers, and high-efficiency horn tweeter. Frequency range 40-20,000 Hz; impedance 8 ohms; input power 25-130 W;

crossovers as 1 and 5 kHz; sensitivity 92 dB SPL/W/m; midrange presence and treble brilliance controls; walnut-grain vinyl finished enclosure with removable grille; 29 $\frac{1}{8}$ "H \times 18 $\frac{1}{4}$ "W \times 14 $\frac{1}{16}$ "D; 56 lb.....\$390

ST450 Speaker System

Bass-reflex speaker system with 12" woofer, 5" midrange driver, and 3" flare-dome tweeter. Frequency range 45-20,000 Hz; impedance 8 ohms; input power 20-100 W; crossovers at 1 and 5 kHz; sensitivity 91 dB SPL/W/m; midrange presence and tweeter brilliance controls; walnut-grain vinyl finished enclosure with removable grille; 27 $\frac{1}{8}$ "H \times 16" W \times 13 $\frac{1}{16}$ "D; 44 lb.....\$330

STE1080 Speaker System

Bass-reflex speaker system with 10" porous-metal woofer and 1 $\frac{1}{4}$ " aluminum hard-dome tweeter. Frequency range 40-20,000 Hz; impedance 8 ohms; input power 10-40 W; crossover at 2.5 kHz; sensitivity 91 dB SPL/W/m; tweeter level control; walnut-grain vinyl finished enclosure with removable grille; 21 $\frac{1}{8}$ "H \times 12" W \times 12"D; 27 $\frac{1}{2}$ lb.....\$295

ST915 Speaker System

Bass-reflex speaker system with 10" woofer, 5" midrange driver, and 3" ferrofluid-damped tweeter. Frequency range 50-20,000 Hz; impedance 8 ohms; input power 10-50 W; crossovers at 1.5 and 6 kHz; sensitivity 92 dB SPL/W/m; tweeter and midrange level controls; candlelight hickory vinyl finished enclosure with removable grille; 26 $\frac{1}{8}$ "H \times 14 $\frac{1}{4}$ "W \times 11 $\frac{1}{8}$ "D; 31 lb.....\$280

ST440 Speaker System

Bass reflex speaker system with 12" woofer, 5" midrange driver, and 3" flare-dome tweeter. Frequency range 45-18,000 Hz; impedance 8 ohms; input power 12-75 W; crossovers at 1 and 5 kHz; sensitivity 90 dB SPL/W/m; treble brilliance control; walnut-grain vinyl finished enclosure with removable grille; 25 $\frac{1}{2}$ "H \times 16" W \times 12 $\frac{1}{16}$ "D; 36 lb.....\$260

XP95C Speaker System

Acoustic-suspension speaker system with 15" woofer, 2 5" midrange drivers, and 3" high-efficiency tweeter. Frequency range 40-20,000 Hz; impedance 8 ohms; input power 25-75 W; crossovers at 1 and 5 kHz; sensitivity 92 dB SPL/W/m; midrange presence and treble brilliance controls; walnut-grain vinyl finished enclosure with removable grille; 28" H \times 17 $\frac{1}{2}$ "W \times 12 $\frac{1}{8}$ "D; 44 lb.....\$250

STEC7 Speaker System

Bass-reflex speaker system with 8" carbon/metal cone woofer, 4 $\frac{1}{2}$ " carbon/metal cone midrange driver, and 2" carbon/metal cone tweeter. Frequency range 50-20,000 Hz; impedance 6 ohms; input power 10-60 W; crossovers at 1 and 5 kHz; sensitivity 91 dB SPL/W/m; silver vinyl veneer finished enclosure; 17 $\frac{1}{8}$ "H \times 10 $\frac{1}{8}$ "W \times 9 $\frac{1}{8}$ "D; 19 lb.....\$225

ST430 Speaker System

Bass-reflex speaker system with 10" woofer, 5" midrange driver, and 3" low-mass tweeter. Frequency range 50-17,000 Hz; impedance 8 ohms; input power 6.5-50 W; crossovers at 1 and 5 kHz; sensitivity 90 dB SPL/W/m; treble brilliance control; walnut-grain vinyl finished enclosure with removable grille; 25 $\frac{1}{2}$ "H \times 16" W \times 12 $\frac{1}{16}$ "D; 34 lb.....\$220

STEC5 Speaker System

Acoustic-suspension speaker system with 8" carbon/metal woofer and 1 $\frac{1}{4}$ " aluminum hard-dome tweeter. Frequency range 50-20,000 Hz; impedance 6 ohms; input power 10-50 W (100 W peak music); crossover at 4 kHz; sensitivity 91 dB SPL/W/m; Bubinga veneer enclosure; 15" H \times 9 $\frac{1}{2}$ "W \times 10 $\frac{1}{4}$ "D; 18 $\frac{1}{8}$ lb.....\$195

STEC3 Speaker System

Bass-reflex speaker system with 6 $\frac{1}{2}$ " carbon/metal cone woofer and 2" carbon/metal weeter. Frequency range 65-20,000 Hz; impedance 6 ohms; input power 5-30 W (60 W peak music); crossover at 4 kHz; sensitivity 88 dB SPL/W/m; silver vinyl finished enclosure; 11 $\frac{1}{16}$ "H \times 8 $\frac{1}{8}$ "W \times 8 $\frac{1}{2}$ "D; 11 lb.....\$180

MS157 Speaker System

Bass-reflex speaker system with 12" woofer, 5" midrange driver, and 3" tweeter. Frequency range 40-20,000 Hz; impedance 8 ohms; input power 8-60 W; crossovers at 1 and 5 kHz; sensitivity 92 dB SPL/W/m; walnut-grain vinyl finished enclosure with removable grille; 29 $\frac{1}{8}$ "H \times 14 $\frac{1}{8}$ "W \times 11 $\frac{1}{2}$ "D; 26 lb.....\$160

DS176/176R Speaker System

Bass-reflex speaker system with 12" woofer, 5" midrange driver, and 3" wide-dispersion tweeter. Frequency range 40-20,000 Hz; impedance 8 ohms; input power 5-75 W; crossovers at 1.5 and 6 kHz; sensitivity 92 dB SPL/W/m; 25 $\frac{1}{2}$ "H \times 16" W \times 11 $\frac{1}{8}$ "D; 34 lb.....\$150

MS147 Speaker System

Bass-reflex speaker system with 10" woofer, 5" midrange driver, and 3" tweeter. Frequency range 50-17,000 Hz; impedance 8 ohms; input power 6.5-45 W; crossovers at 1 and 5 kHz; sensitivity 92 dB SPL/W/m; walnut-grain vinyl finished enclosure with removable grille; 26 $\frac{1}{8}$ "H \times 14 $\frac{1}{8}$ "W \times 11" D; 22 lb.....\$130

MS137 Speaker System

Bass-reflex speaker system with 8" woofer, 3" midrange driver, and 2" tweeter. Frequency range 60-16,000 Hz; impedance 8 ohms; input power 5-35 W; sensitivity 91 dB SPL/W/m; crossovers at 6 and 8 kHz; walnut-grain vinyl enclosure finish with removable grille; 25 $\frac{1}{2}$ "H \times 14 $\frac{1}{8}$ "W \times 11" D; 21 lb.....\$100

MSM100 Speaker System

Bass-reflex speaker system with 6" woofer and 2 $\frac{1}{2}$ " tweeter. Frequency range 60-20,000 Hz; impedance 8 ohms; input power 5-30 W; crossover at 6 kHz; sensitivity 90 dB SPL/W/m; rosewood-grain vinyl finish; 10 $\frac{1}{8}$ "H \times 8 $\frac{1}{8}$ "W \times 9 $\frac{1}{8}$ "D.....\$100

MSM101. Same as MSM100 but with candlelight hickory finish.....\$100

MS127 Speaker System

Bass-reflex speaker system with 8" woofer and 2" midrange driver. Frequency range 60-14,000 Hz; impedance 8 ohms; input power 4-30 W; crossover at 6 kHz; sensitivity 91 dB SPL/W/m; walnut-grain vinyl finished enclosure with removable grille; 24 $\frac{1}{8}$ "H \times 13 $\frac{1}{8}$ "W \times 9" D; 16 lb.....\$90

MS117 Speaker System

Bass-reflex speaker system with 6 $\frac{1}{2}$ " woofer and 2" midrange driver. Frequency range 70-12,000 Hz; impedance 8 ohms; input power 3-22 W; sensitivity 90 dB SPL/W/m; walnut-grain vinyl finished enclosure with removable grille; 21 $\frac{1}{8}$ "H \times 13 $\frac{1}{8}$ "W \times 9" D; 14 lb.....\$80

MS115B Speaker System

Bass-reflex speaker system with 6 $\frac{1}{2}$ " full-range driver. Frequency range 80-12,000 Hz; impedance 8 ohms; input power 3-22 W; sensitivity 90 dB SPL/W/m; walnut-grain vinyl finished enclosure with removable grille; 21 $\frac{1}{8}$ "H \times 13 $\frac{1}{8}$ "W \times 9" D; 14 lb.....\$80

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 $\frac{1}{2}$ "H \times 30" W \times 18" D.....\$1766

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 \times 24" W \times 18 $\frac{1}{2}$ " D.....\$1298

Seven-D System

Floor-standing speaker system with 12" woofer, 4 $\frac{1}{2}$ " high-compliance midrange driver with rolled edge, and soft-dome tweeter. Features front-mounted woofer and midrange driver; high and midrange controls; walnut-veneer cabinet; black double-knit grille. Frequency range 25-22,000 Hz; input power 5-100 W; impedance 8 ohms nominal; crossovers at 500 and 4k Hz; efficiency 98 dB SPL/W/m; 29" H \times 19" W \times 16" D; 98 lb.....\$562

Mark V-D System

Speaker system with 12" woofer, 4" midrange driver, and 1" soft-dome tweeter. Features front-mounted woofer and midrange driver; high-frequency and midrange level controls; walnut-veneer cabinet; double-knit grille. Frequency range 35-22,000 Hz; input power 5-100 W; impedance 8 ohms nominal; efficiency 97 dB SPL/W/m; 25 $\frac{1}{2}$ "H \times 14" W \times 12" D; 55 lb.....\$423

Concerto D Speaker System

Floor-standing speaker system with 10" woofer, 3" \times 7" compression horn tweeter, and 1" dome tweeter. Features high-frequency and midrange level controls; walnut-veneer cabinet; double-knit grille. Frequency range 35-22,000 Hz; input power 5-75 W; impedance 8 ohms; crossovers at 2 and 4 kHz; efficiency 97 dB SPL/W/m; 21 $\frac{1}{2}$ "H \times 16 $\frac{1}{8}$ "D \times 16" W; 56 lb.....\$344

Mark IV-D Speaker System

Speaker system with 10" stiff-suspension woofer and 1" dome tweeter. Features front-mounted woofer; high-frequency level control; walnut-veneer cabinet; double-knit grille. Frequency range 40-22,000 Hz; input power 5-50 W; impedance 8 ohms nominal; crossover at 4 kHz; efficiency 96 dB SPL/W/m; 24" H \times 14" W \times 12" D; 44 lb.....\$255

Monte Carlo D Speaker System

Bookshelf speaker system with 8" woofer and 1" ferrofluid dome tweeter. Features walnut-veneer cabinet and black double-knit grille. Frequency range 50-22,000 Hz; input power 5-50 W; impedance 8 ohms nominal; efficiency 94 dB SPL/W/m; 19" H \times 12" D \times 10" W; 31 lb.....\$160

CAD-1System

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 \times 10 $\frac{1}{2}$ " W \times 10 $\frac{1}{2}$ " D.....\$110

FRIED PRODUCTS

HPS Speaker System

Floor-standing speaker pyramidal speaker system with 12" Plasticote woofer, 3" dome-type midrange driver, and aperiodic dome tweeter. Features line tunnel. Frequency response 30-25,000 Hz \pm 3 dB; crossovers at 300 and

11**SPEAKER SYSTEMS**

4.5k Hz; 42" H × 23" W × 21" D.....\$3000/pr

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 × 16" W × 14½" 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 × 18½" (bottom) × 6½" (top) W × 15½" (bottom) × 9½" (top) D.....\$515/pr

Factory assembled.....\$1300/pr

G Speaker System

Speaker system with 10" polypropylene ferrofluid-filled, ventilated voice-coil woofer with 10-lb magnet, dome-type midrange driver, and semisoft dome tweeter. Features damping by edge-on filters, circuit-breaker protection. Frequency range 30-20,000 Hz; maximum input power 200 W; sensitivity 90 dB SPL/W/m; 26" H × 14½" W × 10½" D.....\$800/pr

A/2 Speaker System

Speaker system with 8" polypropylene woofer and 1" soft-dome tweeter. Features edge-on free-flow filters; line tunnel. Frequency response 45-17,000 Hz ±3 dB; input power 25-100 W; impedance 8 ohms; crossover at 2 kHz; sensitivity 89 dB SPL/W/m; 23" H × 13" W × 10½" D.....\$500/pr

Q/2 Speaker System

Speaker system with 8" polypropylene woofer and dome tweeter. Features edge-on free-flow filters; circuit-breaker protection. Frequency range 45-18,000 Hz; input power 20-100 W; vinyl-finished enclosure; 23" H × 13" W × 10½" D.....\$350/pr

C Satellite Speaker Kit

Two-way pyramidal speaker system designed for use with Model O subwoofer; incorporates 6-in



bass/midrange and dome tweeter; features pressure-release damped venting system; 10½" (bottom) × 6" (top) W × 9" (bottom) × 6½" (top) D.....\$450/pr

Factory assembled.....\$800/pr

Model O Subwoofer

Mirror-image dual-channel subwoofer with transmission-line design, 10" woofer. Normal input for use with Fried satellite speakers, biamp in-

put for use with other satellites. Response within 3 dB at 20 Hz; input power 25-200 W; fuse protected; 31" H × 24½" W × 13½" D.

Kit.....\$650/pr

Factory assembled.....\$2500/pr

GENESIS**410 Speaker System**

Four-way speaker system with 10" high-compliance butyl-surround cone woofer, 10" dual-point-suspension passive cone radiator, 4½" vented-pole, double-compressed-foam-surround midrange driver, and 1" ferrofluid-suspension inverted phenolic-dome tweeter. Features separate 2-position midrange and tweeter level controls; 8"-high speaker stands; natural walnut-veneer cabinet with beveled low-diffraction-frame black grille. Frequency response 32-20,000 Hz ±3 dB; crossovers at 45, 1000, and 4000 Hz; sensitivity 88 dB/W/m; input power 25-300 W/channel; impedance 8 ohms; 30.5" H × 15.75" W × 15" D.....\$1000/pr

320 Speaker System

Three-way, floor-standing speaker system with dual 8" acoustic-suspension woofers, 4½" vented-pole double-compressed-foam-surround midrange driver, and 1" ferrofluid-suspension inverted dome tweeter. Features separate 3-position tweeter and midrange controls; walnut-grain vinyl finish; beveled low-diffraction-frame black grille. Frequency response 36-20,000 Hz ±4 dB; crossovers at 800 and 3000 Hz; sensitivity 89 dB/W/m; input power 20-250 W/channel; nominal impedance 4 ohms; 34" H × 18½" W × 10½" D.

Mirror-image pair.....\$699

Optional 5" stands.....\$30/pr

210 Speaker System

Two-way, floor-standing speaker system with 8" woofer, 10" passive radiator, and 1" ferrofluid-suspension inverted-dome tweeter. Features 2-position tweeter control; walnut-grain vinyl finish; beveled low-diffraction-frame black grille. Frequency response 30-20,000 Hz ±4 dB; crossovers at 45 and 1800 Hz; sensitivity 89 dB/W/m; input power 20-100 W/channel; nominal impedance 8 ohms; 31" H × 16½" W × 10½" D.

Mirror-image pair.....\$499

Optional 5" stands.....\$30/pr

110 Speaker System

Two-way acoustic-suspension speaker system with 10" woofer and 1" ferrofluid-suspension inverted-dome tweeter. Features walnut-grain vinyl finish; low-diffraction-frame black grille. Frequency response 38-20,000 Hz ±4 dB; crossover at 1.8 kHz; sensitivity 89 dB/W/m; input power 20-100 W/channel; nominal impedance 8 ohms; 27" H × 14½" W × 10½" D.

Mirror-image pair.....\$399

Optional 4" stands.....\$30/pr

Genesis 10 Speaker System

Two-way acoustic-suspension speaker system with 10" woofer and 1" ferrofluid-suspension inverted-dome tweeter. Features walnut-grain vinyl finish. Frequency response 48-20,000 Hz ±4 dB; crossover at 1.8 kHz; sensitivity 89 dB/W/m; input power 20-100 W/channel; nominal impedance 8 ohms.

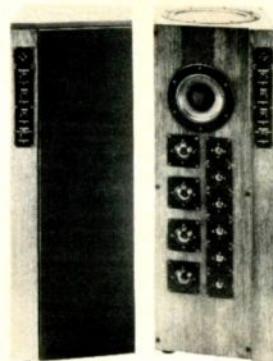
Mirror-image pair.....\$299

1 Speaker System

Two-way acoustic-suspension speaker system with 8" woofer and 1" inverted-dome tweeter. Features walnut-grain vinyl finish. Frequency response 58-20,000 Hz ±4 dB; crossover at 1800 Hz; sensitivity 89 dB/W/m; input power 15-50 W/channel; impedance 8 ohms. \$219/pr

HECO by OSAWA**Lab 3 Speaker System**

Five-way air-suspension "Tower" speaker sys-



tem featuring 13" subwoofer, six 1" tweeters, four 2" midrange drivers, 8" woofer, and ½" supertweeter. Frequency response 20-40,000 Hz ±2 dB; sensitivity 89 dB (1W/1m); selectable 4/8 ohms impedance; power rating 400 watts into 4 ohms; 48" H × 18" W × 20" D.....\$2450

Lab 2. Similar to Lab 3 except uses 12" subwoofer, four 1" tweeters, three 2" midrange drivers, 6¾" woofer, and ½" supertweeter; 200 watts; 40" H × 16" W × 16" D.....\$1850

Precision 400 Speaker System

Three-way speaker system with 12-in woofer, 2-in midrange, and ¾-in tweeter; frequency response 25-25,000 Hz; crossovers at 600 and 3000 Hz; input range 120-200 W; 26" H × 15" W × 10½" D.....\$600

Precision 300 Speaker System

Three-way speaker system with 10-in woofer, 2-in midrange, and ¾-in tweeter; frequency response 25-25,000 Hz; crossovers at 700 and 3000 Hz; input range 100-170 W; 20" H × 12½" W × 10¾" D.....\$450

Precision 200 Speaker System

Three-way bookshelf speaker system with 9½-in woofer, 2-in midrange, and ¾-in tweeter; frequency response 30-25,000 Hz; crossovers at 700 and 4000 Hz; input range 80-140 W; 18½" H × 11½" W × 9½" D.....\$380

Precision 100 Speaker System

Three-way bookshelf speaker system with 8-in woofer, 1½-in midrange, and ¾-in tweeter; frequency response 35-25,000 Hz; crossovers at 1000 and 3500 Hz; input range 60-110 W; 16½" H × 10½" W × 8½" D.....\$340

HITACHI**HS-410 Speaker System**

Bass-reflex speaker system with 30-cm metal-cone woofer, 10-cm metal-cone midrange driver, and 2.5-cm metal-cone tweeter. Frequency response 35-20,000 Hz -15 dB; crossovers at 1k and 3.5 kHz; nominal impedance 8 ohms; 26½" H × 14½" W × 12½" D; 31 lb 14 oz.....\$300

HS-310. Similar to HS-410 except has 25-cm woofer; 22½" H × 12½" W × 12½" D; 25 lb 5 oz.....\$200

HS-31 Speaker System

Acoustic-suspension speaker system with 20-cm woofer and 5-cm tweeter. Features rosewood-grain vinyl finish cabinet with brown grille cloth. Frequency response 45-20,000 Hz -15 dB; crossover at 3.5 kHz; impedance 8 ohms; output 92 dB SPL/W/m; 16½" H × 9½" W × 8½" D; 11 lb 7 oz.....\$200/pr

HS-2M Miniature Speaker System

Acoustic-suspension speaker system with 10-cm metal-cone woofer and 2.5-cm dome tweeter. Features silver cabinet with black grille. Frequency response 50-20,000 Hz -15 dB; crossover at 3 kHz; nominal impedance 8 ohms; 7½" H × 4½" W × 4½" D; 5 lb 8 oz.....\$200/pr

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/mid-range), 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 × 18" square/radius corners; midrange/tweeter modules 7'6" H × 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 64½" H × 26½" W × 14½" D; control unit 2½" H × 14¼" W × 10¼" D.....\$4200

Reference Standard II

Three-way floor-standing speaker system with 2 10" polypropylene woofers, three 5" dipole midrange with polypropylene cones, and 2 EMIT tweeters in dipole array. Frequency response 38-32,000 Hz ±2 dB; crossover frequency 60 Hz, 125 Hz, 1500 Hz, and 3 kHz; suggested power 35-250 rms 40 ohms; 48" H × 22¾" W × 18" D.....\$650

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 × 15" W × 11" D.....\$440

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; 26½" H × 15" W × 10" D.....\$375

RS_b 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 × 14" W × 10" D.....\$290

RS. Similar to RS_b except two-way system minus midrange driver; crossover at 3000 Hz.....\$225

RS_s Speaker System

Two-way sealed-box speaker system with 8-in polypropylene cone woofer, in and EMIT tweeter; frequency response 45-34,000 Hz ±2 dB; crossover at 3000 Hz; input range 10-100 W; impedance 4 ohms.....\$165

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; 35½" H × 103¾" W × 24½" D.....\$6000/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); 31¾" H × 23" W × 22½" D.....\$1500

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 19½" H × 18½" W × 18½" D; wide-range systems 38¾" H × 17" W × 13" D.....\$2200 set.

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 × 512 mm W × 390 mm D.....\$1000

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 7/8-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; 41½" H × 17" W × 13" D.....\$695

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; 24½" H × 14½" W × 13" D.....\$450

L40 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 × 15" W × 11¾" D.....\$270

Radiance Series

R133 Speaker System

Three-way floor-standing speaker system with 10" woofer, 10" passive radiator, 3" midrange, and 1½" tweeter. Crossovers at 600 and 3000 Hz; impedance 6 ohms; power range 10-150 watts; SPL 91 dB; 37¾" × 16½" × 12¾"; 57½ lb.....\$295

R123 Speaker System

Three-way bookshelf speaker system with 12" woofer, 3" midrange, and 1½" tweeter. Crossovers at 600 and 3000 Hz; impedance 6 ohms; power range 10-125 watts; SPL 90 dB; 27½" × 17½" × 12¾"; 46 lb.....\$255

R103 Speaker System

Three way bookshelf speaker system with 10" woofer, 3" midrange, and 1½" tweeter. Crossovers at 600 Hz and 3000 Hz; impedance 6 ohms; power range 10-100 watts; SPL 90 dB; 25½" × 15¾" × 11¾"; 40 lb \$195

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 × 13" W × 10" D.....\$180

R82 Speaker System

Two-way bookshelf speaker system with 8" woofer, and 1½" tweeter. Crossover at 2000 Hz; impedance 6 ohms; power range 10-60 watts; SPL 89 dB; 21½" × 13½" × 11¾"; 31 lb.....\$155

JENSEN

System B Speaker System

Four-way floor-standing speaker system with 12-in woofer, 6-in lower midrange, 1½-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; 33¾" H × 16½" W × 11¾" D.....\$660

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 $\frac{1}{4}$ "H \times 14 $\frac{1}{2}$ "W \times 12 $\frac{1}{2}$ "D.....\$440

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 \times 18 $\frac{3}{4}$ "W \times 13 $\frac{1}{2}$ "D.....\$300

System 500 Speaker System

Three-way floor-standing speaker system with 12" woofer, 5" midrange, and 1" soft dome tweeter in front and 2" direct radiator tweeter in the rear. Frequency response 38 Hz-20 kHz \pm 3 dB; crossovers at 760 and 4200 Hz; impedance 8 ohms; min/max power 10/100 watts continuous; dark brown double-knit grill and oak-grain vinyl on wood cabinet; 29" \times 15 $\frac{1}{4}$ " \times 11 $\frac{1}{16}$ "; 45 lb.....\$290

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 \times 16 $\frac{1}{2}$ "W \times 10 $\frac{1}{2}$ "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 \times 15" W \times 10"D.....\$240

System 400 Speaker System

Three-way speaker system with 10" woofer, 3 $\frac{1}{2}$ " midrange, and 1" dome tweeter. Frequency response 45 Hz-20 kHz \pm 3dB; crossovers at 1500 and 4200 Hz; impedance 8 ohms; min/max power 10/90 W continuous; brown grill with oak-grain vinyl finished cabinet; 26 $\frac{1}{4}$ " \times 13" \times 10 $\frac{1}{16}$ "; 31 lb.....\$200

System 300 Speaker System

Two-way speaker system with 10" woofer and 1" dome tweeter. Frequency response 48 Hz-20 kHz \pm 3dB; crossover 3100 Hz; impedance

8 ohms; min/max power 10/75 W continuous; dark-brown grill cloth and oak-grain vinyl finished cabinet; 23" \times 13" \times 10 $\frac{1}{4}$ "; 23 lb.....\$170

Model 30 Speaker System

Three-way speaker system with 10" woofer, 3 $\frac{1}{2}$ " midrange, and 2" direct radiator tweeter. Frequency response 60-18,000 Hz \pm 3 dB; impedance 8 ohms; crossovers at 1500 Hz and 4000 Hz; min/max power 10/50 W continuous; walnut-grained veneer cabinet with brown polyester grill; 24 $\frac{1}{2}$ " \times 15" \times 10"; 28 lb.....\$190

System 200 Speaker System

Two-way speaker system with 8" woofer and 1" dome tweeter. Frequency response 56 Hz-20 kHz \pm 3 dB; crossover at 3100 Hz; impedance 8 ohms; min/max power 10/60 W continuous; oak-grain vinyl cabinet with polyester brown grill; 18 $\frac{1}{4}$ " \times 11" \times 9 $\frac{1}{2}$ "; 16 lb.....\$130

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 dispersion; input range 10-40 W continuous; simulated wood veneer finish; 18 $\frac{1}{2}$ "H \times 11" W \times 8 $\frac{1}{2}$ "D.....\$110

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 $\frac{1}{4}$ "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 $\frac{1}{2}$ "D.....\$180 ea

SK-700II Speaker System

Three-way bass-reflex speaker system with 10" free-edge woofer, 5" free-edge midrange driver, 1" dome tweeter, and midrange and tweeter controls. Frequency range 35-40,000 Hz; max input power 140 W peak, 70 W rms; impedance 8 ohms; crossovers at 900 and 9 kHz; sensitivity 93 dB/W at 1 m; 22 $\frac{1}{4}$ "H \times 13 $\frac{1}{2}$ "W \times 13 $\frac{1}{2}$ "D; 30.9 lb.....\$180 ea

SK-600II Speaker System

Three-way bass-reflex speaker system with 10" free-edge woofer, 2 $\frac{1}{2}$ " tweeter, and 2" cone tweeter. Frequency range 40-25,000 Hz; impedance 8 ohms; max input power 120 W peak, 60 W rms; crossovers at 1.2 and 10 kHz; sensitivity 92 dB/W at 1 m; 19 $\frac{1}{2}$ "H \times 12 $\frac{1}{2}$ "W \times 12 $\frac{1}{2}$ "D; 24.2 lb.....\$240/pr

SK-400II Speaker System

Two-way bass-reflex speaker system with 8" free-edge woofer and 2 $\frac{1}{2}$ " cone tweeter. Frequency range 45-20,000 Hz; max input power 80 W peak, 40 W rms; impedance 8 ohms; crossover at 2 kHz; sensitivity 91 dB/W at 1 m; 17 $\frac{1}{2}$ "H \times 10 $\frac{1}{2}$ "W \times 10 $\frac{1}{4}$ "D; 17.6 lb.....\$150/pr

KEF

Model 105.2 Speaker System

Three-way floor standing speaker system with

minimum interunit time delay. Flat frequency response 38-22,000 Hz. Features visual indication of optimum listening area; variable system geometry extends choice of listening position; contoured mid- and high-frequency enclosures reduce off-axis coloration; novel bass loading technique; electronic protection (S-STOP) protects against overload and fault conditions; peak level indicator; pairing of systems guarantees sensitivity and frequency response match to within 0.5 dB; maximum output 107 dB SPL on program peaks; less than 1% THD, 20-20,000 Hz; 965 mm H \times 415 mm W \times 455 mm D; 80 lb.....\$1400

Model 105.4 Speaker System

Three-way floor-standing speaker system; features flat frequency response 60-22,000 Hz; contoured mid and high frequency enclosures; visual indication of optimum listening area; variable system geometry; novel bass loading technique; S-STOP; pairing of systems guarantees sensitivity and match to within 0.5 dB; max output 108 dB; less than 1% THD, 30-20,000 Hz; nominal impedance 8 ohms; 963 mm H \times 350 mm W \times 380 mm D; 45 lb each....\$1050 ea.

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\$725 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.....\$475 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.....\$395

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.....\$350

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 impedance; teak/walnut cabinet with black/brown grille; 340 mm H \times 180 mm W \times 190 mm D.....\$295

Corelli 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 Series II Speaker System

Two-way closed-box speaker system; frequency



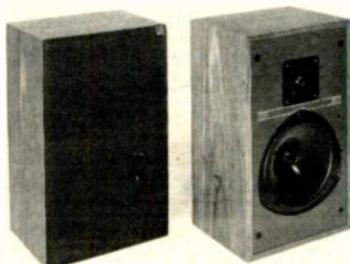
response 50-25,000 Hz; sensitivity 86 dB SPL/W/m; input range 10-50 W; 8-ohm impedance; satin black plinth cabinet with black cloth grille; 506 mm H x 265 mm W x 230 mm D.....\$225

Model 103.2 Speaker System

Two-way, floor-standing speaker system with flat frequency response 60-20,000 Hz; features novel bass loading technique; 106 dB SPL output on program peaks; S-STOP protection; pairing of systems guarantees sensitivity and frequency response match to within 0.5 dB; less than 1% THD. 50-20,000 Hz; nominal impedance 8 ohms; 506 mm H x 265 mm W x 249 mm D; 19 lb.....\$900/pr

Model 203 Speaker System

Two-way, bookshelf speaker system with flat frequency response from 68-20,000 Hz; fea-



tures novel bass loading technique; 106 dB SPL output on program peaks; less than 1% THD from 50-20,000 Hz; nominal impedance 8 ohms; genuine wood-veneer cabinets; 18½" H x 11" W x 8½" D; 18lb.....\$600/pr

Model 204 Speaker System

Two-way, floor-standing speaker system features flat frequency response 47-20,000 Hz; extended low-frequency response; 106 dB SPL output on program peaks, less than 1% THD, 150-20,000 Hz; nominal impedance 8 ohms; 15 W minimum amplifier requirement; genuine wood-veneer cabinets; 27½" H x 11" W x 12¾" D.....\$1100/pr

KENWOOD

LS-408C Speaker System

Three-way bass-reflex speaker system with 12-in cone woofer in diecast basket, 4½-in cone midrange in diecast basket, and 1½-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 x 16½" W x 14¾" 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; 25¾" H x 15" W x 13" D.....\$275

LS-405C Speaker System

Two-way bass-reflex speaker system with 10-in cone woofer in diecast basket and 1¾-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; 23¾" H x 13" W x 12¾" D.....\$189

S-4 Speaker System

Three-way speaker system with 8" woofer, 2" midrange driver, and 1" tweeter. Features polyvinyl finish. 14¾" H x 9½" W x 8½" D.....\$260/pr

S-2 Speaker System

Two-way speaker system with 6½" woofer and 2½" tweeter. Features polyvinyl finish. 14¾" H x 8½" W x 5½" D.....\$184/pr

Audio Purist Series

LS-1800 Speaker System

Bass-reflex speaker system with 11" woofer with carbon-fiber ribs, 4" active planar radiator midrange driver, and 1½" active planar radiator tweeter. Features polyvinyl finish. 26¾" H x 14½" W x 12¾" D.....\$1080 ea

LS-1000 Speaker System

Bass-reflex speaker system with 10" woofer with carbon-fiber ribs and 1½" active planar radiator tweeter. Features high-frequency level control; double baffle to block transmission of vibration; improved crossover network to reduce crosstalk; high-rigidity enclosure finished in walnut-grain vinyl; centralized low-frequency driver. Frequency range 35-20,000 Hz; impedance 8 ohms; max input power 150 W; crossover at 2 kHz; sensitivity 89 dB/W at 1 meter; 23¾" H x 11½" W x 12¾" D.....\$250 ea

LS-10 Speaker System

Two-way speaker system with 6½" woofer with carbon-fiber ribs and 1½" active planar radiator tweeter. Features polyvinyl finish. 16½" H x 8½" W x 8½" D.....\$420/pr

LSC Series

LSC-5500 Speaker System

Three-way speaker system with 12" woofer, 4½" midrange driver, and 1½" tweeter. Features acoustic-suspension design; walnut-grain vinyl finished enclosure. 24" H x 14" W x 10¾" D.....\$189

LSC-4500 Speaker System

Three-way speaker system with 10" woofer, 4½" midrange driver, and 1½" tweeter. Features acoustic-suspension design; walnut-grain vinyl finished enclosure. 24" H x 14" W x 10½" D.....\$163

LSC-2500 Speaker System

Two-way speaker system with 8" woofer and 1½" tweeter. Features acoustic-suspension design and walnut-grain vinyl finished enclosure. 17½" H x 11½" W x 8½" D. Packed in pairs.....\$155/pr

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, 4½-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 x 11" W x 10½" D; computer 2½" H x 10½" W x 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 x 10.25" W x 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 x 8.5" W x 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; 12½" H x 8½" W x 6" D.....\$320/pr.

319B Speaker System

Three-way tuned phase-inverted speaker system with 12-in woofer, 5½-in cone midrange, 1-in soft-dome front tweeter, and 2½-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; 24½" H x 14½" W x 11½" D.....\$239

337 Speaker System

Three-way acoustic-suspension speaker system with 12-in woofer, 4-in cone midrange, and 2½-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; 24½" H x 14½" W x 11½" D.....\$209

KLH-150 Speaker System

Three-way vented speaker system with 8-in high-flux polypropylene cone woofer, 4½-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 x 10½" W x 8½" D.....\$380/pr.

327 Speaker System

Three-way acoustic-suspension speaker system with 10-in woofer, 4-in cone midrange, 2½-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; 23½" H x 14" W x 10¾" 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 x 12" W x 9½" 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; 19½" H x 10½" W x 8" D.....\$250/pr.

(continued on next page.)

KLH-170 Speaker System

Two-way bookshelf speaker system with polypropylene cone woofer and dome tweeter. Birch-grain vinyl finish cabinets; 18" x 10 1/4" x 7" \$220/pr.

331B Speaker System

Two-way acoustic-suspension speaker system with 8-in woofer and 2 1/2-in dome 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 x 12" W x 8 1/4" D \$109

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 ±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 1/4" H x 19 1/4" W x 32 1/8" D; tweeter 10 1/16" H x 19 1/4" W x 19 1/4" D \$3000

KM-52 Speaker System

Two-way bass-reflex bookshelf speaker system with 6 1/2-in cone woofer with Motional Feedback 60-W continuous integral amplifier and 1 1/4-in soft dome tweeter; features switched bass and treble controls; frequency response 38-20,000 Hz ±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 x 14" W x 9.5" D \$1099/pr

KM-32 Speaker System

Two-way bass-reflex bookshelf speaker system with 6 1/2-in bextrene cone woofer with passive radiator and 1" soft-dome tweeter. Frequency range 42 Hz-22 kHz ±3 dB; input impedance 4.7k ohms (low level), 150 ohms (high level); max power input 40 watts rms; variable bass and treble controls; crossover at 2.7 kHz; SPL 100 dB; 14" H x 9 1/4" W x 8" D; 17.8 lb \$749/pr

AC 550 Speaker System

Five-way floor-standing passive bass-reflex speaker with ducted port; features 9" treated cone woofer, 9" treated-cone woofer/midrange, 1" soft-dome tweeter, and two 1" soft-dome HF Ambience tweeters; crossovers at 850 Hz and 2800 Hz; max input power 250; sensitivity 93 dB SPL/W/m; frequency response 37 Hz-23 kHz ±2dB; impedance 4 ohms; walnut, natural or black oak finish; 33 1/2" H x 11" W x 13 1/2" D \$749

AC 530 Speaker System

Three-way bookshelf speaker with passive radiator and rear-mounted ambience tweeter. Features 5" passive radiator, 6" woofer/midrange treated cone driver, 1" soft-dome tweeter and 1 1/4" HF Ambience tweeter. Crossover at 2800 Hz; max input power 150 W; sensitivity 89 dB SPL/W/m; frequency response 45 Hz-23 kHz ±3 dB; impedance 4 ohms; 14" H x 9 1/4" W x

8" D \$274

AC 510 Speaker System

Two way mini speaker with rear-mounted passive radiator; features 5" high-mass passive radiator, 5" bextrene cone woofer/midrange driver, 1" soft-dome tweeter. Crossover at 2700 Hz; max input power 75 W; sensitivity 85 dB SPL/W/m; frequency response 50 Hz-23 kHz ±3 dB; impedance 8 ohms; walnut finish; 10" H x 6 1/2" W x 5 1/2" D \$199

KOSS**CM/1030 Speaker System**

Four-way, four-bandpass, dual-port, floor-standing speaker system with 10-in woofer, two 4-in midrange 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_s) 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; mid-



range, treble, and tweeter spectrum-shaped controls ±3 dB range; 38 1/2" H x 16 1/2" W x 14 1/2" D \$890

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_s) 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 x 15 1/2" W x 13 1/4" D \$675

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_s) 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 x 15 1/2" W x 11" D \$480

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_s) 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 x 13 1/4" W x 11 1/4" D \$345

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 x 16" W x 1" D \$1550

MG-IIA Speaker System

Two-way floor-standing speaker system with 500-in² woofer and 68-in² 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 x 22" W x 2" D \$825 pr.

MG-I Speaker System

Two-way floor-standing speaker system with 428-in² woofer and 68-in² 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 x 22" W x 2" D \$495 pr.

