Stereo Review's

$2.50

# STEREO DIRECTORY & BUYING GUIDE® 1979

## COMPLETE BUYING INFORMATION ON OVER 2000 MODELS

RECEIVERS • TURNTABLES • CARTRIDGES
TAPE DECKS • SPEAKER SYSTEMS
AMPLIFIERS • CAR STEREO

EXTRA
HOW TO ALLOCATE $$$ TO EACH COMPONENT

0 95
14024 14270

# DENON

| MODEL | DESCRIPTION | *PRICE |
|---|---|---|
| DP-755 | Armless base; dir dr AC servo motor; detent on speed control | $ 300 |
| DP-1100 | Economical direct drive AC turntable w/tonearm | 280 |
| DP-1200 | Auto-lift/shutoff in simulated ash or mahogany base | 375 |
| DP-1250 | Armless table with natural wood veneer | 340 |
| DP-1800 | Natural marble base; dynamically damped tonearm | 480 |
| DP-2500 | Quartz-locked; dynamically damped tonearm | 525 |
| DP-2550 | Armless Quartz-locked in simulated ash & walnut | 475 |
| DP-2800 | Quartz-locked TT in natural marble base with damped arm | 675 |
| DP-3500 | Popular DP-3000 motor in natural walnut or ash veneer base | 600 |
| DP-6700 | High performance quartz-locked DP-6000 motor w/DA-307 tonearm | 1,060 |
| DA-307 | Dynamically damped static balance tonearm; magnetic anti-skate | 255 |
| DA-309 | Economical version of DA-307 with improved damping | 220 |
| DL-103/T | DL-103 conical stylus MC cartridge w/AU-300 transformer | 200 |
| DL-103S | Moving coil type; modified shibata stylus | 186 |
| DL-103D | Moving coil type; elliptical stylus | 267 |
| AU-310 | Moving coil transformer; 40 ohm impedance | 95 |
| AU-320 | Moving coil transformer; 3 ohm & 40 ohm impedance | 153 |
| HA-1000 | Head-amp for MC type cartridge | 440 |
| PCC-1000 | Phono crosstalk cancellor | 290 |
| TU-501 | AM/FM tuner to match PMA-501 | 340 |
| PMA-501 | 50 + 50W integrated amp w/PCC | 410 |
| TU-850 | Low distortion, high selectivity, 5 gang var. cap. tuner | 480 |
| PMA-850 | 85 + 85W integrated amp w/PCC; matches TU-850 | 800 |
| PMA-830 | 65 + 65W; 15 + 15W class A integrated amp; matches TU-850 | 635 |
| DR-350 | Stereo cassette tape deck | 450 |
| DR-750 | Professional quality tape deck | 1,400 |
| IR-8W | Vertical Sound Center | 295 |

*Prices and model number subject to change without notice.


## Vertical Sound Center

**American Audioport, Inc.**

A DIVISION OF THE DISCWASHER® GROUP
1407 North Providence Road
Columbia, Missouri 65201 314/443-1636

CIRCLE NO. 8* ON READER SERVICE CARD


# THE ART IS STATED

by the DENON DP-6700 (above) and the DP-2500 (below). Both have quartz synchronization, DENON's ultra-sensitive magnetic tape head speed control system, plus fast starting and braking.

The 6700 includes the dynamically-damped 307 tonearm and a turntable mat developed by laser analysis that eliminate resonant vibrations.

The 2500 has performance specs to match turntables at twice the price (wow & flutter—less than 0.05%), and a style and grace unmatched by any other.

# American Audioport, Inc.

presents

# DENON


The Oldest New Name in Quality Audio




# ELECTRONICS

**The 850 Series**—Perfectionist equipment for serious listeners. 85/85 watts of DC amplification, tuner performance, and meaningful meters make the 850 Series an exceptional set of "separates", that defy comparison.

**The 501 Series**—Amplifier and tuner that defy performance/value comparisons. 50/50 watts of coupled accuracy.

**The PCC-1000**—A Phono Crosstalk Canceller that increases phono cartridge channel separation by 10 to 15cB—a feature that is built into the 850 and 501 amplifiers.


# TAPE DECKS

**DR-750**—The first innovative transport and head system in five years make the DR-750 the lowest distortion and highest performance cassette deck you can physically carry! Wow & flutter are under 0.045% with a literal 20 to 20kHz capability. Ask for literature and a listening test.

**DR-350**—The engineering of the DR-750 in a scaled-down package. Servo-monitored transport and fine-tune bias control make the DR-350 an outstanding bargain (you will know in a comparison with any comparably-priced cassette deck).


DR-350


# No matter what system you own there's an Empire Phono Cartridge designed to attain optimum performance.

Detail, brilliance, depth.
This is the promise of each Empire Phono Cartridge and although there are many Empire models, each designed to meet specific turntable performance characteristics, every Empire cartridge contains the following features:

| Features | Details | Benefits |
|---|---|---|
| Unique Fixed Unidirectional Three-Magnet Structure | Every Empire cartridge uses 3 high energy ferrite magnets in the cartridge body to provide a high level of unidirectional flux. | Higher and more linear output signal, immunity to bi-directional magnetic distortion, and improved hum and microphonic rejection. |
| Molded Four-Pole Magnetic Assembly | Every Empire cartridge employs a four-pole magnetic assembly that is precisely aligned and locked in place by a high pressure injection molding process... providing a uniform and orthagonal magnetic field. | Improved crosstalk and reduced distortion that is insensitive to tracking force. |
| Tubular moving Iron Design | By using a tubular high magnetic saturation iron armature we obtain an optimum ratio of output level to effective tip mass. | Improved tracking ability and widened frequency response. |
| Four Coil Hum Bucking Assembly Plus Electromagnetic Shielding | Using custom designed computer controlled machines, a precision drawn copper wire (thinner than human hair and longer than a football field) is wound onto a symmetrical 4 bobbin structure. By using 2 coils per channel a symmetrical electrical circuit is formed. | Improved rejection of hum and stray noise fields. |
| Aluminum Alloy Cantilever | The Empire computer designed tubular cantilever provides optimum coupling of the diamond tip to the moving magnetic system resulting in minimum effective stylus tip mass. | Superb low level tracking, reduced tracking distortion... plus enhanced wideband separation characteristics. |
| Precision Ground Oriented Diamond Tips | Empire diamonds are precision ground, polished and inspected in house, using sophisticated television cameras and powerful microscopes to ensure accurate angular orientation. | Reduced tracing phase distortion, together with reduced wear of both the record and the diamond tip. |

For the full story on Empire cartridges we suggest you "test-listen" to one at your local Empire dealer, and for information on our full line of cartridges, write for our brochure "How to Get the Most Out of Your Records": **Empire Scientific Corp.**, Garden City, N.Y. 11530

EMPIRE

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Stereo Review's

# STEREO DIRECTORY & BUYING GUIDE 1979

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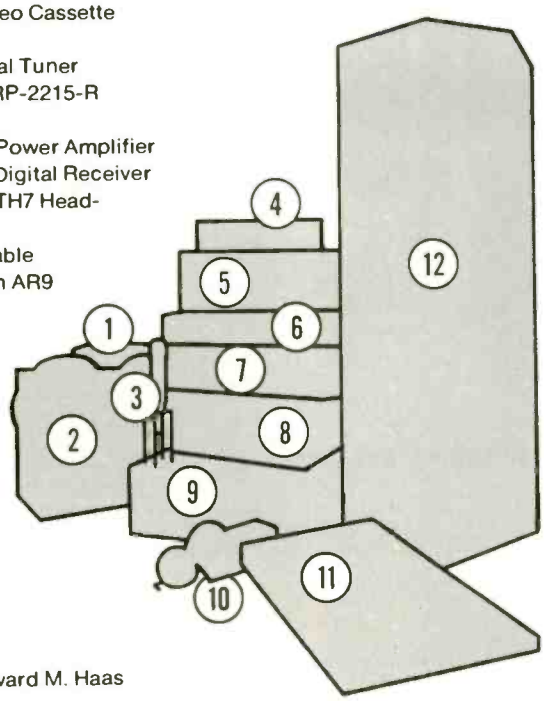
**1979 EDITION**

## THE COVER

1. Marantz 420 Car Stereo
2. Studer-Revox B77 Open-Reel Tape Machine
3. Electro-Voice 309 Microphone with stand
4. David Hafler DH-101A Preamplifier
5. Hitachi D-900 Stereo Cassette Deck
6. Onkyo T-909 Digital Tuner
7. Soundcraftsmen RP-2215-R Equalizer
8. Denon POA-1001 Power Amplifier
9. Toshiba SA-7150 Digital Receiver
10. Audio Technica ATH7 Headphones
11. Lux PD 444 Turntable
12. Acoustic Research AR9 Speaker System

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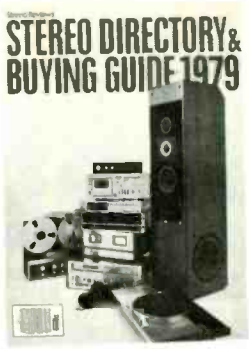



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# New Scott amps are loaded with extras.

**DC Amplification.** Improves reliability, expands frequency response, and reduces TH and IM distortion.

**Twin logarithmic Op Amp meters.** Visually monitor the peak average power amplifier output of each channel in both watts and dBW.

**Attenuated volume control calibrated in dB.** Makes precise volume level selection and exact duplication of previous volume settings.

**Bi-modal electro-sensor relay protection.** Protects amplifier as well as speakers from all conceivable malfunctions.

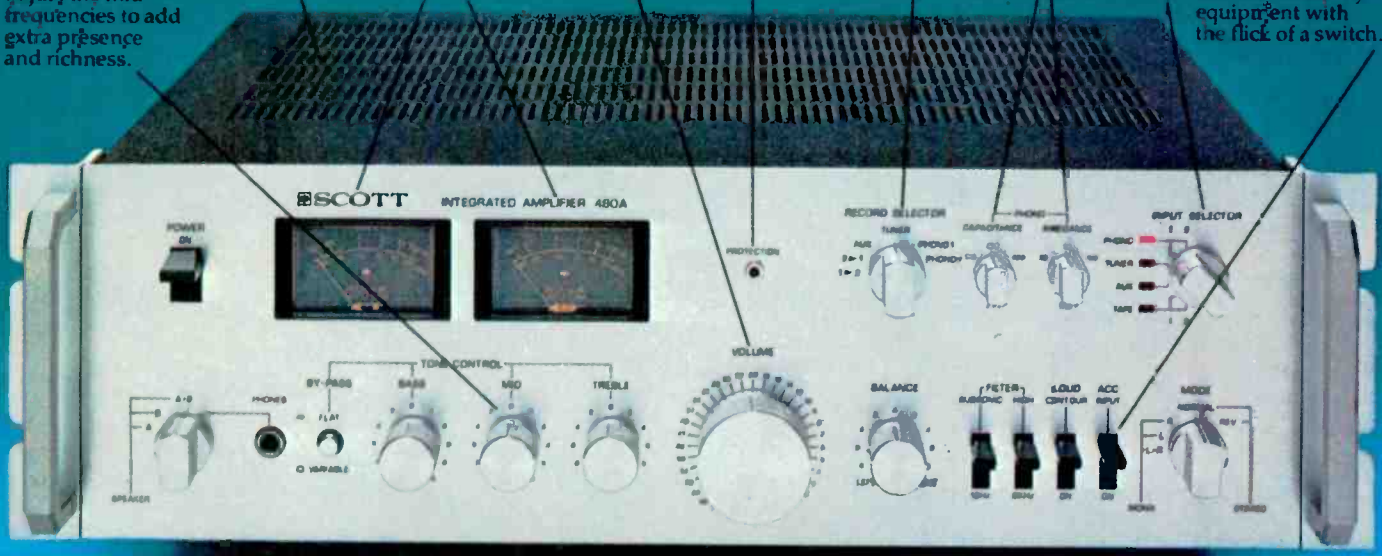
**Complete tape monitoring and two-way copy capability.** Listen, record, monitor or copy from Tape I, Tape II, Tuner, Aux, or two phono inputs in any combination.

**Capacitance and Impedance Adjustments.** Maintain accurate frequency response by adjusting for various phono cartridge requirements.

**Two independent phono equalizer pre-amps.** Use both phono inputs at the same time, listen to one while recording the other, or vice versa. Impossible with other comparably priced amps.

**Mid-range control.** In addition to the treble and bass controls, you can adjust the mid frequencies to add extra presence and richness.

**Front Panel Accessory Switch.** Control accessory equipment with the flick of a switch.




# At no extra cost.

When you consider separates, you want all the extras you can get for your money. And no one gives you more than Scott.

Just take our new 480A integrated amplifier. 85 watts per channel min. RMS, at 8 ohms from 20-20,000 Hz with no more than 0.03% THD.

It's the only amplifier in its price class that gives you two independent phono preamps. Now you can record one phono while listening to the other. Or vice versa.

All our amps boast dozens of other advantages you simply can't find in comparably priced units. Our state-of-the-art circuitry gives you plenty of power with very low distortion. And our features and functions give you full flexibility in producing the sound you like best.

When you move up to separates, move up to Scott. Where all the extras don't cost extra.

**New Scott 460A Integrated Amplifier**
70 watts per channel min. RMS, at 8 ohms from 20-20,000 Hz with no more than 0.04% THD

**New Scott 440A Integrated Amplifier**
55 watts per channel min. RMS, at 8 ohms from 20-20,000 Hz with no more than 0.05% THD

**New Scott 420A Integrated Amplifier**
40 watts per channel min. RMS, at 8 ohms from 20-20,000 Hz with no more than 0.08% THD

*Shown with optional rack mount handles

Scott's unique gold warranty card, individualized with your warranty, model and serial numbers, and expiration date. Scott's fully transferable, three-year parts and labor-limited warranty is your assurance of lasting pleasure.

**SCOTT**
**Warranty Identification Card**

Warranty Number: 32461
Model: 480A Amplifier
Serial Number: 403 8372/626
Expiration Date: September 15, 1981

For specifications on our complete line of audio components, contact your nearest Scott dealer, or write H.H. Scott, Inc. Corporate Headquarters, 20 Commerce Way, Woburn, MA 01801.
In Canada: Paco Electronics, Ltd., Quebec, Canada.

**SCOTT**
**The Name to listen to.**
Makers of high quality high fidelity equipment since 1947.

CIRCLE NO. 69 ON READER SERVICE CARD

# HOW MUCH OF THE MUSIC DO YOU WANT TO HEAR?

Today's professional musicians are putting more into their music than ever before. A whole new generation of recording equipment allows them to pack a tape or fill a record's grooves with musical shadings and textures and subtleties that simply went unrecorded a few years ago.

JBL is part of that process.

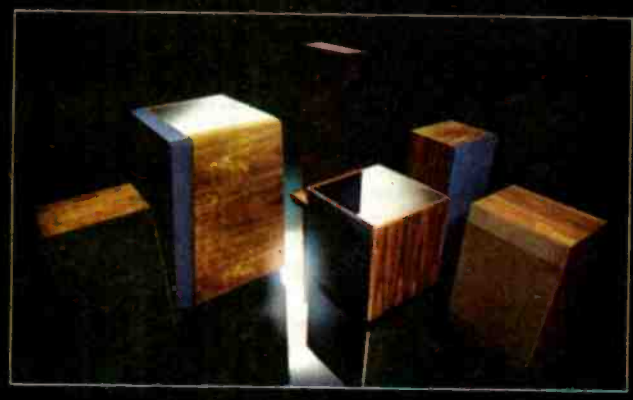
In fact, according to a recent national survey by

Cherokee Recording Studios Los Angeles California

Billboard Magazine. JBL is the most widely used loudspeaker in professional recording studios. There's a reason:

JBL delivers all the music, all the time. And it does it with flawless accuracy and attention to detail that professionals can't afford to be without.

If you want to get all the music out of your records and tapes, get the loudspeaker the pros used to put it there: JBL.



You don't have to be a professional to own JBL loudspeakers. The same sound is available in a wide variety of home systems, priced from $175 to $4,800.

JBL

GET IT ALL.

James B. Lansing Sound Inc., 8500 Balboa Boulevard, Northridge, California 91329

# HITACHI
# The New Leader In Audio Technology


## ...introduces the world's most powerful 50 watt receiver.

The new Hitachi SR 804 stereo receiver has the revolutionary Class G amp that instantly doubles its rated power from 50 to 100 watts to prevent clipping distortion during those demanding musical peaks (note the clipped and unclipped waves in the symbolic graph above). The SR 804 is conservatively rated at 50 watts RMS, 20-20,000 Hz into 8 ohms with only 0.1% THD.

Class G is just one example of Hitachi's leadership in audio technology. Power MOS/FET amplifiers, R&P 3-head system cassette decks, Uni-torque turntable motors, and gathered-edge metal cone speakers are just some of the others. There's a lot more. Ask your Hitachi dealer.

**HITACHI**
**When a company cares, it shows.**

CIRCLE NO. 26 ON READER SERVICE CARD

Audio Component Division, Hitachi Sales Corp. of America, 401 West Artesia Boulevard, Compton, CA 90220, (213) 537-8383

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*continued on page 10*

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**ORTOFON**, Tannoy-Ortofon, Inc.
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*continued on page 226*

# Power-hungry speakers have finally met their match.

If you're enthusiastic about today's less efficient, super-accurate speaker systems, you know you need a very efficient, super-power receiver to drive them.

And if your ears are good enough, you know the value of lots of power to handle critical musical passages with any speaker system.

That's why we created the new KR-8010. With 125 watts per channel, minimum RMS both channels driven at 8 ohms, from 20 to 20,000 Hz with no more than 0.03% total harmonic distortion, you've got all the power you really need.

But more important, the KR-8010 gives you an extremely clean, low-distortion signal at the same time.

For example, the signal-to-noise ratio through the phono input is the best you'll find on any receiver (90 dB). Its overall frequency response is matched precisely to the RIAA curve ±0.2 dB. And the tuner delivers sensitivity and selectivity that you'll really appreciate in signal-crowded cities.

To shape that signal into music, the KR-8010 offers a full range of front-panel controls usually found only in esoteric separates and recording studios. Like tape dubbing while listening to another source. And dual FM muting levels. MIC input and fade control. Bass, treble and midrange tone controls. And more.

The point is simply this: At $675.00,* the KR-8010 is made for the listener who demands as much from his receiver as he does from his speakers.

Next time you're at your Kenwood dealer listen to your favorite speaker with the KR-8010.

We think that your ears will finally meet their match.

*Nationally advertised value. Actual prices are established by Kenwood dealers.


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For the dealer nearest you, see your Yellow Pages, or write Kenwood, P.O. Box 6213, Carson, CA 90749. In Canada: Magnasonic Canada, Ltd.

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## Sound Guard® keeps your good sounds sounding good.

Ball

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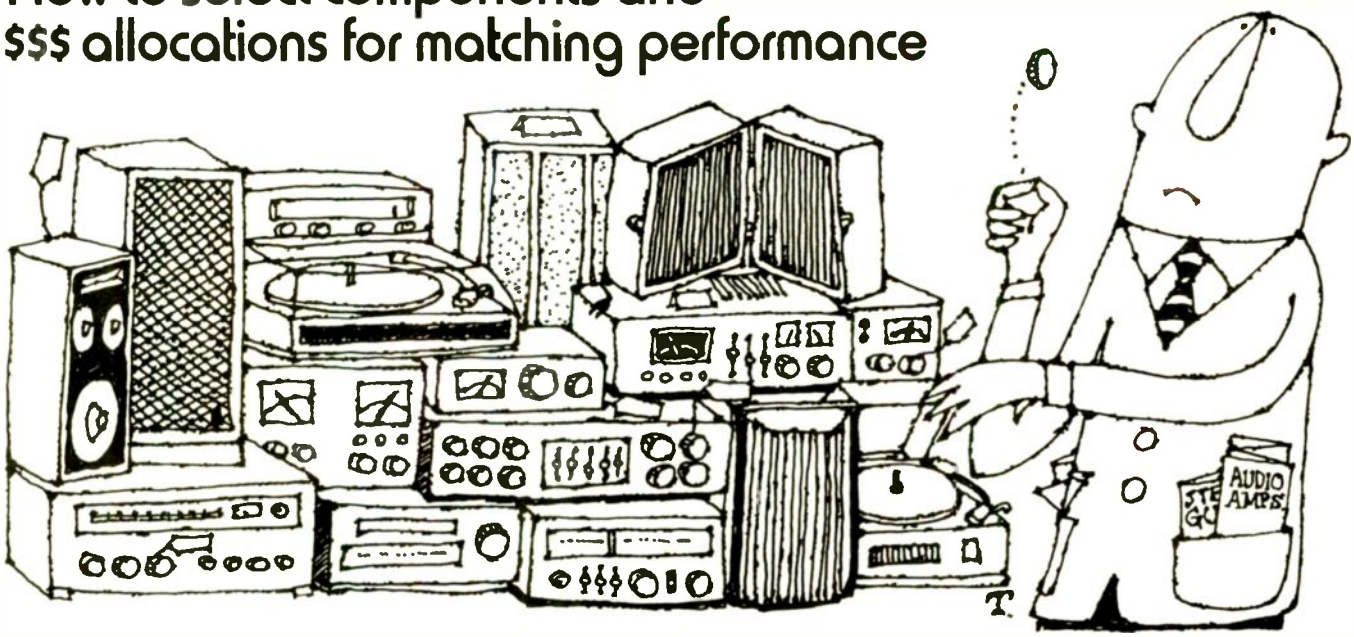
CIRCLE NO. 18 ON READER SERVICE CARD

# A DECISION-MAKING GUIDE FOR YOUR FIRST STEREO COMPONENT SYSTEM

## How to select components and $$$ allocations for matching performance




If you are planning to purchase your first stereo high fidelity component system and thumbed through this directory, the awesome number and variety of components described may seem intimidating. As a first-time buyer, the options, permutations, and combinations seem endless. Where to begin?

Actually, choosing a well-matched component system is not all that difficult. An informed and experienced audio dealer can guide you toward a sensible approach to component selection, but it helps if you provide him with some basic information. You should have some idea of how much you want to spend for your first set of stereo components. You should also give some thought to possible expansion and upgrading of your system at a later date. Happily, component stereo systems lend themselves to such upgrading and we will deal with that subject after we have outlined the basics of buying your first component system.

### WHAT TO BUY

The majority of high fidelity component systems consist of only three or four basic components. You will, of course, need a pair of loudspeaker systems. Most popularly connected to the speakers will be a single electronic component known as a stereo receiver. The receiver really contains three separate sections: (1) a tuner for FM and AM radio broadcasts; (2) a preamplifier/control section to amplify these radio signals, as well as other possible signal sources such as those produced from a record-playing system or a tape deck; and (3) a power amplifier, which further amplifies these signals so they are powerful enough to drive the loudspeakers satisfactorily. The receiver can, of course, be replaced by separate components such as a tuner, preamplifier, and amplifier. This generally results in a higher-priced, though more flexible, system. The savings gained by combining these three components into one physical package are often substantial, and that is why most first-system buyers choose the all-in-one receiver approach.

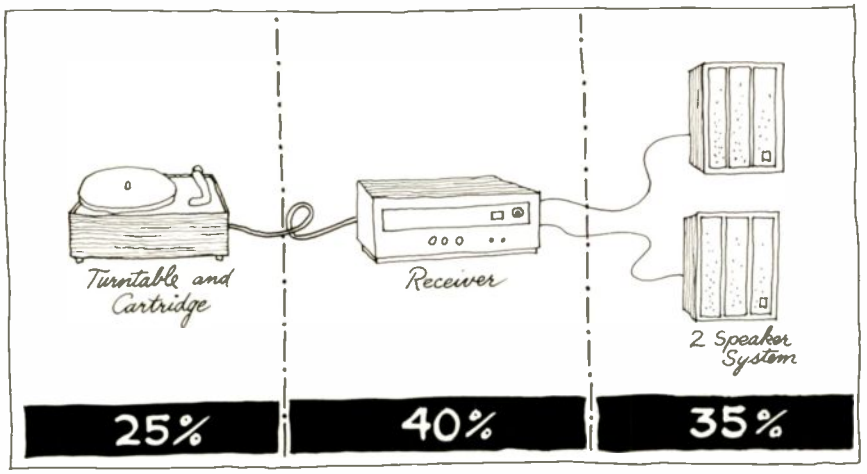
Even in a first, modestly priced system there may be justification for selecting separate components. For example, if you live in an area where there is little or no desirable FM reception, you may want to forego the expense of an FM program source. In that event, it may be more economical or practical to purchase an integrated amplifier (which includes the preamplifier-control and power amplifier sections of a receiver, but omits the tuner section) at the outset. Choosing this type of component as the electronic heart of your system does not eliminate the possibility of AM or FM as a future program source if you move to another area, or if FM stations become more plentiful in your listening area. A separate, FM or AM-FM tuner can be added to such a system at any time in the future.

The final component combination that should be considered in any basic system is the record-playing system. The two basic elements of this combination are the turntable/tonearm system and the phono cartridge, the latter containing the tiny diamond stylus that rides along in record grooves.

In addition to these basic components, you may want to add a tape deck to your system. Many first-time stereo system purchasers content themselves with a receiver, a pair of speakers and a record-playing system at the outset. Often, after experiencing the pleasure of listening to faithfully reproduced music, a tape deck is added. This adds a new capability to a home music-playing system—recording new records, radio broadcasts, live performances, etc. The cassette deck, which uses small pre-packaged tape cassettes, is the most popular tape recording medium. This is owed to its ease of operation and great improvements made in its ability to record and play back sounds with great fidelity. Amateur recordists who want to do more than just record their favorite musical programs from radio or records may prefer an open-reel tape deck. This permits easier tape editing and, in some cases, simulates the capabilities of professional recording studio machines in both creative and sound fidelity aspects.

### HOW MUCH FOR YOUR FIRST SYSTEM

As you will learn upon examining product




Apportioning dollars to a stereo receiver/turntable/speaker system.

listings in this directory, it's possible to spend as little as $400 to $500 on a "basic" system consisting of a receiver, a pair of speaker systems and a record-playing system. Even this relatively low figure can be further reduced by careful shopping. This is especially true if you purchase all of the components you need from one dealer. Many dealers, in fact, offer complete systems bearing a single price tag that's generally much lower than the sum of the prices of all components included. There is nothing wrong with taking advantage of such "package" deals if the components selected and combined in this way meet your listening requirements.

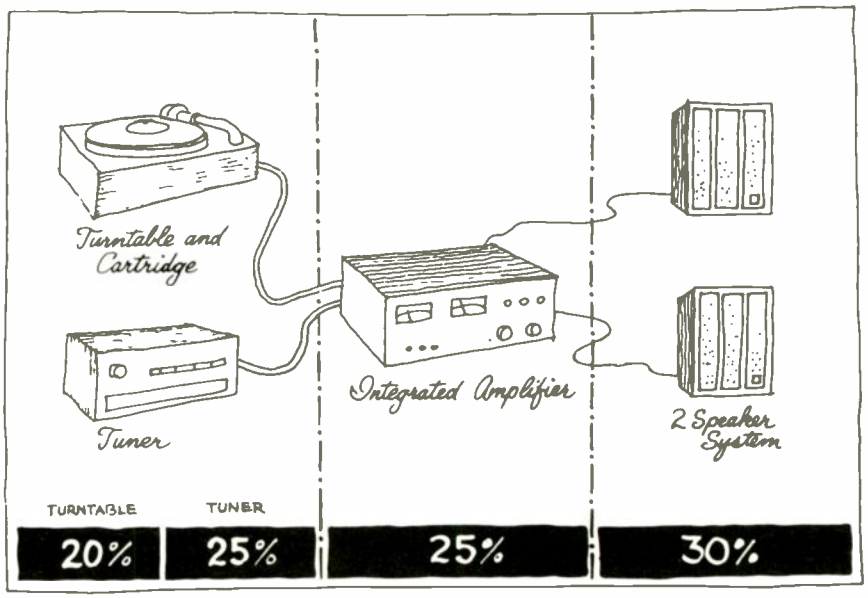
While $400 to $500 allows you to enter the world of component high fidelity, there are much more costly systems, with correspondingly better performance and greater operating flexibility. There are, for example, speaker systems which, by themselves, cost several thousands of dollars. Highest powered, full-featured stereo receivers presently available also sell for more than the $1000 mark. And there are even turntable systems which, alone, cost more than a complete four-component system which, to untrained ears, may be perfectly acceptable.

It has been said that the first few hundreds of dollars you spend on a high fidelity stereo system brings you a long way toward the "ultimate" in sound quality. It's that last 10% or 20% in "fidelity" that is the expensive quest. To many persons, it's worth it, too.

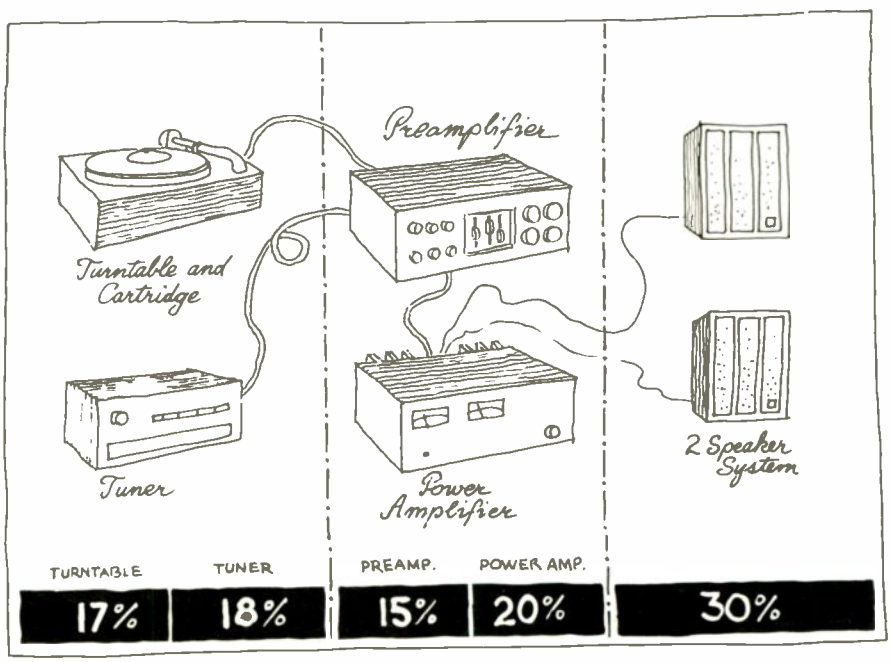
Regardless of how much money you decide to spend for your first component system, it's important that the components chosen be well matched or compatible with each other. If your budget is $500, it makes little sense to spend $350 of that sum on a stereo receiver, and be left with only $150 for a pair of speakers, a turntable system and a stereo phono cartridge. Figure 1 illustrates how to apportion your monies for a basic component system so that no component's performance quality will greatly exceed another. Keep in mind that, in most cases, sound-quality performance will only be as good as that of the poorest component in the system. So buying a "super" component to match only modest-performing ones would be a waste of money in most instances.

### WHAT TO CHOOSE FIRST

Most audio experts agree that, in choosing a component system, the first decision to be made (and perhaps the most difficult one) concerns your loudspeakers. Speaker systems offer the greatest variable in any high-fidelity system. What's more, unlike some of the purely electronic elements of a stereo system, it is difficult, if not impossible, to describe the performance of a speaker system in terms of published technical specifications. As you audition speaker systems at your dealer's showroom (and that is a basic way to judge speaker qualities) you will




Apportioning dollars to an integrated amplifier/tuner/turntable system.




Apportioning dollars to a "separates" system.

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## Love that SOUND!

## Love that PRICE! $45

# Stanton's newest headset... the DYNAPHASE® 35

(MADE IN U.S.A.)

This sparkling new design combines in its advanced open-audio construction everything desirable in a headset. So light and comfortable over long listening periods. Amazingly pure sound, with an extended frequency response over the range from 20 Hz to 20 kHz. Special adapter plug permits you to connect with portable radios, records and tv sets. It's a real love match.

*Hear them at your nearest Stanton dealer, or for further information write to Stanton Magnetics, Terminal Drive, Plainview, N.Y. 11803.*

STANTON



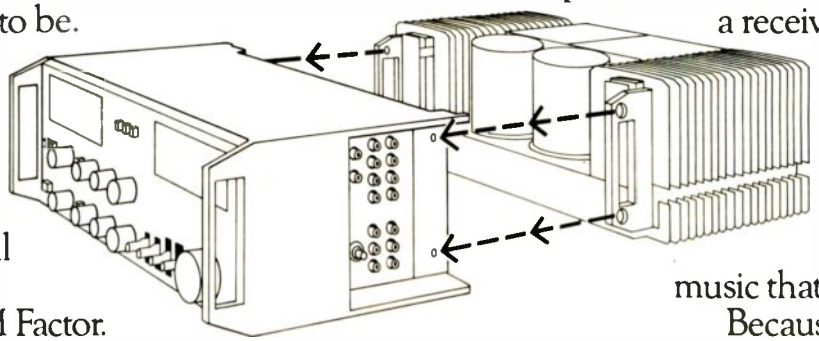
CIRCLE NO. 75 ON READER SERVICE CARD

# Mitsubishi Pre-empts the Receiver.

Introducing the docking tuner/preamplifier and amplifier. Exclusively Mitsubishi.

It is not a receiver. It is what receivers try to be.

It is two components. Tuner and preamplifier on one chassis. That docks with our dual monaural power amplifier.



It has The DM Factor. Dual Monaural construction. Exclusively Mitsubishi.

It means more than mere stereo. It means inside our stereo tuner/preamplifier are two perfectly matched mono preamplifiers. Just like our component preamplifiers. But not like any receiver.

Because it is not a receiver.

It is a tuner with THD in stereo at 0.08%. With signal to noise in stereo at 75dB. With switchable selectivity for uncompromising reception.

With incredible clarity and definition. Ten violins sound like ten violins, not one big mushy solo.

It is a dual monaural preamplifier with interchannel separation at better than 80 dB at 20kHz. Far better than any receiver. With THD at less than 0.002%. For effective elimination of leaks, crosstalk, or any influence able to distort the stereo image.

With the ability to handle the moving coil cartridge. For signal to noise at −77dB (0.1mV input). Previously unheard of in any preamplifier.

It is a tuner/preamplifier that docks with a dual monaural power amplifier. 100 watts or 150 watts. With max RMS output power into 8 ohms from 15Hz to 30kHz. With THD at no more than 0.05% at rated output.

It is a single, uncluttered unit with the convenience of a receiver. But the integrity of the exclusive DM Factor. The prime factor in making sure our equipment doesn't fictionalize any music that it plays.

Because the equipment is Mitsubishi. And Mitsubishi has a standard: what comes out must be as real as everything that went in.

Listen to the most expensive receiver you can. Then hear our DA-C20 dual monaural tuner/preamplifier and self-docking amplifier.

Hear what our standard really sounds like.

And, believe us, it doesn't sound like any receiver in the world.

MITSUBISHI AUDIO SYSTEMS

CIRCLE NO. 57 ON READER SERVICE CARD


MITSUBISHI DA-C20
TAPE MONITOR DUPLICATE
TURNING

**TABLE I–GUIDE TO POWER-AMPLIFIER REQUIREMENTS FOR SPEAKER EFFICIENCY AND ROOM SIZE**

Highest Sound Pressure Level (in dB) Possible for a Room of Indicated Volume (in cu. ft)

| Amplifier Power (Continuous Watts per Channel) | Low-Efficiency Systems | | | Medium-Efficiency Systems | | | High-Efficiency Systems | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2000 Cu Ft | 3000 Cu Ft | 4000 Cu Ft | 2000 Cu Ft | 3000 Cu Ft | 4000 Cu Ft | 2000 Cu Ft | 3000 Cu Ft | 4000 Cu Ft |
| 10 | 94 dB | 92 dB | 91 dB | 97 dB | 95 dB | 93 dB | 102 dB | 101 dB | 100 dB |
| 20 | 97 dB | 95 dB | 94 dB | 100 dB | 98 dB | 96 dB | 105 dB | 104 dB | 103 dB |
| 35 | 99.5 dB | 97.5 dB | 96.5 dB | 102.5 dB | 101.5 dB | 98 dB | 107 dB | 106 dB | 105 dB |
| 50 | 101 dB | 99 dB | 98 dB | 104 dB | 102 dB | 100 dB | 109 dB | 108 dB | 107 dB |
| 75 | 103 dB | 101 dB | 100 dB | 105 dB | 103.5 dB | 101.5 dB | 110.5 dB | 109.5 dB | 108.5 dB |
| 100 | 104 dB | 102 dB | 101 dB | 107 dB | 105 dB | 103 dB | 112 dB | 111 dB | 110 dB |
| 125 | 105 dB | 103 db | 102 dB | 108 dB | 106 dB | 104 dB | 113 dB | 112 dB | 111 dB |

Numbers given are for "average" room furnishings–neither too reflective nor too absorptive. Rooms having heavy draperies, rugs, and much upholstered furniture may require somewhat more power to achieve the sound levels shown. Overly "live" rooms may require a bit less power for the same results.
CAUTION: Not all speaker systems can safely accept all power levels shown. Check with the manufacturer regarding maximum power permissible.

(Courtesy of The Institute of High Fidelity)

quickly discover that most speaker systems sound somewhat different from each other.

Aside from obvious differences in sonic qualities or "coloration," you might also note that as different speakers are connected for comparison listening tests, some may play louder than others, even though no alteration of volume-control settings has been made on the associated receiver or amplifier. These differences in loudness levels arise because different speaker system designs result in different speaker system efficiencies. (Many dealers have speaker switching systems that compensate for these differences. Accordingly there may not appear to be any sound output difference.)

Speaker efficiency, rather than a measure of sound quality, is a measure of how much sound energy is delivered by the speaker system for a given amount of amplifier energy or power fed to it. Thus, a speaker which delivers 1 watt of acoustical energy when driven by 100 watts of amplifier power may be said to have an efficiency of 1%. Many popular speakers have even lower efficiency ratings. Generally, speakers which are small in size (so-called "bookshelf" types) and which employ sealed-box enclosures (popularly known as "acoustic suspension" or "air suspension" designs) have relatively low efficiencies, while larger, floor standing models (often equipped with front-baffle cut-outs known as vents or ports, and sometimes featuring so-called passive radiators or "drone cones") usually exhibit higher efficiency ratings. Since overall efficiency may vary (depending upon the type of design) from well below 1.0% to above 10% (for certain types of horn-loaded speaker systems), it is often wise to select speaker systems first. Only then can you have some idea of how much power you will need to properly drive those speakers to satisfactory listening levels of loudness.

Room size also affects the amount of power you will need for your receiver or amplifier. Obviously, a small room such as a den or office will require less audio power than will a large, cathedral-ceilinged living room. Table I should serve as a general guide in helping you to decide how much power you need for your receiver or amplifier, once you have selected your speakers and determined whether they are classified as low-efficiency, medium-efficiency or high-efficiency types. Your audio salesman can help you in making that determination, or you may consult the speaker manufacturer's specification sheet. Ideally it would list the system's sensitivity as well as the minimum power that an amplifier should have to drive it satisfactorily.

Though speaker sensitivity does not permit you to calculate actual efficiency directly, it does give you an indication of relative efficiency. Speaker sensitivity is generally given in dB-SPL (Decibels of Sound Pressure Level) that will be perceived at a distance of 1 meter from the front of the speaker when that speaker is being fed with a power level of 1 watt from an amplifer. The higher the dB-SPL rating, the greater the efficiency. In order to relate sensitivity to efficiency (for utilizing Table I), the following guidelines may be used.

| *Sensitivity, dB-SPL* | *Efficiency* |
|---|---|
| 80 to 85 | Low |
| 85 to 92 | Medium |
| Above 92 | High |

## RECEIVER OR AMPLIFIER POWER

To use Table I, calculate the volume (in cubic feet) of your proposed listening room. Do this by multiplying room height by length, and then by width. Next, you must decide just how loudly you are going to want to play your music. To give you some idea about loudness levels, consider that when you are seated in mid-orchestra at a live concert performance, you are likely to hear peak sound levels of 90 to 95 dB SPL. If you want the sonic sensation of sitting up close in your home concert hall, 100 dB or even a bit more may be required. If you'd rather be standing where the conductor of a full orchestra is, or if you want the sonic environment of a discotheque, sound levels of 110 dB or even higher may, at times, be required.

It is important to remember that when you double the power fed to a loudspeaker, the sounds you hear do not *sound* twice as loud. Rather, you will note only a moderate increase in loudness level when power levels are doubled. For sound to *seem* twice as loud, it is necessary to increase power by a factor of ten to one! So if you are coasting along at peak power levels of 10 watts or so, should you wish to make the sound appear twice as loud, you would need to boost power all the way up to 100 watts!

If your funds are limited, you would do well to select a speaker that exhibits relatively high efficiency (or high sensitivity ratings.) Picking up a mere 3 dB of speaker sensitivity means you can purchase a receiver or amplifier that delivers *half* the power you would otherwise need for a given loudness level of sound reproduction. (Note that high or low speaker efficiency is no indication of quality. But high-efficiency speak-

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CIRCLE NO. 22 ON READER SERVICE CARD

## TABLE II–PREAMPLIFIER/CONTROL SECTION FEATURES

| FEATURE | PRICE RANGE | | | PURPOSE OR ADVANTAGE |
|---|---|---|---|---|
| | LOW | MEDIUM | HIGH | |
| Phono 1 & Phono 2 Inputs | | X | X | Permits use of two separate record players |
| 1 Tape Monitor Circuits & Switching | X | | | Add a Tape Deck or another audio accessory |
| 2 Tape Monitor Circuits & Switching | X | | | Add two tape decks or one tape deck plus an audio accessory |
| Tape Dubbing | | X | X | Copy tapes from one connected tape deck to another |
| Bass and Treble Tone Controls | X | X | X | Adjust response of system to compensate for other components, or to suit personal taste |
| Mid-Range Tone Control | | | X | Aids in emphasizing vocal music. Affords greater degree of control. |
| Selectable Bass & Treble Frequency Turnover Points | | | X | Permits trimming response at frequency extremes without affecting important mid-range frequencies |
| Low-Cut Filter | X | X | X | Reduces effects of turntable vibration, noise and rumble |
| High-Cut Filter | X | X | X | Reduces FM hiss, and tape and record noise with minimum effect on musical reproduction |
| Audio Muting | | | X | Fixed reduction of loudness, used when listening is interupted by phone call, doorbell, etc. |
| Loudness Control | X | X | X | Improves sound quality and balance when listening at low, "Background Music" loudness levels |
| Microphone Input | | X | X | Lets you add voice sounds to other program sources |
| Pre-Amp Interconnections | | X | X | Permits separate operation of these sections, or connection of accessories (e.g., equalizer, noise reduction unit etc.) between them |

ers generally require larger enclosures to achieve the amount of deep bass that a low-efficiency speaker system produces in a smaller enclosure. The smaller enclosure, though, requires a more powerful amplifier.)

Our ears tend to play tricks on us; we will generally tend to favor the louder of two pairs of speakers in any comparison test. Therefore it is important, in comparing the sonic quality of speakers during auditioning tests, that each pair of speakers compared be played at precisely the same loudness as the next pair.

It is also a good idea to start by listening to a few pairs of speakers that cost much more than you plan to spend. Having familiarized yourself with the typically better sound from such speakers, the idea then is to try to find speakers in *your* price category which come closest to reproducing the costlier sound.

### CHOOSING THE RECEIVER

Assuming you now know how much power you need from a receiver to properly drive your chosen loudspeakers, it's time to select the heart of your system—the stereo receiver itself. It is, of course, possible to purchase a receiver that can deliver much *more* power than you need. Some of today's stereo receivers deliver fully as much power as the very highest powered separate integrated amplifiers or basic power amplifiers. Indeed, if you plan to add additional speakers in other rooms (most receivers can handle two or even three sets of speakers, all connected to the one component and switchable from the front panel), you may want to choose a receiver with a higher-than-now-needed power rating. With two sets of speakers playing simultaneously, power will divide equally between them. Hence, you would need twice as much power from your receiver for equal sound levels.

Aside from power ratings, there are many other considerations in choosing a receiver. These may be divided into two general categories: features and specifications of the preamplifier/control section, and features and specifications of the tuner section.

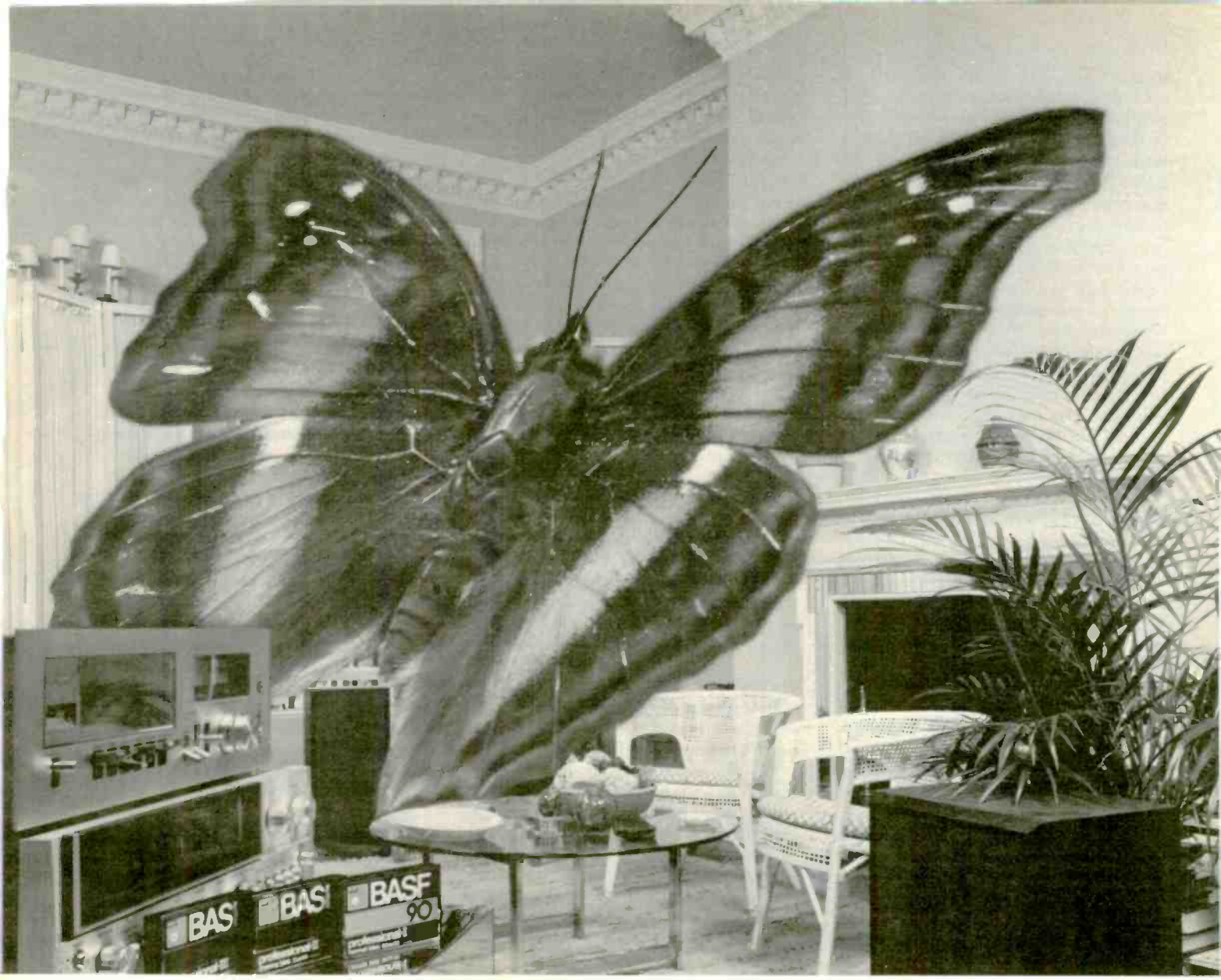
### PREAMPLIFIERS/AMPLIFIERS

Table II outlines some of the more popular control features available on today's receivers. In the column at the right of each feature is an explanation of what that feature (or control) accomplishes. Though we have separated the features and controls into low-priced, mid-priced and high-priced categories, you will quickly discover that there is a great deal of overlap. If you spot a feature that appeals to you and it is listed in the high-priced column, the idea is to seek out a receiver in a mid-priced or low-priced category (assuming you are bound by such budget limitations) that manages to incorporate the desired feature.

Table IV lists some of the more important specifications which you will want to know about when considering the performance quality of the preamplifier and amplifier sections of the receiver you buy. While most people are concerned primarily with power output ratings of the amplifier section, it is important to remember that this is only one of many performance criteria that must be judged.

Even power ratings are subject to some interpretation. For example, two amplifiers may both be rated at 50 watts per channel of continuous power, but one may boast a harmonic distortion rating of only 0.1% while the other may deliver its rated power with 0.5% total harmonic distortion. Beware of inflated power ratings based solely on mid-frequency capability. An amplifier will generally deliver more power at mid-frequencies (around 1000 Hz) than it can at the audio frequency extremes of 20 Hz and 20 kHz, yet it is at the low-frequency end of the spectrum that greatest power demands are often made upon an amplifier.

Similarly, most amplifiers deliver higher output power when measured with 4-ohm speaker loads than they will with 8-ohm

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We will send you a $4.99 Professional II C-90 cassette with these sounds. This offer will be available while supplies last. Please allow 4 weeks for delivery.

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speaker loads, even though most speakers have rated impedances of 8 ohms. A complete power specification (as required by the Federal Trade Commission) will list the continuous power per channel rating and will mention, in the same sentence, the frequency limits over which that full power can be delivered, the impedance at which that power rating is applicable, and the maximum total harmonic distortion that may be expected at rated power or at any power level down to a quarter of a watt.

New Amplifier Measurement Standards have recently been introduced by the Institute of High Fidelity (IHF). Since it takes some time for manufacturers to adopt these standards in their specification sheets, however, we elected to use existing references and standards of measurement in compiling Table III.

### TUNER SECTION FEATURES

With very few exceptions, the AM tuner sections incorporated in most stereo high fidelity receivers are incapable of producing sound having wide frequency response or good fidelity. While most receivers do offer both AM and FM sections, the AM section should generally be regarded as a convenient listening format for news broadcasts, sporting events and other program features which do not particularly benefit from high-fidelity reproduction.

As for the FM tuner sections built into receivers, there are wide variations in quality from lower-priced models to the high-priced units. More often than not, features and performance tend to decrease as the power and price of the overall receiver goes down. This is unfortunate, since a user does not always require a powerful receiver (having selected high-efficiency speakers) but nevertheless wants top-grade FM radio performance. Some manufacturers are becoming aware of these needs and are no longer sacrificing FM performance as they design lower-powered receivers. The serious FM listener will try to ferret out such design examples in choosing a lower-powered, lower-priced receiver. To assist in that task, we have prepared a brief table of features which may be found in low, mid and high priced FM receivers. Table III summarizes these features, together with brief explanations of their functions and advantages.

In Table IV we have similarly prepared a listing of the more important performance specification ranges for the FM sections of receivers in different price categories. Once again, try to select a receiver in your price category which offers as many of the features and specifications normally found in the next higher priced category as you can. Regardless of which receiver you purchase, don't overlook the importance of a good outdoor FM antenna. Such an antenna installation can often make a low-priced tuner section perform like a much higher-priced unit not similarly equipped.

### CHOOSING A RECORD-PLAYER

Most present-day turntable systems operate at two speeds, 33⅓ and 45 rpm, to match all modern records.

Your first concern, as a first-time buyer, is whether to select a single-play or a multiple-play machine. The latter allows you to stack several records (usually around six) and have them play sequentially. The former type requires that you flip the record or place a new record on the turntable when you have listened to one complete side. Many of the better multiple-play machines can also be used in a single-play mode. Moreover, many single-play machines have some degree of automation, such as automatic tone arm set-down or lift-off at the end of play.

As you shop for a turntable system, you will be told of the virtues of direct drive (a motor operates at slow speed and its shaft is coupled directly to the center spindle of the turntable) and belt drive (a higher speed motor's torque is coupled to an inner rim of the turntable by means of an elastic belt). Both drive systems, properly engineered, can result in a turntable which runs at precise speed, exhibits little audible vibration or rumble and low orders of speed fluctuation commonly known as wow-and-flutter. You will also be confronted with such convenience features as variable pitch control (ability to vary speed by a few percent in either direction, useful if you want to "play along" using an instrument that is not precisely in tune, but otherwise of academic importance), crystal controlled speed accuracy, electronic drive systems, and even a few models capable of being operated remotely. As with all high fidelity component products, you pretty much get what you pay for, and if your main concern is performance, you should be guided by the few turntable specifications listed in Table IV (again, presented in typical ranges based upon price categories), adding those convenience features that are important to you and that you think you can afford.

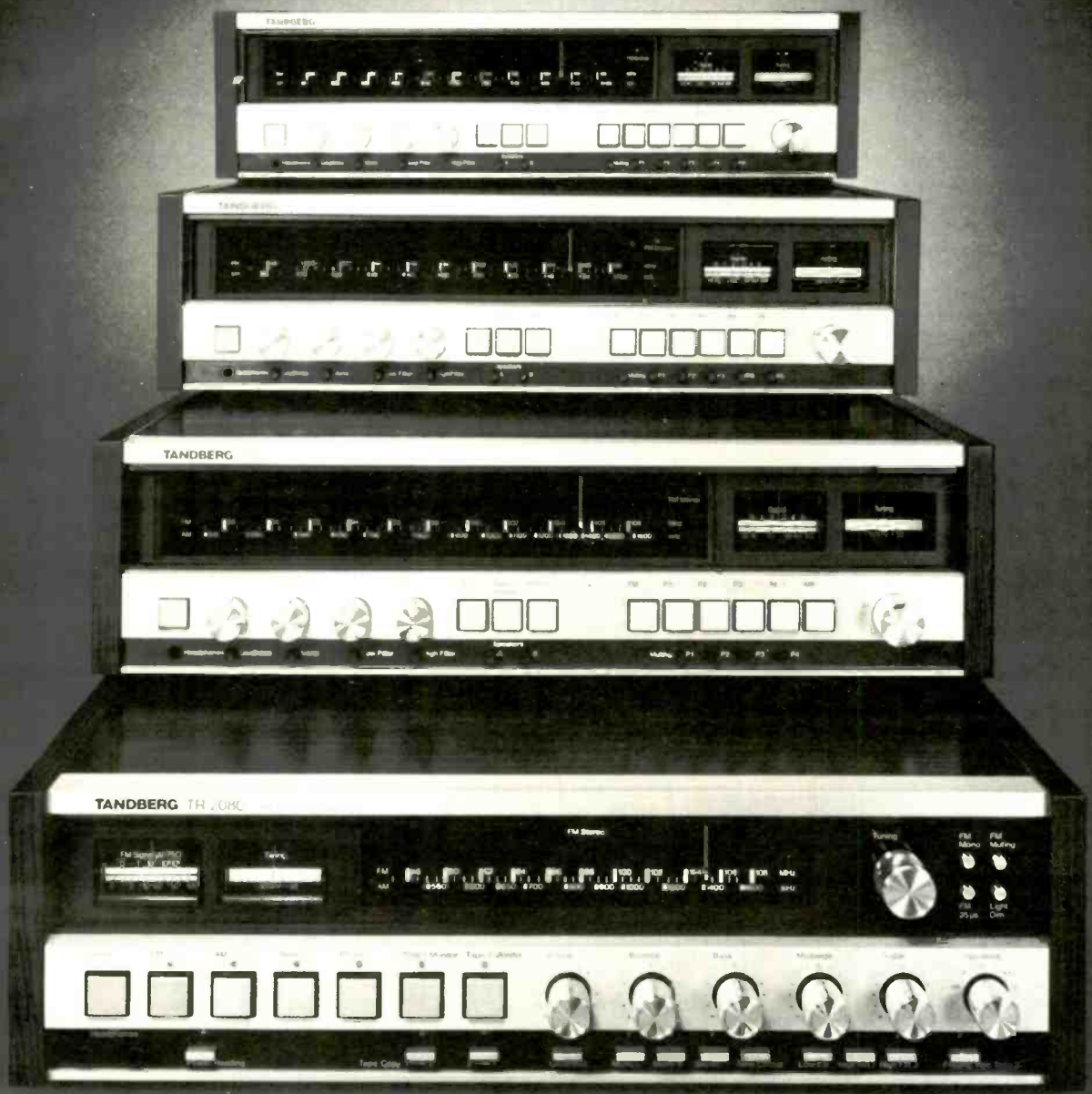
### CHOOSING A PHONO CARTRIDGE

As in the case of loudspeaker selection, judging the quality of a phono cartridge is largely a subjective matter. Of course, the cartridge must be one that will work satisfactorily in the turntable system's tonearm;

## TABLE III—FM TUNER FEATURES

| FEATURE | PRICE RANGE | | | PURPOSE OR ADVANTAGE |
|---|---|---|---|---|
| | LOW | MEDIUM | HIGH | |
| Twin Tuning Meters | | X | X | Permits more accurate tuning (and therefore lower distortion) in FM. |
| FM Muting | X | X | X | Eliminates interstation noise when tuning between FM signals. |
| Selectable I-F Bandwidth | | | X | Lowest distortion reception for uncrowded dial conditions; reduced interference from adjacent signals in crowded signal areas. |
| "MPX" Blend Switch | | X | X | Reduced background noise when listening to weak-signal stereo FM stations. |
| Touch-Sensitive AFC Tuning Knob | | X | X | Goes by various trade names, but assists in achieving center-tune accuracy; and reduces tuning error and possible long-term station drifting. |
| Variable Muting | | | X | Lets you set muting threshold level for reception and noise conditions. |
| Station Pre-Select Switches | | | X | Permits pre-programming of favorite stations and selection of them at the push of a single button. |
| Dolby FM (built in) | | X | X | Useful for noise reduction in FM listening if some stations in your area use the Dolby system when broadcasting. |

# Why Buy a Datsun or Toyota When You Can Consider a Mercedes




In this world of mass produced look-alikes, there are always a select few products that stand out above the rest. Their purchase price is often less premium than you may imagine, particularly when you consider their extraordinary operating flexibility, construction and years of dependable service. And, of course, their superior level of performance.

Knowledgeable experts around the world place Tandberg high fidelity products in that special category. The TR 2080 stereo receiver, for example, is actually made up of a recognizably superior electronic tuner, preamplifier and power amplifier, each on its own separate chassis, perfectly balanced into one integrated unit. Moreover these individual sections of the receiver offer specifications & flexibility normally associated with individual components whose total price would be much, much more than the TR 2080. So, perhaps it is even possible to consider it a bargain.

See the entire Tandberg receiver line—a series that shares more than just their exquisite rosewood cabinetry. Indeed, you will discover a commonality of performance, specifications and features that reflect the world-famous Tandberg commitment to integrity.

For the name of your nearest dealer, write: Tandberg of America, Inc. Labriola Court, Armonk, N.Y. 10504. Available in Canada.

**TANDBERG**

CIRCLE NO. 81 ON READER SERVICE CARD

## TABLE IV–TYPICAL SPECIFICATIONS OF HI-FI COMPONENTS

| | LOW | MEDIUM | HIGH |
|---|---|---|---|
| **TUNER (OR TUNER SECTION OF RECEIVER)** | | | |
| IHF Sensitivity μV (dBf) (mono) | 3.0 (14.7) or lower | 2.0 (11.2) or lower | 1.8 (10.3 or lower |
| 50 dB quieting sensitivity μV (dBf), mono/stereo | 10(25.2)/50(39.1) | 5(19.2)/40(37.2) | 3(14.7)/30(34.7) |
| S/N (dB); mono; stereo | 60/50 | 68/60 | 70/65 |
| Selectivity (dB) | 50 or more | 60 or more | 80 or more |
| Capture Ratio (dB) | 3.0 or less | 2.0 or less | 1.3 or less |
| THD (%) (1 kHz, mono/stereo) | 1.0/1.5 or less | 0.5/0.8 or less | 0.2/0.3 or less |
| Stereo Separation (dB, 1 kHz) | 30 or more | 35 or more | 40 or more |
| AM Suppression (dB) | 40 or more | 50 or more | 60 or more: |
| **AMPLIFIER ( OR RECEIVER AMP)** | | | |
| Power Out/Channel (Continuous watts) | 10-30 | 30-100 | over 100 |
| Rated THD (at full output) (%) | 1.0 or less | 0.5 or less | 0.2 or less |
| Rated IM Distortion (%) | 1.0 or less | 0.5 or less | 0.2 or less |
| Damping factor | 10 or more | 30 or more | 50 or more |
| Phono Hum (dB below 10 mV input) | 60 or more | 65 or more | 70 or more |
| Aux Hum (dB below rated output) | 70 or more | 75 or more | 80 or more |
| **TURNTABLE SYSTEMS** | | | |
| Wow and Flutter (% Wrms) | 0.15 or less | 0.10 or less | 0.05 or less |
| Rumble (dB, per Din B) | 55 or more | 60 or more | 70 or more |
| **CASSETTE DECKS** | | | |
| Frequency Response (Hz±3dB) | 50-12,000 | 30-15,000 | 20-18,000 |
| Wow and Flutter (% Wrms) | 0.2 or less | 0.12 or less | 0.1 or less |
| S/N (dB, less Dolby) | 45 or more | 48 or more | 50 or more |
| **OPEN-REEL DECKS** | | | |
| Highest Speed (ips) | 7½ | 7½ | 15 |
| Freq. Response at highest speed (Hz ± dB) | 40-15,000 | 30-20,000 | 20-21,000 |
| S/N (dB) | 50 or more | 55 or more | 60 or more |
| Wow and Flutter (%) | 0.15 or less | 0.1 or less | 0.07 or less |

your dealer can advise you about this. But it is wise to comparatively audition more than one cartridge before making a final choice. Such "A-B" testing can be conducted at a well-equipped hi-fi dealer's showroom. Recorded material used in such tests should preferably be of your own selection and should include a wide variety of musical selections with which you are familiar and which you have heard played on a friend's top-quality high-fidelity system.

Most hi-fi cartridges or pickups are moving-magnet types which can be directly connected to the phono inputs on your receiver or amplifier. There are, however, a few moving-coil types (generally more expensive than the moving magnet types) which require either a step-up transformer or additional amplification circuitry to work with conventional receivers.

Check the cartridge manufacturer's literature and the directory listings that appear in this publication to be sure that the tracking force range (given in grams) is compatible with the tonearm adjustment range on the turntable system of your choice.

### ADDING A TAPE DECK

Your choice of a tape deck (cassette or open-reel) relates closely to your interest and involvement in home recording. If you are very serious about making your own tape recordings, especially of live performances and with such options as multi-channel overdubbing, echo effects, mastering for other tape copies, etc., you may want to think in terms of an open-reel machine. For more casual recording projects, you will want to consider a top-performing stereo cassette deck. Modern cassette decks will typically include a built-in noise reduction system such as Dolby (other noise-reduction techniques are also available) and switching facilities that enable you to use a variety of tape formulations such as ferric oxide, ferric-chrome combinations and chromium dioxide.

Most cassette decks are two-head designs which combine record and play functions into one head (the other head is for erasing previous recorded material from the tape so that it can be used over and over again). A few costlier cassette decks offer three heads. This enables you to monitor recordings by means of a separate playback head an instant after they are made.

While cassette technology (both in the machines themselves and in the tape cassette packages) has made giant strides in the past few years, higher-speed open-reel machines still can produce wider frequency response with less residual tape hiss or noise and with greater dynamic range than even the highest priced cassettte decks, though this gap is constantly being narrowed. The ease of handling possible with cassettes has contributed to the popularity of this tape recording format.

Though there exists a growing library of pre-recorded cassettes (there are practically no pre-recorded open-reel tapes available), if pre-recorded rock and pop music are your forte, keep in mind that 8-track cartridges offer a much larger catalogue of pre-recorded material than is available on cassettes. The drawbacks of an 8-track tape deck include absence of a fast-forward and rewind facility, few models that can also record, and greater tape storage space requirements compared with cassettes.

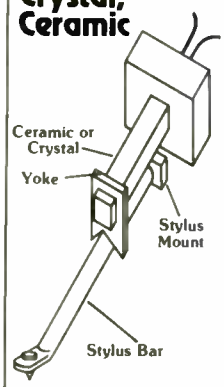
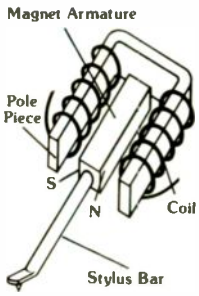
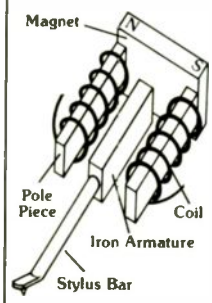
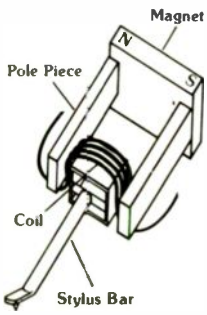
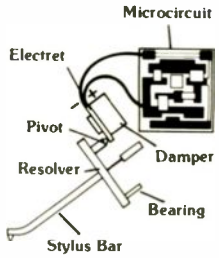
Table IV details the most important specifications for both open-reel and cassette tape decks and gives you an idea of what levels of performance you may expect in low, medium- and high-priced machines of each type.

Armed with the foregoing information, you should now be in a good position to examine the models listed in the accompanying Directory, referring to the glossary of technical terms that precedes it. When you narrow down the number of models in each category to a reasonable group, perhaps adding stereo headphones and other components, visit your local audio dealer and discuss your plans with him. □

# Phono Cartridges

## A Buyer's Guide from Micro-Acoustics

The phonograph record is a mechanical replica of musical performance. The job of the phono cartridge is to convert complex undulations of the record groove into an electrical signal. Here's how the different kinds of phono cartridges compare in function, performance and manufacture. This chart has been prepared to help you make the appropriate choice for your budget and music system. The information encompasses the range of performance characteristics for each type of cartridge. Data* is compiled from manufacturers' literature and the results obtained at Micro-Acoustics cartridge clinics held throughout the U.S.A.

| Performance Categories | Crystal, Ceramic | Moving Magnet | Moving Iron (Similar to Induced Magnet Type) | Moving Coil | Electret (Micro-Acoustics Direct-Coupled) |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| **Operation Principle** | Stylus bar moved by record groove under heavy tracking pressure (3-8 grams). Bar's motion bends crystal element causing output signal. | Stylus bar moved by record groove. Magnet armature vibrates between pole pieces, causing change in flux, and inducing signal in output coil. | Stylus bar moved by record groove. Iron armature vibrates between pole pieces, changing reluctance of magnetic path, and inducing signal in output coil. | Stylus bar moved by record groove. As coil vibrates through magnetic field, signal is induced in coil and fed to step-up transformer or pre-preamp. | Stylus bar moved by record groove. Stylus bar vibrates electrets through resolver and pivots, producing signal which is fed to microcircuit. |
| **Tracking Ability** | Poor to Fair | Good to Excellent | Good to Excellent | Good to Very Good | Very Good to Excellent |
| **Transient Ability** *(rise time in microseconds)* | 60 to 100 | 30 to 60 | 25 to 50 | 20 to 30 | 17 to 20 |
| **Freq. Resp. Variation Due to Loading with Pre-Amp, Cables** | ±4dB below 1000Hz *(plugs directly into amp input)* | −10dB to +6 above 3kHz | −12dB to +4 above 3kHz | ±½dB over entire range | ±½dB over entire range |
| **Ability to Perform In Variety of Tonearms** | Works in low-cost units only | Good to Very Good | Fair to Very Good | Fair to Very Good | Very Good to Excellent |
| **Ability to Track Warped Records** | Poor to Good | Fair to Good | Fair to Good | Fair to Good | Very Good to Excellent |
| **Cartridge Body Weight** | 5 to 10 grams | 6 to 8 grams | 5.5 to 7 grams | 7 to 11 grams | 4 to 5.25 grams |
| **User Replaceable Stylus** | Yes | Yes | Yes | Usually Not | Yes |
| **Method of Manufacture** | Mass Production | Mass Production | Mass Production | Precision Handmade | Precision Handmade |
| **Cost Range** | Least Expensive | Inexpensive to Moderate | Inexpensive to Moderate | Expensive to Very Expensive | Moderate to Expensive |
| **Warranty** | 90 days *(limited)* | 90 days to 1 year *(limited)* | 90 days to 1 year *(limited)* | 90 days to 1 year *(limited)* | 2 years *(full)* |

*All cartridges show single channel only



ma® Micro-Acoustics
8 Westchester Plaza, Elmsford, N.Y. 10523
In Canada, H. Roy Gray Ltd., Markham, Ont.

# Stepping Up To Higher Fi

If you have owned a stereo high fidelity component system for, say, five years or so, you're in for some pleasant surprises. There's a great deal of equipment that's new and improved. As a result, it's likely that you can enhance your system's performance by changing a component or two, or even stepping up to a completely new, state-of-the-art system.

**Speakers.** Perhaps the most likely candidate for replacement or upgrading is your pair of speaker systems. In the past half decade, the science of speaker system design has undergone a major transformation. Not that there have been any truly radical new principles uncovered. Rather, some of the complex mathematics involved in purely scientific speaker system design has been reduced to "language" which can be understood by a computer. As a result, the complex interrelationships between speaker drivers, cabinet enclosures, crossover networks and the other elements that make up a speaker design can now be dealt with more easily by speaker design engineers. The upshot: systems that more closely simulate realistic sound.

**Electronics.** Is it time to replace that old receiver or amplifier with a modern component? As you thumb through this directory, you will be surprised to find that, despite inflationary trends in other consumer product areas, you can actually purchase more performance per dollar in audio electronics today than you could five or ten years ago. That's because technology has actually advanced more rapidly than the dollar's value has shrunk.

Nearly all of the audio electronics available today is solid state. And solid-state electronics no longer means only transistorized. More and more complex integrated circuits are being used in audio equipment. The entire stereo FM decoder circuitry, once requiring a half-dozen transistors or tubes and countless related parts, coils and capacitors, has been reduced to a single integrated circuit (IC). What's more, it performs much better than earlier decoders, delivering more stable and greater channel separation. Moreover, it seldom if ever requires any realignment. The same is true of the rest of the FM tuner circuitry, which now often uses solid-state permanently aligned filters instead of adjustable coils.

There are tuners which are set to their frequency by a process called frequency synthesis. Most of them display the tuned-to frequency with digital read-outs, much like the read-outs on a quartz-controlled wristwatch—and with as great an accuracy. Do they offer audibly superior performance? Yes, because even slight mis-tuning of an FM signal causes the distortion to rise rapidly, and meters on your old model may not be accurately aligned.

If you need high power at low distortion, there are receivers on the market today which will deliver upwards of 300 watts per channel and more. There are also high-powered basic amplifiers that produce even more power. And, whereas some years ago, a rated harmonic distortion of 0.5 to 1.0% was considered to be quite good, you'll find that higher-priced receivers and amplifiers these days boast of rated distortion figures as low as 0.03% or even lower. Can you really hear the difference? Perhaps not insofar as harmonic distortion is concerned, but many of the new amplifiers and receivers can respond to signals much more quickly than did their predecessors, which renders them able to reproduce fast transients in a musical signal with greater accuracy than ever before. If you are among the "golden eared" few who can perceive these differences, you won't settle for less!

**Pick Up A New Pickup.** Phono cartridges, like speakers, are a class of components known as transducers. They convert one form of energy into another. In the case of a phono pickup, mechanical energy is converted into minute amounts of electrical energy. It is a fact that phonograph recordings have become better in the last few years. Many small recording companies are now producing so-called direct-to-disc records (on which the intermediate process of tape recording, with its minute amounts of added noise and distortion, is eliminated entirely) which have higher dynamic range capability and better response than ever before. In order to get the best from these new recordings, a new phonograph cartridge may be in order (and may be all you really need).

Modern phono pickups are better able to trace the complex signals contained in record grooves, and they can do so with less downward tracking force than previously possible, thereby prolonging the life of your record collection.

Of course, substituting a top-grade cartridge won't be satisfactory if you plan to mount it in a ten-year-old "record changer." Its downward tracking force of several grams would be too great for the newer, better pickups. In that case, a new turntable is in order. Perhaps you are ready for one of the new quartz-locked models that maintain speed accuracy to within a minute fraction of one percent, regardless of line voltage or line frequency variations. It, like the quartz-controlled tuner mentioned earlier, is governed by a precision, self contained oscillator whose frequency never varies at all.

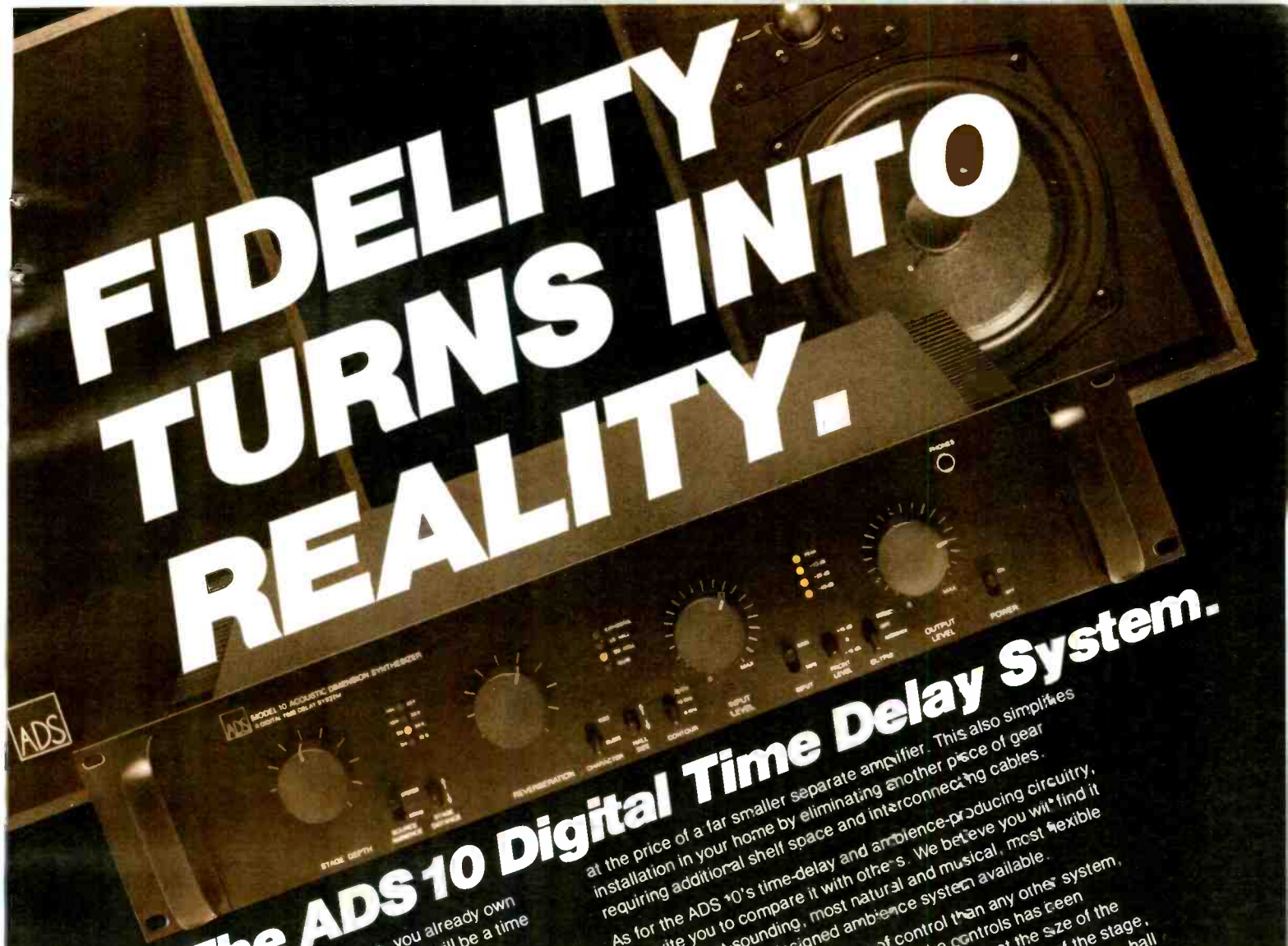
**Signal Processing—A New World of Sound.** Perhaps your present components are rather new, but you simply aren't satisfied with the sonic balance of your system. You've tried every combination available from your bass and treble tone controls, but you still can't get things to sound "just right." That may be a cue for you to consider the purchase of one of the new graphic equalizers on the market. These increasingly popular add-on devices (they are easily connected to any component system that has tape-out/tape-in jacks or between a preamplifier and a power amplifier) are really nothing more than elaborate tone control systems.

Whereas simple bass and treble controls operate over a large swath of frequencies (making it impossible, for example, to boost response at around 100 Hz without also affecting response at, say, 400 Hz), graphic equalizers have multiple controls (as few as five or as many as twenty), each of which can boost or attenuate a narrow band of frequencies. This permits you to tailor the overall response of your entire system to match requirements of room acoustics or to compensate for minor aberrations in the frequency response of other components in your system. If you disagree with the tonal coloration provided in a particular recording, you can even "debate" the point with the recording engineer and alter his tonal balance to suit your own preferences.

If the objective of using a graphic equalizer is to adjust your system for "flat response" in your listening room, you may need a fair amount of test equipment (or the services of a sound contractor who has that equipment) to perform the equalization process correctly. Some makers of equalizers supply a test record which has several frequency bands of random noise recorded in it. Such test records allow you to adjust overall response of your system in an approximate manner, with accuracy of final adjustment depending upon your own hearing acuity or ability to judge equality of sound levels at different frequencies.

**"Enlarging" Your Listening Room.** Most of us listen to music in home listening rooms that are but a fraction of the size of concert halls. Since the listening room itself might be regarded as the final high-fidelity component in the reproducing chain, this discrepancy in room size constitutes a form of "distortion" in the reproduced sound. Recording engineers attempt to counter this

# FIDELITY TURNS INTO REALITY.




## With The ADS 10 Digital Time Delay System.

If you are a typical reader of this magazine, you already own a good stereo system and your next component will be a time delay ambience-reproduction system.

The best two-channel stereo sound is still a limited illusion, a sonic painting on the wall between the stereo speakers. You don't have to open your eyes to know that you are hearing a reproduction rather than the real thing. Stereo provides a picture-window view of the recording locale, but as long as the sound is only projected at listeners from in front, stereo cannot produce the feeling of **being there** in the same acoustic space with the musicians. Better recordings and finer stereo components can improve the quality of the picture-window view but they cannot make the breakthrough to a convincing sense of **"reality"** in the reproduction. The you-are-there illusion in sound, that feeling of hearing the sound in **three** dimensions, can only be achieved by re-creating the enveloping "ambient" sound field which surrounds the listener in any real acoustic space. Critics and reviewers have agreed that there is nothing you can add to a decent stereo system for $1000 which will improve its performance as much as a good time delay ambience system can.

The ambience system you will want to own is the ADS 10 — the most sophisticated and the only complete time delay system now offered to the public. The ADS 10 is a fully optimized, fully integrated, third generation digital system containing everything you need to add to your existing stereo (ambience circuitry, amplifier, earlier time delay units. Its component parts work at maximum efficiency with each other, with no money wasted on redundant parts or unused capacity. The ADS L10 speakers were developed specifically for this application.

Building the amplifiers into the same chassis as the time delay circuitry, sharing the same power supply and cabinet, allows us to offer a full 100 watt per channel amp at the price of a far smaller separate amplifier. This also simplifies installation in your home by eliminating another piece of gear requiring additional shelf space and interconnecting cables.

As for the ADS 10's time-delay and ambience-producing circuitry, we invite you to compare it with others. We believe you will find it to be the best-sounding, most natural and musical, most flexible and most logically designed ambience system available.

The ADS 10 has more flexibility of control than any other system, but it is simple to operate. Design of the controls has been human-engineered so that you can easily select the size of the hall (from an intimate club to a cathedral), the depth of the stage, the location of your 'seat' and the reverberant qualities of the hall itself. An irritating problem of earlier time delay systems — the unnatural sound of the ambience-enhanced human voice, as in FM listening, for example — is resolved in the ADS 10 by a special circuit. Provisions made for adding ambience to the front channels for 'dry' recordings, as well as to your own tape recordings. An ambience-enhanced headphone outlet provides the most natural, most musical headphone listening you've ever known.

Visit your ADS dealer. Bring your favorite records with you and listen to them through the ADS 10. Experience the difference between fidelity and reality. Change the hall. Deepen the stage. Move your 'seat.' Check the features and the performance of the ADS 10 against any other time delay system.

You'll discover the ADS 10 Acoustic Dimension Synthesizer is the system for which you've been waiting.

ADS

For a comprehensive explanation of ambience reproduction and the ADS 10 Time Delay System, request your free copy of the ADS 10 Brochure. For full information on the scientific basis, design, installation, features and functions of the ADS 10, we invite you to order the ADS 10 Owner's Manual at $5.00 per copy.

**ADS, Analog & Digital Systems, Inc., One Progress Way, Wilmington, MA 01887**

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lack of realism by adding varying amounts of reverberation (delayed sound) to the recording, but even such electronic correction fails to completely reproduce the sonic environment of a concert hall. In the case of stereo systems set up at home, both the primary and the reverberant sounds emanate from the two loudspeakers located up-front, whereas in a live concert, reverberant sounds reach the listener from the walls, ceiling and rear of the hall in a complex pattern of reflections as sound waves bounce back and forth about the hall.

To achieve this missing effect, several manufacturers have recently developed audio time delay devices. Time delay units are usually connected to the main receiver or amplifier via one of the tape-monitor circuits. Four outputs are provided on the device. Two of these simply connect back to the tape-play circuits of the main amplifier or receiver and have no time delay introduced, while the other pair of outputs are connected to a second stereo amplifier which is used to drive an additional pair of speakers located behind the listener. These speakers are fed with a time delayed, reverberant signal whose content may be varied (by means of front panel controls on the time delay device) to approximate the acoustics of "concert halls" of varying sizes.

Devices such as these have been commonly used in professional recording applications for years, but it is only recently that complex integrated circuits have been developed which enable such time delay units to be manufactured and sold at costs within reach of home high fidelity enthusiasts.

Most makers of time delay units agree that the secondary amplifiers and the extra pair of speakers used need not be of the same high-power capacity or quality as the primary system. That is because the reverberant sound field in a live concert is normally lower in energy content than the sound field reaching your ears from on-stage. Moreover, reverberant sound frequencies do not extend as high as do the primary instrumental sounds.

**Increasing Music Dynamic Range.** When we speak of the dynamic range of music, we refer to the difference between the loudest crescendo and the softest pianissimo passages in a musical selection. This difference is expressed in decibels (dB). In a live performance of a full orchestra, it can easily approach 80 or even 90 dB. Yet, if you examine the specifications of tape recorders, phonograph discs or even FM radio you will find that these most important high fidelity storage and transmission media are incapable of handling this full dynamic range.

In the case of tape, for example, the maximum dynamic range is limited on the one hand by the residual tape hiss or noise which can "mask" very soft passages of music and, at the other extreme, by the maximum signal which can be magnetically applied to the tape. If that maximum is exceeded, high levels of distortion are heard during playback. Typically, even an open-reel tape deck cannot handle a dynamic range of much more than 60 or 65 dB; the same is true of even the best, quietest phonograph records. FM broadcast practices also limit the maximum dynamic range of material that is sent over the air (not to mention the fact that most of what's broadcast over the air is derived from phonograph discs in the first place).

Recording engineers, cognizant of these dynamic range limitations, are forced to compress the music they record to fit the medium. Whether electronically or manually, they must reduce the intensity of the loudest sounds of music and, conversely, must accentuate the levels of softest musical moments. The critical listener can easily perceive this compression (especially if he or she attends live concerts regularly) and it is this compression which detracts from the realism of the reproduced sound.

Here, again, innovative audio designers have developed a variety of devices which attempt to counter the effects of compression. One of these is known as an expander. As its name implies, this product automatically senses the instantaneous level of program signals being fed to it, making the "louds" louder and the "softs" softer. Controls permit the user to vary the amount of expansion, since not all recorded or broadcast material has been compressed to the same degree. As with all of the add-ons we have discussed thus far, the expander fits into the system easily, since it can be connected between a pair of tape-out (or tape record) terminals and a pair of tape-play (or tape monitor) terminals on most receivers or amplifiers.

**Companders Make Music Fit.** If you are a serious recordist and have access to uncompressed music programming (live music is the prime example), you may want to consider a dual-purpose device known as a "Compander." A compander compresses your music by a fixed ratio (usually two to one), making the loudest passages half as loud and the softest passages twice as loud. In doing so, music which originally might have had a total dynamic range of, say, 90 dB, is compressed to a dynamic range of only 45 dB—well within the capability of even a cassette recorder and cassette tape.

During playback, the compander serves the converse function, restoring loudest passages to their full intensity and diminishing the intensity of the softest passages through a process of linear expansion. The result: music reproduced in its full, live dynamic range.

**Filters and Record Scratch Eliminators.** To a dedicated audiophile there is nothing quite so disturbing as surface noise from a record, or those annoying pops and clicks which are heard when a record has been accidentally scratched through mis-handling. Even the very best high-cut filters found on receivers and amplifiers, though able to reduce the intensity of the record hiss or surface noise, do so at the expense of high-frequency response. Since surface noise consists of random high frequency noise, removing this noise with a passive filter invariably cuts out some of the high treble content of the music being reproduced.

There are available, however, devices called "dynamic filters" that can be added to any high fidelity component system. These filters have sensing circuits which can differentiate between high-frequency noise and high-frequency musical content. When the former is present alone, the filter automatically restricts system frequency response and the hiss is gone. When musical highs appear in the program, the filter quickly "opens up" the response of the system and, even though the noise comes through again, the high-frequency music is usually loud enough to mask the noise's effect. The overall result is a reduction of high-frequency noise with no audible degradation of musical frequency response.

Perhaps even more incredible are the new "pop and click" eliminators which have recently appeared on the market. These innovative instruments can actually sense the presence of record-scratch ticks and pops. When these appear in the signal complex, the signal flow is interrupted for a couple of thousandths of a second. The interruption is too short to be detected, but those once-per-record-revolution pops and clicks are miraculously gone! If you own a large collection of valuable records that have been accidentally scratched or damaged, you will appreciate this latest marvel of audio technology.

**Perfect Fidelity.** In addressing the first-time buyer of a stereo component system elsewhere, we mentioned that there is really no limit to the amount of money that one can spend in the quest for perfect sound reproduction. The major strides towards high fidelity occurred many years ago, true. But minute, subtle improvements continue to appear each year. Amplifiers which can handle sub-sonic frequencies (even down to "zero Hz" or dc), introduced just a couple of years ago, are now finding their way even into all-in-one receivers.

The casual listener may not be able to hear the difference between them and more conventional amplifiers, but the critical listener not only hears the difference, but is willing to pay a good deal more for that difference.

Today, there is talk of entirely new approaches to sound reproduction, including such futuristic ideas as a laser phonograph disc, digital recording, loudspeakers with no mechanical moving parts, and more. The esoteric audio components of today may be commonplace in a few years, only to be replaced by still more technologically advanced audio equipment of the future. Complementing the technologically advanced, smaller group of dedicated manufacturers are a group of equally dedicated audiophiles who are willing to spend any amount of money and try the very best equipment available to further their quest for perfect audio fidelity. As a second- or third-time system buyer, perhaps you are one of them.

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# GLOSSARY OF AUDIO TECHNICAL TERMS

## AMPLIFIERS (Section 1)

**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). Decibels are frequently used to specify variation in signal level throughout a range of frequencies (i.e., 20-20,000 Hz ±1 dB) and to specify such other ranges as signal-to-noise (S/N) ratio.

**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, plus hum and noise, 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 The lower the distortion in any form, the better.

**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. The action of a filter is usually defined by its slope (in dB per octave—usually some multiple of 6 dB/oct) and by its *Turnover Frequency*.

**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, maintaining the original balance among the low, middle (or mid-range), and high frequencies.

**Hz:** The standard abbreviation for Hertz, the unit of frequency, amounting to one complete waveform cycle per second.

**Integrated Amplifier:** A single component combining the functions and circuitry of a Power Amplifier and Preamplifier. Also called, occasionally, a "control amplifier," since it is an amplifier with controls.

**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, and thus to preserve proper frequency balance at different listening volume levels.

**Noise:** Any unwanted addition of frequencies unrelated to the signal that tends to obscure the signal information. In audio, noise is usually heard as hiss (random noise) or as hum (the power line frequency and its harmonics). Since signals must be, in general, stronger than the noise level in order to convey information, noise defines the lower limits of a component's dynamic range. (The upper limit is imposed by the maximum tolerable distortion.) Noise may be defined in terms of absolute levels, but in audio equipment it is usually defined in terms of its "distance" in decibels below the maximum tolerably distorted signal. See *Signal-to-Noise Ratio*.

**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. Typical power outputs may range from a few watts to several hundred watts, into impedances in the range of 2 to 16 ohms. The term "power amplifier" is commonly used to distinguish an amplifier that does not handle source signals directly and does not have control functions. See *Preamplifier*.

**Power Output:** FTC rules require that amplifier power be measured with all channels operating, after a standard pre-conditioning period to bring amplifier components to their maximum working temperature. Advertised power must be expressed in the form: "50 watts minimum rms per channel into 8 ohms with less than 0.3% harmonic distortion from 20 Hz to 20,000 Hz." The manufacturer is free to establish its own power, frequency, and distortion ratings, and implicit in the rating is the statement that rated distortion will not be exceeded at any power from 0.25 watts to rated power.

**Preamplifier:** Also known as control amplifier, or control center. A switching, amplification, and equalization component designed to select input signals, amplify them by amounts from 0 to 60 dB, and deliver an output voltage compatible with the input requirements of 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. The higher this ratio, the better. (Also rates other components.)

**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. Due to the popularity of "equalizers," which provide tone control over five or more frequency bands, some amplifiers and preamplifiers are now being produced with no built-in tone controls, on the assumption that external equalizers will be used instead; other amplifiers may actually include such equalizers.

**Turnover Frequency:** The "knee" of the tone control or filter frequency response curve. Though normally thought of as the frequency where the control begins to have its effect, the turnover point is actually the frequency at which response has already been altered by 3 dB relative to the unfiltered signal. Some tone controls and filters offer a choice of turnover frequencies, usually switch-selected.

## TUNERS (Section 2)

**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. Expressed in decibels (dB), it is the ratio between the tuner output with a 100% modulation FM signal to its output with a 30% modulated AM signal.

**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 so that both signals will not be heard at once. The smaller this ratio (measured—like most ratios in audio—in dB) the better. This is most useful in suburban and fringe areas where co-channel signals from two almost equidistant stations are more likely to be received, or in urban areas with *multipath* problems.

**De-emphasis:** A form of equilization 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. It is expressed in the form of a time constant, or product of a resistance and capacitance. Standard FM broadcasts use a 75 microsecond time constant in the United States, and 50 microseconds in Europe, while Dolby "B" transmissions use a 25 microsecond time constant.

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

**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. Measured in dB (the higher the better), it is of more significance in AM than in FM reception because the lowest broadcast AM frequency, now 530 kHz, is so close to the standard AM i-f frequency of 455 kHz.

**IHF (Institute of High Fidelity):** An organization whose technical committees have developed standards for measuring and specifying the performance of high fidelity components. Current IHF Standards cover amplifiers and tuners.

**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). Image response can be reduced by using selective tuned stages in the input circuits of the tuner. As with most tuner "rejection" or "suppression" specificiations, it is measured in dB, with higher numbers indicating more suppression.

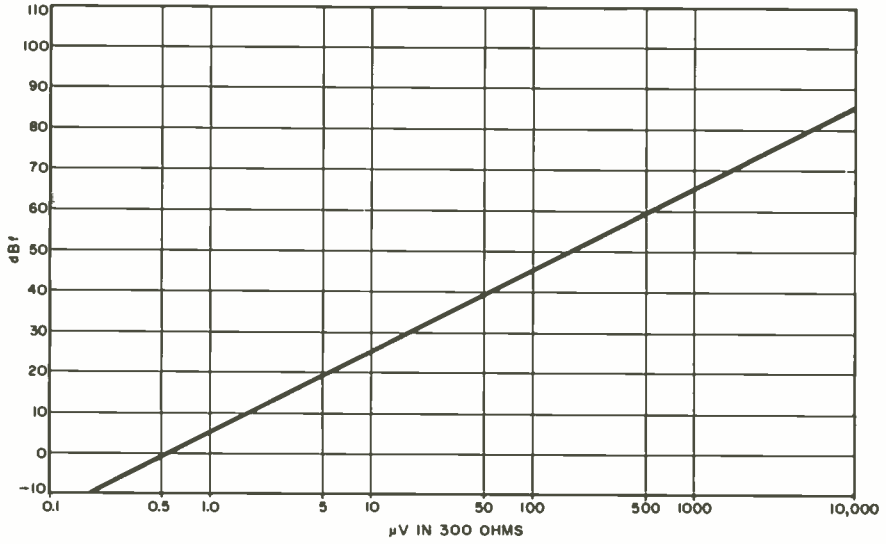
**Multipath:** A condition in which a signal reaches the receiving antenna over two or more paths of different lengths. The resulting interference causes distortion in the receiver, as well as loss of stereo channel separation. Multipath distortion can be minimized by using a directional receiving antenna, and by tuners having a low capture ratio and high AM suppression. Some tuners also have visual or audible multipath indicators which can be used as aids in adjusting the antenna for minimum multipath interference.

**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. It is the ratio (in decibels) of the signal strength that produces a standard output on the desired channel to the strength of a signal on a nearby channel needed to produce an output 30 dB below the standard level. Selectivity measurements usually refer to signals on the *alternate channel* (400 kHz from the desired channels in FM and 20 kHz in AM); selectivity measured on the *adjacent channel* (200 kHz for FM, 10 kHz for AM) is usually lower. The higher the selectivity, the less interference there will be from signals on nearby channels; this is most important in crowded metropolitan areas.

**Sensitivity.** In FM, the signal strength a tuner requires in order to reduce noise and distortion to specified levels. "Quieting sensitivity" measures the input signal needed to reduce noise and distortion to 50 dB below the output audio signal level, a fairly listenable condition. "Usable sensitivity" defines the signal level needed to reduce noise and distortion to 30 dB below the audio output, a condition noisy enough to render "usable" a misnomer. Sensitivity is usually stated both in microvolts ($\mu$V) of signal across the tuner's 300-ohm input (figures across the 75-ohm input would be lower) and in "dBf"—decibels above a signal level of one femtowatt ($10^{-15}$W), equivalent to 0.55 $\mu$V into 300 ohms. The lower the figure, in any case, the better, as this indicates that the tuner will achieve rated performance with a weaker signal. Sensitivity, like many other FM tuner specifications, will be worse (in this case, numerically higher) in stereo than in monophonic reception. See chart.

**FM SENSITIVITY CONVERSION 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. As compared to the latter, a synthesizer circuit can result in a tuner whose frequency setting is known with great accuracy, and which is free from drift or other tuning errors. True digital tuners (as opposed to those which tune conventionally, but have digital frequency displays) use synthesizers in order to jump in discrete steps from one exact channel frequency to another without passing through the unwanted frequencies between.

## TURNTABLES (Section 4)

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

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

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

**Belt Drive:** A system for transferring power from the motor to the turntable platter through a flexible belt.

**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.*

**Dynamically Balanced Arm:** A type of tonearm whose masses are balanced about its pivot, with tracking force applied by a spring. This type of arm does not require that the turntable be level for proper tracking.

**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; changes from the desired speed cause corrective signals to speed up or slow down the motor. Changes in speed, whether gross (as from 33⅓ to 45 rpm) or small (as in "pitch control" adjustments, normally on the order of ±3%) can be made with this system simply by alternating components in the external speed regulation circuit, rather than by mechanically shifting belts or idler wheel.

**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.

**Idler Drive:** A system for transferring power from the motor to the turntable through a rubber wheel which contacts the motor shaft and the inside rim of the platter.

**Pitch Control:** A circuit which permits a turntable's speed to be varied slightly. It is used to raise and lower the musical pitch of the recording being played (hence the name), or to slightly lengthen or shorten playing time.

**Pivot:** A low-friction bearing in the support of a tonearm that allows it freedom of movement in vertical and horizontal planes. In lower-priced tone arms, it may be a simple point-in-cup pivot, but more expensive tonearms usually have precision ball bearings or knife-edge pivots.

**Platter:** The flat disc that supports the record and is turned by a motor at a constant speed. Usually machined from a non-ferrous alloy, but is sometimes a lightweight stamped or pressed disc.

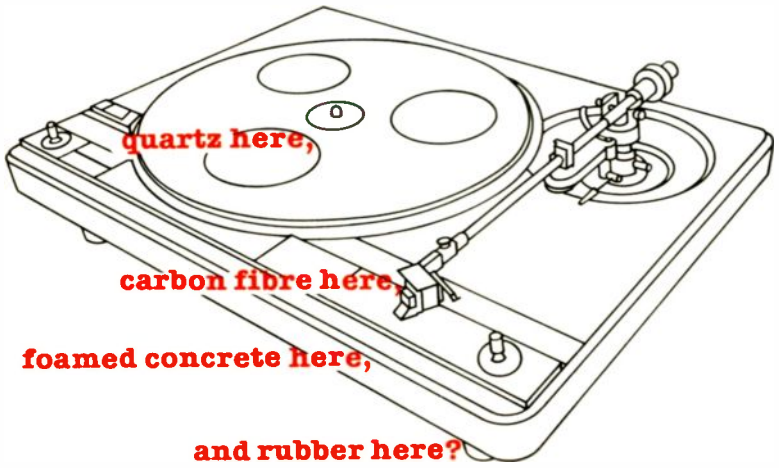
**Radial Tonearm:** A tonearm that moves along a track parallel to the record radius, maintaining perfect tangency to the groove. Sometimes called *straight line tracking* arm.

**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. The farther below (i.e., the larger the number), the less audible the rumble. Since some rumble frequencies are more annoyingly audible than others, it is common to "weight" the rumble measurement, counting the most annoying frequencies most heavily, and less annoying ones

*(continued on page 34)*

**What do you get when you put**




# ADC THE FIRST LOW-MASS TURNTABLE.

ADC is in the business of building breakthroughs.

First, we brought you the innovation of the low mass cartridge. Then the remarkable computerized Accutrac® turntables. Next, the State-of-the-Art Low Mass tonearms.

And now, our engineers have combined the latest advancements of tonearm technology and turntable construction to reduce mass and resonance to new lows.

Result: new benchmarks of high performance.

Finally, the integration of a carbon fibre design tonearm. The famous LMF Carbon Fibre tonearm was the model for the tonearm found on the ADC 1700DD.

In fact, until now you had to make a separate investment in an ADC tonearm to achieve this level of performance.

A level of performance never before available on an integrated turntable.

The mass is lowered by the development of a tapered profile. It is statically balanced with a lead-filled decoupled counterweight, and the headshell is molded carbon fibre, long known for its low mass to high tensile strength ratio.

Furthermore, the headshell is connected to the arm with gold plated computer terminal pins. And the main bearing cradle is made of sintered aluminum. The pivot system utilizes micron polished instrument bearings which are hand picked and matched perfectly to both the inner and outer races, for virtually frictionless movement.

The viscous cueing is a gentle 4mm/sec., and the tempered spring anti-skate adjustment is infinitely variable to 3.5 grams.

The design, the materials and the details interact to provide incomparable performance for a tonearm on an integrated turntable system.

In fact, the tonearm alone is worth the price of an ADC 1700DD.

Finally, resonance conquered.

The technical know-how that conquered the problems of the tonearm mass, also conquered the problems of turntable resonance.

The ADC 1700DD reduces resonance to levels so negligible they are virtually nonexistent.

The achievement lies in the innovative construction formula for the turntable base that incorporates the latest advancements from European engineers.

The base is constructed with two dissimilar materials that are resonance-cancelling. First, the outer frame of the base is molded, and then a composition of foamed concrete is injected to absorb and neutralize resonance and feedback.

# LOW RESONANCE

Beyond even this foamed concrete anti-resonance breakthrough, the base is isolated by energy absorbing, resonance-tuned, rubber suspension feet.

This is as close as technology has ever come to defying the physical laws of resonance.

The motor in the ADC 1700DD is also present standard of excellence: Direct Drive Quartz Phase-Locked Loop. The quartz is used in the reference oscillator of the motor.

An electronic phase comparator constantly monitors any variance in the speed, making instantaneous corrections. Even when out of the Quartz-Locked mode, the optical scanning system keeps drift at below 0.2%.

In fact, to check the speed at a glance, we've engineered the 1700DD with a pulsed LED strobe display for your convenience.

Low-mass. Low-resonance. High performance.

What is the result of all these breakthroughs? Pure pleasure.

The pleasure of enjoying your favorite music with less distortion and coloration than you may have ever experienced before. Now you can truly appreciate the integrity of the original recording.

Our engineers have reduced record wear and music distortion to a point where rumble is −70dB Din B, and Wow and flutter less than .03% WRMS.

In the history of audio technology, significant breakthroughs have been made over the past four years with the development of Quartz Lock Direct Drive, carbon fibre tonearms, foamed concrete anti-resonance construction. And now, ADC is the first to bring them all together in the 1700DD. We invite you to a demonstration of this and the other remarkable ADC turntables at your nearest franchised ADC dealer.

Or, if you'd like, write for further information to: ADC Professional Products, a division of BSR Consumer Products Group, Route 303, Blauvelt, N.Y. 10913.

Low-mass. Low-resonance. We think you'll be highly interested.

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lightly. Such weighted measurements (usually according to the DIN "B" weighting curve) are usually higher than unweighted ones.

**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*). In a servo-controlled tonearm, a small departure of the cartridge from tangency to the groove is sensed, where it is used to activate a motor drive that moves the tonearm to minimize the error.

**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, and is a function of tracking force, offset angle, stylus size and shape, record material, and recorded amplitude. The effect of skating force is to increase the stylus-to-groove contact force on the left channel and decrease it on the right channel. See *Anti-Skating*.

**Statically Balanced Arm:** A type of tonearm whose masses are first balanced about the pivot, then deliberately unbalanced by a gram or so in order to provide the required 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 33⅓ 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. On conventional pivoted tonearms, the cartridge is mounted at an offset angle, and with a slight overhang beyond the turntable center to reduce the tracking error. The mass of the cartridge and the forward portion of the arm is balanced by an adjustable counterweight, and the desired vertical tracking force is supplied by a slight mass unbalance or a spring. See *Radial Tonearm*.

**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 on heavily recorded passages, especially near the inner grooves of the record.

**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. Usually made of aluminum, but beryllium is used in some recent cartridges. Also known as the "shank."

**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. Most cartridges are either *Magnetic* or *Piezoelectric* types.

**CD-4:** A discrete four channel disc recording and playback system, using a frequency modulated 30-kHz carrier to convey additional information that can be combined with the audio output of the cartridge to produce four essentially independent program channels. Requires a cartridge frequency response to at least 45 kHz, and a special demodulator.

**Ceramic:** The more common type of *piezoelectric* phono cartridge.

**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. Expressed in micro-centimeters per dyne ($cm^{-6}$/dyne) as the distance through which the stylus will be deflected by a force of 1 dyne. Typical values are from 10 to 50 micro-centimeters per dyne.

**Damping:** The application of a mechanical resistance, such as a rubber or silicone material, to the cantilever pivot to reduce the amplitude of the resonance between the tip mass and the compliance of the vinyl record material (which usually occurs between 15 and 30 kHz).

**Electret:** A special plastic *piezoelectric* element, polarized during manufacture to become the equivalent of a permanently charged capacitor. Generates an amplitude responsive output voltage, like a ceramic element, but requires less energy from the stylus system. By loading with a resistance, its output can be converted to the equivalent of a magnetic cartridge's velocity-responding output characteristic.

**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. Such styli have two radii (e.g., 0.4 x 0.7 mil).

**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. This requires an equalization circuit in the preamplifier to restore proper frequency balance, since records are cut with more nearly constant-amplitude than constant-velocity characteristics.

**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. Usually from 0.25 to 1 milligram in modern cartridges.

**Mil:** One one-thousandth of an inch.

**Moving-coil:** A type of magnetic cartridge in which the coils, connected to the stylus, move within a stationary magnetic field. Output from such cartridges is low, and the stylus can usually not be replaced by the user, but some users feel the sound quality outweighs these inconveniences.

**Multi-Radial:** See *Shibata*.

**Output:** A cartridge's output (also known as its "sensitivity") is measured with relation to a specific signal level on the record. Since the output of magnetic cartridges (the majority type manufactured for "hi-fi" equipment) is a function of the stylus's velocity in tracking the groove, it is expressed in terms of a specific velocity. Some cartridge output specifications are given in terms of a velocity of one centimeter per second (e.g., "output 1 mV±2 dB at 1 cm/sec"), others at 5 cm/sec (e.g., "output 3.5 mV at 5 cm/sec"). To compare these figures, multiply the first by five; note that the first cartridge's output is actually greater (1 mV @ 1 cm/sec = 5 mV @ 5 cm/sec) than the second's.

**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, and so requires no equalization (see *Magnetic*). Both these factors allow the use of simpler input circuits, one reason why piezoelectric (chiefly ceramic) cartridges are used in low-cost equipment.

**Sensitivity:** See *Output*.

**Shibata Stylus:** The first of several multi-radial stylus designs, for CD-4 use 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 the ultra-fine, high-frequency modulations of a CD-4 record, while the long line of contact along that edge distributes tracking force over a larger area, reducing the effective pressure (pressure equals force divided by area) on the record surface.

**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. Insufficient as well as excessive force will increase record wear. Most cartridges operate best in the upper half of their recommended tracking force range. Tracking forces for modern cartridges are extremely low, mostly in the range from 1 to 2 grams (one gram equals 0.035 oz.) Tracking *pressures*, however, are extremely high, since the force is concentrated on such a small area.

**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.

**Automatic Level Control (ALC):** A circuit which automatically maintains recording level within permissible limits, so that, no matter how loud or soft the sound being recorded, the signal on the tape will not get strong enough to overmodulate and distort or soft enough to be lost in noise. Also known as Automatic Volume Control (AVC).

**Automatic Reverse:** The ability of some four-track stereo tape recorders to play the second pair of stereo tracks automatically (in the reverse direction) without the necessity for interchanging the empty and full reels after the first pair of stereo tracks is played. (See also *Four-Track Recording*)

**Automatic Shut-Off:** A device (usually a mechanical switch) incorporated into most tape recorders that automatically stops the machine when the tape runs out or breaks.

**AVC:** Automatic Volume Control—See *Automatic Level Control*.

**Bias:** A high frequency current which is com-

bined with the signal being recorded. Necessary for low distortion and noise, and must be adjusted for the properties of the tape used.

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

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

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

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

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

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

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

**Dolby "B":** A noise reduction system widely used in cassette recorders, as well as some open reel and cartridge machines, and in FM broadcasting. The high frequency portions of signals being recorded are compressed, with the degree of compression being greater as signal level decreases. An opposite expansion process takes place in playback, restoring the original frequency response, but with a reduction in high frequency hiss.

**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 3¾ ips, where the delayed signal is not heard as a separate sound.

**Elcaset:** A new tape system using a cassette similar in plan to the compact cassette, but holding ¼-inch tape running at 3¾ inches per second; the tape is loaded out of the cassette to reach the heads and capstan during recording and playback. (In other cassette systems, the heads contact the tape through windows in the cassette shell.)

**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. Heads are used to supply erase signals, to record a program, and to play back a recorded tape.

**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. On some cassette decks with monitor capability, the monitor "head" is not completely separate, but is built into the same shell as the record head.

**Motion-Sensing:** A type of tape transport in which certain actions which could break or spill the tape are prevented or delayed until the instant the tape has come to a stop or reached a speed which allows the action to take place safely.

**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. Some receivers and tuners have such filters built in, too.

**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 flash-

ing-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.

**Program Selector:** Control which switches an 8-track recorder from one set of tracks to another.

**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. Recording-level meters come in a variety of types, including meters that register the approximate *average* value of the signal (of which the professional *VU Meter* is an example), those designed to show the instantaneous *peak* levels of the signal, and some not readily classifiable into any group.

**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.

**Synch, Sync:** The maintenance of correct time relationships between events. Examples in recording include synchronization of sound and film for motion-picture use, synchronization of a slide-changing projector with a tape by means of signals recorded on the tape, and "Selective Synchronization," or "Sel-Sync" as it was originally named by Ampex, used to synchronize several tracks when they are recorded one at a time.

**Tape Speed:** The speed at which tape moves past the head in recording or playback modes. Standard tape speed for home use is 7½ ips or half that speed (3¾ ips). Speeds of 1⅞ and 15/16 ips are found on some machines, but on reel-to-reel recorders are usually suitable only for non-critical voice recording. Some cartridge machines, using special tape and circuits, achieve very good results at the slow speeds. Professional recording speed (for making original master tapes of music, for example) is usually 15 ips and sometimes higher. Higher tape speeds increase fidelity and simplify editing (the sounds to be edited are spaced farther apart), but increases tape consumption and hence cost.

**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.

**Three-Motor:** Having separate motors for the capstan and each of the two reel motors. This simplifies the mechanical design of a recorder, with some increase in reliability, but increases its cost as well.

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

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

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

## SPEAKER SYSTEMS (Section 10)

**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. A form of *Infinite Baffle*.

**Active Equalizer:** An equalizer designed to correct deficiencies in a speaker system's response (see definition under *Amplifiers*). Such equalizers, which are designed to precisely match specific speaker systems, usually connect between the amplifier and preamplifier, or in one of the amplifier's tape-monitor circuits.

**Air-motion transformer:** A type of speaker in which the air is not pushed into vibration by a piston, but rather "squeezed" by the contractions of a folded diaphragm.

**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.

**Direct/Reflected:** A form of speaker in which a small part of the total output is radiated directly forward, with the major part reflected from the wall behind the speaker.

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

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

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

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

**Electret:** A type of *piezoelectric* speaker.

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

**Impedance:** A speaker's resistance to the flow of an alternating current, which varies with frequency. A speaker's rated impedance is usually the value measured at 400 Hz. When two or more speakers are connected in parallel, speakers with impedances of 8 ohms or more are recommended.

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

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

**Motional Feedback:** Correction of a speaker's response by feeding information about its motion back to the amplifier. The amplifier then compares the speaker's motions with its own output and changes this output in such a way as to counteract any changes (distortions) created by the speaker. Such speakers usually have special "servo" amplifiers built in, though a few can be used with other amplifiers if these are modified.

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

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

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

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

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

**Ribbon:** A form of high-frequency driver using a light ribbon suspended in a magnetic field to generate sound when current is passed through it. In its basic form, a very high quality but fragile high frequency driver.

**Servo amplifier:** See *Motional Feedback*.

**Slope:** The rate of attenuation of frequencies beyond the pass-band of a crossover network. Usually either 6 dB or 12 dB per octave of frequency.

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

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

**Tweeter:** A high frequency driver.

**Walsh Radiator:** A type of driver invented by the late Lincoln Walsh, in which a gently sloping cone, moving up and down, so displaces the air with its sloped sides as to radiate a cylindrical wave-front in a 360° horizontal circle.

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

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

## HEADPHONES & MICROPHONES
(Section 12)

**Air-Motion Transformer:** See definition in *Speakers*.

**ASA:** American Standards Association.

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

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

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

**Condenser:** A type of microphone characterized by its wide frequency range and low distortion. Used for precision measurements and high-quality recording. Can be omni-directional or cardioid.

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

**EIA:** Electronic Industries Association.

**Electret:** A permanently polarized form of capacitor microphone. See definition in *Cartridges*.

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

**Impedance:** See definition under *Speakers*. Note, however, that while most headphones have impedances on the order of 8 to 16 ohms, some have impedances on the order of 25 to 200 ohms. Some headphone output jacks will work with either type of phone, but others require a closer impedance match.

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

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

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

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

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

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

## SIGNAL PROCESSORS
(Section 13)

**Auto-Correlator:** A circuit that distinguishes coherent programs (music or speech) from random noise (hiss) and operates filters that attenuate noise without audible loss of program frequencies.

**CD-4:** A discrete four channel disc recording system. See definition under *Cartridges*.

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

**Delay:** An electronic time delay device that can introduce time delays from a few milliseconds to about 100 milliseconds without significantly degrading signal quality. Can be used to restore acoustics of a large auditorium to recorded programs heard in a normal sized room.

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

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

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

**Matrix:** A means of encoding four channels into two, and vice versa. See definition under *Cartridges*.

**QS:** A matrix system developed by Sansui.

**SQ:** A matrix system developed by CBS.

# the (w)hole story

For years, SAE has been producing "state-of-the-art" separate components that offer value, quality and performance. That experience has now been applied to a line of integrated amplifiers. But what's the hole for? The answer is, ultimate performance!

Unlike others, our integrateds are identical to our separates with the same designs and component parts already proven in SAE preamps and amps. But that's not all - in each of our integrateds the preamp and amp section is entirely separated (even the power supply!). The preamp section, which is identical to our 2900 (or 3000, depending on the model) has its inputs and outputs near the front (hence the need for the hole), while the amp section (2200 or 3100) is at the rear. The only common parts are the chassis and the power switch. This unusual "U" shape design provides isolation of low and high level circuits, while retaining easy access to inputs and outputs (now only 3.5" behind the front panel).

These new units are so unique we don't consider them integrateds. Instead, we call them preamp/amps. They meet all the goals of an ideal integrated; (1) Convenience of an integrated design; (2) Excellent value due to reduced packaging costs; 3) The performance of separate components.

No matter which of SAE's preamp/amps you choose - the 2922 with parametric EQ and 100 watts* per channel, 3022 with tone controls and 100 watts* per channel or the 3031 with tone controls and 50 watts* per channel, you are assured of SAE performance, quality and value. The preamp/amps are truly integrated separates. And that's the whole story.

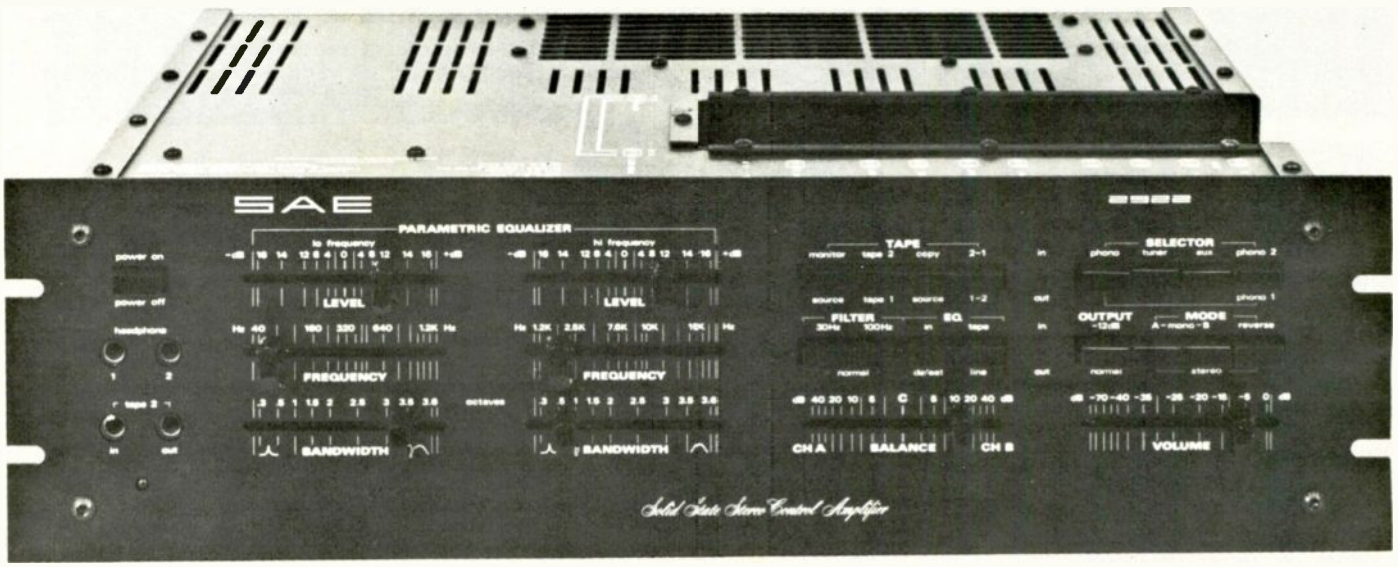
*Per FTC Rating @ 8 ohms

**For Complete Information Write:**

SAE

**Scientific Audio Electronics, Inc.**

P.O. Box 60271 Terminal Annex, Los Angeles, CA 90060




**2922 Pre-amp/Amp**

# 1 AMPLIFIERS

## ACCUPHASE

### P-300 Stereo Power Amplifier
150 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD (200 W/ch into 4 ohms, 75 W/ch into 16 ohms); frequency response 20-20,000 Hz +0/−0.2 dB; hum and noise 100 dB below rated output; 6" H × 17½" W × 14" D ..... $850
**AWC-1.** Walnut case ..... $50

### P-20 Stereo Power Amplifier
70 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD (100 W/ch into 4 ohms, 35 W/ch into 16 ohms); frequency response 20-20,000 Hz +0/−0.2 dB; hum and noise 100 db below rated output; output load impedance 4, 8, and 16 ohms; subsonic filter 18 dB/octave; cutoff frequency 17 Hz; incorporates two independent power supplies; front-panel stereo headphone jack; dual mounting handles; screw-type speaker terminals; 6" H × 19" W × 13¾" D ..... $750

### C-200 Stereo Preamplifier
Frequency response 20-20,000 Hz +0/−0.2 dB (high level), 20-20,000 Hz ±2 dB (low level); 0.5% dist. at rated output; hum and noise −74 dB (10 mV phono input); sensitivity variable over 2-6 mV (phono), 200 mV (aux.); high- and low-cut filters; built-in headphone amplifier; tape monitor/copy facilities; mike inputs on front panel; 6" H × 17½" W × 14" D ..... $700
**AWC-1.** Walnut case ..... $50

### E202 Integrated Stereo Amplifier
100 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD (140 W/ch into 4 ohms, 50 W/ch into 16 ohms); hum and noise −94 dB (main amp), −80 dB (high level), −74 dB (low level); phono sensitivity variable over 2.5-5 mV; phono impedance 30,000, 47,000, 100,000 ohms (switchable); 6" H × 18" W × 14" D ..... $800
**AWC-2.** Walnut case ..... $50

### C-220 "A" Disc Equalizer/Head Amp
RIAA disc equalizer with built-in head amplifier (26 dB gain) for moving-coil (MC) cartridges; class-A symmetrical push-pull circuit; ringemittor transistor in head-amplifier section; equalizer circuit uses low-impedance differential push-pull circuit for 85 dB S/N for 2 mV input; frequency response 20-20,000 Hz ±0.2 dB with 0.01% THD at rated output; control tracking error less than 1 dB at −60 dB setting ..... $900

## ACE AUDIO

### 35 × 2 Stereo Power Amplifier
35 W/ch into 4 or 8 ohms over 20-20,000 Hz with 0.1% HD; IM dist. 0.1% (full output), 0.05% (1 W output); sensitivity 1 V for rated output; frequency response 20-20,000 Hz ±0.2 dB at 1 W; hum and noise 90 dB below 35 W; rear-panel heatsink and perforated covers for cooling; 3⁷/₁₆" H × 14" W × 8½" D ..... $225
**35 × 2 Super.** Similar to 35 × 2 but has double-sized filter capacitors in power supply, greater peak power ..... $239

### 3000 Stereo Preamplifer
2 V rated output into 10,000-ohm load, 8 V (max.); gain 20 dB (high-level inputs), 60 dB (phono input); phono overload 90 mV; frequency response 20-20,000 Hz ±0.1 dB, −1 dB at 1 and 75,000 Hz; harmonic and IM dist. 0.02% max.; hum and noise 90 dB below 0.8 V input (high level), 73 dB below 8 mV input (phono); RIAA phono equalization ±0.5 dB; input impedance 33,000 ohms (high level), 47,000 ohms (phono); output impedance 470 ohms; outputs: main, tapes 1 and 2; inputs: phono, tuner, aux., and tapes 1 and 2; volume and balance controls; three ac outlets (1000 W max.), one switched, two unswitched; 120- or 240-V ac, 5 W; 2³/₄" H × 14½" W × 7" D ..... $250
Kit ..... $156
**3100.** Similar to 3000 but uses external power supply ..... $325

### Basic Stereo Preamplifer
High-level inputs (FM, aux. 1 and 2): sensitivity 0.1 V for 1 V output; input impedance 41,000 ohms at full volume, 50,000 ohms at −20 dB setting; output impedance 100 ohms; harmonic and IM dist. 0.05% at 2 V output; frequency response 20-20,000 Hz ±0.1 dB; hum and noise 85 dB below 0.5 V input; output 10 V into 15,000 ohms. Phono input: sensitivity 2.2 mV for 1 V output; input impedance 47,000 ohms; harmonic dist. 0.05% (midband); RIAA equalization ±0.5 dB; hum and noise 70 dB below 10 mV input; overload 250 mV. Inputs: RIAA phono, FM, aux. 1 and 2, and tape monitor; outputs: main, tape; four ac outlets (three switched). 117-V ac (220-V models available, $5 additional), 5W ..... $168
Kit ..... $100
**BSPW High.** Similar to BSP but +6 dB gain on all inputs ..... $175

### Zero-Distortion Preamp
High-level inputs (FM, aux. 1 and 2): sensitivity 1 V for 1 V output; input impedance 50,000 ohms (no load), 25,000 ohms (50,000-ohm load); output impedance 0-12,500 ohms (varies with volume setting); harmonic and IM dist. 0; frequency response −3 dB at 67 kHz (−6 dB volume setting); hum and noise −86 dB at 1 V input. Phono input: sensitivity 10 mV for 1 V output; input impedance 47,000 ohms; harmonic dist. 0.05% (midband, 5-V output level); RIAA equalization ±0.5 dB; hum and noise 76 dB below 10 mV input; overload 110 mV. 117-V ac (220-V models available), 3 W; black anodized front panel with Canadian maple end caps ..... $138
Kit (with conversion sheet) ..... $100

## A&E

### E-2000 Phono Equalizer Preamplifier
Frequency response 0-500,000 Hz ±3 dB (aux.), 20-20,000 Hz ±0.2 dB (phono eq); THD 0.01%; max. output 18 V; sensitivity switchable from 25 mV to 10 mV; phono overload 50 mV or 200 mV (varies with switched sensitivity); phase shift within ±1 degree from 20-20,000 Hz; low (12 dB/octave) filter. Features dc design; four switched input impedances at 33,000, 47,000, 68,000 and 100,000 ohms; two phono inputs; +12-dB gain; −15 and −30-dB switched attenuators; dc balance meter and adjustors. 3⁵/₈" H × 18⁷/₈" W × 11³/₈" D. ..... $1075

## AKAI

### AM-2800 Integrated Stereo Amp
80 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.08% THD; S/N (IHF) 75 dB (phono), 95 dB (aux.); residual noise 0.5 mV (8 ohms); channel separation (IHF) 55 dB (phono, 1 kHz); damping factor 60 (8 ohms, 1 kHz); load impedance 8-16 ohms (speakers), 4-16 ohms (headphones). Preamp section: input sensitivity/impedance. 3 mV/50,000 ohms (phono 1), 3 mV/33,000, 47,000 or 100,000 ohms (phono 2), 150 mV/100,000 ohms (aux., tape PIN), 30 mV/180,000 ohms (tape DIN); frequency response 30-15,000 Hz ±0.5 dB (phono), 7-70,000 Hz +0/−1 dB (tuner, aux., tape); bass, mid-range, and treble tone controls; 120-V ac, 60 Hz; 6.5" H × 17.3" W × 16.6" D. ..... $400

### AM-2600 Integrated Stereo Amp
60 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD; S/N (IHF) 75 dB (phono), 95 dB (aux.); residual noise 0.5 mV (8 ohms); channel separation (IHF) 55 dB (phono, 1 kHz); damping factor 60 (8 ohms, 1 kHz); load impedance 8-16 ohms (speakers), 4-16 ohms (headphones). Preamp section: input sensitivity/impedance 3 mV/50,000 ohms (phono 1), 3 mV/33,000, 47,000 or 100,000 ohms (phono 2), 150 mV/100,000 ohms (aux., tuner, tape PIN), 30 mV/180,000 ohms (tape DIN); frequency response 30-15,000 Hz±0.8 dB (phono), 7-70,000 Hz+0/−1 dB (tuner, aux., and tape); bass and treble tone controls; 120-V ac, 60 Hz; 5.6" H × 17.3" W × 13" D. ..... $300

### AM-2400 Integrated Stereo Amp
40 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.15% THD; S/N (IHF) 75 dB (phono), 95 dB (aux.); residual noise 0.5 mV (8 ohms); channel separation (IHF) 55 dB (phono, 1 kHz); damping factor 60 (8 ohms, 1 kHz); load impedance 8-16 ohms (speakers), 4-16 ohms (headphones). Preamp section: input sensitivity/impedance 3 mV/50,000 ohms (phono), 150 mV/100,000 ohms (aux., tuner, and tape PIN), 30 mV/180,000 ohms (tape DIN); frequency response 30-15,000 Hz ±1 dB (phono), 7-70,000 Hz +0/−1 dB (tuner, aux., and tape); bass and treble tone controls; 120-V ac, 60 Hz; 5.6" H × 17.3" W × 13" D ..... $195

### AM-2200 Integrated Stereo Amp
23 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.5% THD; S/N (IHF) 75 dB (phono), 95 dB (aux.); residual noise 0.8 mV (8 ohms); channel separation (IHF) 55 dB (phono, 1 kHz); damping factor 60 (8 ohms, 1 kHz); load impedance 8-16 ohms (speakers), 4-16 ohms (headphones). Preamp section: input sensitivity/impedance 3 mV/47,000 ohms (phono), 150 mV/100,000 ohms (aux., tuner, and tape PIN), 30 mV/180,000 ohms (tape

# 1 AMPLIFIERS

DIN); frequency response 30-15,000 Hz ±1 dB (phono); bass and treble tone controls; 120-V ac, 60 Hz; 4.9" H × 15" W × 10.3" D..... $145

## ALL-TEST

**ATD-25 Phono Preamp**
Amplifies magnetic phono cartridge signals to level which will drive high-level inputs of any stereo amp, integrated amp, or receiver; IM dist. 0.01%, 0.005% typical; noise 80 dB below 10mV input, 20-20,000 Hz (input shorted); negative feedback 70 dB at 1 kHz; gain 36 dB at 1 kHz; input impedance 47,000 ohms ±5%; frequency response 20-20,000 Hz ±0.5 dB of RIAA curve; channel separation 80 dB at 10,000 Hz; max. output 8 V rms into 47,000 ohms or higher, 7 V rms into 10,000 ohms; channel balance within ±0.1 dB.... ..... $170

## ANALOG ENGINEERING

**A-620 Power Amplifier**
325 W/ch continuous over 5-40,000 Hz with

0.05% IM dist.; min. load impedance 2 ohms; slew rate 70 V/μsec; damping factor 500 (1 kHz); S/N



110 dB; input sensitivity 2 V; has two peak-following ballistometric meters with transient LED indicator on meter face plate; rack mountable ..... $1220

**A-610 Power Amplifier**
150 W/ch over 5-40,000 Hz with 0.08% THD and 0.05% IM dist.; damping factor 500; min. load impedance 2 ohms; S/N 110 dB; front-mounted peak-following meters with sensitivity switch; has amp/speaker protection circuitry; rack mountable .. ..... $745

**Analogue 520 Preamplifier**
Frequency response 10-60,000 Hz +0/−0.5 dB; THD 0.005% at 2.5 V rms output; IM dist. 0.005%; S/N 100 dB at full output (unweighted); gain 23 dB (high level in to main out); max. output 7.5 V rms; output impedance 100 ohms; recommended load 30,000 ohms or greater; bass and treble controls; low and high cut filters. Phono section: frequency response RIAA ±0.5 dB; THD 0.004%; IM dist. 0.004% (phono in to tape out); S/N 84 dB below 10 mV (1000 Hz); gain 34 dB (phono in to tape out), 57 dB (phono in to main out); phono overload 120 mV rms (1 kHz); input impedance 47,000 ohms..... $590

**A-515 MC Cartridge Preamp**
Moving-coil cartridge preamplifier; frequency response 10-30,000 Hz +0/−5 dB; S/N 127 dB; phono sensitivity 0.0005 mV; THD and IM dist. 0.005%; hum-shielded chassis; input and output jacks are 24 k gold plated..... $189

## APT

**Holman Preamplifier**
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, 100,000 ohms (phono 1 and 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 100 mV 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). Features dc phono preamp with FET/bipolar differential pair-input configuration; optional plug-in pre-preamp for moving-coil cartridges; 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; tone defeat switch; high filter switchable between 40,000 and 8000 Hz (12 dB/octave rolloff); treble and bass controls; headphone amplifier output; front-panel mute control. 3.12" H × 15.04" W × 8.19" D..... $447

## AUDIO GENERAL

**511A Stereo Preamplifier**
Frequency response 20-20,000 Hz ±0.1 dB (high-level inputs); phono inputs within 0.25 dB of RIAA curve; THD and IM dist. below 0.005%, 20-20,000 Hz; hum and noise −88 dB (phono input, "A" weighting), −106 dB (unweighted, 20-20,000 Hz, high-level inputs); no filters or tone controls; "tone send" button controls external processor loop for equalizers or other signal processors; slew rate 250 V/μ sec (phono), 50 V/μ sec (high-level); rise time 10 μsec (phono), 250 μsec (high-level); two tape monitor inputs; 20 A power switch . ..... $465

## AUDIONICS OF OREGON

**BA-150 A/D Power Amplifier**
Hybrid design with solid state front end and microprocessor-controlled bias optimization; THD less than 0.25% with feedback switched in; frequency response 20-20,000 Hz; power output 150 W/ch continuous into 4, 8, or 16 ohms ..... $2400

**PZ3-11 Stereo Power Amplifier**
100 W/ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.03% THD; frequency response 20-20,000 Hz ±0.5 dB; sensitivity 1 V for rated output; input impedance 22,000 ohms (below 20 kHz); damping factor 50 (8 ohms, 1 kHz); load impedance 4 ohms to infinity; hum and noise—95 dB; direct-coupled output; rack mountable; 6" H × 19" W × 15" D ..... $489
**PZ3-HP.** Same as PZ3-11 but with input level controls and peak-reading meters ..... $589

**CC2 Stereo/Mono Power Amplifier**
Stereo and bridged-mono power amplifier with leading-phase feedback and open-loop push-pull circuitry. 70 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.18% THD (stereo), 225 W continuous into 8 ohms from 20-20,000 Hz with 0.35% THD; TIM dist. unmeasurable; frequency response 20-20,000 Hz ±0.5 dB, 5-70,000 Hz −3 dB; input sensitivity 1.0 V for rated output; slew rate 36 V/μsec (doubles in mono mode); negative feedback 23 dB. Features two peak-reading LEDs and rack-mount handles; black anodized front panel. 3½" H × 19" W × 8½" D ..... ..... $429

**BT-2 Stereo Preamplifier**
Output 6 V rms into 10,000 ohms, 3 V rms into 500 ohms; THD and IM dist. 0.01% max.; source and

load impedance 500 ohms (min.); recorder output/impedance 0.2-2 V/10,000 ohms; THD and IM dist. 0.01%; sensitivity 100 mV (tape, tuner, aux.), 2 mV (phono); input impedance 25,000 ohms (tape, tuner, aux.); noise (A wtd.) −82 dB (phono, 10 mV input); phono overload 150 mV; equalization accuracy 20-20,000 Hz ±0.5 dB (phono)..... $429
With rack mount handles..... $444

## AUDIO RESEARCH

**D-350 Stereo Power Amplifier**
Linear two-channel power amplifier. 350 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.25% THD; IM dist. less than 0.1% at rated output; S/N 110 dB (unweighted); input sensitivity/impedance 1.35 V rms/30,000 ohms. Features power-line monitor meter with identified operating ranges; output power monitor meters; built-in speaker line fuse holders; logic circuitry; front-panel power supply fuses; three built-in fans. 10½" H × 19" W × 17¼" D ..... $2785

**D-110 Power Amplifier**
Linear two channel bridged mono amplifier. 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/30,000 ohms; load impedance 4 ohms; damping factor more than 200 at rated power. Features power-line monitor meters; built-in speaker line fuse holders; front-panel power supply fuses; three built-in fans. 10½" H × 19" W × 17¼" D ..... $1995

**D-100A Stereo Power Amplifier**
100 W/ch continuous, both channels driven into 8 ohms over 1-20,000 Hz with 0.25% THD and 0.1% IM dist.; S/N 100 dB (phono, 10 mV input); sensitivity 1.5 V rms (high level); load impedance 4 ohms (min.); damping factor 200; 5¼" H × 19" W × 10½" D ..... $1195
**WC-3.** Walnut finished wood cabinet for D-100..... ..... $100

**D-52 Power Amplifier**
Linear two-channel power amplifier. 50 W/ch continuous, both channels driven into 8 ohms from 1-20,000 Hz at 0.25% THD; IM dist. less than

0.1%; S/N 90 dB (unweighted); input sensitivity 1.1 V rms/30,000 ohms; damping factor 500 min. at rated power and load. Features built-in switch for bridged mono operation; front-panel power supply fuses. 5¼" H × 19" W × 10½" D. ..... $995
**WC-3.** Walnut-finished wood cabinet for D-52 ..... $100

### SP-6 Stereo Preamplifier
Max. input 700 mV at 1000 Hz (magnetic phono); input impedance 50,000 ohms (all inputs); output impedance 500 ohms at 1000 Hz (all outputs); rated output (IHF) 5 V rms from 20-30,000 Hz (all outputs), 60 V rms at 1000 Hz into 100,000-ohm load at 1.0% THD (main out); S/N 90 dB below 1 V rms input; frequency response 10-30,000 Hz ±0.25 dB (high level), RIAA phono deviation ±1 dB from 30-15,000 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). Features segmented 2-dB gain control; front-panel mute switch; rear-panel gain range switch (-10 dB); separate on/off switch; indicator for three amp power receptacles. 5¼" H × 19" W × 10¼" D ..... $1075
**WC-4.** Walnut-finished wood cabinet for SP-6. $100

### SP-4A Stereo Preamplifier
Frequency response 1-100,000 Hz +0/−3 dB; 2 V rated output (10 V overload); 0.005% THD and IM dist. at rated output; S/N 84 dB (phono, 10 mV input); sensitivity 0.1 V (high level), 2 mV (phono); phono overload 300 mV; tape impedance/output 2000 ohms/0.5 V. Features provisions for alternate compensation of magnetic phono sections; shielded power supply and head amp sections; main output turn-on delay; gold-contact switching controls. 3½" H × 19" W × 8½" D. ..... $975
**WC-2.** Walnut finished wood cabinet for SP-4... $90

### SP-5 Stereo Preamplifier
Frequency response 1-100,000 Hz +0/−3 dB; 2 V rated output (10 V overload); 0.005% THD and IM dist. at rated output; S/N 80 dB (phono, 10 mV input); sensitivity 0.1 V (high level), 2 mV (phono); phono overload 300 mV; tape impedance/output 2000 ohms/0.5 V; 3½" H × 19" W × 8½" D.. $595
**WC-2.** Walnut finished wood cabinet for SP-5 ... $90

### MCP-2 Pre-Preamplifier
Frequency response 20-20,000 Hz ±0.25 dB; HD and IM dist. less than 0.005% at rated output (IHF); max. input 50 mV rms; max. output 0.25 V rms; output impedance 50 ohms. Features front-panel switch selectable gain +6 dB from 10-34 dB; front-panel switch selectable input impedance at 10, 30, 100, 300, and special (from 3-1000 ohms); front-panel mute/operate switch; front-panel input/output selection switches; three switched and one unswitched power receptacles. .... $495
**WC-2.** Walnut-finished wood cabinet for MCP-2 ..... $90

### MCP-1 "Pre"-Preamplifier
Frequency response 5-100,000 Hz +0/−3 dB; 1 V rated output; S/N 80 dB (phono, 10 mV input); sensitivity 100 mV (phono); phono overload 100 mV; serves as moving coil pre-preamp for SP-4 and SP-5 ..... $195

## AUDIO TECHNOLOGY

### 440 Head Amplifier/Phono Preamplifier
RIAA equalizer (IHF) with built-in head amp; frequency response 20-20,000 Hz ±0.25 dB over 0-200,000 Hz bandwidth; THD and IM dist. 0.001%; S/N 90 dB ("A" weighted); slew rate 15 V/μsec; drives 600 ohm load to 5 V rms; will accommodate moving magnet and moving coil cartridges; resistive and capacitive loading for cartridge over 120 combinations; programmable gain 40-70 dB; 1¾" H × 7½" W × 5½" D ..... $180

## AUDIRE

### DM 700 Power Amplifier
Combines two bridged mono amplifiers on one chassis. 350 W/ch, both channels driven into 8 ohms

from 20-20,000 Hz, 500 W into 4 ohms; THD and IM dist. less than 0.05% at 350 W; frequency response at rated power 10-20,000 Hz ±0.2 dB; hum and noise −110 dB; slew rate 80 V/μsec min.; damping factor 300; input sensitivity/impedance 1.15 V/27k ohms. Features dual power output meters with VU meter range selector switch and peak-clipping LED indicators. 5¾" H × 19" W × 17" D ..... $1050

### 2M Power Amplifier
100 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz, 120 W/ch into 4 ohms; THD and IM dist. less than 0.05% at 100 W; power bandwidth 10-20,000 Hz ±0.2 dB; frequency response 10-60,000 Hz ±0.2 dB at 1 W; hum and noise −100 dB; damping factor 150; input sensitivity/impedance 1.0 V rms/33k ohms. Features clipping LEDs, twin VU meters, VU meter range selector switch and ac switch; includes front-panel rack mount; 5¼" H × 15" W × 13" D ..... $575
**Model 2.** Similar to 2M minus VU meters with selector switch and ac switch ..... $450

### Diffet 1A Preamplifier
Features three switch positions for moving-coil cartridge: standard (47,000 ohms and 0 dB), medium-gain (40 ohms and +6 dB), and low-gain (500 or 47,000 ohms and +12 dB). Magnetic phono: RIAA ±0.25 dB from 20-20,000 Hz; phono overload 175 mV at 1000 Hz; HD 0.005% at 20 Hz and 0.008% at 20,000 Hz; output 15 V rms; gain 38.5 dB at 1000 Hz; S/N 93 dB. High level: frequency response 0-100,000 Hz +0/−0.25 dB; THD 0.005% at 3 V rms out; IM dist 0.001%; S/N 90 dB at 3 V rms out; gain 23 dB. Inputs: magnetic phono, tuner, aux., tape 1/2; outputs: two tape and two main; two switched and two unswitched ac outlets; volume, balance, short-wave selector, and short-wave power controls. 4¾" H × 19" W × 7" D. ..... $525
**Diffet 1.** Similar to Diffet 1A minus provisions for moving-coil cartridges ..... $475

## BGW

### Model 410 Power Amplifier
200 W continuous into 8 ohms; frequency response 20-20,000 Hz +0/−0.2 dB; THD 0.02%; IM dist. 0.02%; residual hum and noise −110 dB; slew rate

40 V/μsec.; rise time 3μsec; input sensitivity 2 V for rated output; high speed relay activated arc-interrupter speaker protection; four-position speaker selector; low-impedance headphone jack; two input sensitivity controls; meter display of average responding LEDs (10 on each of two meters) with three-position (−20, −10, and 0 dB) meter sensitivity switch; 5¼" H × 19" W × 11¾" D ..... $799
**Model 210.** Similar to Model 410 except 100 W/ch continuous and input sensitivity 1.4 V for 100 W. Features similar minus input sensitivity controls and headphone jack ..... $599
Cabinet designed for either 410 or 210 ..... $36

### Model 203 Stereo Control Center
Gain 42 dB (phono to tape out, 1 kHz), 22 dB and

# 1 AMPLIFIERS

10 dB (high level to line out) with high-low gain switch set to high and low, respectively; frequency response 20-20,000 Hz ±0.2 dB (high level), ±0.25 dB of RIAA (phono); input impedance 47,000 ohms (phono), 90,000 ohms (high level); input overload 100 mV (phono, 1000 Hz), 10 V (high level); max. output 8 V rms into 600 ohms (line), 10 V rms into 5000 ohms (phono at tape out), 4 V rms into 5000 ohms (rated output); THD 0.01%; subsonic and scratch filters; front-panel tape copy and headphone jacks; provisions for remote MC preamp and ac power switching; active bass and treble tone circuitry; equalizer in/out jacks; 5¼" H × 19" W × 11¾" D..... $649
Cabinet..... $33

**Model 103 Stereo Preamplifier**
Gain 40 dB at 1000 Hz (phono to tape out), 24 dB (high level to line out); input impedance 47,000 ohms (phono), 90,000 ohms (high level); imput overload 120 mV at 1000 Hz (phono), 4.5 V (high level); 100-dB dynamic range (phono); max. output voltage 8 V rms into 600 ohms (line out), 10 V rms into 5,000 ohms (phono at tape out); THD less than 0.01% at rated output; noise −90 dB below rated output (high level to line out); frequency response 20-20,000 Hz ±0.25 dB (high level and phono RIAA). Features all-discrete circuitry; three-pole (18 dB/octave) subsonic filter; separate bass and treble tone controls equalized at ±15 dB at 50 and 15,000 Hz; front-panel defeat switch for removal of tone controls; four high-level inputs (tuner, aux., tape 1 and 2, equalizer phono); one switched and two unswitched ac outlets; full facilities for interfacing with two tape machines; 3½" H × 19" W × 10½" D ..... $399

## BOSE

**1801 Power Amplifier**
250 W/ch into 8 ohms over 20-20,000 Hz with 0.5% THD; frequency response 20-20,000 Hz ±1

dB; hum and noise 100 dB below rated output; input impedance 100,000 ohms; damping factor 40; input sensitivity 1.5 V for rated output; two integrated VU meters plus LED peak-level display; brushed aluminum control panel with black-out display panel; power consumption 86 W (idle), 1960 W (at rated output); 7³/₁₆" H × 18" W × 18½" D..... $986

## BOZAK

**929 Audio Power Amplifier**
150 W/ch continuous sine wave into 8 ohms (20-20,000 Hz) at 0.2% THD; response at full output power 20-20,000 Hz +0 dB/−0.2 dB; THD at 1000 Hz 0.1%; response 3-100,000 Hz +0/−3 dB (at 1 W); damping factor 100 at 20 and 1000 Hz; S/N (unweighted) 100 dB; input impedance 35,000 to 100,000 ohms (100k pot); two power meters; matte black front panel; optional walnut veneer enclosure extra; 7" H × 17¾" W × 12" D $850
**929-V.** Same except without the meters..... $750

**939 Audio 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..... $480

**919 Mixer/Preamplifier**
Designed to be used with the 929 power amplifier; features bass, treble, and mid-range 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, mid-range, 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 ..... $800

**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 channe , 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 dist.; S/N (unweighted) 80 dB (phono), hi-level 90 dB (unweighted); 12 V output into 600 ohms..... $450

## BRYSTON

**4B Stereo Power Amplifier**
200 W/ch into 8 ohms (400 W/ch into 4 ohms, 800 W bridged into 8 ohms) over 20-20,000 Hz with 0.05% THD and 0.025% IM dist. at 200 W/ch; S/N 100 dB; crosstalk below 100 dB; slew rate 60 V/μsec; damping factor 500 (8 ohms, 20 Hz); input sensitivity/impedance 1.25 V/50,000 ohms; has bridging switch; each channel separated back to line cord; LED pilot light and overdrive (clipping) indicators; 5¼" H × 19" W × 13½" D..... $1295

**3B Stereo Power Amplifier**
100 W/ch into 8 ohms (200 W/ch into 4 ohms, 400 W bridged into 8 ohms) over 20-20,000 Hz with 0.05% THD and 0.025% IM dist. at 100 W/ch; S/N 100 dB; crosstalk below 100 dB; slew rate 60 V/μsec; damping factor 500 (8 ohms, 20 Hz); input sensitivity/impedance 1 V/50,000 ohms; has bridging switch; each channel separated back to line cord; LED pilot light and overdrive (clipping) indicators; 5¼" H × 19" W × 9" D..... $795

**2B Stereo Power Amplifier**
50 W/ch into 8 ohms (100 W/ch into 4 ohms, 200 W bridged into 8 ohms) over 20-20,000 Hz with 0.05% THD and 0.025% IM dist. at 50 W/ch; S/N 100 dB; crosstalk below 100 dB; damping factor 500 (8 ohms, 20 Hz); input sensitivity/impedance 0.75 V/50,000 ohms; has bridging switch; each channel separated back to line cord; LED pilot light and overdrive (clipping) indicators; 3½" H × 19" W × 10" D..... $495

## CROWN

**M-600 Power Amplifier**
Monaural power amplifier; 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 0-20,000 Hz ±0.1 dB (1 W into 8 ohms); 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); short, mismatch, open circuit, high line voltage, and input overload protection; includes meter and indicator lamps with adjustable thresholds; 120- and 240-V ac, 50-60 Hz, 80 W (idle), 1000 W (at rated output); fits 19-in standard rack mount; 8¾" H × 16½" D ..... $1795
**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 0-20,000 Hz ±0.2 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)..... $3590

**DC-300A Stereo/Mono Amplifier**
Single- or dual-channel power amplifier. Stereo mode: 155 W/ch into 8 ohms over 1-20,000 Hz with 0.05% THD and 0.01% IM dist.; frequency response 0-20,000 Hz ±0.1 dB (1 W into 8 ohms); input sensitivity 1.71 V ±2% for 155 W into 8 ohms; hum and noise 110 dB below rated output; phase response +0/−15 degrees (0-20,000 Hz, 1 W); damping factor greater than 750; input impedance 25,000 ohms ±30%; short, mismatch, open circuit, thermal, and input overload protection; 120-, 128-, 240-, 248-, and 256-V ac ±10%; 50-400 Hz, 40 W (idle), 510 W (at rated output); fits 19-in standard rack mount; includes IOC (input/output comparator); 7" H × 9¾" D ..... $899
**7R.** Cabinet ..... $55

**D-150A Stereo/Mono Amplifier**
Single- or dual-channel power amplifier. Stereo mode: 80 W/ch into 8 ohms over 1-20,000 Hz with 0.05% THD and 0.01% IM dist.; frequency response 0-20,000 Hz ±0.1 dB (1 W into 8 ohms); input sensitivity 1.19 V ±2% for 80 W into 8 ohms; hum and noise 110 dB below rated output; phase response +0/−15 degrees (0-20,000 Hz, 1 W); damping factor greater than 400; input impedance 25,000 ohms ±30%; short, mismatch, open circuit, thermal, and input overload protection; 120- and 240-V ac ±10%, 50-400 Hz, 30 W (idle), 250 W (at rated output); includes IOC (input/output comparator); 5¼" H × 17" W (19" wide with standard rack mounting bracket installed) × 8¾" D. ..... $549
**5R.** Cabinet ..... $45