SMG Magneplanar Speaker System

Two-way full-range speaker system with 0.5-mil diaphragm driven by a planar magnetic field. Frequency response 50-16,000 Hz ±4 dB; input power 20-50 watts; sensitivity 90 dB SPL/W/m; 4-ohm impedance; crossover at 2400 Hz; oak side moldings; 24 1/4" X 48 1/16" X 1 1/4"; 70 lb \$385/pr

MARANTZ**M-16 Speaker System**

Four-way focused-field floor-standing speaker system with 12" woofer, 5" midrange, 1 1/2" LPF tweeter, and 1" 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 x 19" W x 12 1/2" D \$750

600 Speaker System

Linear T-Drive™ floor-standing speaker system with 10" woofer, 5" midrange driver with impedance-control cap, 1 1/2" LPF dome tweeter, and 1" LPF dome super tweeter. Frequency range 25-28,000 Hz; input power 5-150 W; impedance 8 ohms; crossovers at 750, 24k, and 5.5 kHz; 36" H x 14 1/4" W x 14 1/4" D \$650

400 Speaker System

Three-way focused-field speaker system with 10" woofer, 5" midrange, and 1 1/2" 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 x 14 1/4" W x 11 1/2" D \$320

M-2 Speaker System

Two-way focused-field bookshelf speaker system with 6 1/2" hard cone woofer and 1" dome tweeter; frequency response 30-20,000 Hz; crossover at 2400 Hz; input range 30-200 W; impedance 4 ohms; 8 1/2" H x 13 1/2" W x 7 1/2" D \$190

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 × 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 x 15" W x 15" D \$429

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; 32¹/₂"H x 14¹/₂"W x 11¹/₂"D.....\$319
MA-136. Similar to MA-206 except uses one 12-in woofer; 8-ohm impedance; has tweeter level control; 24¹/₂"H x 15¹/₂"W x 10¹/₂"D.....\$219

MA-156 Speaker System

Three-way bass-reflex speaker system with 15-in woofer, 4-in midrange, and two 3¹/₂-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; 28¹/₂"H x 19¹/₂"W x 10¹/₂"D.....\$169

MA-126 Speaker System

Three-way acoustic-suspension speaker system with 12" foam surround woofer, 5" midrange driver, and 1¹/₂" phenolic-radiator tweeter. Frequency response 37-20,000 Hz; crossovers at 2.5 and 5 kHz; input power 8-45 watts; impedance 8 ohms nominal; 24¹/₂"H x 15¹/₂"W x 10¹/₂"D; 26 lb.....\$149

MA-106 Speaker System

Two-way acoustic-suspension speaker system with 10" foam surround woofer and 1¹/₂" phenolic-radiator tweeter. Frequency response 40-20,000 Hz; crossover at 5 kHz; input power 5-35 watts; impedance 8 ohms nominal; 20¹/₂"H x 12¹/₂"W x 10¹/₂"D; 35 lb.....\$99

MA-86 Speaker System

Two-way acoustic-suspension speaker system with 8" foam surround woofer and 1¹/₂" phenolic radiator tweeter. Frequency response 50-20,000 Hz; crossover at 5,000 Hz; input power 2-25 watts; impedance 8 ohms nominal; 18¹/₂"H x 11¹/₂"W x 9¹/₂"D; 29 lb.....\$79

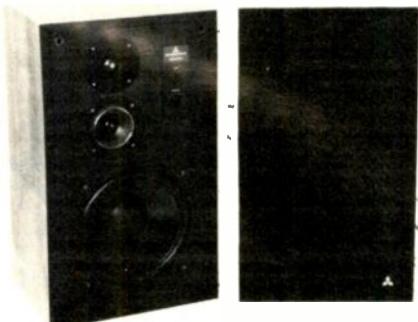
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MS-40 Speaker System

Three-way acoustic air-suspension floor-standing speaker system with 12-in glass-fiber-reinforced plastic honeycomb-cone woofer, 4-in cone midrange, and 1¹/₂-in hybrid dome tweeter; frequency response 25-20,000 Hz ±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; 34¹/₂"H x 15¹/₂"W x 14¹/₂"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 1¹/₂-in dome tweeter; frequency re-



sponse 30-20,000 Hz ±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 mid-

range and high level controls; detachable grille and walnut cabinet; 26¹/₂"H x 15¹/₂"W x 13¹/₂"D.....\$395

MS-10 Speaker System

Two-way acoustic air-suspension bookshelf speaker system with 10-in glass-fiber-reinforced plastic honeycomb-cone woofer and 2¹/₂-in cone tweeter; frequency response 35-20,000 Hz ±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; 22¹/₂"H x 12¹/₂"W x 11¹/₂"D.....\$165

M&K

Satellite-IA Speaker System

2-way acoustic-suspension speaker system with two 5" woofers and two 1" tweeters. Features adjustments for 14 tonal balances, including German, English, and American sounds; walnut or oak finish with black grille. Frequency response 70-22,000 Hz ±3 dB; input power 7.5-400 W; impedance 4 ohms; 21¹/₂"H x 7¹/₂"W x 7¹/₂"D; 19 lb.....\$540/pr

Volkwoofer A Subwoofer

Internally amplified (60 W) subwoofer with 12" driver and 3 selectable room response contours, walnut or oak finish with black grille. Frequency response 18-1000 Hz ±3 dB; crossover at 100 Hz; input power 7.5-400 W; built-in high-pass filter; 17¹/₂"H x 18¹/₂"W x 15¹/₂"D; 50 lb.....\$555
System A. Complete speaker system with 2 Satellite-IA speaker systems and 1 Volkwoofer A.....\$1095

Satellite II Speaker System

2-way acoustic-suspension speaker system with 6¹/₂" woofer and 1" tweeter. Features adjustments for 14 different tonal balances, walnut or oak finish with black grille. Frequency response 65-20,000 Hz ±3 dB; crossover at 2 kHz; input power 10-200 W; impedance 4 ohms; 12¹/₂"H x 9¹/₂"W x 8¹/₂"D; 16 lb.....\$375/pr

Volkwoofer-III Subwoofer

Internally amplified (40 W) subwoofer with 12" driver and 3 selectable room response contours. Features high-pass filter; black vinyl finish with black grille. Frequency response 25-100 Hz ±3 dB; crossover at 100 Hz; input power 10-200 W; 17¹/₂"H x 17¹/₂"W x 14¹/₂"D; 48 lb.....\$350

Goliath II-A Subwoofer

Acoustic-suspension woofer with 12" driver and internal adjustable crossover network for 50, 100, 125, 150 Hz. Features walnut or oak finish. Frequency response 26-150 Hz; 18¹/₂"W x 17¹/₂"H x 15¹/₂"D; 46 lb.....\$275

Bottom END-IIA Subwoofer

Acoustic-suspension subwoofer with 12" driver designed for biamplication and external crossover. Features walnut or oak finish. Frequency response 25-150 Hz; input power 30-150 W; 18¹/₂"W x 17¹/₂"H x 15¹/₂"D; 41 lb.....\$215

MORDAUNT-SHORT

Signer 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 ±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; 31¹/₂"H x 15¹/₂"W x 12¹/₂"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 ±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; 21¹/₂"H x 13¹/₂"W x 9¹/₂"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 ±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; 17¹/₂"H x 11¹/₂"W x 7¹/₂"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 ±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; 15¹/₂"H x 9¹/₂"W x 5¹/₂"D.....\$305/pr.

OHM ACOUSTICS

Model F Speaker System

Floor-standing speaker system with 12-in diameter Walsh radiator and 16-in tweeter with 33.6-oz Alnico V-7, 10¹/₂-lb magnet; frequency response 37-19,000 Hz ±4 dB; input range



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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 ±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 ¾-in flakeboard stock; 33½" H × 15½" W × 15½" D at bottom, tapers to 13½" W × 13½" 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 ±4 dB; crossovers at 1700 and 5000 Hz; input range 10-100 W; 8-ohm impedance; three-position tweeter level control; ¾-in stock oiled walnut finish; 26½" H × 15" W × 10½" D \$400

Model C₂ 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 ±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 ¾-in stock with black Formica back; 25" H × 14" W × 9½" 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 ±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 ¾-in stock; 20" H × 12" W × 9½" D \$220

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 ±4 dB; crossover at 3500 Hz; input range 5-100 W; impedance 4 ohms; cast aluminum cabinet; 7½" H × 4½" W × 4½" D \$150

Model N2 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 × 16" W × 15" D \$385

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 × ¾-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; 26½" H × 16½" W × 10½" D \$350

E-200 Speaker System

Three-way air-suspension speaker system with 11-in Fiber-Aligned™ woofer, 4-in carbon-fiber midrange, and 2 × ¾-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

HS-20 Midi Speaker System

Two-way mirror-imaged speaker system with 6.5" woofer and 2" tweeter. Frequency response 60-20,000 Hz; max input 50 watts; silver finish \$100

AS-30. Pedestal speaker stands for use with HS-20; expandable center post \$55/pr

OPTONICA

CP-8101 Speaker System

Two-way speaker system with bass reflex design; 8" woofer and 2" tweeter; RC crossover network; integral speaker stands; 12" W × 25" H × 10" D \$180/pr

JC PENNEY

MCS 8330 Speaker System

Three-way linear-phase speaker system with 12" woofer with 20-oz ferrite magnet, 5" cone-type midrange driver with 5.3-oz ferrite magnet, and 2" cone-type tweeter with 3.2-oz magnet. Features dual level controls; handles; removable grille cloth. Input power 10-120 W; impedance 8 ohms; vinyl wood-grain cabinet; 27" H × 15" W × 13" D \$300

MCS 8232 Speaker System

Three-way bass-reflex speaker system with 12" woofer with 16-oz ferrite magnet, 1½" soft-dome driver with 12-oz ferrite magnet, and 2" cone-type tweeter. Features dual level controls; vinyl wood-grain cabinet with removable grille cloth; built-in speaker protection; reset buttons. Input power 10-100 W; impedance 8 ohms; 27" H × 15" W × 10½" D \$250

MCS 8229. Similar to 8232 except with 10" woofer with 12-oz ferrite magnet; tweeter level control only; input power 10-60 W; 24½" H × 13" W × 10½" D \$150

MCS 8231. Similar to 8229 except has 8" woofer with 3.6-oz ferrite magnet; 3½" cone-type midrange driver with 2-oz magnet; input power 10-30 W; no level controls; 23" H × 13" W × 9" D \$75

MCS 8310 Speaker System

Two-way linear-phase speaker system with 8" woofer with 8-oz ferrite magnet, 2" cone-type tweeter with 3.2-oz ferrite magnet, vinyl wood-grain cabinet with removable grille. Input power 10-50 W; impedance 8 ohms; 21½" H × 11" W × 10" D \$100

MCS 8231. Similar to 8229 but has 8" woofer with 3.6-oz ferrite magnet; 3½" cone-type mid-

range driver with 2-oz magnet; input power 10-30 W; no level control; 23" H × 13" W × 9" D \$75

MCS 8230 Mini Speaker System

Two-way air-suspension miniature bookshelf speaker system with 5½" woofer with 14-oz magnet, 1½" cone-type tweeter with 2-oz magnet, and vinyl silver-color cabinet. Input power 10-30 W; 9½" H × 7½" D × 6½" W \$75

PIONEER

HPM-1100 Speaker System

Four-way speaker system with 15¾" PG (Polymer Graphite) woofer, 4¾" PG midrange driver, 1¾" PG cone tweeter, and horn-loaded



double-drive High Polymer film supertweeter. Features bass-reflex design; walnut-grain vinyl finished cabinet; removable grille. Frequency range 25-50,000 Hz; input power 50-300 W, 125 nominal; sensitivity 92.5 dB SPL/W/m; 35½" H × 19½" W × 14½" D; 70 lb 1 oz \$550

HPM-900 Speaker System

Four-way speaker system with 12" PG (Polymer Graphite) woofer, 4" PG midrange driver, 1¾" PG cone tweeter, and horn-loaded High Polymer film supertweeter. Features bass-reflex design; walnut-grain vinyl finished cabinet; removable grille. Frequency range 30-50,000 Hz; input power 50-270 W, 100 W nominal; sensitivity 92.5 dB SPL/W/m; 26½" H × 15½" W × 15½" D; 51 lb 9 oz \$375

HPM-700 Speaker System

Four-way speaker system with 10" PG (Polymer Graphite) woofer, 4" PG midrange driver, 1¾" PG cone tweeter, and horn-loaded High Polymer film supertweeter. Features bass-reflex design; walnut-grain vinyl finished cabinet; removable grille. Frequency range 35-50,000 Hz; input power 30-150 W, 60 W nominal; sensitivity 92.5 dB SPL/W/m; 24" H × 13½" W × 12½" D; 32 lb 7 oz \$275

HPM-500 Speaker System

Three-way speaker system with 10" PG (Polymer Graphite) woofer, 1¾" PG cone tweeter, and horn-loaded High Polymer film supertweeter. Features bass-reflex design; walnut-grain vinyl finished cabinet; removable grille. Frequency range 35-50,000 Hz; input power 20-100 W, 40 W nominal; sensitivity 91 dB SPL/W/m; 22½" H × 12½" W × 12½" D; 26 lb 14 oz \$195

POLK AUDIO

R.T.A. 12B Monitor Speaker System

Three-way real-time-array floor-standing speaker system with 12" low-resonance molded-foam subwoofer, two 6½" polymer laminated bass-midrange drivers, and 1" open-mounted, moving-coil soft-dome tweeter. Frequency range 17-25,000 Hz; crossovers at 40 and 2k Hz; input power range 10-500 W/channel; impedance 4 ohms; walnut or rosewood grain finish; 39" H × 16" W × 12" D \$500

TenA Speaker System

Three-way subbass radiator/sealed floor-standing speaker system with 10" fluid-coupled

subwoofer, two 6½" bass/midrange drivers, and 1" soft-dome tweeter. Frequency range 22-25,000 Hz; crossovers at 60 and 3k Hz; input power range 10-200 W/channel; impedance 6 ohms; walnut or rosewood grain finish; 28" H × 16" W × 11½" D.....\$300

LF14 Low-Frequency System

Modular bass reference monitor low-frequency speaker system with 2 6.5-W trilaminated polymer drivers fluid coupled to low-resonance 12" foam-laminated planar subbass radiator. Features 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 power range 20-250 W/channel; walnut or rosewood grain vinyl cabinet.....\$300

SevenB Speaker System

Three-way subbass radiator/sealed bookshelf speaker system with 10" subwoofer, 6½" plasticized bass/midrange driver, and 1" soft-dome tweeter. Frequency range 26-25,000 Hz; crossovers at 60 and 3k Hz; input power range 10-100 W/channel; impedance 8 ohms; walnut or rosewood grain finish; 24" H × 14" W × 9½" D.....\$220

FiveA Similar to SevenB but with 8" subwoofer; frequency response 31-25,000 Hz; input power range 10-60 W/channel; 21½" H × 10½" W × 8½" D.....\$160

QUAD

ESL-63 Electrostatic Loudspeaker

Full-range electrostatic doublet speaker with dipole source. Features 2 protection circuits. Input power 100-190 W; sensitivity 86 dB, 2.83 V rms; impedance 8 ohms nominal; axis band limits -6 dB at 35 Hz, third order, -6 dB at 20 kHz; 92.5 × 66 × 27 cm; 23 kg.....\$3300/pr

Quad Electrostatic Loudspeaker

Full-range electrostatic loudspeaker incorporates closely-coupled moving elements 200 times lighter than diaphragms of moving-coil speakers; band-width 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; 790mmH × 880mmW × 270mmD.....\$890

REALISTIC

Optimus T-200 Speaker System

Three-way floor-standing speaker system with two 10-in woofers, 6½-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 × 12½" W × 12½" 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; 28½" H × 17½" W × 12" D.....\$240

Optimus-10 Speaker System

Two-way speaker system with 8-in woofer, 10-in passive radiator, and 3½-in cone tweeter; frequency response 42-20,000 Hz ±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 × 15½" W × 10½" D.....\$140

Optimus 25 Speaker System

Sealed three-way acoustic-suspension speaker system with 12-in woofer, 4-in midrange, and 2½-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 × 14" W × 11½" D.....\$140

Nova-10 Speaker System

Two-way sealed speaker system with 8-in high efficiency woofer with complementary passive radiator and 2½-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 × 12½" W × 10½" D.....\$130

ROTEL

Micro Component Series

RML-90 Speaker Systems

Air-suspension 2-way speaker system designed for limited spaces and to complement Micro 90 system components. Feature 5" woofers and 1" soft-dome tweeters. Frequency range 45-20,000 Hz; max input power 50 W; 11½" H × 7½" W × 6½" D.....\$150/pr

RML-82 Speaker Systems

Air-suspension 2-way speaker systems designed for limited spaces and to complement Micro 82 system components. Feature wood cabinets with detachable cloth grilles; 4" woofer; 1" tweeter. Frequency range 55-20,000 Hz; max input power 50 W; sensitivity 92 dB at 1 W; 8½" H × 5½" W × 5½" D; 4.8 lb.....\$90/pr

RML-70 Speaker Systems

Air-suspension 2-way speaker systems. Frequency range 55-20,000 Hz; max input power 30 W peak; sensitivity 92 dB at 1 W; 9½" H × 5½" W × 5½" D; 4.84 lb.....\$80/pr

Mini-Size Speaker

RMS-1000 Speaker Systems

Mini-size speaker systems with high-density molded "marble resin" to enhance flat response and high-efficiency crossover network to handle high power at low distortion.....\$160/pr

RTR INDUSTRIES

800D Speaker System

Four-way acoustic-suspension phased speaker system with 8-in and 10-in woofers, 1½-in soft dome midrange, and 1-in soft dome tweeter; frequency response 36-20,000 Hz ±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; 37½" H × 13½" W (bottom) and 4" W (top) × 23½" D.....\$600

600D Speaker System

Three-way acoustic-suspension speaker system with two 12-in woofers, 1½-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 × 16½" W × 16½" D.....\$600

DAC/1 Subwoofer

Differential ac subwoofer with one 12-in and two 15-in woofers; frequency response 16-150 Hz ±1.5 dB; crossover at 120 Hz; 6-ohm nominal impedance; min. input 40 W; includes casters; oiled walnut finish with black knit grille; 21½" H × 29½" W × 28" D.....\$575

300D Speaker System

Three-way acoustic-suspension speaker system with two 10-in woofers, 1½-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 × 14½" W × 12½" D.....\$400

G-350 Speaker System

3-way speaker system with 10" woofer, 12" passive radiator, 1½" midrange driver, and 1" soft-dome tweeter. Features midrange and tweeter controls; circuit breaker; oiled-walnut finish. Input power 10-120 W; sensitivity 92 dB; impedance 8 ohms; 38" H × 18" W × 11" D.....\$400

PS/1 Speaker System

Three-way acoustic-suspension speaker system with 8-in woofer, 1½-in soft dome midrange, and 1-in soft dome tweeter; frequency response 65-20,000 Hz ±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; 21½" H × 12½" W (bottom) and 5" W (top) × 8" D.....\$325

G-200 Speaker System

Two-way mass-tuned passive radiator modified-vent speaker system with 10-in woofer, 1½-in high-temperature voice coil, total emersion dampener impregnated cone 1-in soft dome wide-dispersion tweeter; frequency response 25-25,000 Hz ±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 × 14½" W × 12½" D.....\$300

75D Speaker System

Three-way acoustic-suspension speaker system with 10" woofer; 1½" soft-dome midrange driver, and 1" dome tweeter. Features tweeter and midrange controls; circuit breaker; vinyl finish. Input power 20-100 W; sensitivity 90.5 dB; impedance 6 ohms; 25½" H × 14½" W × 11½" D.....\$250

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 $\frac{1}{2}$ "H x 14 $\frac{1}{2}$ "W x 12"D \$250

G-100 Speaker System

Two-way speaker system with 10" woofer, 10" passive radiator, and 1" soft-dome tweeter. Features circuit breaker; tweeter level control; vinyl finish. Input power 10-120 W; sensitivity 91 dB; 30"H x 14 $\frac{1}{4}$ "W x 11 $\frac{1}{2}$ D \$250

4.1 Miniature Speaker System

Two-way acoustic-suspension miniature speaker system with 4" woofer and 1" soft-dome tweeter in die-cast enclosure. Max. input power 60 W; 7 $\frac{3}{8}$ "H x 4 $\frac{3}{8}$ "W x 4 $\frac{1}{2}$ D; 99 oz ea..... \$200/pr
B4.1. Brackets for 4.1 speaker systems .. \$25/pr

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 $\frac{1}{4}$ "W x 11 $\frac{1}{2}$ D \$190

G-40A Speaker System

Two-way speaker system with 8" woofer, 8" passive radiator, and 1" dome tweeter. Features tweeter level control; circuit breaker; vinyl finish. Input power 10-100 W; sensitivity 90 dB; 23"H x 12"W x 9 $\frac{1}{2}$ D \$150

G-35 Speaker System

Two-way speaker system with 6 $\frac{1}{2}$ " woofer, 6 $\frac{1}{2}$ " passive radiator, 1" soft-dome tweeter. Features tweeter level control; circuit breaker; vinyl finish. Input power 10-60 W; sensitivity 90 dB; impedance 8 ohms; 21 $\frac{1}{2}$ "H x 12"W x 7"D..... \$100

SANSUI

SP-L750 Speaker System

Three-way bass-reflex floor-standing speaker system with 12" woofer and complementary passive radiator, 3" rear-driven horn-loaded tweeter, and 1 $\frac{1}{2}$ " 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-X9 Speaker System

Five-way, seven-driver bass-reflex floor-standing speaker system with 17" woofer, 6 $\frac{1}{2}$ " midrange driver, two 6 $\frac{1}{2}$ " x 2" horn tweeters, and three 1 $\frac{1}{2}$ " cone-type supertweeters. Frequency range 22-23,000 Hz; impedance 8 ohms; max input power 300 W; sensitivity 100



dB SPL/W/m. Features 3-step sound balance control; simulated walnut-grain cabinet; hand-carved Kumiko grille \$400
SP-X8. Similar to SP-X9 except 4-way, 7-driver system with max input-power capability of 250 W \$350

SP-X7 Speaker System

Four-way floor-standing bass-reflex speaker system with 16" woofer, 4 $\frac{3}{8}$ " midrange driver, 6 $\frac{1}{2}$ " x 2" horn tweeter, and two 1 $\frac{1}{2}$ " cone-type supertweeters. Frequency range 30-22,000 Hz; impedance 8 ohms; max input power 200 W; sensitivity 97 dB SPL/W/m. Features simulated walnut-grain cabinet and hand-carved Kumiko grille; 3-step sound-balance control \$300
SP-X6. Similar to SP-X7 except has 13" woofer and one 1 $\frac{1}{2}$ " supertweeter; max input power 160 W \$250

J33 Mini Speaker System

Two-way air-suspension mini bookshelf speaker system with 8 $\frac{1}{2}$ " seamed-sheet cone woofer and 1" 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 $\frac{1}{2}$ "H x 9 $\frac{1}{2}$ "W x 7 $\frac{1}{2}$ D \$450/pr

J11 Mini Speaker System

Two-way paperback-book-sized speaker system with 4" cone woofer, concave passive radiator, and 1" 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 $\frac{1}{2}$ "H x 4 $\frac{1}{2}$ "W x 5 $\frac{1}{2}$ D.... \$250/pr
310. Similar to 312 except uses 10-in woofer; input range 10-70 W; 23"H x 12 $\frac{1}{2}$ "W x 10 $\frac{1}{2}$ D \$250

SP-M1 Mini Speaker System

Two-way mini speaker system with 4" woofer, 1" dome tweeter, wood enclosure, and Kumiko lattice grille. Frequency range 45-20,000 Hz; impedance 8 ohms; sensitivity 86 dB SPL/W/m; 8"H x 5 $\frac{1}{2}$ "W x 4 $\frac{3}{4}$ D.... \$250/pr

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 ±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 x 19" W x 14 $\frac{1}{2}$ D..... \$730

199T Speaker System

Three-way floor-standing speaker system with 1" dome-tweeter, 4 $\frac{1}{2}$ " isolated midrange driv-



er, and 12" extended-voice-coil woofer in vertical aligned tower configuration. Features three-

position tweeter and midrange attenuation controls; input power 15-150 W; frequency response 38-20,000 Hz ±4 dB; efficiency 92 dB SPL/W/m; controlled impedance 6-8 ohms; crossovers at 800 and 3500 Hz; air suspension enclosure; hickory vinyl cabinet with removable grille; 36" H x 15"W x 11 $\frac{1}{2}$ D \$360

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 ±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; hickory vinyl with removable grille; 27 $\frac{1}{2}$ "H x 16 $\frac{1}{2}$ "W x 13 $\frac{1}{2}$ D \$360
196B. 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; 25 $\frac{1}{2}$ "H x 15"W x 10 $\frac{1}{2}$ D \$280

312 Speaker System

Three-way air-suspension bookshelf speaker system with 12-in woofer, 4 $\frac{1}{2}$ -in midrange, and 1 $\frac{1}{2}$ -in tweeter; frequency response 45-18,000 Hz ±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 x 14 $\frac{1}{2}$ "W x 11 $\frac{1}{2}$ D \$300
310. Similar to 312 except uses 10-in woofer; input range 10-70 W; 23"H x 12 $\frac{1}{2}$ "W x 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 ±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; hickory vinyl finish with removable grille; 33 $\frac{1}{2}$ "H x 13 $\frac{1}{2}$ "W x 10 $\frac{1}{2}$ D \$280
186B. Similar to 188T except bookshelf system with 95-dB SPL/W/m efficiency; 24"H x 13 $\frac{1}{2}$ "W x 10 $\frac{1}{2}$ D..... \$250

177BL Speaker System

Three-way air suspension speaker system with 8" woofer, 5" midrange, and 1 $\frac{1}{2}$ " tweeter; input power 7-70 W; frequency response 50-18,000 Hz ±4 dB; efficiency 92.5 dB SPL; controlled impedance 6-8 ohms; crossovers at 1200 and 3500 Hz; hickory vinyl cabinet with removable grille; 21" x 11" x 9 $\frac{1}{2}$ " \$150

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 ±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 x 7 $\frac{1}{2}$ "W x 6 $\frac{1}{2}$ D..... \$145

176BL Speaker System

Two-way bookshelf speaker system with 8" woofer and 1 $\frac{1}{2}$ " tweeter; air-suspension enclosure; frequency response 50-18,000 Hz ±4 dB; efficiency 91.0 dB SPL; controlled impedance 6-8 ohms; crossover at 3500 Hz; input power 5-65 W; hickory vinyl cabinet with removable grille; 21" x 11" x 9 $\frac{1}{2}$ " \$110

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 x 12" W x 11" D ... \$280/pr.

SHERWOOD

S-03 Speaker System

Time-compensated speaker system with 12" passive radiator, 10" woofer, 2" soft-dome midrange driver, and 1" soft-dome tweeter. Features separate free-standing baffle for midrange and tweeter; hand-rubbed oiled-walnut enclosure finish; black grille. Frequency response 40-20,000 Hz ±2 dB (-3 dB at 28 Hz with optional ultra low bass EQ); input power 8-150 W rms; impedance 8 ohms; sensitivity 88 dB SPL/W/m; crossovers at 500 and 5k Hz; 30" H x 16" W x 14½" D; 69 lb \$400



S-02 Speaker System

Time-compensated speaker system with 10" passive radiator, 8" woofer, and 1" soft-dome tweeter. Features separate free-standing baffle for tweeter; hand-rubbed oiled-walnut enclosure finish; black grille. Frequency response 40-20,000 Hz ±2.5 dB (-3 dB at 28 Hz with optional ultra low bass EQ); input power 8-100 W rms; impedance 8 ohms; sensitivity 88 dB SPL/W/m; 31" H x 15½" W x 11½" D; 41 lb \$250

S-01 Speaker System

Two-way speaker system with 8" passive radiator, 6½" woofer, and 1" soft-dome tweeter. Features hand-rubbed oiled-walnut enclosure finish and black grille. Frequency response 40-20,000 Hz ±3 dB (-3 dB at 28 Hz with optional ultra low bass EQ); input power 12-80 W rms; impedance 8 ohms; sensitivity 84 dB SPL/W/m; 23" H x 12" W x 9½" D; 27 lb \$170

S.I.A.R.E. CORP. (U.S.A.)

Delta 400 Speaker System

Three-way vented, phase-aligned speaker system with 9" long-excursion woofer, woven-fiberglass-cone midrange driver, and polyamide-dome tweeter. Features "acoustic stabilizers" throughout enclosure's interior to eliminate standing waves and undesirable resonances. Frequency response 45-25,000 Hz ±2 dB; input power 100 W rms max; impedance 8 ohms; crossovers at 500 and 4k Hz; hand-rubbed oiled-walnut enclosure finish; 30¾" H x 13¾" W x 16¼" D; 66 lb \$850

Fugue 400 Speaker System

Three-way vented, vertically-aligned speaker system with 8" long-excursion, radially ribbed woofer, woven-fiberglass-cone midrange driver, and Nomex dome tweeter. Features midrange driver in its own completely isolated subenclosure and hand-wired crossover network. Frequency response 50-22,000 Hz ±2.5 dB; input power 80 W rms max; impedance 8 ohms; crossovers at 600 and 4k Hz; hand-rubbed oiled-walnut enclosure finish; 30¾" H x 11" W x 14½" D; 44 lb \$500

Sigma 400 Speaker System

Three-way vented, vertically aligned speaker system with 8" long-throw, radially ribbed woofer, woven-fiberglass-cone midrange driver, and Nomex dome tweeter. Frequency response 50-20,000 Hz; input power 60 W rms max; impedance 8 ohms; crossovers at 700 and 3k Hz; hand-rubbed oiled-walnut enclosure finish; 26¾" H x 11" W x 13¾" D; 36 lb \$400

Gamma 400 Speaker System

Three-way vented, vertically aligned speaker system with 8" long-excursion woofer, woven-fiberglass-cone midrange driver, and Nomex dome tweeter. Frequency response 60-20,000 Hz; input power 50 W rms max; impedance 8 ohms; crossovers at 700 and 3k Hz; alagash-

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; 23¾" H x 13" W x 12½" D \$360/pr

SS-U50 Speaker System

Acoustic-suspension speaker system with 8" woofer and direct-drive ribbon tweeter and walnut-grain vinyl finish. Max input power 80 W; 24¾" H x 13" W x 12½" D; 28 lb 14 oz \$280/pr

SOUND DYNAMICS by API

Consumer S Series

1S 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; 36½" H x 10" W x 18¼" D \$450

12S. Similar to 15S except uses 12-long-throw felted-cone woofer; frequency response 26-20,000 Hz ±3 dB; crossover at 2050 Hz; sensitivity 101.5 dB SPL/W/m; input range 12-150 W continuous; 33" H x 16¾" W x 13" D \$360

12S. Similar to 120S minus floating port; frequency response 28-20,000 Hz ±3 dB; crossover at 2100 Hz; sensitivity 101 dB SPL/W/m; input range 10-125 W continuous; 27" H x 15½" W x 12¾" D \$300

10S. Similar to 12S except 10-in long-throw

birch-grain vinyl enclosure finish; 23½" H x 11" W x 10¾" D; 24 lb \$298

SONY

SS-U80 Speaker System

Acoustic-suspension speaker system with 12" woofer, 4" low midrange driver, 2½" high midrange driver, and direct-drive ribbon tweeter. Features 1"-thick particle-board enclosure and fiber-board baffle; genuine walnut-veneer finish. 39¾" H x 16½" W x 14¾" D; 78 lb 11 oz \$480

SS-U70 Speaker System

Acoustic-suspension speaker system with 10" woofer, 4" midrange driver, and direct-radiator ribbon tweeter. Features 1"-thick particle-board enclosure and fiber-board baffle; genuine walnut-veneer finish. 32½" H x 15" W x 14" D; 63 lb 6 oz \$380/pr

SS-U60 Speaker System

Three-way acoustic-suspension bookshelf

In the finest European Tradition...

and, with 37 years acoustic experience!
It takes time to become a legend.

Just as the artistic virtuosity of Henri Matisse developed over a period of time, the acoustic virtuosity of SIARE has been developing since 1944. As a painter orchestrates the elements at his disposal to create a masterpiece, SIARE has orchestrated its elements within the 400 Series to create acoustic perfection.

Subtle nuances differentiate the superior from the conventional, in art and in sonic reproduction.

Sonic Superiority from...

SIARE
PRONOUNCED (SEE-ARE)

HAUT PARLEURS DE FRANCE • LOUDSPEAKERS FROM FRANCE
For further information:
Write to SIARE Corp., 80 13th Avenue, Ronkonkoma, N.Y. 11779

feltd-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; $25\frac{1}{8}^{\prime\prime}$ H \times $14\frac{1}{2}^{\prime\prime}$ W \times $12\frac{3}{8}^{\prime\prime}$ D \$225

100S Speaker System

Two-way computer-tuned bass-reflex bookshelf speaker system with 10-in long-throw soft feltd-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; $20^{\prime\prime}$ H \times $12\frac{3}{8}^{\prime\prime}$ W \times $10^{\prime\prime}$ D \$180

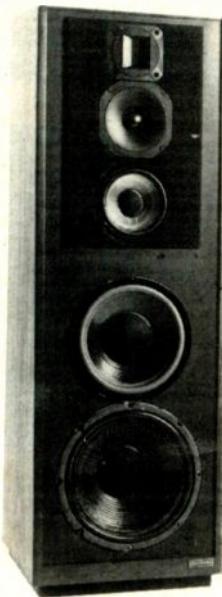
6S. Similar to 100S except uses 6-in woofer; crossover at 2300 Hz; sensitivity 96 dB SPL/W/m; input range 5-50 W continuous; tweeter level control; black finish with removable grille; $14\frac{1}{16}^{\prime\prime}$ H \times $9\frac{1}{16}^{\prime\prime}$ W \times $9^{\prime\prime}$ D \$150

Studio Monitor Tower Series
Two-way bass-reflex passive-radiator speaker system with 12" woofer and 1" tweeter; crossover at 2050 Hz; frequency response 34-20,000 Hz \pm 3 dB; output 101.5 dB; input power 15-250 w rms; impedance 8 ohms; $37^{\prime\prime}$ \times $14\frac{3}{8}^{\prime\prime}$ \times $15^{\prime\prime}$; 75 lb \$400

SPEAKERLAB

S-50 Speaker System

4-way biampified floor-standing speaker system with 12" and 10" Nestorovic double-layer cone woofers, 6" midbass/midrange driver, $\frac{1}{2}$ " dome-type upper midrange driver, and leaf-type



samarium-cobalt tweeter. Features midrange and tweeter level, woofer damping, and biamp in/out controls; wiring for full-range and biamp operation. Crossovers at 350, 1.5k, and 8k Hz; sensitivity 93 dB SPL/W/m; input power 15-350 W; impedance 8 ohms; $48^{\prime\prime}$ H \times $16^{\prime\prime}$ W \times $12\frac{1}{2}^{\prime\prime}$ D \$980
Speakers and crossover only \$649

SK Speaker System

3-way folded-horn floor-standing speaker sys-

tem with 15" woofer, $17^{\prime\prime}$ \times $6^{\prime\prime}$ (mouth) horn midrange driver, and $4^{\prime\prime}$ \times $8\frac{1}{4}^{\prime\prime}$ (mouth) wide-dispersion wave aperture™ tweeter. Features midrange and tweeter level controls. Crossovers at 400 and 5k Hz; efficiency 99 dB SPL/W/m; input power 10-250 W; impedance 8 ohms. Speakers and crossover only \$399

Super 7 Speaker System

3-way acoustic-suspension speaker system with 12" polypropylene woofer, $6\frac{1}{2}^{\prime\prime}$ polypropylene midrange driver, and samarium-cobalt tweeter. Crossovers at 350 and 6 kHz; efficiency 93 dB SPL/W/m; input power 20-200 W; impedance 4 ohms; $38\frac{1}{8}^{\prime\prime}$ H \times $16^{\prime\prime}$ W \times $14\frac{1}{2}^{\prime\prime}$ D.
With rosewood vinyl finish, black grille cloth \$389
With oak finish, brown grille cloth \$439
Speaker and crossover only \$259

S500 Speaker System

3-way passive-radiator speaker system with 12" passive radiator, 10" polypropylene woofer, 4" midrange driver, and samarium-cobalt leaf tweeter. Features oak finish, brown grille cloth. Crossovers at 900 and 8 kHz; efficiency 92 dB SPL/W/m; input power 5-100 W; impedance 8 ohms; $38\frac{1}{8}^{\prime\prime}$ H \times $14\frac{1}{2}^{\prime\prime}$ W \times $11\frac{1}{2}^{\prime\prime}$ D \$368

S17 Speaker System

3-way passive-radiator speaker system with 10" passive radiator, 8" polypropylene woofer, $6\frac{1}{2}^{\prime\prime}$ polypropylene midrange driver, and samarium-cobalt leaf tweeter. Crossovers at 350 and 3.8 kHz; efficiency 91 dB SPL/W/m; input power 15-75 W; impedance 6 ohms; $31^{\prime\prime}$ H \times $12\frac{3}{8}^{\prime\prime}$ W \times $11\frac{1}{4}^{\prime\prime}$ D.
Rosewood vinyl finish, black grille cloth \$250
Oak finish, brown grille cloth \$299
Speakers and crossover only \$169

S300 Speaker System

2-way passive-radiator speaker system with 10" passive radiator, 8" polypropylene woofer, and 3" tweeter. Features oak finish, brown grille cloth. Crossover at 2.5 kHz; efficiency 92 dB SPL/W/m; input power 5-75 W; impedance 8 ohms; $34\frac{1}{8}^{\prime\prime}$ H \times $12\frac{1}{4}^{\prime\prime}$ W \times $11^{\prime\prime}$ D \$219

S15 Speaker System

2-way passive-radiator speaker system with 10" passive radiator, 8" polypropylene woofer, and samarium-cobalt leaf tweeter. Crossover at 3.8 kHz; efficiency 91 dB SPL/W/m; input power 15-75 W; impedance 6 ohms; $31^{\prime\prime}$ H \times $12\frac{3}{8}^{\prime\prime}$ W \times $11\frac{1}{4}^{\prime\prime}$ D.
Rosewood vinyl finish, black grille cloth \$199
Oak finish, brown grille cloth \$239
Speakers and crossover only \$119

S10 Subwoofer

Passive subwoofer system for S9 speaker system (below) features 10" dual-voice-coil mono woofer and 12" passive radiator. Crossover at 180 Hz; efficiency 91 dB SPL/W/m; input power 10-75 W; impedance 6 ohms; $18^{\prime\prime}$ W \times $18\frac{1}{2}^{\prime\prime}$ H \times $18\frac{1}{2}^{\prime\prime}$ D \$199
Oak finish, brown grille cloth \$199
Speakers and crossover only \$109

S100 Speaker System

2-way bass-reflex speaker system with 8" woofer and 3" tweeter. Features oak finish, brown grille cloth. Crossover at 2.5 kHz; efficiency 92 dB SPL/W/m; input power 5-75 W; impedance 8 ohms; $30\frac{1}{2}^{\prime\prime}$ H \times $10\frac{1}{4}^{\prime\prime}$ W \times $10\frac{1}{4}^{\prime\prime}$ D \$169

S11 Speaker System

2-way bass-reflex system with 8" polypropylene woofer and samarium-cobalt leaf tweeter. Crossover at 3.5 kHz; efficiency 91 dB SPL/W/m; input power 15-75 W; impedance 6 ohms; $28\frac{1}{4}^{\prime\prime}$ H \times $11\frac{1}{4}^{\prime\prime}$ W \times $10\frac{1}{4}^{\prime\prime}$ D.
Rosewood vinyl finish, black grille cloth \$159
Oak finish, brown grille cloth \$189
Speakers and crossover only \$99

S9 Speaker System

2-way acoustic-suspension speaker system with $6\frac{1}{2}^{\prime\prime}$ woofer and samarium-cobalt lead tweeter. Crossover at 3.8 kHz; efficiency 91 dB SPL/W/m; input power 10-75 W; impedance 6 ohms; $13\frac{1}{2}^{\prime\prime}$ H \times $8\frac{1}{2}^{\prime\prime}$ W \times $7^{\prime\prime}$ D.
Oak finish, brown grille cloth \$129
Speakers and crossover only \$79

SX Speaker System

2-way bass-reflex speaker system with $6\frac{1}{2}^{\prime\prime}$ polypropylene woofer and samarium-cobalt leaf tweeter. Features rosewood vinyl finish, black grille cloth. Crossover at 3.8 kHz; efficiency 91 dB SPL/W/m; input power 10-75 W; impedance 6 ohms; $20\frac{1}{4}^{\prime\prime}$ H \times $11\frac{1}{4}^{\prime\prime}$ W \times $9\frac{1}{4}^{\prime\prime}$ D \$129
Speakers and crossover only \$79

SL Speaker System

2-way acoustic-suspension speaker system with 8" polypropylene woofer and 2" tweeter. Features rosewood vinyl finish, black grille cloth. Crossover at 2.5 kHz; efficiency 92 dB SPL/W/m; input power 10-75 W; impedance 8 ohms; $20\frac{1}{4}^{\prime\prime}$ H \times $11\frac{1}{4}^{\prime\prime}$ W \times $9\frac{1}{4}^{\prime\prime}$ D \$109

S.1 Speaker System

2-way acoustic-suspension mini speaker system with 6" double-layer-cone woofer and 1" dome tweeter. Crossover at 2.5 kHz; efficiency 88 dB SPL/W/m; power input impedance 4 and 8 ohms; tweeter level control; $10^{\prime\prime}$ H \times $7^{\prime\prime}$ W \times $5^{\prime\prime}$ D.
Vinyl-finish kit \$79
S.1S speakers and crossover only \$59

SJ Speaker System

2-way bass-reflex speaker system with 5" woofer and 2" tweeter. Features rosewood vinyl finish, black grille cloth. Crossover at 5 kHz; efficiency 90 dB SPL/W/m; input power 10-35 W; impedance 8 ohms; $13\frac{1}{2}^{\prime\prime}$ H \times $8\frac{1}{2}^{\prime\prime}$ W \times $7^{\prime\prime}$ D \$69

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 $13^{\prime\prime}$ H \times $42^{\prime\prime}$ W \times $18^{\prime\prime}$ D, satellites $12^{\prime\prime}$ H \times $19^{\prime\prime}$ W \times $7.5^{\prime\prime}$ D \$1699

Revox Symbol B Speaker System

Highly-efficient 3-way speaker system. Bass between 33 and 70 Hz reinforced by passive radiator; woofer made of rigid die-cast basket and glass-fiber reinforced, highly damped cone; dome-type midrange with 2" soft plastic diaphragm and compensating magnet; dome-type tweeter has very high 17,500-Gauss field intensity and is equipped with acoustic diffraction lens for optimum dispersion above the "presence" range; tweeter thermal protector reduces power level by 30 dB when overload occurs, two level controls (6 dB each in 3 steps). Input power 20-180 watts; crossovers at 730 and 2.8k Hz; impedance 4 ohms; $43\frac{1}{2}^{\prime\prime}$ H \times $18^{\prime\prime}$ W \times $15\frac{1}{2}^{\prime\prime}$ D \$1299

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 $\frac{3}{4}$ -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; $24^{\prime\prime}$ H \times $15^{\prime\prime}$ W \times $13\frac{1}{2}^{\prime\prime}$ D\$439

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 4½-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 × 23" W × 4" D; commode 19¾" H × 38" W × 18" D.....\$1500

S-92 Sub Stereo Sub-woofer System

Complete with 125-Hz low pass crossover; walnut veneer.....\$500

S-70B 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 × 0.5-in ribbon tweeter; frequency response 34-30,000 Hz ±3 dB; crossovers at 1900 and 9000 Hz; sensitivity 91 dB/W/m; input range 15-200 W; impedance 8 ohms; 38" H × 18" W × 11" D.....\$475

S-60B Speaker System

Three-way passive-radiator floor-standing speaker system with 10-in woofer with 10-in passive radiator, 4½-in midrange, and 2 × 0.5-in ribbon tweeter; frequency response 36-30,000 Hz ±3 dB; crossovers at 1000 and 9000 Hz; sensitivity 91 dB/W/m; input range 15-150 W; impedance 8 ohms; 34" H × 14½" W × 12½" D.....\$350

S-50 Speaker System

Two-way passive-radiator floor-standing speaker system with two 6½-in woofers with 12-in passive radiator and 1-in soft dome tweeter; frequency response 38-20,000 Hz ±3 dB; crossover at 2900 Hz; sensitivity 90 dB/W/m; input range 15-150 W; impedance 4 ohms; 30" H × 14¼" W × 11" D.....\$275

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 ±3 dB; crossover at 2500 Hz; sensitivity 90 dB/W/m; input range 10-100 W; impedance 8 ohms; 25¼" H × 14¼" W × 10¾" D.....\$200

S-30 Speaker System

Two-way passive-radiator speaker system with 6½-in woofer with 8-in passive radiator and 1-in soft dome tweeter; frequency response 55-20,000 Hz ±3 dB; crossover at 2000 Hz; sensitivity 90 dB/W/m; input range 10-60 W; impedance 8 ohms; 22½" H × 13" W × 10½" D.....\$150

S-20 Speaker System

Two-way vented bookshelf speaker system with 6½-in woofer and 1-in soft dome tweeter; frequency response 70-20,000 Hz ±4 dB; crossover at 3000 Hz; sensitivity 90 dB/W/m; input range 10-60 W; impedance 8 ohms; 17¾" H × 9¾" W × 8" D.....\$100

S-12B Speaker System

Acoustic suspension system; 8" woofer; 2½" tweeter; vinyl; 8 ohms; 6-40 watts; 88 dB sensitivity; 18" H × 10" W × 8½" D.....\$80

TECHNICS

Linear-Phase Series

SB-L70. Bookshelf 3-way bass system. Features 11" woofer, 4" cone-type midrange driver, and

2" cone-type tweeter. Impedance 8 ohms; input power 90 W music (60 W DIN); output 94 dB SPL at 1 watt, 1 meter. 27" H × 14½" W × 11" D.....\$250/pr
SB-L50. Bookshelf 3-way bass-reflex speaker system. Features 11" woofer, 4" cone-type midrange driver, and 2½" cone-type tweeter. Impedance 8 ohms; input power 75 W music (50 W DIN); output 93 dB SPL at 1 watt, 1 meter. 23¾" H × 13¾" W × 9¾" D.....\$200/pr
SB-L30. Bookshelf 2-way bass-reflex speaker system. Features 9" woofer and 2½" cone-type tweeter. Impedance 8 ohms; input power 60 W music (40 W DIN); output 94 dB SPL at 1 watt, 1 meter. 23¾" H × 11¾" W × 8" D.....\$140/pr

Micro Series

SB-F3. Micro-size linear-phase 2-way bookshelf speaker system. Features 6.3" woofer, horn-type tweeter. Impedance 8 ohms; input power 90 W music (60 W DIN); output 89 dB SPL at 1 watt, 1 meter. Die-case aluminum cabinet die-cast measures 12.6" H × 7.5" D × 7" W.....\$370
SB-F2. Bookshelf 2-way speaker system. Features 4.7" cone-type woofer, horn-type tweeter. Impedance 8 ohms; input power 60 W music (50 W DIN); output 88 dB SPL at 1 watt, 1 meter. Die-cast aluminum cabinet measures 10" H × 6.2" D × 5.4" W.....\$310/pr
SB-F1. Bookshelf 2-way speaker system. Features 4" cone-type woofer, horn-type tweeter. Impedance 8 ohms; input power 60 W music (40 W DIN); output 86 dB SPL at 1 watt, 1 meter. Die-cast aluminum cabinet measures 8.3" H × 5" D × 4.6" W.....\$240/pr

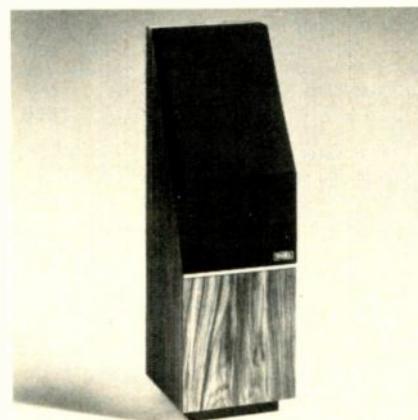
Accessories

SH-S1. Tripod stand for SB-F1 and SB-F2 speaker systems.....\$50
SH-S2. Angle mount for SB-F1 and SB-F2.....\$40
SH-S3. Suspension chain and bracket for SB-F1 and SB-F2.....\$30

THIEL

Model 03a 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 ±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 × 12" W × 12" D.....\$975/pr

Model 04a Speaker System

Two-way coherent-source floor-standing system with 6½-in woofer-midrange, and 1-in soft dome tweeter; frequency response 50-15,000 Hz ±2 dB; crossover at 2500 Hz; sensitivity 87 dB/W/m; input range 20-150 W; 8-ohm impedance; walnut, rosewood, teak, or oak cabinet finishes; 36" H × 10" W × 10" D.....\$570/pr

Model 02 Speaker System

Two-way ported bookshelf speaker system with 6½-in woofer and 1-in cloth dome tweeter; frequency response 45-20,000 Hz ±2 dB; crossover at 2500 Hz; sensitivity 90 dB/W/m; input range 10-100 W; walnut, rosewood, teak, or oak cabinet finishes with double knit black polyester grille; 19" H × 11" W × 9.5" D.....\$310

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 × 7.25" W × 8.5" D; woofer 24" H × 13.75" W × 16" D.....\$450 ea
 Stands for satellite system.....\$65/pr

3D Crescendo Speaker System

Totally time-aligned 3-way speaker system with 3D-controlled dispersion midrange driver and tweeter. Frequency response 39-20,000 Hz ±1.5 dB; input power 30-150 watts/channel continuous; impedance 8 ohms nominal; oiled walnut-veneer cabinet\$750/pr

3D8 Speaker System

Two-way speaker system with 8" long-throw woofer that crosses over at 2 kHz to two 2" wide-angle tweeters and features acoustic coupling of high-frequency drivers. Input power range 20-100 watts/channel; 22" H × 10½" W × 10½" D.....\$329/pr

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 × 5-in horn tweeter; frequency response 35-20,000 Hz; crossovers at 300 and 7000 Hz; input range 10-150 W continuous power; sensitivity 105 dB SPL/W/m, 8-ohm nominal impedance; ±3 dB tweeter and midrange level controls; oak veneer finish with chocolate-brown double-knit polyester stretched over removable wood frame; 26.8" H × 17.3" W × 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 re-

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.

sponse 45-20,000 Hz; crossovers at 800 and 8000 Hz; sensitivity 104 dB SPL/W/m; input range 10-100 W continuous power; ± 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; ± 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

VISONIK

David 9000 Speaker System

Three-way speaker system with 7-in woofer, 1½-in midrange, and ¾-in tweeter; frequency response 35-25,000 Hz +4/-8 dB; crossovers at 900 and 4500 Hz; input range 20-120 W/ch; impedance 4 ohms; nextel grey or simulated walnut finish; 14¾" H \times 9¾" W \times 9¾" D \$330

Euro 7 Speaker System

Three-way floor-standing speaker system with two 7-in woofers, 1½-in midrange, and 1-in soft dome tweeter; power response 45-18,000 Hz ± 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 9¾" D \$325

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; 9¾" H \times 6½" W \times 6¾" D .. \$195

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 +4/-8 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 9½" D \$185

David 5000 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; 7¾" H \times 5" W \times 5¾" D \$150

Mini-Euro 2 Speaker System

Air-suspension bookshelf speaker system with 5" woofer and 1" dome tweeter. Can be matched with Sub-1S (below). Frequency response 60-22,000 Hz +2/-4 dB; crossover at 2.3 kHz; 10¾" H \times 6¾" W \times 6¾" D; 9.5 lb \$135

David 3000 Speaker System

Two-way mini speaker system with 4" woofer and 1" dome tweeter. Crossover at 4 kHz; black cast-aluminum enclosure; 6¾" H \times 4¾" W \times 4¾" D; 5 lb \$95

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; 6¾" H \times 4¾" W \times 4¾" D \$130
Brackets for car mount \$28/pr.

Sub-1S Subwoofer

Floor-standing subwoofer with 12-in woofer and matrix crossover at 160 Hz; frequency response 16-2000 Hz; 6-ohm impedance; input range 50-300 W/ch continuous; walnut finish with brown knit grille; designed for use with David speakers 23¾" H \times 17" W \times 13¾" D \$400

Sub-2S Subwoofer

Floor-standing subwoofer with 10" woofer with dual voice coil. Features walnut finished enclosure and brown knit grille. Frequency range 20-200 Hz; impedance 4 ohms; input power 50-250 W/channel; crossover at 160 Hz. Can be used with David 6000 and 8000 speaker systems. 19" H \times 14¾" W \times 12¾" D; 37 lb \$300

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 \times 15½" W \times 14½" D \$950
NS-1000 M. Same as NS-1000 but with semi-gloss black finish and detachable black grille; 26½" H \times 14¾" W \times 12¾" D \$650

NS-890 Speaker System

Four-way sealed floor-standing speaker system with 12-in cone woofer, 4¾-in cone mid-bass driver, 2-in beryllium dome mid-high driver, and 1¼-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; 19¾" H \times 14¾" W \times 12½" D \$550

NS-690III Speaker System

Natural Sound speaker system with 12" woofer, 4¾" soft-dome midrange driver, and 1¾" soft-dome tweeter. Features tweeter and midrange level controls; stereo left/right configuration; 100% spruce paper cone woofer; reinforced cabinet with open-pore American walnut veneer finish and removable black grille. Frequency range 35-20,000 Hz; impedance 8 ohms; input power 40-80 W; crossovers at 800 and 6k Hz; sensitivity 90 dB SPL/W/m; 24¾" H \times 13¾" W \times 12¾" D; 59 lb 6 oz \$400

NS-690II Speaker System

Three-way speaker system with 12-in woofer, 3-in midrange, and 1½-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; 24¾" H \times 13¾" W \times 11½" D \$400

NS-590 Speaker System

Three-way sealed speaker system with 12-in cone woofer, 4¾-in cone midrange, and 1¾-in berylliumdome 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; 26¾" H \times 14½" W \times 12½" D \$350

NS-344 Speaker System

Three-way acoustic-suspension bookshelf speaker system with 10-in cone woofer, 4¾-in cone midrange, and 1½-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 \times 13" W \times 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 \times 12½" W \times 11¾" D \$200

NS-8 Speaker System

Three-way acoustic-suspension bookshelf speaker system with 10-in long-throw cone woofer, 1½-in soft-dome midrange, and 1-in soft-dome tweeter flush-mounted on flush-mount baffle board; frequency response 40-20,000 Hz ± 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 \times 14¾" W \times 10½" D \$230

NS-10M Speaker System

Two-way acoustic-suspension bookshelf speaker system with 7-in cone woofer and 1½-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 \times 8½" W \times 7½" D \$155



"... I see what you mean, sir. Have you considered divorce?"

DIRECTORY of MANUFACTURERS

(continued from page 34)

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OPTONICA, Sharp Electronics
10 Keystone Pl., Paramus, NJ 07652

ORTOFON, INC.
122 Dupont St., Plainview, NY 11803

OSAWA & CO. (USA), INC.
21 Harbor Park Dr., Port Washington, NY 11050

PANASONIC, Div. of Matsushita Electric Corp. of America
One Panasonic Way, Secaucus, NJ 07094

PEARLCORDER by OLYMPUS CORP. OF AMERICA
4 Nevada Dr., New Hyde Park, NY 11042

JC PENNEY
1301 Ave. of the Americas, New York, NY 10019

PHASE LINEAR CORP.
20121 48th Ave. West, Lynnwood, WA 98036

PHILCO, GTE Products Corp.
700 Ellicott St., Batavia, NY 14020

PHILIPS AUTO AUDIO
230 Duffy Ave., Hicksville, NY 11802

PICKERING & COMPANY, INC.
101 Sunnyside Blvd., Plainview, NY 11803

PIONEER, U.S. Pioneer Electronics Corp.
85 Oxford Dr., Moonachie, NJ 07074

PIONEER ELECTRONICS OF AMERICA
1925 E. Dominguez St., Long Beach, CA 90810

POLK AUDIO
1205 South Carey St., Baltimore, MD 21230

PYLE INDUSTRIES, INC.
501 Center St., Huntington, IN 46750

QUAD
425 Sherman Ave., Suite 130, Palo Alto, CA 94306

QUASAR COMPANY, Div. of Matsushita Electric Corp. of America
9401 W. Grand Ave., Franklin Park, IL 60131

RCA CONSUMER ELECTRONICS
600 N. Sherman Dr., Indianapolis, IN 46201

RECORDER CARE by NORTRONICS
8101 Tenth Ave. North, Minneapolis, MN 55427

RECOTON CORPORATION
46-23 Crane St., Long Island City, NY 11101

RG DYNAMICS, INC.
6440 N. Ridgeway Ave., Lincolnwood, IL 60645

RKO TAPE CORP.
3 Fairfield Crescent, West Caldwell, NJ 07006

ROBINS INDUSTRIES CORP.
75 Austin Blvd., Commack, NY 11725

ROTEL OF AMERICA INC.
13528 S. Normandie Ave., Gardena, CA 90249

RTR INDUSTRIES, INC.
8116 Deering Ave., Canoga Park, CA 91304

RUSSOUND/FMP, INC.
P.O. Box 2369, Woburn, MA 01888

SAE, Scientific Audio Electronics, Inc.
701 East Macy St., Los Angeles, CA 90012

SANSUI ELECTRONICS CORP.

1250 Valley Brook Ave., Lyndhurst, NJ 07071

SANYO ELECTRIC INC.
1200 West Artesia Blvd., Compton, CA 90220

SATIN by OSAWA & CO. (U.S.A.), INC.
21 Harbor Park Dr., Port Washington, NY 11050

SCHOEPS, Posthorn Recordings
142 W. 26th St., Tenth Floor, New York, NY 10001

SCOTCH, 3M Company
3M Center, St. Paul, MN 55101

H.H. SCOTT, INC.
20 Commerce Way, Woburn, MA 01888

SENNHEISER ELECTRONICS CORP.
10 West 37th St., New York, NY 10018

SHAHINIAN ACOUSTICS LTD.
4 Selden Court, Selden, NY 11784

SHARP ELECTRONICS CORP.
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SHERWOOD TRADING CORPORATION
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SHURE BROTHERS, INC.
222 Hartrey Ave., Evanston, IL 60204

S.I.A.R.E. LOUDSPEAKERS CORP.
8013 Ave., Ronkonkoma, NY 11779

SIGNET DIVISION, Audio-Technica U.S., Inc.
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SNELL ACOUSTICS
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SONUS by SONIC RESEARCH, INC.
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395 Riverside Dr., New York, NY 10025

SOUND CONCEPTS INC.
P.O. Box 135, Brookline, MA 02146

SOUNDCRAFTSMEN
2200 South Ritchey, Santa Ana, CA 92705

SOUND DYNAMICS by AUDIO PRODUCTS INT'L
161 Don Park Rd., Markham, Ontario, Canada L3R 1C2

SOUND GUARD CORPORATION
348 SW 19th Ave., Pompano Beach, FL 33060

(continued on page 226.)

12

HEADPHONES

AKG

K-340 Stereo Headphones

Two-way electrostatic/dynamic headphones incorporating fixed-charge electrostat transducer/dynamic 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 $\frac{1}{4}$ -in stereo phone plug; 13.5 oz less cable.....\$195

K-240 Free-Field Headphones

Free-field stereo headphones; dynamic moving-coil transducer and six passive radiators in each circumaural 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 $\frac{1}{4}$ -in phone plug; 10 oz.....\$95

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.....\$75

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 $\frac{1}{4}$ -in phone plug; 8 oz.....\$65

K-130 Stereo Headphones

Stereo headphones with dynamic moving-coil transducers. Frequency range 20-20,000 Hz; max. SPL 119 dB; impedance 600 ohms \pm 20%, 20-20,000 Hz; 9.8-ft, 4-conductor cable with $\frac{1}{4}$ " phone plug; 8 oz.....\$49

K-41 Stereo Headphones

Lightweight supra-aural stereo headphones with dynamic moving-coil transducers. Frequency range 30-18,000 Hz; max. SPL 117 dB; matches 4-200-ohm outputs; 9.8-ft, 4-conductor cable; 3-conductor stereo phone plug; 4.5 oz.....\$39

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; $4\frac{1}{2}$ 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 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 μ bar/V); impedance 4-16 ohms; includes impedance-matching adapter with headphone/speaker switching and normal/high-level LED indicators; 8 $\frac{1}{4}$ -ft cord; adapter size 3 $\frac{1}{2}$ "H \times 2 $\frac{1}{4}$ "W \times 7 $\frac{1}{2}$ 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 $\frac{1}{4}$ -ft cord; adapter size 1 $\frac{3}{4}$ "H \times 3" W \times 3 $\frac{1}{2}$ 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 $\frac{1}{2}$ -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 $\frac{1}{2}$ -ft cord; 7.25 oz.....\$65

ATH-2 Stereophones

Dynamic planar moving-coil stereophones; frequency response 30-20,000 Hz; sensitivity 93dB 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 $\frac{1}{4}$ -ft

cord; 4.75 oz.....\$30

ATH-0.1 Stereophones

Moving-coil dynamic stereophones; frequency response 35-20,000 Hz; sensitivity 100 dB at 1 kHz, 1 mW; matching impedance 4-16 ohms; acoustical foam ear-cushions; 1.5-m cord; $\frac{1}{8}$ " plug; 1.8 oz without cord; black.....\$30

ATH-0.3. Same as ATH-0.1 except frequency response 30-20,000 Hz; 2.5-m cord; $\frac{1}{8}$ " plug; 1.9 oz without cord.....\$50

ATH-0.5. Same as ATH-0.3 except frequency response 25-20,000 Hz; brown.....\$80

Eskimo® Stereophone Earmuffs

For cold-weather listening; quickly convert lightweight, portable stereophones to musical earmuffs or to improve fit and increase comfort indoors; fit models with 35- or 45-mm elements; nonallergenic material.....\$8

BANG & OLUFSEN

U-70 Headphones

Orthodynamic stereo headphones; frequency response 16-20,000 Hz; sensitivity 8 mW for 94-dB SPL; continuous load 2W; dist. 1% max.; 140-ohm impedance; 10-ft straight cord with three-conductor phone jack; 10.6 oz.....\$95

BEYER DYNAMIC, INC.

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 mV; 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-44S 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.....\$215

DT-480 Dynamic Headphones

Moving-coil dynamic headphones; frequency response 20-18,000 Hz; sensitivity 1 mW at 400 Hz for 115-dB SPL; impedance 5, 100, 400, and 2000 ohms; max input 1 W/phone.....\$125

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.....\$88

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.....\$68

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; chromeplated finish.....\$65

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).....\$63

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).....\$33

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.....\$125

DT-108 Moving-Coil Mic/Headphone

Moving-coil stereo headphones with noise-cancelling microphone; frequency response 40-12,000 Hz; SPL 120 dB; mic rotates 180 degrees; foam-filled ear cushions and padded headband; field serviceable.....\$110

DT-880 Dynamic Headphones

Semi-open design permits close coupling for full bass response with hear-through external access; frequency range 15-25,000 Hz; sensitivity 94 dB SPL with less than 1% harmonic distortion; nominal impedance 600 ohms; 6-ft coiled cord.....\$125

DT-550. Similar to DT-880, except frequency range 10-22,000 Hz; sensitivity 95 dB SPL.....\$83

DT-330. Similar to DT-550, except frequency range 15-18,000 Hz; sensitivity 90 dB SPL; nominal impedance 400 ohms.....\$65



nominal impedance 40 ohms.....\$43

DENON**AH-9 Open-Type Stereo Headphones**

Open-earcup design dynamic stereo headphones. Impedance 600 ohms; sensitivity 100 dB/mW; maximum input power 100 mW; frequency range 20-22,000 Hz; weight 100 g.....\$80

AH-7. Same as AH-9 except impedance 65 ohms.....\$50

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; frequency 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**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

HP-1100 Stereo Headphones

Moving-coil type stereo headphones. Sensitivity 102 dB/mW; power-handling capacity 200 mW; THD less than 0.2%; frequency range 20-20,000 Hz; nominal impedance 100 ohms.....\$80

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

AKG

**To fully appreciate the design advantages
of our headphones simply put on
a pair and listen.** The AKG K340 is truly unique. Each earpiece contains an electrostatic high frequency transducer, shown here, a moving-coil, dynamic low frequency transducer, and AKG patented passive diaphragms. This combination of components allows the full spectrum of sound to be reproduced with unequalled detail, clarity and realism.

Every AKG headphone has been designed for comfort as well as performance...and there are more than 5 models to choose from. Your AKG dealer is ready to give you a demonstration of all the design advantages inherent in what many professionals consider to be the best sounding headphones in the world...and the most comfortable.

AKG ACOUSTICS INC.
A NORTH AMERICAN PHILIPS COMPANY
77 Selleck Street, Stamford, CT 06902
(203) 348-2121

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12

HEADPHONES

H-707 Moving-Coil Headphones

Moving-coil design weighs only 5.64 oz and features 46-mm dia X38-micron thick diaphragms; open-back design; double headband for added comfort. Frequency range 20-20,000 Hz; nominal impedance 63 ohms; sensitivity 104 dB/mW at 1 kHz; maximum input power 100 mW; 9.75-ft cord.....\$60
H-505. Similar to H-707 except 8-ohm impedance; 106-dB sensitivity; 4.58 oz.....\$40
H-404. Similar to H-505 except 16-ohm impe-

ding surface area of electrostatic element 25 cm²/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

100-dB SPL; impedance 132.5 ohms; 10.8 oz.....\$60

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



dance; 102-dB sensitivity; 3.7 oz.....\$30

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 ±2 dB; output impedance 600 ohms; S/N 45 dB; frequency response 50-10,000 Hz ±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 (% in., % in., % in., PF 1/2 in., 1/4 in.); 1.32 lb.....\$100
HM-100E. Binaural headphone/microphone combination.....\$70
BN-5. Biphasic processor for HM-200E; processes binaural sources through stereo speaker.....\$280

KENWOOD**Ultralight Dynamic Headphones**

KH series of ultralight dynamic headphones are supra-aural types but are acoustically vented. Phones feature pressure-molded polyester diaphragms, rare-earth magnets, and tiny voice coil made from extremely pure copper; snapoff foam ear cushions (extra pair provided); adjustable stainless-steel headband.
KH-7. Frequency range 20-23,000 Hz; max. power input 120 milliwatts/ch.; impedance 32 ohms; sensitivity 98 dB; 9.8-ft cord; 1.8 oz (exclusive of cord).....\$80
KH-5. Same as KH-7, except high-end response is 22 kHz.....\$50
KH-3. Frequency range 20-20,000 Hz; input impedance 24 ohms; sensitivity 95 dB; 6.5-ft cord; 2.1 oz (exclusive of cord).....\$25

KOSS**ESP/10 Electrostatic Stereophones**

Electrostatic circumaural design with energizer. Headset bandpass response 20-22,000 Hz ±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%; radiat-

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

PRO/4X Stereo Headphones

Dual-element stereo headphones combine a rare-earth moving-coil element with a piezoelectric element in each earcup to provide a frequency range of 10-40,000 Hz. Closed-design headphones weigh only 10 oz and come with coiled cord; labeled left/right earcups; adjustable headband.....\$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 sidebars and Pneumalite ear cushions; includes 10-ft coiled cord; 15.9 oz less cord.....\$60

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
HV 1LC. Same as HV/1A except volume/balance control per earcup; sensitivity 1.1 V rms for

ohms at 1 kHz; individual volume controls; supplied with 10-ft coiled cord; 14 oz.....\$40
K/6A. Same as K/6ALC but with volume controls; sensitivity 0.15 V rms for 100-dB SPL.....\$30

KSP Sound Partner Stereophones

Featherweight stereophone for on-the-go radio and tape listeners. Folds to compact size to fit into denim tote bag (supplied). Frequency range 20-17,000 Hz; sensitivity 100 dB SPL pink noise at 1 volt; impedance 43 ohms; total weight 3.5 oz, including 9-ft Y cord. Comes with accessory adaptors to fit almost any sound system.....\$35

KC/180 Stereophones

Inexpensive stereo headphones with patented Pneumalite® earcushions and Mylar cone elements. Frequency range 16-20,000 Hz; impedance 90 ohms; weight 220 g.....\$20

MURA**HV-230 Stereo Headphones**

Vented high-velocity stereo headphones with lightweight polymer film diaphragms; individual volume controls; frequency range 20-20,000 Hz; impedance 8 ohms; lightweight 10-ft coiled cord with plug.....\$40

HV-190 Stereo Headphones

Stereo headphones with new ferrite-magnet speaker system; frequency range 20-20,000 Hz; impedance matching 8-70 ohms; maximum input 250 mW; lightweight 12-ft coiled cord with 1/4" stereo plug; 8 oz (less cord).....\$30

Red Set III Stereo Phones

High-velocity stereo headphones with Mylar diaphragms and subminiature ultralightweight samarium-cobalt magnets and anoxic copper wire designed to reduce signal attenuation. Frequency range 20-20,000 Hz; sensitivity 98 dB at 1 kHz; maximum input 0.2 W; matching impedance 4-25 ohms; 6.6-ft cord with 1/4" 3-conductor stereo plug; 1.6 oz less cord.....\$30

Red Set II Stereo Phones

Ultralightweight stereo headphones with folding headband and cable that ends in 3.5-mm mini plug and comes with 1/4" plug adaptor. Frequency range 20-20,000 Hz; sensitivity 100 dB at 1 mW; maximum input 0.1 W; matching impedance 4-35 ohms; samarium-cobalt magnets with high-velocity Mylar diaphragms; 6.6-ft cord with 0.138" 3-conductor stereo plug.....\$25
Red Set I. Similar to Red Set II except no folding headband; matching impedance 4-30 ohms; 1/4" stereo plug.....\$22

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 $\frac{1}{4}$ -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; voltage control; stereo/mono switch; frequency range 30-15,000 Hz; 10-ft coiled cord with plug.....\$23

SP-294 Stereo Headphones

Stereo headphones with $\frac{1}{4}$ -in dynamic drivers; individual volume controls; stereo/mono switch; frequency range 40-15,000 Hz; adjustable soft leatherette-padded headband and earcups; 10-ft coiled cord.....\$17
SP-194. Similar to SP-294 but minus stereo/mono switch.....\$15

SP-94 Stereo Headphones

Lightweight dynamic stereo headphones with $\frac{1}{4}$ -in drivers. Frequency range 40-15,000 Hz; impedance 8 ohms; oversize earcups for greater comfort; 8-ft cord with plug.....\$11

HS Stereo Headphones

Lightweight stereo headphone with samarium-cobalt drivers and high-velocity Mylar dia-



phragms. Intended as replacement or add-on for personal stereo cassette players. Frequency range 20-20,000 Hz; sensitivity 96 dB at 1 mW; maximum input 0.1 W; matching impedance 4-35 ohms; weight less cord 1.6 oz; cord length 4 ft; 3-conductor stereo plug....\$15

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 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 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 tricot-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

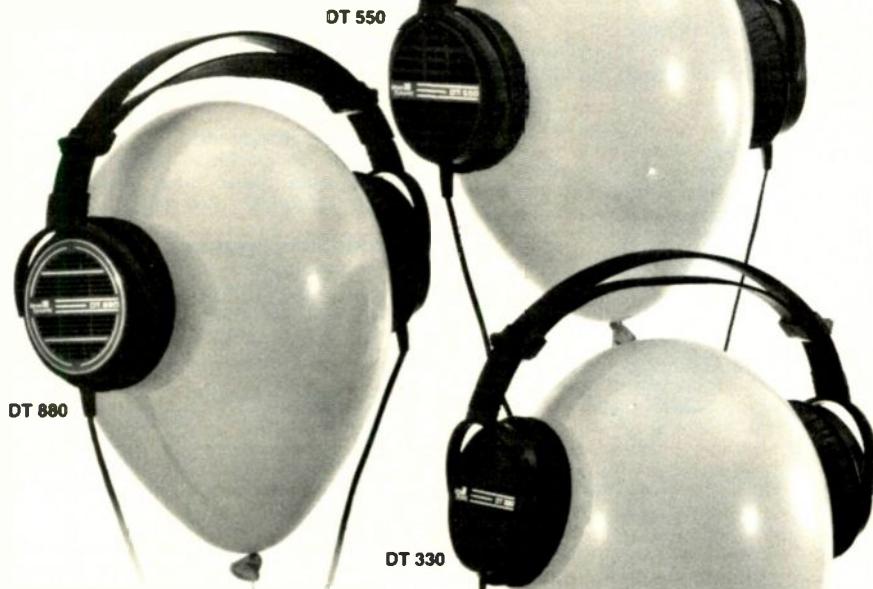
Lightweight stereo headphones with $\frac{3}{4}$ -in. dynamic high-velocity drivers wth synthetic film diaphragms and samarium cobalt magnets; fre-

quency 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 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

LIGHTWEIGHT HEADPHONES. HEAVYWEIGHT TECHNOLOGY.



Imagine headphones so light you hardly know they're there, with a frequency range so wide you never miss a note. And imagine what it took to create such headphones — heavyweight technology that distinguishes Beyer from the rest.

A copper coil .9mm thick and one-third the weight of conventional headphone coils. A polycarbonate plastic diaphragm so light, rigid and rare it is found only in the world's best mics. It is viscous damped and statistically embossed so it is absolutely perfect for transmitting sound. Imagine using rare samarium cobalt magnets, the strongest material known.

And imagine headphones that will simply overwhelm you with bass response and a transparency of sound unheard of except in the finest transducers.

But you don't have to imagine. Just visit your Beyer dealer and try on our new heavyweight line of lightweight headphones. There is something better from Beyer.

BEYER DYNAMIC, INC.

5-05 Burns Avenue, Hicksville, NY 11801 · (516)935-8000 In Canada, H. Roy Gray, Ltd.

Beyer 
Dynamic

12

HEADPHONES

OA-2 Featherfone™ Headphones

Open-audio stereo headphones. Features adapter plug for stereo/mono use; adjustable lightweight headband; earcushions with multidensity polyurethane; 7-ft Y-type straight cord with plug adaptors for mono and stereo. Designed for all portable applications. Frequency range 10-20,000 Hz; impedance 40 ohms at 1 kHz; max. input power 0.5 W; 2 oz.....\$35

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

Master-1S Lightweight Phones

Lightweight headset with a sensitivity of 103 dB/mW and frequency range of 16-22,000 Hz.



Features gold-plated plug; oxygen-free copper litz cord; 10-ft connection cord; click-stop adjustable headband. Max. input 200 mW; 5.2 oz without cord.....\$130

SE-650 Stereo Headphones

Around-the-ear stereo headphones with simulated-leather vinyl headband and ear cushions. Frequency response 20-20,000 Hz; max. input power 1 W; 9-ft 5-in. cord; 8.6 oz without cord.....\$75
SE-550. Similar to SE-660 but weighs 8.1 oz.....\$55
SE-450. Similar to SE-550 but weighs 9.9 oz.....\$45

SE-L7 Headphones

Variable Chamber® open-type stereo headphones with simulated-leather vinyl headband and ear pads. Frequency range 20-20,000 Hz; max. input power 200 mW; 9-ft 5-in. cord; 8 oz without cord.....\$70

SE-L5 Headphones

Dynamic open-air super lightweight headphones. Features oxygen-free copper litz cord and 10-ft connection cord. Sensitivity 101 dB/mW; frequency range 20-22,000 Hz; max. input 200 mW; 2.5 oz without cord.....\$50

SE-4 Stereo Headphones

Open-type stereo headphones with simulated-leather vinyl headband and ear cushions. Frequency range 20-20,000 Hz; max. input power

200 mW; 8-ft 2-in cord; 7.3 oz without cord.....\$50

SE-2. Similar to SE-4 except weighs 7.3 oz.....\$30

SE-L3 Lite-Phones

Lightweight stereo headphones. Frequency range 18-22,000 Hz; max. input power 100 mW; 9-ft 5-in; 1.8 oz without cord.....\$35

SE-205 Stereo Headphones

Around-the-ear stereo headphones with simulated-leather vinyl headband and ear cushions. Frequency range 20-20,000 Hz; max. input power 500 mW; 8-ft 2-in cord; 15 oz without cord.....\$30

JC-51 Y-Type Extension Cord

Two-headphone capability when plugged into standard headphone jack.....\$10

REALISTIC

PRO-IIA 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 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

NOVA-40 Stereo Headphones

3 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 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 1/4-in plug.....\$15
NOVA-16. Similar to NOVA-10 except has separate Glide Path® level controls.....\$20

RECOTON

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

Power Drive® Series

ST88 High-Velocity Stereo Phones

Stereo headphones with volume controls. Features lightweight "high-velocity" samarium-co-

balt magnets; stereo/mono switch; volume and tone controls. Frequency range 15-22,000 Hz; sensitivity 102 dB at 1 kHz; impedance 30 ohms; maximum input power 0.5 watt. Comes with 10-ft cable with stereo phone plug.....\$43

ST77 Ultralightweight Stereo Phones

Designed for all mini recorders and players and includes an adaptor for standard receivers. Weight is only 1.65 oz, less cable. Sensitivity 98 dB at 1 kHz; frequency range 20-25,000 Hz; impedance 25 ohms; maximum input 0.3 watt. Comes with 10-ft cable with mini plug and 1/4" stereo adapter.....\$38

ST66 Ultralightweight Headphones

Designed for all mini recorders and players, stereo headphones weigh only 2.47 oz exclusive of cable. Sensitivity 98 dB at 1 kHz; frequency range 20-25,000 Hz; input impedance 25 ohms; maximum input 0.4 watt. Comes with 10-ft cable with mini plug and 1/4" stereo adapter.....\$43

SANSUI

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 control; 385 g.....\$50
DR-S4. Volume control; 375 g.....\$40
DR-S3. 350 g; no volume or tone control.....\$30

SS-40 Headphones

Thin polyester 2 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 1/4-in wide dynamic cones; frequency response 20-20,000 Hz; max. input 500 mW; 8-ohm impedance; 11.5 oz.....\$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

SENNHEISER

HD224 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 222 Closed-Earcup Headphones

Ultralightweight diaphragms with powerful cobalt-samarium magnets are used in these closed-earcup-type stereo headphones. Wide range response extremely flat from 16 to 10,000 Hz; impedance 600 ohms; 8.8 oz.....\$120

HD 430 Headphones

"Open-air" 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-air" design dynamic headphones; frequency response 15-20,000 Hz; sensitivity 17.7 µbar/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-air" 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-air" design dynamic headphones; frequency response 20-20,000 Hz; sensitivity 17.7 μ bar/V; 1 mW (1.41 V) per channel for SPL of 102 dB; dist. 1% at 22 V; i kHz: 2000-ohm impedance per channel; 10-ft cable; 5 oz (without cable).....\$79

HD 400 Headphones

"Open-air" 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 stereophone/speaker operation and hi/lo stereophone sensitivity 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.....\$275

TK33S. Additional stereophone only for TK33.....\$115

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 FDX 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.....\$85

SONY

ECR-500 Electrostatic Headphones

Uni-electret open-back electrostatic 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 1/2" W x 7 1/2" D; cable 7 ft. 6 in; weight 12 oz.....\$120

Z Series Stereo Headphones

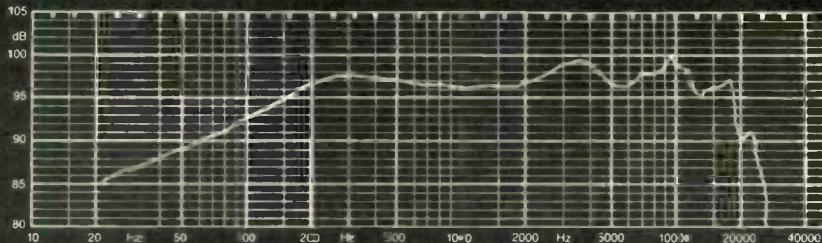
Stereo headphones feature lightweight palladium-coated construction, uniform piston action across diaphragm surface, 30-mm diameter voice coils, magnets with copper-coated yoke and thin copper-clad aluminum wire, litz wire, and SBMC grille material; 110-ohm impedance; sensitivity 104 dB/mW; 50-mW rated input; include 2-m cord.

DR-Z7. Frequency response 20-25,000 Hz; THD 0.03% at 1000 Hz, 93 dB SPL; 420 g with cord.....\$100

THE MURA RED SET III. TRUE SPECS.

At Mura, we believe the unadorned truth is our strongest ally. That's because we produce superior and innovative products of uncompromising quality. Products that don't require puffery and half-truths to sell them.

Take a look at the line min. headphones, the Red Set III™. The graph below represents the Red Set III's frequency response. Note the



use of 1dB increments so that maximum performance detail is revealed rather than using larger increments as others do to make their curve look better. Also note that our measurements are taken at realistic sound pressure levels and that there is no peak or valley of more than 2dB from 1000 Hz reference level over the range of 150 Hz to 19,000 Hz.

Of course the graph is not a complete presentation of the specs on the Red Set III. For instance, THD is less than 0.3% at 100 dB cut-off from 100 to 20,000 Hz.

But the most impressive spec of all is that sound of this quality can be produced by a headset that weighs only 1.6 oz.

Try it for yourself. We think you'll be truly amazed.

TRUE SOUND.