**D75 Stereo Power Amplifier**
Single- or dual-channel power amplifier. Features two IOCs (input/output comparators), three meter indicators (two signal and one power), and separate signal and chassis grounds. Stereo: 35 W/ch continuous into 8 ohms from 20-10,000 Hz at 0.05% THD, 45 W/ch continuous into 4 ohms from 20-20,000 Hz at 0.05% THD; frequency response 20-20,000 Hz ±0.1 dB and 5-100,000 Hz ±1.2 dB at 1 W into 8 ohms; IM dist. 0.05% max.

from 0.01-0.25 W; slew rate 6 V/μsec; damping factor 400 from 0-400 Hz into 8 ohms; rated for 4- and 8-ohm loads, safely handles purely reactive loads; input sensitivity 0.9 V ±2% for 35 W into 8 ohms. Mono: 95 W continuous into 8 ohms from 20-20,000 Hz at 0.05% THD; frequency response at 1 W into 16 ohms from 20-20,000 Hz ±0.2 dB, from 6-50,000 Hz ±1 dB. General: hum and noise 106 dB below rated output from 20-20,000 Hz;

phase response +10, −15 degrees from 20-20,000 Hz at 1 W; input impedance ±30% at 20,000 ohms (balanced), ±30% at 10,000 ohms (unbalanced), ±30% at 25,000 ohms (unbalanced phone jack); amplifier output protection volt-amp limiting circuit; ac voltages from 100-240 V ±10% between 50-400 Hz; 1¾" H × 19" W × 8¾" D..... $349

### 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; moving-coil module to be announced). Switching Module: features digital control-setting displays, digital interface for wireless remote control system (to be announced), and eight dual-channel touch-button selectable inputs, including 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 dB; hum and noise below rated output 97 max. (unweighted), 101 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, ¼-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; 7½" H × 17" W × 14" D. Power Supply: Seven switched and two unswitched ac outlets; three dc outlets; 3½" H × 17" W × 7½" 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; 3½" H × 13/16" W × 6⅝" 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..... $1995

### IC-150A Control Center/Preamp

Input gain/impedance 20.8 dB ±0.2 dB/100,000 ohms (25,000 ohms max. volume) for high-level inputs, 30-50 dB (adjustable)/47,000 ohms for phono inputs; sensitivity 0.75 mV at 1 kHz for rated output at max. gain; frequency response 3-100,000 Hz ±0.6 dB with high impedance load and 10-20,000 Hz ±0.1 dB with IHF load (high-level), ±0.5 dB of RIAA (phono); hum and noise 95 dB below rated output (high-level), 85 dB below 10-mV input (phono); THD less than 0.0005% at 1 kHz, 0.05% over 20-20,000 Hz at rated output with IHF load; IM dist. less than 0.002% at rated output with IHF load; inputs: one tuner, three aux., two tape, and two phono (overload 33-330 mV at 1 kHz, depending on gain); max. output 12 V, 600-ohm impedance; max. phono output 11 V rms at 1 kHz, high impedance; continuously variable panorama control; tone control (±15 dB at 30 and 15,000 Hz); rumble and scratch filters; 120- or 240-V ac, 50-60 Hz, 2 W; fits 19-in standard rack mount; 5¼" H × 8⅛" D..... $399
Walnut cabinet..... $45

## DAYTON WRIGHT

### SPA Preamplifier

Basic preamplifier for high-level modes with optional moving-coil/moving-magnet cartridge preamp; THD 0.001% from 20-20,000 Hz; IM dist. 0.002% from 20-20,000 Hz; gain 37 dB at 1000 Hz (phono), 32 dB (high level) input sensitivity 60 mV (MM), 21-27 μV (MC), 45 mV (high level); RIAA phono equalization +0/−1 dB from 1-200,000 Hz, high level 0.5-200,000 Hz +0/−1 dB; S/N 81 dB below 10 mV out (MM), 70 dB with open input (MC), 95 dB below 750 mV out (high level); rise time 1 μsec (MM and high level), 1.5 μsec (MC); input overload 100 mV (MM), 14 mV (MC); rated output 1.5 V; max. output 9 V (high level). Features remote power module with ac outlets, provisions for two moving-coil and two moving-magnet cartridges; monitoring and cross-dubbing with two tape decks; mute switch; input selectors; headphone jack. 3½" H × 19" W × 13" D... $1350
Without pre-preamplifier..... $1080

### SPS/Mk3 Basic Preamplifier

THD less than 0.001% from 20-20,000 Hz; IM dist. less than 0.005% from 20-20,000 Hz (phono), 0.002% (high level); input sensitivity 0.6 mV (phono), 45 mV (high level); gain 37 dB at 1000 Hz (phono), 32 dB (high level); frequency response +0/−1 dB from 1-93,000 Hz (phono), +0/−1 dB from 0.6-145,000 Hz (high level); S/N 80 dB below 10 mV in (phono), 95 dB below 750 mV in (high level); rise time 1 μsec (phono and high level); phono overload 100 mV; rated output 1.5 V; max. output 9 V. Features input selector switches, tape monitor switch, left/right balance control, and headphone jack; black anodized faceplate. 6½" H × 6" W × 11" D..... $555

### DW535 Moving-Coil Cartridge Preamp

Input sensitivity 90 μV; gain 35 dB at 1000 Hz; THD and IM dist. less than 0.002% from 20-20,000 Hz; S/N 70 dB with open input; rise time 1.5 μsec; phono overload 14 mV; rated output 5 mV; max. output 800 mV. Features adjustable gain and impedance matching settings, phono and BNC connections for input terminals, and separate left/right output terminals; anodized black case. 2" H × 10" W × 7" D..... $470

## DB SYSTEMS

### DB-6 Power Amplifier

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 0.008% 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 113 dB at 1 V in (A weighted), 96 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. Features 12 dB/octave subsonic filter; peak-clipping LEDs; electronic clamp (in place of relays). 4.9" H × 16" W × 12.8" D..... $595

**DB-6M.** Similar to DB-6 except bridged mono amplifier with 140 W continuous into 8 ohms from 20-20,000 Hz with less than 0.008% THD, 225 W continuous into 4 ohms; slew rate greater than 30 V/μsec..... $615

### DBR-15A Preamplifier/Tone Control

THD less than 0.0008% from 20-20,000 Hz; IM dist. less than 0.001%; frequency response 10-40,000 Hz ±0.07 dB (RIAA phono), 10-20,000 Hz ±0.2 dB (tone out), 20-20,000 Hz ±0.5 dB (tone in); input sensitivity for 1 V out 1.8 mV into 47,000 ohms (phono), 120 mV into 50,000 ohms (high level); phono overload 150 mV at 1000 Hz, 1.4 V at 20,000 Hz; output impedance 220 ohms; max. output 8 V into 10,000 ohms; max. load 10,000 ohms min. Features input selector, balance, volume, mode switch; bass (50, 150, and 400 Hz), and treble (1500, 3500, and 7500 Hz): low (6 dB/octave at 0, 20, and 36 Hz) and high (6 dB/octave at 0, 5000, and 10,000 Hz) cut filters; tape monitor (includes mute); tone in/out; six low frequency boost controls; requires DB-2 power supply; rack mount included. 3½" H × 19.1" W × 7" D (rack mounted)..... $720

### 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, 10-20,000 Hz +0, −0.25 dB; 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; 8.5" × 3.2" × 7"..... $397
**DBR-1A.** Same as DB-1A except mounted in standard rack; requires DB-2 power supply ..... $423
**DB-2.** Power supply; wired for 120 V or 240 V operation. supplies up to 300 mA at 33 V (includes protective current limiter)..... $62
**DBP-3.** Solid walnut case for DB-1 ..... $35

### DB-4A Pre-Preamp

Low-distortion pre-preamp for use with moving-coil cartridges; gain selectable with internal switch to handle all available cartridges; requires DB-2 power supply if not used with DB-1A preamplifier; THD less than 0.0008% from 20-20,000 Hz at 1 V out; frequency response 10-100,000 Hz +0/1 dB; input impedance 9000 ohms/2000 pF; output impedance 220 ohms; max. load for rated distortion 10,000 ohms/3000 pF ..... $150

## DCE

### Dreadnaught 1000 Power Amplifier

250 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.25% dist. (500 W/ch into 4 ohms); input sensitivity/impedance 1.75 V rms/100,000 ohms; hum and noise −100 dB; direct-coupled output; individual channel level controls; three-position meter range switch; two VU meters; two-speed cooling fan. uncased rack mount; 7" H × 19" W × 15" D..... $1500
Walnut-veneer cabinet..... $80
**Dreadnaught 500.** Same as Dreadnaught 1000 except 200 W/ch into 8 ohms (300 W/ch into 4 ohms); input sensitivity 1.2 V rms; uncased rack mount; 7" H × 19" W × 12" D..... $980
**Dreadnaught 250.** Same as Dreadnaught 500 except 125 W/ch into 8 ohms (200 W/ch into 4 ohms)..... $675
Walnut-veneer cabinet..... $60

### Model 10 Preamplifier

Frequency response 5-200,000 Hz ±3 dB; THD and IM dist. 0.05%; hum and noise −90 dB; phono sensitivity 1 mV; phono overload 180 mV; output 4 V; 3½" H × 19" W × 12" D..... $675
Walnut-veneer cabinet..... $40

## DENON

### PCA-1003 Power Amplifier

100 W/ch continuous both channels driven into 4 ohms from 20-20,000 Hz at 0.03% THD, 85 W/ch continuous into 8 ohms; IM dist. 0.02%; power bandwidth 3-70,000 Hz; frequency response 0-100,000 Hz +0/−1 dB; input sensitivity/impedance 1 V rms/50k ohms; output impedance 0.04 ohms; damping factor 200 into 8 ohms; S/N 119 dB (IHF "A"); 6 dB/octave rolloff. Features cascode coupling at first stage, low noise FET differential amp, complementary ICL/OCL circuitry and left/right power transformer meters. 200 mm H × 410 mm W × 285 mm D..... $870

### PMA-850 Integrated Amplifier

All-stage, complementary-pushpull, dc-circuit integrated amplifier. Power amplifier: 110 W/ch continuous into 4 ohms at 1000 Hz with 0.05% THD, 85 W/ch continuous into 8 ohms from 20-20,000 Hz

# 1 AMPLIFIERS

at 0.001% THD; IM dist. 0.02% max.; power bandwidth 5-100,000 Hz into 8 ohms; frequency response at 0.5 W output from 5-100,000 Hz +0/−1 dB; input sensitivity/impedance 1 V rms/50k ohms ±10% from 20-20,000 Hz; output impedance 0.16 ohm max.; S/N 122 dB (IHF "A"). Preamplifier: input sensitivity/impedance 2.5 mV rms/50k ohms; rated output/impedance 1 V rms/50k ohms; RIAA deviation ±0.2 dB from 20-20,000 Hz; max. phono input 200 mV rms at 1000 Hz; bass frequency response 100 Hz ±8 dB, treble 10,000 Hz ±8 dB. Features direct-coupled switch and toroidal core power transformer with separate left/right channel coils. 164 mm H × 434 mm W × 400 mm D..... $800

### PRA-1003 Control Amplifier

Silicon transistor stereo control amplifier. Equalizer: input sensitivity/impedance 2.5 mV/50,000 ohms (phono 1), 2.5 mV/30, 50, and 100,000 ohms (phono 2); 320 mV max. input; THD 0.003% at 3 and 20 V from 20-20,000 Hz; RIAA deviation ±0.2 dB from 20-20,000 Hz; S/N 86 dB (IHF "A"); separation 100 dB min. from 20-1000 Hz, 90 dB min. at 20,000 Hz; 35.6-dB gain. Control: input sensitivity/impedance 150 mV/50k ohms (tuner, aux., and phonos); 10-V max output; THD 0.003% at 3 V from 20-20,000 Hz, 0.007% at 10 V from 20-20,000 Hz; frequency response 10-100,000 Hz +0/−1 dB; S/N 100 dB min. (IHF "A"); stereo separation 100 dB min. at 20,000 and 1000 Hz, 85 dB min. at 20,000 Hz; gain control at 0, −10, and −20 dB; bass control 50 Hz +10 dB, treble 20,000 Hz +10 dB; 18 dB/octave low filter rolloff, 6 dB/octave high filter rolloff. Features independent REC FUNCTION knob to hook up with phono 1 or tuner, FETs and ICL input circuit with no coupling condenser, separate left/right equalizer amps, pure-complementary pushpull circuitry, and headphone amplifier; 170 mm H × 410 mm W × 270 mm D..... $550

### PMA-501 Integrated Amplifier

Three-stage, direct-coupled equalizer amplifier. Power amplifier: 65 W/ch continuous into 4 ohms from 20-20,000 Hz at 0.005% THD, 50 W/ch continuous into 8 ohms; IM dist. and HD at rated output max. 0.05%; power bandwidth 5-50,000 Hz

both channels driven into 8 ohms; frequency response from 5-100,000 Hz −1 dB at 0.5 W output; input sensitivity/impedance 1 V rms/50k ohms ±10%; 0.16-ohm output impedance; S/N 116 dB (IHF "A"). Preamplifier: input sensitivity/impedance 2.5 mV rms/50k ohms (phono), 150 mV rms/85k ohms (tuner, aux, tape 1 & 2); RIAA deviation ±0.2 dB; max input 230 mV rms (phono); max. output/impedance 10 V rms/50k ohms; THD at rated output 0.008% max. at 1000 Hz; S/N 76 dB min. Tone control: frequency response 50 Hz ±10 dB (bass), 20,000 Hz ±10 dB (treble); low filter rolloff 6 dB/octave at 20 Hz; stereo separation 75 dB from 20-1000 Hz (phono/speaker out), 60 dB at 20,000 Hz (phono/speaker out). Features PCC (phono crosstalk canceller) device, separate recording switch, three power transformers, and OCL and pure complementary circuitry; 5¾" H × 16¹³/₁₆" W × 12³/₁₆" D ..... $410

### 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) ..... $290

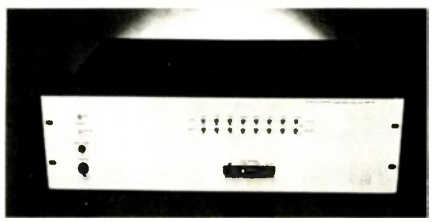
## DYNACO

### Stereo 416A Power Amplifier

200 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.25% THD and 0.1% IM dist. (300 W/ch into 4 ohms, 100 W/ch into 16 ohms); frequency response 20-20,000 Hz ±0.5 dB; hum and noise −95 dB (−100 dB over 20-20,000 Hz); sensitivity 1.6 V for rated output; input impedance 50,000 ohms (normal), 20,000 ohms (control by-pass); slew rate 8 V/μsec; damping factor 80 (8 ohms, 1 kHz); 11 A max. current drain; 7" H × 19" W × 14" D.
Kit..... $649
Assembled ..... $949

### 2521 Stereo Power Amplifier

100 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with less than 0.05%



THD; IM dist. less than 0.02% up to 100 W/ch; frequency response 5-40,000 Hz +0 dB/−1 dB at 1 W into 8 ohms, 20-20,000 Hz +0/−0.4 dB at 100 W into 8 ohms; hum and noise −95 dB below rated output; damping factor greater than 80 at 1000 Hz into 8 ohms, greater than 30 at 10,000 Hz; input sensitivity/impedance 1.25 V/40,000 ohms; slew rate 10 V/μsec. Features class AB amplifier with bi-polar output; LED power readout; relay-operated dc protection and built-in thermal protection; four separate power supply fuses; pewter-front panel..... $600

### Stereo 410 Power Amplifier

200 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.25% THD; relay-operated dc protection circuit; built-in cooling fan; provision for adding level controls.
Kit..... $399
Assembled ..... $599

### Stereo 150 Power Amplifier

75 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.25% THD and IM dist.; dc coupled circuitry after input; fully complementary output stage; MC-2 output meter kit optional; supplied with walnut veneer end panels.
Kit..... $269
Assembled ..... 399

### 2510 Stereo Preamplifier

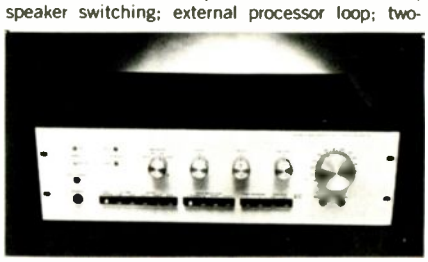
THD 0.0005% from 20-20,000 Hz at 2 V out; IM dist. 0.002% at 2 V out; RIAA phono deviation ±0.2 dB, 10-60,000 Hz ±0.5 dB (high level/tone); S/N (IHF "A") 85 dB (phono), 90 dB below 5 V out (high level); input impedance 47,000 ohms (phono), 50,000 ohms (high level); output impedance 100 ohms (tape out), 600 ohms (high level); selectable phono gain 37/43 dB at 1000 Hz; 20 dB gain (high level); 18 dB/octave subsonic and 6 dB/octave high filters; treble (±10 dB at 15,000 Hz) and bass (±10 dB at 50 Hz) tone controls. Features bipolar FET front end; open/closed relay LED indicators; external processor loop directly connects signal processor; gold-plated phono gain switch for MM cartridges (some MC cartridges); switchable speaker control; two-deck provisions for tape monitoring and dubbing with tape-through features; buffered tape outputs; two headphone jacks; pewter front panel; rack mountable..... $500

### PAT-5/FETA Improved Preamp

Frequency response 10-50,000 Hz ±1 dB (high level), ±0.5 dB of RIAA curve (low level); 0.007% THD and IM dist. (2 V output into 10,000 ohms, 1000 pF); hum and noise −70 dB (magnetic phono, 10 mV input at 1 kHz), −90 dB (high level, 0.5 V input); phono input acceptance 115 mV min. (low, 1kHz), 45 mV (high, 1 kHz); bass and treble tone controls; high and low filters; output 7 V min. into 10,000 ohms, 4.5 V min. into 1000 ohms; impedance 47,000 ohms (220 pF, phono), 50,000 ohms (high level), 15,000 ohms or greater (tape out from phono inputs), 600 ohms (audio output); separation 70 dB (2 kHz, 2 V into 10,000 ohms); 120- or 240-V ac, 50/60 Hz, 12 W; 4¼" H × 13½" W × 11¾" D.
Kit..... $299
Assembled ..... $449

### 2530 Integrated Stereo Amplifier

Power amplifier: 100 W/ch continuous into 8 ohms from 20-20,000 Hz with less than 0.05% THD, 235 W into 4 ohms at 2500 Hz with less than 0.1% THD; IM dist. 0.02%; frequency response 5-40,000 Hz +0/−1 dB at 1 W into 8 ohms, 20-20,000 Hz +0/−0.4 dB at 100 W into 8 ohms; hum and noise −95 dB below rated output; input sensitivity/impedance 1.25 V/40,000 ohms; slew rate 10 V/μsec; damping factor 80 at 1000 Hz into 8 ohms, 30 at 10,000 Hz into 8 ohms; channel separation greater than 60 dB (IHF). Preamplifier: gain 37 dB at 1000 Hz (phono), 20 dB (high level/tone); RIAA phono equalization ±1 dB, 10-50,000 Hz ±0.5 dB (high level/tone); S/N (IHF "A") 80 dB below 10 mV in (phono), 85 dB below 5 V out (high level/tone); input impedance 47,000 ohms (phono), 50,000 ohms (high level/tone); output impedance 10,000 ohms (tape out), 600 ohms (high level/tone); THD less than 0.007% from 20-20,000 Hz at 2 V out; IM dist. 0.009% at 2 V out; subsonic (6 dB/octave at 45 Hz), and high (6 dB/octave at 7000 Hz) filters; bass and treble tone controls (±10-dB range). Features electronic muting with LED indicators; built-in thermal protection for each channel; 32-step detented volume control; speaker switching; external processor loop; two-



deck provision for tape monitoring/dubbing; IC power supply; bi-polar output circuitry; dc power amplifier; multi-tapped power transformer; four power supply fuses with ac line fuse; headphone jack; pewter front panel ..... $750

### SCA-50 Preamp/Amplifier

25 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.5% THD and 0.1% IM dist.; frequency response (1 W) 15-45,000 Hz ±0.5 dB (high level), ±1 dB of RIAA curve (phono); hum and noise −60 dB (phono), −80 dB (high level); input sensitivity/impedance 1.4 mV/47,000 ohms (phono), 100 mV/50,000 ohms (high level); separation 60 dB (1 kHz); 4¼" H × 13½" W × 12" D.
Kit..... $199
Assembled ..... $299

## ELECTRO RESEARCH

### A-75VI Power Amplifier

75 W/ch continuous into 8 ohms from 0-50,000 Hz with 0.1% THD and IM dist., 140 W/ch into 4 ohms; power bandwidth 0-400,000 Hz into 8 ohms ; linear frequency response 0-200,000 Hz −0.3 dB; overload recovery 2.5 μsec; rise time 2.7 μsec; slew rate 105 V/μsec; input sensitivity/impedance 1.4 V rms/100,000 ohms (47 pF); output voltage ±40; S/N 100 dB (unweighted); features digital time meter for total operating hours; calibrator with input trim knobs to match A-75 to preamp or drive source; microswitch-activated power switch; load 1/2, normal/supply, standby, and reset/frequency indicators; 7" H × 19" W × 18" D..... $2185

## EPICURE

### Model One Power Amplifier

125 W/ch continuous over 20-20,000 Hz with 0.2% THD and IM dist.; frequency response 20-20,000 Hz +0/−1 dB; rise time 1.5 μsec; damping factor 100; slew rate 17 V/μsec; S/N 100 dB; phase response ±15°; input impedance 10,000 ohms; input capacitance 50 pF; input sensitivity 1 V for rated output; short, mismatch, and open circuit proof, line voltage and speaker fused, plus thermal cut-out switch; 7½" H × 18⅓" W × 12½" D ..... $649
With 19-in rack mount kit ..... $680

### Model Four Preamplifier

Frequency response 20-20,000 Hz ±0.25 dB from RIAA curve (phono) 10-100,000 Hz ±0.25 dB; THD 0.005%; S/N −85 dB (phono, C weighted), −105 dB (high level); phono overload 150 mV (1 kHz); phase shift at 20,000 Hz 5° (phono), 2° (high level); rated output 2.5 V rms; input impedance 47,000 ohms (phono), 100,000 ohms (high level); output impedance 600 ohms; input capacitance 37 pF (phono), 47 pF (high level); high and low filters; selectable bass and treble tone compensation; 5½" H × 18¼" W × 9½" D ..... $450
With 19-in rack mount kit ..... $480

## FISHER

### CA2310 Stereo Amplifier

70 W/ch continuous sine wave into 8 ohms over 20-20,000 Hz with 0.05% THD and IM dist.; damping factor 40. Preamp section: frequency response 30-15,000 Hz ±1 dB (phono), 20-20,000 Hz ±1 dB (aux.); input sensitivity/impedance 2 mV/50,000 ohms (phono), 150 mV/100,000 ohms (tape, tuner, aux.); phono overload 220 mV; bass and treble tone controls; subsonic filter; hum and noise (IHF A) −78 dB (phono), −100 dB (tuner, aux., and tape); output level impedance 150 mV/600 ohms (tape); three ac convenience outlets; 5¹⁵⁄₁₆" H × 17½" W × 14¹³⁄₁₆" D ..... $350

### CA2110 Stereo Amplifier

55 W/ch continuous sine wave into 8 ohms over 20-20,000 Hz with 0.2% THD and 0.1% IM dist.; damping factor 30. Preamp section: frequency response 30-15,000 Hz ±1 dB (phono), 20-20,000 Hz ±1 dB (aux.); input sensitivity/impedance 2 mV/50,000 ohms (phono), 150 mV/100,000 ohms (tuner, aux., tape); phono overload 150 mV; bass and treble tone controls; low filter; hum and noise (IHF A) −75 dB (phono), −95 dB (tuner, aux., and tape); output level/impedance 150 mV/200 ohms (tape); two ac convenience outlets; 5⁵⁄₁₆" H × 16⁹⁄₁₆" W × 13¾" D ..... $250

## GLI

### SA-250 Power Amplifier

125 W/ch minimum continuous, both channels into 8 ohms from 20-20,000 Hz with no more than 0.25% THD; front panel circuit breakers for each channel and ac line, always-on cooling fan; plug-in circuit boards; rack-mountable; matte black finish; 7" H × 19" W ..... $600

### 3880 Creative Controller

Rack-mountable mixer/preamplifier; two main inputs accept either phono or high-level signals and have level controls plus fader; mike input has automatic music fade; high-level aux. input may be adapted for phono; headphone jack operates normally or feed merges mono program signal to one ear plus "on-cue" signal to other ear; mic EQ control; output level control matches pre- or power amplifiers. S/N 78 dB phono, 85 dB high level; separation 75 dB; IM and THD no more than 0.05% (phono, mic), 0.01% (high level); matte black finish. 3.5" H × 19" W ..... $515

## DAVID HAFLER

### DH-101 Stereo Preamplifier

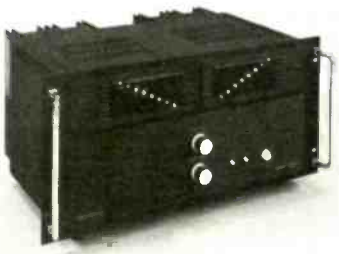
Rated output 3 V; max. output 7 V; dist. 0.0006% (phono, 1 kHz, 3 V output), 0.001% (high level); slew rate 12 V/μsec; phono overload 200 mV (1 kHz); hum and noise (A weighted) −88 dB (phono, 1 kHz, 10 mV input), −90 dB (high level, 1 V);

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 × 13.75" W × 8.38" D.
Kit ..... $200
Assembled ..... $300

## HARMAN/KARDON

### Citation 16a Power Amplifier

150 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.05% THD; power bandwidth 5-45,000 Hz; frequency response 4-120,000 Hz (1 W/ch); IM dist. 0.05%; damping factor 300 min.; slew rate 30 V/μsec; hum and noise −100 dB; separate



power supplies for each channel; LED power output display; supplied with metal case; silver or black finish; 9¾" H × 19" W × 14" D ..... $850
**Citation 16as.** Similar to Citation 16a but without LED display; black finish only ..... $750
**Citation RPM.** Rack panel mount for 16a and 16as ..... $188
**Citation CRM.** Floor-standing rack mount for 16a and 16as ..... $285

### Citation 19 Power Amplifier

100 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.08% THD; frequency response 5-45,000 Hz ±0.5 dB; IM dist. 0.08%; hum and noise −100 dB; damping factor 125; input sensitivity 1.25 V for rated output; may be bridged for 220 W into single 16-ohm load over 20-20,000 Hz with 0.16% THD; 5¼" H × 16" W × 14¾" D ..... $570

### Citation 17 Preamplifier

Incorporates equalizer section; high-frequency and subsonic filters; two tape monitor loops controlled by front-panel switches; two phono, three high-level aux., and tuner inputs; switching for two sets of speakers and two headphone jacks; stepped attenuation; max. output 14 V rms into 2200 ohms; 0.002% THD and 0.0025% IM dist. at 2 V rms output; S/N 92 dB (2 V rms, high-frequency filter in); input sensitivity 2.8 mV for 2 V rms output; phono preamp: S/N 80 dB (10 mV input, 1 kHz); input sensitivity 2.8 mV for 2 V at tape output (1 kHz); overload 180 mV (1 kHz); 4¾" H × 16" W × 12" D ..... $630
**Citation 17s.** Similar to Citation 17 but without equalizer section ..... $450
**CW-17.** Walnut enclosure for 17 and 17s ..... $40
**P-11/17.** Rack panel for 17 and 17s ..... $30
**Citation RPM.** Rack panel mount for 17 and 17s ..... $188
**Citation CRM.** Floor-standing rack mount for 17 and 17s ..... $285

# 1 AMPLIFIERS

### hk505 Integrated Amplifier
Power amplifier: dc-coupled with dual power supplies; 60 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.05% THD; THD 0.01% (1000 Hz at rated output); IM dist. 0.05% at rated output; frequency response 2-150,000 Hz ±0.5 dB; damping factor more than 50 at 8 ohms; hum and noise −100 dB. Preamplifier: four-stage, low-noise preamplifier; sensitivity 2.0 mV (phono), 120 mV (high level); phono overload greater than 150 mV; phono equalization ±0.5

dB; S/N ("A") 85 dB (phono), 90 dB (high level). Features separate 21-step bass and treble controls (±10 dB) with bass hinge set at 150 or 500 Hz and treble hinge set at 2500 or 6000 Hz; tone defeat switch; subsonic and high-cut filters; electronic circuit protection; two-position bass turnover and treble rolloff; two-way tape duplication with LED tape monitor indicators; two auxiliary inputs; phono capacitance switch; speaker selector switch ..... $359
**hk503.** Similar to hk505 except 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD; frequency response 3-100,000 Hz ±0.5 dB; damping factor greater than 30 at 8 ohms; hum and noise −95 dB. Features similar, but single power supply, center detent bass and treble controls (±10 dB), no electronic circuit protection, no phono capacitance switch, and three-position tape monitor with simultaneous two tape deck recording and tape copying functions ..... $259

## HEATH

### AA-1640 Stereo Power Amplifier
200 W/ch min. continuous into 8 ohms at 0.1% THD over 20-20,000 Hz; frequency response 7-50,000 Hz +0/−1 dB, 5-100,000 Hz +0/−3 dB; IM dist. 0.1%; input sensitivity 1.5 V for full output; turn-on delay, relay, and fuses to protect speakers; optional peak-reading meters display output in dB and watts into 8 ohms; 7¼" H × 19" W × 18" D.
Kit ..... $450
**Optional Meters.** Kit ..... $70

### AA-1515 Stereo Power Amplifier
70 W/ch min. continuous into 8 ohms at 0.08% THD over 20-20,000 Hz; frequency response 8-45,000 Hz +0/−1 dB; input sensitivity 2 mV (phono), 150 mV (aux., tuner, tape, tape monitor, and tape dub); secondary controls concealed behind fold-down front panel; outputs for two speaker pairs; stereo headphone jack; lighted power meters and program legends; 6⅛" H × 17½" W × 14¼" D.
Kit ..... $300

### AA-1506 Stereo Power Amplifier
60 W/ch continuous into 8 ohms (20-20,000 Hz) at 0.1% THD; hum and noise −95 dB; styled to match Modulus AN-2016 tuner/preamp; includes input level controls; main/remote speaker switches, plug-in polarized speaker connectors; 5⅜" H × 14³¹/₃₂" W × 8" D. Kit ..... $180
**AA-1505.** Same as AA-1506 except 35 W/ch continuous ..... $130

### AA-1219 Stereo 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; 3⅞" H × 12¾" W × 12" D.
Kit ..... $110

### AP-1615 Stereo Preamplifier
Basic preamp; THD and IM dist. 0.05%; −65 dB hum and noise (phono); frequency response 20-20,000 Hz +0/−0.2 dB; phono input 100 dB dynamic range; built-in subsonic filter; tape dubbing facilities; hi and lo filters; power on/off relay; solid walnut end panels; 4⁷/₃₂" H × 17½" W × 8" D.
Kit ..... $130

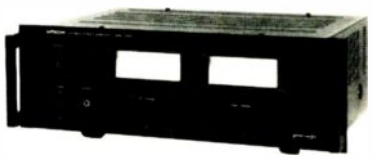
### *4-Channel*

### AA-2015 Four-Channel Amplifier
35 W/ch min. continuous into 8 ohms with less than 0.25% THD over 20-20,000 Hz; frequency response 7-40,000 Hz +0/−1 dB; IM dist. less than 0.2% at full power; stereo and four-channel headphone jacks; front and rear channel speaker on/off switches; plays all discrete four-channel program material, accepts optional SQ and CD-4 decoders; 6¼" H × 18" W × 14¾" D.
Kit ..... $300

## HITACHI

### HMA/8300 Power Amplifier
200 W/ch continuous into 4 or 8 ohms over 20-20,000 Hz with 0.1% THD; frequency response 5-80,000 Hz ±1 dB; input sensitivity/impedance 1 V/50,000 ohms; load impedance 4-16 ohms; damping factor 50 (20-20,000 Hz, 8 ohms); channel separation 80 dB (1 kHz, 8 ohms); S/N 110 dB (IHF A network); two peak meters; output level control; subsonic filter; 7³/₁₆" H × 17⅛" W × 16" D. ..... $800

### HMA 7500 Power Amplifier
MOS FET power amplifier with pure complementary dc OCL and two-stage differential circuitry systems. 75 W/ch, both channels driven into 8 or 4 ohms from 20-20,000 Hz at 0.01% 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. Features calibrated peak power meters, protection relay for power resistors and connected speakers, and subsonic filter. 6½" H × 18⅞" W × 14" D..... $500

### HCA/8300 Preamplifier
Output level/impedance 1 V/600 ohms (pre out), 100 mV/600 ohms (tape out, PIN), 40 mV/80,000 ohms (tape out, DIN), 50 mV/8 ohms (headphones); frequency response 5-100,000 Hz ±1.5 dB (tuner, aux.), RIAA ±0.2 dB (phono); THD 0.01% (phono, 20 V at rec out; tuner, aux., 7 V at pre out); S/N 75 dB at 2 mV input (phono), 100 dB at 100 mV input (tuner, aux.), 100 dB at 100 mV input (tape); input sensitivity/impedance 2-6 mV/50,000 ohms (phono 1), 2 mV/50,000 ohms (phono 2), 100 mV/50,000 ohms (tuner, aux., tape); 6" H × 17⅛" W × 12⅛" D ..... $370

### HCA 7500 Preamplifier
Complementary push-pull, three-stage dc equalizer amplifier circuitry and three-stage dc push-pull FET differential tone control amplifier circuitry. 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; ±10 dB bass and treble tone controls; low filter rolloff −12 dB/octave at 15 Hz, high filter rolloff −6 dB/octave at 8000 Hz; two switched and two unswitched ac outlets. 6½" H × 18⅞" W × 13¾" D ..
..... $370

### HA 330 Integrated Amplifier
OCL integrated amplifier. 40 W/ch, both channels driven into 8 ohms from 20-20,000 Hz at 0.3% THD and IM dist.; IHF power bandwidth 10-50,000 Hz; frequency response 20-20,000 Hz ±1 dB (tape, aux.); bass and treble tone controls ±8 dB range. Features twin power level meters; low (12 dB/octave) filter; two-tape deck capability through switch control; 41-click-stop volume control .. $200

## JVC

### M-3030 "DC" Stereo Power Amp
100 W/ch continuous both channels driven into 8 ohms over 20-20,000 Hz with 0.05% THD and IM dist. (130 W/ch continuous into 4 ohms); frequency response 0-100,000 Hz +0/−1 dB (1 W, "Direct" input); input sensitivity/impedance 1 V/50,000 ohms or more; S/N (IHF A) 116 dB; damping factor 75; output impedance 4-16 ohms; 6⁹/₁₆" H × 16⁹/₁₆" W × 11¹³/₁₆" D ..... $700

### JP-S7 S.E.A. Preamplifier
Input sensitivity/impedance 2 mV/33,000, 47,000, or 100,000 ohms selectable (phono), 200 mV/80,000 ohms (tuner), 200 mV/70,000 ohms (aux.), 200 mV/50,000 ohms (tape); capacitance selectable, 100 or 330 pF; max. input 350 mV (phono, 1 kHz), 35 V (tuner, aux); rated output 1 V (output), 200 mV (tape); output impedance 600 ohms (output), 80 ohms (tape PIN), 70,000 ohms (tape DIN); THD 0.02% at 1 V output, 0.05% at 5 V output (1 kHz); S/N (IHF A) 75 dB (phono), 96 dB (tuner, aux., tape); frequency response ±0.3 dB from RIAA curve (phono), 15-100,000 Hz +0/−0.5 dB (tuner, aux., tape); S.E.A. graphic equalizer has 10 controls (one per octave) with ±12 dB

range; subsonic and high filters; 6¹³/₃₂" H × 22¾" W × 10¹⁷/₃₂" D ..... $750

### P-3030 Control Preamplifier
Input sensitivity/impedance 2 mV/100, 33,000, 47,000, and 100,000 ohms selectable (phono), 0.1 mV/30 ohms (MC phono), 140 mV/50,000 ohms (tuner, aux., tape); capacitance selectable 100, 220, 330, and 470 pF; output/impedance 140 mV/2000 ohms (tape), 1 V/600 ohms (rated), 20 V/600 ohms (max.); phono overload 300 mV rms (phono, 1 kHz), 15 mV rms (MC phono, 1 kHz); THD 0.005% (phono, aux., 10 V output), 0.05% (MC phono, 1 V output); frequency response ±0.3 dB from RIAA curve (phono), ±0.5 dB from RIAA curve (MC phono), 10-40,000 Hz ±0.5 dB (aux.); S/N (IHF A, 1 V output) 76 dB (phono), 66 dB (MC phono), 96 dB (aux., tuner); bass and treble tone controls; two switched and one unswitched ac convenience outlets; 2⅜" H × 16⁹/₁₆" W × 13¹¹/₁₆" D...
..... $420

### JA-S77 Integrated Stereo Amplifier
All-stage dc power amp, phono equalizer, and tone control circuits. Power amplifier: 65 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.02% THD, 90 W/ch continuous into 4 ohms at 1000 Hz, 0.02% THD; THD 0.005% at 1000 Hz, 65 W output; IM dist. 0.01% at 65 W out; damping factor 50 from 20-20,000 Hz into 8 ohms; load impedance 4-16 ohms (Sys. 1 or

2), 8-16 ohms (Sys. 1 +2). Preamplifier: input sensitivity/impedance 2.5 mV/33k, 47k, 100k ohms (phono 1, 2), 200 mV/50k ohms (tuner, aux., tape 1, 2); max. input 280 mV rms (phono); S/N (IHF "A") 81 dB (phono), 105 dB (tuner, aux, tape); RIAA phono equalization ±0.2 dB; frequency response 3-100,000 Hz +0/−1 dB; subsonic filter rolloff −6 dB/octave at 18 Hz; −20 dB muting level. Features two gold-plated phono terminal pairs, pre-out/main-in switch, and twin power meters; 6¼" H × 17¾" W × 13½" D..... $400

### JA-S55 Integrated Stereo Amplifier

All-stage, dc power amplifier, phono equalizer, and tone control circuits. Power amplifier: 60 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.02% THD, 70 W/ch continuous into 4 ohms at 1000 Hz, 0.05% THD; THD 0.005% at 60 W output; IM dist. 0.01% at 60 W output; damping factor 50 from 20-20,000 Hz into 8 ohms; load impedance 4-16 ohms (Sys. 1 or 2), 8-16 ohms (Sys. 1 +2). Preamplifier: input sensitivity/impedance 2.5 mV/47k ohms (phono), 200 mV/50k ohms (tuner, aux., tape 1, 2); max. input 230 mV rms (phono); S/N (IHF "A") 81 dB (phono), 105 dB (tuner, aux, and tape); RIAA phono equalization ±0.3 dB; frequency response 5-100,000 Hz +0/−1 dB; subsonic filter rolloff −6 dB/octave at 18 Hz; muting −20 dB. Features separate power supplies, dB-calibrated attenuator volume control, and twin power meters; 6" H × 16¾" W × 13⅜" D. ..... $300

### JA-S44 Integrated Stereo Amplifier

DC power amplifier with SEA stereo graphic equalizer. Power amplifier: 45 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.02% THD, 70 W continuous into 4 ohms at 1000 Hz with 0.05% THD; THD 0.005% at 45 W output; IM dist. 0.01% at 45 W output; damping factor 30 from 20-20,000 Hz; load impedance 4-16 ohms (Sys. 1 or 2), 8-16 ohms (Sys. 1 +2). Preamplifier: input sensitivity/impedance 2.5 mV/47k ohms (phono), 160 mV/50k ohms (tuner, aux., tape 1, 2); max. input 200 mV rms; S/N (IHF "A") 80 dB (phono), 100 dB (tuner, aux, tape); RIAA phono equalization ±0.3 dB; frequency response 5-100,000 Hz +0/−2 dB; subsonic filter rolloff −6 dB/octave at 18 Hz. Features SEA REC switch and twin power meters. 6" H × 16¾" W × 12⅜" D. ..... $290

### JA-S22 Integrated Stereo Amplifier

DC power amplifier. Power amplifier: 45 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.02% THD, 50 W/ch continuous into 4 ohms at 1000 Hz, 0.05% THD; THD and IM dist. 0.01% at 40 W output; damping factor 30 from 20-20,000 Hz into 8 ohms; load impedance 4-16 ohms (Sys. 1 or 2), 8-16 ohms (Sys 1 +2). Preamplifier: input sensitivity/impedance 2.5 mV/47k ohms (phono), 160 mV/50k ohms (tuner, aux, tape 1, 2); max. input 200 mV rms (phono); S/N (IHF "A") 80 dB (phono), 100 dB (tuner, aux, tape); RIAA phono equalization ±0.3 dB; frequency response 5-100,000 Hz +0/−2 dB; subsonic filter rolloff −6 dB/octave at 18 Hz. Features twin power meters, class-A phono equalizer, and front-panel Tape-2 terminals. 6" H × 16¾" W × 13⅜" D. $200

### JA-S11G Integrated Stereo Amplifier

30 W/ch continuous both channels driven into 8 ohms over 20-20,000 Hz with 0.1% THD and IM dist.; damping factor 30 (8 ohms, 1 kHz); S/N 75 dB (phono); phono overload 150 mV (1 kHz); phono equalization RIAA ±0.5 dB; frequency response 25-40,000 Hz +0/−1 dB; sensitivity 2.5 mV (phono); bass and treble tone controls; two tape monitoring circuits with tape-to-tape dubbing; protection for speakers and power transistors; three-position speaker selector; front panel headphone jack; 5³/₃₂" H × 15¹¹/₃₂" W × 13" D ..... $150

## KENWOOD

### KA-9100 Integrated Stereo Amp

90 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.03% THD; dc power amplifier; dual power supplies; two selectable-range power meters; independent preamplifier power supply; two tape deck capability with intertape dubbing and tape-through circuit; tone control defeat; gain sensitivity control (accommodates MC cartridges with 0.8 mV sensitivity); two-position loudness control; high and subsonic filters (12 dB/octave); stepped attenuator-type volume control; 5⅞" H × 17" W × 15⅛" D..... ..... $550

### KA-8100 Stereo Integrated Amplifier

DC stereo integrated amplifier. Power amplifier: employs three-stage differential input section with complementary out section. 75 W/ch continuous into 8 ohms from 20-20,000 Hz at 0.03% THD, 90 W/ch both channels driven into 4 ohms at 1000 Hz; THD and IM dist. 0.03% at rated power into 8 ohms; power bandwidth 5-50,000 Hz; frequency response 0-100,000 Hz +0/−1 dB; S/N 115 dB (short-circuited); damping factor 50 at 8 ohms; input sensitivity/impedance 1.0 V/50k ohms; load impedance 4-16 ohms. Preamplifier: input sensitivity/impedance 2.5 mV/50k ohms (phono 1, 2), 150 mV/50k ohms (tuner, aux., tapes A, B); S/N (IHF

"A") 85 dB for 2.5 mV phono in, 110 dB for 150 mV tuner/aux/tape A, B in; output level/impedance (tape rec.) 15 mV/220 ohms (PIN), 30 mV/80k ohms (DIN), 1 V/470 ohms (preamp out); RIAA phono deviation +0.2/−0.2 dB, 7-50,000 Hz +0/−1 dB (aux. and tape); gain +10, 0, −10 dB; −6 dB/octave at 18 Hz subsonic filter rolloff, −12 dB/octave at 40 Hz low filter rolloff, and −12 dB/octave at 8000 Hz high filter rolloff. Features independent dual power supplies; FET phono equalizer circuit; attenuated volume, gain, and loudness controls; bass and treble controls with defeat switch; two-tape deck capability with tape-through facility. 5⅞" H × 16⁹/₁₆" W × 15⅛" D..... $425

### KA-7100 Integrated Stereo Amp

60 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.02% THD; dc power amplifier; dual

power supplies; direct coupled phono equalizer; two tape deck capability with A-B dubbing and tape-through circuit; tone control defeat; two-position loudness compensation; high and low filters (6 dB/octave); stepped attenuator-type volume control; 20-dB attenuator switch; 5⅞" H × 17" W × 15⅛" D..... ..... $315

### KA-6100 Stereo Integrated Amplifier

Power amplifier: three-stage differential input section. 50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.03% THD, 70 W/ch continuous into 4 ohms at 1000 Hz; THD 0.03%; IM dist. 0.02% at rated power into 8 ohms; power bandwidth 5-30,000 Hz; frequency response 10-50,000 Hz +0/−1 dB; damping factor 50 at 8 ohms; load impedance 4-16 ohms. Preamplifier: input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/50k ohms (tuner, aux, tape A, B); S/N (IHF "A") 86 dB for 2.5 mV in (phono), 106 dB for 150 mV in (tuner, aux., tape A, B); output level/impedance (tape rec) 150 mV/450 ohms (PIN), 30 mV/80k ohms (DIN); RIAA phono deviation +0.3/−0.3 dB, 10-50,000 Hz +0/−1 dB (aux. and tape); subsonic filter rolloff −6 dB/octave at 18 Hz. Features independent dual power supplies; click-stop tone controls with defeat switch; 41-step calibrated volume attenuator control; dual power meters; two tape inputs with tape-through facility; loudness control; phono equalizer circuit. 5⅞" H × 16¹⁵/₁₆" W × 14¹¹/₃₂" D..... $275

### KA-5700 Stereo Integrated Amplifier

Power amplifier: three-stage differential input section. 40 W/ch continuous into 8 ohms from 20-20,000 Hz at 0.04% THD, 45 W/ch, both channels driven into 4 ohms at 1000 Hz; THD 0.04% at rated power into 8 ohms, IM dist. 0.02% at rated power into 8 ohms; power bandwidth 10-40,000 Hz; damping factor 30 at 8 ohms; load impedance 4-16 ohms. Preamplifier: input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/50k ohms (tuner, aux., tape A, B); S/N (IHF "A") 76 dB for 2.5 mV in (phono), 100 dB for 150 mV in (tuner, aux., tape); output level/impedance (tape rec) 150 mV/450 ohms (PIN), 30 mV/80k ohms (DIN); RIAA phono deviation ±0.4 dB; −6 dB/octave subsonic filter rolloff. Features dual power meters; click-stop tone controls; two tape deck capability with tape-through facilities; 41-click-stop calibrated volume control; and loudness control. 5½" H × 14³¹/₃₂" W × 11¹/₁₆" D ..... $200

### KA-3700 Stereo Integrated Amplifier

DC integrated amplifier. Power amplifier: 20 W/ch continuous into 8 ohms from 20-20,000 Hz at 0.08% THD, 22 W/ch both channels driven into 4 ohms at 1000 Hz; THD 0.08% at rated power into 8 ohms; IM dist. 0.04% at 1/2 rated power into 8 ohms; power bandwidth 10-50,000 Hz; damping factor 30 at 8 ohms; load impedance 4-16 ohms. Preamplifier: input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/50k ohms (tuner, aux., tape); S/N (IHF "A") 72 dB for 2.5 mV in (phono), 100 dB for 150 mV in (tuner, aux., tape); output level/impedance (tape rec) 150 mV/450 ohms (PIN); RIAA phono deviation ±0.4 dB. Features dc phono equalizer circuit, loudness and volume controls, click-stop tone controls, tape monitoring, input selector switch, balance control, and front-panel headphone jack. 5½" H × 14³¹/₃₂" W × 11⁷/₁₆" D ..... $155

## Audio Purist Group

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

300 W continuous into 8 ohms over 20-20,000 Hz with 0.02% THD; triple push-pull class AB full complementary symmetry circuitry; chimney-type structural heat sinks; residual noise less than 35 μV; S/N 120 dB; gold-plated screw-type pin plugs with special audio cable for preamp connection; remote power switch for control by L-07C control amplifier; 6½" H × 19" W × 16⅛" D..... $700

**L-07M.** Similar to L-09M but 150 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.008% THD ..... $500

### 600 Integrated Stereo Amplifier

130 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.08% THD; independent power supply for each channel; ASO protection circuit; all-FET direct coupled preamp; max. input 220 mV; dual-level attenuation before and after control preamp section; negative feedback tone controls; selectable turnover points (150, 400, 3000, and 6000 Hz); two-position presence control; defeat switch; four-position loudness control; high/low steep-slope filters; dual tape provision with "tape-through" circuit; selectable cartridge impedance; provision for two phono, two aux., tuner, and three speaker systems.... $550

**500.** Same as 600 but 100 W/ch..... $450

# 1 AMPLIFIERS

### L-07C Control Amplifier
Features two independent phono equalizers, one for use with MC cartridge; input sensitivity 2 mV; S/N 84 dB; residual noise suppression −120 dBV at output terminals; channel separation 100 dB; THD 0.003% (1 V output, phono 1, tuner, aux., tape), 0.009% (phono 2); low-capacitance audio cable with screw-type locking pin plugs; 4" H × 19" W × 13" D ..... $550

## LAFAYETTE

### LT-40 Integrated Stereo Amplifier
Power amplifier: 40 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.3% THD; IM dist. 0.1%; damping factor 50 (8 ohms, 1 kHz); hum and noise −85 dB (aux., tuner, tape), −66 dB (phono). Preamplifier: input sensitivity/impedance 120 mV/50,000 ohms (tuner, aux., tape), 2 mV/47,000 ohms (phono); max. input 10 V (tuner, aux., tape), 150 mV (mag. phono); channel separation 55 dB (1 kHz); tape output level 120 mV. Features bass and treble tone controls; low-frequency filter; loudness control. 5⅜" H × 15⅜" W × 12⅜" D ..... $150

## LENCO

### A-50 Integrated Stereo Amplifier
Power amplifier: 40 W/ch continuous sine wave, both channels driven into 8 ohms with 0.2% HD at 1000 Hz; frequency response 10-40,000 Hz; power bandwidth 20-40,000 Hz. Preamplifier: sensitivity/impedance 2.5 mV/50,000 ohms (phono and mic), 160 mV/50,000 ohms (aux. and tape); RIAA phono equalization ±1 dB; S/N 56 dB (phono, DIN weighted), 58 dB (aux. and tape, DIN weighted); crosstalk 55 dB at 1000 Hz, 38 dB at 10,000 Hz. Features separate bass and treble controls (±10 dB), loudness control, high (8 dB/octave at 10,000 Hz) and low (8 dB/octave at 100 Hz) filters; two VU meters; tape copy function with provisions for two tape decks; mic mixing; A/B and A+B speaker controls; headphone jack; 132 mm H × 430 mm W × 370 mm D ..... $230

## LENTEK

### Moving-Coil Preamplifier
Complementary push-pull dc moving-coil preamplifier; voltage gain 28 dB; frequency response 20-20,000 Hz +0/−1 dB; dist. less than 0.05%; max. output 300 mV rms; input impedance 100 ohms; output impedance 4700 ohms; battery test LED indicator; gold plated phono input sockets, phono output connectors, and switch contacts; 9-V Mallory battery; 1 3/32" H × 2½" W × 6" D ..... $160

## LUX

### M-6000 Stereo Power Amplifier
300 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.05% THD and IM dist.; frequency response 5-50,000 Hz ±1 dB; input sensitivity 1.25 V; S/N 100 dB; residual noise 0.5 mV; crosstalk −70 dB (20 kHz); damping factor 100 (8 ohms); two VU meters and LED peak level indicators; muting function; on/off switch may be remote-controlled; dc drift, thermal, over current, and power TR fuse protected; 8" 11/16" H × 22 7/16" W × 16¾" D ..... $2995

### M-4000 Stereo Power Amplifier
180 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.05% THD and IM dist.; frequency response 3-100,000 Hz; input sensitivity 1 V; input impedance 50,000 ohms; residual hum and noise −180 dB; crosstalk −90 dB (1 kHz); damping factor 100 (8 ohms); meter sensitivity switch; two power output meters and LED peak level indicators; dc drift, thermal, over current, and power TR fuse

protected; 6⅞" H × 19⅛" W × 15⅜" D..... $1595

### M-2000 Stereo Power Amplifier
120 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.05% THD and IM dist.; frequency response 5-100,000 Hz +0/−1 dB; input sensitivity 800 mV; input impedance 50,000 ohms; residual hum and noise −108 dB; crosstalk −90 dB; damping factor 100 (8 ohms); two VU meters and two LED peak-indicating scales (sensitivity adjustable); 6⅞" H × 19⅛" W × 11⅝" D..... $995

### M-12 Power Amplifier
Direct-coupled stereo power amplifier. 80 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.006% THD and IM dist.; frequency response 0-100,000 Hz −1 dB; input sensitivity/impedance 600 mV/20,000 ohms; S/N better than 110 dB (IHF "A"); channel separation 80 dB; damping factor 150 into 8 ohms at 1000 Hz. Features independent power supply for right/left channels; DML-IC to suppress dc drift; input capacitor in/out selector; attenuator for both channels. 3¾" H × 17 9/16" W × 12 15/16" D..... $795

### B-12 Power Amplifier
Direct-coupled mono power amplifier. 150 W continuous into 8 ohms from 20-20,000 Hz with 0.006% THD and IM dist.; frequency response 0-100,000 Hz −1 dB; input sensitivity/impedance 900 mV/20,000 ohms; S/N better than 110 dB (IHF "A"); damping factor 120 into 8 ohms at 1000 Hz. Features power supply for left/right channels; DML-IC to suppress dc drift; input capacitor in/out selector; input attenuator. 3¾" H × 17 9/16" W × 12 15/16" D ..... $645

### MB3045 Monophonic Power Amp
50 W into 4/8/16 ohms over 20-20,000 Hz with 0.3% THD; IM dist. 0.3% frequency response 10-40,000 Hz +0/−1 dB; input sensitivity 700 mV; damping factor 16 (8 ohms); residual hum and noise −95 dB; 6 11/16" H × 14 9/16" W × 9 7/16" D..... ..... $495

### CL35/III Stereo Control Center
Vacuum tube design; frequency response 15-40,000 Hz +0/−1 dB; THD 0.06%; output 15 V max.; output impedance 550 ohms; sensitivity 1.4 mV (phono), 140 mV (aux. 2, aux. 1 and 3 variable), 0.5 mV (mike); input impedance 100,000, 50,000, 30,000 ohms (phono 1), 50,000 ohms (phono 2), 100,000 ohms (aux. 1 and 3), 150,000 ohms (aux. 2), 50,000 ohms (mike); S/N 64 dB (phono), 77 dB (aux.), 60 dB (mike); RIAA equalization ±0.3%; controls include tone, low and high cut filters, monitor and tape reprint switches, balance and volume, bass and treble turnover switches, etc.; 7¾" H × 19 25/32" W × 11" D.... $795

### C-1010 Stereo Control Center
Output 1 V (13 V max.); THD 0.007%; frequency response 2-80,000 Hz +0/−0.5 dB; input sensitivity 2.5 mV (phono), 150 mV (aux., tuner, monitor); input impedance 30,000-100,000 ohms (phono 1), 50,000 ohms (phono 2, aux.), 70,000 ohms (tuner); S/N 65 dB (phono); phono overload 450 mV rms (1 kHz); RIAA equalization ±0.2 dB; has tone controls, high and low cut filters, audio attenuator, output muting, linear equalizer, tape dubbing and monitoring; 6⅞" H × 19⅛" W × 9⅜" D .. $745

### CL32 Stereo Control Center
Vacuum tube design; output 1 V (15 V max.); THD 0.03%; frequency response 10-40,000 Hz +0/−1 dB; output impedance 600 ohms (pre out), 560 ohms (rec. out); input sensitivity 2 mV (phono), 160 mV (tape, aux. 1), 160 mV at 5 V (tuner, aux. 2); input impedance 30,000, 50,000, 100,000 ohms (phono 1), 200,000 ohms (tape, aux. 1), 100,000 ohms (tuner, aux. 2), 50,000 ohms (phono 2); S/N (IHF A) 74 dB (phono), 89 dB (tuner, aux., tape); phono overload 400 mV rms (1 kHz); RIAA equalization ±0.3 dB; crosstalk −60 dB; has linear equalizer, low cut, flat, and subsonic filters, tape monitoring and dubbing, audio attenuator, three ac convenience outlets (two switched); 3 1/32" H × 17¼" W × 12 11/16" D..... $645

### C-12 Preamplifier
Direct-coupled stereo preamplifier. Output/impedance 1 V/100 ohms (pre out), 150 mV/100 ohms (rec. out); THD 0.005% (phono, rec. out, tuner, aux., monitor, pre out); IM dist. 0.002% (phono, rec. out, tuner, aux., monitor, pre. out); frequency response 20-20,000 Hz ±0.2 dB (phono 1 and 2), 1-200,000 Hz −0.5 dB (tuner, aux. 1 and 2, monitor 1 and 2); input sensitivity/impedance 2.3 mV/50,000 ohms (phono 1 and 2), 150 mV/50,000-60,000 ohms (tuner, aux. 1 and 2, monitor 1 and 2); S/N (IHF "A") better than 96 dB (phono 1, 2), better than 100 dB (tuner, aux. 1 and 2, monitor 1 and 2); phono overload 300 mV min. Features DML-IC for dc drift suppression; volume control; linear equalizer; subsonic filter; input impedance adjuster; tape monitor, tape dubbing, and record off switch; audio attenuator with preset position; extra ac outlet (two switched and one unswitched). 3 1/16" H × 17¼" W × 14 5/16" D..... $645

### L-110 Integrated Amplifier
Direct-coupled stereo integrated amplifier. Power amplifier: 120 W/ch continuous into 8 ohms from 20-20,000 Hz at 0.05% THD and IM dist.; frequency response 0-70,000 Hz ±1 dB; input sensitivity/impedance 950 mV/100,000 ohms; hum and noise −97 dB; damping factor 50. Features muting circuit, low boost, volume attenuator, speaker selector, phono impedance selector, and tape-dubbing circuit. Preamplifier: rated output 950 mV; input sensitivity/impedance 2.7 mV/30k, 50k, 100k ohms (phono 1 and 2), 220 mV/30k, 50k, 100k ohms (tuner, aux. 1 and 2); S/N (IHF "A") 87 dB (phono), 95 dB (aux., monitor); phono overload 330 mV; phono RIAA equalization ±0.2 dB, frequency response 5-50,000 Hz ±1 dB; THD 0.007%. Features linear equalizer and touch-mute function. 6⅞" H × 19⅛" W × 13¾" D..... $995

### L-11 Integrated Amplifier
Power amplifier: 100 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.02% THD and IM dist.; frequency response 2500-100,000 Hz +0/−1 dB; input sensitivity 1.6 V; damping factor 80. Preamplifier: input sensitivity 2.5 mV (phono 1 and 2), 150 mV (aux., tuner); S/N (IHF "A") better than 92 dB (phono); frequency response 20-20,000 Hz ±0.2 dB (phono), 2500-100,000 Hz +0/−1 dB (tuner, aux., monitor 1 and 2). Features moving-coil position and input transformer socket; linear equalizer; two-position subsonic filter; headphone jack; two tape deck capability with separate selectors; tape monitor circuit; speaker protection circuit; ac power outlet..... $895

### L-10 Integrated Amplifier
Power amplifier: 55 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.015% THD and IM dist.; frequency response 0-100,000 Hz ±1 dB; input sensitivity 300 mV; hum and noise −100 dB (IHF "A"); damping factor 80. Preamplifier: output 300 mV; input sensitivity 3 mV (phono), 300 mV (tuner, aux.); S/N (IHF "A") 90 dB (phono), 100 dB (tuner, aux.); frequency response 20-20,000 Hz ±1 dB (phono), 0-100,000 Hz −1 dB (tuner, aux.). Features variable tonal range of +2/−2.5 dB; speaker protection circuit; subsonic filter; tape 1 and 2 recording selectors; tape monitor switch; headphone jack; extra ac outlets (switched and unswitched). 3 5/64" H × 17¼" W × 14 19/64" D..... $795

### L-5 Integrated Amplifier
Power amplifier: 60 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at

0.03% THD and IM dist.; frequency response 5-100,000 Hz +0/−1 dB; input sensitivity 1.3 V; damping factor 80. Preamplifier: input sensitivity 2.5 mV (phono 1 and 2), 150 mV (aux., tuner, and monitor 1 and 2); S/N (IHF "A") 92 dB (phono); frequency response 20-20,000 Hz ±0.5 dB (phono), 10-100,000 Hz +0/−1 dB (tuner, aux., monitor 1 and 2). Features bass and treble controls (±12-dB range); headphone jack; tape dubbing circuit; tape monitor circuit; high- and low-cut filters; subsonic filter; speaker protection circuit; ac power outlet ..... $595

### L-3 Integrated Amplifier

Power amplifier: 35 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.05% THD; IM dist. 0.08%; frequency response 15-60,000 Hz −1 dB; damping factor 60. Preamplifier: input sensitivity 2.5 mV (phono), 150 mV (aux., tuner, monitor 1 and 2); S/N (IHF "A") 87 dBf (phono); frequency response 30-18,000 Hz ±0.5 dB (phono), 15-60,000 Hz −1 dB (tuner, aux., monitor 1 and 2). Features bass and treble tone controls (±11-db range); headphone jack; tape dubbing circuit; tape monitor circuit; ac power outlet ..... $395

## Laboratory Reference Series

### Luxman 5M21 DC Stereo Power Amp

100 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.008% THD and IM dist.; frequency response 0-100,000 Hz +0/−1 dB; damping factor 80 (8 ohms); input sensitivity 890 mV; input impedance 50,000 ohms; residual hum and noise 0.1 mV; crosstalk −90 dB (1 kHz); S/N (IHF A) 120 dB; slew rate 30 V/μsec; pure dc design; class A/B output stage; separate dual polarity supplies for each channel; speaker and amplifier protection circuits; electrostatic/normal speaker switch; 5.8" H × 17.7" W × 16" D..... $1295

### Luxman 5C50 Stereo Control Preamp

Output 1 V (pre out), 150 mV (rec. out), 18 V (max.); THD 0.005%; IM dist. 0.002%; frequency response RIAA ±0.2 dB (phono), 0.5-200,000 Hz +0/−0.5 dB (tuner, aux.); S/N 80 dB below 2.5 mV (phono, IHF A), 100 dB (tuner and aux., IHF A); input sensitivity for 1 V pre. out 2.5 mV (phono), 150 mV (tuner, aux.); input impedance 30,000, 50,000, 100,000 ohms (phono), 50,000 ohms (tuner, aux.); output impedance 500 ohms; crosstalk −80 dB (phono), −95 dB (tuner, aux.); phono overload 300 mV rms (1 kHz); residual noise 0.33 mV (phono), 5 μV (tuner, aux.); has linear equalizer, switch-selected subsonic notch filter circuitry, selectable sharp high frequency filters, tape dubbing and monitoring, muting switch; 4" H × 17.7" W × 16" D..... $895

### Luxman 5L15 Integrated Amplifier

Stereo integrated amplifier with direct-coupled dc preamps and power amps and class AB output stages; connections for tuner, two tapes, two auxiliary sources, and phono. Features phono subsonic filter, two-level muting switch, and illuminated power meters. Power amplifier: 80 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.02% THD and IM dist.; frequency response 0-100,000 Hz ±1.0 dB; S/N greater than 100 dB (IHF "A"); damping factor 80. Preamplifier: input sensitivity 3 mV (phono), 300 mV (aux., tape 1/2); other features include dc offset warning light, electrostatic speaker switch, outputs for LED peak indicator, and speaker-amplifier protection dc sensors. Metal enclosure; 16" H × 17 7/16" W × 5 4/5" D..... $995

## MARANTZ

### 510M Stereo Power Amplifier

256 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.05% THD; direct-coupled output; 3 1/2-in VU meters (two) and peak indicators; separate left and right channel gain controls; 5 3/4" H × 15 3/8" W × 14" D ..... $1000

**510.** Same without meters ..... $900

### 300DC Power Amplifier

Fully complementary, dc amplifier. 152 W/ch continuous into 8 ohms at 0.03% THD, 190 W/ch con-

tinuous into 4 ohms from 20-20,000 Hz at 0.05% THD; features dc circuitry for zero phase-shift distortion; two illuminated 3 1/4-in VU meters; separate left/right gain controls; LED peak indicators; ac-dc input coupling switch. 5 3/4" H × 16 3/8" W × 11 11/16" D..... $630

### 250M Stereo Power Amplifier

126 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.19% THD; direct-coupled output; two 3 1/2-in illuminated VU meters; 5 3/4" H × 15 3/8" W × 10 3/8" D ..... $600

### 170DC Power Amplifier

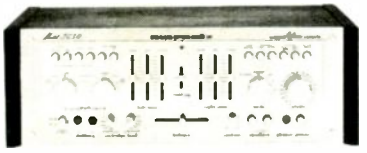
Fully complementary, dc amplifier. 86 W/ch continuous into 8 ohms at 0.03% THD, 108 W/ch continuous into 4 ohms from 20-20,000 Hz at 0.05% THD; features dc circuitry for zero phase-shift distortion; two illuminated 3 1/4-in VU meters; separate left/right gain controls; LED peak indicators. 5 3/4" H × 16 3/8" W × 11 11/16" D..... $440

### 3800 Preamp/Control Console

Incorporates full process Dolby noise-reduction system; THD 0.02%; IM dist. 0.01% (3 V output); variable frequency tone turnover points; graphic bass, mid-range, and treble tone controls; tape monitoring for two decks; tape equalization circuit; 5 3/4" H × 15 1/8" W × 9 1/4" D ..... $600

### 3650 Preamp/Control Console

Includes moving-coil head amplifier. THD and IM dist. 0.005% at 3-V output from 20-20,000 Hz. Features separate left/right channel controls; bass,



midrange, and treble slide tone controls; selectable tone turnover frequencies; variable contour; tape equalization adjustable resistance and capacitance cartridge load switches; low (18 dB/octave at 15 Hz) and high (18 dB/octave at 9000 Hz) filters. 5 3/4" H × 16 1/8" W × 9 1/2" W × 9 1/2" D..... $500

### 3600 Preamp/Control Console

THD 0.02%; IM dist. 0.01% (3 V output); variable frequency tone turnover points; graphic bass, midrange, and treble controls; tape monitoring circuitry for two tape decks; 5 3/4" H × 15 3/8" W × 9 1/4" D..... $500

### 3250B Preamp/Control Console

Includes moving-coil head amplifier. THD and IM dist. 0.01% at 3-V output from 20-20,000 Hz. Features selectable tone turnovers; bass, midrange, and treble slide tone controls; independent tape-to-tape copy; two-recorder tape monitoring circuitry; low (18 dB/octave at 15 Hz) and high (18 dB/octave at 9000 Hz) filters. 5 3/4" H × 16 3/8" W × 9 3/4" D..... $300

### 1300DC Integrated Amplifier

Fully complementary, stereo dc amplifier. 150 W/ch continuous into 8 ohms from 20-20,000 Hz at 0.03% THD, 190 W/ch into 4 ohms at 0.05% THD. Features separate left/right slide tone controls; selectable tone turnovers; variable contour; tape equalization; independent tape copy function; low (18 dB/octave at 15 Hz) and high (18 dB/octave at 9000 Hz) filters; moving-coil head amplifier; adjustable resistance and capacitance cartridge load switches; LED peak indicators. 5 3/4" H × 16 3/8" W × 17" D ..... $950

### 1180 DC Integrated Amplifier

Fully complementary, stereo dc amplifier. 90 W/ch continuous into 8 ohms from 20-20,000 Hz at 0.06% THD, 113 W/ch into 4 ohms at 0.03% THD. Features selectable tone turnovers; variable contour; bass, midrange, and treble controls; independent tape copy function; LED peak indicators; low (18 dB/octave at 15 Hz) and high (18 dB/octave at 9000 Hz) filters. 5 3/4" H × 16 3/8" W × 12 5/16" D.. ..... $500

### 1152DC Integrated Amplifier

Fully complementary, stereo dc amplifier. 76 W/ch continuous into 8 ohms from 20-20,000 Hz at 0.03% THD, 95 w/ch into 4 ohms at 0.06% THD. Features selectable tone turnovers; bass, midrange, and treble controls; variable contour; low (18 dB/octave at 15 Hz) and high (18 dB/octave at 9000 Hz) filters. 5 3/4" H × 16 3/8" W × 12 5/16" D ..... $420

### 1122DC Integrated Amplifier

Fully complementary dc amplifier. 61 W/ch continuous into 8 ohms at 0.03% THD from 20-20,000 Hz, 77 W/ch into 4 ohms; bass, midrange, and treble controls; low and high filters; two tape monitors; 5 3/4" H × 16 3/8" W × 12 5/16" D..... $350

### 1090 Integrated Amplifier

Fully complementary, dc integrated amplifier. 45 W/ch continuous into 8 ohms from 20-20,000 Hz at 0.1% THD, 57 W/ch continuous into 4 ohms; bass, midrange, and treble controls; two tape monitors; high filter; 5 3/4" H × 16 3/8" W × 11 11/16" D..... ..... $240

### 1060B Integrated Amplifier

30 W/ch continuous into 8 ohms from 20-20,000 Hz at 0.1% THD, 33 W/ch continuous into 4 ohms at 0.15% THD; bass and treble controls; high filter; main/remote speaker switching; loudness switch ... ..... $180

## MARLBORO SOUND

### P200W Power Amplifier

150 W continuous into 4 ohms with 1.0% THD; input sensitivity 800 mV at 1000 Hz; input impedance 10,000 ohms; S/N 84 dB; frequency response 25-20,000 Hz ±1 dB. Features two power supply fuses and separate line fuse, two outputs and line out, 10-dB level set, and two input jacks, all on rear-panel. 7" H × 18" W × 18 1/2" D ..... $250

### 1200R Power Amplifier

60 W continuous into 8 ohms at 1.0% THD; sensitivity 15 mV at 1000 Hz; S/N 74 dB; frequency response 50-18,500 Hz ±2 dB; features four individual channels with master volume, bass, treble and reverb controls and four input volume controls; 7" H × 18" W × 8 1/2" D ..... $220

### 1500B Integrated Amplifier

60 W continuous into 8 ohms with 1.0% THD; sensitivity 30 mV at 1000 Hz; S/N 76 dB; frequency response 40-18,000 Hz ±2 dB; features individual volume, bass, treble, and hi-lo boost controls; three instrument inputs; 7" H × 18" W × 8 1/2" D .... $185

## METRON

### A-4000 Power Amplifier

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 2500-200,000 Hz −3 dB, 5-100,000 Hz

# 1 AMPLIFIERS

−1 dB; S/N greater than 110 dB (unweighted); slew rate 50 V/μsec; damping factor min. 200; nominal input sensitivity/impedance 2.0 V/10,000 ohms. 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. 7.87" H × 18.9" W × 18.5" D..... $1350

### M-200 Power Amplifier

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/μsec; damping factor min. 175 at 100 Hz into 8 ohms; input sensitivity/impedance 1.4 V/10,000 ohms. Features illuminated power averaging meters calibrated to +3 dB at clipping point; stepped 2-dB level controls; protection indicator. 5.875" H × 19" W × 13" D ..... $550

### PR-1 Preamplifier

Input sensitivity 2.0 mV at 1000 Hz (phono 1 and 2), 220 mV (aux. and tuner), 250 mV (tape 1 and 2), 1.8 mV at 1000 Hz (mic); input impedance 47,000 ohms (phono 1 and 2), 47 ohms unbalanced (mic); 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). 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. 2.8" H × 18.9" W × 14.2" D..... $500

## MITSUBISHI

### DA-A15DC Dual-Mono Power Amplifier

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

THD; IM dist. 0.008% at rated power; frequency response 20-20,000 Hz ±0.1 dB at rated power; input sensitivity/impedance 1 V variable/50,000 ohms; damping factor 100; channel separation 100 dB at 1000 Hz, 80 dB at 20,000 Hz; S/N (IHF "A") 123 dB; 6¾" H × 16¾" W × 11¼" D..... $630
**DA-A15.** Same as DA-A15DC but not direct-coupled and without dc-amplification capability..... $590
**DA-A10DC.** Similar to DA-A15DC, but 100 W/ch into 8 ohms; S/N (IHF "A") 122 dB..... $430
**DA-A10.** Same as DA-A10DC except not direct-coupled and without dc-amplification capability.. $390
**DA-M10.** Power output level meter unit for above amplifiers; power amplifier function controls on meter unit front panel; 6¾" H × 16¾" W × 4⅞" D..... $150

### M-A01 Micro-Power Amplifier

70 W/ch continuous, both channels driven into 8 ohms from 15-20,000 Hz at 0.01% THD; THD 0.006% at 1 W/ch; IM dist. 0.008% at rated power; power bandwidth 10-60,000 Hz (IHF) at 0.05% THD; frequency response 20-20,000 Hz ±0.1 dB at rated power; input sensitivity/impedance 1 V/50k ohms; damping factor 100 from 20-20,000 Hz; S/N at rated power 123 dB closed circuit (IHF "A"); slew rate 30 V/μsec. Features dc amplification, peak-level LED indicators, and large heat sinks. 5⅛" H × 10⅜" W × 9⅜" D..... $460

### DA-P20 Stereo Preamplifier

Dual-mono docking preamplifier. Specifications: in-

put sensitivity/impedance 0.1 mV/10 ohms (phono MC), 2.3 mV/60k ohms (phono MM), 150 mV/50k ohms (tuner, aux., tape 1/2); RIAA deviation ±0.2 dB from 20-20,000 Hz (phono MC, MM), +0/−0.5 dB from 10-100,000 Hz (tuner, tape 1/2); THD 0.005% (phono MC), 0.003% (phono MM), 0.002% (tuner, aux., tape 1/2); S/N (IHF "A") 77 dB into 47 ohms (phono MC), 84 dB, closed circuit (phono MM), 110 dB, closed circuit (tuner, aux., tape 1/2); channel separation 80 dB at 20,000 Hz for phono MC/MM, 100 dB for tuner and tape 1/2; phono overload 12 mV at 1000 Hz with 0.1% THD (phono MC), 290 mV (phono MM); output level/impedance 1 V/600 ohms rated, 18 V max., 150 mV/600 ohms (tape 1/2); load impedance 8-16 ohms. Features attenuator-type level controls: independent tone controls and tone-defeat switches; provisions for two tape decks with duplication and monitoring facilities from one to the other; subsonic filter; A, B or A+B speaker selections. 6¾" H × 16¾" W × 8" D..... $380

### M-PO1 Micro-Preamplifier

With built-in moving-coil head amp. Specifications: input sensitivity/impedance 100 μV/10 ohms (phono MC), 2.3 mV/50k ohms (phono MM), 150 mV/50k ohms (tuner, aux., tape 1/2); RIAA deviation ±0.2 dB from 20-20,000 Hz (phono), +0/−0.5 dB from 10-100,000 Hz (high level); THD at 1 V output from 20-20,000 Hz −20 dB 0.005% (phono MC), 0.003% (phono MM), 0.002% (high level); S/N (IHF "A") 77 dB (phono MC), 90 dB

(phono MM for 10 mV out), 110 dB, closed circuit (high level); phono overload at 12 mV (MC), 290 mV (MM); output level/impedance 1 V/600 ohms, rated (preamp out), 150 mV/600 ohms at rated output (tape 1/2). Features digital tone controls with LEDs, provisions for two tape decks with tape duplication and monitoring facilities from one to the other, and gold-plated phono input terminals. 2¾" H × 10⅜" W × 9¾" D..... $350

### DA-P10 Stereo Preamplifier

Two completely separate amplifiers for left and right channels; frequency response 30-15,000 Hz ±0.2 dB (phono, RIAA), 10-70,000 Hz +0/−0.5 dB (tuner, aux., play); channel separation 100 dB at 1 kHz, 80 dB at 20 kHz (phono), 85 dB at 20 kHz (tuner, aux., play); THD 0.05% max.; S/N (IHF A) 73 dB (phono), 90 dB (tuner, aux., play); phono overload 270 mV; input sensitivity/impedance 2.2 mV/50,000 ohms (phono 1 and 2), 150 mV/60,000 ohms (tuner, aux., play); output level 9 V max. (pre out, 50,000 ohms), 150 mV (rec out, 50,000 ohms), 50 mV (headphones, 8 ohms); 6¾" H × 16¾" W × 8" D..... $290

## NAKAMICHI

### 620 Stereo Power Amplifier

100 W/ch continuous sine wave into 8 ohms over 5-20,000 Hz with 0.01% THD and 0.002% IM dist.; frequency response 5-100,000 Hz ±0.5 dB; S/N 120 dB (IHF A); class B operation with "complete-mirror" push-pull circuitry; complete speaker and power transistor protection; peak indicating lamps with selectable triggering points; 6¾" H × 15¾" W × 9¾" D..... $740
**BA-100.** Self-powered unit permits bridging of Nakamichi 420 and 620 power amplifiers for monaural operation; single unit connects stereo outputs of preamplifier to two power amplifiers for stereo operation; bridged 620 is rated at 350 W min. continuous sine wave into 8 ohms over 5-20,000 Hz with 0.05% THD, bridged 420 is rated at 120 W min. continuous sine wave into 8 ohms over 5-20,000 Hz with 0.05% THD; bridged Nakamichi amplifiers are stable with loads of 8 ohms or more; 2¼" H × 7½" W × 3¾" D..... $75
**BA-150.** Same as BA-100 but powered by PS-100 Power Supply..... $65
**PS-100 Power Supply.** Provides ±10 V dc to operate the BA-150 and other Nakamichi BlackBox Series components; can power up to 6 components.... $75

### 420 Stereo Power Amplifier

50 W/ch min. continuous sine wave into 8 ohms over 5-20,000 Hz with less than 0.02% THD and

0.002% IM dist.; frequency response 5-50,000 Hz +0/−1 dB; S/N 110 dB (IHF A); damping factor 100; unconditional load stability; full amplifier and loudspeaker protection; 3⅝" H × 16" W × 8⅞" D..... $390

### 630 FM Tuner/Preamplifier

See Section 2, "Tuners," under Nakamichi, for details..... $730

### 610 Stereo Control Preamplifier

Combines preamplifier circuitry, test circuitry, and mixing facilities; 19 different inputs with full dubbing and 5-in/2-out mixing; built-in sine wave tones, pink noise, phase check, and invert capabilities; remote speaker/amplifier selection; mike input attenuators; frequency response 30-100,000 Hz ±0.75 dB (mike), 20-100,000 Hz ±0.75 dB (aux.), RIAA ±0.3 dB (phono); S/N (IHF A) 65 dB (mike with 15-dB attenuation), 80 dB (phono re 1 mV), 93 dB (aux.); THD 0.01% (mike), 0.005% (phono and aux.)..... $660
**610B.** Same but with black matte finish ..... $680
**WC-600.** Walnut cabinet for Nakamichi 600 Series components..... $55
**RM-610.** Remote control unit; permits switching of up to three speaker pairs or amplifiers from front-panel controls of preamplifier..... $90

### 410 Stereo Preamplifier

Frequency response 20-50,000 Hz ±0/−1.5 dB (aux., tape), RIAA ±0.3 dB (phono); S/N (IHF A) 102 dB (aux., tape), 80 dB (phono re 1 mV); phono overload 250 mV (1 kHz, 5 mV sensitivity); dist.

0.003%; switchable phono input sensitivity (1, 2, or 5 mV); defeatable active subsonic phono filter (−45 dB at 10 Hz); tone control circuitry bypass switch; variable contour control; 3⁹/₃₂" H × 16" W × 8½" D ..... $370

**WC-400.** Walnut cabinet for Nakamichi 400 Series components ..... $30

### MB-150 Moving-Coil Booster Amplifier

Switchable gain 22 or 38 dB; equivalent input noise −158 dB (IHF "A" weighted); THD less than 0.005%, 20-20,000 Hz; frequency response 10-100,000 Hz +0/−0.5 dB, 22-dB gain setting; requires PS-100 Power Supply; 2½" H × 7⅓" W × 4" D ..... $110

## NIKKO

### Alpha V Lab Standard Power Amplifier

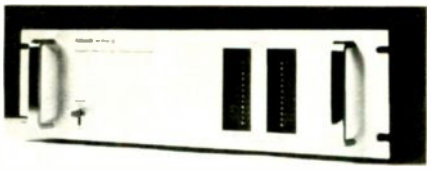
Class A stereo power amplifier; 100 W/ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.06% THD; frequency response 0-60,000 Hz; S/N (IHF A) 110 dB; input sensitivity/impedance 1 V/100,000 ohms; ac/dc amp selector; two VU meters; two-speed cooling fan; rack mountable; 9" H × 19" W × 17" D. $3000

### Alpha I Stereo Power Amplifier

220 W/ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.08% THD and IM dist.; frequency response 10-100,000 Hz; S/N (IHF "A") 100 dB; direct-coupled OCL pure complementary circuitry; protection circuitry; rack mountable; chrome handles; 7" H × 19" W × 11½" D ..... $650

### Alpha III Power Amplifier

80 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.006% THD; IM dist. 0.01%; S/N 115 dB



("A"); damping factor 80 into 8 ohms; dc MOS-FET transistors; front-panel logarithmic LED readouts for left and right channels; built-in protection circuitry; rack mountable; 5⅛" H × 19" W × 11⁹/₁₆" D ..... $480

### Alpha II Stereo Power Amplifier

120 W/ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.03% THD and IM dist.; frequency response 5-100,000 Hz; S/N (IHF A) 115 dB; two VU meters with four-button range control (0, 6, 12, 24 dB); switchable two-speaker operation; relay and speaker protection circuitry; exterior heat sinks; rack mountable; 5½" H × 19" W × 12⅞" D ..... $430

### Beta V Stereo Preamplifier

Input sensitivity/impedance 2 mV/22,000, 33,000, 47,000, 68,000, 100,000 ohms (phono), 100 mV/22,000, 33,000, 47,000, 68,000, 100,000 ohms (tuner, aux.); S/N (IHF "A") 72 dB (phono), 100 dB (tuner, aux.); rated output 1 V; has mono/stereo/reverse mode switching; calibrated dual-attenuator master volume control; balance control; subsonic filter (−12 dB/octave) and audio muting (−20 dB); five-position tape monitor control; three-way capacitance switching; rack mountable; 2" H × 19" W × 17" D ..... $750

### Beta I Stereo Preamplifier

All-FET stereo preamplifier; input sensitivity/impedance 2 mV/50,000 ohms (phono), 100 mV/50,000 ohms (tuner, aux., and tape); S/N (IHF "A") 72 dB (phono), 100 dB (aux., tuner, tape); output 1 V (rated), 10 V (max.); 42-position dual-attenuator calibrated master volume control; balance control; five-position tape monitor control; three-way phono impedance switching; phono level controls; rack mountable; 2½" H × 19" W × 11½" D ..... $340

### Beta II Preamplifier

Input sensitivity/impedance 2.5 mV/22,000, 47,000, 100,000 ohms (phono), 150 mV/50,000 ohms (tuner, aux.); S/N 80 dB (phono), 100 dB (tuner, aux.); RIAA equalization ±0.2 dB; rated output 1.0 V; calibrated dual-attenuator master volume control; balance control; five-way tape monitoring system; tone defeat; −20 dB audio muting; switchable subsonic filter (−12 dB/octave); dual phono level controls; rack mountable; 2½" H × 19" W × 11½" D ..... $210

### NA 850 Integrated Amplifier

Power amplifier: 60 W/ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.08% THD and IM dist. Preamplifier: input sensitivity/impedance 2.2 mV/47,000 ohms (phono), 150 mV/50 000 ohms (tuner, aux., tape); hum and noise −75 dB (phono), − 95 dB (aux., tuner, tape); phono overload 220 mV. Features two VU meters; two speaker-system control; tone defeat; five-position tape dubbing control; balance control and variable VU meter control; speaker protection circuit; subsonic filter (−3 dB/octave) and high filter; 5¾" H × 15¼" W × 12¼" D ..... $270

### NA 550 Integrated Amplifier

Power amplifier section: 45 W/ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.05% THD and IM dist.; damping factor 50. Preamplifier: input sensitivity/impedance 2.2 mV/47,000 ohms (phono), 150 mV/50,000 ohms (tuner, aux., tape); hum and noise −75 dB (phono), −95 dB (tuner, aux., tape); phono overload 190 mV. Features two VU meters; five-way tape dubbing control; speaker protection circuitry. 5¾" H × 15¼" W × 12¼" D ..... $220

## ONKYO

### M-505 Stereo Power Amplifier

105 W/ch continuous, both channels into 8 ohms over 20-20,000 Hz with 0.05% THD (140 W/ch into 4 ohms); IM dist. 0.01%; damping factor 100 (8 ohms, 1 kHz); frequency response 0-150,000 Hz +0/−1 5 dB; input sensitivity 1.5 V; input impedance 100,000 ohms; load impedance 4-16 ohms; S/N 110 dB (IHF A); Features two mono amplifiers with own power supply; large heatsinks; dc amplifier circuitry; relay-operated protective circuit; three-step low-cut filter; power, cutoff frequency, and left/right level adjuster controls; "P" input and speaker outputs; embossed vinyl over metal cabinet. 6½" H × 17¾" W × 12¹¹/₁₆" D ..... $580

### P-303 Preamplifier

Input sensitivity/impedance 100 μV/10 ohms (phono MC), 2.5 mV/30,000, 50,000, 100,000 ohms (switchable, phono MM), 150 mV/50,000

ohms (tuner, tape), 1.5 V/82,000 ohms (accessory receive); rated output/impedance 150 mV/2000 ohms (tape), 1.5 V/100 ohms (accessory send), 1.5 V (15 V max.)/600 ohms (output); frequency response 3.5-200,000 Hz +0/−1.5 dB (tuner), RIAA ±0.2 dB (phono); phono overload 330 mV rms at 1 kHz, 0.05% THD (phono MM), 13 mV rms at 1 kHz, 0.05% THD (phono MC); THD 0.006% (phono MM, 3 V output), 0.03% (phono MC, 3 V output); IM dist. 0.01%; S/N (IHF A) 70 dB (phono MC), 83 dB (phono MM), 100 dB (tuner). Features two mono amplifiers, separate moving-coil amplifier with provision for moving-magnet cartridge, and equalizer amplifier circuitry; 32-detent, 4-gang attenuator volume control; transient killer circuit with reed relay; power, volume, balance, tape monitor; phono/tuner selector, MM/MC cartridge, impedance selector (30,000, 50,000, and 100,000 ohms), and accessory terminal switch controls; African wood veneer over Lauan plywood finish. 3¼" H × 17¾" W × 14⁹/₁₆" D ..... $410

**U-30.** System selector unit provides additional input/output facilities to P-303: phono 1, 2, and 3; tuner (aux.) 1, 2, and 3; tape monitor 1, 2, Source; record mode channel 1 to 2, channel 2 to 1, rec, off; pre-out 1, 2, 1+2, off; mode stereo (normal, reverse)/mono (L+R, L, R); speakers 1, 2, 1+2, off; headphone; meter selector reads speaker output power (10 and 100 W), pre-out (dB-scale reading at 1 and 10 V), off. African wood veneer over Lauan plywood; 3¼" H × 17¾" W × 14⁹/₁₆" D $400

**E-30.** Audio equalizer provides additional frequency notches to P-303: 63 (45/32 switchable), 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz; max. switchable range ±5/+10 dB in 0.5/1 dB step; African wood veneer over Lauan plywood; 3¼" H × 17¾" W × 14⁹/₁₆" D ..... $550

### A-10 Integrated Amplifier

Amplifier: 85 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD (110 W/ch into 4 ohms); IM dist. 0.1%; damping factor 50 (8 ohms); frequency response 2-80,000 Hz ±1 dB; rated input 1.5 V; input impedance 50,000 ohms; load impedance 4-16 ohms; S/N 110 dB (IHF A). Preamplifier section: input sensitivity/impedance 100 μV/20 ohms (phono MC), 2.5 mV/50,000 ohms (phono), 150 mV/50,000 ohms (tuner, aux., tape); THD 0.05% IM dist. 0.08%; frequency response 10-50,000 Hz +0/−1 dB (aux.), 30-15,000 Hz ±0 2% (phono); phono overload 230 mV rms at 1 kHz, 0.1% THD; S/N (IHF A) 68 dB (phono MC), 78 dB (phono), 90 dB (aux.); output voltage 1.5 V (pre out), 150 mV (rec out); output impedance 27,000 ohms (pre out), 25,000 ohms (rec out). 6¼" H × 17½" W × 15¹³/₁₆" D ..... $465

### A-7 Integrated Amplifier

Amplifier: 65 W/ch into 8 ohms over 20-20,000 Hz with 0.1% THD and IM dist. (70 W/ch into 4 ohms); frequency response 2-80,000 Hz ±1 dB; S/N (IHF A) 110 dB; damping factor 50 (8 ohms); input impedance 100,000 ohms; rated input 1.5 V; load impedance 4-16 ohms. Preamplifier section: input sensitivity/impedance 2.5 mV/50,000 ohms (phono), 150 mV/50,000 ohms (tuner, aux., tape); THD 0.05%; IM dist. 0.08%; frequency response 30-15,000 Hz ±0.2 dB (phono), 10-50,000 Hz +0/−1 dB (tuner, aux.); phono overload 230 mV rms at 1 kHz, 0.1% THD; output voltage 1.5 V; output impedance 27,000 ohms; S/N (IHF A) 80 dB (phono), 90 dB (tuner, aux.). Embossed vinyl over metal cabinet; 6¼" H × 17½" W × 15" D ..... $360

### A-5 Integrated Amplifier

Amplifier: 45 W/ch into 8 ohms over 20-20,000 Hz with 0.1% THD (50 W/ch into 4 ohms); frequency response 2-70,000 Hz ±1 dB; S/N (IHF A) 110 dB; damping factor 50 (8 ohms); input impedance 25,000 ohms; rated input 1.5 V; load impedance 4-16 ohms. Preamplifier section: input sensitivity/impedance 2.5 mV/50,000 ohms (phono), 150 mV/50,000 ohms (tuner, tape); THD 0.08%; IM dist. 0.08%; frequency response 30-15,000 Hz ±0.3 dB (phono), 15-40,000 Hz +0/−1 dB (tuner); phono overload 170 mV rms at 1 kHz, 0.1% THD; output voltage 1.5 V; output impedance 2200 ohms; S/N (IHF A) 75 dB (phono), 90 dB (tuner). Embossed vinyl over metal cabinet; 6¼" H × 17½" W × 15" D ..... $250

## OPTONICA

### SM-4646 Integrated Amplifier

Power amplifier: 80 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.08% THD and 0.1% IM dist.; damping factor 45. Preamp section: input sensitivity/impedance 2.5 mV/22k, 47k, 100k

# 1 AMPLIFIERS

ohms (phono 1), 2.5 mV/47,000 ohms (phono 2), 150 mV/47,000 ohms (aux., tuner, tape and tape DIN); phono overload 370 mV (1 kHz); output level/impedance 150 mV/47,000 ohms (tape), 30 mV/82,000 ohms (tape DIN); frequency response

20-20,000 Hz ±0.18 dB (phono), 10-80,000 Hz ±1.5 dB (tuner, aux., tape). Features automatic protection circuit; high and low filters; tone controls with turnover frequency selection; 41-position detent volume control. 5.7" H × 17.4" W × 14.4" D.. ..... $460

**SM-3636 Integrated Amplifier**
Power amplifier: 60 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.09% THD and 0.1% IM dist.; damping factor 45. Preamp section: input sensitivity/impedance 2.5 mV/22k, 47k, 100k ohms (phono 1), 2.5 mV/47,000 ohms (phono 2), 150 mV/47,000 ohms (tuner, aux., tape and tape DIN); phono overload 240 mV (1 kHz); output level/impedance 150 mV/47,000 ohms (tape), 30 mV/82,000 ohms (tape DIN); frequency response 20-20,000 Hz ±0.25 dB (phono), 10-70,000 Hz (tuner, aux., tape). Features automatic protection circuit; high and low filters; tone controls with turnover frequency selection; 41-position detent volume control. 5.7" H × 17.4" W × 14.4" D..... $380

**SM-3201 Integrated Amplifier**
40 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.19% THD; two output meters; two-way tape dubbing; mode selector switch; tone controls; negative feedback tone control amp; −20 dB audio muting; loudness contour; high and low filters; 41-position detent volume control; speaker selector A and A+B; headphone jack ..... $250
**SM-3205.** Same as SM-3201, except in ebony finish..... $250

**SM-1515 Integrated Amplifier**
Power amplifier: 40 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.19% THD and 0.1% IM dist.; damping factor 40. Preamp section: input sensitivity/impedance 2.5 mV/50,000 ohms (phono), 150 mV/50,000 ohms (tuner, aux., tape); phono overload 240 mV (1 kHz); output level/impedance 150 mV/47,000 ohms (tape); frequency response 20-20,000 Hz ±0.3 dB (phono), 10-80,000 Hz (tuner, aux., tape). Feature two output meters; two-way tape dubbing; tone controls; low filter; loudness contour; audio muting; 41-position detent volume control. 5.7" H × 16.1" W × 10" D ..... ..... $240

**SM-1515B.** Same as SM-1515 except in ebony finish..... $240

## OSAWA

**DCA-400 DC Stereo Power Amp**
200 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.02% THD; frequency response 0-500,000 Hz ±3 dB; S/N 100 dB; crosstalk −70 dB (over 20-20,000 Hz); damping factor 300; low-cut filter (6 dB/octave at 6 Hz); sensitivity variable over 0 to −31 dB and −∞; two peak-level meters calibrated in watts and dB; phase shift ±1°; dc drift, thermal, and overcurrent protected; 6⅜" H × 18⅞" W × 17⅜" D..... $3250

**DCA-120 DC Stereo Power Amp**
60 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.02% THD; frequency response 0-500,000 Hz +0/−3 dB; phase accuracy 0-3° (over 0-20,000 Hz); slew rate 20 V/μsec; damping factor 300; S/N 100 dB; crosstalk −70 dB (over 20-20,000 Hz); group time delay 0.42 μsec; switch-selectable low-cut filter with 6 dB/octave slope and 7 Hz turnover frequency; power transistors are current- and voltage-limiter protected; 3⅜" H × 18⅞" W × 11" D..... $800

**SCA-2000 Preamplifier**
Frequency response 1-500,000 Hz +3/−3 dB (phono), 0-500,000 Hz +3/−3 dB (aux.); S/N (IHF A) 80 dB (phono), 90 dB (aux.); THD 0.01%; group time delay 0.7 μsec; max. output level 10 V; output impedance 600 ohms (record jacks) accommodating 10,000 ohm loads or higher; phase shift 0-3°; RIAA accuracy within ±0.2 dB; switch-selectable phono input impedance of 100,000, 68,000, 47,000, 33,000, 1000, and 100 ohms; phono sensitivity 1 mV; dc output cut off at 1 Hz (6 dB/octave); provision for reciprocal dubbing; pushbutton attenuation (15 dB) adds to setting of 32-point rotary volume control; low-boost (6 dB below 100 Hz) and low-cut (6 dB/octave) filters; phono, tuner, and two aux. inputs; 3⅜" H × 18⅞" W × 11" D..... ..... $950

## JC PENNEY

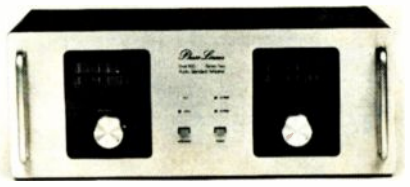
**3865 Integrated Amplifier**
65 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD; IM dist. 0.02%; RIAA phono deviation ±0.5 dB from 20-20,000 Hz; S/N 86 dB; phono overload 360 mV; bass and treble control range ±9 dB. Features separate left/right power meters; two deck provisions for tape dubbing; tape monitor switch; mode selector with speaker reverse; volume, balance, tone defeat, and loudness controls; switchable speaker selector; headphone jack; dual power supplies ..... $400

**3845 Integrated Amplifier**
45 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.08% THD and IM dist.; S/N 75 dB; phono overload 170 mV; RIAA deviation ±0.3 dB from 20-20,000 Hz; bass and treble control range ±9 dB. Features separate left/right power meters; two deck provisions for tape dubbing; tape monitor switch; switchable speaker selector switch; volume, balance, and loudness controls; mode selector; headphone jack..... $240

**3835 Integrated Amplifier**
35 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.08% THD and IM dist.; S/N 75 dB; phono overload 170 mV; bass and treble tone control range ±8 dB; RIAA deviation ±0.5 dB from 20-20,000 Hz. Features separate left/right power meters; two deck provisions for tape dubbing; tape monitor switch; volume, balance, and loudness controls; headphone jack..... $200

## PHASE LINEAR

**Dual 500 Series Two Power Amplifier**
505 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.09% THD, 800 W continuous into 4 ohms at 1000 Hz; IM dist. 0.09% max.; damping factor 1000/min; S/N 110 dB (IHF "A"). Features dual LED peak-responding meters; two input sensitivity channel controls; high/low impedance operating modes; high frequency limiters; automatic speaker safeguard system. 7" H × 19" W × 15" D ..



..... $1350

**700 Series Two Stereo Power Amplifier**
360 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.09% THD and IM dist.; frequency response 0-250,000 (1 V, direct-coupled inputs); sensitivity 1.14 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, baked enamel panel ..... ..... $880
Walnut cabinet ..... $40

**400 Series Two Stereo Power Amplifier**
210 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.09% THD and IM dist.; frequency response 0-250,000 Hz (1 W); S/N 110 dB (IHF "A"); load impedance 4-16 ohms; sensitivity 1.75 V. Features peak-responding LED meters; individual channel controls for input sensitivity; light brushed gold, baked enamel, and black anodized panel. 7" H × 19" W × 10" D ..... $600
Walnut cabinet ..... $40

**200 Series Two Stereo Power Amplifier**
120 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.09% THD and IM dist.; hum and noise −110 dB; sensitivity 1.5 V; input impedance 18,000 ohms. Features current-limiting amplifier protection; relay protection for speakers; rear-panel switch for current feedback reduction. 5½" H × 19" W × 8¾" D..... $400
Walnut cabinet ..... $40

**4000 Series Two Stereo 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 65 dB (phono), 15 dB (high level); S/N (IHF "A") 80 dB (phono), 85 dB (high level); 6-dB octave boost below 50 Hz, shelv-

ing +3 dB at 20 kHz and +6 dB at 20 Hz; two monitor switches for two-deck operation; separate dc headphone amplifier; 22-detent 2-dB stepped attenuator volume control; low- and high-frequency autocorrelator; peak unlimiter (nominal rate attack threshold 0.5 dB/μsec for +6 dB peak unlimit operation); downward expander commences at −35 dB; switched outlets handle 25 A. 7" H × 19" W × 10" D..... $650
Walnut cabinet ..... $40

**3000 Series Two Stereo Preamplifier**
Features CMOS logic memory system which switches critical signal paths to 13 relays; tactile

pushbutton controls; phono 1 stage for moving-magnet cartridges and phono 2 stage for moving-

coil cartridges; two-deck tape monitoring and dubbing facilities; noise reduction loop (processes noise ahead of tape monitor); subsonic filter (18 dB/octave at 15 Hz); dc headphone amplifier. Specifications: dist. less than 0.04% from 20-20,000 Hz; 2.0 V rms rated output; S/N 90 dB (phono MM), 78 dB (phono MC), 91 dB (high level); RIAA phono deviation +0.3/−0.3 dB, 20-20,000 Hz ±0.1 dB (high level); input impedance 47,000 ohms (phono MM), 50, 200, or 500 ohms (phono MC), 50,000 ohms (high level); phono overload 120 mV (MM), 12 mV (MC). 3½" H × 19" W × 8" D ..... $500

**2000 Series Two Stereo Preamplifier**
Features separate bass and treble tone controls for each channel, tone defeat, active equalizer, tone turnover controls; two tape monitor circuits; THD 0.05%; frequency response RIAA ±0.5 dB (phono); input sensitivity 40,000 ohms (high level), 47,000 ohms (phono, 290 pF); hum and noise −88 dB (high level, 2 V), −80 dB (low level, 10 mV); 5½" H × 19" W × 6" D ..... $300
Walnut cabinet ..... $40

## PHILIPS

**AH 578 Stereo Power Amplifier**
210 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.06% THD; IM dist. 0.04% at rated power; frequency response 10-30,000 Hz ±0.15 dB; separation 60 dB (1 kHz); damping factor 100 (8 ohms); S/N 100 dB; input sensitivity 1 V; input impedance 50,000 ohms; switchable subsonic filter; function display; step detent level controls; memory lock; two output meters; thermal and speaker protection; 8" H × 18" W × 15" D..... $600
**AH5781**. Black chassis..... $620

**AH 572 Preamplifier**
Input sensitivity 1.5-18 mV (phono, adjustable); THD and IM dist. 0.008%; S/N (A weighted) 75 dB (phono), 90 dB (tuner, aux., tape); phono overload 750 mV; frequency response RIAA ±0.25 dB (phono), 10-50,000 Hz ±0.5 dB (tuner, aux., tape); separation 55 dB; crosstalk −75 dB; output 2 V (rated), 12 V (max.), record output 200 mV. Features lighted function display; LED touch

switches; memory lock; detented volume, bass, treble, and balance controls; separate phono preamps; front-panel play/record for Tape B; tape dubbing/monitoring; tone defeat; channel mode selector; headphone jack; phono 1/2, tape A/B, tuner, and aux. inputs; audio 1/2 and tape A/B outputs; four ac receptacles; high and low cut filters; muting. Silver chassis; 8" H × 18" W × 15" D..... $450
**AH5721**. Black chassis..... $470

**AH388 Integrated Amplifier**
Power amplifier: 80 W continuous into 8 ohms from

20-20,000 Hz with 0.05% THD; IM dist. 0.05% at 40 W. Preamplifier: input sensitivity 2.5 mV (phono 1, 2), 200 mV (aux., tuner, tape), 2.0 mV (mic); S/N 70 dB (phono 1, 2), 65 dB (mic), 85 dB (aux. and tuner); dist. 0.02% (equalizer). Features step detented volume control; center detented balance control; separate bass (±10 dB) and treble (±12 dB) controls; high and low filters (−6 dB/octave); tuner, phono 1 and 2, and aux. inputs; tape monitor; switchable six-speaker capability; headphone jack; mic jack and mixing; audio muting; illuminated power output meters; two ac receptacles. 5½" H × 19" W × 14" D ..... $430
**AH386**. Similar to AH 388 except 60 W continuous; S/N 65 dB (phono 1, 2, and mic); bass and treble controls ±10 dB; switchable four-speaker capability ..... $350
**AH384**. Similar to AH386 except 40 W continuous; bass (±10 dB) and treble (±12 dB) controls; tape monitoring and dubbing; no mic jack and mixing.... ..... $300

## PICKERING

**PP-1 Stereo 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

## PIONEER

**SPEC-2 Stereo Power Amplifier**
250 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD; frequency response 1-80,000 Hz +0/−1 dB; damping factor 70; hum and noise −110 dB (IHF A); impedance selector for 4 or 8 ohms; input sensitivity control; two peak power level meters; built-in surge current control and protection circuits; 6⅞" H × 18¹³⁄₁₆" W × 13³⁄₁₆" D ..... $900

**SPEC-4 Stereo Power Amplifier**
150 W/ch continuous into 8 ohms over 20-20,000

# 1 AMPLIFIERS

Hz with 0.01% THD (180 W/ch into 4 ohms with 0.03% THD); IM dist. 0.01% at rated output; frequency response 5-100,000 Hz +0/−1 dB; input sensitivity/impedance 1 V/50,000 ohms; load impedance 4-16 ohms; damping factor 100 (8 ohms); hum and noise −115 dB (IHF A). 7⅜" H × 18²⁹/₃₂" W × 17¹⁷/₃₂" D..... $700

### SPEC-1 Stereo Preamplifier

Input sensitivity/impedance 2.5 mV/50,000 ohms (phono, mike), 150 mV/100,000 ohms (tuner, aux., tape); 0.05% THD at 2 V output; frequency response 30-15,000 Hz ±0.2 dB (phono), 10-70,000 Hz +0/−0.5 dB (tuner, aux., tape); tone controls; filters; mixing facilities; level adjust; input impedance selector; 6⅞" H × 18¹⁵/₁₆" W × 16³/₁₆" D ..... $550

### SA-9900 Integrated Amplifier

Integrated stereo amplifier. Power amplifier: 110 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD; frequency response 10-80,000 Hz +0/−1 dB. Preamplifier section: input sensitivity 2.5 mV (phono), 6-24 mV (mike), 150 mV (tuner, aux., tape); input impedance 85,000 ohms (mike), 50,000 ohms (tuner, aux., tape); frequency response 30-15,000 Hz ±0.2 dB (phono), 7-40,000 Hz +0/−1 dB (tuner, aux., tape). 6½" H × 16½" W × 15⅞" D ..... $750

### SA-9500 II Integrated Amplifier

Stereo integrated amplifier. Power amplifier: 80 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD; IM dist. 0.05% at rated output; frequency response 5-100,000 Hz +0/−1 dB; input sensitivity/impedance 1 V/50,000 ohms; damping factor 30 (8 ohms); hum and noise −110 dB (IHF A). Preamplifier section: input sensitivity/impedance 2.5 mV/10k, 25k, 50k, 100k ohms (phono), 150 mV/50,000 ohms (tuner, aux., tape); cartridge load 100, 200, 300, 400 pF; phono overload 300 mV (1 kHz); THD 0.01% max.; frequency response 20-20,000 Hz ±0.2 dB (phono), 5-50,000 Hz +0/−1 dB (tuner, aux., tape); hum and noise (IHF A) −75 dB (phono), −95 dB (tuner, aux., tape). 5²⁹/₃₂" H × 16¹⁷/₃₂" W × 14¹³/₁₆" D. $450

### SA-8500 II Integrated Amplifier

Stereo integrated amplifier. Power amplifier: 60 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD (75 W/ch into 4 ohms); IM dist. 0.05% at rated output; frequency response 5-100,000 Hz +0/−1 dB; input sensitivity/impedance 1 V/50,000 ohms; damping factor 30 (8 ohms); hum and noise −110 dB (IHF A). Preamplifier section: input sensitivity/impedance 2.5 mV/50,000 ohms (phono), 150 mV/50,000 ohms (tuner, aux., tape); cartridge load 100, 200, 300, 400 pF; phono overload 250 mV (1 kHz); THD 0.02% max.; frequency response 20-20,000 Hz ±0.02 dB (phono), 5-50,000 Hz +0/−1 dB (tuner, aux., tape); hum and noise (IHF A) −75 dB (phono), −95 dB (tuner, aux., tape). 5²⁹/₃₂" H × 16¹⁷/₃₂" W × 14¹³/₁₆" D..... $350

### SA-7500 II Integrated Amplifier

Stereo integrated amplifier. Power amplifier: 45 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD (50 W/ch into 4 ohms); IM dist. 0.1% at rated output; damping factor 30 (8 ohms). Preamplifier section: input sensitivity/impedance 2.5 mV/50,000 ohms (phono), 150 mV/50,000 ohms (tuner, aux., tape); phono overload 200 mV (1 kHz); frequency response 20-20,000 Hz ±0.3 dB (phono), 10-40,000 Hz +0/−1 dB (tuner, aux., tape); hum and noise (IHF A) −73 dB (phono), −95 dB (tuner, aux., tape). 5¹⁵/₃₂" H × 14³¹/₃₂" W × 12¹/₈" D ..... $250

### SA-6500 II Integrated Amplifier

Stereo integrated amplifier. Power amplifier: 30 W/ch continuous into 8 or 4 ohms over 20-20,000 Hz with 0.1% THD; IM dist. 0.1% at rated output; damping factor 30 (8 ohms). Preamplifier section: input sensitivity/impedance 2.5 mV/50,000 ohms (phono), 150 mV/50,000 ohms (tuner, aux., tape); phono overload 200 mV (1 kHz); frequency response 20-20,000 Hz ±0.3 dB (phono), 10-40,000 Hz +0/−1 dB (tuner, aux., tape); hum and noise (IHF A) −72 dB (phono), −93 dB (tuner, aux., tape). 5¹⁵/₃₂" H × 14³¹/₃₂" W × 12¹/₈" D.. $175

### SA-5500 II Integrated Amplifier

Stereo integrated amplifier. Power amplifier: 15 W/ch continuous into 8 ohms over 20-20,000 Hz

with 0.5% THD; IM dist. 0.5% at rated output; damping factor 30. Preamplifier section: input sensitivity/impedance 2.5 mV/50,000 ohms (phono), 150 mV/50,000 ohms (tuner, aux., tape); phono overload 130 mV (1 kHz); frequency response 20-20,000 Hz ±0.5 dB (phono), 20-20,000 Hz ±1 dB (tuner, aux., tape); hum and noise (IHF A) −71 dB (phono), −87 dB (tuner, aux., tape). 4⅜" H × 14³¹/₃₂" W × 10¹⁹/₃₂" D..... $135

## PROFESSIONAL SYSTEMS

### Studio IV Mono Power Amplifier

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

### Studio Two Stereo Power Amp

80 W/ch continuous into 8 ohms with 0.02% THD, 140 W/ch continuous into 4 ohms with 0.04% THD over 20-20,000 Hz; sensitivity 1.2 V for 100 W into 8 ohms; slew rate 100 V/μsec; damping factor 2000 (at amp output), 200 (at speaker terminals); noise −100 dB..... $579

### Studio One Stereo Control Amp

Discrete class A design; THD 0.01% (ref. 2 V); noise −88 dB (IHF A, 10 mV, phono, 1 kHz), −98 dB (2 V output); slew rate 50 V/μsec; RIAA response ±0.25 dB (phono), 20-20,000 Hz ±0.25 dB (line); gain 45 dB at 1 kHz (phono), 20 dB (line); 15 dB boost or cut for bass and treble; low and high filters; ..... $579

### Studio IOC

Features relay switching for three speaker systems; dual headphone jacks; 16-step stereo precision 40 dB; LED meter switchable from speaker to line level with peak and VU readings..... $197

## REALISTIC

### SA-2001 Integrated Stereo Amplifier

60 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.2% THD; IM dist. 0.02% at 50 W; frequency response 20-20,000 Hz ±1.5 dB; S/N 70 dB (switchable phono), 85 dB (aux.); phono sensitivity 1.5/3.6 μV; phono overload 200 mV. Features pushbutton high and subsonic filters; calibrated dual-range power meters; tuner, aux., and two phono inputs; two-deck tape monitoring/dubbing capability; three-way crossover detented bass and treble switches; switchable tone controls; main-in and pre-out jacks; stereo/mono; A/B speaker switching; headphone jack. 5¾" H × 16⅛" W × 12" D ..... $280

### SA-1001 Integrated Stereo Amplifier

35 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.3% THD; IM dist. 0.2% at 30 W; frequency response 20-20,000 Hz ±1.5 dB; S/N 65 dB (phono), 80 dB (aux.); phono sensitivity 2.2 μV; phono overload 140 mV. Features dc amplifiers; magnetic phono, tuner, and two aux. inputs; three tone controls; A/B speaker switch; two headphone jacks; stereo/mono and tape monitor; switched and unswitched ac outlets. 5¾" H × 16⅛" W × 12" D.. ..... $180

## REVOX

### A740 Stereo Power Amplifier

100 W/ch into 8 ohms over 45-15,000 Hz with 0.1% dist.; frequency response 20-20,000 Hz ±0.5 dB; sensitivity 1 V for rated output; features peak-indicating power output meters; 3-dB stepped input level controls; front-panel headphone jacks; carrying handles; dual phono and XLR input connections; switchable high-pass filter at input; 6" H × 17" W × 14" D ..... $1499

### B750 Integrated Amplifier

Fully complementary integrated stereo amplifier with equalizer connections and tape copy circuitry. Amplifier: 80 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz ±0.5 dB with 0.2% THD; damping factor better than 75 dB at 8 ohms; input sensitivity/impedance 1 V/10,000 ohms; phono overload 400 mV, 9 V (tuner, aux., tape 1 and 2). Preamplifier: input sensitivity/impedance 200 mV/100,000 ohms (tuner, aux., tape 1 and 2), 5 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), 15.5 V/4 ohms (speaker A and B), 200 mV/50,000 ohms (tape 1 and 2), 1 V/10,000 ohms (pre out), 15.5 V/100 ohms (phone 1 and 2); S/N 90 dB unweighted (tuner, aux., tape 1 and 2), 70 dB unweighted (phono 1 and 2); channel separation at 1000 Hz better than 60 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 × 17⅘" W × 13¾" D..... $949

## ROTEL

### RB-5000 Stereo Power Amplifier

500 W/ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.009% THD and IM dist.; frequency response 0-200,000 Hz ±3 dB (1 W/ch into 8 ohms); hum and noise—120 dB (IHF A, closed circuit); input 1 V. Features two average power meters with three-position sensitivity switch (0, −10, and −20 dB) plus LED peak indicators; standby and overload protection, and three speaker select LED indicators; three-position filter (lab test, normal, and low) ..... $2500

### RB-2000 Stereo Power Amplifier

Complementary push-pull dc OCL output circuitry. 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.01% THD and IM dist.; frequency response 0-200,000 Hz ±3 dB; S/N 110 dB (IHF "A"); input sensitivity 0.775 V/50,000 ohms. Features separate power supplies for dual FET, differential and pre-driver stages and power output stage; dual peak level power meters; connection for two pairs of speakers; protection indicator; gold-plated input jacks. 143 mm H × 482 mm W × 328 mm D..... $570

### RC-5000 Stereo Preamplifier

Stereo dc amplifier configuration with dc NF phono equalizer and dc ND graphic equalizer; includes built-in moving-coil head amplifier. THD and IM dist. 0.002% (aux.) from 20-20,000 Hz; S/N (IHF "A") 85 dB (phono), 100 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. 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. 190 mm H × 482 mm W × 410 mm D ..... $1500

**RZ-8 Stereo Play Mixer/Preamp**
Rhythm section features variable tempo, bass, treble, mode, gain, variation switch, and foot switch input; two line inputs with fader and separate gain controls; mic/guitar section has three inputs with variable impedance and gain; echo gain and mode control; two phono inputs with gain and fader controls; master gain control; two VU meters; headphone jack; line frequency response 10-70,000 Hz with 0.05% THD; S/N (IHF "A") 75 dB (phono), 90 dB (tuner, tape); input sensitivity/impedance 2.5 mV/50,000 ohms (phono 1 and 2), 0.5 mV/600, 50,000 and 200,000 ohms (mic, guitar)..... $600

**RC-2000 Stereo Preamplifier**
Four-block dc amplifier configuration with NF phono equalizer and built-in moving-coil head amplifier. THD and IM dist. 0.002% from 20-20,000 Hz; S/N (IHF "A") 80 dB (phono), 100 dB (tuner and tape); input sensitivity/impedance 2 mV/50,000 ohms (phono 1 and 2), 0.1 mV/32 ohms (MC phono), 150 mV/50,000 ohms (tuner, aux., and tape), 0.775 V/50,000 ohms (main in); 12 dB/octave low filter at 15 Hz, 12 dB/octave high filter at 24,000 Hz. Features attenuated volume control; left/right bass and treble tone controls ±10 dB/octave from 100-10,000 Hz; independent recording selector; subsonic and supersonic filters; full tape dubbing with two tape decks; shielded split power supplies; gold-plated input jacks; headphone jack. 143 mm H × 482 mm W × 328 mm D..... $500

**RA-2040 Stereo Integrated Amplifier**
Power amplifier: dc OTL complementary push-pull power circuitry; 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.01% THD and IM dist., 140 W/ch continuous into 4 ohms at 1000 Hz; frequency response 0-200,000 Hz ±3 dB. Preamplifier: dc FET phono equalizer and RIAA equalization; S/N (IHF "A") 80

dB (phono), 100 dB (tuner and tape); input sensitivity/impedance 2 mV/50,000 ohms (phono 1 and 2), 0.1 mV/33 ohms (moving-coil phono), 150 mV/50,000 ohms (tuner, aux., tape), 980 mV/33,000 ohms (main in); 12 dB/octave subsonic filter at 15 Hz, 12 dB/octave supersonic filter at 24,000 Hz; phono overload 450 mV. Features stepped bass and treble controls with turnover switches; full tape dubbing; loudness switch; audio muting switch; peak LED bar-chart power indicators; additional capacitance and load impedance controls; two speaker pair connections; headphone jack. 143 mm H × 482 mm W × 408 mmD ..... $830
**RA-2030.** Similar to RA-2040 except 80 W/ch continuous into 8 ohms, 110 W/ch continuous into 4 ohms; frequency response 0-125,000 Hz; phono overload 300 mV. Features similar except includes moving-coil head amplifier ..... $660
**RA-2020.** Similar to RA-2030 except 60 W/ch continuous, both channels driven into 8 ohms, 85 W/ch into 4 ohms; THD and IM dist. 0.02%; frequency response 0-100,000 Hz ±3 dB; S/N 75 dB (phono), 95 dB (tuner and tape); phono overload 200 mV. Features similar to RA-2030 less recording selector and capacitance and load impedance switches. 143 mm H × 482 mm W × 328 mm D... ..... $450

**RA-713 Stereo Integrated Amplifier**
45 W/ch into 8 ohms over 20-20,000 Hz with 0.1% THD; low and high filters; loudness switch; audio muting; tape monitoring with full dubbing; power meters..... $260

**RA-413 Stereo Integrated Amplifier**
35 W/ch into 8 ohms over 20-20,000 Hz with 0.2% THD; low and high filters; loudness switch; tape monitoring with full dubbing; two power meters ..... $200
**RA-313.** Similar to RA-413 except 25 W/ch into 8 ohms over 20-20,000 Hz with 0.2% THD ..... $170
**RA-212.** Similar to RA-313 except 10 W/ch into 8 ohms over 50-20,000 Hz with 1% THD; magnetic or ceramic phono inputs; loudness switch; tape monitoring..... $130

## SAE

**2600 Stereo Power Amplifier**
400 W/ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.05% THD and IM dist. (600 W/ch continuous into 4 ohms with 0.1% THD); frequency response 20-20,000 Hz ±0.25 dB. S/N 100 dB; input sensitivity 2.12 V; relay protection for speakers; fully complementary plus parallel output stage; 7" H × 19" W × 14" D. $1350

**2400L Stereo Power Amplifier**
200 W/ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.05% THD and IM dist.; frequency response 20-20,000 Hz ±0.25 dB. S/N 100 dB; input sensitivity 1.5 V; relay protection for speakers; volt/amp limiter; complementary double differential inputs and complementary series-connected output stages; LED display; feedback level control; 7" H × 19" W × 12½" D... $850
**C-2.** Unassembled walnut cabinet for 2400L ... $50

**2300 Stereo Power Amplifier**
150 W/ch continuous, both channels driven into 8

ohms from 20-20,000 Hz with 0.05% THD and IM dist.; frequency response 20-20,000 Hz ±0.25 dB; S/N 100 dB; input sensitivity 1.5 V. Features fully complementary circuits, toroid power supply, thermal, signal relay, and electronic protection, and LED display for output monitoring. 5¼" H × 19" W × 12⅓" D ..... $700
**SR-5.** Unassembled roll-around rack walnut cabinet for 2300 ..... $40

### 2200 Stereo Power Amplifier
100 W/ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.05% THD and IM dist.; frequency response 20-20,000 Hz ±0.25 dB; S/N 100 dB; sensitivity 1.5 V rms for rated output, 100,000 ohms; LED display; 5.25" H × 19" W × 8.5" D..... $500
**C-3.** Unassembled walnut cabinet for 2200..... $45

### 3100 Stereo Power Amplifier
50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD and IM

dist.; frequency response 20-20,000 Hz ±0.25 dB; S/N 100 dB; input sensitivity 1.0 V. Features fully complementary circuits, toroid power supply, thermal, signal relay, and electronic protection, and LED display for output monitoring. 5¼" H × 19" W × 8½" D..... $350
**C-3.** Unassembled walnut cabinet for 3100..... $45

### 2100 Stereo Parametric Preamp
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 80 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 ..... $950
**2100L.** Same as 2100 but without parametric equalizer; has LED display which monitors output at tape, line, or power amp level..... $800
**C-2.** Unassembled walnut cabinet for 2100 and 2100L..... $50

### 2900 Stereo Parametric Preamp
Incorporates parametric equalizer, full tape EQ/dubbing facilities, relay muting, and feedback gain control; THD and IM dist. 0.01%; frequency response 20-20,000 ±0.25 dB (phono and high level); S/N 78 dB (phono), 95 dB (aux.); 5.25" H × 19" W × 3.5" D..... $500
**C-4.** Unassembled walnut cabinet for 2900..... $45

### 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 (phono and aux.); THD and IM dist. 0.02%; S/N 72 dB (phono), 85 dB (aux.). 5¼" H × 19" W × 3½" D..... $350
**C-4.** Unassembled walnut cabinet for 3000..... $45

### 2922 Integrated Amplifier
Combines SAE 2200 power amplifier and 2900 preamplifier with parametric equalizer; features tape/line filters and two-stage phono circuit... $850

### 3022 Integrated Amplifier
Combines SAE 200 power amplifier and 3000 preamplifier; features separate bass, midrange, and treble controls for each channel, tape/line filters, and two-stage phono circuit ..... $700

### 3031 Integrated Amplifier
Combines SAE 3100 power amplifier and 3000 preamplifier. Features three-band tone controls for each channel, tape/line filters, and two-stage phono circuit ..... $550

### C3A Integrated Amplifier
50 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.05% THD; features full complementary circuitry, full tape copy capabilities, stepped volume, bass, and treble controls, dual power level indicators, subsonic filter, and muting switch ..... $325

## SANSUI

### BA-5000 Stereo Power Amplifier
300 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD; frequency response 15-30,000 Hz +0/−2 dB (1 W); two VU meters; triple protection circuit; forced-ventilation system; designed for rack mounting; 8¾" H × 19" W × 18¹¹/₃₂" D. $1300

### CA-2000 Stereo Preamplifier
Frequency response 10-80,000 Hz +0.5/−1.0 dB; THD 0.03% at 1 V output; RIAA ±0.2 dB, 20-20,000 Hz; 1000 mV phono overload; dual phono inputs with selectable sensitivity and impedance; S/N 75 dB (phono), 90 dB (tuner, aux.); triple tone-controls with three-frequency treble and bass turnovers; full two-deck dubbing/monitoring; high/low cut filters; muting switch..... $440

### AU20000 Integrated Stereo Amplifier
170 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.05% THD; channel separation 55 dB (phono), 60 dB (tuner and aux.); hum and noise −70 dB (phono), −80 dB (tuner and aux.); dual-amplifier phono equalizer; triple tone controls; selectable phono sensitivity and impedance; accepts up to three stereo tape decks with individual monitoring and deck-to-deck dubbing; tone defeat switch; two-step low/high filters; meter sensitivity switch; illuminated level meters; 7" H × 18⅛" W × 15¾" D ..... $1000
**AU11000A.** Similar to AU20000 but 110 W/ch continuous; input/output facilities for two stereo tape decks; hum and noise −75 dB (phono); no meters..... $750
**AU9900A.** Similar to AU11000A but 80 W/ch continuous; frequency response 5-80,000 Hz +0/−1.5 dB (1W) ..... $600

### AU-919 Straight DC Integrated Amplifier
100 W/ch continuous into 8 ohms from 5-20,000 Hz with 0.008% THD; frequency response 0-500,000 Hz +0/−3 dB (from main in); slew rate 200 V/μsec, 0.5 μsec rise time; RIAA ±0.2 dB,

20-20,000 Hz; S/N 90 dB (MM phono), −154 dBV EIN (MC phono); phono overload 320 mV (MM), 30 mV (MC); click-stop tone controls with dual turnover frequencies; subsonic and high-cut filters; two-system speaker selection; rack-mountable..... $800

### AU-717 DC Integrated Amplifier
85 W/ch continuous into 8 ohms from 10-20,000 Hz with 0.025% THD; frequency response 0-200,000 Hz +0/−3 dB (from main in); slew rate 60 V/μsec, rise time 1.4 μsec; RIAA ±0.2 dB, 20-20,000 Hz; S/N 80 dB (phono); phono overload 350 mV; click-stop tone controls with dual turnover frequencies; subsonic and high-cut filters; two-system speaker selection; rack mountable..... $550

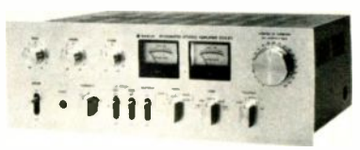
### AU-517 DC Integrated Amplifier
65 W/ch continuous into 8 ohms from 10-20,000 Hz with 0.025% THD; frequency response 0-200,000 Hz +0/−3 dB (from main in); slew rate 50 V/μsec, rise time 1.4 μsec; RIAA ±0.2 dB, 20-20,000 Hz; S/N 80 dB (phono); phono overload 320 mV; click-stop tone controls; subsonic filter; two-system speaker selection; rack mountable ..... $450

### AU-317 DC Integrated Amplifier
50 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.03% THD; frequency response 0-200,000 Hz +0/−2.5 dB (from main in); slew rate 40 V/μsec, rise time 1.4 μsec; RIAA ±0.2 dB, 20-20,000 Hz; S/N 77 dB (phono); phono overload 200 mV; click-stop tone controls; subsonic and high-cut filters; two-system speaker selection; rack mountable..... $350

### AU-217 Stereo Integrated Amplifier
30 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.06% THD; frequency response 10-50,000 Hz +0.5/−1.5 dB (from aux. in); RIAA ±0.5 dB, 30-15,000 Hz; S/N 76 dB (phono); phono overload 180 mV; click-stop tone controls; subsonic and high-cut filters; rack mountable ..... $230
**AU-117.** Similar to AU-217, except 15 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.17% THD..... $190

## SANYO

### DCA611 Integrated Amplifier
60 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.08% THD; IM dist. 0.05%; frequency response 20-20,000 Hz +0/−1 dB (aux. and tape), RIAA phono deviation ±0.5 dB from 30-150,000 Hz; phono sensitivity/overload 2.5/150 mV; aux. and tape sensitivity/impedance 150 mV/50,000 ohms; low (12 dB/octave at 30 Hz) and high (6 dB/octave at 7000 Hz) filters; tone control ±10 dB at 100 and 10,000 Hz. Features separate midrange



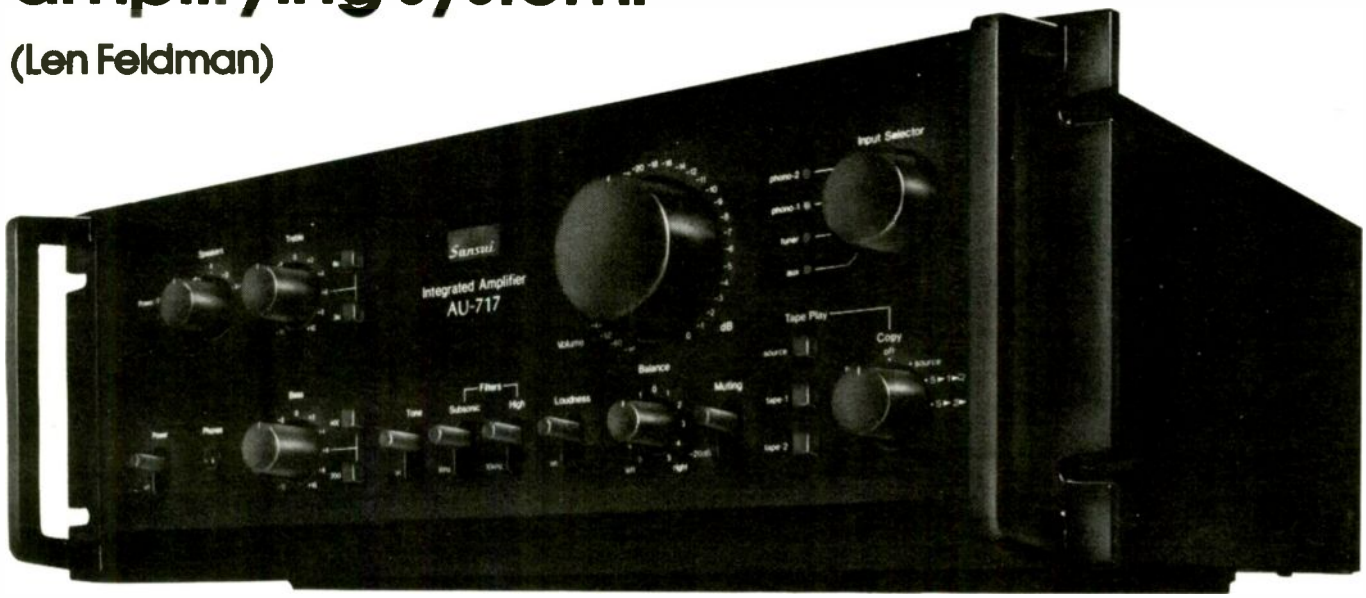
control ±10 dB at 1000 Hz; two-deck tape monitoring and dubbing; front-panel record jack; two peak power meters; 41-step attenuator volume control; switchable (A, B or A+B) speaker selector switch. 5⅞" H × 16½" W × 13¾" D..... $250
**DCA411.** Similar to DCA 611 except 45 W/ch; no midrange and low filter controls; 5⅞" H × 16½" W × 13¾" D ..... $200
**DCA311.** Similar to DCA411 except 30 W/ch and less tape monitoring/dubbing facilities..... $160

## SCOTT

### 480A Stereo Integrated Amplifier
85 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist; input sensitivity 2.5 mV (phono), switchable 2.5/5.0 mV (phono 2), 150 mV (high level); S/N (weighted, input shorted) 90 dB (phono), 95 dB (high level); RIAA equalization ±0.5 dB from 20-20,000 Hz, high level at 1 W; phono overload switchable 180 and 360 mV; separate bass (±10 dB at 100 Hz), midrange (±6 dB at 1000 Hz), and treble (±10 dB at 10,000 Hz) tone controls; high (12 dB/octave at 8000 Hz) and subsonic (12 dB/octave at 18 Hz) filters; channel separation 65 dB

# "The Sansui AU-717 is a superb amplifier. We like it with no ifs, ands, or buts." (Julian Hirsch) It offers "as much circuitry sophistication and control flexibility as any two-piece amplifying system."

(Len Feldman)




**Everyone says great things about the new Sansui AU-717, but the experts say it best.**

The Sansui AU-717 DC integrated amplifier is "Sansui's finest .... It incorporates a fully direct-coupled power amplifier section whose frequency response varies less than +0, −3dB from 0Hz (D.C.) to 200 kHz. The amplifier's power rating is 85 watts per channel (min. RMS) from 20 to 20,000Hz into 8-ohm loads, with less than 0.025 per cent total harmonic distortion .... If any amplifier is free of Transient Intermodulation Distortion (TIM) or any other slew-rate induced distortion, it is this one .... The slew rate ... was the fastest we have measured on any amplifier, an impressive 60 V/$\mu$sec.

"The preamplifier section of the AU-717 .... has very impressive specifications for frequency response, equalization accuracy, and noise levels ... The AU-717 has dual power supplies, including separate power transformers, for its two channels ... [and] exceptionally comprehensive tape-recording and monitoring facilities .... Good human engineering ... separates this unit from some otherwise fine products....

"The Sansui AU-717 is a superb amplifier. We like it with no ifs, ands, or buts." (Reprinted, by permission, **Stereo Review** Magazine, Feb. 1978. Julian Hirsch Test Report. Copyright © 1978. Ziff-Davis Publishing Company. All rights reserved.)

"One clear advantage of DC design is apparent. Even at the low 20Hz extreme, the amplifier delivers a full 92 watts — the same value obtained for mid-frequency power — compared with its 85 watt rating into 8 ohms....

"The equalization characteristic of the preamplifier was one of the most precise we have ever measured, with the deviation from the standard RIAA playback curve never exceeding more than 0.1dB....

"Sansui claims that this unit has reduced transient intermodulation distortion — a direct result of the DC design, and, indeed, the model AU-717 delivered sound as transparent and clean as any we have heard from an integrated amplifier....

"...worth serious consideration — even by those who prefer separate amplifiers and preamplifiers." (Reprinted in part from Len Feldman's test report in **Radio-Electronics,** January, 1978.)

Listen to the superb sound of the Sansui AU-717 at your Sansui dealer today. And be sure to ask him for a demonstration of the matching TU-717 super-tuner.

**SANSUI ELECTRONICS CORP.**

Woodside, New York 11377 • Gardena, California 90247 • SANSUI ELECTRIC CO., LTD., Tokyo, Japan
SANSUI AUDIO EUROPE S.A., Antwerp, Belgium • In Canada Electronic Distributors

Sansui

CIRCLE NO. 67 ON READER SERVICE CARD

# 1 AMPLIFIERS

at 1000 Hz (phono), 75 dB at 1000 Hz (high level); crosstalk 80 dB at 1000 Hz; damping factor 100 at 1000 Hz into 8 ohms. Features two independent phono preamps, bimodal electro-sensor relay protection and delay circuit; linear to logarithmic OP amp meter drive converters; 32-detent logarithmic dB-calibrated volume attenuator; variable impedance and capacitance selection; five-position mode switch; separate record and input selectors; acces-

sory input switch; phono sensitivity switch; center detent balance control; dual range output power level meters calibrated in watts and dBW; two tape monitors with full tape copy; switchable speaker selector; 5¼" H × 17" W × 14¼" D ..... $400

**460A.** Similar to 480A except 70 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.04% THD and IM dist. Features similar but no variable impedance/capacitance selection and no accessory input switch ..... $350

**440A.** Similar to 460A except 55 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD and IM dist.; S/N (weighted, input shorted) 85 dB (phono), 90 dB (high level); phono overload 180 mV; channel separation 60 dB (phono), 70 dB (high level); no subsonic filter. Features similar except two-position mode selector and no record and input selectors; 5¼" H × 17" W × 11¾" D ..... $300

**420A.** Similar to 440A except 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.08% THD and IM dist.; S/N (weighted, input shorted) 80 dB (phono), 85 dB (high level); high-level frequency response 20-20,000 Hz ±1 dB; channel separation at 1000 Hz 55 dB (phono), 60 dB (high level); damping factor 60 at 1000 Hz into 8 ohms. Features similar but no midrange control and no high and subsonic filters..... $220

## SETTON

### AS-5500 Stereo Integrated Amplifier

Two-chassis amplifier incorporates separate preamp (PS-5500) and amplifier (BS-5500). BS-5500 consists of two separate mono amps on single chassis; each amp has on/off, gain, and speaker controls; includes two logarithmic watt meters; THD 0.03%; IM dist. 0.04%. PS-5500 has two bands of bass, mid-range, and treble controls; two turnover controls and high and low filters; fader control allows fading from phono 1 to phono 2, aux. 1 to aux. 2, phono 1 to aux. 2, phono 2 to aux. 1, tuner to phono 2 or aux. 2; stereo mike mixing; three sets of bridged outputs; THD and IM dist. 0.03%; stereo separation greater than 75 dB from 20-20,000 Hz. ..... $1260

### AS-3300 Stereo Integrated Amplifier

Power amplifier: 69 W/ch into 8 ohms over 20-20,000 Hz with 0.08% THD and IM dist.; frequency response 20-20,000 Hz ±0.5 dB; damping factor 35 (8 ohms, 1 kHz). Preamplifier: hum and noise (IHF A) 90 dB (aux., tape), 85 dB (phono, high); input sensitivity for rated output 2.5 mV (phono, high), 5 mV (phono, low), 150 mV (tape, aux.), 6 mV/10,000 ohms (mike); phono overload 220 mV (high), 440 mV (low); channel separation 55 dB (aux., 1 kHz); bass, mid-range, and treble controls; loudness switch; high-frequency filter. 164 mm H × 500 mm W × 295 mm D..... $460

### AS-1100 Stereo Integrated Amplifier

50 W/ch into 8 ohms over 20-20,000 Hz with 0.06% THD and IM dist.; frequency response 20-20,000 Hz ±0.5 dB; hum and noise (IHF A) 85 dB (aux., tape), 85 dB (phono, high); input sensitivity for rated output 3.5 mV (phono, high), 7 mV (phono, low), 150 mV (tape, aux.); damping factor 30 (8 ohms, 1 kHz); phono overload 220 mV (high), 440 mV (low); channel separation 55 dB at 1000 Hz (aux.); bass, mid-range, and treble controls; loudness switch; high-frequency filter; 164 mm H × 500 mm W × 295 mm D ..... $380

### RCS-X 1000 Hi-Fi Control Center

Incorporates tuner with six preselected FM channels; AFC with four-digit display; two volume levers; bass and treble tone control with two crossover frequencies and numerical display of amount of correction in dB; high and low filters with tone defeat control; switching for three sets of speakers; two headphone jacks; two phono, tuner, and two aux. inputs; LF pink noise generator; double monitoring on mag 1 and 2; LED tuning meter; two-component design with interconnecting cable. FM tuner: THD at 1000 Hz 0.1% (stereo); stereo separation greater than 55 dB ..... $3500

## SHARP

### SM-1122 Integrated Amplifier

OTL dc stereo integrated amplifier. 15 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.8% THD; IM dist. 0.3% at rated power; damping factor 40 at 8 ohms, 1000 Hz; input sensitivity/impedance 3.0 mV/40,000 ohms (phono), 150 mV/40,000 ohms (tuner and aux.), 290 mV/40,000 ohms (tape), 2.5 mV/600 ohms (mic); output level 150 mV (tape), 95 mV (mic out); frequency response 15-70,000 Hz ±3 dB (tape, tuner, aux.), RIAA phono deviation +0.5/−0.5 dB from 20-20,000 Hz. Features 41-step calibrated volume control, LED indicators for all functions, switchable loudness control, front-panel stereo headphone input,

front-panel mic input with mic mixing level control, A, B/ A+B speaker selector switch, pushbutton function switches, and fader control. 5⅜" H × 15⅜" W × 10⅛" D..... $150

**MCR-1800.** Audio component rack in wood vinyl finish; 39⅜" H × 17" W × 15" D..... $70

## SHERWOOD

### HP-2000 Integrated Stereo Amp

120 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.08% THD and IM dist.; S/N 83 dB (phono, 10 mV); has dual power meters with LED peak indicators; 22-position detented volume controls; 11-position variable loudness contour; high and low filters; −20 dB audio muting; switching for independent use of preamp and power amp sections; six ac convenience outlets; solid walnut end panels are available ..... $750

**HP-1000.** Same but 60 W/ch continuous; S/N 73 dB (phono, 10 mV) ..... $600

## SHURE

### 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 ..... $70

## SONY

### TA-N88 Stereo Power Amplifier

Stereo power amplifier with pulse-width modulation circuitry and complementary push-pull vertical FET output 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; features pulse-locked power supply system and three stages of amplifier/speaker protection circuitry; suitable for 19-in rack mount; 3⅛" H × 18⅞" W × 14⅛" D ..... $1050

### TA-N7B Stereo Power Amplifier

Stereo power amplifier with dual-FET input and vertical FET output circuitry; all-stage direct-coupled dc design; 100 W/ch continuous into 8 ohms from 20-20,000 Hz with max. 0.01% THD and IM dist.; frequency response 0-100,000 Hz +0/−1 dB (dc coupled); S/N 120 dB ("A"); damping factor 100 at 1000 Hz; input sensitivity/impedance 1.3 V/50,000 ohms; features four separate power transformers; no signal capacitors or switching devices in signal path; muting and complete protection circuitry; two pairs of rear-panel inputs for dc or capacitor-coupled operation; brushed aluminum finish; 6¾" H × 17" W × 13¼" D ..... $920

### TA-E7B Preamplifier/Control Center

Stereo preamplifier with built-in head and phono equalizer amplifiers; input sensitivity/impedance 2.5 mV/50,000 ohms (phono 1) and switchable 50k/100k ohms (phono 2), 0.125 mV/3 or 40 ohms switchable (head amp), 150 mV/50,000 ohms (tuner, aux., tape); max. input 250 mV at 1000 Hz with 0.01% THD (phono 1 and 2), 12.5 mV (head amp); output level/impedance 150 mV/1000 ohms (rec. out), 1.5 V/1500 ohms (pre out), 10 mW/3.3 ohms (headphone); THD and IM dist. 0.003%; frequency response 1-150,000 Hz +0/−1 dB (tuner, aux., and tape), RIAA phono deviation ±0.2 dB; S/N (IHF "A") at rated input 85 dB (phono 1 and 2), 75 dB (head amp), 105 dB (tuner, aux., and tape); bass tone control ±10 dB at 25 Hz with 150-Hz turnover and at 50 Hz with 300-Hz turnover; treble tone control ±10 dB at 20,000 Hz with 4000-Hz turnover and at 40,000 Hz with 8000-Hz turnover; high (12 dB/octave above 9000 Hz) and low (12 dB/octave below 30 Hz) filters. Features two peak/average power meters with meter range switch; connections for tuner, two phono, two aux., two tape decks, and two pairs of preamp outputs; tape monitoring/dubbing facilities for two decks; front-panel Tape-2 connections; 32-step attenuator volume control with −20-dB muting switch; selectable phono input impedance for matching load requirements; stereo, reverse, L+R, L/R, and system check mode selector; gold-plated phono inputs. 6¾" H × 18⅛" W × 12⅝" D..... $820

## SOUNDCRAFTSMEN

### "New Class H" Stereo Power Amplifiers

250 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD; IM dist. 0.05%; S/N better than 105 dB; slew rate 50 V/μsec; damping factor greater than 100; input sensitivity/impedance 1.3 V/15-50,000 ohms; "Vari-Portional" system meters output power requirements for optimum efficiency; class AB amplifier; solid-state crowbar fail-safe overload protection circuitry with automatic reset; nonlimiting output circuitry; black anodized front panel with silver trim and walnut side panels; 7" H × 19" W × 15" D.

**MA5002.** Features red LED clipping indicators and green LEDs for Vari-Portional system usage; dual

power cords for remote ac on/off; VU meters with 10- and 100-times increased sensitivity meter range selection; two speaker switching; power switch; separate gain controls ..... $799

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

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

### 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

### PE2217R Stereo Preamplifier

Combines two discrete phono preamplifiers, discrete line amplifier, pushbutton patching, and equalizer. Features interlocked pushbuttons; discrete-octave equalization control (10 octaves/ch, ±12 dB); full spectrum level control/channel; zero-gain equalization balance; two or three tape deck dubbing capability with front-panel automatic LED tape monitoring input/out jacks; line/tape equalization selector; auto equalizer-defeat; two headphone

jacks; mono selector; reverse/stereo mode; four switched and two unswitched ac outlets. Specifications: frequency response 5-100,000 Hz ±0.25 dB (high level), 20-20,000 Hz ±0.5 dB (phono); THD and IM. dist. 0.05% at 1 V; gain 63 dB (phono), 21 dB (high level); output impedance 600 ohms max. Equalizer: S/N 96 dB; frequency response 10-100,000 Hz ±0.25 dB. Silver/gold front panel in walnut side panels; 6" H × 19" W × 11" D ..... $549

**PE2217.** Same except silver/gold anodized front-panel; 5¼" H × 19" W × 11" D ..... $549

## SPECTRO ACOUSTICS

### Model 500 Stereo Power Amplifier

250 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.25% THD and IM dist.; input sensitivity 1.5 V rms for rated output; noise 107 dB below rated output; LED power level indicators; readout attenuation; gain attenuators ..... $695

**Model 500SR.** Same as 500 but with rack mount 19-in face plate ..... $695

**Model 500R.** Same as 500SR but without LED power level indicators, gain attenuators, and readout attenuators ..... $595

### 202 Stereo Power Amplifier

100 W/ch into 8 ohms over 20-20,000 Hz with 0.25% THD and IM dist.; input sensitivity 1 V rms for rated output; neon-clipping peak-level indicators; class AB design ..... $375

**202C.** Same as 202 with 19-in rack mount front panel ..... $375

### 101B Preamp-Equalizer

Five-band "shelving" type graphic equalizer with oil damped slide controls and hybrid gyrator/coil design that can be "pushbutton patched" into line or tape outputs, or bypassed for EQ in/out comparisons; dual taping facilities include twin monitor circuits, low-impedance buffered outputs, bidirectional "bypass" copying and simultaneous recording from any selected source, with optional EQ inserted before, between or after the tape machines; features dual slide controls for level; function push-buttons for mode, equalizer in/out, monitor, record, source selection; equalizer range ±15 dB in five bands from below 20 Hz to beyond 20 kHz; THD 0.03% over 20-20,000 Hz; IM 0.005% at 60 and 7000 Hz mixed 4:1; S/N 81 dB phono, 95 dB high-level; dynamic range 95 dB phono, 108 dB high-level. 6" H × 15" W × 7" D ..... $300

### 217 Preamplifier

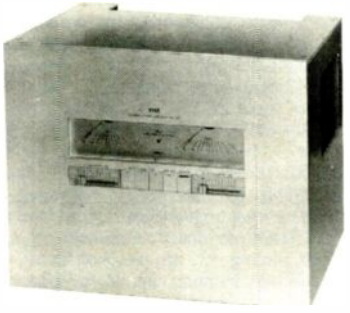
Straightline design with no tone controls or equalization, for ultra-linear output response; front-panel-accessible cartridge-loading adjustments with 16 combinations to match and load most magnetic phono cartridges; high-level switching section permits choice of source, bidirectional-bypass copying in the tape-monitor section and stereo or mono operation; response: phono, 20-20,000 Hz ±0.5 dB; high-level, 10-10,000 Hz ±0.25, 2-250,000 Hz ±3 dB; dist. 0.05% THD, 0.0075% IM at rated output; 3⅓" H × 17" W × 6¾" D ..... $250

**217.** Same with 19-in rack mount front panel ..... $250

## STAX

### DA-300 Stereo Power Amplifier

150 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.01% THD and IM dist.; damping factor



800 (1 kHz); residual hum and noise −97 dB; input sensitivity 1.7 V rms; protection circuits for shorts, speakers, and thermal overload; class A amplifier; dc coupling; two VU meters ..... $3800

### DA-80 Stereo Power Amplifier

45 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.005% THD and 0.01% IM dist.; residual hum and noise −100 dB; input sensitivity 0.89 V; protective circuits for shorts, speakers, and thermal overload, class A amplifier; dc coupling ..... $1700

### DA-80M Mono Power Amplifier

95 W continuous into 8 ohms over 20-20,000 Hz with 0.007% THD and 0.01% IM dist.; residual hum and noise −100 dB; input sensitivity 1.26 V; protective circuits for shorts, speakers, and thermal overload; class A amplifier; dc coupling ..... $1600

## SWTP

### 207-A Mono Power Amplifier

Single-channel power amp designed to be used in any multiples as required (for stereo or four-channel systems); 60 W min. continuous sine wave (20-20,000 Hz) at 0.05% THD into 4 or 8 ohms; IM dist. 0.01%; damping factor 100; hum and noise −90 dB; sensitivity 1 V rms. Features volt-amp and fuse protection plus overheat thermostat; output meter on front panel; perforated metal cover; 5" H × 4¼" W × 15" D (four will fit standard 19-in relay rack) ..... $110

**207.** Kit version ..... $78

### 215 Stereo Power Amplifier

25 W continuous sine-wave power into 4 or 8 ohms (20-20,000 Hz) at 0.05% THD; IM dist. 0.01%; damping factor 100; hum and noise −85 dB; output meter for each channel; 4¼" H × 4¾" W × 13" D.

Kit ..... $70

### 275 Mono Power Amplifier

Single-channel power amp designed to be used in any multiples as required; 85 W continuous sine wave into 4 ohms, 70 W into 8 ohms (20-20,000 Hz) at 0.05% THD; IM dist. 0.03%; damping factor 100; hum and noise −90 dB; sensitivity 1.0 V rms; has volt-amp protection, speaker, power-supply, and line fuses; 5" H × 4¼" W × 15" D (four will fit standard 19-in relay rack) ..... $64

**2-275.** Pair for stereo ..... $125

**AC-275.** Accessory kit with front-panel switch, overheat indicator, output meter, and level-control for rear panel ..... $8

### 198/A Stereo Preamplifier

Preamp/control center with pushbutton input and tone-control settings; loudness compensation; tape monitor functions; inputs: tape, tuner, aux., phono, mike; bass and treble tone controls: +4, +8, +12, −4, −8, −12 dB; left/right balance controls. Frequency response 10-100,000 Hz ±1 dB; HD or IM dist. 0.05% at rated output; phono and mike noise −65 dB, others −70 dB; sensitivity: phono and mike 2.0 mV for 1 V output, others 100 mV for 1 V output; two switched ac receptacles on rear; comes with brushed gold finished front panel and woodgrain cover.

Kit ..... $75

## TECHNICS BY PANASONIC

### SE-9600P Power Amplifier

110 W/ch into 8 ohms; THD and IM dist. 0.08%; frequency response 5-150,000 Hz +0/−3 dB; S/N 110 dB; damping factor 1 to 100 in four steps; input sensitivity/impedance 1 V/40,000 ohms; variable output impedance; peak-level output meters with range switching; full overload protection for amplifier and speakers; may be rack mounted; 7⅜" H × 17¾" W × 13¾" D ..... $810

### SE-9060 Power Amplifier

Stereo dc power amplifier; 70 W/ch sine wave continuous into 8 ohms over 20-20,000 Hz with

0.01% THD and IM dist.; frequency response 20-20,000 Hz +0/−0.1 dB; S/N (IHF A) 115 dB; damping factor 70; load impedance 4-16 ohms (main or remote), 8-16 ohms (main plus remote); 120-V ac, 60 Hz, 240 W; 3³¹/₃₂" H × 19" W ×

**AN IMPORTANT WORD ABOUT PRICES.....**

All prices quoted in this Directory are manufacturers' "Suggested Retail" or "Fair Retail Value," in conformance with new FTC rules following discontinuance of Fair Trade Laws. There may be a price differential for various sections of the U.S. depending on the manufacturer's location.

# 1 AMPLIFIERS

14¹³/₁₆" D ..... $450

### SU-9600P Control Center/Preamp
Frequency response 2-100,000 Hz +0/−3 dB (aux.), RIAA ±0.3 dB (phono); 0.02% THD and IM dist.; S/N 95 dB (tuner and aux.), 69-76 dB (phono); 20 dB audio muting switch; 18 dB/octave high and low filters with variable cut-offs (15 or 30 Hz low, 10,000 or 15,000 Hz high); max. phono input 1350 mV at 3 mV sensitivity; interdeck tape dubbing capability; fixed and variable phono input sensitivity and switchable phono input impedance; may be rack mounted; 6³/₁₆" H × 17³/₄" W × 13³/₄" D..... $640

### SU-9070 Preamplifier
Stereo dc preamplifier; output voltage/impedance 20 V/600 ohms (pre out max.), 150 mV (rec out

tape); frequency response 20-20,000 Hz +0/−0.1 dB (tuner, aux.), RIAA ±0.2 dB (phono); S/N (IHF A) 88 dB (phono MM), 72 dB (phono MC), 105 dB (tuner, aux.); THD 0.004%; input sensitivity/impedance 2.5 mV/47,000 ohms (phono MM), 60 μV/50 ohms (phono MC), 150 mV/47,000 ohms (tuner, aux.); max. phono input voltage (1 kHz, rms) 350 mV (phono MM), 8 mV (phono MC); 120-V ac, 60 Hz, 30 W; 3³¹/₃₂" H × 19" W × 14¹⁷/₃₂" D .. $460



### SU-8080 Integrated Amplifier
Stereo integrated dc amplifier. Power amplifier: 72 W/ch continuous sine wave into 8 ohms over 20-20,000 Hz with 0.02% THD; frequency response 20-20,000 Hz +0/−0.1 dB; S/N 115 dB (IHF A); input sensitivity/impedance 1 V/47,000 ohms; damping factor 70; load impedance 4-16 ohms (main or remote), 8-16 ohms (main plus re-

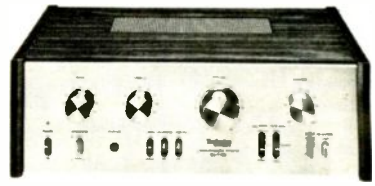
mote. Preamp section: input sensitivity/impedance 2.5 mV/27,000 ohms, 47,000 ohms (phono 1, 2), 200 mV/35,000 ohms (tuner, aux., tape); max. phono input 280 mV; S/N (IHF A) 88 dB (phono), 100 dB (tuner, aux., tape via tone), 106 dB (tuner, aux., tape direct); phono frequency response RIAA ±0.2 dB; output 9 V max. (pre out), 200 mV (rec out, tape); 120-V ac, 60 Hz, 190 W; 5¹/₂" H × 17²³/₃₂" W × 14¹⁹/₃₂" D..... $460

### SU-8600 Stereo Integrated Amplifier
Power amplifier: 73 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.08% THD, 80 W/ch continuous into 4 ohms; IM dist. 0.08%; frequency response 20-20,000 Hz +0/−0.2 dB; S/N 115 dB (IHF "A"); hum and noise 0.3 mV; damping factor 50 into 8 ohms; input sensitivity/impedance 1 V/47,000 ohms; load impedance 4-16 ohms (main or remote), 8-16 ohms (main + remote). Preamplifier: input sensitivity/impedance 2.0 mV/47,000 ohms (phono 1, 2), 150 mV/47,000 ohms (tuner, aux., tape 1, 2); phono max. input 200 mV rms at 1000 Hz; THD 0.08%; S/N (IHF"A") 73 dB (phono 1, 2), 92 dB (tuner, aux.); RIAA phono deviation ±0.4 dB, 20-20,000 Hz ±0.3 dB (tuner, aux.). Features bass and treble tone controls, ±12 dB range; bass and treble turnover frequencies; high and low filters (−12 dB/octave); loudness control with volume set at −30 dB; muting −20 dB; provision for two stereo tape decks with monitor circuits for tape-to-tape dubbing in both directions; inputs for phono 1, phono 2, tuner, and aux.; main and remote speaker terminals and pre-out and power-in terminals; switched and unswitched ac outlets. 7³/₃₂" H × 19⁹/₃₂" W × 13³/₈" D..... $360

### SU-7700 Integrated Amplifier
Stereo integrated amplifier. Power amplifier: 50 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.08% THD and IM dist.; residual hum and noise 0.6 mV; damping factor 50 (8 ohms), 25 (4 ohms); load impedance 4-16 ohms (main or remote), 8-16 ohms (main plus remote). Preamp section: input sensitivity/impedance 2.5 mV/47,000 ohms (phono), 150 mV/47,000 ohms (tuner, aux., tape); max. phono input voltage (1 kHz, rms) 150 mV; S/N (IHF A ) 78 dB (phono), 97 dB (tuner, aux.); frequency response 20-20,000 Hz ±0.5 dB (tuner, aux.), RIAA ±0.2 dB (phono); output voltage 150 mV (tape, rec out); 120 V ac, 60 Hz, 160 W; 5³/₄" H × 17¹⁵/₁₆" W × 13⁹/₃₂" D ..... $280

### SU-7300 Integrated Amplifier
Stereo integrated amplifier. Power amplifier: 41 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.08% THD and IM dist.; residual hum and noise 0.6 mV; damping factor 40 (8 ohms), 20 (4 ohms); load impedance 4-16 ohms. Preamp section: input sensitivity/impedance 2.5 mV/47,000 ohms (phono), 150 mV//47,000 ohms (tuner, tape); max. phono input voltage (1 kHz, rms) 150 mV; S/N (IHF A) 78 dB (phono), 97 dB (tuner); frequency response 20-20,000 Hz ±0.5 dB (tuner), RIAA ±0.3 dB (phono); output voltage 150 mV (tape, rec. out); 120-V ac, 60 Hz, 140 W; 5³/₄" H × 17⁹/₁₆" W × 13³/₃₂" D..... $200

### SU-7100 Stereo Integrated Amplifier
Power amplifier: 35 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.1% THD and IM dist., 36 W/ch into 4 ohms; hum and noise 0.6 mV; damping factor 40 into 8 ohms, 20 into 4 ohms; main or remote load impedance 4-16 ohms. Preamplifier: input sensitivity/impedance 2.5 mV/47,000 ohms (phono), 150 mV/33,000 ohms (tuner, tape 1, 2); phono max. input 110 mV rms at 1000 Hz; S/N (IHF "A") 78 dB (phono), 97 dB (tuner, aux.); RIAA phono deviation ±0.5 dB, 20-20,000 Hz ±0.5 dB (tuner,



aux.). Features provision for two stereo tape decks with monitor circuits for tape-to-tape dubbing in either direction; 41-step volume control; bass and treble tone controls, ±12 dB range; tone switch; high filter (−6 dB/octave rolloff); loudness control; and main and remote speaker system terminals with pushbutton indication switch. 5³/₄" H × 17⁹/₁₆" W × 12³¹/₃₂" D ..... $170

## THRESHOLD

### 4000A Stereo Power Amplifier
Power amplifier with stereo amplifier/bridged mono amplifier modes; front-to-back/cascode class A circuitry incorporated into 4 mHz channel output stages with 6 kW dissipation reserve; 1-kW power transformer and dual feeding independent power supplies; includes peak and average output level indicators (+2 to −20 dB range) for each channel; 200 W/ch continuous from 20-20,000 Hz with 0.05% THD and IM dist.; frequency response 1.5-200,000 Hz; damping factor 300; slew rate 50 V/μsec; S/N 106 dB unweighted..... $1825

### 400A Stereo Power Amplifier
100 W/ch into 8 ohms over 20-20,000 Hz with 0.1% THD and IM dist.; slew rate 40 V/μsec (max.); frequency response 20-20,000 Hz ±0 dB; damping factor 200; S/N 103 dB (unweighted); thirty-two output transistors; current limiting, thermal, fuse, and circuit breaker protected; peak vs average output level indicators for each channel; grained and black anodized face plate with smooth black anodized chassis, heat sinks, and handles; 6¹⁵/₁₆" H × 19" W × 11" D ..... $1215

### CAS-1 Stereo Power Amplifier
All signal-carrying transistors in cascode mode that eliminates voltage-induced gain nonlinearities; dual power supplies and active current sourcing; low noise metal film resistors and tantalum capacitors in signal path; heavy gauge chassis and aluminum

"T" beam extrusion mounts; 75 W/ch continuous from 20-20,000 Hz with 0.05% THD and IM dist.: frequency response 1.5-200,000 Hz; damping factor 120 constant from 20-20,000 Hz; S/N 105 dB unweighted, 110 dB weighted; slew rate 40 V/μsec ..... $740

### NS 10 Preamplifier
Wide-bandwidth preamplifier with 50,000,000-Hz active circuit bandwidth and 1,500,000-Hz bandpass capability; active input devices biased to current levels and increases magnetic phono input transistor overload to 1 V at 20,000 Hz and 2 V at 100,000 Hz; discrete design with tantalum capacitors and metal film resistors in signal path; sealed gold-contact switch modules; dual segment volume control individually adjusted for 0.5% tracking be-

tween segments; frequency response 1.5-160,000 Hz; THD and IM dist. 0.01%; noise 80-85 dB; slew rate 150 V/μsec..... $1046

### M1 Impedance Matching Module

Interfaces low-impedance moving-coil cartridges to 47,000-ohm magnetic cartridge input load of NS 10; frequency response 0.1-1,000,000 Hz +0/−3 dB with 47,000-ohm load; seven transistors/ch direct-coupled to input; accepts cartridges with 1.5-900 ohm loads..... $154

## TOSHIBA

### SC-335 Stereo Power Amplifier

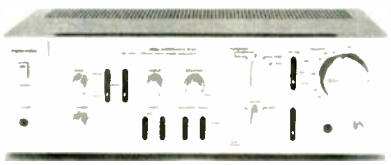
40 W/ch continuous into 8 ohms from 20-20,000 Hz at 0.1% THD and IM dist.; damping factor 25; frequency response 5-80,000 Hz ±1 dB; power bandwidth 5-50,000 Hz, both channels driven, at 0.1% THD; S/N (IHF "A") 95 dB (main in). Features audio muting switch (−20 dB); left/right power meters; power range selector switch; double-pair speaker drive selection; stereo headphone jack; heat radiator; 3⁴/₅" H × 16¹/₂" W × 9¹/₂" D ..... $170

### SY-335 Stereo Preamplifier

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 ("A" weighted); three ac outlets. Features twin-tape monitoring/duplicating facilities; 41-position click-stop volume control; microphone mixing with control/switch; mode and loudness switches; phono equalization amp; 3⁴/₅" H × 16¹/₂" W × 9¹/₂" D..... $105

### SB-420 Integrated Amplifier

42 W/ch continuous, both channels driven into 8 ohms over 20-20,000 Hz with 0.3% THD; IM dist. 0.3%; damping factor 25; frequency response 10-80,000 Hz +0/−1 dB; power bandwidth 5-40,000 Hz, both channels driven, at 0.3% THD. Preamp: input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/47k ohms (aux., tape, tuner), 4 mV/20k ohms (mic), 1 V/47k ohms (main



in); output 150 mV (tape), 1.0 V (preamp out); S/N (IHF "A") 80 dB (phono at 10 mV), 90 dB (aux.); frequency response 30-15,000 ±0.3 dB (phono), 10-50,000 Hz +0/−1 dB (aux., tape); phono overload 350 mV. Features all stage direct-coupled OCL circuitry and push-pull type symmetrical complementary circuitry; attenuator type volume control; two-step audio muting; two tape monitors; two phono inputs; two-step turnover switches with tone defeat; mike mixing with independent volume control; 5⁴/₅" H × 17¹¹/₁₆" W × 14⁴/₅" D..... $230

## YAMAHA

### B-2 Power Amplifier

100 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.08% THD and 0.3% IM dist.; frequency response 10-100,000 Hz +0/−1 dB (1 W); peak-reading meters calibrated in watts and dB; two inputs; two outputs ..... $850

### C-2 Preamplifier

Incorporates all-FET circuitry; frequency response 30-15,000 Hz ±0.2 dB (phono), 5-100,000 Hz +0/−1.5 dB (tuner, aux., tape); head amp for moving-coil cartridges; bass, treble, and four-gang volume/balance controls; subsonic filter; inputs: three phono, tuner, aux., two tape; outputs: two pre out, two rec. out..... $650

### CA-2010 Integrated Amplifier

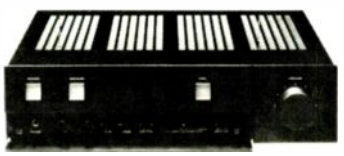
Amplifier section switchable between classes A and B; 120 W/ch continuous (class B), 30 W/ch continuous (class A) into 8 ohms with 0.03% THD; preamp section incorporates equalizer amp with 96 dB S/N (IHF A); moving-coil amp has 71 dB S/N (IHF A) and 50 μV input sensitivity; tone control amp has tone, filter, and buffer amps; two-ganged volume controls for each channel (one each on input/output); peak level output meters have −50 to +5 dB range and may be switched to read rec. out terminal output; selectable phono impedance (47,000, 68,000, and 100,000 ohms); switching for independent use of preamp and power sections; audio muting switch..... $785

### CA-1010 Integrated Amplifier

Fully complementary OCL power amp section switchable between classes A and B; 90 W/ch (class B), 18 W/ch (class A). Preamp section has 96 dB S/N (IHF A) and input sensitivity of 10 mV; dist. 0.003% (phono to rec. out); 310 mV dynamic margin for phono input; moving-coil head amp has 68 dB S/N (IHF A) and 50 μV input sensitivity; tone control amp has tone, filter, and buffer amp; two-ganged volume control for each channel; peak level meters have a range of −50 to +5 dB and may be switched to read rec. out terminal output; three input impedances for MM cartridges (47,000, 68,000, and 100,000 ohms); switching for independent use of preamp and power amp sections; audio muting switch ..... $645

### 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, 80 W/ch continuous, both channels driven into 4 ohms from 20-20,000 Hz at 0.05% THD; THD 0.005% max.; IM dist. 0.003% max.; power bandwidth



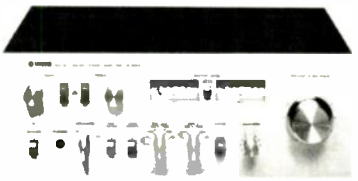
10-50,000 Hz; frequency response 20-20,000 Hz +0/−0.2 dB; damping factor over 100 at 8 ohms, 1000 Hz. Preamplifier: input sensitivity/impedance 2.5 mV/47k ohms/200 pF (phono moving magnet), 60 μV/10 ohms (phono moving cartridge), 200 mV/47k ohms (tuner, aux., tape); max. input level 230 mV rms (moving magnet), 6 mV rms (moving coil); S/N at 10 mV ref. level better than 97 dB (phono moving magnet), better than 82 dB (phono moving coil), 112 dB min. (tuner, aux., tape); output sensitivity/impedance 200 mV/600 ohms (record playback), 2 V/600 ohms (preamp out); RIAA deviation 0/±0.2 dB, 20-20,000 Hz +0/−0.2 dB (tuner, aux.); channel separation at 1000 Hz 70 dB min. at 5.1-ohm input (tuner), 75 dB min. at 5100-ohm input (phono moving magnet), 75 dB min. (phono moving coil input shorted); headphone output 39 mV (8 ohms, rated output). Features FET input circuitry employed in power amplifier, tone control and equalizer; dual power meters; separate rec. out and input selectors; variable loudness controls; and high filter and power amp direct switches. 4⁵/₈" H × 17¹/₈" W × 15" D..... $595

### CA-810 Integrated Amplifier

65 W/ch continuous over 20-20,000 Hz with 0.05% dist.; preamp dist. 0.005%; S/N 83 dB (IHF A); input sensitivity 2.5 mV; moving-coil head amp has 73 dB S/N and 60 μV input sensitivity; has negative feedback tone controls with individual defeat controls for bass and treble; power output meters cover 0.5 mW to 158 W; phono impedance selectable (47, 68, 100,000 ohms), rec. out selector switch ..... $395

### CA-610II Stereo Integrated Amplifier

Power amplifier: 45 W/ch continuous into 8 ohms from 20-20,000 Hz at 0.05% THD, 50 W/ch continuous into 4 ohms from 20-20,000 Hz at 0.1% THD; THD and IM dist. 0.02% with 8-ohm load; damping factor 50 into 8 ohms at 1000 Hz. Preamplifier: input sensitivity/impedance 2.5 mV/47k ohms (phono), 150 mV/ 47k ohms (tuner, aux.,



tape PB); max. input level 150 mV at 1000 Hz (phono); S/N 97 dB for 10 mV, shorted (phono), 100 dB (tuner, aux., tape PB); output sensitivity/impedance 150 mV/600 ohms (rec. out); RIAA deviation +0.3/−0.3 dB from 30-15,000 Hz, 10-100,000 Hz +2/−2 dB (tuner, aux., tape PB); high filter rolloff −6 dB/octave at 10,000 Hz. Features main direct switch to bypass tone-control amp; dual power meters; input and rec. out selectors, variable loudness contour; master volume control; two front-panel speaker connectors; stereo headphone jack; and three rear ac outlets. 6¹/₄" H × 17¹/₈" W × 13³/₁₆" D..... $295

### CA-410 II Integrated Amplifier

35 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.05% THD, 40 W continuous, both channels driven into 4 ohms from 20-20,000 Hz at 0.1% THD; input sensitivity/impedance 3.0 mV/47k ohms (phono), 150 mV/47k ohms (tuner, aux., tape playback); max. input level 135 mV at 1000 Hz, 0.05% THD (phono); RIAA deviation +0.3/−0.3 dB from 30-15,000 Hz, +0.5/−0.5 dB (tuner, aux., tape); S/N (IHF "A") 95.4 dB shorted (phono), 100 dB (tuner, aux., tape playback), dist. 0.1% from 20-20,000 Hz at 1 V out (phono), 0.02% into 8 ohms at 17.5 W (tuner, aux , tape playback); subsonic filter rolloff −12 dB/octave at 12 Hz, high filter rolloff −6 dB/octave at 8000 Hz. Features power output meters, separate input and record out selectors, variable loudness controls, and speaker selector buttons; 5¹/₂" H × 17⁷/₈" W × 13¹/₁₀" D..... $235

### HA-1 MC Cartridge Head Amplifier

Pre preamp for moving-coil phono cartridges. Has low-high output level switches and a "pass" position for MM cartridges. Input impedance 10 ohms (low), 100 ohms (high); gain 34 dB (low), 14 dB (high); frequency response 10-500,000 Hz +0/−1 dB; THD 0.005%; max. input levels 30 mV (low), 300 mV (high); input equivalent noise −157 dB/V (low), −144 dB/V (high); minimum load impedance 10,000 ohms; 2⁵/₈" H × 5⁷/₈" W × 13⁷/₈" D.... $270

## ABOUT PRICES

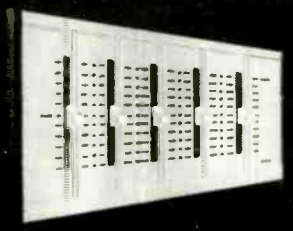
**With repeal of Fair Trade Laws, manufacturers are now providing "Suggested Retail" or "Fair Retail Value" figures for the guidance of their dealers and customers. Prices in this Directory are those provided by the manufacturers under these conditions.**

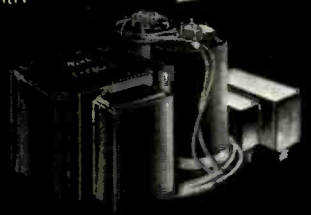
# THE JVC SEPARATES.

## Sensitive tuners, plus DC amplifiers that help eliminate sonic backlash.

If you've ever listened to a JVC music system with a separate tuner and amplifier, and thought, "One of these days . . ."

Well that day is here. The new JA-S44 DC integrated stereo amplifier, with its exclusive built-in SEA graphic equalizer and dual power meters, provides clean, uncannily-accurate music reproduction, with all the power you're ever likely to need.*

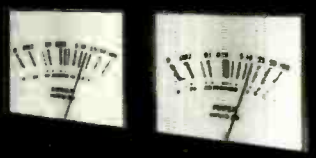




Our "Tri-DC" design in the JVC JA-S55 and JA-S77 further eliminates distortion-causing capacitors within the DC phono equalizer, DC tone control and DC power amplifier sections, providing frequency response from 5Hz to 100kHz (+0, −1.0dB). And they have dual power supplies—not one for each channel, as in conventional designs—but one for the Class A-operated preamp/tone control section, and a second which performs even heavier duty for the Class B-operated DC power amplifier section. This unique design practically eliminates both inter- and intra-channel crosstalk and distortion, or what we call "sonic backlash." The results: increased tonal definition and brilliance, especially with high-level transient signals.

The new JVC JT-V22 AM/FM stereo tuner is a standout in its class. With an FM front end that uses an FET RF amplifier, combined with a 3-gang tuning capacitor, the JT-V22 brings in the most timid FM stations and makes them sound as though they're just around the corner.

Or, if you're in an area where FM stations are a hairline away from each other on the dial, it delivers clear, interference-free reception. Then, to help you make sure you're on target, it has both signal strength and center-channel tuning meters.

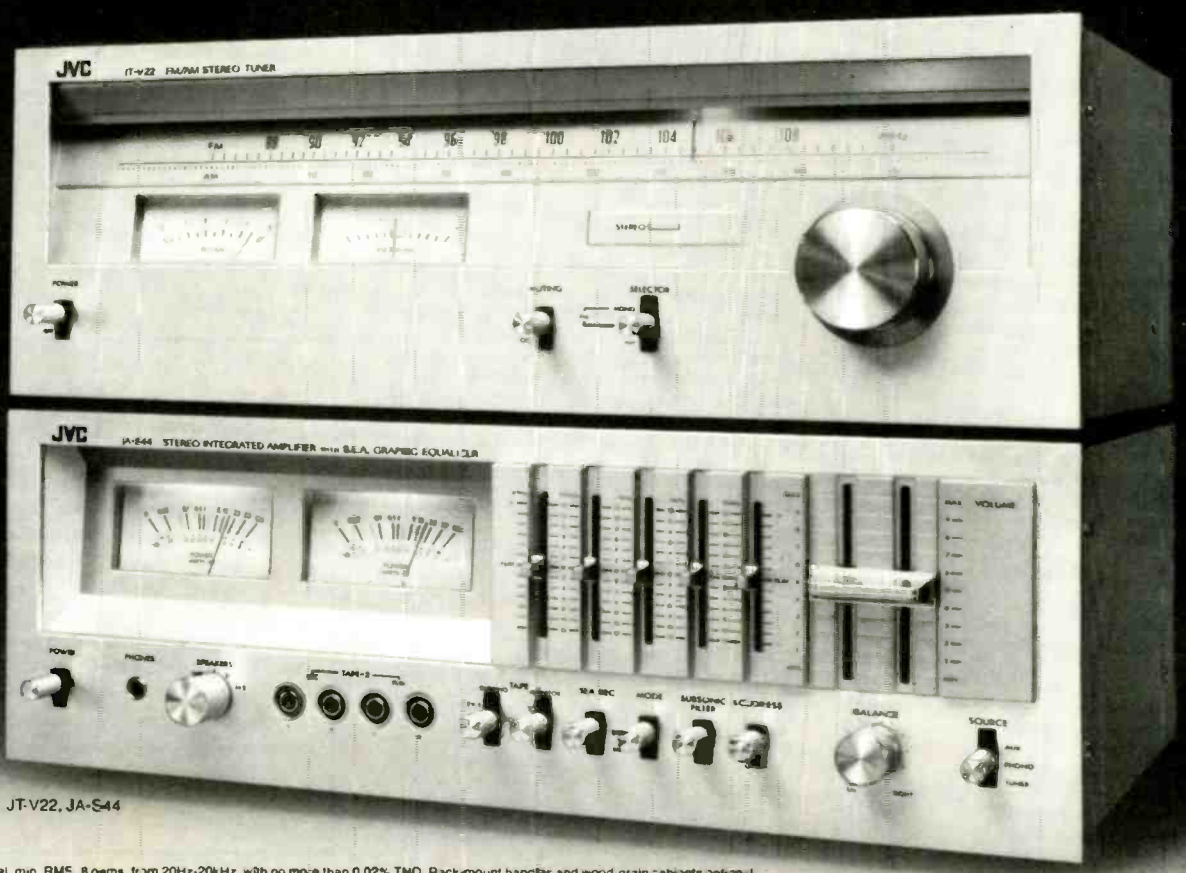


Probably the most significant advance in recent FM tuner technology is JVC's Phase Tracking Loop circuitry in our new top model—JT-V77. This advanced circuit provides high signal-to-noise ratio as well as excellent interference rejection and freedom from multipath effects and adjacent channel interference. It's still another example of JVC's innovative engineering. But sounds speak louder than words. See and hear these magnificently-designed separates at your JVC dealer soon.

JVC High Fidelity Division, US JVC Corp., 58-75 Queens Midtown Expressway, Maspeth, N.Y. 11378. Canada: JVC Electronics of Canada, Ltd., Ont.

JVC

Top: JA-S22 Bottom: JA-S55 Top: JT-V77 Bottom: JA-S77




JT-V22, JA-S44

*45 watts/channel, min. RMS, 8 ohms, from 20Hz-20kHz, with no more than 0.02% THD. Rackmount handles and wood-grain cabinets optional.

CIRCLE NO. 42 ON READER SERVICE CARD

# 2 TUNERS

## ACCUPHASE

**T-100 AM-FM Stereo Tuner**
FM sensitivity 11.2 dBf (2.0 μV); capture ratio 1.5 dB; S/N 75 dB/; THD 0.1% at 1000 Hz; stereo separation 45 dB at 1000 Hz; response 20-15,000 Hz +0/−1 dB. 6" H × 17½" W × 14" D ..... $750
**AWC-1.** Walnut case..... $50

**T-101 FM Stereo Tuner**
FM sensitivity 11.2 dBf (2.0 μV); capture ratio 2.0 dB; S/N 70 dB; THD 0.1% at 1000 Hz; stereo separation 45 dB at 1000 Hz; response 20-15,000 Hz +0/−1 dB. 6" H × 18" W × 14" D ..... $500
**AWC-2.** Walnut case..... $50

## AKAI

**AT-2600 AM-FM Stereo Tuner**
FM section: sensitivity (IHF) 9.8 dBf (1.7 μV); capture ratio 1 dB; image response −110 dB; i-f response −110 dB; AM suppression 55 dB; S/N 75 dB; has signal strength/deviation and FM tuning meter; stereo separation 45 dB (1 kHz). AM section: sensitivity (IHF) 13 μV (with external antenna); image response −55 dB; i-f response −70 dB; S/N 50 dB. 5.6" H × 17.3" W × 13.2" D. $300

**AT-2400 AM-FM Stereo Tuner**
FM section: sensitivity (IHF) 10.3 dBf (1.8 μV); capture ratio 1 dB; image response −90 dB; i-f response −100 dB; AM suppression 55 dB; S/N 75 dB; has signal strength and FM tuning meters; stereo separation 42 dB (1 kHz). AM section: sensitivity (IHF) 15 μV (with external antenna); image response −55 dB; i-f response −45 dB; S/N 50 dB. 5.6" H × 17.3" W × 13.2" D..... $195

**AT-2200 AM-FM Stereo Tuner**
FM section: sensitivity (IHF) 10.8 dBf (1.9 μV); capture ratio 1.3 dB; image response −55 dB; i-f response −85 dB; AM suppression 50 dB; S/N 70 dB; has signal strength and FM tuning meters; stereo separation 40 dB (1 kHz). AM section: sensitivity (IHF) 17 μV (with external antenna); image response −55 dB; i-f response −45 dB; S/N 45 dB. 4.9" H × 15" W × 10.3" D ..... $145

## DENON

**TU-850 FM Tuner**
IHF sensitivity 9.8 dBf (1.7 μV); capture ratio 0.8 dB; image response-120 dB; i-f response −110 dB;

AM suppression 65 dB; S/N 84 dB; THD 0.08% (stereo), 0.05% (mono). Features five-gang capacitor using MOS FET, two-system i-f section, PLL/IC stereo demodulation circuitry, recording level check, high-precision tuning, and two multi-functioning level meters to measure amplifier output. 164 mm H × 434 mm W × 40 mm D..... $480

**TU-501 AM-FM Stereo Tuner**
FM Section: IHF sensitivity 10.3 dBf (1.8 μV); capture ratio 1.2 dB; image response −90 dB; i-f response −90 dB; AM suppression 60 dB; S/N 75 dB; THD 0.15% (stereo), 0.1% (mono). Features four-gang capacitor, low-noise FET, and separate left/right meters with meter selector switch. AM section: sensitivity 300 μV/m; image response −55 dB; S/N 55 dB. Features IC and high-selectivity ceramic filters. 5¾" H × 16¹⁵/₁₆" W × 11¹⁵/₁₆" D .... ..... $340

**TU-500 FM Tuner**
IHF sensitivity 9.8 dBf (1.7 μV); capture ratio 1.0 dB; image response −80 dB; i-f response −110 dB; AM suppression 60 dB; S/N 75 dB; THD 0.2% at 1000 Hz (mono and stereo), 0.3% from 50-5000 Hz (stereo), 0.3% from 50-10,000 Hz (mono); stereo separation 45 dB at 1000 Hz, 40 dB from 100-10,000 Hz. Features separate left/right VU meters, multipath terminal, five-gang variable capacitor, dual gate MOS FET and oscillator circuit, two separate i-f sections, PLL decoder, "Stereo Only" switch, and headphone jack; 140 mm H × 430 mm W × 350 mm D..... $415

## DYMEK

**AM7 International AM Tuner**
AM-only (150-300 kHz and 540-1600 kHz) solid-state tuner. Sensitivity: 3 μV medium-wave, 6 μV long-wave at 10 dB S/N; −6 dB r-f bandwidth ±4 kHz (narrow), ±7.5 kHz (wide); −50 dB r-f bandwidth ±10 kHz (narrow), ±14 kHz (wide); THD (30% mod, 1 kHz) 0.5%, (80% mod. 1 kHz) 1.5%; audio output 1 V rms, 5000 ohms, +2 dBm, 600 ohm optional; tuning meter; 110/220 V, 60 Hz. 3.5" H × 17.5" W × 10" D ..... $320

**AM5 AM Tuner**
AM-only solid-state tuner. Sensitivity 3 μV for 10 dB S/N; bandwidth −6 dB r-f; narrow mode ±4 kHz, wide mode ±10 kHz; modulation response −3 dB at 15 Hz and 9 kHz; THD (30% mod, 1 kHz) 0.5%; 80% modulation 1.5%; front-mounted slide volume control; 3.5" H × 17.5" W × 10" D (option 19-in rack-mount hardware); designed to be used with active directional antenna (Dymek DA5) . $295

## DYNACO

**2501 Varactor FM Tuner**
Varactor FM tuner with six electronically tuned stages and PLL multiplex and automatic logic circuitry; LED signal-strength indicator with 60-dB display range; built-in quartz digital clock; touch sensitive tuning knob; LK, i-f, multiplex, and SCA filters; four preset stations; 32-position stepped level control; front-panel switchable de-emphasis of 25, 50, 75 μsec; four power supplies. 30-dB sensitivity 9.8 dBf (1.7 μV) mono, 22 dBf (7 μV) stereo; 50-dB quieting sensitivity 16 dBf (3.5 μV) mono, 36 dBf (35 μV) stereo; alternate channel selectivity 80 dB; capture ratio 1.75 dB; image rejection 100 dB; AM rejection 50 dB; stereo separation 45 dB from 100-5000 Hz, 30 dB at 10,000 Hz; THD 0.19% mono, 0.4% stereo; IM dist. 0.15% mono and stereo; S/N at 65 dBf 70 dB mono, 65 dB stereo. Pewter front panel..... $800

**FM-5 FM Stereo Tuner**
Frequency response 20-15,000 Hz ±1 dB; 40 dB stereo separation at 1000 Hz; FM sensitivity 10.2 dBf at 30 dB quieting; 1.5 dB capture ratio; THD 0.5%; 65 dB S/N; has 55 dB 38-kHz subcarrier and 19 kHz suppression and 80 dB SCA carrier suppression; 2 V output; features stereo indicator light, signal-strength meter, interstation muting, ceramic i-f filters, and Dynatune automatic tuning for exact center-of-channel; 4½" H × 13½" W × 9" D.
Kit..... $199
Assembled ..... $319

## FISHER

**FM2310 AM-FM Stereo Tuner**
FM section: sensitivity 4.3 μV; S/N 70 dB; capture ratio 0.8 dB; image response −80 dB; i-f response −100 dB; AM suppression 65 dB; frequency response 20-15,000 Hz ±1 dB. AM section: sensitivity 280 μV/m; S/N 55 dB; image response −56 dB; i-f response −70 dB. 5¹⁵/₁₆" H × 17½" W × 14³/₁₆" D..... $250

**FM2110 AM-FM Stereo Tuner**
FM section: sensitivity 4.6 μV; S/N 66 dB; capture ratio 1 dB; image response −60 dB; i-f response −75 dB; AM suppression 60 dB; frequency response 20-15,000 Hz ±1 dB. AM section: sensitivity 300 μV/m; S/N 55 dB; image response −50 dB; i-f response −50 dB. 5¹⁵/₁₆" H × 16⁹/₁₆" W × 13¾" D.. ..... $160

## HARMAN/KARDON

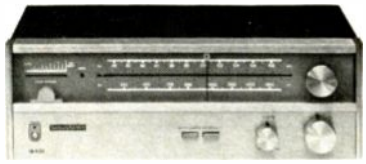
**Citation 18 FM Tuner**
Usable mono sensitivity 11.2 dBf (2.0 μV); 50-dB quieting mono sensitivity 15.1 dBf (3.2 μV); cap-

ture ratio 1.5 dB; S/N 64 dB; image response −100 dB; i-f response − 100 dB; frequency response 10-50,000 Hz ±0.5 dB; has FM quieting meter for tuning; two-stage muting system (wide and narrow); pushbutton for external processor use; 25 μsec de-emphasis; noise filter; headphone monitoring; output level adjustment; 4¾" H × 16" W × 13½" D ..... $630
**CW-14/15.** Walnut enclosure for Citation 18.... $40
**P-11/17.** Rack panel for Citation 18 ..... $30
**Citation RPM.** Rack panel mount for Citation 18 ..... $188
**Citation CRM.** Floor-standing rack mount for Citation 18..... $285

# 2 TUNERS

### hk500 AM-FM Stereo Tuner

FM section: usable sensitivity 1.9 μV; 50-dB quieting 3.0 μV (mono), 40μV (stereo); capture ratio 1.5



dB; alternate channel selectivity 65 dB; image response −50 dB; i-f response −50 dB; AM rejection 55 dB; stereo separation 45 dB; S/N 75 dB; HD 0.2% at 65 dBf (mono). Features signal-strength tuning meter; LED in-tune and stereo indicators; switchable 75/25 μsec de-emphasis; switchable interchannel noise suppression; output level control; parallax-free tuning dial ..... $229

## HEATH

### AN-2016 Modulus Tuner/Preamp

Stereo/four-channel combines preamp and digital-readout AM-FM tuner. THD or IM dist. 0.05% (preamp); hum and noise −75 dB (phono); Baxandall tone controls; peak-responding output meters; FM sensitivity 1.7 μV (3.5 μV for 50 dB quieting); selectivity 100 dB; stereo separation 40 dB; optional plug-in circuit boards and Dolby FM (AD-1504, $39.95), CD-4 (AD-1507, $79.95), and full-logic SQ (AM-1503, $49.95). 6½" H × 19" W × 14½" D ..... $600

### AJ-1510A Digital FM Stereo Tuner

Frequency-synthesized FM tuning provides 0.005% accuracy; digital frequency readouts; push-button or punched-card frequency selection; automatic frequency sweep; FM sensitivity 1.8 μV IHF; frequency response 20-15,000 Hz ±1 dB; channel separation 40 dB at mid-frequencies.

Kit ..... $580

**AJA-1510-1.** Pecan-stained veneer case ..... $27

### AJ-1515 AM-FM Stereo Tuner

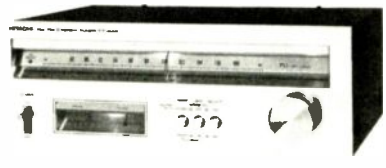
Digital frequency readout tuner utilizing same circuitry as AR-1515 receiver. FM section: FM sensitivity 1.8 μV; capture ratio 1.5 dB; frequency response 20-15,000 Hz ±1 dB; center-tune and signal-strength meters; output level control; stereo and program indicators. AM section features nine-pole LC filter; secondary controls are concealed behind fold-down front panel. 6⅛" H × 17½" W × 14¼" D

Kit ..... $380

## HITACHI

### FT 340 AM-FM Tuner

Dual-gate MOS FET and three-stage variable capacitors with i-f filter, four-stage differential integrated



circuitry and PLL multiplex demodulator. FM section: usable sensitivity (IHF) mono 10.8 dBf (1.9 μv), stereo 37 dBf (6.3 μV); 50-dB quieting sensitivity mono 17 dBf (3.9 μV), stereo 37 dBf (39 μV); capture ratio 1.5 dB; S/N 75 dB; image response −50 dB; i-f response −90 dB; alternate channel selectivity 65 dB; frequency response 30-15,000 Hz +0.2/−2.0 dB; dist. 0.15% (mono), 0.4% (stereo). Has MPX noise filter switch, center-tuning and signal-strength meters, and high-inertia flywheel ..... $200

## JVC

### T-3030 FM Stereo Tuner

Digital frequency synthesizer FM tuner; sensitivity 1 μV; image response −110 dB; i-f response −110 dB; capture ratio 1 dB; AM suppression 65 dB; S/N 72 dB; 25, 50, and 75 μsec de-emphasis; variable output level; seven pre-selected station memory; LED digital frequency display; five-LED signal strength indicator; automatic scanning; anti-birdie filter (switchable); 2⅜" H × 16⁹/₁₆" W × 13¹¹/₁₆" D. ..... $600

### JT-V77 AM-FM Stereo Tuner

FM section: sensitivity 10.3 dBf (1.8 μV); frequency response 20-15,000 Hz +0.5/ −0.8 dB;

50-dB quieting sensitivity 36.8 dBf (38 μV) stereo, 16.8 dBf (3.8 μV) mono; S/N 72 dB (stereo), 78 dB (mono); capture ratio 1.0 dB; alternate channel selectivity 75 dB; image response −90 dB (98 mHz); i-f response −95 dB; AM suppression 60 dB; stereo separation 45 dB at 100 Hz, 50 dB at 1000 Hz, and 40 dB at 10,000 Hz; antenna input impedance 75 ohms (unbalanced), 300 ohms (balanced). AM section: sensitivity 300 μV (bar antenna), 50 μV (external antenna); image response −45 dB; i-f response −45 dB; S/N 50 dB. Features PLL multiplex demodulator with recording level calibrator and automatic pilot signal cannceller; four-gang tuning capacitor; automatic tuning hold circuit; single-clip four- and one-resonator ceramic filters; VU record level meters. 6¼" H × 17¾" W × 13½" D .... $290

### JT-V22 AM-FM Stereo Tuner

FM section: sensitivity 11.2 dBf (2.0 μV); 50-dB quieting sensitivity 38.3 dBf (45 μV) stereo, 17.2 dBf (4.0 μV) mono; S/N 65 dB (stereo), 73 dB (mono); capture ratio 1.5 dB; alternate channel selectivity 70 dB; image response −58 dB (98 mHz); i-f response −90 dB; AM suppression 45 dB; stereo separation 30 dB at 100 Hz, 40 dB at 1000 Hz, and 30 dB at 10,000 Hz; 75 and 300 ohm antenna input impedance. AM section: sensitivity 300 μV/m (bar antenna), 50 μV (external antenna); image response −45 dB; i-f response −40 dB; S/N 50 dB. Features IC PLL FM multiplex demodulator; FET radio-frequency amplifier and frequency-linear three-gang tuning capacitor; FM/AM signal strength and FM center-of-channel tuning meters; muting switch; FM-linear tuning dial; and AM bar antenna. 5⅞" H × 16½" W × 11⅝" D. ..... $190

### JT-V11G AM-FM Stereo Tuner

FM section: sensitivity 11.6 dBf (2.1 μV); 50-dB quieting sensitivity 38.3 dBf (45 μV) stereo, 17.2 dBf (4.0 μV) mono; S/N 65 dB (stereo), 70 dB (mono); capture ratio 1.5 dB; alternate channel selectivity 55 dB; image response −55 dB (98 mHz); i-f response −90 dB; AM suppression 45 dB; stereo separation 30 dB at 100 Hz, 35 dB at 1000 Hz, 30 dB at 10,000 Hz; 75 and 300 ohm antenna input impedance. AM section: sensitivity 350 μV/m (bar antenna), 50 μV (external antenna); image response −45 dB; i-f response −40 dB; S/N 50 dB. Features PLL IC FM demodulator, twin tuning meters, and 240 mm frequency-linear tuning dial. 6" H × 15¹¹/₃₂" W × 13½" D. ..... $150

## KENWOOD

### Audio Purist Group

### L-07T FM Stereo Tuner

Features double-diffused MOS FET front end; seven-gang tuning capacitor with built-in oscillator; selectable i-f bandwidth (wide or narrow); PLL auto response switching in MPX, double-switching demodulator for 45 dB separation over 50-10,000 Hz (wideband); high-linearity signal meter; center-channel tuning meter; 25 μsec de-emphasis; 270-mm linear frequency tuning dial; sensitivity 9.3 dBf (1.6 μV); S/N 75 dB; capture ratio 1 dB (wide), 1.5 dB (narrow); 4" H × 19" W × 13¼" D... ..... $450

### KT-8300 AM-FM Stereo Tuner

FM sensitivity 9.3 dBf (1.6 μV at 75 ohms); 50 dB quieting sensitivity 14.2 dBf (2.8 μV at 75 ohms) mono, 34.8 dBf (39 μV) stereo; S/N at 65 dBf 78 dB mono, 75 dB stereo; capture ratio 1 dB (wideband), 1.5 dB (narrow band); alternate channel selectivity 40 dB (wide), 110 dB (narrow); stereo separation (50-10,000 Hz) 45 dB (wide), 35 dB (narrow); spurious response 110 dB; 5⅞" H × 17" W × 14¾" D ..... $450

### KT-7500 AM-FM Stereo Tuner

Features switchable i-f bandwidth (wide and narrow); three dual-gate MOS FETs in FM front end; dc

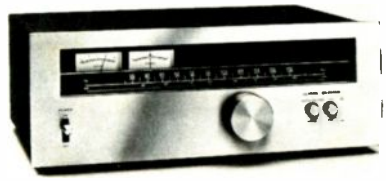
amplifiers and separate power amplifiers. FM section: usable sensitivity 9.8 dBf (1.7 μV); 50-dB quieting sensitivity mono 14.1 dBf (2.8 μV), stereo 36.1 dBf (35 μV); S/N 75 dB (mono), 70 dB (stereo); THD (wide i-f) 0.08% stereo, (narrow i-f) 0.2% mono; capture ratio 1.0 dB; stereo separation 43 dB from 50-10,000 Hz, 50 dB at 1000 Hz; alternate channel selectivity 100 dB (narrow), 30 dB (wide); image response −105 dB; AM suppression 60 dB; output level (400 Hz, 100% mod) 0.75 V, 1.2k ohms. AM section: usable sensitivity 14 μV; S/N 50 dB; THD 0.5%; image response −60 dB; alternate channel selectivity 30 dB (wide), 100 dB (narrow); output level (fixed) 0.15 V, variable 0-0.3 V. Includes signal-strength and tuning meters, muting lever switch, front-panel output level control, and multiplex filter. 5⅞" H × 16¹⁵/₁₆" W × 14²⁷/₃₂" D. ..... $310

### KT-6500 AM-FM Stereo Tuner

FM section: usable sensitivity 10.3 dBf (1.8 μV); 50-dB quieting sensitivity mono 16.3 dBf (3.6 μV), stereo 37.9 dBf (43 μV); S/N 75 dB (mono), 70 dB (stereo); THD 0.1% at 1000 Hz mono, 0.15% at 1000 Hz stereo; capture ratio 1.0 dB; alternate channel selectivity 75 dB; stereo separation 50 dB at 1000 Hz; spurious response ratio 80 dB; image response −50 dB; AM suppression ratio 65 dB; output level 0.7 V into 3000 ohms at 1000 Hz (100% mod). AM section: usable sensitivity 14 μV; S/N 50 dB; THD 0.5%; image response −60 dB; selectivity 30 dB; output level 0.12 V, 15,000 ohms. Includes signal-strength and tuning meters, automatic and fixed muting selector, and multiplex filter. 5⅞" H × 16¹⁵/₁₆" W × 14⅝" D. ..... $200

### KT-5500 AM-FM Stereo Tuner

Three-gang variable tuning capacitor with FET input. FM section: usable sensitivity 10.8 dBf (1.9



μV); 50-dB quieting sensitivity mono 72 dB, stereo 68 dB; THD 0.15% at 1000 Hz mono, 0.2% at 1000 Hz stereo; frequency response 30-15,000 Hz +0.2/−2.0 dB; capture ratio 1.0 dB; stereo separation 45 dB at 1000 Hz; spurious response 80 dB; i-f response −90 dB; alternate channel selectivity

60 dB. AM section: usable sensitivity 20 μV; S/N 50 dB at 1 mV input; image response −45 dB; THD 0.5%. Includes signal-strength and center-channel tuning meters and automatic and fixed muting switch. 5½" H × 14³¹/₃₂" W × 11⁷/₁₆" D..... $155

## LAFAYETTE

### LA-40 AM-FM Tuner
FM section: sensitivity 18 dBf; capture ratio 1.6 dB; stereo separation 40 dB (1 kHz); i-f response −90 dB; S/N 68 dB; image response −50 dB. AM section: sensitivity (IHF) 25μV; image response −40 dB; S/N 44 dB. 5⅜" H × 15⅜" W × 14⅛" D. ..... $230

## LENCO

### T-30 AM-FM Stereo Tuner
FM section: sensitivity 1.8 μV mono; mono dist. 0.2%; mono S/N 55 dB; capture ratio 1.5 dB; i-f rejection 90 dB; image rejection 80 dB; channel separation 40 dB; frequency response 20-15,000 Hz; 300 mV output. AM section: sensitivity 20 μV (antenna in); dist. 1.0%; image rejection 50 dB; S/N 50 dB. Features signal-strength and center-tuning meters, dual-gate MOS-FET input stage, 70- and 300-ohm antenna input, muting switch, and multiplex filter..... $200

## LUX

### T-12 FM Tuner
Quartz-locked FM tuner includes two-step i-f bandwidth selector (wide and narrow) and FM 5-gang variable capacitor and features "accutouch" system for accurate center tuning. Specifications: IHF usable sensitivity 10.3 dBf (1.8 μV); 50-dB quieting sensitivity mono 16.0 dBf (3.3 μV), stereo 14.2 dBf (2.8 μV); capture ratio 0.8 dB (wide), 2 dB (narrow); S/N 80 dB; i-f response −100 dB; image response −100 dB; AM suppression 62 dB; alternate channel selectivity 60 dB (narrow), 30 dB (wide); stereo separation 50 dB (wide), 30 dB (narrow); frequency response 20-17,000 Hz within −0.5 dB, mono and stereo. Also features multipath check switch, recording test tone circuit, center tuning indicator, signal strength indicator, FM muting switch, FM muting level control, time delay muting circuit, and output level control. 3¼" H × 17¼" W × 12¹¹/₁₆" D..... $645

### T-110 FM/FM-MPX Tuner
Features signal strength and center tuning meters; four-channel decoder terminal; fixed and variable output terminals; sensitivity 1.6 μV; AM suppression 53 dB; capture ratio 1.3 dB; image response −100 dB; i-f response −100 dB; stereo separation 48 dB (1 kHz); S/N 72 dB; 4½" H × 19" W × 9⁹/₁₆" D..... $545

### T-4 AM-FM Stereo Tuner
IHF usable sensitivity 10.3 dBf (1.8 μV); 50-dB quieting sensitivity 14.7 dBf (3.0 μV); capture ratio 2 dB; S/N 75 dB; i-f response −80 dB; image response−55 dB; AM suppression 60 dB; alternate channel selectivity 85 dB (narrow), 40 dB (wide); stereo separation 45 dB (wide), 80 dB (narrow); frequency response 20-15,000 Hz; THD mono 0.8% (wide), 0.2% (narrow). AM section: IHF usable sensitivity 200 μV; i-f response −40 dB; image response −50 dB; S/N 50 dB; dist. 0.6%. Features center tuning meter, signal strength meter, FM muting level control, and FM muting switch. ..... $495
**T-2.** Similar to T-4 except capture ratio 1.5 dB; AM suppression 58 dB; alternate channel selectivity 60 dB; stereo separation 45 dB at 1000 Hz; THD 0.3% ..... $345

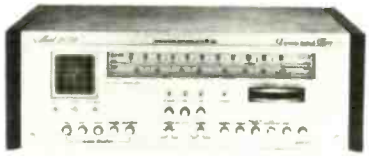
### Laboratory Reference Series

### Luxman 5T50 Stereo FM Tuner
Features full digital frequency synthesis; LED digital-frequency readout; pushbutton tuning with scanning and predetermined channel (seven) modes; full Dolby system; 400-Hz test tone; FM muting; sensitivity 4.5 μV (IHF); S/N 70 dB; capture ratio 1.1 dB; i-f response −100 dB; image response −100 dB; AM suppression 55 dB; stereo separation 40 dB (100 Hz); output voltage 1 V (fixed) and 0-1 V (variable); 4" H × 17.7" W × 16" D..... $1595

### Luxman 5T10 FM Stereo Tuner
Features tuning lock system, i-f bandwidth selector, multipath check switch, recording test-tone circuit, center-tuning and signal-strength meters, FM muting switch, FM muting level control, and output level control. Usable mono sensitivity 10.3 dBf (1.8 μV); 50-dB quieting mono sensitivity 15.6 dBf (3.3 μV) 50 μsec; THD 0.05% wide (1000 Hz), 0.06% narrow (1000 Hz); capture ratio 0.8 dB (wide), 2 dB (narrow); alternate channel selectivity 90 dB (narrow ±400 kHz); S/N 80 dB; spurious response ratio 100 dB; i-f response −100 dB; image response −100 dB; AM suppression 62 dB; stereo separation 50 dB wide, 30 dB narrow; output voltage 1 V (fixed), 0-1 V (variable); output impedance 100 ohms (fixed), 100-1250 ohms (variable). $795

## MARANTZ

### 2130 AM-FM Stereo Tuner
Features three-in oscilloscope display; quartz-lock FM tuning; dual-surface, acoustical-wave (SAW) fil-



ters; PLL FM multiplex demodulator; plug-in FM Dolby capability; selectable FM i-f bandwidth; record level tone switch; IHF sensitivity 9.3 dBf (1.6 μV), 28 μV for 50-dB quieting (stereo); 5¾" H × 16⅜" W × 9⁷/₁₆" D..... $530

### 2110 AM-FM Stereo Tuner
Features three-in oscilloscope display; PLL FM multiplex demodulator; 25-μsec Dolby de-emphasis network; IHF sensitivity 10.3 dBf (1.8 μV), 40 μV for 50-dB quieting (stereo); 5¾" H × 16⅜" W × 9⁷/₁₆" D ..... $340

### 2120 AM-FM Stereo Tuner
Features two tuning meters; PLL FM multiplex demodulator; plug-in FM Dolby capability; 400-Hz record calibration tone; selectable FM i-f bandwidth; sensitivity (IHF) 10.3 dBf (1.8 μV); 35 μV for 50-dB quieting (stereo); 5¾" H × 16⅜" W × 9⁷/₁₆" D..... $320

### 2100 AM-FM Stereo Tuner
Features two tuning meters; PLL FM multiplex demodulator; 25 μsec Dolby de-emphasis network; sensitivity (IHF) 10.3 dBf (1.8 μV); 40 μV for 50-dB quieting (stereo); 5¾" H × 16⅜" W × 9⁷/₁₆" D..... $220

### 2020 AM-FM Stereo Tuner
Features AM/FM signal-strength meter; FM PLL center-channel tuning meter; mono/stereo mode switch; FM muting; stereo LED indicator; AM and FM LEDs; 5¾" H × 16⅜" W × 9½" D..... $180

## MITSUBISHI

### DA-C20 Tuner-Preamplifier
AM/FM stereo combination has individual-channel preamplifiers and moving-coil head amplifier. Also features locked tuning, detent volume control and independent output level controls. FM section: sensitivity 11.2 dBf (2.0 μV) mono, 22.7 dBf (7.5 μV) stereo; 50-dB quieting sensitivity 19.2 dBf (5.0 μV) mono, 39.2 dBf (50 μV) stereo; S/N 75 dB (stereo); frequency response 30-15,000 Hz ±1 dB; THD (1000 Hz, 65 dBf) 0.08% stereo (wide), 0.5% (narrow); selectivity 45 dB (wide), 75 dB (narrow); capture ratio 0.8 dB (wide), 1.5 dB (narrow); stereo separation at 1000 Hz 45 dB (wide), 40 dB (narrow). AM section: sensitivity 45 dB (bar an-

# 2 TUNERS

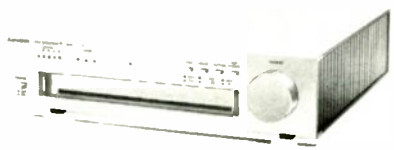
tenna); selectivity 30 dB; THD 0.8%. Preamplifier section: input sensitivity/impedance 0.1 mV/10 ohms (phono MC), 2.3 mV/50,000 ohms (phono MM, 100 pf), 150 mV/50,000 ohms (tuner, aux., play); output level max. 18 V; S/N (IHF "A") 77 dB (phono MC), 84 dB (phono MM), 110 dB (tuner, aux., play); THD 0.005% max.; channel separation at 20,000 Hz 80 dB (phono MC, MM), 100 dB (tuner, play). Other features include subsonic filter; separate tape monitoring and duplication; A/B or A+B speaker pushbutton selection; FM muting; separate tone controls with defeat switches; signal strength and tuning meters; front-panel headphone jack. 6¾" H × 16¾" W × 11½" D..... $490

### DA-F20 FM Stereo Tuner

Features both conventional tuning and digital frequency readout with a quartz PLL synthesizer; switchable selectivity; inter-station muting; signal-strength and center-tuning LEDs; tape record level check signal; variable and fixed output level. Specifications: sensitivity mono 11.2 dBf (2.0 μV), stereo 22.7 dBf (7.5 μV); 50-dB quieting sensitivity 19 dBf (5.0 μV) mono, 39.2 dBf (50 μV) stereo; S/N stereo 75 dB (wide), 70 dB (narrow); alternate channel selectivity 45 dB (wide), 75 dB (narrow); stereo separation 50 dB at 1000 Hz (narrow); THD at 1000 Hz and 65 dBf 0.08% (wide), 0.25% (narrow); capture ratio 0.8 dB (wide), 1.3 dB (narrow). 6¾" H × 16¾" W × 10¾" D ..... $380

### M-F01 FM Tuner

Miniature FM tuner with quartz-PLL synthesizer tuning; five-gang tuning condenser with dual-gate



MOS-FETs and four-pole linear-phase LC filters; recording level check signal. Specifications: sensitivity 11.2 dBf (2.0 μV) mono, 22.7 dBf (7.5 μV) stereo; 50-dB quieting sensitivity 19.2 dBf (5.0 μV) mono, 39.2 dBf (50 μ V) stereo; S/N 77 dB (stereo); capture ratio 1.0 dB; alternate channel selectivity 70 dB; image response −100 dB; i-f response −100 dB; AM suppression 65 dB; stereo separation 50 dB at 1000 Hz, 40 dB at 10,000 Hz; frequency response 30-16,000 Hz +1 dB; THD at 1000 Hz 0.08% (mono), 0.1% (stereo). 2¾" H × 10⅜" W × 9¾" D..... $320

### DA-F10 AM-FM Stereo Tuner

AM-FM stereo tuner features switchable selectivity (wide and narrow). FM section: (stereo mode) usable sensitivity 7.8 μV; S/N 70 dB; dist. at 65 dBf 0.1% (wide), 0.5% (narrow); alternate channel selectivity 45 dB (wide), 75 dB (narrow); stereo separation 45 dB at 1 kHz and 40 dB at 10 kHz (wide), 35 dB at 1 kHz and 30 dB at 10 kHz (narrow). AM section: usable sensitivity 45 dB/m; dist. 1%; hum and noise −50 dB; 6¾" H × 16¾" W × 10⅜" D ... ..... $260

## NAKAMICHI

### 630 FM Tuner/Preamplifier

Features switchable phono input sensitivity (1, 2, or 5 mV); stepped tone and variable contour controls; independent tape copying; MOS FET front end; switchable i-f section selectivity (normal and narrow); PLL MPX demodulator; Dolby FM reception. Preamp section: frequency response 20-50,000 Hz +0/−1.5 dB (aux., tape); RIAA equalization ±0.3 dB; S/N (IHF A) 102 dB (aux., tape), 80 dB (phono, 1 mV); phono overload 250 mV (1 kHz, 5 mV sensitivity). Tuner section: sensitivity 33 dBf; S/N 73 dB (Dolby off); separation 50 dB (1 kHz). 6¹¹/₁₆" H × 16" W × 9⁵/₁₆" D..... $730

### 430 FM Tuner

Features MOS FET front end; SAW i-f filtering; switchable i-f bandwidth (normal and narrow); PLL MPX demodulator; self-lock tuning; optional Dolby FM circuit board. Specifications: sensitivity for 50-dB quieting 17.3 dBf (mono); THD 0.09% at 1000 Hz; S/N better than 70 dB at 65 dBf (mono); separation better than 50 dB at 1000 Hz. 3⁹/₃₂" H × 16" W × 8⅞" D..... $440

**D8-100**. Dolby FM circuit board for 430..... $44

## NIKKO

### Gamma V Digital FM Stereo Tuner

Two-stage PLL-synthesized digital FM stereo tuner features LED digital station frequency readout; au-

tomatic or manual tuning; tuner lock; hold buttons; muting threshold control; stereo/mono switch; five-LED signal strength; hi-blend switch; i-f band switch; six-station memory. Sensitivity 1.8 μV; S/N at 65 dBf 78 dB (mono), 75 dB (stereo); capture ratio 1.0 dB (wide), 1.5 dB (narrow); image response −120 dB; i-f response −120 dB; stereo separation at 1000 Hz 55 dB (wide), 45 dB (narrow); THD in mono 0.04% (wide), 0.08% (narrow), in stereo 0.06% (wide) and 0.2% (narrow). Rear-panel features include de-emphasis selector (25 μsec, 75 μsec), output level control, multipath check points, and Dolby adaptor provision. 2½" H × 19" W × 11⅜" D ..... $650

### Gamma I Stereo FM Tuner

Dual-gate MOS-FETs with wide and narrow i-f stage and PLL multiplex circuitry. Sensitivity 1.8 μV; selectivity 35 dB (wide), 85 dB (narrow); S/N 78 dB (mono), 72 dB (stereo); capture ratio 1.0 dB; stereo separation 50 dB (wide), 40 dB (narrow); spurious rejection 110 dB; THD 0.05% (wide), 0.08% (narrow). Features dual signal-strength and center-tuning meters; power on/off; rack mountable. 2½" H × 19" W × 9" D ..... $370

### NT 850 AM-FM Stereo Tuner

Features switchable (normal and narrow) i-f band; multipath switching; PLL MPX circuit. FM tuner: sensitivity (IHF) 1.8 μV; S/N 75 dB; stereo separation 48 dB (wide); capture ratio 1 dB (wide). AM tuner: S/N 50 dB; image response −50 dB; i-f response −40 dB. 5¾" H × 15¾" W × 13½" D..... ..... $230

### NT-550 AM-FM Stereo Tuner

Dual-gate FET front end with multipath and hi-blend switching; PLL circuitry; three FM and two AM variable capacitors; FM quadrature detector, flywheel tuning knob; center tuning meter. Usable sensitivity 10.8 dBf (1.9 μ V) mono; 50-dB quieting sensitivity 16 dBf (mono), 34 dBf (stereo); S/N at 65 dBf 72 dB (mono), 68 dB (stereo); capture ratio 1 dB; stereo separation 45 dB at 1000 Hz; THD at 65 dBf 0.1% (mono), 0.2% (stereo). 5¾" H × 15¾" W × 13½" D..... $180

## ONKYO

### T-9 AM-FM Stereo Tuner

Features quartz-locked tuning; PLL MPX circuitry, tape recording level switch. FM section: sensitivity 4 μV; capture ratio 1.5 dB; i-f response −100 dB; S/N 65 dB; AM suppression 50 dB; stereo separation 40 dB (1 KHz); frequency response 30-15,000 Hz +0.5/−2 dB. AM section: sensitivity 25 μV; image response −55 dB; i-f response −55 dB; S/N 45 dB; has de-emphasis switch (25, 50, and 75 μsec). 6¼" H × 17½" W × 15" D ..... $300

### T-4 AM-FM Stereo Tuner

Features servo-locked tuning circuit; two tuning meters; PLL MPX circuitry; i-f de-emphasis switch for FM Dolby reception. FM section: sensitivity 4.5 μV; capture ratio 1.5 dB; image response −60 dB; i-f response −90 dB; S/N 60 dB; AM suppression 50 dB; stereo separation 40 dB (1 kHz); frequency response 30-15,000 Hz +0.5/−2 dB. AM section: sensitivity 25 μV; image response −40 dB; i-f response −30 dB; S/N 40 dB. 6¼" H × 17½" W × 15" D ..... $210

## OPTONICA

### ST-3636 AM-FM Stereo Tuner

Features Opto-Lock tuning; dual tuning meters with multipath function; built-in switchable FM muting; 400-Hz tape calibration tone; fixed and variable outputs. FM section: sensitivity (IHF) 1.6 μV; S/N 75 dB; capture ratio 2 dB; image response −120 dB; i-f response −110 dB; AM suppression 50 dB; frequency response 35-15,000 Hz ±1.5 dB; stereo separation 40 dB (wide), 35 dB (narrow). AM section: quieting sensitivity 250 μV/m; S/N 42 dB; image response −60 dB; i-f response −60 dB. 5.7" H × 17.4" W × 14.7" D..... $300

### ST-4201 AM-FM Stereo Tuner

Features dual gate MOS FET front end and PLL multiplex circuitry; i-f detector; FM air-check calibrator; dual tuning meters; muting; hi-blend switch. FM section: sensitivity 1.7 μV (IHF); frequency response 30-15,000 Hz ±1.5 dB; S/N ratio 72 dB... ..... $200

**ST-4205**. Same as ST-4201, except in ebony finish ..... $200

### ST-1515 AM-FM Stereo Tuner

Features tape calibration circuitry; switchable FM muting and high blend; dual tuning meters. FM section: sensitivity (IHF) 1.7 μV; S/N 72 dB; capture ratio 1.2 dB; image response −82 dB; i-f response −90 dB; AM suppression 50 dB; frequency response 30-15,000 Hz ±1.5 dB; stereo separation 45 dB (1 kHz). AM section: quieting sensitivity 250 μV/m; S/N 42 dB; image response −45 dB; i-f response −30 dB. 5.7" H × 16.1" W × 10.8" D..... ..... $190

**ST-1515B**. Same as ST-1515 except in ebony finish ..... $190

## JC PENNEY

### 3710 FM Stereo Tuner

IHF usable sensitivity 1.9 μV; quieting sensitivity 3.0 μV; mono and stereo THD 0.2%; S/N 72 dB mono; capture ratio 0.6 dB; alternate channel selectivity 70 dB; image rejection 85 dB; stereo separation 45 dB; frequency response 9-16,000 Hz. Features PLL multiplex circuitry; signal-strength and center-tuning meters; FM muting switch; multiplex filter; flywheel tuning knob; record level check; FM dipole antenna; quadrature detector for FM ..... ..... $230

### 3701 AM-FM Stereo Tuner

FM section: IHF sensitivity 1.9 μV; quieting sensitivity 3.0 μV; THD 0.2% (mono and stereo); S/N 75 dB mono; capture ratio 0.9 dB; alternate channel selectivity 55 dB; image rejection 50 dB; stereo separation 48 dB; frequency response 10-16,000 Hz. AM section: sensitivity 300 μV; selectivity 30 dB; S/N 50 dB. Features PLL multiplex circuitry; signal-strength and center-tuning meters; FM mute switch; flywheel tuning; FM dipole antenna ... $160

## PHASE LINEAR

### 5000 Series Two Stereo FM Tuner

Features dynamic range expander; multipath dist. indicator; PLL multiplex decoder; variable muting; variable outputs; 25 and 75 μsec de-emphasis; tuning and signal strength meters; IHF sensitivity 10.8 dBf (1.9 μV) mono, 20.8 dBf (6.0 μV) stereo; 50-dB quieting sensitivity 14.8 dBf (3.0 μV) mono, 34.8 dBf (30.0 μV) stereo; S/N 74 dB mono, 72 dB with expander; frequency response 20-15,000 Hz

±0.5 dB; capture ratio 1.2 dB (narrow); alternate channel selectivity 75 dB (narrow); stereo separa-

tion 42 dB (1 kHz); optional walnut cabinet available; 7" H × 19" W × 10" D..... $550

## PHILIPS

### AH673 AM-FM Stereo Tuner

Has signal strength, center tuner, and switchable to multipath meters; function display lights; AM and

FM output level controls; FM muting; LED touch switches. FM section: sensitivity 3 μV stereo; 50-dB quieting sensitivity 2.2 μV mono, 30 μV stereo; capture ratio 1 dB; AM response −50 dB; i-f response −110 dB; image response −110 dB; stereo separation 50 dB (1 kHz); hum and noise −72 dB. AM section: sensitivity 150 μV/m (rod antenna); image response −68 dB; i-f response −52 dB; hum and noise −60 dB. 5½" H × 18" W × 13½" D..... $500
**AH6731.** Black chassis..... $520

### AH185 AM-FM Stereo Tuner

FM section: usable sensitivity 1.7 μV mono; 50-dB quieting sensitivity 3.5 μV; capture ratio 1.2 dB; AM rejection 60 dB; i-f rejection 90 dB; image rejection 80 dB; stereo separation 50 dB at 1000 Hz. AM section: sensitivity 180 μV/m; alternate channel selectivity 35 dB; image rejection 70 dB at 1400 Hz; i-f rejection 60 dB at 600,000 Hz. Features illuminated FM tuning and signal-strength meters; flywheel tuning; stereo indicator light; AM antenna; output level control; mono mode; multiplex filter; and AFC. 5½" H × 14" W × 14" D. $300

## PIONEER

### TX-9500II AM-FM Stereo Tuner

Has switchable i-f bandwidth (wide, narrow); surface acoustic wave filter; automatic pilot signal cancelling; audio multipath detector; record level calibration with 440-Hz signal generator; output level control. FM section: 50-dB quieting sensitivity 35 μV, S/N 77 dB; frequency response 20-15,000 Hz +0.2/−0.5 dB; capture ratio 0.8 dB (wide); stereo separation 50 dB (1 kHz, wide); image response −120 dB; i-f response −105 dB; AM suppression 65 dB. AM section: sensitivity 300 μV/m (IHF, with ferrite antenna); S/N 55 dB; image response −70 dB; i-f response −65 dB. 5²⁹/₃₂" H × 16¹⁷/₃₂" W × 15⁹/₁₆" D..... $400

### TX-8500II AM-FM Stereo Tuner

Has switchable i-f bandwidth (wide, narrow); automatic pilot signal canceller; record level calibration with 440-Hz signal generator; MPX noise filter; output level control. FM section: 50 dB quieting sensitivity 40 μV; S/N 75 dB; frequency response 20-15,000 Hz +0.2/−0.5 dB; capture ratio 0.8 dB (wide); stereo separation 45 dB (1 kHz, wide); image response −85 dB; i-f response −100 dB; AM suppression −55 dB. AM section; sensitivity 300 μV/m (IHF,with ferrite antenna); S/N 45 dB; image response −45 dB; i-f response −50 dB. 5¹⁹/₃₂" H × 16¹⁷/₃₂" W × 15⁹/₁₆" D..... $300

### TX-6500II AM-FM Stereo Tuner

Features PLL AM-MPX circuit; five-stage AM interference noise limiter; FM muting; tuning meter combines center-of-channel and signal-strength functions. FM section: 50-dB quieting sensitivity 44 μV; S/N 68 dB; frequency response 20-15,000 Hz +0.2/−1 dB; capture ratio 1 dB; image response −60 dB; i-f response −90 dB; AM suppression 50 dB. AM section: sensitivity 300 μV/m (IHF, with ferrite antenna); S/N 50 dB; image response −40 dB; i-f response −70 dB. 5¹⁵/₃₂" H × 14³¹/₃₂" W × 12¹¹/₁₆" D..... $200

### TX-5500II AM-FM Stereo Tuner

Incorporates PLL IC in FM-MPX demodulator section: FM front end has three-gang variable capacitor and FET; i-f section has ceramic filter/IC design. FM section: 50-dB quieting sensitivity 44 μV; S/N 68 dB; capture ratio 1 dB; image response −60 dB; i-f response −90 dB; AM suppression 50 dB; stereo separation 35 dB (1 kHz). AM section: sensitivity 300 μV/m (IHF, with ferrite antenna); S/N 50 dB; image response −40 dB; i-f response −70 dB. 4⅞" H × 14³¹/₃₂" W × 10¹⁹/₃₂" D..... $150

### TVX-9500 VHF/UHF TV Audio Tuner

Converts all VHF/UHF television audio signals to FM. Features VHF electronic tuning with LED channel indicators and front-panel touch buttons for channels 2-13; UHF rotary detent selector for channels 14-83 and fine tune control; i-f amplifier circuitry; one-stage differential amp and two-stage dc output amplifier circuitry; automatic frequency control. Specifications: 50-dB quieting sensitivity 32 dBf (22 μV) at 25,000 Hz DEV.; S/N 65 dB; dist. at 65 dBf, 25,000 Hz DEV. 0.07% at 100 Hz, 0.07% at 1000 Hz, 0.2% at 6000 Hz; frequency response 50-10,000 Hz +0.5 dB/−1.0 dB, capture ratio 1.0 dB; alternate channel selectivity 25 dB; image response −50 dB (VHF), −40 dB (UHF); i-f response −50 dB (VHF), −55 dB (UHF); AM suppression ratio 50 dB; antenna input 300 ohms and 75 ohms (VHF), 300 ohms (UHF); output level/impedance 400 mV/4700 ohms. 3⅞" H × 16⁹/₁₆" W × 13¾" D..... $250

## REALISTIC

### TM-1001 AM-FM Stereo Tuner

FM section: IHF sensitivity 9.8 dBf (1.7 μV); alternate channel selectivity 75 dB (narrow), 45 dB (wide); stereo separation at 100 Hz 38 dB (wide), 30 dB (narrow), at 1000 Hz 40 dB (wide), 35 dB (narrow), at 10,000 Hz 32 dB (wide), 28 dB (narrow); S/N 70 dB. AM section: sensitivity 250 μ V/m. Features selectable bandwidth (wide/narrow); multipath meter; switchable 25/75 μsec deemphasis for Dolby FM; stereo/mono; FM muting; adjustable output level. 5¾" H × 16¹/₁₆" W × 12" D..... $180

## 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 station frequencies; variable muting and separation; Dolby-B card option available; logarithmic signal-strength and center-tuning meters; multipath scope output; 50-dB quieting sensitivity 2.5 μ V; capture ratio 0.9 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 75 dB; 6" H × 17¾" W × 13¾" D..... $1350

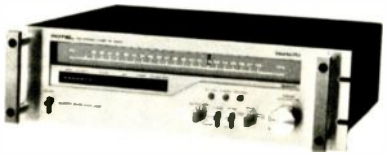
## ROTEL

### RT-2100 FM Stereo Tuner

Quartz PLL FM tuner with built-in Dolby noise-reduction circuit. IHF sensitivity 8.8 dBf (1.5 μV) mono, 29 dBf stereo ; mono S/N 80 dB (IHF); stereo HD 0.05% (wide), 0.15% (narrow); capture ratio 0.8 dB; IHF alternate channel selectivity 35 dB (wide), 80 dB (narrow); stereo separation 50 dB

# 2 TUNERS

(wide) at 1000 Hz; image and i-f rejection 110 dB; AM suppression 55 dB; frequency response



30-15,000 Hz ±0.5 dB. Features quartz PLL tuning and multiplex section with dual wide/narrow band selection; LED signal-strength and center-tuning configuration readout; digital station readout; FM muting switch; multipath switch; flywheel tuning. 143 mm H × 482 mm W × 328 mm D... $600

**RT-2000.** Similar to RT-2100 but AM section included; IHF sensitivity 9.3 dBf (1.6μV) mono, 30 dBf stereo; stereo HD 0.1%; capture ratio 1.0 dB; alternate channel selectivity 75 dB (IHF); frequency response 30-15,000 Hz +0.5/−1 dB; stereo separation 45 dB at 1000 Hz. AM section: IHF sensitivity 12.5 μV; S/N 50 dB; image rejection 60 dB; selectivity 40 dB. Features similar less digital readout and Dolby noise-reduction circuit. ..... $430

### RT-925 AM-FM Stereo Tuner

FM sensitivity 1.7 μV (mono); S/N 70 dB; has center tune/multipath and signal strength meters; variable headphone output level control; hi-blend switch; variable output level; multipath switch; 25-μsec de-emphasis; FM muting..... $340

### RT-725 AM-FM Stereo Tuner

FM sensitivity 1.8 μV (mono); S/N 70 dB; has center tune and signal strength meters; variable output level control; hi-blend and FM muting switches ..... $200

**RT-425.** Similar to RT-725 but FM sensitivity 1.9 μV (mono); without variable output level control .... $170

## SAE

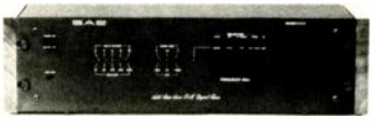
### 8000 FM Digital Tuner

Features LED digital frequency display; five-gang, dual-gate FET front end; sensitivity 8.5 dBf (1.6 μV); 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; alternate channel selectivity 120 dB; stereo separation 30 dB (over 50-15,000 Hz); log meters for center-channel tuning and signal strength. 5.25" H × 19" W × 11" D..... $700

**SR-5.** Roll-around rack cabinet ..... $40

### 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 μV); 50-dB quieting sensitivity 37.2 dBf (40 μV); dist. less than 0.2% stereo, 0.15% mono; stereo separation 35 dB from 50-10,000 Hz.. $400



### T3U AM-FM Stereo Tuner

Features linear AM-FM dial; signal-strength and FM center-channel tuning meters; PLL multiplex; illuminated pushbutton modes. IHF usable sensitivity 10.3 dBf (1.8 μV); capture ratio 1.5 dB; THD 0.15% mono, 0.25% stereo ..... $275

## SANSUI

### TU-9900 AM-FM Stereo Tuner

FM sensitivity (IHF) 1.5 μV; THD 0.08% (stereo wide), 0.8% (stereo narrow) both at 1000 Hz; stereo separation 40 dB (50 and 10,000 Hz), 50 dB (1000 Hz); frequency response 30-15,000 Hz +0.5 dB/−0.8 dB; S/N 76 dB (stereo); spurious rejection 106 dB (98 MHz); 6⁹/₁₆" H × 18⁷/₈" W × 12¹/₄" D ..... $570

### TU-717 AM-FM Stereo Tuner

Has selectable dual i-f bandwidth; dual-gate MOS-FET and four-gang tuning capacitor in front end; signal-strength and center-tune meters; PLL multiplex demodulator; switched 400-Hz tape level adjustment signal; FM muting and MPX noise canceller; S/N 81 dB; sensitivity (IHF) 9.8 dBf (1.7 μV); stereo separation 45 dB; rack mounting adaptors are available ..... $370

**TU-517.** Similar to TU-717 without tape calibration feature ..... $300

### TU-317 AM-FM Stereo Tuner

FM sensitivity (IHF) 10.3 dBf (1.8 μV); THD 0.09% (stereo); S/N 79 dB; selectivity 50 dB; stereo separation 40 dB; dual signal/tune meters; junction FET front end; four-element linear-phase ceramic i-f; PLL multiplex demodulator; rack mountable.. $240

**TU-217.** Similar to TU-317, except FM sensitivity (IHF) 10.6 dBf (1.85 μV); THD 0.13% (stereo); S/N 71 dB..... $190

## SANYO

### FM T611K AM-FM Stereo Tuner

MOS-FET FM front end with ceramic i-f filters and PLL multiplex decoder. FM section: IHF usable sensitivity 10.8 dBf (1.9 μV); S/N 75 dB mono, 65 dB stereo; dist. at 1000 Hz 0.08% mono, 0.2% 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; image rejection 50 dB; i-f rejection 48 dB; built-in antenna. Features FM muting switch; signal-strength and center-channel tuning meters; multiplex noise switch; FM stereo indicator; flywheel tuning. 5⁷/₈" H × 16¹/₂" W × 13³/₄" D..... $160

## SCOTT

### 590T AM-FM Stereo Tuner

FM section: IHF usable sensitivity 9.3 dBf (1.6 μV); 50-dB quieting sensitivity 14.8 dBf (3.0 μV) mono, 35 dBf (32 μV) stereo; S/N at 65 dBf 80 dB mono, 75 dB stereo; dist. 0.08% mono, 0.15% stereo; capture ratio 1.0 dB; alternate channel selectivity 80 dB; image rejection 90 dB; i-f rejection 100 dB; stereo separation 50 dB at 1000 Hz; frequency response 20-15,000 Hz ±2 dB. AM section: bar antenna usable sensitivity 150 μV/m; S/N 55 dB; selectivity 50 dB; image rejection 65 dB. Features five-gang FM tuning capacitor with twin-stage dual-gate MOS FET TRF amplifier; PLL FM multiplex demodulator; three-gang AM tuning capacitor with RF stage; multipath switch; multiplex filter and muting switches; flywheel tuning; signal-strength and center-channel tuning meters; variable output level; 110/220 V ac switchable voltage; 25/50/75 μsec de-emphasis switch; rack mountable. 5¹/₄" H × 17" W× 11³/₄" D ..... $300

**570T.** Similar to 590T; IHF usable sensitivity 10.3 dBf (1.8μV); 50-dB quieting sensitivity 16.1 dBf (3.5 μV) mono, 35.6 dBf (33 μV) stereo; S/N 75 dB mono, 70 dB stereo; dist. 0.1% mono, 0.2% stereo; alternate channel selectivity 70 dB; image rejection 80 dB; i-f rejection 90 dB; stereo separation 50 dB at 1000 Hz; frequency response 25-15,000 Hz ±2 dB. AM section: bar antenna usable sensitivity 250 μ V/m; S/N 50 dB; selectivity 45 dB; image rejection 40 dB. Features similar except no multipath switch..... $250

**530T.** Similar to 570T; IHF usable sensitivity 10.8 dBf (1.9 μV); 50-dB quieting sensitivity 16.8 dBf (3.8 μV) mono, 36 dBf (35 μV) stereo; S/N 72 dB mono, 67 dB stereo; dist. 0.15% mono, 0.3% stereo; capture ratio 1.5 dB; alternate channel selectivity 60 dB; image rejection 65 dB; i-f rejection 85 dB; stereo separation 45 dB at 1000 Hz. AM S/N 45 dB and 40 dB image rejection and selectivity. Features similar less variable output level and switchable multiplex filter ..... $200

## SHARP

### ST-1122 AM-FM Broadcast Tuner

## NOTICE TO READERS

We consider it a valuable service to our readers to continue, as we have in previous editions of Stereo Directory & Buying Guide, to print the price set by the manufacturer or distributor for each item described as available at presstime. However, almost all manufacturers and distributors provide that prices are subject to change without notice.

We would like to call our readers' attention to the fact that during recent years the Federal Trade Commission of the U.S. Government has conducted investigations of the practices of certain industries, in fixing and advertising list prices. It is the position of the Federal Trade Commission that it is deceptive to the public, and against the law, for list prices of any product to be specified or advertised in a trade area, if the majority of sales of that product in that trade area are made at less than the list prices.

It is obvious that our publication cannot quote the sales price applicable to each trading area in the United States. Accordingly, prices are listed as furnished to us by the manufacturer or distributor. It may be possible to purchase some items in your trading area at a price that differs from the price that is reported in this edition.

The Publisher

FET front-end AM-FM stereo tuner. FM section: IHF sensitivity 11.2 dBf (1.9 μV); capture ratio 1 dB; S/N 70 dB; IHF selectivity 60 dB; image rejection 50 dB; i-f rejection 90 dB; AM suppression 50 dB; dist. 0.3% at 400 Hz (mono and stereo); stereo separation 45 dB at 1000 Hz, 35 dB from 50-10,000 Hz; frequency response 30-15,000 Hz ±1.5 dB. AM section: quieting sensitivity 300 μV/m; selectivity 25 dB; S/N 42 dB; image rejection 50 dB; i-f rejection 30 dB. Features "air check," 400-Hz tone generator for recording FM broadcasts, frequency linear slide-rule tuning, center-channel FM tuning and signal-strength meters, AM/FM/mono/FM muting pushbutton selector switches, and LED stereo and power on indicators. 5⅜" H × 15⅜" W × 10⅛" D ..... $120

**MCR-1800.** Audio component rack in wood vinyl finish; 39⅜" H × 17" W × 15" D ..... $70

## SHERWOOD

### Micro/CPU 100 FM Stereo Tuner

FM sensitivity 9.8 dBf (1.7 μV) for 30 dB S/N; stereo distortion 0.15% at 100% mod.; spurious rejection 120 dB; stereo separation 50 dB (1000 Hz); digitally synthesized tuner controlled by CPU with a wide and narrow i-f system; six-section varactor front end; advance digital detection system; PLL multiplex; LED dial scale; digital station readout; station call-letter readout; auto scan and memory tuning ..... $2000

### HP-5500 AM-FM Stereo Tuner

FM sensitivity 9.8 dBf (1.7 μV) for 30 dB S/N; distortion (stereo) 0.2% at 100% mod.; separation 50 dB at 1000 Hz; capture ratio 1 dB; six-section front end; digital detection system; PLL multiplex; switchable de-emphasis; walnut end panels included ..... $600

## SONY

### ST-A7B FM Stereo Tuner

Quartz-crystal frequency synthesis FM tuner with "X-tal Lock" tuning system which eliminates need for center-tuning and AFC circuit; usable sensitivity 8.8 dBf (1.5 μV); 50-dB quieting sensitivity 14.2 dBf (2.8 μV) mono, 34.6 dBf (30 μV) stereo; S/N 80 dB mono, 75 dB stereo; capture ratio 0.8 dB (normal), 1.8 dB (narrow); alternate channel selectivity 50 dB at 400,000 Hz (normal) 120 dB at 400,000 Hz (narrow); image rejection 90 dB; AM suppression 60 dB; THD and IM dist. mono 0.04% at 1000 Hz (normal), 0.2% (narrow), stereo 0.08% (normal) 0.3% (narrow); frequency response 20-15,000 Hz +0.2/−0.5 dB; stereo separation 55 dB at 1000 Hz (normal), 45 dB at 1000 Hz (narrow); output 750 mV fixed, 1.5 V variable. Features digital frequency display; linear tuning dial with LED; i-f bandwidth selector; signal-strength tuning meter with switchable multipath; connections for FM Dolby adaptor and 25 μsec de-emphasis; adjustable interstation-noise muting threshold; adjustable output level for program-source level matching; hi-blend switch; brushed aluminum finish. 6¾" H × 18 ⅛" W × 16⅜" D ..... $900

## TECHNICS BY PANASONIC

### ST-9038 FM Stereo Tuner

Quartz-synthesizer FM stereo tuner. IHF sensitivity 12.8 dBf (1.2 μV) at 75 ohms; 50-dB quieting sen-

sitivity at 75 ohms 18.1 dBf (2.2 μV) mono, 38.1 dBf (22 μV) stereo; THD 0.1% (mono), 0.15% (stereo); S/N 75 dB (mono); frequency response 20-18,000 Hz +0.1/−0.5 dB; capture ratio 1.0 dB; alternate channel selectivity 75 dB; image response −105 dB; i-f response −105 dB; spurious response 105 dB; AM suppression 55 dB; stereo separation 45 dB at 1000 Hz; output level 0-1.5 V. Features quartz-oscillated digital program readout; three-position muting switch; mode switch for pink noise, auto, and mono; auto hi-blend on/off; power on/off; auto tune down/up dial and main auto tuning dial. 1²⁵/₃₂" H × 18³/₈" W × 11¹/₃₂" D ..... $550

**SH-9038.** 32-step microprocessor-controlled programming unit (see Section 14, Accessories, under "Technics by Panasonic" ..... $550

### ST-9030 FM Stereo Tuner

Professional Series component; has automatic narrow and wide i-f bandwidth selection; PLL MPX IC circuitry; pilot and subcarrier cancelling circuits; servo tuning circuit; eight-ganged variable tuning capacitor; signal meter (linear to 81 dBf); sensitivity 1.2 μV; 50-dB quieting sensitivity at 75 ohms 18.1 dBf (2.2 μV) mono, 38.1 dBf (22 μV) stereo; THD at 1000 Hz 0.08% (mono and stereo wide), 0.15% (mono narrow), 0.3% (stereo narrow); S/N 80 dB mono; frequency response 20-18,000 Hz +0.1/−0.5 dB variable; capture ratio 0.8 dB (wide), 90 dB (narrow); alternate channel selectivity 25 dB (wide), 90 dB (narrow); image response −135 dB; i-f response −135 dB; AM suppression 58 dB (wide) stereo separation 50 dB (1 kHz, wide) ..... $460

### ST-8600 AM-FM Stereo Tuner

FM sensitivity (IHF) 10.8 dBf (1.9 μV); response 20-18,000 Hz +0.2/−0.8 dB; capture ratio 1 dB; THD 0.25% (stereo); S/N 72 dB (stereo); image rejection 95 dB (98 MHz); i-f rejection 105 dB (98 MHz); selectivity 85 dB; has full complement of controls and outputs, including built-in pink-noise generator; signal-strength and center-tuning meters ..... $330

### ST-8080 AM-FM Stereo Tuner

Features FM multipath and four-channel multiplex outputs. FM section: usable sensitivity 10.8 dBf (1.9 μV); 50-dB quieting sensitivity 13.6 dBf (2.6 μV) mono, 34.3 dBf (28.4 μV) stereo; THD 0.15% mono, 0.3% stereo; S/N 75 dB mono; frequency response 20-18,000 Hz +0.2/−0.8 dB; capture ratio 1.0 dB; alternate channel selectivity 85 dB; image response −85 dB; i-f response −100 dB; AM suppression 55 dB; stereo separation 45 dB. AM section: usable sensitivity 30 μV; selectivity 25 dB; image rejection 45 dB at 1000 Hz; i-f rejection 40 dB at 1000 Hz. Output 0.6 V fixed, 0-1.4 V variable; 5¹/₂" H × 17²³/₃₂" W × 14⁷/₁₆" D ..... $280

### ST-7300 AM-FM Stereo Tuner

Features built-in 440-Hz test signal generator for FM taping and signal-strength and tuning meters. FM section: usable sensitivity 11.2 dBf (2.0 μV) mono; 50-dB quieting sensitivity 14.8 dBf (3.0 μV) mono, 38.3 dBf (45 μV) stereo; THD 0.2% mono, 0.4% stereo; S/N 75 dB mono; frequency response 20-15,000 Hz +0.2/−1.0 dB; capture ratio 1.0 dB; alternate channel selectivity 75 dB, image response −55 dB; i-f response −82 dB; AM suppression 55 dB; stereo separation 45 dB at 1000 Hz. AM section: usable sensitivity 30 μV; selectivity 20 dB; image response −45 dB at 1000 Hz; i-f response −40 dB at 1000 Hz. Output 0.5 V fixed; simulated wood cabinet; 5³/₄" H × 17⁵/₁₆" W × 12¹⁵/₃₂" D ..... $200

## TOSHIBA

### ST-910 FM Digital Synthesizer Tuner

FM sensitivity 10.3 dBf (1.8 μV) for 30-dB S/N; S/N 65 dB; capture ratio 1 dB; selectivity 70 dB;

image rejection 100 dB; 75 and 300 ohm antenna inputs; output 1.5 V fixed, 0-1.5 V variable; features crystal-controlled PLL frequency-synthesizer tuner; no knob control; digital display; has seven programmable pre-set stations; automatic searching; manual tuning; three-level FM muting; 5⁴/₅" H × 17⁷/₁₀" W × 13²/₅" D ..... $1300

### ST-420 AM-FM Stereo Tuner

Incorporates FET and frequency linear four-gang variable capacitor in front end; PLL IC MPX circuitry; built-in calibrator for air check level; variable output; FM vertical and horizontal multipath outputs; signal and tuning meters ..... $230

### ST-335 AM-FM Stereo Tuner

FM section: sensitivity (IHF) 11.2 dBf (2.0 μV); S/N 65 dB; capture ratio 1.5 dB; alternate channel selectivity 60 dB; stereo separation 40 dB at 1000 Hz; frequency response 30-15,000 Hz ±1 dB. AM section: sensitivity 20 μV (IHF); S/N 45 dB; selectivity 25 dB. 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. 3⁴/₅" H × 16¹/₂" W × 10¹/₁₀" D ..... $150

## 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. 2³/₄" H × 17⅛" W × 13¾" D ..... $700

### CT-1010 AM-FM Stereo Tuner

Has PLL multiplex decoder; wide-gap five-gang variable capacitor; image response −110 dB; sensitivity 1.9 μV; 19-kHz pilot carrier cancellation; manual tuning with automatic disengagement of AFC; muting circuit; signal strength/quality and center-zero metering; 333-Hz recording signal calibration generator ..... $375

**CT-810.** Similar to CT-1010 but has −90 dB image response and 1.8 μV sensitivity ..... $275

### T-1 AM-FM Stereo Tuner

Features DX selection circuitry for automatic selection of i-f bandwidth; signal quality meter; record calibration system; direct-current amplifiers. FM section: usable sensitivity 9.8 dBf (1.7 μV); 50-dB quieting sensitivity 14.8 dBf (3 μV) mono, 36 dBf (35 μV) stereo; THD 0.05% (mono and stereo); S/N 80 dB (mono); frequency response 30-15,000 Hz ±0.5 dB; capture ratio 1.0 dB; alternate channel selectivity 92 dB; image response −90 dB; i-f response −100 dB; AM suppression 65 dB; stereo separation 55 dB at 1000 Hz; output 0.5 V fixed. AM section: sensitivity 15 μV (IHF); selectivity 30 dB; S/N 50 dB. 3⅞" H × 17⅛" W × 14⅞" D. $355

### CT-610II AM-FM Stereo Tuner

Has selectable long-distance mode, NFB-PLL FM multiplex demodulator, and built-in recording calibrator. FM section: usable sensitivity 9.3 dBf (1.6 μV) mono; capture ratio 1.0 dB; alternate channel selectivity 85 dB (DX mode), 55 dB (normal mode); S/N (at 65 dBf) 75 dB stereo; IM dist. 0.2%; stereo separation 45 dB at 1000 Hz, 40 dB at 50 and 10,000 Hz; frequency response 50-10,000 Hz ±0.5 dB. AM section: sensitivity 18 μV; selectivity 25 dB at 1000 Hz; S/N 50 dB; THD 0.4%. Other features include signal-strength and tuning meters, FM blend and muting selection, and front-panel output level control. 6¼" H × 17⅛" W × 13¹³/₁₆" D. ..... $215

### CT-410II AM-FM Stereo Tuner

FM section: usable sensitivity 10.3 dBf (1.8 μV); 50-dB quieting sensitivity; 14.8 dBf (3 μV) mono, 37.2 dBf (40 μV) stereo; THD 0.1% (mono), 0.15% (stereo); S/N 74 dB (mono); frequency response 30-15,000 Hz +0.5/−1.5 dB; capture ratio 1 dB; alternate channel selectivity 82 dB; image response −45 dB; i-f response −80 dB; AM suppression 60 dB; stereo separation 40 dB; output 0.5 V. AM section: usable sensitivity 18 μV; selectivity 25 dB at 1000 Hz; image response −40 dB at 1000 Hz; THD 0.4% ..... $175

# Time and a bit of genius make the difference.

It wasn't easy to create the world's finest DC receiver. It took time. A great deal of it. For research. For development. For testing. And it also took a bit of genius — the kind of genius that Sansui engineers are world famous for. But we at Sansui were determined. And we succeeded. So now there is a patent pending on Sansui's unique new DC amplifier circuitry.

The Sansui G-6000 DC receiver, like Sansui's entire G-line of DC receivers, incorporates this unique technology. It delivers music reproduction so superb you will actually hear the difference.

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The Sansui G-6000 DC Receiver

# 3 RECEIVERS

## ADVENT

### 300 FM Stereo Receiver
Combines Holman phono preamp circuit, FM multiplex tuner, and 30-W power amplifier; FM sensitivity 2.5 μV; frequency response 20-20,000 Hz; power bandwidth 40-20,000 Hz; 15 W/ch continuous at rated output at 0.5% THD; stereo separation 35 dB; S/N 82 dB (phono); capture ratio 1.2 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; 3½" H × 15⅞" W × 9" D (plus 1¾" for knob clearance)..... $280

## AIWA

### AX-7500 Stereo Receiver
AM-FM stereo receiver. Amp section: 30 W/ch min. continuous into 8 ohms over 20-20,000 Hz with 0.2% THD and IM dist.; frequency response 30-15,000 Hz ±0.3 dB phono (RIAA eq.), 10-70,000 Hz +0/−1 dB aux., tape, and DIN; S/N 80 dB (aux., DIN, tape 2), 90 dB (tape 1), 75 dB (phono); phono overload (1 kHz) 200 mV (rms), 560 mV (p-p). FM tuner section: usable sensitivity 11.2 dBf (2 μV); capture ratio 1.5 dB; selectivity 60 dB; spurious rejection 80 dB; AM suppression 50 dB; harmonic dist. 0.25% (mono), 0.4% (stereo); S/N 70 dB; stereo separation 43 dB (1 kHz). AM tuner section: sensitivity 300 μV/m (IHF); S/N 50 dB; 120-V ac, 60 Hz, 110 W. Features signal-strength and tuning meters; click-stop rotary control; push-button selectors; LED mode indicator lamps; dual speaker selector switch; mixing circuit; front-panel DIN jack for two-tape deck dubbing; three-stage dc equalizer, dc OCL power amplifier, and FM FET and 3-gang variable capacitor with five-stage limiter in FM i-f section and PLL integrated circuit. 6⅝" H × 17¹¹⁄₁₆" W × 14³⁄₁₆" D..... $290
**SB-10.** Decorator side panel for AX-7500..... $18

## AKAI

### AA-1200 AM-FM Stereo Receiver
120 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.08% THD; FM sensitivity (IHF) 1.7 μV; FM selectivity (IHF) 80 dB; one phono and two tape inputs; three ac outlets (one switched); speaker selector switch for two sets of speakers; tape dubbing and monitoring facilities; tuning and signal-strength meters; power meters with switchable 3- and 120-W ranges; FM muting switch; separate bass, mid-range, and treble controls; dual power supply; lighted mode indicators ..... $650

### AA 1175 AM-FM Stereo Receiver
75 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.08% THD; FM sensitivity (IHF) 1.7 μV; FM selectivity (IHF) 80 dB; one phono and two tape inputs; three ac outlets (one switched); speaker selector switch for two sets of speakers; tape dubbing and monitoring facilities; tuning and signal-strength meters; FM muting switch; high- and low-frequency filters; separate bass, mid-range, and treble controls; dual power supply; lighted mode indicators ... ..... $500

### AA-1150 AM-FM Stereo Receiver
50 W/ch continuous over 20-20,000 Hz with 0.1% THD; FM sensitivity (IHF) 1.8 μV; FM selectivity (IHF) 70 dB one phono and two tape inputs; two ac outlets (one switched); speaker selector switch for two sets of speakers; tape dubbing and monitoring facilities; tuning and signal-strength meters; FM muting switch; high- and low-frequency filters; dual bass and treble controls; lighted mode indicators ... ..... $400

### AA-1135 AM-FM Stereo Receiver
35 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.2% THD; FM sensitivity (IHF) 1.8 μV; FM selectivity (IHF) 70 dB; one phono and two tape inputs; two ac outlets (one switched); speaker selector switch for two sets of speakers; tape dubbing and monitoring facilities; tuning and signal-strength meters; FM muting switch ..... $300

### AA-1125 AM-FM Stereo Receiver
25 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.3% THD (27 W/ch continuous into 4 ohms); S/N (IHF) 75 dB (phono), 90 dB (aux.); channel separation (IHF) 50 dB at 1 kHz (phono); damping factor 30 (1 kHz, 8 ohms); input sensitivity/impedance 3 mV/47,000 ohms (phono), 150 mV/100,000 ohms (aux.); frequency response 30-15,000 Hz ±1 dB (phono), 10-70,000 Hz +0/−2 dB (aux , tape monitor). FM tuner: sensitivity (IHF) 1.9 μV; capture ratio 1.3 dB; selectivity (IHF) 70 dB; image response −65 dB; i-f response −90 dB; spurious response −90 dB; AM suppression 50 dB; S/N 65 dB; HD 0.3% (mono), 0.6% (stereo); stereo separation 40 dB (1 kHz). AM tuner: sensitivity (IHF) 180 μV/m, 10 μV (with external antenna); selectivity (IHF) 30 dB; image response −65 dB; i-f response −45 dB; S/N 45 dB. FM center tuning indicator and AM signal strength meter. 4.8" H × 18.9" W × 10.6" D..... $260

### AA-1115 AM-FM Stereo Receiver
15 W/ch continuous into 8 ohms over 40-20,000 Hz with 0.5% THD (17 W/ch continuous into 4 ohms); S/N (IHF) 75 dB (phono), 90 dB (aux.); channel separation (IHF) 50 dB at 1 kHz (phono); damping factor 30 (1 kHz, 8 ohms); input sensitivity/impedance 3 mV/47,000 ohms (phono), 150 mV/100,000 ohms (aux.); frequency response 30-15,000 Hz ±1 dB (phono), 10-70,000 Hz +0/−2 dB (aux ). FM tuner: sensitivity (IHF) 1.9 μV; capture ratio 1.3 dB; selectivity 60 dB; image response −65 dB; i-f response −90 dB; spurious response −90 dB; AM suppression 50 dB; S/N 65 dB; HD 0.3% (mono), 0.6% (stereo). AM tuner: sensitivity 180 μV/m, 10 μV (with external antenna); selectivity (IHF) 30 dB; image response −65 dB; i-f response −45 dB; S/N 45 dB. FM center tuning indicator and AM signal-strength meter. 4.8" H × 18.9" W × 10.6" D ..... $200

## AUDIO PRO by INTERSEARCH

### TA-150 AM-FM Stereo Receiver
Fully-computer controlled AM-FM stereo receiver with interlock, memory, and logic functions performed by micro-computer. Amplifier: 70 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; power bandwidth 10-100,000 Hz; frequency response 10-200,000 Hz ±0.5 dB (speakers), 8-400,000 Hz −3 dB (tape in), 18-200,000 Hz −3 dB (other inputs), RIAA phono deviation ±0.5 dB; hum and noise −100 dB (power amp), −80 dB at 1 V out (preamp), −75 dB (phono preamp); slew rate 100 V/μsec (power amp), 15 V/μsec (preamp), 7 V/μsec (phono); HD 0.04% at 4 V rms out (preamp) and at 7 V rms out (phono); IM dist. 0.01% at 1 V rms out (phono); overload 5 V rms for 0.1% THD at 1000 Hz (preamp), 150 mV in for 0.1% THD at 1000 Hz (phono); channel separation 67 dB at 1000 Hz; crosstalk 60 dB at 1000 Hz (preamp); bass, mid-range, and treble tone controls ±16 dB range. FM tuner: sensitivity 11 dBf (mono); 50-dB quieting sensitivity 28 dBf (mono), 35 dBf (stereo); capture ratio 2 dB max.; i-f response −55 dB; AM rejection 55 dB; selectivity 55 dB; stereo separation 40 dB at 1000 Hz; frequency response 30-15,000 Hz ±1.5 dB (mono and stereo); 75- and 300-ohm antenna connectors. Also features solid-state switches; full-printed circuitry; mechanical operator controls, one adjustable control knob for volume, balance, treble, midrange, bass, and tuning with selector buttons for each; optical readout for control. 4½" H × 19½" W × 10¼" D ..... $995

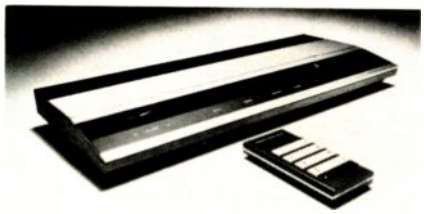
## BANG & OLUFSEN

### Beomaster 4400 FM Receiver
FM stereo receiver. Amp section: 70 W/ch continuous into 4 ohms; frequency response 20-20,000 Hz; max. THD 0.1%; IM dist. 0.1%; input sensitivity/impedance. 2.2 mV/47,000 ohms (phono), 200 mV/470,000 ohms (tape); S/N (linear) 60 dB (phono), 65 dB (tape). Tuner section: 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 63 dB (mono), 62 dB (stereo); capture ratio 4 dB (mono); AM suppression 50 dB (mono); selectivity 4.5 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; 3¾" H × 22⅜" W × 11" D .. $695

### Beomaster 2400 FM Receiver
Low-slung design with no visible knobs; touch-control switching; pre-set FM station capability; wireless remote control optional. 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 μV) mono; 50-dB quieting sensitivity 38.8 dBf (47 μV) stereo, 18.5 dBf (4.6 μV) 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 volume, phono/FM selection and up to 5 pre-set FM stations; func-

# 3 RECEIVERS

tions duplicated (except only four pre-set stations) on optional wireless remote. Additional controls un-



der hinged top panel include main tuning dial, AFC switch, bass, treble and balance controls; "volume memory" pre-sets volume level when unit is turned on. 2½" H × 24¼" W × 9¾" D.
With remote control ..... $655
Less remote ..... $570

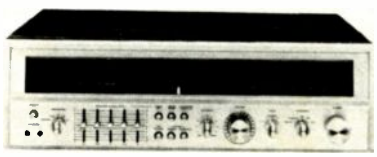
## FISHER

### RS1080 Stereo Receiver

170 W/ch continuous sine wave into 8 ohms over 20-20,000 Hz with 0.08% THD and IM dist. Preamp section: frequency response 30-15,000 Hz ±0.5 dB (phono), 20-20,000 Hz ±0.5 dB (aux.); input sensitivity/impedance 2 mV/50,000 ohms (phono), 150 mV/100,000 ohms (tape and aux.); phono overload 300 mV (1% THD, 1 kHz); hum and noise −95 dB (IHF A; tape, aux.), −78 dB (IHF; phono). FM tuner: sensitivity 3.5 μV (stereo); S/N 75 dB (stereo); capture ratio 0.8 dB; alternate channel selectivity (±400 kHz) 75 dB; image response −100 dB; spurious response −110 dB; i-f response −106 dB; AM suppression 65 dB; THD (65 dBf, stereo) 0.25%; stereo separation 46 dB (1 kHz); frequency response 20-15,000 Hz ± 1 dB. AM tuner: sensitivity 280 μV/m; selectivity (±10 kHz) 45 dB; S/N 55 dB; image response −70 dB; i-f response −80 dB; three ac outlets; 108-132 V ac, 50/60 Hz, 1 kW; 7⅜" H × 23¾" W × 18⁹/₁₆" D ..... $1000

### RS2015 AM-FM Stereo Receiver

Has 5-band graphic equalizer. Amplifier section: 150 W/ch continuous power into 8 ohms



(20-20,000 Hz) at 0.05% THD; IM dist. 0.05%; power bandwidth 20-20,000 Hz; frequency response 20-20,000 Hz ±0.5 dB; phono sensitivity 2 mV; input impedance 50k ohms phono, 100k ohms others; max. phono input 220 mV; S/N (A-weighted) 78 dB phono, 95 dB others. Tuner section: FM usable sensitivity 9.8 dBf (1.7 μV); 50-dB quieting sensitivity 13.2 dBf (2.5 μV) mono, 35.9 dBf (34 μV) stereo; FM distortion 0.2-0.4% stereo, 0.1-0.3% mono; capture ratio 0.8 dB; selectivity 80 dB; AM suppression 65 dB; i-f rejection 100 dB; image rejection 90 dB; spurious response rejection 100 dB; subcarrier rejection 65 dB; stereo separation 45 dB at 1000 Hz, 40 dB from 100-10,000 Hz. AM section: sensitivity 300 μV/m; selectivity 40 dB; S/N 55 dB; image rejection 50 dB; i-f rejection 45 dB. Features power-level, signal-strength, and center-channel meters, Dolby de-emphasis (25 μsec) switch; two tape monitors with one-way dubbing; three speaker outputs; switchable FM muting; loudness; MPX and subsonic filters; calibrated volume control; illuminated function display ..... $850

**RS2010.** Similar to RS2015. 100 W/ch at 0.09% THD; 200 mV max. phono input; S/N 76 dB phono, 90 dB aux. Tuner specs as for RS2015. Features same, but no tape-dub switch. 6¹¹/₁₆" H × 20⁹/₁₆" W × 14¼" D ..... $750

**RS2007.** Similar to RS2010, but 75 W/ch; max. phono input 180 mV. Tuner: FM usable sensitivity 10.8 dBf (1.9 μV) mono; 50-dB quieting sensitivity 14.2 dBf (2.8 μV) mono, 36.8 dBf (38 μV) stereo; capture ratio 1.0 dB; selectivity 68 dB; S/N 70 dB mono, 66 dB stereo; AM suppression 55 dB; i-f rejection 100 dB; image rejection 56 dB; spurious response rejection 85 dB; subcarrier rejection 65 dB; FM distortion 0.15% mono, 0.2% stereo. Features same, with less elaborate function display, single-phono circuit, and two speaker outputs ..... $550

**RS2004.** Similar to RS2007 but 45 W/ch at 0.1% THD; IM dist. 0.1%; max. phono input 150 mV. Features same except single tape monitor, no power meters, no filters, no mono mode switch. 5⅞" H × 19¼" W × 14⅞" H ..... $450

### RS1058 Stereo Receiver

90 W/ch continuous sine wave into 8 ohms over 20-20,000 Hz with 0.1% THD and IM dist. Preamp section: frequency response 30-15,000 Hz ±0.5 dB (phono), 20-20,000 Hz ±0.5 dB (aux.); input sensitivity/impedance; 2 mV/50,000 ohms (phono), 150 mV/100,000 ohms (tape and aux.); phono overload 180 mV (1% THD, 1 kHz); hum and noise −90 dB (IHF A; tape, aux.), −76 dB (IHF; phono). FM tuner: sensitivity 4.3 μV (stereo); S/N 70 dB (stereo); capture ratio 0.8 dB; alternate channel selectivity (±400 kHz) 75 dB; image response −80 dB; spurious response −100 dB; i-f response −100 dB; AM suppression 65 dB; THD (65 dBf, stereo) 0.25%; stereo separation 45 dB (1 kHz); frequency response 20-15,000 Hz ±1 dB. AM tuner: sensitivity 300μV/m; selectivity (±10 kHz) 43 dB; S/N 55 dB; image response −56 dB; i-f response 70 dB; two ac outlets; 108-132 V ac, 50/60 Hz, 500 W; also available with black dial. 6¹³/₁₆" H × 20¾" W × 14¼" D ..... $550

### RS1052 Stereo Receiver

50 W/ch continuous sine wave into 8 ohms over 20-20,000 Hz with 0.2% THD and IM dist. Preamp section: frequency response 30-15,000 Hz ±1 dB (phono), 20-20,000 Hz ±1 dB (aux.); input sensitivity/impedance 2mV/50,000 ohms (phono), 150 mV/100,000 ohms (tape, aux.); phono overload 110 mV (1% THD, 1 kHz); hum and noise −90 dB (IHF A; tape, aux.), −75 dB (IHF; phono). FM tuner: sensitivity 4.6 μV (stereo); S/N 66 dB (stereo); capture ratio 1 dB; alternate channel selectivity (±400 kHz) 68 dB; image response −56 dB; spurious response −85 dB; i-f response −70 dB; AM suppression 55 dB; THD (65 dBf, stereo) 0.4%; stereo separation 40 dB (1 kHz); frequency response 20-15,000 Hz ±1.5 dB. AM tuner: sensitivity 300 μV/m; selectivity (±10 kHz) 40 dB; S/N 55 dB; image response −50 dB; i-f response −45 dB; two ac outlets; 108-132 V ac, 50/60 Hz, 230 W; also available with black dial. 6¹/₁₆" H × 19⅛" W × 13⅛" D ..... $400

**RS1035.** Similar to RS1052 but 35 W/ch continuous sine wave into 8 ohms over 20-20,000 Hz with 0.2% THD and IM dist.; power consumption 190 W ..... $350

**RS1022.** Similar to RS1052 but 22 W/ch continuous sine wave into 8 ohms over 20-20,000 Hz with 0.5% THD and IM dist.; power consumption 160 W ..... $250

### MC2500 AM-FM Stereo Receiver

Amplifier section: 18 W/ch continuous power into 8 ohms (60-20,000 Hz) at 1% THD; IM dist. 0.5%; frequency response 20-20,000 Hz ±2 dB; phono sensitivity 2 mV (magnetic); 300 mV (ceramic); input impedance 50k ohms mag phono, 500k ohms ceramic phono, 100k ohms tape; mag phono max input 100 mV; S/N 70 dB phono, 85 dB aux. Tuner section: FM usable sensitivity 14.1 dBf (2.8 μV); 50-dB quieting sensitivity 19.2 dBf (5.0 μV) mono, 38.3 dBf (45 μV) stereo; FM distortion 0.5% stereo, 0.3% mono; capture ratio 1.2 dB; selectivity 50 dB; AM suppression 55 dB; i-f rejection 65 dB; image rejection 56 dB; spurious response rejection 80 dB; subcarrier rejection 45 dB; stereo separation 35 dB at 1kHz, 30 dB at 100 Hz and 10 kHz; antenna 75 or 300 ohms. Am section: sensitivity 300 μV/m; selectivity 40 dB; S/N 50 dB; image rejection 45 dB; i-f rejection 45 dB Features dual illuminated tuning meters, high filter, switchable loudness, two speaker outputs, magnetic and ceramic phono inputs. 5¹¹/₁₆" H × 20¹/₁₆" W × 10½" D ..... $250

**MC2100.** Similar to MC2500, but 10 W/ch, signal-strength meter only. 4⅞" H × 17¼" W × 10⁹/₁₆" D. ..... $190

## HARMAN/KARDON

### hk670 AM-FM Stereo Receiver

Amplifier: 60 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.05% THD

and IM dist.; frequency response 2-150,000 Hz ±0.5 dB; damping factor 50 into 8 ohms; slew rate 60 V/μsec; square wave rise time 2.0 μsec at 20,000 Hz, tilt less than 5% at 20 Hz; phono sensitivity 2.0 mV; max. input 150 mV; S/N ("A") 90 dB (aux., tape), 85 dB (phono). Tuner section: FM usable sensitivity 10.8 dBf (1.9 μV) mono; 50-dB quieting sensitivity 14.7 dBf (3.0 μV) mono, 37.2 dBf (40 μV) stereo; FM S/N 75 dB; FM dist. 0.5% at 1000 Hz, 80% modulation. Features "SMQ" tuning meter (indicates signal-strength, multipath distortion, and quieting); dual tape monitors with two-way dubbing; switchable tone defeat; high and subsonic filters, 25-μsec de-emphasis; FM muting and loudness; dual power supplies; headphone jack; two speaker output pairs. ..... $519

**hk560.** Similar to hk670, but 40 W/ch; damping factor 30; frequency response 3-100,000 Hz ±0.5 dB. Features similar, but low filter only, no de-emphasis switch, one-way tape dubbing, signal-strength meter only ..... $369

**hk450.** Similar to hk560, but 30 W/ch at 0.1% THD and IM dist.; frequency response 2-80,000 Hz ±0.5 dB; 3.0 μsec rise time at 20,000 Hz; phono sensitivity 2.7 mV; max. input 75 mV; S/N ("A") 78 dB phono. FM tuner usable sensitivity 11.2 dBf (2.0 μV) mono; 50-dB quieting sensitivity 16.1 dBf (3.5μV) mono; FM S/N 70 dB. Features single tape monitor, no filter, no tone defeat ..... $319

**hk340.** Similar to hk450, but 20 W/ch at 0.2% THD; square wave rise time 3.5 μsec at 20,000 Hz. FM tuner usable sensitivity 13.2 dBf (2.5 μV) mono; FM S/N 65 dB; FM dist. 0.75%. Features similar, but no mode or muting switches, single speaker output only, no tape monitor ..... $249

## HEATH

### AR-1515 AM-FM Stereo Receiver

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 μV for 30 dB quieting; capture ratio 1.3 dB. Features digital readout and signal-strength and center-tune meters; secondary controls concealed behind fold-down front panel. Accepts Dolby FM module. 6³/₁₆" H × 21½" W × 15" D
Kit ..... $550
**AD-1504.** Dolby FM module (kit) ..... $40

### AR-1500A AM-FM Stereo Receiver

Amplifier: 60 W/ch min. continuous into 8 ohms at 0.25% THD over 20-20,000 Hz; IM dist. 0.1% at full power; frequency response 5-120,000 Hz +0/−3 dB at 1 W. Tuner: input sensitivity 1.8 mV (mag. phono), 140 mV (tape, aux., and tape monitor); FM sensitivity 1.8 μV for 30 dB quieting; capture ratio 1.5 dB. 5⅛" H × 18½" W × 13⅞" D.
Kit ..... $400
**ARA-1500-1.** Walnut-stained veneer case ..... $25

### AR-1429 AM-FM 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 μV (16.1 dBf); capture ratio 1.5 dB. Features two tuning meters, stereo indicator, main and remote speaker selection, and headphone jack. 4¾" H × 20" W × 13½" D.
Kit ..... $320

**AR-1219 AM-FM Stereo Receiver**
15 W/ch min. continuous into 8 ohms at 0.5% THD over 20-20,000 Hz; frequency response 7-100,000 Hz ±1 dB; FM response 20-15,000 Hz ±1 dB; channel separation 40 dB typically, 35 dB min.; sensitivity 2 μV; capture ratio 2 dB; preassembled FM tuner section; stereo light; headphone jack; 3⅞" H × 17" W × 13" D.
Kit ..... $190

## HITACHI

**SR 2004 Class G Stereo Receiver**
Amplifier: 200 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.08% THD; input sensitivity/impedance 2.5 mV/47,000 ohms (phono), 150 mV/50,000 ohms (tape, aux.). Tuner: FM sensitivity 1.5 μV; FM alternate channel selectivity 85 dB; FM THD 0.2% (1 kHz, stereo); FM S/N 75 dB; stereo separation 50 dB (1 kHz) ..... $1095

**SR 904 Class G Stereo Receiver**
Amplifier: 75 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.09% THD; input sensitivity/impedance 1.9 mV/47,000 ohms (phono), 150 mV/50,000 ohms (tape, aux.). Tuner: FM sensitivity 1.6 μV; FM alternate channel selectivity 80 dB; FM THD 0.25% (1 kHz, stereo); FM S/N 74 dB; stereo separation 45 dB (1 kHz) ..... $600

**SR 804 Class G Stereo Receiver**
Amplifier: 50 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.09% THD; input sensitivity/

impedance 2.5 mV/47,000 ohms (phono), 150 mV/ 50,000 ohms (tape, aux.). Tuner: FM sensitivity 1.7 μV; FM alternate channel selectivity 80 dB; FM THD 0.25% (1 kHz, stereo); FM S/N 74 dB; stereo separation 45 dB (1 kHz) ..... $430

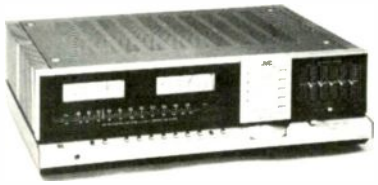
**SR 704 Stereo Receiver**
Amplifier: 40 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.07% THD; input sensitivity/impedance 2.5 mV/47,000 ohms (phono), 200 mV/ 50,000 ohms (tape, aux.). Tuner: FM sensitivity 1.7 μV; FM alternate channel selectivity 60 dB; FM THD 0.3% (1 kHz, stereo); FM S/N 72 dB; stereo separation 40 dB (1 kHz); subsonic filter ..... $350

**SR 504 Stereo Receiver**
27 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.08% THD; input sensitivity/impedance 2.5 mV/47,000 ohms (phono), 200 mV/40,000 ohms (tape, aux.); FM sensitivity 1.8 μV; FM alternate channel selectivity 60 dB; FM THD 0.15% (1 kHz, stereo); FM S/N 74 dB; stereo separation 74 dB (1 kHz); subsonic filter ..... $260

**SR 304 Stereo Receiver**
18 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.08% THD; input sensitivity/impedance 2.5 mV/47,000 ohms (phono), 200 mV/40,000 ohms (tape, aux.); FM sensitivity 1.8 μV; FM alternate channel selectivity 56 dB; FM THD 0.3% (1 kHz, stereo); FM S/N 72 dB; stereo separation 40 dB (1 kHz); subsonic filter ..... $230

## JVC

**JR-S501 Stereo Receiver**
Integrated stereo receiver features dc power amplifier and five-band SEA graphic equalizer; four-gang



frequency-linear tuning capacitor and FET r-f amplifier in FM front end; PLL multiplex demodulator with pilot signal canceller; thumb-controlled lateral control for speed scanning and tuning; twin tuning and power meters; pushbutton source selectors with LED display/slider controls; two-deck dubbing; FM muting; mode/loudness/high and subsonic filters; speaker 1 and 2 switches. Amplifier: 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.03% THD; THD 0.008% at half-rated power; IM dist. 0.001% at rated output; damping factor 70 at 8 ohms, 100C Hz; input sensitivity/impedance 2.5 mV/47,000 ohms (phono), 250 mV/50,000 ohms (aux. and tape); S/N (IHF "A") 75 dB (phono), 95 dB (aux. and tape); frequency response 5-40,000 Hz +0/−1 dB; RIAA phono equalization ±0.2 dB from 20-20,000 Hz; phono overload 250 mV at 1000 Hz. FM tuner: usable sensitivity 10.3 dBf (1.8 μV); 50-dB quieting sensitivity 14.8 dBf (3.0 μV) mono, 37.2 dBf (39.7 μV) stereo; stereo separation 52 dB at 1000 Hz; 0.08% (mono) and 0.1% (stereo) at 1000 Hz; S/N (IHF "A") 78 dB mono, 70 dB stereo; capture ratio 1.0 dB; alternate channel selectivity 80 dB; image rejection 80 dB; i-f rejection 110 dB; frequency response 20-15,000 Hz +0.3/−0.8 dB. Equalizer center frequencies set at 40, 250, 1000, 5000, and 15,000 Hz with 12-dB boost or cut. 6⁹/₁₆" H × 22¹/₁₆" W × 16¹⁵/₁₆" D ..... $700
**JR-S401.** Similar to JR-S501 but 85 W/ch under same conditions; aux. and tape input sensitivity/impedance 210 mV/50,000 ohms; phono overload 200 mV; one-way tape dubbing ..... $600
**JR-S301.** Similar to JR-S401 except 60 W/ch under same conditions; aux. and tape input sensitivity/impedance 190 mV/50,000 ohms; phono overload 190 mV. FM tuner usable sensitivity 10.8 dBf (1.9 μV), stereo separation 50 dB at 1000 Hz, dist. at 1000 Hz 0.08% mono, 0.1% stereo, 55 dB image rejection, i-f rejection 80 dB; no PLL multiplex demodulator with pilot signal canceller, high filter, or phono switch; 6⁹/₁₆" H × 19³/₄" W × 14¹⁵/₁₆" D $460
**JR-S201.** Similar to JR-S301 except 35 W/ch under same conditions; THD and IM dist. 0.01%; aux. and tape input sensitivity/impedance 150 mV/50,000 ohms; phono overload 180 mV at 1000 Hz; signal-strength and center-tuning meters only $350

**JR-S81 AM-FM Stereo Receiver**
Amplifier section: 35 W/ch continuous power into 8 ohms (20-20,000 Hz) at 0.5% THD; phono sensitivity 2.5 mV; input impedances 50k ohms phono, 35k ohms high-level; S/N (A-weighted, inputs shorted) 75 dB phono, 95 dB aux./tape. Tuner section: FM usable sensitivity 12.1 dBf (2.2 μV); 50-dB quieting sensitivity 16.8 dBf (3.8 μV) mono, 38.3 dBf (45 μV) stereo; FM distortion 0.2-0.6% mono and stereo; capture ratio 1.5 dB; selectivity 70 dB; AM suppression 45 dB; i-f rejection 80 dB; image rejection 60 dB; stereo separation 40 dB at 1 kHz, 30 dB 50-10 kHz; S/N (weighted) 78 dB mono, 70 dB stereo. AM section: sensitivity 300 μV/m (bar antenna), 30 μV (ext. antenna); S/N 55 dB. Features twin tuning meters, switchable mode, loudness and FM muting, two speaker output pairs. 6" H × 21¹/₆₄" W × 14⅜" D with rack handles (JR-S81H) ..... $290
**JR-S81W.** Same as JR-S81 except with wood side panels; 6" H × 19⅜" W × 13¹³/₁₆" D ..... $300
**JR-S61.** Similar to JR-S81, but 18 W/ch at 0.8% THD. FM 50-dB quieting sensitivity 17.2 dBf (4.0 μV) mono, 39.2 dBf (50 μV) stereo. Features single tuning meter, switchable loudness and hi-filter; no mode switch ..... $190
**JR-S61W.** Same as JR-S61 except with wood side panels; 6" H × 17½" W × 13⁹/₁₆" D ..... $200

# 3 RECEIVERS

## KENWOOD

### KR-9600 AM-FM Stereo Receiver

160 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.08% THD; dual power supplies; two se-

lectable-range power meters; separate equalizer amplifier for each phono input; microphone sound injection/public address; two tape deck capability with intertape dubbing and tape-through circuit; triple tone controls with defeat; dual-gate MOS FET low-noise FM front end; low-distortion, eight-element linear phase i-f filter; PLL in multiplex for improved separation; dual-function signal/deviation meter; five-gang FM tuning capacitor; 25 μsec Dolby de-emphasis switch; 6⅜" H × 22⅞" W × 16½" D ..... $775

### KR-8010 AM-FM Stereo Receiver

Amplifier section: 125 W/ch continuous power into 8 ohms at 0.05% THD, both channels driven; IM dist. 0.05%; damping factor 35; power bandwidth 5-70,000 Hz; frequency response 5-100,000 Hz +0/−1 dB; phono sensitivity 2.5 mV; max. input 250 mV; input impedance 50,000 ohms, all inputs; S/N (A-weighted): phono 84 dB for 2.5 mV in, 90 dB for 5.0 mV; aux. and tape 105 dB for 150 mV in; mic 73 dB for 2.0 mV in. FM tuner section: usable sensitivity 9.8 dBf (1.7 μV) mono; 50-dB quieting sensitivity 14.1 dBf (2.8 μV) mono, 36.3 dBf (36 μV) stereo; S/N 80 dB mono, 72 dB stereo at 65 dBf in; FM distortion 0.1% mono, 0.15% stereo; capture ratio 1.0 dB; selectivity 85 dB; AM suppression 60 dB; i-f rejection 90 dB; image rejection 85 dB; spurious response rejection 105 dB; subcarrier rejection 67 dB; stereo separation 45 dB at 1000 Hz, 30 dB from 50-15,000 Hz; antenna 300-ohm and 75-ohm. AM section: sensitivity 250 μV/m (rod antenna), 20 μV (ext. antenna); S/N 50 dB; selectivity 30 dB; image rejection 50 dB. Features triple tone controls; dual signal meters; angled dial; function indicator lights; switchable tone defeat; subsonic and high filters; mode/two-level muting; loudness; microphone input with mixing; two tape monitors with two-way dubbing; three speaker output pairs; FM de-emphasis selector (50, 25, and 75 μsec); DIN tape jack. 6¹⁹/₃₂" H × 21¹/₃₂" W × 18¹/₁₆" D ..... $675

### KR-6030 AM-FM Stereo Receiver

Amplifier section: 80 W/ch continuous power into 8 ohms at 0.1% THD and IM dist., both channels driven; damping factor 50; power bandwidth 5-50,000 Hz; frequency response 10-50,000 Hz +0/−1 dB; phono sensitivity 2.5 mV; max. input 250 mV; input impedance: phono 50k, tape/aux. 45k ohms; S/N 75 dB phono, 98 dB tape/aux. (all A-weighted). FM tuner section: usable sensitivity 9.8 dBf (1.7 μV) mono; 50-dB quieting sensitivity 14.1 dBf (2.8 μV) mono, 36.3 dBf (36 μV) stereo; S/N 73 dB mono, 68 dB stereo, at 65 dBf in; FM dist. 0.15% mono, 0.25% stereo at 65 dBf; capture ratio 1.2 dB; selectivity 85 dB; AM suppression 60 dB; i-f rejection 90 dB; image rejection 75 dB; spurious response rejection 95 dB; subcarrier rejection 62 dB; stereo separation 45 dB at 1000 Hz, 35 dB from 50-15,000 Hz; antenna 300-ohm and 75-ohm. AM section: sensitivity 15 μV (ext. antenna); S/N 50 dB; selectivity 33 dB; image rejection 50 dB. Features switchable tone-control defeat; subsonic filter; loudness compensation; mode/FM muting; function display lights; dual tape monitors; angled dial; DIN jack. 5⅞" H × 18²⁹/₃₂" W × 15¹⁵/₁₆" D ..... $525

**KR-5030.** Similar to KR-6030, but 60 W/ch under same conditions; power bandwidth 10-45,000 Hz; damping factor 30; high-level input S/N 95 dB. FM section: usable sensitivity 10.8 dBf (1.9 μV); 50-dB quieting sensitivity 15.0 dBf (3.0 μV) mono, 37.2 dBf (40 μV) stereo; capture ratio 1.0 dB; selectivity 65 dB; AM suppression 60 dB; i-f rejection 86 dB; image rejection 60 dB; spurious response rejection 72 dB; subcarrier rejection 40 dB. Features similar, but no tone defeat, mode/muting switch, DIN jack ..... $425

**KR-3090.** Similar to KR-5030, but 27 W/ch under same conditions; power bandwidth 10-50,000 Hz; damping factor 40; S/N (A-weighted) 77 dB (phono), 100 dB (tape/aux.); phono overload 160 mV; frequency response 20-50,000 Hz +0.5/−1.0 dB. FM tuner section: usable sensitivity 11.2 dBf (2.0 μV) mono; 50-dB quieting sensitivity 15.6 dBf (3.3 μV) mono, 36.1 dBf (35 μV) stereo; S/N 76 dB mono, 72 dB stereo at 65 dBf; FM dist. 0.2% mono, 0.3% stereo; capture ratio 1.5 dB; selectivity 54 dB; AM suppression 55 dB; i-f rejection 90 dB; image suppression 60 dB; spurious response rejection 75 dB; subcarrier rejection 40 dB; stereo separation 43 dB at 1000 Hz, 35 dB from 50-10,000 Hz. AM section: sensitivity 20 μV; S/N 50 dB; image rejection 50 dB; selectivity 35 dB. Features dual tuning meters, switchable muting; two pair of speaker outputs; DIN tape jack. 5½" × 18⁷/₁₆" W × 13¹¹/₁₆" D ..... $260

**KR-2090.** Similar to KR-3090, but amplifier section 16 W/ch under same conditions; power bandwidth 10-60,000 Hz; damping factor 30; phono S/N 76 dB; max. phono input level 120 mV. Features same except for single tuning meter (FM center-channel/AM signal strength) ..... $215

### KR-4070 AM-FM Stereo Receiver

40 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD; shock noise-elimination circuit; center-off tone controls; loudness compensation; tape monitor; FET low-noise FM front end with three-gang tuning capacitor; low-dist. four-element linear phase i-f filter; PLL in multiplex for improved separation; signal-strength and center-tune FM meters; simulated walnut-grain side panels optional; 5⅞" H × 18½" W × 15½" D ..... $315

## LAFAYETTE

### LR-120db AM-FM Stereo Receiver

Includes Dolby noise-reduction system. Amplifier: 120 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.09% THD; hum and noise −90 dB (aux., tape), −70 dB (magnetic phono 1 and 2); input sensitivity for rated output 2.5 mV (phono high), 5 mV −10 mV (phono low), 150 mV (aux., tape), 5 mV/10,000 ohms (mic); phono overload 150 mV at rated output; tape output level 0.15 mV at rated input. FM tuner: usable sensitivity 17.2 dBf; alternate channel selectivity 80 dB at 1000 Hz; capture ratio 1.3 dB at 1000 Hz, stereo; stereo separation 45 dB at 1000 Hz, 1 mV in, 30% mod.; S/N 70 dB (Dolby off, stereo), 80 dB (Dolby on, stereo); spurious rejection 90 dB; image rejection 80 dB at 1000 Hz; i-f rejection 85 dB at 1000 Hz; tape output level 0.77 V. Features switchable turnover on bass and treble for extended range tone controls; dual reversible tape monitors for tape-to-tape dubbing; signal-strength and FM center-tuning meters; left/right power meters; three-speaker capability; mic jack and mixing; two headphone jacks. UL approved. 7" H × 21½" W × 17⅝" D ..... $600

### LR-9090 AM-FM Stereo Receiver

Amplifier: 90 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.1% THD; hum and noise −80 dB (aux., tape), −65 dB (phono, low), −60 dB (phono, high); input sensitivity for rated output 2.5 mV (phono, high), 5 mV (phono, low), 150 mV (aux., tape), 6 mV (mike); phono overload 180 mV (high), 360 mV (low); tape output level 0.15 V (at rated input). Tuner: FM sensitivity 21 dBf; alternate channel selectivity 80 dB (1 kHz); capture ratio 1.25 dB (1 kHz, 1 mV in, 30% mod.); FM dist 0.2% (1 kHz, stereo); stereo separation 40 dB (1 kHz, 1 mV in, 30% mod.); S/N 67 dB (stereo); spurious response −90 dB; image response −80 dB (1 kHz); i-f response −90 dB (1 kHz); tape output level 0.77 V (1 kHz). AM section: sensitivity 20 μV; image response −60 dB (600 kHz); alternate channel selectivity 45 dB (1 kHz); S/N 45 dB (1 kHz); tape output level 0.3 V (1 kHz). Features variable microphone mixing with any program source; switchable turnover on bass and treble for extended range tone controls; dual reversible tape monitors for tape-to-tape dubbing. UL approved. 6½" H × 20⅞" W × 16" D ..... $600

### Criterion Mk VII AM-FM Stereo Receiver

Amplifier: 75 W/ch into 8 ohms from 20-20,000 Hz with 0.3% THD and IM dist.; hum and noise −90 dB (aux., tape), −70 dB (low phono), −65 dB (high phono); input sensitivity for rated output 2.5 mV (high phono), 5 mV (low phono), 150 mV (aux., tape); phono overload 300 mV (low phono), 150 mV (high phono), 10 V (aux.); tape output level 150 mV at rated input. FM tuner section: sensitivity 1.8 μV; alternate channel selectivity 80 dB; capture ratio 1.25 dB; FM dist. 0.25% at 1000 Hz, stereo; S/N 65 dB (stereo); spurious response −100 dB; i-f rejection 95 dB; image rejection 85 dB; tape output level 0.77 V. AM section: sensitivity 25 μV; image response −60 dB; alternate channel selectivity 50 dB; S/N 45 dB; tape output level 0.3 mV. Features dual tape monitors; low and high filters; electronic overload protection circuitry ..... $380

### LR-5555A AM-FM Stereo Receiver

Amplifier: 55 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.3% THD; hum and noise −80 dB (aux., tape), −65 dB (phono, low), −60 dB (phono, high); input sensitivity for rated output 2.5 mV (phono, high), 5 mV (phono, low), 150 mV (aux., tape), 6 mV (mike); phono overload 150 mV (high), 300 mV (low); tape output level 0.15 V (at rated input). FM tuner section: FM sensitivity 21 dBf; alternate channel selectivity 80 dB (1 kHz); capture ratio 1.25 dB (1 kHz, 1 mV in, 30% mod.); FM dist. 0.4% (1 kHz, stereo); stereo separation 40 dB (1 kHz, 1 mV in, 30% mod.); S/N 67 dB (stereo); spurious response −85 dB; i-f response −80 dB (1 kHz); tape output level 0.77 V (1 kHz). AM section: sensitivity 20 μV; image response −60 dB (600 kHz); alternate channel selectivity 45 dB (1 kHz); S/N 45 dB (1 kHz); tape output level 0.3 V (1 kHz). Features variable microphone mixing with any program source; dual meters for signal strength and FM center tuning; bass, mid-range, and treble controls. 6½" H × 19¾" W × 14" D ..... $320

### LR-3030A AM-FM Stereo Receiver

Amplifier: 30 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.5% THD; hum and noise −75 dB (aux., tape), −60 dB (phono); input sensitivity for rated output 3.5 mV (phono, high), 7 mV (phono, low), 150 mV (aux., tape); phono overload 180 mV (high), 360 mV (low); tape output level 0.15 V (at rated input). FM tuner section: sensitivity 2 μV; alternate channel selectivity 70 dB; capture ratio 1.5 dB; FM dist. 0.4% (1 kHz, stereo); stereo separation 40 dB (1 kHz); S/N 65 dB (stereo); i-f response −80 dB; image response −55 dB; tape output level 0.77 V. AM section: sensitivity 25 μV; image response −40 dB; alternate channel selectivity 45 dB; S/N 45 dB; tape output level 0.3 V. Features dual tape monitors; derived four-channel built-in; dual tuning meters; three tone controls. 6½" H × 19¾" W × 14" D ..... $300

### Criterion Mk V AM-FM Stereo Receiver

Amplifier: 44 W/ch into 8 ohms from 20-20,000 Hz with 0.3% THD and IM dist.; hum and noise −85 dB (aux. and tape), −70 dB (magnetic phono); input sensitivity 4 mV for rated output (mag. phono), 150 mV (aux., tape); phono overload 180 mV; tape output level 150 mV at rated input. FM tuner section: sensitivity 2.0 μV; alternate channel selectivity 70 dB; capture ratio 1.5 dB; dist. 0.3% at 1000 Hz, stereo; S/N 65 dB; spurious response −75 dB; i-f rejection 80 dB; image rejection 55 dB; tape output level 0.77 V. AM section: sensitivity 25 μV; image response −40 dB; alternate channel selectivity 50 dB; S/N 45 dB; tape output 0.3 mV. Features dual tape monitors, high filter, loudness switch, and separate signal strength and center tuning meters .. ..... $280

**Criterion Mk III.** Similar to Criterion Mk V except 22 W/ch into 8 ohms from 20-20,000 Hz with 0.6%

THD and IM dist.; hum and noise −75 dB (aux. and tape), −60 dB (magnetic phono). FM tuner dist. 0.4% at 1000 Hz, stereo; spurious response −70 dB. Features one tape monitor and signal-strength meter only ..... $240

**Criterion Mk I.** Similar to Criterion Mk III except 8 W/ch into 8 ohms from 20-20,000 Hz with 0.6% THD and IM dist.; hum and noise −70 dB (aux. and tape) ..... $130

### LR-2020A AM-FM Stereo Receiver

Amplifier: 20 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.6% THD; hum and noise −75 dB (aux., tape), −60 dB (phono); input sensitivity for rated output 4 mV (phono), 150 mV (aux., tape, NR adapter); phono overload 180 mV; tape output level 0.15 V (at rated input). FM tuner section: sensitivity 23 dBf; alternate channel selectivity 70 dB; capture ratio 1.5 dB; FM dist. 0.4% (1 kHz, stereo); S/N 65 dB (stereo); spurious response −70 dB; i-f response −80 dB; image response −55 dB; tape output level 0.77 V. AM section: sensitivity 25 μV; image response −40 dB; alternate channel selectivity 45 dB; S/N 45 dB; tape output level 0.3 V. Features dual-purpose meter for signal strength and FM center tuning; NR (noise reduction) adaptor connections serve as second tape monitor. 5³/₈" H × 16½" W × 11⅝" D ..... $250

### LR-1515A AM-FM Stereo Receiver

Amplifier: 15 W/ch continuous into 8 ohms over 40-20,000 Hz with 0.7% THD; hum and noise −75 dB (aux., tape), −60 dB (phono); input sensitivity for rated output 4 mV (phono), 150 mV (aux., tape); phono overload 180 mV; tape output level 0.15 V (at rated input). FM tuner section: sensitivity 25 dBf; alternate channel selectivity 60 dB; capture ratio 2 dB; FM dist. 0.8% (1 kHz, stereo); stereo separation 35 dB (1 kHz); S/N 63 dB (stereo); spurious response −70 dB; i-f response −80 dB; image response −50 dB; tape output level 0.77 V. AM section: sensitivity 25 μV; image response −40 dB; alternate channel selectivity 35 dB; tape output level 0.3 V. Features signal strength tuning meter; detent-type controls for volume, bass, treble; derived four-channel circuit built-in. UL approved. 5³/₈" H × 16½" W × 11⅝" D ..... $200

## LUX

### R-1120 AM-FM Stereo Receiver

Amplifier: 120 W/ch continuous power into 8 ohms with both channels driven (20-20,000 Hz); THD 0.03%; IM dist. no more than 0.05%; frequency response 10-60,000 Hz ±1 dB; input sensitivity 2.6 mV phono, 160 mV line; phono overload 175 mV; S/N, weighted (IHF "A") 94 dB phono, 95 dB line, unweighted, 66 dB (phono), 86 dB (line); filter frequencies (12 dB/oct) subsonic 15 Hz, low-cut 70 Hz, high-cut 7,000 Hz. FM tuner: FM sensitivity for 50 dB quieting, 14.1 dBf (2.8 μV) mono, 36.8 dBf (38.0 μV) stereo; IHF usable sensitivity 10.3 dBf (1.8 μV) mono, 17.2 dBf (4.0 μV) stereo; FM distortion 0.1-0.3% mono, 0.2-0.4% stereo; selectivity 80 dB; capture ratio 1.3 dB; stereo separation 42 dB at 1000 Hz; AM suppression 55 dB; image rejection 80 dB; i-f rejection 85 dB; S/N 74 dB mono, 70 dB stereo; SCA rejection 60 dB. AM section: usable sensitivity (IHF) 200 μV/m; image ratio 75 dB; i-f rejection 80 dB; S/N 52 dB; distortion 0.5%; selectivity 32 dB. Has loudness compensation, peak indicator, speaker switch, tape dubbing switch ..... $995

### R-1050 AM-FM Stereo Receiver

55 W/ch continuous power into 8 ohms with both channels driven (20-20,000 Hz); THD and IM dist. 0.05%; frequency response 10-50,000 Hz +0/−1 dB. Features LED peak-power output indicators, signal-strength and center-channel tuning meters; speaker selector, tape dubbing switch, provision for plug-in Dolby decoder board; low-cut and high-cut filters; loudness compensation switch; two tape monitor circuits. FM specifications same as R-1120 except: IHF usable sensitivity (stereo) 18.2 dBf (4.6 μV); selectivity 70 dB; AM suppression 52 dB; spurious response rejection 90 dB; stereo separation 40-45 dB; AM specifications same as R-1120 except usable sensitivity rated for external antenna, 15 μV; 7⅛" H × 19⁵/₁₆" W × 14" D ..... $695

### R-1040 AM-FM Stereo Receiver

Amplifier: 40 W/ch continuous power into 8 ohms with both channels driven (20-20,000 Hz); THD 0.03%; IM dist. 0.05% max.; frequency response 10-50,000 Hz +0/−1 dB. Features similar to R-1050, except single tuning meter, no Dolby provision, one tape monitor circuit. FM tuner: FM sensitivity for 50 dB quieting, 18.2 dBf (4.5 μV) mono, 39.8 dBf (51 μV) stereo; IHF usable sensitivity 11.2 dBf (2 μV) mono, 19 dBf (4.8 μV) stereo; FM distortion 0.2-0.3% mono, 0.3-0.5% stereo; selectivity 55 dB; capture ratio 1.2 dB; stereo separation 40-45 dB; AM suppression 50 dB; image rejection 55 dB; i-f rejection 70 dB; S/N 74 dB mono, 70 dB stereo; SCA rejection 60 dB. AM section: usable sensitivity (external antenna) 15 μV; image rejection 50 dB; i-f rejection 40 dB; S/N 50 dB. 7⅞" H × 19¹/₁₆" W × 13¹⁵/₁₆" D ..... $495

## LENCO

### R-50 Stereo Receiver

Amplifier: 40 W/ch continuous sine wave, both channels driven into 8 ohms with 0.2% dist. at 1000 Hz; frequency response 10-40,000 Hz; power bandwidth 20-40,000 Hz; sensitivity/impedance 2.5 mV/50,000 ohms (phono, mic), 160 mV/50,000 ohms (aux., tape); RIAA phono equalization ±1 dB. FM tuner section: sensitivity 1.8 μV mono; mono dist. 0.2%; mono S/N 55 dB; capture ratio 1.5 dB; i-f rejection 90 dB; image rejection 80 dB; channel separation 40 dB; frequency response 20-15,000 Hz. AM section: sensitivity 20 μV; dist. 1.0%; image rejection and S/N 50 dB. Features signal-strength and tuning meters; A/B and A+B speaker controls; high and low filters (8 dB/octave); bass and treble controls (±10-dB range); balance and volume controls; tape copy switch with provisions for two tape deck dubbing; mic mixing; mute switch. 132 mm H × 490 mm W × 390 mm D ..... $330

**R-25.** Similar to R-50 except 19 W/ch continuous sine wave, both channels driven into 8 ohms with 0.5% dist. at 1000 Hz; phono RIAA equalization ±1.5 dB; S/N (DIN weighted) 60 dB (phono), 62 dB (aux. and tape); crosstalk 52 dB at 1000 Hz, 33 dB at 10,000 Hz. AM tuner dist. 2.0%, image rejection and S/N 45 dB. No mic mixing and high and low filter switches ..... $250

## MARANTZ

### 2600 AM-FM Stereo Receiver

300 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.03% THD, 400 W/ch continuous into 4

ohms at 0.05% THD; five-gang dual-gate MOS FET FM front end; quartz-lock FM tuning; PLL FM multiplex demodulator; full complementary direct coupled output; turbo-flow heat dissipation system; built-in 3-in oscilloscope display; peak indicators; plug-in Dolby FM capability; high- (9 kHz, 18 dB/octave) and low-frequency (15 Hz, 18 dB/octave) filters; independent tape-to-tape copy; 7" H × 19¼" W × 17⅛" D ..... $1600

### 2385 AM-FM Stereo Receiver

185 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD, 250 W/ch continuous into 4 ohms at 0.1% THD; five-gang dual-gate MOS FET FM front end; PLL FM multiplex demodulator; full complementary direct coupled output; peak indicators; plug-in Dolby FM capability; high- (9 kHz, 18 dB/octave) and low-frequency (15 Hz, 18 dB/octave) filters; independent tape-to-tape copy; 7" H × 19¼" W × 17⅛" D ..... $1100

# 3 RECEIVERS

### 2330B AM-FM Stereo Receiver
130 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD, 180 W/ch continuous into 4 ohms at 0.1% THD; four-gang dual gate MOS FET FM front end; PLL multiplex demodulator; full complementary direct coupled output; plug-in Dolby FM capability; high- (9 kHz, 18 dB/octave) and low-frequency (15 Hz, 18 dB/octave) filters; independent tape-to-tape copy; selectable tone turnover frequencies; 5³/₈" H × 19¹/₄" W × 15¹/₄" D ..... $770