MURA

You'll be Hearing From Us

DR-Z6. Similar to DR-Z7 except 400 g \$85
DR-Z5. Similar to DR-Z6 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 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 control; 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 ±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 ±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 tricot-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 ¾-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/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 ear cushions; 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 1½-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

Model X Micro Wafer™ Headphones

Stereo headphones designed for all portable applications. Features 1" dynamic high-velocity driver elements with specially formulated synthetic film diaphragms and samarium-cobalt magnets; adjustable lightweight headband; earcushions with multidensity polyurethane foam. Frequency range 10-20,000 Hz; distortion less than 0.5% at 100 dB SPL; sensitivity 100 dB minimum SPL at 0.25-V input, 1 kHz each channel; max. input power 0.05 W; 7-ft Y-type straight cord with plug adaptors for mono/stereo; weight 2 oz less cord \$35

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, 100 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 ±2 dB, 10-22,000 Hz ±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" × 3½" × 6½" \$150

PEP-79E Electrostatic System

Consists of PEP-74 headphones and CC-79E control console; headphone frequency response 15-18,000 Hz ±2 dB, 10-22,000 Hz ±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 2½" H × 7" W × 4" D \$90

SM-700 Headphones

Dynamic headphones with 2½-in Mylar diaphragm; 35-ohm impedance; frequency response 10-20,000 Hz ±3 dB; sensitivity 10 mW (0.6V) 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 (0.6V) 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 2½-in Mylar diaphragm; 35-ohm impedance; frequency response 15-20,000 Hz ±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 ±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 ±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 impedance; brown with gold trim; 7-ft cord with stereo plug \$20

TECHNICS

EAH-830 Linear-Drive Headphones

Low-distortion, high-power-handling capacity stereo headphones. Features Supra-Aural ear pads and precise-fit leather head pads. Frequency range 15-35,000 Hz; input power 3 watts; impedance 125 ohms; distortion 0.3%. Comes with 3-meter coiled cord and weighs 430 grams \$80

EAH-820 Linear-Drive Headphones

High-power-handling capacity stereo headphones with Supra-Aural ear pads and precise fit wide-contact leather head pads. Frequency range 20-30,000 Hz; maximum input power 3 watts; impedance 125 ohms; distortion 0.3%. Comes with 3-meter coiled cord and weighs 430 grams \$60

EAH-810 Linear-Drive Headphones

Open-environment waveform response at

(continued on page 225.)

13

MICROPHONES

AKAI

ACM-80 Condenser Microphone
Medium-impedance electret-condenser-type general-purpose microphone.....\$35

ACM-100 Condenser Microphone
High-impedance electret-condenser-type general-purpose microphone.....\$58

AKG

D-40 Stereo-Pair Microphones
Package contains two D-40 low-impedance cardioid dynamic microphones, stand adapters, cables.....\$99

D-125E Cardioid Microphone
Cardioid dynamic microphone with shock-suspended transducer; for general-purpose applications; hum rejecter and heavy-duty wire-mesh windscreens; 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.....\$110

D-130E Omnidirectional Microphone
Omnidirectional dynamic microphone with shock-suspended transducer; designed for newsmag and ENG applications; frequency response 50-15,000 Hz; sensitivity -54.5 dBm; impedance 200 ohms; hum rejecter and sintered bronze windscreens; nickel-plated zinc alloy diecast housing; includes SA-30 stand adapter and case; 1.75" dia. x 7" L; 9 oz.....\$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 windscreens; nickel-plated finish; supplied with SA-23/2 stand adapter and case; 7/8" dia. x 5 1/2" L; 4.5 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 windscreens; 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.....\$110

D-200E Two-way Cardioid Microphone
Cardioid dynamic two-way microphone for the semi-professional recordist and musician; frequency range 25-16,000 Hz ±3 dB; sensitivity -56 dBm ASA; dist. 0.5%; 200-ohm impedance; includes SA-20 stand adapter and case; wire mesh grille and cotton-fiber screen; 1.5" dia. x 7" L; 8 1/2 oz.....\$150

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, windscreens/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.....\$130
D-310. Similar to D-310S without integral on/off switch.....\$115

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 windscreens/pop filter; nickel-plated zinc alloy diecast housing; includes SA-31 stand adapter and case; 2" dia. x 7.5" L; 10.5 oz.....\$150

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 windscreens/pop filter; nickel-plated zinc alloy die-cast housing; includes SA-31 stand adapter and case; 2" dia. x 7.25" L; 12 oz.....\$195

D-4000E 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 ±3 dB; sensitivity -52 dBm; 200-ohm impedance; sintered bronze windscreens; nickel-plated housing; supplied with SA-12 stand adapter and case; 1.5" dia. x 6.25" L; 8 1/2 oz.....\$130

C-414EB Polydirectional Condenser Mic

FET condenser microphone with large-diaphragm capsule; features selectable omni, cardioid, hyper-cardioid, 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 windscreens, and case; 1.75" dia. x 5.5" L; 12 oz.....\$730
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 windscreens, SA-18/3 stand adapter, and case.....\$1400

C-450 Modular Condenser Microphone

Modular system consists of three interchangeable preamps, seven 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-451E preamp has 9.52 V power; 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 windscreens/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.....	\$340
C-451EB preamp.....	\$360
C-452EB preamp.....	\$234
CK-1 cardioid.....	\$112
CK-1S cardioid.....	\$105
CK-4 figure-eight.....	\$290
CK-5 cardioid.....	\$205
CK-8 short shotgun.....	\$205
CK-9 long shotgun.....	\$245
CK-22 omnidirectional.....	\$119

Condenser Mic/FET Preamps

C-422. Large-diaphragm stereo condenser microphone with FET preamplifier. Features 9 polar patterns/channel selected via remote control via M-S or Y-Y recording techniques; 0/-10/-20-dB preattenuator; 9.52-V phantom powered; LED aiming lights; S-42E remote controller; MK-42/20 66-ft cable; W-42 windscreens; H-15/9 suspension mount/stand adaptor; foam-lined carrying case. Frequency range 20-20,000 Hz; sensitivity -45 dBm; impedance 200 ohms; 9 1/2" L x 1 1/2" Dia.; 15.5 oz.....\$2265

C-34. Small diaphragm stereo condenser microphone similar to C-422 except sensitivity -43.5 dBm; W-34 windscreens; H-15/6 suspension mount/stand adapter; 7 3/4" L; 9.75 oz.....\$1650

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, the other rotatable through 0°-180° angle; MK-32/20 66-ft cable.....\$950

ARISTA

Cardioid Microphones

663. Cardioid electret microphone; frequency response 40-15,000 Hz; attachable windscreens; stand adapter; 20-ft cable; 10 1/4" x 7 1/2" 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 windscreens.....	\$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.**ATH815 Line/Gradient Microphone**

Electret condenser "shotgun" microphone; permanently polarized element; frequency response 40-20,000 Hz; sensitivity -50 dB; nominal impedance 600 ohms; maximum input SPL 120 dB; S/N 50 dB at 1 kHz, 1 μ bar; 1.5-V AA cell powered; 16.5-ft cable with professional XLR/A3F connector at mic end, $\frac{1}{4}$ " phone plug at equipment end; slip-in stand clamp; carrying case; windscreens; battery \$200

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/cm²); EIA sensitivity -150 dB; 250-ohm nominal impedance; features high-efficiency windscreens and balanced low-impedance output; includes 16.5-ft cable with XLR/A3F professional connector with $\frac{1}{4}$ " phone plug, tapered slip-in stand clamp, and carrying case \$130
AT814/XLR. AT814 with XLR/A3M connector on output end of cable..... \$135

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; input SPL 125 dB; S/N 50 dB (1 kHz, 1 μ bar); AA penlight battery powered; supplied with 16.5-ft cable with professional XLR/A3F connector with $\frac{1}{4}$ " phone plug, slip-in stand clamp, carrying case, and battery \$110
AT813/XLR. AT813 with XLR/3M connector on output end of cable..... \$115
AT813R. Phantom-power version of AT813. External power only (9-65 V dc). Sensitivity -49 dB; impedance 200 ohms; max SPL 141 dB. Supplied with A3F/A3M connectors on cable \$160

AT831 Mini Unidirectional Microphone

Electret condenser permanently polarized element; frequency response 50-18,000 Hz; sensitivity -58 dB; nominal impedance 600 ohms; maximum input SPL 130 dB; S/N 45 dB at 1 kHz, 1 μ bar; 1.5-V N-type battery powered; balanced output via battery holder/belt clip with recessed on/off switch; includes clothing clip, musical instrument adaptor for acoustic guitar, saxophone, etc.; windscreens; battery carrying case; 0.3" diameter \times 0.9" length..... \$110

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..... \$100
AT812/XLR. AT812 with XLR/3M connector on output end of cable..... \$105

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 μ bar); battery powered; supplied with 16.5-ft cable with professional XLR/A3F connector with $\frac{1}{4}$ " phone plug, slip-in stand clamp, carrying case, and battery \$95
AT811/XLR. AT811 with XLR/A3M connector on output end of cable..... \$100

AT803S Subminiature Omni Microphone

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, windscreens, battery, and carrying case; 16 $\frac{1}{2}$ -ft cable; mic 0.4" diameter \times 0.8" L \$95

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 μ bar); AA penlight battery powered; supplied with 16.5-ft cable with professional XLR/A3F connector, slip-in stand clamp, carrying case..... \$80
AT801/XLR. AT801 with XLR/A3F connector on output end of cable..... \$85

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..... \$85

AT805S Miniature Omni Microphone

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, windscreens, belt clip, battery, carrying case, and 16 $\frac{1}{2}$ -ft cable with $\frac{1}{4}$ " phone plug; mic 0.6" diameter \times 2" L \$57

AT817 Unidirectional Microphone

Electret condenser permanently polarized element; frequency response 50-16,000 Hz; sensitivity -52 dB; nominal impedance 60 ohms; maximum input SPL 125 dB; S/N 45 dB at 1 kHz, 1 μ bar; 1.5-V AA cell powered; 13-ft integral cable with $\frac{1}{4}$ " phone plug; snap-in stand clamp and battery \$50

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 $\frac{1}{4}$ " phone plugs..... \$60/pr

BEYER DYNAMIC, INC.**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 \$419

M-160 Super Cardioid Ribbon Mic

Super-cardioid dynamic double-ribbon microphone; frequency response 50-18,000 Hz \pm 2.5 dB; sensitivity -152 dBm (EIA); 200-ohm impedance; low sensitivity at 120 degrees

to axis; suitable for stereo recording; Cannon XLR termination \$360

M-88 Super Cardioid Moving-Coil Mic

Super-cardioid dynamic type; frequency response 30-20,000 Hz \pm 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 \$320

M-500 Unidirectional Ribbon Mic

Hypercardioid dynamic ribbon microphone with professional-application tailored presence boost; frequency response 40-18,000 Hz; integral four-stage blast filter for high-level sound sources; sensitivity -152 dBm (EIA), -60 dBm (1mW/Pa); 20-db side attenuation at 120°; matte black aluminum case; 16 $\frac{1}{2}$ -ft, 2-conductor cable with XLR-type connector; leatherette carrying case; 7.4 in. long \$240

M-260-S Super Cardioid Ribbon Mic

Super-cardioid dynamic design; frequency response 50-18,000 Hz \pm 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..... \$200

M-101 Omnidirectional 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 $\frac{1}{2}$ \times $\frac{7}{8}$ ", Cannon XLR termination..... \$200

M-201 Hypercardioid Dynamic Mic

Professional-application unidirectional dynamic microphone with "hum-bucking" coil construction; frequency response 40-18,000 Hz; sensitivity -149 dBm (EIA), -56 dBm (1mW/Pa); impedance 200 ohms electrical, 1k ohm or more load; more than 20 dB side attenuation at 120°; 16 $\frac{1}{2}$ -ft 2-conductor cable and Switchcraft A3F connector; matte black brass case with windscreens, clamp, case. 6.3-in. long \$190

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 \$180
M-112. Similar to M-111 minus chest filter; zinc-alloy diecast case..... \$169

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 P \times 23 battery or 12-48V 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 hu-

midity	\$160	
M-69-SM Same as M-69 but with on/off and bass-cut switch.	\$170	
M-400 Moving-Coil Cardioid Microphone		
Moving-coil dynamic super-cardioid type; frequency response 50-15,000 Hz; sensitivity -146 dB (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.	\$150	
M-400S . Same as M-400 except with on/off switch.	\$155	

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 $\frac{1}{4}$ -in phone plug, two table stands, mic clamps, stereo adaptor cable, mounting bar, and presentation case; 5.47" L.....\$150 pr.

CALECTRO

30-2373 Cardioid Microphone

Cardioid microphone; frequency response 50-17,000 Hz; output -58 dB; impedance 30,000 ohms; 10-ft cord with connector and lavalier strap included.....\$34

30-2388 Omnidirectional Microphone

Lightweight omnidirectional microphone with satin silver finish; frequency response 100-10,000 Hz; dual impedance 250/50,000 ohms; output -79 dB (low), -60 dB (high); swivel holder and 15-ft cable included.....\$30

30-2308 Matched-Pair Microphones

Omnidirectional matched-pair stereo microphones for voice and stereo recording applications; on/off switch; windscreens; frequency response 100-10,000 Hz; impedance 500 ohms; sensitivity -74 dB; includes desk stand and 4-ft cord with plug.....\$17

30-2383 Lavalier Microphone

Hand-held lavalier microphone; frequency response 70-12,000 Hz; output -57 dB; impedance 30,000 ohms; includes 3-ft cord with miniature phone plug.....\$14

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 μ bar); built-in pop filter; on-off and tone impedance switches; includes 16-ft cable with $\frac{1}{4}$ -in three-conductor phone plug and Cannon XLR-3-11C equivalent connector; 1.930" \times 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 μ bar); built-in pop filter; on/off switch; includes 16-ft cable with $\frac{1}{4}$ -in three-conductor phone plug and Cannon XLR-3-11C equiv. connector; 1.575" \times 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-in-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 $\frac{1}{4}$ -in aluminum plate 5 \times 6 in; wall or floor positioning or suspension above choir or orchestra.....\$350

Low Profile. Cantilever holding electret capsule, mounted on 2 \times 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

PZM-31S Pressure Zone Microphone

Designed to complement the PZM 30GP to provide a frequency response with a deeper low end. Active element is an electret capsule mounted on a 6" \times 5" plate so that it faces the boundary defined by the plate and the surface on which the plate rests. Sound pickup pattern is hemispheric. Mike is usable with either PX-18 transformer or PA-18 active power supply. Frequency response 20-20,000 Hz; sensitivity -76 dB open circuit (0 dB = 1V/ μ bar); normal loading impedance 1000 ohms; THD 3% at 150 dB SPL; S/N less than 25 dB SPL; electrical impedance 150 ohms with PA-18 and PX-18; cable length 5.5 ft.....\$350

JVC

M-510 Electret Condenser Microphone

Super-directional/undirectional pattern; frequency response 40-20,000 Hz; sensitivity -68 dB (super), -71 dB (unit); 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

MARLBORO SOUND WORKS

M900 Cardioid Microphone

Unidirectional dynamic cardioid microphone; built-in spherical wind screen; frequency response 50-17,000 Hz; output at 1000 Hz 74.6 dB (low impedance), 58.7 dB (high impedance); 200-ohm low impedance; 20,000-ohm high impedance; 16-ft detachable cable with XLR-connector.....\$89

M500 Cardioid Microphone

Unidirectional dynamic microphone for acoustic instruments; frequency response 50-16,000 Hz; output level at 1000 Hz 76 dB (low impedance), 56 dB (high impedance); 200-ohm low impedance, 20,000-ohm high impedance; 16-ft detachable cable with XLR-connector.....\$87

M400 Cardioid Microphone

Cardioid condenser microphone; electret element built-in FET preamp and 1 1/2-V battery; frequency response 40-18,000 Hz \pm 3 dB; sensitivity 51 dB \pm 3 dB high impedance; 20-ft detachable cable with heavy duty Cannon-type connector.....\$49

M300 Cardioid Microphone

Cardioid dynamic microphone; frequency re-

sponse 60-15,000 Hz \pm 3 dB; sensitivity 58 dB \pm 3 dB high impedance; 20-ft detachable cable with heavy duty Cannon-type connector.....\$42

M200 Cardioid Microphone

Cardioid dynamic microphone; frequency response 60-13,000 Hz \pm 3 dB; sensitivity 61 dB \pm 3 dB (high impedance), 80 dB \pm 3 dB (low impedance); 10-ft heavy duty detachable cable.....\$31

M50 Dynamic Microphone

Dynamic microphone; frequency response 60-13,000 Hz \pm 3 dB; sensitivity 61 dB \pm 3 dB high impedance; 10-ft heavy duty cable.....\$21

M30 Dynamic Microphone

Dynamic microphone; frequency response 70-12,000 Hz \pm 3 dB; sensitivity 56 dB high impedance; 10-ft heavy duty cable.....\$14

MURA

DX-109 High-Z Microphone

Type A high-impedance microphone designed as a low-cost replacement for recorders that require 50k ohms impedance mics. Sensitivity -61 dB at 1 kHz; frequency range 50-10,000 Hz; remote switch; 5-ft cable; dual plugs for audio and remote control.....\$6

DX-118 Cassette Microphone

Type B microphone designed to fit most cassette recorders and supplied with dual plugs for audio and remote control. Impedance 500 ohms; sensitivity -70 dB at 1 kHz; frequency range 60-12,000 Hz; remote switch; 5-ft cable.....\$6

DX-129 Cardioid Microphone

Ball-type dynamic microphone with built-in pop and blast filters; on/off switch; black satin and chrome finish. Frequency range 40-14,000 Hz; sensitivity -58 dB at 1 kHz; supplied with 20-ft cable and stand adapter.....\$50

DX-133 Low-Z Microphone

Type D low-impedance microphone for cassette recorders with extremely low impedance (200 ohms). Comes with dual plugs for audio and remote control; remote switch; 5-ft cable. Sensitivity -70 dB at 1 kHz.....\$6

DX-211 Microphone

Type E single-plug microphone designed for tape recorders requiring high-quality mic with single miniature plug. Supplied with adapter to convert from miniature to standard $\frac{1}{4}$ " phone plug; on/off switch; 5-ft cable. Impedance 500 ohms; sensitivity -70 dB at 1 kHz; frequency range 60-12,000 Hz.....\$6

DX-235 Microphone

Omnidirectional single-impedance microphone. Comes with on/off switch; stand; styrofoam case with sleeve; $\frac{1}{4}$ " adapter plug; 6-ft cable with attached miniature plug. Frequency range 50-15,000 Hz; sensitivity -78 dB at 1 kHz; impedance 600 ohms.....\$28

DX-242 Stereo Microphones

Type F matched-pair stereo microphones for stereo recorders. Supplied with adapters to convert from miniature to standard $\frac{1}{4}$ " phone plug; 5-ft cable. Impedance 500 ohms; sensitivity -70 dB at 1 kHz; frequency range 60-12,000 Hz.....\$20

DX-247 Microphone

Dynamic omnidirectional microphone with removable windscreens, designed for vocals and recording. Comes with on/off switch; 20-ft cable with $\frac{1}{4}$ " phone plug; black satin and chrome finish. Frequency range 50-14,000 Hz; sensitivity -57 dB at 1 kHz; impedance 600 and 50k ohms.....\$39

EX-279 Lapel Microphone

Omnidirectional electret condenser microphone with clothing clip, 10-ft cable, mini plug, battery. Frequency range 30-16,000 Hz; impedance 600 ohms \$26

V-100 VCR Microphone

Compatible with all videocassette recorders and tape decks with microphone inputs and with video cameras and audio dub and voice-over recordings. Comes with on/off switch; stand; adapter plug; 15-ft cable with miniature plug. Frequency range 60-12,000 Hz; sensitivity -70 dB at 1 kHz; impedance 500 ohms \$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 ±3.5 dB; sensitivity -76 dB at 1 kHz (0 dB = 1V/μbar); impedance 250 ohms; supplied with Cannon-type XLR-3 connector; anodized black matte finish; 10.4 oz \$300

CM-300 Electret Condenser Microphone

Studio-type system with interchangeable capsules; basic set comes with CP-1 cardioid and CP-2 omnidirectional capsules, windscreens, 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 ±3.5 dB; impedance 200 ohms balanced; sensitivity -76 dB, ±2.5 dB (CP-1, CP-2, CP-3), -74 dB, ±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-2. Omni capsule for CM-100 (included with CM-300) \$20
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 \$465
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 \$110

DM-500 Super Cardioid Microphone

Dynamic moving-coil microphone; built-in windscreens; super cardioid polar pattern; frequency response 50-15,000 Hz ±5 dB; impedance 250 ohms; sensitivity -73 dB, ±2.5 dB \$100

NEUMANN**fe-80 Condenser Microphones**

A line of studio microphones that come in many configurations from omni, figure-8, cardioid, multiple pattern to multiple pattern stereo; all can be either battery or phantom (separate power supplies) powered except the U-87, which contains a switchable battery compartment.

KM-83. Omnidirectional \$386
KM-84. Cardioid \$386
KM-85. Cardioid, low-frequency roll-off \$386
KMS-84. Pop-proof cardioid \$977

U-47FET. Cardioid	\$1056
KMR-82. Shotgun	\$926
KM-86. Three-pattern, switchable	\$1050
KM-88. Three-pattern	\$1114
U-87. Three-pattern	\$1155
U-89. Five pattern	\$1285
N-80. 117-V ac portable power supply for powering one or two fet-80 microphones	\$74

OLSON ELECTRONICS**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" × 1 3/4" \$33

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 \$23

PIONEER**Unidirectional Dynamic Microphones**

DM-61	\$130
DM-51	\$100
DM-21	\$30

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 windscreens 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 response 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 ±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 adapter, and foam windscreens; requires "AA" battery \$30

RECOTON**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 windscreens 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 Ultraminiature Electret Mike

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; 5/8" diameter × 5/8" long \$32

SANSUI**DM11 Cardioid Microphone**

Unidirectional dynamic microphone; frequency response 100-15,000 Hz; 600-ohm output impedance; -76 dB sensitivity (frontal); meshed windscreens 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/on/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 connecting plug \$80

MS1 MultiPurpose Mic Stand

Microphone boom stand with arm for stereo pairing; mike-mount holes at both ends of adjusting boom; boom is 35 1/16-in long and rotatable over 360 degrees; supplementary bar is included to extend boom to 43 11/16-in; collapsible stand; four mike-mounting screws (5/16", 3/8", 5/8", 1/2"); matte black finish \$200

SCHOEPS**Colette Series Microphones**

Studio condenser microphones with interchangeable capsules and amplifiers. Can be 12-volt phantom or parallel powered, or 48-volt phantom powered. Transformerless construction gives low output impedance; insulated transducer and polarization voltage of 60V.

CMC 38. Figure-eight microphone; frequency response 40-16,000 Hz; sensitivity 1.0 V/μbar; S/N ratio 75 dB; 132 dB SPL at 0.5% distortion; 80 g; 5.57" L × 0.79" dia \$780

CMC 341. Hypercardioid microphone; frequency range 40-20,000 Hz; sensitivity 1.3 mV/μbar; S/N 77 dB; 131 dB SPL; 80 g; 5" L × 0.79" dia \$730

CMC 34. Cardioid microphone; frequency range 40-20,000 Hz; sensitivity 1.2 mV/μbar; S/N 76 dB; 131 dB SPL; 80 g; 5" L × 0.79" dia \$640

CMC 33. Special omnidirectional microphone designed for distant field placement; frequency range 20-20,000 Hz; sensitivity 1.0 mV/μbar; S/N 76 dB; 132 dB SPL; 80 g; 5" L × 0.79" dia \$640

SENNHEISER**MD 441 U Super Cardioid Microphone**

Super cardioid dynamic microphone; frequency response 30-20,000 Hz; sensitivity 0.2

mV/ μ 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 windscreens; 1.3" H \times 1.4" W \times 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/ μ bar) ± 2.5 dB; supplied with Cannon XLR connector and cable; 1" diameter \times 4 $\frac{1}{4}$ " 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 2 ; 200-ohm source impedance at 1000 Hz; built-in bass/proximity cutoff 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 ± 5 dB; sensitivity 0.2 mV/ μ bar ± 3 dB at 1 kHz; EIA rating -145.8 dB; output level -53 dBm (1 mW/10 dynes/cm 2); front-to-back ratio 18 dB, -2 dB; variable bass attenuator; supplied with XLR connector and cable; 7" \times 1 $\frac{1}{8}$ " \times 1 $\frac{1}{4}$ ".

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/ μ bar ± 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

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

MD 402 Super Cardioid Microphone

Super cardioid dynamic microphone; frequency response 50-15,000 Hz; output level -57 dBm at 94 dB SPL; includes windscreens, 15-ft cable, and quick-release clamp.....

\$80

MD 200 Microphone

Frequency response 60-13,500 Hz; pressure transducer; omnidirectional pickup pattern; output voltage at 1000 Hz 2.5 mV/pA ± 3 dB; impedance 600 ohms; phone plug connector; 1.9" diameter; 4 oz.....

\$31

MD 400. Same as MD 200 except super cardioid with 22-dB rejection at 1000 Hz, 120°; pressure-gradient transducer.....

\$39

SHURE

300 Bidirectional 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 ... \$195

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 μ 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.....

\$34

575SB. Similar to 575S but low impedance..

\$34

515 SAC Unidyne® B Microphone

Dynamic cardioid type for good-quality sound systems and tape recorders. Has locking on/off switch. Output level -59 dB; frequency range 80-13,000 Hz; high impedance. Comes with 15-ft cable with $\frac{1}{4}$ " phone plug, built-in shock mount

\$53

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 windscreens, swivel adapter, cable, mini-plug adapter cable, and carrying case

\$118

516EQ-PR. Two 516EQ microphones

\$210

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.....

\$73

588SB. Low impedance.....

\$73

588SAC. 588SA with $\frac{1}{4}$ " plug.....

\$88

588SB-CN. 588SB with 3 pin plug

\$79

UNISPHERE® A Cardioid Mics

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.....

\$85

585SB. Low impedance.....

\$85

585SAV. Similar to 585SA but has volume control on microphone barrel.....

\$93

585SAC. High impedance, soldered $\frac{1}{4}$ " plug.....

\$88

585SBV. Similar to 585SB except volume control in handle

\$93

585SAVC. Similar to 585SAV plus $\frac{1}{4}$ " plug

\$96

UNISPHERE® 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.....

\$110

545SD. Same as 545D with on-off switch on microphone barrel

\$113

545SH. Similar to 545D with swivel mount to stand and on-off switch

\$113

545L. Similar to 545D but has low impedance; supplied with lavalier cord, clip, and permanently attached cable.....

\$88

546. Similar to 545D except shock

mounted

\$170

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.....

\$123

565SD. 565D with on-off switch

\$126

565SH. Similar to 565D with swivel mount to stand and on-off switch.....

\$126

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.....

\$88

578 OMMIDYNE® Omni Microphone

Omnidirectional pattern; power level -61 dB; response 50-15,000 Hz; dual impedance; handheld; use for speech and music; has on-off switch, a 15-ft cable, and accessory swivel adaptor; chrome finish.....

\$100

Professional Microphones

SM7 Dynamic Cardioid Microphone

Unidirectional microphone with flat, bass rolloff, presence boost, and bass rolloff/presence boost response tailoring; power level -57 dB (0 dB = 1 mW/10 μ bar); frequency response 40-16,000 Hz; impedance 150 ohms for inputs rated at 19-300 ohms; dark gray foam windscreens and dark gray enamel finish....

\$450

SM10A Unidirectional Head-Worn Microphones

Close talking, cardioid pattern for effective noise reduction. Frequency response 50-15,000 Hz; impedance 150 ohms; power level -66 dB

\$120

SM12A. Similar to SM10A plus one ear monitor

\$165

SM14A. Similar to SM10A plus two ear monitors

\$215

SM17 Dynamic Omni Microphone

Miniature omnidirectional microphone designed for mounting on 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

\$90

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.....

\$310

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

\$185

SM63 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® grille damage-resistant to drops and impact, rust, moisture, and corrosion; champagne finish aluminum case

\$118

Starmaker® Series Microphones

Small, lightweight, rugged dynamic cardioid type designed for stand-mount or handheld use. Frequency range 50-15,000 Hz; output power level -57.5 dB; low impedance.

195

13

MICROPHONES

SM77EB , Ebony Suedecoat®	\$120
SM77EB-CN , Same as SM77EB plus 25-ft cable with three-pin connector	\$141
SM77TN , Tan Suedecoat®	\$120
SM77TN-CN , Same as SM77TN plus 25-ft cable with three-pin connector	\$141
SM78EB , Ebony Suedecoat® plus pop filter	\$153
SM78EB-CN , Same as SM78EB plus 25-ft cable with three-pin connector	\$174
SM78TN , Tan Suedecoat® plus pop filter	\$153
SM78TN-CN , Same as SM78TN plus 25-ft cable with three-pin connector	\$174

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, windscreens, swivel adapter and cable; metallic vinyl finish.....\$290

PS-1 Power Supply

Power supply for Shure condenser microphones; unit powers 2 microphones; 108-132 Vac 50/60 Hz.....\$133

Accessories

A15 Series In-Line Adapters

Modifies mic response; three-pin male output and female input connectors.

A15AS, Switchable microphone attenuator.....\$32

A15PRS, Switchable phase reverser.....\$28

A15HP, High-pass filter.....\$24

A15LP, Low-pass filter.....\$24

A15PA, Presence adapter.....\$24

A15RS, Response shaper.....\$24

A15LA, Line input adapter.....\$24

A15BT, Bridging transformer.....\$24

A15TG, Tone generator.....\$32

A27M, Stereo Microphone Mount.....\$26

A53M, Shock Mount for 578, 579, SM59, SM63 and SM81 microphones.....\$28

A55M, Shock Mount for 515, 516, 588, 585, 545, 565, SM77, and SM78 microphones.....\$28

A95 Series Line Matching Transformers

Connect low-impedance microphone to high-impedance input or vice versa; for use with most microphones and input jacks.

A95U, Lo-Z: 3-pin; Hi-Z: $\frac{1}{4}$ -in plug and jack.....\$26

A95UF, Lo-Z: 3-socket; Hi-Z: $\frac{1}{4}$ -in plug and jack.....\$30

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 bar; max SPL 138 dB; dynamic range 104 dB; XLR-3-12C type mic connector; includes carrying case, 006P battery, and screw adaptor; $9\frac{1}{2}$ " H \times $2\frac{1}{2}$ " W \times $1\frac{1}{2}$ " 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 windscreens; 1" diameter \times $26\frac{3}{8}$ " L.....\$795

C-74, Similar to C-76 except designed for media use; 1" diameter \times $16\frac{1}{2}$ " 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 ± 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; windscreens and shock mounting; fixed mike connector; 20ft cable; comes with carrying case; 3" dia. \times $8\frac{1}{16}$ " L.....\$545

C-37P, Similar to C-38B without high-cut switch and internal battery power; max. SPL 154 dB; dynamic range 130 dB; $1\frac{1}{8}$ " dia. \times $7\frac{1}{16}$ " L.....\$495

ECM-53FP Cardioid Microphone

Unidirectional cardioid back electret condenser microphone designed for desk or podium use; frequency 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 windscreens, carrying case, battery, and stand adaptor; $1\frac{1}{16}$ " diameter \times $10\frac{3}{16}$ " 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. \times $8\frac{1}{8}$ " 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; $1\frac{1}{2}$ " dia. \times $6\frac{1}{2}$ " 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 windscreens; phantom power system or battery power; XLR-3 mike connector; 20-ft cable; $1\frac{1}{2}$ " diameter \times 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 Microphone

Professional omnidirectional electret condenser microphone with miniature design; frequency response 40-14,000 Hz; 250-ohm output impedance; S/N 66 dB; max. SPL 117 dB; dynamic range 83 dB; plug adaptor for mini and phone connections; on/off switch; includes windscreens, case with mike stand, tie clip, and battery; fixed mike connector; 6-ft 5-in cable; $1\frac{1}{2}$ " diameter \times $1\frac{1}{32}$ " L.....\$65

F-115 Omnidirectional Microphone

Professional dynamic microphone for outdoor use in all weather conditions; built-in waterproof screen; also has double-structured accessory windscreens; 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;

$1\frac{3}{16}$ " diameter \times $6\frac{1}{8}$ " L.....\$160

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, windscreens, and tie clip; $1\frac{1}{32}$ " diameter \times $1\frac{1}{32}$ " L.....\$115

ECM-23F Cardioid Microphone

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 windscreens, carrying case, mike cable, and mike holder; XLR-3 mike connector; 20-ft cable; $1\frac{1}{16}$ " diameter \times $7\frac{1}{2}$ " 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; $1\frac{1}{16}$ " dia. \times $6\frac{1}{16}$ " 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 windscreens and mic holder; $\frac{1}{4}$ " diameter \times $10\frac{3}{16}$ - $19\frac{1}{16}$ " L.....\$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. \times $6\frac{1}{8}$ " L.....\$100

F-420, Similar to F-520 except designed for public address and recording applications; frequency response 100-12,000 Hz.....\$75

ECM-170A Omnidirectional Microphone

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 windscreens; 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. \times $6\frac{1}{16}$ " L.....\$75

ECM-150 Omnidirectional Microphone

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 windscreens, case with mike stand, tie clip, and battery; fixed mike connector, 6-ft 5-in cable; $1\frac{1}{32}$ " diameter \times $1\frac{1}{32}$ " 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 windscreens, battery, mic holder, stand adaptor, and carrying case; $1\frac{1}{2}$ " diameter \times $7\frac{1}{16}$ " 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 windscreens and mic holder; $\frac{3}{4}$ " diameter \times adjustable 10%-19% 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; $2\frac{1}{2}$ " dia. \times $7\frac{1}{2}$ " L.....\$50

ECM-220T "The Instrument Mic"

Back electret condenser cardioid microphone for miking instruments, with unimatch plug to fit all home recorders. Frequency range 50-14,000 Hz; impedance 200 ohms.....\$50

F-V4T "The Vocal Mic" Microphone

Cardioid-pattern dynamic microphone for vocal applications, with unimatch plug to fit all home tape recorders. Frequency range 90-13,000 Hz; output level -58.8 dBm; impedance 600 ohms.....\$40

ECM-16T "The Tie Tac Mic"

Omnidirectional electret condenser microphone for lavalier applications, with unimatch plug to fit all home tape recorders. Frequency range 50-13,000 Hz; impedance 250 ohms.....\$40

F-99T "The Stereo Mic"

Stereo dynamic microphone for recording purposes, with left and right unimatch plugs to fit all home tape recorders. Frequency range 80-12,000 Hz; impedance 200 ohms.....\$40

F-V3T "The Mic" Dynamic Microphone

Cardioid-pattern dynamic microphone with unimatch plug that fits all home tape recorders. Frequency range 100-12,000 Hz; impedance 600 ohms.....\$30

F-V2A Dynamic Microphone

General-purpose microphone with $\frac{1}{4}$ " phone plug that fits hi-fi tape recorders.....\$20

STUDER/REVOX

M3500 Dynamic Cardioid Microphone

Dynamic unidirectional moving-coil type; hypercardioid pattern; response 40-18,000 Hz; impedance 600 ohms; comes with windscreens, clamp, table stand, and case; Cannon XLR connector; each unit supplied with own frequency-response curve; all-metal construction with matte black chromium finish.....\$185

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 with 2-position response switch (40-18,000 Hz cardioid, 30-16,000 Hz omni). Supplied with stand adapter, 2 windscreens, 15-ft cable.....\$120
ME-80. Same as ME-120 except 50-16,000 Hz response.....\$90
ME-50. Same as ME-80 except cardioid design; unbalanced/balanced 10k/200-ohm impedance; response 50-14,000 Hz.....\$50

PE-120 Professional Microphone

PA/recording cardioid and omnidirectional condenser microphone with 200-ohm balanced output and XLR connector.....\$100

TECHNICS

RP-3540E Cardioid Microphone

Electret condenser cardioid microphone. Output impedance 600 ohms; sensitivity -68 dB; frequency range 40-14,000 Hz. Requires 2 AA cells. Comes with stand, mic holder, $\frac{3}{8}$ " adapter, 5-meter cable. 42 \times 227 mm.....\$70

RP-3210E Stereo Microphone

Cardioid electret condenser microphone with two elements physically aligned for stereo perspective. Frequency range 50-12,000 Hz. Desk stand included.....\$60

RP-3500E Electret Microphone

Cardioid electret condenser microphone with high signal-handling ability for wide dynamic range. Frequency range 50-12,000 Hz. Comes with tripod desk stand.....\$60

RP-V370 Dynamic Microphone

Unidirectional dynamic microphone designed for vocal and musical instrument recording. Frequency range 40-12,000 Hz. Comes with $\frac{3}{8}$ " mic holder adapter.....\$40

RP-V340 Cardioid Microphone

Dynamic cardioid microphone designed for voice recording. Has built-in windscreens. Frequency range 40-12,000 Hz. Comes with $\frac{3}{8}$ " mic holder adapter.....\$26

TELEDYNE by OLSON

MK-105 Omnidirectional Microphone

Miniature lavalier electret-condenser microphone with FET preamp and battery; designed for handsfree PA use; frequency response 20-20,000 Hz; output -70 dB; impedance 6000 ohms; includes thin-diameter 16-ft cable with $\frac{1}{4}$ -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 $\frac{1}{4}$ -in phone plug and windscreens/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 windscreens...\$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 windscreens; 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
942A. Same as 942 except sensitivity is -72 dB at 600 ohms, -52 dB at 50,000 ohms.....\$47

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NEED MORE INFORMATION?

Write directly to the manufacturer or distributor. A list of names and addresses starts on page 32.