### 2285B AM-FM Stereo Receiver
85 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD, 110 W/ch into 4 ohms at 0.1% THD; four-gang dual gate MOS FET FM front end; PLL multiplex demodulator; full complementary direct coupled output; plug-in FM Dolby capability; high- (9 kHz, 18 dB/octave) and low-frequency (15 Hz, 18 dB/octave) filters; independent tape-to-tape copy; selectable tone turnover frequencies ..... $660

### 2265B AM-FM Stereo Receiver
65 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD, 83 W/ch into 4 ohms at 0.1% THD; four-gang dual gate MOS FET FM front end; PLL FM multiplex demodulator; full complementary direct coupled output; plug-in FM Dolby capability; independent tape-to-tape copy; low and high filters; selectable tone turnover frequencies; 5³/₄" H × 17¹/₄" W × 14¹/₂" D ..... $580

### 2252B AM-FM Stereo Receiver
54 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD, 68 W/ch into 4 ohms at 0.1% THD; dual-gate MOS FET FM front end; PLL FM multiplex demodulator; full complementary direct coupled output; plug-in Dolby FM capability; independent tape-to-tape copy ..... $460

### 1550 AM-FM Stereo Receiver
50 W/ch continuous into 8 ohms from 20-20,000 Hz at 0.05% THD, 55 W/ch into 4 ohms at 0.1% THD. Features separate bass, midrange, and treble controls; loudness control; high and low filters; FM center-tuning meter; tape copy function; tape monitor; connections for two pairs of speakers. 5¹/₂" H × 17¹/₄" W × 14¹/₄" D ..... $430

**1530.** Similar to 1550 except 30 W/ch into 8 ohms at 0.08% THD, 33 W/ch into 4 ohms at 0.15% THD. Features similar less low filter; AM/FM signal-strength meters ..... $340

**1515.** Similar to 1530 except 15 W/ch into 8 ohms, 17 W/ch into 4 ohms. Features similar less midrange control and tape copy function ..... $230

### 2238B AM-FM Stereo Receiver
40 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD, 48 W/ch into 4 ohms at 0.1% THD; dual-gate MOS FET FM front end; PLL FM multiplex demodulator; full complementary direct coupled output; plug-in Dolby FM capability; separate L/R bass, mid-range, and treble controls; 5³/₈" H × 17¹/₄" W × 14³/₈" D ..... $370

### 2226B AM-FM Stereo Receiver
26 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD, 33 W/ch into 4 ohms at 0.1% THD; dual-gate MOS FET FM front end; PLL FM multiplex demodulator; full complementary direct coupled output; separate left/right bass, mid-range, and treble controls; 25 μsec de-emphasis network; 5³/₈" H × 17¹/₄" W × 14³/₈" D ..... $310

### 2218 AM-FM Stereo Receiver
18 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.08% THD, 24 W/ch into 4 ohms at 0.15% THD; dual-gate MOS FET FM front end; PLL FM multiplex demodulator; full complementary direct coupled output; dual-purpose AM-FM tuning meter; main/remote speaker switching ..... $250

## McKAY DYMEK

### DR 33C Professional AM Receiver
General coverage, AM/CW/SSB receiver with digital frequency synthesis and six-digit frequency readout to 100 Hz. Amplifier section: 2 W into 4 ohms, 1 V rms into 5000 ohms; internal 4-in monitor speaker with external speaker connectors; frequency coverage 50 kHz-29.7 MHz continuous; reception modes AM, upper and lower sideband, CW, RTTY (with external converter); sensitivity for 4-kHz AM bandwidth varies from 1.0 μV (400 kHz-20 MHz) to 10 μV (100 kHz) for 10 dB (S+N)/N; image rejection 70 dB; r-f blocking 100 dB above 1 μV; cross-modulation 65 dB to 1 μV; intermodulation 65 dB above 1 μV; hum and noise 55 dB below full output; harmonic distortion 0.6% for 50% modulation, 1.5% for 90% modulation; max bandwidth 8 kHz. Features audio notch filter, i-f output jack, noise limiter, quartz-crystal PLL digital synthesis, independent selection of reception mode and i-f bandwidth, tuning meter. Options include RF preselector, 600-ohm balanced audio output, 400-Hz CW and 1200-Hz RTTY filters, rack mount. 5.1" H × 17.5" W × 15" D ..... $1500

**DR 22C.** Similar to DR 33C, but 5-digit, 1-kHz readout; no separate i-f filter switch; minimum bandwidth 4 kHz, no 400- and 1200-Hz bandwidth filter options ..... $1095

## NAKAMICHI

### 730 Receiver
Features touch-activated electronic switching for all functions; triple-transistor phono preamplifier; motor-driven variable capacitor for automatic tuning; four pre-set 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; 3¹/₂" H × 23¹/₄" W × 14¹/₂" D ..... $1200

**RM-730.** Optional wireless remote control system for 730 Receiver; uses pulse-code-modulated infrared light ..... $190

## NIKKO

### NR 1415 AM-FM Stereo Receiver
Amplifier: 175 W/ch continuous, both channels driven into 8 ohms from 15-20,000 Hz with 0.045%

THD; features dual-mode (wide/narrow) i-f bandwidth; microphone mixing; LED function indicator lights; circuit-protection indicator LED; audio muting; tone control defeat; dual tuning meters. FM tuner section: IHF usable sensitivity 1.7 μV normal bandwidth, 2.0 μV narrow-band; selectivity 65 dB normal, 85 dB narrow; capture ratio 1.0 dB normal, 1.5 dB narrow. AM section: S/N 75 dB. 7³/₄" H × 22" W × 20" D ..... $850

**NR 1015.** Similar to NR 1415, but 85 W/ch (20-20,000 Hz) at 0.05% THD; single-mode i-f bandwidth; FM IHF usable sensitivity 1.8 μV; selectivity 80 dB; S/N 45 dB; image rejection 45 dB; 6³/₄" H × 21" W × 16" D ..... $570

**NR 815.** Similar to NR 1015, but 55 W/ch (20-20,000 Hz); 0.07% THD; FM stereo separation 45 dB ..... $470

### NR 715 AM-FM Stereo Receiver
Amplifier: 38 W/ch continuous both channels driven into 8 ohms from 20-20,000 Hz with 0.2% THD; features high filter, connections for two pairs of speakers, patented circuit breakers. Tuner: usable sensitivity 2.0 μV; selectivity 75 dB; capture ratio 1.5 dB; stereo separation 45 dB; image rejection 60 dB; AM signal-to-noise 45 dB; AM image rejection 45 dB. 6¹/₈" H × 18" W × 13¹/₂" D ... $310

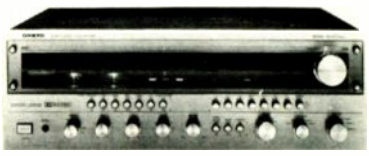
**NR 615.** Similar to NR 715, but 28 W/ch at 0.3% THD; single tuning meter ..... $270

**NR 515.** Similar to NR 615, but 18 W/ch at 0.5% THD; FM usable sensitivity 1.1 μV; selectivity 55 dB; capture ratio 2.0 dB; stereo separation 40 dB; 5¹/₄" H × 17¹/₄" W × 17³/₄" D ..... $220

**NR 315.** Similar to NR 515; 10 W/ch (40-20,000 Hz) at 0.8% THD; FM usable sensitivity 2.4 μV ..... $175

## ONKYO

### TX-8500 MK II AM-FM Stereo Receiver
Features digital frequency readout (FM only), quartz-locked tuning (automatic optimum tuning af-



ter rough-hand tuning) with "Accutact" control (finger-contact sensing unlocks station), and seven FM station presets. Amplifier section: 160 W/ch continuous, both channels driven into 8 ohms at 0.05% THD; IM dist. 0.1%; frequency response 2-30,000 Hz ±1 dB; phono sensitivity 2.5 mV; max. input 250 mV; input impedance 50,000 ohms, all inputs; S/N (A-weighted) 87 dB phono, 95 dB aux./tape. FM tuner section: FM usable sensitivity 9.3 dBf (1.6 μV) mono; 50-dB quieting sensitivity 14.7 dBf (3.0 μV) mono; S/N 70 dB mono, 65 dB stereo; distortion 0.15% mono, 0.3% stereo; selectivity 70 dB; i-f rejection 100 dB; image rejection 83 dB; stereo separation 40 dB at 1 kHz, 32 dB at 100-10,000 Hz. AM section: image rejection 55 dB; i-f rejection 55 dB; S/N 45 dB. Other features include linear dial scale; dual tuning meters; Dolby noise reduction; dual tape monitors with two-way dubbing; three speaker outputs; detented volume, bass, midrange, and treble controls; switchable subsonic, low and high filters, bass and treble turnover frequency; external-processor loop, audio mode and loudness compensation. 7³/₈" H × 21⁷/₈" W × 18⁵/₈" D ..... $1000

**TX-6500 MK II.** Similar to TX-8500 MK II, but 100 W/ch under same conditions; phono max. input 250 mV. FM section: usable sensitivity 9.8 dBf (1.7μV), 17.2 dBf (4 μV) stereo; 50-dB quieting sensitivity 14.7 dBf (3μV) mono, 36 dBf (35 μV) stereo; capture ratio 1.3 dB; spurious rejection 95 dB; AM suppression 55 dB; subcarrier suppression 60 dB. Features similar, but no digital readout or station presets; tone control turnovers not switchable; de-emphasis switch for external Dolby unit. 7³/₈" H × 21⁷/₈" W × 17⁷/₈" D ..... $650

**TX-4500 MK II.** Similar to TX-6500 MK II, but 60 W/ch at 0.1% THD under same conditions; IM 0.3%; frequency response 15-30,000 Hz ±1 dB. FM section: usable sensitivity 10.3 dBf (1.8 μV) mono, 18.3 dBf stereo; 50 dB quieting sensitivity 17.2 dBf (4 μV) mono, 37.2 dBf (40 μV) stereo; distortion 0.2% mono, 0.4% stereo; capture ratio 1.5 dB; image rejection 80 dB; spurious rejection 90 dB; stereo separation 40 dB at 1000 Hz, 30 dB 100-10,000 Hz. AM section: image rejection 45 dB; i-f rejection 40 dB; S/N 40 dB. Features similar, but no midrange control, subsonic filter, external-processor loop. 6⁷/₁₆" H × 21³/₁₆" W × 15⁷/₈" D ..... $460

**TX-2500 MK II.** Similar to TX-4500 MK II, but 40 W/ch under same conditions; frequency response 20-30,000 Hz ±1 dB. FM section: usable sensitivity 11.2 dBf (2.0 μV) mono, 19.2 dBf (5 μV) stereo; selectivity 60 dB; i-f rejection 80 dB; image rejection 45 dB; separation at 1 kHz 37 dB. AM i-f rejection 30 dB. Features similar, but no low filter; one-way tape dubbing; servo-lock instead of quartz-lock tuning. 6⁷/₈" H × 19" W × 14⁵/₈" D ..... $320

**TX-1500 MK II.** Similar to TX-2500 MK II, but 15 W/ch at 0.3% THD; IM 0.5%; max. phono input 100 mV; S/N 90 dB tape and aux, 83 dB phono (A-weighted). FM usable sensitivity 12.4 dBf (2.3 μV) mono; 50-dB quieting sensitivity 18.3 dBf (4.5 μV)

mono, 39.2 dBf (5.0 μV) stereo; distortion 0.25% mono, 0.5% stereo; stereo separation at 1 kHz 35 dB. Features similar, but no high filter or de-emphasis switch; single tuning meter. 5¾" H × 17¼" W × 12⅛ D .... $215

## OPTONICA

### SA-5151 AM-FM Stereo Receiver

85 W/ch continuous power into 8 ohms with both channels driven (20-20,000 Hz); THD 0.09%; IM dist. 1.0%; features dual phono inputs; dual tape monitor circuits with dubbing; dual tuning meters; signal generator to calibrate tape deck to match tuner output; 41 step volume control; FM usable sensitivity (IHF) 1.8 μV; distortion 0.2% mono, 0.4% stereo; selectivity 70 dB; capture ratio 1.0 dB; stereo separation 35 dB; AM suppression 55 dB; image rejection 81 dB; i-f rejection 86 dB; S/N 72 dB mono; AM sensitivity 400 μV/m; selectivity 36 dB; S/N 44 dB; THD 0.8%; image rejection 40 dB; i-f rejection 55 dB; 6½" H × 21⅝" W × 19⅛" D ... $530

**SA-4141.** Similar to SA-5151, but 65 W/ch; IM dist. 0.1%; FM sensitivity 1.9 μV (IHF); selectivity 60 dB, image rejection 60 dB; AM suppression 50 dB, spurious rejection 66 dB..... $430

### SA-5401 AM-FM Stereo Receiver

Amplifier: 65 W/ch continuous power into 8 ohms at 0.19% THD, 20-20,000 Hz, both channels driven. FM tuner: usable sensitivity 10.8 dBf (1.9 μV); S/N 72 dB; AM distortion 0.4% stereo at 1000 Hz. Features 41-position detented volume control, FM "air-check" tape-level oscillator, dual tuning meters, switchable FM muting, low and high filters, loudness compensation, audio muting and FM high-blend, Opto-lock tuning with indicator light, dual speaker outputs, dual tape monitors with two-way dubbing, and two phono inputs..... $450

**SA-5405.** Same, but in black finish..... $450

### SA-5201 AM-FM Stereo Receiver

Amplifier section: 45 W/ch continuous power into 8 ohms at 0.19% THD and IM dist., both channels driven; damping factor 46; frequency response 10-60,000 Hz ±1.5 dB; phono sensitivity 2.5 mV; max. input 150 mV; input impedance 47k ohms, all inputs. FM tuner section: usable sensitivity 10.8 dBf (1.9 μV) mono; S/N 72 dB; distortion at 1 kHz, 0.2% mono, 0.4% stereo; capture ratio 1.2 dB; selectivity 60 dB; AM suppression 50 dB; i-f rejection 80 dB; image rejection 50 dB; spurious response rejection 66 dB; stereo separation 40 dB at 1000 Hz, 35 dB from 50-10,000 Hz. AM section: sensitivity 300 μV/m (rod antenna); S/N 42 dB; selectivity 27 dB; image rejection 44 dB; i-f rejection 30 dB. Features "air-check" recorder-calibrating oscillator; switchable FM muting/mode; high and low filters; two tape monitors with two-way dubbing; 41-detent volume control; dual tuning meters; switchable loudness contour; two speaker outputs; slanted dial. 6.5" H × 19.6" W × 15.3" D..... $340

**SA-5205.** Same, but in black..... $340

## PANASONIC

### RA-6700 AM-FM Receiver/Cassette

Stereo receiver with built-in cassette recorder/player. Amplifier section: 25 W/ch continuous power into 8 ohms at 0.8% THD from 40-20,000 Hz, both channels driven; input sensitivity 3 mV (magnetic phono), 400 mV (ceramic phono), 1 mV mic (recording), 300 mV aux./tape; phono input impedance 50k ohms (mag), 1 megohm (ceramic); mic input 1.5k ohms; S/N (open circuit) 70 dB phono, 80 dB aux. Tuner section: FM usable sensitivity 11.2 dBf (2.0 μV) mono; selectivity 55 dB; S/N 68 dB; THD less than 0.3% mono, 0.4% stereo; stereo separation 40 dB at 1 kHz; antenna input 300 ohms. AM sensitivity 100 μV/m (rod antenna); selectivity 25 dB; image rejection 40 dB; i-f rejection 40 dB. Stereo cassette recorder wow and flutter less than 0.15% wrms. Features detented volume, bass and treble controls, center-detent balance; switchable AFC, loudness; tape monitor for external deck; Dolby and $CrO_2$/Normal selectors; auto-stop; recording level meters (one doubles as tuning meter); whistle defeat switch for AM recording. 7" H × 21⅜" W × 15¾" D..... $440

### RA-6100 AM-FM Stereo Receiver

12 W/ch continuous power into 8 ohms with both channels driven (40-20,000 Hz); THD 0.8%; features magnetic and ceramic phono inputs; speaker switching; mic mixing; 41-step volume control; detented bass and treble controls; FM usable sensitivity (IHF) 2 μV; distortion 0.3% mono, 0.4% stereo; selectivity 55 dB; stereo separation 40 dB at 1 kHz; S/N 68 dB, AM usable sensitivity 100 μV/m; selectivity 25 dB; image rejection 40 dB, i-f rejection 40 dB; 7" H × 19" W × 12¾" D..... $216

**RA-6600.** Same as RA-6100 with built-in 8-track cartridge recorder..... $350

**RA-6500.** Same as RA-6100 with built-in cassette recorder..... $370

**RA-6800.** Same as RA-6500, but 25 W/ch.... $416

## JC PENNEY

### MCS 3275 Stereo Receiver

AM-FM stereo receiver with 10-octave graphic equalizer. Amplifier: 80 W/ch, both channels driven into 8 ohms from 20-20,000 Hz with 0.25% THD; frequency response 5-60,000 Hz −2 dB, RIAA phono deviation +18.6/−19.6 dB from 30-20,000 Hz; input sensitivity 2.5 mV (phono), 150 mV (aux., tape, and Dolby in); phono overload 200 mV; output 150 mV (tape 1 and 2); S/N (IHF "A") 75 dB (phono), 100 dB (aux., tape, Dolby in); low (8 dB/octave at 20 Hz) and high (6 dB/octave at 12,000 Hz) filters. FM tuner: IHF usable sensitivity 1.9 μV; 30-dB quieting sensitivity 1.5 μV; THD 0.2% mono, 0.35% stereo; S/N 65 dB; alternate channel selectivity 50 dB; capture ratio 1.5 dB; image rejection 50 dB i-f rejection 80 dB; stereo separation 45 dB at 1000 Hz, 40 at 100 Hz, 30 at 10,000 Hz. AM section: 20-dB quieting sensitivity 300 μV/m; alternate channel selectivity 30 dB, i-f rejection 35 dB; image rejection 50 dB; THD 1.0% at rated output. Equalizer frequencies set at 60, 240, 1000, 4000, and 16,000 Hz with ±10 dB range; separate tone defeat switch; LED readout. Unit features attenuated volume control; two-tape deck dubbing capability; −20 dB audio muting switch; FM Dolby adaptor switch; switchable speaker selector; left/right power meters; FM dipole antenna; headphone jack; quadrature detector for FM ..... $600

### MCS 3253 Stereo Receiver

AM-FM stereo receiver. Amplifier: 53 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.5% THD; IM dist. 0.03%; S/N 85 dB, phono overload 240 mV; RIAA deviation ±0.5 dB from 30-15,000 Hz; high (8000 Hz) and low (12,000 Hz) filters. FM tuner: IHF usable sensitivity 1.9 μV; quieting sensitivity 3 μV; THD 0.21% mono, 0.25% stereo; S/N 73 dB mono; frequency response 12-15,000 Hz; capture ratio 0.75 dB; alternate channel selectivity 65 dB; image rejection 50 dB; stereo separation 48 dB. AM section: sensitivity 300 μV; selectivity 30 dB; S/N 50 dB. Tuner features PLL circuit in FM multiplex demodulator; FM muting; LED stereo indicator; center-tuning/signal-strength tuning meter. Amplifier features twin calibrated power meters; speaker selector switch; two-step bass and treble turnover frequency selector switch; three defeat switches; 32-position detented attenuator master volume control; two-deck tape monitoring and dubbing; LED function indicator; mode switch; loudness defeat; flywheel tuning knob; 300- and 75-ohm antenna terminals; headphone jack ..... $450

### MCS 3233 Stereo Receiver

Amplifier: 33 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.8% THD; IM dist. 0.1%; S/N 80 dB; phono overload 160 mV; RIAA deviation ±3 dB from 20-20,000 Hz. FM tuner: IHF usable sensitivity 3 μV; quieting sensitivity 5 μV; THD 0.25% mono, 0.35% stereo; S/N 70 dB mono; capture ratio 2.2 dB; alternate channel selectivity 80 dB; image rejection 50 dB; stereo separation 30 dB; frequency response 10-15,000 Hz. AM section: sensitivity 350 μV/m; selectivity 35 dB; S/N 32 dB. Features bass (±10 dB), midrange (±8 dB), and treble (±10 dB) tone controls; high and low filters; attenuator volume control; two-tape deck dubbing capability; switchable speaker selector; separate left/right power meters; headphone jack..... $300

### MCS 3223 Stereo Receiver

Amplifier: 23 W/ch continuous, both channels driven into 8 ohms from 40-20,000 Hz with 0.9% THD; IM dist. 0.2%; S/N 84 dB; phono overload 210 mV; RIAA deviation ±4 dB from 20-20,000 Hz. FM tuner: IHF usable sensitivity 2.5 μV; quieting sensitivity 4 μV; THD 0.25% mono, 0.5% stereo; mono S/N 75 dB; capture ratio 2.5 dB; alternate channel selectivity 75 dB; image rejection 45 dB; stereo separation 40 dB; frequency response 15-15,000 Hz. AM section: sensitivity 350 μV; selectivity 30 dB; S/N 32 dB. Features separate bass and treble controls (±10 dB range); high and low filters; 41-position detented volume control; loudness switch; mode switch; FM mute switch; tape monitor selector; two-way tape dubbing; switchable speaker selector; signal-strength and center-tuning meters; headphone jack..... $230

### MCS 3212 Stereo Receiver

Amplifier: 12 W/ch continuous into 8 ohms from 40-20,000 Hz with 1.0% THD; IM dist. 0.5%; S/N 78 dB; phono overload 140 mV; RIAA deviation ±2 dB from 20-20,000 Hz. FM tuner: IHF usable sensitivity 3 μV; quieting sensitivity 4 μV; THD 0.6% mono, 0.8% stereo; S/N 73 dB mono; capture ratio 1.5 dB; selectivity 70 dB; image rejection 50 dB; stereo separation 33 dB; frequency response 20-12,000 Hz. AM section: sensitivity 500 μV/m; selectivity 30 dB; S/N 37 dB. Features separate bass and treble tone controls (±8 dB range); high and low filters; volume control; loudness switch; mode switch; FM muting; tape monitor switch; switchable speaker selector; signal-strength meter; headphone jack ..... $180

## PHILIPS

### AH787 AM-FM Stereo Receiver

Amplifier section: 60 W/ch continuous power into 8 ohms at 0.04% THD, both channels driven; IM dist.

# 3 RECEIVERS

0.04%; damping factor 50; frequency response 15-30,000 Hz ±0.5 dB; phono sensitivity 2.5 mV; max. input 210 mV; input impedance phono 50k ohms, others 100k; S/N (A-weighted) 70 dB phono, 90 dB aux./tape. FM tuner section: usable sensitivity 9.8 dBf (1.7 μV) mono; 50-dB quieting sensitivity 14.1 dBf (2.8 μV) mono, 34.7 dBf (30 μV) stereo; S/N at 65 dBf, 70 dB mono, 65 dB stereo; FM distortion 0.15% mono, 0.25% stereo; capture ratio 1.3 dB; selectivity 75 dB; AM suppression 45 dB; i-f rejection 100 dB; image rejection 90 dB; spurious response rejection 100 dB; stereo separation 45 dB at 1kHz. AM section: sensitivity 300 μV/m (rod antenna); S/N 50 dB; selectivity 30 dB; image rejection 50 dB; i-f rejection 42 dB. Features switchable high and low features, mode, loudness, FM muting; dual tuning meters; detented bass and treble controls; dual tape monitors with two-way dubbing; three speaker outputs; illuminated function indicators. 6" H × 20¾" W × 15½" D .... $430

**AH7871.** Same as AH787 but in black ..... $440

**AH786.** Similar to AH787, except 45 W/ch at 0.05% THD and IM dist.; FM usable sensitivity 10.3 dBf (1.8 μV). Features same, except high filter only and two speaker outputs ..... $350

**AH7861.** Same as AH786 but in black finish . $360

**AH785.** Similar to AH786, except 30 W/ch at 0.08% THD under same conditions; IM dist. 0.07%; damping factor 30; frequency response 20-20,000 Hz ±0.5 dB; maximum phono input 150 mV. Tuner section: FM usable sensitivity 10.8 dBf (1. 9 μV); 50-dB quieting sensitivity 16.1 dBf (3.5 μV) mono, 37.7 dBf (42.0 μV) stereo; FM distortion (stereo) 0.3%; capture ratio 1.6 dB; selectivity 70 dB; AM suppression 45 dB; i-f rejection 90 dB; image rejection 70 dB; spurious response rejection 75 dB. AM S/N 45 dB; selectivity 20 dB; i-f rejection 45 dB. Features similar, but only one tape monitor. 5.5" H × 17.31" W × 13.25" D ..... $270

**AH7851.** Black version of AH785..... $280

**AH784.** Similar to AH785, except 20 W/ch at 0.1% THD, same conditions; damping factor 25; FM usable sensitivity 11.2 dBf (2.0 μV) mono. Features similar except no high filter, single tuning meter. ... ..... $200

**AH7841.** Black version of AH784..... $210

## PIONEER

### SX-1980 AM-FM Stereo Receiver

Amplifier section: 270 W/ch continuous power into 8 ohms at 0.03% THD and IM dist., both channels

driven; damping factor 40; frequency response 5-80,000 Hz +0/−1 dB; phono sensitivity 2.5 mV; max. input 300 mV; input impedance 50k ohms, all inputs, phono 1 switchable 10-50-100k ohms, 100-200-300-400 pF; S/N (A-weighted, inputs shorted) 87 dB phono (interference filter off), 100 dB aux./tape. FM tuner section: FM usable sensitivity 8.75 dBf (1.5 μV) mono; 50-dB quieting sensitivity 11.5 dBf (2.2 μV) mono, 36 dBf (34 μV) stereo; S/N 83 dB mono, 74 dB stereo at 65 dBf; FM distortion 0.07% mono, 0.1% stereo at 1000 Hz, 0.2% stereo and mono at 6000 Hz; capture ratio 1.0 dB; selectivity 80 dB; AM suppression 60 dB; i-f rejection 120 dB; image rejection 120 dB; spurious response rejection 120 dB; subcarrier rejection 65 dB; stereo separation 50 dB at 1000 Hz, 40 dB from 30-15,000 Hz; antenna 300-ohm and 75-ohm. AM section: sensitivity 300 μV/m (rod antenna), 15 μV (ext. antenna); S/N 55 dB; selectivity 26 dB; image rejection 70 dB; i-f rejection 70 dB. Features front-panel cartridge load impedance and capacitance controls (phono 1); two phono inputs (one doubles as mic input); dual tape monitors with two-way dubbing; separate main and sub bass and treble controls; dual power meters; quartz-lock tuning (unlocks when tuning knob is touched); dual tuning meters; function indicator lights; station memory markers; switchable high and low filters; tone defeat, mode, loudness; audio muting; FM muting; 25 μsec FM de-emphasis (external adapter loop provided for Dolby); audible multipath circuit; phono filter for r-f interference. 8⁹/₁₆" H × 22" W × 19⁹/₁₆" D ..... $1250

**SX-1280.** Similar to SX-1980. Amplifier section: 185 W/ch under same conditions; IM dist. 0.01%; damping factor 30; input impedance 50k ohms, all inputs; phono 1 adjustable 100, 200, 300, 400 pF; S/N 80 dB phono, 95 dB aux./tape. Tuner section: FM usable sensitivity 9.8 dBf (1.7 μV) mono; 50-dB quieting sensitivity 14.2 dBf (2.8 μV) mono, 36 dBf (34 μV) stereo; S/N 80 dB mono, 71 dB stereo at 65 dBf; distortion 0.1% mono, 0.15% stereo at 1 kHz; AM suppression 55 dB; i-f rejection 110 dB; image rejection 90 dB; spurious response rejection 100 dB. AM: S/N 55 dB; image and i-f rejection 40 dB. Features similar, but switch for phono 1 capacitance only, no phono interference filter. 7⅜" H × 21⅞" W × 18⅛" D..... $900

**SX-1080.** Similar to SX-1280. 120 W/ch, same conditions; 0.05% IM dist.; max. phono input 200 mV; S/N 76 dB phono, 90 dB aux./tape. Features same except no Phono 1 capacitance switch, single bass and treble controls with turnover switches. 6¹⁵/₁₆" H × 20¾" W × 17⁹/₁₆" D..... $700

**SX-980.** Similar to SX-1080, except 80 W/ch and no multipath switch. ..... $550

**SX-880.** Similar to SX-980. 60 W/ch; S/N 76 dB phono, 95 dB aux./tape. FM section: usable sensitivity 10.3 dBf (1.8 μV) mono; 50-dB quieting sensitivity 16.2 dBf (3.6 μV) mono, 37.0 dBf (39.0 μV) stereo; S/N at 65 dBf 80 dB mono, 72 dB stereo; distortion at 65 dBf 0.07% mono, 0.15% stereo at 1 kHz; capture ratio 1.0 dB; selectivity 75 dB; AM suppression 50 dB; image rejection 65 dB; i-f rejection 90 dB; spurious response −65 dB; subcarrier rejection 55 dB; stereo separation 45 dB at 1 kHz, 35 dB from 30-15,000 Hz. Features similar, but low filter only, no FM de-emphasis, audio muting, tone defeat or turnover switches; single phono input, no mic input. 5½" H × 18⅞" W × 12⅜" D .. ..... $425

**SX-780.** Similar to SX-880, except 45 W/ch. Features tape monitor indicator lights; dual-purpose single tuning meter; dual power meters; two speaker outputs; switchable low filter, FM muting, mode, loudness; two tape monitors with one-way dubbing. ..... $325

**SX-680.** Similar to SX-780, except 30 W/ch at 0.1% THD, same conditions; 0.1% IM dist.; frequency response 10-60,000 Hz +0.5/−1.5 dB; S/N 75 dB phono, 90 dB aux./tape. FM section: usable sensitivity 10.8 dBf (1.9 μV); 50-dB quieting sensitivity 16.8 dBf (3.8 μV) mono, 37.0 dBf (39.0 μV) stereo; selectivity 60 dB; separation 40 dB at 1 kHz, 30 dB from 30-15,000 Hz. Features similar, but combined mode/FM mute switch, no filter, no dubbing. 5¹¹/₁₆" H × 17⅞" W × 12⅜" D ..... $275

**SX-580.** Similar to SX-680, except 20 W/ch at 0.3% THD, same conditions; IM dist. 0.3%; S/N 73 dB phono, 90 dB aux./tape; features single tape monitor..... $225

### *4-Channel*

### QX-949A Four-Channel Receiver

Includes built-in CD-4 demodulator and decoders for regular matrix and SQ sources; continuous power output 40 W × 4 into 8 ohms over 20-20,000 Hz; power bandwidth (IHF, four channels driven) 7-40,000 Hz with 0.3% HD; frequency response 10-25,000 Hz ±1 dB (aux.); FM usable (IHF) sensitivity 1.8 μV; capture ratio 1 dB; selectivity 80 dB; HD 0.2% (mono), 0.4% (stereo); four-channel level indicator; outputs for four pairs of speaker systems and three tape decks; two turntable inputs and additional aux. source input..... $750

## REALISTIC

### STA-2100 AM-FM Stereo Receiver

Amplifier: 120 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.1% THD; frequency response 15-25,000 Hz ±2 dB; IM dist. 0.05%; S/N 70 dB (phono), 75 dB (aux.); phono overload 230 mV. FM tuner: IHF sensitivity 10.1 dBf (1.5 μV); capture ratio 1.5 dB; alternate channel selectivity 75 dB; stereo separation 52 dB at 1000 Hz; S/N 70 dB. AM section: sensitivity 200 μV/m; image rejection 60 dB; S/N 45 dB. Features two tape deck monitoring and dubbing capability; three tone controls with selectable bass and treble crossover points; switchable 25/75 μsec de-emphasis for FM Dolby B; switched and unswitched ac outlets; signal-strength and power meters; brushed aluminum front panel. 6⅞" H × 20½" W × 16⅞" D..... $600

**STA-2000D.** Similar to STA-2100 except with Dolby noise-reduction system; 75 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.18% THD; IM dist. 0.1%; FM tuner sensitivity 1.7 μV (IHF); FM stereo separation 48 dB at 1000 Hz; features similar less switchable 25/75 μsec de-emphasis for FM Dolby B; 6¼" H × 19¼" W × 16½" D..... $500

### STA-235B AM-FM Stereo Receiver

Amplifier: 55 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.3% THD; frequency response 50-30,000 Hz ±1 dB; S/N 65 dB (phono), 80 dB (aux.); phono sensitivity 2.5 and 6 mV; phono overload 200 mV. FM tuner: IHF sensitivity 10.8 dBf (1.9 μV); capture ratio 2.0 dB. AM tuner: sensitivity 250 μV. Features switchable 25/75 μsec de-emphasis for Dolby; two tape monitor circuits; three detented tone controls with Baxandall circuitry; automatic FM fine tuning; brushed aluminum front panel. 5½" H × 19⅛" W × 13½" D..... $430

### STA-95 AM-FM Stereo Receiver

Amplifier: 45 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.3% THD; frequency response 30-20,000 Hz ±1 dB; S/N 65 dB (phono), 80 dB (aux.); phono overload 150 mV. FM tuner: IHF sensitivity 11.2 dBf (2 μV); capture ratio 2 dB; alternate channel selectivity 50 dB; stereo separation 40 dB at 1000 Hz; S/N 60 dB. AM section: sensitivity 250 mV/m; image rejection 35 dB; S/N 40 dB. Features two tape monitors; front-panel tape dubbing; 25/75 μsec de-emphasis switch for Dolby; signal-strength and center-channel tuning meters; black finish front panel. 5⅞" H × 19¼" W × 14½" D ..... $400

### STA-85 AM-FM Stereo Receiver

Amplifier: 35 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.3% THD; frequency response 20-20,000 Hz ±1 dB; S/N 60 dB (phono), 70 dB (aux.). FM tuner: sensitivity (IHF) 2 μV; capture ratio 2 dB; alternate channel selectivity 50 dB; stereo separation 40 dB (1 kHz); THD 0.5% (stereo), 0.3% (mono). AM tuner: sensitivity 250 μV/m for 20 dB S/N; selectivity 28 dB; image response −35 dB. Features 11-step detented Baxandall-type tone controls; tape in/out, aux., and magnetic phono inputs; switchable 25 μsec de-emphasis for FM Dolby-B with standard Dolby equipment; edge-lighted dial; 75- and 300-ohm FM inputs. 5½" H × 18⅞" W × 12¾" D..... $300

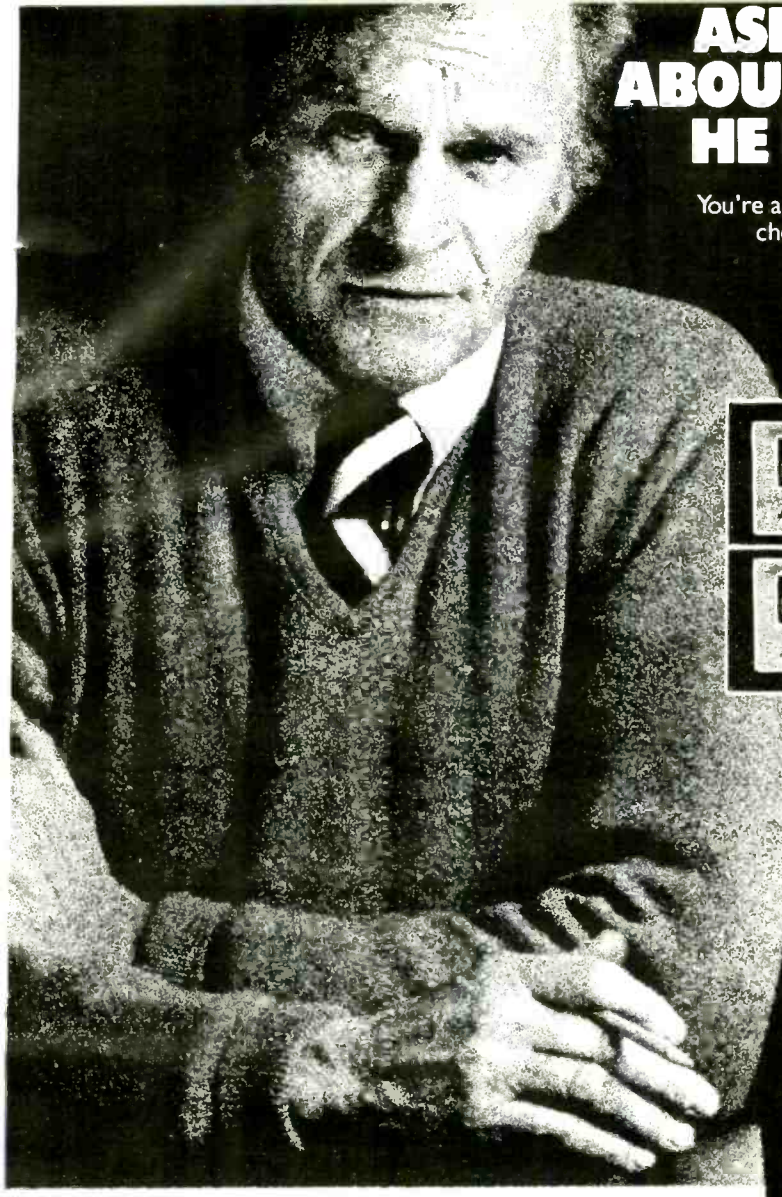
### STA-78 AM-FM Stereo Receiver

Amplifier: 22 W/ch continuous into 8 ohms over 20-20,000 Hz with 0.5% THD; frequency response 20-20,000 Hz ±2 dB; S/N 65 dB (phono), 75 dB (aux.). FM tuner: sensitivity (IHF) 1.9 μV; capture ratio 1.5 dB; alternate channel selectivity 60 dB; stereo separation 38 dB (1 kHz); THD 0.5% (stereo), 0.1% (mono). AM tuner: sensitivity 200 μV/m for 20 dB S/N; selectivity 32 dB; image response −45 dB; S/N 45 dB. Features FET/IC FM; 25 μsec de-emphasis for FM; taping and dubbing jacks; 75- and 300-ohm FM inputs; unswitched ac convenience outlet. 6" H × 17" W × 12½" D ..... ..... $270

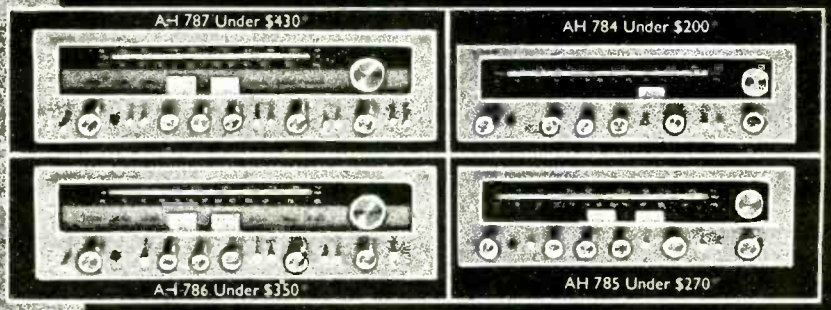
### STA-64B AM-FM Stereo Receiver

Amplifier: 18 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.5% THD; frequency response 15-30,000 Hz ±2 dB; S/N 65 dB (phono), 70 dB (aux.). FM tuner: IHF sensitivity 2.2 μV; capture

# ASK ANY AUDIO ENGINEER ABOUT PHILIPS 4 NEW RECEIVERS. HE KNOWS.



You're a tough customer. Before you buy any piece of equipment you check it out. You talk to experts. And that's exactly what we want you to do. Talk directly to any audio engineer. Or any expert you trust. Ask him any question you like. We're not afraid of your questions, because we've got the right answers. We know that if we can please a tough customer like you, we'll please everybody.




*Mfg. suggested retail price.

**Why Four Receivers?**

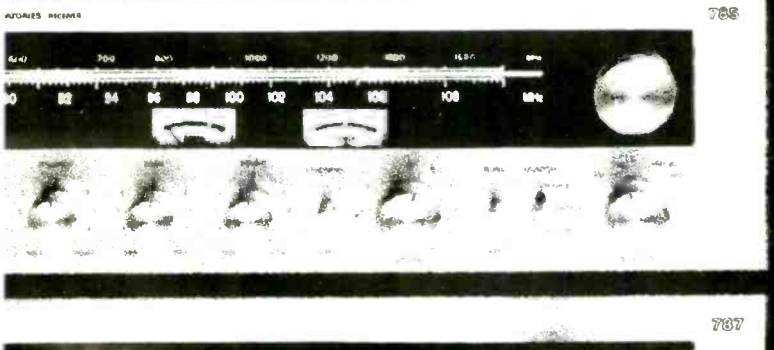
Our engineers wanted to cover the full range of people's needs. And give everyone the advantages of Philips technology. Philips' efficient AH 784 receiver can fill any apartment with clean, accurate sound. The powerful AH 787 receiver is for those who like power behind their bass notes and drive behind their highs.

**Honestly, How Much Distortion?**

Honestly, not much. All four of our receivers, from our **AH 784 with 20 watts per channel, minimum RMS,** to our **AH 787 with a big 60 watts per channel, minimum RMS, have less than 0.1% total harmonic distortion from 20Hz to 20kHz at 8 ohms.*** Which means that in one crucial area, our least sophisticated receiver is just as sophisticated as our best.

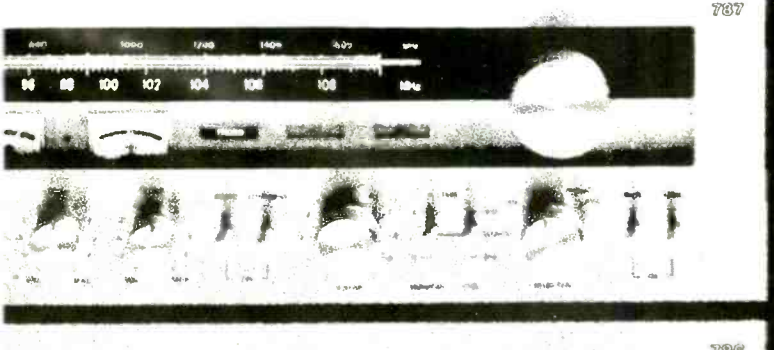
**How Good is the AM Section?**

An unusual question. Normally, everyone neglects AM and touts their FM. We neglected nothing in designing our receivers. Not even the AM. Our circuitry provides clear, sensitive reception with very low distortion. And on the AH 787 there's a center-tuned meter—just like the FM. And that's a Philips AM exclusive.




**Like Our AM? You'll Love Our FM.**

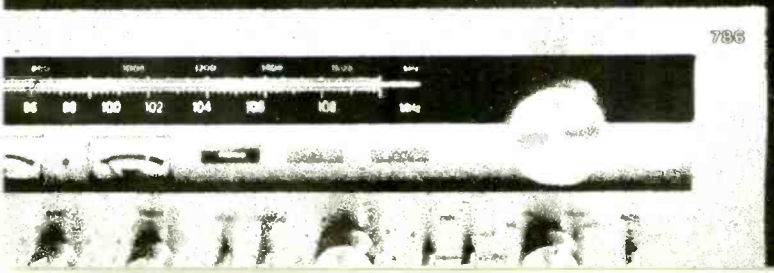
It's state-of-the-art all the way. A Phase Locked Loop Multiplex Decoder locks onto the 19kHz pilot and holds it. High Q RF tuned circuits reject unwanted signals. Dual gate MOS FET's provide optimum gain and immunity to overload. And to all this we add a Philips FM exclusive—Automatic Stereo Noise Cancelling. It virtually eliminates annoying noisy broadcasts on the AH 787 receiver.




**Any More Questions? Call Us. Toll-Free. 800-243-5000.**

You're just one toll-free call away from all the answers. Just dial 800-243-5000** and we'll send you a free copy of "Ask us about high fidelity. We know." It's our new, informative, fact-filled brochure prepared by a team of Philips audio engineers.

When you want to know about high fidelity, ask us. Because when you've got the right answers, you can answer all the questions.




*Measured pursuant of Federal Trade Commission trade regulation rule on power output claims for amplifiers.

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**EVERYONE WHO KNOWS, KNOWS**

# PHILIPS

High Fidelity Laboratories, Ltd.

CIRCLE NO. 90 ON READER SERVICE CARD

ratio 2 dB; alternate channel selectivity 70 dB; stereo separation 48 dB at 1000 Hz; S/N 65 dB. AM section: sensitivity 200 μV/m; selectivity 30 dB; image rejection 45 dB; S/N 42 dB. Features stereo reverse switch; 25/75 μsec switch for Dolby; aux. and magnetic phono inputs; DIN and standard input/output jacks; brushed aluminum front panel; 5¼" H × 18½" W × 14" D ..... $260

### STA-52B AM-FM Stereo Receiver

Amplifier: 16 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.8% THD; frequency response 15-25,000 Hz ±2 dB; S/N 65 dB (phono), 68 dB (aux.). FM tuner: IHF sensitivity 13.2 dBf (2.5 μV); capture ratio 2 dB; alternate channel selectivity 65 dB; stereo separation 38 dB at 1000 Hz; S/N 65 dB. AM section: sensitivity 200 μV/m; selectivity 30 dB; image rejection 45 dB; S/N 45 dB. Features 25/75 μsec de-emphasis for Dolby; main/remote switching; DIN and standard tape input/output jacks; three tone controls; stereo reverse; semi-blackout dial with LED; signal-strength meter; ac outlet. 5¼" H × 17¼" W × 11¼" D ..... $200

### STA-7 AM-FM Stereo Receiver

Amplifier: 10 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.5% THD; frequency response 15-30,000 Hz ± 2 dB; S/N 60 dB (phono), 65 dB (aux.); phono overload 100 mV; frequency equalization response for mini speakers +6.5 dB at 100 Hz. FM tuner: IHF sensitivity 14.2 dBf (2.8 μV); capture ratio 3 dB; selectivity 45 dB; stereo separation 34 dB at 1000 Hz; S/N 60 dB. AM section: sensitivity 200 μV/m; image rejection 45 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. 3½" H × 16½" W × 11½" D ..... $160

**STA-42.** Similar to STA-7 except 10 W/ch continuous into 8 ohms from 40-20,000 Hz with 0.9% THD; FM alternate channel selectivity 38 dB; FM S/N 65 dB. Features similar but less equalization circuit; 5⅛" H × 16¼" W × 11⅛" D..... $150

## REFERENCE by QUADRAFLEX

### 650FET R Stereo Receiver

Amplifier: 65 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.1% THD; IM dist. 0.02% at 1 W; S/N 80 dB (phono), 85 dB (tape and aux.); phono overload 200 mV; RIAA deviation ±0.25 dB; bass tone control range ±10 dB at 50 Hz with 150 Hz turnover and at 100 Hz with 300 Hz turnover, treble ±10 dB at 10,000 and 20,000 Hz. FM tuner: IHF sensitivity 9.8 dBf (1.7 μV) mono, 17.7 dBf (4.2 μV) stereo; 50-dB quieting sensitivity 13.5 dBf (2.6 μV) mono, 35.9 dBf (34 μV) stereo; channel separation at 1000 Hz 44 dB, 24 dB with multiplex blend; THD 0.1% mono, 0.15% stereo; S/N 72 dB; capture ratio 1 dB; alternate channel selectivity 72 dB; i-f rejection 95 dB; image rejection 60 dB. Features MOS FET front end, six equalization functions through turnover switch for presence control, separate LEDs; signal-strength and center-tuning meters; two-deck provisions for tape monitoring/dubbing; switchable speaker selector; hi-filter control; FM mute; overload indicator; headphone jack. 5⁹/₁₆" H × 18⁹/₁₆" W × 14" D..... $480

**450R.** Similar to 650FET R except 45 W/ch continuous under same conditions; IM dist. 0.04%; S/N 75 dB (phono), 80 dB (tape and aux.); FM tuner alternate channel selectivity 70 dB. Features separate turnover switch for presence controls with four equalization functions for tone control..... $370

**300R.** Similar to 450R except 30 W/ch continuous under same conditions; IM dist. 0.05%; phono overload 125 mV. FM usable sensitivity 10.3 dBf (1.8 μV) mono, 17.9 dBf (4.3 μV) stereo; 50-dB quieting sensitivity 14.2 dBf (2.8 μV) mono, 36.4 dBf (36 μV) stereo; THD 0.2% mono, 0.4% stereo; alternate channel selectivity 68 dB. Features similar minus clipping level indicator and turnover switch for presence control; 5¹³/₁₆" H × 17½" W × 12¼" D ..... $310

**240R.** Similar to 300R except 24 W/ch continuous under same conditions; S/N 72 dB (phono), 78 dB (tape and aux.); phono overload 120 mV. FM tuner sensitivity (IHF) 10.8 dBf (1.9 μV) mono, 18.3 dBf (4.5 μV) stereo; THD 0.22% mono, 0.45% stereo; S/N 70 dB mono, 69 dB stereo. Features similar but no signal-strength meter and no LED mode indicators. 5¹³/₁₆" H × 16¹³/₁₆" W × 11¹³/₁₆" D..... $260

**180R.** Similar to 240R except 18 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.15% THD; S/N 70 dB (phono), 75 dB (tape and aux.). FM tuner 50-dB quieting 14.8 dBf (3.0 μV) mono, 36.8 dBf (38 μV) stereo; THD 0.25% mono, 0.5% stereo; alternate channel selectivity 65 dB; S/N 70 dB mono, 68 dB stereo. Features similar but less FM mute switch; 5³/₁₆" H × 16³/₄" W × 11³/₁₆" D .... ..... $220

## ROTEL

### RX-1603 AM-FM Stereo Receiver

Amplifier: 180 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD; frequency response 5-100,000 Hz ±3 dB; S/N (IHF "A") 75 dB (phono), 95 dB (tuner, tape). FM tuner: sensitivity for 50 dB quieting 11.5 dBf (2.1 μV) mono, 36 dBf (35 μV) stereo; FM usable sensitivity 8.9 dBf (1.5 μV) mono; capture ratio 1.0 dB. Features dual tuning meters; switchable tone control turnover frequencies; high-cut and dual-frequency low-cut filters; dual phono inputs; dual tape monitors with dubbing; stepped volume, bass, and treble control; loudness switch; adjustable phono sensitivity and impedance; FM muting switch, hi-blend switch; multipath metering switch; 25 μsec de-emphasis switch; LED function indicators; in rack-type chassis with handles. 7¹/₁₆" H × 23⅜" W (panel) × 18⅞" D ..... $1100

**RX-1203.** Similar to RX-1603 but 120 W/ch; FM usable sensitivity 9.3 dBf (1.6 μV); 7¹/₁₆" H × 22¹/₁₆" W × 17⁹/₁₆" D..... $750

**RX-803.** Similar to RX-1203 but 75 W/ch at 0.1% THD; frequency response 5-70,000 Hz; tuner and tape S/N 90 dB; FM sensitivity for 50 dB quieting, 14.5 dBf (3 μV) mono, 38 dBf (4.4 μV) stereo; FM usable sensitivity 10.3 dBf (1.8 μV); tone control frequencies not variable, tone controls not stepped; single-frequency low filter; no FM hi-blend; no multipath metering; 5¹¹/₁₆" H × 19⁵/₁₆" W × 15¾" D.... ..... $480

**RX-603.** Similar to RX-803 but 50 W/ch; FM usable sensitivity 10.8 dBf (1.9 μV) mono, 38 dBf (4.4 μV) stereo; single phono input pair; no low filter; no tone defeat; no de-emphasis selector; 5¹¹/₁₆" H × 19³/₁₆" W × 15" D..... $380

**RX-503.** Similar to RX-603 but 35 W/ch; tuner and tape S/N 95 dB; FM sensitivity for 50 dB quieting 17.4 dBf (4 μV) mono, 39.2 dBf (50 μV) stereo; volume control not stepped; single tape monitor; 5¹¹/₁₆" H × 19³/₁₆" W × 14¹⁵/₁₆" D..... $300

**RX-403.** Similar to RX-503 but 25 W/ch at 0.2% THD; frequency response 20-60,000 Hz ±3 dB; tuner and tape S/N 85 dB; FM usable sensitivity 11.2 dBf (2.0 μV); capture ratio 2.0 dB; single tuning meter; no front handles; 5⁹/₁₆" H × 18½" W × 10¹³/₁₆" D ..... $230

### RX-7707 Touch-Tuning AM-FM Stereo

35 W/ch continuous both channels driven into 8 ohms from 20-20,000 Hz with 0.5% THD. FM usable sensitivity 11.2 dBf (2.0 μV); features touch-sensitive tuning buttons for pre-setting and recall of up to 5 FM stations; slider-type volume, bass, treble, and balance controls; low and high filters; loudness switch; FM muting ..... $480

### RX-203 AM-FM Stereo Receiver

Amplifier: 20 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.5% THD, 24 W/ch into 4 ohms at 1000 Hz; frequency response 20-50,000 Hz ±3 dB; S/N (IHF "A") 75 dB (phono), 85 dB (tuner and tape); input sensitivity/impedance 2.5 mV/47,000 ohms (phono), 150 mV/50,000 ohms (tape, aux., tuner). FM tuner: IHF sensitivity 2.0 μV (mono), 48 μV (stereo); capture ratio 2.0 dB; alternate channel selectivity 50 dB; IHF S/N 70 dB (mono); stereo separation 35 dB at 1000 Hz; image rejection 40 dB; frequency response 30-15,000 Hz +0.5/−1 dB; HD 0.3% stereo at 1000 Hz. AM tuner IHF sensitivity: 12.5 μV (ext. antenna). Features dc OCL complementary power circuitry; dc NF phono equalizer and tone control amplifier; linear FM dial scale and signal-strength tuning meter; stereo indicator; facility for two speaker systems; headphone jack. 125 mm H × 400 mm W × 252 mm D ..... $200

### RV-555 Stereo Receiver

Amplifier: compact receiver with dc OCL power amplifier and dc NF phono equalizer and tone control amplifier; 20 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.05% THD, 24 W/ch into 4 ohms; frequency response 20-50,000 Hz; S/N (IHF "A") 75 dB (phono), 85 dB (tape and aux.); input sensitivity/impedance 2.8 mV/47,000 ohms (phono), 150 mV/50,000 ohms (tape, aux., and tuner). FM tuner: IHF sensitivity 2.0 μV mono, 47 μV stereo; alternate channel selectivity 50 dB; capture ratio 2.0 dB; S/N 70 dB mono; stereo HD 0.15% at 1000 Hz; stereo separation 35 dB at 1000 Hz; image rejection 40 dB; frequency response 30-15,000 Hz +0.5/-1 dB. AM IHF sensitivity 12.5 μV (ext. antenna). Features signal-strength tuning meter, front-panel function and connection facilities, and stereo indicator. Includes RS-555 two-way air-suspension bookshelf speakers..... $290

## SAE

### R3C Receiver

Amplifier: 30 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.09% THD. Tuner: 50-dB quieting sensitivity 37.2 dBf (40 μV); FM dist. 0.25% stereo. Features full complementary circuitry; dual speaker-switching capability; linear phase i-f filter; loudness switch; rumble filter; signal-strength and FM center tuning meters; separate bass and treble controls calibrated ±10 dB; balance control; headphone jack..... $335

## SANKYO

### SRC-4040 AM-FM Stereo Receiver

Amplifier: 40 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.5%

THD and IM dist.; power bandwidth 10-40,000 Hz, −3 dB at rated output; phono RIAA deviation +0.8/−0.8 dB from 20-20,000 Hz; sensitivity 2.5 mV (phono), 200 mV (aux. and tape); S/N 70 dB (phono), 80 dB (aux. and tape); damping factor better than 50 at 1000 Hz; output level 200 mV (tape), 500 mV (headphones). FM tuner section: IHF usable sensitivity 11.2 dBf (2 μV); 50-dB quieting sensitivity (IHF) 38.2 dBf (45 μV) stereo, 15.2 dBf (3.2 μV) mono; capture ratio 1.5 dB (IHF); alternate channel selectivity 78 dB; i-f rejection 70 dB; AM suppression 60 dB; stereo separation 50 dB at 1000 Hz; frequency response 20-15,000 Hz +0.5/−1.5 dB; S/N 68 dB stereo, 78 dB mono. AM section: usable sensitivity 25 μV (ext. antenna); S/N 60 dB. Features PLL multiplex circuitry; signal strength and tuning meters; high and low filters; slide-rule tuning dial; two-deck tape monitor capability; FM stereo indicator light; calibrated bass and treble controls (±5 dB); balance control; A or B, A+B speaker selector control; headphone jack. Silver or black chassis; 5¾" H × 17⅛" W × 13⅜" D.. ..... $350

### SRC-2020 AM-FM Stereo Receiver

Amplifier: 20 W/ch continuous, both channels dri-

ven into 8 ohms from 20-20,000 Hz with 0.5% THD and IM dist.; power bandwidth 10-40,000 Hz, −3 dB at rated output; phono RIAA deviation +0.8/−0.8 dB from 20-20,000 Hz; sensitivity 2.5 mV (phono), 200 mV (aux. and tape); S/N 70 dB (phono), 80 dB (aux. and tape); damping factor 40 at 1000 Hz; output level 200 mV (tape), 500 mV (headphones). FM and AM tuner specifications same as SRC-4040. Features A or B, A+B speaker selector control; FM stereo indicator light; signal strength and tuning meters; loudness switch; built-in FM muting; headphone jack. Silver or black chassis; 5¾" H × 17⅛" W × 13⅜" D ..... $230

## SANSUI

### G-33000 AM-FM Stereo Receiver

Amplifier: 300 W/ch continuous, both channels driven into 8 ohms from 5-20,000 Hz; THD 0.009%; frequency response 0-300,000 Hz +0/−3 dB (from main in); slew rate 175 V/μsec; rise time 0.7μsec. Tuner: FM sensitivity (IHF) 8.7 dBf (1.5μV); dist. 0.06%; selectivity 90 dB; S/N 82 dB (FM), 87 dB (phono), 105 dB (aux.). Features separable power section; dc design in preamp and power amp; dual phono inputs with selectable impedances; twin power meters plus signal strength and tuning meters; triple tone controls with selectable turnover frequencies; selectable FM and AM bandwidth; subsonic and high-cut filters, loudness switch, FM and audio muting, mic mixing; two-deck tape copy and monitor switches; two-system speaker selector. 8⅜" H × 25¹/₁₆ W × 21¹¹/₁₆" D .... ..... $1900

**G-22000.** Similar to G-33000, except 220 W/ch ... ..... $1400

### G-9000 AM-FM Stereo Receiver

Amplifier: 160 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz; THD 0.02%;

frequency response 0-200,000 Hz +0/−3 dB (from main in); slew rate 80 V/μsec; rise time 1.4 μsec; Tuner: FM sensitivity (IHF) 8.7 dBf (1.5 μV); dist. 0.06%; selectivity 90 dB; S/N 80 dB (FM, phono), 95 dB (aux.). Features dc power amp; dual phono inputs; twin power meters plus signal-strength and tuning meters; triple tone controls with selectable turnover frequencies; selectable FM bandwidth; subsonic and high-cut filters, loudness switch, FM and audio muting, mic mixing; two-deck tape copy/monitor switch; two-system speaker selector; 7¹⁵/₁₆" H × 22¹/₁₆" W × 19½" D..... $1100

**G-8000.** Similar to G-9000, except 120 W/ch with 0.025% THD and single-bandwidth FM section..... ..... $920

### G-7000 AM-FM Stereo Receiver

Amplifier: 85 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz; THD 0.025%; frequency response 0-200,000 Hz +0/−3 dB (from main in); slew rate 60 V/μsec; rise time 1.4 μsec. Tuner: FM sensitivity (IHF) 10.3 dBf (1.8 μV); dist. 0.13%; selectivity 75 dB; S/N 72 dB (FM), 78 dB (phono), 95 dB (aux.). Features dc power amp; dual phono inputs; twin power meters plus signal-strength and tuning meters; subsonic and high-cut filters, loudness switch, FM and audio muting, mic mixing; two-deck monitoring plus copy from 1 to 2; two-system speaker selector; 7¹/₁₆" H × 19¹⁵/₁₆" W × 16⅜" D..... $750

**G-6000.** Similar to G-7000, except 65 W/ch with 0.03% THD. ..... $630

### G-5000 AM-FM Stereo Receiver

Amplifier: 45 W/ch continuous power, both channels driven into 8 ohms from 20-20,000 Hz; THD 0.03%; frequency response 0-200,000 Hz +0/−3 dB (from main in); slew rate 56 V/μsec; rise time 1.4 μsec. Tuner: FM sensitivity (IHF) 10.8 dBf (1.9μV); dist. 0.13%; selectivity 70 dB; S/N 72 dB (FM), 78 dB (phono), 95 dB (aux.). Features dc power amp; separate signal-strength and tuning meters; subsonic filter, loudness switch, FM and audio muting, mic mixing; two-deck monitoring plus copy from 1 to 2; two-system speaker selector; 7¹⁵/₁₆" H × 18⁹/₁₆" W × 16¹/₁₆" D..... $470

### G-3000 AM-FM Stereo Receiver

26 W/ch continuous power into 8 ohms with both channels driven (20-20,000 Hz); THD 0.15%; frequency response 10-50,000 Hz +1/−2 dB; features low-pass filter to suppress carrier leakage; microphone mixing; twin tuning meters; high-fidelity AM section with beat filter; loudness switch; speaker selector; FM-section distortion 0.15% mono, 0.2% stereo; 6¹/₁₆" H × 17¹/₁₆" W × 13¹⁵/₁₆" D..... $290

**G-2000.** Similar to G-3000 but 16 W/ch, 0.15% HD ..... $240

### *4-Channel*

### QRX-9001 4-Ch AM-FM Stereo Receiver

Amplifier: 120 W/ch stereo, 60 W/ch quadraphonic, with all channels driven into 8 ohms (20-20,000 Hz); THD and IM dist. 0.3%; frequency response 20-30,000 Hz ±1 dB; channel separation 45 dB stereo; 20 dB adjacent, 30 dB diagonal on QS decoding or synthesizing; 20 dB between front channels, 12 dB center front to center rear on SQ; 40 dB left-to-right, 25 dB front to rear on CD-4. Features Dolby noise reduction available for FM or tape use; mic mixing; "Peak Range" tuning indicator with 250-kHz calibrations; dual tuning meters, four level meters; built-in Dolby calibration oscillator; allows simultaneous recording with and without Dolby encoding. FM tuner: FM sensitivity for 50 dB quieting, 5.6 dBf mono, 38 dBf stereo; IHF usable sensitivity 10.3 dBf (1.8 μV); distortion 0.3% mono, 0.4% stereo; selectivity 80 dB; capture ratio 1.5 dB; stereo FM separation 28-40 dB; AM suppression better than 50 dB; image rejection 75 dB; i-f rejection 95 dB; S/N 70 dB mono, 65 dB stereo. AM section: AM usable sensitivity 50 μV/m; selectivity 35 dB; image rejection 35 dB; i-f rejection 30 dB. 6⅞" H × 23⅝" W × 16⅜" D ..... $1150

**WRX-8001.** Similar, but 100 W/ch stereo, 40 W/ch quadraphonic. FM sensitivity 16 dBf mono, 38 dBf stereo for 50 dB quieting, 10.8 dBf (1.9 μV) IHF; selectivity 60 dB..... $990

## SANYO

### JC2900K AM-FM Stereo Receiver

Amplifier section: 120 W/ch continuous power into 8 ohms at 0.08% THD, both channels driven; power

bandwidth 20-20,000 Hz; frequency response 20-30,000 Hz ±0.2 dB; phono sensitivity 2.5 mV; maximum input 300 mV; S/N (A-weighted) 70 dB phono, 90 dB aux./tape. FM tuner section: usable sensitivity 9.3 dBf (1.6μV) mono; S/N 78 dB mono or stereo; FM distortion 0.1% mono, 0.15% stereo at 1 kHz; capture ratio 1.0 dB; selectivity 80 dB; AM suppression 60 dB; i-f rejection 100 dB; image rejection 85 dB; spurious response rejection 90 dB; stereo separation 45 dB at 1000 Hz; antenna 300-ohm and 75-ohm. AM section: sensitivity 280 μV/m (rod antenna); S/N 55 dB; selectivity 33 dB; image rejection 65 dB; i-f rejection 80 dB. Features bass, midrange and treble tone controls; switchable bass and treble turnover; tone defeat; switchable low and high filters, audio muting, FM muting, hi-blend, mode, loudness; three speaker outputs; front-panel mic inputs with mixing; speaker and function indicator lights; two tape monitors with dubbing; detented volume control; dual tuning meters; two phono inputs. 6½" H × 21¼" W × 16¾" D..... $600

**JC2600K.** Similar to JC2900K except 85 W/ch at 0.1% THD, same conditions; phono overload 250 mV. FM section: usable sensitivity 10.3 dBf (1.8 μV); S/N 73 dB mono, 68 dB stereo; distortion 0.15% mono, 0.2% stereo at 1 kHz; stereo separation 43 dB at 1 kHz. Features similar, but two speaker outputs, no hi-blend. 6½" H × 21¼" W × 15" D ..... $500

### JCX2400K AM-FM Stereo Receiver

50 W/ch continuous power into 8 ohms with both channels driven (20-20,000 Hz); THD 0.3%; features click-stop bass, treble and volume controls, dual tape monitor with dubbing, loudness contour switch, high filter, dual tuning meters, speaker selector; FM usable sensitivity 10.3 dBf (1.8 μV) mono; distortion 0.3% mono, 0.4% stereo; selectivity 67 dB; capture ratio 1.0 dB; stereo separation 40 dB at 1 kHz; AM suppression 55 dB; image rejection 50 dB; i-f rejection 55 dB; spurious rejection 80 dB; S/N 70 dB mono, 67 dB stereo. AM usable sensitivity 300 μV/m; selectivity 33 dB; S/N 50 dB; image rejection 48 dB; i-f rejection 50 dB. 5⅜" H × 17⅜" W × 15" D ..... $300

**JCX2300K.** Similar to JCX2400K, but 26 W/ch at 0.4% THD; no high filter; FM usable sensitivity 10.8 dBf (1.9 μV); selectivity 65 dB; AM suppression 55 dB; image rejection 50 dB; i-f rejection 55 dB; 5⅜" H × 17⅜" W × 13" D..... $240

**JCX2100K.** Similar to JCX2300K, but 13 W/ch at 0.5% THD; FM usable sensitivity 11.2 dBf (2 μV); FM S/N 68 dB mono, 65 dB stereo; spurious response rejection 70 dB; capture ratio 1.2 dB; 5½" H × 16¾" W × 11¾" D..... $180

## H. H. SCOTT

### 390R AM-FM Stereo Receiver

Amplifier section: 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at 0.03% THD and IM dist.; damping factor 100; frequency response 20-20,000 Hz ±0.5 dB; phono sensitivity 2.5 or 5 mV switchable; max. input 300 or 600 mV; S/N (weighted, inputs shorted) 90 dB phono, 95 dB tape/aux. FM tuner section: IHF usa-

# 3 RECEIVERS

ble sensitivity 9.8 dBf (1.7 μV) mono; 50-dB quieting sensitivity 15.6 dBf (3.3 μV) mono, 35.6 dBf

(33 μV) stereo; S/N 80 dB mono, 75 dB stereo; distortion 0.1% mono, 0.2% stereo; capture ratio 1.0 dB; selectivity 80 dB; i-f rejection 100 dB; image rejection 90 dB; spurious response rejection 100 dB; subcarrier rejection 74 dB; stereo separation 50 dB at 1kHz. AM section: sensitivity 150 μV/m (rod antenna); S/N 55 dB; selectivity 50 dB; image rejection 60 dB. Features 18-LED logarithmic power display calibrated in watts and dBW; detented volume, bass, midrange and treble controls with tone defeat; two-position subsonic and high filters; switchable bass and treble turnover; FM muting; loudness mode; dual tape monitors with two-way dubbing; two phono inputs with switchable sensitivity; LED function indicators; external-processor accessory loop; dual tuning meters; three speaker outputs; switchable 25/50/75 μsec de-emphasis. 6½" H × 22⅞" W × 15¾" D..... $700

**380R.** Similar to 390R, but 85 W/ch continuous under same conditions. Features similar, but subsonic and single-position high filters only; signal strength, tuning and dual power meters; no loudness switch; two speaker outputs. 6" H × 20¾" W × 13¾" D ..... $580

**370R.** Similar to 380R, but 60 W/ch at 0.05% THD and IM dist. under same conditions; damping factor 60; phono sensitivity 2.5 mV; max phono input 200 mV; S/N (weighted, inputs shorted) 85 dB phono, 90 dB aux./tape. FM tuner section: usable sensitivity 10.3 dBf (1.8 μV) mono; 50-dB quieting sensitivity 16.1 dBf (3.5 μV) mono, 36.3 dBf (36 μV) stereo; S/N 75 dB mono, 70 dB stereo; distortion 0.125% mono, 0.25% stereo; capture ratio 1.25 dB; selectivity 60 dB; i-f rejection 85 dB; image rejection 65 dB; spurious response rejection 80 dB; subcarrier rejection 60 dB; stereo separation 45 dB at 1kHz. AM section: sensitivity 250 μV/m; S/N 50 dB; selectivity 45 dB; image rejection 60 dB. Features similar, but no tone defeat or turnover switches; low instead of subsonic filter, single phono input with fixed sensitivity. 6" H × 20¾" W × 11¹³/₁₆" D ..... $450

**350R.** Similar to 370R, but 40 W/ch at 0.06% THD and IM dist., same conditions; FM capture ratio 1.5 dB; AM S/N 45 dB, selectivity 40 dB, image rejection 40 dB. Features similar, but no midrange control, hi filter only, one-way tape dubbing. 5¼" H × 17¾" W × 11¹³/₁₆" D..... $350

**330R.** Similar to 350R except 25 W/ch at 0.08 % THD and IM dist.; same conditions: S/N 80 dB phono, 85 dB tape/aux.; max phono input 180 mV; damping factor 50; frequency response 20-20,000 Hz ±1.0 dB. FM tuner section: usable sensitivity 10.8 dBf (1.9 μV) mono; 50-dB quieting sensitivity 16.7 dBf (3.8 μV) mono, 37 dBf (39 μV) stereo; S/N 72 dB mono, 67 dB stereo; distortion 0.15% mono, 0.3% stereo; capture ratio 2.0 dB; selectivity 50 dB; i-f rejection 80 dB; image rejection 55 dB; spurious response rejection 78 dB; subcarrier rejection 58 dB. Features similar, but no power meters, single tape monitor. 5¼" H × 17¾" W × 10¼" D ..... $265

**320R.** Similar to 330R, but 15 W/ch at 0.1% THD and IM dist., same conditions. FM usable sensitivity 11.2 dBf (2.0 μV) mono; subcarrier rejection 45 dB. Features similar, but single tuning meter only (FM center-channel, AM signal-strength) ..... $220

## SETTON

### RS-660 AM-FM Stereo Receiver

Amplifier: 120 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.035% THD and IM dist.; frequency response 20-20,000 Hz ±0.5 dB; power bandwidth 5-40,000 Hz; features 12 dB/oct high and low filters with switchable frequencies; bass, treble and midrange controls with switchable turnover points for bass and treble; provision for external Dolby FM adaptor; dual tape monitors with two-way dubbing; mic mixing; illuminated function indicators; dual tuning meters; outputs for three sets of speakers; switchable FM and audio muting; switchable loudness; front handles; styling by Pierre Cardin studios. FM tuner: FM sensitivity for 50 dB quieting 16 dBf mono, 29.8 dBf stereo; IHF usable sensitivity 10.3 dBf mono, 18 dBf stereo; distortion 0.1% mono, 0.15% stereo; selectivity 80 dB; capture ratio 1 dB; stereo separation 50 dB; i-f rejection 95 dB; S/N 72 dB mono, 67 dB stereo. AM section: usable sensitivity 25 μV (external antenna); selectivity 45 dB; S/N 45 dB; image rejection 60 dB. 6¹¹/₁₆" H × 22⁷/₁₆" W × 13¾" D ..... $880

**RS-440.** Similar to RS-660 but 69 W/ch at 0.085% THD and IM; no filters; no external Dolby provision; one-way dubbing; FM distortion 0.1% mono, 0.18% stereo; selectivity 70 dB; i-f rejection 90 dB; 6¹¹/₁₆" H × 21¼" W × 11¹³/₁₆" D ..... $660

**RS-220.** Similar to RS-440 but 50 W/ch at 0.08% THD and IM; no mic mixing; outputs for 2 sets of speakers; no audio muting; tone control frequencies fixed; does have high filter; power bandwidth 10-35,000 Hz; FM sensitivity for 50 dB quieting 18.3 dBf mono, 39.0 dBf stereo; usable sensitivity 11.2 dBf mono, 19.0 dBf stereo; i-f rejection 80 dB; S/N 70 dB mono, 65 dB stereo..... $560

## SHERWOOD

### S-110 CP AM-FM Stereo Receiver

Amplifier section: 100 W/ch continuous power at 0.08% THD; phono overload 200 mV at 1000 Hz,

975 mV at 10,000 Hz; phono S/N 94 dB (A-weighted). Tuner section: FM usable sensitivity 9.8 dBf (1.7 μV); 50-dB quieting sensitivity (stereo) 33.2 dBf (25 μV); capture ratio 1.0 dB; selectivity 80 dB; AM rejection 65 dB; i-f rejection 100 dB; image rejection 95 dB; stereo separation 45 dB at 1 kHz; antenna 300-ohm and 75-ohm. Features signal strength and center-tune meters plus "Positune" indicator; digital FM detector. Supplied with notarized statement of individual unit performance ..... $750

**S-75 CP.** Similar to S-110 CP, except 70 W/ch continuous power at 0.08% THD. FM section: 50-dB stereo quieting sensitivity 34.8 dBf (30 μV); i-f rejection 95 dB; image rejection 85 dB. Features digital detector, signal-strength and center-tune meters, performance certification ..... $550

### S-7650 CP AM-FM Stereo Receiver

Amplifier section: 45 W/ch (16.5 dBW) continuous power into 8 ohms, 20-20,000 Hz at 0.2% THD; IM dist. 0.2%; frequency response 20-20,000 Hz ±0.5 dB; phono sensitivity 2.5 mV; max. phono input 160 mV; phono input 47k ohms, 220 pf; S/N (A-weighted) 80 dB phono (92 dB for 10 mV in), 95 dB aux.; damping factor 30. Tuner section: FM usable sensitivity 9.8 dBf (1.7 μV) mono; 50-dB quieting sensitivity 13.9 dBf (2.7 μV) mono, 36.8 dBf (38 μV) stereo; S/N 70 dB mono, 66 dB stereo; distortion 0.15% mono, 0.25% stereo, at 100% modulation; capture ratio 1.0 dB; selectivity 70 dB; AM rejection 60 dB; i-f rejection 90 dB; image response rejection 80 dB; spurious response rejection 95 dB; separation 40 dB at 1000 Hz, 30 dB from 20-10,000 Hz; antenna 300-ohm and 75-ohm. AM: sensitivity 15 μV; selectivity 25 dB; i-f rejection 40 dB; image rejection 40 dB; spurious response rejection 40 dB; frequency response −6 dB at 4000 Hz ..... $400

**S-7450 CP.** Similar to S-7650 except 30 W/ch (14.8 dBW), same conditions; max phono input 140 mV. Tuner section: FM usable sensitivity 10.3 dBf (1.8 μV); 50-dB quieting sensitivity 15.6 dBf (3.3 μV) mono, 37.0 dBf (39 μV) stereo; selectivity 60 dB; AM rejection 55 dB; image rejection 55 dB; i-f rejection 75 dB; spurious response rejection 85 dB; AM sensitivity 20 μV..... $325

**S-7250 CP.** Similar to S-7450 except 20 W/ch (13.0 dBW), same conditions. Tuner section: FM usable sensitivity 10.8 dBf (1.9 μV) mono; 50-dB quieting sensitivity 16.1 dBf (3.5 μV) mono, 37.0 dBf (39 μV) stereo; spurious response rejection 80 dB..... $250

## SONY

### STR-V7 AM-FM Stereo Receiver

Direct-coupled dc power amplifier and MOS FET RF front end with built-in Dolby FM decoder and FM bandwidth selector in FM tuner section. Amplifier: 150 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.07% THD and IM dist.; damping factor 40 at 8 ohms; input sensitivity/impedance 2.5 mV/50,000 ohms (phono 1), 0.25 mV/100 ohms (MC phono 2), 150 mV/100,000 ohms (aux. and tape); phono overload 250 mV (phono 1), 25 mV (phono 2); output level/load impedance 250 mV/4700 ohms; frequency response 5-50,000 Hz +0/−2 dB (aux. and tape), RIAA phono deviation ±0.5 dB; bass tone control ±10 dB at 100 Hz, treble tone control ±10 dB at 10,000 Hz; high (6 dB/octave above 9000 Hz) and low (6 dB/octave below 50 Hz) filters; S/N (IHF "A") 80 dB (phono 1), 100 dB (aux. and tape). FM tuner: usable sensitivity 9.3 dBf (1.6 μV); 50-dB quieting sensitivity 14.2 dBf (2.8 μV) mono, 37.3 dBf (40 μV) stereo; S/N 75 dB mono, 70 dB stereo; capture ratio 1.0 dB; alternate channel selectivity 80 dB (narrow), 50 dB (wide); image rejection 80 dB; i-f rejection 100 dB; AM suppression 60 dB; THD and IM dist. at 1000 Hz 0.08% mono, 0.15% stereo; frequency response 30-15,000 Hz +0.2/−1.5 dB; stereo separation 48 dB at 1000 Hz. AM section: sensitivity 100 μV (external antenna); S/N 50 dB; image rejection 40 dB; i-f rejection 40 dB. Features center-tuning meter with meter/switching for signal-strength indication; dual power meters; linear FM and AM dial scales; FM interstation noise muting switch; phono equalization circuitry for moving-coil cartridge phono input; connections for two phono sources, aux., and two tape decks with tape-to-tape dubbing in either direction; stepped attenuator volume control; stepped attenuator bass and treble controls; tone defeat switch; two speaker connections. 7⁹/₁₆" H × 20½" W × 17¾" D ..... $820

**STR-V6.** Similar to STR-V7 minus built-in Dolby FM decoder and phono equalization circuitry for low-output (MC) cartridges; 115 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.07% THD and IM dist.; phono overload 200 mV; S/N (IHF "A") 75 dB (phono), 100 dB (aux. and tape) ..... $650

**STR-V5.** Similar to STR-V6 minus FM bandwidth selector; 85 W/ch continuous into 8 ohms under same conditions; FM usable sensitivity 9.8 dBf (1.7 μV); 50-dB quieting sensitivity 14.5 dBf (2.9 μV) mono; alternate channel selectivity 75 dB; image rejection 80 dB..... $530

**STR-V4.** Similar to STR-V5 less phono equalizer stage for accurate RIAA response, aux. connection, and tone control defeat switch; linear FM dial scale. Amplifier: 55 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.1% THD and IM dist.; tape input sensitivity/impedance 150 mV/50,000 ohms; frequency response 5-50,000 Hz+0.5/−2.0 dB (tape), RIAA phono deviation ±0.8 dB; phono S/N (IHF "A") 72 dB. FM tuner: usable sensitivity 10.8 dBf (1.9 μV); 50-dB quieting sensitivity 16.4 dBf (3.6 μV) mono, 37.9 dBf (43.0 μV) stereo; S/N 72 dB (mono), 68 dB (stereo); alternate channel selectivity 60 dB; image rejection 45 dB; i-f rejection 95 dB; mono THD and IM dist. at 1000 Hz 0.15%; frequency response 30-15,000 Hz+1.0/−2.0 dB; stereo separation 45 dB at 1000 Hz; 5¹¹/₁₆" H × 19¹¹/₁₆" W × 15⁷/₁₆" D..... $390

**STR-V3.** Similar to STR-V4 minus high and low filters and power meters; 25 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.1% THD and IM dist..... $300

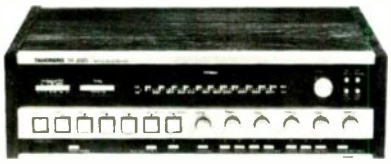
**STR-V2.** Similar to STR-V3 minus connections for phono, two tape decks with tape-to-tape dubbing, and two speakers; 25 W/ch continuous into 8 ohms

from 20-20,000 Hz with 0.3% THD and IM dist.; damping factor 30 into 8 ohms; S/N (IHF "A") 70 dB (phono), 100 dB (tape); FM mono THD and IM dist. 0.2% at 1000 Hz, stereo 0.3%; stereo separation 40 dB at 1000 Hz..... $240

**STR-1800 AM-FM Stereo Receiver**
Amplifier: 12 W/ch continuous into 8 ohms from 40-20,000 Hz with 0.8% THD and IM dist.; input sensitivity/impedance 3.0 mV/47,000 ohms (phono), 440 mV/50,000 ohms (tape); phono overload 100 mV; output level/impedance 240 mV/10,000 ohms (rec out); frequency response 40-20,000 Hz ±1 dB (tape), RIAA phono deviation ±0.3 dB; S/N (IHF "A") 65 dB (phono), 70 dB (tape); bass tone control ±10 dB at 100 Hz, treble ±10 dB at 10,000 Hz. Features signal-strength meter; FM stereo indicator light; frequency linear FM tuning dial scale with flywheel tuning knob; tape monitor switch; loudness compensation switch; front-panel headphone output with built-in speaker defeat switch; illuminated dial pointer; illuminated tuning meter; aluminum control panel. 6" H × 18⅞" W × 11¾" D..... $165

## TANDBERG

**TR 2080 AM-FM 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 μsec. AM tuner includes two MOS FETS and auto volume control. Features provision for 2 tape recorders, 2 phono, 3 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 5 FM stations; stereo decoder w/PLL oscillator; connections for 2 tape decks, 1 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/μsec; rise time 1 μsec..... $685
**TR 2045.** Similar to TR 2060. 5 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..... $585

## TECHNICS

**SA-1000 AM-FM Stereo Receiver**
Amplifier section: 330 W/ch continuous power into 8 or 4 ohms (20-20,000 Hz) at 0.03% THD and IM

dist.; frequency response 5-40,000 Hz +0/−1 dB; phono sensitivity 2.5 mV; input impedance phono 25k, 50k or 100k ohms; tape and aux. 47k ohms; S/N 97 dB (phono, 10 mV), 85 dB (phono, 2.5 mV), 100 dB (aux.). Tuner section: FM usable sensitivity 10.3 dBf (1.8 μV); 50-dB quieting sensitivity 12.8 dBf (2.4 μV) mono, 36.2 dBf (17.7 μV) stereo; FM distortion 0.1% at 1 kHz, 0.2% 6 kHz, mono and stereo; capture ratio 1.0 dB; selectivity 85 dB; AM suppression 60 dB; i-f rejection 120 dB; image rejection 100 dB; spurious response rejection 110 dB; subcarrier rejection 70 dB; stereo separation 50 dB at 1000 Hz, 40 dB at 10,000 Hz; antenna 75-ohm coax connector. AM section: sensitivity 30 μV, 250 μV/m; selectivity 35 dB; image rejection 90 dB; i-f rejection 80 dB. Features LED power-level indicator arrays for each channel with display-range select; bass, treble and midrange controls; input-selection indicator lights; front-panel phono-impedance and capacitance selectors; tape dubbing; provisions for two tape recorders and two speaker pairs; switchable audio and FM muting; loudness compensation; high and low filters (boost and cut); MPX filter; hi-blend; center-channel and signal-strength meters. 7½" H × 14¹³/₁₆" W × 21³/₃₂" D..... $1500
**SA-800.** Similar to SA-1000. 125 W/ch at 0.04% THD and 0.03% IM dist.; phono input impedance 47k ohms; phono overload 200 mV; S/N 95 dB (phono, 10 mV), 83 dB (phono, 2.5 mV), 97 dB (aux.). Tuner section: FM 50-dB quieting sensitivity 13.2 dBf (2.5 μV) mono; THD 0.1-0.3% mono, 0.2-0.4% stereo; S/N 77 dB mono, 73 dB stereo; selectivity 80 dB; image rejection 85 dB; i-f rejection and spurious response rejection 100 dB; stereo separation 45 dB at 1 kHz, 35 dB at 10 kHz; 75-ohm and 300-ohm antenna terminals. AM image rejection 50 dB, i-f rejection 45 dB. Features same as SA-1000, but without phono-input impedance and capacitance selectors. 6½" H × 22⅞" W × 15½" D..... $730
**SA-700.** Similar to SA-800 but 100 W/ch continuous power into 8 ohms, 110 W/ch into 4 ohms, at 0.04% distortion. No FM hi-blend or MPX filter. 6⁹/₁₆" H × 21¾" W × 15½" D..... $620
**SA-600.** Similar to SA-700, but 70 W/ch continuous power into 8 ohms, 80 W/ch into 4 ohms. FM section: usable sensitivity 10.8 dBf (1.9 μV); 50-dB quieting sensitivity 13.7 dBf (2.7 μV) mono, 37.2 dBf (38.7 μV) stereo; stereo distortion 0.3-0.4%; S/N 75 dB mono, 70 dB stereo; capture ratio 1.2 dB; selectivity 70 dB; AM suppression 55 dB; i-f rejection 90 dB; image rejection 70 dB; spurious response rejection 80 dB. Features similar, but without midrange control. 6⁹/₁₆" H × 19⅛" W × 12¹³/₁₆" D..... $480
**SA-500.** Similar to SA-600, but 55 W/ch continuous power into 8 ohms, 60 W/ch into 4 ohms under same conditions (20-20,000 Hz, 0.04% THD, both channels driven). Features same, except no program-selection indicator lights..... $390
**SA-400.** Similar to SA-500, but 45 W/ch continuous power into 8 ohms. Similar features, less LED power-level indicators. 5¹³/₁₆" H × 18⅛" W × 11¹³/₁₆" D..... $330
**SA-300.** Similar to SA-400, but 35 W/ch, continuous power into 8 ohms. Same features, except dual-purpose FM center-channel/AM signal-strength meter, high filter only, no tape dubbing switch... $280
**SA-200.** Similar to SA-300, but 25 W/ch continuous power into 8 ohms. Similar features, but no high filter, only one tape monitor circuit..... $230

## THORENS

**AT-410 AM-FM Stereo Receiver**
Receiver features preset selectors for five FM and two AM stations. Amplifier section: 55 W/ch continuous, both channels driven into 8 ohms, from 20-20,000 Hz at 0.1% THD; damping factor 50; frequency response 20-20,000 Hz ±0.5 dB; phono sensitivity 2.5 mV; input impedances: phono 47k, tape 470k ohms; S/N 60 dB below 50 mW output power, phono or tape. FM tuner section: usable sensitivity 9.3 dBf (0.8 μV); DIN stereo sensitivity 34.7 dBf (30 μV) for 46-dB quieting; S/N 70 dB mono, 62 dB stereo (for 59.2 dBf input); FM distortion 0.3% mono, 0.5% stereo; capture ratio 1.5 dB; selectivity 70 dB; stereo separation 40 dB at 1 kHz; antenna 75-ohm and 300/240 ohm. AM sensitivity 10 μV for 6 dB S/N. Features dual tuning meters; electronic muted switching of inputs; switchable loudness plus 2-position presence contour, FM muting, afc; 3-position hi filter plus low filter; two DIN tape inputs plus front-panel connection for third; dubbing; tone controls affect Tape 1 output, but not Tape 2; separable amp and preamp sections; two speaker outputs; headphone jack; speaker selection A, B, A+B. Accessory rack mounts Thorens turntables atop unit. Black or chrome finish. 6" H × 17¾" W × 15½" D... $1195
**AT-403.** Similar to AT-410 but FM only. 35 W/ch under same conditions; damping factor 35; S/N (below 50 mW) 58 dB. FM usable sensitivity 0.9 μV/75 ohms (10.3 dBf) mono; DIN stereo sensitivity 40 μV/75 ohms (43.2 dBf); S/N 67 dB mono, 62 dB stereo; capture ratio 1.8 dB; selectivity 60 dB. Features similar, but no filters, one tape monitor, amp and preamp not separable..... $895

## TOSHIBA

**SA-7150 AM-FM Stereo Receiver**
Digital-synthesis-tuned receiver with digital frequency readout and six-station memory. Amplifier

section: 150 W/ch continuous power into 8 ohms (20-20,000 Hz) at 0.05% or less THD (0.03% at half power); IM dist. 0.05% (0.03% at 1 W/ch); power bandwidth 5-35,000 Hz; frequency response 10-50,000 Hz +0.5/−1.5 dB; phono sensitivity 2.5 mV for 80 dB S/N, 10 mV for 90 dB; tape/aux. S/N 95 dB. Tuner section: FM usable sensitivity 9.8 dBf (1.7 μV); 50-dB quieting sensitivity 14.7 dBf (3.0 μV) mono, 37.6 dBf (42 μV) stereo; S/N 70 dB (stereo), 75 dB (mono); FM distortion 0.1% stereo, 0.08% mono; capture ratio 1.0 dB; selectivity 80 dB narrow, 45 dB wide; AM suppression 55 dB; i-f rejection 100 dB; spurious rejection 100 dB; image rejection 85 dB at 98 MHz; subcarrier rejection 70 dB; stereo separation 50 dB at 1000 Hz, 30 dB from 30-15,000 Hz; antenna 75 or 300 ohms. AM sensitivity 300 μV/m (IHF, ferrite antenna), 30 μV/m (IHF, ext. antenna); AM selectivity 35 dB; S/N 50 dB; image rejection 45 dB; if rejection 40 dB. Features LED signal-level display; peak-reading power meters; 10- and 20-dB audio muting; Dolby

# 3 RECEIVERS

FM; FM muting; hi-blend, multipath listening check; tape level set tone; 32-position attenuator volume control; wide/narrow FM i-f; high and low filters; provisions for three speakers, two tape decks. 7.5" H × 21.6" W × 19.7" D ..... $995

**SA-7100.** Similar in styling and features to SA-7150, but with conventional tuning, linear dial, and signal and tuning meters; no tape level-set tone; has single i-f bandwidth (80 dB selectivity). Amplifier section: 100 W/ch continuous power. FM tuner section: distortion 0.2% stereo, 0.1% mono to 6 kHz, 0.25% stereo, 0.2% mono at 6 kHz; stereo separation 45 dB at 1kHz; 7½" H × 21⅜" W × 18⅛" D... ..... $630

### SA-750 AM-FM Stereo Receiver

Amplifier section: 50 W/ch continuous power into 8 ohms (20-20,000 Hz) at 0.08% THD, both channels driven; THD 0.05% or less at 25 W/ch; IM dist. 0.08% at rated power, 0.05% at 25 W/ch; power bandwidth 10-35,000 Hz; frequency response 10-40,000 Hz +0.5/−1 dB (aux.), 30-15,000 Hz ±0.3 dB (phono); S/N 72 dB phono, 95 dB tape/aux.; input impedance 47k ohms, all inputs; phono sensitivity 2.5 mV; phono overload level 200 mV; tape output 150 mV, DIN output 30 mV. Tuner section: FM usable sensitivity 10.3 dBf (1.8 μV); 50-dB quieting sensitivity 38.3 dBf (45 μV) stereo, 15.3 dBf (3.2 μV) mono; S/N 68 dB stereo, 75 dB mono; capture ratio 1.0 dB; selectivity 80 dB; AM suppression 40 dB; i-f rejection 100 dB; image rejection 80 dB; spurious response rejection 100 dB; subcarrier rejection 60 dB; stereo separation 45 dB at 1000 Hz, 30 dB from 30-15,000 Hz; antenna 75 or 300 ohms. AM section: sensitivity 300 μV/m (IHF, ferrite antenna), 30 μV/m (IHF, ext. antenna); selectivity 35 dB; S/N 50 dB; image rejection 45 dB; i-f rejection 40 dB. Provisions for two tape decks with direct dubbing and two pairs of speakers; hi and low filters; switchable FM muting; switchable loudness; 25-μsec Dolby de-emphasis position for use with external Dolby decoder; two ac convenience outlets; 41-position volume attenuator. 5¹¹⁄₁₆" H × 18⅞" W × 15¾" D ..... $350

**SA-735.** Similar to SA-750, but 35 W/ch. FM section: 10.8 dBf (1.9 μV) usable sensitivity; 50-dB quieting sensitivity 39.2 dBf (50 μV) stereo, 16 dBf (3.5 μV) mono; selectivity 65 dB; AM suppression 50 dB; i-f rejection 90 dB; image rejection 60 dB at 98 MHz; spurious rejection 75 dB. ..... $300

## WINTEC

### R1120 Stereo Receiver

Features TV tuning section that receives VHF/UHF programming. Amplifier: 120 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.03% THD and IM dist.; frequency response 0-100,000 Hz −1 dB; damping factor 50 at 1000 Hz into 8 ohms. FM tuner sensitivity 1.7 μV; 50-dB quieting sensitivity 14.2 dBf (mono), 37 dBf (stereo); alternate channel selectivity 80 dB; capture ratio 1.0 dB; dist. 0.1% (mono) and 0.2% (stereo) at 1000 Hz; stereo separation 35 dB at 1000 Hz; S/N 80 dB (mono), 71 dB (stereo); i-f rejection 95 dB; image rejection 85 dB; frequency response 30-15,000 Hz ±0.5 dB. AM section: IHF sensitivity 25 μV (antenna terminal); image rejection 60 dB at 600 kHz; S/N 60 dB. Features dc power amplifier; dual power supplies; signal-strength and center-tuning meters with LEDs; LED multipath tuning; dB-calibrated volume attenuator; five LEDs/ch power outputs; infrasonic filter; variable tune turnover; three speaker outputs; variable loudness; walnut cabinet with brushed aluminum panel..... $899

### R1060 Stereo Receiver

Features TV tuning section that receives VHF/UHF programming. Amplifier 60 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.05% THD and IM dist. FM tuner sensitivity 1.8 μV; capture ratio 1.0 dB. Features dc power amplifier; dual power supplies; signal-strength and center tuning meters with LEDs; multipath tuning LEDs; dB-calibrated volume attenuator; power output LEDs; variable loudness; walnut cabinet with brushed aluminum..... ..... $599

### R1030 Stereo Receiver

Amplifier: 30 W/ch continuous into 8 ohms from 20-20,000 Hz with 0.08% THD and IM dist. FM tuner sensitivity 1.9 μV; capture ratio 1.0 dB. Features signal-strength and center-tuning meters with LEDs; mid-range tone control; FM muting; two tape monitors with dubbing; high filter; walnut cabinet.. ..... $319

### R1015 Stereo Receiver

Amplifier: 15 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz with 0.08% THD and IM dist.; frequency response 20-20,000 Hz ±1.5 dB; power bandwidth 18-35,000 Hz −3 dB; S/N (IHF "A") 70 dB (phono), 80 dB (aux. and tape); input sensitivity 2.5 mV (phono), 150 mV (aux. and tape); max. input 120 mV (phono), 10 V (aux. and tape). FM tuner: mono usable sensitivity 10.7 dBf (1.9 μV); 50-dB quieting sensitivity 15.0 dBf (mono), 38.0 dBf (stereo); alternate channel selectivity 70 dB; capture ratio 1.0 dB; dist. 0.25% (mono) and 0.4% (stereo) at 100 and 1000 Hz; stereo separation 32 dB at 100 Hz, 40 dB at 1000 Hz; S/N 70 dB (mono), 65 dB (stereo); i-f rejection 80 dB; image rejection 55 dB; frequency response 30-15,000 Hz +0.5/−2 dB. AM tuner sensitivity 25 μV (IHF, antenna terminal); image rejection 40 dB; selectivity and S/N 45 dB. Features dc OCL power amplifier circuitry; dual-gate MOS FET in FM front end; signal-strength and center-tuning LED readout; PLL IC in multiplex section; two speaker output terminals; phono equalizer amp; LED power on indicator; bass and treble tone controls (±10 dB range); loudness control; high filter (10 dB/octave at 10,000 Hz); tape dubbing and monitor switches; source selector switch; FM muting; headphone jack ..... $229

## YAMAHA

### CR-3020 AM-FM Stereo Receiver

Amplifier section: 170 W/ch continuous, both channels driven into 8 ohms from 20-20,000 Hz at

0.1% THD, 200 W/ch into 4 ohms; IM dist. 0.03%; damping factor 70; frequency response 0-100,000 Hz +2/−3 dB; phono sensitivity 2 mV (MM), 50 μV (MC); max. input levels 310 mV (MM in), 7.5 mV (MC); input impedance 47k, 68k, 100k ohms (phono 1, MM), 10 ohms (phono 2, MC), 50k ohms (others); S/N (IHF "A") 96 dB (MM phono), 85 dB (MC phono), 100 dB (aux., tape), 118 dB (power amp main in). Tuner section: FM usable sensitivity 11.2 dBf (2.0 μV) mono; 50-dB quieting sensitivity 15.3 dBf (3.2 μV) mono, 37.2 dBf (40 μV) stereo; FM S/N 80 dB mono, 75 dB stereo; FM dist. 0.07% mono or stereo at 1000 Hz (local), 0.2% mono, 0.6% stereo (DX); capture ratio 1.0 dB (local), 1.5 dB (DX); selectivity 60 dB (local), 80 db (DX); AM suppression 60 dB; i-f response −120 dB; image response −110 dB; spurious response 110 dB; subcarrier rejection 70 dB; stereo separation 52 dB at 1000 Hz (local), 30 dB (DX). AM section: sensitivity 300 μV/m (rod antenna); S/N 50 dB; selectivity 45 dB; image response −75 dB; i-f response −75 dB. Features dual tuning and power level meters (right-channel meter doubles as signal-strength indicator), meters also read tape output; independent input and recorder output select; independent headphone level control and main/rec-out monitor selection; dual tape monitors with two-way dubbing; bass, midrange and treble controls with switchable turnover frequency and defeat; separate volume and variable loudness-compensation controls; adjustable FM muting level; DX/Local/Auto select; recorder-calibration tone; audio muting; dual phono inputs with moving-coil head amp (switchable) on one; FM high-blend and Dolby-adaptor switches. 7½" H × 24¾" W × 19½" D..... $1400

### CR-2020 AM-FM Stereo Receiver

100 W/ch continuous power into 8 ohms with both channels driven (20-20,000 Hz); THD and IM dist. 0.05%; frequency response 10-100,000 Hz ±2.5 dB; FM sensitivity for 50 dB quieting, 15.3 dBf (3.2 μV) mono, 37.2 dBf (40 μV) stereo; IHF usable sensitivity 10.3 dBf (1.8 μV) mono; distortion 0.08-0.15% mono, 0.4-0.2% stereo; selectivity 80 dB; capture ratio 1.0 dB; stereo separation 35-50 dB; AM suppression 65 dB; image rejection 85 dB; i-f rejection 90 dB; SCA rejection 60 dB; S/N 77 dB mono, 73 dB stereo. AM usable sensitivity 300 μV/m; selectivity 30 dB; S/N 50 dB; THD 0.4%; image rejection 55 dB; i-f rejection 40 dB; 6⁹⁄₁₆" H × 21¼" W × 16⁹⁄₁₆" D..... $750

**CR-1020.** Similar to CR-2020, but 70 W/ch .. $595

**CR-820.** Similar to CR-1020 but 50 W/ch; frequency response 20-20,000 Hz ±0.5 dB; distortion on FM 0.1-0.2% (mono), 0.15-0.3% (stereo); selectivity 75 dB; stereo separation 30-40 dB; 6⁹⁄₁₆" H × 20" W × 15⁹⁄₁₆" D ..... $465

**CR-620.** Similar to CR-820, but 35 W/ch; FM stereo sensitivity for 50 dB quieting 38 dBf (43.5 μV); distortion on FM 0.15-0.3% mono, 0.25-0.4% stereo; selectivity 80 dB; AM suppression 56 dB; image rejection 50 dB; i-f rejection 75 dB; SCA rejection 50 dB; AM usable sensitivity 316 μV/m; selectivity 25 dB; THD 0.6%; image rejection 50 dB ..... $365

### CR-420 AM-FM Stereo Receiver

Amplifier section: 22 W/ch continuous power into 8 ohms (20-20,000 Hz) at 0.05% THD and IM dist.; power bandwidth 10-40,000 Hz; frequency response 20-20,000 Hz ±1.5 dB; phono sensitivity 2 mV; input impedance 50k ohms (phono), 45k ohms (aux., tape); maximum input level (phono) 110 mV; S/N (A-weighted) 91 dB phono (10 mV, shorted), 97 dB aux. Tuner section: FM usable sensitivity 10.3 dBf (1.8 μV); 50-dB quieting sensitivity 16.1 dBf (3.5 μV) mono, 38 dBf (43.5 μV) stereo; FM distortion 0.8% stereo, 0.3% mono (max.); capture ratio 1.0 dB; selectivity 65 dB; AM suppression 56 dB; i-f rejection 75 dB; image rejection 50 dB; spurious response rejection 75 dB; stereo separation 40 dB at 1000 Hz, 30 dB from 50-10,000 Hz; antenna 75 or 300 ohms. AM section: IHF sensitivity 18 μV/m; selectivity 20 dB; S/N 50 dB (at 80 dB/m); image and AM suppression 40 dB; spurious response ratio 50 dB; distortion 0.6%. Separate input and tape out selectors; provision for two speaker pairs; continuously adjustable loudness compensation; relay speaker protectors; click-stop bass and treble; switchable high filter; built-in 10-Hz low filter; FM antenna terminals also serve for AM; combination FM center-channel/AM signal-strength meter. 6⅜" H × 17¾" W × 12¾" D ..... $000

**CR-220.** Similar to CR-420, but 15 W/ch; maximum phono input level 100 mV; frequency response +1.5/−2.0 dB, 20-20,000 Hz; S/N 90 dB phono, 96 dB tape and aux. FM section: usable sensitivity 11.2 dBf (2.0 μV) mono; 50-dB quieting sensitivity 17.3 dBf (4 μV) mono, 39.2 dBf (50 μV) stereo; AM suppression 52 dB; capture ratio 1.5 dB; selectivity 60 dB; S/N 70 dB mono, 65 dB stereo; max. mono distortion 0.4%; IM dist. 0.2% mono, 0.4% stereo. Provision for two speaker pairs; continuously variable loudness compensation; built-in subsonic filter; FM muting; single meter for FM center-channel, AM signal-strength. 5¾" H × 17⅛" W × 12⅞" D..... $220

## ABOUT PRICES. . . .

**With repeal of Fair Trade Laws, manufacturers are now providing "Suggested Retail" or "Fair Retail Value" figures for the guidance of their dealers and customers. Prices in this Directory are those provided by the manufacturers under these conditions.**

# ANNOUNCING THE FIRST RECEIVER IN THE WORLD WITH AN FM/AM DIGITAL SYNTHESIZER. THE TOSHIBA 7150.

Toshiba introduces the first receiver in the world with FM/AM frequency-synthesized digital tuning.

Until now, this technology was available only in the most costly separate FM tuners.

Now it's incorporated into the 7150, an extraordinarily high-powered, low distortion, state-of-the-art receiver. With a suggested retail price of only $995.00.*

The 7150's tuner employs a quartz crystal oscillator, which automatically locks into the center of any station's frequency — as precisely as the station's own transmitter.

Drift is eliminated. So is the inaccuracy of handsetting a conventional center-tuning meter.

Stations are selected merely by pushing the auto-scan button, which scans the full range of the FM or AM band, then automatically reverses.

Twelve stations, six FM and six AM, can be preselected and locked into the receiver's memory for instant push-button recall.

Bright green LED numerals instantly display all frequencies as they are tuned.

## WE'VE ELIMINATED THE MOST PRIMITIVE ELEMENT OF FM/AM TUNING. THE HAND.


*Toshiba's new digital read-out.*


*Conventional center-tuning meter.*

Of course, the frequency-synthesized tuner would be of little use if the rest of the receiver didn't measure up.

It does. The 7150 also features separate transformers for class A and class B amplifier sections. Separate left and right power supplies, with a toroidal transformer. Plus a built-in FM Dolby** circuit, with an air-check switch for meter calibration.

The 7150 also has LED signal level indicators. Left and right power meters. Three-way speaker selection. And much more: every important feature you would expect to find in a top-of-the-line receiver.

The specs are, simply, spectacular. The 7150 delivers a minimum of 150 watts per channel into 8 ohms, 20 to 20,000 Hz, with no more than 0.05% THD.

Frequency response, separation and all the rest of the figures are just as impressive.

The 7150 looks spectacular, too. Speaker selection, balance, bass, treble, and high and low filter controls are all hidden behind the dashpot-loaded cover.

This gives the 7150 a sleek, streamlined appearance that sets it apart from all other receivers.

Altogether, the Toshiba 7150 adds up to the most advanced electronic design. So it produces the kind of clear, open sound that will satisfy the most demanding audio purists.

Which is exactly what you'd expect from Toshiba, a company that demands of itself the most exacting standards for technology and innovation.

*Suggested Retail Value Solely For Purpose of Information.
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**TOSHIBA**
Again, the first.
Toshiba America, Inc., 280 Park Ave., New York, N.Y. 10017
CIRCLE NO. 88 ON READER SERVICE CARD

# Single-play vs. Multi-play.

## (You can't lose with ADC Accutrac®)

**The fight rages on: the benefits of a single-play versus the advantages of a multi-play. Truce!**

**Accutrac has perfected both formats with a whole new patented technology: computerized track selection!**

**With the computerized control panel on any Accutrac turntable you can play the tracks on a record in any order you like, as often as you like, even skip the tracks you don't like.**

**The Accutrac 4000 single-play format offers you everything from computerized track selection to remote control. The Accutrac 4000 is engineered with a Direct Drive motor, with rumble measured at better than −70dB (DIN B), and flutter less than .03% WRMS.**

**Accutrac+6 is the ultimate multi-play design that plays six records, but doesn't drop them! Because Accutrac+6 has the remarkable Accuglide™ spindle that spirals up through the platter, and lowers each record, like an elevator, into playing position. And after all six records have played, lifts them back up to the starting position.**

**Accutrac+6 offers you a belt drive motor, with rumble measured better than −66dB (DIN B), and flutter less than .04% WRMS. The Accutrac+6 also has the added feature of remote volume control.**

**And all of the Accutrac turntables feature the famous ADC magnetic cartridge.**

**We invite you to write for the full details of the Accutrac systems, or visit your nearest Accutrac dealer. Whether you prefer single-play, or multi-play, Accutrac does it best.**

ADC Accutrac

A BSR Company

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# 4 TURNTABLES

## ACOUSTIC RESEARCH

### AR77-XB Single-Play Manual

Two-speed (33⅓ and 45 rpm) with manually operated tone arm. Features synchronous motor, belt

drive, viscous-damped cueing, damped three-point suspension isolating tonearm and platter system. Specifications: wow and flutter 0.03% (IEEE); rumble −65 dB (DIN "B"); max. tracking error 0.32 degrees/in. Includes walnut-grained vinyl veneer base and hinged, two-position dustcover; 5½" H × 16¹³/₁₆" W × 13" D..... $150
With Shure M91ED cartridge ..... $175

## ADC PROFESSIONAL PRODUCTS

### 1700DD Single-Play Semi-Automatic

Two-speed (33⅓ and 45 rpm) direct-drive quartz PLL turntable with auto return arm; electronic

phase comparator monitors speed change; low-mass black anodized aluminum tubular straight tonearm; molded carbon fiber headshell; viscous damped cueing; spring anti-skate adjustment; micro-switch electronic controls; electronic speed and pitch controls; digital speed display; aluminum platter; resonance-tuned suspension feet; includes removable hinged dustcover..... $250

**1600DD.** Similar to 1700DD except has illuminated stroboscope for speed monitoring and anti-static mat on platter; minus quartz PLL motor and digital speed display ..... $200

**1500FG.** Similar to 1600DD except belt-drive system with S-shaped arm; FG servo-controlled dc motor ..... $130

## AIWA

### AP-2200 Single-Play Semi-Automatic

Two-speed (33⅓ and 45 rpm) direct-drive turntable with automatic lift/return tonearm; 8-pole linear torque dc servomotor; front-panel controls; one-row stroboscope with pilot lamp; variable pitch control ±3%; S-shaped arm (effective length 215 mm); anti-skating; viscous-damped cueing; rubber headshell liner; moving-magnet cartridge; stylus pressure gauge; adjustable insulators; wow and flutter 0.035% wrms, 0.065% (DIN); rumble −60 dB (IEC "B"), −70 dB (DIN "B"); tracking force 0-3 g; 4⅞" H × 18¾" W × 14³/₁₆" D..... $220

## ARISTON

### RD-11S Single-Play Manual

Two-speed (33 and 45 rpm) manual turntable with belt drive and brushless dc servomotor; speed adjustment ±4%; wow and flutter 0.04%; rumble −72 dB, weighted; tonearm board and turntable suspended from top plate to minimize feedback; LED speed and mode indications; illuminated strobe; leveling bubble ..... $300
With SME tonearm ..... $500
Pre-drilled tonearm plates ..... $10
Blank tonearm plates ..... $8

## AUDIONICS OF OREGON

### LK1 Single-Play

33⅓-rpm belt-drive turntable without tonearm; precut tonearm mounting board for choice of arms and electronic speed control for 45 rpm; 24-pole synchronous ac motor; graphite bearing machined to 0.002-in tolerance; 12-in dynamically-balanced aluminum platter; adjustable base with spring-loaded, air-cushioned feet; wow and flutter less than 0.05%; rumble −55 dB (unweighted); speed accuracy ±0.25%; on/off switch, includes hinged smoked-acrylic dustcover; matte black finish; 6" H × 17⅝" W × 14" D..... $329

## BANG & OLUFSEN

### Beogram 4002 Single-Play Automatic

Two-speed (33 and 45 rpm, electronic selection), belt-driven turntable with tangential-tracking to-

nearm; rumble −65 dB; patented electro-pneumatic damping system lowers tonearm at precise, controlled speed. Turntable comes with MMC4000 cartridge. Fine-speed adjustment greater than ±3%. Pendulum and leaf-spring suspension have resonance of 4.5 Hz; wow and flutter ±0.025%; rumble −65 dB (DIN "B"); 4" H × 19¼" W × 15" D..... $750

### Beogram 2400 Single-Play Automatic

Two-speed (33 and 45 rpm) belt-drive turntable with automatic lift/shutoff tonearm; single master control for all operations; tachometer-controlled, dc motor. Speed adjustment ±3%; speed deviation 0.1%; wow and flutter less than ±0.035%; rumble (DIN weighted) 62 dB; tracking error 0.126°/cm (0.32°/in); comes equipped with magnesium alloy tonearm and MMC4000 stereo cartridge, hinged dustcover (records can be played with cover closed), rosewood veneer base (oak, teak or white lacquer finishes available on special order); 3¼" × 17½" W × 13" D..... $350

## B.I.C.

### 918MP Single-Play Automatic

Two-speed (33⅓ and 45 rpm), quartz-crystal servo-controlled, microprocessor digital belt-drive turntable with automatic tonearm; digital pitch computer with four-character readout and stopwatch; two motors; 9-in dynamically balanced carbon-fiber arm; digital arm control for cueing, programming, repeat, and start/stop; variable isolation adjustment; three-scale anti-skating; jewel vertical bearings; cartridge overhang, and vertical tracking angle adjustments; hinged removable dustcover; 12-in platter in aluminum top plate; wow and flutter 0.04% wrms; tracking force range 0-3 g; speed adjustment range ±3%; 5¾" H × 18¾" W × 15¼"D..... $300

**918MPC.** Same as 918MP except automatic record changer ..... $320

**916MP.** Similar to 918MP except driven by 24-pole, ac servo-controlled motor; has digital pitch control with four-character display; arm not controlled by microprocessor ..... $200

**916MPC.** Same as 916MP except automatic record changer ..... $220

### 914 Single-Play Automatic

Two-speed (33⅓ and 45 rpm) dc belt-drive turntable with automatic tonearm and repeat; 300-rpm synchronous motor with three-tier isolation; variable pitch; illuminated strobe; hinged removable dustcover; 12-in platter in metallic silver gray top plate; 9-in low-mass dynamically balanced arm with plug-in tube; wow and flutter 0.06% wrms; tracking force range 0-3 g; 5¾" H × 18¾" W × 14⅜" D..... $160

**914C.** Same as 914 except automatic record changer..... $180

**912.** Similar to 914 without plug-in arm tube; has 9-in statically-balanced arm with oil-damped cueing and three-scale anti-skate adjustment. $130

**912C.** Same as 912 except automatic record changer..... $150

**911.** Similar to 912 except has manual tonearm operation ..... $100

# 4 TURNTABLES

## BSR

### Quanta 800 Single-Play Semi-Automatic

Two-speed (33⅓ and 45 rpm) quartz PLL direct-drive turntable with automatic return tonearm; S-

shaped tubular arm; electronic micro switches; viscous damped cueing; illuminated digital speed display; aluminum platter with anti-static mat; anti-resonant cabinet on resonance-tuned suspension feet; black base ..... $230

**Quanta 700.** Similar to Quanta 800 except dc brushless servo-controlled motor; S-shaped counterbalanced arm with plug-in headshell; metallic silver base ..... $180

**Quanta 600.** Similar to 700 except belt-drive dc servo-controlled motor ..... $130

**Quanta 500.** Similar to Quanta 600 except includes non-ferrous platter, bayonet removable headshell, and hydraulic automatic arm return ..... $110

**Quanta 500X.** Same as 500 except with ADC QLM-34 Mk III magnetic cartridge ..... $130

**Quanta 400.** Similar to Quanta 500 except 24-pole ac synchronous belt-drive turntable ..... $90

**Quanta 400X.** Similar to Quanta 400 except with ADC QLM-32 Mk III magnetic cartridge ..... $110

### Quanta 550 SX Automatic Multiple-Play

Two-speed (33 and 45 rpm), automatic multiple-play turntable; belt-driven by 24-pole, 300-rpm synchronous ac motor with electronic speed changing; speed adjustment ±3%; illuminated stroboscope; dynamically balanced, aluminum, channeled tonearm with slide-in headshell, calibrated 1-4 g tracking force adjustment; viscous-damped cueing tonearm automatically locks on arm rest after play; "Autoglide" umbrella spindle interchangeable with single-play stub spindle; includes ADC QLM-34 Mk III magnetic cartridge, base and dustcover; wow and flutter 0.06% wrms; rumble −65 dB (DIN "B" weighting) ..... $150

**Quanta 450SX.** Similar to 550 SX, but with mechanical speed change, no speed adjustment or stroboscope; tonearm counterweight preset at factory, tracking-force adjustment by calibrated scale-beam weight; includes ADC QLM-32 Mk III magnetic cartridge; wow and flutter 0.08% wrms; rumble −62 dB (DIN "B") ..... $110

**Quanta 350SX.** Similar to Quanta 450SX with dynamically-balanced arm ..... $90

### BSR McDonald Series

Three-speed (33, 45, and 78 rpm) record changer with six-record umbrella spindle and interchangeable single-play spindle; four-pole, high-torque induction motor; spring-balanced S-shaped tonearm with automatic lock, anti-skate control and stylus force adjustment; cue/pause control; supplied complete with ADC QLM-30 Mk III magnetic cartridge, set up and ready to play; includes base with compartment for spare spindle, hinged dust cover .. $70

**200S.** Single-play automatic, with counterbalanced tonearm; gimbal arm suspension; bidirectional viscous-damped cueing; includes 45-rpm single-play adaptor ADC QLM-30 Mark III magnetic cartridge, base, dustcover ..... $70

**35CS Changer.** Similar to 250S, but rim-drive with BSR ceramic cartridge, stabilizer-arm changing mechanism; two-pole induction motor; no anti-skating ..... $65

**25CX.** Similar to 35CS, but more compact design .. ..... $60

**2000AX.** Minichanger; extremely compact; with BSR ceramic cartridge and diamond stylus ..... $50

## CONNOISSEUR

### BD103 Transcription Unit

Three-speed (33, 45, and 78 rpm), belt-drive turntable; low-voltage dc electronically-controlled servomotor with external power supply to eliminate hum fields; replaceable tonearm mounting discs; electronic speed adjustment; 12-in platter; illuminated stroboscope; comes with base and dustcover; 5¾" H × 18" W × 15" D ..... $200

**BD103/A.** Same as BD103 except with Connoisseur tonearm; magnetically damped unipivot/double-knife-edged tonearm with magnetic antiskate and adjustable effective mass; rumble −77 dB; hum −100 dB; wow and flutter 0.05%; plug-in headshell ..... $250

### BD2A Single-Play/Automatic Cue Up

Integrated turntable with SAU2 arm and pickup assembly; has push-button speed control; hydraulic lift and lowering of tonearm plus automatic lift at end of record; anti-vibration springs; lightweight cartridge shell with self-cleaning contacts. Two-speed (33 and 45 rpm) belt-drive; 60-Hz synchronous constant speed 450 rpm; rumble −65 dB (DIN); hum −80 dB; wow and flutter 0.065%; 10¼-in aluminum platter; comes with arm, base, dustcover but without cartridge. 5½" H × 18" W × 15" D ..... $150

**HS.** Head shell for SAU2 tonearm ..... $7

**SAU2.** Double-gimbal tonearm ..... $100

**SAU4.** Unipivot tonearm ..... $140

## DENON

### DP-6700 Quartz-Controlled Single-Play

Two-speed (33 and 45 rpm) direct-drive turntable with quartz-crystal phase-locked speed control; ac

motor regulated by pulse-width modulation; stroboscope illumination derived from quartz oscillator; supplied with stabilizer weight to prevent acoustic feedback pickup from record; Denon DA-307 tonearm with one-point suspension; dynamic damping of arm/cartridge resonance; magnetic anti-skating; magnesium headshell; vernier tracking-force adjustment; oil-damped cueing; speed electronically adjustable (±6%); wow and flutter less than 0.015% wrms; rumble better than −77 dB; starting time to full speed less than 1.2 sec; tonearm effective length 9⅝-in; tracking error 2.5° max.; 7⅜" H × 20⁹/₁₆" W × 16⁹/₁₆" D ..... $1060

**DP-6000.** Above DP-6700 table only, less Denon DA-307 dynamically damped tonearm with magnetic anti-skating, base, and cover ..... $595

### DP-3500 Single-Play Manual

Two-speed (33 and 45 rpm) direct-drive turntable with manual arm; ac servomotor; magnetic speed detection system; speed adjustable ±3%, with stroboscope; laminated base finished with genuine Japanese "sen" veneer or black walnut; wow and flutter less than 0.015% wrms; rumble below −75 dB (DIN "B" weighting); touch-controlled speed-change switch; replaceable tonearm board .... $600

### DP-2500 Quartz-Controlled Single-Play

Two-speed (33⅓ and 45 rpm) direct-drive turntable with automatic tonearm and quartz-crystal phase-locked speed control; ac servomotor regulated by magnetic pulse detection; electrical dc brake for stop mode; illuminated stroboscope; dynamically damped and statically balanced tonearm; anti-skating and cueing device; aluminum alloy head shell; slide-switch speed selection; wow and flutter 0.015% max. wrms; rumble better than −75 dB; starting time less than 1.5 sec (33⅓ rpm); effective tonearm length 9⅜-in; vinyl plywood cabinet with acryl resin cover; 9⅜" H × 19¹/₁₀" W × 16" D. $525

**DP-2800.** Similar to 2500 but with marble base .... ..... $675

**DP-2550.** Similar to 2500 minus arm ..... $475

**DP-2000.** Similar to 2500 less cabinet, legs, and arm ..... $415

**DP-2000.** Two-arm base with unhinged dust cover; ash ..... $300

**DA-309** Dynamically damped tonearm; 9⅜-in ..... ..... $220

### DP-1800 Single-Play Automatic

Two-speed (33⅓ and 45 rpm) direct-drive turntable with automatic tonearm and servo system speed control; ac servo motor; Denon DA-307 dynamically damped and statically balanced tonearm; oil-damped cueing; slide-switch speed selection; wow and flutter 0.018% max. rms weighted; rumble better than −75 dB (DIN "B" weighted); starting time less than 1.8 sec; effective arm length 9⅜-in; marble base and laminated plywood cabinet; 6⅘" H × 19¹/₁₀" W × 16¹/₁₀" D ..... $480

**DP-1200.** Similar to DP-1800 except semi-automatic with automatic arm lift and adjustable tonearm height, record-end sensor, and stand-by switch for end-of-cue; starting time less than 1.5 sec; 6⅜" H × 19¹/₁₀" W × 15⅜" D ..... $375

**DK-200.** Base with hinged dust cover ..... $260

**DA-307.** Dynamically damped tonearm; 9⅜-in ..... ..... $255

## DUAL

All Dual turntables feature straight-line tubular tonearms mounted in true four-point gimbal suspensions; dynamically balanced tonearm does not require critical leveling of chassis; precision-machined die-cast platters; tracking to ¼ g; vernier-adjust damped counterbalance; direct-dial setting of stylus force; stylus force applied around vertical pivot; anti-skating calibrated for conical, elliptical, and CD-4 styli; adjustable pitch control for both speeds (33⅓ and 45 rpm); strobe platter; cueing system damped in both directions; quick-release cartridge holder with stylus overhang adjustment; dustcover included; base 3½" H × 16½" W × 14½" D.

### Fully Automatic Multiple-Play

Additional features of Dual fully automatic multiplay turntables include vario-belt drive system; vertical tracking angle adjustable for single or multi-

play; automatic and manual operation in both single- and multiple-play modes; interchangeable rotating single-play spindle; 6% pitch control; elevator-action multiple-play spindle holds up to six records; records may be removed from platter without removing spindle.

**CS1246.** 12-in platter; illuminated strobe; tonearm anti-resonance filters; continuous repeat switch; rumble −68 dB; wow and flutter 0.04%; 5⁴/₅" H ×

# 4 TURNTABLES

16½" W × 14⅜" D..... $260
**CS1242.** Similar to 1246 but without illuminated strobe, continuous repeat switch and anti-resonance filters..... $225
**CS1237.** Compact version of 1242; 10⅝-in platter ..... $180

### Direct-Drive Single-Play

**CS731Q.** Fully automatic, single play turntable. Features anti-resonance filters user-tunable to specific mass and compliance of high-performance cartridge; 8-gram tonearm and Ortofon ULM60E cartridge; quartz reference oscillator (11% pitch) with LEDs and illuminated strobe, and phase-locked-looped monitoring circuit; front-panel solenoid-operated controls; variable cueing descent speed; rumble −75 dB; wow and flutter 0.015%..... $530
**CS714Q.** Similar to CS731Q but semi-automatic tonearm with automatic return and shut-off; switchable lead-in groove sensor indicates when tonearm is precisely over 7-in and 12-in lead-in grooves.. $440
**CS721.** Fully automatic, all-electronic direct-drive brushless dc motor with regulated power supply; overlapping coil design provides gapless rotating magnetic field; two Hall-effect generators for electronic self-regulating speed monitoring; 8% pitch control for each speed; 12-in one-piece dynamically balanced die-cast 9.7-lb. platter; gimbal-mounted 8¾-in tonearm with 8-mm height range; variable cue control height and descent speed; continuous automatic repeat; counterbalance incorporates two anti-resonance filters; stylus pressure 0-3 g; anti-skating; damped cueing; rumble −72 dB; wow and flutter 0.03%..... $420
**CS621.** Similar to CS721 except direct-drive motor with CMOS regulator circuit and integral frequency generator; illuminated strobe; rumble −70 dB ..... $300
**CS604.** Similar to CS621 except has semi-automatic tonearm with automatic return and shut off; mechanical lead-in groove sensor indicates when tonearm is precisely over 7-in and 12-in lead-in grooves..... $270
**CS521.** Similar to CS604 except no illuminated strobe; rumble −86 dB; wow and flutter 0.04% .... ..... $210
**CS504.** Similar to CS521 except has semi-automatic tonearm with automatic return and shut-off .. ..... $180

## EMPIRE

### 698 Single-Play Manual

Two-speed (33 and 45 rpm) belt-drive; speed accuracy 0.25% (90 to 130 V); rumble 68 dB below

3.54 cm/sec at 1000 Hz; average wow and flutter (weighted) 0.04%; hysteresis synchronous motor; startup time ⅓ revolution; aluminum tonearm mounted on 32 jeweled sapphire bearings; end-of-record arm lift; vertical and horizontal bearing friction 0.001 g; 12-in aluminum platter; tracking force range 0-4 g (½ g per div.); cartridge weight handling range 4-10 g; low-capacitance cable 100 pF, standard-capacitance cable 210 pF (both including arm); 8³⁄₁₆" H × 17½" W × 15⅛" D... $400

## FISHER

### MT 6250 Automatic/Manual Single-Play

Two-speed (33⅓ and 45 rpm) linear motor, direct-drive turntable with automatic tonearm and option

of manual start/stop; quartz PLL speed control, ±6% range unlocked; S-shaped balanced tonearm; viscous damped cueing and variable anti-skate; strobe light and pitch control; adjustable legs, integrated level and stylus overhang gauge; wow and flutter 0.03% wrms; rumble −70 dB (DIN "B"); tracking force range 0.6-3.5 g; tracking error ±1.5 degrees; 12 ¹⁵⁄₁₆-in platter; effective arm length 222 mm; cartridge mounting hardware; walnut base; 6½" H × 17¾" W × 14¼" D..... $300
**MT 6250C.** With stereo magnetic cartridge .... $325

### MT 6225A Automatic Single-Play

Two-speed (33 and 45 rpm) turntable with direct-drive linear motor (no windings or electrical connections in turntable platter); manual start and stop, auto stop and reject; strobe light, ±3% speed adjust; S-shaped, balanced arm with removable cartridge shell; viscous-damped cueing; wow and flutter 0.03% wrms; speed variation within ±0.5%; rumble −70 dB; tonearm effective length 222 mm; max. tracking error ±1.5°; with base and dustcover; 6" H × 17¾" W × 14¼" D ..... $230
**MT 6225AC.** With stereo magnetic cartridge .. $250
**MT 6224.** Same as MT 6225A except wow and flutter 0.04% wrms and rumble −68 dB ..... $200
**MT 6224C.** Wikth stereo magnetic cartridge... $220

### MT 6211 Automatic/Manual Single-Play

Two-speed (33⅓ and 45 rpm) dc servo, belt-drive turntable with automatic tonearm and option of manual start/stop; speed control (±3% range); pitch control; strobe light; stereo magnetic cartridge; S-shaped balanced tonearm; viscous damped cueing; anti-skate control; wow and flutter 0.05% wrms; rumble −60 dB (DIN "B"); tracking force range 0.6-3.5 g; tracking error ±2.0 degrees; 12⅛-in platter; effective arm length 222 mm; gray base; 5⅛" H × 17¾" W × 14¼" D..... $150

### MT 6115 Automatic/Manual Single-Play

Two-speed (33⅓ and 45 rpm) four-pole ac synchronous, belt-drive turntable with automatic tonearm and option of manual start/stop; pitch control; stereo magnetic cartridge, S-shaped balanced tonearm; viscous damped cueing; anti-skate control; wow and flutter 0.08% wrms; rumble −55 dB (DIN "B"); tracking force range 0.7-3.5 g; tracking error ±3 degrees; 11-in platter; effective arm length 193 mm; gray walnut base; 5⅛" H × 17⅜" W × 13¾" D ..... $120

## GARRARD

### GT 55 Single-/Multiple-Play Automatic

Two-speed (33 and 45 rpm) automatic belt-drive turntable with "zero-tracking-error" pantograph type tonearm, dc servomotor; tonearm shell pivots as the arm moves across the record to keep the stylus tangent to the groove; manual/automatic single-play or automatic multiple-/repeat-play; electronic speed control; pitch control with stroboscope; magnetic anti-skating; viscous-damped cueing; two-point record support in multiple-play mode; wow and flutter 0.05%; rumble −66 dB (DIN "B"); includes base and dust cover..... $260

### DD 75 Single-Multiple-Play Semi-Automatic/Manual

Two-speed (33 and 45 rpm) belt-drive turntable with electronic speed regulation and pitch control, manual/automatic single-play or automatic multiple-/repeat-play; automatic arm return and shut-off at end of play; dc servomotor; stroboscope; jewelled arm bearings; photoelectric arm return trip; viscous-damped cueing. Wow and flutter 0.03%; rumble −70 dB (DIN "B"). With base and cover..... $230

### GT-35 Single-/Multiple-Play Automatic

Two-speed (33 and 45 rpm), belt-drive automatic turntable; manual/automatic single-play or automatic multiple-/repeat-play; dc servomotor with electronic speed regulation and pitch control, stroboscope; independent pitch control for each speed; ultra-low-mass "S"-type tonearm with detachable headshell; cueing; anti-skating; repeat play if desired; wow and flutter 0.06%; rumble −68 dB (DIN "B"); with base and cover ..... $220
**GT-25.** Similar to GT-35 but with Garrard Synchro-Lab motor, no pitch control or stroboscope; wow and flutter 0.08%; rumble −65 dB (DIN "B"); with base and cover..... $175

### GT35P Single-Play Semi-Automatic

Two-speed (33⅓ and 45 rpm) belt-drive dc servo-controlled turntable with automatic lift/return/shut-off tonearm; 12-g S-shaped tubular aluminum arm with magnesium headshell; anti-skating and two-way viscous-damped cueing; 12-in aluminum platter; stroboscope with LED; electronic speed control; wow and flutter 0.06% rumble −68 dB (DIN 'B"); includes base and dustcover; 5⅜" H × 17¾" W × 13¾" D ..... $190
**GT25P.** Similar to GT35P except driven by four-pole synchronous motor; wow and flutter 0.08%; rumble −65 dB (DIN "B") ..... $145

### GT-15S Multiple-Play Automatic

Belt-driven by Synchro-Lab motor; cue control; anti-skating; manual/automatic single-play or automatic multiple-/repeat-play; arm mass 10 g; supplied with Shure M93E cartridge; wow and flutter 0.12%; rumble −60 dB (DIN "B"); with base and cover ..... ..... $180
**GT-10P.** Similar to GT15; 7-g tonearm with Pickering V15/ATE-4 cartridge; four-pole, high-torque motor; belt drive; damped cueing; anti-skating; wow and flutter 0.15%; rumble −55 dB, (DIN "B"); with base and cover ..... $135

### GT12 Single Play Semi-Automatic

Two-speed (33⅓ and 45 rpm) belt-drive turntable with automatic lift/return/shut-off arm; four-pole induction motor; 7-g S-shaped gimbal-support arm with cartridge; anti-skating and damped cueing controls; includes base and dustcover; wow and flutter 0.15%; rumble −55 dB (DIN "B")..... $110

### DD130 Single-Play Manual

Two-speed (33⅓ and 45 rpm) direct-drive brushless dc servo-controlled turntable with manual tonearm; 12-g tubular aluminum arm with headshell; calibrated anti-skating; servo electronic-controlled automatic speed; variable pitch control; LED stroboscope; 12-in aluminum platter; shock absorbent feet; includes dustcover and base..... $160

## HARMAN/KARDON

### ST-8 Semi-Automatic Single-Play

Two-speed (33⅓ and 45 rpm, adjustable ±5.5%) belt-drive turntable with automatic lift tonearm;

# Introducing an evolutionary idea. The New Empire 698 Turntable

Great ideas never change radically.

Instead, they are constantly being refined to become more relevant with time.

So it has been with Empire turntables. Our latest model, 698, is no exception. Basically, it's still the uncomplicated, belt-driven turntable we've been making for 15 years. A classic.

What we're introducing is improved performance.

The lower mass tone arm, electronic cueing, quieting circuitry and automatic arm lift are all very new.

The rest is history.

**The Tonearm**

The new 698 arm moves effortlessly on 32 jeweled, sapphire bearings. Vertical and horizontal bearing friction is a mere 0.001 gram, 4 times less than it would be on conventional steel bearings. It is impervious to drag. Only the calibrated anti-skating and tracking force you select control its movement.

The new aluminum tubular arm, dramatically reduced in mass, responds instantly to the slightest variation of a record's movement. Even the abrupt changes of a warped disc are quickly absorbed.

**The Motor**

A self-cooling, hysteresis synchronous motor drives the platter with enough torque to reach full speed in one third of a revolution. It contributes to the almost immeasurable 0.04% average wow and flutter value in our specifications. More important, it's built to last.

**The Drive Belt**

Every turntable is approved only when zero error is achieved in its speed accuracy. To prevent any variations of speed we grind each belt to within one ten thousandth of an inch thickness.

**The Platter**

Every two piece, 7 lb., 3 inch thick, die cast aluminum platter is dynamically balanced. Once in motion, it acts as a massive flywheel to assure specified wow and flutter value even with the voltage varied from 105 to 127 volts AC.

**The Main Bearing**

The stainless steel shaft extending from the platter is aged, by alternate exposures to extreme high and low temperatures preventing it from ever warping. The tip is then precision ground and polished before lapping it into two oilite, self-lubricating bearings, reducing friction and reducing rumble to one of the lowest figures ever measured in a professional turntable; −68 dB CBS ARLL.

**The Controls**

Electronic cueing has been added to the 698 to raise and lower the tone arm at your slightest touch. Simple plug-in integrated circuitry raises the tone arm automatically when power is turned off.

A see-through anti-skating adjustment provides the necessary force for the horizontal plane. It is micrometer calibrated to eliminate channel imbalance and unnecessary record wear.

Stylus force is dialed using a see-through calibrated clock mainspring more accurate than any commercially available stylus pressure gauge.

A new silicon photocell sensor has been added to automatically lift the arm at the end of a record.

New quieting circuitry has also been added. Now, even with the amplifier volume turned up, you can switch the 698 on or off without a "pop" sound to blow out your woofers.

At Empire we make only one model turntable, the 698. With proper maintenance and care the chances are very good it will be the only one you'll ever need.

EMPIRE

*The Empire 698 Turntable*

Suggested retail price $400.00

For more information write:
EMPIRE SCIENTIFIC CORP.
Garden City, New York, 11530.

CIRCLE NO. 40 ON READER SERVICE CARD

# 4 TURNTABLES

brushless dc motor; automatic speed control; illuminated strobe; touch control operation; straight tubular tonearm; damped cueing; adjustable feet; wow and flutter 0.04% (NAB); rumble −68 dB (DIN "B"); tracking error 0; includes dustcover; 6¾" H × 16½" W × 16¼" D..... $499

## JVC

### QL-10 Quartz-Locked Single-Play

Two-speed (33 and 45 rpm) direct-drive turntable with manual tonearm. Speed controlled by quartz-

locked, dual servo system; servocontrol system operates for both speed increase and decrease; digital speed indicator; pitch adjustable ±6 Hz from 440-Hz standard "A," in 1-Hz increments; powered by coreless dc servomotor; electronic brake; touch-control buttons; run/hold control for counter; includes UA-7045, gimbal-support arm; statically balanced arm; oil-damped cueing; CL-P1 turntable base with "resonance-free" seven-layer cabinet with interchangeable tonearm boards, heavy acrylic dustcover; wow and flutter less than 0.02% wrms, less than 0.04% DIN; S/N 75 dB (DIN "B"); start up time less than 0.6 sec, 60° of rotation; speed overshoot less than 2%; speed deviation less than 0.002%; drift 0.00004%/hr; stopping time less than 1 sec; tonearm effective length 9⅜-in; tracking error 1°48' max; tracking force range 0-3 g in 0.1-g steps; arm height adjustable 40-60 mm; 7⁴¹/₆₄" H × 20⁵/₆₄" W × 16⁹/₆₄" D..... $1250

**QL-8.** Similar to QL-10 but with oscillator-driven stroboscope instead of digital frequency readout; dc servomotor; start-up time less than 1 sec to full speed; wow and flutter less than 0.025% wrms; S/N 73 dB (DIN "B"); 7¾" H..... $830

**QL-A7.** Similar to QL-8, but single quartz-lock servo system with photokinetic auto liftup/stop arm and touch sensor buttons for speed change; no pitch control; start-up time 1.4 sec max.; quick-stop time 1.6 sec; 6½" H × 18¹⁵/₁₆" W × 15⅞" D..... $350

**QL-7.** Similar to QL-A7 but manual arm; 6⅜" H × 18¾" W × 15¾" D..... $300

**QL-5.** Similar to QL-7 except electrical-switch speed change and no stroboscope; 6½" H × 18¹⁵/₁₆" W × 15⅞" D..... $270

**QL-50.** Similar to QL-5 less tonearm..... $220

**QL-F4.** Similar to QL-50 except fully automatic tonearm, coreless direct drive servomotor; S/N 72 dB (DIN "B"); effective arm length 220 mm; tracking error +3°35', −0°43'; 5¾" H × 18⅛" W × 14⅜" D..... $200

**QL-A2.** Similar to QL-F4 except semi-automatic tonearm and four-pole synchronous motor..... $170

### JL-F30 Automatic Single-Play

Two-speed (33⅓ and 45 rpm), belt-drive, fully automatic turntable with automatic lead-in/repeat/return/shut-off tonearm powered by four-pole synchronous motor; includes mechanically-operated speed change, oil-damped cueing, and statically-balanced arm. Wow and flutter less than 0.06% wrms, S/N 67 dB min. (DIN "B"); effective tonearm length 220 mm; tracking error +3°35', −0°43'; tracking force range from 0-3 g; 5¼" H × 18⅛" W × 14½" D..... $150

**JL-A20.** Semi-automatic version of F30; S/N 63 dB (DIN "B")..... $100

## LAFAYETTE

### T-5000 Automatic Single-Play

Two-speed (33⅓ and 45 rpm) direct-drive turntable with automatic tonearm; dc servo motor; calibrated balance and stylus force adjustment; front-mounted capacitance controls; S-shaped tonearm; viscous damped cueing in both directions; resonance-absorbing feet; wow and flutter 0.03%; rumble −65 dB; includes base and dustcover; UL approved..... $200

**T-3000.** Similar to T-5000 except semi-automatic arm; direct-reading anti-skating; no front-mounted capacitance controls; no resonance absorbing feet; rumble −60 dB..... $150

### T-4000 Single-Play Semi-Automatic

Two-speed (33 and 45 rpm) with auto return/shut-off tonearm; dc servomotor; wow and flutter 0.08%; rumble −45 dB; speed adjust. ±2.5%; calibrated balance stylus force adjustment; anti-skating adjustment; stylus force range 1.5-3 g; auto return and shutoff; detachable shell; illuminated strobe; low-capacitance cables; semi-automatic cueing; comes with base and dustcover; UL approved; 6¼" H × 18½" W × 14¼" D..... $180

**T-2000.** Similar to T-4000 except wow and flutter 0.1%; rumble −40 dB (DIN B); hysteresis synchronous motor; speed adjustable ±1.3%; UL approved; 6" H × 17¼" W × 13⅜" D..... $130

**T-1000.** Same as T-2000 except manual operation..... $90

## LENCO

### L833 DD Single-Play Semi-Automatic

Two-speed (33 and 45 rpm) direct-drive turntable with contact-less auto-stop and tonearm lift; speed adjustable ±4%; stroboscopic speed monitor; brushless dc motor; gimbal-suspended tonearm (effective length 8¹⁵/₁₆-in); anti-skating for spherical, elliptical, and Shibata styli; viscous-damped cue control; wow and flutter ±0.06% DIN, 0.035% wrms; rumble −70 dB (DIN "B" weighting), −50 dB (DIN "A" unweighted); dimensions with base and dustcover 5¹¹/₁₆" H × 18⅛" W × 14⅜"..... $230

**L-830 00.** Same as L-833, but without autostop..... $200

### L-236 Automatic Single-Play

Two-speed (33 and 45 rpm) belt-drive single-play turntable with automatic tonearm positioning, automatic stop and arm return at end of record; synchronous 16-pole motor; S-shaped balanced tonearm (length 227.1 mm); adjustable anti-skating for spherical and elliptical styli; cueing viscous damped in both directions; includes base and dust cover; wow and flutter ±0.08%; rumble −62 dB (DIN weighted), −45 dB unweighted..... $160

**L-133.** Semi-automatic version of L-236 except has manual tonearm positioning; automatic stop and arm return at end of record..... $120

## LUX

### PD444 Single-Play Quartz-Lock

Two-speed (33⅓ and 45 rpm) direct-drive quartz-PLL turntable without tonearm; provision for any two tonearms with detachable, sliding arm base and tonearm selector switch; quartz-controlled, load-free spindle, brushless dc servomotor; two-step brake insulator; wow and flutter no more than 0.025% wrms; rumble −75 dB; includes detachable acrylic resin dustcover; 6⁵/₁₆" H × 26¼" W × 15⁷/₁₆" D..... $795

**PD441.** Similar to PD 444 except one-tonearm provision without tonearm selector switch; 6⁵/₁₆" H × 18¹¹/₁₆" W × 15⁷/₁₆" D..... $645

### PD121 Single-Play

Two-speed (33⅓ and 45 rpm) direct-drive turntable without tonearm; brushless dc servomotor; bayonet arm-base mounting; mirror stroboscope with black-light speed indication; adjustable-height insulator; feathertouch on/off micro switch; speed adjustment range ±4%; wow and flutter no more than 0.03% wrms; rumble −70 dB; 5¹¹/₁₆" H × 18⅝" W × 14¹¹/₁₆" D..... $545

### PD272 Single-Play Manual

Two-speed (33⅓ and 45 rpm) direct-drive turntable with manual tonearm; dc servo brushless and slotless motor; power on/off/speed selection switch; mirror-reflex stroboscope with black-light speed indication; straight balanced tonearm (effective length 240 mm); oil-damped cueing; anti-skating device; height-adjustable insulator; speed adjustment range ±4%; wow and flutter no more than 0.03% wrms; rumble −60 dB (IEC "B"); includes detachable hinged acrylic dustcover; 6" H × 18³⁷/₆₄" W × 13⁴⁵/₆₄" D..... $345

## MARANTZ

### 6370Q Single-Play Automatic/Manual

Two-speed (33⅓ and 45 rpm), direct-drive, quartz-

locked turntable with auto return/shutoff arm; dc servomotor; rpm speed/deviation digital readout; lateral balanced tonearm; oil-damped cueing; shock absorbent feet; anti-skating; wow and flutter 0.02% (NAB weighted); rumble −70 dB (NAB RRLL); includes dustcover and walnut-finish base; 5¾" H × 18¼" W × 14½" D..... $400

### 6270Q Single-Play Semi-Automatic

Two-speed (33⅓ and 45 rpm) direct-drive quartz-locked turntable with automatic lift/shutoff tonearm; dc servomotor; strobe; damped cueing; anti-skating; shock absorbent feet; wow and flutter 0.025% (NAB weighted); rumble −67 dB (NAB RRLL); includes dustcover and base; 5⅛" H × 17¾" W × 14⅛" D..... $270

### 6170 Single-Play Semi-Automatic

Two-speed (33⅓ and 45 rpm), dc servo, direct-drive turntable with automatic lift/shutoff arm; pitch controls and strobe; damped cueing; anti-skating; shock absorbent feet; wow and flutter 0.03% (NAB weighted); rumble −65 dB (NAB RRLL); includes dustcover and base; 5½" H × 17¾" W × 14⅛" D..... $200

### 6025 Single-Play Semi-Automatic

Two-speed (33⅓ and 45 rpm) belt-drive turntable with automatic return/shutoff arm; four-pole ac-synchronous motor; reject button; damped cueing; anti-skating; shock absorbent feet; wow and flutter 0.07% (NAB weighted); rumble −65 dB (NAB RRLL); includes dustcover and base; 5⅛" H × 17⅞" W × 13¹⁵/₁₆" D..... $130

## MICRO SEIKI

### DQX-1000 Single-Play Automatic

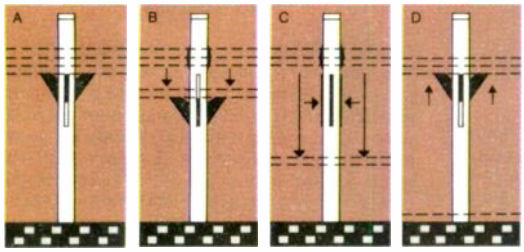
Direct-drive, quartz PLL servo-controlled motor; will accept three tonearms because of special casting containing three separate modular pods; separate layers of cork and rubber for turntable mat; two-layer absorber system consisting of cushion rubber and insulator balls with built-in springs; turntable controls and power supply in separate unit for speed select, stop, power, and fine-speed adjustment; without tonearm or cartridge..... $750

**MA-505.** Dynamically balanced manual arm for DQX-1000..... $175

### DQL-120 Single-Play Armless

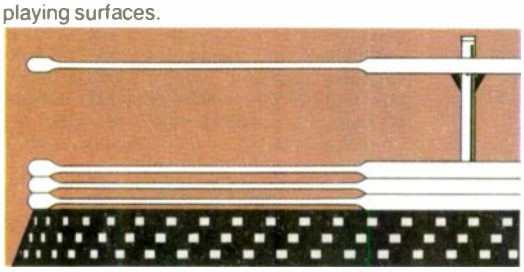
Two-speed (33⅓ and 45 rpm) direct-drive quartz-locked PLL dc servo-controlled turntable; 350-mm

# If you'd like to hear an hour or more of uninterrupted music, don't let a few old myths stop you.




Dual's exclusive elevator-action. **A)** Records are supported entirely by platform. **B)** Bottom record is lowered away from stack above which is held in place by soft neoprene pads. **C)** Platform retracts, gently releasing record to platter. **D)** Platform rises to engage stack.

No need to worry about record grooves touching when stacked. Records are made with raised edges and centers which place an air cushion between the playing surfaces.



Myths die hard. Those about all multiple-play turntables compromising performance are no exception, despite the achievement of the legendary Dual 1009.

Before then, serious music lovers were understandably reluctant to entrust their records to the heavy-tracking, vinyl-chewing automatic tonearms of the day.

We therefore felt the need to prepare for the 1009's introduction by asking cartridge manufacturers and independent test labs to put it through the most demanding tests they could devise.

The manufacturers reported that the 1009 tracked flawlessly with their "professional-type" cartridges. The test labs found the 1009 matched the best of the manuals in rumble, wow and flutter—and they quickly adopted it as one of their reference-standard turntables.

Since then, of course, Dual has added refinement after refinement. The tonearms of *all* current Dual turntables are mounted in four-point gyroscopic gimbals, widely acknowledged as the finest suspension system available.

During play, Dual automatic tonearms are completely free-floating. They are engaged by the cycling mechanism only when being moved to or from the record.

Records stacked on Dual's multiple-play spindle are handled with extraordinary care. Before the bottom record is released to the platter, it is gently lowered away from those above. Nothing is ever forced. This is Dual's famous "elevator-action" system. And since all records are made with raised edges and centers, an air cushion keeps the grooved surfaces from ever touching.

In the single-play mode, the short spindle rotates with the platter. This patented design permits more precise centering of the record, an important touch in achieving extremely low wow and flutter specifications. Another touch of Dual precision is the vertical tracking angle control; there's an optimum setting for single play and multiple play.

But one very important thing hasn't changed. Dual reliability. Backed by a two-year limited warranty, today's Duals are made to last just as long as the 1009 and its successors (the 1019 and 1219) which are often found to be worth more in trade than their original purchase price.

So if you'd like many years of uninterrupted pleasure from your next turntable, select one of our multiple-play models. (They start at less than $180 for the CS1237.)

Unless, of course, you prefer old myths to future legends.

***For the life of your records***

Dual®

United Audio, 120 So. Columbus Ave., Mt. Vernon, NY 10553

CIRCLE NO. 50 ON READER SERVICE CARD

zinc platter; separate power transformer integrated with control section; stand-by lamp until rated speed is reached; electronic brake; brass tonearm mount with sub tonearm mount; 1-mm lead plate inserted into rosewood base to reduce vibration; adjustable air-suspension absorbers; wow and flutter less than 0.02% wrms; rumble −75 dB (DIN "B"); main unit 174 mm H × 520 mm W × 420 mm D; control box 60 mm H × 96 mm W × 192 mm D..... $750

**DQX-500.** Similar to DQL-120 except features MA-707 dynamically-balanced, variable mass tonearm

with mechanically-controlled viscous damped cueing; effective length 9³/₈-in; tracking force 0-3 g; phonomotor and tonearm integrated with metal base; 13³/₄-in aluminum platter; 5¹/₂" H × 16¹/₈" W × 13³/₄" D..... $550

**DQ-50.** Similar to DQL-120 except has MA-505 dynamically balanced tonearm with manual operation; effective length 9³/₈-in anti-skating control; adjustable arm height; mechanically-controlled viscous damped cueing; no power transformer; 6⁷/₈" H × 19³/₄" W × 16¹/₈" D..... $550

### DQ-43 Single-Play Semi-Automatic

Two-speed (33¹/₃ and 45 rpm) direct-drive quartz-locked PLL dc servo-controlled turntable with electronically-controlled auto lift/shut off tonearm; MA-707 dynamically-balanced variable mass tonearm (effective length 9³/₈-in) with solenoid-activated viscous damped cueing; 13-in aluminum platter; wow and flutter less than 0.025% wrms; rumble −63 dB (JIS), −75 dB (DIN "B"); max. tracking error less than 1.5 degrees; tracking force 0-3 g; rosewood base; 6¹/₈" H × 18³/₈" W × 14³/₄" D..... $500

**DD-33.** Similar to DQ-43 but less quartz PLL system; speed adjustment range ±6%; 12¹/₄-in aluminum platter; wow and flutter less than 0.03% wrms ..... $400

### DD-24 Single-Play Manual

Two-speed (33¹/₃ and 45 rpm) direct-drive dc servo-controlled turntable with electronically-controlled tonearm return/shutoff with manual operation; DD-24 statically-balanced S-shaped arm; viscous damped cueing; inside force canceller; on/off and rotational speed pushbutton controls; speed adjustment ±5% range; automatic quick start when arm moves toward record; 12¹/₄-in aluminum platter; anti-howl rubber feet; wow and flutter less than 0.03%; rumble −73 dB (DIN "B"); max. tracking error less than 1.5 degrees; tracking force adjustment 0.3 g; 4⁷/₈" H × 17⁵/₈" W × 13³/₄" D..... $200

**MB-14.** Similar to DD-24 except belt-drive, four-pole synchronous system; .tubular S-shaped arm with detachable headshell; oil-damped cueing; anti-skating control; 11⁷/₈-in aluminum platter; wow and flutter less than 0.55%; rumble −65 dB (DIN "B"); 5⁵/₈" H × 17⁵/₈" W × 13³/₄" D..... $140

## MITSUBISHI

### DP-EC1 Single-Play Automatic

Fully automatic two-speed (33¹/₃ and 45 rpm) direct-drive turntable features photo-optical, electronic setting of disc size and speed with full safety devices and manual override; 12-pole FG dc servomotor; wow and flutter 0.025% wrms; 12.25-in 4-lb die-cast aluminum platter; S/N 65 dB (IEC-B); S-type universal static balance tonearm accepts cartridges from 8 to 16 g (with headshell), 12-20 g (with headshell and subweight); speed indicated by LED-lighted stroboscope; ±3% speed adjustment;

5⁷/₈" H × 18³/₄" W × 14⁵/₈" D..... $590

**DP-EC2.** Similar to DP-EC1 but manual speed selection for disc sizes other than 7-in and 12-in; 6" H × 18³/₄" W × 14⁵/₈" D..... $400

## NETRONICS

### 350F Single-Play Kit

Three-speed (33, 45, and 78 rpm), direct-drive turntable in kit form; two-stage decoupled base for freedom from acoustic feedback; digital servo pitch-lock circuit; pitch control.with ±5% variation; percentage pitch meter for direct readout of turntable speed; wow and flutter 0.04% weighted, 0.02% unweighted; rumble −60 dB (RIAA/RRLL); base available blank or pre-drilled for Shure/SME, Audio-Technica AT-100511 or Grace 707 tonearms; approximate assembly time 2¹/₂ hr..... $130

**350D.** Similar to 350F but two-speed (33 and 45 rpm); no servo pitch-lock circuit or meter; approximate assembly time under 1 hr..... $100

## OPTONICA

### RP-3636 Mark II Single-Play Manual

Two-speed (33 and 45 rpm) direct-drive turntable with ac servomotor and 72-pole frequency generator

servomotor; granite composite motor board to resist acoustic feedback; audio-isolated legs; statically-balanced "S"-type tonearm with plug-in headshell, oil-damped cueing; anti-skating; micrometer-style counter-weight calibration; rosewood grained base; illuminated stroboscope; speed adjustment ±4%; wow and flutter less than 0.03% wrms; rumble less than −70 dB (DIN "B" weighting); tonearm effective length 9.6-in min. tracking force 1 g; 7.4" H × 19.8" W × 16.3" D..... $300

### RP-7505 Single-Play Automatic

Two-speed (33¹/₃ and 45 rpm) direct-drive turntable with coreless dc motor; frequency generator servo system; single-play fully automatic operation with push-button controls; metal-filled resin base; static-balanced "S"-type tonearm with plug-in headshell; oil-damped cueing; anti-skate dial; 12-in platter; counterweight calibration; controls include automatic play, reject, auto-repeat; illuminated stroboscope. Pitch detachable acrylic dustcover adjustment ±4%; wow and flutter 0.03% wrms: rumble −70 dB (DIN "B" weighting); tonearm effective length 8.3-in; tracking force 1.0 g; 5.6" H × 17.5" W × 14" D..... $270

### RP-7205 Single-Play Automatic

Two-speed (33¹/₃ and 45 rpm) automatic belt-drive system; dc servo motor; static balanced "S"-shaped tonearm; oil-damped cueing; micrometer-style stylus pressure calibration; "Soft-Touch" solenoid controls; end of disc return, auto play and reject. Wow and flutter 0.06% wrms; rumble (DIN B) −60 dB; 12-in platter; tonearm length 8.3-in, resonance 8 Hz; min. tracking 1.0 g; wood-composition base; detachable plastic dustcover; 5.6" H × 17.5" W × 14.0" D..... $190

## PANASONIC

### RD-3500 Single-Play Semi-Automatic

Two-speed (33¹/₃ and 45 rpm) belt-drive turntable with automatic return tonearm. Features frequency generator servosystem with FG servo-controlled dc motor; 12-in aluminum platter; moving magnet cartridge; detachable headshell; S-shaped static-balanced arm (effective length 8³¹/₃₂-in); anti-skating control; stylus pressure adjustment; viscous damped cueing; electrical speed changer. Wow and flutter 0.06% wrms; rumble −65 dB (DIN "B"); frequency response 20-25,000 Hz; channel separation 22 dB at 1000 Hz; tracking force range 1.5-2 g. Includes removable dustcover; simulated wood base. 4²⁷/₃₂" H × 16⁵⁹/₆₄" W × 13⁴⁵/₆₄" D..... $160

### RD-3100 Multiple-Play Auto/Manual

Three-speed (33¹/₃, 45, and 78 rpm) rim-drive turntable with auto/manual record changer. Features four-pole induction motor; 11-in platter; moving magnet stereo cartridge; anodized balanced tubular arm; calibrated anti-skating device; viscous damped cueing; calibrated stylus pressure gauge; pause control. Wow and flutter 0.3% wrms; rumble −35 dB (DIN "B"); frequency response 20-18,000 Hz; channel separation 18 dB at 1000 Hz; tracking force range 3-5 g. Includes removable dustcover and ac outlet; simulated wood base. 7¹⁷/₃₂" H × 17⁹/₁₆" W × 14⁷/₃₂" D..... $110

## JC PENNEY

### 6700 Multiple-Play Automatic

Two-speed (33¹/₃ and 45 rpm) direct-drive dc servo-controlled turntable with automatic arm operation; speed deviation 0.06%; fine speed control; strobe; S-shaped tubular tonearm with cue/pause and anti-skating; arm length 9.06-in; wow and flutter 0.04% rumble −70 dB (DIN "B"); tracking error 3.5 degrees; includes universal cartridge head and dustcover..... $220

**6601.** Similar to 6700 except single-play with automatic return/stop tonearm; wow and flutter 0.03%; ..... $160

### 6503 Single-Play Semi-Automatic

Two-speed (33¹/₃ 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 0.06%; rumble −65 dB (DIN "B"); tracking error 3.5 degrees; includes dustcover ..... $130

### 6300 Multiple-Play Automatic

Two-speed (33¹/₃ and 45 rpm) belt-drive 24-pole synchronous turntable with automatic arm operation; speed deviation 0.1%; fine speed control; strobe; S-shaped tubular arm (length 7.55-in) with anti-skate and cue/pause controls; wow and flutter 0.1%; rumble -60 dB (DIN "B"); tracking error 4.5 degrees; includes dustcover..... $130

**6200.** Similar to 6300 minus strobe and fine speed control; speed deviation 0.2%..... $100

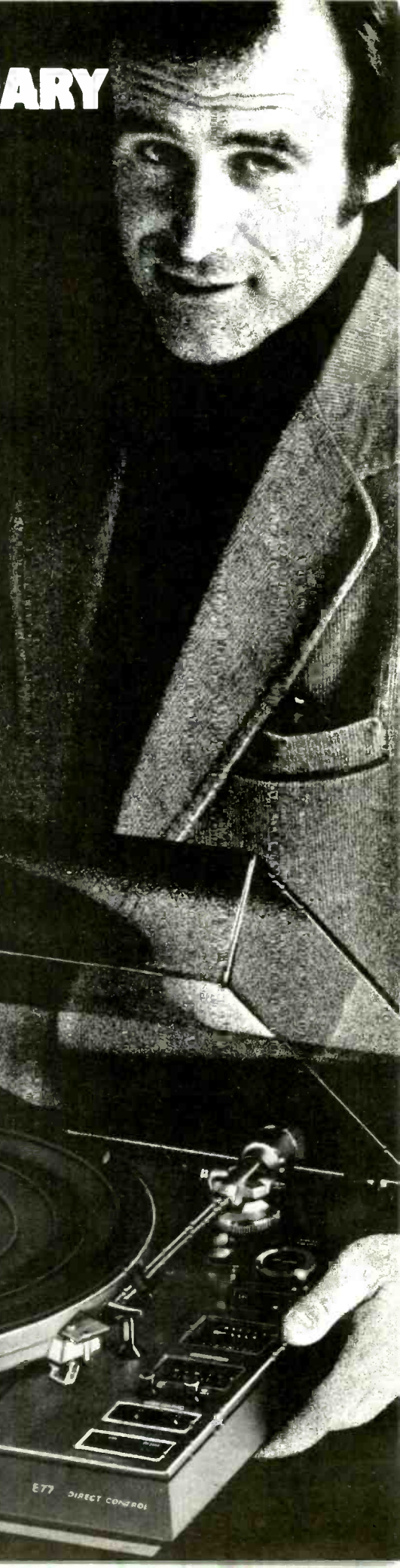
## PHILIPS

### AF877 Semi-Automatic Single-Play

Two-speed (33¹/₃ and 45 rpm) belt-drive electronically-controlled dc turntable with photo-electronic stop/auto return and reject tonearm; electronic touch controls with electronic speed adjustment (±3%); direct-reading stylus force gauge; straight tubular arm (effective length 8.46-in); anti-skating adjustment; viscous damped cueing; pitch controls

# ASK ANY AUDIOPHILE ABOUT PHILIPS' REVOLUTIONARY PROJECT 7 SERIES.

# HE KNOWS.



**The World's First No-Compromise Turntables.**

These are the turntables audiophiles have been waiting for. The first turntab es to combine the specs and performance of direct drive with the proven advantages and value of belt drive. All Philips Project 7 Series turntables have wow & flutter and rumble specs as good as the most expensive direct drive systems. And the acoustic and mechanical solation of a belt drive. They've even got two new specially designed tonearms for compatibility with the new drive system

**Did Philips Compromise On Performance? No!**

The heart of the Project 7 revolution is a 160 pole tacho generator that electronically monitors and controls the speed of the platter at the driving disc. Actually putting the driving disc right into the electronic feedback loop. So that variations in line voltage and frequency, variations in pressure on the platter, variations in temperature, even belt slippage – all have virtually no effect on platter speed. All Project 7 turntables maintain constant, accurate speeds – automatically and electronically.

**Did Philips Compromise On Specs? No!**

Wow & flutter on the Philips AF877, for example, is a remarkable 0.03% (WRMS). With a rumble figure of better than –70dB. No compromise there.

**Did Philips Compromise On Construction? No!**

The aluminum platter and the specially designed straight, low-mass, tubular tonearm are mounted on a separate, shock-proof, free-floating sub-chassis for superb acoustic and mechanical isolation, and excellent tracking.

**Did Philips Compromise On Controls? No!**

Project 7 Series turntables are all-electronic, all the way. On the Philips AF877, for example, four reliable vibration-free electronic touch controls – with LED's – let you start, stop, reject and select speeds, all with one touch. And when the record ends, you don't have to touch anything at all. Because electronic (not mechanical) controls lift the tonearm and return it to its rest.

**Philips Won't Compromise. Neither Should You.**

Four years ago Philips set out to build the best-performing, best-looking, best-priced turntables in the business. The Project 7 Series turntables more than meet al those goals. With no compromise.

And we don't want you to compromise, either. That's why we've prepared a new, fact-filled 36-page brochure "Ask Us About High Fidelity. We Know." And it's yours, free. Just **call us, toll-free, at 800-243-5000*** and we'll send you a copy. It can help you find the high fidelity equipment you're looking for. With no compromises.

*(In Conn. 1-800-882-6500)

## EVERYONE WHO KNOWS, KNOWS

# PHILIPS

High Fidelity Laboratories. Ltd.

| | AF 877 | AF 867 | AF 777 |
|---|---|---|---|
| Wow & Flutter | 0.03% (WRMS) | 0.05% (WRMS) | 0.05% (WRMS) |
| Rumble | –70dB (DIN B) | –65dB (DIN B) | –65dB (DIN B) |
| Price | Under $240** | Under $200** | Under $180** |

**Suggested retail prices optional with dealers.

CIRCLE NO. 61 ON READER SERVICE CARD

# 4 TURNTABLES

with nine-element LED bar; wow and flutter 0.03% wrms; rumble −70 dB (DIN "B"); tracking error

0-degree, 9-ft/cm; tracking force range 0-3 g; includes detachable headshell and hinged dustcover; 5½" H × 16½" W × 13¾" D..... $240

**AF867.** Similar to AFB77 except manual tonearm with photo-electronic stop; three-element LED bar; wow and flutter 0.05% wrms; rumble −65 dB (DIN "B") ..... $200

**AF777.** Similar to AF867 except automatic tonearm; no electronic touch controls; tracking force 0-4 g..... $180

### GA222 Automatic/Manual Single-Play

Two-speed (33 and 45 rpm), fully-automated, electronically controlled turntable; belt-driven by 72-pole dc servomotor; touch-activated, electronic controls with electronic speed selection and adjustment (±3%); separate adjustment for each speed; viscous-damped cueing; anti-skating; wow and flutter less than 0.08%; rumble less than −62 dB (DIN "B" weighting); effective arm length 8½-in; effective moving mass ca. 21 g; tracking error less than 0°9'/cm (0°23'/in) comes with base and dustcover; 5¾" H × 15 1/16" W × 12¾" D..... $230

### GA 312 Single-Play Manual

Two-speed (33 and 45 rpm) belt-driven turntable with automatic end-of-record arm lift; electronic speed control (each speed individually adjustable ±3%); lighted electronic touch-button switches; tubular arm with elastically decoupled counterweight; anti-skating; wow and flutter 0.1%; rumble below −62 dB (DIN "B" weighting); comes with dustcover and base; 6¼" H × 15½" W × 13¼" D.. ..... $180

**GA437.** Similar to GA 312 but with synchronous, 24-pole low-speed ac motor, no speed adjust; direct-reading stylus force gauge built into tonearm rest; combination power/cue control raises arm when power is switched off; wow and flutter less than 0.12%; rumble less than −60 dB (DIN "B" weighting); comes with dustcover and base; 5¾" H × 16½" W × 13½" D ..... $120

### GA406 Auto/Manual Multi-Play

Two-speed (33 and 45 rpm) multiple-play turntable with automatic tonearm; holds up to five records, automatically selects record diameter and speed for each; both speeds independently adjustable ±3%; belt-driven by dc servomotor, speeds changed and regulated electronically; independent dc servomotor controls changing mechanism and arm movements; viscous-damped cue control; anti-skating; counterbalanced arm adjustable for 0-4 g stylus force; wow and flutter less than 0.1% (DIN); rumble below −60 dB (DIN "B" weighting); speed drift less than 0.2%; tracking error less than 0°23'/in; comes with dustcover and base; 5¾" H × 16⅜" W × 13½" D .. ..... $170

## PIONEER

### PL-630 Single-Play Automatic

Two-speed (33⅓ and 45 rpm) quartz-PLL direct-drive turntable with automatic lead-in/play/return/shut-off tonearm (can be set for manual operation). Features quartz-PLL Hall and dc motors with three ICs for electronic control; front-panel touch-sensitive buttons and LEDs; pitch control (range ±6%)

and meter display; optical-electronic end-of-play detection; electronic cueing device and quick-stop; anti-skating; S-curved gimbal-supported tonearm (effective length 237 mm); magnesium headshell; coaxial suspension system. Wow and flutter 0.025% wrms max.; rumble −65 dB (JIS), −75 dB (DIN "B"). Includes removable hinged acrylic cover. 5 13/16" H × 18½" W × 16 7/16" D..... $400

**PL-610.** Similar to PL-630 except automatic-return tonearm..... $350

**PL-560.** Similar to PL-630 minus full electronic operation and coaxial suspension system; has Warren motor for automatic functions, one-row strobe, repeat button, electronic quick-stop, and oil-damped cueing; rumble −63 dB (JIS), −73 dB (DIN "B"); effective arm length 221 mm. 5 1/16" H × 7 5/16" W × 14⅜" D ..... $275

**PL-540.** Similar to PL-560 except auto-return/shut-off tonearm; minus electronic operation and meter display for pitch control; rumble −60 dB (JIS) ..... ..... $225

### PL-518 Single-Play Semi-Automatic

Two-speed (33⅓ and 45 rpm) direct-drive turntable with auto return/shut-off tonearm; dc servo motor; right-hand controls including cue lever, speed select button, fine pitch control (±2% range), and built-in strobe; S-shaped balanced pipe arm (effective length 221 mm); anti-skating and lateral balancer devices; oil-damped cueing mechanism; 45-rpm adaptor; wow and flutter 0.03% wrms; rumble −73 dB (DIN "B"); 5⅜" H × 17⅜" W × 14⅜" D..... $175

**PL-516.** Similar to PL-518 except belt-drive system with FG servo dc motor; anti-skating with dial control; wow and flutter 0.045% wrms; rumble −68 dB (DIN "B"); 5½" H × 17⅜" W × 14⅜" D..... $150

**PL-514.** Similar to PL-516 minus fine pitch control and strobe; four-pole synchronous motor; wow and flutter 0.055% wrms; rumble −65 dB ..... $125

**PL-512.** Similar to PL-514 except manual operation; minus anti-skating device; includes removable hinged, acrylic dustcover; 5 1/16" H × 17 1/16" W × 14⅜" D ..... $100

## REALISTIC

### LAB-500 Single-Play Automatic

Two-speed (33⅓ and 45 rpm) electronic quartz-locked direct-drive turntable with automatic tonearm; brushless dc servomotor; statically balanced S-shaped tonearm with integrated headshell and cartridge and biradial elliptical stylus; electronic oil-damped cue/pause; calibrated anti-skate; start/stop; record size and speed selectors; single-play/repeat knob; includes hinged dustcover; wow and flutter 0.04% wrms; tracking force less than 1 g; walnut vinyl base; 6⅛" H × 18⅞" W × 15 1/16" D.... ..... $260

### LAB-400 Single-Play Automatic

Two-speed (33⅓ and 45 rpm) direct-drive turntable with automatic tonearm; brushless dc servomotor and tonearm motor; neon strobe; damped cue/pause; calibrated anti-skating; 8 11/16-in S-shaped tonearm tracks down to 0.5 g; low-capacitance pick-up leads; supplied with magnetic cartridge with elliptical stylus and hinged dustcover; wow and flutter 0.03% wrms; rumble −63 dB (DIN B); walnut veneer base; 5⅜" H × 17 11/16" W × 13 31/32" D... ..... $200

### LAB-250 Single-Play Manual

Two-speed (33⅓ and 45 rpm) belt-drive manual player with automatic return/shutoff tonearm; four-pole synchronous motor; wow and flutter 0.09%; rumble −60 dB (DIN B); 11¾-in cast platter; S-shaped tonearm; viscous damped cue/pause lever; adjustable anti-skating; cartridge has elliptical stylus; tracking force adjustable over 0-4 g; walnut-grained vinyl veneer base; 6" H × 17 5/16" W × 14⅛" D..... $130

### LAB-110 Single-Play Automatic

Three-speed (33⅓, 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; 5¾" H × 15 5/16" W × 14⅜" D..... $80

## REFERENCE BY QUADRAFLEX

### 610T Single-Play Semi-Automatic

Two-speed (33⅓ and 45 rpm) direct-drive dc servo-controlled turntable with automatic lift/shut off tonearm; front-panel stroboscope and controls; 11½-in S-shaped tonearm with adjustable anti-skating and damped cueing; lighted pitch control; speed adjustable ±3%; wow and flutter 0.03% wrms; rumble −70 dB; 6.1" H × 18" W × 13.2" D. ..... $229

## REGA

### Planar 2

Single play manual turntable; glass platter; three-point suspension; diamond-lapped bearing; 24-pole synchronous motor runs at half power for reduced noise and vibration; has Rega arm with magnetic bias; comes with dustcover; 6" H × 17½" W × 14" D..... $280
Without arm..... $225

**Planar 3.** Further refinement of Planar 2 design; each unit personally checked by the designer; with Rega arm ..... $390
Without arm..... $295

## REVOX

### B790 Single-Play Automatic

Two-speed (33⅓ and 45 rpm) quartz-controlled dc servo direct-drive turntable with servo-electronic tangential tonearm; speed accuracy ±0.01%; cartridge output electronically muted except when stylus in groove; no tonearm but uses 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; 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); supplied with installed and aligned Ortofon M20E; 5⅜" H × 17 4/5" W × 15" D..... $799

## ROTEL

### RP-6300 Single-Play Semi-Automatic

Two-speed (33⅓ and 45 rpm) dc servo-controlled direct-drive turntable with auto return/shut-off/lead-in tonearm; 12-in platter with stroboscope; speed controls ±4% range; static-balanced S-shaped arm with plug-in headshell, oil damped cueing, direct-readout stylus gauge counterweight, and anti-skating; wow and flutter 0.04% wrms; S/N 60 dB (DIN "B"); includes detachable dustcover and wood base; 145 mm H × 436 mm W × 360 mm D..... $225

### RP-3000 Single-Play Manual

Two-speed (33 and 45 rpm) direct-drive ac servo-controlled turntable; speed control ±5%; wow and flutter less than 0.05% wrms; S/N 60 dB; static-balanced S-shaped tonearm with plug-in headshell; spirit level for correct leveling; anti-skating; stroboscope; includes base and dustcover ..... $225

# New DC Motor-Twin Servo System

# Exclusive Isotrack™ Plug-In-Arm

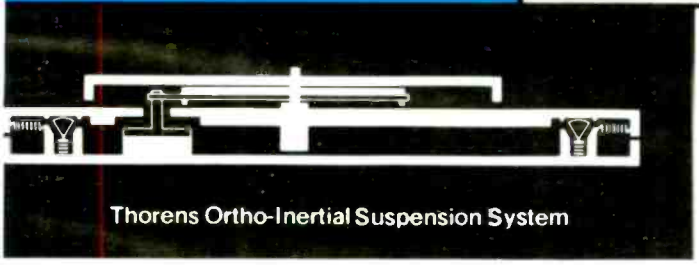
# Ortho-Inertial Suspension System

# Renowned Quality and Reliability

## It's time to move up to THORENS®


TD-115C


TD-110C


Thorens Ortho-Inertial Suspension System

Thorens reputation for quality turntables has been built upon innovative design and uncompromised reliability. Design changes are not made for the sake of change alone, but only when a meaningful improvement in performance or reliability results.

This design philosophy is incorporated in the new Thorens Isotrack turntables TD-115C and TD-110C.

**New Motor Drive System:** A new innovative design was needed to overcome the design limitations of synchronous motors and achieve further improvements in performance.

After years of research to improve on the renowned Thorens belt drive system, Thorens developed a new Twin Servo Motor drive system. One servo system maintains precise speed control of a commutator type-pulse modulated DC motor with a 72 pole tachogenerator. The second servo system (AFC-Automatic Pitch Control) maintains precise speed under load variations such as from use of a Watts Dust Bug on the record.

**Improved Suspension System:** A 4-point computer calculated Ortho-Inertial suspension system has been designed. This patented Thorens system is characterized by ball-segment bearings upon which the chassis is supported with separate elements for both horizontal and vertical displacement.

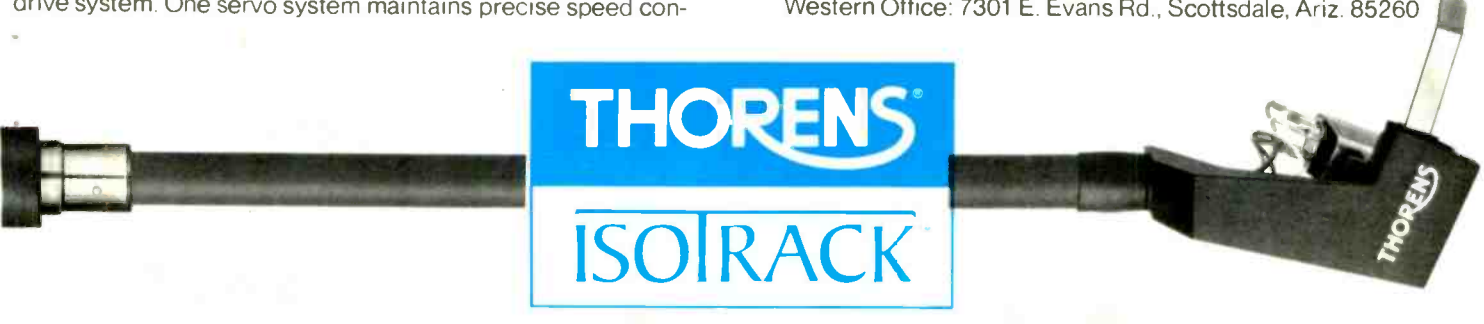
**Improved Tonearm:** The Thorens Isotrack tonearm with low mass Plug-In-Arm assembly has been improved in the new TD-115 and TD-110 series.

Jeweled pivot bearings reduce the tonearm bearing friction to between 10 and 15 mg.

TD-115C features automatic end of record cueing and shut-off.

Thorens new TD-115C and TD-110C now at your Authorized Thorens Dealer, or for further details, write:

**ELPA MARKETING INDUSTRIES, INC.**
Eastern Office: New Hyde Park, New York 11040
Western Office: 7301 E. Evans Rd., Scottsdale, Ariz. 85260



# 4 TURNTABLES

### RP-2500 Single Play Semi-Automatic
Two-speed (33 and 45) turntable with auto return and shutoff; belt-driven by dc servomotor; speed control ±5%; wow and flutter less than 0.05% wrms; S/N 58 dB; static-balanced "S"-type tonearm with plug-in headshell, anti-skating and cue stick; stroboscope; includes detachable dustcover . ..... $180

### RP-5300 Single Play Manual
Two-speed (33 and 45 rpm) brushless dc servo-controlled direct-drive turntable with manual tonearm; speed control ±5%; stroboscope; wow and flutter less than 0.04% wrms; S/N 60 dB; arm similar to RP-2500 with oil-damped cueing..... $160

### RP-1100Q Single-Play Semi-Automatic
Two-speed (33 and 45 rpm) turntable with auto return and shutoff; belt-driven by hysteresis-synchronous motor; wow and flutter less than 0.2% wrms; S/N greater than 45 dB; arm similar to RP-2500 with oil-damped cueing ..... $135

### RP-2300 Single Play Semi-Automatic
Two-speed (33 and 45 rpm) belt-drive turntable with auto return and shutoff; hysteresis-synchronous motor; wow and flutter less than 0.08% wrms; S/N greater than 55 dB; arm similar to RP-2500 with oil-damped cueing ..... $130

## SANSUI

### SR929 Single-Play Manual
Two-speed (33⅓ and 45 rpm), quartz-servo direct-drive turntable; 20-pole, 30-slot dc brushless motor; quartz crystal-controlled direct spindle drive; concrete resin base; oscillator-driven stroboscope; speed indicators; wow and flutter 0.028%; rumble −74 dB (DIN B); speed deviation 0.002%; fine-speed adjustment ±3.5% (quartz-servo off); statically balanced S-shaped tonearm; min. tracking force setting 0.5 g; acceptable cartridge weight 2-11 g; anti-skating; universal headshell; dustcover with free stop hinges; 6⅞" H × 19⁵⁄₁₆" W × 15" D .. ..... $530

### SR-838 PLL Quartz Single-Play Manual
Two-speed (33 and 45), direct-drive manual turntable; quartz-oscillator PLL servo-control system; all

controls up front for convenience; oil-damped cueing; "S"-type arm with gold-plated headshell connector contacts; stroboscope; pitch control; quartz-lock defeat; wow and flutter 0.025%; speed deviation less than 0.002%; rumble below −72 dB; with base and removable, hinged dustcover; 6⅝" H × 19⁵⁄₁₆" W × 15⅜" D..... $440

### SR-737 PLL Single-Play Automatic
Two-speed (33 and 45 rpm), direct-drive turntable with phase-lock loop (PLL) servo-control and automatic arm; separate speed adjustments for each speed; electronic brake; motor, arm and cabinet separately suspended to reduce feedback; gold plated connector contacts for universal headshell; stroboscope; automatic repeat (one to five plays or continuous as desired); anti-skating "S"-type arm; three-position record-size selector; wow and flutter 0.03%; rumble better than −70 dB; with base and removable, hinged dustcover; 6¹⁄₁₆" H × 18⅛" W × 14¹¹⁄₁₆" D ..... $360

**SR-535.** Similar to SR-737, but non-PLL electronic speed control; wow and flutter less than 0.038%; rumble better than −67 dB ..... $270

**SR-5090.** Similar to SR-535, except finished in matte-black ..... $280

**SR-333.** Similar to SR-535, but manual operation only; wow and flutter 0.035% ..... $210

**SR-232.** Similar to SR-333, but with automatic tonearm return; belt-driven by synchronous motor; no speed adjustment or stroboscope; wow and flutter 0.07%; rumble −58 dB; 5¹¹⁄₁₆" H × 16¹⁵⁄₁₆" W × 14" D ..... $150

### SR-636 PLL Manual Single-Play
Two-speed (33 and 45) direct-drive with manual tonearm; PLL servo-controlled dc brushless motor; up-front controls; oil-damped cueing; "S"-shaped fulcrum tonearm with decoupled balance weight; separate pitch adjustments for each speed; wow and flutter 0.028% wrms; rumble below −71 dB; with base and removable, hinged dustcover; 6⅜" H × 19³⁄₁₆" W × 15⅜" D..... $320

### SR-222 Single-Play Manual
Two-speed belt-driven turntable; four-pole synchronous motor; wow and flutter 0.07% wrms; rumble −60 dB; "S"-type tonearm; min. tracking force 0.8 g; cartridge weight 4-10 g; 5½" H × 17¹³⁄₁₆" W × 14⅜" D ..... $110

## SANYO

### TP1030 Single-Play Automatic
Two-speed (33⅓ and 45 rpm) two-motor servo-controlled brushless dc direct-drive turntable with auto start/return tonearm; electronic speed change (±3% speed adjustment); illuminated stroboscope; S-shaped counterbalanced tone arm; anti-skating; cueing control; automatic continuous repeat; reject button; auto shutoff; wow and flutter 0.03% wrms; rumble −70 dB; tracking force range 1-3 g; tracking error ±1.5 degrees; 6⁹⁄₁₆" H × 18¾" W × 15" D ..... $170

### TP1020 Single-Play Manual/Semi-Auto
Two-speed (33⅓ and 45 rpm) servo-controlled dc direct-drive turntable with auto return tonearm; illuminated stroboscope; speed adjustable ±3.0%; cueing damped down only; stylus inspection mirror; wow and flutter 0.05% wrms; rumble −60 dB (DIN "B"); tracking force range 1.5-2 g; tracking error ±1.5 degrees; with base and hinged dustcover; 5¹⁄₈" H × 17¾" W × 14⅝" D..... $130

### TP1012 Single-Play Semi-Automatic
Two speed (33⅓ and 45 rpm) dc servo-controlled direct-drive turntable with end-of-record automatic return tonearm speed adjustment ±3%; illuminated stroboscope; S-shaped counterbalanced arm; anti-skating; cueing control; reject control; wow and flutter 0.04% wrms; rumble −70 dB; tracking error ±1.5 degrees; tracking force range 1-3 g; 5⁹⁄₁₆" H × 17⅜" W × 14¹⁄₈" D..... $140

**TP1010.** Similar to TP1012 except PLL dc servo-controlled belt-drive turntable with manually-operated laterally-balanced tonearm and Pickering stereo magnetic cartridge; wow and flutter 0.05%.. ..... $110

### TP728 Single-Play Semi-Automatic
Two-speed (33⅓ and 45 rpm) dc servo-controlled belt-drive turntable with moving-magnet Audio Technica stereo cartridge and automatic return/shutoff tonearm; statically-balanced tubular tonearm; micrometer stylus force adjustment; anti-skating; speed-mode LED indicators; stroboscope; reject button; electronic speed adjustment ±3%; wow and flutter 0.05% wrms; rumble −60 dB; tracking error ±1.5 degrees; tracking force range 1-3 g; 5½" H × 18" W × 14" D..... $100

### PT636 Single-Play Semi-Automatic
Two-speed (33⅓ and 45 rpm) ac synchronous belt-drive turntable with automatic return tonearm; adjustable arm with damped cueing, anti-skating, and reject control; wow and flutter 0.06% wrms; rumble −55 dB; tracking error +3, −1 degrees; tracking force range 1-3 g; 5½" H × 18" W × 14" D.... $100

## H.H. SCOTT

### PS-97XV Single-Play Automatic
Two-speed (33⅓ and 45 rpm) quartz PLL direct-drive turntable with auto start/reject/return/shutoff arm with single play or repeat functions; high torque motor with electronic switching commutation; servo-applied speed lock; pushbutton speed change; 12-in aluminum platter with strobe; strobe light with adjustable speed controls; S-shaped unipoint-suspension statically-balanced tonearm; viscous damped cueing; direct-readout anti-skating; stylus pressure control; record size selector; includes spare headshell holder; and hinged dust cover..... ..... $250

**PS-77XV.** Similar to PS-97XV except automatic reject/return/shutoff tonearm; 72-pole FG ac servomotor; no record selector..... $220

### PS-87A Single-Play Automatic
Two-speed (33⅓ and 45 rpm) direct-drive turntable with auto start/reject/return/shut-off tonearm with single play or repeat functions; 72-pole FG ac servomotor; pushbutton speed change; 12-in aluminum platter with strobe; strobe light with adjustable speed controls; S-shaped unipoint-suspension statically-balanced tonearm; viscous damped cueing; direct-readout stylus pressure and anti-skating controls; record size selector; spare headshell holder ... ..... $190

**PS-67A.** Similar to PS-87A except automatic reject/return/shutoff tonearm; no record size selector; has low-capacitance phono cables, hinged dust cover... ..... $160

**PS-47A.** Similar to PS-67A except FG dc servo-controlled belt-drive turntable; gimbal supported statically balanced arm; no spare headshell holder..... ..... $140

**PS-17A.** Similar to PS-47A except automatic return/shutoff arm; four-pole ac synchronous motor; no stroboscope ..... $110

## SONY

### PS-X7 Single-Play Automatic
Two-speed (33⅓ and 45 rpm) direct-drive quartz-locked servo-controlled turntable with auto lead-in/return with optical sensing repeat/stop tonearm; electronic touch switches with LED; front-panel automatic control switches; speed monitoring system; 8¹⁷⁄₃₂-in statically-balanced carbon fiber arm; direct-reading stylus force gauge; viscous damped cueing; anti-skating with direct-reading force adjustment and lateral balance weight; 12½-in aluminum platter; quartz-controlled stroboscope; rubber viscous-filled mat; adjustable shock-absorbing feet; universal headshell; wow and flutter 0.025% wrms; rumble −73 dB (DIN "B"); tracking force 0-3 g; headshell weight 10.5 g; includes hinged acrylic dustcover; 5⅞" H × 17½" W × 14¾" D ..... $350

**PS-X6.** Similar to PS-X7 except has statically-balanced S-shaped aluminum arm ..... $290

**PS-X5.** Similar to PS-X6 less optically controlled auto arm return and electronic switches; touch control switches ..... $240

### PS-T3 Single-Play Automatic
Two-speed (33⅓ and 45 rpm) direct-drive turntable with automatic lead/return/repeat/shut-off tonearm; driven by Sony BSL dc servomotor; front-panel play/reject/repeat button;) statically balanced S-shaped tonearm with 10.5-g universal shell; arm length 8¹⁷⁄₃₂-in; direct-reading stylus force gauge; viscous damped cueing; anti-skating device with direct-reading gauge; 12⅞-in aluminum platter; viscous-filled rubber feet; wow and flutter 0.03% wrms; rumble −70 dB (DIN "B"); tracking force 0-3 g; includes removable hinged dustcover; 5½" H × 17⁹⁄₁₆" W × 14¾" D..... $190

**PS-T2.** Similar to PS-T3 except semi-automatic with auto return/shut-off tonearm; front-panel reject button; strobe light and speed adjustment ±4%; no viscous-filled rubber feet..... $150

**PS-T1.** Similar to PS-T2 but includes speed moni-

toring system from multi-gap head in servo system and magnetic-coated platter rim; statically-balanced J-shaped arms; wow and flutter 0.04% wrms; rumble −68 dB (DIN "B"); ..... $130

## STANTON

### 8005 Single-Play Semi-Automatic

Two-speed (33⅓ and 45 rpm) slow-speed, synchronous belt-drive turntable supplied with either Stanton 881S or 681 Triple-E phono cartridge and extra cartridge adaptor head; wow and flutter 0.07% max. (DIN weighted); rumble −55 dB (DIN weighted); stylus force range 0-4 g; tracking error ±1.2 degrees max.; anti-skate adjustable with separate scales for any stylus; 6" H × 14¼" W × 16¾" D.

With 881S phono cartridge: tracking force 1¼ 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+⅛, −¼; 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.

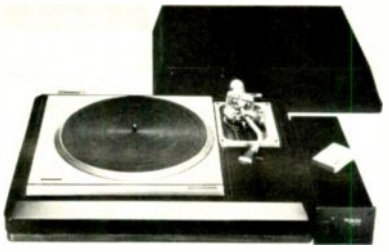
With 881S..... $450

With 681 Triple-E ..... $390

## TECHNICS BY PANASONIC

### SL-1000 Mark II Quartz Manual Single-Play

Three-speed (33, 45, and 78 rpm) direct-drive turntable with quartz-controlled servomotor and strobo-



scope lamp; power supply in separate housing for reduced hum; EPA-100 tonearm with dynamic damping to lower Q of arm-cartridge resonance, adjustable to match compliance of cartridge used; gimbal suspension with ruby bearings; nitrogen-hardened titanium arm shaft; helical tracking-force and arm-height adjusting devices; anti-skating; low-capacitance cables; vibration-resistant obsidian base; speed accuracy within ±0.036% over 30-minute period; wow and flutter 0.025% wrms (JIS); rumble −50 dB unweighted, −70 dB weighted; full speed within 0.25 sec; remote stop/start; 6¹¹/₁₆" H × 22¹/₁₆" W × 18⁵/₁₆" D..... $1400

### SP-10 MK II Single-Play Manual

Three-speed (33, 45, and 78 rpm) direct-drive turntable with phase-lock quartz-crystal speed control of low-speed, dc brushless motor; build-up time to precise speed within 25 degree rotation (0.25 sec) at 33⅓ rpm; stop time (magnetic brake) within 30 degree rotation (0.3 sec); long-term speed stability ±0.002% (within ±36 ms over 30-min period, less than ¾ sec in 10 hr); wow and flutter 0.025%P wrms (JIS); rumble −70 dB; solenoid controls (including remote); 4¹/₄₄" H× 14.5" W × 14.5" D..... $800

### SL-1300 Mk II Quartz-Locked Automatic

Two-speed (33 and 45 rpm) single-play automatic turntable with quartz-lock speed control active on normal-speed and pitch-control modes; touch-control buttons adjust speed ±9.9% in 0.1% increments, monitored by digital readout; IC logic and noncontact optical sensor system control automatic start, lead-in, stop and auto-return; record may be repeated from two to six times or continuously; output muting linked to cueing lever; all controls accessible with cover closed; arm height adjustable; low-capacitance cables; speed accurate within 0.002%; full speed attained in 0.7 sec (¼ turn); electronic braking; wow and flutter 0.025% wrms (JIS); rumble −73 dB or less (DIN "B")..... $490

**SL-1400 Mk 2.** Similar to SL-1300 Mk 2, but with manual start, manual and automatic shutoff and arm return at end of record; single play..... $440

**SL-1500 Mk 2.** Similar to SL-1300 Mk 2, but with completely manual control of arm..... $390

### SL-1301 Single-Play Automatic

Two-speed (33⅓ and 45 rpm) quartz-phase-locked, direct-drive turntable with automatic arm; brushless dc motor; logic-detected end-of-play; start/stop lever; 13-in aluminum diecast platter; S-shaped gimbal-suspension arm (effective length 9¹/₁₆-in); anti-skating control; oil-damped cueing in both directions; can be operated manually. Speed drift within ±0.002%; wow and flutter 0.025% wrms (JIS), ±0.035% peak (IEC); rumble −50 dB (DIN "A"), −73 dB (DIN "B"); tracking error +1 degree (inner groove), +3 degrees (outer groove); adjustable tracking force 0-3 g; 4¹⁵/₁₆" H × 17³/₄" W × 14⁹/₁₆" D ..... $320

**SL-1401.** Similar to SL-1301 except auto lead-in/auto-return tonearm..... $290

### SL-1650 Automatic Changer

Two-speed (33⅓ and 45 rpm) direct-drive turntable with automatic tonearm; IC frequency-generator servomotor; electronic speed change; strobe with markings; pitch control (10% variable range); S-shaped balanced tubular arm (effective length 9¹/₁₆-in); anti-skating; oil-damped cueing; memogram repeat allows max. six records to be played automatically, auto stop, or combine change/repeat play functions in single-play or changer mode. Wow and flutter 0.03% wrms (JIS), ±0.042% weighted (DIN); rumble −50 dB (DIN "A"), −70 dB (DIN "B"); tracking error within +3 degrees (12-in record outer groove), +1 degree (12-in record center); adjustable tracking force 0-3 g. Includes 45-rpm changer spindle, low-capacitance phono cables, and detachable hinged dustcover. 17½" H × 45⅓" W × 36½" D ..... $300

**SL-1950.** Similar to SL-1650; memogram repeat programmable for infinite repeat as well as one to six plays; includes base and dustcover; 6¹⁵/₁₆" H × 16¹⁵/₁₆" W × 13⅞" D..... $200

### SL-1600 Single-Play Manual/Automatic

Two-speed (33 and 45 rpm), direct-drive, servo-controlled table with manual control plus automatic start, return, shut-off and memo-repeat; pitch controllable separately (10%) for each speed; electronic speed change and pitch control; double-isolated suspension system; strobe lamp anti-skating; oil-damped cueing; wow and flutter 0.025% wrms (JIS); rumble −73 dB weighted, −50 dB unweighted; full speed within ⅓ revolution; arm effective length 9¹/₁₆-in; effective mass 11 g (with 6-g cartridge); tracking error within +3° at edge, +1° at inner groove; tracking force range 0-3 g; cartridge weight range 5-11 g; with base and dustcover; 4¹⁵/₁₆" H × 7¾" W × 14⁹/₁₆" D ..... $280

**SL-1700.** Similar to SL-1600, but with manual start, automatic and manual stop and return, no auto repeat ..... $230

**SL-1800.** Similar to SL-1600, but manual arm control only ..... $200

### SL-3350 Multiple-Play Automatic

Two-speed (33⅓ and 45 rpm) direct-drive changer with automatic set-down/lift-off/return/record change tonearm; FG servo-controlled and dc brushless motor; memogram accommodates max. six records and programs sequential play/repeat, six repeated record-play or continuous play in single-play mode; front-panel controls for all functions; individual pitch controls; stroboscope; S shaped gimbal-suspension tonearm; viscous damped cueing; anti-skating control; wow and flutter 0.03% wrms; rumble −73 dB (DIN "B"); includes detachable tonearm headshell and removable dustcover..... $200

**SL-3300.** Similar to SL-3350 except automatic tonearm with additional auto stop function. ... $180

**SL-3200.** Similar to SL-3350 except auto return/shut-off tonearm; front-panel controls for stop, cueing and speed adjustment..... $150

### SL-1900 Single-Play Automatic/Manual

Two-speed (33 and 45 rpm), direct-drive turntable

# 4 TURNTABLES

with manual and automatic start, return and stop; memo repeat up to six times or indefinitely; servomotor speed control with electronic speed change and pitch control (10% adjustment range); wow and flutter 0.03% wrms (JIS), ±0.042% (DIN) weighted zero-to-peak; rumble −73 dB (DIN "B" weighting), −50 dB unweighted; tonearm effective length 9 1/16-in; effective mass 23 g with 6-g cartridge; tracking error within 1° at inner groove, within 3° at edge; tracking force adjustable 0-3 g, direct-reading; cartridge weight range 5-10 g; with base and dustcover; 5 3/8" H × 16 15/16" W × 13 1/8" D ..... $180

**SL-2000.** Similar to SL-1900, but manual control of arm motions; wow and flutter 0.045% wrms (JIS), ±0.0965% (DIN) weighted zero-to-peak; rumble −70 dB (DIN "B" weighted), −47 dB unweighted; tonearm effective length 8 21/32-in; with base and dustcover ..... $150

### SL-235 Automatic Changer

Two-speed (33 1/3 and 45 rpm) belt-drive automatic changer/turntable with automatic tonearm; FG servo-controlled dc motor; electronic speed switching; front-panel control for all functions; memogram repeat programs six records played sequentially with last record repeated, last record continuous repeat, or in single-play one record played indefinitely; two pitch controls within 6% range; illuminated stroboscope; S-shaped balanced tubular tonearm (effective length 9 1/16-in); anti-skating; viscous damped cueing; 12-in aluminum diecast platter. Wow and flutter 0.045% wrms (JIS), ±0.06% peak (IEC "A"); rumble −70 dB (DIN "B"); tracking error +0 degree, 32 ft (inner groove), +2 degrees, 32 ft (outer groove); tracking force 0-3 g; includes detachable hinged dustcover; 6 23/64" H × 16 59/64" W × 14 49/64" D ..... $180

**SL-230.** Similar to SL-235 except single-play ..... $150

**SL-220.** Similar to SL-230 except auto return/shut-off tonearm and no memogram repeat; 4 31/32" H × 16 59/64" W × 14 49/64" D ..... $130

**SL-210.** Similar to SL-220 except manual arm operation ..... $100

## THORENS

All Thorens turntables are belt-driven, single-play units powered by 16-pole, two-phase synchronous motors with slip clutch for instantaneous start; straight tubular tonearms have interchangeable shafts instead of headshells for lower effective mass; gimbal suspension, anti-skating; 9-in tonearm effective length; tracking error less than 0.18°/cm (0.46°/in).

### TD-126C Single-Play Manual/Semi-Auto

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 −70 dB weighted, −50 dB unweighted; frictionless, magnetic anti-skating; with base and dustcover; 6 11/16" H × 19 7/8" W × 15 1/2" D ..... $750

**TD-126BC.** Same as TD-126C, but without arm ..... $600

**TD-166C.** Similar to TD-126BC except two-speed (33 1/3 and 45 rpm) with manual tonearm; mechanical speed change; no pitch control with strobe; counterweighted anti-skating; wow and flutter 0.06% (DIN); rumble −45 dB (DIN unweighted), −65 dB (DIN weighted); 6" H × 17" W × 14 3/16" D. ..... $250

### TD-115C Single-Play Semi-Automatic

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 anti-skating device; wow and flutter 0.05%; rumble −48 dB unweighted, −68 dB weighted; 11 13/16-in platter; arm length 8 3/4-in; tonearm mass 7.5 g; 5 1/8" H × 17 1/2" W × 14 11/64" D ..... $390

**TD-110C.** Same as TH-115C except no auto cue and shut-off ..... $330

## TOSHIBA

### SR-F335 Automatic Single-Play

Two-speed (33 1/3 and 45 rpm) dc servo, direct-drive turntable with automatic tonearm; integral IC servo system with 16-pole, 24-slot servomotor; separate speed adjustments (±3% range); stroboscopic speed indicator; disc size selector; S-shaped balanced arm; calibrated tracking force, calibrated anti-skating balance; oil-damped cueing/elevation lever for manual operation; auto repeat memory counter; acoustic insulator feet; wow and flutter 0.03% wrms (JIS); rumble −70 dB (DIN "B"); tracking error +3/−1 degree max.; 31-cm aluminum turntable with strobe marks; effective arm length 222 mm; includes 45 rpm adaptor and base; 6 1/10" H × 17 4/5" W × 14 1/5" D. ..... $190

### SR-230 Semi-Automatic Single-Play

Two-speed (33 and 45 rpm), belt-drive turntable with manual start, auto return and shut-off; magnetic cartridge; ac synchronous motor; "S"-type, static-balanced arm with anti-skating; interchangeable head shells; damped cueing; acoustic insulator feet; calibrated counterweight; wow and flutter 0.09% wrms; rumble −48 dB; tonearm effective length 8 3/8-in; stylus force range 0-4 g. Cartridge: 30-20,000 Hz response; output 3 mV at 50 mm/sec, 1kHz; crosstalk better than −25 dB; channel balance within 1 dB; compliance 7 × 10 " cm/dyne; stylus tip 0.6-mil diamond; 2.5 g recom-

mended tracking force; with dustcover and base;

5¾" H × 17⅝" W × 14" D ..... $120

## VISONIK

### DD-8200 Single-Play Semi-Automatic

Two-speed (33 and 45 rpm) direct-drive turntable with automatic arm return and shutoff at end of record; 20 pole, 30-slot dc servomotor with electronic speed change and ±3.5% pitch control; stroboscope and all controls on front panel, accessible with cover closed; "S" -type tonearm; cueing; anti-skating; wow and flutter 0.05% (DIN); rumble −70 dB weighted, −45 dB unweighted; tonearm effective length 8½"; tracking error 1°28'-3°; tracking force 0-2.5 g; includes free-stop hinged dustcover and adjustable base; 6¼" H × 18" W × 13⅞" D .... $250

### BD-5200 Single-Play Semi-Automatic

Two-speed (33 and 45 rpm) belt-drive turntable, with automatic arm return shutoff at end of play; servomotor with electronic speed change and ±3% pitch control; stroboscope; statically-balanced S-shaped tonearm; independent motor-arm suspension for feedback isolation; wow and flutter 0.07% (DIN), rumble −66 dB weighted, −46 dB unweighted; tonearm effective length 8½ inches; tracking force 1°20'; adjustable anti-skating; tracking force adjustable 0-4 g; includes free-stop hinged dustcover and base; 5½" H × 18⅛" W × 13¼" D ..... $200

**BD-4200.** Similar to BD-5200, but with automatic start and repeat as well as auto return, synchronous motor without pitch control; wow and flutter 0.09% (DIN), rumble −64 dB weighted, −44 dB unweighted ..... $175

**BD-3200.** Similar to BD-4200, but auto return and shutoff only ..... $150

**BD-2200.** Similar to BD-5200, but manual only; wow and flutter 0.1% (DIN); rumble −62 dB weighted, −42 dB unweighted ..... $125

## YAMAHA

### YP-D10 Semi-Automatic Single-Play

Two-speed (33⅓ and 45 rpm), direct-drive turntable with automatic lift/stop tonearm. Features

double FG/quartz PLL servo system with high-torque 12-pole, 24-slot dc servomotor; S-shaped arm on gimbal support; oil-damped cueing lever; direct-reading anti-skate device; acoustic insulator feet; stroboscopic speed indication on turntable rim with speed adjustment range ±3%. Specifications: wow and flutter less than 0.03% wrms; rumble −60 dB (IEC "B"), −70 dB (DIN "B"); effective arm length 8¾-in; tracking force range 0-3 g; includes dustcover. 6⅛" H × 18½" W × 14⅛" D ..... $650

### YP-D8 Semi-Automatic Single-Play

Two-speed (33⅓ and 45 rpm), direct-drive turntable with automatic lift/stop tonearm. Features FG servo system with 12-pole, 24-slot dc servomotor; S-shaped arm; anti-skate device; oil-damped cueing; speed adjustment range ±3% with strobe and pitch control. Specifications: wow and flutter less than 0.03% wrms; rumble better than −70 dB (DIN "B"); effective arm length 9⅛-in; includes dustcover. 18½" H × 14⅞" W × 6⅞" D ..... $395

### YP-D6 Semi-Automatic Single-Play

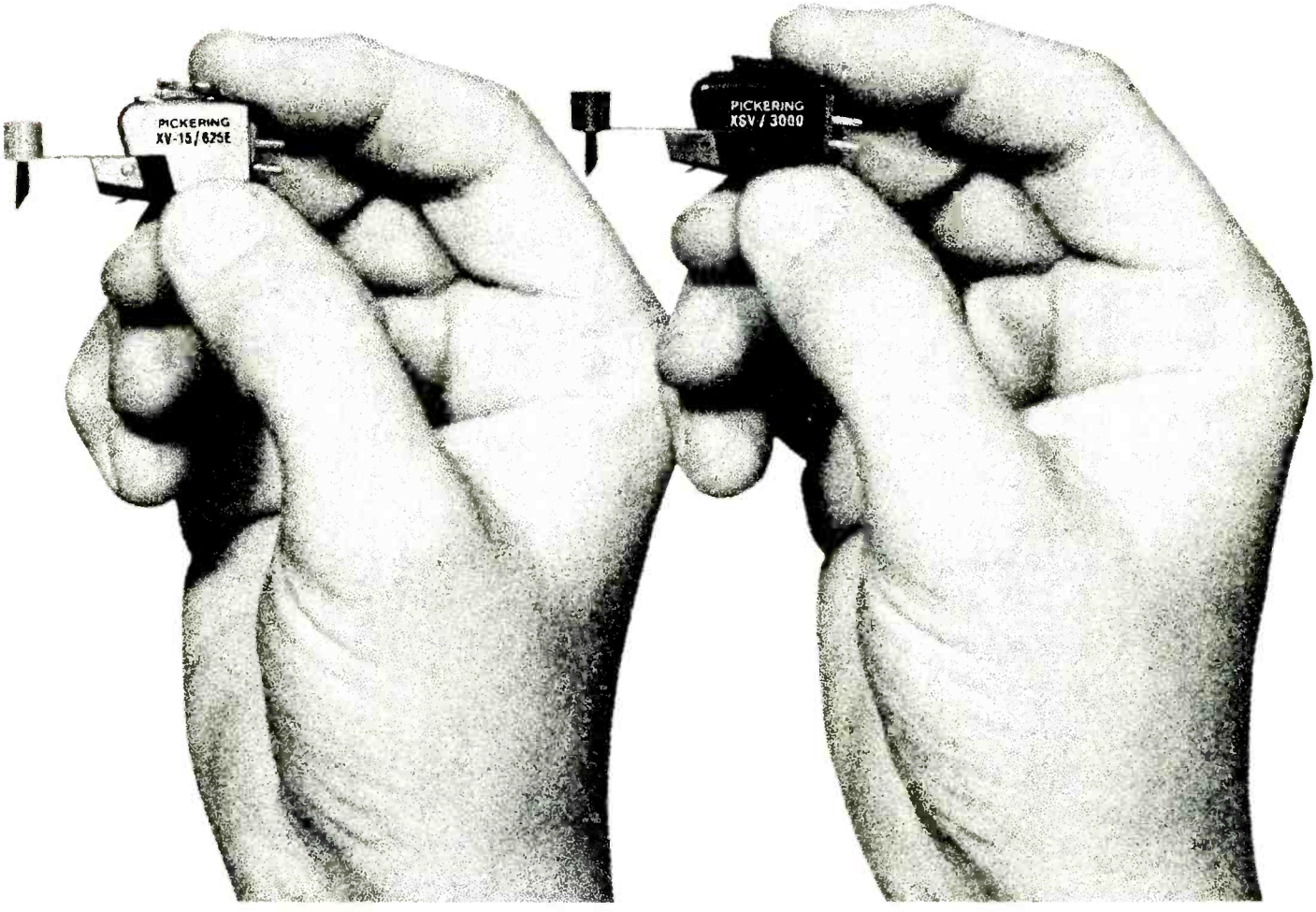
Two-speed (33 and 45 rpm) direct-drive manual turntable with automatic arm return and stop at end of record; brushless dc servomotor; S-type tonearm; ±3% speed adjustment, with strobe; acoustic-insulator feet; wow and flutter less than 0.035%; rumble below −60 dB (IEC "B" weighting); comes with dustcover and base; 6⅛" H × 18½" W × 14⅛" D .. $260

### YP-B4 Automatic Single-Play

Two-speed (33 and 45 rpm), belt-drive turntable with automatic lead-in, stop and shutoff, and return tonearm, automatic repeat if desired; 4-pole high-torque synchronous motor; S-shaped tonearm; adjustable anti-skating; direct-reading tracking force adjust; cueing control; braced wood cabinet with acoustic damper feet and detachable hinged dust cover; wow and flutter less than 0.07%; rumble below −62 dB (DIN B); 5⅛" H × 17½" W × 14¼" D. ..... $180

**YP-211.** Similar to YP-B4 except with auto return/reject and shut-off; wow and flutter 0.08% wrms; rumble −52 dB ..... $140

# Two sources of perfection in stereo sound.




## Match one to your equipment

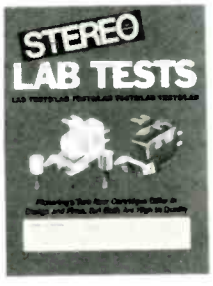
**"The right Pickering Cartridge for your equipment is the best Cartridge money can buy."**

We've been saying that for years; and tens of thousands of consumers have profited by applying this principle in assembling their playback systems.

If you have a fine manual turntable, the XSV/3000 is a perfect choice.

If you have a high quality automatic turntable, then installing an XV-15/625E in its tone arm is a perfect choice.

The summary advice of **Stereo's** Lab Test, in an unusual dual product review, we think brilliantly states our position: "The XV-15/625E offers performance per dollar; the XSV/3000, the higher absolute performance level." That makes both of these cartridges **best buys!**




**FREE!**

Pickering's new XSV/3000 is a remarkable development. It possesses our trademarked Stereohedron Stylus Tip, designed to assure the least record wear and the longest stylus life achievable in these times with a stereo cartridge. Its frequency response is extraordinarily smooth and flat; its channel separation is exceptional; its transient response affords superb definition. It represents a whole new concept of excellence in stereo cartridges.

*Read the whole evaluation report. Send for your free copy of the* ***Stereo*** *"Lab Test" reprint; write to Pickering & Co., Inc., 101 Sunnyside Blvd., Plainview, N.Y. 11803. Department SDB.*

PICKERING

*"for those who can hear the difference"*

# 5 PHONO CARTRIDGES

## AKG

### P8ES Phono Cartridge

Output voltage (5 mV/cm/sec) 3.75; frequency response 10-28,000 Hz; channel balance/separation


±1 dB/30 dB at 1kHz; optimum load impedance 47,000 ohms; optimum load capacitance 470 pF; tracking force 0.75-1.25 g; 0.2 × 0.7 mil elliptical diamond stylus; supplied with frequency response/crosstalk curve and screwdriver; weight 5.86 g..... $135

### P8E Phono Cartridge

Output voltage (5 mV/cm/sec) 4; frequency response 10-23,000 Hz; channel balance/separation ±1 dB/30 dB at 1 kHz; optimum load impedance 47,000 ohms; optimum load capacitance 470 pF; tracking force 0.75-1.25 g; 0.2 × 0.7 mil elliptical diamond stylus; includes frequency response/crosstalk curve and screwdriver; weight 5.86 g..... $100

### P7E Phono Cartridge

Output voltage (5 mV/cm/sec) 4.5; frequency response 10-21,500 Hz; channel balance/separation ±2 dB/25 dB at 1 kHz; optimum load impedance 47,000 ohms; optimum load capacitance 470 pF; tracking force 1.25-2.5 g; 0.3 × 0.7 mil elliptical diamond stylus; weight 5.86 g..... $70

### P6E Phono Cartridge

Output voltage (5 mV/cm/sec) 6.25; frequency response 20-20,000 Hz; channel balance/separation ±2 dB/20 dB at 1 kHz; optimum load impedance 47,000 ohms; optimum load capacitance 470 pF; tracking force 1.5-3 g; 0.4 × 0.8 mil elliptical diamond stylus; weight 5.86 g..... $50

### P6R Phono Cartridge

Output voltage (5 mV/cm/sec) 6.25; frequency response 20-20,000 Hz; channel balance/separation ±2 dB/15 dB at 1 kHz; optimum load impedance 47,000 ohms; optimum load capacitance 470 pF; tracking force 2-4 g; 0.7 mil spherical diamond stylus; weight 5.86 g..... $40

## AUDIO RESEARCH

### MCP-2 Pre-Preamplifier

See Section 1, Amplifiers, under "Audio Research" ..... $495

## AUDIO-TECHNICA

### AT20SS Phono Cartridge

Frequency response 5-50,000 Hz; output 2.7 mV at 5 cm/sec; channel balance/separation ±0.75 dB/35 dB at 1000 Hz; tracking force 0.75-1.75 g; nude-mounted square-shank Shibata stylus; beryllium cantilever; supplied with individual frequency response curves for both channels; replacement stylus ATN20SS ($95)..... $195

### AT20SLa Phono Cartridge

Output 2.7 mV at 5 cm/sec; frequency response 5-50,000 Hz; channel balance/separation ±0.75 dB/30 dB at 1 kHz; tracking force 0.75-1.75 g; nude-mounted square-shank Shibata stylus; supplied with individual response curves for both channels; replacement stylus ATN20 ($95)..... $195

### AT15SS Phono Cartridge

Frequency response 5-45,000 Hz; output 2.7 mV at 5 cm/sec; channel balance/separation ±0.75 dB/33 dB at 1000 Hz; tracking force 0.75-1.75 g; nude-mounted square-shank Shibata sylus; beryllium cantilever; supplied with individual frequency response curves for both channels; replacement stylus ATN15SS ($70)..... $150

### AT15Sa Phono Cartridge

Output 2.7 mV at 5 cm/sec; frequency response 5-45,000 Hz; channel balance/separation ±0.75 dB/30 dB at 1 kHz; tracking force 0.75-1.75 g; nude-mounted square-shank Shibata stylus; supplied with frequency response curves for both channels; replacement stylus ATN15 ($70)..... $150

### AT15XE Phono Cartridge

Output 2.7 mV at 5 cm/sec; frequency response 5-30,000 Hz; channel balance/separation ±0.75 dB/28 dB at 1 kHz; tracking force 0.75-1.75 g; square-shank nude-mounted 0.2 × 0.7 mil elliptical stylus, supplied with individual stereo response curves; replacement stylus ATN15XE ($60.00)..... $125

### AT14Sa Phono Cartridge

Output 2.7 mV at 5 cm/sec; frequency response 5-45,000 Hz; channel balance/separation ±1 dB/27 dB at 1 kHz; tracking force 0.75-1.75 g; square-shank nude-mounted Shibata stylus; replacement stylus ATN14 ($45)..... $95

### AT12Sa Phono Cartridge

Output 2.7 mV at 5 cm/sec; frequency response 15-45,000 Hz; channel balance/separation ±1 dB/26 dB at 1 kHz; tracking force 0.75-1.75 g; Shibata stylus; replacement stylus ATN12S ($42). $80

### AT13Ea Phono Cartirdge

Output 4.2 mV at 5 cm/sec; frequency response 10-30,000 Hz; channel balance/separation ±1 dB/25 dB at 1 kHz; tracking force 0.75-1.75 g; 0.2 × 0.7 mil square-shank diamond stylus; replacement stylus ATN13 ($38)..... $70

### AT12XE Phono Cartridge

Output 4.2 mV at 5 cm/sec; frequency response 15-28,000 Hz; channel balance/separation ±1.5 dB/23 dB at 1 kHz; tracking force 1-2 g; 0.4 × 0.7 mil bonded diamond mounted to thin-wall stylus tube; replacement stylus ATS12 ($35)..... $65

### AT12E Phono Cartridge

Output 4.2 mV at 5 cm/sec; frequency response 15-26,000 Hz; channel balance/separation ±1.5 dB/23 dB at 1000 Hz; tracking force 1-2 g; bonded 0.4 × 0.7 mil; elliptical tip and thin-wall stylus tube, replacement stylus ATS12 ($30)..... $55

### AT11E Phono Cartridge

Output 4.8 mV at 5 cm/sec; frequency response 15-25,000 Hz; channel balance/separation ±1.5 dB/21 dB at 1 kHz; tracking force 1.5-2.5 g; bonded 0.4 × 0.7 mil elliptical tip an thin-wall stylus tube; replacement stylus ATS11E ($25). $45

### AT11 Phono Cartridge

Output 4.8 mV at 5 cm/sec; frequency response 15-22,000 Hz; channel balance/separation ±1.5 dB/21 dB at 1 kHz; tracking force 1.5-2.5 g; spherical bonded tip; replacement stylus ATS11 ($18)... ..... $35

### AT10 Phono Cartridge

Output 4.8 mV at 5 cm/sec; frequency response 20-20,000 Hz; channel balance/separation ±2 dB/20 dB at 1 kHz; tracking force 2-3 g; spherical bonded tip; replacement stylus ATS10 ($13)... $25

### Compass Series

#### ATX5E Phono Cartridge

Incorporates separate magnetic system for each stereo channel; 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; tracking force 1-1.75 g; 0.3 × 0.7 mil nude-mounted elliptical diamond stylus; replacement stylus ATXN5; weight 7.2 g..... $75

#### ATX3E Phono Cartridge

Incorporates separate magnetic system for each stereo channel; 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; tracking force 1-2 g; 0.4 × 0.7 mil elliptical diamond stylus; replacement stylus ATXN3; weight 7.2 g ..... $60

#### ATX1 Phono Cartridge

Incorporates separate magnetic system for each stereo channel; 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; tracking force 1.5-2.5 g; 0.6 mil spherical stylus; replacement stylus ATXN1; weight 7.2 g..... $35

### "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 imp. 47,000 ohms; tracking force 2-3 g; 0.3 × 0.7 mil nude elliptical diamond stylus; replacement stylus ATP-N3; weight 7.2 g..... $45

#### 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 imp. 47,000 ohms; tracking force 3-5 g; 0.4 × 0.7 mil elliptical diamond stylus; replacement stylus ATP N2; weight 7.2 g..... $35

#### ATP-1 Phono Cartridge

For stereo operation; output 5.3 mV at 5 cm/sec;

## 5 PHONO CARTRIDGES

frequency response 20-20,000 Hz; channel balance/separation ±1.5 dB/21 dB at 1 kHz; load imp. 47,000 ohms; tracking force 3-5 g; 0.6 mil spherical diamond stylus; replacement stylus ATP-N1; weight 7.2 g ..... $30

### AT-1009 Tonearm

Includes all basic elements of the AT-1005 II plus exclusive pneumatic arm lift with convenient lever control; special low-mass plug-in shell; sliding counterweight with set screw for setting static balance; separate micro-adjust for precise balance precision lever and dial scale for anti-skating adjust, arm height ±2½ mm adjustment with separate micro-adjust lever; stylus force guage with sliding ring-weight calibrated to 0.1 g ..... $175
**AT-0.** Plug-in shell ..... $12

### AT-1005 II Tonearm

Features calibrated adjustments to permit exact selection of desired tracking force, anti-skating, with stylus overhang; perforated plug-in shell and sliding cartridge mounting, attaches by means of knurled locking ring and spring-loaded contacts; sliding main counterweight; tracking force selecteed by sliding ring weight along length of arm (calibrations permit adjustment to 0.5 g); one-hole installation of arm. Stylus force 0-3 g, calibrated to 0.5 g; cartridge weight 5-24 g; effective mass 20 g (set for AT14S cartridge) ..... $85
**ART-S.** Plug-in shell ..... $8
**AT-L2.** Optional hydraulic arm lift ..... $17

## AUDIO TECHNOLOGY

### 440 Head Amp/Phono Preamp

See Section 1, Amplifiers under "Audio Technology" ..... $180

## BANG & OLUFSEN

### MMC Series Phono Cartridges

Completely sealed, miniaturized cartridge line; non-replaceable styli; can be used for playing CD-4 discs.
**MMC6000.** Output 0.6 mV/cm/sec; frequency response 20-15,000 Hz ±1.5 dB, 15-45,000 Hz (Class A rating); channel separation 25 dB at 1000 Hz, 20 dB from 400-10,000 Hz; IM dist. 1%; compliance 30 × $10^6$ cm/dyne; effective tip mass 0.22 mg; load 100,000 ohms/100 pF; stylus pressure 1 g; radius of curvature CD-4 quadro; Pramanik diamond stylus ..... $145
**MMC4000.** Similar to 6000 except frequency response 20-25,000 Hz ±1.5 dB; stylus pressure 1 g; elliptical naked diamond stylus; effective tip mass 0.4 mg; load 47k ohm/200 pF ..... $95
**MMC3000.** Similar to 6000 except frequency response 16-25,000 Hz ±3 dB, 20-16,000 Hz ±2.5 dB; channel separation 20 dB at 1000 Hz, 15 dB from 400-10,000 Hz; effective tip mass 0.5 mg; stylus pressure 1.2 g; spherical diamond stylus $60

### SP-12 Phono Cartridge

Moving-iron type; output 1 mV/cm/sec; frequency response 15-25,000 Hz ±3 dB; has 0.2 × 0.7-mil elliptical stylus; tracking force 1 to 1½ g; 15-degree tracking angle; channel separation 25 dB at 1000 Hz; compliance 25 × $10^6$ cm/dyne; replacement stylus 5430 ..... $85

## DECCA

### MK VI Elliptical Cartridge

Stereo cartridge with elliptical styli; tracking force 1½ 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 ..... $160
Replacement stylus (gold) ..... $80

### MK VI Spherical Cartridge

Stereo cartridge with spherical styli; Tracking force 2 g; 7½ mV output at 5 cm/sec; otherwise similar to elliptical model ..... $140
Replacement stylus (plum) ..... $70

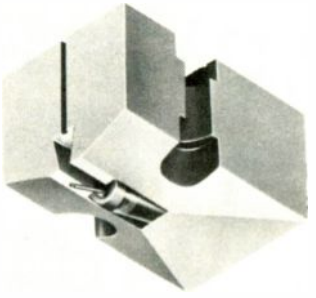
### London International Tonearm

Separate tonearm features frictionless jeweled unipivot magnetic floating assembly, magnetic anti-skating, optional vertical and lateral fluid damping, micrometer-type tracking-force adjustment, spirit level in head shell, adjustable stylus overhang provisions; effective arm mass 9 g; effective arm friction better than 0.02 g lateral and vertical; tracking force ¼-3 g; cable capacitance, 120 μF/ch; cartridge weight range, 5-12 g; pivot-to-stylus distance 9½-in; height adj. 2¼-in max., 1¼-in min.... $140

## DENON

### DL-103D Moving-Coil Cartridge

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 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; round 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; 50 k 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; weight 7.8 g.. ..... $186

### AU-320 Cartridge Transformer

For moving-coil type. 1:10 step-up ratio; 3-40-ohm primary impedance, 4000-ohm secondary impedance; frequency response 10-100,000 Hz ±1 dB; 65 mm H × 97 mm W × 155 mm D ..... $153
**AU310.** Similar to AU-320 except with 20-40,000 Hz ±1dB frequency response; 53 mm H × 51 mm W × 181 mm D ..... $95

## DYNAVECTOR

### 20B Moving-Coil Cartridge

Output 2 mV (1 kHz, 5 cm/sec); channel balance ±1.5 dB; crosstalk −20 dB (1 kHz); frequency response 20-30,000 Hz ±2 dB; beryllium cantilever; 6μ Shibata stylus; 85-ohm dc resistance; tracking force 1.5 ±0.3 g; weight 9.5 g; ½" mounting centers ..... $250
**20A.** Similar to 20B but with aluminum cantilever; frequency response 10-30,000 Hz ±2 dB..... $190

### 10A Moving-Coil Cartridge

Output 2 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-replaceable spherical stylus on alumnum cantilever; tracking force 2.5 g; weight 9.5 g; ½-in mounting center .... $160

**10X.** Similar to 10A ..... $120

**DV-505 Tonearm**
Bi-axis inertia-controlled dynamic balance-type tonearm; arm has two pivots; dynamic damping system to eliminate arm resonance; electro-magnetic damping system; free-standing type mounting; overall length 335 mm; effective length 241 mm; height 72-94 mm; offset angle 21.5°; lateral tracking error 0-2.2°; overhang 15 mm; height adjustable over 38-70 mm; suitable cartridge weights 9-35 g; supplied with 1.2 m cable ..... $600

## EMPIRE

**2000Z Phono Cartridge**
For matrix four-channel and stereo operation; output 3 mV/ch at 3.54 cm/sec; frequency response 20-20,000 Hz ±1 dB; channel balance/separation ±0.75 dB (1 kHz)/30 dB (500-15,000 Hz); input load 47,000 ohms/ch; total capacitance 300 pF/ch; compliance 30 × $10^{-6}$ cm/dyne; tracking force 0.75-1.25 g; 0.2 × 0.7 mil elliptical stylus... $125

**2000T Phono Cartridge**
Incorporates laminated pole structure; output 3 mV at 3.54 cm/sec; frequency response 20-20,000 Hz ±1.5 dB; channel balance/separation ±1 dB (1 kHz)/27 dB (500-15,000 Hz); recommended load 47,000 ohms; total capacitance 300 pF; compliance 30 × $10^{-6}$ cm/dyne lateral and vertical; tracking force 0.75-1.25 g; 0.2 × 0.7 mil diamond stylus ..... $90

**2000E/III Phono Cartridge**
For matrix four-channel and stereo operation; output 4.5 mV/ch at 3.54 cm/sec; frequency response 20-20,000 Hz ±2 dB; channel balance/separation ±1 dB (1 kHz)/28 dB (500-15,000 Hz); input load 47,000 ohms/ch; total capacitance 400-500 pF/ch; compliance 20 × $10^{-6}$ cm/dyne; tracking force 0.75-1.5 g; 0.2 × 0.7 mil elliptical stylus ..... $70

**2000E/II Phono Cartridge**
For matrix four-channel and stereo operation; output 4.5 mV/ch at 3.54 cm/sec; frequency response 20-20,000 Hz ±2 dB; channel balance/separation ±1.25 dB (1 kHz)/25 dB (500-15,000 Hz); input load 47,000 ohms/ch; total capacitance 400-500 pF/ch; compliance 18 × $10^{-6}$ cm/dyne; tracking force 0.75-1.5 g; 0.2 × 0.7 mil elliptical stylus .... $55

**2000E/I Phono Cartridge**
For matrix four-channel and stereo operation; output 7 mV/ch at 3.54 cm/sec; frequency response 20-20,000 Hz ±3 dB; channel balance/separation ±1.5 dB (1 kHz)/23 dB (500-15,000 Hz); input load 47,000 ohms/ch; total capacitance 400-500 pF/ch; compliance 17 × $10^{-6}$ cm/dyne; tracking force 1-2 g; 0.2 × 0.7 mil elliptical stylus..... $45

**2000E Phono Cartridge**
For matrix four-channel and stereo operation; output 7 mV/ch at 3.54 cm/sec; frequency response 20-20,000 Hz ±3 dB; channel balance/separation ±1.5 dB (1 kHz)/23 dB (500-15,000 Hz); input load 47,000 ohms/ch; total capacitance 400-500 pF/ch; compliance 16 × $10^{-6}$ cm/dyne; tracking force 1.25-2.5 g; 0.3 × 0.7 mil elliptical stylus .... $40

**2000 Phono Cartridge**
For matrix four-channel and stereo operation; output 7 mV/ch at 3.54 cm/sec; frequency response 20-20,000 Hz ±3 dB; channel balance/separation ±1.5 dB (1 kHz)/21 dB (500-15,000 Hz); input load 47,000 ohms/ch; total capacitance 400-500 pF/ch; compliance 14 × $10^{-6}$ cm/dyne; tracking force 1.5-3 g; 0.7 mil spherical stylus ..... $30

### *4-Channel*

**4000D/III Phono Cartridge**
For discrete and matrix four-channel as well as

# 5 PHONO CARTRIDGES

stereo operation; output 3 mV/ch at 3.54 cm/sec; frequency response 10-50,000 Hz ±3 dB; channel balance/separation ±1 dB (1 kHz)/28 dB (15-1000 Hz); input load 100 ohms/ch; total capacitance under 100 pF/ch; compliance 30 × $10^6$ cm/dyne; tracking force 0.75-1.25 g; 0.2 mil LAC stylus..... ..... $150

**4000D/I Phono Cartridge**
For discrete and matrix four-channel as well as stereo operation; output 3 mV/ch at 3.54 cm/sec; frequency response 15-45,000 Hz ±3 dB; channel balance/separation ±1.5 dB (1 kHz)/24 dB (15-1000 Hz); input load 100,000 ohms/ch; total capacitance under 100 pF/ch; compliance 30 × $10^6$ cm/dyne; tracking force 1-1.75 g; 0.2 mil LAC stylus ..... $85

## INFINITY

**Black Widow Tone Arm**
Utilizes jointed-pipe damped-knife-edge-fulcrum system; accommodates cartridges weighing 4-8.5

g; adjustable cartridge mounting bar; graphite-fiber arm tube; stylus force adjustment ±2 g per revolution of single-weight vernier; anti-skating fine spring adjustment, calibrated for coordination with stylus pressure; bearing sensitivity at stylus point 0.005 g (vertical, knife-edge bearing), 0.01 g (lateral, fine miniature ball bearing); sliding base adjustment ±10 mm (slideset and lock type); output cord capacitance 50 pF per 1.5 meter; effective arm mass 3 g; oil-damped cueing device ..... $245

## LENTEK

**Moving-Coil Preamplifier**
See Section 1, Amplifiers, under "Lentek".... $160

## LUX

**CX-1 DC Head Amplifier**
See Section 14, Accessories, under "Lux" .... $295

## MICRO-ACOUSTICS

**530-mp Stereo Cartridge**
Micro-Point diamond stylus, beryllium cantilever; frequency response 5-20,000 Hz ±1.25 dB; channel separation 30 dB at 1000 Hz, 15 dB at 10,000 Hz; output voltage 3.5 mV/ch at 5 cm/sec peak recorded velocity; load requirements 10,000-100,000 ohms; cable capacity 100-1500 pF; tracking force range 0.7-1.4 g; cartridge weight 4 g ..... $200

**2002-e Stereo Cartridge**
Frequency response 5-20,000 Hz ±1.5 dB; tracking force range 0.7-1.4 g; channel separation 30 dB at 1000 Hz, 15 dB at 10,000 Hz; output voltage 3.5 mV/ch at 5 cm/sec peak recorded velocity; load 10,000-100,000 ohms; cartridge weight 4 g; 0.0002 × 0.0007 elliptical diamond; cable capacitance 100-1500 pF..... $120

**282-e Stereo Cartridge**
0.0002 × 0.0007 elliptical diamond stylus; frequency response 5-20,000 Hz ±2 dB; channel separation 25 dB at 1000 Hz, 15 dB at 10,000 Hz; output voltage 3.5 mV/ch at 5 cm/sec peak recorded velocity; load requirements 10,000-100,000 ohms; cable capacity 100-1500 pF; tracking force range 0.75-1.5 g; cartridge weight 5.2 g..... $90

## MICRO SEIKI

**MA-707 Tonearm**
Features low mass and dynamic balancing; made from light aluminum alloy; linear stylus force

change from 0.3-3.0 g in 0.1 g steps; resonant frequency 8-10 Hz; headshell has plug-in 4-pin design; anti-skating device; 500-g brass arm base; total length 12³/₈-in; effective length 9³/₈-in; handles 4-12 g cartridge weight; horizontal movement sensitivity 10 mg; vertical movement sensitivity 15 mg ..... $200

## NAGATRON

**HV9100 Ribbon Stereo Phono Cartridge**
Fine wire-ribbon magnetic cartridge converts mechanical signal from record into electrical signal by reacting to stylus tip motion over record grooves; constant dc magnetic flux; no internal coil; uses one-point support for straight-line titanium stylus cantilever; acrylic resin headshell; frequency response 20-30,000 Hz; output 0.04 mV at 5 cm/sec (1000 Hz); channel balance/separation 1.0/25 dB at 1000 Hz; output impedance 3 ohms at 1000 Hz nominal dynamic compliance 7 × $10^6$ cm/dyne. 0.4 × 0.8 mil elliptical nude solid diamond stylus . ..... $220

**HA-9000.** Head amplifier designed for use with Nagatron HV9100 and moving-coil cartridges; fre-


quency response 10-200,000 Hz ±1 dB; 40-dB gain; THD 0.01% at 1000 Hz; noise level at input −155 dB/V (RIAA and IHF "A"); max. input 8.4 mV; output to magnetic phono in 50,000 ohms; input impedance 20 ohms; battery-powered with individual power supplies/channel ..... $275

**300 Series**
Features critically aligned two-channel Samarium-cobalt alloy induced magnet structure; universal mount; frequency response 10-25,000 Hz; channel balance/separation 1.0/25 dB at 1000 Hz; output 4.0 mV at 50 mm/sec (1000 Hz); recommended load 30,000-100,000 ohms, 50,000 ohms nominal; dynamic compliance 9 × $10^6$ cm/dyne; static compliance 20 × $10^6$ cm/dyne.
**360CEX.** Hand-selected 0.3 × 0.7 mil shaped elliptical nude diamond stylus with tapered carbon-fiber cantilever; effective mass 0.60 mg; ..... $125
**360CE.** 0.3 × 0.7 mil shaped elliptical nude diamond stylus; effective mass 0.6 mg..... $95
**350E.** 0.3 × 0.7 mil elliptical nude diamond stylus with aluminum UT-58 cantilever; effective mass 0.65 mg ..... $70
**340S.** 0.5 mil spherical diamond stylus; aluminum UT-58 cantilever; effective mass 0.85 mg..... $48

**200 Series**
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 × 0.7 mil shaped elliptical nude diamond stylus with tapered carbon-fiber cantilever; effective mass 0.60 mg ..... $80
**210E.** 0.3 × 0.7 mil elliptical nude diamond stylus with aluminum UT-58 cantilever; effective mass, 0.65 mg ..... $60
**200S.** 0.5 mil spherical diamond stylus with aluminum UT-58 cantilever; effective mass 0.85 mg ..... ..... $38

**100 Series**
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 × 0.7 mil elliptical diamond stylus; integral head shell ..... $45
**185E.** 0.3 × 0.7 mil elliptical diamond stylus; universal mount ..... $38
**175IS.** 0.5 mil spherical diamond stylus; integral head shell ..... $35
**165S.** 0.5 mil spherical diamond stylus; universal mount ..... $28

## 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 1.5-2.1 g; features Shibata stylus; supplied with SME-type shell and individual test data ..... $305
**MC-500.** Similar to MC-1000 but with duralumin cantilever and without 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; features elliptical stylus ..... $135
**MCB-100.** Moving-coil pickup booster with double-shielded, specially wound transformer; frequency response 10-65,000 Hz; load impedance 50,000 ohms; input impedance 2-20 ohms ..... $120
**FG-100.** High-precision stylus force gauge..... $25

**MB-150 Moving-Coil Booster Amplifier**
See Section 1, Amplifiers, under "Nakamichi"..... ..... $110

## ORTOFON

**MC-20 Phono Cartridge**
Moving-coil pick-up cartridge; output 0.1 mV at 5 cm/sec (1 kHz); frequency response 20-20,000 Hz ± 1 dB; channel separation 25 dB at 1000 Hz); load impedance 47,000 ohms; tracking force 1.5-2 g.; beryllium-filled stepped cantilever; three-part damping system; square-pole piece; weight 7 g ..... ..... $185

**M-20FL Super Cartridge**
Moving-magnet type compliance-matched to average tonearm mass; output 4 mV at 5 cm/sec (1


kHz); frequency response 10-25,000 Hz ± 1 dB; channel separation 27 dB at 1000 Hz; load impedance 47,000 ohms; tracking force 1.25-1.75 g.;

# THE SOURCE OF PERFECTION IN RECORD PROTECTION!

Why take a chance?

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No other manufacturer is licensed to copy or duplicate the genuine Pickering product: Bogus styli made by others can't be very good because they were created by "reverse engineering" . . . meaning, of course, that attempts to copy the exacting dimensional tolerances can only approximate the original.

Here are some things to remember:

1. A Pickering cartridge is a precision instrument. A genuine Pickering replacement stylus assures a proper fit and perfect performance.
2. The attempts of others to duplicate the genuine product are by definition illegitimate and/or illegal, and probably won't work up to expectations.
3. The Dustamatic Brush, which cleans the record's grooves in advance of the stylus, is also covered by Patents issued only to Pickering.
4. Always look for the on the stylus handle. It identifies the genuine Pickering replacement stylus.

Genuine Pickering Replacement Styli are covered by one or more of the following patents: Patent #3146319; 3297831; 3546399; 3572725.



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A GENUINE **PICKERING** REPLACEMENT STYLUS

*"for those who can hear the difference"*

# 5 PHONO CARTRIDGES

0.3 mil fine line stylus; variable magnetic shunt; removable capacitance matching device ..... $145

**M-20E Super Cartridge**
Moving-magnet type with ultra-high compliance for use with low mass tonearms only; output 4 mV at 5 cm/sec (1kHz); frequency response 10-25,000 Hz ± 1 dB; channel separation 25 dB at 1000 Hz; load impedance 47,000 ohms; tracking force 0.75-1.25 g.; 0.3 × 0.7 mil elliptical stylus; variable magnetic shunt; removable capacitance matching device ..... $145

**MC-10 Phono Cartridge**
Moving-coil pick-up cartridge; output 0.1 mV at 5 cm/sec (1 kHz); frequency response 20-20,000 Hz ±1 dB; channel separation 22 dB at 1000; load impedance 47,000 ohms; tracking force 1.7-2.3 g.; 0.3 × 0.7 mil elliptical stylus ..... $125

**VMS-20E MkII Cartridge**
Variable magnetic shunt moving-magnet type; output 5 mV at 5 cm/sec (1 kHz); frequency response 20-20,000 Hz ± 1 dB; channel separation 25 dB at 1000 Hz; load impedance 47,000 ohms; tracking force 0.75-1.5 g.; 0.3 × 0.7 mil elliptical stylus; removable capacitance matching device.. $100

**F-15E MkII Cartridge**
Moving-magnet type; output 5 mV at 5 cm/sec (1 kHz); frequency response 20-20,000 Hz ± 1 dB; channel separation 25 dB at 1000 Hz; load impedance 47,000 ohms; total capacitance 400 pF; 0.3 × 0.7 mil elliptical stylus; tracking force 1-2 g.; compliance 25 × $10^6$ cm/dyne both lateral and vertical; variable magnetic shunt..... $80
**FF-15E MkII.** Similar to F-15E, except tracking force 1-3 g, channel separation 20 dB at 1000 Hz, and compliance 20 × $10^6$ cm/dyne both lateral and vertical ..... $60
**FF-15XE MkII.** Similar to FF-15E, except tracking force 1.5-3 g..... $40

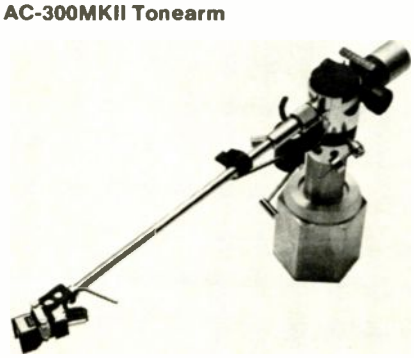
## OSAWA

**300MP Phono Cartridge**
Permalloy-induced magnet design for S/N; carbon fiber cantilever; cobalt magnet; butyl cantilever damper; 0.3 × 0.7 mil elliptical nude diamond stylus; frequency response 20-22,000 Hz; separation 25 dB at 1000 Hz; dynamic compliance 9 × $10^6$ cm/dyne ..... $100

**200MP Phono Cartridge**
Permalloy-induced magnet design; cobalt magnet, butyl cantilever damper; 0.3 × 0.7 mil elliptical nude diamond stylus; frequency response 20-20,000 Hz; separation 25 dB at 1000 Hz; dynamic compliance 9 × $10^6$ cm/dyne..... $65

**100MP Phono Cartridge**
Permalloy-induced magnet design; cobalt magnet; butyl cantilever damper; 0.6 mil conical bonded diamond stylus; frequency response 20-20,000 Hz; separation 25 dB at 1000 Hz; dynamic compliance 8 × $10^6$ cm/dyne ..... $35

**AC-300MKII Tonearm**



Single needle-point support with adjustable oil damping; accepts interchangeable straight or S-shape metal and carbon fiber arm stems; with straight tubular stem..... $325
Other stems ..... $60

## PICKERING

**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 ..... $100

**XV-15/1200E Phono Cartridge**
Output 4.4 mV at 5.5 cm/sec; frequency response 10-30,000 Hz; 0.2 × 0.7 mil elliptical stylus; tracking force 0.5-1.25 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D1200 ..... $80

**XV-15/750E Phono Cartridge**
Output 4.4 mV at 5.5 cm/sec; frequency response 10-25,000 Hz; 0.3 × 0.7 mil elliptical stylus; tracking force 0.5-1.5 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D750 ..... $65

**XV-15/625E Phono Cartridge**
Output 4.4 mV at 5.5 cm/sec; frequency response 10-25,000 Hz; 0.3 × 0.7 mil elliptical diamond stylus; tracking force 0.75-1.5 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D625..... $60

**XV-15/400E Phono Cartridge**
Output 5.5 mV at 5.5 cm/sec; frequency response 10-25,000 Hz; 0.4 × 0.7 mil elliptical stylus; tracking force 1-1.5 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D4000 ..... $55

**XV-15/200E Phono Cartridge**
Output 8 mV at 5.5 cm/sec; frequency response 10-25,000 Hz; 0.4 × 0.7 mil elliptical stylus; tracking force 2-4 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D200 . ..... $50

**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.... $40

**XV-15/140E Phono Cartridge**
Output 8 mV at 5.5 cm/sec; frequency response 10-20,000 Hz; 0.5 × 0.7 mil elliptical stylus; tracking force 3-5 g; channel separation 35 dB; features Dustamatic brush; replacement stylus D140 . ..... $35

**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.... $35

**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.... $30

**V-15 Micro IV AME Phono Cartridge**
Output 5.5 mV at 5.5 cm/sec; frequency response 20-20,000 Hz; 0.4 × 0.7 mil elliptical stylus; tracking force 1-2 g; channel separation 30 dB; features Dustamatic brush; replacement stylus DIV-AME ..... $50

**V-15 Micro IV ATE Phono Cartridge**
Output 6.5 mV at 5.5 cm/sec; frequency response 20-18,000 Hz; 0.4 × 0.7 mil elliptical stylus; tracking force 2-4 g; channel separation 28 dB; features Dustamatic brush; replacement stylus DIV-ATE ..... $40

**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 . $35

**V-15 Micro IV ACE Phono Cartridge**
Output 8 mV at 5.5 cm/sec; frequency response 20-17,000 Hz; 0.5 × 0.7 mil elliptical stylus; tracking force 3-5 g; channel separation 26 dB; features Dustamatic brush; replacement stylus DIV-ACE ..... $30

**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 .. $30

**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.. $25

### *4-Channel*

**XUV/4500-Q Phono Cartridge**
For stereo, four-channel matrix (SQ and QS), and discrete four-channel playback; output 3.4 mV at 5.5 cm/sec; frequency response 10-50,000 Hz; Quadrahedral stylus with Quadrahedron tip; tracking force 0.5-1.5 g; channel separation 35 dB at 1 kHz, 25 dB at 30 kHz; channel balance 1.5 dB; features Dustamatic brush..... $140

**UV-15/2400-Q Phono Cartridge**
For discrete four-channel playback; output 3.3 mV; frequency response 10-50,000 Hz (100,000-ohm 100-pF load); Quadrahedral diamond stylus; tracking force 1.5-2.5 g; channel separation 35 dB; features Dustamatic brush..... $125
**UV-15/2000-Q.** Similar to UV-15/2400-Q but frequency response 20-45,000 Hz; channel separation 30 dB ..... $70

## POLK AUDIO

**Mayware Formula 4 Mk III Tonearm**
Silicone damped pick-up arm and cartridge combination with inverted jeweled unipivot; adjustable bias compensation; adjustable oil-damped lift and cue; removable skeletal headshell, accepts cartridges weighing 2-10 g; effective length 229 mm, 65-mm rear overhang required; pivot friction less than 5 mg; tracking force 0-3 g; max. tracking error 0.5 degree; cable capacitance 112 pf ..... $180

## SATIN

**M-18BX Phono Cartridge**
Moving-coil phono cartridge with fixed-pivot beryllium cantilever and magnetic fluid damping; for stereo and four-channel operation; output 2.5 mV; frequency response 10-40,000 Hz; compliance 20 × $10^6$ cm/dyne; tracking force 0.5-1.5 g; 0.1 × 2.5 mil Shibata diamond stylus; any phono input impedance over 30 ohms may be used; user-replaceable stylus mounts in magnetic mounting..... $350

**M-18X Phono Cartridge**
Moving-coil phono cartridge with fixed-point pivot for the stylus cantilever mechanism; for stereo and four-channel operation; output 2.5 mV; frequency response 10-35,000 Hz; compliance 15 × $10^6$ cm/dyne; tracking force 0.5-1.5 g; 0.1 × 2.5 mil Shibata diamond stylus; user-replaceable stylus mounts in magnetic mounting ..... $275

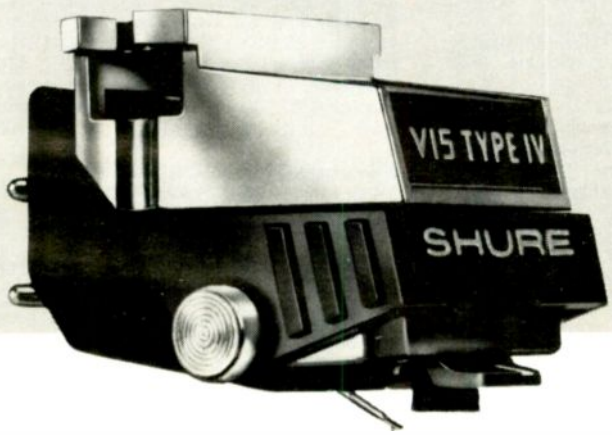
# fact:
# the IV does more... *much more!*

new!

Shure V15 Type IV

**SUPER TRACK IV™**

Stereo Dynetic® Phono Cartridge

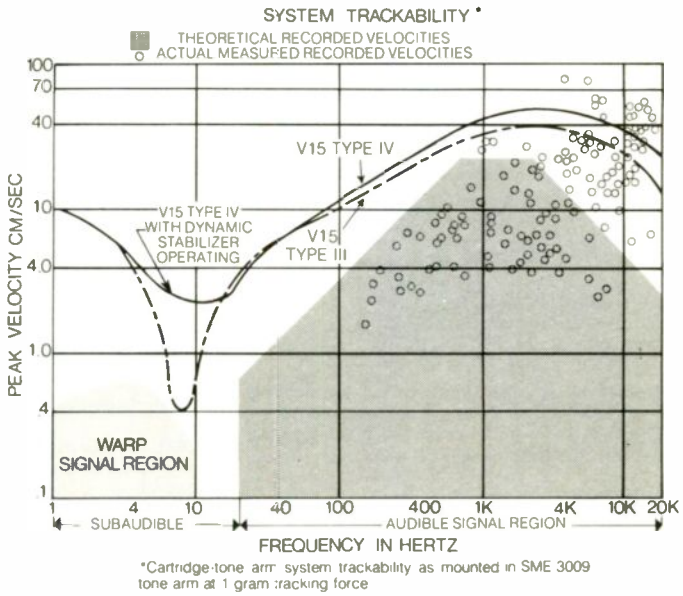



The creation of the new V15 Type IV is a tour de force in innovative engineering. The challenge was to design a cartridge that would transcend all existing cartridges in musical transparency, technical excellence, and uniformity. The unprecedented research and design disciplines that were brought to bear on this challenge over a period of several years have resulted in an altogether new pickup system that exceeds previous performance levels by a significant degree—not merely in one parameter, but in totality.

In fact, this pickup system has prevailed simultaneously over several extremely difficult music re-creation problems which, until now, have defied practical solutions. Most of all, this is an eminently musical cartridge which is a delight to the critical ear, regardless of program material or the rigorous demands of today's most technically advanced recordings.

## THE V15 TYPE IV OFFERS:

- Demonstrably improved trackability across the entire audible spectrum—especially in the critical mid- and high-frequency areas.




*Cartridge-tone arm system trackability as mounted in SME 3009 tone arm at 1 gram tracking force

- Dynamically stabilized tracking overcomes record-warp caused problems, such as fluctuating tracking force, varying tracking angle and wow.
- Electrostatic neutralization of the record surface minimizes three separate problems: static discharge; electrostatic attraction of the cartridge to the record; and attraction of dust to the record.
- An effective dust and lint removal system.
- A Hyperelliptical stylus tip configuration dramatically reduces both harmonic and intermodulation distortion.
- Ultra-flat response—individually tested to within ± 1 dB.
- Lowered effective mass of moving system results in reduced dynamic mechanical impedance for superb performance at ultra-light tracking forces.

For more information on this remarkable new cartridge, write for the V15 Type IV Product Brochure (ask for AL569), and read for yourself how far Shure research and development has advanced the state of the art.

SHURE®

Shure Brothers Inc., 222 Hartrey Ave., Evanston, IL 60204 In Canada: A. C. Simmonds & Sons Limited
Manufacturers of high fidelity components, microphones, sound systems and related circuitry.



CIRCLE NO. 72 ON READER SERVICE CARD

# 5 PHONO CARTRIDGES

### M-18E Phono Cartridge
Moving-coil phono cartridge with fixed-point pivot for the stylus cantilever mechanism; output 2.5 mV; frequency response 10-30,000 Hz; compliance 15 × $10^{-6}$ cm/dyne; tracking force 0.5-1.5 g; 0.2 × 0.8 mil elliptical diamond stylus; user-replaceable stylus mounts in magnetic mounting..... $225

### 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..... $175

## SHURE

### V15 Type IV Phono Cartridge
Moving-magnet type; output 4 mV at 5 cm/sec peak velocity (1000 Hz); frequency response 10-25,000


Hz; channel separation 25 dB at 1000 Hz; tracking force 0.75-1.25 g; 0.2 × 0.7 mil biradial hyperelliptical stylus; features viscous damped dynamic stabilizer; replacement stylus VN45HE..... $150

### V-15 Type III 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; 0.2 × 0.7 mil biradial elliptical stylus; replacement stylus VN35E ..... $90

### M95ED Phono Cartridge
Output 4.7 mV/ch at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; channel balance/separation ±2 dB/25 dB (1 kHz); tracking force 0.75-1.5 g; biradial elliptical stylus with nude diamond tip; replacement stylus N95ED..... $75
**M95EJ.** Same as M95ED except tracking force 1.5-3 g; replacement stylus N95EJ ..... $60

### M75ED Type 2 Phono Cartridge
Output 5 mV/ch at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; tracking force 0.75-1.5 g; 0.2 × 0.7 mil biradial elliptical stylus; replacement stylus N75ED Type II ..... $65
**M75G Type 2.** Same as M75ED Type 2 but with 0.6 mil spherical stylus; replacement stylus N75G Type 2..... $48

### M91E 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 N91E..... $60
**M91GD.** Same as M91E but with 0.6 mil spherical stylus; replacement stylus N91GD..... $55

### 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 25 dB (1 kHz); tracking force 1.5-3 g; 0.4 × 0.7 mil biradial elliptical stylus; replacement stylus N93E ..... $50

### M70EJ Phono Cartridge
Output 6.2 mV/ch 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..... $45
**M70B.** Same as M70EJ but with 0.6 mil spherical stylus; replacement stylus N70B..... $40

### M75B Type 2 Phono Cartridge
Output 5 mV/ch at 5 cm/sec peak velocity (1 kHz); frequency response 20-20,000 Hz; tracking force 1.5-3 g; 0.6 mil spherical stylus; replacement stylus N75B ..... $43
**M75EJ Type 2.** Same as M75B Type 2 but with 0.4 × 0.7 mil biradial elliptical stylus ..... $55

### 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 22 dB (1 KHz); compliance 25 × $10^{-6}$ cm/dyne; 0.2 × 0.7 mil biradial elliptical stylus; replacement stylus N55E..... $40

### 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); compliance 15 × $10^{-6}$ cm/dyne; 0.4 × 0.7 mil biradial elliptical stylus; replacement stylus N44E..... $35

### M3D Phono Cartridge
Moving-magnet type; output 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 ..... $23

### M24H Four-Channel Cartridge
For discrete and matrix four-channel and stereo operation; output 3 mV/ch at 5 cm/sec peak velocity (1 kHz); frequency response 20-50,000 Hz; channel balance/separation ±2 dB/22 dB (1 kHz); tracking force 1-1.5 g; hyperbolic tip linked to high-energy magnet via low-mass stylus assembly.... $85

### SME3009 Series III Tonearm
Integral carrying arm interchangeable for multi-cartridge use; low-friction pivots; high-precision, protected ball races on vertical axis, knife edges on horizontal axis; precise tracking force gauge (up to 2.5 g can be applied without gauge); balance system accommodates max. 12-g cartridges; antiskating force; fine adjustment 0-2.5 g; fluid-damped cueing control; gold-plated electrical contacts; adjustable fluid damper ..... $294

### SME3009 Series II Tonearm
Incorporates non-detachable shell for reduced weight; low-friction pivots for vertical axis and knife-edges for horizontal axis; bed slides on bedplate for tracking adjustment with protractor; arm mass divided by elastic coupling; lever-operated hydraulically damped cueing control; tracking force 1-1.5 g; cartridge weight 4-9 g ..... $162
**SME3009/S2.** Same as SME3009 Series II but with detachable shell ..... $174

## SIGNET

### TK7SU Phono Cartridge
Frequency response 5-45,000 Hz; output 2.7 mV at 5 cm/sec; channel balance/separation 0.75 dB/30 dB at 1000 Hz; tracking force ¾-1¾ g; nude square-shank minature Shibata stylus; micromass tapered tube cantilever; replacement stylus TKN3 ($100) ..... $175

### TK7E Phono Cartridge
Frequency response 5-30,000 Hz; output 2.7 mV at 5 cm/sec; channel balance/separation 0.75 dB/30 dB at 1000 Hz; tracking force ¾-1¾ g; 0.2 × 0.7-mil nude square-shank miniature elliptical stylus; micro-mass tapered tube cantilever; replacement stylus TKN2 ($75) ..... $150

### TK5E Phono Cartridge
Frequency response 10-30,000 Hz; output 4.2 mV at 5 cm/sec; channel balance/separation 1.0 dB/25 dB at 1000 Hz; tracking force ¾-1¾ g; 0.2 × 0.7-mil nude square-shank elliptical stylus; tapered tube cantilever; replacement stylus TKN1 ($50).... ..... $85

## SONUS

### Standard Series II

### Gold Phono Cartridges
Electromagnetically balanced cartridges with interchangeable styli among Gold models; output 0.8 mV ±2 dB; 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 ¾-1¼ g; weight 5.5 g.
**Blue Label.** Modified-line contact-form ground stylus designed for extended high-frequency response quadraphonic recordings ..... $140
**Red Label.** Ground elliptical stylus ..... $125
**Green Label.** Precision spherical stylus..... $110

### Silver Phono Cartridges
Similar in principal characteristics to Gold series; output 1.0 mV ±2 dB; 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 stylus suitable for quadraphonic recordings..... $80
**Silver "E".** Elliptical stylus ..... $70

### Standard Series

### Blue Label Phono Cartridge
Output 0.8 V ±2 dB at 1 cm/sec (1 kHz); frequency response 5-20,000 Hz ±1.5 dB; channel balance/separation ±2 dB/30 dB (1 kHz); compliance 50 × $10^{-6}$ cm/dyne; tracking force 0.75-1.25 g; load impedance/ch 47,000 ohms in parallel with 400 pF (250 pF for CD-4 records); 3 × 0.3 mil Pathemax diamond stylus; weight 5.5 g ..... $125
**Red Label.** Similar to Blue Label except frequency response 5-20,000 +2/−1 dB; 0.3 × 0.7 mil elliptical diamond stylus ..... $104
**Green Label.** Similar to Red Label except frequency response 5-20,000 Hz ±2 dB; 0.6 mil spherical stylus ..... $88

### Silver Label Phono Cartridges
Output 1 mV ±2 dB at 1 cm/sec (1 kHz); frequency response 5-20,000 Hz +2/−1 dB; channel balance/separation ±2 dB/30 dB (1 kHz); compliance 30 × $10^{-6}$ cm/dyne; tracking force 0.75-1.5 g; weight 5.5 g.
**Model P.** Incorporates 3 × 0.3 mil Pathemax diamond stylus; frequency response 20-45 kHz ±6 dB for CD-4 records; 250 pF for CD-4 records..... $70
**Model E.** Incorporates 7 × 0.3 mil elliptical stylus.. ..... $60

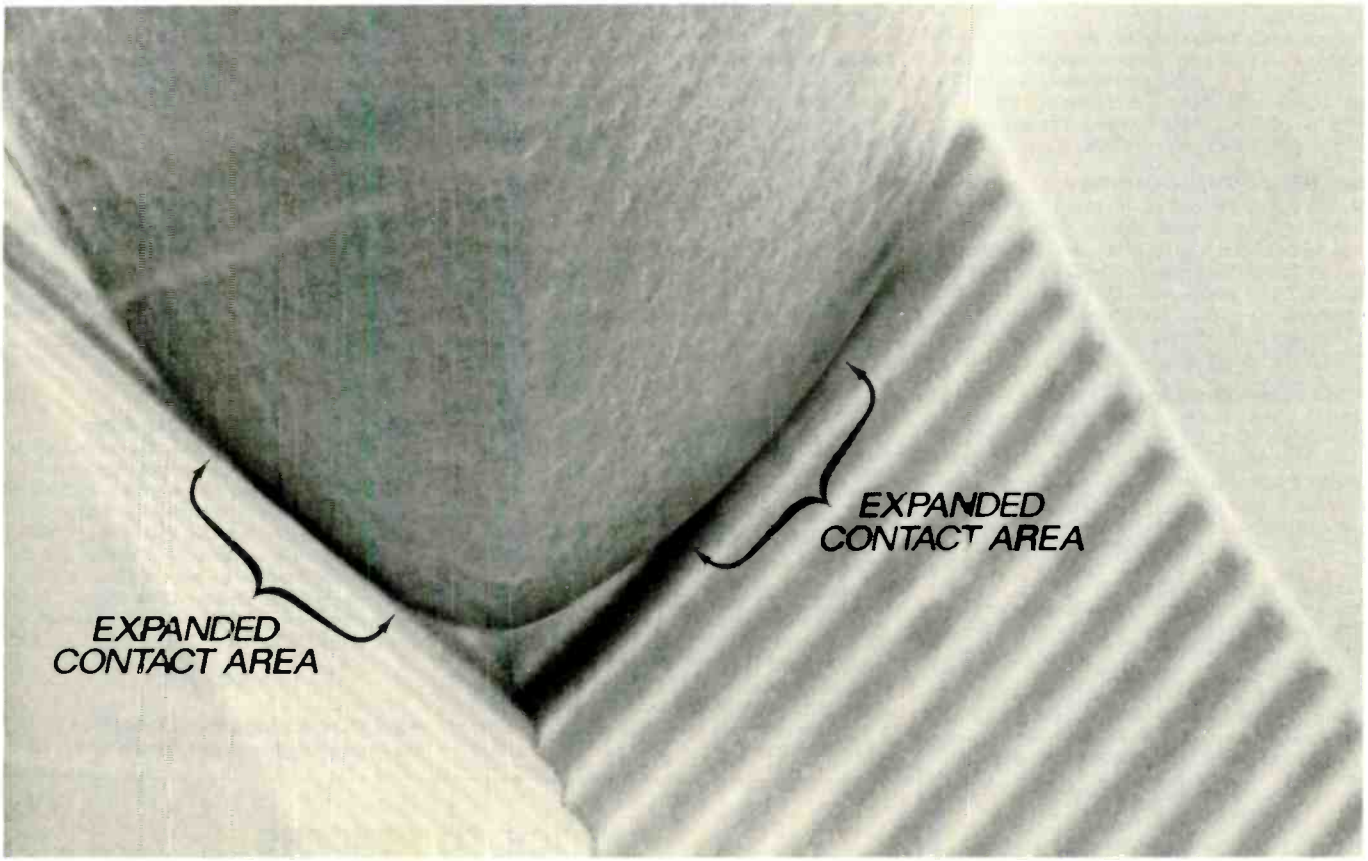
## STANTON

### 881S Phono Cartridge
Output 0.9 mV/cm/sec; frequency response 10-25,000 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; replacement stylus D81, D810 for mono LP's, D827 for 7B's ..... $150

### 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; 3 × 2.8 mil Stereohedron stylus;

# Better stereo records are the result of better playback pick-ups






Scanning Electron Beam Microscope photo of Stereohedron Stylus; 2000 times magnification. Brackets point out wider contact area.

# Enter the New Professional Calibration Standard, Stanton's 881S

Mike Reese of the famous Mastering Lab in Los Angeles says: "While maintaining the Calibration Standard, the 881S sets new levels for tracking and high frequency response. It's an audible improvement. We use the 881S exclusively for calibration and evaluation in our operation"

The recording engineer can only produce a product as good as his ability to analyze it. Such analysis is best accomplished through the use of a playback pick-up. Hence, better records are the result of better playback pick-up. Naturally, a calibrated pick-up is essential.

There is an additional dimension to Stanton's new Professional Calibration Standard cartridges. They are designed for maximum record protection. This requires a brand new tip shape, the Stereohedron®, which was developed for not only better sound characteristics but also the gentlest possible treatment of the record groove. This cartridge possesses a revolutionary new magnet made of an exotic rare earth compound which, because of its enormous power, is far smaller than ordinary magnets.

Stanton guarantees each 881S to meet the specifications within exacting limits. The most meaningful warranty possible, individual calibration test results, come packed with each unit.

Whether your usage involves recording, broadcasting or home entertainment, your choice should be the choice of the professionals... the STANTON 881S.

STANTON

*For further information write to Stanton Magnetics, Terminal Drive, Plainview, New York 11803*

CIRCLE NO. 74 ON READER SERVICE CARD

## 5 PHONO CARTRIDGES

weight 6.3 g with self-supporting (1 g) brush; replacement stylus 6800EEE-S, D6810 for LP's, D6827 for 78's..... $115

**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 × 0.7 mil elliptical diamond stylus; weight 5.5 g; replacement stylus D6800EL ..... $90

**681 Triple-E Phono Cartridge**
Output 0.7 mV/cm/sec ±2 dB; frequency response 10-12,000 Hz ±1.5 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; 0.2 × 0.7 mil elliptical diamond stylus; weight 5.5 g with self-supporting (1 g) brush; replacement stylus D6800EEE, D6810 for LP's, D6827 for 78's ..... $90

**681A Phono Cartridge**
Output 1 mV/cm/sec ±2 dB; frequency response 10-10,000 ±0.5 dB; channel balance/separation ±2 dB/35 dB (1 kHz); load impedance 47,000 ohms; load capacitance 275 pF; tracking force 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 ..... $72

**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 × 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 ..... $72

**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 × 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 .... $72

**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 × 0.7 mil elliptical diamond stylus; weight 5.5 g with self-supporting (1 g) brush; replacement stylus D680 ..... $63

**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 × 0.7 mil elliptical diamond stylus; weight 5 g; replacement stylus D6003EE, D6010 for LP's, D6027 for 78's..... $55
**600E.** Similar to 600EE but frequency response 20-20,000 Hz ±2 dB; 0.4 × 0.7 mil elliptical diamond stylus; tracking force 1.5-3 g; replacement stylus D6004E ..... $50
**600A.** Similar to 600E but with 0.7 mil stylus; tracking force 2-4 g; replacement stylus D6071A... ..... $45

**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 × 0.7 mil elliptical diamond stylus; weight 5 g; replacement stylus D5100EE, D5110 for LP's, D5127 for 78's..... $40

**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..... $35

**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 × 0.7 mil elliptical diamond stylus; weight 5 g; replacement stylus D5100E, D5110 for LP's, D5127 for 78's..... $35

**500A Phono Cartridge**
Output 1 mV/cm/sec ±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..... $30

### *4-Channel*

**780/4DQ Four-Channel Cartridge**
Designed to play discrete four-channel records as well as standard stereo discs or four-channel matrix-derived compatible records; response 10-50,000 Hz (when terminated in recommended load of 100 k ohms and 100 pF); tracking force 1-3 g; channel separation 35 dB; output 0.7 mV/cm/sec ±2 dB; inductance and resistance (each channel) 350 mH, 750 ohms; features "Quadrahedral" stylus.... $125
**780/Q.** Same as 780/4DQ except frequency response is 10-45,000 Hz ..... $75

### YAMAHA

**HA-1 MC Cartridge Head Amplifier**
See Amplifier Section under "Yamaha" ..... $270



## NOTICE TO READERS

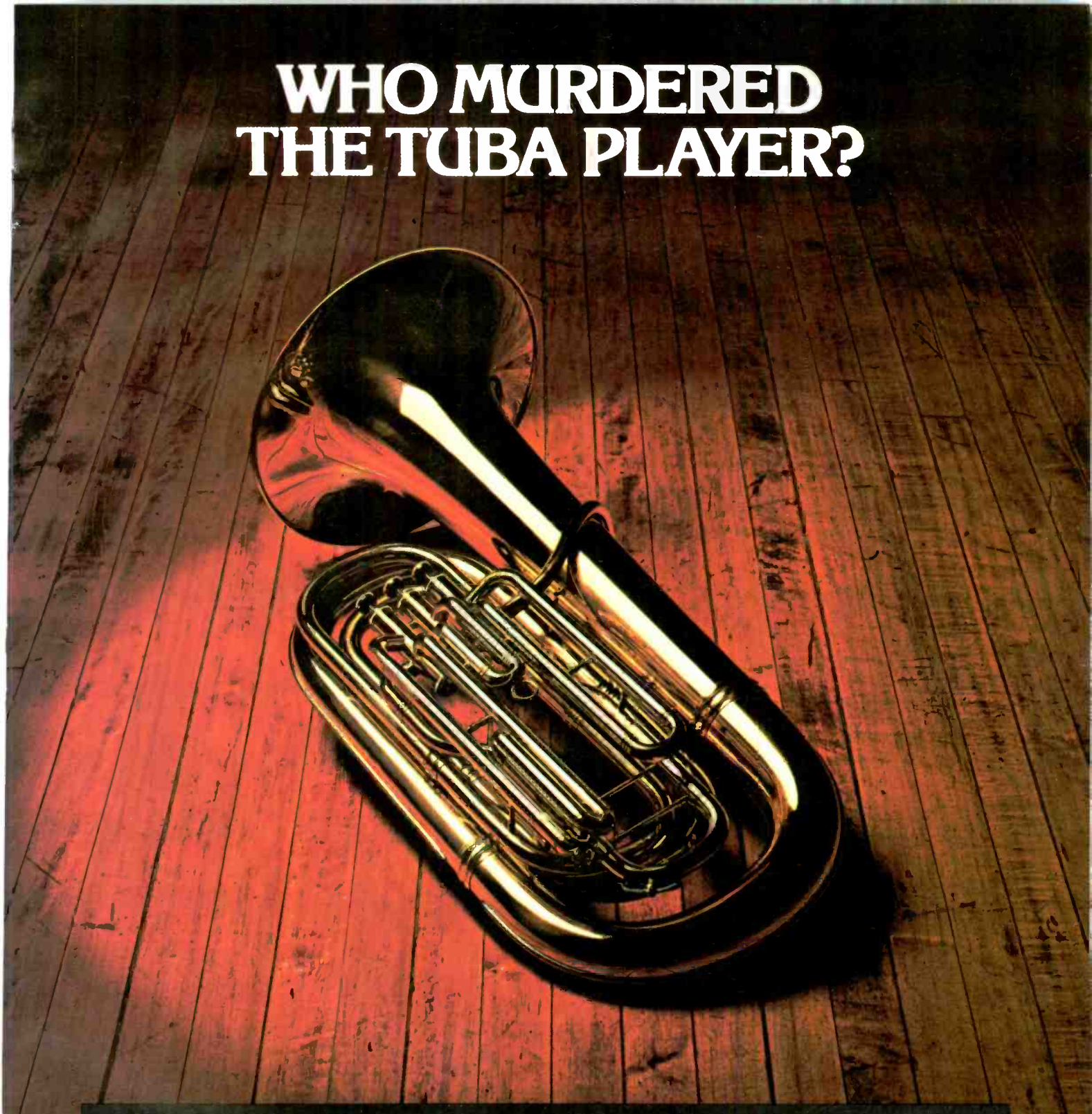
We consider it a valuable service to our readers to continue, as we have in previous editions of Stereo Directory & Buying Guide, to print the price set by the manufacturer or distributor for each item described as available at presstime. However, almost all manufacturers and distributors provide that prices are subject to change without notice.

We would like to call our readers' attention to the fact that during recent years the Federal Trade Commission of the U.S. Government has conducted investigations of the practices of certain industries, in fixing and advertising list prices. It is the position of the Federal Trade Commission that it is deceptive to the public, and against the law, for list prices of any product to be specified or advertised in a trade area, if the majority of sales of that product in that trade area are made at less than the list prices.

It is obvious that our publication cannot quote the sales price applicable to each trading area in the United States. Accordingly, prices are listed as furnished to us by the manufacturer or distributor. It may be possible to purchase some items in your trading area at a price that differs from the price that is reported in this edition.

The Publisher

# WHO MURDERED THE TUBA PLAYER?



He disappeared right in the middle of Tchaikovsky's "1812 Overture." The victim of a low definition cartridge.

But he could have been saved by the audio engineering achievement in the ADC patented induced magnetic cartridge.

With today's sophisticated "direct to disc" records it takes a state of the art cartridge to accurately capture the sonic quality of the recordings.

ADC has developed a unique design that sets the new standard of excellence.

The remarkable ZLM model features an ELIPTIC® stylus design that effects the optimum balance between the stereo reproduction advantages of the elliptical stylus' high frequency tracing shape and the longer, lower wearing vertical bearing radius typical of the Shibata shape.

The result: unparalleled definition and clarity of sound and unsurpassed record protection while tracking at ½ to 1½ grams.

Because of its ultra linear frequency response, flat ±1dB 10 Hz to 20 kHz and 1½ dB 20 kHz to 26 kHz, every instrument sounds alive and natural.

If you'd like the complete facts about the ADC ZLM cartridge, simply circle our reader service number on the reader service card, and we'll send you the ADC brochure and a free record care gift.

Be nice to tuba players and other musicians. And invest in something that understands them, and protects them.

An ADC cartridge.


ADC
A BSR COMPANY

Audio Dynamics Corporation, Pickett District Road, New Milford, Connecticut 06776 • Distributed in Canada by BSR (Canada) Ltd., Rexdale, Ontario

CIRCLE NO. 10 ON READER SERVICE CARD

# the unreel deck

**The AIWA AD-6900U. Super specs and sound quality we defy any reel-to-reel to beat. Plus a lot of extras.**

For openers, the AD-6900U delivers a frequency response of 20 to 20,000 Hz and an S/N Ratio of 68 dB using FeCr tape with Dolby* on. And only 0.04% WOW and FLUTTER (WRMS). Great numbers, but there's more.

**The exclusive AIWA Flat Response Tuning System (FRTS) gets sensational sound out of any kind of tape on the market.**

With just the push of a button, FRTS will use its own circuitry to measure the precise bias level of any kind of tape and adjust for the flattest possible response. And with the built-in 400 Hz and 8 kHz oscillators, the AD-6900U offers the most precise test recording possible, so you know exactly what to expect before you record. Coupled with AIWA's exclusive combination 3-head V-cut design, you can expect absolute optimum results in recording, playback and test.

Exclusive AIWA 3 head V-cut design

**The AD-6900U features Full Logic operation and exclusive Double Needle Meters.**

Full logic feather-touch push button controls and dual motor operation make the going easy, and the feather-touch operation with Cue and Review can't be found on any other cassette deck. And no other reel-to-reel or cassette deck offers Double Needle Meters that combine both VU and Peak functions on each meter.

**Plus a full array of extras, including AIWA's exclusive SYNCHRO-RECORD.**

When you use the AD-6900U with AIWA's AP-2200 turntable, Synchro-Record activates recording automatically when the record is cued, and stops when the tone arm lifts. Mic/line mixing, oil-damped cassette ejection, Double-Dolby Noise Reduction with fully adjustable calibration, optional RC-10 remote control, low profile design and your choice of rich wood side panels or tough rack-mount handles make this deck an unparalleled value.

RC-10 Remote Control

The AD-6900U is the absolute deck. When you hear it, when you use it, you'll agree it's UNREEL.

**AIWA®**

Distributed in the U.S. by: **AIWA AMERICA INC.**, 35 Oxford Drive, Moonachie, New Jersey 07074 • Distributed in Canada by: SHRIRO (CANADA) LTD.
*Dolby is a trademark of Dolby Laboratories, Inc.

CIRCLE NO. 5 ON READER SERVICE CARD

# 6 CASSETTE TAPE MACHINES

## AIWA

### AD-6900 Cassette Deck

Front-loading stereo cassette deck with double Dolby noise-reduction system; double-gap ferrite

erase head and V-cut record/play combination head; 38-pulse FG servo motor and electronically-controlled two-speed dc motor; flat response tuning system for bias equalization of all tape types; dual VU and peak-reading meters; feathertouch logic controls; cue/review facility (optional); rec-mute with muting time indicator; memory rewind; timer standby mechanism; stop/start record; oil-damped cassette ejection; mic/line mixing; line input jack; wow and flutter 0.04% wrms; S/N 68 dB (FeCr with Dolby); frequency response 25-14,000 Hz +2/−3 dB (LH tape), 25-17,000 Hz +2/−3 dB ($CrO_2$ tape), 25-18,000 Hz +2/−3 dB (FeCr tape); fast-winding time 65 sec (C-60); 120 mm H × 450 mm W × 327 mm W..... $800

**RC-10.** With remote control..... $60

### AD-6800 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; dual-needle meters show VU (average) and peak level for each channel; selectable peak hold; front-panel bias adjust for three tape types, plus bias-calibration oscillator; two heads plus special bias-test head; servo capstan motor plus dc reel motor; wow and flutter 0.05% wrms; S/N 65 dB (Dolby on, FeCr tape); frequency response 20-19,000 Hz ±3 dB (FeCr tape), 20-16,000 Hz ±3 dB (LH tape); fast-winding time 90 sec (C-60); memory rewind; limiter; separate bias and equalization selectors; oil-damped cassette ejection; front-panel (DIN) record/play jack; separate record and output level controls; timer record provision; 6⅜" H × 17¾" W × 13⁵/₁₆" D. $650

### AD-6550 Cassette Deck

Front-loading cassette deck with Dolby noise-reduction system and remaining tape time meter; 38-pulse FG servomotor; wow and flutter 0.05% wrms; S/N 65 dB (Dolby on, FeCr tape); frequency response 30-15,000 Hz ±3 dB (FeCr and $CrO_2$ tape), 30-13,000 Hz ± 3 dB (LH tape); fast-winding time 90 sec (C-60); has ferrite guard head; bias fine adjustor and separate bias and equalization selectors; oil-damped cassette ejection; memory rewind; two VU meters and two-step peak indicator lamps; 5¹³/₁₆" H × 16⁹/₁₆" W × 13" D..... $430

### AD-6400 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; three-step tape selector switches; bias and equalizer selectors; LH bias fine tuning; 38-pulse FG servomotor; ferrite guard tape head; wow and flutter 0.05% wrms; S/N 65 dB (Dolby on, FeCr tape); frequency response 20-17,000 Hz (FeCr tape), 20-17,000 Hz ($CrO_2$ tape), 20-15,000 Hz (LH tape); fast-winding time 90 sec (C-60); two-step peak-level indicator lamps; front-panel VU meters; oil-damped cassette ejection; front-panel (DIN) record/play jack; separate record and output level controls; timer record provision; 5¹³/₁₆" H × 16⁹/₁₆" W × 13" D..... $380

### AD-6350 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; permalloy head; dc servo motor; bias fine adjustor; three-step tape selector switches; rec-mute control; LED VU and peak-level indicators; oil-damped eject; built-in timer standby; full auto stop; cue and review; mechanical pause; line/mic input selector; record indicator lamp; wow and flutter 0.08% wrms; S/N 65 dB (FeCr tape with Dolby); fast-winding time 85 sec (C-60); 5¹³/₁₆" H × 16⁹/₁₆" W × 13" D..... $325

### AD-6300 Cassette Deck

Front-loading cassette deck with Dolby noise-reduction system; dc servomotor; wow and flutter 0.09%; S/N 60 dB (Dolby on, FeCr tape); frequency response 30-14,000 Hz (LH tape), 30-16,000 Hz ($CrO_2$ and FeCr tapes); fast-winding time 85 sec (C-60); interlocked Dolby-MPX filter switch; three-step bias and equalization; oil-damped cassette ejection; peak level indicator signals +5 dB level; cue and review; full automatic stop; 6⅜" H × 16⁹/₁₆" W × 11¹³/₁₆" D..... $260

**SB-10E.** Side wood panels for AD-6300..... $18

### AD-1250 Cassette Deck

Slant-type housing cassette deck with Dolby noise-reduction system; permalloy head; dc servomotor; wow and flutter 0.09%; S/N 60 dB (Dolby on, FeCr tape); frequency response 30-14,000 Hz (LH tape), 30-16,000 Hz ($CrO_2$ and FeCr tape); fast-winding time 85 sec (C-60); three-step bias and equalization; oil-damped cassette ejection system; cue and review; full automatic stop mechanism; 5¹/₁₆" H × 15⁵/₁₆" W × 10⁷/₈" D..... $240

## AKAI

### GXC-570D Cassette Deck

Vertical-style front-loading stereo cassette deck with dual-process Dolby noise-reduction; GX combination record/playback head, for tape/source monitoring plus one erase head; ac servo capstan motor plus two dc motors for fast-forward and rewind; closed-loop dual capstan drive system, Sensi-Touch; full-logic function controls; automatic playback repeat, pitch control for playback (±5%); meters switchable from VU to peak level; memory rewind; mic/line mixing; detent-type input/output controls; remote-control operation (with optional RC-18); electrically operated top control panel; damped cassette carriage; wow and flutter 0.06% wrms; S/N 62 dB (with Dolby above 5 kHz); frequency response 30-19,000 Hz (FeCr tape); dist. 1% (1000 Hz); 10" H × 17.3" W × 9" D..... $900

### GXC-730D Bidirectional Deck

Auto/manual reverse, record and playback; GX head; Dolby noise reduction; ADR system; memory rewind; limiter; tape selector; auto-stop; locking pause; solenoid-assisted full-function change controls illuminated direction indicators; VU meters; peak level indicator lamp; output level control; reverse selector switch for continuous play or shut-off; wow and flutter 0.08% wrms; S/N 50 dB at +3 VU; dist. 1.5% (1000 Hz, 0 VU); Dolby improves up to 10 dB above 5000 Hz; 6.9" H × 17.3" W × 11.9" D..... $585

### GXC-725D Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; electronically controlled dc motor; GX record-play head and one erase head; wow and flutter 0.06% wrms; frequency response 35-16,000 Hz ±3 dB ($CrO_2$ tape); dist. 1.2% (0 VU, 1 kHz); S/N 51 dB (Dolby off, +5 VU); two line out and one headphone jack; two mike and two line in jacks; four-position tape selector; peak level indicator; two VU meters; automatic stop; tape/source monitoring; multiplex filter; 6.5" H × 17.3" W × 11.2" D..... $400

### GXC-709D Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; one GX record/play head and one erase head; wow and flutter 0.06% wrms; frequency response 35-15,000 Hz ±3 dB ($CrO_2$ tape); dist. 1.5% (0 VU, 1 kHz); S/N 51 dB (Dolby off, +3 VU); two line out and one headphone jack; two mike and two line in jacks; electronically controlled dc motor; automatic stop; multiplex filter; mike/line mixing; memory rewind; two peak-level indicators; two VU meters; 6.5" H × 17.3" W × 11.2" D. $360

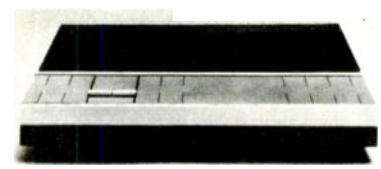
### CS-707D Cassette Deck

Front-loading stereo cassette deck with Dolby noise reduction; memory rewind; limiter; peak level indicator; full-release auto-stop; tape selector switch; locking pause; full-function operating controls; multiplex filter switch; vertical headblock assembly; illuminated VU meters; mike/line mixing; output level control; electronically controlled dc motor; wow and flutter 0.08% wrms; S/N 50 dB at +3 VU; dist. 1.5% (1000 Hz 0 VU); walnut-grained vinyl cover; 6.4" H × 17.3" W × 12.0" D..... $280

## BANG & OLUFSEN

### Beocord 5000 Cassette Deck

Top-loading stereo cassette deck with automatic Dolby noise-reduction system; dual capstan; two



servomotors; Sendust record/playback tape head; automatic bias selection; automatic tape head demagnetization; stainless-steel touch plate control panel with on/off, Dolby out, fade in/out, record, eject, rewind, fast forward, and stop controls; left and right slide-lever volume controls; illuminated cassette tray; illuminated peak program meters (−25 to +3 dB); slide-rule type peak-reading all-electronic "meters"; wow and flutter (DIN) ±0.1%; S/N (DIN) 57 dB ($CrO_2$ tape, Dolby off), 65 dB ($CrO_2$

# 6 CASSETTE TAPE MACHINES

tape, Dolby on); frequency range (DIN) 30-15,000 Hz; fast forward/rewind time 60 sec; speed deviation ±0.5%; sleek wood grain and stainless-steel cabinet design; 3 1/8" H × 18 1/2" W × 11" D.... $595

## B.I.C

All BIC cassette decks are two-speed (1 7/8 ips and 3 3/4 ips) front-loading machines with Dolby noise reduction; broadband electronics (balanced bias oscillator, bias trapping, independent record EQ current, phase-error prevention); high-speed tape handling (C-60 rewind time 45 sec); stereo/mono mike switching; six-position bias/EQ switching; tachometer feedback dc servo motor; dual illuminated peak-reading meters.

### T-3 Cassette Deck

Three-head, dual-capstan machine; four separate Dolby circuits; "chameleon" record indicator LED

turns from green to red at distortion levels; memory; record calibration; MPX filter; output and headphone level controls; frequency response 25-19,000 Hz ±3 dB (1 7/8), 25-22,000 Hz ±3 dB (3 3/4); S/N (A-weighted, Dolby in, $CrO_2$ tape) 63 dB (1 7/8), 67 dB (3 3/4); wow and flutter 0.05% wrms (1 7/8), 0.035% wrms (3 3/4); THD 1.8% (1 7/8), 1.5% (3 3/4); output 2 V rms into 10,000 ohms (line), 0.7 V rms into 100 ohms (phones); 6 7/16" H × 17 15/16" W × 10 1/8" D ..... $500

### T-2 Cassette Deck

Two-head machine; "chameleon" record indicator LED; MPX filter; output and headphone level controls; frequency response 30-18,000 Hz ±3 dB (1 7/8), 30-21,000 Hz ±3 dB (3 3/4); S/N (A-weighted, Dolby in, $CrO_2$ tape) 62 dB (1 7/8), 66 dB (3 3/4); wow and flutter 0.06% wrms (1 7/8), 0.04% wrms (3 3/4); THD 1.9% (1 7/8), 1.6% (3 3/4); output 2 V rms into 10,000 ohms (line), 0.7 V rms into 100 ohms (phones); 6" H × 16 3/4" W × 9 1/4" D..... $330

**T-1.** Similar to T-2, except no "chameleon" LED, MPX filter, memory, and output or headphone controls; frequency response 35-17,000 Hz ±3 dB (1 7/8), 35-20,000 Hz ±3 dB (3 3/4); S/N (A-weighted, Dolby in, $CrO_2$ tapes) 61 dB (1 7/8), 63 dB (3 3/4); wow and flutter 0.06% wrms (1 7/8), 0.04% wrms (3 3/4); THD 2.0% (1 7/8), 1.7% (3 3/4); output 1 V rms into 10,000 ohms (line), 0.5 V rms into 150 ohms (phones); 6" H × 15 1/2" W × 9 1/4" D..... $280

## CENTREX by PIONEER

### RK-888 Portable Cassette Recorder

Portable combines AM-FM radio with cassette recorder/player; frequency response 50-10,000 Hz (standard tape), 50-12,000 Hz (chrome tape); wow and flutter 0.1% rms; auto/manual recording; cue and review; pause control; sleep feature; automatic shut-off; built-in condenser mike; selector switch for chrome/standard tape; meter for tuning signal, recording level, battery life; memory tape counter; mike mixing with source and microphone; separate level control; line-in, line-out and monitor jack; separate bass, treble, loudness controls; headphone jack; two-way speaker with 6 1/2-in woofer; audio output 2 W at 1 kHz, 0.5% THD; three-way power: ac, battery, or car cigarette lighter; 9 3/8" H × 14 3/8" W × 4 1/4" D; weight 10 lb, 2 oz..... $180

### RK-114 Portable Cassette Recorder

Portable cassette recorder with AM-FM radio; three-digit tape counter; play and record from radio and mike; headphone jack; 4 3/4-in speaker; built-in condenser microphone; cue and review; record level/battery/tuning meter; auto shut-off in all modes; uses four "D" batteries; fast-winding time 80 sec (C-60); frequency response 80-10,000 Hz; S/N 46 dB; wow and flutter 0.2% wrms; 8" H × 12 1/4" W × 3 3/4" D ..... $130

### RK-113 Portable Cassette Recorder

Portable cassette recorder with AM-FM radio; 4 3/4-in speaker; built-in condenser microphone; three-way power; cue and review; automatic shut-off in record and play modes; three-position speaker monitor; uses four "D" batteries; frequency response 125-6300 Hz; S/N 40 dB; wow and flutter 0.3%; fast-winding time 80 sec (C-60); 8" H × 12 1/4" W × 3 3/4" D ..... $110

### KD-12 Portable Cassette Recorder

Provides automatic or manual control of recording level; automatic shut-off in all modes; built-in condenser mike; cue and review, pause controls; digital tape counter; meter for recording level and battery condition; has tone control, headphone jack; operates from four "D" cells (not included) or 117-V ac (optional car battery adaptor available); 3" H × 6 1/8" W × 11 1/8" D ..... $95

**KD-11.** Similar to KD-12 but LED indicator for recording level and battery condition; ac bias and erase; remote mike jack with on/off external speaker jack ..... $70

## DENON

### DR-750 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; dual capstans and direct-detect servo motor system; 1/4-track, two heads; record/

play head is Sendust tip ferrite, erase head is ferrite; four-position tape selector with full-range bias adjust control; muted recording/pause button; timer recording and timer playback feature; memory rewind; tape counter; MPX filter switch; microphone recording and line-mixing recording; two peak-reading VU meters; feather-touch button controls for pause/mute, record, play, stop, fast-forward, and rewind; wow and flutter 0.045% wrms; frequency response 35-18,000 Hz ($CrO_2$), 35-16,000 Hz (LH); fast-forward/rewind time 70 sec (C-60); S/N 65 dB (Dolby on, $CrO_2$ tape); input impedance 50k ohm, −20 dB; 12" H × 16 1/2" W × 9" D..... $1400

### DR-350 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; electrical control dc motor system; 1/4-track, two heads; record/play head is hard permalloy, erase head is double-gap high-density ferrite; three-position equalizer; full-range bias fine adjust control; timer recording and timer playback feature; tape counter; light-touch stop control; when eject button is depressed the tape transport function comes to a full-stop during any of the operational modes; two peak-reading VU meters; wow and flutter 0.058% wrms; frequency response 35-15,500 Hz ±3 dB ($CrO_2$), 35-15,000 Hz ±3 dB (LH); fast-forward time 95 sec (C-60), fast rewind time 75 sec (C-60); S/N ratio 64 dB (Dolby on, $CrO_2$ tape); input impedance 50k ohm, −21 dB; 6 3/8" H × 17" W × 11 1/2" D..... $450

## DUAL

### 939 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system and FM decoding; has auto reverse; continuous playback and bidirectional recording; variable fade/edit control permits fade out of recording errors during playback; continuous-pole sync motor with double capstan drive system; hard permalloy heads; LED level indicators switchable from VU to peak; separate bias and equalization controls for FeCr, $CrO_2$ and ferric-oxide tape; line and mike mixing; separate channel output and headphone level controls; selectable peak limiter; memory stop; wow and flutter 0.04% wrms; frequency response 20-16,000 Hz (ferric-oxide), 20-16,500 Hz ($CrO_2$), 20-17,000 Hz (FeCr); S/N 64 dB (Dolby on, ferric-oxide, $CrO_2$); HD 0.5% at 0 VU (FeCr); fast winding time 45 sec (C-60); 17.3" × 9" × 11.8" ..... $580

### 819 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; high-torque dc servo-control mo-

tor with integral frequency generator; direct gear-drive fast forward and rewind; hard permalloy record/playback head; memory operative in both directions; three-way bias and equalization control; electronic fade/edit control; level controls for headphone and output; equalized peak-reading meters with electronically-damped return; line/mic mixing; photo-electric tape-motion monitoring; switchable overload protection; wow and flutter 0.05% wrms; frequency response 20-16,000 Hz (ferric-oxide), 20-16,500 Hz ($CrO_2$), 20-17,000 Hz (FeCr); S/N 64 dB (Dolby on, ferric-oxide, $CrO_2$); HD 0.7%; fast winding time 65 sec (C-60); 17.5" × 6" × 14.5" ... ..... $430

### 809 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; high-torque dc servo-control motor with integral frequency generator; hard permalloy record/playback head; separate three-way bias and equalization setting for all tape types; logic-controlled intermode switching; full automatic shut-off, all modes; wow and flutter 0.06% wrms; frequency response 20-15,500 Hz (ferric-oxide), 20-16,000 Hz ($CrO_2$), 20-16,500 Hz (FeCr); S/N 63 dB (Dolby on, ferric-oxide, $CrO_2$); HD 0.7%; fast winding time 110 sec (C-60); 17.5" × 6" × 14.5" . ..... $300

## EUMIG

### CCD Stereo Cassette Deck

Top-loading stereo cassette deck with opto-electronic servo-controlled capstan motor, dc controlled

mixing circuits, and LED display record-level indicators; three heads; built-in tone generator for playback head azimuth adjustment and Dolby calibration; full solenoid/logic operation with LED indica-

# INTRODUCING THE TEAC C-1.

## We took a data recorder made for computers and built a cassette deck made for connoisseurs.


If you're critical about what you listen to, you should see the new TEAC C-1.

The C-1 has a transport directly derived from recorders built by our Instrumentation Division for the world's major computer manufacturers.

Its motors are rated for thousands of hours of continuous use. Servo controls have a reliability factor of $10^8$ and function switches are built to withstand repeated use in excess of 100,000 times.

### WHY THE TRANSPORT IS SO IMPORTANT

For the C-1 to deliver the kind of virtuoso performance we promise, it has to meter—not pull—tape with the utmost reliability. And that's a matter of mechanics, not electronics.

The sad fact is, many tape recorders are built by electronics companies with a short history of transport design. And transport mechanics is where most tape recorders break down.

Transport design—using materials that move and interact—is no simple science. It's an art that takes a long time to learn.

The art of mechanical design is one we've been practicing for more than 25 years. And it reaches a high point with the C-1.

### THE TRANSPORT

The C-1 transport is a 3-motor/3-head dual capstan system. The closed loop dual capstans are linked with twin belts to produce a wow and flutter spec of just 0.04%. The capstan motor is phase-locked loop, so it's free from voltage and frequency fluctuations.

C-1 pinch rollers are self-adjusting to get optimum tape pressure onto the capstans. Transport controls are LSI logic-operated and positive. Separate right and left input controls are cross-geared with friction coupling for one-hand control of channels.

A pitch control lets you vary tape speed up to ±4% (because tapes you get from others may not be as accurately recorded as those you give).

### THE ELECTRONICS

There isn't a cassette deck made that can beat this combination of specs: overall frequency response with $CrO_2$—20-20kHz, other—20-18kHz; Wow and Flutter—0.04% NAB, weighted; and Signal-to-Noise ratio—−70dB with Dolby at 5kHz and up to −90dB with optional dbx interface module (Rx-8).

Another unique feature to the C-1, are plug-in bias EQ/cards that let you optimize the electronics to a specific brand of tape. Additional cards are available for various brands of tape. For distortion-free recording, peak program meters respond to signals with an attack time of 10 milliseconds in all audio frequencies and give you an accurate display of peak level up to +5dB.

Other C-1 features include an input selector switch for Mic/Mic-with-attenuation (20dB pad)/Line; a timer control for automatic record/playback start; a memory function for Auto-Stop/Repeat; and a folding stand for vertical or angled use. Naturally, the C-1 can also be rack mounted.

### HOW MUCH

The TEAC C-1* has a suggested list price of $1300, a lot of money by some standards. But when you consider its computer/instrumentation heritage—and what that means in ferms of how long and how well it will run—it could be the most inexpensive tape recorder you can buy.

**TEAC®**

First. Because they last.



*Also available in brushed aluminum.

TEAC Corporation of America • 7733 Telegraph Road • Montebello, CA. 90640 • In Canada TEAC is distributed by White Electronic Development Corporation (1966) Ltd.