CIRCLE NO. 20 ON READER SERVICE CARD

14

SIGNAL PROCESSORS (includes Mixers)

ADC PROFESSIONAL PRODUCTS

Sound Shaper Two MkII Equalizer

Twelve-band stereo frequency equalizer with center frequencies set at 30, 50, 90, 160, 300, 500, 900, 1600, 3000, 5000, 9000, and 16,000 Hz, ± 12 dB boost or cut; each band/ch has linear potentiometer control with center detent. Features internal switching and monitoring with pushbutton line/record and tape monitor controls; pushbutton equalization bypass; dual seven-segment ± 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 ± 1 dB; unity gain ± 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; $6\frac{1}{4}$ "H $\times 16\frac{1}{8}$ "W $\times 6\frac{3}{4}$ "D.....\$330

Sound Shaper Series

One IC Equalizer

Five-band/channel stereo graphic equalizer with center frequencies at 60, 240, 1000, 3500, and 10k Hz. Features a bank of LEDs adjacent to each of the 10 slider controls to graphically illustrate adjusted frequency curve; ± 6 dB control range; tape monitor switch.....\$120

One Ten IC Equalizer

Ten-band stereo graphic equalizer has center frequencies at 31, 62, 125, 250, 500, 1k, 2k, 4k, 8k, and 16k Hz. Features a bank of LEDs alongside each slider control to dramatically indicate positions on a ± 6 -dB range scale; one-way tape dubbing; line/record, bypass/equalizer, and power switches.....\$230

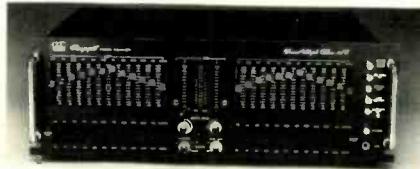
Two IC 12-Band Equalizer

12-band equalizer with center frequencies at 32, 56, 100, 180, 320, 560, 1k, 1.8k, 3.2k, 5.6k, 10k, and 18k Hz. Features slider controls with adjacent LED indicators to dramatically illustrate altered response curve; two-way tape dubbing; subsonic filter with 15-Hz cutoff point; LED-type vertical meters (one for each of two channels) with ± 12 -dB range in 4-dB steps; left- and right output and left and right master controls; line/record, bypass/equalizer, meter in/out, subsonic filter in/out, and power switches.....\$330

Three IC Paragraphic Equalizer

Top-of-the-line ADC Paragraphic® equalizer with 24 ancillary switches to bring 36 bands per stereo channel under control, combining parametric EQ versatility and ease of operation of graphic EQ. Features ± 12 -dB range slide controls (center frequencies at 32, 56, 180, 320, 560, 1k, 1.8k, 3.2k, 5.6k, 10k, 18k Hz); LED vertical signal-gain meters (± 12 -dB range in 2-dB increments) and separate left and right

slide controls; separate left and right meter-level controls; two-way tape dubbing; LED slide control position indicators; subsonic filter; LED power indicator adjustable for 12, 24, or 36



dB scale; bypass/equalize, meter in/out, line/record switches; sound-level meter (SLM) input jack on front panel.....\$500

SA-1 Spectrum Analyzer

Real-time spectrum analyzer with built-in pink-noise generator and supplied calibrated microphone. Features a network of 132 LEDs that display audio spectrum in real time for visual equivalent of sound system's frequency response; range selector with 12-, 24-, and 36-dB positions; left and right mode selector buttons; peak-hold and slow display buttons; pink-noise in/out and mic/line switches.....\$230

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 (preamplifier 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 ± 0.5 dB. Model L10 speakers: 2-way (7-in woofer and 1-in soft dome tweeter); frequency response 48-18,000 Hz ± 3 dB, 38-20,000 Hz ± 5 dB; efficiency 90 dB/watt; input range 50-100 W. Delay/amplifier dimensions $3\frac{1}{2}$ "H $\times 15\frac{1}{8}$ "W (19" W optional rack mount) $\times 12$ "D. Speakers 15"H $\times 9\frac{1}{8}$ "W $\times 6\frac{1}{2}$ "D.....\$1150

1001. 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; $3\frac{1}{4}$ "H $\times 15\frac{1}{8}$ "W $\times 10\frac{3}{4}$ "D...\$800

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 $1\frac{1}{2}$, 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 ± 1 dB; $1\frac{1}{16}$ "H $\times 9\frac{1}{16}$ "W $\times 9\frac{1}{16}$ "D.....\$225

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, ± 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 ± 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 $\times 17.3$ "W $\times 11.6$ "D.....\$400

EA-G40 Stereo Graphic Equalizer

Eight-band stereo graphic equalizer with center frequency slide controls at 25, 56, 160, 400, 1000, 2500, 6300, and 16,000 Hz, ± 10 dB; has defeat switch, built-in relay muting circuit, and rec/out terminals; frequency response 10-100,000 Hz ± 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 $\times 17.3$ "W $\times 11.4$ "D.....\$250

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; 2¹/H × 14¹/₄"W × 4³/₄"D.....\$290

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 ±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 ±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; 3.5¹H × 19¹W × 6.5"D.....\$599

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 ±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 ±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; 3.5¹H × 19¹W × 6.5"D.....\$259

D-11 Equalizer/Pink Noise Analyzer

Unit combines ten-band octave graphic equalizer, built-in pink noise generator/analyizer, and measurement microphone. Features center frequency slide controls at 31.5, 63, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz ±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 ±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 D10. 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/analyizer, electronic crossover, and measurement microphone; designed to enhance bass response. Features center frequency slide controls at 31.5, 45, 63, 90, and 125 Hz, ±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 biamplification modes. Frequency response 3-100,000 Hz ±1 dB; THD 0.04%; input impedance 100,000 ohms; output impedance 150 ohms; pink noise 100 mV; S/N 90 dB; ebony face-plate with oak end panels.....\$249

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 ±12-15 dB. Features tape monitor loop and separate function switches; I/r tape inputs/outputs and I/r main inputs/outputs. Frequency response 15-30,000 Hz ±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; 2.6¹H × 12.3¹W × 5"D.....\$125

AUDIONICS OF OREGON

Space and Image Composer

Class "A" SQ quadraphonic 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 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 ±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); ±7° axial tilt correction; black anodized front panel; 3.5¹H × 19¹W × 9"D.....\$1275

CX Model DE-1 Record Expander

Decoder for use in any stereo system via tape monitor loop for decoding CX encoded records. Features class-A circuitry; external power supply; tape monitor; stereo bypass; front-panel indicators for calibration; noise reduction/range expansion control. CX dynamic range expansion up to 84 dB; noise reduction 20 dB; THD 0.03%; hum and noise 90 dB down.....\$125

AUDIO RESEARCH

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; 5.25¹H × 19¹W × 6"D.....\$695

BIAMP

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 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; 3¹/2"H × 19¹W × 10"D.....\$595

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; 3¹/2"H × 19¹W × 5¹/4"D.....\$295
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; 1¹/4"H × 19¹W × 5¹/2"D.....\$295

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.....\$500

CARVER

C-9 Sonic Hologram Generator™

Patented onboard employs Sonic Holography. Attaches to any conventional hi-fi system to restore life-like spaciality and dimensionality to music. Sonic Hologram Generator precisely locates music and voice in 3-dimensional space



by using otherwise inaudible phase and timing information to recreate the original vector sound field. Unlike 4-channel and other less effective locational devices, C-9 requires no special source material or additional loudspeakers. Specifications and performance are identical to the Sonic Holography section of the C-4000 preamp. 19¹W × 1¹/4"H × 4¹/8"D. \$279

CERWIN-VEGA

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 3/4" 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), 6V 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 3/4" 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 1/2" H x 12 3/4" W x 5 1/4" D..... \$350

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 speakers and to mixed-channel bass module; 3 3/8" H x 8 1/4" W x 7" D..... \$150

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 1/2 or 2 1/2-way, respectively); individual channel gains screwdriver adjustable; THD 0.0008% from 20-20,000 Hz; noise -95 dB (shorted input); frequency response of summed output within 1 dB 5-50,000 Hz.

2-way Gaussian crossover..... \$250

2-way Butterworth crossover..... \$330

3-way Gaussian crossover..... \$300

3-way Butterworth crossover..... \$465

Additional common base..... \$16

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..... \$280

DB-2. Power supply for DB-3 and DB-3-100..... \$70

DB-3-24 In Phase Crossover

24 dB per octave crossover minimizes irregularity in radiation pattern through the crossover region. High and low pass outputs are always in phase with each other and 6 dB down at crossover frequency. Noise performance has been improved by 10 dB over the 18 dB DB-3. Requires a DB-2 power supply or DBP-1 cable. User must specify frequency. Only available in 2-way..... \$420

DB-3-24-100. Standard version of above, set at 100 Hz and with an additional common bass..... \$350

DB-7 Phase Inverter/Bandpass Filter

Increase 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, 18-dB/octave subsonic and Bessel 18-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..... \$175

DB-2. Power supply for DB-7..... \$70

dbx®

dbx Type II Tape**Noise-Reduction Systems**

Type II systems reduce noise by more than 30 dB across entire audio-frequency spectrum and add 10 dB additional recording headroom when used with any tape recorder. In addition, they decode dbx discs.

Model 224. Linear decibel compander offers simultaneous encode/decode process for full monitoring capability with 3-head open-reel and cassette recorders, but will also work with 2-head decks. Effective noise reduction 50 dB plus 10 dB headroom; dynamic range 110 dB peak signal to weighted background noise; frequency response ± 0.5 dB 40-20,000 Hz, -1 dB at 30 Hz; slew rate greater than 10 V/ μ sec; equivalent input noise -85 dB unweighted, 20-kHz bandwidth, referenced to 1 V; THD less than 0.4% 30-100 Hz, less than 0.1% 100-

20,000 Hz; IM distortion less than 0.2% SMPTE; power consumption 7 W; 17 1/4" W x 7 1/2" D x 1 3/4" H; 6 lb..... \$299

Model 222. Similar to Model 224 but designed for use with 2-head recorders. Has separate encode (record) and decode (playback) functions but no monitoring capability. Specifications are the same as well..... \$219

Model 128. Dynamic range enhancer/tape noise-reduction system performs all functions of Model 224 plus provides expansion \times dynamic range, as well as compression. Expansion ratio continuously variable 1.0: 2.0: compression ratio 1.0 to infinity; effective noise reduction 30 dB plus 10 dB headroom; dynamic range 100 dB peak signal to weighted background noise; input/output levels 6/5.5 V rms; frequency response 20-20,000 Hz ± 1 dB enhancer section, 30-20,000 Hz NR section; equivalent input noise -85 dBV unweighted, 20 kHz bandwidth, ref. 1 V; THD 0.1% at 1.0 expansion enhancer section, less than 0.5% 30-100 Hz and 0.1% 100-20,000 Hz NR section; IM distortion 0.2% SMPTE; power consumption 10 W; 11" W x 10 1/4" D x 1 3/4" H; 8 lb..... \$499

Model 21. dbx disc (and tape) decoder designed to reproduce full 90 dB of a live performance. Also designed to virtually eliminate pop, ticks, and surface noise on records. Dynamic range 100 dB; nominal/maximum input 300 mV/6 V rms; output level 5.5 V rms; frequency response ± 0.5 dB 30-15,000 Hz; hum and noise less than -100 dBV, referenced to 1 V, A weighted, 20-kHz bandwidth; THD less than 0.2% at 1 kHz (encode/decode) up to 4 V rms output; IM distortion less than 0.2% SMPTE; power consumption 5 W; 8 1/4" W x 6 1/4" D x 2 3/4" H; 2.5 lb..... \$109

dbx Dynamic Range Expanders

Expanders are designed to increase the dynamic range of records, tapes, and FM broadcasts by as much as 50%, while reducing noise by as much as 20 dB.

Model 3BX. Advanced expander makes loud passages louder, soft passages quieter; Bass, mid-range, and treble frequencies are processed individually. Features 3 rows of LEDs that monitor degree of expansion in each range; expansion level control; transition level control; tape-monitor loop to restore loop required by expander in stereo system. Expansion ratio continuously variable 1.0-1.5 (0 to 50% increase), linear in dB; dynamic range 100 dB peak signal to weighted background noise; input level nominal/max. 300 mV/7 V rms; output level 7 V rms; frequency response ± 0.5 dB 20-20,000 Hz at 1.0 expansion; equivalent input noise -85 dBV unweighted, referenced to 1 V, 20-kHz bandwidth; THD 0.1% at 1.0 expansion; IM distortion 0.15% SMPTE; power consumption 30 W; 17 1/4" W x 10 1/4" D x 3 3/4" H; 12 lb..... \$759

Model 2BX. Similar to Model 3BX except divides frequency range into 2 bands (bass and treble) and has 2 rows of expansion monitoring LEDs. Output level 6 V rms; power consumption 20 W; 8.3 lb..... \$499

Model 1BX. Similar to Model 2BX except has infrasonic filter in its rms level detector to prevent mistracking caused by turntable rumble and record warp; 10 LEDs to monitor upward and downward expansion; power consumption 10 W; 11" W x 10 1/4" D x 3 3/4" H; 4.5 lb \$279

Model 3BX-R. Remote control allows Model 3BX expander to be operated from a remote location and provides more control capability. Includes release-time control for adjusting reaction time of 3BX; fade switch; master volume control; bypass switch; LEDs that indicate operational modes; 25-ft cable..... \$169

dbx Signal-Improvement Units

Model 118. Dynamic range enhancer is a single-band linear decibel expander/compressor and limiter/peak unlimiter designed to expand dynamic range of any program source. Specifications same as Model 3BX; power consumption 5 W; 10 1/4" W x 3 3/4" H; 5 lb..... \$239

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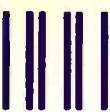
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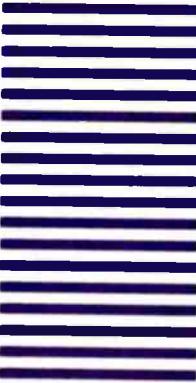
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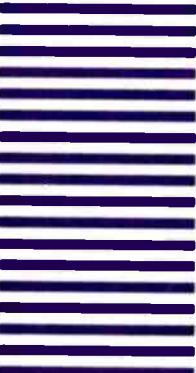
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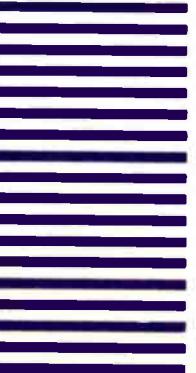
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Revised and updated! Stereo Review's SRT14-A **STEREO TEST RECORD**



THE EDITORS AND TECHNICAL STAFF OF
STEREO REVIEW PRESENT THE MOST
COMPREHENSIVE, ACCURATE AND EASY-
TO-USE TEST RECORD EVER DEVELOPED—
REVISED AND UPDATED FROM THE
ORIGINAL SRT14 VERSION.

This latest version contains everything you need to
get the fullest, most realistic reproduction from your
stereo equipment. You can actually perform a
complete stereo system checkup by ear alone.

A test lab in a record jacket

Employing the most advanced recording, master-
ing, 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.
- Wow and flutter.
- Stereo separation.
- Optimum speaker placement.
- Cartridge tracking ability.
- Cartridge Tracking Force & Anti-skating.
- Channel balance.
- Musical Instrument Tuning Standards, and more . . . much more.
- Hum and noise,
- Including turntable rumble.

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Included with SRT14-A is a detailed instruction
manual, complete with charts, tables, and dia-
grams. It explains the significance of each test. It
tells you what to listen for. It clearly describes
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corrective procedures.

For professionals too

Included on the record are a series of tests that
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- FREQUENCY RESPONSE, 20 kHz to 25 Hz
- SEPARATION, LEFT-TO-RIGHT
- SEPARATION, RIGHT-TO-LEFT
- CARTRIDGE TRACKING, LOW FREQUENCY
- CHANNEL BALANCE
- CARTRIDGE AND SPEAKER PHASING
- LOW-FREQUENCY NOISE
- TURNTABLE FLUTTER
- FREQUENCY-RESPONSE SWEEP, 500 TO 20,000 Hz, LEFT CHANNEL
- FREQUENCY-RESPONSE SWEEP, 500 Hz TO 20,000 Hz, RIGHT CHANNEL
- TONE-BURST
- INTERMODULATION DISTORTION
- ANTI-SKATING ADJUSTMENT
- 1000-Hz REFERENCE TONES
- FLUTTER AND SPEED ACCURACY
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ORDER FROM: TEST RECORD, Dept. 30013, P.O. Box
278, Pratt Station, B'klyn, N.Y. 11205.

Model 110. Subharmonic synthesizer that passes low-frequency signals plus same signals a full octave lower (synthesized by sampling original signals) to recreate subharmonics. Dynamic range 100 dB peak signal to weighted background noise; input level nominal/max. 300 mV/7 V rms; output level 7 V rms; frequency response 20-20,000 Hz ±2 dB; equivalent input noise -85 dBV unweighted referenced to 1 V, 20-kHz bandwidth; THD 0.1% typical, main signal channel; IM distortion 0.15% SMPTE, main channel; power consumption 10 W \$249

dbx Model 20/20 Computerized Equalizer/Analyzer
Automatic equalizing system combines a microprocessor-controlled 10-band graphic equalizer, real-time analyzer, pink-noise generator, sound-pressure-level (SPL)-indicator and includes a calibrated microphone. EQ center frequencies 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16 kHz; EQ range +14/-15 dB; accuracy ±0.1 dB at full boost/cut, ±0.1 dB/step; gain 0 dB; THD 0.01% 20-20,000 Hz. Analyzer/SPL meter/generator: analyzer dynamic range 80 dB; display 30 LED × 10 band; meter bandwidth at 90 dB SPL input 15-20,000 Hz; dynamic range 80 dB; generator accuracy ±0.5 dB. Microphone type electret condenser; frequency response ±1 dB 20-20,000 Hz; 25-ft cable. 19" W × 12½" D × 5½" H \$1500

ESPRIT by SONY

SE-P900 Equalizer

Deluxe stereo trimetric acoustic equalizer with dual-monophonic-stage construction and sub-isolated power supplies. Can be used as a preamplifier with conventional tone controls or as total compensating-frequency-balance system; permits independent left- and right-channel adjustments for frequency, level, and bandwidth; has low- and high-band shelving subwoofer operation. Frequency ranges 30-600 Hz low, 200-5000 Hz mid, and 800-16,000 Hz high; equalization boost/cut range ±12 dB; bandwidth 0.15-1.0 octave; S/N ratio 100 dB; THD 0.01%; 17 lb 15 oz \$1750

FISHER

EQ550 Graphic Equalizer

12-band stereo equalizer. Features 24 slide controls; EQ on/recording/bypass switch; tape-monitor switch; LED indicators in control knobs for at-a-glance indication of equalization curves. Center frequencies 16, 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16 kHz, and 32k Hz; boost/cut range ±12 dB; frequency response +0/-0.5 dB; input/output impedance 50k/2k ohms; THD 0.01% at 1 V output, 0.06% at 5 V; max output at 1% THD 7 V; S/N ratio at 100/1k/10k Hz A weighted, referred to 1 V; power consumption 8 W; 17½" W × 11¾" D × 4½" H; 10 lb \$350

EQ350 Graphic Equalizer

10-band stereo graphic equalizer. Features 10 detented slide controls per channel; tape-monitor, line/source, and record switch. Center frequencies 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16 kHz; boost/cut range ±12 dB; input/output impedance 50k/2k ohms; THD 0.01% at 1 V output, 0.06% at 5 V; max output at 1% THD 7 V; frequency response 20-20,000 Hz +0/-0.3 dB; S/N ratio at 100/1k/10k Hz A weighted, referred to 1 V; power consumption 6 W; 17½" W × 11¾" D × 3½" H; 9.2 lb \$230

EQ2322. Similar to EQ350 except black front panel and cabinet and different knobs; all specifications same as above \$200

NR500 Noise-Reduction System

"Super D" dual-process noise-reduction system with decilinear compression/expansion system

to expand dynamic range up to 40 dB. Features phase-compensated bandsplitting system that minimizes breathing while reducing hiss and clipping; decilinear system that eliminates level-matching problems for recording and playback; response speed matched to bandwidth requirements for optimum transient characteristics with minimum distortion. Dynamic range 100 dB; THD 0.08% at 1 kHz, rated level; frequency range 20-30,000 Hz; noise reduction 40 dB max; record/play input level 350 mV, impedance 330 ohms; power consumption 7 W; 17½" W × 10¾" D × 1¾" H; 8 lb 3 oz \$350

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, ±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 ±0.5 dB (EQ flat), 0-500,000 Hz ±0.1 dB (EQ bypassed); dist. 0.05% at 1 V rms out; THD and IM dist. 0.005% from 20-20,000 Hz at 5 V; slew rate 14 V/μsec; S/N 90 dB below 2 V rms; max. output 10 V before clipping; 19" rack-mountable \$250

HARTLEY PRODUCTS

3/5-Way Crossover

Crossover system built with op amps has high slew rate bi-FET circuitry that provides 2-pole Butterworth response with 12-dB/octave roll-offs. Features stereo/mono modes; 20-20,000-Hz variable-frequency settings; separate input controls with unity gain; separate output-level controls; gold-plated RCA connectors; regulated power supplies for each channel; black anodized brushed-aluminum front panel. Input 10k ohms unbalanced; output 50 ohms unbalanced; maximum gain 6 dB; S/N ratio 101 dB; THD 0.01% at 1 kHz; power consumption 8 watts; 19" W × 8" D × 3½" H; 8 lb \$750

2/3-Way Crossover. Same as above but with regulated power supplies for each channel; 19" W × 8" D × 1¾" H; 5 lb \$475

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 μV; 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 × 19" W × 14" D \$225

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 ±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; 4½" H × 17½" W × 8½" 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; 4¾" H × 17½" W × 8" D \$145

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 fiberglass printed circuit board with component locations, all alignment circuits, and solid mahogany cabinet; assembly time approx. 10 hrs; 2.75" H × 15.5" W × 6.75" D \$137

Dolby Calibration Tapes. Specify reel or cassette \$9

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 μsec 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 × 8.5" W × 4" D \$100

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, ±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/-1dB; THD and IM dist. 0.003%; gain 0 dB/-6dB; 6 $\frac{1}{4}$ "H x 17 $\frac{1}{2}$ "W x 8 $\frac{1}{4}$ "D...\$379
MU-S80. Electret condenser microphone for room acoustics measurements with SEA-80. Frequency response 30-16,000 Hz ±2 dB; sensitivity 72 dB ±3 dB; output impedance 600 ohms.....\$200

SEA-70 Graphic Equalizer

Stereo graphic equalizer with 12 frequency "tone-zone" controls in each channel, two-deck SEA recording/dubbing. Features wide dynamic range expansion; LED status indicators; ±12 dB/±6 dB control-range switch.....\$400

SEA-20GL Graphic Equalizer

Seven frequency "tone zone" control ranges (one per 1 $\frac{1}{2}$ 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 7W; 3 $\frac{1}{4}$ "H x 15 $\frac{1}{4}$ "W x 9 $\frac{1}{2}$ "D.....\$280

KM LABORATORIES**SSO-330 Servo Sub-Octavator™**

Unit tightens and extends bass response of any conventional speaker/amplifier system by up to 1 octave. Features detented controls for low-



frequency speaker ratings and bass compensation in 1.5-dB steps; power-on and system-override buttons; manual balancing controls for left and right channels. Test button operates a zero-crossing switched 128-Hz oscillator; adjusting balance controls aligns system for particular amplifier/speaker system. LEDs for each channel indicate correct setting. FET input (cascode zero-gain adder) impedance 20k ohms; output impedance 220 ohms; gain 0 dB ±0.15 dB; channel separation 90 dB at 1 kHz; THD 0.001% at 0.5 V output; group delay 125 msec; S/N ratio 101 dB; max output 9 V rms; black finish; 14 $\frac{1}{2}$ "W x 6"D x 2 $\frac{1}{4}$ "H.....\$399

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 read-outs; frequency response (min. bandwidth) -3 dB at 500 Hz, -10 dB at kHz,

-20 dB at 2.5 kHz; (max. bandwidth) ±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 μV rms 20 Hz to 20 kHz; has 8 phono jacks and tape deck connectors; 2 $\frac{1}{4}$ "H x 17 $\frac{1}{2}$ "W x 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 ±0.5 dB; distortion 0.1% (THD), 0.5% (IM); internal noise 40 μV rms; 2 $\frac{1}{4}$ "H x 16 $\frac{1}{4}$ "W x 7 $\frac{1}{4}$ "D.....\$329

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. -6-dB and peak amplitude LEDs; three equalization controls; direct, reverberant, reverberant drive controls; send-receive buss. Frequency response 2-40,000 Hz ±0.5 dB (direct); reverberant 20-5500 Hz; reverberant time 2.5 sec; input impedance 47k ohms; output impedance 200 ohms for 2k-ohm loads; S/N 90 dB (direct); 2"H x 19"W x 7"D.....\$430

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, ±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 $\frac{1}{16}$ "H x 17 $\frac{1}{4}$ "W x 10 $\frac{1}{8}$ "D.....\$350

MARANTZ**EQ 20 Equalizer**

Ten-band stereo graphic equalizer with separate left- and right-channel controls and 24-karat-gold-plated input and output jacks for low-oxidation/low-distortion audio connections. Features 20 detented slide controls; tape equalization recording capability; extra tape monitor with EQ defeat switch to bypass equalizer. Frequency response 10-25,000 Hz ±1 dB; S/N ratio 110 dB A weighted at 1 kHz referenced to rated output (1 volt); THD 0.005% at rated output, 20-20,000 Hz; IM distortion 0.005% at rated output, SMPTE method; sensitivity for rated output 1100 mV line in and tape in; line input impedance 110k ohms; line output impedance 3.5k ohms; power consumption 8.5 watts at 110-120 V ac, 60 Hz; 16 $\frac{1}{4}$ "W x 7 $\frac{1}{2}$ "D x 2 $\frac{1}{4}$ "H; 5.25 lb.\$250

MXR**One-Third Octave Equalizer**

31-discrete-band one-channel $\frac{1}{3}$ -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, ±12 dB boost or cut; EQ in/out switch; dynamic range 108 dB; THD 0.01% at 0 dBV (20-20,000 Hz), 0.009% at 0 dBV (1 kHz); IM distortion 0.01% at 0 dBV (60 Hz/7 kHz, 4:1); frequency response 10-20,000 Hz +0/-1 dB; max. slew rate 7 V/μsec; 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.....\$385

Fifteen-Band Stereo Equalizer

Fifteen-band stereo graphic equalizer, spaced $\frac{1}{4}$ -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, ±12 dB boost or cut; tape monitor and in/out switches; THD 0.02% at 0 dBV from 20-20,000 Hz, 0.009% at 0 dBV (1 kHz); 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/μsec; optional rack mount ears available; walnut side panels.....\$357

Ten-Band Stereo Octave Equalizer

Vertical format, 10-band, 2-channel graphic equalizer with center frequencies at 31, 62, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz. Independent left and right level controls; switchable subsonic filter; complete tape monitoring facilities with ability to preequalize when recording; bypass switch; control range ±12 dB; maximum input/output level +18 dBV; input impedance 20k ohms nominal; output impedance 100 ohms; equivalent input noise -95 dBV; maximum slew rate 7 volts/microsecond; THD 0.02% at 0 dBV (20-20,000 Hz), 0.009% at 0 dBV (1 kHz); IM distortion 0.009% at 0 dBV (60 Hz/7 kHz, 4:1); frequency response 20-20,000 Hz +0/-1 dB; 19"W x 3 $\frac{1}{2}$ "H; solid-walnut end pieces; optional rack-mount "ears" available.....\$250

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 ±12 dB; gain: unity ±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 ±1 dB at 0 dBV; THD 0.05% at 0 dBV (20-20,000 Hz), 0.009% at 0 dBV (1 kHz); IM 0.05% at 0 dBV (60/7000 Hz, 4:1).....\$220

Five-Band Equalizer

Two-channel equalizer with center frequencies at 50, 100, 200, 2000, and 10,000 Hz. Independent left and right level controls with LED level-set indicators; subsonic filter; tape-monitor and equalizer bypass switches; control range ± 12 dB; max. input/output level +13 dBV; input impedance 20k ohms nominal; output impedance 100 ohms; equivalent input noise -95 dBV; THD 0.05% at 0 dBV (20-20,000 Hz), 0.005% at 0 dBV (1 kHz); IM dist. 0.005% at 0 dBV (60 Hz/7 kHz, 4:1); frequency response 20-70,000 Hz +0/-3 dB; sloping console design with solid wood end pieces.....\$150

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); 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 7V/ μ 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 available.....\$327

Comander

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 ± 1 dB per 20 dB; frequency response 30-20,000 Hz ± 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.....\$160

System Preamp

Control preamplifier combines functions of preamp, mixer, and patch bay; can process two independent programs simultaneously. Features front-panel instrument input, two tape loops, two processor loops, integral headphone amp with independent level and selection controls, and left mono, right mono, and stereo reverse switching. RIAA equalization ± 0.2 dB; phono S/N 87 dB; phono gain 40 dB at 1000 Hz; THD and IM dist. 0.005%; max. signal output +18 dBV; rear-panel ac convenience outlet; black anodized extrusion with solid walnut end pieces; optional rack-mount ears available; 3 $\frac{1}{2}$ "H \times 19"W.....\$500

System Preamp II. Same as System Preamp, except includes second RIAA phono preamp, allowing independent selection of two turntables.....\$550

Decoder Noise-Reduction System

Noise-reduction system for CX-encoded phonograph records manufactured under license from CBS, Inc. provides up to 20 dB NR with no loss of transient or frequency response. System is capable of providing greater than 80 dB dynamic range. Features LED level-set indicators; bypass switch; level-set display on/off switch; tape-monitor-loop connectors; compact case with solid-walnut end pieces \$100

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

NR-200 Noise-Reduction System

Dolby-C noise-reduction system designed to be used with any high-quality tape recorder. Rack-mountable system has its own power supply, peak responding LED recording-level meters; left, right, and master recording-level controls; output control; calibration oscillator; MPX filter; switch for choosing between Dolby B and C processing. Features encoder and decoder sections for true off-tape monitoring with 3-head cassette decks. Noise reduction Dolby B/C 10 dB beyond 2 kHz/20 dB 2k-8k Hz; frequency response 20-20,000 Hz ± 1 dB; THD less than 0.1% (at 400 Hz, ref. 0-dB level); power consumption 20 W; 19"W \times 10 $\frac{3}{4}$ "D \times 2 $\frac{1}{2}$ "H; 12 lb 2 oz.....\$450

NR-100 Noise-Reduction System

Dolby-C noise-reduction system designed specifically to be used with Nakamichi 700ZXE, 700ZXL, and 1000ZXL cassette decks. Can be used without recorder recalibration and is selected by setting noise-reduction switch on cassette deck to EXT. Provides 4 channels of NR (both stereo channels in record and playback). Noise reduction approximately 10 dB at 1 kHz, 20 dB 2k-8k Hz; power supplied by remote-control socket on cassette deck; 9 $\frac{1}{2}$ "W \times 4 $\frac{1}{2}$ "D \times 1 $\frac{1}{2}$ "H. Supplied with 27 $\frac{1}{2}$ " cable.....\$230

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 $\frac{1}{2}$ "H \times 7 $\frac{1}{2}$ "W \times 4"D....\$140

PS-100 Power Supply. Provides ± 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

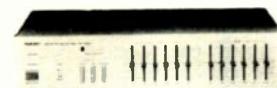
Designed to recreate concert hall sound in any acoustical environment. Features three pushbutton selectors for acoustics of small, medium, and large halls; three pushbutton selectors for hall character; five pushbutton selectors for degree of reverberation from 100 msec-2 sec; stage distance or front-to-rear 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 ± 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 $\frac{1}{2}$ "H \times 19"W \times 11 $\frac{1}{2}$ "D..\$350

EQ-I Graphic Equalizer

Ten-band stereo graphic equalizer (± 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 ± 1 dB; THD 0.007%; S/N 105 dB (IHF "A"); 3 $\frac{1}{2}$ "H \times 19"W \times 9"D.....\$320

EQ-500 Graphic Equalizer

Stereo graphic equalizer with 6 bands/channel (center frequencies 40, 125, 400, 1.25k, 4k, 12.5 k Hz ± 10 dB range). Features 11-position EQ slide-type controls; EQ-defeat switch; 3 tape-monitor function switches that allow



source monitoring and pre- and post-EQ monitoring, push-push power switch with power-on indicator.....\$220

EQ-II Graphic Equalizer

Six-band stereo graphic equalizer with center frequencies set at 40, 125, 400, 1250, 4000, and 12,500 Hz, ± 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 ± 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

\$210

CLSON ELECTRONICS

RA-067 Teledyne Graphic Equalizer

Two completely independent 10-octave equalizers with high-performance bi-FET operational amplifiers (op amps) in LCR filter networks. Features LED level meters with fast response up to 100 kHz; separate boost/cut controls for each band; two 7-LED green displays monitor output levels from 50 to 1000 mV peak; level display of fast-attack/slow-release characteristics; brushed-aluminum front panel with walnut wood end pieces and black metal cabinet; 17 $\frac{1}{2}$ "W \times 8"D \times 4"H.....\$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 ± 5 or ± 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 $\frac{1}{4}$ "H \times 17 $\frac{1}{4}$ "W \times 14 $\frac{1}{4}$ "D.....\$550

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, ± 12 dB boost or cut. Features power and EQ on/off toggle switches with LEDs; tape/source tape 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 $\frac{1}{2}$ "H \times 16 $\frac{1}{2}$ "W \times 9 $\frac{1}{2}$ "D.....\$160

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, ± 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 $\frac{1}{2}$ "H \times 19"W \times 8"D.....\$595

1400 Series Two Graphic Equalizer

Ten-band graphic equalizer; accurate to an octave; ± 14 dB boost or cut; separate input level controls; EQ mode switch; noiseless hard-wired bypass; separate overload indicators; built-in output relay. THD + noise less than 0.009% at 2 V output; S/N (A weighted) 98 dB below 2 V; frequency response 20-20,000 Hz +0/-1 dB; input impedance 50k ohms; gain +6 dB max; channel separation greater than

70 dB at 1 kHz; center frequencies 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; bandwidth 1.2 octaves at 6 dB boost; 19" W X 3 1/4" H X 8 1/2" D; 8 lb.....\$550

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 ±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 X 19" W X 8 1/2" D.....\$450

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 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 µV (direct), less than 80 µV (delayed); frequency response 5-20,000 Hz ±0.1 dB (direct), 40-6000 Hz (delayed, short primary), 40-2500 Hz (delayed, long primary); 5 1/2" H X 19" W X 10" D.....\$340

1300 AV Video Sound/Stereo NR System

Features 10-dB audio/video sound noise reduction; works without need for encoding, with any source; single pushbutton control to switch between video and stereo systems; LED noise-reduction display. THD less than 0.09%; input impedance greater than 50k ohms; input level 150 mV rms average; frequency response 20-20,000 Hz ±1 dB. Correlator noise reduction system: high-frequency NR commences at 2 kHz, weighted overall noise reduction 12 dB; 13 1/2" X 13 1/2" X 6 1/2"; 6 lb.....\$250

180 Dimensional Sonic Localizer

Designed primarily for headphones; improves sonic imaging. THD + noise at 0.5 V output less than 0.009%; S/N (A weighted) 83 dB below 0.5 V output; input impedance 20k ohms; max output 10 V rms into 10k ohms; 8.1" W X 2 1/4" H X 6 1/2" D; 3 lb.....\$150

PIONEER

SG-9 Stereo Graphic Equalizer

Graphic equalizer with ±10-dB EQ range in each of 12 channels (center frequencies at 16, 32, 64, 125, 250, 500, 1k, 2k, 4k, 8k, 16k, 32k Hz), using slide-type controls. Rated THD 0.006% 20-20,000 Hz with all controls flat, 1-V output. 16 1/2" W X 14" D X 5 1/2" H; 15.5 lb.....\$395

SR-303 Reverberation Amplifier

Reverb amplifier with 3-dimensional-effect visual display. Frequency response 5-70,000 Hz

±1 dB (depth volume control set to minimum); S/N ratio 90 dB; reverberation time 0.3-0.6 sec at effect 1, 400 Hz; THD 0.05 at 1 kHz, depth volume control set to minimum, output 1 volt; 16 1/2" W X 13 1/2" D X 3 1/2" H; 9.5 lb.....\$195

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 expander



sion 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 µV; S/N 100 dB (1 kHz, dynamic expansion 16 dB); twin Fluroscan meters, 3 1/2" H X 16 1/2" W X 13 1/2" D.....\$195

ROTEL

RE-1010 Graphic Equalizer

Advanced inductorless active-resonant-circuitry stereo octave equalizer with 10 bands/channel. Features current-limited power supply; professional-type components for super low noise/distortion performance; flat-response ICs; tape 1 to tape 2 dubbing facility; EQ rec and bypass switches. Center frequencies 32, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; boost/cut range ±12 dB; input sensitivity/impedance 1.0 V/50k ohms; output



level/impedance 1.0 V/600 ohms; hum and noise 108 dB IHF A weighted; residual noise 3.9 µV; frequency response 15-45,000 Hz ±0/-2 dB; harmonic distortion 0.009%; 16 1/2" W X 11 1/2" D X 3 1/2" H; 9.5 lb.....\$200

RE-500 Graphic Equalizer

Stereo graphic equalizer with 7 bands/channel. Features discrete inductorless active resonant circuitry; smooth, long-stroke slide controls; stabilized current-limited power supply; specially selected components for low noise/distortion performance; tape-monitor and defeat switches. Center frequencies 40, 125, 400, 1k, 2.5k, 6k, 15k Hz; boost/cut range ±12 dB; input sensitivity/impedance 0.775 V/55k ohms; output level/impedance 0.775 V/600 ohms; hum and noise 100 dB IHF A weighted; residual noise 0.005 mV; frequency response 10-100,000 Hz ±0/-2 dB; harmonic distortion 0.009%; 16 1/2" W X 11 1/2" D X 3 1/2" H; 8.6 lb.....\$150

RY-1010 Spectrum Analyzer

10-band peak-level spectrum analyzer with LED spectrum display designed to simplify adjustment of equalizers. Features pink-noise generator for use with microphone to measure room acoustics; line switch for visual display of sound level across audio spectrum and to illustrate effects of changes in tone controls and filters; range selector for 12, 24, and 36 dB peak-level displays; mode selector for individual or all channels; level calibration control. Bandpass filter 1-octave bandwidth, 10 bands; center frequencies 32, 63, 250, 500, 1k, 2k, 4k, 8k, 16k Hz; pink-noise generator

output level 100 mV/3k ohms, 20-20,000 Hz ±0/-0.5 dB frequency response; input sensitivity/impedance 0.2 mV/3k ohms mic, 2 mV min/30k ohms; microphone frequency response 20-20,000 Hz ±0/-0.5 dB; level display sensitivity 1 dB/step ±0.5 dB on 12-dB range, 2 dB/step ±1 dB on 24-dB range, 3 dB/step ±1.5 dB on 36-dB range; line mode left/left + right/right; 16 1/2" W X 11 1/2" D X 3 1/2" H; 9.9 lb.....\$400

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 ±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 ±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 1/2" X 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 X 19" W X 3.5" D....\$400

C-6. Unassembled walnut cabinet for 2800..\$50

C-4. Unassembled walnut cabinet for 1800..\$45

E101 Parametric Equalizer

Computer direct-line parametric equalizer with digital display and two bands with 10 memories per band. Bandwidth adjustable 0.3-3.5 octaves; boost/cut range ±16 dB; rated output 2.5 V rms; THD 0.02%; S/N ratio 95 dB; 19" W X 12 1/2" D X 3 1/2" H; 20 lb.....\$650

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 facilities and level match controls; frequency response 20-20,000 Hz ±0.25 dB; THD and IM dist. 0.02%; S/N 90 dB; 4 1/2" H X 17 1/2" W X 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 ±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 all controls centered; 2.75" H X 15" W X 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 ±0.25 dB; insertion loss 1 dB; 75,000-ohm input impedance; 600-ohm output impedance; rack mountable; 3 1/2" H X 19" W X 3 1/2" D.....\$275

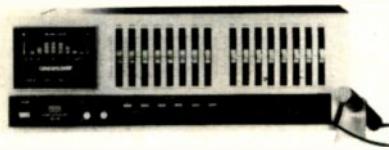
5000A Click and Pop Filter

Filter is designed to eliminate or considerably reduce audible effects of scratches, grit, mistracking, static, imperfections, and normal wear of records during normal play and tape recording. Frequency response 20-20,000 Hz ± 1 dB; S/N ratio greater than 96 dB; THD and IM less than 0.1%; $10\frac{1}{4}$ "W \times $9\frac{1}{4}$ "D \times $3\frac{1}{2}$ H; 8 lb \$225

SANSUI

SE-9 Graphic Equalizer

Microprocessor-controlled stereo graphic equalizer with unique motorized fader-setting system, 4-curve memory storage, spectrum-analyzer display, built-in pink-noise generator, and external electret condenser microphone. All 16 (8 bands \times 2 channels) frequency controls are dual slide potentiometers, one section boosting/cutting its band by ± 12 dB, the other producing a varying dc voltage for physically positioning the sliders. Using the automatic adjustment procedure, fader-to-fader interaction is minimized. Automatic setup procedure requires only 30 seconds overall. Left/right frequency spectra are shown on a gas-display calibrated in 3-dB increments over a 24-dB



range. Under and over LEDs warn of out-of-range conditions. Features 2-way dubbing, 2-deck monitoring facilities. Center frequencies 80, 160, 315, 630, 1.25k, 5k, and 10k Hz; in/out level 1 volt with flat control settings; THD 0.008%; frequency response 10-100,000 Hz $+0/-1$ dB; S/N ratio 105 dB; input/output impedance 30k/600 ohms

SE-9S. SE-9 with brushed-aluminum front panel \$700
SE-9B. SE-9 with matte black front panel and rack-mounting hardware \$700

SE-8 Graphic Equalizer

Ten-band stereo graphic equalizer with spectrum-analyzer display. Features 2-tape-deck monitoring facilities; analyzer calibration control; silver or rack-mountable matte black finish. EQ center frequencies 32, 63, 125, 250, 500, 1k, 2k, 4k, 8k, and 16k Hz; boost/cut range ± 12 dB; THD 0.008%; S/N ratio 110 dB; frequency response 10-100,000 Hz $\pm 0/-1$ dB \$400