CIRCLE NO. 82 ON READER SERVICE CARD

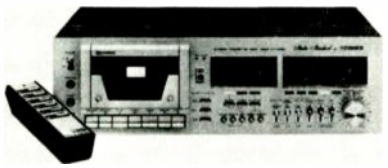
# 6 CASSETTE TAPE MACHINES

tors, memory rewind and full remote control accessory included; automatic or manual record level setting; separate headphone volume control; frequency response 20-20,000 Hz ±3 dB (FeCr and $CrO_2$), 30-16,000 Hz (ferric); S/N (with Dolby) 72 dB (FeCr), 68 dB ($CrO_2$), 66 dB (ferric); wow and flutter 0.05% wrms; 5.4" H × 17.1" W × 11.8" D.. ..... $1300

## FISHER

### CR5150 Cassette Deck

Front-loading stereo cassette deck with dual-process Dolby noise reduction system; dc-servo and dc-



governor motors with dual-capstan drive; three ferrite heads; wow and flutter 0.04% wrms; S/N 55 dB (Dolby off), 64 dB (Dolby on); channel separation 40 dB; signal crosstalk −70 dB; frequency response 30-15,000 Hz ±3 dB (normal tape), 30-18,000 Hz ±3 dB ($CrO_2$ tape); THD at O VU 1.4%; fast-winding time 84 sec (C-60); input/impedance 0.2 mV/600 ohms (mic), 100 mV/100,000 ohms (line, FM Dolby); output/impedance 1 V/5,000 ohms (line), stereo headphone jack. Features remote wireless control for stop/play/record/rewind/fast forward/pause modes; solenoid control buttons; digital display with electronic tape counter and digital timer capabilities; LED peak indicators; record level VU meters; defeatable FM subcarrier filter; switchable limiter; bias and equalization switches for normal, $CRO_2$, and FeCR tapes; Dolby switch; FM subcarrier filter. Includes six-function transmitter; walnut finish. 5⅓" H × 17⅓" W × 11⅞" D ..... $700

**CR5125.** Similar to CR5150 except remote wireless control for pause mode only; no digital display; includes remote control transmitter; 4¾" H × 17⅓" W × 12¼" D ..... $600

### CR5120 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; one dc Hall Element servomotor and one dc governor motor; three ferrite heads; wow and flutter 0.05% wrms; S/N 62 dB (Dolby on); channel separation 40 dB; signal crosstalk −70 dB; frequency response 30-15,000 Hz ±3 dB (normal tape), 30-17,000 Hz ±3 dB ($CrO_2$ tape); THD at O VU 1.4%; tape speed variation ±0.8%; fast-winding time 84 sec; two VU meters and peak-indicating LED; input/impedance 0.2 mV/600 ohms (mike), 100 mV/100,000 ohms (aux., FM Dolby); output/impedance 1 V/5000 ohms (line), headphone jack; tape select switch for normal, $CrO_2$ and FeCr tape; memory rewind; walnut-grain vinyl veneer finish; 6⅜" H × 17⅛" W × 12½" D..... $400

### CR5115 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; one dc servomotor; three ferrite heads; wow and flutter 0.07% wrms; S/N 60 dB (Dolby on); channel separation 38 dB; signal crosstalk −70 dB; frequency response 30-14,000 Hz ±3 dB (normal tape), 30-16,000 Hz ±3 dB ($CrO_2$ tape); THD at O VU 1.5%; tape speed variation ±1%; fast-winding time 90 sec; two VU meters; input/impedance 0.2 mV/600 ohms (mike), 100 mV/100,000 ohms (aux., FM Dolby); output/impedance 1 V/5000 ohms (line), headphone jack; tape select switch for normal, $CrO_2$, and FeCr tape; walnut-grain vinyl veneer finish; 6⅜" H × 16⅜" W × 11¾" D ..... $300

### ER8150 Cassette/8-Track Deck

Combination stereo cassette and 8-track deck. Cassette section: front-loading; dc-governor motor; capstan drive; two heads, ferrite and super permalloy; wow and flutter 0.09% wrms; S/N 50 dB (Dolby off), 56 dB (Dolby on); frequency response 40-12,000 Hz ±3 dB; THD 1.8% at O VU; fast-forward/rewind time 100 sec. 8-Track section: front-loading; dc-governor motor; one permalloy head; wow and flutter 0.15% wrms; S/N 46 dB (Dolby off), 52 dB (Dolby on); frequency response 40-12,000 Hz ±3 dB; THD 1.0% at O VU; unit has two record level VU meters; two input level controls; FM Dolby decoder. 6" H × 20" W × 10¹⁵/₁₆" D ..... ..... $300

### CR4025 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; dc-governor motor; capstan drive system; two heads, ferrite and Mu-Metal; tape selector switch for normal and $CrO_2$ tape; wireless remote control with pause function; two input level controls; twin VU meters; three-digit tape counter; wow and flutter 0.09% wrms; S/N 50 dB (Dolby off), 56 dB (Dolby on); frequency response 40-12,000 Hz ±3 dB (normal tape), 40-14,000 Hz ±3 dB ($CrO_2$ tape); THD 1.8% at O VU; fast-forward and rewind time 100 sec; 6" H × 15⅛" W × 11⅞" D ..... $250

### CD4015 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; dc-governor motor; capstan drive; two heads, one ferrite and one Mu-Metal; tape selector switch for normal and $CrO_2$ tape; two record level/VU meters; one dual input level control; wow and flutter 0.09% wrms; S/N 50 dB (Dolby off), 56 dB (Dolby on); frequency response 40-11,000 Hz ±3 dB (normal tape), 40-13,000 Hz ±3 dB ($CrO_2$ tape); THD 1.8% at O VU ..... $160

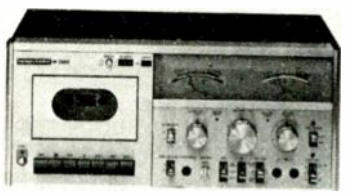
### CR4011 Cassette Deck

Front-loading stereo cassette deck; dc-governor motor; capstan drive; two heads, one ferrite and one Mu-Metal; tape selector switch for normal and $CrO_2$ tape; two record level/VU meters; two input level controls; wow and flutter 0.09% wrms; S/N 50 dB; frequency response 40-11,000 Hz ±3 dB (normal tape), 40-13,000 Hz ±3 dB ($CrO_2$ tape); THD 1.8% at O VU ..... $130

## HARMAN/KARDON

### hk3500 Cassette Deck

Stereo cassette deck with Dolby noise-reduction system; dual permalloy record/play head; dc servo



capstan motor and fast forward/reverse motor; separate Dolby record and playback electronics; twin peak-reading record/play VU meters calibrated from −40 to +6 dB; three-position bias and equalization controls; test signal generator for Dolby and bias calibration; two tape overload LEDs; separate level controls for microphone input, line input, and playback; three-digit tape counter with memory control; tape motion indicator; headphone monitor amplifier; record/mute switch; variable speed control for playback. Wow and flutter 0.05% wrms (NAB); frequency response 20-17,500 Hz (FeCr, $CrO_2$); S/N 61 dB (Dolby "A"); sensitivity 0.5 mV (mic), 50 mV (low-level line), 200 mV (high-level line); channel separation 36 dB; channel crosstalk 65 dB; input impedance 600 ohms (mic), 30,000 ohms (low-level aux.), 50,000 ohms (high-level aux.); headphone impedance 8 ohms ..... $479

### hk2000 Cassette Deck

Stereo cassette deck with built-in Dolby noise-reduction circuit; front-panel bias switch for standard, low-noise, and chromium-dioxide tapes; features memory relay, peak-reading VU meters, sliding controls for playback and record level, and mic/line mixing; response 30-17,000 Hz ($CrO_2$); wow and flutter 0.07% (weighted); speed variation 1%; hard permalloy head; peak-reading VU meters with LED overload indicator; 5⅜" H × 15" W × 10¼" D ..... $399
In black finish ..... $429

### hk2500 Cassette Deck

Stereo cassette deck with Dolby noise-reduction system; dc servo-controlled motor; permalloy record/play head; twin peak-reading record/play VU meters; expanded range meters calibrated from −20 to +5 dB; separate record and playback level controls; three-position bias and equalization controls; bias trim control for tape calibration; two LED tape overload indicators; tape counter with memory control; tape motion indicator; headphone monitor amplifier; spring-loaded record mute switch; subsonic filter; flashing record "pause" indicator; Dolby FM filter "off" position for mic/phono recording; fast-winding time 90 sec (C-60); wow and flutter 0.07% wrms; frequency response 20-16,000 Hz ±3.5 dB (low noise, FeCr, $CrO_2$); THD 1.5% (3 dB below Dolby level); S/N 61 dB; sensitivity (microphone) 0.5 mV, (line) 50 mV; channel separation 34 dB; channel crosstalk 62 dB; microphone input impedance 1000 ohms; headphone impedance 8 ohms ..... $319

### hk1500 Cassette Deck

Stereo cassette deck with Dolby noise-reduction system; dc servo-controlled motor; permalloy record/play head; twin peak-reading record/play VU meters; expanded range meters calibrated from −20 to +5 dB; LED tape overload indicator; separate record and playback level controls; two-position bias and equalization controls; three-digit tape counter; tape motion indicator; headphone monitor amplifier; Dolby-on LED; record-on LED; two microphone inputs; fast-winding time 90 sec (C-60); wow and flutter 0.08% wrms; THD 1.5%; frequency response 30-15,000 Hz ±3.5 dB (low noise, $CrO_2$); S/N 61 dB sensitivity (microphone) 0.5 mV, (line) 50 mV; channel separation 32 dB; channel crosstalk 60 dB; microphone input impedance 1000 ohms; headphone impedance 8 ohms ..... $259

## HITACHI

### D-7500 Cassette Deck

Stereo cassette deck with "hall-effect" semiconductor element in the playback head; three-head design; full logic controls; peak-reading meters; black finish with rack mountable dimensions; includes handles ..... $700

### D900 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; three-head system for tape monitoring; ferrite heads; full logic controls permit push-button shifting to any tape function instantly and smoothly without damaging tape; three-position bias and equalization; dual capstan motors, dc servo controlled; front-panel peak-reading VU meters; tape counter; input, source, output, record, and play indicator lamps; Dolby on/off switch; memory counter with on/off and reset controls; frequency response 20-15,000 Hz ±3 dB (normal tape), 30-18,000 Hz ±3 dB ($CrO_2$), 20-15,000 Hz ±3 dB (FeCr); S/N 63 dB (Dolby on), 55 dB (Dolby off); wow and flutter 0.05% wrms; 2% dist.; fast-forward/rewind time 100 sec (C-60); input sensitivity/impedance (Mic) 0.25 mV, 300-5k ohms, (line) 50 mV, 100k ohms, (DIN) 0.25 mV, 12k ohms; 7⅛" H × 17⅛" W × 10" D ..... $495

### D850 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; three-head system for tape monitoring; ferrite tape heads; power-assisted controls; three-position bias and equalization; dual capstan servo motors; front-panel peak-reading VU meters; Dolby calibration control; Dolby FM broadcast decoder; tape counter; Dolby-on and record indicator lamps; frequency response 30-15,000 Hz ±3 dB (normal tape), 30-16,000 Hz ($CrO_2$), 30-15,000

Hz (FeCr); S/N 63 dB (Dolby on), 55 dB (Dolby off); wow and flutter 0.05% wrms; less than 2% dist.; fast-forward/rewind time 100 sec (C-60); input sensitivity/impedance (mic) 0.25 mV, 300-5k ohms, (line) 50 mV, 100k ohms, (DIN) 0.25 mV, 12k ohms; 5¾" H × 17⅛" W × 10" D..... $349

**D720 Cassette Deck**
Front-loading stereo cassette deck with Dolby noise-reduction system; three-head system for tape monitoring; record/playback head is hard permalloy, erase head is ferrite; dc servomotor; power-assisted controls; dynamic noise limiting circuit; full automatic stop on all functions; damped vertical transport; three-position bias and equalization; memory rewind counter; front-panel calibrated VU meters; frequency range 30-15,000 Hz ±3 dB (normal tape), 30-16,000 Hz ±3 dB ($CrO_2$), 30-16,000 Hz ±3 dB (FeCr); S/N 63 dB (Dolby/DNL on), 58 dB (Dolby on), 53 dB (Dolby off); wow and flutter 0.07% wrms; 10" H × 17⅛" W × 5⅜" D..... $270

**D550 Cassette Deck**
Front-loading stereo cassette deck with Dolby noise-reduction system; record/playback head is super life permalloy, erase head is ferrite; dc servomotor; power-assisted controls; full automatic stop on all functions; three-position bias and equalization controls; damped vertical transport; tape rewind counter; calibrated VU meters; record and Dolby-on indicator lamps; frequency response 30-14,000 Hz ±3 dB (normal tape), 30-15,000 Hz ±3 dB ($CrO_2$), 30-15,000 Hz ±3 dB (FeCr); S/N 58 dB (Dolby on), 53 dB (Dolby off); wow and flutter 0.08% wrms; 1.8% dist.; fast-forward/rewind time 100 sec (C-60); input sensitivity/impedance (Mic) 0.26 mV, 300-5k ohms, (line) 60 mV, 100k ohms, (DIN) 0.25 mV, 2k ohms; 5⅜" H × 11½" W × 10" D..... $220

**D220 Cassette Deck**
Front-loading stereo cassette deck with Dolby noise-reduction system; dc servomotor drive; two hard permalloy SL heads; frequency response 30-12,500 Hz ±3 dB (normal tape), 30-14,000 Hz ± dB ($CrO_2$ and FeCr); S/N 58 dB (Dolby on), 53 dB (Dolby off); wow and flutter 0.09% wrms; 10" H × 15⅜" W × 5⅜" D..... $170

## JVC

**KD-3030 Cassette Deck**
Front-loading stereo cassette deck with super ANRS noise-reduction system and recording equalizer circuit; independent drive motors: servo type for capstan, dc type for reel drive; two-head configuration: Sen-Alloy record/playback head, double-gap ferrite erase head; electronic solenoid operation; independent mic and line volume controls for mic/line mixing; twin VU level meters; five peak-reading LED indicators; three-position bias and equalization selection; automatic stop at end of tape in all modes; memory rewind; three-digit tape counter; built-in 400 Hz signal oscillator; frequency response 30-16,000 Hz ±3 dB (normal and chrome tape); S/N 56 dB, 66 dB (above 5 kHz with ANRS); wow and flutter 0.05% wrms; THD 0.4%; 8⁹/₁₆" H × 18¹³/₁₆" W × 13³/₁₆" D..... $530

**KD-85 Cassette Deck**
Front-loading stereo cassette deck with super ANRS noise-reduction system and recording equalizer circuit; independent drive motors: FG servo type for capstan, dc type for reel drive; two-head configuration: Sen-Alloy record/playback head, double-gap ferrite erase head; push-button full-logic solenoid operation; independent mic and line inputs; three-position bias and equalization selection; spectro-peak level indicator with 25 LEDs indicates the levels (−10, −5, 0, +3, +6 dB) of five frequency ranges (100, 300, 1000, 3000, 10,000 Hz); twin vertically-designed VU level meters; automatic stop; memory rewind; three-digit tape counter; frequency response 30-16,000 Hz ±3 dB (normal and chrome tape); S/N 56 dB, 66 dB (above 5 kHz with ANRS); wow and flutter 0.05% wrms; THD 0.4%; 6¼" H × 17¾" W × 12⅞" D..... $500

**KD-65 Cassette Deck**
Front-loading stereo cassette deck with super ANRS noise-reduction system and recording equalization; FG dc servomotor; two-head configuration: Sen-Alloy record/playback head; double-gap erase head; independent mic and line imputs; three position bias and equalization selection; spectro-peak level indicator with 25 LEDs indicates the levels (−10, −5, 0, +3, +6 dB) of five frequency ranges (100, 300, 1000, 3000, 10,000 Hz); twin vertically-designed VU level meters; output level control; automatic tape-end stop; memory rewind; three-digit tape counter; frequency response 30-16,000 Hz ±3 dB (chrome tape); S/N 56 dB, 66 dB (above 5 kHz with ANRS); wow and flutter 0.06% wrms; THD 0.5%; 6¼" H × 17¾" W × 12⅞" D..... $400

**KD-2020 Cassette Deck**
Front-loading stereo cassette deck with super ANRS noise-reduction system and recording equalizer; FG dc servomotor; two-head configuration: Sen-Alloy record/playback head, double-gap ferrite erase head; five LED multi-point peak level indicators; twin VU level meters; three-position bias and equalization selection; separate mic/line controls for mic/line mixing; hall-element automatic tape-end stop; memory rewind; three-digit tape counter; frequency response 30-16,000 Hz ±3 dB (chrome tape); S/N 56 dB, 66 dB (above 5 kHz with ANRS); wow and flutter 0 06% wrms; THD 0.5%; 6⁵/₁₆" H × 18¹³/₁₆" W × 13¾" D..... $400

**KD-1636II Portable Cassette Deck**
Top-loading portable stereo cassette deck with super ANRS noise-reduction system; electronic governor coreless dc motor; Sen-Alloy record/playback head and double-gap ferrite erase head; tri-color LED peak-level indicator; built-in monitor speaker with volume control; master record volume control for easier face-in, fade-out; headphone amp with separate volume control; electronic automatic stop; twin wide-range VU meters and battery condition checker; bias and equalization selector switches; input selection for mic/DIN and line; −20 dB mic attenuator; stereo/mono mode switch; three-digit tape counter; frequency response 30-16,000 Hz ±3 dB (chrome tape); S/N 57 dB, 67 dB (above 5 kHz with ANRS); wow and flutter 0.08% wrms; THD 0.5%; three-way power flexibility: ac, 8-16 V dc, or batteries; 4" H × 14⅜" W × 9¹¹/₁₆" D..... $360
**CB-4E.** Carrying case for KD-1636II..... $35
**KL-4E.** Mounting rack for KD-1636II..... $35
**KD-2.** Similar to KD-1636II less tri-colored LEDs; has three-position input select switch and headphone volume control; wow and flutter 0.09% wrms; 3¾" H × 10⅞" W × 11⅜" D..... $320
**CB-2E.** Carrying case for KD-2..... $30

**KD-S201 Cassette Deck**
Front-loading stereo cassette deck with super ANRS noise-reduction system; FG dc servomotor; Sen-Alloy record/playback head and double-gap ferrite erase head; push-button and slider controls; multi-point peak indicator system with five LEDs; two VU meters; separate mic and line inputs; photocell all-mode automatic stop; input selector; three-digit tape counter; frequency response 30-16,000 Hz ±3 dB (chrome tape); S/N 56 dB, 66 dB (above 5 kHz with ANRS); wow and flutter 0.06% wrms; THD 0.5%; 6⁹/₁₆" H × 19¹¹/₁₆" W × 14⅛" D..... $350

**KD-1770II Cassette Deck**
Top-loading stereo cassette deck with super ANRS noise-reduction system; FG dc servomotor; Sen-Alloy record/playback head and double-gap ferrite erase head; independent drive system for both capstan and reels; twin five-LED peak indicators for left and right channels; three-position (six push-buttons) bias and equalization selection; mic/line mixing; memory rewind; mirrored VU meters; photocell automatic tape-end stop; frequency response 30-15,000 Hz ±3 dB (chrome tape); S/N 56 dB, 66 dB (above 5 kHz with ANRS); wow and flutter 0.05% wrms; THD 0.5%; 4⅜" H × 16¾" W × 10⅞" D..... $350
**CD-1770.** Similar to KD-1770II with one set of five-LED peak indicators..... $340

**KD-55 Cassette Deck**
Front-loading stereo cassette deck with super ANRS noise-reduction system and recording equalization; FG dc servomotor; Sen-Alloy record/playback head and double-gap ferrite erase head; five multi-point (−10, −5, 0, +3, +6 dB) peak level indicators; three-position bias and equalization selection; "one touch" recording level setting; automatic input selector for mic and line inputs; automatic tape-end stop; two VU level meters; output level control; three-digit tape counter; frequency response 30-15,000 Hz ±3 dB (chrome tape); S/N 56 dB, 66 dB (above 5 kHz with ANRS); wow and flutter 0.06% wrms; THD 0.5%; 5⅞" H × 16⁹/₁₆" W × 10⁷/₁₆" D..... $300

**KD-25 Cassette Deck**
Front-loading stereo cassette deck with Dolby noise-reduction system; FG dc servomotor; Sen-Alloy record/playback head and double-gap ferrite erase head, three-position bias and equalization selection; five LEDs for multi-point (−10, −5, 0, +3, +6 dB) peak level indication; automatic input selector mic and line inputs; dual rotary controls for left and right channel recording levels; automatic tape-end stop; two VU level meters; three-digit tape counter; frequency response 40-15,000 Hz ±3 dB (chrome tape); S/N 56 dB, 66 dB (above 5 kHz with Dolby); wow and flutter 0.06%; THD 0.5%; 5⅞" H × 16⁹/₁₆" W × 10⁷/₁₆" D..... $260

**KD-15 Cassette Deck**
Front-loading stereo cassette with Dolby noise-reduction; five-LED peak level indicators; timer recording facility; mic/line input selector switch; two position bias and equalization switches; VU meters; reed-type full automatic stop; frequency response 20-15,000 Hz (normal tape), 20-16,000 Hz (chrome tape); S/N 56 dB (from peak level) without Dolby, improved 5 dB at 1 kHz and 10 dB above 5 kHz with Dolby; wow and flutter 0.1% wrms; cross-talk −65 dB at 1 kHz; channel separation 35 dB at1 kHz; 6¼" H × 15⅜" W × 10¼" D..... $200

## KENWOOD

**KX-1030 Cassette Deck**
Front-loading stereo cassette deck with Dolby noise-reduction system; electronically-controlled dc motor; ¼-track two-channel stereo/mono recording/playback system; ac bias system (bias frequency 85 kHz); three ferrite heads for record, rewind, and erase; three-position bias selector (normal, chrome, reserve); three-position equalization selector (normal, chrome, reserve); fine bias adjustment controls with oscillator; full auto shut-off in all modes; mic/line mixing; memory rewind; LED peak and recording indicator; tape monitor; three-digit tape counter; two large illuminated VU meters; wow and flutter 0.06% wrms; S/N 65 dB (Dolby on, normal tape), 67 dB (Dolby on, $CrO_2$ tape); frequency response 35-15,000 Hz ±3 dB (normal tape), 35-18,000 Hz ±3 dB ($CrO_2$ tape), 35-17,000 Hz ±3 dB (Ferri-$CrO_2$ tape); HD 1.3% at 1 kHz, 0 VU with normal tape; fast-winding time 80 sec (C-60);

# 6 CASSETTE TAPE MACHINES

line input #1-77.5 mV at 56k ohms; line input #2-0.1 mV at 1k ohms; line output 775 mV; headphone impedance 8-16 ohms; 6⁹/₁₆" H × 16¹⁵/₁₆" W × 13¹/₁₆" D ..... $425

### KX-830 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; electronically-controlled dc motor; ¼-track two-channel stereo/mono recording/playback system; ac bias system (bias frequency 85 kHz); hard permalloy recording/playback head; ferrite erase head; three-position bias selector (normal, chrome, reserve); three-position equalization selector (normal, chrome, reserve); three-position input selector (mic/DIN, line, and ATT mic/DIN); full auto stop in all modes; memory rewind; LED peak and recording indicator; two-way tape loading system; three-digit tape counter; two large illuminated VU meters; wow and flutter 0.06% wrms, ±0.18% DIN; S/N 62 dB (Dolby on, normal tape), 64 dB (Dolby on, $CrO_2$ tape); frequency response 35-13,000 Hz ±3 dB (normal tape), 35-16,000 Hz ±3 dB ($CrO_2$ tape), 35-15,000 Hz ± dB (Ferri-$CrO_2$ tape); HD 1.3% at 1 kHz, 0 VU with normal tape; fast-winding time 80 sec (C-60); line input 77.5 mV at 100k ohms; line output 775 mV; headphone impedance 8-16 ohms; 6⁹/₁₆" H × 16¹⁵/₁₆" W × 13¹/₁₆" D ..... $315

### KX-630 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; electronically-controlled dc motor; ¼-track two-channel stereo/mono recording/playback system; ac bias system (bias frequency 85 kHz); hard permalloy record/playback head; ferrite erase head; three-position equalization selector (normal, chrome, reserve); two-position bias selector (normal, chrome); three-position input selector (mic/DIN, line, and ATT mic/DIN); full auto shut-off in all modes; LED recording indicator; three-digit tape counter; two large illuminated VU meters; wow and flutter 0.07% wrms, ±0.18% DIN; S/N 62 dB (Dolby on, normal tape), 64 dB (Dolby on, $CrO_2$ tape); frequency response 40-13,000 Hz ±3 dB (normal tape), 40-15,000 Hz ±3 dB ($CrO_2$ tape), 40-15,000 Hz ±3 dB (ferri-chrome tape); HD 1.5% at 1 kHz, 0 VU with normal tape; fast-winding time 85 sec (C-60); line input 77.5 mV at 80k ohms; line output 775 mV at 100k ohms; headphone impedance 4-16 ohms; 6¼" H × 16¹⁵/₁₆" W × 13³/₄" D ..... $250

### KX-530 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; electronically-controlled dc motor; ¼-track, two channel stereo/mono recording/playback system; ac bias system (bias frequency 85 kHz); hard permalloy record/playback head; ferrite erase head; two-position bias selector (normal, chrome); two-position equalization selector (normal, chrome); full auto shut-off in all modes; LED recording indicator; three-digit tape counter; two large illuminated VU meters; wow and flutter 0.07% wrms, ±0.18% DIN; S/N 62 dB (Dolby on, normal tape); 64 dB (Dolby on, $CrO_2$ tape); frequency response 40-13,000 Hz ±3 dB (normal tape), 40-15,000 Hz ±3 dB ($CrO_2$ tape); HD 1.5% at 1 kHz, 0VU with normal tape; fast-winding time 85 sec (C-60); line input 77.5 mV at 100k ohms; line output 489 mV at 100k ohms; headphone impedance 8-16 ohms; 6¼" H × 14³¹/₃₂" W × 11⅞" D ..... $200

## LAFAYETTE

### RKD-600 Cassette Deck

Front-loading stereo cassette deck with dual process Dolby noise-reduction system; electronically-controlled dc motor; three-head design; true monitoring off playback head; air-damped cassette eject system; "feather-touch" control keys; full auto stop; two VU meters with dual peak LEDs; mic/line mixing; memory rewind; independent bias and equalization for normal, $CrO_2$, and FeCr tape; monitor switch; MPX filter; output control; three-digit tape counter; mic and headphone jacks; frequency response 40-17,000 Hz ($CrO_2$ tape); wow and flutter 0.06%; S/N −63 dB (Dolby on); less than 2% dist.; fast-winding time 96 sec; UL approved. 4⁹⁹/₆₄" H × 16¼" W × 11¹³/₁₆" D ..... $300

### RKD-225 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; dc servomotor; permalloy head; oil-damped cassette eject system; "feather-touch" control keys; built-in Dolby circuitry allows any receiver to decode Dolbyized broadcasts through tape monitor; left/right channel record and output controls; large VU meters with peak LED; auto shut-off; independent bias and equalization; memory rewind; three-digit tape counter; headphone jack; two microphone jacks; frequency response 30-13,000 Hz ($FeO_3$ tape); wow and flutter 0.08%; S/N greater than 60 dB (Dolby on); fast-winding time 90 sec (C-60); UL approved. 5⅞" H × 17⁹/₁₆" W × 12" D ..... $200

### RKD-150 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; auto shut-off; independent bias and equalization; independent record level controls; dual mic inputs; large VU meters; digital tape counter; frequency response 40-12,000 Hz; wow and flutter 0.15%; S/N 55 dB (Dolby off), 60 dB (Dolby on over 5 kHz); dist. 1.5%; UL approved. 6½" H × 17" W × 11½" D ..... $150

### RK-735 Cassette Deck

Top-loading stereo cassette deck with low impedance amplifier for stereo headphone listening; standard/$CrO_2$ tape switch; record level meters; tape counter; left/right channel mic and input jacks; frequency response 50-13,000 Hz; wow and flutter 0.25%; walnut wood case; UL approved. 3⁹/₁₆" H × 12⅞" W × 9¹/₁₆" D ..... $100

### RK-715 Cassette Deck

Top-loading stereo cassette deck designed for recording from consoles and phones; features record and output level controls; LED level indicator; frequency response 60-10,000 Hz; 3⅛" H × 5⅜" W × 8⅜" D ..... $80

## LENCO

### C-2003 Cassette Deck

Top-loading stereo cassette deck with Dolby noise-reduction system; wow and flutter 0.07% wrms; frequency response 30-18,000 Hz ±3 dB, 30-16,000 Hz ±3 dB (with multiplex filter); dist. 1.5% (0 dB VU); S/N (DIN 45633) 56 dB (Dolby off), 65 dB (Dolby on); crosstalk −65 dB (opp. rec. direction), −40 dB (stereo rec.); fast-winding time 75 sec (C-60); inputs: 350 μV at 1000 ohms (mike DIN), 8 mV at 22,000 ohms (DIN-plug input), 60 mV at 180,000 ohms (line); outputs: 0.75 V at 330 ohms (DIN and line), 6.7 mW at 8 ohms and 5.4 mW at 600 ohms (headphones); automatic tape selection switching for $CrO_2$ tape, manual for three others; switchable multiplex filter; mono switch; two peak level indicators; ±2.5% speed regulation during playback; has ferrite erase and record heads and hard permalloy play head; three-digit tape counter with "zero stop"; 85 mm H × 285 mm W × 460 mm D ..... $796

### RAC 10 Auto Cassette Changer

Automatic cassette changer with Dolby and monitor speaker; can play up to 10 cassettes in succession without interruption; 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 ..... $696

### 1202 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; cue review in fast-forward/rewind mode; provision for auto-timeclock operation for attendant-less recording; Sendust heads; two large VU meters; LEDs for Dolby, record and peak indication; three-digit tape counter with run feature; separate bias and equalization ..... $350

## MARANTZ

### 5030B Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; dc servo-controlled motor; three super hard permalloy heads; tape speed 1⅞ ips; tape/source monitoring capability; bias and equalization for $CrO_2$, FeCr, and standard tapes; mic/line mixing with master level control; 3-in VU meters; left and right channel peak-level indicators; defeatable peak limiter; tape counter with memory rewind; wow and flutter 0.05%; frequency response 35-17,000 Hz ±3 dB (FeCr and $CrO_2$ tapes), 35-14,000 Hz ±3 dB (standard tape); S/N 58 dB (Dolby off), 64 dB (Dolby on); sensitivity −72 dBV; overload level −25 dBV; 5¾" H × 16⅜" W × 11¹¹/₁₆" D ..... $431

### 5025B Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; dc servo-controlled motor; bias and equalization settings for standard, FeCr, and $CrO_2$ tapes; mic/line mixing with master level control; 3-in VU meters; left and right peak indicators; defeatable peak limiter; tape counter with memory rewind; tape speed 1⅞ ips; wow and flutter 0.05%; frequency response 35-17,000 Hz ±3 dB (FeCr and $CrO_2$ tape), 35-14,000 Hz ±3 dB (standard tape); S/N 58 dB (Dolby off), 64 dB (Dolby on); sensitivity −72 dBV; overload level −25 dBV; 5¾" H × 16⅜" W × 11¹¹/₁₆" D ..... $330

### 5010B Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; bias and equalization settings for standard, $CrO_2$, and FeCr tapes; super hard permalloy head; 3-in VU meters; defeatable peak limiter; tape counter; front-panel mike input and headphone jacks; tape speed 1⅞ ips; wow and flutter 0.07% wrms; frequency response 35-16,000 Hz ±3 dB (FeCr and $CrO_2$ tape), 35-14,000 Hz ±3 dB (standard tape); S/N 58 dB (Dolby off), 64 dB (Dolby on); sensitivity −72 dBV; overload level −25 dBV; 5¾" H × 16⅜" W × 11¹¹/₁₆" D ..... $270

### 5000 Cassette Deck

Vertical-loading cassette deck with Dolby noise-reduction system; bias and equalization switches for

normal, $CrO_2$, and FeCr tape; VU meters; defeatable peak limiter; dc servomotor; super hard permalloy head; total shut-off; front-panel mic and headphone jacks; tape counter; 5¾" H × 16⅜" W × 11¹¹/₁₆" D ..... $220

### 1810 Cassette Deck

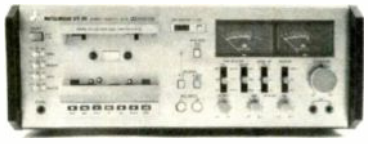
With Dolby noise-reduction system; super-hard permalloy record/playback head; bias equalization switches for normal, $CrO_2$, and FeCr tapes; left/right record level controls; total shut-off; three-digit tape counter; left/right VU meters; 5¾" H × 16 ⅜" W × 9" D ..... $190

## MITSUBISHI

### DT-30 Cassette Deck

Front-loading stereo cassette deck with Dolby noise reduction system; two ferrite heads for record/erase and Sendust head for playback; closed-loop dual-capstan tape transport motor; automatic spacing-pause button and illuminated indicator; dual peak meters with peak-hold switch; separate recording-

level setting controls for microphone/line inputs; master recording volume control; three-way bias



and equalization adjustment; multiplex filter for FM recordings; timer-controlled recording/playback; memory play/rewind; auto-repeat and auto-rewind; output level control; line/mono input jack for microphone; wow and flutter 0.05% wrms; S/N at 400 Hz +0 dB 66 dB (Dolby on), 58 dB (Dolby off); frequency response 30-17,000 Hz (normal tape), 30-18,000 Hz (special tape), and 30-20,000 Hz (FeCr); HD at 400 Hz 1%; input sensitivity 0.3 mV (mic), 100 mV (line); fast-winding time 80 sec (C-60); includes connecting cord for remote-control connection with DP-EC20 auto turntable; 6¾" H × 16¾" W × 14⅞" D ..... $600

### M-T01 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; closed-loop, dual capstan tape transport motor; Sendust recording/playback head; feather-touch controls; automatic spacing-pause button and illuminated indicator; dual peak-level meters; full access to tape heads; multiplex filter for FM recording; separate three-way bias and equalization adjustment; timer-controlled recording/playback; memory-play and memory-stop functions; line/microphone input mixing; output level control; line/mono microphone input jack; wow and flutter 0.05% wrms; S/N 64 dB (Dolby on), 56 dB (Dolby off); frequency response 30-15,000 Hz (normal tape), 30-17,000 Hz (special/FeCr tape); HD 1% at 400 Hz; input sensitivity 0.3 mV (microphone), 100 mV (line); fast-winding time 80 sec (C-60); 5½" H × 10⅜" W × 9⅜" D ..... $520

### DT-10 Cassette Deck

Front-loading cassette deck with Dolby noise-reduction system; dc servomotor; master recording volume control; separate level controls for mike and line inputs; residual tape meter calibrated for C-60 and C-90 tapes; peak-level indicator and two VU meters; memory rewind function; timer-controlled recording/playback; line/mono input jack for microphone; oil-damped eject; wow and flutter 0.06% wrms; S/N at 400 Hz +3 dB 64 dB (Dolby on), 56 dB (Dolby off); frequency response 30-15,000 Hz (normal tape), 30-17,000 Hz (special tape); HD 1% at 400 Hz; input sensitivity 0.24 mV (mic), 80 mV (line); fast-winding time 80 sec (C-60); 6¾" H × 16¾" W × 14⅞" D ..... $350

## NAKAMICHI

### 1000 II Cassette Deck

Three-head stereo record/play deck with Dolby noise-reduction system and DNL; Crystal Permalloy playback head; dual capstan, closed-loop transport with dc servomotor drive; wow and flutter 0.05% wrms, 0.1% weighted peak; S/N 65 dB (400 Hz, 3% THD, with Dolby and SX tape); THD less than 1.5% (400 Hz, 0 dB); frequency response 35-20,000 Hz ±3 dB (with Dolby); inputs 0.2 mV at 10,000 ohms (mike), 50 mV at 50,000 ohms (line); outputs 1 V max. (line, variable), 300 mV/channel max. into 8 ohms (headphone); record head azimuth alignment beacon; full IC logic transport controls; auto shut-off; spill-proof system; memory and auto rewind; playback pitch control; two 50-dB range peak-reading meters; separate bias and equalization switches; left, right, and blend wide dynamic range mike inputs; phase-corrected low-noise electronics; 11¹¹/₁₆" H × 20¹¹/₁₆" W × 8⁹/₁₆" D ..... $1650

**700 II.** Similar to 1000 II but without auto rewind or DNL; 10¹¹/₁₆" H × 20½" W × 5⅛" D ..... $1140

**RC-1000.** Remote control duplicates control systems of 1000 II and 700 II; controls all tape motion including record; 15-ft range ..... $60

**HC-1000.** Extra heavy duty carrying cabinet covered in leatherette; double-protected edges and corners; side-mounted folding metal carrying handles; front and rear covers for complete protection; accommodates one 1000 II or 1000 ..... $365

**HC-700.** Similar to HC-1000 but for 700 II; rear cover attached; metal hinged door for connection access ..... $325

**DS-200.** Digital timer turns system on at present time; sleep timer function plays for 59 min. before shutdown; allows unattended recording of broadcasts with company's 1000, 700, and 600 cassette decks; self-repeating 24-hr basis; 2" H × 12¼" W × 4½" D ..... $180

### 600 II Cassette Console

Two-head stereo record/play cassette deck; Crystal Permalloy record/play head; adjustable record level

and bias; two built-in test tones (400 Hz for record level, 10 kHz for bias); Dolby noise reduction; MPX filter switch; separate bias and equalization switches; 47-dB peak level meters; tape counter with memory; dc servomotor drive with self-start for unattended recording; frequency response 35-20,000 Hz ±3 dB; wow and flutter 0.08% wrms, 0.12% weighted peak; S/N 63 dB (400 Hz, 3% THD, with Dolby); THD less than 1.5% (400 Hz, 0 dB); input 50,000 ohms, 50 mV; line output 580 mV; headphone output 45 mW/channel (400 Hz, 0 dB); 6¾" H × 15¾" W × 9⅓" D ..... $655

**600 IIB.** Same as 600 II with matte black finish ..... $680

**WC-600.** Oiled walnut veneer cabinet for 600 series cassette decks; supplied in easy-to-assemble kit form ..... $55

### 500 Cassette Deck

Two-head stereo record/play cassette deck; Crystal Permalloy record/play head; full-range 45-dB peak-reading meters; Dolby noise reduction system; dc servomotor drive; automatic shut-off and memory rewind; three-point sound pickup for live recording; peak limiter; three-position tape selector; variable output level control; frequency response 40-17,000 Hz ±3 dB; wow and flutter 0.08% wrms, 0.13% weighted peak; S/N 63 dB (400 Hz, 3% THD, with Dolby and SX tape); THD 1.5% at 1 kHz, 0 dB; inputs: mike and blend mike, 600 ohms, 0.2 mV; line 150,000 ohms, 70 mV; outputs: line 1 V max., variable; headphones 8 ohms, 1 mW, 0 dB; 4½" H × 15" W × 10" D ..... $480

**550.** Similar to 500 but S/N 65 dB (SX tape with Dolby); outputs: line 580 mV; headphones 300 mW (1 kHz, 0 dB); three-way power supply (117 V ac, 12 V battery, car jack); tape-end alarm with preset timer; 3½" H × 12¼" W × 13¾" D; 11.15 lb (without battery) ..... $630

**HC-550.** Hard carrying case for 550 ..... $60

### 350 Cassette Deck

Stereo record/play deck; Dolby noise reduction system; tape selector; full automatic shut-off; three low-impedance microphone inputs with mixing; dc servomotor drive; frequency response 40-15,000 Hz ±3 dB; wow and flutter 0.08% wrms; S/N 58 dB (with Dolby); operates from ac power pack (included), 12-V dc source, or from battery supply in optional carrying case; 3½" H × 7⅓" W × 9½" D ..... $440

**HC-350.** Carrying case with built-in 12-V lead-acid battery and recharging circuit; 12-hr charge for 6-hr continuous recording with 350; 10½" H × 9½" W × 3¾" D; 4.5 lb ..... $125

### 250 Cassette Deck

Portable stereo playback deck with Dolby noise-reduction system. See Car Tape section under "Nakamichi." ..... $310

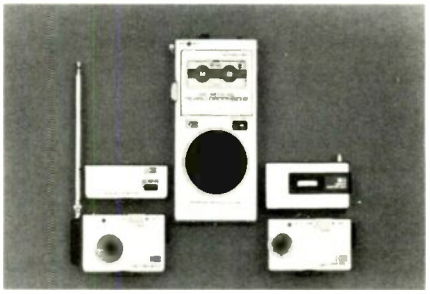
### DM-10 Head Demagnetizer

See Section 14, Accessories, under "Nakamichi."

## OLYMPUS

### SD2 Pearlcorder MicroCassette

Two-hour microcassette sound system; completely portable, battery powered; coreless motor; ferrite re-



cording head; capstan drive (can drive a single 8-ohm 10-in woofer); auto shut-off mechanism; front-panel speed selector switch; cassette eject and LED battery check indicator; internal electret condenser microphone and 50 mm dynamic speaker; side-mounted record, stop, and pause buttons; four-way feature switch (cue, review, rewind, fast forward); includes voice actuator module; also available detachable AM and FM tuner modules and accessories ..... $280

### SR501 Pearlcorder MicroCassette

60-min microcassette; completely portable, battery powered; built-in AM/FM tuners; automatic noise filter; capstan drive; coreless motor; sleep switch for 30 min AM/FM radio play or recorded playback; built-in electret condenser microphone; digital tape counter; bass/treble control; master control switch for fast forward, cue, rewind, and review functions; pause button; 57 mm dynamic speaker; automatic voice level control; LED battery check; telescoping antenna and easel stand ..... $200

# 6 CASSETTE TAPE MACHINES

## ONKYO

### TA-630D Cassette Deck

Stereo cassette deck with Dolby noise-reduction system; PLL servo dc motor; Sendust record/playback head; ferrite core erase head; three-position tape selector (normal, FeCr, $CrO_2$); FM Dolby switch with MPX filter; record muting; memory winding; timer start; peak and full auto stop mechanism; input and output level controls; input selector mic or DIN/line; fast winding time 90 sec (C-60); wow and flutter 0.05% wrms nominal; frequency response 20-15,000 Hz (normal tape); 20-18,000 Hz (FeCr and $CrO_2$ tape); S/N ratio 58 dB (FeCr), 68 dB (FeCr with Dolby); input impedance 50k ohms (mike jacks), 50k ohms (line-in jacks), 5k ohms (DIN jack); 6 7/32" H × 16 19/32" W × 11 11/16" D..... $350

## OPTONICA

### RT-3535 Mark II Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; has voltage-generator control-

type servomotor capstan drive and dc motor reel drive; Auto Program Locate Device (APLD) scans prerecorded tape and stops at desired program; has permalloy, ferrite, and APLD sensing heads; frequency response 30-15,000 Hz ±3 dB (normal tape), 30-16,000 Hz ±3 dB ($CrO_2$ tape), 30-17,000 Hz ±3 dB (FeCr tape); S/N 64 dB with Dolby; input sensitivity/impedance 0.2 mV/70k ohms (mike), 70 mV/50k ohms (aux.); output level/impedance 580 mV/50k ohms (line), 2 mW/8 ohms (headphone); wow and flutter 0.04% wrms; 5.8" H × 18.4" W × 13.9" D..... $430

### RT-6501 Cassette Deck

Front-loading microprocessor-controlled cassette deck with Automatic Program Locate Device (APLD) and Dolby noise-reduction system; five separate memory functions (can be programmed to find start and automatically play any segment of tape by going either forward or in reverse, to turn itself on and off, repeatedly play a certain segment of a tape; has rewind and tape counter memory); frequency generator servomotor; permalloy head; digital Quartz clock and complete LCD display; LCD electronic tape and elapsed time displays; two VU meters; LED peak level, record and Dolby indicators; individual input level controls for mic and line; separate bias and equalization settings; Hall effect IC full automatic stop; illuminated tape compartment; teardrop shaped control knobs; wow and flutter 0.058% wrms; frequency response 30-13,000 Hz ±3 dB (normal tape), 30-16,000 Hz ±3 dB ($CrO_2$), 30-17,000 Hz ±3 dB (FeCr); S/N 64 dB with Dolby ..... $370

**RT-6505.** Same as RT-6501 except in ebony finish ..... $370

### RT-2050 Mark II Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; has voltage-generator control-type servomotor capstan drive and dc motor reel drive; Auto Program Find System (APFS) facilitates program selection; two peak-level meters; electronic auto stop; has permalloy, ferrite, and APFS sensing heads; frequency response 30-13,000 Hz ±3 dB (normal tape), 30-14,000 Hz ($CrO_2$ and FeCr tapes); S/N 64 dB with Dolby; input sensitivity/impedance 0.2 mV/70k ohms (mike), 70 mV/50k ohms (aux.); output level/impedance 580 mV/50k ohms (line), 2 mW/8 ohms (headphone); wow and flutter 0.058% wrms; fast-winding time 100 sec (C-60); 5.8" H × 18.4" W × 13.9" D ..... $300

### RT-1515 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; dual adjustable bias and equalization controls; input level controls; electronic auto stop; single Micro Crystal Ferrite head; frequency response 30-12,500 Hz ±3 dB (normal tape), 30-14,000 Hz ±3 dB ($CrO_2$ tape), 30-15,000 Hz ±3 dB (FeCr tape); S/N 62 dB with Dolby; input sensitivity/impedance 0.2 mV/68k ohms (mike), 50 mV/50k ohms (aux.); output level/impedance 500 mV/50k ohms (line), 0.5 mW/8 ohms (headphone); has dc electronic governor motor; wow and flutter 0.085% wrms; fast-winding time 100 sec (C-60); ebony or silver front-panel; 6.2" H × 16.1" W × 9.6" D ..... $240

## PANASONIC

### RS-612US Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system. Features LH tape head and ferrite erase head; electronic speed-control dc motor; separate bias and equalization selectors; twin VU meters and recording level controls; glide-open door switch; lockable pause control; record indicator lamp; digital tape counter; auto-stop. Wow and flutter 0.12% wrms; S/N 65 dB (Dolby on), 55 dB (Dolby off); frequency response 30-15,000 Hz ($CrO_2$ tape), 30-13,000 Hz (normal tape); input sensitivity/impedance 0.25 mV/400 ohms (mic), 60 mV/90k ohms (line); output/impedance 420 mV/22k ohms (line), 65 mV/8 ohms (headphone); fast-winding time 90 sec (C-60). 5 3/8" H × 16 1/8" W × 9 3/8" D ..... $180

### RS-600US Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system. Features super-alloy head for rec/playback and ferrite head for erase; dc motor; three-position tape selector for bias and equalization; twin level meters; record/playback level controls with preset markers; limiter switch; noise filter switch; digital tape counter; auto-stop/lockable pause control. Wow and flutter 0.15% wrms; S/N 45 dB; frequency response 40-13,000 Hz ($CrO_2$ and FeCr tapes), 40-11,000 Hz (normal tape); input sensitivity/impedance 0.25 mV/600 ohms (mike), 64 mV/390k ohms (line); output/impedance 0.7 V/50k ohms (line), 0.45 mW/8 ohms (headphone); fast-winding time 120 sec (C-60). 3 7/8" H × 14 1/4" W × 9 1/4" D ..... $130

## JC PENNEY

### 3563 Stereo Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; permalloy record/play and ferrite erase heads; dc motor; FM multiplex filter; memory reset; bias control for normal, FeCr and $CrO_2$ tapes; mic/line source selectors; timer standby; record mute; tape run, peak, record, memory, and Dolby LEDs; low, mid and high tone controls; power on/off; tape counter with reset; all playback/record function modes; record level meters and controls; left/right mic jacks; headphone jack; wow and flutter 0.07% wrms; frequency response 20-12,500 Hz ±3 dB (normal tape), 20-15,000 Hz ±3 dB ($CrO_2$ and FeCr tapes); S/N 64 dB ($CrO_2$ with Dolby), 63 dB (normal tape with Dolby); THD 1.4%... $270

**3564.** Similar to 3563 minus source selectors, timer standby, record mute, and memory LED; wow and flutter 0.06% wrms; frequency response 20-14,000 Hz ±3 dB ($CrO_2$ and FeCr tapes); S/N 61 dB (normal tape with Dolby) ..... $220

**3561.** Similar to 3564 except has FM Dolby, mic/line source selectors, and LED $CrO_2$ tape indicator; wow and flutter 0.05% wrms; frequency response 40-14,000 Hz ±3 dB (normal), to 15,000 Hz ($CrO_2$), to 16,000 Hz (FeCr); S/N 65.5 dB ($CrO_2$ with Dolby), 63 dB (normal tape with Dolby); THD 1.1% ..... $200

**3551.** Similar to 3561 minus FM multiplex filter, memory reset, FM Dolby, output control, and LED Dolby and $CrO_2$ indicators; wow and flutter 0.04% wrms; frequency response 40-12,500 Hz ±3 dB (normal tape), 40-14,000 Hz ±3 dB ($CrO_2$ and FeCr tapes); S/N 66.5 dB ($CrO_2$ with Dolby), 61 dB (normal tape with Dolby); THD 1.4%..... $160

## PHILIPS

### N2535 Cassette Deck

Stereo cassette deck with Dolby noise-reduction system; bias/equalization switches for chromium dioxide, ferro-chrome, and ferrous oxide tapes; three-digit tape counter; automatic stop; multiplex filter; adjustable output level controls; illuminated recording level meters; record/overload indicator; fool-proof selector switching enables speed and direction change without going through stop; wow and flutter 0.01%; frequency range 40-14,000 Hz ±3 dB (ferro-chrome and chromium), 40-13,000 Hz ±3 dB (ferro); S/N 56 dB (without Dolby); fast-winding time 90 sec (C-60); mike input sensitivity 1 mV/k ohm; 16" × 19" × 10 1/4" ..... $200

## PIONEER

### CT-F1000 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; monitoring-while-recording capa-

bility; two-position bias and three-position equalization controls; automatic "chrome" tape sensing and switching; memory stop and play; separate log amp for each VU meter (two); MPX filter; mike/line mixing and recording; tape-end warning and auto stop; has electronically controlled dc motor capstan drive and dc fast-winding motor; "Single-Crystal Ferrite Solid" record/play head and ferrite erase head; fast-winding time 65 sec (C-60); wow and flutter 0.05% wrms; frequency response 30-15,000 Hz ±3 dB (standard tape), to 17,000 Hz with $CrO_2$ and FeCr tapes; S/N 64 dB with Dolby (chrome tape); two mike, four line, and DIN inputs; four line, DIN, and headphone outputs; 7 3/8" H × 16 17/32" W × 14 1/4" D ..... $600

### CT-F900 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; electronically controlled dc servomotor with built-in generator for capstan drive; Sendust record/playback head; ferrite erase head; three-head configuration; digital readout tape counter; memory/repeat functions; electronic microprocessor for record/play level display (20 segments in each channel, covering a range from −20 dB to 7 dB, can also show VU's and peak level); electronic tape transport with soft-touch controls; bias adjust facility; automatic chrome tape selection; add-on recording; timer start; fast-winding time 85 sec (C-60); wow and flutter 0.05% wrms; frequency response 30-15,000 Hz ±3 dB (standard LH tape), 30-17,000 Hz ±3 dB (chromium dioxide and ferrichrome tapes); S/N 54 dB (Dolby off), 64 dB (Dolby on); HD 1.3% at 0 dB; mike input sensitivity 0.3 mV/100 mV/30k ohms; 7 3/8" H × 16 9/16" W × 14 1/4" D..... $475

### CT-F700 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; electronically-controlled dc motor with built-in generator; ferrite solid record/playback head; ferrite erase head; three meters for dynamic level, bias for recording, and peak for playback; bias adjustment system; line/mic-DIN input selector; memory stop; soft-touch buttons; vertical-hold tape mounting; Dolby on/off with indicator lamp; tape selector (STD,FeCr,$CrO_2$); illuminated cassette compartment; fast-winding time 85 sec (C-60); wow and flutter 0.05% wrms; frequency response 30-14,000 Hz ±3 dB, 40-13,000 Hz DIN (both with STD tape), 30-16,000 Hz ±3 dB

# Onkyo TA-630D Cassette Deck with the Exclusive Accu-Bias System.

## The reason you waited to buy one.

With cassette hardware and software changing constantly, a lot of you have been waiting. Holding off for top technology.

You've got it.

Onkyo's TA-630D with our exclusive Accu-Bias is here. And it's the only cassette deck with adjustable bias in a two-head configuration. Which right there offers lower distortion, better low frequency response and little or no crosstalk. That's a lot, but there's more.

You know how important it is to have optimum bias when you record. Too low a bias signal and you have distortion. Too high a bias signal and you lose high frequency response.

Other cassette decks have adjustable bias and equalization, set at the factory for average conditions. Onkyo doesn't believe in playing averages. And gives you Accu-Bias.


Accu-Bias is Onkyo's exclusive system. It works with a pair of reference signal generators built into the TA-630D. Feed these signals to your tape, and read the reproduction signal on the meters. If bias is off for that cassette tape, you compensate with continuous, variable settings until you get an absolutely flat frequency response. It's that simple...and you get the best high frequency response, least distortion and lowest signal to noise ratio.

You get all that because the bias signal primes your tape as the recording is made, and every manufacturer's tape is different. Even when equalization is correct, if the bias is incorrect, it results in producing peak or losing the high frequency characteristic. Again, this depends on the tape used...all of which respond differently.

*Does it work?*

After all the effort Onkyo's gone to so you can have the only two-head continuously variable bias control you might expect fantastic sound.

You've got it.

You've got frequency response of 20-15,000 Hz on normal tape; 20-18,000 Hz with FeCr and $CrO_2$.

S/N ratio with FeCr is 58dB, goint up to 68dB with built-in Dolby* NR System. Wow and Flutter are negligible at 0.055% WRMS by use of a DC servo motor for constant speed.

There's still more, but you'll have to find out from your Onkyo dealer. Be prepared for a stunning cassette listening experience and features found only in higher-priced decks. Listen for the difference Accu-Bias makes and find out what keeps Onkyo a step ahead of state-of-the-art.

*Dolby is a trademark of Dolby Laboratories, Inc.


*ARTISTRY IN SOUND*

**ONKYO**

**Eastern Office:** 42-07 20th Ave., Long Island City, NY 11105 (212) 728-4639
**Midwest Office:** 935 Sivert Drive, Wood Dale, ILL. 60191 (312) 595-2970
**West Coast Distribution Center:** Damark Industries, Inc. 20600 Nordhoff Street. Chatsworth, CA 91311 (213) 998-6501
**Canada:** Sole Distributor, Tri-Tel Associates, Ltd., Willowdale, Ontario Canada M2H 2S5

CIRCLE NO. 60 ON READER SERVICE CARD

# 6 CASSETTE TAPE MACHINES

(FeCr tape), 30-16,000 Hz ±3 dB, 40-14,000 Hz DIN (both with $CrO_2$ tape); S/N 54 dB (Dolby off), 64 dB (Dolby on); HD 1.5% at 0 dB; mike input sensitivity 0.3 mV/100 mV/10k ohms; 7⅜" H × 16⁹/₁₆" W × 12" D..... $375

### CT-F6262 Cassette Deck

Front-loading cassette deck with Dolby noise-reduction system and exclusive vertical cassette holding mechanism so that tape movement and labels on all cassette tapes are visible during operation; flat belt drive and electronically controlled dc servomotor; hard permalloy record/playback head, ferrite erase head; fast winding 85 sec (C-60); wow and flutter ±0.2% (DIN), 0.08% wrms; frequency response 30-14,000 Hz (standard) 30-16,000 Hz (chrome and ferrichrome); S/N 52 dB (Dolby off), 62 dB (Dolby on); HD 1.7%; features Dolby on/off switch with indicator lamp, tape selector switch, tape compartment illumination; complete complement of inputs and outputs; 6³¹/₃₂" H × 16¼" W × 12¹³/₃₂" D . ..... $300

### CT-F4242 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; three-step bias/equalization; full auto stop; electronically controlled dc motor; hard permalloy solid record/play head and ferrite erase head; fast-winding time 85 sec (C-60); wow and flutter 0.08% wrms; frequency response 40-13,000 Hz ±3 dB (standard tape), to 15,000 Hz with $CrO_2$ and FeCr tapes; has oil-damped compartment door; full complement of inputs/outputs; 5²⁹/₃₂" H × 14³¹/₃₂" W × 12⁷/₁₆" D..... $225

### CT-F500 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; dc servomotor; hard permalloy recording/playback head; ferrite erase head; flywheel capstan drive; automatic shut-off in all modes; soft-damping cassette holder; three-mode tape bias/equalization switching; left/right mic jacks; two large VU meters; three-digit tape counter; record and Dolby on indicators; fast-winding time 90 sec (C-60); wow and flutter 0.05% wrms; frequency response 40-13,000 Hz ±3 dB (STD tape), 40-15,000 Hz ±3 dB ($CrO_2$ and FeCr tape); S/N 54 dB (Dolby off), 64 dB (Dolby on); HD 1.5%; mike input sensitivity 0.3 mV/110 mV/10k ohms; 5½" H × 14¹⁵/₁₆" W × 10¼" D..... $175

## REALISTIC

### SCT-30 Cassette Deck

Front-loading stereo cassette deck with double Dolby noise-reduction system; three permalloy

heads permit monitoring with or without Dolby while recording; dual capstan servomotor; three-position bias and equalization; full auto-stop; power assist controls; record and output level controls; dual VU meters; headphone and left and right microphone jacks; push levers for fast forward, rewind, pause, stop, and eject; frequency response 30-15,000 Hz ±3 dB (ferric tape), 30-16,000 Hz ±3 dB ($CrO_2$ tape); wow and flutter 0.06% wrms; S/N 61 dB; 5½" × 18" × 10" ..... $380

### SCT-16 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; permalloy record/play head and ferrite erase heads; dual capstan dc servomotor; three-position bias and equalization; dual VU meters; full auto-stop; power assist controls; headphone and left/right microphone jacks; push levers for fast forward, rewind, pause, stop, and eject; tape counter; frequency response 30-14,000 Hz ±3 dB (ferric tape), to 15,000 Hz ($crO_2$ tape); wow and flutter 0.07% wrms; S/N 60 dB; 5½" × 15½" × 10"..... $260

### SCT-18 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; permalloy record/play and ferrite erase heads; dc electronic governor motor; dual VU meters; full auto-stop; bias and equalization controls; record and output level controls; headphone and left/right microphone jacks; push lever stop/eject, rewind, fast forward, and pause; three-digit tape counter; frequency response 30-13,000 Hz (ferric tape), 30-14,000 Hz ($CrO_2$ tape); wow and flutter 0.12% wrms; S/N 59 dB; 6" × 15½" × 9½" ..... $200

### SCT-17 Cassette Deck

Top-loading stereo cassette deck with Dolby noise-reduction system; permalloy record/play and ferrite erase heads; dc electronic governor motor; dual VU meters; full auto-stop; bias and equalization switch; tape counter; headphone and left/right microphone jacks; push-button rewind, fast forward, stop/eject, and pause; frequency response 30-11,000 Hz (ferric tape), 30-13,000 Hz ($CrO_2$ tape); wow and flutter 0.19% wrms; S/N 54 dB; THD 1.5% at 1 kHz (0 VU); 3¾" × 11¾" × 9" ..... $140

### SCT-12 Cassette Deck

Stereo cassette deck; permalloy record/play head and ferrite erase heads; dc electronic governor motor; frequency response 50-10,000 Hz (ferric tape), to 11,000 Hz ($CrO_2$ tape); wow and flutter 0.2% wrms; S/N 48 dB (without Dolby); dist. 1.5%; automatic level control for mic input, −20 dB aux. input ..... $80

## REFERENCE by QUADRAFLEX

### 712D Stereo Cassette Deck

Front-loading stereo cassette deck with FM Dolby noise-reduction system; FG servomotor; two heads;

dB-calibrated peak meters with LEDs; switch for VU or peak meter indication; Dolby decoding for FM listening and recording; three-position bias and equalization settings; tape run and stop LEDs; memory stop; mic/line mixing; full auto stop at end of tape; wow and flutter 0.06% wrms; frequency response 30-15,000 Hz ±3 dB (normal tape), to 16,000 Hz ($CrO_2$); S/N 56 dB Dolby off, 62 dB with Dolby; THD 1.2% Dolby off, 1% with Dolby; crosstalk 55 dB at 1000 Hz; 5⅝" H × 17⅛" W × 10¼" D..... $380

## ROTEL

### RD-20 Cassette Deck

Top-loading stereo deck with Dolby noise-reduction system; permalloy record/play head and ferrite erase head; electronic governor dc motor; wow and flutter 0.07% (play); frequency response 22-16,000 Hz +0/−3 dB ($CrO_2$ tape), 30-15,000 Hz ±3 dB (normal/LH tape); S/N 60 dB with Dolby; three-digit tape counter, memory function; limiter switch; tape selection switches for normal, $CrO_2$, and FeCr tapes; L/R slide controls for output level, record level, and mike level; headphone and two mike jacks; 75 mm H × 458 mm W × 245 mm D .. ..... $400

### RD-30F Cassette Deck

Front-loading stereo deck with Dolby noise-reduction system; ferrite record/play and erase heads; electronic governor dc motor; wow and flutter 0.07% (play); frequency response 25-15,000 Hz +0/−3 dB ($CrO_2$ tape), 30-14,000 Hz ±3 dB (normal/LH tape); S/N 60 dB with Dolby; three-digit tape counter; headphone jack; three-position bias and equalization controls; L/R input and master output level controls; two VU meters; two mike inputs; 190 mm H × 480 mm W × 300 mm D . $390

### RD-2200 Stereo Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; Sendust record/play head and

ferrite erase head; electronic governor dc motor; three-position tape selection for ferrichrome, chrome, and normal tapes; bias adjustment for normal tape; cue and review; rec/mute switch; peak LED bar-chart indicators; tape counter; memory rewind; input and output controls; flywheel-damp ejection; headphone jack; mic jacks; wow and flutter 0.005% wrms; frequency response 30-15,000 Hz ±3 dB (normal/LH tapes), 22-16,000 Hz ±3 dB ($CrO_2$ tape); S/N 64 dB with Dolby; 150 mm H × 482 mm W × 300 mm D..... $390

**RD-2000.** Siilar to RD-2200 without cue/review memory function and LED ± dB readout; rack mountable with handles..... $330

### RD-12F Cassette Deck

Front-loading stereo deck with Dolby noise-reduction system; permalloy record/play and ferrite erase heads; electronic governor dc motor; wow and flutter 0.09% (play); frequency response 30-16,000 Hz +0/−3 dB ($CrO_2$ tape); S/N 60 dB with Dolby; has 120-min real time counter; three-digit tape counter; memory function; headphone jack; limiter switch; three-position tape select switch; two mike inputs; dual ganged concentric L/R mike, record, and output level controls; two VU meters; wood-grained vinyl clad cabinet..... $340

### RD-10F Cassette Deck

Front-loading stereo deck with Dolby noise-reduction system; permalloy record/play and ferrite erase heads; electronic governor dc motor; wow and flutter 0.08% (play); frequency response 30-15,000 Hz +0/−3 dB ($CrO_2$ tapes); S/N 60 dB with Dolby; three-digit tape counter; headphone jack; two VU meters; two-position bias and equalization (70 and 120 μsec) switches; two mike inputs; dual ganged concentric record level controls (L/R); 140 mm H × 430 mm W × 260 mm D..... $250

### RD-15F Stereo Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; electronic governor dc motor; superhard permalloy record/play and ferrite erase heads; two VU meters; peak indicator; tape selector; separate bias and equalization controls; recording level control; tape counter; mic jacks; headphone jack; wow and flutter 0.08% wrms; frequency response 30-15,000 Hz ±3 dB (normal/LH and $CrO_2$ tapes); S/N 62 dB with Dolby; 143 mm H × 430 mm W × 260 mm D..... $240

## SAE

### C3D Cassette Deck

Front-loading stereo cassette deck with Dolby noise-

reduction system; FG servomotor; solenoid operated

with full logic control; separate three-step tape bias and equalization for normal, FeCr, and $CrO_2$ tapes; auto-stop in all modes; 41-step calibrated recording level dial; separate left/right VU meters; record balance control; mic, line, and rec mute switch; tape counter; timer switch; separate left/right mic jacks; headphone jack; wow and flutter 0.06%; frequency response 30-18,000 Hz ±3 dB ..... $400

## SANKYO

### STD-2000 Cassette Deck

Automatic front-loading stereo cassette deck with Dolby noise-reduction system and multiplex filter

switch; electronically-contolled dc motor; super-hard permalloy record/play and erase heads; automatic total shut-off; separate three-position bias and equalization switches; three-digit memory counter; peak indicator; twin illuminated VU meters; record, Dolby, and tape running indicators; line/mic/DIN input switch; mechanical pause; fast-winding time 90 sec (C-60); wow and flutter 0.065% wrms; frequency response 30-14,000 Hz (normal tape), 30-17,000 Hz ($CrO_2$ and FeCr tapes); THD less than 1.5%; S/N 56 dB ($CrO_2$ tape, with filter, Dolby off), improved by 5 dB at 5 kHz and 10 dB at 5 kHz cycle or more with Dolby; crosstalk 35 dB at channel, 55 dB at track; input sensitivity (DIN/mic) 0.5 mV, (line-in) 50 mV; input impedance (DIN/mic) 5k ohms, (line-in) 50k ohms; 5½" H × 17" W × 11¾" D ..... $300

### STD-1870 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; electronically-controlled dc motor; super-hard permalloy record/playback head and ferrite core erase head; automatic shut-off; record level controls; three-position tape selector switch ($CrO_2$, FeCr, normal); memory switch; record/mute switch; input select switch; output level control; twin illuminated VU meters; three-digit tape counter; fast-winding time 90 sec (C-60); wow and flutter 0.07% wrms; frequency response 30-14,000 Hz (normal tape), 30-16,000 Hz ($CrO_2$ and FeCr tapes); THD 2.0% with normal tape; S/N 55 dB ($CrO_2$ with filter, Dolby off), improved by 5 dB at 1 kHz and 10 dB at 5 kHz with Dolby on; input sensitivity (DIN/mic) 0.7 mV at 400 Hz, (line-in) 50 mV at 400 Hz; input impedance (DIN/mic) 10k ohms, (line-in) 50k ohms; crosstalk 50 dB at 1 kHz; separation 30 dB at 1 kHz; 5 15/16" H × 17 1/8" W × 9⅞" D ..... $250

### STD-1850 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; electronically-controlled dc motor; super-hard permalloy record/play head and ferrite core erase head; three-position tape selector switch ($CrO_2$, FeCr, normal); record level controls; twin illuminated VU meters; three-digit tape counter; automatic total shut-off; dual microphone jacks; headphone jack; line in/out jacks; output level control; input selector switch; fast-winding time 90 sec (C-60); wow and flutter 0.07% wrms; frequency response 30-14,000 Hz (normal tape), 30-16,000 Hz ($CrO_2$ and FeCr tapes); THD 2.0% with normal tape; S/N 55 dB ($CrO_2$ with filter, Dolby off) improved by 5 dB at 1 kHz and 10 dB at 5 kHz with Dolby on; separation 30 dB at 1 kHz; crosstalk 50 dB at 1 kHz; input sensitivity (DIN/mic) 0.7 mV at 400 Hz, (line-in) 50 mV at 400 Hz; input impedance (DIN/mic) 10k ohms, (line-in) 50k ohms; 5 15/16" H × 15¾" W × 9⅞" D ..... $220

**STD-1850MV.** Same as STD-1850 except power requirement 110 or 220 V ..... $230

### STD-1750 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; mechanical governor dc motor; super-hard permalloy record/playback head and ferrite core erase head; record level controls; twin VU meters; three-digit tape counter; automatic total shut-off; two-position tape selector switch (normal/$CrO_2$); dual microphone jacks; headphone jack; record indicator; fast-winding time 90 sec (C-60); wow and flutter 0.14% wrms; frequency response 30-14,000 Hz (normal tape), 30-16,000 Hz ($CrO_2$ tape); THD 2.0% with normal tape; S/N 55 dB ($CrO_2$ tape with filter, Dolby off) improved by 5 dB at 1 kHz and 10 dB at 5 kHz with Dolby on; separation 30 dB at 1 kHz; crosstalk 50 dB at 1 kHz; input sensitivity (mic) 0.7 mV at 400 Hz, (line-in) 50 mV at 400 Hz; input impedance (mic) 10k ohms, (line-in) 50k ohms; 5 15/16" H × 14¼" W × 9⅞" D... $180

**STD-1750MV.** Same as STD-1750 except power requirement either 110 or 220 V ..... $190

### STD-1700 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; mechanical governor motor; super-hard permalloy record/play and erase heads; automatic total shut-off; record level control; twin VU meters; mechanical pause; three-digit tape counter; two-position tape selector switch; left/right microphone jacks headphone jack; line in/out jack; five-pin DIN jack; fast-winding time 90 sec (C-60); wow and flutter 0.15% wrms; frequency response 40-12,000 Hz (normal tape), 40-14,000 Hz ($CrO_2$ and FeCr tape); THD 2.0%; S/N 55 dB ($CrO_2$ with filter, Dolby off), improved 5 dB at 5 kHz and 10 dB at 5 kHz cycle with Dolby; input sensitivity (DIN/mic) 0.5 mV, (line-in) 50 mV; input impedance (DIN/mic) 5k ohms, (line-in) 50k ohms; 5⅞" H × 14¼" W × 9¾" D ..... $160

### STD-1650 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; mechanical governor dc motor; super-hard permalloy record/playback head and ferrite core erase head; dual record level controls; automatic shut-off; microphone jacks; headphone jack; two-position tape selector switch; record indicator; fast-winding time 90 sec (C-60); wow and flutter 0.16% wrms; frequency response 40-13,000 Hz (normal tape), 40-15,000 Hz ($CrO_2$ tape); THD 2.2% with normal tape; S/N 53 dB ($CrO_2$ with filter, Dolby off) improved 5 dB at 1 kHz and 10 dB at 5 kHz with Dolby on; separation 30 dB at 1 kHz; crosstalk 50 dB at 1 kHz; input sensitivity (mic) 0.5 mV at 400 Hz, (line-in) 50 mV at 400 Hz; input impedance (mic) 5k ohms, (line-in) 50k ohms; 5⅜" H × 14¼" W × 7⅞" D ..... $130

## SANKYO SEIKI

### ST-60 Portable Cassette Recorder

Portable cassette recorder with built-in condenser microphone; capstan drive with ac bias recording;

cue and review; chromium dioxide switch; three-digit tape counter; record level/battery meter; tone control; three-way power; auto shut-off; auto recording level control; pause control; ¼-in headphone jack; wow and flutter less than 0.35%; frequency response 50-10,000 Hz ($CrO_2$ tape), 80-90,000 Hz (standard tape); 6¼" H × 11" W × 2¾" D ..... $70

**ST-40.** Similar to ST-60 without cue and review, chromium dioxide switch, three-digit tape counter, record level/battery meter, and ¼-in headphone jack; wow and flutter less than 0.4%; frequency response 200-6000 Hz; 2.67" H × 4.67" W × 10.2" D ..... $40

**ST-30.** Similar to ST-40 ..... $33

### STR-500 AM-FM Stereo/Cassette

AM-FM stereo radio and cassette recorder with built-in condenser microphone. Cassette: capstan drive with ac bias recording system; chromium dioxide switch; tuning/recording/battery meter; variable monitoring; auto shutoff; three-digit tape counter; sleep switch; auto recording level; three-way power; variable tone control; wow and flutter less than 0.3%; frequency response 100-11,000 Hz ($CrO_2$ tape), to 8000 Hz (standard tape); 8¼" H × 12¾" W × 3¼" D ..... $100

**STR-250.** Similar to STR-500 without meters... $70

**STR-100.** Similar to STR-250 without three-digit tape counter ..... $60

## SANSUI

### SC-5100 Cassette Deck

"Direct-O-Matic" front-loading stereo cassette deck with Dolby noise-reduction system; ferrite heads; FG servomotor capstan drive and dc winding motor for takeup; wow and flutter 0.05% ; frequency response 20-15,000 Hz (30-13,000 Hz ±3 dB) with normal tape, 20-17,000 Hz (30-14,000 Hz ±3 dB) with $CrO_2$ tape; S/N 57 dB before Dolby; features "Tape Lead-In" for bypassing leader; separate bias and equalization switches for $CrO_2$, normal, and FeCr tapes; mic/line mixing capability; peak level indicator; VU meters; built-in limiter circuitry; three-digit tape counter; automatic memory and repeat functions; simulated walnut grain finish; 8¼" H × 19⅝" W × 12⅞" D ..... $690

**SC-5110.** Same as SC-5100 but with black matte

finish; 7 11/16" H × 18⅞" W × 12 11/16" D..... $690

### SC-3100 Cassette Deck

"Direct-O-Matic" front-loading stereo cassette deck with Dolby noise-reduction system; permalloy record/play head, ferrite erase head; FG-equipped servomotor drive; wow and flutter 0.06%; frequency response 25-14,000 Hz (30-13,000 Hz ±3 dB) with normal tape, 25-16,000 Hz (30-14,000 Hz ±3 dB) with $CrO_2$ tape; S/N 57 dB before Dolby; features "Tape Lead-in;" separate bias and equalization switches for $CrO_2$, normal, and FeCr tapes; automatic memory; mixing capability; VU meters; tape counter; simulated walnut grain finish; 7⅞" H × 18" W × 12¾" D..... $480

**SC-3110.** Same as SC-3100 but with black matte finish and rack-mounting adapters; 6¾" H × 19" W × 13⅜" D ..... $500

### SC-2100 Cassette Deck

"Direct-O-Matic" front-loading stereo cassette deck with Dolby noise-reduction system; wow and flutter 0.08%; frequency response 25-14,000 Hz (30-13,000 Hz ±3 dB) with normal tape, 25-16,000 Hz (30-14,000 Hz ±3 dB) with $CrO_2$ tape; S/N 57 dB before Dolby; features "Tape Lead-In;" three-position independent bias and equalization switches; VU meters; tape counter; simulated walnut grain finish; 7⅞" H × 18" W × 12¾" D..... ..... $400

**SC-2110.** Same as SC-2100 but with black matte finish and rack-mounting adapters; 6¾" H × 19" W × 13⅜" D ..... $410

### SC-1100 Cassette Deck

"Direct-O-Matic" front-loading stereo cassette deck with Dolby noise-reduction system; permalloy record/play head, ferrite erase head; frequency response 30-13,000 Hz (35-12,500 Hz ±3 dB) with normal tape, 30-16,000 Hz (35-13,000 Hz ±3 dB) with $CrO_2$ tape; S/N 54 dB before Dolby; features "Tape Lead-In;" tape selector switch for $CrO_2$, normal, and FeCr tapes; VU meters; three-digit tape counter; automatic shut-off at end of tape; 6¾" H × 17¾" W × 11⅞" D. ..... $280

# 6 CASSETTE TAPE MACHINES

**SC-1110.** Similar to SC-1100 but with rack-mounting adapters; 6⅜" H × 19" W × 11⅞" D..... $270

## SANYO

### RD5350 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; PLL dc servomotor with 34 stator

and 34 rotor poles; permalloy recording head; LED peak indicators; separate calibrated input and output level controls; two large lighted VU meters; record mute; standby timer; full automatic stop; locking pause; separate bias and equalization switching ($CrO_2$ and normal); separate left and right microphone jacks; headphone jack; digital tape counter; Dolby on/off switch; line-in, mic/DIN input button; wow and flutter 0.04% wrms; frequency response up to 17,000 Hz with $CrO_2$ and FeCr tape; S/N 64 dB (Dolby on); simulated walnut covered metal cabinet; 6¹⁄₈" H × 16¹⁄₂" W × 11⅞" D..... $220

### RD8400 Cassette/8-Track Deck

Front-loading unit combines cassette record/play deck with 8-track cartridge record/play deck; permits recording either on cassette or 8-track and transferring from one to the other. Cassette section: frequency response 60-12,000 Hz; S/N 48 dB; wow and flutter 0.15% rms; $CrO_2$/standard tape selector; tape counter; pause control. 8-track section: frequency response 30-12,000 Hz; S/N 45 dB; wow and flutter 0.15% rms; lighted program indicators; LED record and end-of-tape indicators; locking pause; two lighted VU meters; separate record-level controls. 6¹⁄₄" H × 21¹⁄₂" W × 9¹⁄₄" D ..... $190

### RD5300 Cassette Deck

Front-loading stereo cassette recorder deck with Dolby noise-reduction circuit; frequency response 30-16,000 Hz; S/N 57 dB (Dolby out), 63 dB (Dolby in); wow and flutter 0.05% rms; separate input and output level controls; $CrO_2$/standard tape pushbutton equalization control and LED indicators; bias high/low control; limiter on/off control; two large VU meters; 6¹⁄₂" H × 16¹⁄₂" W × 11⅞" D ..... $190

### RD5250 Cassette Deck

Stereo record/playback cassette deck with Dolby noise-reduction system; tape selector; permalloy recording head; calibrated input/output level controls; separate LED record-on and Dolby-on indicators; two large VU meters; locking pause control; bias/equalization switching; full automatic stop; viscous damped cassette door; wow and flutter 0.05% wrms; S/N 64 dB (Dolby on); 6¹⁄₈" H × 16¹⁄₂" W × 11⅞" D..... $170

### RD5030 Cassette Deck

Front-loading stereo record/playback deck with Dolby noise-reduction system; tape select switch for normal, $CrO_2$, and FeCr tape; pause control; calibrated level controls; separate bias/equalization switching; full automatic stop; left and right mike inputs; frequency 30-16,000 Hz; wow and flutter 0.08%; S/N 62 dB (Dolby on); 5¹⁄₄" H × 16¹⁄₂" W × 11¼" D ..... $140

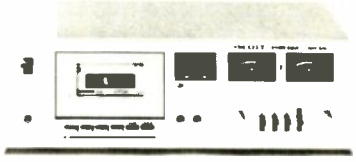
### RD4550 Stereo Cassette Deck

Front-loading stereo cassette deck; tape selector for $CrO_2$ and normal tapes; two VU meters; calibrated left/right channel input levels controls; locking pause control; digital tape counter; ac bias and erase; two mic jacks; stereo headphone jack; line in/out jacks; wow and flutter 0.25% rms; S/N 45 dB; frequency response 30-12,000 Hz; 4⅜" H × 11⅝" W × 9" D..... $100

## H.H. SCOTT

### 670D Stereo Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; electronically controlled dc mo-



tor; superhard permalloy heads; built-in bias and equalization for normal, $CrO_2$, and FeCr tapes; full automatic stop; tape memory rewind function; three-digit tape counter with reset; record, Dolby, and peak level indicating LEDs; separate channel microphone inputs; channel record level controls; line/mic input selector; output level control; calibrated VU meters; illuminated cassette compartment; rack mountable ..... $200

## SHARP

### RT-3388 Cassette Deck

Microprocessor-controlled stereo cassette deck with Automatic Program Locate Device (APLD) and Dolby noise-reduction system; front-loading; servo-controlled dc motor; hard permalloy record/playback head; ferrite erase head; has five forms of memory, can be programmed to find the start and automatically play any segment of cassette tape by going either forward or in reverse, can turn itself on and off, has both rewind and tape counter memory, and can be programmed to repeatedly play a certain segment of tape; Quartz digital clock and complete LCD display; LCD electronic tape and elapsed time displays; two VU meters; LED peak level, record and Dolby indicators; individual input level controls for mic and line; separate bias and equalization settings; Hall effect IC; full auto stop; illuminated tape compartment; pause control; wow and flutter 0.06% wrms; frequency response 30-13,000 Hz ±3 dB (normal tape), 30-16,000 Hz (FeCr tape), 30-15,000 Hz ±3 dB ($CrO_2$ tape); S/N 64 dB (Dolby on) ..... $360

### GF-9090 Portable Cassette Recorder

Portable stereo cassette recorder with AM/FM/Stereo FM radio with two shortwave bands; Automatic Program Search System (The Sharp Eye); VU meters for each channel that double as tuning and battery check indicators; bias/equalizer switch for normal, $CrO_2$, and FeCr tapes; narrow gap head; mechanical pause control; extra-large stop button; two built-in condenser (electret) microphones; cue/review system; LED FM stereo indicator; two powerful amplifiers; built-in two-way speaker system with two 6¹⁄₂-in woofers and two horn tweeters; stereo expander switch; balance control; individual bass and treble controls; left/right separate recording level controls; dial light; mic mixing control ..... $350

### RT-1165 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; Automatic Program Search System (The Sharp Eye); servo-controlled dc motor; narrow gap permalloy head for record/playback and ferrite erase head; two VU meters; LED peak level indicator; mic/line mixing with individual level controls; separate bias and equalization switches; automatic end-of-tape shut-off; mechanical pause control; digital tape counter; mic/line selector and editor button; wow and flutter 0.09% wrms; frequency response 30-13,000 Hz ±3 dB (normal tape), 30-14,000 Hz ±3 dB (FeCr and $CrO_2$ tapes); S/N 62 dB (Dolby on) ..... $240

### RT-1157 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; Automatic Program Search System (The Sharp Eye); servo-controlled dc motor; narrow gap permalloy record/playback head and ferrite erase head; two VU meters; LED peak level indicator; individual bias and equalization switches; automatic end-of-tape shut-off; mechanical pause control; line/mic input selector switch; front panel inputs for stereo headphones; digital tape counter; wow and flutter 0.09% wrms; frequency response 40-12,500 Hz ±3 dB (normal tape), 40-14,000 Hz (FeCr and $CrO_2$ tapes); S/N 62 dB (Dolby on)..... ..... $220

### RT-1125 Cassette Deck

Front-loading stereo cassette deck with noise reduction; Automatic Program Search System (The Sharp Eye); servo-controlled dc motor; narrow gap permalloy record/playback head and ferrite erase head; two VU meters; LED record indicator; individual bias and equalization switches; automatic end-of-tape shut-off; mechanical pause control; front panel inputs for stereo headphones and microphones; digital tape counter; wow and flutter 0.09% wrms; frequency response 40-11,000 Hz ±3 dB (normal tape), 40-13,000 Hz ±3 dB ($CrO_2$ tape); S/N 56 dB (Dolby on) ..... $170

## SONY

### EL-7 Stereo Elcaset Deck

4-track, 2-channel stereo elcaset deck with Dolby noise-reduction system and built-in 40-Hz test oscillator for Dolby calibration and switchable FM multiplex filter for Dolby FM recording; dc closed-loop dual-capstan servo-controlled motor; separate ferrite-and-ferrite heads for record, playback, and erase; solenoid-operated pushbuttons; logic-controlled tape transport; three-digit tape counter with memory stop and play; dc FET head/playback amplifier; timer standby; photoelectric auto shut-off; three-position bias and equalization switches; headphone and line output level controls; line/mic mixing with separate controls/ch; master fader; front-panel line input jack; three-position mic attenuator switch for 0, −15, −30 dB muting; dual VU meters for source/playback signal levels; source/tape monitor switch; full-function remote control with optional RM-30 remote control unit; wow and flutter 0.04% wrms; frequency response 25-22,000 Hz ±3 dB (FeCr tape), to 20,000 Hz (standard tape); S/N 62 dB (FeCr, Dolby off); THD 0.8%; fast-winding time 60 sec (LC-60); mic input sensitivity 0.3 mV, line 0.095 V/100,000-ohm load; line output/impedance 0.775 V/10,000 ohms; 3-32 ohms headphone output impedance; 6³⁄₄" H × 17" W × 12⅝" D ..... $900

**RM-30.** Remote control unit..... $55

**EL-4.** Similar to EL-7 without solenoid-operated pushbuttons, headphone and line output level controls, line/mic mixing, front-panel line input jack, three-position mic attenuator switch, three position bias and equalization switches, and tape/source monitor switch; includes two heads (ferrite-and-ferrite), single capstan motor with scrape filter, illuminated tape selectors, and rec-mute for instant muting; no remote control; wow and flutter 0.06% wrms; frequency response 25-10,000 Hz ±3 dB (FeCr tape), to 18,000 Hz ±3 dB (standard tape); fast-winding time 100 sec (LC-60) ..... $500

### TC-K7II Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; dc servo-controlled motor with frequency generator; two-motor transport system; ferrite-and-ferrite heads; bias and equalization settings for standard, FeCr, and $CrO_2$ tape; switchable FM multiplex filter; three LEDs measure varying peak levels; direct-coupled amplifier; full-logic solenoid controls; line and microphone mixers with separate level controls for each channel; tape counter with memory circuit; full-function remote control with optional RM-30 remote control unit; wow and flutter 0.045%; frequency response 30-16,000 Hz ±3 dB (FeCr tape), to 15,000 Hz ±3 dB ($CrO_2$ tape), and to 13,000 Hz ±3 dB (Fe tape); S/N 60 dB (FeCr without Dolby); THD 1.3%; fast-winding time 70 sec (C-60)..... $540

### TC-K6 Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; frequency-generator dc servo-controlled motor for capstan drive; separate spool-

ing motor; ferrite-and-ferrite record/playback head; two VU meters; three LED peak level indicators; switchable FM multiplex filter; three-position bias and equalization switches for standard, FeCr, and $CrO_2$ tape; solenoid-assisted mode selection; automatic shut-off in all modes; logic-controlled tape transport; record-mute switch; timer standby capability; line and microphone mixing with separate level controls for each channel; line output/headphone level control; wow and flutter 0.05% wrms; frequency response 30-16,000 Hz ±3 dB (FeCr tape), to 15,000 Hz ±3 dB ($CrO_2$ tape), and to 13,000 Hz ±3 dB (Fe tape); S/N 59 dB (Dolby off, FeCr); fast-winding time 90 sec (C-60) ..... $400

### TC-158SD Portable Cassette Deck

Portable stereo cassette deck with Dolby noise-reduction system and ac/dc operation; dc servo-con-

trolled motor; ferrite-and-ferrite heads; bias and equalization settings for standard, FeCr, and $CrO_2$ tape; two illuminated VU meters; peak-reading LED; automatic end-of-tape shut-off; can be operated with four different power sources (ac, batteries, rechargeable battery pack, and optional Sony DCC-129 car/boat battery cord); wow and flutter 0.08% wrms; frequency response 30-15,000 Hz ±3 dB (FeCr and $CrO_2$ tape), to 13,000 Hz ±3 dB (Fe tape); S/N 59 dB (Dolby off, FeCr); THD 1.3%; fast-winding time 90 sec (C-60); weight 11 lb 9 oz ..... $380

### TC-K5 Stereo Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; dc frequency generator single-capstan servomotor; ferrite-and-ferrite head; auto play for automatic tape repeat with three-digit tape counter/memory for auto start; switchable FM multiplex filter for FM Dolby broadcasts; three-position bias and equalization switches; timer standby; rec-mute for instant muting; dial VU meters with three LED peak level indicators; auto shut-off; front-panel line/headphone control; wow and flutter 0.05% wrms; frequency response 30-16,000 Hz ±3 dB (FeCr tape), to 15,000 Hz ($CrO_2$ tape), to 13,000 Hz (standard tape); S/N 59 dB (FeCr, Dolby off); THD 1.3%; fast-winding time 90 sec (C-60); 5¾" H × 17⅛" W 11½" D ..... $300

### TC-K2A Stereo Cassette Deck

Front-loading stereo cassette deck with Dolby noise-reduction system; dc servomotor; ferrite-and-ferrite head; auto play for auto tape repeat; two VU meters; auto shut-off; three-position tape selector; wow and flutter 0.06% wrms; frequency response 40-14,000 Hz ±3 dB ($CrO_2$ and FeCr tapes), to 12,500 Hz (standard); S/N 57 dB (FeCr, Dolby off); THD 1.7%; fast-winding time 90 sec (C-60); 5¾" H × 17⅛" W × 10⅝" D ..... $200

## SONY from SUPERSCOPE

### TC-138SD Dolbyized Cassette Deck

Stereo cassette deck with Dolby noise-reduction system; ferrite-and-ferrite head; FeCr equalization; built-in multiplex filter; three-position tape select switch; pushbutton operation; mic/line mixing; straight-line record level controls; record interlock; separate line-out volume control; stereo headphone monitor jack; two calibrated VU meters, peak limiter; peak level indicator; three-digit tape counter; automatic total mechanism shutoff; four function-indicator lamps; locking fast-forward and rewind; frequency response 20-15,000 Hz (standard), 30-15,000 Hz ±3 dB (chrome and FeCr tape); induction motor drive; wow and flutter 0.07%; comes with two RK-72 patchcords, dust cover, FeCr-60 cassette; 5⁷⁄₁₆" H × 16³⁄₁₆" W × 11⁹⁄₁₆" D ..... $400

### TC-136SD Stereo Cassette Deck

Stereo cassette deck; Dolby noise-reduction system; ferrite-and-ferrite head; "Symphase" recording capability; built-in multiplex filter; three-position tape select switch; pushbutton operation; mic/line mixing; straight-line record level controls; record interlock; two illuminated VU meters; peak limiter; three-digit tape counter; automatic total mechanism shutoff; Dolby and record indicator; frequency response 30-12,000 Hz (standard), 40-15,000 Hz ±3 dB (chrome and FeCr tapes); comes with two RK-74 patchcords, head cleaning tips, FeCr cassette; 5" H × 15¼" W × 9½" D. $300

### TC-186SD Stereo Cassette Deck

Front-load stereo cassette deck; Dolby noise-reduction system; ferrite-and-ferrite head "Symphase" recording capability; Dolby FM; Dolby calibration controls (FM); three-position tape select switch; pushbutton operation; record interlock; stereo headphone monitor jack; two illuminated VU meters; peak limiter; three-digit tape counter; automatic total mechanism shutoff; frequency response 30-14,000 Hz ±15 dB (standard), 40-15,000 Hz ±3 dB (chrome and FeCr tapes); two mic and line inputs; two line and one stereo headphone outputs; comes with two RK-74 patchcords, wooden cabinet; 6¼" H × 6¼" W × 11⅝" D ..... $300

### TC-135SD Stereo Cassette Deck

Stereo cassette deck; Dolby noise-reduction system; ferrite-and-ferrite head; FeCr equalization; "Symphase" recording capability; dc servo-controlled motor; Dolby FM and calibration controls; multiplex filters; three-position tape select switch; automatic bias adjust for $CrO_2$ tape; two illuminated VU meters; pushbutton operation; peak limiter; three-digit tape counter with reset button; imput selector for mic or line imput; record indicator pilot lamp; locking fast-forward and rewind; frequency response 30-13,000 Hz ±15 dB (standard), 30-15,000 Hz ±15 dB (FeCr), 50-14,000 Hz ±3 dB (chrome); comes with two RK-74 patchcords; 4¼" H × 15⁵⁄₁₆" W × 9¾" D ..... $250

### TC-118SD Cassette Deck

Stereo cassette deck with Dolby noise-reduction system; servo-control motor; three-position tape selector switch; illuminated VU meters; peak limiter; pause control; three-digit tape counter; automatic shutoff; wow and flutter 0.15% wrms; S/N (Dolby off) 50 dB; frequency response 40-13,000 Hz (FeCr and $CrO_2$cf43s tapes); fast-winding time 90 sec (C-60); bias frequency 85 kHz; input 0.06 V at 100,000 ohms (line), −72 dB (lo-Z mike); output 0.435 V at 10,000 ohms (line); 8-ohm headphones; 120-V ac, 60 Hz, 7 W; 4⅛" H × 14¼" W × 9⅜" D ..... $210

### TC-117 Stereo Cassette Deck

Stereo cassette deck; FeCr equalization; servo-controlled motor; tape select switch; pushbutton operation; straight-line record level controls; record interlock; two illuminated VU meters; pause control with interlock; three-digit tape counter, high filter switch; frequency response 40-10,000 Hz (standard), 40-13,000 Hz (chrome and FeCr); comes with walnut base and two RK-74 patchcords; 4⅛" H × 14¼" W × 9⅜" D ..... $160

## SUPERSCOPE

### CD-330 Cassette Deck

Portable top-loading stereo cassette deck with dual-

process Dolby noise-reduction system; dc servo-motor; dual flywheel mechanism; one super-hard permalloy record and two playback heads; tape/source monitoring; complete shut-off; one-touch record and cue/review; separate left/right channel record level controls; auto/manual/limiter record level selection; calibrated VU meters; bias and equalization select for standard, FeCr, and $CrO_2$ tapes; tone control; tape counter; built-in condenser microphone; wow and flutter 0.12% wrms; S/N 60 dB with Dolby; frequency response 40-12,000 Hz (standard tape) and 40-14,000 Hz (FeCr) ..... $250

**CD-320.** Similar to CD-330 except two heads (super-hard) permalloy record and playback) and minus built-in condenser microphone ..... $200

### CD-310 Cassette Deck

Front-loading cassette deck with Dolby noise-reduction system; bias and equalization selection switches; pause control; tape counter; Permalloy head; peak limiter switch; VU meters ..... $200

### CD-304 Cassette Deck

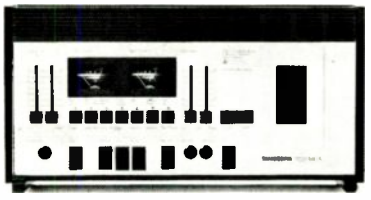
Top-loading stereo cassette deck with Dolby noise-reduction system; super hard permalloy record/playback head; auto-stop; separate left and right record level controls; peak limiter; locking pause control; three-digit tape counter; dual calibrated VU meters; front panel headphone and mic jacks; rear panel line input and output jacks; wow and flutter 0.15% wrms; frequency response 40-12,000 Hz ±3.5 dB (standard tape), 40-14,000 Hz ±3.5 dB ($CrO_2$ and FeCr tape); S/N 48 dB (Dolby off), 54 dB (Dolby on); 3¼" H × 13¾" W × 9¹⁄₁₆" D ..... $160

**CD-303.** Similar to CD-304 without Dolby noise-reduction system ..... $115

## TANDBERG

### TCD-340A Cassette Deck

Actilinear recording system; three-motor, servo-controlled dual capstan closed loop drive system; sole-



noidless operation; separate adjustable azimuth recording and playback heads and dual-gap erase head; electronic logic control; equalized peak reading VU meters; variable input/output controls; mode indicator lights; four Dolby-B processors; tape selector switch; multiplex filter; front-panel electronic editing; pneumatically damped cassette department; digital tape counter; left/right mic jacks; headphone jack; wow and flutter 0.12% wrms; 0.08% (JIS); S/N better than 65 dB (IEC A); frequency response 30-20,000 Hz; horizontal or vertical operation; rack mountable ..... $1150

**TCD 340AM.** Similar to TCD 340A except has front-panel four-position bias/equalization circuitry for use with Metafine-type tape; S/N 70 dB; matte black aluminum finish ..... $1300

### TCD-330 Cassette Deck

Stereo record/play cassette deck with Dolby noise-reduction system; three heads (for tape/source monitoring during recording); three-motor, dual-capstan, closed-loop drive system, hysteresis synchronous record/play motor; wow and flutter 0.12% (wrms), 0.18% (DIN 45500); S/N (Dolby on, ref. 3% third harmonic dist.) 64 dB (DIN 45500, IEC A curve rms), 52 dB (DIN 45500, IEC linear); 0.3% dist. (electronic with 0-dB rec. level); frequency response 20-20,000 Hz (DIN 45500), 30-18,000 Hz ±3 dB (FM/MPX filter off); channel separation 60 dB (side 1/side 2), 35 dB (track 1/track 2) at 1 kHz, input sensitivity 0.15-20 mV (mic), 0.08-10 V (line), 0.008-1 V (radio); input impedance automatically adjusts 100-800 ohms (mic), 470,000 ohms (line), 47,000 ohms (radio); output 775 mV unloaded, 5000-ohm impedance (radio), 1.5 V unloaded, 100-ohm impedance (line), 5 mW at 8 ohms (headphone); 230-V ac, 50 Hz or 115-V ac, 60 Hz, 40 W; 4⅛" H × 18½" W × 9⅛" D ... $1000

# 6 CASSETTE TAPE MACHINES

### TCD 320 Cassette Deck
Stereo record/play cassette deck with Dolby-B noise-reduction system; three motor dual capstan closed-loop transport system; record/play head; self-adjust input amplifier; equalized peak-reading VU meters; defeatable multiplex filter; headphone output; playback volume controls; digital tape counter; left/right mic jacks; wow and flutter 0.13% wrms (record/play), 0.09% (JIS); S/N 65 dB min.; frequency response 30-18,000 Hz; max. speed tolerance ±1.0%; horizontal or vertical operation; rack mountable..... $650
**TCD 320AM.** Similar to TCD 320 except features actilinear recording system, dual-gap erase head, and front-panel bias selector switch for metal particle tape; matte black aluminum finish..... $750

### TCD 310 Mk II Cassette Deck
Stereo record/play cassette deck with Dolby noise-reduction system; three-motor, dual-capstan, closed-loop drive system, synchronous record/play motor; wow and flutter 0.2% (DIN 45500 weighted peak); S/N (Dolby on, ref. 3% third harmonic dist., Tandberg Tape) 65 dB (DIN 45500, IEC A curve), 55 dB (DIN 45500, IEC linear rms); 0.3% dist. (electronic with 0-dB rec. level); frequency response 30-16,000 Hz (DIN 45500, MPX filter off); channel separation 60 dB (side 1/side 2), 35 dB (track 1/track 2) at 1 kHz; input sensitivity 0.15-0.20 mV (mic), 0.04-5 V (line), 0.008-1 V (radio); input impedance automatically adjusts 100-800 ohms (mic), 220,000 ohms (line), 47,000 ohms (radio); output 775 mV at 10,000 ohms (radio/line), 2 mW at 8 ohms (headphone); 240-V ac, 50 Hz or 115-V ac, 60 Hz, 34 W; 4¼" H × 17" W × 9¼" D ..... $600

### TCR-222 Cassette Deck
Top-loading cassette deck for mono recording and playback; three-motor system, one synchronous hysteresis motor for recording and playback and two servo dc motors for fast winding; dual-capstan closed-loop drive system; 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..... $600

## TEAC

### C-1 Cassette Deck
Front-loading stereo cassette deck with Dolby noise-reduction system; three-motor and three-head dual-capstan transport system; logic operation control with LSI; pitch control to vary tape speed up to ±4%; double-action input controls; two peak program VU meters; three-position bias and equalization switch; interchangeable bias/equalization card, CX-8; three-position monitor switch; switchable Dolby/dbx noise reduction system; input selector switch for mic/mic-with-attenuation/line; memory function for auto-stop/repeat; timer control switch; wow and flutter 0.04% (NAB weighted); frequency response 31.5-18,000 Hz ±3 dB ($CrO_2$), 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; 6½" H × 19" W × 13⅞" D ..... $1300

### A-800 Cassette Deck
Front-loading stereo cassette deck with Dolby noise-reduction system; FG servo-controlled dc capstan motor; one mechanically governed dc reel motor; three heads for erase, record, and playback; logic-controlled transport with optional remote control; optional dbx noise-reduction system interface; three-position bias and equalization selectors; two peak-reading VU meters; mic/line mixing; record/mute switch; memory stop/rewind switch; three-digit tape counter; timer switch; lighted cassette compartment; fast-winding time 90 sec (C-60); wow and flutter 0.05% (NAB weighted); frequency response 30-18,000 Hz ±3 dB ($CrO_2$ and FeCr tape), 30-16,000 Hz ±3 dB (hi-fi tape); S/N 58 dB, improved 5 dB at 1 kHz and 10 dB over 5 kHz with Dolby; two mic inputs 0.25 mV (−72 dB), 600-ohm impedance; two line inputs 60 mV at 50,000-ohm impedance; one stereo headphone jack 8-ohm impedance; 7" H × 17⅝" W × 12⅜" D ..... $725

### A-601R Cassette Deck
Front-loading stereo cassette deck with Dolby noise-reduction system; FG servo-controlled dc motor; two heads for erase and record/playback; newly developed transport for reverse playback; easy change of direction by touching electronic button; record, Dolby, and record/mute indicators; three-position bias and equalization switch; memory function; mic/line mixing; peak-level meters; timer switch for automatic record-start; mono mic input jack; fast-winding time 100 sec (C-60); wow and flutter 0.08% (NAB, weighted); frequency response 30-16,000 Hz ($CrO_2$), 30-13,000 Hz (hi-fi); S/N 55 dB, improved 5 dB at 1 kHz and 10 dB over 5 kHz with Dolby; two mic inputs 0.25 mV (−72 dB) at 600-ohm impedance; two line inputs 60 mV at 50,000-ohm impedance; 6¹¹⁄₁₆" H × 17⅝" W × 13³⁄₁₆" D ..... $600

### A-700 Cassette Deck
Front-loading stereo cassette deck with Dolby noise-reduction system; FG servo-controlled dc capstan motor; dc reel motor; two heads for erase and record/playback; optional remote control; twin peak-level meters; three-position bias and equalization switches; record/mute; recording level and balance controls; memory stop switch; three-digit counter; timer switch; front-panel microphone and headphone jacks; line/mic input selector switch; fast winding time 90 sec (C-60); wow and flutter 0.05% (NAB, weighted); frequency response 30-16,000 Hz ($CrO_2$), 30-14,000 Hz (hi-fi); S/N 57 dB, improved 5 dB at 1 kHz and 10 dB over 5 kHz with Dolby; two mic inputs 0.25 mV (−72 dB)/600-ohm impedance; two line inputs 60 mV at 50,000-ohm impedance; 7" H × 17⅝" W × 12⅜" D ..... $550

### A-303 Cassette Deck
Front-load stereo cassette deck with Dolby noise-reduction system; two-head design; wow and flutter 0.06%; frequency response 30-16,000 Hz ($CrO_2$ or FeCr tape); S/N 57 dB (Dolby out), improved by 10 dB at 5 kHz with Dolby in; record/mute function; memory switch for easy search of recorded material; photo-transistor-controlled auto-stop; three-step independent bias and equalization switches; timer control permits automatic recording or playback ..... $400

### A-105 Cassette Deck
Stereo cassette deck with Dolby noise-reduction system; two permaflux heads; wow and flutter 0.09%; frequency response 30-15,000 Hz ($CrO_2$ tape); S/N 53 dB (Dolby out), improved by 10 dB at 5 kHz with Dolby in; two-step bias and equalization switches; separate left and right record level controls; mic/line input switch; pause control; three-digit tape counter; VU meters; 7¹¹⁄₁₆" H × 17⅝" W × 9⅜" D ..... $300

### A-103 Cassette Deck
Front-load stereo cassette deck with Dolby noise-reduction system; two permaflux heads; wow and flutter 0.1%; frequency response 30-14,000 Hz ($CrO_2$ tape); S/N 50 dB (Dolby out), improved by 10 dB at 5 kHz with Dolby in; two-step bias and equalization switches; three-digit tape counter; two VU meters; separate left and right record level controls; mic/line input switch; 7¹¹⁄₁₆" H × 17⅝" W × 9⅜" D..... $250

## TECHNICS by PANASONIC

### RS-677US Cassette Deck
Vertical design with front-loading; features Dolby circuit (including switch selector and calibrator for pre-encoded Dolby FM broadcasts); two motors including electronic control for capstan drive; solenoid operation; hot-pressed ferrite head; meter peak-check switch; selectable MPX filter; chromium-dioxide/normal tape selector (either manual or automatic); full auto-stop in any mode; mechanical pause; single level control for record mode with aux. left/right balancer; digital counter; memory rewind with automatic replay; mike/line/tuner inputs with a mic level control for mixing; remote-control box included; vinyl-over-wood cabinet. Guaranteed minimum specifications: record/play frequency response 30-17,000 Hz ±3 dB (chromium-dioxide tape); 30-15,000 Hz ±3 dB (standard tape); wow and flutter 0.07% wrms; S/N 52 dB (Dolby out), 65 dB (Dolby in); RP-9275 complete six-function remote control included; 5⅜" H × 17¼" W × 13¼" D ..... $500

### RS-631US Cassette Deck
Front-loading stereo cassette deck with Dolby noise-reduction system; IC-controlled FG servo dc motor; two-head system (HPF record/playback ferrite erase head); memory auto play; separate three-position bias and equalization selectors; built-in muting circuit; peak level check meters plus three-stage (0, 3, 6 dB) LED peak warning indicators; mic/line mixing; full auto stop; timer stand-by mechanism; remaining tape indicator scale; cue and review function; output level control; left and right microphone input jacks; recording indicator lamp; tape counter and reset button; fast-winding time 90 sec (C-60); wow and flutter 0.06% wrms; frequency response 30-17,000 Hz ($CrO_2$ and FeCr tape), 30-14,000 Hz (normal tape); S/N 67 dB (Dolby on), 57 dB (Dolby off); mic input sensitivity 0.25 mV, impedance 400-20,000 ohms; line sensitivity 60 mV, input impedance 33,000 ohms; 5⅞" H × 18" W × 10½" D..... $300

### RS-630TUS Cassette Deck
Four-track stereo record/play front-loading cassette deck with Dolby noise-reduction system; Super-Alloy head for record/play, ferrite head for erase; wow and flutter 0.09% wrms; S/N 63 dB ($CrO_2$ tape, above 5 kHz, Dolby in), 50 dB (normal tape, Dolby out); frequency response 30-16,000 Hz ($CrO_2$ tape), 30-14,000 Hz (standard tape); fast-winding time 90 sec (C-60); input 0.25 mV at 600-20,000 ohms (mike), 60 mV at 47,000 ohms (line); output 0.42 V (0 VU) at 50,000 ohms (line), 60 mV at 8 ohms (headphone); automatic play/record with timer stand-by mechanism; left/right dual-level input/output controls; bias and equalization settings for all major tapes; digital tape counter; pause control; 5⅜" H × 17⅛" W × 12⅜" D..... $260

### RS-615US Cassette Deck
Four-track stereo record/play front-loading cassette deck with Dolby noise-reduction system; Super-Alloy head for record/play, ferrite head for erase; wow and flutter 0.1% wrms; S/N 63 dB ($CrO_2$ tape, Dolby in), 50 dB (standard tape, Dolby out); frequency response 30-15,000 Hz ($CrO_2$ tape), 30-14,000 Hz (standard tape); fast-winding time 90 sec (C-60); input 0.25 mV at 600-20,000 ohms (mike), 60 mV at 47,000 ohms (line); output 0.42 V at 50,000 ohms (line), 65 mV at 8 ohms (headphone); three-position tape selector; timer stand-by mechanism; pause control; level meters; 41-step l/r dual input control; auto stop; recording indicator lamp; tape counter; 5½" H × 16⅛" W × 12" D ..... $200

### RS-616 Cassette Deck
Front-loading stereo cassette deck with Dolby noise-reduction system; vertical hold, flat component style; electronically-controlled dc motor; record/playback head and ferrite erase head; three-position bias and equalization selectors for ferric, $CrO_2$, and FeCr tapes; two level meters; soft-loading/unloading cassette compartment; cue and review; full auto stop; headphone jack; wow and flutter 0.07%..... $200

### Professional Series

### RS-9900US Cassette Deck
Incorporates closed-loop, double-capstan, three-motor drive, separate amplifier unit, and Dolby noise-reduction system; memory play/rewind; pitch

control; remaining tape time meter; calibration controls for Dolby play and record, bias, equalization; tape/source monitoring; mike attenuator; tape selection switch; 400- and 8000 Hz test oscillators; MPX filter; amp unit: S/N 67 dB with Dolby; 55-dB dynamic range (mike amp recording capacity); tape transport; wow and flutter 0.04% wrms; frequency response 25-18,000 Hz ±3 dB (normal tape), to 20,000 Hz with $CrO_2$ tape; fast-winding time 70 sec (C-60); two HPF record/play heads and ferrite erase head; tape transport: 7⅝" H × 19" W × 14¾" D; amp: 6⅞" H × 19" W × 14¾" D..... $1600

**RS-7500US Elcaset Deck**
Three-head design with automatic tape selection; full-stop mechanism; memory rewind; timer record-

ing and play; tape monitoring; mike/line mixing; click and pop muting; two VU meters; separate output level control; wow and flutter 0.06% wrms; frequency response 25-20,000 Hz ±3 dB (tape type I), to 22,000 Hz (tape types II and III); S/N 63 dB (tape types II and III); 0.8% dist. with tape type III; output level/impedance 580 mV/22k ohms (line), 60 mV/8 ohms (headphone); input sensitivity/impedance 0.25 mV/400-20,000 ohms (mike), 60 mV/100k ohms (line); has FG servo-controlled dc motor; 10" H × 19" W × 13¾" D ..... $680

**RS-M85 Cassette Deck**
Front-loading 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; fluorescent electronic bar graph peak meters; three-position tape selector; fine bias adjustment; electronic full auto-stop; record muting; mic/line mixing; memory rewind; left and right channel microphone jacks; stereo headphone jack; electronic muting circuit; wow and flutter 0.035% wrms; speed deviations 0.3%; fast-winding time 80 sec (C-60); frequency response 30-16,000 Hz ±3 dB ($CrO_2$ 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; microphone impedance 400-10,000 ohms; 3⅞" H × 19" W × 15⅞" D..... $650

**RS-686DS Portable Cassette Deck**
Top-loading portable stereo cassette deck with Dolby noise-reduction system; FG servo dc motor; three heads (hot-pressed ferrite record/play, super alloy for monitoring, and ferrite for erase); anti-rolling mechanism for mobile situations; separate bias and equalization selectors; left/right peak check indicators; tape/source monitor switch; limiter switch; low-cut filter; silent auto-stop and tape-end alert eye; mic/line input selector with microphone attenuator; monitor speaker volume control; record indicator light; lockable pause control; sliding fast-forward/rewind lever; digital tape counter and re-set button; built-in dc-ac converter. Wow and flutter 0.07% wrms; frequency response 50-16,000 Hz ±3 dB ($CrO_2$ tape), 50-14,000 Hz ±3 dB (normal tape); S/N 63 dB above 5000 Hz (Dolby on), 53 dB (Dolby off); fast winding time 80 sec (C-60); input sensitivity/impedance 0.25 mV/400-10,000 ohms (mic), 60 mV/100,000 ohms (line); output/load impedance 0.42 V/22,000 ohms (line), 65 mV/8-125 ohms (headphone), 65 mV/8 ohms (earphone, mono); monitor speaker 0.2-W output (mono). 3" H × 9½" W × 7⅞" D ..... $650

**RS-646DS Portable Cassette Deck**
Top-loading portable stereo cassette deck with Dolby noise-reduction system; electronically-controlled dc motor; two heads (super alloy for record/playback and ferrite for erase); separate bias and equalization; 4-in PM monitor speaker; mic/line input selector with mic attenuator; limiter switch; full auto-stop with silent-stop; tape end indicator; three-way power supply (battery/ac/car battery) and level battery check meter; independent left/right input level controls with lock switch; speaker volume and tone controls; lockable pause control; digital tape counter and reset button; left/right mic and line input jacks and headphone jack. Wow and flutter 0.10% wrms; frequency response 50-14,000 Hz ±3 dB ($CrO_2$ and normal tape); S/N 65 dB above 5000 Hz (Dolby on), 55 dB (Dolby off); fast-winding time 130 sec (C-60); input sensitivity/impedance 0.25 mV/40C-10,000 ohms (mic), 60 mV/47,000 ohms (line); output/load impedance 0.42 V/50,000 ohms (line), 65 mV/8 ohms (headphone), 0.8 W output (monitor speaker); includes shoulder strap and ac power cord. 4¼" H × 14¼" W × 11" D..... ..... ..... ..... $330

## TOSHIBA

**PC-5460 Cassette Deck**
Front-loading stereo cassette deck with Dolby noise-reduction system; servo dc motor; all Sendust re-

cord/playback head; ferrite erase head; three-level/six-way independent bias equalization; twin, triple function meters (VU, peak-level, and peak-hold); editor volume control; mic and line mixing with separate right and left channel volume controls; output level control timer recording; Dolby FM in/out switch; tape counter; feather-touch controls; wow and flutter 0.05% wrms; frequency response 20-17,000 Hz ±3 dB (chrome tape); S/N 69 dB (Dolby on, chrome tape); 6" H × 16½" W × 11" D.. ..... ..... $340

**PC-4460 Cassette Deck**
Front-loading stereo cassette deck with Dolby noise-reduction system; dc servomotor; hard permalloy record/playback head; ferrite erase head; three-level/six-way independent bias equalization selectors; twin VU meters; +6 dB LED peak indicator; left/right record level controls; output level control; switchable MPX filter; timer recording; feather-touch controls; wow and flutter 0.05% wrms; frequency response 30-16,500 Hz ±3 dB (chrome tape); S/N 69 dB (Dolby on, chrome tape); 6" H × 16½" W × 11" D..... $270

**PC-3460 Cassette Deck**
Front-loading stereo cassette deck with Dolby noise-reduction system; dc servomotor; hard permalloy record/playback head; ferrite erase head; large twin VU meters; +6 dB LED peak indicator; three-level/six-way independent bias equalization selectors; left/right record level controls; output level control; switchable MPX filter; cue and review; feather-touch controls; wow and flutter 0.06% wrms; frequency response 30-16,500 Hz ±3 dB (chrome tape); S/N 67 dB (Dolby on, chrome); 5¾" H × 16½" W × 11" D..... $200

**PC-2460 Cassette Deck**
Front-loading stereo cassette deck with Dolby noise-reduction system; dc servomotor; permalloy record/playback head; ferrite erase head; two wide-range peak-reading level meters; two-level four-way separated bias/equalization controls; left/right record level controls; built-in MPX filter; wow and flutter 0.1% wrms; frequency response 30-14,000 Hz ±3 dB (chrome tape); S/N 65 dB (Dolby on, chrome tape); 6½" H × 16½" W × 11" D..... $150

## YAMAHA

**TC-1000 Cassette Deck**
Front-loading cassette deck with Dolby noise-reduction system; FG/PLL servosystem with dc capstan-

tape motor and dc capstan-reel motor; Sendust-alloy head and ferrite erase head; recording amp and bias circuit; electronic automatic stop, memory rewind, and play modes; three-position switch for $CrO_2$, LH, and FeCr tapes; separate bias fine adjust control with center click-stop (± 8% range); twin peak VU meters; timer recording; headphone amp; mic/line mixing; dual line output. Specifications: wow and flutter 0.05% (JIS wrms); frequency response 30-16,000 Hz ±3 dB (LH tape), 30-13,000 Hz ±3 dB ($CrO_2$ tape); S/N (JIS weighted) better than 60 dB ($CrO_2$ tape, Dolby off), improved 9 dB at 5000 Hz with Dolby on; input sensitivity/input impedance 0.25 mV/600 ohms (mic), 50 mV/50k ohms (line); fast-winding time 70 sec (C-60). 6"/16" H × 18⅛" W × 12⅞" D .... $595

**TC-520 Cassette Deck**
Front-loading cassette deck with Dolby noise-reduction system; double-belt tape transport with dc motor; hard permalloy heads; muting switch; front-panel bias adjustor (range ±20%) and record/playback equalization controls with center click-stop; headphone amplifier; separate left/right VU meters; wow and flutter less than 0.07% (JIS-wrms); frequency response 30-13,000 Hz ±3 dB (LH tape), 30-15,000 Hz ±3 dB (FeCr and $CrO_2$ tapes); S/N 57 dB (JIS weighted ), improved 9 dB at 5000 Hz (Dolby on); channel separation 30 dB at 1000 Hz; bias frequency 85,000 Hz; input sensitivity/input impedance 0.3 mV/5k ohms (mic), 50 mV/100k ohms (line); fast-winding time 90 sec (C-60); 6¼" H × 17⅛" W × 12⅞" D..... $295

**TC-320.** Similar to TC-520, except frequency response 40-14,000 Hz (normal bias tape), 40-16,000 Hz (chrome tape); 4⅜" H × 17⅛" W × 11¼" D ..... $225

**Don't Forget . . .**

If you need additional information on any of the products listed in this directory, don't hesitate to write directly to the manufacturers. They will be pleased to assist you. (See company address list beginning on page 8.)

For more information on audio products advertised in this guide, the post-paid "Free Information" Cards on page 185 are easy and convenient to use. Simply circle the numbers on the card corresponding to the key numbers at the bottom of the advertisements that interest you to obtain information free of charge.

# 7 OPEN-REEL TAPE MACHINES

## AKAI

### PRO-1000 Stereo Tape Deck

Three-speed (15, 7½, and 3¾ ips); ½-track record/play and ¼-track play two-channel stereo system; will handle up to 10½-in reels; double-capstan closed-loop drive system; features one ac servomotor for capstan drive and two six-pole eddy current motors for reel drive; has three GX heads and one full-track erase head; has illuminated VU meters with changeover switch for reading peak/VU and bias; built-in mixing of four different inputs with pan-pots; input selector switch with 30 dB microphone attenuator; full mic/line mixing capability; tape/source monitoring; remote control and timer operation (with optional RC-17 or RC-18); feather-touch full logic solenoid control system; NAB playback standards; recording input level control; independent left and right output volume controls; wow and flutter 0.025% wrms (15 ips), 0.04% wrms (7½ ips), 0.08% wrms (3¾ ips); frequency response 50-20,000 Hz ±1 dB (15 ips), 40-24,000 Hz ±3 dB (7½ ips), 60-12,000 Hz ±3 dB (3¾ ips); THD 1%, 1 kHz, 0 VU; S/N 60 dB; fast-forward and rewind time within 120 sec (1800-ft tape). 16¼" H × 18" W × 8" D..... $1895

### GX-650D Stereo Tape Deck

Three-speed (15, 7½, and 3¾ ips), ¼-track two-channel stereo/mono system; will handle up to 10½-in reels; features closed-loop double capstan mechanism; three motors with ac servo-controlled capstan drive; glass and crystal ferrite heads; response 30-30,000 Hz ±3 dB at 15 ips, 30-26,000 Hz ±3 dB at 7½ ips (both with LN-150 tape); dist. 0.4% at 15 and 7½ ips (1000 Hz, 0 VU); has line/mike mixing; sound-on-sound recording facilities; dual-monitoring system; remote control (with optional RC-17 accessory); automatic stop; pause lever switch; cue switch; individual line-output volume control; tape selector switch (low noise/wide range); four-digit tape index counter; two VU meters; two mike input jacks; stereo headphone jack; RCA-type line input and output jacks; record and pause indicator lamps. 20.6" H × 17.4" W × 10" D ..... $1195

### GX-630D Stereo Tape Deck

Two-speed (7½ and 3¾ ips), ¼-track, two-channel stereo/mono system; will handle up to 10½-in reels; features direct capstan-drive ac servomotor; three-motor tape transport; glass and crystal ferrite heads; response 30-25,000 Hz ±3 dB at 7½ ips (LN-150 tape); dist. 0.5% at 7½ ips (1000 Hz, 0 VU); has dual monitoring system; line/mike mixing; individual recording-mode selector buttons; automatic stop; line-output level control; pause lever switch; two VU meters; headphone output jack; two mike input jacks; recording indicator lamp; DIN connector; RCA-type line input and output jacks. 18.3" H × 17.4" W × 9.4" D..... $895

### GX-265D Stereo Tape Deck

Two-speed (7½ and 3¾ ips), ¼-track, two-channel stereo/mono system; will handle up to 7-in reels; features automatic reverse, record and playback; direct capstan-drive ac servomotor; three-motor transport; six-head function; dual monitoring system; glass and crystal ferrite heads; line/mike mixing; individual recording safety-lock buttons; pause lever switch; automatic stop; line-output volume control; four-digit tape index counter; DIN connector; RCA-type line input/output jacks; stereo headphone jack; two mike inputs; two VU meters; directional indicator lamps in recording and playback modes. 15.9" H × 17.4" W × 8.2" D..... $795

**GX-270D.** Similar to GX-265D but with three heads (four-head function); peak-level indicator lamp; add-on recording; 15.9" H × 17.4" W × 8.3" D..... $735

### GX-230D Stereo Tape Deck

Two-speed (7½ and 3¾ ips), ¼-track, two-channel stereo system; will handle up to 7-in reels; glass and crystal ferrite heads; features automatic and manual reverse playback; automatic stop; pause control; tape selector switch; output level control; expanded VU meters; dual monitoring; independent line/mike controls; sound mixing; 15.6" H × 17.3" W × 8.1" D..... $635

### 4000DS Mk-II Stereo Tape Deck

Two-speed (3¾ and 7½ ips), ¼-track, two-channel stereo; wow and flutter 0.07% rms at 7½ ips; response 30-26,000 Hz ±3 dB at 7½ ips; THD 1.5%; S/N 50 dB; bias frequency 100 kHz; has separate record, play, and erase heads; line output 1.23 V; inputs: mike (0.8 mV) and line (60 mV); features selector switch for regular or low-noise tape; sound-on-sound; sound-with-sound; mixing, automatic shut-off; pause control; 12.4" H × 16" W × 7.7" D..... $385

**4000DB.** Same as 4000DS but with Dolby built in.. ..... $460

### 1722W Tape Recorder

Two-speed (3¾ and 7½ ips), ¼-track, two-channel stereo; wow and flutter 0.14% rms at 7½ ips; response 30-21,000 Hz ±3 dB at 7½ ips; THD 2%; S/N 50 dB; bias frequency 63 kHz; has one record/playback and one erase head; inputs: mike (0.5 mV) and line (150 mV); two built-in 5-in × 7-in speakers; features PA capability, automatic shut-off. equalizer preamp for direct phono input, selector switch for regular or low-noise tape; 14.1" H × 14" W × 9.8" D..... $435

### *4-Channel*

### GX-630DSS 4-Channel Tape Deck

Four-channel or stereo record and playback; features four GX glass and single crystal heads; A-B monitoring in either mode; two-speed (7½ and 3¾ ips); full-logic function controls; "Quadra-Sync" recording; mic/line mixing; left/right track selector; pitch control (±5%); tape select switch; line output control; auto-stop, pause control with lock; will handle up to 10½-in reels..... $1175

### GX-270DSS 4-Channel Tape Deck

¼-track, four and two channel record/play deck; will handle 7-in reels; ac servo direct-drive capstan motor plus two eddy current motors for fast-forward and rewind; four GX heads; three-head function; full logic solenoid function controls; automatic stereo reverse playback; tape/source/monitoring; "Quadra-Sync" recording; pitch control for record/playback (±5%); line output control; mic/line mixing; auto stop; tape speed: 7½ and 3¾ ips; wow and flutter 0.07% rms (7½ ips); S/N 54 dB (measured via tape with peak recording level of +6 VU); frequency response 30-21,000 Hz ±3 dB; distortion 1% (1000 Hz, 0 VU); 18.3" H × 17.3" W × 7.5" D ..... $995

## PHILIPS

### N4506 Tape Recorder

Three-motor, three-head, preamplified tape recorder; dynamic noise limiter; A-B monitor switch; two

peak-reading meters; direct switchable tape direction; four-digit tape position; memory stop; input selection and level adjustment of phono, tuner, aux., and line; tone, volume, and balance preamplifier controls; three speeds (7½, 3¾, 1⅞ ips); max. reel diameter 7-in; frequency response 35-11,500 Hz (1⅞ ips), to 20,000 Hz (3¾ ips), to 26,000 Hz (7½ ips); S/N (without DNL) 60 dB (7½ and 3¾ ips), 58 dB (1⅞ ips); wow and flutter 0.05% (7½ ips), 0.07% (3¾ ips), 0.2% (1⅞ ips); fast-winding time 180 sec (1800 ft); channel separation 30 dB; track separation 60 dB; full complement of inputs/outputs; 17" H × 21¾" W × 8¼" D..... $650

### N4504 Tape Recorder

Three-motor, three-head tape recorder; two peak-reading meters; direct switchable tape direction; four-digit tape position; headphone amplifier with volume and balance controls; A-B monitor switch; dynamic noise limiter; three speeds (7½, 3¾, 1⅞ ips); max. reel diameter 7-in; frequency response 35-11,500 Hz (1⅞ ips), to 20,000 Hz (3¾ ips), to 26,000 Hz (7½ ips); S/N (without DNL) 60 dB (7½ and 3¾ ips), 58 dB (1⅞ ips); wow and flutter (wrms) 0.05% (7½ ips), 0.07% (3¾ ips), 0.2% (1⅞ ips); fast-winding time 180 sec (1800 ft); channel separation 25 dB; track separation 60 dB; full complement of inputs/outputs; 16¾" H × 16⅜" W × 7¼" D..... $450

## PIONEER

### RT-2022 Stereo Tape Deck

Two-speed (7½ and 15 ips), ½-track, three-motor, three-head stereo deck; will handle up to 10½-in reels; ⁴/₈ pole hysteresis synchronous motor; two six-pole inner-rotor induction motors for reel drive; solenoid-operated direct-change function buttons; separate transport and amplifier units; plug-in head assembly; scrape filter; continuously variable tape bias, two-step tape equalizer and tape selector with time-constant switch mechanism for use with all types of tape; wide-dynamic-range playback amplifier; independent recording amplifier for line and

mike input/output; "synchromonitor" mechanism for sound-on-sound, sound-with-sound; wow and flutter 0.04% wrms at 15 ips, 0.08% wrms at 7½ ips; S/N 55 dB; THD 0.8% max. at 15 ips, 1.0% max. at 7½ ips; response 30-28,000 Hz ±3 dB at 15 ips, 40-20,000 Hz ±3 dB at 7½ ips; full complement of inputs and outputs; 21¾" H × 18⅛" W × 10¹³/₁₆" D ..... $1250

### RT-1050 Stereo Tape Deck

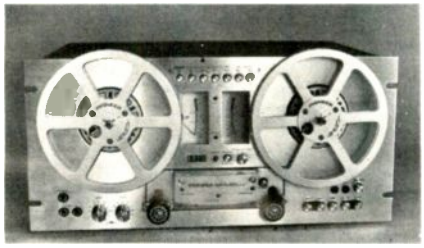
¼-track, two-speed (15 and 7½ ips), three-motor, three head stereo deck; ⁴/₈ pole, two-speed hysteresis synchronous motor (capstan drive) and six-pole inner-rotor induction motor (reel drive); response 30-22,000 Hz ±3 dB at 15 ips, 40-20,000 Hz ±3 dB at 7½ ips; wow and flutter 0.04% wrms at 15 ips, 0.08% wrms at 7½ ips; S/N 57 dB; stereo channel separation 53 dB at 1000 Hz; 125 kHz bias frequency; features three-step bias selector; four-step EQ selector; dual-scale level meters; recording peak indicator; lockable electronic controls (including pause); two pairs of line inputs; full complement of inputs and outputs; 17⅞" H × 18⅛" W × 9¹⁹/₃₂" D ..... $800

### RT-1011L Stereo Tape Deck

¼-track, two-speed (7½ and 3¾ ips), three-motor, three-head stereo deck; ⁴/₈ pole hysteresis synchronous motor; two six-pole inner-rotor induction motors for reel drive; solenoid-operated direct-changeable function buttons; mechanically lockable function buttons for automatic recording facility; wow and flutter 0.08% wrms (7½ ips), 0.1% (3¾ ips); frequency response 40-20,000 Hz ±3 dB (7½ ips), 40-12,000 Hz ±3 dB (3¾ ips); S/N 55 dB; dist. 1%; crosstalk −60 dB; has full complement of inputs and outputs; will handle up to 10½-in reels; 16⅞" H × 16⅞" W × 9" D ..... $675

### 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; two six-pole inner-rotor induction motors for reel drive; solenoid operated, direct switchable function buttons and preset function buttons for timer record and play; 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); 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; 9¹/₁₆" H × 18²⁹/₃₂" W × 14¹/₃₂" D ..... $600

### RT-701 Stereo Tape Deck

Two speed (3¾ and 7½ ips) design; speed accuracy ±0.5%; three-motor, three-head design; FG servo ac direct drive motor for capstan drive; two six-pole inner-rotor induction motors for reel drive; solenoid operation; direct switchable function buttons and preset function buttons for timer record and play; permalloy heads; 7-in reel capacity; fast rewind 100 sec; wow and flutter 0.05% wrms (7½ ips), 0.08% wrms (3¾ ips); S/N 58 dB; dist. 1% (7½ ips); 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); line/mike mixing; two bias and two equalization tape selectors; full complement of inputs/outputs; 9¹/₁₆" H × 18²⁹/₃₂" W × 14¹/₃₂" D ..... $525

## 4-Channel

### RT-2044 4-Channel Tape Deck

Same as RT-2022 stereo deck except with two TAU-11 amplifier units; 37¹⁵/₁₆" H × 18⅛" W × 10¹³/₁₆" D ..... $1625

### RT-1020L 4-Channel Tape Deck

Three-motor, three-head stereo tape deck with four-channel reproduction capability; has ⁴/₈ pole two-speed hysteresis synchronous motor (capstan drive) and two six-pole inner-rotor induction motor (reel drive); operates at 7½ and 3¾ ips; wow and flutter less than 0.08% wrms at 7½ ips, less than 0.1% wrms at 3¾ ips; S/N 55 dB; dist. less than 1%; response 40-20,000 Hz ±3 dB at 7½ ips; crosstalk −60 dB, stereo channel separation 50 dB both at 1000 Hz; inputs; mike 0.25 to 80 mV; line 50 mV to 25 V; DIN 15 mV to 1.5 V; outputs: line 316 mV; DIN 316 mV; headphone 40 mV (4 to 16 ohms); features three-position bias selector, two-position equalizer selector, lockable pause lever, four-digit tape counter, independent left/right tape monitor switches, four-ch/two-ch playback mode selector, independent right/left recording mode selectors, four-channel front, rear monitor mode selectors, independent mike and line recording level controls, output level controls; will accept up to 10½-in reels ..... $750

## SONY from SUPERSCOPE

### TC-880-2 Open-Reel Deck

Two-speed (15, 7½ ips) two-track (rec/play), four-track (play), stereo record/play deck; ac servomotor capstan drive. induction motor reel drive; wow and flutter 0.02% wrms (15 ips), 0.03% wrms (7½ ips); S/N 59 dB (standard tape), 62 dB (SLH-180 tape), 65 dB (FeCr tape); frequency response 25-30,000 Hz ±2 dB (15 ips), to 20.000 Hz (7½ ips) with standard tape, 20-45,000 Hz ±2 dB (15 ips), 25-25,000 Hz (7½ ips) with SLH-180 tape, 20-47,000 Hz ±2 dB (15 ips) with FeCr tape; fast-winding time 150 sec (2400 ft); bias frequency 160 kHz; input 0.06 V at 100,000 ohms (line), −72 dB (lo-Z mike); output 0.435 V at 10,000 ohms (line), 8-ohm headphone; 10½-in max. reel size; four-head (ferrite-and-ferrite) design; "Symphase" recording capability; three-position equalization selection; two-position bias selection; VU meters (VU, peak, peak hold modes); four-digit tape counter; pause control; 20⅜" H × 18⅞" W × 10½" D ..... $2495

### TC-766-2 Open-Reel Deck

Two-speed (15, 7½ ips) two-track (rec/play), four-track (play), stereo record/play deck; ac servomotor capstan drive; wow and flutter 0.018% wrms (15 ips), 0.04% wrms (7½ ips); S/N 64 dB (FeCr tape); frequency response 30-22,000 Hz (15 ips), to 18,000 Hz (7½ ips) with standard tape, 30-30,000 Hz (15 ips), to 25,000 Hz (7½ ips) with SLH and FeCr tape; fast-winding time 150 sec (2400 ft, 10-in reel); bias frequency 160 kHz; input 0.06 V at 100,000 ohms (line), −72 dB (lo-Z mike); output 0.435 V at 10,000 ohms (0.775 V when PB level is set to detented position), 8-ohm headphone; 10½-in max. reel size; four head (ferrite-and-ferrite) design; "Symphase" recording capability; three-position equalization and bias switches; illuminated VU meters; four-digit tape counter; pause control; 20⅜" H × 17½" W × 9¼" D ..... $1195

### TC-758 Stereo Tape Deck

Three-motor, automatic-reverse stereo tape deck; 7½ and 3¾ ips speeds; handles up to 10½-in reels; response 30-20,000 Hz ±3 dB (standard tape), 30-25,000 Hz ±3 dB (SLH-180 tape), both at 7½ ips; 4-digit counter; illuminated pause control with lock; illuminated VU meters; full complement of inputs and outputs; ferrite-and-ferrite heads; walnut base. 17⅛" H × 17¾" W × 8¾" D .. ..... $1150

### TC-765 Open-Reel Deck

Two-speed (7½, 3¾ ips) four-track stereo record/play deck; three-motor drive system, ac servo control motor; wow and flutter 0.08% (3¾ ips), 0.04% (7½ ips); S/N 61 dB (FeCr tape); frequency response 30-18,000 Hz (7½ ips) and 30-15,000 Hz

# 7 OPEN-REEL TAPE MACHINES

(3¾ ips) with standard tape, 30-25,000 Hz (7½ ips) and 30-18,000 Hz (3¾ ips) with SLH tape, 30-25,000 Hz (7½ ips) and 30-18,000 Hz (3¾ ips) with FeCr tape; fast-winding time 150 sec (2400 ft, 10-in reel); bias frequency 160 kHz; input 0.06 V at 100,000 ohms (line), −72 dB (lo-Z mike); output 0.435 V (0 VU) at 10,000 ohms (0.775 V max. when PB level is set to detented position), 8-ohm headphone; 10-in max. reel size; three-head (ferrite-and-ferrite) design; "Symphase" recording capability; three-position bias and equalization selection; calibrated VU meters; pause control; four-digit tape counter; sound-on-sound; 110 W; 20⅝" H × 17½" W × 9¼" D ..... $1125

### TC-377 Open-Reel Deck

Three-speed (7½, 3¾, 1⅞ ips) four-track stereo record/play deck; three-head design; one induction motor; wow and flutter 0.09% (7½ ips); S + N/N 52 dB (standard tape), 55 dB (SLH-180 tape); frequency response 30-20,000 Hz ±3 dB (7½ ips); bias frequency 160 kHz; input 0.06 V (aux.), −72 dB (mike); output 0.775 V (line); VU meters; mike-line record level mixing controls; tape select switch for Sony standard or low-noise, high-output tape; pause control; automatic total mechanism shutoff; reversible base for vertical or horizontal operation; 8⅜" H × 16½" W × 15½" D..... $450

### TC-105A Open-Reel Monaural Recorder

Three-speed (7½, 3¾, 1⅞ ips) four-track play/record monaural recorder; two-head design; one induction motor; wow and flutter 0.12% (7½ ips), 0.15% (3¾ ips), 0.2% (1⅞ ips); S/N 46 dB (standard tape); frequency response (standard tape) 40-18,000 Hz (7½ ips), 40-13,000 Hz (3¾ ips), 50-60,000 Hz (1⅞ ips); fast-winding time 140 sec (1200 ft); 7-in max. reel size; input 0.034 V at 100,000 ohms (aux.), −77 dB (lo-Z mike); output 5 W continuous at 8 ohms (extension speaker), 3.5 V at 10,000 ohms (earphone/monitor); VU meter; built-in speaker; PA capability; pause control; three-digit tape counter; automatic shutoff; 13⅜" H × 14¾" W × 7¼" D..... $370

## *4-Channel*

### TC-788-4 Quadradial Deck

Two-speed (15, 7½ ips) four-track quadradial, stereo, mono open-reel deck; three-head design; ac

servomotor capstan drive; wow and flutter 0.04% (15 ips), 0.06% (7½ ips); S/N 53 dB (standard tape), 56 dB (SLH-180 tape); frequency response 20-30,000 Hz (15 ips), 30-22,000 Hz ±3 dB (15 ips), 20-23,000 Hz (7½ ips), 30-17,000 Hz ±3 dB (7½ ips) all with standard tape, 20-35,000 Hz (15 ips), 30-28,000 Hz ±3 dB (15 ips), 20-28,000 Hz (7½ ips), 30-23,000 Hz ±3 dB (7½ ips) all with SLH-180 tape; fast-winding time 150 sec (2400 ft); bias frequency 160 kHz; input 0.06 V at 100,000 ohms (line), −72 dB (lo-Z mike); output 0.775 V at 10,000 ohms (max. PB volume), 8-ohm headphones; 10½-in max. reel size; tape/source monitoring; record equalization selector switch; VU meters; pause control; four-digit tape counter; automatic total mechanism shutoff; "Syncro-Trak"; mechanical memory capability; four record mode switches and pan pots; 22" H × 17⅜" W × 8¾" D..... $1595

### TC-388-4 Quadradial Deck

Two-speed (7½, 3¾ ips) four-track quadradial, stereo, mono open-reel deck; three-head design; one induction motor; wow and flutter 0.09% wrms (7½ ips), 0.12% wrms (3¾ ips); S/N 52 dB (standard tape), 55 dB (SLH-180 tape); frequency response 20-25,000 Hz (7½ ips) and 30-17,000 Hz (3¾ ips) with standard tape, 20-30,000 Hz (7½ ips), 20-25,000 Hz ±3 dB (7½ ips), 30-19,000 Hz (3¾ ips) with SLH-180 tape; fast-winding time 100 sec (1800 ft); bias frequency 160 kHz; input 0.06 V at 100,000 ohms (line), −72 dB (lo-Z mike); output 0.775 V at 10,000 ohms (line), 8-ohm headphone; 7-in max. reel size; tape/source monitoring; record equalization selector switch; illuminated VU meters; pause control; four-digit tape counter; pan pot on/off switch; automatic total mechanism shutoff; vertical or horizontal operation; 19¾" H × 16⅞" W × 8⅞" D..... $680

### TC-277-4 Quadradial Deck

Three-speed (7½, 3¾, 1⅞ ips) four-channel open-reel deck; wow and flutter 0.12% (7½ ips); S/N 52 dB; frequency response 50-16,000 Hz ±3 dB (7½ ips); two-head design; four inputs; four line outputs (one per channel); input sensitivity 0.06 V; 15½" H × 15¾" W × 7¾" D..... $470

## STUDER/REVOX

### A700 Stereo Tape Recorder

Three-motor, three-speed (15, 7½, 3¾ ips) recorder; features computer-type digital control logic with memory circuits; quartz-crystal speed-control reference; frequency and phase servo system for capstan speed control; two tape-tension sensors governing servo-controlled reel motors; has logic-controlled tape tension which is automatically maintained even with mixed reel sizes; electronic tape-motion sensor; minutes and seconds readout on tape counter; plug-in head assembly (¼ or ½ track available); three heads (with fourth control head optional); fail-safe auto stop logic to eliminate possibility of tape breakage; electronic pause control operating on all functions; instant repeat play control; continuous unattended record or play function; solid-state switching of audio circuits; features built-in four-input mixer; switched selection of 12 input sources including four balanced hi/lo mike inputs; built-in magnetic phono preamp; master record-level slide fader; stereo echo; five independent stereo outputs; standard zero-level line outputs and level and tone-controlled outputs; VU meters with instantaneous over-modulation indicators; variable speed (+ or − 7 halftones with remote-control accessory); variable speed (2.5 to 21.5 ips with external oscillator); input or off-tape metering .... $2499

### B-77 Stereo Tape Recorder

Three-motor, two-speed (3¾ and 7½ ips) recorder; handles up to 10½-in reels; features integrated

drive logic, operation by computer-type pushpoint keys, and built-in tape cutter close to headblock; dual VU meters with peak level indicators; remote control of all functions and electric timer operation possible; wow and flutter (DIN) 0.1% at 3¾ ips, (IEEE) 0.08% at 7½ ips; winding time approx. 135 sec for 3600-ft tape; frequency response 50-10,000 Hz ±1.5 dB at 3¾ ips, 50-15,000 Hz ±1.5 dB at 7½ ips; S/N at ½-track 63 dB (3¾ ips), 66 dB (7½ ips), at ¼-track 59 dB (3¾ ips), 62 dB (7½ ips); microphone input impedance (position lo) 0.15 mV/2.2k ohms for 50-600 ohm mikes, (position hi) 2.8 mV/110k ohms for microphone impedances up to 20k ohms; connectors for remote control of tape transport functions, remote control of variable tape speed, slide projector or crossfade unit; 16.3" H × 17.8" W × 8.14" D..... $1295

## TANDBERG

### TD 20A "Baron" Open-Reel Deck

Actilinear recording system; active transconductance circuit for lower intermodulation; Sel Sync built-in; four-motor solenoidless operation; phase linearity network; push-button 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 fad-

ing 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..... $1300
15 and 7½ ips; ¼-track..... $1350
15 and 7½ ips; ½-track..... $1400
Carrying case with/without wheels .....$160/$130

### Series 15 Open-Reel Recorder

Three-speed (7½, 3¾, 1⅞ ips), mono record/play open-reel recorder; wow 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 × 13⅜" W × 11⅞" D.

**1541F/1521F.** ¼ track/½-track ..... $600

## TEAC

### A-6600 Stereo Tape Deck

Two speed (7½ and 3¾ ips), ¼-track, two-channel deck; will handle reels up to 10½-in; four heads (erase, record, play, reverse playback); features auto-reverse and counter repeat; two capstans, one for each direction; tape guide rollers; cueing facility for both forward and reverse tracks; record mode indicator lights; auto spacer for inserting blank spaces between selections; separate left and right level controls; master gain controls for mic and line inputs; hi and low bias and equalization settings; three-position monitor switch; peak LEDs flash at 10 VU (7½ ips) and 8 VU (3¾ ips); remote control with optional RC-80..... $1400

### A-6100 Mark II Stereo Tape Deck

Two speed (15 and 7½ ips), ½-track, two-channel deck; will handle reels up to 10½-in; four heads (erase, record, play, ¼-track playback); features two peak-reading LED level indicators; timer control; servo-controlled supply reel; manual cue lever which defeats tape lifters during last modes for fast search, cueing, and editing; flip-up hinged head cover; memory stop function..... $1350

### A-6300 Stereo Tape Deck

Two-speed (7½, 3¾ ips), ¼-track, two-channel stereo with four heads (erase, record, playback, reverse playback), three motors; will handle 10½-in and 7-in reels; features auto-reverse, mike/line mixing, automatic repeat by memory counter, total remote-control capability; response 40-24,000 Hz; wow and flutter 0.06% both at 7½ ips; S/N 65 dB (wtd at 3% THD) ..... $1150

### A-6100 Stereo Tape Deck

Two-speed (15, 7½ ips), ½-track, two-channel stereo with four heads (erase, record, playback, four-track playback); three motors; will handle 10½-in and 7-in reels; features cue button and flip-up head cover for easy editing; auto stop counter; mike attenuation control; LED peak level indicators; response 30-26,000 Hz at 15 ips; wow and flutter 0.04% at 15 ips; S/N 67 dB (wtd at 3% THD); 20½" H × 17⅜" W × 8¼" D..... $1150

### A-3300SX-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; independent left/right channel source/tape selectors; VU-type level meters; manual cue lever; separate bias and equalization selectors; 17⅝" H × 17⅝" W × 8⅝" D..... $1000

### A-3300SX Stereo Tape Deck

Two-speed (7½, 3¾ ips), ¼-track, two-channel deck; will handle up to 10½-in reels; offers remote-control capability; push-button transport control with logic circuitry; dual level bias oscillator for low-noise recording; dc-coupled equalization network; features dual VU meters; pause control with indicator light; separate mic/line level controls; tape/source monitor switch; stereo headphone jacks; four-digit resettable tape counter; response 40-24,000 Hz at 7½ ips; 40-16,000 Hz at 3¾ ips; wow and flutter 0.06% at 7½ ips; S/N 65 dB (wtd at 3% THD); 17⅝" H × 17⅝" W × 8⅝" D. $900

**A-3300SR.** Similar to A-3300SX but with auto-reverse ..... $1050

### A-4300SX Stereo Tape Deck

Two speed (7½, 3¾ ips), ½-track, two-channel stereo deck; dual-speed hysteresis synchronous capstan motor; two eddy-current induction reel motors; four heads (erase, record, forward play, and reverse play); features auto-reverse; will handle 7-in and 5-in reels; wow and flutter 0.06% at 7½ ips; S/N 58 dB; frequency response 30-28,000 Hz; 40-24,000 Hz ±3 dB at 7½ ips; THD 1% at 1 kHz; VU-type level averaging meters; automatic reverse; independent level controls for mic/line mixing; left/right channel record mode selectors for making mono recordings and adding sound-on-sound effects with external equipment; 17⅝" H × 19¼" W × 8½" D..... $900

### A-2300SD Dolbyized Stereo Deck

Two-speed (7½, 3¾ ips) ¼-track, two-channel deck; features push-button transport control with logic circuitry; dual VU meters; separate bias/equalization switches; record/pause lights; total remote-control capability; Dolby noise-reduction circuitry and lights; three motors; response 40-24,000 Hz at 7½ ips; wow and flutter 0.08% at 7½ ips; S/N 74 dB (wtd, at 3% THD, with Dolby); 17⅝" × 15⅞" × 8½"..... $800

### A-2300SX Stereo Tape Deck

Two-speed (7½, 3¾ ips), ¼-track, two-channel stereo deck; dual-speed hysteresis synchronous capstan motor; two eddy-current induction reel motors; three heads; will handle 7-in reels; wow and flutter 0.08% wrms at 7½ ips; S/N 58 dB; frequency response 40-24,000 Hz ±3 dB at 7½ ips; THD 1% at 1 kHz; two-position bias and equalization selectors; independent dual-concentric input level controls for mic/line mixing; VU-type level averaging meters; 15⅞" H × 17⅝" W × 8⅝" D..... $700

**A-2300SR.** Similar to A-2300SX but with auto-reverse ..... $800

## *4-Channel*

### A-3440 4-Channel Tape Deck

Multi-channel, three-motor, three-head, ¼-track tape deck with 15 and 7½ ips tape speeds; features "Simul-Sync"; function select and output select switches; micro-switch transport controls; headphone monitor select; manual cueing; pitch control; independent mic/line input selectors; four wide-range VU meters; independent output level controls; optional dbx noise-reduction interface; front-panel input jacks for four unbalanced low or high impedance microphones; LED function indicators; will take 7-in and 10½-in reels; wow and flutter (NAB, weighted) 0.04% at 15 ips, 0.06% at 7½ ips; frequency response 40-22,000 Hz ±3 dB (15 ips, 0 VU), 40-20,000 Hz ±3 dB (7½ ips, −10 VU); S/N 65 dB (3% THD level weighted); 0.8% harmonic dist.; stereo channel separation 45 dB at 1 kHz; fast-winding time 140 sec with 1800-ft tape; four mic inputs 0.25 mV (−72 dB)/600 ohms; 20½" H × 17½" W × 9¼" D..... $1500

### A-2340SX Multichannel Tape Deck

Two-speed (7½, 3¾ ips), ¼-track with "Simul-Sync"; one dual-speed hysteresis synchronous capstan motor; two eddy-current induction reel motors; three heads; will handle 7-in and 5-in reels; wow and flutter 0.08% at 7½ ips; S/N 55 dB; frequency response 30-22,000 Hz at 7½ ips; THD 1.0% at 1 kHz; independent source/tape output selector each channel; four VU-type level averaging meters; four independent record mode selectors; four front-panel mic inputs; two stereo headphone jacks; independent input level controls for mic/line mixing for each of four channels; record indicator lights for each channel; digital tape counter; 2-channel/4-channel playback selector; 17⅝" H × 18¾" W × 8¾" D..... $1125

## TECHNICS by PANASONIC

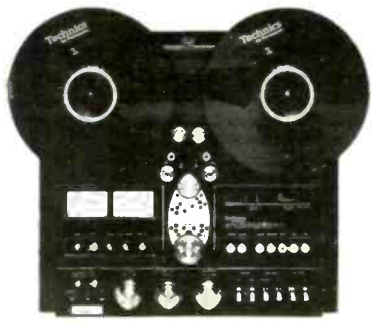
### RS-1520US Open-Reel Deck

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; 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 × 10⅛" D..... $2000

**RS-1500US.** Similar to RS-1520US except has tape-deck stroboscope..... $1600

**RS-1506US.** Similar to RS-1520US except ¼-track, two-channel recording/playback and ½-track, two-channel playback..... $1600

**RS-1700US.** Similar to RS-1506US except photo-electric auto-reverse in both recording and playback modes; ¼-track, two-channel; six-head system ..... $2000



# 8 8-TRACK TAPE MACHINES

## AKAI

**CR-83D 8-Track Deck**
Recorder/player features illuminated elapsed-time record indicator, locking pause, fast-forward, independent dual-record level controls, combination record/play and erase head, auto stop, and continuous playback selector switch; dc motor; illuminated record interlock; automatic ac on when cartridge is inserted; wow and flutter 0.15% rms; S/N 48 dB; frequency response 60-14,000 Hz ±3 dB (low-noise tape); dist. 2% at 3¾ ips; 4¼" H × 16½" W × 9½" D ..... $220

## CENTREX by PIONEER

**RH-65 8-Track Deck**
Record/playback deck with Dolby noise-reduction system; frequency response 30-15,000 Hz; wow

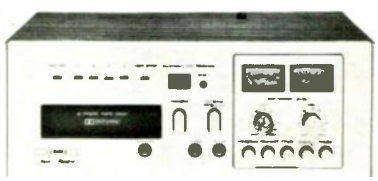
and flutter 0.15% wrms; S/N 45 dB; time counter; three-position function switch; two VU record level meters; fast-forward and pause controls; illuminated track indicator; automatic or manual track change; dual mike jacks; 4½" H × 14¾" W × 10⅞" D ..... $255
**RH-60.** Similar to RH-65 except frequency response 70-13,000 Hz; no Dolby circuitry; 4½" H × 14¾" W × 10½" D ..... $250

**TH-30 8-Track Deck**
Playback deck; frequency response 30-12,000 Hz; wow and flutter 0.25%; S/N 40 dB; automatic/manual track change; illuminated track indicators; vertical headshift mechanism for positive tape/head contact; 4⅝" H × 7⅞" W × 10⅞" D ..... $60

## FISHER

**ER8130 8-Track Deck**
Incorporates Dolby noise-reduction system; wow and flutter 0.15% wrms; fast-winding time 3.3 min (45-min cartridge); auto or manual end of tape shutoff; frequency response 35-12,500 Hz; S/N 52 dB with Dolby; crosstalk −55 dB; channel separation 40 dB (1 kHz); 5" H × 14⅜" W × 10" D.. $250

**ER8125 8-Track Deck**
With Dolby noise-reduction system; wow and flutter



0.15% wrms; fast-winding time 3.3 min (45 min cartridge); auto or manual end-of-tape shutoff; frequency response 32-12,000 Hz; S/N 52 dB with Dolby; crosstalk −55 dB; channel separation 40 dB at 1000 Hz; 5" H × 13⅜" W × 10" D..... $200

**ER8120 8-Track Deck**
Wow and flutter 0.15% wrms; fast-winding time 3.3 min (45-min cartridge); auto or manual end of tape shutoff; frequency response 35-11,000 Hz; S/N 44 dB; crosstalk −55 dB; channel separation 40 dB (1 kHz); 5" H × 12⅝" W × 10¼" D..... $170

**ER8110 8-Track Deck**
Wow and flutter 0.15% wrms; fast-winding time 4.5 min (45-min cartridge); auto or manual end of tape shutoff; frequency response 35-11,000 Hz; S/N 44 dB; crosstalk −55 dB; channel separation 40 dB (1 kHz); 5" H × 12⅝" W × 10¼" D..... $130

## LAFAYETTE

**RK-899 8-Track Deck**
Stereo 8-track deck; selectable auto stop for play/record modes; dual record level meters; left/right mic input jacks; record level controls; pause control; frequency response 50-10,000 Hz; wow and flutter 0.3%; walnut vinyl covered wood cabinet; UL approved. 4¹⁄₁₆" H × 16½" W × 8¼" D..... $160

**RK-88 8-Track Deck**
8-track stereo playback deck with repeat button, pushbutton program selector, channel indicator light and connecting cables; frequency response 50-10,000 Hz; 9½" H × 9⅝" W × 3⅞" D..... $50

## PANASONIC

**RS-808 8-Track Deck**
Stereo 8-track deck; auto-manual program selection; left and right channel level meters; minute/

second time counter; level controls for recording and playback; locking fast forward and pause controls; auto-stop; record function includes stop after one channel or stop after all channels; mic in and headphone jacks; wow and flutter 0.15% wrms; S/N 45 dB; frequency response 50-12,000 Hz; 5⅜" H × 14¼" W × 9⅞" D ..... $130

## REALISTIC

**TR-802 8-Track Deck**
Record/play deck features digital timer; push-button control of continuous play, program repeat, auto-stop, push-button eject, program change, fast-forward, and pause; three-in-one laminated permalloy head; response 50-13,000 Hz; wow and flutter 0.15% wrms; front-panel mike input for live recording; walnut wood cabinet; 4¾" × 16½" × 10" ..... $180

**TR-883 8-Track Deck**
Record/play deck features dual VU meters; level controls; push-button fast forward, pause, and record interlock; program select button; auto stop button; stereo headphone jack; left and right microphone jacks; timer; program indicators; three-in-one permalloy head; frequency response 50-13,000 Hz; wow and flutter 0.15% wrms; walnut-finish wood-grain case; 4⅝" × 14" × 8¾" ..... $130

**TR-884 8-Track Deck**
Record/play deck features dual VU meters; level controls; push-button fast forward and record interlock; program select button; stereo headphone jack; left and right microphone jacks; program indicators; three-in-one permalloy head; frequency response 50-10,000 Hz; wow and flutter 0.2% wrms; walnut-finish wood-grain case; 13⅓" × 8½" × 5". $90

**TR-168 8-Track Deck**
Playback only deck with dc governor motor; playback laminated permalloy head; frequency response 50-10,000 Hz; wow and flutter 0.2% wrms; S/N 45 dB ..... $50

## SANYO

**RD8400 Cassette/8-Track Deck**
See Section 6, Cassette Decks, under "Sanyo"..... ..... $190

**RD8020 8-Track Deck**
8-track record/play deck; features automatic stop at program-start point; two calibrated VU meters; latching fast-forward control; latching pause control; restart button; lighted channel indicators; inputs for right/left mike and aux.; frequency response 30-12,000 Hz; S/N 42 dB; wow and flutter 0.3%; 5" H × 12½" W × 10" D ..... $100

## SHARP

**RT821 8-Track Deck**
8-track, 2-channel endless-cartridge tape deck with two-speed dc motor; record/playback/erase head; incorporates Auto Program Search System (APSS); auto or manual program changing; two VU meters; mechanical pause; digital time display tape counter; two mike and two line inputs; two line and headphone outputs; wow and flutter 0.25% wrms; frequency response 50-10,000 Hz; S/N 45 dB..... ..... $190

## SUPERSCOPE

**TDR-830 8-Track Deck**
8-track record/play deck wity Dolby noise-reduction system; pause/restart button; auto stop selectors; LED program indicator; three-digit tape counter..... ..... $220
**TDR-820.** Same as TDR-830 without Dolby.... $180

# 9 CAR STEREO EQUIPMENT

## CAR TAPE EQUIPMENT

### AUDIOVOX

**CAS-600A AM-Stereo FM/Cassette**
In-dash unit combines AM/FM/MPX radio and stereo cassette player with Dolby noise-reduction system; power output 20 W/channel; locking fast-forward/rewind, bass, treble, mono/stereo, local/distant, and power booster on/off controls ..... $300

**CAS-500 AM-Stereo FM/Cassette**
In-dash unit combines AM/FM/MPX radio and stereo cassette player; auto reverse; four-way stereo balance; power output 4 W rms; mono/stereo, program select, local/distant, eject, and locking fast-forward controls ..... $280

**CAS-300A AM-Stereo FM/Cassette**
In-dash unit combines AM/FM radio and stereo cassette player; fast-forward, rewind, local/distant, mono/stereo, and eject controls; power output 5 W/channel; 2 3/16" H × 7" W × 5 1/2" D ..... $170

**C-981 Cassette Player**
Auto-reverse cassette player; volume, tone, balance, fast-forward, and rewind controls; has tape direction indicators; power output 5 W/channel; accepts 4-8 ohm speakers; mounts under dash; 1 3/4" H × 5 1/2" W × 6 3/4" D ..... $130

**C992 Stereo FM/Cassette Player**
Under-dash unit combines stereo FM radio and cassette player; rewind, fast-forward, and local/distant controls; power output 4 W/channel into 4 ohms; S/N 40 dB; wow and flutter 0.3%; 2" H × 6 1/2" W × 6 1/4" D ..... $130

**TPB-4000 AM-Stereo FM/8-Track**
Combines AM/Stereo FM radio and 8-track player with built-in power booster; four-way stereo balance; power output 20 W/channel ..... $300

**C-993 Stereo FM/8-Track**
Under-dash unit combines Stereo FM radio and 8 track player; has slide volume tone and balance controls; FM local/distant switch; power output 4 W/channel rms; 2" H × 6 3/8" W × 6 1/4" D ..... $120

### CRAIG

**T683 AM-FM/Cassette Player**
Combines Powerplay cassette player with AM/Stereo FM receiver. Features separate pushbutton controls, automatic reverse, loudness control, FM muting, locking fast-forward and rewind, separate bass and treble controls, AFC, separate balance and fader controls, and power-off and auto-eject in-dash mounting. Cassette: wow and flutter 0.1% wrms; frequency response 20-10,000 Hz ±3 dB; S/N 45 dB; stereo separation 36 dB; crosstalk 50 dB; audio output 12 W/ch at 5.0% THD. Tuner: sensitivity 1.9μ V (FM), 22μ V (AM); S/N 60 dB (FM), 45 dB (AM); FM alternate channel rejection 60 dB; FM i-f rejection 70 dB; AM image rejection 65 dB at 1400 kHz; FM capture ratio 1.9 dB; FM frequency response from 20-15,000 Hz −3 dB with 0.9% THD at 65 dBf. Includes car radio antenna and dial light dimmer inputs, front/rear left and right speaker outputs, front-panel antenna trimmer, and mounting hardware; 2" H × 7 1/16" W × 6 1/4" D ..... $210

**T633 AM-FM/Cassette Player**
Combines stereo cassette player with AM/Stereo FM receiver. Features separate pushbutton controls, AFC, locking fast-forward and rewind separate balance fader controls, local/distant and stereo/mono pushbuttons and FM muting; in-dash mounting. Cassette: wow and flutter 0.10% wrms; frequency response 70-14,000 Hz ±3 dB; S/N 45 dB; stereo separation 35 dB; crosstalk 55 dB, 4.5 W/ch at 5.0% THD. Tuner: sensitivity 1.5μ V (FM), 24μ V (AM), S/N 61 dB (FM), 50 dB (AM), FM alternate channel rejection 75 dB min.; FM i-f rejection 106 dB; AM image rejection at 1400 kHz 69 dB; FM capture ratio 1.9 dB; FM frequency response from 70-14,000 Hz +3 dB at 65 dBf. Includes car radio antenna and dial light dimmer inputs. front/rear left and right speaker outputs, front-panel antenna trimmer, and mounting hardware; in-dash mounting; 2 3/4" H × 7 1/16" W × 5 1/4" D ..... $200

**T600 AM-FM/Cassette Player**
AM/Stereo FM radio with cassette player; auto-reverse; stereo/mono switch; manual eject; separate balance and fader controls; wow and flutter 0.2% rms; audio output 3.5 W average continuous sine wave per channel; frequency response 40-10,000 Hz; S/N 50 dB; crosstalk −40 dB; channel separation 35 dB; 12-V dc negative ground; supplied with customizer trim plate, gasket, hardware, and knobs; in-dash mounting; 2" H × 7 1/16" W × 8 1/2" D ... $180

**T605 AM-FM/Cassette Player**
Combines AM/Stereo FM radio with cassette tape player; separate balance and fader controls; automatic rewind at end of tape; stereo/mono pushbutton; fast forward and rewind; wow and flutter 0.3%; frequency response 70-10,000 Hz; stereo separation 35 dB; S/N 40 dB; audio output 4 W average continuous sine wave per channel ... ..... $160

**T281 FM/Cassette Player**
Combines Stereo FM radio and cassette tape player; fast forward and rewind; end-of-tape indicator light; stereo matrix circuitry for four-channel effect; wow and flutter 0.3% rms; audio output 12 W average continuous sine wave per channel; S/N 40 dB; stereo separation 30 dB; crosstalk −35 dB; 12-V dc negative ground; size (bracket with unit) 2 1/4" H × 8 1/2" W × 10 1/4" D ..... $160

**3514 AM-FM/Cassette Player**
Combines AM/Stereo FM radio with cassette player; automatic shut-off at end of tape; in-dash mounting; mono/stereo switching; illuminated tape/stereo indicators; momentary and locking fast forward; stereo matrix circuitry for four-channel effect; wow and flutter 0.3% rms; audio output 4 W continuous per channel; frequency response 70-10,000 Hz; S/N 40 dB; crosstalk −40 dB; channel separation 35 dB; 12-V dc negative ground; supplied with trim panel, gasket, and knobs; 2" H × 7" W × 5 1/4" D .... ..... $150

**T180 Cassette Player**
Cassette tape player with auto-reverse; reversible quick-release slide-out bracket; illuminated direction signals; auto and manual program change; separate bass and treble controls; manual or automatic eject; locking fast forward; loudness pushbutton; wow and flutter 0.25% rms; frequency response 70-10,000 Hz; S/N 45 dB; stereo separation 30 dB; crosstalk −45 dB; audio output 12 W average continuous sine wave per channel (5% THD, 4-ohm load, both channels driven); 12-V dc negative ground; 3 7/16" H × 7" W × 8 1/2" D ..... $130

**T609 Stereo Cassette Player**
Combines stereo cassette player with AM/Stereo FM radio. Features locking fast-forward and rewind slide bar, volume balance and tone controls, and local/distant switch; in-dash mounting. Cassette: wow and flutter 0.1% wrms; frequency response 80-10,000 Hz ±3 dB; S/N 46 dB; stereo separation 36 dB; crosstalk 55 dB; 4.5 W/ch at 5.0% THD. Tuner: sensitivity 1.9μ V (FM), 15μ V (AM); S/N 62 dB (FM), 48 dB (AM); FM alternate channel rejection 68 dB; FM i-f rejection 86 dB; AM image rejection at 1400 kHz 78 dB; FM capture ratio 1.7 dB; FM frequency response 30-15,000 Hz −3 dB with 0.6% THD at 65 dBf. Includes car radio antenna and dial light dimmer inputs, left/right speaker outputs, trim panel, and mounting hardware; 2" H × 7 1/16" W × 5 1/4" D ..... $115

**T102 Cassette Player**
Quick-mount cassette tape player; automatic reverse; locking fast forward and rewind; separate balance and fader controls; stereo matrix circuitry for four-channel effect; wow and flutter 0.2% rms; frequency response 40-10,000 Hz; S/N 50 dB; stereo separation 35 dB; audio output 4 W average continuous sine wave per channel ..... $110

**T608 Cassette Player**
Combines stereo cassette player with AM/Stereo FM radio. Features separate local/distant and stereo/mono pushbuttons, locking fast-forward, and AFC; in-dash mounting. Cassette: wow and flutter 0.3% min,; frequency response 50-10,000 Hz; S/N 40 dB min.; crosstalk 40 dB min.; 4 W/ch continuous sine-wave power. Radio: PLL stereo switching; stereo separation better than 30 dB; FM frequency response 50-15,000 Hz. Includes left/right speaker outputs, trim plate, and mounting hardware; 1 11/16" H × 6 1/4" W × 2 3/8" D ..... $100

**T100 Cassette Player**
Quick-mount cassette tape player; locking fast forward; end-of-tape indicator; locking rewind; quick-release bracket; stereo matrix circuitry for four-channel effect; audio output 4 W average continuous sine wave per channel; frequency response 40-10,000 Hz; stereo separation 35 dB; crosstalk −35 dB; S/N 40 dB; 12-V negative ground; supplied with quick-release bracket and mounting hardware; 2 1/4" H × 5" W × 5" D ..... $90

**3517 FM/Cassette Player**
Combines FM radio and cassette tape player; ultra-compact size; fast forward; LED tape running indicator; tone switch; illuminated stereo indicator; fast forward time 200 sec (C-60); wow and flutter 0.3% rms; power output 3.5 W continuous sine wave per channel; frequency response 50-10,000 Hz; stereo

# 9 CAR TAPE EQUIPMENT

separation 40 dB; crosstalk −50 dB; S/N 45 dB; 12-V dc negative ground; supplied with mounting bracket and hardware for console or under-dash mounting; 1⅞" H × 7¼" W × 6¾" D ..... $80

### T101 Cassette Player
Ultra-compact cassette tape player; slide-out bracket; volume, balance, and tone controls; manual eject; locking fast forward; tape running indicator ..... $70

### S685 AM-FM/8-Track Player
Combines stereo eight-track player with AM/Stereo FM receiver and digital clock. Features PLL tuning


with digital readout, AFC, separate bass and treble controls, FM muting, local/distant and stereo/mono pushbuttons, and power-off eject; in-dash mounting. Cassette: wow and flutter 0.15% (weighted); frequency response 40-10,000 Hz ±3 dB; S/N 50 dB; stereo separation 45 dB; crosstalk 55 dB; 12 W/ch at 5.0% THD. Tuner: sensitivity 1.9μ V (FM), 20μ V at 20-dB S/N (AM); S/N 60 dB (FM), 50 dB (AM); FM alternate channel rejection 72 dB min.; FM i-f rejection 102 dB; AM image rejection at 1400 kHz 79 dB; FM capture ratio 1.5 dB; FM frequency response 30-15,000 Hz −3 dB with 0.6% THD at 65 dBf. 12-V dc negative ground. Includes car radio antenna and dial light dimmer inputs, front/rear left and right speaker and power antenna outputs, trim panel, and mounting hardware ..... $280

### S681 AM-FM/8-Track Player
Combines AM/Stereo FM radio, emergency and weather information channel, and 8-track tape player; automatic or manual program change; repeat pushbutton for continuous program play; in-dash mounting; cartridge program indicators; wow and flutter 0.3% rms; audio output 12 W continuous sine wave per channel; frequency response 40-10,000 Hz; stereo separation 30 dB; crosstalk −35 dB; S/N 40 dB; power source 12-V dc negative ground; supplied with customizer trim plate, gasket, mounting hardware, and knobs; 2¾" H × 7" W × 5⅛" D (main unit), 1¾" H × 4¹⁵⁄₁₆" W × 4¾" D (amplifier unit) ..... $220

### S683 AM-FM/8-Track Player
Combines eight-track player with preset AM/Stereo FM receiver. Features AFC, fast-forward and program repeat, separate bass and treble controls, separate balance and fader controls, and local/distance and stereo/mono pushbuttons; in-dash mounting. Cassette: wow and flutter 0.12% wrms; frequency response 40-10,000 Hz ±3 dB; S/N 56 dB; stereo separation 36 dB; crosstalk 55 dB; 12 W/ch at 5.0% THD. Tuner: sensitivity 1.9μ V (FM), 22μ V at 20-dB S/N (AM); S/N 61 dB (FM), 60 dB (AM); FM alternate channel rejection 71 dB min.; FM i-f rejection 70 dB; FM capture ratio 1.8 dB; AM image rejection at 1400 kHz 66 dB; FM frequency response 30-15,000 Hz −3 dB with 0.4% THD at 65 dBf. 12-V dc negative ground. Includes car radio antenna and dial light dimmer inputs, front/rear left and right speaker outputs, trim panel, and mounting hardware 2¾" H × 7⅛" W × 5¼" D ..... $210

### S630 AM-FM/8 Track Player
Combines AM/Stereo FM radio, emergency and weather information channel, and 8-track tape player; separate balance and fader controls; illuminated program indicators; automatic or manual program selection; repeat button; wow and flutter 0.3% rms; audio output 4 W average continuous sine wave per channel; frequency response 40-10,000 Hz; stereo separation 30 dB; crosstalk −35 dB; S/N 40 dB; 12-V dc negative ground, 2.5-A max. current drain; supplied with customizer trim plate, gasket, mounting hardware, and knobs; 2¾" H × 7" W × 5⅛" D ..... $190

### T607 AM-FM/8-Track Player
Combines stereo eight track player with AM/Stereo FM receiver. Features automatic reverse, slot cassette loading, separate balance and fader controls, FM muting, local/distant and stereo/mono pushbuttons, and dial in door; in-dash mounting. Casette: wow and flutter 0.1% wrms; frequency response 50-15,000 Hz ±3 dB; S/N 45 dB; stereo separation 40 dB; crosstalk 60 dB; 4.5 W/ch at 5.0% THD. Tuner: sensitivity 1.7μ V (FM), 20μ V at 20-dB S/N (AM); S/N 63 dB (FM), 49 dB (AM); FM alternate channel rejection 72 dB min.; FM i-f rejection 102 dB; AM image rejection at 1400 kHz 79 dB; FM capture ratio 1.9 dB; FM frequency response 30-15,000 Hz −3 dB with 0.9% THD at 65 dBf. 12-V dc negative ground. Includes car radio antenna and dial light dimmer inputs, front/rear left and right speaker and power antenna outputs, trim panel, and mounting hardware; 2" H × 7⅛" W × 5¼" D ..... $180

### S680 AM-FM/8-Track Player
Combines AM/FM radio and 8-track tape player; automatic or manual tape program change; Powerplay booster; illuminated program indicators for 8-track cartridges; separate volume, balance, tone, and sensitivity controls; wow and flutter 0.3% rms; audio output 12 W continuous sine wave per channel (5% THD, 4-ohm load, both channels driven); frequency response 40-10,000 Hz; stereo separation 30 dB; crosstalk −35 dB; S/N 40 dB; 12-V dc negative ground, 2.5-A max. current drain; supplied with customizer trim plate, gasket, mounting hardware, Powerplay booster, and knobs; 1¹⁵⁄₁₆" H × 7⅛" W × 5⅛" D (main unit), 1¾" H × 4¹⁵⁄₁₆" W × 4¾" D (booster) ..... $160

### S608 AM-FM/8-Track Player
Combines stereo eight-track player with AM/Stereo FM receiver. Features program repeat, separate bass and treble controls, power-off eject, FM muting, local/distance and stereo/mono pushbuttons, and stereo-matrix circuitry for four-channel effect; in-dash mounting. Cassette: wow and flutter 0.15% frequency response 50-12,000 Hz ±3 dB; S/N 48 dB; stereo separation 38 dB; crosstalk 55 dB; 4.5 W/ch at 5.0% THD. Tuner: sensitivity 1.9μ V (FM), 20μ V at 20-dB S/N (AM); S/N 63 dB (FM), 50 dB (AM); FM alternate channel rejection 72 dB; FM i-f rejection 102 dB; AM image rejection at 1400 kHz 65 dB; FM capture ratio 1.7 dB; FM frequency response 40-15,000 Hz −3 dB with 0.9% THD at 65 dBf. 12-V dc negative ground. Includes car radio antenna and dial light dimmer inputs, front/rear left and right speaker outputs, trim panel, and mounting hardware; 2" H × 7⅛" W × 5⅞" D ..... $150

### S281 FM/8-Track Player
Combines FM radio and 8-track player; stereo matrix circuitry for four-channel effect; fast forward; numbered program indicators; manual and automatic program changing; repeat push-button; wow and flutter 0.25% rms; audio output 12 W continuous sine wave per channel (5% THD, 4-ohm load, both channels driven); frequency response 50-10,000 Hz; S/N 40 dB; crosstalk −45 dB; stereo separation 30 dB; supplied with quick-release slide-out bracket; 12-V dc negative ground; 2¼" H × 8½" W × 10¼" D (bracket with unit) ..... $140

### S604 AM-FM/8-Track Player
Combines stereo eight-track player with AM/Stereo FM radio. Features program repeat, separate bass and treble controls, stereo/mono pushbutton, and dial-in door; in-dash mounting. Cassette: wow and flutter 0.11% rms (weighted); frequency response 70-12,000 Hz ±3 dB; S/N 48 dB; stereo separation 38 dB; crosstalk 55 dB; 4.5 W/ch with 5.0% THD. Tuner: sensitivity 3.1μ V (FM), 22μ V at 20-dB S/N (AM); S/N 61 dB (FM), 60 dB (AM); FM alternate channel rejection 71 dB min.; FM i-f rejection 70 dB; AM image rejection at 1400 kHz 68 dB; FM capture ratio 1.8 dB; FM frequency response 20-15,000 Hz −3 dB with 0.8% THD at 65 dBf. 12-V dc negative ground. Includes car radio antenna and dial light dimmer inputs, left and right speaker outputs, trim panel, and mounting hardware; 2" H × 7⅛" W × 5¼" D ..... $130

### S600 AM-FM/8-Track Player
Combines AM/FM radio and 8-track stereo tape player; separate volume, balance, tone, and sensitivity controls; illuminated program indicators; automatic or manual program change; wow and flutter 0.3% rms; audio output 4 W average continuous sine wave per channel; frequency response 40-10,000 Hz; stereo separation 30 dB; crosstalk −35 dB; S/N 40 dB; 12-V dc negative ground, 2.5-A max. current drain; supplied with customizer trim plate, gasket, mounting hardware, and knobs; 1¹⁵⁄₁₆" H × 7⅛" W × 5⅛" D ..... $120

### S200 FM/8-Track Player
Combines FM radio and 8-track stereo tape player; stereo matrix for four-channel effect; repeat mode; fast forward; numbered program indicators; manual and automatic program change; wow and flutter 0.25% rms; output power 4 W average continuous sine wave per channel; frequency response 50-10,000 Hz; S/N 45 dB; crosstalk −45 dB; stereo separation 40 dB; supplied with quick-release slide-out bracket; 12-V dc negative ground, 1.5-A max. current drain; 2⅛" H × 7½" W × 7" D.. ..... $110

### S101 8-Track Player
Stereo 8-track tape player; stereo matrix for four-channel effect; repeat mode; fast forward; wow and flutter 0.3% rms; frequency response 40-10,000 Hz; S/N 40 dB; stereo separation 35 dB; audio output 4 W average continuous sine wave per channel; ultra-compact size ..... $90

## J.I.L.

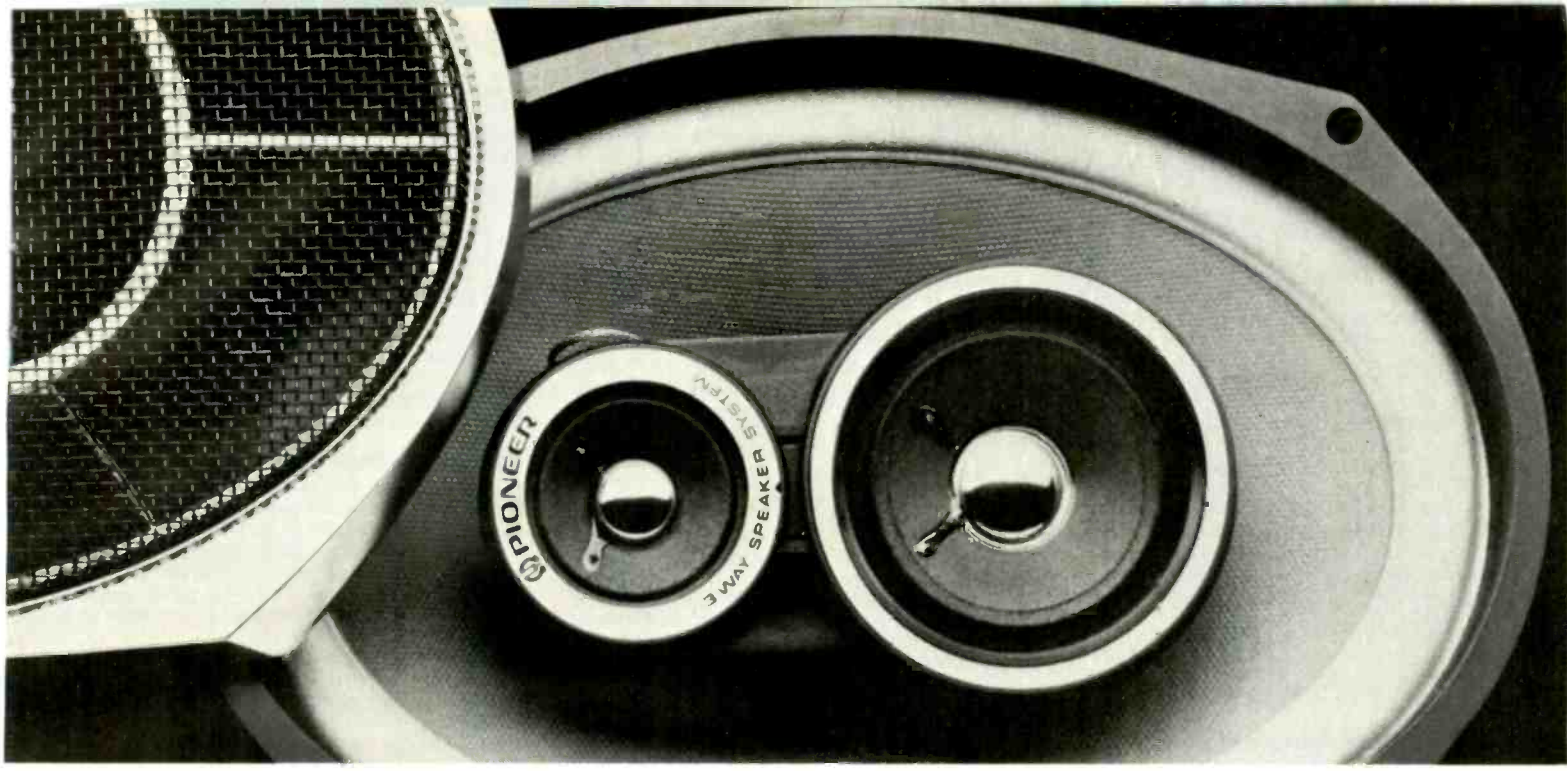
### 634E AM-Stereo FM/Cassette Deck
In-dash unit combines electronic computer-programmed AM-stereo FM radio with cassette playback deck and digital clock. Radio; four AM and four FM pushbutton-tuned programmable channels; scan/pause function; seek/lock-in; FV display, channel frequency; PLL multiplex circuitry; local/distance switch; multiplex indicator; AM/FM button; automatic FM muting; usable sensitivity 2 μV; stereo separation 35 dB at 1000 Hz. Cassette player: capstan drive; auto reverse/eject buttons; locking fast-forward/rewind; tape direction lights; wow and flutter 0.35%; frequency response 40-10,000 Hz; dist. 0.8%; S/N 53 dB. Clock has hour and minute adjust, FV display, and time; ±10 sec/month accuracy. Features "pumper power" power boost, bass and treble tone controls, volume, balance, and fader controls, loudness switch, and adjustable shafts; 2" H × 7" W × 7" D ..... $327

**633.** Similar to 634E, except no digital clock; minus pre-set AM/FM buttons, scan/pause function, seek/lock-in function, channel frequency display. Usable sensitivity less than 3 μV and stereo separation 30 dB at 1000 Hz; 2" H × 7¼" W × 6¾" D .... ..... $203

**632.** Similar to 633 except minus power pumper switch and tape direction control; frequency response 60-10,000 Hz; usable sensitivity 4 μV; 2" H × 7¼" W × 6" D ..... $174

**631.** Similar to 632 less balance control, tape direction indicator lights, loudness switch, FM muting, rewind and play selector, and eject switch. 2⅛" H × 7¼" W × 5" D ..... $114

### 874E AM-Stereo FM/8-Track
In-dash unit combines electronically computer-programmed AM-stereo FM radio with 8-track deck and digital clock. Radio features four AM/FM programmable channels for pushbutton tuning; scan/pause function; seek/lock-in function; LED channel frequency readout; PLL multiplex; local/distance switch; multiplex indicator; AM/FM button; automatic FM muting; usable sensitivity less than 20 μV; stereo separation 35 dB at 1000 Hz; 8-track features cartridge slot in readout panel; capstan




# THE HOTTEST THREE-WAY ON THE FREEWAY.

That's right. Our TS-695's are the very best 3-way car speakers you can buy.

Better than anyone else's. Including the other leading brand's.

Here's why: Theirs has a bridge plate across the top to hold the midrange and tweeter in place, blocking some of the woofer's sound.

We took the bridge out. So our bass comes through loud and clear.

Their woofer magnet is two 10 oz. magnets glued together. While ours is a solid 20 oz. ferrite magnet. So there's smaller flux leakage and less loss of energy.

Our 3.5 oz. midrange magnet is more than twice as heavy as theirs and drives a free edge cone. (Theirs has a fixed edge cone.) So the music comes through with each instrument clearly defined.

Our tweeter has a cone speaker with an alnico magnet dynamic tweeter. Theirs has no magnet at all. Can you guess which one has less distortion in the high end?

There's more.

Ours can handle 40 watts. Theirs, only 30. Ours is twice as sensitive and operates at 4 ohms instead of 8. So you get twice the volume at the same power.

We think the TS-695's are pretty hot stuff.

But if you still aren't sure about which three-ways to buy, take your ears into your stereo store. And let them decide.

## CAR SPEAKERS BY PIONEER.

Pioneer Electronics of America, 1925 E. Dominguez St., Long Beach, CA 90810

CIRCLE NO. 64 ON READER SERVICE CARD

drive for stereo playback; wow and flutter less than 0.35%; frequency response 40-10,000 Hz; S/N 53 dB. Clock is hour/minute adjustable; LED readout. Features 20 W/ch continuous, bass and treble tone controls, "power pumper" power boost, volume, balance and fader controls, loudness switch, and adjustable shafts; 2" H × 7" W × 7" D..... $277

**873.** Similar to 874E minus pre-set buttons, scan/pause function, seek/lock-in function, LED frequency readout; usable sensitivity 3 μV; stereo separation 30 dB; 8-track has channel selector, dial-in door slot, and channel indicator lights; 1 13/16" H × 7 1/4" W × 6" D ..... $164

**872.** Similar to 873 less FM muting switch, multiplex indicator, FM stereo/mono-auto switching, fader control, loudness switch, and "power pumper" boost switch; frequency response 60-10,000 Hz; usable sensitivty 4 μV; 1 13/16" H × 7 1/4" W × 5 1/2" D ..... $107

## LAFAYETTE

### Auto-Mate II Cassette Player

Compact under-dash stereo cassette car player; fast forward; eject push button; separate slide volume, balance and tone controls; power indicator lamp; supplied with mounting bracket, connecting cable and mounting hardware; 12 V dc negative ground operation; 1 7/8" H × 6" W × 6 3/4" D ..... $30

### CP-100 8-Track Player

Compact under-dash stereo 8-track cartridge player; manual or automatic program selection; separate slide volume, balance and tone controls; channel indicator lights; supplied with mounting bracket, speaker/power—connecting cable and mounting hardware; 12 V dc negative ground; 2" H × 5 1/4" W × 6 1/2" D ..... $30

### Mini FM Auto Converter

Under-dash unit converts AM car radio to FM; player through AM units speaker; 12 V dc negative ground; 1 1/8" H × 4 1/8" W × 5" D ..... $25

## MARANTZ

### 420 AM-FM/Cassette Player

In-dash unit combines AM/Stereo FM radio with cassette player; AM/FM stereo Computuner with

quartz-controlled synthesized digital tuning and microprocessor which provides electronic search plus instant access to 12 user-programmable stations (six AM and six FM); auto-reverse cassette player with locking fast forward and rewind; wow and flutter 0.18%; tape frequency range 30-12,000 Hz; 40 W rms max. output power; FM sensitivity 1.1 μV at 75 ohms (12 dBf); capture ratio 1.5 dB; FET r-f amplifier; PLL for stereo separation; fader control; FM muting; local/distant switch; bass and treble controls; loudness control; antenna trimmer; adjustable shaft spacing; quartz clock; 1 3/4" H × 7 1/8" W × 5 7/8" D; nose dimensions 1 5/8" H × 4 1/8" W (DIN standard) ..... $400

### 410 AM-FM/Cassette Player

In-dash unit combines AM/FM radio and stereo cassette player; AM/FM stereo Computuner with quartz controlled synthesized digital tuning and microprocessor which provides electronic station search plus instant access to 12 user-programmable stations (six AM and six FM); auto-eject cassette player with locking fast forward and rewind; wow and flutter 0.18%; tape frequency range 30-12,000 Hz; 12 W rms max. output power; FM sensitivity 1.1 μV 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 3/4" H × 7 1/8" W × 5 7/8" D; nose dimensions 1 5/8" H × 4 1/8" W (DIN standard) .. $320

### 350 AM-FM/Cassette Player

In-dash AM/Stereo FM receiver and auto-reverse cassette player; locking fast forward and rewind; power-off eject; FET r-f amplifier; PLL for stereo separation; FM muting; local/distant switch; tone control; antenna trimmer; adjustable control shafts; wow and flutter 0.18%; tape frequency range 30-12,000 Hz; 12 W rms max. output power; capture ratio 2 dB; FM sensitivity 1.5 μV at 75 ohms; 1 3/4" H × 7 1/8" W × 5 3/8" D; nose dimensions 1 5/8" H × 4 1/8" W (DIN standard)..... $230

### 300 AM-FM/Cassette Player

In-dash unit combines five-station presets and auto eject cassette; PLL FM decoder; FM muting; full-time noise blanker; automatic stereo/mono/switching; local/distant switch; super-hard permalloy head; volume, tone and balance controls; FM stereo LED indicator; locking fast-forward and rewind; wow and flutter 0.15% wrms; max audio output 20 W continuous into 2 ohms, frequency response 20-20,000 Hz; FM sensitivity 1.8 μV into 75 ohms (16.36 dBf); capture ratio 2.0 dB; FM selectivity 60 dB at ±400,000 Hz; negative ground; anodized brushed-aluminum faceplate in gold; chassis 2 5/8" H × 7 1/8" W × 5 3/8" D; nose 1 3/4" × 4 1/8" ..... $190

## MOTOROLA

### TC887AX AM-FM/Cassette Player

In-dash unit features AM/FM radio and stereo cassette player; 8 W continuous total system power; AutoReverse sensor automatically plays second side of tape; locking fast forward and rewind buttons; FM local/distance switch; tape direction switch and light; stereo indicator lights; left/right balance controls; front-rear fader; mono/stereo switch; hard permalloy head; 2.6" H × 7.1" W × 5.3" D..... $230

### TC888AX AM-FM/Cassette Player

In-dash unit combines AM/FM radio and stereo cassette player; 8 W continuous total system power; AutoCue control positions tape in either forward or reverse mode; push-button tuning; separate fader control; locking fast forward and rewind buttons; tape eject; tone, balance, and volume controls; local/distance and mono/stereo switches; stereo indicator light..... $220

### TC885AX AM-FM/Cassette Player

In-dash unit designed for compact cars combines AM/FM radio and stereo cassette player; 8 W continuous total system power; AutoReverse; hard permalloy tape head; controls for tone, balance, and volume; locking fast forward and rewind; tape eject; local/distance switch; stereo indicator light ... $180

### TC883AX AM-FM/Cassette Player

In-dash unit combines AM/FM radio and stereo cassette player; 8 W continuous total system power; push-button tuning; front-to-rear fader; controls for tone, balance and volume; locking fast forward and rewind; tape eject; local/distance switch..... $170

### TC881AX AM-FM/Cassette Player

In-dash unit combines AM/FM radio and stereo cassette player; 8 W continuous total system power; AutoEject; front-to-rear fader; front-loading installation; controls for tone, balance, and volume; locking fast forward and rewind; local/distance switch; stereo indicator light ..... $140

### TC879AX AM-FM/Cassette Player

In-dash unit combines AM/FM radio and stereo cassette player; 8 W continuous total system power; short chassis depth; locking fast forward and rewind; volume, tone and balance controls; tape eject; tape run light; manual tuning; local/distance switch; stereo indicator light ..... $100

### Under-Dash Cassette Players

All models feature locking fast forward and rewind buttons; tape eject; tape run lights; controls for volume and left/right balance; U-trackets for easy mounting.

**TC344S.** Total output 24 W continuous; rotary bass

and treble controls; loudness contour control; hi-filter, power meter ..... $150

**TC334S.** Total output 8 W continuous; AutoReverse; tape direction switch and light ..... $110

**TC324S.** Total power output 8 W continuous.... $80

### TF882AX AM-FM/8-Track Player

In-dash unit combines AM/Stereo FM radio and 8-track player; 24 W continuous total system power; balance and volume controls; push-button or manual tuning; local/distance switch; mono/stereo and program select switches; stereo and program indicator lights; separate controls for bass, treble, and front-to-rear fader; loudness button ..... $190

### TF880AX AM-FM/8-Track Player

In-dash unit combines AM/Stereo FM radio and 8-track player; 8 W continuous total system power; push-button or manual tuning; volume, tone and balance controls; front-to-rear fader; local/distance, mono/stereo and program select switches; stereo and program indicator lights ..... $150

### TF850AX AM-FM/8-Track Player

In-dash unit combines AM/Stereo FM radio and 8-track player; 8 W continuous total system power; manual tuning; controls for tone, volume and balance; stereo and program indicator lights; local/distance switch ..... $100

### TM428S 8-Track Player

Under-dash 8-track tape player; 24 W continuous total system power; separate controls for bass, volume, treble, and balance; loudness button; fast forward, channel select, and program repeat switches; lighted channel indicator ..... $100

### TM228S 8-Track Player

Under-dash 8-track tape player; 8 W continuous total system power; treble, bass, fast forward, volume, and balance controls; channel select switch; lighted program indicator..... $70

### TM125S 8-Track Player

Under-dash 8-track tape player; 8 W continuous total system power; controls for tone, volume, and balance; program repeat and channel select switches; lighted channel indicator..... $50

## NAKAMICHI

### 350 Universal Cassette Deck

See Section 6, Cassette Tape Machines, under "Nakamichi" ..... $440

### 250 Cassette Player

Designed for use with ADS subminiature biamplified speaker systems; Dolby noise reduction circuitry; selectable playback equalization; full auto shut-off; dc servomotor drive; volume, tone, and balance controls; supplied with bracket for under-dash mounting and cable for interfacing with ADS system; playback frequency response 40-17,000 Hz ±3 dB; wow and flutter 0.08% wrms; S/N 62 dB (with Dolby); output 580 mV; 9 1/2" × 7 1/2" × 3 1/2"... ..... $310

**250S.** Same but with ac power supply ..... $335

## PANASONIC

### CQ-6700 AM-Stereo FM/Cassette Player

In-dash unit combines AM/Stereo FM radio and stereo cassette player; compact size for installation in most dashboards; fast-forward control; automatic tape eject; local/distant switch; automatic stereo/mono change circuit; FM stereo indicator light;

# Motorola introduces the complete sound system for your car.


The TC887AX In-Dash Cassette with AM/FM Stereo, the EQB 3000 Graphic Equalizer, plus 3-way and 2-way speakers.

This new system from Motorola® gives you 30 watts of output and a sound that can sound as good as many home stereo systems.

The TC887AX has cassette features like automatic reverse for continuous play of the cassette without removal and reinsertion, locking fast forward to advance the tape quickly and quietly, locking rewind to rewind the tape and repeat a program, and direction indicator lights. Plus push-button tuning, a local/distance switch, balance control for adjusting right and left channels, a fader control for adjusting the front to rear sound level.

The Motorola EQB 3000 Graphic Equalizer has been designed specifically for the varying automotive environment. It compensates adequately for car acoustic levels, speaker placement and ambient road noise. With five frequency bands from 60 Hz to 10,000 Hz, and a fader, it enables you to tailor the sound to your preference.

The Pow-R-Handler™ Professional Series 3-way speakers have 20 oz. one piece magnets and one inch aluminum voice coil for superior heat dissipation. The 2-ways are co-axial speakers with 10 oz. one piece magnets.

And this is just one of the many systems you can create with Motorola components. Listen to them at a dealer near you. And start getting sound in your car that can be as good as the sound you get at home.

**MOTOROLA**

*Auto Sound Systems*

To find the dealer nearest you, write: Market Relations Manager, Motorola, Inc., Automotive Products Division, 1299 East Algonquin Road, Schaumburg, Illinois 60196.
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CIRCLE NO. 58 ON READER SERVICE CARD

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tone, volume and balance control; output power 4 W/channel max.; THD 10% at 3.5 W/channel; 4 to 8 ohm impedance; frequency response 50-10,000 Hz; wow and flutter 0.4% wrms; S/N 40 dB; 1¾" H × 7" W × 5⁹/₁₆" D ..... $160

### CX-7100 Cassette Player
Component Systems stereo cassette player; under-dash installation; automatic and manual reverse; two-stage preamp and dual channel amplifier; separate left/right tone controls; locking fast forward, rewind, and eject on one lever; program indicator lamp; direction indicator; balance control; power output 4.8 W/channel with 10% THD, 3.6 W with 1% THD; 4 to 8 ohm impedance; frequency response 50-10,000 Hz; wow and flutter 0.3% wrms; S/N 40 dB; 2½" H × 7½" W × 5⁹/₁₆" D..... $120

### CX-5100 Cassette Player
Component Systems stereo cassette player with Repeatrack; under-dash installation; two-stage preamp and dual channel amplifier; separate left/right tone controls; locking fast forward, rewind, and tape eject on one lever; balance control; play indicator; volume control; output power 4.8 W/channel with 10% THD, 3.6 W with 1% THD; 4 to 8 ohm impedance; frequency response 50-10,000 Hz; wow and flutter 0.3% wrms; S/N 40 dB; 2½" H × 7½" W × 5⁹/₁₆" D ..... $90

### CX-233 Cassette Player
Under-dash compact stereo cassette player; auto stop; manual eject; push-button fast-forward and eject controls; slide-rule volume, balance, and tone controls; max. output power 4 W/channel; THD 10% at 3.5 W; 4 to 8 ohm impedance; frequency response 50-10,000 Hz; wow and flutter 0.4% wrms; S/N 40 dB; 2" H × 4¾" W × 6¹¹/₁₆" D .... $70

### CQ-1851 Stereo FM/8-Track Player
Under-dash unit combines stereo FM radio and stereo 8-track tape player; distant/local switch; automatic frequency control; automatic mono/stereo change circuit; FM stereo indicator; radio dial in cartridge door; separate controls for bass, treble, balance, and volume; tape program selector; VU meter; output power 10 W/channel with 10% THD; 8-ohm impedance; wow and flutter 0.4% wrms; S/N 35 dB; 2⁹/₁₆" H × 9⁷/₁₆" W × 7¹⁵/₁₆" D..... $150

### CQ-2700 AM-FM/8-Track Player
In-dash unit combines AM/Stereo FM radio and stereo 8-track tape player; radio dial in cartridge door; vertical head movement; two-stage preamp and dual channel amplifier; continuous volume and tone; distant/local switch; stereo indicator; volume, balance and tone controls; tape program selector; output power 3.5 W/channel with 10% THD; 4 to 8 ohm impedance; frequency response 50-10,000 Hz; wow and flutter 0.3% wrms; S/N 37 dB; 2" H × 7" W × 6" D ..... $140

### CX-1100 8-Track Player
Under-dash Component System stereo 8-track tape player; two-stage preamp and dual channel amplifier; vertical head movement; continuous volume and tone controls; separate left and right tone controls; automatic and manual program selection; balance control; output power 4.8 W/channel with 10% THD, 3.6 W with 1% THD; 4 to 8 ohm impedance; frequency response 50-10,000 Hz; wow and flutter 0.3% wrms; S/N 40 dB; 2½" H × 7½" W × 6³/₃₂" D ..... $70

## PIONEER

### KPH-9000 AM-FM Stereo/Cassette
In-dash AM-FM Supertuner with stereo cassette player; separate power amplifier; volume and balance control; release/eject button; LED tuning scale; rewind/fast-forward lever; separate bass and treble controls; loudness contour switch; three AM/FM preset buttons; tape play indicator; FM muting; FM stereo/mono switch; tuner capture ratio 1.7 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 46 dB; 2" H × 7⅛" W × 5⅞" D; nose 1¾" H × 4⅛" W × 1⅛" D..... $350

### KP-8005 AM-FM Stereo/Cassette
In-dash AM-FM stereo receiver with cassette player; 8 W max. continuous output power; FM usable sensitivity 1.1 μV at 75 ohms (12 dBf); 50 dB quieting sensitivity 1.4 μV at 75 ohms (14.3 dBf); alternate channel selectivity 74 dB; capture ratio 1.7 dB; five-station preset tuning; volume/tone/balance controls; FET r-f amplifier; PLL for stereo separation; muting switch; tape frequency range 30-12,000 Hz; wow and flutter 0.25%; 2" H × 7⅛" W × 5¾" D; nose dimensions 1¾" H × 4⅛" W × 1⅛" D ..... $250
**KP-8000.** Same as KP-8005 except designed to DIN standard to fit European cars; nose dimension 1⅜" H × 4⅛" W × ¾" D; shaft spacing 5⅛-in ..... $250
**KP-5005.** Same as KP-8005 but with manual tuning..... $220

### KPH-838 Cassette Player
Under-dash cassette player with separate power amplifier and Dolby noise-reduction system; electronically governed motor; features separate bass, treble, and loudness controls, locking fast forward and rewind, and Dolby and tape indicator lights.... $230

### KP-500 Stereo FM/Cassette
Under-dash FM stereo receiver with cassette player; PLL multiplex demodulator; automatic stereo/mono switching; local/distant switch; loudness and muting switches; separate bass and treble controls; 8 W max. continuous output power; FM usable sensitivity 1.1 μV; 50 dB quieting sensitivity 1.4 μV; alternate channel selectivity 74 dB; capture ratio 1.7 dB; automatic eject; fast forward and rewind; wow and flutter 0.3%; brushed aluminum panel; 3" H × 7⅛" W × 7½" D..... $210
**KP-250.** Similar to KP-500 except separate balance/tone/volume control; stereo/mono switch; frequency range 40-10,000 Hz; 2" H × 6⅛" W × 6¾" D..... $160

### KP-4000 AM-FM Stereo/Cassette
In-dash AM-FM stereo receiver with cassette player; 8 W max. continuous output power; tape frequency response 40-10,000 Hz; wow and flutter 0.3%; automatic stop and eject; rotary mode selector; local/distant switch; FM stereo indicator; tape play lights; 2" H × 7⅛" W × 6¼" D; nose dimension 1¾" H × 4⅛" W × 1⅜" D..... $200

### KP-292 Cassette Player
Under-dash cassette system with locking fast-forward and rewind; automatic replay after rewind; automatic eject; tone and balance controls; loudness switch; slide volume control; 8 W min. continuous output power; frequency range 30-12,000 Hz; wow and flutter 0.3%; 2" H × 4¾" W × 6⅛" D..... $130
**KP-212.** Similar to KP-292 except side load; on/off indicator light; frequency range 40-10,000 Hz; 2" H × 5⅞" W × 16⅛" D ..... $105

### TP-9006 AM-FM Stereo/8-Track
In-dash AM-FM stereo receiver with 8-track player; 8 W max. continuous output power; FM usable sensitivity 1.1 μV at 75 ohms; 50 dB quieting sensitivity 1.4 μV at 75 ohms; alternate channel selectivity 74 dB; capture ratio 1.7 dB; wow and flutter 0.25% wrms; ten-station preset pushbutton tuning; 3¼" H × 7⅛" W × 6⅜" D; nose size 3" H × 4⅝" W; designed primarily for GM cars ..... $260
**TP-9005.** Similar except designed primarily for Ford cars ..... $260
**TP-9004.** Similar except designed primarily for Chrysler cars ..... $260

### TP-7006 AM-FM Stereo/8-Track
Combines AM-FM stereo receiver with 8-track player; 8 W max. continuous output power; FM usable sensitivity 1.1 μV at 75 ohms; 50 dB quieting sensitivity 1.4 μV at 75 ohms; alternate channel selectivity 74 dB; capture ratio 1.7 dB; tape frequency response 30-15,000 Hz; wow and flutter 0.25%; five-station preset tuning; automatic stereo/mono switching; local/distant switch; separate bass and treble controls; 3" H × 7⅛" W × 6⅛" D; nose size 3" H × 4⅝" W; designed primarily for GM cars ..... $240
**TP-7005.** Similar to TP-7006 except designed primarily for Ford cars ..... $240
**TP-7004.** Similar to TP-7006 except designed primarily for Chrysler cars ..... $240

### TP-900 Stereo FM/8-Track
Under-dash FM stereo with 8-track; PLL multiplex demodulator; FET front end; local/distant switch; loudness switch; muting; separate bass, treble, balance controls; FM usable sensitivity 1.1 μV; 50 dB quieting sensitivity 1.4 μV; alternate channel selectivity 74 dB; capture ratio 1.7 dB; automatic stereo/mono switching; tape frequency response 30-15,000 Hz; wow and flutter 0.25%; fast forward; program repeat; 3" H × 7⅝" W × 7½" D ..... $200
**TP-200.** Similar to TP-900 but automatic/manual program change; frequency range 40-10,000 Hz; illuminated track indicator; 2⅛" H × 7½" W × 7⅜" D..... $120

### TP-7000 AM-FM Stereo/8-Track
In-dash AM-FM stereo receiver with 8-track player; 8 W max. continuous output power; frequency response 40-10,000 Hz; wow and flutter 0.3%; pushbutton tuning; volume/balance/tone controls; lighted FM and stereo indicators; stereo/mono switch; 2" H × 7⅛" W × 6¼" D; nose dimension 1¾" H × 4¼" W × 1⅛" D ..... $190
**TP-6001.** Similar to TP-7000 except automatic and manual program change; nose dimension 4¾" × 1⅞" ..... $140

### TP-727 8-Track Player
Under-dash 8-track player; 8 W max. continuous output power; frequency range 30-10,000 Hz; wow and flutter 0.25%; separate bass and treble controls; loudness switch; fast-forward; automatic/manual program change; repeat option; 2⅝" H × 6½" W × 6¼" D..... $115
**TP-252.** Similar to TP-727 but frequency range 40-10,000 Hz; slide volume and tone controls; separate balance control; 2" H × 4¾" W × 6⅛" D ..... $60

## RCA

### 20C505 AM-FM Stereo/Cassette Player
In-dash unit combines AM-FM stereo radio and stereo cassette player; five × five AM/FM slidebar switching; five quick-set push-button tuning; local/distant switch; automatic frequency control; stereo balance control; fader control; dial light dimmer control lead; automatic power antenna activator lead; 10 W/ch continuous; frequency response 30-20,000 Hz; 4-8 ohm impedance; adjustable shafts; 2⁹/₁₆" H × 7" W × 6" D ..... $200

### 12R210 AM-FM Stereo/Cassette Player
In-dash unit combines AM-FM stereo radio and stereo cassette player; compact installation for use in small domestic and foreign cars; solid state circuitry; built-in afc; automatic tape shut-off; stereo fader and balance controls; FM stereo indicator light; tape indicator light; fast-forward and eject button; 9 W/ch continuous; frequency response 30-15,000 Hz; 3-8 ohm impedance; adjustable shafts; 1⅜" H × 6¹¹/₁₆" W × 4⅜" D..... $145

### 12R206 Cassette Player
Under-dash compact cassette player; fast forward and rewind; automatic and manual tape eject; power on/off indicator; slide controls for volume, balance, and tone; 9.5 W/channel; frequency response 80-18,000 Hz; 3-8 ohm impedance; wow and flutter 0.25%; 2" H × 5¼" W × 6½" D ..... $65

### 12R704 AM-FM Stereo/8-Track Player*
In-dash unit combines AM-FM stereo radio and

stereo 8-track player; radio dial in cartridge door; five quick-set tuning push buttons; cartridge eject; local/distant switch; stereo fader and balance controls; dial light dimmer control lead; afc; program indicator lights; FM stereo indicator light; 10 W/channel; frequency response 30-20,000 Hz; 3-8 ohm impedance; adjustable shafts; 2 13/16" H × 7" W × 6" D ..... $190

### 12R710 AM-FM Stereo/8-Track Player

In-dash unit combines AM-FM stereo radio and stereo 8-track player; radio dial in cartridge door; short chassis only 4 3/4-in deep; AM/FM slidebar switching; local/distant switch; stereo fader and balance controls; afc push button; tape program indicator lights; 10 W/channel; frequency response 30-10,000 Hz; 3-8 ohm impedance; adjustable shafts; 2" H × 7 1/16" W × 4 3/4" D ..... $140

### 12R904 Stereo FM/8-Track Player

Under-dash unit combines Stereo FM radio and 8-track tape player; non-glare numbered program indicator lights; push-button tape program selection; sliding volume, balance, and tone controls; FM stereo indicator light; front-loading with dust cover; compact size for installation in small cars, boats or RV's; 14 W power output, 7 W/ch continuous; frequency range 80-8000 Hz; wow and flutter 0.3% rms; 3-8 ohm impedance; 2" H × 6 3/4" W × 6 3/4" D. ..... $90

### 12R305 8-Track Player

Under-dash stereo 8-track player; solid state circuitry; fast-forward push button; automatic repeat; automatic on/off; program indicator lights; program selector; volume, balance, and tone controls; 9.5 W/channel; frequency response 80-9500 Hz; wow and flutter 0.3%; 2" H × 5 1/2" W × 6 3/4" D. ..... $65

### 12R903 8-Track Player

Under-dash stereo 8-track player; non-glare numbered program indicator lights; push-button program selection; sliding volume, balance, and tone controls; automatic on/off switch; front-loading with dust cover; 14 W power output; frequency range 80-8000 Hz; 3-8 ohm impedance; wow and flutter 0.3% rms; 2" H × 5 1/2" W × 6 3/4" D. ..... $55

### 12R902 8-Track Player

Under-dash compact stereo 8-track tape player; sliding volume, balance, and tone controls; automatic on/off switch; push-button program selection; 14 W power output; frequency range 80-8000 Hz; 3-8 ohm impedance; wow and flutter 0.3% rms; 2" H × 5 1/2" W × 6 3/4" D ..... $45

## ROYAL SOUND

### RS-3110 AM-FM/Cassette Player

In-dash unit combines automatic electronically tuned AM/FM stereo receiver with cassette tape player; LED dial illumination; LED stereo, AM, and FM indicator lights; automatic tape reverse for continuous play and locking fast forward/fast rewind controls; tape frequency range 40-12,000 Hz; power output 2 × 7 W; wow and flutter 0.45% wrms; S/N 35 dB; 4-8 ohm output impedance; 52 mm H × 180 mm W × 165 mm D ..... $600

**PSA-5.** Optional remote five-station preset adaptor. ..... $60

### RS-2010N AM-FM/Cassette Player

In-dash unit combines stereo cassette tape player with AM-stereo FM receiver. Tape section features fast forward, manual eject, auto stop, tape, and end-of-tape controls; wow and flutter 0.18% wrms; frequency response 50-10,000 Hz; S/N 50 dB; power output 4 W/ch continuous at less than 3.0% THD. Receiver features LEDs for AM/FM/MPX, AM, FM mono, FM, and multiplex selector switch, auto AM antenna trimmer, adjustable shaft, on/off connection for antenna; max. sensitivity 2 μV (FM), 30 μV (AM). 44 mm H × 178 mm W × 125 mm D ..... $200

## SANKYO SEIKI

### SCS-444 AM-FM Stereo/Cassette Player

In-dash AM-FM stereo radio and cassette player with one-touch automatic loading. Cassette: Philips-type compact playback with locking fast-forward and eject; wow and flutter 0.35% wrms; S/N 40 dB; channel separation 40 dB; dist. less than 3.0%. Radio features pushbutton tuning of five preselected AM-FM stations; volume, tone, and balance controls; LED FM stereo indicator; FM sensitivity 3 μV; S/N 40 dB; dist. less than 3.0%; AM S/N 40 dB; dist. 4.0%; system frequency response 40-12,000 Hz; output power 5 W at 1000 Hz; speaker impedance 4-8 ohms; adjustable shafts; 2 1/2" H × 7" W × 5 5/8" D ..... $180

**SCS-333.** Similar to SCS-444 except playback cassette player features auto-reverse and locking fast-forward, rewind, and stop; S/N 45 dB; dist. less than 2.0%; channel separation 55 dB. FM sensitivity less than 1 μV and S/N 45 dB; AM S/N 40 dB; 1 13/16" H × 7" W × 6 3/8" D ..... $170

**SCS-222.** Similar to SCS-444 without pushbutton tuning of five preselected AM-FM stations; 2 1/2" H × 7" W × 5 5/8" D ..... $120

## SANYO

### FT1670 AM-FM Stereo/Cassette Player

In-dash unit combines AM-FM stereo radio, cassette player, digital clock, and elapsed timer; has auto eject transport; biamp with 12 W/ch woofer amps and 2 W/ch tweeter amps; LED display for elapsed time and station frequency; auto up/down for electric antennas; separate woofer and tweeter controls; remote scanning with hold button; locking fast-forward/rewind. Receiver: 28 W continuous output power; FM usable sensitivity 11.2 dBf (1 μV); frequency response 30-16,000 Hz; selectivity 60 dB; capture ratio 1.2 dB; stereo separation 35 dB; speaker impedance 4 or 8 ohms; operating voltage 12 V dc neg. ground, 13.8 V dc nominal. Cassette: wow and flutter 0.2% wrms; S/N 45 dB. 3" H × 7" W × 6" D ..... $370

**FT690.** Similar to FT1670 without elapsed timer and biamp with woofer/tweeter amps; 8 W continuous output power; frequency response 50-12,000 Hz ..... $300

**FT1495.** Similar to FT1670 without digital clock; features Dolby noise-reduction system and Dolby-encoded FM broadcasting; full auto reverse with auto repeat; S/N with Dolby 50 dB..... ..... $220

**FT1490A.** Similar to FT1495 without five-station preset pushbutton tuning; has loc/DX control; FM stereo separation 30 dB ..... $200

### FT489 AM-FM Stereo/Cassette Player

In-dash AM-FM pushbutton stereo radio with cassette player; features auto-reverse; dual-gate MOS FET front end; locking fast-forward and rewind; local/DX switch; auto up/down control for electric antennas; EZ install system. Receiver: 8 W continuous output power. FM sensitivity 11.2 dBf (1.0 μV); frequency response 50-21,000 Hz; selectivity 60 dB; capture ratio 1.2 dB; FM stereo separation 35 dB; speaker impedance 4 or 8 ohms. Cassette: wow and flutter 0.25% wrms; S/N 45 dB. Operating voltage 12 V dc neg. ground, 13.8 V dc nominal; 2" H × 7" W × 6" D ..... $180

**FT488R.** Similar to FT489 without pushbutton tuning, local/DX switch, and auto up/down control; has auto repeat, LED tuning dial, antenna trimmer, and auto FM stereo/mono switch. Radio: FM sensitivity 14.7 dBf (1.5 μV); selectivity 55 dB; capture ratio 1.5 dB; FM stereo separation 26 dB ..... $160

**FT484R.** Similar to FT488R less auto reverse; has auto stop and eject; cassette wow and flutter 0.2% rms ..... $140

**FT481.** Similar to FT484R with auto stop instead of auto eject; 4 W/ch continuous output power; FM usable sensitivity 19.2 dBf (2.5 μV); frequency response 50-10,000 Hz; wow and flutter 0.25%; FM stereo separation 25 dB ..... $120

**FT479.** Similar to FT481 without locking rewind..... ..... $110

**FT478.** Similar to FT479 except side-loading cassette with auto start; 1 7/8" H × 6 1/4" W × 4 3/4" D. $90

### FT418 AM-FM Stereo/Cassette Player

In-dash pushbutton AM-FM stereo radio with cassette player; features ceramic i-f filters; PLL multiplex decoder; EZ install system; separate bass and treble controls; local/DX switch; auto eject; auto up/down for electric antennas. Receiver: 8 W continuous output power; FM usable sensitivity 14.8 dBf (1.5 μV); frequency response 50-10,000 Hz; selectivity 55 dB; capture ratio 1.5 dB; FM stereo separation 35 dB; speaker impedance 4 or 8 ohms. Cassette: wow and flutter 0.25% wrms; S/N 45 dB. Operating voltage 12 V dc neg. ground, 13.8 V dc nominal; 2" H × 7" W × 6" D..... $160

**FT417.** Similar to FT418 without auto up/down and auto eject; has auto stop; 4 W/ch continuous output power ..... $140

**FT415.** Similar to FT418 without pushbutton preset stations; local/DX switch; has full-function recording mode; locking fast-forward, pause, and rewind; can record from radio with hand-held remote microphone; 7 W/ch continuous output power; FM sensitivity 11.2 dBf (2.0 μV); selectivity 60 dB; capture ratio 1.2 dB; FM stereo separation 80 dB; 2" H × 7" W × 5 1/8" D ..... $160

### FT1405 FM Stereo/Biamp/Cassette Play

Under-dash FM stereo receiver with biamp and cassette player; features slide in/out bracket; biamp with 12 W/ch woofer and 2 W/ch tweeter amps at 3.0% THD; separate woofer and tweeter controls; loudness switch; locking fast-forward and rewind; dual gate MOS FET front end. Receiver: 28 W continuous total output power; FM usable sensitivity 14.8 dBf (1.5 μV); frequency response 30-16,000 Hz; selectivity 55 dB; capture ratio 1.5 dB; FM stereo separation 35 dB; speaker impedance 4 or 8 ohms. Cassette: wow and flutter 0.2% wrms; S/N 45 dB. Operating voltage 12 V dc neg. ground, 13.8 V dc nominal; 2 1/4" H × 6 3/4" W × 6 7/8" D..... $140

**FT1400.** Similar to FT1405 but has auto reverse; 26 W continuous; 3 1/3" H × 7" W × 7" D ..... $120

### FT407 FM Stereo/Cassette Player

Under-dash FM stereo receiver with cassette player; features FET front end; PLL multiplex decoder; local/DX switch; locking fast-forward and rewind; auto eject at end of tape. Receiver: 8 W continuous output power; FM usable sensitivity 19.2 dBf (2.5 μV); frequency response 50-10,000 Hz; selectivity 55 dB; capture ratio 1.5 dB; FM stereo separation 26 dB; soeaker impedance 4 or 8 ohms. Cassette: wow and flutter 0.25% rms; S/N 45 dB; operating voltage 12 V dc neg. ground, 13.8 V dc nominal; 2 9/16" H × 7 5/16" W × 6 3/16" D..... $110

**FT406.** Similar to FT407 without radio; frequency response 40-12,000 Hz; wow and flutter 0.2% rms; 2" H × 6 1/2" W × 6 1/4" D..... $90

**FT402R.** Similar to FT406 but has manual/auto stop-eject and cue and review; 3.5 W/ch continuous output power..... $55

**FT601.** Similar to FT402R but 3 W/ch continuous; frequency response 50-10,000 Hz; wow and flutter 0.3% rms; S/N 40 dB; 2" H × 4 3/4" W × 5" D... $45

### FT1877 AM-FM Stereo Biamp/8-Track

In-dash AM-FM biamplified stereo receiver with 8-track player; five pushbutton preset stations; Dolby noise-reduction system; biamp with 12 W/ch woofer amp and 2 W/ch tweeter amp; separate woofer and tweeter controls; locking fast-forward; dual gate MOS FET front end; PLL multiplex decoder; automatic up/down for electric antennas. Receiver: 28 W continuous total output power; FM usable sensitivity 11.2 dBf (2.0 μV); frequency response 30-16,000 Hz; selectivity 60 dB; capture ratio 1.2 dB; FM stereo separation 35 dB; speaker impedance 4 or 8 ohms. Cassette: wow and flutter 0.2% wrms; S/N 53 dB with Dolby. Operating voltage 12 V dc neg. ground, 13.8 V dc nominal; 3" H × 7" W × 6" D ..... $200

**FT1004.** Similar to FT1877 but under-dash unit without Dolby noise-reduction system and locking fast-forward; has rotary balance and tone controls; FM radio; FM sensitivity 14.8 dBf (1.5 μV); S/N 45

# 9 CAR TAPE EQUIPMENT

dB; 2¼" H × 6¾" W × 6⅞" D..... $140
**FT874.** Similar to FT1004 but in-dash unit; no biamp with woofer and tweeter controls; AM-FM radio; 8 W continuous output power; frequency response 50-10,000 Hz; wow and flutter 0.25%; capture ratio 1.5 dB; 3" H × 7" W × 6" D..... $150
**FT950.** Similar to FT874 less pushbutton preset tuning; has repeat play and separate bass and treble slide controls; 2" H × 7" W × 5" D..... $130
**FT1003.** Similar to FT950 but under-dash with FM radio; has slide in/out bracket, separate bass and treble boost/cut controls; speaker matrix system; recessed thumb-wheel tuning; 16 W continuous output power; frequency response 30-12,000 Hz; FM sensitivity 17.3 dBf; selectivity 60 dB; FM stereo separation 30 dB; wow and flutter 0.2% rms; S/N 45 dB; 2⅜" H × 7¼" W × 8" D..... $120
**FT1002.** Similar to FT1003 except includes biamplifier with 12 W/ch woofer amp and 2 W/ch tweeter amp; separate woofer and tweeter controls; no radio; 28 W continuous output power; frequency response 30-16,000 Hz; 2½" H × 7" W × 7" D. $120
**FT870.** Similar to FT1002 except in-dash unit with AM-FM stereo receiver; DIN specifications meet foreign and compact car installation; FET multiplex decoder; local/DX switch; antenna trimmer; auto FM stereo switch; 8 W continuous output power; frequency response 50-10,000 Hz; FM usable sensitivity 19.2 dBf (2.5 μV); selectivity 55 dB; capture ratio 1.5 dB; FM stereo separation 26 dB; speaker impedance 4 or 8 ohms; wow and flutter 0.25% rms; 2¼" H × 7" W × 6" D..... $110
**FT869.** Similar to FT870 without behind-the-door antenna trimmer and speaker matrix; has rotary controls and slide-bar band selector switch..... $90
**FT1001A.** Similar to FT869 but under-dash without radio; frequency response 30-12,000 Hz; wow and flutter 0.2% rms; 2⅜" H × 7¼" W × 8" D..... $90

## SHARP

### RG-5252 AM-FM Stereo/Cassette Player
In-dash stereo cassette player with FM-AM stereo radio; Automatic Program Search System (The Sharp Eye); tape end LED indicator; automatic end-of-tape shut-off; simplified slot loading; illuminated slide-rule tuning dial; band switch for AM/FM/Stereo FM; balance control; fast-forward and reverse lever; variable tone control; solid state stereo amplifier; PLL/FM stereo circuitry; agc and afc; stereo indicator lamp; wow and flutter 0.25% wrms; frequency response 50-10,000 Hz..... $170

### RG-5702 AM-FM Stereo/Cassette Player
FM-AM stereo FM radio with stereo cassette player; automatic reverse feature that plays cassette to end of one side, reverses automatically and plays side two; simplified slot loading; illuminated slide-rule tuning dial; band selector for AM/FM/Stereo FM; balance control; variable tone control; fast forward and rewind; solid state stereo amplifier; PLL/FM stereo circuitry; afc and agc; stereo indicator lamp; wow and flutter 0.25% wrms; frequency response 50-10,000 Hz..... $150

### RG-5202 AM-FM Stereo/Cassette Player
FM-AM stereo FM radio with stereo cassette player; built-in automatic eject mechanism; simplified slot loading; illuminated slide-rule tuning dial; band selector switch; balance control; variable tone control; fast forward and rewind; PLL/FM stereo circuitry; afc and agc; stereo-indicator lamp; wow and flutter 0.25% wrms; frequency response 50-10,000 Hz... ..... $130

## SONY from SUPERSCOPE

### TC-34 AM-FM/Cassette Player
In-dash AM-FM radio with stereo cassette player; stereo indicator light; illuminated dial scale; rotary tuning; volume, tone, and balance controls; built-in afc; mono/stereo switch; antenna trimmer adjustment; manual direction change; auto reverse in fast-forward, play, and rewind modes; cassette actuated tape/radio switching; power-on indicator lamp; locking fast forward and rewind; manual cassette eject; tape run indicator light; adjustable shafts; wow and flutter 0.3%; frequency response 120-8,000 Hz; 2" H × 7" W × 4" D..... $250

### TC-28 AM-FM-MPX/Cassette Player
In-dash AM-FM/stereo radio with stereo cassette player; stereo indicator light; automatic FM-FM Stereo switching; illuminated dial scale; rotary tuning; volume, tone, and balance controls; switchable afc; mono/stereo switch; local/distant switch; PLL multiplexing IC; locking fast forward and rewind; auto eject at end-of-tape in fast forward and play; manual cassette eject; tape run indicator light; adjustable shafts; wow and flutter 0.25%; frequency response 50-10,000 Hz; 1.69" H × 7.09" W × 8.39" D ..... $200

### TC-30 Cassette Player
Car stereo cassette player with automatic reverse; dual capstan tape drive; wow and flutter 0.25%; frequency response 50-10,000 Hz (standard tape); S/N 50 dB (standard tape); tape pilot directional lamp; individual tone, volume, and balance controls; locking fast-forward and rewind buttons; dual differential-balanced flywheels; supplied with spare fuse and mounting hardware; 12-V dc negative ground; 2 13/16" H × 7¼" W × 9⅜" D..... $200

### TC-26F FM/Cassette Player
Car stereo FM radio and cassette player; wow and flutter 0.22%; frequency response 50-10,000 Hz (standard tape); S/N 50 dB (standard tape); mono/stereo FM; tape indicator; fast-forward and rewind buttons; tone, volume, and balance controls; supplied with spare fuse, mounting hardware, and antenna cord; 12-V dc negative ground; 2½" H × 8" W × 8¾" D ..... $170

### TC-24FA AM-FM/Cassette Player
In-dash car cassette tape player with AM/FM stereo radio; wow and flutter 0.35% rms; frequency response 125-8000 Hz (standard tape); S/N 43 dB (standard tape); stereo balance, tone, and volume controls; automatic shut-off in forward tape mode; locking fast forward; tape travel indicator; mono/stereo switch; 1⅞" H × 6⅞" W × 5⅞" D (body), 1 9/16" H × 3 9/16" W × ¾" D (nose) ..... $150

### TC-17 Cassette Player
Under-dash stereo cassette player; locking fast forward and rewind; auto shut-off; tape run indicator light; automatic cassette eject at end-of-tape; manual eject; straight-line slide volume, tone, and balance controls; wow and flutter 0.25%; frequency response 50-10,000 Hz; S/N −49 dB; 1¾" H × 6½" W × 7½" D..... $120

## *CAR SPEAKERS*

## ADS

### 2001A Bi-Amplified Speaker System
Two-way miniature bi-amplified speaker system primarily for use in mobile situations; 4-in woofer and 1-in acoustic-suspension soft-dome tweeter; crossover at 2700 Hz (acoustic), 1500 Hz (electronic, woofer), 3500 Hz (electronic, tweeter); woofer amplifier 60 W/ch continuous at 500 Hz with 0.3% THD, tweeter 20 W/ch continuous at 20,000 Hz with 0.3% THD; sensitivity 0.5 V rms into 43,000 ohms (low level), 4.0 V rms into 350,000 ohms (high level); S/N 85 dB ("A"); supply voltage 14.0 V dc negative ground. Features amplitude and frequency-sensitive opto-electronic feedback for woofers. Includes two 10-ft interface cables and two swivel brackets; black anodized finish with perforated aluminum grille; 4¼" H × 6⅘" W × 4⅗" D.... ..... $570

### 2002A Bi-Amplified Miniature System
Two-way, miniature, bi-amplified speaker system primarily for in-car use with the Nakamichi 250 cassette player pre-amplifier, which incorporates on/off switching (see Audio Tape Equipment Section for Nakamichi 250). Optional connector cords for other systems; requires 11-15.5 V dc (ac power supply optional); employs 4-in long excursion woofer and 1-in soft-dome tweeter; crossovers at 2500 Hz (acoustical), 1450 and 3250 Hz (electrical); woofer amplifier 25 W/ch continuous into 1.5 ohms, 0.1% THD at 100 Hz; tweeter amplifier 5 W/ch continuous into 4 ohms, 0.1% THD at 10,000 Hz; total stereo output power at 15.5 V supply, 2 × 40 W min. continuous at clipping; sensitivity 500 mV rms for rated output, system (pair) acoustical output 103-dB SPL at 1 m; frequency response 85-17,000 Hz ±3 dB; S/N 90 dB; input impedance 47k ohms; black anodized aluminum enclosure on swivel bracket (flush-mount bracket and carrying case optional); 4¼" H × 6⅘" W × 5⅗" D.. ..... $450
With Nakamichi 250..... $747
**2002 PS.** 120/220 V ac adaptor and cables... $140

## ADVENT

### EQ-1 Car Stereo Speaker System
Two dual-cone speaker drivers with integrated power amplifier, remote power on/off switch, wiring,

hardware, and grilles for rear-shelf placement; 12 V dc nominal power; consumes less than 4 amps at 13.5 V dc, both channels driven; two pairs of outputs provided for speaker outputs of radio/tape player or for audio outputs of component tape deck; 6" × 9" ..... $180

## AUDIOVOX

### TRYVOX-20 Auto Speaker System
Three-way, 6-in × 9-in auto speaker system with 20-oz ceramic magnet; has separate 3-in mid-range and 2-in tweeter; max. input 30 W/ch; frequency response 60-7,000 Hz; 8-ohm impedance "Sound-Flo"™ grilles; ..... $80

### TRYVOX-25 Auto Speaker System
Three-way auto speaker system with 5¼-in woofer, 1½-in mid-range, and 1-in horn tweeter; 20-oz ceramic magnet; frequency response 65-16,500 Hz; max. input 15 W; 8-ohm impedance; "Sound-Flo" ™ grilles ..... $70

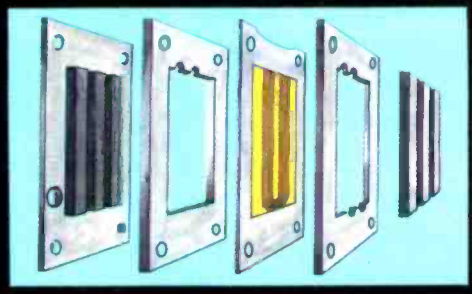
### COID-69/20 Auto Speaker System
Coaxial 6-in × 9-in auto speaker system with 20-oz magnet; has separate 3-in tweeter; max. input 20 W; frequency response 60-16,000 Hz; 8-ohm impedance; "Sound-Flo" metal mesh grilles.... $50

### COID-57/20 Auto Speaker System
Coaxial 5-in × 7-in auto speaker system with 20-oz ceramic magnet; has separate 2-in tweeter; max. input 20 W; frequency response 85-16,500 Hz; 8-ohm imp.; "Sound-Flo"™ grilles..... $46

### COMP-60
Two-way auto speaker system with two 6½-in woofers with 20-oz ferrite magnet woofers and two 3½-in mylar dome tweeters; frequency response 50-20,000 Hz; 8-ohm impedance; max. input 40

Most car speakers that are advertised as "true high-fidelity for your car" sound about as convincing as a used-car salesman's pitch. More often than not, the music comes out sounding as if it were recorded in a closet full of winter clothes. The truth of the matter is that if a manufacturer wants to make car loudspeakers sound as good as the ones you hear in your home, he has to make car loudspeakers *as good as the ones you hear in your home.* Which means no tricks. No short cuts. No nonsense. Which is why the new KLH Model 693 DMSC automotive stereo loudspeakers sound about as good as anything you've ever heard anywhere. Maybe better. Consider the components. We use Controlled Acoustic Compliance® Woofers with 30-ounce magnets for extended bass response. Hemispherical soft dome midrange drivers (found in only the most expensive speakers). And the most advanced driver found in *any* loudspeaker system – The Samarium Cobalt Tweeter (an ultra thin Kapton® diaphragm with "printed" voice coil suspended between the most powerful magnet material known to man – rare earth Samarium Cobalt!). The 693 DMSC can be driven nicely by the stereo electronics in most cars. (You won't believe the performance if you decide to add a quality power booster.) Now instead of hearing a muffled mess from the back of your car, you can look forward to hearing every nuance of the music – the timbre of the tympany, the bite of the brass, and the sweet, mellow sound of the strings. And when all is said and done, isn't *that* what high fidelity is all about?


**The Samarium Cobalt Tweeter**



For more information on KLH automotive loudspeakers (we also make two-way systems, additional three-way systems, and a totally new concept in automotive sound, The Headliner series), write to KLH Research & Development Corp., University Avenue., Westwood, Mass. 02090.

KLH
University Avenue
Westwood, Mass. 02090

# You've never seen this name on an automotive loudspeaker because there's never been an automotive loudspeaker worthy of this name.


# Until now.

CIRCLE NO. 45 ON READER SERVICE CARD

# NOW THERE ARE THREE TRIAXIALS® FROM THE PEOPLE WHO INVENTED THE 3-WAY SPEAKER.

**The 6" x 9" Jensen Triax®... the first ever.**

This is the speaker that revolutionized car stereo sound. It features a separate woofer for the low tones, a tweeter for the highs, and a midrange for the middle tones...just like the better home stereo speakers.

**The 5¼" Triax for front seat 3-way sound.**

Another Jensen innovation. The 5¼" woofer mounts low in the front door for distortion-free bass. While a separate unit mounts high on the door, delivering sharp, clear high and middle tones from an individual tweeter and midrange.

**A new 4" x 10" Triaxial for newer midsize cars.**

It's specially designed to bring 3-way high fidelity to the narrower rear decks of the new midsize cars.

**And a whole line of other quality speakers.**

Jensen also offers a full line of coaxial 2-way speakers, dual cone speakers and surface mount speakers. All with the quality and great sound Jensen is famous for. And with a size and price to fit every car and wallet.


® "Triax" and "Triaxial" are registered trademarks identifying the 3-way car stereo speakers of Jensen Sound Laboratories, Division of Pemcor, Inc.

**JENSEN**
**SOUND LABORATORIES**
Division of Pemcor, Inc.
Schiller Park, Illinois 60176

CIRCLE NO. 8 ON READER SERVICE CARD

W/ch; adaptor kit included for installation in OEM locations; "Sound-Flo" metal mesh grilles .... $125

## AVANTI

All speaker systems are complete with grilles, wire, hardware and installation instructions, use Liquglide magnetic fluid injected into voice coil to increase longevity, extend frequency range, increase acoustic output and power handling and have 4-8 ohm impedance; sold in pairs unless otherwise noted.

### 30-2654
6-in × 9-in dual cone speaker system with 3-in tweeter 1½-in aluminum voice coil; max. input 25

W peak; frequency response 40-18,000 Hz; 25 oz. magnet; flush-mount; 6" H × 9" W × 4" D..... $82

### 30-2656 3-D Sound
6-in × 9-in triaxial speaker system with 1-in tweeter, 3-in mid-range, and 1-in aluminum voice coil; max. input 30 W peak; frequency response 40-20,000 Hz; 20 oz. magnet; flush mount; 6" H × 9" W × 4" D ..... $88

### 30-3058
6-in × 9-in dual cone/dual voice coil speaker system; max. input 20 W peak; frequency response 50-16,000 Hz; 10 oz. magnet; flush mount; 6" H × 9" W × 4" D; sold singly ..... $19

### 30-2650
6-in × 9-in flush-mount dual cone speaker system with 1-in aluminum voice coil; max. input 20 W peak; frequency response 50-16,000 Hz; 10 oz. magnet; 6" H × 9" W × 4" D ..... $43

### 30-2651
6-in × 9-in dual cone speaker system with 1-in aluminum voice coil; max. input 25 W peak; frequency response 40-16,000 Hz; 20 oz. magnet; flush mount; 6" H × 9" W × 4" D ..... $49

### 30-2652
6-in × 9-in two-way speaker system with 3-in tweeter and 1-in aluminum voice coil; max. input 20 W peak; frequency response 50-18,700 Hz; 10 oz. magnet; flush mount; 6" H × 9" W × 4" D ..... $62

### 30-2653
6-in × 9-in two-way speaker system with 3-in tweeter and 1-in aluminum voice coil; max. input 25 W peak; frequency response 45-18,000 Hz; 20 oz. magnet; flush mount; 6" H × 9" W × 4" D ..... $69

### 30-2640
5¼-in dual cone speaker system with 1-in aluminum voice coil; max. input 16 W peak; frequency response 60-15,000 Hz; 5½ oz. magnet; flush mount; 5¼" H × 5¼" W × 4" D ..... $34

### 30-2641
5¼-in dual cone speaker system with 1-in aluminum voice coil; max. input 20 W peak; frequency response 55-15,000 Hz; 10 oz. magnet; flush mount; 5¼" H × 5¼" W × 4" D ..... $38

### 30-2642
5¼-in dual cone speaker system with 1-in aluminum voice coil; max. input 25 W peak; frequency response 50-16,000 Hz; 20 oz. magnet; flush mount; 5¼" H × 5¼" W × 4" D ..... $45

### 30-2644
5¼-in two-way speaker system with 1-in aluminum voice coil; max. input 25 W peak; frequency response 50-20,000 Hz; 20 oz. magnet; flush mount; 5¼" H × 5¼" W × 4" D ..... $70

## BLACKMAX SYSTEMS

### M5001 Car Speaker
Two-way speaker system with 5-in midrange/woofer and 1¾-in cone/dome tweeter; crossover at 3500 Hz; 8-ohm nominal impedance; frequency response 70-20,000 Hz; input range 8-50 W; mounts in side door panel, flush mount on rear deck, or free-standing; 9½" H × 6½" W × 2½" D..... $100 pr.

## CRAIG

### R780 Car Speaker
5¼-in super full range Trans-Rib acoustical driver; surface-mount enclosure in black molded, rib-braced plastic; frequency response 80-17,000 Hz ±6 dB; 50 W music power rating; 41-oz magnetic structure; 1.4-in diameter voice coil; 4-ohm impedance; 12-ft connecting leads; enclosure size 6⅞" H × 11⅝" W × 9" D; two per kit ..... $100

### R731 Flush-Mount Car Speaker
One-way flush-mount, full-range speaker system with 5¼-in Trans-Rib braced-cone acoustic driver; frequency response from 60-17,000 Hz ±6 dB; max. input 50 W/ch; 4-8 ohms impedance; includes grilles, connecting cords, and mounting hardware; 6⅛" round, 2" D ..... $85

### V461 Car Speaker
6 in × 9 in oval speaker; coaxially mounted 3-in tweeter; 25 W music power rating; 20-oz magnet; 8-ohm impedance; fits standard 6 in × 9 in cutouts; 6⅝" H × 9½" W × 7/16" D; two per kit ..... $75

### V460 Car Speaker
6 in × 9 in oval speaker, coaxially mounted 3-in tweeter; 25 W music power rating; 10-oz magnet; 8-ohm impedance; fits standard 6 in × 9 in cutouts; 6⅝" H × 9½" W × 7/16" D; two per kit ..... $65

### 9429 Car Speaker
6 in × 9 in oval speaker; flush mount; dual impedance 4 and 8 ohms; 30-oz magnet; 25 W music power rating; 1-in diameter voice coil; 16-ft detachable connecting leads; 6 in × 9 in oval cut-out size, 3 1/16 in deep; two per kit ..... $60

### 9430 Car Speaker
5¼-in surface-mount speaker with black naugahyde-covered wedge enslosure; 11-oz magnet; 4-ohm impedance, 25 W music power rating; 1-in diameter voice coil; 16½-ft detachable connecting leads; enclosure size 5⅛" H × 10¼" W × 8 13/16" D; two per kit ..... $60

### V440 Car Speaker
6 in × 9 in oval speaker; all-weather design; dual cone; 25 W music power rating; 10-oz magnet; 8-ohm impedance; fits standard 6 in × 9 in cutouts; 6⅝" H × 9½" W × 7/16" D; two per kit ..... $50

### 9425 Car Speaker
6½-in surface-mount enclosed speaker; 10-oz magnet; 25 W musc power rating; 8-ohm impedance; 13/16-in diameter voice coil; 16½-ft detachable connecting leads; enclosure size 5⅛" H × 9⅜" W × 9½" D; two per kit ..... $45

### 9420 Car Speaker
5¼-in square flush-mount speaker with black grille; 11-oz magnet; 25 W music power rating; 8-ohm impedance; 1-in diameter voice coil; 16½-ft detachable connecting leads; 5-in diameter cut-out size, 2 in deep; two per kit ..... $40

### 9422 Car Speaker
6 in × 9 in oval flush-mount speaker; 11.6-oz magnet; 25 W music power rating; 8-ohm impedance; 1-in diameter voice coil; 16½-ft detachable connecting leads; 6 in × 9 in oval cut-out size, 3 1/16 in deep; two per kit ..... $40

### V480 Car Speaker
4-in round speaker; 25 W music power rating; moisture-resistant cones; 8-oz magnet; 8-ohm impedance; 4⅜" H × 5 9/16" W × ½" D; two per kit ..... $35

### 9428 Car Speaker
5¼ in convertible-mount speaker, black wedgebox or black rectangular grille; 2.9-oz magnet; 10 W music power rating; 4-ohm impedance; ¾-in diameter voice coil; 16-ft detachable connecting leads; 4 15/16-in diameter cut-out size, 1⅜ in deep; enclosure size 4" H × 8" W × 7⅜" D ; two per kit ..... $30

## EPICURE

### LS-70 Car Speaker
Two-way 6" × 9" auto speaker system with 6-in woofer and 1-in air-spring tweeter in side-by-side pattern; crossover at 1800 Hz; 8-ohm nominal impedance; frequency response 70-20,000 Hz; disperses sound 120 degrees max. at 15,000 Hz −3 dB; door panel, rear deck, van/wagon wall, and 5-in cutout installation; perforated metal grille. $75

## JANDY INTERNATIONAL

### Car-Fi ISK-30 Isophon
Three-way car speaker system with two 6-in woofers, two 4-in midrange drivers, and two 3½-in dome tweeters; has two crossovers and decorative grilles . ..... $200 pr.

### Car-Fi ISK-20
Two-way speaker system with two 6-in woofers and two 3½-in dome tweeters; has two crossovers and decorative grilles..... $145

## JENSEN

### J1001 Car Speaker System
Three-part, three-way speaker system with 6-in × 9-in woofer (3⅛-in mounting depth), 3½-in midrange (1½-in mounting depth), and 2-in tweeter (1 1/16-in mounting depth); crossovers at 1000 and 4000 Hz; frequency response for total system 35-20,000 Hz; handles 35 W power; includes midrange and tweeter controls..... $190

### Three-Way Triaxial Car Speaker Systems

**C9945.** 6-in × 9-in with 4½-in mounting depth; frequency response 40-20,000 Hz; handles 30 W power ..... $120
**C9991.** 4-in × 10-in with 3 13/32-in mounting depth; frequency response 45-20,000 Hz; handles 30 W.. ..... $120
**C9959.** 5¼-in with 2 15/16-in mounting depth; frequency response 60-20,000 Hz; handles 30 W..... ..... $118

### Enclosed Surface-Mount Car Speaker Systems
**C9927.** Coaxial 5¼-in; frequency response 50-15,000 Hz; handles 25 W ..... $97
**C9926.** Dual-cone 5¼-in; frequency response 60-12,000 Hz; handles 25 W ..... $64
**C9809.** Dynamount 5¼-in; frequency response 60-12,000 Hz; handles 25 W ..... $62

### Two-Way Coaxial Car Speaker System
**C9740.** 6-in × 9-in with 3⅞-in mounting depth; frequency response 40-18,000 Hz; handles 25 W.. ..... $80
**C9994.** 4-in × 10-in with 3 13/32-in mounting depth; frequency response 45-18,000 Hz; handles 25 W.. ..... $80

# 9 CAR SPEAKERS

**C9943.** 5-in × 7-in with 3⅜-in mounting depth; frequency response 50-15,000 Hz; handles 25 W.. ..... $79
**C9852.** 5¼-in with 2⅜-in mounting depth; frequency response 60-15,000 Hz; handles 25 W ..... $78
**C9853.** 5¼-in with 2¼-in mounting depth; frequency response 60-15,000 Hz; handles 25 W ..... $67
**C9851.** 4-in with 1¾-in mounting depth; frequency response 70-15,000 Hz; handles 20 W ..... $66

### Two-way Dual-Cone Car Speaker Systems

**C9729.** 6-in × 9-in with 3⅜-in mounting depth; frequency response 40-14,000 Hz; handles 25 W.. ..... $54
**C9997.** 4-in × 10-in with 3³⁄₃₂-in mounting depth; frequency response 46-14,000 Hz; handles 25 W.. ..... $54
**C9862.** 5¼-in with 2⅜-in mounting depth; frequency response 60-12,000 Hz; handles 25 W ..... $52
**C9728.** 6-in × 9-in with 3¼-in mounting depth; frequency response 40-12,000 Hz; handles 25 W.. ..... $47
**C9863.** 5¼-in with 2¼-in mounting depth; frequency response 60-12,000 Hz; handles 25 W ..... $45
**C9860.** 4-in with 1¾-in mounting depth; frequency response 70-12,000 Hz; handles 20 W ..... $44

## KLH

### 693DMSC Car Speaker System

Three-way, wide-dispersion, 6-in × 9-in auto speaker system with Controlled Acoustic Compliance woofers with printed Kapton diaphragms and 30-oz samarium cobalt magnets, hemispherical soft-dome mid-range and samarium cobalt tweeters; frequency response 40-30,000 Hz, 2¾-in depth ..... $215


### 692DT Car Speaker System

Two-way, wide-dispersion, 6-in × 9-in auto speaker system with Controlled Acoustic Compliance woofers with 30 oz magnets; hemispherical soft dome tweeter; frequency response 40-20,000 Hz; 2¾-in depth ..... $145

### 692CT Car Speaker System

Two-way, wide dispersion, 6-in × 9-in auto speaker system with Controlled Acoustic Compliance woofers with 30 oz magnets and 1⅜-in high-efficiency cone tweeter; frequency response 40-18,000 Hz; 2¾-in depth ..... $120

### Headliner Car Speakers

Tweeter/midrange that uses solid-state barium titanate crystals instead of voice coil magnets; each speaker is 4½" H × 6" W × ½" D; mounts in front of car at head level.
**Headliner III.** For installation in an already existing system; includes two headliners with variable tone control adjustable in both channels ..... $120
**Headliner V.** Includes two headliners and two 6-in × 9-in Controlled Acoustic Compliance woofers with 20 oz magnets; has variable tone control adjustable in both channels ..... $170

## KRIKET

### 8974 Domaxial Car Speaker

6-in × 9-in woofer with 20-oz ceramic magnet and 1¼-in aluminum voice coil, 1-in soft dome tweeter with 5-oz ceramic magnet and 1-in aluminum voice coil; input 50 W continuous; frequency response 40-20,000 Hz; 4.8 ohm impedance; efficiency 95 dB/W/m; kit includes two speakers, two grilles, two 15-ft cables with quick-connect terminals, and hardware ..... $110

### Klassic Series Car Speakers

Each kit contains two speakers, two grilles, two 15-ft cables with quick-connect terminals, mounting instructions, and hardware; incorporate 10-oz ceramic magnets and 1-in voice coils; 8-ohm impedance.
**2821.** 8-in × 3-in pincushion dual-cone design, 5-oz ceramic magnet and ¾-in voice coil; input 18 W continuous; frequency response 85-15,000 Hz.. ..... $15
**2831.** 8-in x 3-in round dual cone design; input 30 W continuous; frequency response 50-15,000 Hz.. ..... $19
**2031.** 4-in × 10-in dual cone design, input 25 W continuous; frequency response 55-16,000 Hz ..... $18
**2032.** 4-in × 10-in coaxial design; input 25 W continuous; frequency response 55-18,000 Hz..... $25
**2731.** 5-in × 7-in dual cone design; input 25 W continuous; frequency response 60-16,000 Hz ..... $18
**2732.** 5-in × 7-in coaxial design; input 25 W continuous; frequency response 60-18,000 Hz.... $25
**8231.** 5¼-in dual cone design; input 12 W continuous; frequency response 55-15,000 Hz ..... $45
**8232.** 5¼-in coaxial design; input 12 W continuous; frequency response 15-17,500 Hz..... $65
**8531.** 5-in dual cone design; input 10 W continuous; frequency response 65-15,000 Hz..... $45
**8931.** 6-in × 9-in dual cone design; input 18 W continuous; frequency response 45-15,000 Hz ..... $50
**8932.** 6-in × 9-in coaxial design; input 18 W continuous; frequency response 45-18,000 Hz..... $70
**8971.** 6-in × 9-in dual cone design, 20-oz ceramic magnet, 1¼-in voice coil; input 30 W continuous; frequency response 40-15,000 Hz..... $60
**8972.** 6-in × 9-in coaxial design, 20-oz ceramic magnet, 1¼-in ceramic voice coil; input 30 W continuous; frequency response 40-18,000 Hz..... $80

### Series 6000 Car Speakers

Compatible with 4 or 8 ohm systems; incorporate 10-oz ceramic magnets and 1-in high temperature voice coils; convertible mounting capability; supplied with 18.5-ft cable with quick-connect terminals, mounting instructions, and hardware.
**6049.** 5¼-in dual cone speaker system; input 25 W continuous; frequency response 60-15,000 Hz ±5 dB; 90-dB SPL/W/m (400 Hz)..... $35
**6059.** 5¼-in coaxial speaker system; input 25 W continuous; frequency response 60-20,000 Hz ±5 dB; 91-dB SPL/W/m (400 Hz)..... $40
**6069.** 6-in × 9-in dual cone speaker system; input 36 W continuous; frequency response 50-15,000 Hz ±5 dB; 93-dB SPL/W/m (400 Hz) ..... $45
**6079.** 6-in × 9-in coaxial speaker system; input 36 W continuous; frequency response 50-18,000 Hz ±5 dB; 93-dB SPL/W/m (400 Hz)..... $50
**6099.** Two-way system; independently-mounted 1-in soft dome tweeter with 5-oz ceramic magnet and 1-in aluminum voice coil and 5¼-in woofer with 10-oz ceramic magnet and 1-in aluminum voice coil; input 40 W continuous; frequency response 50-20,000 Hz ±5 dB; efficiency 87 dB/W/m ..... $80

## LAFAYETTE

### 32-00508W Car Speakers

Two-way coaxial speaker system with 6-in × 9-in oval speaker and 3-in tweeters with 30 oz magnet; flush mount; power handling capacity 50 W continuous, 100 watts peak; 8-ohm impedance; kit includes heat resistant modled nylon grilles; mounting hardware; wire; two per kit. ..... $60

### 17-64018 Car Speakers

Three-way speaker system with 6-in × 9-in woofer, 3-in midrange, and 2-in tweeter; 20 oz magnet; max input 30 W; frequency response 50-20,000 Hz; two per kit ..... $50

### 32-57201V Car Speakers

Two-way speaker system with built in 6-in × 9-in woofer and 3-in tweeter; max input 50 W; 20 oz magnet; 4-8 ohm impedance; two per kit ..... $40

### 32-57177V Car Speakers

Two-way speaker system with 5¼-in woofer and 2-in tweeter; max. input 50 W; 25 W continuous music power; 4-8 ohm impedance; kit includes grilles, 16 ft wire, hardware and instruction; two per kit ..... $30

### 17-64539 Car Speakers

Two flush/hand-on speaker system with 5-in woofer and 2-in tweeter; input 25 W continuous, 50 W peak; 4-8 ohm impedance; can be mounted flush or surface with hardware and wire; two per kit..... $35

### 32-57235 Car Speakers

5-in flush/surface mount air suspension system with dual cone speaker and 10.2 oz magnet; input 20 W continuous, 40 W peak; 4-8 ohm impedance; use as hand ons or flush mount in 5" cutout; w/hardware and wire; two per kit ..... $22

### 17-64505 Car Speakers

6-in × 9-in dual cone speaker system with 10-oz ceramic magnets; 4-8 ohm; input 20 Watts continuous power, 40 W peak; 16 ft stereo wire; high impact ABS grilles; mounting hardware; two per kit ..... $22

## MARANTZ

### SS-569 Car Speaker System

Flush-mount, five-way speaker system with 6-in × 9-in woofer, 4-in midrange, 1½-in extended mid-range, 1½-in tweeter, and ¾-in super tweeter; three separate capacitive high-pass crossovers; frequency response 40-20,000 Hz; 8-ohm impedance; efficiency 92-dB SPL/W/m; max. input 30 W music; mounting gasket; wire-mesh grilles; includes speaker cables ..... $100

### SS-469 Car Speaker System

Flush-mount, four-way speaker system with 6-in × 9-in woofer, 2½-in midrange, 1½-in tweeter, and ¾-in super tweeter; two separate capacitive high-pass crossovers; frequency response 40-18,000 Hz; 8-ohm impedance; efficiency 92-dB SPL/W/m; max. input 30 W music; mounting gasket; wire-mesh grilles; with speaker cables ..... $90
**SS-3469.** Similar to SS-469 except features front-insertion design for flexible installation..... $100

### SS-825 Car Speaker System

Door-mount, three-way speaker system with 6¼-in woofer, 1¾-in midrange, and 1-in horn super tweeter; two capacitive high-pass crossovers; frequency response 50-20,000 Hz; 8-ohm impedance; efficiency 89-dB SPL/W/m; max. music power 20 W; wire-mesh grilles; with speaker cables..... $80

### SS-3410 Car Speaker System

Two-way speaker system with 4-in × 10-in woofer and ¾-in super tweeter; capacitive high-pass crossover; frequency response 50-20,000 Hz; 4-ohm impedance; efficiency 90-dB SPL/W/m; max. mu-

sic power 20 W; wire-mesh grilles; with speaker cables ..... $70

**SS-269 Car Speaker System**
Flush-mount, two-way speaker system with 6-in × 9-in woofer and 3-in tweeter, capacitive high-pass crossover; frequency response 40-15,000 Hz; 4-ohm impedance; efficiency 91-dB SPL/W/m; max. input 30 W music; mounting gasket; wire-mesh grilles; with speaker cables ..... $60
**SS-3269.** Similar to SS-260 except features front-insertion design ..... $70

**SS-725 Car Speaker System**
Door-mount two-way speaker system with 6¼-in woofer and 1½-in tweeter; capacitive high-pass crossover; frequency response 50-16,000 Hz; 4-ohm impedance; efficiency 89-dB SPL/W/m; max. music power 20 W; wire-mesh grilles; with speaker cables ..... $60

**SS-169 Car Speaker System**
Flush-mount dual-cone speaker system with 6-in × 9-in woofer and cone; mechanical crossover; frequency response 40-13,000 Hz; 4-ohm impedance; efficiency 90-dB SPL/W/m; max. input 30 W music; mounting gasket; wire-mesh grilles; with speaker cables ..... $50

**SS-140 Car Speaker System**
Four-inch speakers designed for small or shallow installation; frequency response 60-14,000 Hz; 4-ohm impedance; efficiency 90-dB SPL/W/m; max. music power 10 W; wire-mesh grilles; speaker cables ..... $40

**SS-625 Car Speaker System**
Door-mount dual-cone speaker system with 6¼-in woofer and cone; designed for tight installations; frequency response 50-13,000 Hz; 8-ohm impedance; efficiency 89-dB SPL/W/m; max. music power 12 W; wire-mesh grilles; with speaker cables ..... $30

## MATRECS

All speaker systems are supplied with two speakers, grilles, wire and hardware; all speakers are 4-8 ohm impedance with 1-in dia. voice coils.

**MA-0069-20TP**
6-in × 9-in TRI-POWER speaker system with 3-in mid-range and 1-in tweeter; max. input 30 W peak; frequency response 40-20,000 Hz ..... $68

**MA-0069-25CP**
6-in × 9-in BI-POWER speaker system with 3-in tweeter; 1½-in dia. voice coil; max. input 35 W peak; frequency response 40-18,000 Hz ..... $64

**MA-0525-20CP**
5¼-in BI-POWER speaker system with 1¾-in piezo tweeter; max. input 25 W peak; frequency response 50-20,000 Hz ..... $53

**MA-0069-20CP**
6-in × 9-in BI-POWER speaker system with 3-in tweeter; max. input 25 W peak; frequency response 45-18,000 Hz ..... $52

**MA-0069-10CP**
6-in × 9-in BI-POWER speaker system with 3-in tweeter; max. input 20 W peak; frequency response 50-18,000 Hz ..... $47

**MA-0069-020P**
6-in × 9-in dual cone speaker system; max. input 25 W peak; frequency response 40-16,000 Hz ..... $37

**MA-0525-020P**
5¼-in dual cone speaker system; max. input 25 W peak; frequency response 50-16,000 Hz ..... $35

**MA-0069-010P**
6-in × 9-in dual cone speaker system; max. input 20 W peak; frequency response 50-16,000 Hz ..... $31

**MA-0525-010P**
5¼-in dual cone speaker system; max. input 20 W peak; frequency response 55-15,000 Hz ..... $30

**MA-0525-005P**
5¼-in dual cone speaker system; max. input 16 W peak; frequency response 60-15,000 Hz ..... $26

**MA-0069-10DV**
6-in × 9-in dual voice speaker system; max. input 20 W peak; frequency response 50-14,000 Hz; single speaker only ..... $14

**MA-0410-0010**
4-in × 10-in dual cone speaker system: max. input 15 W peak; frequency response 60-14,000 Hz; single speaker only ..... $12

## MESA

**Mini-Mesa 30 Speaker System**
See Section 10, Speakers, under "Mesa" ..... $122

**Mini-Mesa 15 Speaker System**
See Section 10, Speakers, under "Mesa" .$120 pr.

## MOTOROLA

**Pow-R-Handlers Car Speakers**
Professional series car speakers; all models feature 1-in voice coils, rolled cloth edges, one-piece magnets, and ABS plastic mounting bases. Two per kit.
**M4-8C.** Tw-way flush mount speaker; 8 oz ceramic magnet; 15 W input; 1¾-in deep ..... $50
**M5-10C.** Two coaxial 5¼-in flush mount speakers; 10 oz ceramic magnets; formed cloth grilles; 2-in deep; 20 W input ..... $84
**M5-20C.** Two coaxial 5¼-in flush mount speakers; 20 oz magnets; formed cloth grilles; 2-in tweeters 25 W input ..... $86
**M69-20C.** Two coaxial 6-in × 9-in speakers for flush mounting on rear decks; integral 2-in tweeters; 20 oz ceramic magnets; formed cloth grilles; top or bottom loading installation; 25 W power input ..... $100
**M69-20T.** Two three-way 6-in × 9-in speakers for flush mounting on rear decks; integral 2½-in mid-range and 2-in tweeters; 20 oz ceramic magnets; formed cloth grilles with wedge type extender; top or bottom loading installation; 25 W power input ..... $130

**Pow-R-Handlers II Speaker Systems**
All models feature 1-in voice coils; one-piece magnets; ABS plastic mounting bases; polycarbonate plastic grilles in silver and black; sold in pairs.
**D5-10C.** 5¼-in coaxial flush-mount speaker with 10 oz. ceramic magnets; max. input 20 W; 2-in D .. ..... $70
**D5-20C.** 5¼-in coaxial design; max. input 25 W; 20 oz. magnet; flush-mount on rear decks ..... $78
**D69-20C.** 6-in × 9-in coaxial design; max. input 25 W; 20 oz. ceramic magnet; flush mount on rear decks; suitable for top or bottom loading ..... $80

**D69-20T**
6-in × 9-in three-way speaker with integral 2½-in mid-range and 2-in tweeters; flush mounting on rear decks; max. input 25 W; 20 oz. ceramic magnet; top or bottom loading ..... $120

## PANASONIC

**EAB-800 Car Speaker**
Two-way surface-mount speaker system with side-by-side 5¼-in woofer and 3½-in tweeter; 4-ohm impedance; max. input 30 W; high frequency adjustment; electrical crossover networks and attenuator; removable mesh grille ..... $150 pr.

**EAB-754 Car Speaker**
5¼-in coaxial flush-mount speaker with 20-oz magnet and separate woofer and tweeter and aluminum voice coil; 4-ohm impedance; max. input 20 W; includes wires ..... $65 pr.
**EAB-753.** Similar to EAB-754 except has 10-oz magnet ..... $55 pr.
**EAB-752.** Similar to EAB-754 except 6-in × 9-in ... ..... $38 pr.

**EAB-774 Car Speaker**
5¼-in dual-cone flush-mount speaker with mechanical equalizer and aluminum voice coil 20-oz magnet; 4-ohm impedance; max. input 20 W; wires included ..... $50 pr.
**EAB-773.** Similar to EAB-774 except 10-oz magnet ..... $40 pr.
**EAB-772.** Similar to EAB-774 except 6-in × 9-in ... ..... $30
**EAB-771.** Similar to EAB-774 except has 10-oz magnet and 6-in × 9-in ..... $20

**EAB-951 Car Speaker**
6-in × 9-in flush-mount speaker system with 5¼-in woofer and 1-in tweeter; 8-ohm impedance; with cloth edge; wires included ..... $20

**EAB-755 Car Speaker**
6-in high-compliance flush-mount speaker system; 8-ohm impedance; max. input 20 W; padded grilles with cloth edge; wires included ..... $30 pr.
**EAB-751.** Similar to EAB-755 minus cloth edge ..... $20 pr.

**EAB-303 Car Speaker**
5-in flush-mount speaker systems with 4- or 8-ohm impedance; wires not included ..... $20 pr.

**EAB-151 Car Speaker**
3-in × 5-in surface-mount speaker system; 8-ohm impedance; wires included ..... $20 pr.

**EAB-551 A Car Speaker**
5-in surface-mount speaker system with 8-ohm impedance; wires included ..... $20 pr.

## PIONEER

**Surface and Rear-Deck Speakers**
**TS-X9.** Two-way, surface-mount speakers; 3⅜-in bass speaker; 1-in treble dome radiator; 50-22,000

Hz; 4-ohm impedance; 40 W power; die-cast aluminum enclosure ..... $230
**TS-X6.** Two-way surface-mount speakers; 4-in bass speaker; 4-in passive radiator; 2⅜-in treble driver; 80-20,000 Hz; 4-ohm impedance; 20 W power; black molded enclosure with chrome handles ..... $120
**TS-35.** Door and surface mount speakers; 5¼-in single cone; 80-13,000 Hz; 40 W power; 4-ohm impedance; black and chrome finish ..... $45
**TS-22.** Two-way surface-mount speakers; coaxial design; 4-in high-compliance woofer; 2⅜-in tweeter; tweeter port; 100-15,000 Hz; 8 W power; 4-ohm impedance; black and chrome finish ..... $45
**TS-5.** Door and surface mount speakers; 5¼-in single cone; 2.9 oz magnet; 70-10,000 Hz; 8 W power; 4-ohm impedance; black and chrome finish ..... $25

**Door-Mount Speakers**
**TS-167.** 6½-in two-way coaxial speakers; 10-oz magnet; 2-in tweeter; tweeter horn built into grille; high-compliance woofer; 30-20,000 Hz; 4-ohm impedance; 20 W power; wire mesh grille ..... $75
**TS-165.** 6½-in coaxial; 20-oz magnet; two-way speaker; 2-in tweeter; high-compliance woofer; 30-16,000 Hz 4-ohm impedance; 20 W power; black/chrome grilles ..... $65
**TS-164.** 6½-in coaxial two-way speakers; 10-oz magnet; 40-16,000 Hz; 2-in tweeter; high compliance woofer; 4-ohm impedance; 20 W power; black/chrome grilles ..... $55
**TS-106.** 4-in single cone; 7-oz magnet; 50-16,000 Hz; 4-ohm impedance; 20 W power; black/mesh aluminum finish ..... $43
**TS-161.** 6½-in dual cone speaker; matches door panel; 10-oz magnet; 40-16,000 Hz; 4-ohm impedance; 20 W power ..... $38

# 9 CAR SPEAKERS

**TS-160.** 6½-in dual cone speakers; 10-oz magnet; 40-16,000 Hz; 4-ohm impedance; 20 W power..... $36
**TS-120.** 5½-in single cone speaker; 1-in mounting depth; 80-16,000 Hz; 4-ohm impedance; 8 W power; gray metal and chrome grille..... $36
**TS-100.** 4-in single cone; 60-14,000 Hz; 7-oz magnet; 4-ohm impedance; 8 W power; black with chrome finish..... $27
**P-16L.** 6½-in heavy duty speakers; single cone; 50-10,000 Hz; 4-ohm impedance; 8 W power; black leatherette finish..... $25
**P-10L.** 4-in single cone speaker; 3.7-oz magnet; 100-10,000 Hz; 4-ohm impedance; 8 W power; black leatherette finish..... $21

### 6" × 9" Car Speakers

**TS-694.** Coaxial two-way speaker; 20-oz magnet; 2⅜-in tweeter; high-compliance woofer; 35-18,000 Hz; metallic center cap; 4-ohm impedance; 20 W power; black crinkle finish..... $42
**TS-693.** Coaxial speaker; 10-oz magnet; high-compliance woofer; 40-18,000 Hz; metallic center cap; 4-ohm impedance; 20 W power; black crinkle finish..... $36
**TS-692.** High-compliance dual-cone speaker; 20-oz magnet; 35-16,000 Hz; metallic center cap; 4-ohm impedance; 20 W power; black crinkle finish... $31
**TS-691.** High-compliance dual cone speaker; 10-oz magnet; 40-16,000 Hz; metallic center cap; 4-ohm impedance; 20 W power; black crinkle finish... $25
**TS-690.** Dual cone speaker; 50-16,000 Hz; 4-ohm impedance; 10 W power; black crinkle finish... $11

### 5" × 7" Car Speakers (sold singly)

**TS-571.** Two-way speaker with coaxial tweeter, 10-oz magnet, and high compliance woofer; metallic center cap; 4-ohm impedance; 20 W power; gray metal grille..... $31
**TS-570.** Dual cone speaker with high compliance woofer and 10-oz magnet; metallic center cap; 4-ohm impedance; 20 W power; gray metal grille... ..... $22

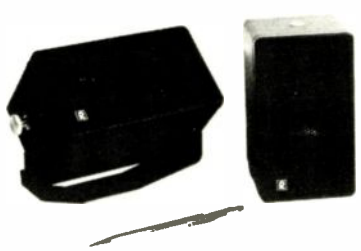
### TS-M2 Car Tweeter

Tweeter with enclosure; adapts to any car system; adjustable level controls; dual mounting system; 20 W power; black matte finish..... $51

## ROYAL SOUND

### RS-6050 Car Speaker System

Compact three-way car speaker system with two 66-mm woofers and piezoelectric tweeter; max. output 50 W; frequency response 50-30,000 Hz; impedance 4-8 ohms; includes quick-disconnect swivel bracket for rear deck or under-dash mounting; 155 mm H × 80 mm W × 80 mm D...$300 pr.



### RS-6060 Car Speaker System

Compact two-way speaker system with 4-in high-compliance dynamic woofer and soft-dome tweeter; crossover at 2500 Hz; max. output 60 W; frequency response 40-20,000 Hz; impedance 4-8 ohms; quick-disconnect swivel bracket for rear-deck mount; aluminum housing with black satin finish; 181 mm H × 114 mm W × 116 mm D.....$240 pr.

## SANYO

### SP795 Car Speaker System

Two-way speaker system with 4-in woofer and 3-in hard-dome tweeter; designed for Sanyo biamp system with 6000 Hz rolloff; 4- or 8-ohm impedance; max. input 30 W rms; frequency response 100-20,000 Hz..... $100

### SP777 Car Speaker

6-in × 9-in woofer with hard-dome midrange and diecast aluminum horn tweeter; for conventional or biamp system; 4- or 8-ohm impedance; max. input 25 W continuous power; frequency response 60-20,000 Hz..... $100

### SP780 Car Speaker System

Two-way, four-speaker system with 6-in × 9-in woofer and 3½-in tweeter; designed for Sanyo biamp system crossing over at 2000 Hz; 4- or 8-ohm impedance; 4-in × 6-in adapters included; max. input 30 W continuous power frequency response 60-20,000 Hz..... $85

### SP770 Car Speaker

Three-way speaker system with 6-in × 9-in woofer, 3¼-in midrange, and 2-in tweeter; for conventional or biamp systems; 4- or 8-ohm impedance; max. input 20 W continuous power; frequency response 45-20,000 Hz..... $80

### SP768 Car Speaker

6-in × 9-in woofer with coaxial-mounted separate 3¼-in tweeter; for conventional or biamp systems; 4- or 8-ohm impedance; max. input 25 W continuous power; frequency response 60-20,000 Hz..... $65

### SP757 Car Speaker

5-in × 7-in woofer with separate coaxial-mounted 2¼-in tweeter; for conventional or biamp systems; 4- or 8-ohm impedance; max. input 18 W continuous power; frequency response 70-15,000 Hz..... $50

### SP730 Car Speaker

Coaxial mounted 6½-in woofer and 2¼-in woofer and 2¼-in tweeter; 4- or 8-ohm impedance; max. input 21 W continuous power; frequency response 80-15,000 Hz..... $40

### SP720 Car Speaker

Coaxially-mounted 4-in woofer and 1-in tweeter; frequency response 80-12,000 Hz; 4- or 8-ohm impedance; max. input 14 W continuous; door-mount..... $35

## SPARKOMATIC

### LC-100 Amplified Car Speaker System

Full-range amplifier, two 6-in × 9-in air suspension woofers with coaxial high-frequency tweeters; separate slide controls for bass and treble; standard boost and tone boost switches; power meter; 18 W/channel at 10% THD into 3 ohms; channel separation more than 45 dB; amplifier frequency response 2-20,000 Hz −3 dB; input impedance 27 ohms; woofers have 10-oz magnets; speaker frequency response 45-20,000 Hz ±3 dB; includes two ABS grilles, wiring harness, and leads..... $84

### SK-700V Speakers for Vans & RV's

Stereo speakers for vans and recreational vehicles; 6-in air-suspension woofers with 10-oz magnets; 1-in voice coils; 50 W max.; 2¼-in tweeters with aluminum dust covers and Alnico magnets; 4-8 ohm impedance; total mounting versatility..... $84

### SK-6900 Car Speakers

Three-speaker car stereo set designed to fit 6-in × 9-in cutouts for rear deck installation; 5¼-in foam edge air suspension woofers with 20-oz ceramic magnets; 3-in foam edge air suspension midrange speakers with 3-oz ceramic magnets; 1-in × 2.5-in dome-horn loaded tweeters; 4-8 ohm impedance; max. input 50 W..... $80

### Rear-Deck Car Speakers

Weather resitant speakers with ABS grilles; 4-8 ohm impedance; hardware and stereo wire harness included; two per kit.
**SK-6922T.** Three-way speaker system; 6-in × 9-in air suspension woofers with 20-oz ceramic magnets; direct radiating midrange speakers; dome-horn loaded tweeters; max. input 50 W..... $63
**SK-6920C.** Coaxial speaker system; 6-in × 9-in air suspension woofers with 20-oz ceramic magnets; built-in coaxial 3-in tweeters..... $45
**SK-690.** 6-in × 9-in; air suspension tweeters; 10-oz ceramic magnets..... $25

### Hang-On Car Speakers

Stereo car speakers include ABS housings and hardware; 4 and 8 ohm impedance, two per kit.
**SK-522T.** Three-way; 5-in air suspension woofers with 20-oz ceramic magnets; direct radiating midrange; dome-horn loaded tweeters; in-door or hang-on mount; max. input 50 W..... $55
**SK-520C.** Coaxial; 5-in foam edge air suspension woofers with 20-oz ceramic magnets and built-in 2-in coaxial tweeters..... $23
**SK-250.** Dual speaker system; 3-in × 5½-in woofers with 3-oz ceramic magnets; 2¾-in tweeters; coupling capacitors..... $20
**SK-203.** 3-in × 5½-in; 3-oz ceramic magnets.. $12
**SK-313.** 3-in air-suspension; 3-oz ceramic magnets; specially designed for small and intermediate size cars..... $12
**SK-303.** Air suspension; 3-oz magnets; specially designed for small and intermediate cars..... $12

### SK-622T Car Speakers

In-door threeway speaker system with 5¼-in foam-edge air-suspension woofers with 20-oz magnets, direct-radiation midrange drivers, and dome horn-loaded tweeters; max. input 50 W; includes 6¼-in press-on ABS grilles..... $51

## TRUSONIC

All speakers compatible with 4- or 8-ohm units; waterproof cones; chrome cast baskets; complete kit includes two speakers, grilles, wire and hardware.

### TK69RC-FR2C

Three-way 6-in × 9-in speaker with 3½-in midrange, 3-in tweeter; and 40 oz. magnet; 120-Watt power handling; frequency response 25-25,000 Hz..... $150
**TK69PC-FR2C.** Same as TK 69RC-FR2C except has 20 oz. magnet, handles 80 Watt and frequency response 30-25,000 Hz..... $130

### TK69RC-FRC

Two-way 6-in × 9-in speaker with 3-in tweeter and a 40 oz. magnet; 120-Watt power handling..... $110
**TK69PC-FRC.** Same as TK69RC-FRC except has 20 oz. magnet, 80 W power handling..... $90

### TK6RC-FRC

Two-way 6-in round speaker with 3-in tweeter and 40 oz. magnet; 120-W power handling..... $110
**TK6PC-FRC.** Same as TK6RC-FRC except has 20 oz. magnet, 80-W power handling..... $90

### TK57PC-FRC

Two-way 5-in × 7-in speaker with 3-in tweeter and 20 oz magnet; 80-W power handling..... $90

## ULTRALINEAR

### UD-15 CARponent Speaker System

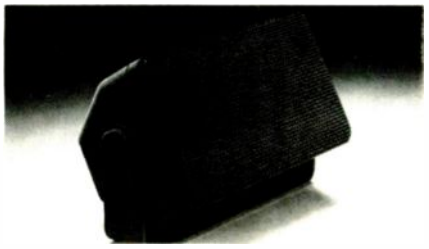
Two-way flush/rear deck surface-mount air-suspension speaker system with 4½-in midrange/woofer and 1-in soft dome tweeter; crossover at 2500 Hz;

nominal impedance 4-8 ohms rated; frequency response 55-22,000 Hz; input range 3-50 W continuous; charcoal steel escutcheon front panel with handles and surface mount cradle; tweeter assemblies removable for front-door-panel mount; 4½" H × 12" W × 6" D ..... $120

**M-15 CARponent Speaker System**
Two-way air-suspension speaker system with 4½-in midrange/woofer and 1-in soft dome tweeter; crossover at 2500 hz; nominal impedance 4-8 ohms rated; frequency response 53-22,000 Hz; input range 3-50 W continuous; ebony matte or walnut laminated finish; can be used in home or moving vehicle; mounting bracket included; 7¾" H × 5¼" W × 4⅜" D ..... $100

## VISONIK

**Car Speakers**
See Section 10, Speakers, under "Visonik."
**0-502M0.** ..... $122
**0-5000M0.** ..... $125



**D-302M0** ..... $92

# 9 CAR ACCESSORIES

## AUDIOVOX

**AMP-1000A Stereo Power Amp**
Amplifier mounts remotely; has control head with slide equalizer controls for four frequency ranges; power output 22 W/ch; accepts 4 or 8 ohm speakers; 12 V d.c. ..... $140

## CRAIG

**V505 Car Stereo Power Amplifier**
24 W/ch min. continuous into 4 ohms (both channels driven; 8 ohms with four speakers) from 50-15,000 Hz with 1.0% THD. Features four-band modular graphic equalizer, power-range pushbutton, and OCL/OTL dc-coupled amplifier circuitry. Specifications: IHF power bandwidth from 20-20,000 Hz (amp), equalized bandwidths ±10 dB from 30-125 Hz (low bass), 125-1000 Hz (bass), 1000-6500 Hz (treble), and 6500-20,000 Hz (hi treble); equalized center frequencies at 80, 400, 2500, and 10,000 Hz; 11-dB gain; S/N 60 dB; crosstalk 70 dB; damping factor 5. Includes adapter cable and underdash mounting hardware. Amplifier 2¼" H × 6½" W × 5½" D; equalizer 1⅜" H × 7" W × 4¾" D ..... $140

**V502 Car Power Booster Amplifier**
24 W/ch min. continuous into 4 ohms (both channels driven; 8 ohms with four speakers) from 50-15,000 Hz with 1.0% THD; frequency response 20-20,000 Hz; 11-dB gain; S/N 60 dB; crosstalk 70 dB; damping factor 5. Includes automatic power switching, pigtail adapter cable, plug-in installation, and mounting hardware. 2¼" H × 6½" W × 5½" D ..... $70

## JANDY INTERNATIONAL

Jandy's Car-Fi™ amplifiers, preamplifiers, and equalizers are A-B switchable through C-MOS technology memory switching system with digital LED readout.
**6160.** 120-W stereo power amplifier features electronic circuit guard as protection from burnouts ..... $260
**6100.** 80-W stereo power amplifier; THD 0.1% at 1000 Hz, 1 W; 4-8 ohm impedance; plug-in con-

nection terminals for installation ..... $130
**3100.** 40-W power amplifier with electronic circuit guard ..... $80
**310.** In-dash or under-dash 60-W, five-band micro-electronic equalizer booster with tone controls set at 60, 250, 1000, 3500, and 10,000 Hz (±12 dB) and fader/level control ..... $160
**210.** 30-W, five-band equalizer/amplifier with micro-electronic technology ..... $130
**4200.** Seven-band eqaulizewr/preamplifier with low-level inputs, balance control, level control, power switch, and input level control; micro-electronics technology design ..... $120
**4000B.** Three-band tone control equalizer with bass, midrange, and treble controls (±18 dB boost or cut), switchable hiss filter, on/off switch, and headphone jack ..... $60

## JENSEN

**R430 Car Stereo Receiver**
Includes cassette deck. Amplifier: dual-power dc-IC OTL circuitry for each channel with passive cross-

over network. 30 W/ch continuous, 60 W total system power; low (-12 dB/octave) filter rolloff, high (-6 dB/octave) filter rolloff; frequency response 30-18,000 Hz −3 dB; THD 0.4% at 1000 Hz; separate bass and treble controls ±10-dB range. FM Tuner: usable sensitivity 11.2 dBf (1.0 μV); 50-dB quieting sensitivity 19.2 dBf (2.5μV; alternate channel selectivity 75 dB; S/N 73 dB with Dolby; image response −65 dB; i-f response −85 dB; AM suppression 52 dB; capture ratio 1.5 dB; stereo separation 32 dB; frequency response 30-15,000 Hz. AM section: 20-dB quieting sensitivity 9.0 μV; image response −80 dB; Cassette: wow and flutter 0.2% rms; crosstalk 45 dB; separation 35 dB; S/N 60 dB (Dolby on), 50 dB (Dolby off) ..... $470
**R330.** Similar to R430 except includes 8-track recorder; wow and flutter 0.2% rms; separation 35-dB; crosstalk 45-dB; S/N 60 dB (Dolby on), 50 dB (Dolby off) ..... $470
**R420.** Similar to R430 except 18 W/ch rms, 36 W total system power; THD 1.0% at 1000 Hz .... $370
**R320.** Similar to R420 except includes R330 8-track player ..... $370
**R410.** Similar to R420 except independent IC-OTL circuitry; 5 W/ch continuous, 10 W total system power ..... $300
**R310.** Similar to R410 except with R330 8-track recorder ..... $300

## MARANTZ

**SA-247 Equalizer Amplifier**
Seven-band graphic equalizer amplifier with up to 12-dB boost or cut at each frequency, 8-octave contour; ambience button; auto turn-on; front-rear fader control; dentented slide controls; max. audio output 75 W continuous; frequency response 20-20,000 Hz; brushed aluminum plate in gold; 2⅛" H × 6¾" W × 5¾" D ..... $170

**SA-230 Integrated Power Amplifier**
10 W/ch continuous into 4 ohms from 20-20,000 Hz at 0.5% THD, 60 W continuous into 2 ohms; bass and treble controls ±12 dB; high filter; auto turn-on; brushed aluminum plate in gold; includes metal case; 1⅝" H × 4¾" W × 7¼" D ..... $80

## MOTOROLA

**EQB-3000 Graphic Equalizer/Booster**
Graphic equalizer/booster; 30 W continuous total power output; HD 1% at 10 W; slide controls for each of five bands; front-rear fader; LED power indicators; for use with either two or four speakers ..... $120

**PA4000 Stereo Amplifier**
Stereo power amplifier; 40 W continuous power output at 4-ohm load; THD less than 1% at 1 kHz at 30 W continuous; audio bypass switch; bass boost and treble boost switches; dc to dc converter ..... $90

**PA 2400 Stereo Amplifier**
Stereo power amplifier; 24 W continuous power output at 4-ohm load; THD less than 2% at 1 kHz at 20 W; frequency response 50-16,000 Hz ..... $50

## PANASONIC

**Amplifiers**

**CJ-3510 Power Booster**
10 W/ch into 4 ohms at 400 Hz, 1% THD; frequency response 50-20,000 Hz at 1 W with 5% THD; on/off switch; separate bass and treble controls; illuminated power indicator; weight 3.1 lbs; 3⁴⁷/₅₀" H × 2¾" W × 7⅜" D ..... $85

**CJ-1552 Power Booster**
Completely transistorized; 10 W/ch; weight 1.8 lbs; 1⅝" H × 3⅜" W × 5⅜" D ..... $40

**Compacts**

**CQ-8520 Car Compact**
Combines electronic-tuning, in-dash AM/stereo FM radio with auto/manual cassette deck. Features digital clock; six electronic memory buttons for 12 preset stations, and seek/search and memory buttons; digital readout of AM/FM frequencies and tape direction indicator; fader switch, balance control; separate bass and treble controls; illuminated stereo indicator; locking fast-forward/rewind; dimmer and motor antenna connector; max. power output 25 W ..... $400
**CQ-6520.** Similar to CQ-8520 minus digital/electronic functions ..... $240
**CQ-2520.** Similar to CQ-6520 except 8-track. $230

## PIONEER

**AD-320 Power Amplifier**
Car power amplifier; 20 W/ch continuous; includes automatic on/off power switch, manual by-pass switch, car stereo input, and aux. input jacks ... $80

**AD-312 Power Amplifier**
Car power amplifier; 12 W/ch continuous; has manual on/off and by-pass switch, car stereo input, and aux. input jacks ..... $60

# 9 CAR ACCESSORIES

### AD-306 Noise Suppression System
Reduces static and multipath interference; plug-in installation; designed for use with KPH-9000 AM-FM Stereo/Cassette ..... $37

### AD-990 Noise Filter
Encapsulated noise filter reduces ignition noise by 40 dB or 100 times; for all car stereos and includes plug-in installation on Pioneer car equipment..... $8

## RECOTON

### SE50 Power Amplifier/Graphic Equalizer
Combines solid-state, compact amplifier and equalizer for car installation. Power amplifier: 15 W/ch

continuous with less than 1.0% THD, 24 W/ch continuous peak; frequency response 10-30,000 Hz, −3 dB from 1000 Hz ref. Equalizer: five-slide equalizer switches at 50, 250, 1000, 3500, and 10,000 Hz; (±12 dB range). Features multiple speaker switch, defeat switch, and power on/off switch with "on" light; includes clip-in leads in output wires for installation..... $130

## ROYAL SOUND

### EA-400 Graphic Equalizer Amplifier
Mobile high fidelity graphic equalizer amplifier; five-band equalizer control console with vertical


slide controls (60 Hz, 250 Hz, 1 kHz, 3.5 kHz, 15 kHz); on/off push-button; LED power indicator light; 20 W continuous/channel; frequency response 10-40,000 Hz; THD 0.03%..... $160

### A600 Power Amplifier
Mobile power amplifier; 30 W/ch into 8 ohms from 40-20,000 Hz with less than 1.0% dist.; S/N 70 dB; input sensitivity/impedance 2.5 V/100 ohms; one-touch connectors for input and output terminals; automatic power control; heat sinks; 55 mm H × 134 mm W × 172 mm D ..... $120

### IA400 Integrated Amplifier
Mobile preamplifier/equalizer control console; 20 W/ch into 4 ohms from 50-15,000 Hz; S/N 80 dB min.; input sensitivity/impedance 2.0 V/330 ohms; features separate bass and treble rotary controls; automatic power control; LED power indicator; one-touch connectors for input and output terminals; heat sinks; 42 mm H × 120 mm W × 165 mm D... ..... $90

## SANYO

### PA7000 Biamp Stereo Power Booster
Connects to auto stereo unit with 7.5 W or less output and delivers 56 W continuous total output


power at 3% THD; 23 W/ch low-frequency amplifiers; 5 W/ch tweeter amp; designed for trunk or rear mounting; automatic turn on and off; separate under-dash control unit for high and low frequency level controls with 20-ft cable; built-in 2000-Hz electronic crossover; power bandwidth 100-20,000 Hz; amp unit 3" H × 9" W × 7" D, control unit 1½" H × 4½" W × 2½" D..... $100

### PB 3000 Stereo Power Booster
Increases output stage of auto audio system to 15 W/ch continuous power at 1% THD; fuse protected; automatic electronic monitoring turns amp on when sound is present; frequency response 50- 20,000 Hz; output impedance 4-8 ohms with reversing plug; 12 V dc power requirement neg. ground; 2" H × 6" W × 4" D..... $35

**PB5000.** Similar to PB3000 except 25 W/ch continuous with 1.0% THD; 2¼" H × 6" W × 5" D..... ..... $60

## SOUND CONCEPTS

### Concert Machine
Enhances ambient sounds of performance of recorded sound in mobile environment; uses continuously variable time delay; has two built-in 7-W (into 3.2 ohms) power amplifiers; time delay 10-70 msec.; distortion less than 1% at power supply voltage clipping, primarily second harmonic; S/N greater than 64 dB; 2¼" H × 7½" W × 7" D.. $300

## SPARKOMATIC CORP.

### GE-300 Equalizer-Booster
Graphic stereo equalizer-booster for use with all car radios, tape decks speakers; power-handling capacity of 15 W or more, output power greater than 20 W/ch into 4 ohms; frequency range 30-15,000 Hz; features five tone controls, front fader control; and audio by-pass switch..... $95

### GE-500 Power Booster
Car booster graphic equalizer for use with tape decks, radios, and min. 15-W speakers; 20 W/ch

from 20-20,000 Hz; features visual response curve of amplifier performance on illuminated screen; includes slide controls with five adjustable frequency bands, front-to-rear fader control, power indicator light, and audio by-pass switch; 2" H × 6³/₁₆" W × 6½" D ..... $90

### LC-50 Power Booster
Wide-range amplifier for car stereo or radio; 18 W/ch at 10% THD into 4 ohms; 15 W per channel with less than 1% dist.; channel separation greater than 45 dB; frequency response 20-20,000 Hz −3 dB at end points at full power, input impedance 27 ohms; output impedance 4 to 8 ohms; 1¾" H × 4" W × 5" D..... $30

## VISONIK

### A-300 Car Power Amplifier
30 W/ch continuous into 4 ohms from 20-20,000 Hz with 0.05% dist.; includes two dc amplifier


channels; oscillator-driven push-pull inverted circuit with ferrite-core power transformer; low-current remote turn-on feature; one-piece printed circuit board construction for all components and connectors; clamped power transistors to extruded heat sinks..... $136
With pair of D-302M0 speakers ..... $320

**NEED MORE INFORMATION?**

**Write direct to the manufacturer or distributor. A list of names and addresses starts on page 8.**

# 10 SPEAKER SYSTEMS

## ACCULAB

### 440 Speaker System
Four-way acoustic suspension speaker system with 12 in woofer, 3⅝-in cone midrange, 3½-in cone tweeter, and 2¾-in piezo super tweeter; crossovers at 3300, 7500, and 10,000 Hz; 8-ohm impedance; frequency response 33-30,000 Hz ±4 dB; efficiency 91 dB SPL/W/m; min. input 5 W; vinyl finish with brown cloth grille; 25½" H × 14¼" W × 11" D ..... $250

### 340 Speaker System
Three-way acoustic suspension speaker system with 12 in woofer, 3⅝-in cone midrange, and 2¾-in cone tweeter; crossovers at 3300 and 7500 Hz; 8 ohm impedance; frequency response 33-18,500 Hz ±4 dB; efficiency 91-dB SPL/W/m; min. input 4 W; vinyl finish with brown cloth grille; 25½" H × 14¼" W × 11" D ..... $220

### 320 Speaker System
Three-way acoustic suspension speaker system with 10 in woofer, 3⅝ in cone midrange, and 2¾-in cone tweeter; crossovers at 3300 and 7500 Hz; 8 ohm impedance; frequency response 40-18,500 Hz ±4 dB; efficiency 91 dB SPL/W/m; min. input 4 W; vinyl finish with brown cloth grille; 22½" H × 13" W × 10½" D ..... $175

### 220 Speaker System
Two way acoustic-suspension speaker system with 10 in woofer and 2¾ in cone tweeter; crossover at 6500 Hz; 8 ohm impedance; frequency response 40 18,500 Hz ±4.5 dB; efficiency 89.9-dB SPL/W m; min. input 4 W; vinyl finish with brown cloth grille, 22½" H × 13" W × 10½" D ..... $150

## ACCUSOUND

### Saturn SMX Speaker System
Four way floor standing speaker system with 15-in subwoofer reactor, 10 in woofer, 2.5-in voice coil, and 5 in midrange/tweeter; crossovers at 60, 400, and 3000 Hz; 8-ohm impedance; frequency response 32 20,000 Hz; efficiency 96 dB at 5 W; input range 20-125 W; midrange and tweeter level controls; walnut veneer with removable black grille; 40" H × 18" W × 13½" D ..... $495

### 120B Speaker System
Four way bookshelf speaker system with 12 in subwoofer reactor, 10 in woofer, 2-in voice coil, and 5 in midrange/tweeter; crossovers at 60, 400, and 3000 Hz; 8-ohm impedance; frequency response 32 20,000 Hz; efficiency 96 dB at 5 W; input range 20 100 W; midrange and tweeter level controls; walnut veneer with removable black grille; 26" H × 15" W × 10½" D ..... $295

### 100B Speaker System
Three-way bookshelf speaker system with 12-in subwoofer reactor, 8 in woofer, and 1½ in voice coil; crossovers at 60 and 1500 Hz; 8-ohm impedance; frequency response 36-20,000 Hz; efficiency 94 dB at 5 W; input range 10-80 W; midrange and tweeter level controls; walnut veneer with removable black grille; 24" H × 13" W × 10½" D ..... $179

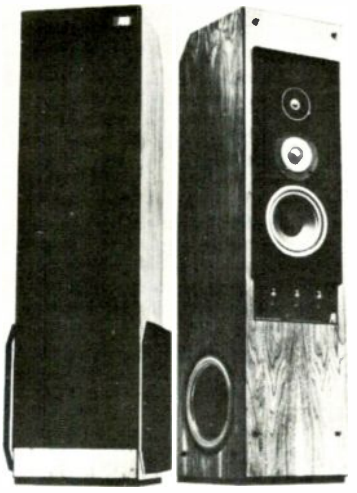
### 90B Speaker System
Three-way bookshelf speaker system with 12-in subwoofer reactor, 6-in woofer, and 1½-in voice coil; crossovers at 80 and 2000 Hz; 8-ohm impedance; frequency response 40-20,000 Hz; efficiency 92 dB at 5 W; input range 10-35 W; walnut vinyl finish with removable black grille; 21" H × 14" W × 8" D ..... $99

### 80B Speaker System
Three-way bookshelf speaker system with 10-in subwoofer reactor, 6 in woofer, and 1-in voice coil; crossovers at 80 and 2000 Hz; 8-ohm impedance; frequency response 45 20,000 Hz efficiency 90 dB at 5 W; input range 10-35 W; walnut vinyl finish with removable black grille; 21" H × 13" W × 8" D ..... $79

### 50B Speaker System
Three-way bookshelf speaker system with 8-in subwoofer reactor, 5-in woofer, and 1-in aluminum voice coil; crossover at 150 Hz; 8-ohm impedance; frequency response 70-18,000 Hz efficiency 86 dB at 5 W; input range 5-30 W; walnut vinyl finish with black removable grille; 18" H × 11" W × 8" D ..... $49

## ACOUSTIC RESEARCH

### AR9 Speaker System
Four-way floor-standing speaker system features five drivers consisting of two 12 in parallel and connected acoustic suspension woofers handling from 20-200 Hz, 8-in acoustic suspension low midrange driver from 200-1200 Hz, 1½ in dome upper midrange driver from 1200-7000 Hz, and ¾-in dome tweeter; crossover frequencies at 200, 1200, and 7000 Hz; 4-ohm nominal impedance; sensitivity 86-dB SPL W/m; input 400 W/ch continuous; low frequency response −3 dB at 28 Hz; three three-position switches for lower midrange, upper mid range and high range level control; walnut veneer cabinet with three grilles; "Acoustic Blanket," absorbent fiber sheet that absorbs front-surface-reflected soundwaves, behind front grille; 52¾" H × 15" W × 15 13/16" D ..... $750



### AR10π Speaker System
Three-way speaker system with 12-in acoustic suspension woofer, 1½-in hemispherical dome midrange, and ¾-in hemispherical dome tweeter; crossovers at 525 and 5000 Hz; 4-8 ohms nominal impedance; sensitivity 86-dB SPL/W/m; max. input 150 W/ch continuous; system low frequency response −3 dB at 35 Hz; three three position switches for woofer environmental control and for mid range and tweeter level control; oiled walnut veneer finish; 25" H × 13 15/16" W × 10¾" D ..... $450

### AR11 Speaker System
Three-way speaker system with 12-in acoustic suspension woofer, 1½-in hemispherical dome midrange, and ¾-in hemispherical dome tweeter; crossovers at 525 and 5000 Hz; 4-ohm nominal impedance; sensitivity 1 W for 86-dB SPL (on axis at 1 m); max. input 150 W/ch continuous; system low frequency response −3 dB at 35 Hz; two three-position switches for mid-range and tweeter level control; oiled walnut veneer finish; 25" H × 13 15/16" W × 10¾" D ..... $350

### AR12 Speaker System
Three-way speaker system with 10-in acoustic suspension woofer, 2¼-in cone mid-range, and ¾-in hemispherical dome tweeter; crossovers at 700 and 4000 Hz; 8-ohm nominal impedance; sensitivity 1 W for 86 dB SPL (on axis at 1 m); max. input 150 W/ch continuous; system low-frequency response −3 dB at 44 Hz; two three-position switches for mid range and tweeter level control; oiled walnut veneer finish; 25" H × 13 15/16" W × 10¾" D ..... $250

### AR14 Speaker System
Two-way speaker system with 10-in acoustic suspension woofer and 1-in dome tweeter; crossover at 1300 Hz; 8-ohm nominal impedance; sensitivity 1 W for 86-dB SPL (on axis at 1 m); max. input 100 W/ch continuous; system low-frequency response −3 dB at 44 Hz; two-position switch for tweeter contour control; oiled walnut veneer finish; 25" H × 13 15/16" W × 10¾" D ..... $180

### AR15 Speaker System
Two-way speaker system with 8-in acoustic suspension woofer and 1-in dome tweeter; crossover at 1700 Hz; 8-ohm nominal impedance; sensitivity 1 W for 86-dB SPL (on axis at 1 m); max. input 100 W/ch continuous; system low-frequency response −3 dB at 48 Hz; three-position switch for tweeter contour control; oiled walnut veneer finish; 21½" H × 11¼" W × 7¾" D ..... $130

### AR17 Speaker System
Two-way speaker system with 8-in acoustic suspension woofer and 1¼-in ring radiator tweeter; crossover at 2000 Hz; 8-ohm nominal impedance; sensitivity 1 W for 86-dB SPL (on axis at 1 m); max. input 100 W/ch continuous; system low-frequency response −3 dB at 50 Hz; two-position switch for tweeter level control; oiled walnut veneer finish; 18½" H × 10" W × 8¾" D ..... $190 pr.

### AR18 Speaker System
Two-way speaker system with 8-in acoustic suspen-

# 10 SPEAKER SYSTEMS

sion woofer and 1¼-in ring radiator tweeter; crossover at 2000 Hz; 8-ohm nominal impedance; sensitivity 1 W for 86 dB (on axis at 1 m); max. input 100 W/ch continuous; system low-frequency response −3 dB at 62 Hz; two-position switch for tweeter level control; walnut-grain vinyl veneer finish; 16½" H × 9⅝" W × 6¼" D..... $140 pr.

## ACOUSTIQUE 3a

### Telephonic Integrated Speaker System

Three-way acoustic pressure feedback system with sub-bass and satellite units.