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, ± 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; $6\frac{1}{2}$ "H \times 19 "W (with detachable handles for rack mounting) \times $11\frac{1}{4}$ "D \$300
SE-7S. Same as SE-7B but with brushed aluminum finish faceplate and rosewood cabinet; $6\frac{1}{2}$ "H \times $17\frac{1}{2}$ "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, ± 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; $4\frac{1}{2}$ "H \times 19 "W (with handles) \times $11\frac{1}{4}$ "D \$230

RA-700 Reverberation Amplifier

Continuously adjustable reverb time with visual indication; can handle two tape recorders simul-

taneously; adds echo effects during recording or playback; frequency response 20-30,000 Hz ± 2 dB (at reverb time min.), 20-30,000 Hz ± 10 dB (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; $4\frac{1}{2}$ "H \times $11\frac{1}{2}$ "W \times $10\frac{1}{2}$ "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 ± 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; $1\frac{1}{4}$ "H \times $17\frac{1}{2}$ "W (19" with handles) \times $11\frac{1}{4}$ "D \$300

PLUS N33 Noise-Reduction System

Super D noise-reduction system uses companding scheme. Features a phase-compensated band-splitting filter; "Decliner" 2:1 compansion; optimized level sensing; mic/line mixing; fluorescent peak-reading signal-level meters; MPX filter Dynamic range 100 dB; frequency response 10-30,000 Hz ± 1 dB; THD 0.08% at rated output, 1 kHz; noise reduction 40 dB maximum using a tape deck with 50-dB minimum S/N ratio; mic level/impedance 0.3 mV/400-10,000 ohms; record/playback line input level/impedance 100 mV minimum/50k ohms; encode output level/impedance 80 mV/2k ohms; decode output level/impedance 530 mV/2k ohms; $17\frac{1}{2}$ "W \times $10\frac{1}{4}$ "D \times $1\frac{1}{4}$ "H \$300

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 ± 2 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 ± 0.5 dB; THD 0.01% at 1V 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, 500, 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 \$315

M63 Audio Master®

Combination equalizer, noise-reducer, and dynamic range enhancer/compressor system; two high-level inputs and five outputs (high-impedance high-level mic, 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; $2\frac{1}{2}$ "H \times

$11\frac{1}{4}$ "W \times 6 "D \$205

M610 Feedback Controller

Cut-only equalizer with notch filters centered at 63, 125, 250, 500, 1000, 2000, 4000, and 8000 Hz; bypass switch; level control; hi/lo-Z microphone and AUX inputs and outputs. 108-132 V ac; 50/60 Hz; $2\frac{1}{4}$ " \times $11\frac{1}{4}$ " \times 7 " \$210

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 ± 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 phone jack (headphone); supplied with 75-ohm coaxial cable with phono plugs, RK-112 connecting cord, power cord, and demo tape; $7\frac{1}{2}$ "H \times $18\frac{1}{2}$ "W \times $15\frac{1}{2}$ "D \$5500

SOUND CONCEPTS**SD550 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; $3\frac{1}{2}$ "H \times $15\frac{1}{2}$ "W \times 9 "D \$739

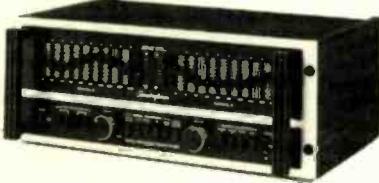
IR2100 Image Restoration System

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 \$249

SOUNDCRAFTSMEN**SP4002 Signal Processor/Preamplifier**

Ten-band two-channel graphic equalizer/preamplifier. Equalizer: center frequencies set at 30, 60, 120, 240, 480, 960, 1920, 3840, 7680, and 15,360 Hz, ± 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: fea-

tures two stereo or four mono phono preamps, each with inputs, outputs, and independently variable ± 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; ± 20 dB stepped level control; frequency response 5-100,000 Hz ± 0.25 dB (hi level), 20-20,000 Hz ± 0.5 dB (phono); THD and IM dist. 0.01% at 1 V; phono impedance 47k or 100k ohms switchable; phone 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

AS1000-Auto Scanalyzer

Extremely accurate (0.1 dB) differential comparator analyzer with 100-LED (10-octave) real-time bar-graph display. Display has 54-dB total range in 2-dB steps with 18-dB "window". Built-in pink-noise generator with adjustable level; differential comparator has autoscans mode with adjustable sweep rate from 0.1 to 10 seconds/octave; high-level input for analysis of three-head tape deck or any signal processor; 3 $\frac{1}{2}$ " \times 19" rack mount front panel \times 10" D; walnut end panels included..... \$499

TG3044-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 $\frac{1}{2}$ octave and six center frequencies set at 1600, 2500, 4000, 6300, 10,000 and 16,000 Hz on alternate $\frac{1}{2}$ 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 $\frac{1}{4}$ " H \times 19" W \times 11" D..... \$599

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, ± 12 dB boost or cut with zero-gain slide controls; includes pink noise generator, 12-in pink noise test record, and Computone charts..... \$499

TG2245 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); ± 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..... \$399

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; ± 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

STANTON

BA-26 Pre-Preamplifier

Designed to amplify signals from any low-output, low-impedance cartridge to level of conventional magnetic cartridges. Flat response down to 5 Hz; insensitive to hum pickup; voltage gain 26 dB; frequency response 10-100,000 Hz ± 5 dB; THD less than 0.08% at 200 mV output; channel separation 60 dB minimum; maximum input level 0.03 V rms at 1 kHz; output 0.8 V rms; input impedance 6k ohms; output impedance 1.2k ohms; powered by 3 C cells; 1.2 lb..... \$189

310 Professional Phono Preamp/EQ

Phono preamplifier/equalizer designed to correctly interface all Stanton and selected magnetic phono cartridges for optimum playback of records and calibration of audio systems. Features universal mounting brackets; instant selection of flat or NAB postemphasis curves; switchable rumble filter; individual gain adjust and high-frequency responses; trim of capacitive cartridge loading; 117/230-V 50/60-Hz operation and immunity to external ac fields. Output 20 dBm maximum; frequency response ± 0.5 dB 20-20,000 Hz flat and NAB positions of mode selector; THD less than 0.05% at 20 dBm; output source impedance 5 ohms; designed for loads of 150 ohms or higher; gain adjustable 30-60 dB; maximum input level 120 mV at 1 kHz; input resistance 47k ohms; channel separation 60 dB minimum, 20-15,000 Hz; 7 $\frac{1}{4}$ " W \times 5" D \times 2 $\frac{1}{4}$ " H..... \$240

SUPEREX

GEM-1 Graphic Equalizer

Five-band stereo graphic equalizer module with center frequencies set at 60, 240, 1000, 3500, and 10,000 Hz, ± 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 ± 0.5 dB; HD 0.02% at 0 dB gain; rated output 2 V rms; dynamic range 8.5

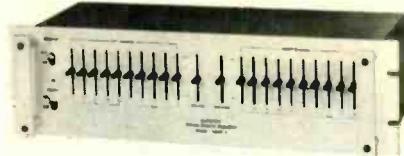
V; S/N 92 dB; input impedance 50k ohms; output impedance 600 ohms \$90

GEM-2 Graphic Equalizer

Provides equalization control at the important high and low ends (high treble and deep bass) and mid-high range. Each stereo channel has five slide controls with center frequencies at 38, 68, 240, 1.6k, and 15k Hz. Features exclusive three-tape function system to permit recording with equalization, playing back with equalization, and tape monitoring. Frequency response 10-150,000 Hz ± 0.5 dB; max. gain/attenuation ± 14 dB; gain at flat setting 0 dB; distortion at 1 kHz 0.02% at 0 dB gain; output 2 V rms; dynamic range 8.5 V rms (flat settings); S/N 92 dB at rated output; input/output impedance 50k/600 ohms; inputs EQ in, tape play; outputs EQ out, tape record \$120

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, ± 14 dB; has separate volume and balance slide controls and on/off monitor switch. Frequency response 20-20,000 Hz ± 0.5 dB; HD 0.04%; S/N 85 dB; input impedance 68k ohms; output impedance 600 ohms; rack mountable \$240

GEM-4 Varigraphic Equalizer

Stereo bi-FET equalizer with variable center-frequency potentiometers that provide "parametric-like" control, true EQ curve modifier, and total tape-recording flexibility with switching facilities for EQing during recording and/or playback. Features five slide and five rotary controls per channel with frequencies at 33-78 Hz, 110-260 Hz, 470-1.1k Hz, 1.9-4.5 kHz, and 6.8-16 kHz. Boost/cut range ± 14 dB; frequency response 10-50,000 Hz ± 2 dB; THD less than 0.01% at 1 kHz; S/N 94 dB IHF A weighted; input/output impedance 100k 100 ohms; output 6 V rms max. with 10,000-ohm load; gain unity (0 dB) in flat positions; center Q 2.5; power consumption 3 W nominal; 19" W \times 7.4" D \times 5.3" H; 11 lb..... \$210

GEM-7 Parametric Equalizer

Stereo parametric equalizer in which each channel has four separate EQ sections and each section incorporates separate frequency and bandwidth level controls. Variable-frequency controls on each channel are logarithmically paired. Features bi-FET technology; complete tape deck switching capability with separate switching for recording with EQ, playing back with EQ, and conventional monitoring function; handles and standard front-panel rack mount notches. Frequency selection continuously variable 30-820 Hz and 820-16k Hz; boost/cut range ± 18 dB (± 36 dB possible with two bands set for identical frequency), continuously variable; bandwidth 0.16-2 octaves, continuously variable; frequency response 5-100,000 Hz ± 2 dB with controls flat; THD less than 0.01%; IMD less than 0.005%; S/N 89 dB IHF A weighted; input output impedances 50k/100 ohms; output 6 V rms max. with 10k load; gain 0 dB controls flat; power consumption 3 watts nominal; 19" W \times 7.4" D \times 5.3" H; 11 lb \$450

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"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

Audio Signal Restoration Unit

Audio signal restoration unit noise filter and dynamic range expander designed to increase apparent dynamic range of good-to-excellent audio signals. Features dynamically variable filter and dynamic range expander to improve normal material without encoding/decoding; bandwidth-determining control signal derived by very accurate feedback technique; variable noise reduction that allows user to set tradeoff between effectiveness and potential side effects; fixed 8.5-dB expander with very shallow expansion slope to virtually eliminate side effects; very little low-bass expansion. S/N ratio 0.5 V rms reference 90 dB IHF A weighted, noise filter set to maximum, expander on; THD 0.1% noise filter, 0.2% noise filter and expander; frequency response 20-20,000 Hz \pm 1 dB; noise-filter bandwidth 1200-25,000 Hz +0/-3 dB; Kit.....\$110 Assembled.....\$180 EX-1 expander kit.....\$60 EX-1 assembled.....\$95

LFF-1 Low-Frequency Filter

Filter designed to improve sound of high-quality systems. Features steep 18-dB/octave cutoff subsonic filter with 20-Hz cutoff frequency to eliminate inaudible power-wasting record warps; low-frequency rumble cancellation circuit that combines bass signals below 140 Hz into single mono signal; acoustic feedback reduction. Crossover frequency 140 Hz; frequency response 20-20,000 Hz \pm 1 dB; both channels driven; differential rumble rejection 20 dB at 20 Hz; separation 25 dB above 1 kHz, 35 dB above 3 kHz; rated output 0.5 V rms; S/N ratio 100 dB; THD 0.02%, 20-20,000 Hz; max. output greater than 5 V rms. LFF-1 low-frequency filter kit.....\$50 LFF-1A assembled version.....\$85 LFF-Kernal add-on for ASRU/EQ-2.....\$15

TEAC

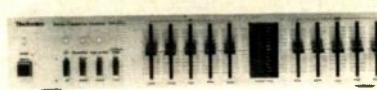
GE-20 Graphic Equalizer

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; max. output level +18 dB at 8V.....\$350

TECHNICS

SH-8015 Graphic Equalizer

Stereo graphic equalizer with illuminated display that indicates the variable ranges. Features dual 5-band equalization for each channel (63, 240,



1k, 4k, 16 kHz \pm 12 dB range); equalizer on/off switch; equalizer position switch; tape monitor switch with LED indicator that permits monitoring signal source/tape deck output. Frequency response 5-100,000 Hz \pm 3 dB; max. output 6 V; THD 0.02%; input sensitivity 0.5V; S/N ratio 101 dB IHF A weighted at 1 V output; overall gain \pm 0 dB; output voltage 0.5 V at 0.02% THD; power consumption 12 W; $15\frac{1}{2}$ "W \times 10%"D \times 3%"H.....\$200

SH-8010 Graphic Equalizer

Stereo graphic equalizer with 5 controls for each channel. Features low-distortion circuitry; low-noise, high-gain operational amplifier (op-amp) circuitry; equalizer on/off bypass switch; tape monitor switch; equalizer on indicator; die-cast cabinet.....\$200



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 buses, 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 echo buss; monitor buss); equalization controls set at 12,500, 3700, 250, and 80Hz with \pm 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/ μ sec; S/N 80 dB; $9\frac{1}{2}$ "H \times 36%"W \times 31%"D.....\$3695

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%"H \times 19"W \times 5%"D.....\$875

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 \pm 3 dB at 2.0 V rms at program output; illuminated VU meters for both output channels; bass/treble/stereo balance controls; 1 $\frac{1}{2}$ " 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

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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 × 13^{13/16}" W × 5^{1/2}" D..... \$150
 CD-5 Similar to CD-10 except three recorder capacity; 4" H × 9^{3/16}" W × 4^{1/2}" 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 ±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/μsec (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 ±0.25 dB; bass equalization ±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), 6dB (mix), 20 dB (line amp); overload 315 mV; slew rate 9V/μsec; 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/μsec; frequency response 20-20,000 Hz ±0.1 dB; rack mountable 7" H × 19" W... \$900

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, ±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

Kit..... \$6400
 1204RS. Wired version..... \$9900

PIONEER

MA-62A 6-Channel Mixer

Has input facilities for up to six mikes, each channel has alternative terminal for line or

mountable 8^{3/4}" H × 19" W \$450

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/phono/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 ±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

LT SOUND

MX-8 Mixing Board

8 × 2 mic/line mixer uses 8 balanced ultralow-noise solid-state microphone preamplifiers. Designed for studio and portable recording and PA use. Features gain control; echo; cue; solo; rotary fader control; 2 main outputs. Maximum output level +22 dBV; S/N ratio greater than 85 dB; low and high boost/cut 18 dB..... \$349

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^{1/2}" H × 7^{1/2}" W × 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 × 9^{1/2}" W × 5^{1/2}" D..... \$150

OPAMP LABS

1204 RS 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 buses; 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^{1/2}-in lighted VU meters for output assign channels, two 4^{1/2}-in lighted VU meters for stereo mixdown; four master pots; eight mono earphone 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..... \$6400
 1204RS. Wired version..... \$9900

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^{1/2}" H × 15^{1/2}" W × 10^{1/2}" D \$295

SANSUI

MA-7 Monitor Consolette

Monitor consolette features dual-function peakhold 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 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 and tape); max. output 5 V into 47k ohms at 0.1% THD; 4^{1/2}" H × 16^{13/16}" W × 11^{1/4}" D..... \$300

SHURE

M67 Professional Mixer

Professional mixer provides four low-impedance, transformer-coupled balanced microphone inputs, one convertible to line input. Balanced 600-ohm line and mike-level outputs; illuminated VU meter calibrated for +4 and +10 dBm output; very low noise and r-f susceptibility design; 108-132 V ac, 50/60 Hz; 11^{13/16}" W × 7^{1/2}" D × 2^{1/2}" H..... \$330

M267 Professional Mixer

Professional mixer for recording or broadcast use. Four low-impedance balanced inputs switchable to mike or line level; simplex (phantom) power on each input; fast-acting limiter; built-in battery supply; headphone amplifier with level control; illuminated VU meter with LED peak level indicator; low-cut filters and tone oscillator; battery check switch; mix bus jack; mic and line level outputs; master volume control; 120 V ac, 50/60 Hz, 9.5 W; battery power; 11^{13/16}" W × 7^{1/2}" D × 2^{1/2}" H..... \$395

M68 Microphone Mixer

Mixer has independent volume controls and a master volume control that simultaneously adjusts gain of all inputs; three-pin audio input connectors; 120 V ac (±10%), 50/60 Hz, 3 W; 11^{13/16}" W × 5^{1/2}" D × 2^{1/2}" H..... \$195

M68FC. Input connections are professional three-socket connectors for 120 V ac (±10%, 50/60 Hz, 3 W)..... \$195

M268 Microphone Mixer

Five-channel mixer featuring four high/low-impedance microphone inputs and one AUX-level input; simplex (phantom) power on each mic input; mix bus jack; regulated power supply; 120 V ac, 50/60 Hz, 5 W; 11^{13/16}" W × 7^{1/2}" D × 2^{1/2}" H..... \$225

SONY

MX-20 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; $7\frac{1}{2} \times 16\frac{1}{2} \times 18\frac{1}{2}$ " 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 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 $3\frac{1}{2} \times 17\frac{1}{2} \times 10\frac{1}{2}$ " 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; $3\frac{1}{2} \times 17\frac{1}{2} \times 10\frac{1}{2}$ " 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; $3\frac{1}{2} \times 13\frac{1}{2} \times 9\frac{1}{2}$ " 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; $1\frac{1}{2} \times 10\frac{1}{2} \times 6\frac{1}{2}$ " H $\times 10\frac{1}{2} \times 6\frac{1}{2}$ " D \$70

MX-5.

Similar to MX-7 except three-in/one-out mic mixer for mono recordings; $2\frac{1}{2} \times 9\frac{1}{2} \times 5\frac{1}{2}$ " D \$45

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; $7\frac{1}{2} \times 27\frac{1}{2} \times 26.5$ " D \$2895

C-8E II. Expands C-12 to 20, 28, or more inputs; self-powered with LED indicator and ac accessory receptacle \$1995

72 Series Advanced 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/ μ sec; 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; $8.5 \times 21.5 \times 16$ " D \$1495-\$3395

7416. Similar to 7212 except has 16 in/4 sub-group direct out/stereo and mono out format; also available with 8, 24, and 32 channels; $8.5 \times 31.5 \times 16$ " D \$2295-\$5995

TASCAM by TEAC

Model 1 Studio Series 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 ($\times 8$) and buss in ($\times 2$) impedance 30k ohms and nominal input level -10 dB; line outs aux. out ($\times 2$) and cue out ($\times 8$) load impedance 10k ohms and nominal output level -10 dB; headphones ($\times 2$) load impedance 8 ohms; S/N 78 dB weighted; frequency response 30-20,000 Hz ± 1 dB; crosstalk -50 at 1kHz; 0.3% THD max; 117-V ac, 60 Hz, 8W; $4\frac{1}{2} \times 17\frac{1}{2} \times 10$ " D \$200

Model 3 Studio Series Mixer

8-in/4-out mixing console accepts up to 8 microphones, 8 line-level inputs, or phono inputs, or any combination of line/mic/phono inputs. Mic input impedance/nominal level 100k ohms high, greater than 1k ohm low/-50 dB (3 mV); phono input impedance/nominal level greater than 47k ohms/-54 dB at 1 kHz; line input impedance/nominal level greater than 20k ohms/-10 dB (0.3 V); line/aux output

impedance/nominal level greater than 10k ohms/-10 dB (0.3 V); monitor output impedance/nominal greater than 10k ohms/-2 dB (0.78V); headphone impedance/power 8 ohms/1 W rear panel, 100 mW front panel; frequency response 30-20,000 Hz ± 2 dB; S/N ratio at nominal input levels weighted/unweighted greater than 60 dB with 8 mic inputs, 73 dB with 8 line inputs, 65 dB with one phono input; equalization ± 15 dB continuously variable; crosstalk greater than 60 dB at 1 kHz; THD 0.3% maximum; fader attenuation greater than 60 dB; accessory send and receive data impedance/nominal level 10k ohms/-10 dB (0.3 V); monitor input impedance/nominal level greater than 10k ohms/-2dB (0.775 V); submix input impedance/nominal level greater than 10k ohms/-10 dB (0.3 V); power consumption 18 W; $20\frac{1}{2} \times 18\frac{1}{2} \times 6\frac{1}{2}$ " H $\times 10\frac{1}{2}$ " D \$1275

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 $\frac{3}{4}$ ips; wow and flutter 0.04% weighted; frequency response 20-18,000 Hz; S/N 63 dB; crosstalk 50 dB at 1000 Hz \$1200

System 20 Mixing Console

Professional-style audio mixing console consisting of four modular assemblies.

MM-20. Main mixing chassis with 2 mic and 4 line inputs. Features transformer-isolated mic preamps; tape/mic (live) overdub capability; headphone monitoring; corrective EQ; XLR mic input connectors; -20-dB mic attenuator switches; trimpots; accessory send/receive jacks; W-pot pre/post fader; direct output; panpots; buss input jacks; master monitor and headphone level controls; dc outputs for other modules. Mic input impedance/nominal level 600 ohms balanced/-60 dBV (1 mV); line input impedance/nominal level 50k ohms/-10 dBV (0.3 V); line output impedance/nominal level 3k ohms/-10 dBV (0.3 V); headphone output impedance/nominal power 8 ohms/100 mW; frequency response 30-20,000 Hz ± 2 dB; S/N ratio A weighted/unweighted mic 60 dB, line 75 dB; crosstalk greater than 60 dB at 1 kHz; THD less than 0.1% at 1 kHz; fader attenuation 60 dB or more; trim range ± 10 dB (line/mic); power consumption 15 W at 120 V ac, 60 Hz; $16.9 \times 15.8 \times 4.2$ " H; 9.2 lb \$395

EX-20. Expander module adds 4 transformer-isolated mic inputs to MM-20 and complete patch bay. Features 4 mixing positions; accessory patch points; direct outputs. Specifications the same as for MM-20 except power consumption 170 mA at +12 V dc (obtained from MM-20); 9.6" W; 4.4 lb \$325

PE-20. 4-input/4-output/4-channel parametric equalizer for System 20. EQ frequencies: low 60-1.5k Hz adjustable, middle 1-8 kHz adjustable, 10 kHz fixed, ± 12 -dB range; S/N ratio better than 80 dB; crosstalk better than 60 dB; THD less than 0.1% at 1 kHz; input impedance/

(continued on page 225.)



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The RE518 features a Quartz Digital Synthesizer that electronically locks into a selected radio frequency. Tuning is extremely accurate because there is no mechanical drift from temperature variations or vibrations.

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buttons on the RE518 control refinements like equalization for normal or metal and chrome tape playback. And conveniences such as electronic pre-set tuning, seek, scan, and digital readouts.

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CIRCLE NO. 50 ON READER SERVICE CARD

15

CAR STEREO EQUIPMENT

ADS

Power Plate 100 Power Amplifier

Slim-line design stereo power amplifier with built-in equalizer, subsonic filter, and remote turn-on. Output power 50 W/channel continuous into 4 ohms, 20-20,000 Hz at 0.8% THD; frequency response 30-20,000 Hz ± 0.5 dB; S/N ratio 90 dB; 13.5-V, negative-ground power requirements; flat black finish; optional bolt-on handles available; 12 $\frac{1}{4}$ "W \times 6 $\frac{1}{4}$ "D \times 1 $\frac{1}{16}$ "H (2 $\frac{1}{4}$ "H with handles) ... \$300

ALPINE

7308 AM/FM-Stereo/Cassette Player

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/CrO₂/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 watts per channel continuous; 2" H \times 7 $\frac{1}{16}$ "W \times 6 $\frac{1}{4}$ "D..... \$800

7136 AM/FM-Stereo/Cassette Player

In-dash unit with PLL frequency synthesizer, digital tuned frequency display, 10-station



preset capability, and auto-reverse cassette deck. Features SCC tape head; auto reverse at end of play, fast forward, or rewind; ignition-key-off eject; metal/stereo dual-function switch; balance control; local/distant switch; preamp fader control; Tone Tenor control; automatic loudness adjustment; Dolby noise-reduction system; built-in engine noise suppressor; locking fast forward/rewind; power antenna lead; tape-direction indicators. Amplifier output 6 watts at 1 kHz, 8% THD; speaker impedance 4 ohms. Wow and flutter 0.1% wrms; frequency response ± 3 dB 40-16,000 Hz metal, FeCr, and

CrO₂, to 13 kHz normal tape; S/N ratio 65 dB Dolby on, 55 dB Dolby off; separation 40 dB. FM usable sensitivity 16.3 dBf; alternate-channel selectivity 80 dB; S/N ratio 70 dB Dolby on, 60 dB Dolby off; capture ratio 2 dB; 6 $\frac{1}{4}$ "W \times 5 $\frac{1}{8}$ "D \times 2 $\frac{1}{8}$ H..... \$450

7206 AM/FM-Stereo/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; CrO₂/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 μ V; FM S/N 72 dB (Dolby on); FM capture ratio 1.5 dB; dist. 0.8% at 10 W continuous..... \$430

7205. Similar to 7206 without CrO₂/FeCr switch and music sensor..... \$380

7204. Similar to 7205 without four-way fader/balance control..... \$330

7307 Preamp/Tuner/Cassette Player

In-dash AM-stereo FM tuner/preamplifier/stereo cassette deck. Cassette deck features Dolby noise-reduction system, CrO₂/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 μ V; FM S/N 72 dB (Dolby on); FM capture ratio 1.5 dB..... \$400

7138 AM/FM-Stereo/Cassette Player

In-dash unit with PLL frequency synthesizer, digital tuned-frequency display, and 10-station preset capability. Features SCC head; memory logic electronics; Dolby noise-reduction system; auto seek metal/stereo dual-function switch; stereo indicator; Tone Tenor control; automatic loudness adjust; built-in engine noise suppressor; local/distant switch; digital clock; manual up/down tuning; locking fast forward/rewind; Cassette Glide loading system; tape-direction indicators; program switch; power antenna lead. Amplifier output 6 watts at 1 kHz, 8% THD; speaker impedance 4 ohms. Wow and flutter 0.1% wrms; frequency response ± 3 dB 40-16,000 Hz metal, FeCr, CrO₂, and to 13 kHz normal tape; S/N ratio 65 dB Dolby on, 55 dB Dolby off; separation 40 dB. FM usable sensitivity 16.3 dBf, alternate-channel selectivity 80 dB; capture ratio 2 dB;

7"W \times 5 $\frac{1}{4}$ "D \times 2"H..... \$350

7202 AM/FM-Stereo/Cassette Player

In-dash unit with Dolby noise-reduction system. Features electronic-glide cassette eject; automatic replay at end of rewind; auto eject at end of play/fast forward; separate bass and treble controls; mute switch; loudness contour. Amplifier output 8 watts continuous; speaker impedance 4 ohms. Wow and flutter 0.13% wrms; frequency response 40-12,000 Hz; S/N ratio 65 dB Dolby on. FM usable sensitivity 1.4 μ V; S/N ratio 72 dB Dolby on; capture ratio 1.5 dB..... \$330

7201. Similar to 7202 but without Dolby noise reduction and four-way variable fader/balance control..... \$280

7123 AM/FM-Stereo/Cassette Player

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/CrO₂/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 \times 7 $\frac{1}{16}$ "W \times 5 $\frac{1}{8}$ "D..... \$330

7128 AM/FM-Stereo/Cassette Player

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 μ V/75 ohms, selectivity 50 dB, and S/N 55 dB; accepts variety of 3000 Series components through DIN jack connection; 2"H \times 7"W \times 5.25"D..... \$300

7327 AM/FM-Stereo/Cassette Player

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, feathertouch loudness, mute, and AM/FM switches, auto local/distant, built-in afc, and LED stereo indicator; FM usable sensitivity 1.8 μ V/75 ohms, selectivity 60 dB, and S/N 72 dB with Dolby; preamp/deck capability through DIN jack; 2" H \times 6.25" W \times 4.5" D \$300

7121 AM/FM-Stereo/Cassette Player

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 ± 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 (± 10 dB at 10,000 Hz); built-in afc; FM usable sensitivity 1.8 μ 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 \times 7" W \times 5.25" D \$280

7120. Similar to 7121 without cassette Dolby noise-reduction system and key-off eject; tape S/N 55 dB \$230

7124. Same as 7120 except designed for all cars, including X-body models; no built-in afc; 2" H \times 6.25" W \times 4.5" D \$230

7100 AM/FM-Stereo/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 μ V; FM selectivity 70 dB; FM S/N 62 dB; auto afc and power antenna lead \$200

7125 AM/FM-Stereo/Cassette Deck

In-dash unit with auto-reverse cassette player with metal/stereo dual-function switch. Features auto-reverse at end of tape play; hard



permalloy tape head; locking fast forward/rewind; built-in afc (automatic frequency control); automatic local/distant switching; Cassette Glide mechanism that pulls cassette into play position; power-antenna lead; program switch; stereo indicator; tape-direction indicators. Tape wow and flutter 0.1% wrms; frequency response ± 3 dB 40-12,000 Hz normal, to 15 kHz metal/CrO₂/FeCr tape; S/N ratio 55 dB; FM usable sensitivity 16.3 dBf (1.8 μ V); alternate-channel selectivity 60 dB; AM suppression 45 dB; S/N ratio 65 dB; stereo separation 35 dB at 1 kHz; capture ratio 2.0 dB; output power 6 W at 1 kHz, 8%, 2.2 W,

70-20,000 Hz at 0.8% THD; speaker impedance 8 ohms \$200

Under-Dash Units

5400 Cassette Player/Amplifier/Equalizer

Under-dash system with auto-reverse cassette deck, power amplifier, graphic equalizer, and Dolby noise-reduction system. Features 12-dB, 5-band graphic equalizer with slide controls, SCC tape head; locking fast forward/rewind; metal/CrO₂ switch; output power level indicators; Automatic Cassette Glide (automatically loads cassette into transport); auto reverse at end of play, fast forward, and rewind; ignition-key-off eject; loudness contour; tape-direction indicators; program switch; balance control; volume control detent. Amplifier output 8 W/channel at 0.8% THD; frequency range 40-20,000 Hz. EQ center frequencies 60, 250, 1k, 3.5k, 10k Hz. Wow and flutter 0.1% wrms; frequency response ± 3 dB 40-13,000 Hz normal, to 16 kHz metal, FeCr, and CrO₂ tape; S/N ratio 65 dB Dolby on, 55 dB Dolby off; separation 40 dB; 6" W \times 5 $\frac{1}{2}$ " D \times 2 $\frac{1}{2}$ " H \$300

7114 Music Sensor™ Cassette Player

Compact under-dash cassette player with metal/CrO₂/normal tape capability. Features SC tape head; Cassette Glide mechanism that pulls cassette into play position; locking fast forward/rewind; Music Sensor that automatically scans forward to next selection in fast forward or replays same selection in rewind mode; auto replay at end of rewind; separate bass and treble controls; balance control. Wow and flutter 0.14% wrms; frequency response ± 3 dB 40-16,000 Hz normal, to 18 kHz metal/CrO₂/FeCr tapes; S/N ratio 55 dB; output power 6 W at 1 kHz, 8% THD, 2.2 W, 70-20,000 Hz, 0.8% THD; speaker impedance 4 ohms; 6 $\frac{1}{4}$ " D \times 5 $\frac{1}{2}$ " W \times 2" H \$150

7115 Auto-Reverse Cassette Player

Compact under-dash cassette player with auto-reverse transport and metal/CrO₂/FeCr/normal tape capability. Features auto reverse at end of play, fast forward, or rewind; SCC tape head; locking fast forward/rewind; Cassette Glide mechanism that pulls cassette into play position; program switch; separate bass and treble controls; tape-direction indicators. Wow and flutter 0.14% wrms; frequency response ± 3 dB 40-13,000 Hz normal, to 16 kHz metal/CrO₂/FeCr tapes; S/N ratio 55 dB; output power 6 W at 1 kHz, 1.0% THD, 2.2 W, 70-20,000 Hz, 0.8% THD; speaker impedance 4 ohms; 6 $\frac{1}{4}$ " D \times 5 $\frac{1}{2}$ " W \times 2" H \$150

7216 FM-Stereo/Cassette Player

Under-dash FM-stereo cassette player with auto-reverse cassette transport. Features SCC tape head; metal/CrO₂/FeCr/normal tape capability; locking fast forward/rewind; Cassette Glide mechanism that pulls cassette into play position; built-in afc (automatic frequency control); separate bass and treble controls; tape-direction indicators; program selector. Wow and flutter 0.14% wrms; frequency response ± 3 dB 40-13,000 Hz normal, to 16 kHz metal/CrO₂/FeCr tapes; S/N ratio 55 dB; FM usable sensitivity 3 μ V; alternate-channel selectivity 60 dB; S/N ratio 62 dB; stereo separation 35 dB at 1 kHz; capture ratio 3.5 dB; output power 15 W at 1 kHz, 8% THD, 7 W, 40-20,000 Hz, 0.8% THD; speaker impedance 4 ohms; 6 $\frac{1}{4}$ " D \times 5 $\frac{1}{2}$ " W \times 2" H \$220

AIWA

M-101 Series

Home/car stereo system consisting of SA-A10U integrated amplifier, ST-R10U stereo tuner, and SD-L10U stereo cassette deck \$490

SA-A10U Integrated Amplifier. Stereo integrated amplifier with built-in phono equalizer; LED peak-power indicators; loudness switch. Output

power 11 W/channel into 4 ohms, 50-20,000 Hz at 1.5% THD. Car adaptor CD-123 optional \$140

ST-R10U Stereo Tuner. AM/FM-stereo tuner with input noise blower to suppress ignition noise; auto blend; 3-LED bow-tie tuning indicator; variable mute control. Car adaptor CD-123 optional \$140

SD-L10U Stereo Cassette Deck. Cassette deck with 2-color 5-LED speak signal-level displays; metal-tape compatibility; full auto stop; mic inputs on rear panel; 3-digit tape counter. Car adaptor CD-123 optional \$210

AUDIOVOX

AVX-950 AM/FM-Stereo/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; pushbutton 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 \times 7 $\frac{1}{8}$ " W \times 6" D. \$442

HCC-1026 AM/FM-Stereo/Cassette Player

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 μ 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, FM mute, loudness pushbuttons; front-to-rear fader; separate bass and treble, tuning, volume, and balance controls; 10 W/ch with 1% THD; frequency response 40-15,000 Hz -3 dB; S/N 62 dB (Dolby off), 65 (Dolby on); FM image rejection 65 dB; FM i-f rejection 80 dB; stereo separation 35 dB; supplied with 105-mm nosepiece \$390

HCM-003 AM/FM-Stereo/Cassette Player

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

IM-SPC AM/FM-Stereo/Cassette Player

Pushbutton tuning AM/FM-stereo radio with auto-reverse cassette deck and built-in power amplifier. Features DIN-specified size for imported cars; Audiolok FM tuning circuit; locking fast forward/rewind; pushbutton eject; FM muting; separate bass and treble controls \$350.

HCC-565 AM/FM-Stereo/Cassette Player

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 \$370

AVX-680 AM/FM-Stereo/Cassette Player

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 \$320

IM-CXP AM-FM/Cassette Deck

In-dash DIN-specified pushbutton AM-stereo FM radio with new Audiolok FM tuner and cassette

player. Unit features locking fast forward and rewind, stereo/mono, and four-way balancing.....\$290

AVX-685 AM/FM-Stereo/Cassette Player/EQ

In-dash unit combines AM-stereo FM radio with new Audiok FM tuner 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 ±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 µV at 30 dB S/N; FM separation 25 dB; 2 1/2" H × 7 1/2" W × 5 1/8" D.....\$270

AVX-900 AM/FM-Stereo/Cassette Player

Digital AM/FM-stereo radio with quartz lock and stereo cassette player. Features tuned frequency and quartz-regulated time displayed on LED panel display; 4-way balance control; locking fast forward; eject button; AM/FM and local/distant switches.....\$260

HCC-551 AM/FM-Stereo/Cassette Player

In-dash unit combines AM-stereo FM radio and stereo cassette deck; DIN-spec nosepiece designed for domestic and imported cars. Cassette features auto reverse, locking fast forward and rewind, pushbutton eject, and tape program indicators; radio features AM/FM, loudness, 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.....\$240

AVX 730 AM/FM-Stereo/Cassette Player

Pushbutton AM/FM-stereo radio with cassette player designed for import X-body, Citation, and full-sized cars. Features new Audiok FM tuning; complete "Superflex" installation features; 5 pushbutton tuning; 4-way balance; locking fast forward; AM/FM and mono/stereo switches; super-compact chassis. Wow and flutter 0.3% wrms; frequency range 50-10,000 Hz; amplifier output 6 W maximum; FM stereo separation 20 dB; 12-V dc negative ground; 7 1/4" W × 6" D × 2 3/4" H.....\$190

AVX 605A AM/FM-Stereo/Cassette Player

In-dash unit combines AM-stereo FM radio and stereo cassette deck; designed for imported, X-body and Citation cars. Cassette features compact 4 1/2" D chassis; side-load cassette mechanism; 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 µV at 30 dB S/N; supplied with two nosepieces for vertical or horizontal use; three-way trimplate; compact chassis; fully adjustable shafts; 1 3/4" H × 6 1/4" W × 4 1/2" D.....\$164

HCC-500 AM/FM-Stereo/Cassette Player

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 µV for 30 dB S/N; stereo separation 25 dB; 1 1/4" H × 6 1/4" W × 4 1/2" D.....\$150

HI-COMP Line

HCM-006 AM/FM-Stereo/Cassette Player

In-dash modular 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 am-

plifier. Cassette deck features metal 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; preamp output.....\$600

HCC-1200 AM/FM-Stereo/Cassette Player

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, mono/stereo, local/distant, and AM/FM controls, and preamp output jacks; frequency response 50-12,000 Hz; speaker impedance 4 ohms.....\$650

BLAUPUNKT

Berlin 8000 AM/FM-Stereo Cassette Player

In-dash AM/FM-stereo/SW/LW receiver with unique remote-control system and metal-compatible auto-reversing cassette player and Dolby noise-reduction system. Features



electronic scan tuning with 7 station presets; Sound Ambient Level Sensor (SALS) automatic volume adjustment relative to ambient noise; ASU circuitry to suppress FM noise. Output power 20 W/channel; frequency response on tape 30-15,000 Hz ±3 dB; S/N ratio 56 dB with Dolby on; FM sensitivity 1.5 µV.....\$1395

CR3001 AM/FM-Stereo/Cassette Player

In-dash AM/FM-stereo receiver with frequency-synthesized, digitally displayed tuning and metal-compatible auto-reversing cassette player with Dolby noise-reduction system. Features 12-station preset tuning; ASU circuitry to suppress FM noise; switchable equalization for ferric/CrO₂/metal tapes. Output power 15 W × 4 channels; tape response 63-14,000 Hz; wow and flutter 0.15%; FM sensitivity 2.5 µV.....\$630

CR-5001 AM/FM-Stereo/Cassette Player

In-dash AM/FM-stereo receiver with digital clock, 5 AM and 5 FM station preset buttons, and metal-compatible cassette player with Dolby noise-reduction system. Features ASU circuitry to suppress FM noise; switchable EQ for ferric/CrO₂/metal tape; separate bass and treble controls; switchable loudness compensation; local/distant switch; automatic night illumination of controls. Output power 15 W × 4 channels; tape response 40-14,000 Hz; wow and flutter 0.15%; FM sensitivity 2.5 µV.....\$450

CR-2001 AM/FM-Stereo/Cassette Player

In-dash AM/FM-stereo receiver with 5 AM and 5 FM station pushbutton tuning presets and auto-reverse cassette deck with Dolby noise-reduction system. Features ASU circuitry to suppress FM noise; switchable loudness contour to optimize frequency balance. Output power 5 W × 2 channels; tape response 35-14,000 Hz; wow and flutter 0.15%; FM sensitivity 1.8 µV.....\$350

CR-4000 AM/FM-Stereo/Cassette Player

In-dash AM/FM-stereo receiver with manual tuning and auto-reverse cassette deck with Dolby noise-reduction system. Features 4 × 7-W amplifiers to drive two front and two rear speakers with option of add-on power boosters; ASU circuitry to suppress FM noise; local/distant switch; loudness-contour switch; separate bass and treble controls. Tape response 40-14,000 Hz; wow and flutter 0.15%; FM sensitivity 2.5 µV.....\$344

CR-2000 AM/FM-Stereo/Cassette Player

In-dash AM/FM-stereo receiver with ASU circuitry to suppress FM noise and auto-reversing cassette player. Features locking fast-forward/rewind with powered cassette eject; tone and balance controls; local/distant switch. Output power 5 W × 2; tape response 35-10,000 Hz; wow and flutter 0.15%; FM sensitivity 1.8 µV.....\$275

BOSE

CRC Digital Tuner/Cassette Player

DIN-sized in-dash player fits most vehicles manufactured since 1975. Features microprocessor-controlled PLL digital AM/FM-stereo tuner with 12-station preset tuning; seek/scan/manual tuning; 4-digit LED tuned-frequency display with time readout; auto FM mute; local/distant switch; FM fringe blend and noise-cancel switches; powered antenna lead; auto-reverse cassette transport with Dolby noise-reduction system; normal/CrO₂/metal playback-EQ selector;



Permalloy tape head; locking fast forward/rewind; separate volume, balance, bass, treble controls; low-level preamp outputs to connect directly to 1401 booster/equalizer.....\$499

1401™ Direct/Reflecting® Car Speaker

4-speaker car-stereo system with under-dash 1401 booster/equalizer with 4 separate 25-W power amplifiers. Features active electronic equalization; Spatial Control™; low-frequency control; high-frequency switch; 2 full-range Direct/Reflecting speaker assemblies with adjustable energy controls; 2 full-range door speaker assemblies. System connects directly to integrated or component-type front-end units with high- and low-level input facilities. Speaker mounting dimensions 4 1/2" dia. × 1 1/2" D; booster/EQ dimensions 10" W × 4 1/2" D × 1 1/4" H.....\$400

CLARION

PE959A AM/FM-Stereo/Cassette Player

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 CrO₂ tapes, auto reverse, locking fast forward and rewind, and pushbutton eject. Programmable tun-

er 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 × 7" W × 5½" D \$900

PE956B AM/FM-Stereo/Cassette Player

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 × 5.75" W × 7" D \$500

PE958A AM/FM-Stereo/Cassette Player

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 CrO₂ 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 × 6" W × 5.5" D \$460

PE751B AM/FM-Stereo/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 × 7" W × 6.25" D \$350

PE751C AM/FM-Stereo/Cassette Deck

In-dash Hi-Way Fidelity Series high-power AM/FM-stereo pushbutton receiver and auto-reverse cassette deck. Features 5 station pushbuttons; adjustable shaft; 10 W output power at less than 1% THD per channel; Dolby noise-reduction system on FM and cassette; Magi-Tune FM; stereo and Dolby indicator lights; Sendust tape heads; local/distant switch; locking fast forward/rewind; CrO₂ equalization switch; bass, treble, left/right balance, front/rear fader controls; tape jamming protection system; Z connector; line output; equalizer jack; power antenna lead; 7" W × 6½" D × 2" H; 6½ lb \$350

PE768A AM/FM-Stereo/Cassette Player

Deluxe auto-reverse cassette deck with pushbutton-tune AM/FM-stereo receiver. Features 5-button tuning; Magi-Tune FM; 4 W rms/ch; FET front end; program indicator lights; local/distant, program-selector, and CrO₂ switches; stereo indicator light; line output; 4-way balance control; locking fast forward/rewind; eject button; power antenna lead; ultra-thin chassis design; 7" W × 6" D × 1¾" H; 4½ lb \$273

PE758 AM/FM-Stereo/Cassette Player

In-dash unit combines AM-stereo FM radio and stereo cassette deck; DIN nosepiece 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 × 6" W × 7" D \$273

PE765A AM/FM-Stereo/Cassette Player

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 × 5.5" W × 7" D \$255

PE572A AM/FM-Stereo/Cassette Player

Deluxe auto-reverse cassette deck with AM/FM-stereo radio. Features SASC FM; program and stereo indicator lights; local/distant and CrO₂ switches; 4-way balance; locking fast forward/rewind; tone control; power antenna lead; ultra-thin chassis design; amplifier output 4 W rms/channel; 7" W × 6½" D × 1¾" H; 4½ lb \$225

PE550A AM/FM-Stereo/Cassette Player

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 × 6.25" W × 7" D \$255

PE560A AM/FM-Stereo/Cassette Player

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 × 7.125" W × 5.5" D \$216

PE559A. Similar to PE-560A without tape auto reverse and direction indicators and auto stereo/mono switching; has auto eject \$185

PE554A AM/FM-Stereo/Cassette Player

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; 1¾" H × 6½" W × 4¾" D \$135

PE683 AM/FM-Stereo/Cassette Player

In-dash cassette player with AM/FM-stereo receiver. Features auto-stop at end of play;

adjustable shafts; 4 watts rms/channel output power; FET front end; stereo indicator light; end loading; fast forward/ eject; tone and left/right balance controls; local/distant switch; bass-boost circuitry; 7½" W × 5½" D × 2" H; 4½ lb \$120

PE624A AM/FM-Stereo/8-Track Player

In-dash 8-track player with AM/FM-stereo receiver. Features adjustable shafts; FET front end; vertical head tracking; 4 program indicator lights; automatic stereo/mono switching; stereo light; tone and balance controls; local/distant switch; dial-in-door; AM/FM slide switch; amplifier output 4 W rms/channel; 7½" W × 5½" D × 2" H; 3 lb \$120

PE838A Stereo Cassette Player

Under-dash auto-reverse cassette player with 4 W/ch amplifier. Features tone control program indicator light; end loading; eject button; left/right balance control; locking fast forward/rewind; 5¾" W × 5½" D × 1¾" H; 6½ lb \$130

PE828A 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; 1¾" H × 5½" W × 5¾" D \$127

PE840A Stereo Cassette Deck

Under-dash cassette playback/amplifier (4 W/ch). Features end loading; locking fast forward; eject button; end-of-tape stop; tone control; slide-type balance control; 5¾" W × 5½" D × 1¾" H; 3½ lb \$69

CRAIG

T687 AM/FM-Stereo/Cassette Player

In-dash entertainment center with scanning electronic tuning and presets for up to five each AM and FM stations. Power Play 4-channel amplifier, and Dolby noise reduction for tape and FM. Features auto-reverse transport; Sendust-alloy tape head; digital display of time and tuned station; separate bass and treble and front and back balance controls; metal/CrO₂ EQ switch; locking fast forward/rewind; loudness control. Power output 12.5 W/ch into 4 ohms 35-20,000 Hz at 1.0% THD; wow and flutter 0.2% wrms; FM usable sensitivity 20.9 dB; FM alternate-channel selectivity 60 dB; capture ratio 2 dB \$550

T693. Similar to T687 but with 6 each FM and AM station presets; 2-channel amplifier (12 W/ch); sensitivity 20.2 dB; selectivity 50 dB; capture ratio 1.5 dB; wow and flutter 0.15% \$400

T690 AM/FM-Stereo/Cassette Player

In-dash receiver/player with five station presets, auto-reverse tape deck, and Dolby noise reduction. Features Sendust-alloy tape head; metal/CrO₂ EQ; separate bass, treble, balance, fader controls; local (mute)/distant and stereo/mono pushbuttons; loudness control; automatic power antenna switching; dial-light dimming; line-level output jacks. Power output 12 W/ch into 4 ohms 120-20,000 Hz at 5% THD; wow and flutter 0.15% wrms; FM usable sensitivity 17.6 dB; FM alternate-channel selectivity 65 dB; capture ratio 1.7 dB \$280

T692. Similar to T690 except no station presets; no Sendust-alloy tape head; no metal/CrO₂ switch; FM sensitivity 20 dB; capture ratio 1.5 dB \$220

T691. Similar to T692 except no Dolby NR; no auto-reverse tape deck \$170

T619 AM/FM-Stereo/Cassette Player

In-dash receiver/cassette player with auto-reverse transport, Electronic Search and Play (ESP), and Dolby noise reduction. Features Sendust-alloy tape head; metal/CrO₂ tape EQ

switch; locking fast forward/rewind; illuminated tape-direction indicators; separate bass, treble, balance and fader controls; separate local/distant and stereo/mono buttons; FM muting; loudness control; power-off eject; automatic power antenna switching; line-level output jacks. Power output 12 W/ch into 4 ohms 80-20,000 Hz at 5% THD; wow and flutter 0.18% wrms; FM usable sensitivity 18.8 dBf; FM alternate-channel selectivity 65 dB; capture ratio 2.0 dB \$250

T641 AM/FM-Stereo/Cassette Player

In-dash unit with 5 preset tuning pushbuttons, auto-reverse tape deck, and power-off eject. Features separate bass and treble controls; loudness control; balance and fader controls; power antenna switching; line-level output jacks. Power output 12 W/ch into 4 ohms 100-20,000 Hz at 5% THD; wow and flutter 0.15% wrms; FM usable sensitivity 21.3 dBf; FM alternate-channel selectivity 60 dB; capture ratio 2.0 dB \$200

T618. Similar to T641 except no present tuning; wow and flutter 0.1%; FM sensitivity 21.8 dBf; capture ratio 2.4 dB \$170

T614. Similar to T618 except no auto-reverse tape deck; no bass and treble controls; power output 4 W/ch; FM sensitivity 22.7 dBf; capture ratio 1.8 dB; wow and flutter 0.12% \$140

T640 AM/FM-Stereo/Cassette Player

In-dash system with auto-reverse tape deck, preset tuning, power-off eject. Features locking fast forward/rewind; separate bass and treble controls; separate local/distant and stereo/mono switches. Power output 4 W/ch into 4 ohms 200-20,000 Hz at 5% THD; wow and flutter 0.15%; FM usable sensitivity 18.3 dBf; FM alternate-channel selectivity 60 dB; capture ratio 0.15% wrms \$170

T617 AM/FM-Stereo/Cassette Player

In-dash player with auto-reverse tape deck, precision power loading for cassettes, and reverse pushbutton. Features locking fast forward/reverse; separate balance and fader controls; separate local/distant and stereo/mono switches; power-off eject. Power output 4 W/ch into 4 ohms 100-20,000 Hz at 5% THD; wow and flutter 0.12% wrms; FM usable sensitivity 23.4 dBf; FM alternate-channel selectivity 60 dB; capture ratio 0.12% wrms \$150

T610. Similar to T617 except no reversing tape deck; no precision power loading; no balance and fader controls; no reverse button; no mono/

Stereo switch; has separate stereo and matrix buttons; wow and flutter 0.15% wrms; FM sensitivity 25.2 dBf; capture ratio 2.7 dB \$100

T560 AM/FM-Stereo/Cassette Player

Designed especially for most import and X-body cars, unit has auto-reverse tape deck, Dolby noise reduction, and Electronic Search and Play (ESP). Features Sendust-alloy tape head; metal/CrO₂ tape EQ; separate bass, treble, balance, and fader controls; locking fast forward/rewind; loudness control; power-off eject; automatic power antenna switching; line-level output jacks. Power output 4 W/ch into 4 ohms 100-20,000 Hz at 5% THD; wow and flutter 0.15% wrms; FM usable sensitivity 17.8 dBf; FM alternate-channel selectivity 65 dB; capture ratio 2.5 dB \$250

T530. Similar to T560 except no ESP. Has preset buttons for 5 AM or FM stations; no bass and treble controls; nonautomatic power antenna switching. FM sensitivity 18.0 dBf; capture ratio 2.8 \$190

T150 AM/FM-Stereo/Cassette Player

Designed especially for most import and X-body cars. Features auto-reverse tape deck; locking fast forward/rewind; local/distant and mono/stereo switches; AFC (automatic frequency

control); LED stereo indicator; power-off eject. Power output 4 W/ch into 4 ohms 200-10,000 Hz at 5% THD; wow and flutter 0.17% wrms; FM usable sensitivity 19.9 dBf; FM alternate-channel selectivity 60 dB; capture ratio 1.5 dB \$130

T500. Similar to T501 except no auto-reverse tape deck, mono/stereo switch; power output 3.5 W/ch; wow and flutter 0.20%; FM sensitivity 24.3 dBf; FM selectivity 60 dB; capture ratio 2.5 dB \$100

R230 AM/FM-Stereo/Cassette Player

In-dash tuner/player with preset tuning, auto-reverse transport, and Dolby noise reduction. Features Sendust-alloy tape head; metal/CrO₂, tape EQ; precision power loading of cassette; locking fast forward/rewind; illuminated tape-direction indicators; separate bass, treble, and loudness controls; FM muting; local/distant and mono/stereo switches; dial-light dimming; power-off eject; power antenna switching. Wow and flutter 0.24% wrms; frequency range 30-25,000 Hz; FM usable sensitivity 28.8 dBf; FM alternate-channel selectivity 70 dB; capture ratio 2.5 dB \$280

R200. Similar to R230 except no FM muting; FM sensitivity 20.8 dBf; capture ratio 2.8 dB. \$250

S611 AM/FM-Stereo/8-Track Player

In-dash unit features separate local/distant and mono/stereo switches; auto/manual program change; illuminated stereo and program indicators. Power output 4 W/ch into 4 ohms 200-15,000 Hz at 5% THD; wow and flutter 0.15% wrms; FM usable sensitivity 19.9 dBf; FM alternate-channel selectivity 50 dB; capture ratio 0.15% wrms \$90

T130 Stereo Cassette Player

Under-dash stereo cassette player/power amplifier with auto-reversing tape deck. Features separate bass and treble controls; locking fast forward/rewind; balance control; eject button. Power output 4 W/ch into 4 ohms 150-20,000 Hz at 5% THD; wow and flutter 0.15% wrms; frequency response 45-10,000 Hz ±3 dB; S/N ratio 50 dB \$110

FUJITSU TEN

CE-4130 "Mini Wizard"

AM/FM-stereo receiver with auto-reverse cassette player and 5-band graphic equalizer. Features search and scan and programmable tuning; digital-numeric tuned-frequency display; 10-station preset memory; quartz clock; Dolby tape noise-reduction system; metal-tape capability; APS music sensing system. Packaged with QM-104 80-W power amplifier \$780

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, ±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 blower, FM muting, and four-way fader control. Frequency response 40-14,000 Hz \$600

CR-1130 AM/FM-Stereo/Cassette Player

In-dash unit with 5-button preset tuning (3 FM, 2 AM) and auto-reverse cassette player. Features separate bass and treble controls; high-



cut filter; normal and CrO₂/metal tape capability; locking fast forward/rewind; FM muting; Automatic Separation Control (ASC) on FM; dual-gate MOSFET front end with age action; ceramic filters for FM selectivity; loudness switch; FM stereo and tape direction indicators. Amplifier output 16 W/ch minimum into 4 ohms at 10% THD; frequency response 40-20,000 Hz ±3 dB; S/N ratio 70 dB A weighted. FM usable sensitivity 20 dBf; frequency response 30-15,000 Hz ±3 dB; alternate-channel selectivity 60 dB; stereo separation 35 dB at 1 kHz; capture ratio 3 dB. Wow and flutter 0.09% wrms; frequency response 40-14,000 Hz ±3 dB; S/N ratio 53 dB A weighted. 7" W × 5 45/64" D × 1 11/16" H; 3.8 lb \$300

CR-1030. Similar to CR-1130 except has no separate bass and treble controls or fader control. Tape frequency response 40-14,000 Hz; amplifier output 4 W/ch \$240

CR-1031. Similar to CR-1030 but also includes separate bass and treble controls \$290

GP-7881 AM/FM-Stereo/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 blower; 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-7874. Similar to GP-7881 except without Dolby noise reduction and four separate amps \$170

DP-644 AM/FM-Stereo/Cassette Player

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 ±3 dB; S/N 52 dB; stereo separation 40 dB. Radio features separate bass and treble controls with DSS bass boost, FM

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.

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 ± 3 dB; $1\frac{1}{16}$ "W \times $7\frac{1}{4}$ "H \times $5\frac{1}{4}$ "D \$220

DP-640S4. Similar to DP-644 except has only 4 W/ch amplifier output \$185

GP-1010 AM/FM-Stereo/Cassette Player

In-dash unit with 5-button preset tuning and illuminated dial in cassette door. Features multi-color AM, FM, stereo, tape-end, and tape-run LEDs; soft-touch local/distant and mono/stereo switches; locking fast-forward/eject switch; FM noise blanker; AM/FM selector behind tuning control and high/low tone switch behind volume/balance control. Amplifier output 4 W/ch into 4 ohms at 10% THD; frequency response 63-20,000 Hz ± 3 dB; FM usable sensitivity 26 dBf; frequency response 30-15,000 Hz ± 3 dB; alternate-channel selectivity 70 dB; stereo separation 30 dB at 1 kHz; image/i-f response ratio 56/82 dB; capture ratio 6 dB. Wow and flutter 0.15% wrms; frequency response 63-14,000 Hz ± 3 dB; S/N ratio 53 dB A weighted; separation 34 dB. $6\frac{1}{16}$ "W \times $4\frac{3}{8}$ "D \times $1\frac{1}{2}$ "H; 3.1 lb \$190

DP-1006 AM/FM-Stereo/Cassette Player

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 ± 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 ± 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. $1\frac{1}{8}$ "H \times $6\frac{1}{8}$ "W \times $4\frac{1}{4}$ "D \$165

DP-1000. Similar to DP-1006 except has no bass and treble controls \$130

DP-620 AM/FM-Stereo/Cassette Player

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 ± 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 ± 3 dB; $1\frac{1}{16}$ "H \times $7\frac{1}{4}$ "W \times $5\frac{1}{4}$ "D \$150

Under-Dash Tape Players

SP-600S1. Cassette player with locking fast forward/rewind and auto eject on power off \$110

SP-600S4. Similar to SP-600S1 except for Datsun 280ZX \$110

SP-572. Auto-reverse cassette player \$120

CP-581. FM-stereo radio/cassette player with noise blanker \$120

JENSEN

E518 AM/FM-Stereo/Cassette Player

Car system with digital electronic scanning tuner, PLL (phase-locked loop) frequency synthesizer, and auto-reverse cassette deck with Dolby

noise-reduction system. Features 5 each AM and FM station preset tuning; quartz synthesizer for clock and tuned frequency display; CrO₂/normal equalization; loudness control; separate fader/balance and bass/treble controls; feather-touch cassette transport control. Wow and flutter 0.12% wrms; frequency range 30-15,000 Hz; S/N ratio 50 dB A weighted; amplifier output 10 watts; $7\frac{1}{16}$ "W \times $4\frac{1}{4}$ "D \times $1\frac{1}{4}$ "H \$400

R425 AM/FM-Stereo/Cassette Player

In-dash unit with auto-reverse cassette deck, Dolby noise-reduction system, preamp outputs, and Syntex tape heads. Features solenoid-operated tape-direction selector; 5 pushbutton presets; loudness compensation; locking fast



forward/rewind; automatic high blend; pushbutton eject; separate bass/treble and balance/fader controls. Wow and flutter 0.12% wrms; frequency range 30-15,000 Hz; S/N ratio 55 dB Dolby off, 62 dB Dolby on; separation 30 dB; amplifier output 10 watts; $7\frac{1}{16}$ "W \times $5\frac{1}{16}$ "D \times $1\frac{1}{16}$ "H \$380

T415 AM/FM-Stereo/Cassette Player

In-dash unit combines AM-stereo FM radio and auto reverse metal-compatible stereo cassette deck with Dolby noise reduction. Cassette features Syntex® ceramic tape heads; locking fast forward and rewind; eject and program buttons; wow and flutter 0.15% wrms; frequency response 50-10,000 Hz ± 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 μ V); overall frequency response 30-15,000 \$290

KENWOOD

KRC-1022 AM/FM-Stereo Cassette Deck

PLL synthesized tuner with manual and 12-channel preset tuning, automatic-reversing cassette deck, designed for European car body size installation. Features ANRC; mono/stereo switch; ABSS; muting switch; noise killer; balance control; ARI (audio mute); seek tuning; key-off cassette eject; Dolby noise-reduction system; tape-advance control; fader control; bass/treble controls; local/distance switch; loudness control; digital numeric frequency display; display dimmer \$650

KRC-722 AM/FM-Stereo/Cassette Deck

In-dash unit with PLL synthesized tuning, digital numeric frequency display, auto-reverse cas-



sette deck, and Dolby noise-reduction system. Features Automatic Broadcast Sensor System (ABSS); automatic noise reduction system (ANRS); auto-scanning; 5 AM, 5 FM station

preselect plus manual tuning; key-off eject; bass and treble controls; mono/stereo switch; local/distance switch; muting; normal, CrO₂, and metal tape capability; hard Permalloy head. FM tuner sensitivity 14.8 dBf; frequency response 30-15,000 Hz ± 2 dB; S/N 70 dB mono. Cassette deck wow and flutter 0.12% wrms; frequency response 30-16,000 Hz ± 3 dB; stereo separation 35 dB; S/N 63 dB A weighted with Dolby on \$499

KRC-922. Similar to KRC-722 except has automatic seeking as well as automatic scanning; ceramic tape head; tape advance; FM tuner S/N 70 dB mono \$549

KRC-711 AM/FM-Stereo/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 30-16,000 Hz; amplifier boosting 4 W/ch continuous to front-mounted speakers and 15 W/ch continuous to reardeck speakers \$499

KRC-721. Same as KRC-711 without built-in power amplifier \$449

KRC-511. Similar to KRC-711 without bi-directional tape advance; amp output 4 W/ch \$439

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; $1\frac{1}{8}$ "H \times $7\frac{1}{8}$ "W \times $4\frac{1}{8}$ "D \$399

KRC-312 AM/FM-Stereo/Cassette Deck

In-dash 20-watt/channel (into 4 ohms) AM/FM stereo receiver with auto-reversing cassette deck. Features 5-channel preset and manual tuning; local/distance switch; ANRC; hard Permalloy tape head; bass/treble controls; balance control; AM/FM switch; fader control. FM tuner sensitivity 15.8 dBf; S/N 68 dB mono. Cassette deck wow and flutter 0.15% wrms; frequency response ± 3 dB 63-12,500 Hz; stereo separation 35 dB; S/N 60 dB A weighted with Dolby on \$330

KRC-322. Similar to KRC-312 except can handle normal, CrO₂, metal tapes \$369

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- μ 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; $2\frac{1}{2}$ "H \times $6\frac{1}{16}$ "W \times $6\frac{1}{2}$ "D \$269

KZC-657 Cassette Deck/Amplifier

Auto-reversing cassette deck/20-watt-per-channel (into 4 ohms) amplifier combo. Features Dolby tape noise reduction system; preamp output; metal-tape capability; key-off eject; soft-touch eject button; preamp output level control; bass and treble controls? loudness switch? concentric volume and balance controls. Tape section wow and flutter 0.12% wrms; frequency range 30-16,000 Hz; S/N 60 dB with Dolby on; fast-wind time 90 sec for C-60 cas-

sette \$300

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 controls; 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 \$279

MARANTZ

CAR-427 CompuTuner/Cassette Player

In-dash unit incorporates stereo CompuTuner/preamplifier/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/preamplifier 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 μ V, 75 ohms; stereo separation 30 dB at 1000 Hz; $2\frac{1}{16}$ "H \times $7\frac{1}{16}$ "W \times $5\frac{1}{8}$ "D; nose piece $2\frac{1}{8}$ "H \times $4\frac{1}{8}$ "W \$625

CAR-400 CompuTuner/Cassette Player

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 μ V into 75 ohms; stereo separation 30 dB at 1000 Hz; $2\frac{1}{16}$ "H \times $7\frac{1}{16}$ "H \times $5\frac{1}{8}$ "D; nose piece $2\frac{1}{8}$ "H \times $4\frac{1}{8}$ "W \$500

CAR-410 CompuTuner/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 4W/ch continuous into 4 ohms with 0.9% THD; FM sensitivity 1.1 μ 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; $1\frac{1}{8}$ "H \times $7\frac{1}{16}$ "W \times $5\frac{1}{8}$ "D; nose dimensions $1\frac{1}{8}$ "H \times $4\frac{1}{8}$ "W (DIN standard) \$390

CAR-302 AM/FM-Stereo/Cassette Player

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 μ V; $2\frac{1}{16}$ "H \times $7\frac{1}{16}$ "W \times $4\frac{1}{8}$ "D; nose piece $1\frac{1}{4}$ "H \times $4\frac{1}{8}$ "W \$300

CAR-322 AM/FM-Stereo/Cassette Player

In-dash unit with Dolby noise-reduction system and auto-reverse cassette deck. Features Sendust tape head; I.M.S. (see CAR-340 above); FM soft muting; separate bass and treble controls; metal-tape capability; speaker fader control; locking fast-forward and rewind buttons; automatic antenna power and dial-dimmer leads. Amplifier output 4 W/ch at 0.9% THD. FM usable sensitivity 14.77 dBf; frequency response 40-14,000 Hz \pm 3 dB; selectivity 70 dB; S/N ratio 60 dB; stereo separation 34 dB at 1 kHz; capture ratio 2 dB; wow and flutter 0.15% wrms; frequency response 40-13,000 Hz \pm 3 dB; S/N ratio Dolby in/out 60/52 dB. Chassis $6\frac{3}{4}$ "W \times $4\frac{1}{4}$ "D \times $1\frac{1}{8}$ "H; nosepiece $4\frac{1}{8}$ "W \times $1\frac{1}{8}$ "H \$290

CAR-301 AM/FM-Stereo/Cassette Player

In-dash unit combines AM-FM stereo tuner/preamplifier/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-340 AM/FM-Stereo/Cassette Player

In-dash unit with tape Dolby noise-reduction system, automatic-reverse cassette deck, and 5-station preset tuning. Features I.M.S. (Interference Management System) that minimizes FM multipath and fading problems; FM muting; separate bass and treble controls; metal-tape capability; preamp outputs; speaker fader control; locking fast-forward and rewind switches; C.M.S. (Continuous Music System) that automatically switches to FM when cassette is being operated in fast forward or rewind; Sendust tape head; automatic antenna power lead; dial-scale dimmer lead. Amplifier power 4 W/ch at 0.9% THD, kHz. FM usable sensitivity 14.77 dBf; frequency response 40-14,000 Hz \pm 3 dB; S/N ratio 60 dB; selectivity 70 dB; stereo separation 34 dB at 1 kHz; selectivity 70 dB; Wow and flutter 0.15% wrms; frequency response 40-13,000 Hz \pm 3 dB; S/N ratio 2dB Dolby in/out 60/52 dB. Preamp output level/impedance 500 mV/3k ohms. Chassis $7\frac{1}{16}$ "W \times $5\frac{1}{8}$ "D \times $1\frac{1}{8}$ "H \times $1\frac{1}{8}$ "H; nosepiece $4\frac{1}{8}$ "W \times $1\frac{1}{8}$ "H \$250

CAR-330 AM/FM-Stereo/Cassette Player

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 16W. FM tuner section: usable sensitivity 1.8 μ V at 75 ohms; 50-dB stereo quieting 501V at 75 ohms; capture ratio 2dB 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

CAR-300 AM/FM-Stereo/Cassette Player

AM/FM-stereo receiver with 5 station presets and built-in power amplifier. Features auto eject; PLL FM MPX decoder; FM muting; locking fast forward/rewind \$220

PANASONIC

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 trim plates \$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

CQ-7600 AM-Stereo FM/Cassette Player

In-dash preamplifier/AM-stereo FM tuner, Repeatrack 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 trim plates \$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

CQ-6800 AM/FM-Stereo/Cassette Player

Compact in-dash Repeatrack cassette player with AM/FM-stereo radio. Features compact nosepiece and chassis; manual tuning; tape and stereo indicator lights; local/distant switch; balance control; locking fast forward and rewind; auto/manual eject; automatic frequency control (afc) on FM; front-mounted antenna trimmer; adjustable shafts and trim plate. Output power 3.75 W/ch at 5% THD \$150

CQ-4600 AM/FM-Stereo/8-Track Player

Compact in-dash 8-track player with pushbutton AM/FM tuning. Features compact nosepiece and chassis; switchable INQ circuit for noise rejection; front-rear fader control; program and stereo indicator lights; local/distant switch; balance control; automatic frequency control (afc) on FM; front-mounted antenna trimmer; adjustable shafts and trim plate. Output power 4 W/ch at 5% THD \$240

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/CrO₂

tape selector; wow and flutter 0.18% wrms; frequency response 40-12,500 Hz ± 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; 4 W/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 ± 3 dB; i-f rejection 80 dB; stereo separation 35 dB at 1000 Hz; $2\frac{1}{16}$ "H \times $7\frac{1}{8}$ "W \times $5\frac{1}{16}$ "D \$450
CQ-S820. Similar to CQ-S900 without Dolby; repeat track instead of auto reverse; seek only; five station preset electronic tuning; single tone control \$350

CQ-S791 AM/FM-Stereo/Cassette Player

Auto-reverse cassette player with pushbutton AM/FM tuning. Features locking fast forward and rewind; Dolby noise-reduction and HX (headroom extender) systems; metal/CrO₂/normal tape selector; Sendust alloy head; FM Optimizer switch; Impulse Noise



Quieting (INQ) circuit; preamp output; balance and fader controls; separate bass and treble controls; MOSFET and adaptive FM front end; multistage agc (automatic gain control) on AM; traveler's information stations; motor antenna relay control lead; compact chassis \$320
CQ-S761. Similar to CQ-S791 except has W-cut hard Permalloy head and lacks preamp output \$290

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/CrO₂ 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 \$310
CQ-S740. Similar to CQ-S780 minus Sendust alloy head and LED metal/CrO₂ indicator \$270
CQ-S710. Similar to CQ-S740 minus pushbutton tuning \$240
CQ-S700. Similar to CQ-S710 except Repeatrack cassette player without Dolby and metal compatibility; has impulse noise quieting circuit, LED output meter display, and pushbutton tuning \$220
CQ-S680. Similar to CQ-S700 minus LED output display and separate bass and treble; has LED stereo and tape indicators and tone control \$200

CQ-S756 AM/FM-Stereo/Cassette Player

Auto-reverse cassette player with pushbutton AM/FM tuning. Features locking fast forward/rewind; Dolby noise-reduction and HX (headroom extender) systems; metal/CrO₂/normal tape selector; W-cut hard Permalloy head; FM Optimizer switch; impulse

noise quieting (INQ) circuit; separate balance, fader, volume, and loudness-compensated tone controls; MOSFET and adaptive FM front end; multistage agc (automatic gain control) on AM; traveler's information stations; motor antenna relay control lead; compact chassis \$270

CQ-S686 AM/FM-Stereo/Cassette Player

Repeatrack cassette player with pushbutton AM/FM-stereo radio. Features locking fast forward and rewind; hard Permalloy head; FM Optimizer switch; impulse noise quieting (INQ) switch; balance, fader, and loudness-compensated tone controls; MOSFET and adaptive FM front end; multistage agc (automatic gain control) on AM; traveler's information stations; motor antenna relay control lead; compact chassis \$200

CQ-S661 AM/FM-Stereo/Cassette Player

Repeatrack cassette player with manual AM/FM-stereo radio. Features locking fast forward and rewind; Dolby noise-reduction and HX (headroom extender) systems; metal/CrO₂/normal tape selector; radio monitor; hard Permalloy head; FM Optimizer switch; impulse noise quieting (INQ) switch; balance control; MOSFET and adaptive FM front end; multistage agc (automatic gain control) on AM; traveler's information stations; motor antenna relay control lead; compact chassis \$200

CQ-S646 AM/FM-Stereo/Cassette Player

Repeatrack cassette player with manual AM/FM-stereo radio. Features locking fast forward and rewind; radio monitor; hard Permalloy head; FM Optimizer switch; impulse noise quieting (INQ) switch; balance control; MOSFET and adaptive FM front end; multistage agc (automatic gain control) on AM; traveler's information stations; motor antenna relay control lead; compact chassis \$170

Overhead Cockpit Series

RM-710 AM/FM-Stereo Tuner/ Preamp/Cassette Player

Overhead console-type hi-fi car audio system with auto-reverse cassette player, Dolby noise-reduction system, AM/FM-stereo tuner, and preamplifier. Features locking fast forward/rewind; key-off cassette eject; normal/CrO₂ tape bias/EQ selector; tape program sensor; AM/FM-stereo tuner with 5-way electronic soft-touch tuning; programmable preset memory for 6 each AM and FM stations; preset scan button; seek and scan buttons; pushbutton



manual tuning; tuning indicators (LED); distant/local switch; impulse-noise quieting (INQ) circuit; quartz-controlled digital time and tuned frequency display; 5-band graphic equalizer; electronic volume control with LED level

indicators; sound attenuator switch; joystick balance and fader controls; loudness and dimmer switches; built-in stereo power amplifier; 4-position dome light. Preamp frequency response 20-50,000 Hz ± 3 dB; THD 0.02% at 1 kHz. Wow and flutter 0.13% wrms; frequency response 30-14,000 Hz ± 3 dB; S/N ratio Dolby on/off 63/55 dB; separation 40 dB. FM usable sensitivity 16 dBf; THD 0.15%; S/N ratio 72 dB; image rejection 65 dB; frequency response 20-15,000 Hz ± 3 dB; stereo separation 40 dB at 1 kHz \$1400

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 CrO₂ 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 blower; 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; $1\frac{1}{2}$ "H \times $27\frac{1}{8}$ "W \times $9\frac{1}{16}$ "D \$1000

RMS-610. Rear-deck surface-mount two-way air-suspension speaker system with urethane-edged $4\frac{1}{4}$ "-in woofer and 2-in tweeter; max. input 50 W; frequency response 60-20,000 Hz; 4-ohm input impedance; $5\frac{1}{16}$ "H \times $9\frac{1}{16}$ "W \times $7\frac{1}{16}$ "D \$210 pr.

RME-610. Five-band equalizer with ± 12 -dB boost or cut \$60

RM-310 AM/FM-Stereo/Cassette Player

Ceiling-mount car hi-fi system with Repeatrack cassette player. Features locking fast forward/rewind; key-off eject; high-filter switch; AM/FM-stereo tuner with 3 station reference guides; FM stereo-auto/mono switch; LED tuning indicators; mute; distant/local switch; impulse-noise quieting (INQ) circuit; balance and fader controls with center detent; built-in 3-band graphic EQ; loudness switch; built-in stereo power amplifier; audio power indicators; 4-position dome light. Amplifier output 10 W/ch min. into 4 ohms at 1% THD 30-20,000 Hz. Wow and flutter 0.15% wrms; frequency response 45-12,000 Hz ± 3 dB; S/N ratio 55 dB A weighted; separation 40 dB. FM usable sensitivity 16 dBf; S/N ratio 73 dB A weighted; image rejection 60 dB; frequency response 30-15,000 Hz ± 3 dB; separation 35 dB \$600

RD-9060. Two-channel power booster for RM-310. Output power 25 W/channel into 4 ohms from 100 to 10,000 Hz with no more than 5% THD; frequency response 50-16,000 Hz -3 dB. (Two RD-9060s needed to boost a 4-speaker system.) \$80

PIONEER

KI-5000 AM/FM-Stereo/Cassette Player

In-dash unit combines AM/FM-stereo Supertuner with stereo cassette player. Features auto replay/eject; locking fast forward/rewind; MOSFET tuner front end; presets for up to 5 each AM and FM stations; feather-touch instant-

recall of preset stations plus scan/stop and seek station-selector buttons; FM Dolby; stereo/mono switch; local/distant switch; fader control. Amplifier output 2.7 W/ch continuous 50-15,000 Hz; wow and flutter 0.28%; tape frequency response 50-12,000 Hz \pm 3 dB; S/N 53 dB Dolby on; FM usable sensitivity 12 dB; selectivity 65 dB; capture ratio 3 dB.....\$350
KE-3000. Similar to KE-5000 but without muting.....\$300
KE-2100. Similar to KE-3000 but without PNS noise suppression, PLL synthesizer, and scan tuning; has electronic pointer display and AM local/distant switch.....\$250

KEX-20 AM/FM-Stereo/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 feathertouch 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; 2¹/H \times 7¹/₂"W \times 7¹/₂"D.....\$300

KE-5100 AM/FM-Stereo/Cassette Player

In-dash unit with electronically tuned AM/FM-stereo Supertuner II, digital time/frequency display, and PNS noise suppression. Features auto scan/seek; preset of up to 5 AM and 10 FM stations; quartz PLL synthesizer tuning system; FM auto/mono switch; auto replay/eject; locking fast forward/rewind; loudness control; parallel fader control that allows control over two booster amps; activates any automatic power antenna. Amplifier output 2.9 W/ch into 4 ohms 50-15,000 Hz at 5% THD; Wow and flutter 0.15 wrms; S/N ratio 52 dB; tape frequency response 50-12,000 Hz \pm 3 dB; FM usable sensitivity 16.8 dBf (mono); selectivity 70 dB; 7¹/₂"W \times 6"D \times 2¹H.....\$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; 2¹H \times 7¹/₂"W \times 7¹/₂"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; 1¹/₂"H \times 6¹/₂"W \times 5¹/₂"D.....\$120

UKP-5600 AM/FM-Stereo/Cassette Player

Mini receiver/cassette system designed for

subcompact and imported cars. Features mini cassette deck; AM/FM-stereo Supertuner II; music search; automatic tape-slack canceller; separate bass, treble, and loudness controls; PNS noise suppression; 5-station preset tuning; FM auto/mono switch; auto replay/eject; locking fast forward/rewind; hard permalloy tape head; key-off pinchroller release; activates any fullautomatic power antenna. Amplifier output 3.2 W/ch into 4 ohms 50-15,000 Hz at 5 THD; wow and flutter 0.15% wrms; S/N ratio 52 dB; tape frequency response 50-12,000 Hz \pm 3 dB; FM usable sensitivity 16.9 dBf (mono); selectivity 70 dB; 7¹/₂"W \times 3¹/₂"D \times 2¹H.....\$250

UPK-7200. Similar to UPK-5600 except has auto-reverse cassette deck; no Supertuner II, bass/-



treble controls, PNS noise suppression, auto replay/eject. Wow and flutter 0.13%; FM sensitivity 20.8 dBf; selectivity 50 dB.....\$240

KPK-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 \pm 3 dB; S/N 60 dB (Dolby on); FM usable sensitivity 1.1 μ V into 75 ohms (12 dBf) mono; FM 50-dB quieting sensitivity 1.4 μ V into 75 ohms (14.3 dBf); selectivity 74 dB; capture ratio 1.7 dB; 3¹H \times 7¹/₂"W \times 7¹/₂"D.....\$250

KPX-9000 AM-Stereo FM/Cassette Player

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 μ 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 \pm 3 dB; S/N 52 dB; 2¹H \times 7¹/₂"W \times 7¹/₂"D; nose 1¹/₂"H \times 4¹/₂"W \times 1¹/₂D.....\$220

UPK-5200 AM/FM-Stereo/Cassette Player

Mini in-dash unit designed for subcompact and imported cars. Features mini cassette deck; music search; automatic tape-slack canceller; 5-station preset tuning; auto replay/eject; key-off pinchroller release; loudness control; locking fast forward/rewind; stereo/mono switch; fader control; activates any fully automatic power antenna. Amplifier output 3.2 W/ch into 4 ohms 50-15,000 Hz at 5% THD; wow and flutter 0.15% wrms; S/N ratio 52 dB; tape frequency response 50-12,000 Hz \pm 3 dB; FM usable sensitivity 20.8 dBf; selectivity 50 dB; 7¹/₂"W \times 3¹/₂"D \times 2¹H.....\$210

UKP-4200. Similar to UKP-5200 except has auto-reverse tape deck, tape-direction indicator, loudness switch; no preset tuning, auto replay/eject fader control; wow and flutter 0.13%.....\$190
UKP-2200. Similar to UKP-5200 except has loudness control, no preset tuning or fader control.....\$170

KP-8000 AM-Stereo FM/Cassette Player

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 μ V at 75 ohms (12 dBf); 50-dB quieting sensitivity 1.4 μ 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; 2¹H \times 7¹/₂"W \times 6¹/₂"D; nose dimensions 1¹/₂"H \times 4¹/₂"W \times 3¹/₂"D; shaft spacing 5¹/₂".....\$200

KP-707G 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-/CrO₂ 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); 2¹H \times 6¹/₂"W \times 6¹/₂"D.....\$200

KP-4502 AM-Stereo/FM Cassette Player

In-dash AM-stereo FM/auto-reverse cassette player designed for European cars. Cassette features locking 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; 1¹/₂"H \times 7¹/₂"W \times 6¹/₂"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 μ V into 75 ohms; 50 dB quieting sensitivity 1.4 μ V into 75 ohms; alternate channel selectivity 74 dB; 2¹H \times 7¹/₂"W \times 7¹/₂"D; nose dimensions 1¹/₂"H \times 4¹/₂"W \times 1¹/₂D.....\$200

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 μ V (23.2 dBf); FM 50-dB quieting sensitivity 1.4 μ V; selectivity 50 dB; capture ratio 4 dB; 2¹H \times 7¹/₂"W \times 6¹/₂"D; nose dimensions 1¹/₂"H \times 4¹/₂"W \times 3¹/₂D.....\$180

KP-500 FM-Stereo Receiver/Cassette Player

Under-dash unit with FM Supertuner, PLL MPX demodulator. Features separate bass, treble, and balance controls; FM muting; stereo/mono and loudness switches; auto eject; tape-play and stereo indicators. Amplifier output 3 W/ch into 4 ohms 50-15,000 Hz at 5% THD; wow and flutter 0.3% wrms; tape frequency response 50-10,000 Hz \pm 3 dB; FM usable sensitivity 12 dBf (mono); FM selectivity 74 dB; 7¹/₂"D \times 3¹H.....\$190

(continued on next page.)

KPX-600 Stereo FM/Cassette Player

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 dB, 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 ± 3 dB; S/N 52 dB; 2 $\frac{1}{2}$ "H \times 7 $\frac{1}{2}$ "W \times 6 $\frac{1}{2}$ "D \$140

KP-77G Cassette Deck

Underdash cassette deck with electronic governor motor features auto reverse with auto tape slack eliminator, locking fast forward and rewind, CrO₂/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 ± 3 dB; S/N 52 dB; 2 $\frac{1}{2}$ "H \times 6 $\frac{1}{2}$ "W \times 6 $\frac{1}{2}$ "D \$140

KP-66G 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 ± 3 dB; S/N 60 dB (Dolby on), 52 dB (Dolby off); 2 $\frac{1}{2}$ "H \times 4 $\frac{1}{2}$ "W \times 6 $\frac{1}{2}$ "D \$130

KP-202G Cassette Player

Under-dash cassette player designed for extra low wow and flutter. Features music search; automatic tape-slack canceller; separate bass, treble, and loudness controls; illuminated cassette door; metal/CrO₂ tape selector; auto replay/eject; locking fast forward/rewind; key-off pinchroller release. Wow and flutter 0.09% wrms; frequency response 30-18,000 Hz; S/N, ratio 55 dB; 5 $\frac{1}{2}$ "W \times 5 $\frac{1}{2}$ "D \times 2 $\frac{1}{2}$ H \$140

KP-404G. Similar to KP-202G but with Dolby



noise-reduction system \$160

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 $\frac{1}{2}$ "H \times 6 $\frac{1}{2}$ "W \times 4 $\frac{1}{2}$ "D \$130

KP-373. Similar to KP-575 except without auto reverse; has auto replay and slide volume control; 2 $\frac{1}{2}$ "H \times 4 $\frac{1}{2}$ "W \times 6 $\frac{1}{2}$ "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 ± 3 dB; S/N 50 dB; 3 W/ch; FM sensitivity 14.3 dBf; FM selectivity 74 dB; 3 $\frac{1}{2}$ "H \times 7 $\frac{1}{2}$ "W \times 7 $\frac{1}{2}$ "D \$180

TP-727. Similar to TP-900 except without FM section; automatic and manual program change \$105

TP-6006 AM-Stereo FM/8-Track

In-dash AM-stereo FM radio and 8-track player with auto and manual program change, 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; max. output 8 W continuous; 2 $\frac{1}{2}$ "H \times 7 $\frac{1}{2}$ "W \times 7 $\frac{1}{2}$ "D \$130

REALISTIC**12-1889 AM-Stereo FM/Cassette Player**

In/underdash unit combines AM-stereo FM radio, stereo cassette player, and LED digital ra-



dio 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

12-1892 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

SANYO**FT2200 AM/FM-Stereo/Cassette Player**

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, CrO₂, 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 ± 3 dB; stereo separation 32 dB at 1000 Hz. Preamplifier 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 ± 3 dB; 2 $\frac{1}{2}$ "H \times 6 $\frac{1}{2}$ "W \times 5" D \$280

FT C18 AM/FM-Stereo/Cassette Player

In-dash unit with metal-tape capability, pushbutton tuning, Automatic Music Select System, and FM optimizer. Features auto-reversing cassette deck with Dolby noise-reduction system; line-level outputs; DX/LOC switch; loudness control; separate bass and treble controls; backlight function labels. Output 500 mV, 30-20,000 Hz ± 3 dB; wow and flutter 0.15% wrms; S/N ratio 50 dB A weighted; frequency response 63-14,000 Hz ± 3 dB; stereo separation 46 dB; FM usable sensitivity 19.2 dBf; alternate-channel selectivity 60 dB; capture ratio 2 dB; 6 $\frac{1}{2}$ "W \times 4 $\frac{1}{2}$ "D \times 2 $\frac{1}{2}$ H \$230

FT C16 AM/FM-Stereo/Cassette Player

In-dash unit with Dolby noise-reduction, metal-tape capability, and auto-reverse cassette deck. Features line output jacks; loudness switch; separate bass and treble controls; Sendust-alloy tape head; local/distant and reverse switches. Amplifier output 3.5 W/ch into 4 ohms at 10% THD 100-20,000 Hz; frequency response 50-20,000 Hz ± 3 dB at 500 mV output. Wow and flutter 0.09% wrms; frequency response 50-14,000 Hz ± 3 dB with metal tape; S/N ratio 50 dB A weighted; separation 35 dB. FM tuner usable sensitivity 15.2 dBf; alternate-channel selectivity 65 dB; capture ratio 2 dB; 6 $\frac{1}{2}$ "W \times 5"D \times 2" H \$200

FT C15 AM/FM-Stereo/Cassette Player

In-dash unit with Automatic Music Select System, FM optimizer, and full auto-reverse cassette deck. Features pushbutton tuning; separate bass, treble, fader controls; locking fast forward and rewind. Amplifier output 4 W/ch into 4 ohms at 10% THD 100-20,000 Hz; frequency response 50-20,000 Hz ± 3 dB. Wow and flutter 0.15% wrms; frequency response 63-12,500 Hz ± 3 dB; S/N ratio 50 dB. FM usable sensitivity 20.8 dBf; alternate-channel selectivity 55 dB; capture ratio 2 dB; 6 $\frac{1}{2}$ "W \times 4 $\frac{1}{2}$ "D \times 2" H \$187

FT C13 AM/FM-Stereo/Cassette Player

In-dash unit with full auto-reverse cassette deck, pushbutton tuning, fader control, and locking fast forward/reverse. Amplifier output 4 W/ch into 4 ohms at 10% THD 100-20,000 Hz; frequency response 50-20,000 Hz ± 3 dB. Wow and flutter 0.15% wrms; frequency response 63-12,500 Hz ± 3 dB with normal tape; S/N ratio 45 dB A weighted; separation 40 dB. FM usable sensitivity 20.8 dBf; alternate-channel selectivity 55 dB; capture ratio 3 dB; 6 $\frac{1}{2}$ "W \times 4 $\frac{1}{2}$ "D \times 2" H \$160

FT C12 AM/FM-Stereo/Cassette Player

In-dash unit with digital frequency and time display and full auto-reverse cassette deck. Features locking fast forward/rewind; distant/local, frequency/time, FM/AM, and reverse switches. Amplifier output 2.4 W/channel into 4 ohms at 5% THD 100-20,000 Hz; frequency response 100-20,000 Hz ± 3 dB. Wow and flutter 0.1% wrms; frequency response 80-10,000 Hz ± 3 dB; S/N ratio 50 dB A weighted; separation 35 dB. FM usable sensitivity 17.2 dBf; alternate-channel selectivity 60 dB; capture ratio 3 dB; 6 $\frac{1}{2}$ "W \times 4 $\frac{1}{2}$ "D \times 2" H \$150

FT C26 AM/FM-Stereo/Cassette Player

In-dash mini-size, high-power unit with full auto-reverse cassette deck. Features separate bass and treble controls; reverse, stereo/mono, FM/AM, local/distant switches; automatic up/down control for electric antennas. Amplifier output 9.5 W/channel into 4 ohms at 1% THD 50-20,000 Hz; frequency response 100-20,000 Hz ± 3 dB. Wow and flutter 0.09% wrms; frequency response 80-10,000 Hz ± 3 dB; S/N ratio 50 dB A weighted; separation 35 dB. FM usable sensitivity 17.2 dB i-f; alternate-channel selectivity 60 dB; capture ratio 3 dB; 6 $\frac{1}{2}$ "W \times 4 $\frac{1}{2}$ "D \times 2" H \$140

FT C8 AM/FM-Stereo/Cassette Player

In-dash unit with Automatic Music Select System and full auto-reverse cassette deck. Features vertical or horizontal mounting; separate bass, treble, and fader controls; automatic up/down control for electric antennas. Amplifier output 3.5 W/channel into 4 ohms at 10% THD 100-20,000 Hz; frequency response 100-20,000 Hz ± 3 dB. Wow and flutter 0.09% wrms; frequency response 80-10,000 Hz ± 3 dB with normal tape; S/N ratio 50 dB A weighted; separation 35 dB. FM sensitivity 20.8 dBf; alternate-channel selectivity 55 dB; capture ratio 3 dB; 6 $\frac{1}{2}$ "W \times 4 $\frac{1}{2}$ "D \times 2" H \$140

FT C6 AM/FM-Stereo/Cassette Player

Mini-size in-dash unit with full auto-reverse cassette deck and sensitive FM tuner. Features locking fast forward/rewind; separate bass and treble controls; reverse, FM/AM, distant/local switches; balance control; automatic up/down control for electric antennas. Amplifier output 3.5 W/channel into 4 ohms at 10% THD; frequency response 100-20,000 Hz ±3 dB. Wow and flutter 0.09% wrms; frequency response 80-10,000 Hz ±3 dB with normal tape; S/N ratio 50 dB A weighted; separation 35 dB. FM usable sensitivity 20.8 dBf; alternate-channel selectivity 55 dB; capture ratio 3 dB; 6½" W × 4¾" D × 2" H.....\$110

FT C5 AM/FM-Stereo/Cassette Player

In-dash unit with auto-reverse cassette deck and mini-size chassis. Features separate tone, balance, and volume controls; automatic stereo/mono switching; locking fast forward; automatic up/down control for electric antennas. Amplifier output 3.8 W/channel into 4 ohms at 10% THD; frequency response 100-15,000 Hz ±3 dB. Wow and flutter 0.2% wrms; frequency response 63-8000 Hz ±3 dB with normal tape; S/N ratio 45 dB A weighted; separation 40 dB. FM usable sensitivity 24.2 dBf; alternate-channel selectivity 35 dB; capture ratio 4 dB; 6½" W × 4¾" D × 2" H.....\$100

FT C4 AM/FM-Stereo/Cassette Player

In-dash unit with mini-size chassis. Features automatic eject at end of play; locking fast forward/rewind; separate tone, balance, and volume controls; automatic up/down control for electric antennas. Amplifier output 3.5 W/channel into 4 ohms at 10% THD; frequency response 100-20,000 Hz ±3 dB. Wow and flutter 0.1% wrms; frequency response 80-10,000 Hz ±3 dB with normal tape; S/N ratio 50 dB A weighted; separation 35 dB. FM usable sensitivity 20.8 dBf; alternate-channel selectivity 55 dB; capture ratio 3 dB; 6½" W × 4¾" D × 2" H.....\$90

FT C2 AM/FM-Stereo/Cassette Player

In-dash mini-size chassis unit. Features auto stop; local/distant, FM/AM, fast-forward, and eject switches; locking fast forward; separate balance, tone, and volume controls; standard shaft spacing fits most compact cars. Amplifier output 3.8 W/channel into 4 ohms at 10% THD; frequency response 100-15,000 Hz ±3 dB. Wow and flutter 0.2% wrms; frequency response 60-8000 Hz ±3 dB with normal tape; S/N ratio 45 dB A weighted; separation 40 dB. FM usable sensitivity 24.2 dBf; alternate-channel selectivity 35 dB; capture ratio 3 dB; 6½" W × 4¾" D × 1¾" H.....\$80

In-Dash Plus Series

FT590 AM/FM-Stereo/Cassette Player

AM/FM-stereo tuner/cassette player with LCD (liquid-crystal display) tuned-frequency readout, metal-tape capability, and Automatic Music Select System (AMSS). Features Dolby noise-re-



duction system; 10-station (5 AM/5 FM) preset tuning; FM optimizer circuitry; cassette deck with line-level outputs; tape-protection system; Sendust alloy tape head; full auto-reverse mechanism; locking fast forward/rewind; PLL frequency synthesizer tuner; automatic scan tuning; backlit LCD for day/night viewing; Dolby FM; separate bass and treble controls; loudness switch; backlit function labels that light up when engaged; exclusive ZE Install system. Line output: frequency response 30-20,000 Hz ±3

dB; level 500 mV. Tape section: wow and flutter 0.015% wrms; frequency response 63-14,000 Hz ±3 dB with metal tape; S/N ratio 50 dB wtd; separation 46 dB. FM-tuner section: usable sensitivity 17.2 dBf; 50-dB quieting sensitivity 20.2 dBf; alternate-channel selectivity 60 dB; capture ratio 2 dB; stereo separation 30 dB at 1 kHz; 7" W × 5½" D × 2" H.....\$380

FT30 AM/FM-Stereo/Cassette Player

AM/FM-stereo receiver/cassette player with slide-rule tuning dial, auto-reverse cassette deck, and AMSS (Automatic Music Search System). Features metal-tape capability; FM optimizer circuitry; pushbutton tuning; function buttons that light up when engaged; Dolby noise-reduction system; separate bass and treble controls; loudness switch; fader control; locking fast forward/rewind; automatic up/down control for power antennas; stereo/mono switch. Output power 4 W/channel into 4 ohms; amplifier frequency response 30-20,000 Hz ±3 dB; line output level 500 mV; wow and flutter 0.15% wrms; tape frequency response 63-14,000 Hz -3 dB with metal tape; S/N ratio 50 dB A wtd; separation 46 dB; FM usable/50-dB quieting sensitivity 19.2/21.6 dBf; alternate-channel selectivity 60 dB; capture ratio 2 dB; stereo separation 30 dB at 1 kHz; 7" W × 5½" D × 2" H.....\$250

FT20 AM/FM-Stereo/Cassette Player

Stereo receiver with auto-reverse cassette player. Features metal-tape capability; AMSS (Automatic Music Select System); Dolby noise-reduction system; FM optimizer circuit; Sendust alloy head; separate bass and treble controls; locking fast forward/rewind; exclusive EZ Install system; automatic up/down control of powered antennas. Output power 2.4 W/channel into 4 ohms; amplifier frequency response 100-20,000 Hz -3 dB; wow and flutter 0.09% wrms; frequency response 50-14,000 Hz -3 dB with metal tape; S/N ratio 50 dB A wtd; separation 35 dB; FM usable/50-dB quieting sensitivity 15.2/18.2 dBf; alternate-channel selectivity 65 dB; capture ratio 2 dB; stereo separation 35 dB at 1 kHz; 7½" W × 5½" D × 2" H.....\$200

FT9 AM/FM-Stereo/Cassette Player

Stereo receiver with auto-reverse cassette player. Features Automatic Music Select System; advanced FM signal-processing circuitry; FM optimizer; locking fast forward/rewind; pushbutton memory tuning for 5 AM or 5 FM stations; separate bass and treble controls; local/DX, AM/FM, and loudness switches; automatic up/down control for power antennas. Output power 4 W/channel into 4 ohms; amplifier frequency response 50-20,000 Hz ±3 dB; wow and flutter 0.15% wrms; frequency response 60-12,500 Hz ±3 dB with metal tape; S/N ratio 50 dB A wtd; separation 46 dB; FM usable/50-dB quieting sensitivity 20.8/21.6 dBf; alternate-channel selectivity 55 dB; capture ratio 2 dB; stereo separation 30 dB at 1 kHz; 7" W × 5" D × 2" H.....\$190

FT240 AM/FM-Stereo/Cassette Player

Stereo receiver with auto-reverse cassette deck. Features Automatic Music Select System; FM optimizer; Dolby noise-reduction system; tape protection system; bass, treble, and fader controls; locking fast forward/rewind; loudness, AM/FM, and distant/local switches; automatic up/down control for power antennas. Output power 3.5 W/channel into 4 ohms; amplifier frequency response 50-20,000 Hz -3 dB; wow and flutter 0.15% wrms; frequency response 63-12,500 Hz -3 dB with metal tape; S/N ratio 50 dB A wtd; separation 46 dB; FM usable/50-dB quieting sensitivity 19.2/21.6 dBf; alternate-channel selectivity 60 dB; capture ratio 2 dB; stereo separation 30 dB at 1 kHz; 7" W × 5½" D × 2" H.....\$180

FT645 AM/FM-Stereo/Cassette Player

Stereo receiver with auto-reverse cassette deck,

digital tuning/clock, and auto FM stereo/mono switching. Features LED digital-numeric time/tuned-frequency display; LED dimmer; locking fast forward/rewind; AM/FM and distant/local switches; jam-proof self-draw tape compartment; fader, tone, and balance controls; automatic up/down control for powered antennas. Output power 3.4 W/channel into 4 ohms; amplifier frequency response 100-20,000 Hz ±3 dB; wow and flutter (0.09%) wrms; frequency response 80-10,000 Hz ±3 dB with normal tape; S/N ratio 50 dB A wtd; separation 35 dB; FM usable/50-dB quieting sensitivity 19.2/25.0 dBf; alternate-channel selectivity 60 dB; capture ratio 3 dB; stereo separation 30 dB at 1 kHz; 7½" W × 6" D × 2" H.....\$180

FT510 AM/FM-Stereo/Cassette Player

Stereo receiver with auto-reverse cassette deck and Automatic Music Search System. Features separate bass and treble controls; loudness, distant/local, AM/FM, and stereo/mono switches; locking fast forward/rewind; exclusive EZ Install system. Output power 9.5 W/channel into 4 ohms; amplifier frequency response 50-20,000 Hz ±3 dB; wow and flutter 0.1% wrms; frequency response 80-12,000 Hz ±3 dB with metal tape; S/N ratio 50 dB A wtd; separation 35 dB; FM usable/50-dB quieting sensitivity 20.8/30.0 dBf; alternate-channel selectivity 60 dB; capture ratio 3 dB; stereo separation 30 dB at 1 kHz; 7½" W × 5" D × 2" H.....\$160

FT482 AM/FM-Stereo/Cassette Player

Stereo receiver with auto-reverse cassette deck and Automatic Music Search System. Features fader control; separate bass and treble controls; loudness, distant/local, and AM/FM switches; locking fast forward/rewind; FM mute (switched in by LCL/DX switch). Output power 4 W/channel into 4 ohms; amplifier frequency response 50-20,000 Hz ±3 dB; wow and flutter 0.15% wrms; frequency response 60-12,500 Hz ±3 dB with normal tape; S/N ratio 50 dB A wtd; separation 46 dB; FM usable/50-dB quieting sensitivity 20.8/21.6 dB; alternate-channel selectivity 55 dB; capture ratio 2 dB; stereo separation 30 dB at 1 kHz; 7" W × 5" D × 2" H.....\$160

FT7 AM/FM-Stereo/Cassette Deck

Stereo receiver with auto-reverse cassette deck and Automatic Music Search System. Features locking fast forward/rewind; automatic FM stereo/mono switching; local/distant and AM/FM switches; manual tape reverse; exclusive EZ Install system; automatic up/down control for powered antennas. Output power 4 W/channel into 4 ohms; amplifier frequency response 50-20,000 Hz ±3 dB; wow and flutter 0.15% wrms; frequency response 60-12,500 Hz ±3 dB with normal tape; S/N ratio 50 dB A wtd; separation 46 dB; FM usable/50-dB quieting sensitivity 20.8/21.6 dBf; alternate-channel selectivity 55 dB; capture ratio 2 dB; stereo separation 30 dB at 1 kHz; 7" W × 5" D × 2" H.....\$130

FT526 AM/FM-Stereo/Cassette Player

Stereo receiver with auto-eject cassette player and Automatic Music Search System. Features locking fast forward/eject; local/distant and AM/FM switches; separate volume, tone, and balance controls; exclusive EZ Install system; automatic up/down control for powered antennas. Output power 2 W/channel into 4 ohms; amplifier frequency response 50-20,000 Hz ±3 dB; wow and flutter 0.1% wrms; frequency response 100-10,000 Hz ±3 dB with normal tape; S/N ratio 50 dB A wtd; separation 35 dB; FM usable/50-dB quieting sensitivity 20.8/21.6 dBf; alternate-channel selectivity 60 dB; capture ratio 3 dB; stereo separation 30 dB at 1 kHz; 7½" W × 4¾" D × 2" H.....\$110

(continued on next page.)

Under-Dash Players

FT150 Cassette Player

Stereo cassette player with Dolby noise reduction, Automatic Music Select System, auto-reverse cassette deck, and locking fast forward/rewind. Amplifier output 3.5 W/channel into 4 ohms at 10% THD; frequency response 100-20,000 Hz \pm 3 dB. Wow and flutter 0.09% wrms; frequency response 80-10,000 Hz \pm 3 dB; S/N ratio 50 dB A weighted; separation 35 dB; 6 $\frac{1}{2}$ "W \times 5 $\frac{1}{2}$ "D \times 2 $\frac{1}{2}$ "H \$120

FT604 Cassette Player

Stereo cassette player with Automatic Music Select System, auto-reverse deck, locking fast forward/rewind, and balance and tone controls. Amplifier output 4 W/channel into 4 ohms at 10% THD; frequency response 50-20,000 Hz \pm 3 dB. Wow and flutter 0.15% wrms; frequency response 60-10,000 Hz \pm 3 dB with normal tape; S/N ratio 50 dB A weighted; separation 46 dB; 6 $\frac{1}{2}$ "D \times 6 $\frac{1}{2}$ "W \times 2 $\frac{1}{2}$ "H \$90

FT60 Cassette Deck

Auto-reverse cassette deck with tone control; locking fast forward; lighted tape-direction indicators; mini-size chassis. Amplifier output 4 W/channel into 4 ohms at 10% THD; frequency response 50-20,000 Hz \pm 3 dB. Wow and flutter 0.2% wrms; frequency response 63-10,000 Hz \pm 3 dB with normal tape; S/N ratio 50 dB A weighted; separation 46 dB; 6 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "W \times 1 $\frac{3}{4}$ "H \$80

FT50 Cassette Player

Mini-size stereo cassette player with locking fast forward; calibrated tone control; auto stop. Amplifier output 3.8 W/channel into 4 ohms at 10% THD; frequency response 50-15,000 Hz \pm 3 dB. Wow and flutter 0.2% wrms; frequency response 63-10,000 Hz \pm 3 dB with normal tape; S/N ratio 45 dB A weighted; separation 40 dB; 6 $\frac{1}{2}$ "D \times 4 $\frac{1}{2}$ "W \times 1 $\frac{3}{4}$ "H \$60

SPARKOMATIC

SR-3400 AM/FM-Stereo/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 $\frac{3}{4}$ "H \times 5 $\frac{1}{2}$ 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 $\frac{1}{2}$ 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-3300. Similar to SR-3400 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 $\frac{1}{2}$ D \$220

SR-340 AM/FM-Stereo/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 $\frac{3}{4}$ "H \times 7 $\frac{1}{2}$ "W \times 5 $\frac{1}{2}$ 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 $\frac{1}{2}$ 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 $\frac{1}{2}$ D \$190

SR-302 AM/FM Stereo/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 μ V for 30-dB S/N; 2 $\frac{1}{2}$ H \times 7 $\frac{1}{2}$ "W \times 4 $\frac{1}{2}$ D \$160

SR-202. Same as SR-302. Same as SR-302 except has 8-track player instead of cassette \$150

SR-303 AM/FM-Stereo/Cassette Player

In-dash AM/FM-stereo 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 frequency response 1 $\frac{3}{4}$ H \times 6 $\frac{1}{2}$ "W \times 4 $\frac{1}{2}$ "D \$150

SR-301 AM/FM-Stereo/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 $\frac{3}{4}$ H \times 6 $\frac{1}{2}$ D \$120

SR-201. Same as SR-301 except has 8-track player with program selector and LEDs \$120

SR-304 AM/FM-Stereo/Cassette Player

In-dash unit with interchangeable nosepieces and trim plates for Japanese, European, GM X-body, and Citation cars. Features separate volume, tone, balance, and tuning controls; locking fast-forward/rewind button; AM/FM and stereo/mono switches; automatic stop at end of play; tape-end light; cassette end loading. Amplifier output 8 W rms at 1% THD, 75-10,000 Hz. FM usable sensitivity 8 μ V for 30 dB S/N (mono); stereo separation 24 dB at 1 kHz; i/f/image rejection ratio 45/54 dB; Wow and flutter 0.3% wrms; S/N ratio 35 dB; separation 40 dB. 6 $\frac{1}{2}$ "W \times 4 $\frac{1}{2}$ "D \times 1 $\frac{1}{2}$ H \$120

SR-300 AM/FM-Stereo/Cassette Player

In-dash unit with cassette end loading. Features separate volume, tone, balance, and tuning controls; locking fast-forward/eject button; AM/FM and local/distant switches; stereo and tape-end indicators. Amplifier output 7.5 W rms at 1% THD, 75-10,000 Hz. FM sensitivity 8 μ V for 30 dB S/N; stereo separation 24 dB at 1 kHz; i/f/image rejection 50/45 dB. Wow and flutter 0.3% wrms; S/N ratio 35 dB; separation 40 dB. 7" W \times 4 $\frac{1}{2}$ "D \times 1 $\frac{1}{2}$ H \$90

SR-200 AM/FM-Stereo/Cassette Player

In-dash unit. Features separate volume, tone, balance, and tuning controls; AM/FM, local/distant, and mono/stereo switches; illuminated dial in tape door; program-selector and MPX lights. Amplifier output 7.5 W rms at 1% THD, 75-10,000 Hz. FM sensitivity 8 μ V for 30 dB S/N; stereo separation 24 dB at 1 kHz; i/f/image rejection 50/45 dB. Wow and flutter 0.3% wrms; S/N ratio 35 dB; separation 40 dB \$90

Under-Dash Players

SS-200 Cassette Player/Amp

Under-dash end-load cassette player with built-in amplifier. Features left and right slide-type controls; fast-forward/eject and tone high/low switches; tape play light; automatic stop at end of play. Amplifier output 3 W at 1% THD, 100-8000 Hz. Wow and flutter 0.35% wrms; S/N ratio 30 dB; separation 35 dB. 6 $\frac{1}{2}$ "W \times 4 $\frac{1}{2}$ "D \times 1 $\frac{1}{2}$ H \$35

SS-100 8-Track Player/Amp

Under-dash 8-track cartridge player with built-in amplifier. Features slide-type volume, balance, and tone controls; program selector; program indicator lights. Amplifier output 3 W at 1% THD, 100-8000 Hz. Wow and flutter 0.35% wrms; S/N ratio 30 dB; separation 35 dB. 5 $\frac{3}{4}$ "W \times 5 $\frac{1}{2}$ "D 2 $\frac{1}{4}$ H \$35

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.

(continued from page 197.)

eardrum headphones with Supra-Aural ear pads and precise fit soft, wide-contact leather head pads. Frequency range 20-25,000 Hz; maximum input power 1 watt; impedance 63 ohms; distortion 0.5% at 100 dB. Comes with 3-meter coiled cord and weighs 230 grams \$40

EAH-T805 Stereo Headphones

Response 20-20,000 Hz; maximum input 200 mW; SPL 100 dB/mW; impedance 125 ohms.....\$35

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 ODEMENR**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; gimbaled earcups; 3-m cable; 330g\$184

WALD SOUND, INC.**Verit SC-3 Super-Lightweight Headphones**

Stereo headphones for use with mini-cassette, conventional, and other machines, using adaptors supplied. Nominal impedance 32 ohms; matching impedance 4-150 ohms; frequency range 20-18,000 Hz; sensitivity 98 dB SPL at 1 mW; max. input power 100 mW; weight 1.5 oz (less cable)\$30

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

(continued from page 211.)

nominal level greater than 100k ohms/-10 dBV (0.3 V); power consumption 120 mA at ± 12 V dc regulated (obtained from MM-20); 15.8"D x 9.6"W x 4.2"H; 4.62 lb.....\$350
MU-20. Four VU-meter assembly with peak level indicators for System 20. Features -20- to +5-VU range; peak indicator level 10 dB above 0 VU; power obtained from MM-20; 16.4"W x 3.1"H; 2.2 lb\$150

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 100 Hz or 200 Hz; color-coded push-push channel assignment buttons with pan on each channel; 3 $\frac{1}{2}$ "H x 13 $\frac{1}{16}$ "W x 14 $\frac{1}{16}$ "D.....\$495

Model 3 Audio Mixer

8-in, 4-out two-monitor (8 x 4 x 2) versatility

in a compact mixer. Features unlimited flexibility and portability; 40-dB input attenuation; input selection mic-phono-line; 4-frequency, 2-control equalization; direct output and channel assignment; pan; monitor 4 x 2; submix 8 x 2; 20 $\frac{1}{2}$ "D x 18 $\frac{1}{4}$ "W x 6 $\frac{1}{4}$ "H; 40 lb...\$1275

M-35 Audio Mixer

8-in, 4-out, 8 monitor (8 x 4 x 8) portable audio mixer. Features modular construction; 40-dB mic attenuation; 20-dB mic/tape/line trim; cue/echo; 4-frequency, 2-control sweep-type equalization; solo-direct output bus-assignment switches; pan; buss tape monitor (x8); test tone; studio/control-room monitoring; optional talk-back monitoring; 24 $\frac{1}{2}$ "D x 23 $\frac{1}{2}$ "W x 7 $\frac{1}{2}$ "H; 62 lb.....\$2300
201C input.....\$195
210 submaster module.....\$150
208 master module.....\$170
209 talkback module.....\$120
206A power-supply module.....\$150
207 blank panel.....\$25
M-35 EX 8-input expander for M-35, capable of total M-35 system expansion of 20 inputs; 24 $\frac{1}{2}$ "D x 23 $\frac{1}{2}$ "W x 7 $\frac{1}{2}$ "H; 50 lb.....\$1650

System 20 Audio Mixer

MM-20 master module. Features 2 mic inputs,

XLR, balanced; 4 line outputs, -10 dBV, unbalanced; 6 output busses; 14 $\frac{1}{16}$ "W x 14"D x 3 $\frac{1}{4}$ "H; 9.24 lb.....\$395

MU-20 Meter Unit. Permits patching of any -10-dB (0.3-V) unbalanced signal from mixer or external units; 14 $\frac{1}{2}$ "W x 2 $\frac{1}{4}$ "H x 1 $\frac{1}{4}$ "D; 1.1 lb.....\$150

EX-20 Expander module with 4 mic inputs (XLR, balanced) and 4 output buses; 8 $\frac{1}{2}$ "W x 14"D x 3 $\frac{1}{4}$ "H; 4.4 lb.....\$325

PE-20 parametric sweep-type equalizer module with 4 EQ modes; 3 frequency bands (low: 60-1500 Hz ± 12 dB; mid: 1,000-8,000 Hz ± 12 dB; high: 10 kHz fixed ± 12 dB); 14"D x 8 $\frac{1}{2}$ "W x 3 $\frac{1}{4}$ "H; 4.6 lb.....\$350

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 $\frac{1}{2}$ "W x 12 $\frac{1}{2}$ "D.....\$260

**FOR LOCATIONS OF SECTION STARTS,
SEE TABLE OF CONTENTS ON PAGE 3.**

DIRECTORY OF MANUFACTURERS.....

(continued from page 183.)

SPARKOMATIC CORP.
Milford, PA 18337

SPEAKERLAB, INC.
735 North Northlake Way, Seattle, WA
98103

STANTON MAGNETICS, INC.
Terminal Dr., Plainview, NY 11803

STUDER REVOX AMERICA, INC.
1425 Elm Hill Pike, Nashville, TN 37210

SUPEREX ELECTRONICS CORP.
151 Ludlow St., Yonkers, NY 10705

SUPEX by SUMIKO, INC.
P.O. Box 5046, Berkeley, CA 94705

SUPERSCOPE by MARANTZ, Superscope,
Inc.
20525 Nordhoff St., Chatsworth, CA 91311

SWITCHCRAFT, INC.
5555 North Elston Ave., Chicago, IL 60630

TANDBERG OF AMERICA INC.
Labriola Court, Armonk, NY 10504

TAPE 5, INC.
111 Third Ave., New York, NY 10003

TASCAM by TEAC CORP. OF AMERICA
7733 Telegraph Rd., Montebello, CA 90640

TDK ELECTRONICS CORP.
755 Eastgate Blvd., Garden City, NY 11530

TEAC CORP. OF AMERICA
7733 Telegraph Rd., Montebello, CA 90640

TECHNICS, Panasonic Co., Div. of Matsushita
Electric Corp. of America

One Panasonic Way, Secaucus, NJ 07094

TELEDYNE by OLSON ELECTRONICS
260 S. Forge St., Akron, OH 44327

THIEL AUDIO PRODUCTS CO.
4158 Georgetown Rd., Lexington, KY 40511

THORENS, EPI Products, Inc.
One Charles St., Newburyport, MA 01950

3D ACOUSTICS
175 Heritage Ave., Portsmouth, NH 03801

THRESHOLD CORPORATION
1832 Tribute Rd., Suite E, Sacramento, CA
95815

TOSHIBA AMERICA, INC.
82 Totowa Rd., Wayne, NJ 07470

TRANSCRIBER CO., INC.
Box 478, Attleboro, MA 02703

UHER by WALTER ODEMER CO., INC.
621 Shindry Ave., Inglewood, CA 90301

UNITRONEX CORP.
1711 Landmeier Rd., Elk Grove Village, IL
60007

VECTOR RESEARCH
20600 Nordhoff St., Chatsworth, CA 91311

VISONIK OF AMERICA, INC.
701 Heinz Ave., Berkeley, CA 94710

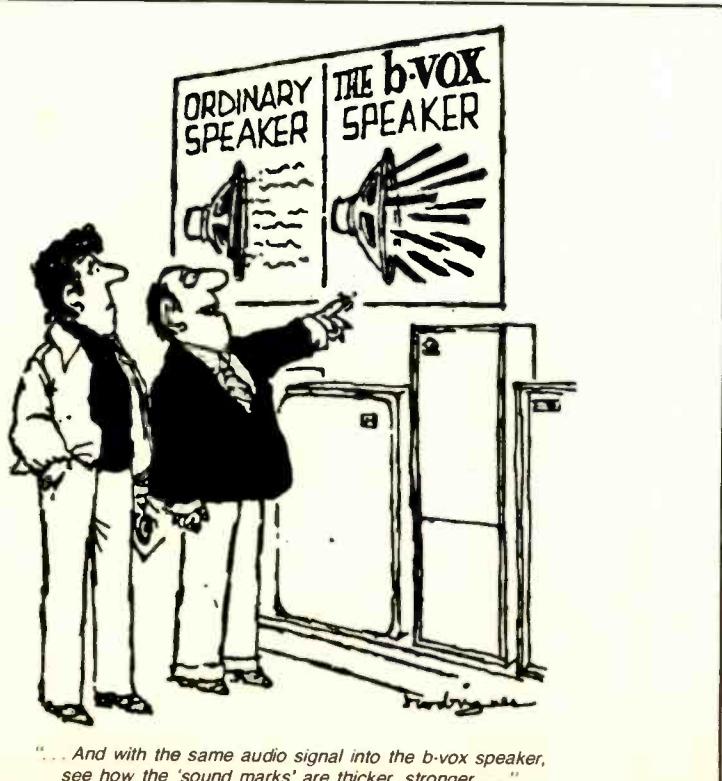
WHITE INSTRUMENTS, INC.
P.O. Box 698, Austin, TX 78767

YAMAHA INTERNATIONAL CORP.
6600 Orangethorpe Ave., Buena Park, CA
90620

STEREO DIRECTORY & BUYING GUIDE 1982

ADVERTISING INDEX

READER SERVICE NO.	ADVERTISER	PAGE NUMBER
1	Acoustic Research	153
	AKG Acoustics, Inc.	185
1	Aiwa	39
	Allison Acoustics	163
2	Allsop, Inc.	143
3	Alpine	Cover 3
5	Audio Technica U.S., Inc.	97
6	BASF	7
7	Benjamin Electroparts, Inc.	85
8	B.E.S.	15
	Beyer Dynamic, Inc.	187
4	B&W Loudspeakers, Ltd.	155
10	Carver Corporation	56
11	Carver Corporation	57
12	Cizek Audio Systems, Inc.	161
13	Dahlquist, Inc.	63
14	Dahlquist, Inc.	165
15	Discount Music Club	4
16	Discount Sound	145
17	Discwasher	Cover 4
	Dolby Laboratories, Inc.	111
18	Empire Scientific	99
19	Epicure Products, Inc.	150
20	Hi-Fi Buys	197
21	Illinois Audio	147
22	Infinity Systems, Inc.	157
	International Record & Tape Club	209
23	JBL (James B. Lansing)	159
24	J&R Music World	83
50	Jensen Sound Laboratories	212
25	Kenwood Electronics	8
26	Koss Corporation	35
27	Loran	27
28	Maxell Corp. of America	134
29	McIntosh Laboratory, Inc.	43
49	Mitsubishi	17-24
30	Mobile Fidelity Sound Labs	11
31	Mura Corp	189
32	Nikko Audio	33
33	Ohm Acoustic Corp.	175
34	Pickering & Company	94
44	U.S. Pioneer	Cover 2,1
35	Polk Audio	2
	Radio Shack	29,40
36	SAE	69
39	Sansui	45
37	Sherwood Electronic Labs, Inc.	48,49
38	SIARE	179
40	Stanton	107
41	Stereo Corporation of America	73
42	Sony Corp. of America	5
	U.S. JVC	36
43	TDK	139
46	Wisconsin Discount Stereo	81
47	Yamaha International Corp.	53





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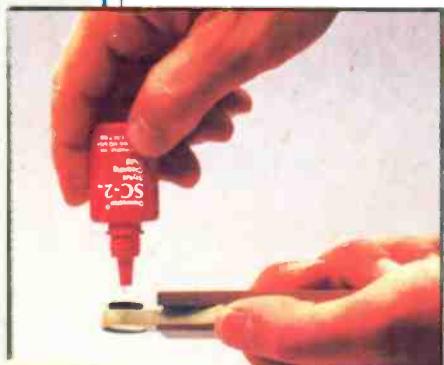
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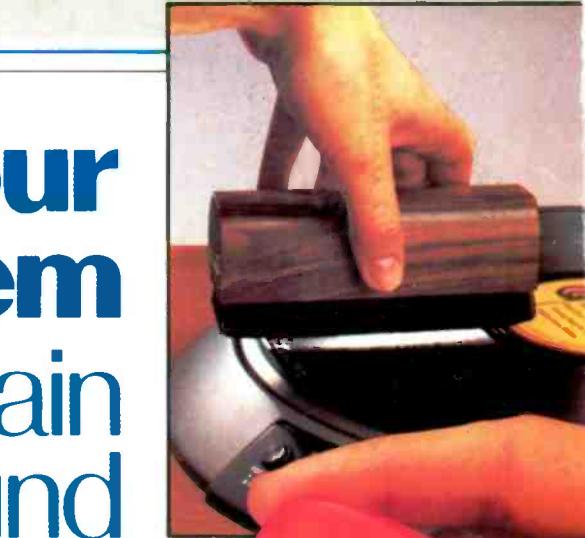


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