**SB 1200.** Coffee table sub-bass includes four 11-in feedback APF woofers and 150 W continuous automatic switch-on feedback amplifier; frequency response from 30-100 Hz ±1.5 dB; sensitivity 84-96 dB/W/m; 100 Hz passive and electronic crossovers for bass and satellites; electret microphone with VU meters; linear/rock switch; walnut finish; 14" H × 35" W × 30" D..... $1200

**SB 1000.** Same as SB 1200 except lounge table sub-bass with three 11-in feedback woofers, fin-

ished in Black Chinese lacquer with brushed brass or chrome maple heart on angles; 12" H × 48" W × 12" D..... $1400

**SB 800.** Same as SB 1200 except corner table sub-bass with two 11-in feedback woofers and SB 1000 finish; 12" H × 30" W × 12" D..... $1000

**Atom 2.** Two-way PLD satellites with 7-in cone midrange woofer and Equiphase flat ribbon tweeter; frequency response from 100-40,000 Hz ±2 dB with 0.5% max. dist.; crossover at 5000 Hz; 150 W continuous max. input; 8-ohm impedance; sensitivity 94 dB/W/m; laminated back wave through flat tunnel; time aligned; 19" H × 9" W × 3" D..... $250

**Atom 3.** Three-way PLD satellites consisting of 5-in cone low midrange woofer, 2-in dome midrange, and ¾-in dome tweeter; frequency response from 100-30,000 Hz ±1.5 dB with 0.5% max. dist.; crossovers at 2000 and 8000 Hz; 80 W continuous max. input; 8-ohm impedance; 90 dB/W/m sensitivity; laminated back wave through very flat tunnel; time aligned; 17" H × 10" W × 7" D..... $250

### Andante Master Control System

Three-way acoustic pressure feedback speaker system with 10-in woofer, 2-in dome midrange, and 2⅛-in × ⅞-in symmetrical ribbon tweeter; frequency response 25-40,000 Hz ±3 dB; crossovers at 300 and 5000 Hz; sensitivity 1.4 W for 96 dB SPL at 400 Hz and 6 ft on-axis; 8-ohm impedance; max. input 60 W continuous; 125 W built-in servo amplifier; distortion 0.7%; 18" H × 12" W × 8" D..... $829

### Arioso Monitor Speaker System

Three-way bass reflex speaker system with 15-in woofer, 5.8-in mid-range, and horn tweeter; frequency response 40-18,000 Hz ±3 dB; crossovers at 300 and 5000 Hz; max. input 120 W continuous; 8-ohm impedance; 27" H × 18" W × 15" D..... $569

### Andante Linear System

Three-way acoustic pressure feedback speaker system with 11-in woofer, 2-in dome mid-range, and ¾-in dome tweeter; frequency response 30-30,000 Hz ± 3 dB; crossovers at 300 and 4000 Hz; max. input 80 W continuous; 8-ohm impedance; 120 W built-in servo amplifier; 18" H × 12" W × 8" D..... $555

### Adaglo ∝ Speaker System

Three-way infinite-acoustic-load speaker system with 11-in woofer, 2-in dome mid-range and ¾-in dome tweeter; frequency response 35-30,000 Hz ±3 dB; crossovers at 400 and 4000 Hz; max. input 80 W continuous; 8-ohm impedance; internal acoustic low-pass filter plus infinite transmission line; 31" H × 12" W × 12" D..... $435

### Apogee Monitor Speaker System

Three-way Peripheral Laminar Decompression speaker system with 11-in woofer, 1⅜-in dome mid-range, and ¾-in dome tweeter; frequency response 45-30,000 Hz ±3 dB; crossovers at 700 and 6000 Hz; max. input 70 W continuous; 8-ohm impedance; laminated back wave through very flat tunnel; time aligned; 29" H × 13" W × 13" D..... $359

### Allegretto Speaker System

Three-way bass reflex speaker system with 10-in woofer, 4-in × 8-in horn mid-range, and horn tweeter; frequency response 50-18,000 Hz ±3 dB; crossovers at 2000 and 10,000 Hz; max. input 60 W continuous; 8-ohm impedance; 25" H × 12" W × 10" D..... $319

### Apogee Speaker System

Two-way bass reflex speaker system with 10-in woofer and ¾-in dome tweeter; frequency response 50-30,000 Hz ±3 dB; crossover at 3500 Hz; max. input 60 W continuous; 8-ohm impedance; 25" H × 12" W × 10" D..... $209

### Alphase Speaker System

Two-way Peripheral Laminar Decompression speaker system with 8-in woofer and ¾-in dome tweeter; frequency response 55-30,000 Hz ±3 dB; crossover at 5000 Hz; max. input 40 W continuous; 8-ohm impedance; laminated back wave through very flat tunnel; time aligned; 20" H × 10" W × 12" D..... $156

## ADS

### L910 (II) Studio Reference Speaker System

Three-way speaker system with two 10-in high-compliance woofers in separate acoustic suspension chambers, 2-in soft-dome mid-range, and ¾-in soft-dome tweeter; frequency response 28-20,000 Hz ±3 dB; crossovers at 550 and 4000 Hz (12 dB/octave); efficiency 93-dB SPL/W/m; input range from 15-300 W continuous, rated input 150 W continuous; 6-ohm nominal impedance; crossover is replaceable with optional tri-amplifier; round-cornered walnut cabinet with removable black grille and cast swivel stand; 33½" H × 19" W × 15¼" D. $660

### L810 (II) Speaker System

Three-way acoustic suspension speaker system with two 8-in high-compliance woofers, 2-in soft-dome mid-range, and ¾-in soft-dome tweeter; frequency response 35-23,000 Hz ±3 dB; crossovers at 550 and 4000 Hz (12 dB/octave); efficiency 93-dB SPL/W/m; input range from 20-200 W continuous; 6-ohm nominal impedance; selected natural walnut finish with removable black grille; 25½" H × 14⅛" W × 11¾" D..... $360

### L710 (II) Speaker System

Three-way acoustic suspension speaker system with two 7-in high-compliance woofers, 2-in soft-dome mid-range, and ¾-in soft-dome tweeter; frequency response 40-23,000 Hz ±3 dB; crossovers at 550 and 4000 Hz (12 dB/octave); efficiency 92-dB SPL/W/m; input range 15-150 W continuous; 6-ohm nominal impedance; selected natural walnut finish with removable black grille; 21⅝" H × 12¼" W × 10½" D..... $275

### L-620 Speaker System

Two-way acoustic suspension speaker system with 10 in long-excursion woofer and 1-in soft-dome tweeter; frequency response 33-20,000 Hz ±3 dB; crossover at 1500 Hz (12 dB/octave); efficiency 93-dB SPL/W/m; input range from 15-150 W; 8-ohm nominal impedance; walnut vinyl finish with removable black grille; 25⅝" H × 14¾₁₆" W × 11¾" D..... $190

### L 520 Speaker System

Two-way acoustic suspension speaker system with 8-in high-compliance woofer and 1-in soft-dome tweeter; frequency response 38-20,000 Hz ±3 dB; crossover at 1,500 Hz (12 dB/octave); efficiency 92-dB SPL/W/m; input range 10-100 W; 8-ohm nominal impedance; walnut vinyl finish with removable black grille; 21¹¹⁄₁₆" H × 12¼" W × 10¼" D..... $150

### 300 Miniature Speaker System

Two-way miniature acoustic suspension speaker system with 5¼-in high-compliance ultra-long excursion woofer and 1-in soft-dome tweeter; frequency response 68-20,000 Hz ±3 dB; crossover at 2500 Hz (12 dB/octave); efficiency 90-dB SPL/W/m; rated input 50 W continuous; min input 10 W continuous; 4-ohm impedance, brushed satin finish; aluminum enclosure (black or silver anodized) with aluminum grille; 8.67" H × 5.9" W × 5.7" D..... $145

**300C.** Same as 300 except input range from 5-75 W; includes quick-disconnect swivel bracket and all hardware for car installation surface mounting; 8½" H × 5⅘" W × 5¼" D..... $150

### 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 ±3 dB; crossover at 2500 Hz (12 dB/octave); efficiency 90-dB SPL/W/m; rated input 30 W continuous; min. input 5 continuous; 4-ohm impedance; brushed aluminum enclosure (black or silver anodized) with anodized aluminum grille; 6¾" H × 4¼" W × 4½" D..... $113

**200C.** Same as 200 except includes swivel bracket and all accessories for car installation surface mounting..... $118

### L420 Speaker System

Two-way acoustic suspension speaker system with 7 in high-compliance woofer and 1-in soft-dome tweeter· frequency response 40-20,000 Hz ±3 dB; crossover at 1500 Hz (12 dB/octave); efficiency 91 dB SPL/W/m; input range 15-75 W; 8-ohm nominal impedance; walnut vinyl finish with removable black grille; 20" H × 11¼" W × 8½" D..... $110

## ADVENT

### Powered Advent Loudspeaker

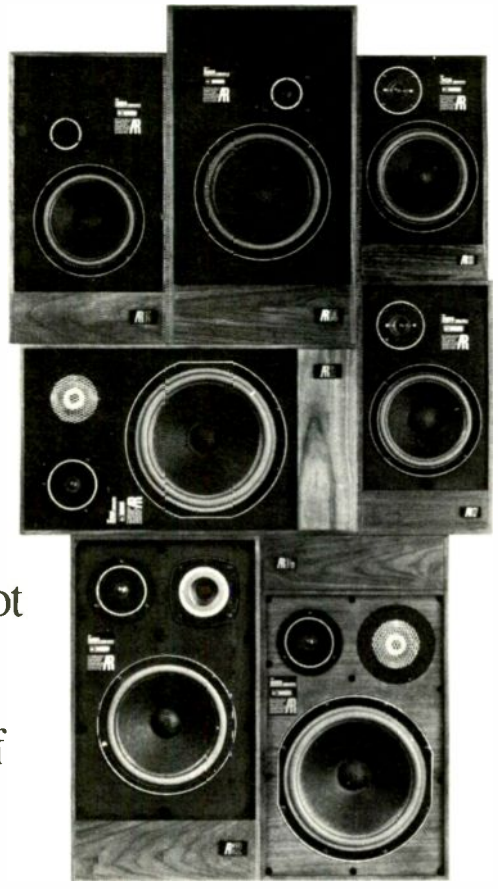
Two-way acoustic suspension, biamplified powered speaker system; input sensitivity ad-

justable up to 0.3 V; input imp. 100,000 ohms; continuously variable equalization controls below 100 Hz (±6 dB at 30 Hz) and above 3000 Hz (·4 dB at 10,000 Hz); switchable subsonic filter; crossover frequency 1500 Hz; walnut veneer finish with walnut front molding and brown grille cloth; requires 120-V a.c., 450 W max.; 28⅜" H × 14⅛" W × 11⅞" D..... $450

### New Advent Loudspeaker

Sealed enclosure, two-way bookshelf system

# HOW MUCH MUST YOU PAY FOR A PAIR OF "DYNAMITE" SPEAKERS?



Would you believe that you can step up from merely "OK" to "absolutely dynamite" for only about $70 per speaker?

Well it's true.

For only about $70 each an AR dealer can put you into a pair of AR18s... an amazing listening experience that sounds a lot more expensive than it really is.

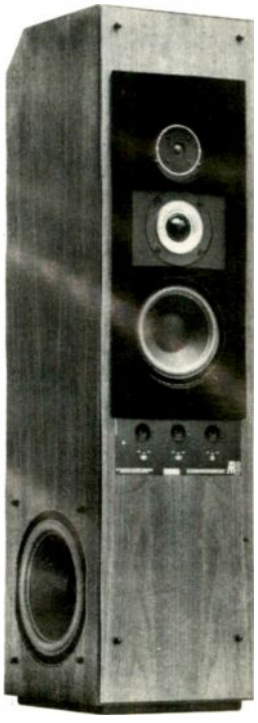
This is what you'll hear.

A firm, well-controlled, reproduction of source material. Accurate and uncolored by minor resonances in the speaker itself.

A nice flat response curve. In layman's language that means bass notes that don't get overemphasized. Middle frequencies, where vocal passages occur, that come through beautifully. And, on the high end, strings that don't sound over bright.

READ ABOUT THEM ALL. OUR FULL COLOR BOOKLETS DESCRIBE THESE SPEAKERS AND HOW TO MAKE YOUR CHOICE. GET ONE FROM YOUR DEALER OR WRITE TO AR AT THE ADDRESS BELOW.

AR SPEAKERS RANGE IN PRICE FROM ABOUT $70 TO ABOUT $750. THIS IS THE $750 ONE – THE INCREDIBLE AR9. ALL ARE COVERED BY THE SAME FULL 5-YEAR WARRANTY WHICH AN AR DEALER WILL SHOW YOU.



There are, of course, other AR speakers beside the AR18 which boast these qualities. The bigger they come the more power they'll handle and more sound level they'll produce.

**Truth In Listening**

But size doesn't determine quality at AR, and every AR speaker is built (in our own factories) to deliver the same thing: truth in listening.

So stop fooling around. Buy a pair... any pair. Discover what the smart money's learning all the time. That listening to a pair of dynamite speakers can really be a blast.

TELEDYNE ACOUSTIC RESEARCH
10 AMERICAN DRIVE, NORWOOD, MASSACHUSETTS 02062
IN CANADA: A.C. SIMMONDS & SONS LTD. ©1978

CIRCLE NO. 83 ON READER SERVICE CARD

# 10 SPEAKER SYSTEMS

with 12" woofer and 2" impregnated-paper-cone tweeter; frequency response 20-15,000 Hz ±3 dB; crossover at 1500 Hz; tweeter control; 8-ohm imp.; min. input 15 W rms; walnut enclosure; 25⅝" H × 14¼" W × 11½" D..... $159
Same but vinyl enclosure ..... $139

### Advent/1 Speaker System
Sealed acoustic-suspension, two-way bookshelf system; frequency response 20-15,000 Hz ±5 dB; 8-ohm imp.; min. input 15 W rms; vinyl-clad walnut enclosure; 13¼" H × 22" W × 9¼" D ..... $100
Walnut enclosure ..... $125

### Advent/2 Speaker System
Sealed enclosure, two-way bookshelf system; 8-ohm imp.; min. input 10 W rms; vinyl-clad walnut enclosure; 19⅜" H × 11¼" W × 7½" D ..... $81

### Advent/3 Speaker System
Two-way acoustic-suspension system designed for smaller apartments; drivers and LCR network provide octave-to-octave tonal balance of more expensive Advent speakers; 8-ohm imp.; min. input 10 W rms; non-resonant particle board finished in walnut-grained vinyl; 15¾" H × 9⅜" W × 6⅝" D..... $57

### 400 Miniature Speaker
Miniature acoustic-suspension speaker; 8-ohm imp.; min. input 4 W; white polystyrene cabinet with silver gray metal grille; 11" H × 6½" W × 6" D..... $35

## AEI

### Evolution 1 Speaker System
Two-way bookshelf speaker system with 10-in acoustic suspension woofer and 1-in hemispherical tweeter; crossover at 1500 Hz; impedance 4.25 ohms ± .20 ohms from 100-45,000 Hz; efficiency 88 dB SPL/W/m; frequency response 35-17,000 Hz +0.5/−2 dB; power input 15-150 W continuous; walnut cabinet with chocolate or black grille; 25" H × 15½" W × 9½" D ..... $180
Vinyl cabinet ..... $160

### Evolution 2 Speaker System
Two-way bookshelf speaker system with 8-in acoustic suspension woofer and 1-in hemispherical dome tweeter; crossover at 1500 Hz; 8-ohm impedance; efficiency 85 dB/W/m; frequency response 38-17,000 Hz ±5 dB; input range 15-100 W; 21⅛" H × 13" W × 9" D ..... $110

## ALLISON

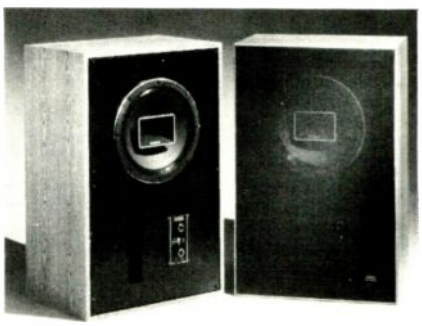
### Model One Speaker System
Stabilized radiation loading design with two 10-in woofers, two 3½-in convex mid-range units, and two 1-in tweeters; crossovers at 350 and 3750 Hz; LC half-section crossover network, air-core chokes, and nonpolarized computer-grade capacitors; features three-position control switch for selection of system acoustic power response (flat to concert-hall balance slope); 8-ohm impedance; efficiency 0.7% when placed at floor-wall intersection; minimum amplifier power 30 W/ch for 100-dB SPL; acoustic power output ½ acoustic watt minimum over full frequency range, with 70-W input; system resonance 45 Hz nominal; sealed oiled walnut enclosure 40" H × 19" W × 10¾" D, internal volume 2550 cubic inches ..... $420
**Model Two.** Same as Model One except has two 8-in woofers, two 3½-in convex mid-range, and two 1-in convex tweeters; system resonance 52 Hz nominal; sealed oiled walnut enclosure 36" H × 16" W × 9⅜" D, internal volume 1775 cubic inches.... $350
**Model Three.** Sealed acoustic-suspension system with 10-in woofer, 3½-in midrange, 1-in tweeter; LC half-section crossover network; crossovers at 350 and 3750 Hz; min. amp. power 30 W/ch for 100-dB reverberant SPL; resonant freq. 45 Hz; designed for corner mounting; three-pos. control switch selects system acoustic power response; 3.5- to 4-ohm impedance; high-density particle board, walnut veneered, oil finished; 40" H × 15¼" W × 10" D (occupies 10⅞" wall space min.).. $290

### Model Four Speaker System
Two-way sealed acoustic-suspension system with 8-in woofer and two 1-in "Convex Diaphragm" tweeters; crossover at 2000 Hz; LC quarter-section network with three-pos. control switch to adjust response from nominally flat to "concert-hall" balance slope; 8-ohm impedance; amp power 30 W/ch for 100-dB SPL; acoustic power output: 0.5 acoustic watt (70 W peak input), 0.25 (35 W input); designed to be used against wall or hung on wall (hardware included); walnut-veneer high-density particle board, oiled finish; 11" H × 19⅜" W × 10" D ..... $195

## ALTEC

### 19 Speaker System
Two-way floor-standing vented enclosure with 15-in bass driver, "Radial Phase Plug" driver mounted on 811B sectoral horn; crossover at 1200 Hz; 8-ohm impedance; frequency response 30-20,000 Hz; operational power range 10 to 350 W; long-term broadband max. power 65 W; 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) ..... $749

### 18 Speaker System
Two-way floor-standing vented speaker system features 15-in bass driver with coaxially mounted, constant directivity control horn and compression driver; crossover at 1500 Hz; 8-ohm nominal impedance; frequency response 30-20,000 Hz; sensitivity 100 dB (SPL 6), 103 dB (SPL 7). 50-degree dispersion at −6 dB vertical, 70 degrees at −6 dB horizontal; 65 W max. power long-term broadband capacity; 10-350 W amplifier operating range; long-term max. acoustic output 118 dB SPL at 65 W; hand-rubbed oiled-oak finish with transparent black knit fabric on removable frame grille, available Jan. 1979; 40" H × 26" W × 18" D. $739



### A7X Voice of the Theatre
Two-way floor-standing speaker system including 16 in bass speaker in combination front-loaded exponential horn and rear-loaded bass reflex baffle, high-frequency compression driver loaded with cast aluminum sectoral horn having exponential expansion and a dividing network/dual-band variable equalizer; crossover 12 dB/octave at 1200 Hz; 8-ohm impedance; frequency response 55-20,000 Hz ±6 dB; 65 W max. continuous power capacity from 20-20,000 Hz; pressure sensitivities 101 dB SPL at 4 ft with 1 W input from 500-3000 Hz, 102.5 dB SPL at 1 m with 1 W input from 500-3000 Hz; dispersion 40 degrees at −6 dB vertical, 90 degrees at −6 dB horizontal; max. mid-range attenuation 12 dB at 2000 Hz; max. high frequency attenuation −4 dB at 10 kHz; metallic gray finish; 52¼" H × 30" W × 24" D ..... $630

### 15 Speaker System
Two-way floor-standing vented enclosure with 12-in bass driver and "Radial Phase Plug" compression driver mounted to curved radial horn; crossover at 1700 Hz; 8-ohm impedance; frequency response 30-20,000 Hz; long-term broadband max. power 60 W; operational power range 12 to 250 W; long-term max. acoustic output 111-dB SPL at 60 W; hand-rubbed oiled walnut or oak finish, all sides and back; acoustically transparent foam mounted on removable panel; 27" H × 22" W × 15½" D (with base and grille)..... $479

### Santana II Speaker System
Two-way floor-standing vented enclosure with 12-in bass driver and 5-in frame cone driver; crossover at 2500 Hz; 8-ohm impedance; frequency response 40-20,000 Hz; max. power 45 W; operational power range 12 to 150 W; long-term max. acoustic output 107.5-dB SPL at 45 W; hand-rubbed oiled walnut finish with composition slate top; acoustically transparent black knit fabric grille mounted on removable frame; 25⅝" H × 19" W × 16" D .. $279

### Model Seven II Bookshelf Speaker
Three-way system with 12-in bass driver, 6½ cone mid range; and 4-in cone tweeter; crossovers at 850 and 8000 Hz; response 45-20,000 Hz; max. power 50 W; operational power range 15 to 200 W; hand-rubbed oiled-walnut veneer cabinet; removable foam grille in choice of black, brown, blue, or burnt orange; 25" H × 16" W × 14⅛" D ..... $259
**Model Nine II.** Similar to Model Seven but with 5-in cone tweeter; crossovers at 800 and 7000 Hz; response 40-20,000 Hz; max power 60 W; operational power range 12 to 250 W; hand-rubbed oiled-oak veneer cabinet; same grille choices; 26½" H × 17½" W × 15" D..... $299

### Model One II Bookshelf Speaker
Two-way system with 8-in bass driver and 4-in cone tweeter; crossover at 3000 Hz; response 50-20,000 Hz; max. power 30 W; operational power range 12 to 75 W; hand-rubbed oiled-oak veneer cabinet; brown knit fabric grille on removable frame; 21" H × 11½" W × 10⅜" D..... $129
**Model Three II.** Similar to Model One but with 10-in bass driver; 1500-Hz crossover; max. power 35 W; operational power range 10 to 100 W; black knit grille; 24" H × 12½" W × 11½" D ..... $149
**Model Five II.** Similar to Model Three except 12-in bass driver and two 4-in cone tweeters; response 45-20,000 Hz; max. power 45 W; operational power range 12 to 150 W; hand-rubbed oiled-walnut veneer cabinet; 25½" H × 14½" W × 12" D.... ..... $189

## AMERICAN ACOUSTIC LABS

### Disco Monster Speaker System
Resonant-free, rigid-wall enclosure houses two 12" extended range speakers; frequency response 18-8000 Hz; 4-ohm nominal imp.; max. input 300 W program; black vinyl finish with chrome-plated metal corners and removable grille cover; ¼" Switchcraft phone-jack connections; 50" H × 30" W × 25" D..... $550

### Studio 6 Speaker System
Three-way speaker system with four 10 woofers, 4" × 10" cast horn mid-range, and three 3" piezoelectric tweeters; frequency response 18-25,000 Hz; 8-ohm nominal imp.; crossovers at 800 and 7000 Hz; dispersion 180 degrees; min. input 20 W; max. input 200 W program; front-mounted mid-range and tweeter controls; fused for speaker protection; push-type terminal connections; walnut-grain vinyl finish; 38" H × 24" W × 15¾" D..... $429

### Disco Tower Speaker System
Three-way speaker system with two 15" woofers, die-cast horn mid-range, and four piezoelectric tweeters; frequency response 18-40,000 Hz; 8-ohm nominal imp.; crossovers at 800 and 7000 Hz; max. input 300 W rms; ¼" female phone and binding post connections; vinyl-covered cabinet with heavy-duty metal corners; 46¾" H × 21" W × 16" D..... $400

*(A Smaller, Less Expensive Version of The New Advent Loudspeaker.)*

# The Advent/1.

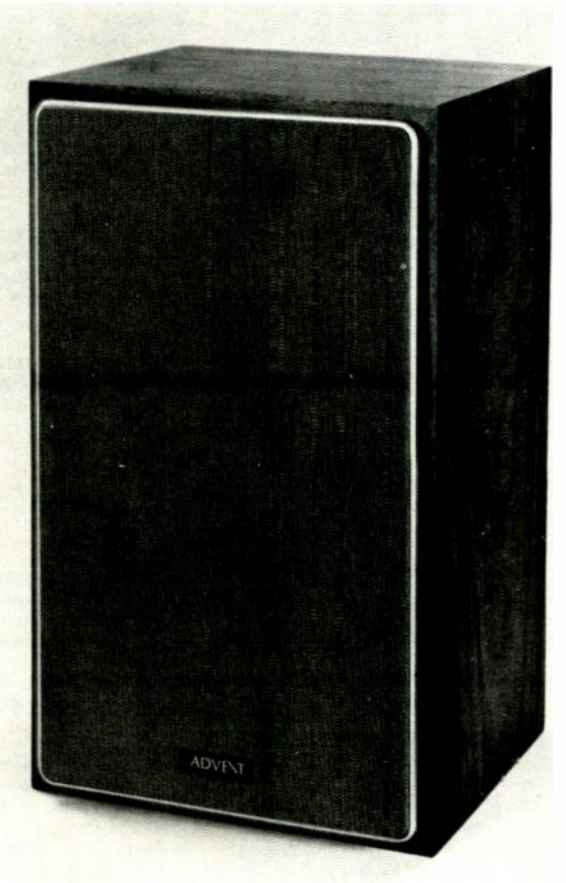
For the past several years, the most popular and most imitated speaker in this country has been the Advent Loudspeaker, which, including its newly redesigned format, is approaching the 750,000 mark in sales. Also on the best-seller list has been the Smaller Advent Loudspeaker, a system carefully designed to have the same frequency range and much the same overall performance for less money in a smaller cabinet.

The Advent/1 is a new two-way acoustic-suspension speaker system that replaces the Smaller Advent. It is a redefinition of just how close we can come to the performance of our flagship speaker in a smaller, less expensive system.

The Advent/1 is one very short step down in performance from the New Advent Loudspeaker. It uses the same low-frequency and high-frequency drivers, and the only performance difference worth quantifying is that it has 2½ dB less output at 32 Hz. Its overall sound is as close to the New Advent's as one speaker can come to another. Its power-handling capabilities are the same, and its efficiency is high enough to allow it to be well driven by low-power amplifiers and receivers.

We feel that the performance-per-dollar (and per-cubic-foot) of the Advent/1 is unsurpassed by anything we or anyone else can offer in a speaker.

Its price* is $100 to $129 (depending on cabinet finish and how far we have shipped it).




If you would like full information on the Advent/1, please send us the coupon.
Thank you.

SD-79

To: Advent Corporation,
195 Albany Street,
Cambridge, Massachusetts 02139

Please send information on the Advent/1 and a list of your dealers.

Name_____

Address_____

City_____

State_____ Zip_____

*Suggested prices, subject to change without notice.

**Advent Corporation,** 195 Albany Street, Cambridge, Massachusetts 02139.

# 10 SPEAKER SYSTEMS

### Disco One Speaker System
Three-way speaker system with 15" woofer, die-cast horn mid-range, and four piezoelectric tweeters; frequency response 30-40,000 Hz; 8-ohm nominal imp.; crossovers at 800 and 7000 Hz; max. input 200 W rms; ¼" female phone and binding post connections; 29" H × 21" W × 16" D ..... $325

### Studio 4 Speaker System
Three-way speaker system with 15" woofer, 4" × 10" cast horn mid-range, and three 3" piezoelectric tweeters; frequency response 20-25,000 Hz; 8-ohm nominal imp.; crossovers at 800 and 7000 Hz; dispersion 180 degrees; front-mounted mid-range and tweeter controls; min. input 20 W; max. input 150 W program; fused for speaker protection; push-type terminal connections; walnut-grain vinyl finish; 31" H × 24" W × 15¾" D ..... $319

### 2001 Four-Way Speaker System
Incorporates 10" woofer, 8" auxiliary bass driver, 4" phenolic ring mid-range, and 3" piezoelectric tweeter; frequency response 25-40,000 Hz; 8-ohm nominal imp.; crossovers at 600, 2000, and 5000 Hz; dispersion 180 degrees; min. input 10 W; max. input 80 W program; front-mounted contour control; push-type terminal connections; walnut-grain vinyl finish; 37" H × 13" W × 11" D ..... $219

### Monster Tweeter Array
Incorporates 14 piezoelectric tweeters; frequency response 7000-40,000 Hz; max. input 300 W program; 11¼" H × 30 W × 11¾" D ..... $300

### Studio 3 Speaker System
Three-way speaker system with 12" woofer, 4" × 10" cast horn mid-range, and 3" piezoelectric tweeter; frequency response 25-25,000 Hz; 8-ohm nominal imp.; crossovers at 1000 and 7000 Hz; dispersion 180 degrees; min. input 10 W; max. input 100 W program; front-mount mid-range and tweeter controls; fused for speaker protection; push-type terminal connections; walnut-grain vinyl finish; 26" H × 15" W × 13" D ..... $199

### Pro Tweeter Array
Incorporates eight piezoelectric tweeters; frequency response 7000-40,000 Hz; max. input 200 W; supplied with vinyl-covered carrying case with metal-reinforced corners; 11¼" H × 16¾" W × 11¾" D ..... $200

### Studio 2 Speaker System
Three-way speaker system with 10" woofer, 2" cone-type phenolic ring mid-range, and 3" piezoelectric tweeter; frequency response 27-25,000 Hz; 8-ohm nominal imp.; crossovers at 4000 and 7000 Hz; dispersion 180 degrees; min. input 10 W; max. input 50 W program; push-type terminal connections; fused for speaker protection; walnut-grain vinyl finish; 25" H × 13½" W × 10½" D ..... $149

### Studio 1 Speaker System
Two-way speaker system with 8" woofer and 2" cone-type phenolic ring tweeter; frequency response 35-20,000 Hz; 8-ohm nominal imp.; crossover at 4000 Hz; dispersion 160 degrees; min. input 10 W; max. input 30 W program; push-type terminal connections; walnut-grain vinyl finish; fused for speaker protection; 22" H × 11" W × 10" D ..... $89

## AMERICAN MONITOR

### 18xp Speaker System
Four-way Helmholtz-port speaker system with 15-in woofer, two 4½-in cone midrange drivers, two 2-in cone tweeters, and two 3-in piezo super tweeters; crossovers at 1500, 7500, and 12,000 Hz; 4-ohm impedance; frequency response 27-30,000 Hz; efficiency 94-dB SPL/W/m; min. input 10 W; midrange and tweeter level controls; oiled walnut finish with brown cloth grille; 32" H × 20" W × 16½" D ..... $600

### 16x Speaker System
Four-way Helmholtz-port bookshelf speaker system with 12-in woofer, 4½-in cone midrange, 2-in cone tweeter, and 3-in piezo super tweeter; crossovers at 1500, 7500, and 12,000 Hz; 8-ohm impedance; frequency response 32-30,000 Hz; efficiency 93.5-dB SPL/W/m; min. input 10 W; midrange and tweeter level controls; oiled walnut finish with brown cloth grille; 26½" H × 15" W × 13½" D ..... $400

### 14 Speaker System
Three-way Helmholtz-port speaker system with 12-in woofer, 4½-in cone midrange, and 2-in cone tweeter; crossovers at 1500 and 7500 Hz; 8-ohm impedance; frequency response 30-20,000 Hz; efficiency 93.5-dB SPL/W/m; min. input 10 W; midrange and tweeter level controls; oiled walnut finish with brown cloth grille; 37½" H × 14½" W × 12½" D ..... $330

### 12x Speaker System
Three-way Helmholtz-port speaker system with 12-in woofer, 4½-in cone midrange, and 2-in cone tweeter; crossovers at 1500 and 7500 Hz; 8-ohm impedance; frequency response 35-20,000 Hz; efficiency 93.5-dB SPL/W/m; min. input 10 W; midrange and tweeter level controls; vinyl finish with brown cloth grille; 25½" H × 14¼" W × 11⅓" D ..... $250

### 10x Speaker System
Two-way Helmholtz-port bookshelf speaker system with 10-in woofer and 2-in cone tweeter; crossover at 2500 Hz; 8-ohm impedance; frequency response 30-20,000 Hz; efficiency 92-dB SPL/W/m; min. input 10 W; tweeter level control; vinyl finish with brown cloth grille; 25½" H × 14¼" W × 11⅓" D ..... $200

### 8x Speaker System
Two-way acoustic-suspension speaker system with 8-in woofer and 2-in cone tweeter; crossover at 2500 Hz; 8-ohm impedance; frequency response 35-20,000 Hz; efficiency 91.5-dB SPL/W/m; min. input 10 W; tweeter level control; vinyl finish with brown cloth grille; 23" H × 12" W × 9½" D ... $150

### 6 Speaker System
Two-way acoustic-suspension speaker system with 8-in woofer and 2½-in cone tweeter; crossover at 2500 Hz; 8-ohm impedance; frequency response 50-18,500 Hz; efficiency 89-dB SPL/W/m; min. input 5 W; vinyl finish with brown cloth grille; 17¾" H × 9⅞" W × 8¼" D ..... $100

## AUDIOANALYST

### Anthem Array Speaker System
Floor-standing speaker system with 10-in subwoofer, 10-in woofer, 4½-in mid-range, 1-in dome tweeter, and piezoelectric super tweeter; frequency response 28-20,000 Hz ±3 dB; max. input 90 W sine wave for 5 min. (400 Hz); min. input 20 W continuous; sensitivity 10 W random noise for 92-dB SPL (at 6 ft); dispersion 180 degrees; separate fusing for mid-range and tweeter; sealed woofer chambers and acoustically transparent foam housing for mid-range and tweeters; removable grille; 44" H × 15" W × 15" D ..... $599

### A-200X Speaker System
Four-way floor-standing speaker system with 12-in high-compliance woofer, 5-in mid-range (in separate subchamber), 2-in tweeter, and two 1½-in wide-dispersion angle-mounted super tweeters; frequency response 38-20,000 Hz ±3 dB; max. input 100 W; dispersion 180 degrees; crossovers at 800, 2000, and 7500 Hz; 8-ohm impedance; mid-range and tweeter level controls; vinyl cabinet and black grille cloth; 27" H × 15" W × 12¾" D ..... $299

### A-100X Speaker System
Three-way bookshelf speaker system with 10-in high-compliance woofer, 2-in cone mid-range, and 1½-in wide-dispersion tweeter; frequency response 40-20,000 Hz ±3 dB; max. input 100 W; dispersion 160 degrees; crossovers at 1500 and 7500 Hz; 8-ohm impedance; mid-range and tweeter level controls; walnut-grain vinyl finish with white grille cloth; 24⅜" H × 13¾" W × 12" D ..... $169

### A-66 Speaker System
Two-way bookshelf speaker system with two 4½-in woofers and 2-in tweeter; frequency response 55-18,000 Hz ±3 dB; dispersion 120 degrees; vented enclosure with walnut-grain vinyl finish and removable sculptured foam grille; 20" H × 9⅞" W × 9" D ..... $99

### PhaseMatrix M8 Speaker System
Four-way speaker system with 12-in polymer cone woofer, 4½-in foam-damped mid-range, 1-in tweeter, and ½-in tweeter; frequency response 27-25,000 Hz ±3 dB; max. input 200 W; min. input 15 W; sensitivity 1 W for 88 dB (at 1 m); crossovers at 600, 2000, and 15,000 Hz; 8-ohm nominal impedance; front-mounted three-position midrange and tweeter contour controls; walnut veneer, lacquer finish with removable black grille; 27½" H × 15½" W × 11¾" D ..... $359

### PhaseMatrix M6 Speaker System
Three-way speaker system with 10-in polymer cone woofer, 4½-in foam-damped mid-range, and 1-in tweeter; frequency response 30-20,000 Hz ±3 dB; max. input 150 W; min. input 15 W; sensitivity 1 W for 88 dB (at 1 m); crossovers at 700 and 2000 Hz; 8-ohm nominal impedance; front-mounted mid-range and tweeter contour controls; walnut veneer, lacquer finish with removable black grille; 24⅜" H × 13¾" W × 11¾" D ..... $269

### PhaseMatrix M4X Speaker System
Two-way speaker system with 10-in polymer cone woofer and 1-in tweeter; frequency response 38-20,000 Hz ±4 dB; max. input 100 W; min. input 10 W; sensitivity 1 W for 90 dB (at 1 m); crossover at 2000 Hz; 8-ohm nominal impedance; vinyl cabinet with removable black grille; 21" H × 12¼" W × 10½" D ..... $160

### PhaseMatrix M2 Speaker System
Two-way speaker system with 6½-in polymer cone woofer and 1-in tweeter; frequency response 46-20,000 Hz ±4 dB; max. input 50 W; min. input 10 W; sensitivity 1 W for 92 dB (at 1 m); crossover at 3000 Hz; 4-ohm nominal impedance; walnut veneer, lacquer finish with removable black grille; 16½" H × 9⅞" W × 9¼" D ..... $139

## AUDIO LAB

### AL60 Speaker System
Three-way speaker system with 12-in woofer, 7-in cone midrange, and phenolic dome tweeter; frequency response 40-20,000 Hz; 140 W input capacity; midrange and tweeter level controls.... $300

### AL40 Speaker System
Four-way speaker system with 10-in woofer, 1-in passive radiator subwoofer, 5-in cone midrange, and phenolic dome tweeter; frequency response 40-20,000 Hz; 100 W input capacity; tweeter level control ..... $225

### AL30 Speaker System
Three-way speaker system with 8-in woofer, 8-in passive radiator, and phenolic dome tweeter; frequency response 55-20,000 Hz; 65 W input capacity; tweeter level control ..... $149

### AL20 Speaker System
Two-way speaker system with 8-in woofer and phenolic dome tweeter; frequency response 60-20,000 Hz; 50 W input capacity; tweeter level control .. $99

## AUDIONICS OF OREGON

### LO-2 Speaker System
Linear-phase speaker system using a combination

of Foundation Bass subwoofers and Vanishing Point satellites; optional biamping; available in six modes: VP satellite pair; FB subwoofer; VP satellite pair and one FB subwoofer; VP satellite pair and two FB subwoofers; VP satellite pair and one FB subwoofer with biamplification; pair of VP satellites and two FB subwoofers with biamplification. Vanishing Point satellites feature minimum-diffraction system and distortion-free crossover (mylar capacitors and air-core inductors used); Foundation Bass subwoofers feature Theile-Small design with Bessel filter alignment, push-pull woofer placement, and response to 18 Hz −3 dB with optional active crossover. Frequency response 75-20,000 Hz ±1.5 dB (Vanishing Points), 32-400 Hz ±1.5 dB (Foundation Bass).....approx. $1000/unit

**T-52 Speaker System**
Three-way dynamic vented speaker system with 10-in high-compliance woofer, 6-in mid-range, and 1-in cloth-dome tweeter; frequency response 32-22,000 Hz ±2 dB; crossovers at 280 and 2500 Hz incorporated in parametric integration network; min. input 10 W continuous; max. input 100 W instantaneous peak; 4-ohm nominal impedance; dispersion 100° vertical, 120° horizontal; high-frequency and mid-range level controls; cabinet: rosewood- or teakwood-grain laminate on high-density particle board with sculptured grille cloth; 48" H × 11½" W × 15½" D.....$365

## AUDIO PRO by INTERSEARCH

**B2-50 Amplified Subwoofer**
Connects speaker coil to amplifier electronically; two 7-in cone drivers with ¾-in throw-in push-pull

arrangement; frequency response 20-200 Hz −3 dB; dist. 3% from 20-200 Hz; 100-dB SPL/½ space/m; sensitivity adjustable 0-100% (96-dB SPL at 50 mV); 150 W power; built in amplifier; DIN connectors for left and right speaker channels; separate volume and crossover controls; power on/off signal-actuated in automatic mode; 19" H × 18" W × 17" D.....$695

**5-40 Speaker System**
Three-way, floor-standing, acoustic suspension speaker system with two 8-in cone woofers, one 5-in cone midrange and two horn-loaded piezoelectric tweeters; crossovers at 1500 and 4000 Hz; 4-ohm impedance; frequency response 28-20,000 Hz (DIN); 91-dB SPL/W/3 ft; input range 90-140 W continuous; dist. less than 0.8% from 100-20,000 Hz at sound pressure level; 23¾" H × 15⅛" W × 12" D.....$295

**4-40 Speaker System**
Two-way, floor-standing, acoustic-dipole speaker system with two 8-in cone woofers and 2 horn-loaded piezoelectric tweeters; crossover at 3000 Hz; 4-ohm impedance; frequency response 30-20,000 Hz (DIN); 98-dB SPL/W/3 ft; input range 70-120 W continuous; dist. less than 0.8% from 100-20,000 Hz at SPL; 26½" H × 12" W × 12½" D.....$265

**3-25 Speaker System**
Two-way speaker system with 8-in woofer, 8-in passive radiator for bass tuning, and horn-loaded piezoelectric tweeter; crossover at 3000 Hz; 4-ohm impedance; frequency response 40-20,000 Hz (DIN); 90 dB SPL/W/3 ft; input range 35-60 W continuous; dist. less than 1.0% from 100-20,000 Hz at SPL; 20⅝" H × 12⅞" W × 9⅝" D.....$157

## AUDIOTEX

**94-400 Audio Trek IV Speaker System**
Three-way air suspension speaker system with 12-in woofer, 4½-in cone mid-range, and 1¾-in cone tweeter; frequency response 35-22,000 Hz; min. input 10 W; 8-ohm nominal impedance; walnut vinyl veneer with brown foam grille; 24" H × 15" W × 10" D.....$101

**94-300 Audio Trek III Speaker System**
Two-way air suspension speaker system with 10-in woofer, 2¾-in cone cone tweeter; frequency response 40-22,000 Hz; min. input 10 W; 8-ohm nominal impedance; walnut vinyl veneer with brown foam grille; 20" H × 12" W × 10" D.....$72

**94-200 Audio Trek II Speaker System**
Two-way air suspension speaker system with 8-in woofer, 1¾-in cone tweeter; frequency response 35-22,000 Hz; min. input 2 W; 8-ohm nominal impedance; walnut vinyl veneer with brown foam grille; 18½" H × 11½" W × 7½" D.....$54

**94-100 Audio Trek I Speaker System**
Two-way air suspension speaker system with 6-in woofer, 3-in cone tweeter; frequency response 50 20,000 Hz; min. input 1 W; 8-ohm nominal impedance; walnut vinyl veneer with brown foam grille; 17" H • 10" W × 6" D.....$45

**30-5120 Omni-Sound Speaker System**
Two-way air suspension bookshelf speaker system with 4-in wocfer and 1-in soft dome tweeter; frequency response 110-20,000 Hz ±6 dB; min. input 1 W; 4-ohm nominal impedance; black aluminum with black aluminum grille; 7¼" H × 4⅜" W × 4½" D.....$119 pr.

## AUDIO-VISUAL CONCEPTS

**Cabasse Sampan 311 Speaker System**
Three-way acoustic-suspension speaker system with 30-cm woofer, 5.5-cm dome midrange, and 2.5-cm dome tweeter; crossovers at 700 and 5500 Hz; 8-ohm impedance; frequency response 40-20,000 Hz ±3 dB; efficiency 95-dB SPL/W/m; min. input 10 W; walnut finish with brown cloth grille; 64 cm H × 40 cm W × 31 cm D.....$850

**Cabasse Brick 235 Speaker System**
Two-way acoustic-suspension speaker system with 21-cm woofer and 2.5-cm dome tweeter; crossover at 6500 Hz; 8-ohm impedance; frequency response 60-20,000 Hz ±4 dB; efficiency 93-dB SPL/W/m; min. input 10 W; walnut finish with brown cloth grille; 64 cm H × 30 cm W × 26 cm D.....$395

## AVID

**Model 330 Speaker System**
Three-way acoustic-suspension floor-standing speaker system with 12-in forward-aligned woofer,

2-in air-suspension midrange, and 1-in fabric dome tweeter; crossovers at 500 and 6000 Hz; 8-ohm nominal impedance; frequency response 35-20,000 Hz ±3 dB; input range 15-250 W/ch continuous (program); two front-mounted midrange and high-frequency balance switch controls; walnut

veneer cabinet with dark brown grille; 30¼" H × 17" W × 10¼" D..... $375
**Model H/200.** Speaker stands..... $60 pr.

### Model 230 Speaker System
Three-way bookshelf speaker system with 10-in woofer, 4½-in midrange, and 1-in fabric dome tweeter; crossovers at 475 and 4000 Hz; 8-ohm nominal impedance; frequency response 40-20,000 Hz ±3 dB; input range 15-150 W/ch continuous (program); two front-mounted midrange and high-frequency balance switch controls; walnut vinyl finish with dark brown grille; 25" H × 15" W × 10" D..... $215

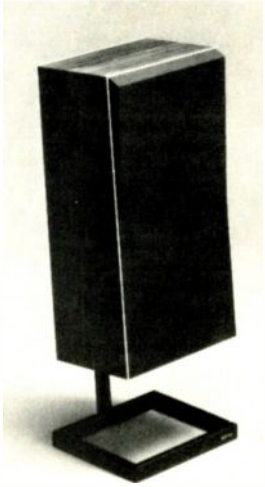
### Model 102a Speaker System
Two-way air-suspension bookshelf speaker system with 10-in woofer and 1-in plastic dome tweeter; crossover at 2200 Hz (12 dB/octave); 8-ohm nominal impedance; frequency response 44-18,000 Hz ±3 dB; input range 15-100 W continuous (program); front-mounted three-position high frequency level control; walnut vinyl finish with dark brown grille: 25" H × 15" W × 9⅜" D..... $150

### Model 100a Speaker System
Two-way air-suspension speaker system with 8-in woofer and 1¾-in cone tweeter; crossover at 2500 Hz (6 dB/octave); 8-ohm nominal impedance; frequency response 47-18,000 Hz ±3 dB; input range 15-75 W continuous (program); three-position high-frequency level control; walnut vinyl finish with dark brown grille; 23¼" H × 13½" W × 9½" D..... $115

### Model 80a Speaker System
Two-way air-suspension bookshelf speaker system with 8-in woofer and 1¾-in cone tweeter; crossover at 3000 Hz (12 dB/octave); 8-ohm nominal impedance; frequency response 55-17,000 Hz ±3.5 dB; input range 8-60 W continuous (program); walnut vinyl cabinet with dark brown cloth grille; 19½" H × 12" W × 8½" D..... $85

## BANG & OLUFSEN

### Beovox Phase-Link M-100 System
Four-way bass reflex speaker system with 12-in bass driver, 4-in Phase-Link, filler driver, 2½-in dome



mid-range, 1½-in dome tweeter, and ¾-in super dome tweeter; frequency response 25-20,000 Hz +4/−8 dB; harmonic dist. 1% max.; max. input 100 W continuous, 150 W music power; 4- to 8-ohm impedance; 120° dispersion; 29⅜" H × 15⅜" W × 12" D..... $980 pr.

### Beovox Phase-Link M-70 System
Three-way pressure chamber speaker system with 10-in bass driver, 5-in Phase-Link, filler driver, 2½-in dome mid-range, and 1-in dome tweeter; frequency response 27-20,000 Hz +4/−8 dB; harmonic dist. 1% max.; max. input 70 W continuous, 120 W music power; 4- to 8-ohm impedance; 120° dispersion; 25⅜" H × 13⅞" W × 10¾" D. $790 pr.

### Beovox Phase-Link S-75 System
Two-way pressure chamber speaker system with 10-in bass driver, 5-in Phase-Link filler driver, 2-in dome mid-range, and 1-in dome tweeter; frequency response 36-20,000 Hz +4/−8 dB at 1% max. harmonic dist.; max. input 75 W continuous, 150 W music power; impedance 4-8 ohms; 120-degree dispersion; 23⅛" H × 12½" W × 9¾" D...$500 pr.

### Beovox Phase-Link P-45 System
Two-way pressure chamber speaker system with two 5-in bass drivers, 3½-in Phase-Link, filler driver, and 1-in dome tweeter; frequency response 40-20,000 Hz +4/−8 dB; harmonic dist. 1% max.; max. input 45 W continuous, 75 W music power; 4- to 8-ohm impedance; 120° dispersion; 25⅜" H × 13⅜" W × 5½" D..... $400 pr.

### Beovox Phase-Link P-30 System
Two-way pressure chamber speaker system with 6½-in bass driver and 1-in dome tweeter; frequency response 49-20,000 Hz +4/−8 dB; harmonic dist. 2% max.; max. input 30 W continuous, 50 W music power; 4- to 8-ohm impedance; 120° dispersion; 21½" H × 11½" W × 4¼" D..... $300 pr.

### Beovox Phase-Link S-35 System
Two-way pressure chamber speaker system with 8-in bass driver and 1-in dome tweeter; frequency response 49-20,000 Hz +4/−8 dB with 2% max. HD.; max. input 35 W continuous, 50 W music power; impedance 4-8 ohms; 120-degree dispersion, 18¾" H × 10¼" W × 7¾" D..... $240 pr.

### Beovox Phase-Link S-25
Two-way pressure chamber speaker system with 6½-in bass driver and 2-in dome tweeter; frequency response 60-18,000 Hz +4/−8 dB with 2% max. HD; max. input 25 W continuous, 40 W music power; impedance 4-8 ohms; 120-degree dispersion; 16⅛" H × 8⅝" W × 6" D..... $190 pr.

## B.E.S.

### D280w Sound Module Speaker System
Four-way speaker system activating four separate polymer diaphragms 3400 in ² total radiating surface to disperse sound 360 × 360-degrees; frequency response 30-20,000 Hz; 10-W efficiency for 96-dB SPL; 8-ohm nominal impedance; power input range from 30-500 W/ch continuous; crossover frequencies at 1000, 4000 and 10,000 Hz; high frequency and mid-range controls; 76" H × 26" W × 3¾" D..... $997

### D190w Sound Module System
Four-way speaker system activating two separate polymer diaphragms 1700 in² total radiating surface to disperse sound 360 degrees; frequency response 35-20,000 Hz; 12 W efficiency for 96 dB SPL; 4-ohm nominal impedance; power input range 30-250 W/ch continuous; crossover frequencies 1000, 4000, and 10,000 Hz; 40½" H × 26" W × 3¾" D..... $649

### D120w Speaker System
Geostatic four-way speaker system with three dynamic and one piezoelectric drivers activating 1700 in² polymer diaphragm pulsating plane; frequency response 35-20,000 Hz; efficiency 12 W for 96-dB SPL at 2 m; max. input 100 W continuous (8 hrs, 400 Hz); 4-ohm nominal impedance; recommended amplifier power 30-250 W continuous; crossovers at 800, 4000, and 10,000 Hz; high-frequency and mid-range level controls; 52½" H × 20" W × 3¾" D..... $599

### D75w Speaker System
Geostatic four-way speaker system activating 1060 in² polymer diaphragm pulsating plane; frequency response 38-20,000 Hz; efficiency 10 W for 96-dB SPL; max. input 85 W continuous (8 hours, 400 Hz); input range from 25-230 W continuous; 4-ohm nominal impedance; crossover frequencies at 1000 and 9000 Hz; 31½" H × 21¾" W × 3¾" D... $449

### D60w Speaker System
Geostatic three-way speaker system with two dynamic and one piezoelectric drivers activating 850 in² polymer diaphragm pulsating plane; frequency response 40-20,000 Hz; efficiency 12.5 W for 96-dB SPL at 2 m; max. input 60 W (8 hrs, 400 Hz); 8-ohm nominal impedance; recommended amplifier power 25-150 W continuous; crossovers at 800 and 10,000 Hz; high-frequency and mid-range level controls; 28" H × 20" W × 3¾" D..... $299

### U60 Speaker System
Geostatic two-way speaker system with two drivers activating 850 in² polymer diaphragm pulsating plane; frequency response 42-18,000 Hz; 8-ohm impedance; recommended amplifier power 15-100 W continuous; crossover at 800 Hz; 25⅜" H × 17¾" W × 3¾" D..... $199

### U50 Speaker System
Geostatic two-way speaker system activating 530 in² polymer diaphragm pulsating plane; frequency response 50-20,000 Hz; efficiency 12 W for 96-dB SPL; max. input 40 W continuous (8 hrs, 400 Hz); 4-ohm nominal impedance; crossover frequency 3000 Hz; recommended amplifier power from 15-60 W; 21½" H × 14" W × 3¾" D..... $139

## BEVERIDGE

### Cylindrical Sound System 2SW-1
Incorporates direct-coupled amplifier, full-range electrostatic transducer with two specially matched dynamic subwoofers, lens, and 12-ft vertical line source enclosure aperture; optimized electrostatic speakers for 70-15,000 Hz range; dynamic subwoofers for 30-70 Hz; supplied with Beveridge Control Module with spectrum slope control, bass environmental control, and lateral stereo control; frequency response 25-18,000 Hz ±2 dB; crossover frequency at 90 Hz; subwoofer power supplied by electrostatic speaker's amplifiers; oiled walnut finish with black foam grille; 78" H × 24" W × 15" D..... $7000

### Bev Jr Sound System
Full-range electrostatic transducer; 10-ft vertical line source enclosure aperture; crossover frequency 200 Hz; 8-ohm impedance; frequency response from 35-18,000 Hz ±2 dB; 50 W min. input; sensitivity 88 dB SPL at 1-W input from 100-10,000 Hz; oiled walnut finish with black foam grille; 72" H × 17" diameter..... $2000

## B.I.C.

### Model 66 Speaker System
Four-way speaker system with heavy-duty 12-in woofer and 5-in acoustically-isolated midrange, twin-tweeter offset array; max. input 100 W; sensitivity 91 dB SPL/W/m; max. SPL 111 dB; limited action tonal balance control; oil-stained walnut veneer with brown removable stretch cloth grille; 26¼" H × 15¾" W × 13½" D..... $269

### Model 44 Speaker System
Three-way shelf/floor-standing speaker system with long-throw 10-in woofer, 5-in midrange, and domed super tweeter; max. input 75 W; sensitivity 89 dB SPL/W/m; max. SPL 109 dB; limited action tonal balance control; walnut vinyl with brown cloth grille; 25½" H × 14½" W × 10½" D..... $180

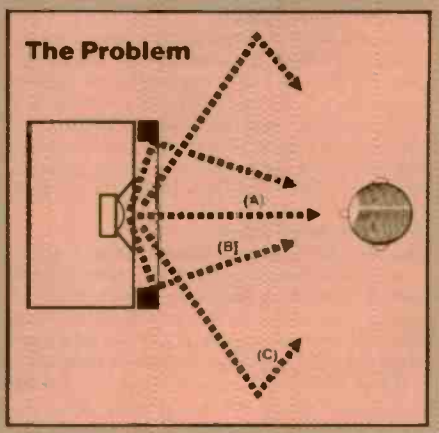
### Model 22 Speaker System
Three-way speaker system with 8-in woofer, 5-in midrange, and domed super tweeter; max. input 60 W; sensitivity 87 dB SPL/W/m; max. SPL 107 dB; walnut grain vinyl with brown stretch cloth grille; 22" H × 13" W × 10" D..... $135

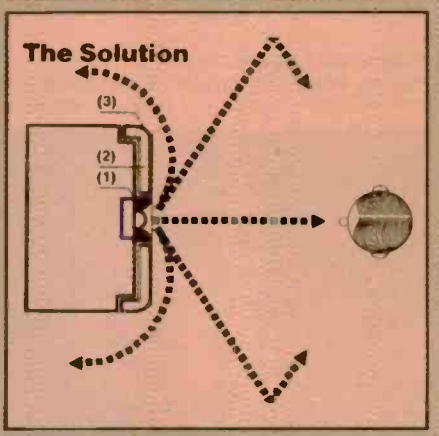
### Model 11 Speaker System
Two-way speaker system with 8-in high excursion woofer and phenolic-ringed tweeter; max. input 45 W; sensitivity 85 dB SPL/W/m; max SPL 101 dB; walnut grain vinyl with brown stretch cloth grille; 18½" H × 11" W × 9" D..... $85

# Unboxed Sound

## Introducing minimum diffraction loudspeakers™ by Avid.

Unwanted cabinet/grille diffraction effects **(B)** give listener clue as to the size/shape of sound source—in this case a box. First arrival signals **(A)** locate source, while brain uses delayed room reflections **(C)** to identify listening environment




The careful integration of special engineered Optimum Dispersion Couplers™ **(1)**, and solid front grille panels **(2)** with rolled edge design **(3)**, significantly reduces the unwanted cabinet diffraction effects—a principal contributor to "boxy" sound. These design principals are incorporated in all Avid Minimum Diffraction Loudspeakers™

In the quest for accuracy, cabinet loudspeakers, regardless of price, still generally suffer from a common failure—they still sound like loudspeakers, or more precisely their sound obviously comes from a box.

**Your brain hears the box.**

Without going too deeply into psycho-acoustics, cabinet speakers tell us their sound is emanating from a box because the brain has been conditioned to recognize the characteristics...size, shape, etc....of any sound source.

What creates the boxy effect? Diffracted or reradiated sound waves, those that bounce off the sharp edges of the speaker and grille assembly, are the clues interpreted by the brain as "box-like."

**No diffraction, no box.**

The problem is graphically illustrated in the drawings. By eliminating sharp cabinet edges and grille panel obstructions, you reduce diffraction effects...which means you eliminate the boxiness of the sound. And that's exactly what we've done with our new line of Avid Minimum Diffraction Loudspeakers™

**To open the box, we closed the cover.**

The solution was deceivingly simple.

By engineering the drivers, cabinet enclosure and, importantly, the grille assembly to create a totally integrated acoustic system, we eliminated cabinet diffraction and the boxy sound quality inherent in typical cabinet loudspeakers.

Our new tweeter and midrange drivers have specially engineered coupling devices (we call them Optimum Dispersion Couplers™) which transmit sound waves with minimum diffraction.

"Solid front" grille panels perfectly mate with each coupler eliminating grille panel diffraction. And, the grille panels have rounded edges creating a smooth, gradual transition from the grille to the cabinet, significantly reducing cabinet edge diffraction—a major cause of boxy sound.

These three simple, but audibly significant, features, coupled with Avid's critically acclaimed accuracy, assure you a new level of performance and sense of reality.

Of course there's a lot more to the Avid story—like our new drivers and Q-Span testing. Write us for literature and a full description. We invite your comparison.

AVID.

10 Tripps Lane
East Providence
R.I. 02914

CIRCLE NO. 15 ON READER SERVICE CARD

# 10 SPEAKER SYSTEMS

## BLACKMAX SYSTEMS

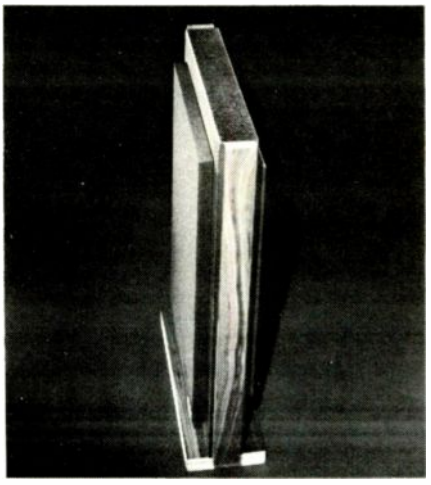
**B50 Speaker System**
Four-way bass-reflex floor-standing speaker system with 10-in woofer, 10-in sub-bass radiator, 5-in midrange in "DiaMax-tm" coupling chamber and 1-in soft dome tweeter; crossovers at 65, 1250, and 4500 Hz; 8-ohm nominal impedance; frequency response 40-20,000 Hz ±3 dB; efficiency 89 dB/W/m; input range 10-200 W; low-diffraction column design; walnut top and black cloth wrap-around grille; optional base; 50" H × 12" W × 12" D. $300

**B40 Speaker System**
Three-way bass-reflex floor-standing speaker system with 10-in woofer, 5-in midrange in "DiaMax-tm" coupling chamber, and 1-in soft dome tweeter; crossovers at 1250 and 4500 Hz; 8-ohm nominal impedance; frequency response 50-20,000 Hz ±3 dB; efficiency 88 dB/W/m; input range 10-150 W; walnut top and black cloth wrap-around grille; optional base; 38" H × 12" W × 12" D..... $230

**B30 Speaker System**
Two-way bass-reflex floor-standing speaker system with 10-in woofer and 1-in soft dome tweeter; crossover at 2800 Hz; 8-ohm nominal impedance; frequency response 60-20,000 Hz ±4 dB; efficiency 89 dB/W/m; input range 10-100 W; walnut top and black cloth wrap-around grille; optional base; 26" H × 12" W × 12" D ..... $160

## BML

**Tracer 2001 Sound Odyssey**
Four-way floor-standing planar column speaker system with 8¼-in woofer, two staggered-resonance



Bextrene ABRs, and one bimorph rear-sealed VHF driver; frequency response 24-22,000 Hz +6 dB/−4 dB; textured black acrylic with oiled-walnut finish racks and base (white lacquer case and rosewood racks and base optionally priced) ..... $700

**Tracer 1000 Sound Window**
Four-way sealed planar column speaker system featuring DualPhase coupling with 7-in bextrene ABR, 7½-in lightweight woofer, and lead-zirconate, lead-titanate bimorph VHF driver; input range from 20-200 W continuous; white lacquer exterior with oiled walnut base; camel beige grille..... $359

**Tracer 1001 Sound Window**
Three-way floor-standing planar column speaker system with 8-in woofer, 8-in ABR, and horn-loaded solid state tweeter; dual phase coupling of main drivers; frequency response 35-20,000 Hz +3/−5 dB; max. input 100 W continuous; min. input 25 W continuous; finished in black acrylic with natural oiled walnut sides and base with ebony grille; 33" H × 20" W × 5" D ..... $340

**Model 10 Speaker System**
2-way bookshelf speaker system with shunted coil for tapered acoustic response; frequency response 43-20,000 Hz; input range from 5-100 W continuous; oiled walnut finish with cocoa grille; 22" H × 10" W × 8" D ..... $120

## BOLIVAR

**Model 64 Speaker System**
Three-way ducted-port floor-standing speaker system with 10-in woofer, 5-in mid-range, and 2-in cone tweeter; crossovers at 800 and 3000 Hz; 4-ohm impedance; input range 10-125 W; continuously variable mid-range and high-frequency level controls; vertical component placement; 6 dB more efficient than acoustic suspension speakers; Espresso or Tennessee hickory finish of 100% shielded stain-resistant vinyl; 26½" H × 14" W × 12⅜" D ..... $190

**Model 18 Speaker System**
Three-way ducted-port floor-standing speaker system with 8-in woofer, 5-in mid-range, and 2-in cone tweeter; crossovers at 1000 and 3000 Hz; 4-ohm impedance; input range 10-100 W; continuously variable mid-range and high-frequency level controls; vertical component placement; 3 dB more efficient than acoustic suspension speakers; Espresso or Tennessee hickory finish of 100% shielded stain-resistant vinyl; 23" H × 12½" W × 11" D..... $145

**Model 125 Speaker System**
Two-way ducted-port floor-standing speaker system with 8-in cone woofer and 2-in cone tweeter; crossover at 2000 Hz; 4-ohm impedance; efficiency 86-dB SPL/W/m; input 10-80 W/ch; Tennessee hickory or Espresso finish of 100% shielded stain-resistant vinyl; 23" H × 12½" W × 11" D..... $115

## BOSE

**901 Series III Speaker System**
Direct/reflecting speaker system with Active Equalizer. Eight rear-facing and one front-facing matched full-range speakers; min. input 10 W; 8-ohm impedance; cabinet utilizes injection molded core with particle board external panels and walnut veneer finish; 12⅜" H × 21" W × 13" D. 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; equalizer 2½" H × 11" W × 5" D; speaker 12⅜" H × 21" W × 13" D..... $765 pr.
Without equalizer ..... $665 pr.
**901 Speaker Pedestals.** Slim, contemporary speaker stands designed for 901 Series III speakers.
Black ..... $50 pr.
Chrome..... $60 pr.
**901 Speaker Comparison Box.** Switching box from Bose speakers with equalizer to other speakers or to headphones without equalizer ..... $35

**601 Speaker System**
Direct/reflecting speaker system with two 8-in woofers and four 3-in tweeters; crossover at 2000 Hz; min. input 20 W; 8-ohm impedance; two-position symmetry control; supplied in mirror-image pairs; walnut veneer laminated cabinet; 25½" H × 15" W × 13" D ..... $279

**501 Speaker System**
Direct/reflecting speaker system with 10-in woofer and two 3½ in tweeters; crossover at 1500 Hz; min. input 15 W/ch continuous, max. input 100 W/ch continuous; 4-ohm impedance; walnut-grain vinyl finish cabinet 24" H × 14½" W × 14½" D .... $199

**301 Speaker System**
Direct/reflecting 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; particle board cabinet with walnut-grain vinyl veneer finish; 10½" H × 17" W × 9½" D..... $109

## BOZAK

**CS-310B Concert Grand Contemporary**
Incorporates four B-199B woofers, two B-209B mid-range 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 × 36" W × 19" D ..... $1200
**CS-410CL.** Same as CS-310B except Classic cabinet ..... $1250
**CS-410M.** Same as CS-310B except Moorish styling ..... $1300

**Symphony No. 1 CS-4000A Modern**
Infinite-baffle, three-way floor-standing system incorporating two 12-in woofers, 6½-in mid-range, and eight 2-in tweeters in vertical column; frequency response 35-20,000 Hz; crossovers at 400 and 2500 Hz at 6 dB/octave; 8-ohm impedance; max. input 150 W program; walnut enclosure; 44½" H × 26¼" W × 15⅝" D..... $700
**CS-4000 CL.** Same as CS-4000A with Classic styling..... $800
**CS-4000M.** Same as CS-4000A with Moorish styling..... $830
**CS-4005A.** Same as CS-4000A except low-boy enclosure; 27⅝" H × 36" W × 20" D ..... $730

**Monitor C (B-407A) Speaker System**
Incorporates four 8-in aluminum-cone bass/mid-range drivers and eight 2-in tweeters mounted in sector-of-sphere configuration; frequency response 30-20,000 Hz; crossover at 2000 Hz at 6 dB/octave; 8-ohm impedance; max. input 150 W program; 40¼" H × 18½" W × 15" D ..... $600

**Concerto VII CS-501A Speaker System**
Three-way floor-standing system with 12-in high compliance bass driver, 6½-in mid-range, 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 × 20½" W × 16" D..... $430

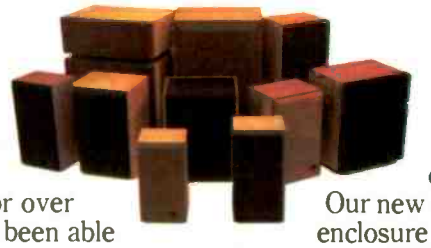
**LS-400 Speaker System**
Three-way floor-standing speaker system with 12-in woofer, 6-in mid-range, and two tweeters; frequency response 40-20,000 Hz; 8-ohm impedance; power input range 20-80 W; phase corrected crossovers 6 dB/octave at 800 and 2500 Hz; three-position brightness switch; walnut veneer cabinet with slide-out grille; 25" H × 18" W × 13" D.. $290

**Celestovox DS-1207 Speaker System**
Floor-standing two-way speaker system; utilizes room sound-reflecting surfaces; high frequency roll-off control; 8-ohm impedance; max. input 70 W program; walnut veneer styling; 30" H × 15" W × 15" D ..... $200

**LS-250 Speaker System**
Three-way bookshelf speaker system with 12-in woofer, 4-in mid-range, and 2-in tweeter; frequency range 45-20,000 Hz; 8- ohm nominal impedance; power input range 20-80 W; phase-corrected crossovers 6 dB/octave at 800 and 2500 Hz; walnut-grain vinyl finish with removable grille; 23" H × 15" W × 12" D..... $180

**B-1002 Bard Outdoor Speaker**
Two-way all-weather speaker system with B-800 wide-range driver and coaxially mounted B-200Z tweeter; 8-ohm impedance; uses jack and plug connector ..... $135

**LS-200 Speaker System**
Two-way bookshelf speaker system with 8-in woofer and 2-in tweeter; frequency response 45-20,000 Hz; 8-ohm nominal impedance; power input range 20-70 W; phase-corrected crossover 6 dB/octave at 2000 Hz; 20" H × 12" W × 11" D..... $110



As the number one professional speaker company, we have to satisfy the most discriminating ears. Recording engineers and artists. What they're listening for is faithful sound reproduction of a live performance. And for over forty years, that's exactly what we've been able to deliver.

The same professionalism pays off for you when Altec Lansing leaves the studio and gets down to some serious playing at home.

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So listen to our speakers and hear how our work for professionals comes into play. For the name of your local dealer and a full line catalog, just write us: Altec Lansing International, 1515 S. Manchester Ave., Anaheim, CA 92803, (714) 774-2900.

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# THE NO.1 PROFESSIONAL SPEAKER

## AT WORK. AND PLAY.

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# 10 SPEAKER SYSTEMS

## BRAUN

### L 1030 Speaker System
Three-way acoustic-suspension floor-standing speaker system with 10-in woofer, 2-in dome midrange, and ¾-in hemispherical dome tweeter; crossovers at 500 and 3000 Hz; 4-8 ohms nominal impedance; frequency response 20-25,000 Hz; input range 25-140 W; black or walnut finish with black metal grille; 27⅛" H × 12¼" W × 10¼" D... $840 pr.

### L 300 Speaker System
Three-way bookshelf speaker system with 5⅛-in woofer, 2-in hemispherical dome midrange, and ¾-in hemispherical dome tweeter; crossovers at 600 and 3000 Hz; 4-ohm impedance; frequency response 35-25,000 Hz; input range 10-50 W; black matte finish; 10" H × 6¼" W × 6¾" D..... $400 pr.

### L 200 Speaker System
Two-way air-suspension bookshelf speaker system with 5⅛-in woofer and 1-in hemispherical dome tweeter; crossover at 1500 Hz; 4-ohm impedance; frequency response 40-25,000 Hz; input range 10-50 W; black matte finish; 10" H × 6¼" W × 5⅞" D ..... $270 pr.

### Output C Speaker System
Two-way miniature speaker system with 4-in woofer and 1-in hemispherical dome tweeter; crossover at 1500 Hz; 4-ohm impedance; frequency response 50-25,000 Hz; input range 10-50 W; black aluminum cabinet with black aluminum perforated grille; 6¾" H × 4¼" W × 4⅜" D ..... $230 pr.
**LVP-100.** Similar to Output C except has swivel mount bracket ..... $260 pr.

## BURHOE ACOUSTICS

### The Burhoe Silver
Four-way speaker system with 10-in woofer and three 1⅛-in and one 1½-in inverted dome tweeters; tuned port enclosure; crossover frequencies at 1000, 2000 and 5000 Hz; sound pressure level 97 dB; 31½" H × 22⅝" W ..... $500

### The Burhoe Blue
Two-way speaker system with 10-in woofer and 1.5-in and 1.1-in tweeters; tuned port enclosure; crossovers at 900 and 1800 Hz; three-position tweeter level control; walnut veneer cabinet; 24¼" H × 14¼" W × 10½" D..... $250

### The Burhoe Light Blue
Two-way speaker system with 10-in woofer and 1½-in inverted dome tweeter; tuned port enclosure; crossover frequency at 1500 Hz; sound pressure level 98 dB; 24¼" H × 14¼" W × 10¼" D ... $170

### The Burhoe White
Two-way speaker system with woofer and "Felted-Dome" tweeter; tuned port enclosure; crossover at 1500 Hz; walnut veneer cabinet; 22" H × 13¾" W × 10" D ..... $150

### The Burhoe Green
Two-way speaker system with 8-in woofer and 1.5-in "Felted-Dome" tweeter; tuned port enclosure; mid-range control switch; crossover at 1000 Hz; vinyl finish cabinet; 18¼" H × 11⅜" W × 10" D..... $120

## CANTON

### GLE 70 Speaker System
Three-way speaker system with 10¼-in woofer, 1⅓-in dome midrange, and ¾-in dome tweeter; crossovers at 800 and 2200 Hz; 4-ohm impedance; frequency response 25-30,000 Hz; input range 5.8-120 W; walnut with bronze metal, matte black with black metal, or matte white with silver metallic removable grille; 11⅞" H × 17⅜" W × 9⅜" D ..... $319

### Gamma 800 Speaker System
Three-way speaker system with 8-in woofer, 1.18-in dome midrange, and ¾-in hemispherical dome tweeter; crossovers at 750 and 2200 Hz; 4-8 ohms nominal impedance; frequency response 23-30,000 Hz; input range 25-120 W; black matte finish; 11" square..... $299

### GLE 60 Speaker System
Three-way speaker system with 8.7-in woofer, 1.2-in dome midrange, and .75-in dome tweeter; crossovers at 800 and 2200 Hz; 4-ohm impedance; frequency response 28-30,000 Hz; input range 6.5-100 W; walnut with bronze metal, matte black with black metal, or matte white with silver metallic removable grille; 13⅘" H × 18⅘" W × 13⅓" D.... $259

### GLE 50 Speaker System
Three-way speaker system with 7.9-in woofer, 1.2-in dome midrange, and .75-in dome tweeter; crossovers at 800 and 2200 Hz; 4-ohm impedance; frequency response 36-30,000 Hz; input range 7.4-80 W; walnut with bronze metal, matte black with black metal, or matte white with silver metallic removable grille; 8⅘" H × 16⅘" W × 12" D .. $195

### GLE 45 Speaker System
Two-way speaker system with 7.9-in woofer and .75-in dome tweeter; crossover at 1700 Hz; 4-ohm impedance; frequency response 38-30,000 Hz; input range 7.6-70 W; walnut with bronze metal, matte black with black metal, or matte white with silver metallic removable grille; 12⅘" H × 16⅘" W × 12" D ..... $165

### GLE 40F Speaker System
Two-way speaker system with 6.3-in woofer and .75-in dome tweeter; crossover at 1700 Hz; 4-ohm impedance; frequency response 48-30,000 Hz; input range 9-60 W; walnut with bronze metal, matte black with black metal, or matte white with silver metallic removable grille; 8⅘" H × 12⅘" W × 3⅓" D..... $139
**GLE 40.** Similar to GLE 40F except crossover at 1400 Hz; frequency response 42-30,000 Hz; 7⅓" H × 10⅗" W × 6" D..... $125

### HC 100 Speaker System
Two-way acoustic-suspension miniature speaker system with 4.33-in woofer and .75-in hemispherical dome tweeter; crossover at 1700 Hz; 4-8 ohm nominal impedance; frequency response 48-30,000 Hz; min. input 5 W; can be used in mobile situations; 4⅞" H × 7½" W × 5⅞" D ..... $190 pr.

## CELESTION

### Ditton 66 Studio Monitor
Three-way speaker system with 12-in woofer, 12-in passive radiator, 2-in dome mid-range, and 1-in dome tweeter; frequency response 40-25,000 Hz ±4 dB; crossovers at 500 and 5000 Hz; min. input 10 W; max. input 160 W; impedance 8 ohms; walnut or teak cabinet; 40" H × 15" W × 12" D... $530

### Ditton 25 Speaker System
Three-way speaker system with 12-in woofer, 12-in passive radiator, two 1¼-in pressure mid-ranges, and 1-in dome tweeter; frequency response 45-25,000 Hz ±4 dB; crossovers at 2000 and 9000 Hz; min. input 10 W; max. input 120 W; 8-ohm impedance; walnut or teak cabinet; 32" H × 14" W × 11" D..... $350

### Ditton 44 Speaker System
Three-way speaker system with 12-in woofer, 6-in cone mid-range, and 1-in dome tweeter; frequency response 50-25,000 Hz ±4 dB; crossovers at 500 and 5000 Hz; 8-ohm impedance; min. input 10 W; max. input 100 W; walnut or teak cabinet; 30" H × 15" W × 10" D..... $310

### Ditton 33 Speaker System
Three-way speaker system with 12-in woofer, 5-in cone mid-range, and 1-in dome tweeter; frequency response 50-20,000 Hz ±4 dB; crossovers at 500 and 5000 Hz; min. input 10 W; max. input 80 W; 8-ohm impedance; walnut or teak cabinet; 24" H × 14" W × 11" D..... $260

### UL6 Speaker System
Two-way speaker system with 6-in woofer, 6-in passive radiator, and 1-in dome tweeter; frequency response 70-20,000 Hz ±4 dB; crossover at 2500 Hz; 8 ohm impedance; min. input 20 W; max. input 80 W; walnut or teak cabinet; 12" H × 16" W × 9" D..... $180

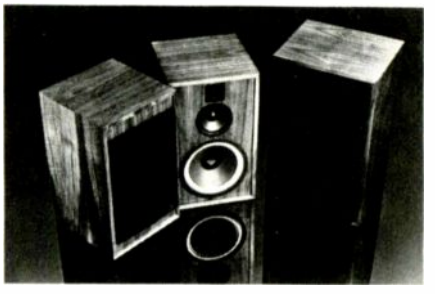
### Ditton 15XR Speaker System
Two-way speaker system with 8-in woofer, 8-in passive radiator, and 1-in pressure dome tweeter; frequency response 60-20,000 Hz ±4 dB; crossover at 2500 Hz; min. input 10 W; max. input 60 W; 8-ohm impedance; walnut or teak cabinet; 21" H × 10" W × 9" D..... $170

## CERWIN-VEGA

### S-2 Loud. Speaker.
Three-way floor-standing speaker system with 15-in woofer, 6-in sealed mid-range, and horn tweeter; frequency response 28-17,000 Hz ±3 dB; crossovers at 200 and 4000 Hz; efficiency 103 dB/W/m; max. input 250 W continuous; features Thermo Vapor Suspension; 29¼" H × 18¼" W × 17¾" D ..... $600

### 15TR Tower
Three-way floor-standing speaker system with 15-in floor-facing woofer, 8-in mid-range, and Dhorm tweeter; frequency response 28-20,000 Hz ±3 dB; crossovers at 250 and 4000 Hz; max. input 150 W continuous program; impedance 4-8 ohms; oiled walnut enclosure; 40" H × 16½" W × 16½" D ..... $600

### 417R Hardrocker
Four-way speaker system with 15-in woofer, 6-in sealed mid-range, and Dhorm and rear horn tweeters; frequency response 30-17,000 Hz ±4 dB; crossovers at 300, 3500, and 12,000 Hz; efficiency 103 dB/W/m; max. input 200 W continuous; 29¼" H × 18¼" W × 17¾" D..... $400



### 12TR Tower
Three-way floor-standing speaker system with 12-in floor-facing woofer, 6-in mid-range, and Dhorm tweeter; frequency response 28-20,000 Hz ±3.5 dB; crossovers at 250 and 4000 Hz; max. input 100 W continuous program; impedance 4-8 ohms; oiled walnut cabinet with black grille; 40" H × 13½" W × 13½" D..... $400

### S-1 Loud. Speaker.
Three-way bookshelf speaker system with 12-in woofer, 6-in sealed mid-range, and 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; features Thermo Vapor Suspension; 25" H × 14½" W × 14" D.... $400

### 312 Hardrocker
Three-way speaker system with 12-in woofer, 6-in sealed mid-range, and horn tweeter; frequency response 35-17,000 Hz ±4 dB; crossovers at 300 and 3500 Hz; efficiency 100 dB/W/m; max. input 150 W continuous; 26" H × 15¾" W × 15¾" D .... $300

# Thermo-Vapor Suspension Systems!
# Mt. Fuji Spring Water Speaker Cones!!
# Hi-Polymer Nitro-Cellulose Strontium Ferrite Magnets!!!

# We say: Bull.


The above ingredients, as improbable and impossible as they sound, make up much of today's advertising by other speaker manufacturers.

We at AAL will not be guilty of insulting your intelligence with this kind of gobbledygook.

The simple fact is: a speaker must be heard to be appreciated. This is the true and final test. AAL speaker systems offer realism of sound in a handsomely designed cabinet. What more can we say. Just take your favorite record along to your nearest AAL dealer. Our speakers are waiting to be auditioned at better stores everywhere.

AAL

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*Acoustics* is our middle name.

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CIRCLE NO. 1 ON READER SERVICE CARD

# 10 SPEAKER SYSTEMS

### R-123 Receiver Saver
Three-way speaker system with 12-in woofer, 6-in sealed mid-range, and Dhorm tweeter; frequency response 38-20,000 Hz ±4 dB; crossovers at 500 and 5000 Hz; efficiency 97 dB/W/m; max. input 50 W continuous; 25" H × 14½" W × 11½" D ... $280

### 212 Hardrocker
Two-way speaker system with 12-in woofer and horn tweeter; frequency response 35-17,000 Hz ±4 dB; crossover at 2000 Hz; efficiency 100 dB/W/m; max. input 100 W continuous; 26" H × 15¾" W × 15¾" D ..... $250

### HED H-15 Speaker System
Two-way speaker system with 15-in woofer and two horn tweeters; frequency response 32-16,000 Hz ±5.0 dB; crossover at 2000 Hz; efficiency 103 dB/W/m; max. input 100 W; beige or brown Durotex textured finish ..... $275

### R-12 Receiver Saver
Two-way speaker system with 12-in woofer and Dhorm tweeter; frequency response 38-20,000 Hz ±4 dB; crossover at 2000 Hz; efficiency 97 dB/W/m; max. input 50 W continuous; 25" H × 14½" W × 11½" D ..... $200

### R-10 Receiver Saver
Two-way speaker system with 10-in woofer and 1-in hard dome tweeter; frequency response 38-20,000 Hz ±4 dB; crossover at 1200 Hz; efficiency 92 dB/W/m; max. input 40 W continuous; 24" H × 13" W × 11½" D ..... $170

### HED H-12 Speaker System
Two-way speaker system with 12-in woofer and 1-in Dhorm tweeter; crossover at 2000 Hz; frequency response 38-20,000 Hz ±4.0 dB; efficiency 97 dB/W/m; max. input 50 W; beige or brown Durotex textured finish ..... $150
**W-12.** Same as H-12 but with walnut finish ... $180
**H-10.** Similar but 10-in system; max. input 25 W; efficiency 92 dB/W/m; Durotex textured finish ..... $140
**W-10.** Same as H-10 but with walnut finish ... $170

## CHARTWELL by OSAWA

### PM-450 Passive Speaker System
Two-way studio monitor with 1-in soft dome tweeter and 12-in Bextrene cone woofer; frequency response 45-20,000 Hz ±3 dB; 8-ohm impedance; 500 watts max. input power; teak, walnut, or black finish with black foam grille (other colors on special order); 30" H × 18.1" W × 16.2"D ..... $2100
Rosewood finish ..... $2275
**PM-450 Active.** Amplified version of PM-450, but includes 100 W amplifier and equalizer; teak, walnut or black oak. ..... $3000
Rosewood finish ..... $3175

### PM-400 Speaker System
Three-way bass reflex speaker system with 1-in plastic dome tweeter, 5¾-in polystyrene midrange, and 12-in woofer with Bextrene cone; frequency response 45-22,000 Hz ±3 dB; max. input 100W; 8-ohm impedance; teak, walnut, or black finish with matte black grille; furnished with 2-in high wood base; optional chrome plated stand available; 35.2" H × 13" D × 15" W ..... $650
Rosewood finish ..... $805

### PM-200 Speaker System
Two-way bass reflex speaker system with dome tweeter and 8-in bextrene cone bass/mid-range driver; frequency response 45-22,000 Hz ±3 dB; max. input 50 W; 8-ohm impedance; teak, walnut, or black finish; 26" H × 13.5" W × 11.2" D ... $400
Rosewood finish ..... $510

### PM-100 Speaker System
Two-way bass reflex bookshelf system with 6.5-in bass/midrange driver with Bextrene cone and long-throw voice coil and 1.9-in soft dome tweeter; frequency response 50-20,000 Hz ±3 dB; max. input 40 W; 8-ohm impedance; teak, walnut, or black finish; 18.1" H × 9.4" W × 8.1" D; ..... $300
Rosewood finish ..... $340

### LS3/5A Baby Monitor
Two-way compact acoustic suspension monitor speaker based on BBC design; has 4.5-in polystyrene bass/midrange and dome tweeter; frequency response 60-20,000 Hz ±4 dB; 8-ohm impedance; max. input 25 W; 12" H × 7.5" W × 6.3" D ... $225

## CIZEK

### Model 1 Speaker System
Two-way speaker system with 10-in acoustic suspension woofer and 1-in hemispherical dome tweeter; frequency response 35-17,000 Hz +1.5/−2 dB; crossover at 1500 Hz; efficiency 88 dB/W/m; min. input 15 W; max. input 150 W-music power; tweeter level and contour controls and Q adjustment switch; walnut enclosure with transparent foam grille; 25" H × 15½" W × 9½" D ..... $198
**Model 2.** Similar to Model 1 but with 8-in woofer; frequency response 35-17,000 Hz ±2 dB; oak vinyl enclosure; 21" H × 13" W × 9½" D ..... $134

### Model 3 Speaker System
Two-way acoustic suspension speaker system with 8-in woofer and 1-in hemispherical dome tweeter; frequency response from 42-18,000 Hz ±2 dB; crossover frequency 1500 Hz; efficiency 88 dB/W/m into 4.25 ohms; input range from 15-100 W/ch continuous into 4 ohms; 4.25-ohm impedance from 100-15,000 Hz; 19" H × 11¾" W × 7½" D .... $97

## CLARKE from BR DISTRIBUTORS

### Precedent Speaker System
Three-way, infinite-baffle speaker system with 12-in woofer, 5-in mid-range, and 1-in soft-dome tweeter; crossover frequencies at 500 and 4200 Hz; min. input 25 W continuous; efficiency rating 1 W at 1000 Hz for 90-dB SPL on axis at 1 m; wood cabinet with brown-fabric grille; 31" H × 15" W × 14" D ..... $270

### Prelude Speaker System
Two-way, ported speaker system with 8-in woofer and 2-in tweeter; crossover frequency at 5000 Hz −6dB/octave; min. input 15 W continuous; efficiency 1 W at 1000 Hz for 91-dB SPL on axis at 1 m; wood cabinet with brown-fabric grille; 22" H × 12" W × 12" D ..... $110

## DAHLQUIST

### DQ-10 Speaker System
Five-way Phased Array moving-coil speaker system with 10-in woofer in sealed air suspension enclosure, 5-in mid-bass driver, 2-in soft-dome midrange; ¾-in dome tweeter, and piezoelectric ceramic super tweeter; frequency response 37-27,000 Hz; crossovers at 400, 1000, 6000, and 12,500 Hz; 8-ohm nominal impedance; max. input 200 W; min. input 60 W; features low-diffraction time-delay correction; continuously variable treble-slope control for boost or cut; solid walnut trim with black grille cloth; 31½" H × 30½" W × 9" D ..... $425

### DQ-1 W Subwoofer
Incorporates 13-in woofer in heavy cast frame mounted in walnut enclosure; recommended application is bi-amped systems but will perform with passive crossovers; typically adds an octave of low bass response to speaker systems; black grille cloth; 28" H × 18" W × 14" D ..... $275

## DAYTON WRIGHT

### XG-8 Mk3 Speaker System
Diapole electrostatic floor-standing speaker system with piezo super tweeter; frequency response 32-24,000 Hz ±4 dB; crossover 10,000 Hz; min. impedance 2.4 ohms; sensitivity 83 dB/W/m; THD less than 0.01% at 1000 Hz; input range 40-2500 W/ch; tweeter level control; rosewood, walnut, or oak finish with black or wheat cloth grille; 41½" H × 39" W × 9½" D ..... $3295

## DECCA

### London Ribbon Speaker
Horn-coupled ribbon tweeter; uses optional crossover network with low-pass slope at 12 dB/octave and high-pass slope initially at 12 dB/octave with final slope at 45 dB/octave; crossover frequency 1000 Hz; insertion loss less than 1 dB in passband; impedance 8 ohms; power-handling capacity 30 watts max.; dist. less than 1.7% at 2500 Hz with 30 W input, 12¾" × 9" ..... $140
**Crossover network CO/1000/8** ..... $25

### London Super Tweeter
Ribbon tweeter in enclosure without horn; impedance 8 ohms; crossover 7000 Hz; grey color .. $130

## DESIGN ACOUSTICS

### D-12A Speaker System
Three-way dodecahedron floor-standing/ceiling-hung speaker system with two 8-in woofers, 1½-in dome midrange, two 5-in cone midrange drivers, two 1-in dome tweeters, and three 1½-in cone tweeters; crossovers at 650 and 2000 Hz; 4-ohm nominal impedance; power response 30-18,000 Hz ±2 dB; efficiency 89-dB SPL/W/m; selectable 180− or 360-degree dispersion angle; input range 25-200 W/ch; two-step woofer, midrange, and tweeter level controls; walnut finish with black grille; available with chrome base; 26" H (with base) × 22" diameter ..... $675
**D-12AR.** Same as D-12A but rosewood finish.. $850

### D-8 Speaker System
Three-way acoustic suspension floor-standing speaker system with two 10-in woofers, 5-in damped cone mid-range, dome tweeter, three cone tweeters, and piezoelectric speaker; power response 30-17,000 Hz ±2 dB; crossovers at 600 and 1500 Hz; 8-ohm impedance; input range 15-150 W/ch; sensitivity 94.5−dB SPL/W/m; three-position switch for woofer, mid-range, and tweeter level controls; oiled walnut finish with black grille cloth; 44" H × 16½" W × 12¾" D ..... $499

### D-6 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; power response 30-15,000 Hz ±2 dB; crossovers at 800 and 2000 Hz; 8-ohm impedance; input range 20-100 W/ch; sensitivity 92-dB SPL/W/m; woofer and tweeter level controls; oiled walnut finish with black/blue/cocoa/crimson grille cloth; 24½" H × 16½" W × 13¾" D ..... $329

### D-4 Speaker System
Three-way acoustic suspension floor-standing speaker system with 10-in woofer, 5-in damped cone mid-range, and three 2½-in cone tweeters; power response 40-15,000 Hz ±3 dB; crossovers at 800 and 2000 Hz; 8-ohm impedance; input range 25-75 W/ch; sensitivity 90.5-dB SPL/W/m; woofer and tweeter level controls; oiled walnut finish with brown grille cloth; 38" H × 17½" W × 9½" D ..... $249

### D-3 Speaker System
Three-way tuned-port bookshelf speaker system with 10-in woofer, 5-in cone midrange, and 1-in dome tweeter; crossovers at 500 and 2500 Hz; power response 40-20,000 Hz ±3.5 dB; input range 30-100 W continuous; oiled walnut finish with brown cloth grille; 25" H × 12" W × 11½" D .. ..... $200

### D-2 Speaker System
Two-way vented acoustic suspension floor-standing speaker system with 10-in woofer and 1-in dome tweeter; power response 40-18,000 Hz ±3.5 dB;

# Thermo-Vapor Suspension

The Cerwin-Vega S1 is the most elegant and exotic shelf speaker currently available. The rare Yucatan rosewood[1] facade only hints at the marvels inside. A sophisticated sixth order Butterworth vent tuning, integrated with an active equalizer filter, increases the effective bass performance to surpass much larger enclosures. The wave of the future in quality shelf speakers surely will be such a system.

Even this is not good enough for the S1.

We have developed an elegantly simple improvement in bass enclosure technology; we call it Thermo-Vapor Suspension.[2] By filling the S1 cabinet with a soft, inert gas which is more compressible than air, a lower system response and more controlled damping is achieved.

The drivers are precision aligned die-cast units having the highest magnetic motor drive efficiencies in the industry. The low crossover of 300 Hz to a 6" midrange driver assures low intermodulation at loud levels. A damped dhorm, high frequency unit (moving mass, .1 gram), operates at a low pressure density extending response to 20 kHz with vanishing coloration.

The S1 has impeccable technical credentials too numerous to detail here so write Cerwin-Vega for full performance specifications or see it, hear it, Feel it, at a selected dealer.

**Cerwin-Vega!**

[1]Walnut is standard
[2]Patent Pending

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CIRCLE NO. 25 ON READER SERVICE CARD

# 10 SPEAKER SYSTEMS

crossover at 1500 Hz; 8-ohm impedance; input range 20-50 W/ch; sensitivity 88-dB SPL/W/m; tweeter level control; oiled walnut finish with black grille cloth; 34" H × 12½" W × 12¼" D ..... $185

### D-1A Speaker System
Two-way vented acoustic suspension bookshelf speaker system with 8-in woofer and 1½-in cone tweeter; power response 50-15,000 Hz ±3.5 dB; crossover at 1500 Hz; 6-ohm impedance; input range 15-30 W/ch; sensitivity 87.5-dB SPL/W/m; aluminum finish with black grille cloth; 20¼" H × 11" W × 8" D ..... $110
**D-1W.** Same as D-1A but with walnut finish. 21¼" H × 12" W × 8" D ..... $120

## DYNACO

### A-30XL Speaker System
Three-way acoustic-suspension bookshelf speaker system with 10-in woofer, 5-in midrange, and 1-in soft dome tweeter; crossovers at 1000 and 5000 Hz; 8-ohm impedance; min. input 15 W continuous; walnut finish; 22⅜" H × 13¼" W × 10" D ..... $149

### A-25 Mark II Speaker System
Two-way bookshelf speaker system with 10-in woofer (critically damped port) and 1-in soft dome tweeter; crossover at 1500 Hz; 8-ohm impedance; min. input 15 W continuous; aperiodic design; supplied with wall-mounting brackets; oiled walnut finish; 19⅜" H × 12" W × 10" D ..... $119

### D-20XL Speaker System
Two-way bookshelf speaker system with ported 8-in woofer and 2-in tweeter; crossover at 2000 Hz; 8-ohm impedance; black cloth grille ..... $74

## ELECTRO-VOICE

### Sentry III Pro Speaker System
Three-way direct-radiator vented design with fourth-order Butterworth tuning; incorporates 15-in woofer and mid-range/tweeter horn array; frequency response 40-18,000 Hz; crossovers at 600 and 3500 Hz; max. input 50 W; built-in tweeter protector; walnut cabinet; 34½" H × 28½" W × 20½" D ..... $849
**SEQ.** Equalizer for Sentry III; extends response to 28 Hz ..... $90

### Interface: D
Three-way floor-standing speaker system with 12-in downward-firing woofer, 6½-in vented mid-range,

and radial horn tweeter; supplied with active equalizer; frequency response 23-20,000 Hz, 23-18,000 Hz ±3 dB; 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; walnut veneer cabinet; 32" H × 21¾" W × 15½" D ..... $1500 pr.

### Interface: C.
Two-way floor-standing speaker system with 10-in woofer and radial horn tweeter; supplied with active equalizer; frequency response 25-20,000 Hz, 30-18,000 Hz ±3 dB; min. input 2.8 W (for 90-dB SPL); max. input 200 W (for 110-dB SPL); 6-ohm nominal impedance; built-in tweeter protector; walnut veneer cabinet; 30" H × 21½" W × 11¾" D .... ..... $900 pr.

### Interface: B Series II
Three-way speaker system with 12-in woofer, 8-in mid-range/woofer, 2½-in front-mounted tweeter with acoustic lens, and 2½-in rear-mounted tweeter; supplied with active equalizer; frequency response 26-20,000 Hz, 30-18,000 Hz ±3 dB; min. input 3.6 W (for 90-dB SPL); max. input 200 W (for 107-dB SPL); 8-ohm nominal impedance; built-in tweeter protector; walnut veneer cabinet; 23¾" H × 14¾" W × 8¼" D ..... $675 pr.

### Interface: A Series II
Three-way speaker system with 12-in woofer, 8-in mid-range/woofer, 2½-in front-mounted tweeter with acoustic lens, and 2½-in rear-mounted tweeter; supplied with active equalizer; frequency response 29-20,000 Hz, 35-18,000 Hz ±3 dB; min. input 3.6 W (for 90-dB SPL); max. input 200 W (for 107-dB SPL); 8-ohm nominal impedance; tweeter-protection circuit is optional; walnut veneer cabinet; 23¾" H × 14¾" W × 8¼" D ..... $500 pr.

### Interface: 3
Three-way speaker system with 12-in woofer, 8-in mid-range/woofer, and 2½-in tweeter; frequency response 34-20,000 Hz, 40-18,000 Hz ±4 dB; min. input 3.6 W (for 90-dB SPL); max. input 200 W (for 107-dB SPL); 8-ohm nominal impedance; simulated walnut-grained vinyl finish; 26⅜" H × 14¾" W × 12½" D ..... $190

### Interface: 2
Three-way speaker system with 10-in woofer, 8-in mid-range/woofer, and 2½-in tweeter; frequency response 39-20,000 Hz, 47-18,000 Hz ±4 dB; min. input 3.6 W (for 90-dB SPL); max. input 200 W (for 107-dB SPL); 8-ohm nominal impedance; simulated walnut-grained vinyl finish; 24½" H × 13¾" W × 11¼" D ..... $150

### Musicaster 1A All-Weather Speaker
Two-way speaker system with 12-in wide-range driver and dual-cone driver assembly for high frequencies; frequency response 80-10,000 Hz; crossover at 4000 Hz; max. input 60 W peak; 8-ohm impedance; dispersion 120 degrees; glass-filled polyester enclosure; 21½" H × 21½" W × 8½" D ..... $144
**Musicaster IIA.** Same as 1A but with high-frequency driver and horn tweeter; frequency response 80-16,000 Hz; crossovers at 4000 and 5000 Hz... ..... $176

### Interface: 1
Two-way speaker system with 8-in woofer and 2½-in tweeter; frequency response 44-20,000 Hz, 54-18,000 Hz ±4 dB; min. input 3.6 W (for 90-dB SPL); max. input 200 W (for 107-dB SPL); 8-ohm nominal impedance; simulated walnut-grained vinyl finish; 21¼" H × 11½ W × 10½" D..... $110

## EPI

### 350 Speaker System
Two-way floor-standing speaker system with three 8-in long-traverse woofers and three 1-in air-spring tweeters; crossover at 1800 Hz; frequency response 36-20,000 Hz, down 3 dB at 36 Hz; input range 38-125 W continuous; three-position high-frequency control; oiled walnut finish with clear-cloth grille; 36½" H × 15¼" W × 13¼" D..... $400

### 200B Speaker System
Two-way floor-standing speaker system with 8-in woofer and 1-in air-spring tweeter; crossover at 1800 Hz; 8-ohm nominal impedance; frequency response 34-20,000 Hz; input range 15-125 W continuous; front-panel high-frequency control; oiled walnut finish with black cloth grille; 32¾" H × 17" W × 11" D..... $255

### 120B Speaker System
Two-way speaker system with 10-in long-traverse woofer and 1-in air-spring tweeter; crossover at 1800 Hz; 8-ohm nominal impedance; frequency response 38-20,000 Hz; input range 25-80 W continuous; wood-grain vinyl cabinet with bronze trim and black matte foam grille; 25" H × 15" W × 11" D..... $149

### 100 Speaker System
Two-way speaker system with 8-in long-traverse woofer and 1-in air-spring tweeter; crossover at 1800 Hz; 8-ohm nominal impedance; frequency response 48-20,000 Hz; input range 12-80 W; oiled walnut finish with black cloth grille; 21" H × 11" W × 9" D..... $115
Wood-grained vinyl cabinet..... $105

### 70 Speaker System
Two-way bookshelf speaker system with 6-in long-traverse woofer and 1-in air-spring tweeter; crossover at 1800 Hz; 8-ohm nominal impedance; frequency response 60-20,000 Hz; input range 10-80 W continuous; wood-grain vinyl finish with bronze trim and black matte foam grille; 16" H × 10½" W × 7¼" D ..... $75

## EPICURE

### 1000 Speaker System
Omnidirectional floor-standing tower speaker system with four 8-in woofers and four 1-in air-spring tweeters; frequency response 20-20,000 Hz ±3 dB; 8-ohm impedance; max. input 250 W continuous; min. input 60 W continuous; transducers matched to within 1 dB efficiency; 75" H × 18" W × 18" D ..... $1000

### 3.0 Trilogy Home Speaker System
Three-way floor-standing speaker system with 10-in woofer, 6-in midrange, and 1-in air-spring tweeter; crossovers at 400 and 2600 Hz; 4-ohm nominal impedance; frequency response 32-20,000 Hz ±3 dB; 180-degree dispersion off-axis from 32-10,000 Hz ±3 dB and from 10,000-18,000 Hz ±4 dB, 90-degree dispersion off-axis at 15,000 Hz; truncated pyramid; 41⅜" H × 17½" bottom × 8½" top ..... $575

### 400+ Speaker System
Omnidirectional floor-standing tower speaker system with four 6-in woofers and four 1-in air-spring tweeters; frequency response 27-19,000 Hz ±3 dB; crossover at 1800 Hz; 8-ohm impedance; max. input 200 W continuous; min. input 25 W continuous; three-position tweeter level control; transducers matched to within 1 dB efficiency; 38" H × 14" W × 14" D..... $450

### Twenty+ Speaker System
Two-way speaker system with two 8-in woofers and two 1-in air-spring tweeters; frequency response 35-20,000 Hz ±3 dB; crossover at 1800 Hz; 8-ohm impedance; input range 20-100 W continuous; tweeter level control; hand-rubbed walnut veneer finish with dark brown grille cloth (additional colors optional); 29" H × 18½" W × 12" D.... $275

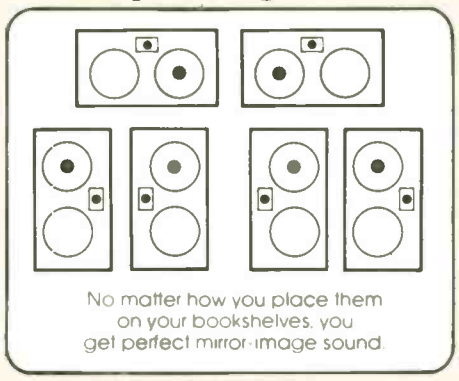
### 14 Speaker System
Two-way speaker system with 6-in controlled-excursion woofer, 8-in passive radiator, and 1-in air-spring tweeter; crossover at 1800 Hz; 8-ohm nominal impedance; frequency response 28-20,000 Hz; input range 15-80 W continuous; nearly hemispherical dispersion; three-position, front-panel high-frequency control; 24" H × 13½" W × 9" D ... ..... $195

### 11 Speaker System
Two-way bookshelf speaker system with 6-in controlled-excursion woofer and 1-in air-spring tweeter; frequency response 38-20,000 Hz ±3 dB; 8-ohm impedance; max. input 80 W continuous; min. input 15 W continuous; nearly hemispherical dispersion; 21½" H × 13½" W × 9½" D..... $149

# The perfect pair.

## The new Koss CM/530 bookshelf speakers with the perfect mirror-image sound.

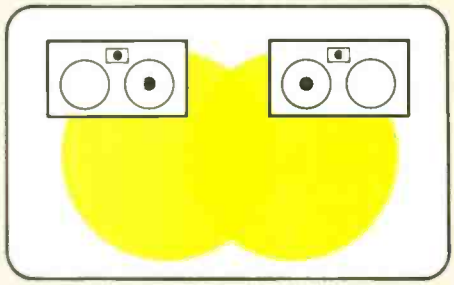
Here is truly a remarkable achievement in loudspeaker design and performance. The Koss CM/530 bookshelf loudspeaker sets an entirely new standard in extended bandwidth response, high efficiency, low distortion and perfect mirror-image for speakers in its size and price range and within



No matter how you place them on your bookshelves, you get perfect mirror-image sound.

today's technological capabilities.

By designing a left and a right channel configuration for the passive radiator, the woofer and the tweeter, Koss engineers

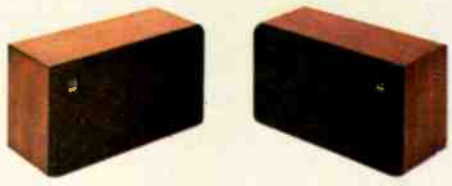


have created a perfectly matched set of bookshelf speakers that can be placed horizontally or vertically without losing the perfect right to left imaging, an incredible degree of dispersion and the beautiful Sound of Koss.

To create the breathtaking depth and clarity in the CM/530, Koss engineers used an 8-inch passive radiator to radiate the sound energy over the lower two octaves. This allowed them to use an 8-inch woofer to reproduce the critical sounds in the midrange up to 3,000 Hz. In addition, the CM/530's 1-inch dome tweeter reproduces an exceptionally flat energy output and unusually low distortion that provides for a transparency and liveliness not found in other competitive speakers.

Ask your Audio Dealer to give you a live demonstration of a matched pair of bookshelf speakers. You'll be amazed at their perfect mirror-image sound. And while you're at it, try the perfect answer to private listening: Koss stereophones. But by all means, write, c/o Virginia Lamm, for our full color speaker and stereophone catalogs. The Sound of Koss will do great things for your records or tapes . . . and your image.





# KOSS® CM/530 BOOKSHELF SPEAKERS

**hearing is believing™**

**KOSS CORPORATION,** 4129 N. Port Washington Ave., Milwaukee, WI 53212. International Headquarters: Milwaukee/facilities: Canada · France · Germany · Ireland · Japan

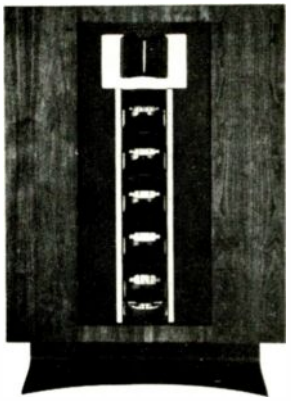
# 10 SPEAKER SYSTEMS

### 10 Speaker System
Two-way bookshelf speaker system with 8-in woofer and 1-in air-spring tweeter; frequency response 42-20,000 Hz ±3 dB; crossover at 1800 Hz (12 dB/octave); 8-ohm impedance; max. input 70 W continuous; min. input 20 W continuous; nearly hemispherical dispersion; vinyl finish cabinet; 22" H × 12" W × 9⅜" D ..... $125

### 5 Speaker System
Two-way bookshelf speaker system with 6-in controlled-excursion woofer and 1-in air-spring tweeter; frequency response 50-20,000 Hz ±3 dB; crossover at 1800 Hz (12 dB/octave); 8-ohm impedance; max. input 70 W continuous; min. input 20 W continuous; nearly hemispherical dispersion; 15" H × 11" W × 7⅞" D ..... $85

## ESS

### Transar/atd Speaker System
Two-way open-baffle speaker system with 32-in × 6-in Heil woofer and Heil air-motion transformer



tweeter; Heil woofer consists of a total of twenty small bubble cones on five Lexan-sheet cones linked by four carbon-fiber rods; bi-amp comes with electronic crossover and current source amplifier; crossover at 1000 Hz; 4-ohm impedance; frequency response 30-20,000 Hz ±3 dB; efficiency 94-dB SPL/W/m; min. input for Heil midrange/tweeter 5 W; continuous frequency level controls; mirror, walnut, rosewood, or ebony finish with brown, sand, or coffee grille; 51" H × 40" W × 10" D ..... $5065

### amt Monitor Speaker System
Two-way speaker system with 12-in Bextrene woofer, 12-in passive radiator, and 21.5 in² Heil air motion transformer; frequency response 30-23,000 Hz ±3 dB; crossover at 1000 Hz; max input 375 W clean music power; 5-ohm nominal impedance; 120° horizontal dispersion, 30° vertical dispersion; sensitivity 90-dB SPL/W/m; presence/brilliance control; oiled walnut finish with black-brown grille; 39.25" H × 15.63" W × 15.88" D ..... $608

### amt 1b Speaker System
Two-way speaker system with 12-in Bextrene woofer, 12-in passive radiator, and 21.5 in² Heil air motion transformer; frequency response 35-23,000 Hz ±3 dB; crossover at 1000 Hz; max input 375 W clean music power; 6-ohm nominal impedance; 120° horizontal dispersion, 30° vertical dispersion; sensitivity 90 dB SPL/W/m; mid-range presence and brilliance controls; oiled walnut finish with black-brown grille; 35.25" H × 16.25" W × 16.25" D ..... $488

### amt 1b Bookshelf Speaker System
Two-way bookshelf speaker system with 12-in Bextrene woofer, 12-in passive radiator, and 21.5 in² Heil air motion transformer; frequency response 40-23,000 Hz ±3 dB; crossover at 1000 Hz; max. input 375 W clean music power; 6-ohm nominal impedance; 120° horizontal dispersion, 30° vertical dispersion; sensitivity 90-dB SPL/W/m; presence/brilliance control; oiled walnut finish with black-brown grille; 24" H × 14" W × 14" D ..... $416

### amt 10b Speaker System
Two-way bookshelf speaker system with 10-in Bextrene woofer, 12-in passive radiator, and 20.25 in² Heil air motion transformer; frequency response 40-22,000 Hz ±3 dB; crossover at 1400 Hz; max. input 275 W clean music power; 6-ohm nominal impedance; 120° horizontal dispersion, 30° vertical dispersion; sensitivity 90-dB SPL/W/m; presence/brilliance control; oiled walnut finish with sable brown grille; 24" H × 14" W × 14" D ..... $334

### Tempest Series Model LS-4
Two-way speaker system with 10-in woofer, 10 in passive radiator, and 10.4 in² Heil air motion transformer; frequency response 35-24,000 Hz ±3 dB; crossover at 2400 Hz; max. input 160 W clean power; 6-ohm nominal impedance; 120° horizontal dispersion, 40° vertical dispersion; sensitivity 96 dB SPL/W/3 ft; oak finish with dark brown grille; 35" H × 12⅛" W × 12⅛" D ..... $348

### Tempest Series Model LS-5
Two-way bookshelf speaker system with 10 in woofer, 10-in passive radiator, and 10.4 in² Heil air motion transformer; frequency response 40-20,000 Hz ±3 dB; crossover at 2400 Hz; max. input 140 W clean power; 6-ohm nominal impedance; 120° horizontal dispersion, 40° vertical dispersion; sensitivity 95-dB SPL/W/3 ft; oak finish with dark brown grille; 24⅛" H × 14" W × 14" D ..... $241

### Tempest Series Model LS-8
Two-way bookshelf speaker system with 8-in woofer, 10-in passive radiator, and 10.4 in² Heil air motion transformer; frequency response 50-20,000 Hz ±3 dB; crossover at 2400 Hz; max. input 100 W clean power; 6-ohm nominal impedance; 120° horizontal dispersion, 40° vertical dispersion; sensitivity 94-dB SPL/W/3 ft; oak finish with dark brown grille; 22" H × 12½" W × 10⅜" D ..... $179

### Performance Series Model 4
Two-way speaker system with 10-in woofer, 10-in passive radiator, and 10.4 in² Heil air motion transformer; frequency response 35-24,000 Hz ±3 dB; crossover at 2400 Hz; max. input 160 W clean power; 6-ohm nominal impedance; 120° horizontal dispersion, 40° vertical dispersion; sensitivity 96-dB SPL/W/3 ft; walnut vinyl finish with dark brown grille; 35" H × 12½" W × 12⅛" D ..... $322

### Performance Series Model 5
Two-way bookshelf speaker system with 10 in woofer, 10-in passive radiator, and 10.4 in² Heil air motion transformer; frequency response 40-20,000 Hz ±3 dB; crossover at 2400 Hz; max. input 140 W clean power; 6-ohm nominal impedance; 120° horizontal dispersion, 40° vertical dispersion; sensitivity 95-dB SPL/W/3 ft; walnut vinyl finish with dark brown grille; 24⅛" H × 14" W × 14" D ..... $234

### Performance Series Model 8
Two-way bookshelf speaker system with 8-in woofer, 10-in passive radiator, and 10.4 in² Heil air motion transformer; frequency response 50-20,000 Hz ±3 dB; crossover at 2400 Hz; max. input 100 W clean power; 6-ohm nominal impedance; 120° horizontal dispersion, 40° vertical dispersion; sensitivity 94-dB SPL/W/3 ft; walnut vinyl finish with dark brown grille; 22" H × 12¼" W × 10⅜" D ..... $172

## FRANKMANN RESEARCH

### The Frankmann Stereo Speaker System
Integrated four-way speaker system with four 12-in woofers, each in left and right channels of one enclosure, and four 6-in midrange drivers, one diffraction horn tweeter, and one cone tweeter, each in left and right satellite panels; one attenuator as part of speaker design mediates response, recording, and listening room variations; crossovers at 200, 4000, and 10,000 Hz; 8-ohm impedance; frequency response 18-22,000 Hz ±4 dB; efficiency 98-dB SPL/W/m (pink noise); input range 10-200 W; bass drivers angularly mounted; fuse-protected; walnut, oak or birch cabinet finished in early American, walnut, or Mediterranean; custom-built hutch placed on top of common bass unit available extra; bass module 34" H × 49½" W × 25" D; satellite panels 38" H × 10" W × 6" D ..... $1295

### The Mini-Frank
Four-way speaker system with two 12-in woofers, each in left and right channels of one enclosure, and two 6-in midrange drivers, one diffraction horn tweeter, and one rear-panel cone tweeter, each in left and right satellite panels; one attenuator as part of design mediates response, recording, and listening room variations; crossovers at 200, 4000, and 10,000 Hz; 6-ohm impedance; frequency response 30-22,000 Hz ±4 dB; efficiency 94-dB SPL/W/m (pink noise); input range 10-125 W; bass drivers angularly mounted; walnut, oak, or birch cabinet in early American, walnut, or Mediterranean finish; bass module 29" H × 29" W × 20" D; satellite panels 22" H × 10" W × 6" D ..... $895
Bass Module A and Satellite A (The Frankmann) interchangeable with Bass Module B and Satellite B (The Mini-Frank).
**Bass Module A.** Eight 12-in woofers; 34" H × 49½" W × 25" D ..... $800
**Bass Module B.** Four 12-in woofers; 29½" H × 30" W × 20" D ..... $500
**Satellite A.** Four 8-in treble drivers, one horn tweeter, and one cone tweeter; with matching stands; 59" H × 9¼" W × 6½" D ..... $495 pr.
**Satellite B.** Two 8-in treble drivers, one horn tweeter, and one cone tweeter; with matching stand; 43½" H × 9¼" W × 6½" D ..... $395 pr.

## FRAZIER

### Eleven System
Three-way speaker system with 15-in and 12-in woofers, four 4-in mid-ranges, each pair isolated in two sealed enclosures, and two dc piezoelectric super horn tweeters; crossovers at 400 and 4000 Hz; max. input 100 W continuous; 4-ohm impedance; efficiency 103-dB SPL/W/m; stepped high-frequency and mid-range controls; oiled walnut veneer on fiberboard with black foam grille; 55" H × 30" W × 18" D ..... $1300

### Frazier's Thing
Three-way speaker system with 12-in and 10-in woofers, exponential mid-range horn system, and two stacked piezoelectric super horn tweeters for columnar effect; crossovers at 800 and 4000 Hz; 4-ohm impedance; efficiency 99-dB SPL/W/m; handles 60 W continuous; front-panel brilliance and presence controls; natural oak finish with black knit grille; 48" H × 24" W × 18½" D ..... $1000

### Seven System
Three-way speaker system with 12-in woofer, two 4-in full-range sealed mid-ranges stacked for columnar effect and two piezoelectric super horn tweeters stacked for columnar effect; crossovers at 400 and 4000 Hz; max. input 50 W continuous; 8-ohm impedance; efficiency 99-dB SPL/W/m; front-panel variable mid-range and high-frequency compensators; oiled walnut veneer on fiberboard with removable black knit grille; 29" H × 18" W × 16" D ..... $500

### Mark V System
Three-way speaker system with 12-in woofer, two 4-in mid-ranges in separate sealed enclosure, and piezoelectric super horn tweeter; crossovers at 500 and 4000 Hz; 8-ohm impedance; efficiency 96-dB SPL/W/m; handles 50 W continuous; front-panel variable mid-range and high-frequency compensators; oiled walnut veneer on fiberboard with acoustically transparent, removable black knit grille; 25¾" H × 14" W × 12" D ..... $350

### Concerto System
Three-way speaker system with 10-in woofer, compression horn tweeter, and dc piezoelectric super horn tweeter; crossovers at 2000 and 4000 Hz; max. input 30 W continuous; 8-ohm impedance;

# Ohm's Law 8:

## Make loudspeakers with great pride, and they will get great reviews.

Ohm defies the laws of modern loudspeaker production.

We don't mass-produce our speakers in huge quantities. Most of the elements that go into Ohm loudspeakers are so intricate, they must be made by hand.

The result is pride-of-craftsmanship you can hear.

Audio critics have heard it. As you're about to read...

**Complete Buyer's Guide to Stereo/Hifi:**

"The Ohm C2 is a high efficiency speaker with ruler-flat response to 37 Hz., high power-handling capability, very smooth

treble response, and excellent dispersion. Considering the size of the box, performance, and the price, the Ohm C2 must be reckoned with as one of the better speaker values available...Ohm speakers are very well made, and we recommend this model highly."

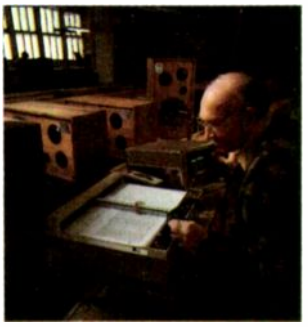
**Stereo Review:**

"Our standard live-room integrated frequency response measurement of the Ohm F produced one of the flattest extended curves we have ever seen from a loudspeaker...It should be apparent from the foregoing that we include the Ohm F among

those few speakers we have tested that achieves state-of-the-art performance." (Copyright 1973 by the Ziff-Davis Publishing Company. Reprinted from *Stereo Review*, October, 1973, by permission. All rights reserved.)

**Canadian Stereo Guide:**

"The Ohm E is just an ordinary speaker to look at.



But when you fire it up, it's something else again. Sound quality within the limits of its capability was well defined and well controlled, with no indication of mushiness even at the outer fringes of the spectrum. The Ohm E speaker system has an excellent dispersion pattern over its entire operating frequency range..."

**Complete Buyer's Guide to Stereo/Hifi:**

"The Ohm H manages to get prodigious bass response out of a small box without sacrificing efficiency. The high end is handled by conventional drivers and is everything one might ask from a speaker. Dispersion is excellent, and the overall sound quality is exemplary."

**Stereo Review:**

"In the simulated live-vs.-recorded test, the Ohm L proved to be a highly accurate reproducer of music...Its highs were strong, and even in our well damped listening room the crispness imparted to vocal sibilants and instrumental sounds such as wire brushes and triangles could be plainly heard... The upper mid-range and high frequencies were virtually perfect." (Copyright 1977 by the Ziff-Davis Publishing Company. Reprinted from *Stereo Review*, June, 1977, by permission. All rights reserved.)

**Complete Buyer's Guide to Stereo/Hifi:**

"The Ohm F is an extraordinary loudspeaker. The coherent sound produced by this speaker is clear, full, and undistorted. It may well be the finest speaker on the market, and is certainly without a doubt among the top few."

For 13 complete reviews, and full specifications, please write us at: Ohm Acoustics Corp., 241 Taaffe Place, Brooklyn, N.Y. 11205.

Ohm

**We make loudspeakers correctly.**

# 10 SPEAKER SYSTEMS

brilliance control on front panel; oiled walnut veneer with acoustically transparent, removable sculptured foam grille (available in brown, black, or burnt orange); 21½" H × 16" W × 16" D..... $300

### Mark IV-A System
Two-way speaker system with 10-in woofer and high-frequency compression horn; crossover at 2000 Hz; max. input 30 W continuous; 8-ohm impedance; efficiency 93-dB SPL/W/m; front-panel variable high-frequency compensator; oiled walnut veneer on fiberboard with acoustically transparent, removable sculptured foam grille (available in brown, black, or burnt orange); 24" H × 14" W × 12" D ..... $225

### Super Monte Carlo
Two-way speaker system with 8-in IF driver and direct-coupled piezoelectric super horn tweeter; crossover at 4000 Hz; max. input 30 W continuous; 8-ohm impedance; efficiency 95-dB SPL/W/m; walnut veneer on fiberboard with black fabric grille; 19" H × 10½" W × 12" D..... $125

### Super Midget System
Bookshelf speaker system with 4-in wide-excursion speaker; max. input 10 W continuous; 8-ohm impedance; efficiency 89-dB SPL/W/m; oiled walnut veneer on fiberboard with black fabric grille; 15¾" H × 6¾" W × 9½" D ..... $63

## FULTON MUSICAL INDUSTRIES

### J Modular Speaker System
Six-way floor-standing speaker system with 12-in sub-woofer, 12-in mid-woofer, 10-in upper-woofer, 8-in midrange, three atmospheric tweeters, and three super tweeters; crossovers at 32, 68, 375, 2400, and 6000 Hz; 8-ohm impedance; frequency response 13-52,000 Hz; input range 35-400 W; walnut veneer finish; 60" H × 25" W × 22" D.....
..... $2275 pr.
Teak finish ..... $3575 pr.
Rosewood finish..... $3775 pr.

### Nuance 1 Speaker System
Two-way speaker system with 10-in woofer and four 2-in tweeters; frequency response 42-42,000 Hz; 8-ohm impedance; min. input 20 W; walnut veneer; 22" H × 14" W × 9" D ..... $359

### FMI E Subwoofer
Subwoofer speaker system with 12-in dynamic subwoofer; complementary crossover at 82 Hz; frequency response 32-82 Hz; walnut vinyl finish; 36¾" H × 17¾" W × 14" D..... $275

### FMI 100 Speaker System
Two-way speaker system with 10-in woofer and four 2¼-in tweeters; crossover at 1200 Hz; 8-ohm impedance; frequency response 40-22,000 Hz; efficiency 105-dB SPL; input range 60-400 W; American walnut veneer; 22" H × 14" W × 9¼ D... $179

### FMI 80 Speaker System
Two-way speaker system with 8-in woofer and two 2¼-in tweeters; crossover at 1600 Hz; 8-ohm impedance; frequency response 50-22,000 Hz; efficiency 96-dB SPL; input range 50-400 W; American walnut; 17¾" H × 9⅞" W × 8½" D..... $119

### FMI 60 Speaker System
Two-way speaker system with 8-in woofer and 2⅞-in phase-arrayed tweeter; crossover at 2800 Hz; 8-ohm impedance; frequency response 55-20,000 Hz; input range 40-400 W; walnut vinyl finish; 17¾" H × 11⅞" W × 10" D..... $89

## GENESIS

### Model 3 Speaker System
Three-way acoustic-suspension floor-standing speaker system with 10-in passive radiator, 8-in woofer, 4½-in cone mid-range, and 1-in inverted phenolic dome tweeter; crossovers at 800 and

3000 Hz; max. input 100 W; min. input 20 W; 8-ohm nominal impedance; three-position separate tweeter and midrange level controls; walnut veneer finish with brown knit grille; 37½" H × 14½" W × 12" D ..... $325
Oak veneer finish ..... $340

### Model 2 Speaker System
Two-way bookshelf speaker system with 8-in long-excursion woofer and 1-in inverted dome tweeter; incorporates 10-in passive radiator; frequency response 32-20,000 Hz ±4 dB (88.5-dB SPL); 8-ohm impedance; max. input 80 W; min. input 15 W; two-position tweeter level switch; walnut vinyl finish with brown grille; 26½" H × 14½ " W × 11½" D..... $159
With oak veneer finish ..... $185

### Model 2+ Speaker System
Two-way speaker system with 8-in woofer, 10-in passive radiator, and 1-in inverted dome tweeter; crossover at 1800 Hz; 8-ohm nominal impedance; frequency response 32-20,000 Hz ±4 dB; efficiency 88.5 dB/W/m; input range 15-80 W/ch continuous; two-position tweeter level control; walnut finish with brown knit grille; 33" H × 14½" W × 10½" D ..... $219
Oak finish..... $229

### Model 1+ Speaker System
Two-way acoustic-suspension speaker system with 8-in woofer and 1-in inverted dome tweeter; crossover at 1800 Hz; 8-ohm nominal impedance; frequency response 35-20,000 Hz ±4 dB; efficiency 88.5 dB/W/m; input range 12-80 W/ch continuous; two-position tweeter level control; walnut vinyl finish with brown knit grille; 22" H × 12½" W × 9½" D..... $109
Oak finish..... $125

### Model 6 Speaker System
Two-way acoustic-suspension speaker system with 6½-in woofer and 1-in inverted dome tweeter; crossover at 1800 Hz; 8-ohm nominal impedance; frequency response 60-20,000 Hz ±5 dB; efficiency 88 dB/W/m; input range 12-40 W/ch continuous; walnut vinyl finish with brown knit grille; 18" H × 10¼" W × 7" D..... $75

## GLI

### Model 4+ Speaker System
Three-way, two-piece speaker system with two 15-in woofers and two 15-in passive radiators in bass cabinet and two 12 × 22-in midrange horns and one 6 × 18-in horn tweeter in mid/high frequency array; frequency response 40-20,000 Hz; max. input 250 W; bass cabinet 50" H × 36" W × 29" D; mid/high array 25" H × 30" W × 20" D. ..... $1700
**Model EX-4.** Extension horn for Model 4+ improves dispersion and extends bass response to 30 Hz.... .
..... $200

### Model 3+ Speaker System
Three-way speaker system with two 15-in woofers in exponential bass horn, 12-in × 22-in midrange horn, and seven 3.5-in solid state super tweeters; frequency response 70-25,000 Hz; max. input 250 W; black painted cabinet; 49.5" H × 36" W × 28.75" D..... $898

### Model 2+ Speaker System
Three-way two-piece bass-reflex speaker system with two 15-in woofers in bass-reflex cabinet and eight 4.5-in midrange drivers and four 3.5-in solid state super tweeters in mid/high cabinet; frequency response 30-25,000 Hz; max. input 250 W; black painted cabinets with metal mesh grilles; mid/high cabinet 19.75" H × 21" W × 8" D; bass-reflex cabinet 37.5" H × 21.5" W × 22.5" D..... $698

### Model 1+ Speaker System
Three-way floor-standing speaker system with two 15-in woofers in bass reflex cabinet, 4.5 × 15-in midrange horn, and three 3.5-in solid state super tweeters; frequency response 40-20,000 Hz ±4 dB; 8-ohm impedance; max. input 150 W; black painted cabinet with metal mesh grille; 37.5" H × 21.5" W × 22.5" D..... $598

### Monolith II Speaker System
Incorporates 15-in woofer, 15-in passive bass radiator, diffraction horn mid-range driver, and two solid-state super tweeters; frequency response 31-22,000 Hz ±4 dB; 6-ohm nominal impedance; max. input 150 W continuous; min. input 1 W continuous; sensitivity 96 dB/W/m; dispersion 94° horizontal, 74° vertical (1 kHz); black textured vinyl finish with black anodized perforated screen grille; 36" H × 21" W × 16" D ..... $438

### The Dwarf
Two-way compact speaker system with four 3.5-in solid state super tweeters and eight 5.5-in mid/low drivers facing forward (15-in passive radiator is driven by mid/low drivers and faces the rear for reflection of bass waves from wall behind speaker); frequency response 48-25,000 Hz ±3.5 dB; max. input 250 W; max. output 110 dB; coil guard protection circuit; available in 4 or 16 ohm models; black painted finish with metal mesh grilles; 20.75" H × 19" W × 9.5" D.....$775 pr.

## GRAFYX

### SP Ten Speaker System
Two-way floor-standing speaker system with 10-in woofer and 1-in dome tweeter mounted on a ¾-in insulated buffer ("anti-aberration addition"); crossover at 2000 Hz; 8-ohm impedance; frequency response 35-20,000 Hz ±3 dB; max. input 75 W continuous; tuned, ported enclosure and removable grille in walnut cabinet; 26½" H × 15" W × 13½" D..... $159

### SP Eight Speaker System
Two-way floor-standing speaker system with 8-in woofer and 1-in dome tweeter mounted on ¾-in "anti-aberration addition"; crossover at 2000 Hz; 8-ohm impedance; frequency response 40-20,000 Hz ±3 dB; max. input 75 W continuous; tuned, ported enclsoure and removable grille in walnut cabinet; 25" H × 14" W × 10" D..... $129

### SP Seven Speaker System
Two-way floor-standing acoustic suspension speaker system with 8-in woofer and 1-in soft dome tweeter, flush-mounted on ⅞-in "anti-aberration addition"; crossover at 2000 Hz; 8-ohm impedance; frequency response 40-20,000 Hz ±3 dB; max. input 50 W continuous; walnut cabinet with removable grille; 23" H × 13" W × 8½" D..... $109

### SP Six Speaker System
Two-way bookshelf speaker system with 6-in woofer and 2-in tweeter, flush-mounted on ¾-in "anti-aberration addition"; crossover at 2000 Hz; 8-ohm impedance; frequency response 55-18,000 Hz ±3 dB; max. input 35 W continuous; tuned ported enclosure and removable grille in walnut cabinet; 16" H × 10" W × 7½" D..... $69

## HARTLEY PRODUCTS

### The Reference
Four-way floor-standing speaker system with 24-in

# Genesis presents affordable realism

The beauty of street music is the realism. There are no mikes, amplifiers, wires, or speakers. No speakers. Wouldn't it be great if we could hear music all the time without speakers. Genesis would like to bring you the next best thing. Speakers you can't hear. You'll hear the music instead of the speakers. You see, we thought it would be nice to design a speaker line that didn't sound like a line of speakers. And a very affordable speaker line. Speakers for every budget priced from $75-$300 depending on how much realism you want.

We design all our speakers with the laws of physics in mind, with superior technology and execution. We sometimes wonder why more speaker manufacturers don't follow these rules. We can't tell you the answer to that, but we can tell you more about Genesis speakers, and how they're built. Visit your nearest Genesis dealer and hear the speakers you can't hear. You may be one step closer to musical reality.

GENESIS

physics corporation

newington park, newington, n.h. 03801

CIRCLE NO. 33 ON READER SERVICE CARD

# 10 SPEAKER SYSTEMS

super woofer, 10-in midrange, 7-in tweeter, and 1-in super tweeter; crossovers at 250, 3000, and 7000 Hz; impedance 5-8 ohms; frequency response 16-25,000 Hz; input range 25-300 W; wood cabinet with removable double-knit grille; 50¼" H × 36" W × 24" D ..... $1500

### The Concertmaster
Four-way floor-standing speaker system with 18-in woofer, 10-in midrange, 7-in tweeter, and 1-in super tweeter; crossovers at 250, 3000, and 7000 Hz; impedance 5-8 ohms; frequency response 16-25,000 Hz; input range 25-300 W; wood cabinet with removable brown grille; 41½" H × 29" W × 18" D ..... $1200

### The Holton Tower
Two-way floor-standing speaker system with two 10-in woofers and 1-in dome tweeter; crossover at 3000 Hz; 4-ohm impedance; frequency response 20-25,000 Hz; input range 15-150 W; wood cabinet with removable brown grille; 49½" H × 20" W × 14" D ..... $450

### Zodiac 300A
Two-way speaker system with two 10-in woofers and 1-in tweeter; crossover at 2000 Hz; 4-ohm impedance; frequency response 30-25,000 Hz; input range 5-100 W; walnut cabinet with removable brown grille; 25" H × 23½" W × 11⅜" D..... $250

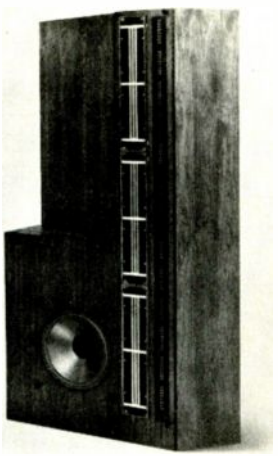
### Zodiac '77
Two-way speaker system with 10-in woofer and 1-in tweeter; crossover at 2000 Hz; 8-ohm impedance; frequency response 35-25,000 Hz; input range 5-100 W; walnut cabinet with removable brown grille; 30" H × 15" W × 11⅜" D ..... $160

### Zodiac 1A
Two-way speaker system with 10-in woofer and 1-in tweeter; crossover at 2000 Hz; 8-ohm impedance; frequency response 40-25,000 Hz; input range 5-100 W; walnut cabinet with removable brown grille; 21¾" H × 14⅜" W × 8¾" D ..... $115

## INFINITY

### Quantum Series Speakers

### Quantum Reference Standard
Biamped, dipole, four-way speaker and equalization system. Speaker: 38-cm dual-drive woofer, 168 cm



× 2.2 cm three-module, line-source electromagnetic-induction midrange, 168 cm × 1.2 cm thirteen-module, line-source electromagnetic-induction tweeter, and seven electromagnetic-induction rear-facing tweeters; electronic crossovers at 100 and 4000 Hz; variable controls for woofer, woofer crossover roll-off, high-pass crossover roll-off, midrange level, tweeter contour, and tweeter level; 4-ohm impedance; frequency response 18-32,000 Hz ±2 dB; min. input 150 W/ch (bass) and 100 W/ch (high-frequency); 60-degree horizontal dispersion −2 dB. Crossover network and equalizer: passive filters (6 dB/octave) with two high- and two low-pass filters and four FET low-gain voltage amplifiers; four three-position bass and midrange controls: bass crossover, bass level, lower mid-crossover, and mid/hi level. Includes mirror-image stereo speaker pairs with electronic crossover. Walnut cabinet; 89⅜" H × 48" W × 24" D ..... $6500

### Quantum Line Source
Four-way, bi-amped, floor-standing speaker system with 12-in dual-drive woofer, midbass coupler, 48-in high-frequency radiator strip, and six 1½-in dome midranges; crossovers at 200, 600, and 4000 Hz; 4-ohm impedance; frequency response 18-32,000 Hz ±2 dB; input range 100-500 W/ch continuous; 180-degree horizontal dispersion; contour controls for midbass, upper midrange, and electromagnetic-induction tweeters; walnut cabinet with removable transparent cloth grille; 15" H × 18" W × 5½" D..... $1300

### Quantum 2
Four-way, floor-standing speaker system with 12-in dual-drive woofer, 4-in midbass coupler, two 1½-in dome midranges, and three electromagnetic-induction tweeters; crossovers at 200, 600, and 4000 Hz; 4-ohm impedance; frequency response 24-32,000 Hz ±3 dB; input range 45-350 W/ch continuous; horizontal dispersion ±60 degrees at 20,000 Hz, −2 dB; level controls for midbass coupler, midrange, and tweeters, variable crossover point for tweeter; walnut cabinet with removable grille; 49" H × 18" W × 13" D ..... $785

### Quantum 3
Four-way, floor-standing speaker system with 12-in dual-drive woofer, 4-in midbass coupler, 1½-in dome midrange, and two electromagnetic-induction tweeters; crossovers at 200, 600, and 4000 Hz; 4-ohm impedance; frequency response 28-32,000 Hz ±3 dB; input range 35-250 W/ch continuous; horizontal dispersion ±60 degrees at 20,000 Hz −2 dB; level controls for midbass coupler, midrange, and tweeters; walnut cabinet with removable grille; 40" H × 18" W × 13" D ..... $550

### Quantum 4
Three-way, floor-standing speaker system with 12-in dual-drive woofer, 1½-in dome midrange, and electromagnetic-induction tweeter; crossovers at 600 and 4000 Hz; 4-ohm impedance; frequency response 35-32,000 Hz ±3 dB; input range 30-250 W/ch continuous; horizontal dispersion 60 degrees left/right at 20,000 Hz −2 dB; midrange and tweeter level controls; walnut cabinet with removable grille; 36" H × 15" W × 12" D..... $445

### Quantum 5
Three-way floor-standing speaker system with 12-in woofer, 1½-in dome midrange, and electromagnetic-induction tweeter; crossovers at 600 and 4000 Hz; 4-ohm impedance; frequency response 38-32,000 Hz ±3 dB; input range 30-250 W/ch continuous; 60-degree left/right horizontal dispersion at 20,000 Hz −2 dB; walnut cabinet with removable black grille; 26½" H × 15" W × 12" D..... $355

### Quantum Jr.
Three-way speaker system with 12-in woofer, 1½-in dome midrange, and electromagnetic-induction tweeter; crossovers at 600 and 4000 Hz; 4-ohm impedance; frequency response 40-32,000 Hz ±3 dB; input range 25-200 W/ch continuous; 60-degree left/right horizontal dispersion at 20,000 Hz −2 dB; walnut cabinet with removable black grille; 25" H × 14½" W × 12" D..... $285

### High-Efficiency Series Speakers

### Column II
Three-way, floor-standing speaker system with two 10-in woofers, 4½-in cone midrange, and two piezo tweeters; crossovers at 750 and 5000 Hz; 8-ohm impedance; frequency response 35-20,000 Hz; input range 15-250 W continuous; walnut cabinet with black cloth grille; 39¾" H × 14" W × 12½" D ..... $365

### 3000B
Three-way speaker system with 12-in woofer, 4½-in cone midrange, and 2½-in tweeter; crossovers at 500 and 5000 Hz; 8-ohm impedance; frequency response 30-20,000 Hz ±4.5 dB; input range 10-125 W continuous; 24¾" H × 14½" W × 12" D ..... $226

### "Q" Series Speakers

### Qb
Three-way speaker system with 10-in woofer, 4-in midrange, and electromagnetic induction tweeter; crossovers at 600 and 4000 Hz; 4-ohm impedance; frequency response 42-32,000 Hz ±3 dB; input range 15-150 W/ch continuous; 60-degree left/right horizontal dispersion at 20,000 Hz −2 dB; birch cabinet with removable brown cloth grille; 25" H × 14½" W × 12" D..... $198

### Qa
Two-way speaker system with 25-cm woofer and electromagnetic-induction tweeter; crossover at 2500 Hz; 4-ohm impedance; frequency response 42-32,000 Hz ±3 dB; input range 15-150 W/ch continuous; 60-degree left/right horizontal dispersion at 20,000 Hz −2 dB; birch cabinet with removable brown-cloth grille; 25" H × 14" W × 12" D ..... $155

### Qe
Two-way bookshelf speaker system with 8-in woofer and electromagnetic-induction tweeter; crossover at 2500 Hz; 4- or 8-ohm impedance; frequency response 47-32,000 Hz ±3 dB; input range 10-100 W/ch continuous; 60-degree left/right horizontal dispersion at 20,000 Hz −2 dB; birch cabinet with removable brown cloth grille; 18" H × 12" W × 10" D..... $109

## INNOTECH

### D-24 Speaker System
Three-way constant width asymmetric transmission line speaker system with two 5-in Bextrene woofers, 1½-in Mylar dome mid-range, and ¾-in cambric super dome tweeter; frequency response 25-25,000 Hz; crossovers at 3500 and 11,000 Hz; 5-ohm impedance; min. input 35 W; rosewood finish; 36½" H × 10½" W × 15⅜" D ..... $497
Walnut finish ..... $427
**D-14**, Similar to D-24 but walnut finish; 26½" H × 9½" W × 15" D..... $300

## JBL

### Paragon Speaker System
Radial-reflection, dual three-way floor-standing speaker system with two 15-in compression horn woofers, two mid-range compression drivers, and two UHF ring radiators; crossovers at 500 and 7000 Hz; max. input 150 W/ch continuous, min. input 10 W/ch continuous; 8-ohm impedance; dual mid-range and UHF level controls; special dispersion surface to recreate stereo image; oiled walnut finish; 35½" H × 103⅜" W × 24 1/16" D ..... $4200 pr.

### L300 Speaker System
Three-way, ducted port, floor-standing speaker system with 15-in woofer, mid-range compression driver with horn/lens assembly, and 077 ultra-high frequency ring radiator; crossovers at 800 and 8500 Hz (12 and 18 dB/octave); max. input 150 W continuous, min. input 10 W continuous; 8-ohm impedance; oiled walnut finish with smoked glass top and fabric grille (blue, black, brown, or camel); 31⅜" H × 23" W × 22½" D..... $1098

### L212 Speaker System
Four-way floor-standing speaker system consisting of three elements: two three-way speaker arrays with 8-in woofer, 5-in mid-range, and 1-in hemispherical tweeter; self-powered 12-in ultrabass; crossovers at 70, 800, and 3000 Hz; max. input 200 W/ch con-

# "State-of-the-art Fever."

## The peculiar disease that has made Infinity what it is today.

## (And what it will be tomorrow.)

It's chronic and incurable—our need to reach for state-of-the-art perfection; our obsession with absolute accuracy of musical reproduction.

Certainly Infinity isn't the first speaker company to create exotic technology. But when you look around and start counting, you'll discover that we're the *only* major American speaker company involved with state-of-the-art technology—year in and year out. Chronic.

### It's people like you who spread the disease.

Of course, speakers speak, and more than one Infinity speaker has sold itself. But the Infinity success story is due in no small part to knowledgeable audiophiles and music lovers—people like you—who, having heard Infinity speakers, spread the word.

In fact, the widest dispersion in stereo is the sound of friends telling friends about Infinity speakers.

And we thank you.

### Our object all sublime.

First, we'll continue to develop the most advanced speaker technology in the world. Second, we'll continue to put as much as possible of that technology into speakers at *all* prices.

### A case in point: EMIT™

We believe our Electromagnetic Induction Tweeter to be the most advanced tweeter in the world of audio.

An etched "voice coil" on an extremely low-mass diaphragm is driven by magnets of rare-earth Samarium Cobalt—the most powerful magnetic substance known. The resulting output shares an electrostatic's delicacy of sound. But is better than electrostatics, cones and dome tweeters in power-handling capacity, transient response and horizontal dispersion.

Every speaker in the Infinity Quantum and Q lines—all the way down to our $109* bookshelf Qe—has one or more EMITs. Which is one reason they also have a clarity, a transparency and a smoothness of response superior to that of any other speaker in each price range.

### The formidable QRS and the more modest Quantum 5

To the rare listener who needs to consider neither speaker size nor price, our Quantum Reference Standard—at $6500* for the complete speakers-and-equalization system—offers tremendous energy handling capacity, accuracy of response, and a seldom heard warmth and reality.

Quantum 5—at $355 each—utilizes much of the same unique Infinity technology on a smaller scale, and still produces a level of accuracy that would be a revelation from speakers of any size.

### No one ever wrote a hit musical called "The Sound of Speakers."

We're convinced that, in the long run, speaker buyers will prefer to hear *music the way the musicians intended it*, and not the way a speaker designer intended it. Thus our continuing obsession with accuracy.

We're making progress. Five years ago only hard-core audiophiles ever heard of Infinity. Today we're one of the three largest speaker companies in America.

But we're not discouraged. We'll keep on trying.

Infinity™

We get you back to what it's all about. Music.

*Manufacturer's suggested retail price, optional with dealers. West of the Mississippi, the suggested price for a Qe is $105; for a Quantum 5, $340. Speaker Stand optional.

tinuous, min. input 10 W/ch continuous; 8-ohm impedance; mid-range and tweeter level controls behind grille; oiled walnut finish; ultrabass has smoked glass top; black fabric grille; Ultrabass 19⅞" H × 18½" W × 18½" D; wide-range systems 38⅝" H × 17" W × 13" D ..... $1740 pr.

### 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; max. input 300 W/ch; oiled walnut finish with charcoal brown grille; 1225 mm H × 512 mm W × 390 mm D..... $750

### L65 Speaker System
Three-way, ducted port, floor-standing speaker system with 12-in woofer, 5-in mid-range, and 3.1 × 0.7-in ultra-high frequency horn tweeter; crossovers at 1000 and 6500 Hz; max. input 150 W/ch continuous, min. input 10 W/ch continuous; 8-ohm impedance; mid-range and tweeter level controls behind grille; oiled walnut finish with smoked glass top and stretch fabric grille (blue, brown, or red); 24½" H × 17½" W × 13⅛" D..... $543

### L166 Speaker System
Three-way, ducted port, bookshelf speaker system with 12-in woofer, 5-in mid-range, and 1-in hemispherical tweeter; crossovers at 1000 and 6000 Hz (12 dB/octave); max. input 200 W/ch continuous, min. input 10 W/ch continuous; 8-ohm impedance; mid-range and tweeter level controls; oiled walnut finish with acoustically transparent APP grille; 14¼" H × 23½" W × 13" D..... $438

### L110 Speaker System
Three-way, ducted port, bookshelf speaker system with 10-in woofer, 5-in mid-range, and 1-in dome tweeter; crossovers at 1000 and 4000 Hz; max. input 150 W/ch continuous, min. input 10 W/ch continuous; 8-ohm impedance; mid-range and tweeter level controls behind grille; oiled walnut finish with semi-transparent black fabric grille; 23½" H × 14¼" W × 11¼" D..... $351

### L50 Speaker System
Three-way ducted-port bookshelf speaker system with 10-in woofer, 5-in midrange, and1½-in tweeter; crossovers at 800 and 3000 Hz; 8-ohm nominal impedance; sensitivity 88 dB SPL/W/m; input range 10-60 W/ch continuous; midrange and tweeter controls; oiled walnut finish with blue, brown, or rust grille; 24½" H × 14¼" W × 12 11/32" D.... $279

### L40 Speaker System
Two-way, ducted port, bookshelf speaker system with 10-in woofer and 1-in hemispherical tweeter; crossover at 1800 Hz; max. input 60 W/ch continuous, min input 10 W/ch continuous; 8-ohm impedance; tweeter level control behind grille; oiled walnut finish with stretch fabric grille (brown, rust, or tan); 23" H × 15" W × 11⅞" D..... $213

### 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; input range 10-60 W/ch continuous sine wave; black walnut finish with brown or black grille; 21" H × 13" W × 10" D. $150

## JENNINGS RESEARCH

### Vector Five Speaker System
Four-way floor-standing speaker system with 12-in woofer, 12-in passive radiator, 5-in mid-range, and 1-in soft cloth dome tweeter; crossovers at 300, 1200, and 5000 Hz; max. input 200 W; impedance 8 ohms; 140° dispersion; two mid-range L-pads, one high-frequency L-pad; oiled walnut with cocoa brown grille; 33½" H × 18" W × 16¼" D..... $440

### Contrara Elan Speaker System
Four-way speaker system with two 8-in woofers, 1.5-in mid-range, and 1-in soft cloth tweeter; crossovers at 500, 1200, and 5000 Hz; max. input 150 W; impedance 8 ohms; 140° dispersion; mid-range and high-frequency L-pads; oiled walnut finish with black grille; 37" H × 12½ W × 12½" D..... $380

### Vector 4 Speaker System
Three-way floor-standing speaker system with 10-in woofer, 10-in passive radiator, 5-in mid-range, and 1-in soft cloth dome tweeter; crossovers at 300 and 5000 Hz; max. input 150 W program; impedance 8 ohms; 140° dispersion; mid-range and high-frequency L-pads; oiled walnut finish with chocolate or rust grille; 27½" H × 16" W × 13" D..... $300

### Vector Two Speaker System
Three-way bookshelf speaker system with 10-in woofer, 10-in passive radiator, 5-in mid-range, and 1-in soft cloth tweeter; crossovers at 1200 and 5000 Hz; max. input 150 W; impedance 8 ohms; 140° dispersion; mid-range and high-frequency L-pads; oiled walnut finish with chocolate or rust grille; 24¾" H × 14¾" W × 11¾" D..... $260

### Contrara Pedastal Speaker System
Three-way speaker system with two 8-in woofers, 5-in midrange, and 1-in soft cloth tweeter; crossovers at 300 and 5000 Hz; max. input 100 W; impedance 8 ohms; 180° dispersion; oiled walnut finish with black grille; 33" H × 11½" W × 11½" D ..... $250

### Vector One A Speaker System
Three-way bookshelf speaker system with 8-in woofer, 8-in passive radiator, 1.5-in soft dome midrange, and 1-in soft dome tweeter; crossovers at 1200 and 5000 Hz; max. input 100 W program; impedance 8 ohms; 140° dispersion; mid-range and high-frequency L-pads; oiled walnut finish with dark blue grille; 23" H × 14" W × 10¾" D..... $230

### Piccola Bass Cube Speaker System
Floor-standing sealed bass commode with 12-in dual-voice coil subwoofer; crossover at 80 Hz; 8-ohm impedance; sensitivity 92 dB/W/m; input range 30-200 W program; walnut finish with chocolate nylon grille; 21½" H × 17" W × 17" D.... $225

### Vector Two B Speaker System
Two-way bookshelf speaker system with 10-in woofer, 10-in passive radiator, and 1-in soft cloth dome tweeter; crossover at 2500 Hz; max. input 100 W program; impedance 8 ohms; 140° dispersion; high-frequency level switch; oiled walnut finish with black grille; 24¾" H × 14¾" W × 11¾" D ..... $210

### Contrara Tower Speaker System
Two-way speaker system with 10-in woofer and 1-in soft cloth dome tweeter; crossover at 2500 Hz; max. input 100 W program; impedance 8 ohms; 140° dispersion; high-frequency level switch; oiled walnut finish with chocolate grille; 28½" H × 11½" W × 11½" D ..... $200

### Vector One Speaker System
Two-way bookshelf speaker system with 8-in woofer, 8-in passive radiator, and 1-in soft cloth dome tweeter; crossover at 2500 Hz; max. input 75 W program; impedance 8 ohms; 140° dispersion; high-frequency level switch; oiled walnut finish with cocoa brown or camel grille; 23" H × 14" W × 10¾" D ..... $180

### Piccola Three Speaker System
Three-way sealed bookshelf speaker system with 6-in woofer, 5-in mid-range, and 1-in soft dome tweeter; crossovers at 1200 and 5000 Hz; 8-ohm impedance; sensitivity 92 dB/W/m; input range 15-100 W; rear-mounted midrange and high-frequency controls; walnut finish with chocolate nylon grille; 14¾" H × 11½" W × 6¾" D ..... $145

### Contrara Rectangle Speaker System
Two-way bookshelf speaker system with 8-in woofer and 1-in soft cloth dome tweeter; crossover at 2500 Hz; max. input 75 W program; impedance 8 ohms; 180° dispersion; oiled walnut finish with black grille; 9" H × 18" W × 12" D..... $135

### Piccola Two Speaker System
Two-way bass-reflex bookshelf speaker system with 6-in woofer and 1-in soft dome tweeter; crossover at 2500 Hz; 8-ohm impedance; sensitivity 92 dB/W/m; input range 15-75 W program; walnut finish with chocolate nylon grille; 14¾" H × 9" W × 6¾" D..... $100

## JENSEN

### LS-6 Speaker System
Three-way acoustic-suspension floor-standing speaker system with 15-in woofer, two 3½-in direct-radiating mid-ranges, and 1½-in Mylar dome tweeter; frequency response 20-25,000 Hz; efficiency 96 dB/W/m; max. input 90 W continuous; min. input 10 W continuous; tweeter and mid-range level controls; hand-rubbed walnut veneer finish; 30¾" H × 18¾" W × 16¼" D..... $290

### LS-5 Speaker System
Three-way acoustic-suspension floor-standing speaker system with 12-in woofer, two 3½-in direct-radiating mid-ranges, and 1½-in Mylar dome tweeter; frequency response 25-25,000 Hz; efficiency 95 dB/W/m; max. input 75 W continuous; min. input 10 W continuous; tweeter and mid-range level controls; walnut vinyl finish; 26" H × 15¾" W × 13⅜" D ..... $220

### LS-4 Speaker System
Three-way acoustic-suspension floor-standing speaker system with 10-in heavy duty woofer, 3½-in direct-radiating mid-range, and 2-in direct-radiating tweeter; frequency response 27-22,000 Hz; efficiency 93 dB/W/m; max. input 60 W continuous; min. input 10 W continuous; midrange/tweeter level control; walnut vinyl finish; 24½" H × 13½" W × 12⅛" D ..... $170

### LS-3 Speaker System
Two-way acoustic-suspension floor-standing speaker system with 10-in woofer and 2-in direct-radiating tweeter; frequency response 35-20,000 Hz; efficiency 92 dB/W/m; max. input 45 W continuous; min. input 10 W continuous; tweeter level control; walnut vinyl finish; 23" H × 12⅞" W × 10¼" D..... $120

### LS-2 Speaker System
Two-way acoustic-suspension floor-standing speaker system with 8-in woofer and 2-in direct-radiating tweeter; frequency response 35-20,000 Hz; efficiency 91 dB/W/m; max. input 40 W continuous; min. input 10 W continuous; walnut vinyl finish; 18¾" H × 11" W × 9⅞" D ..... $80

### Model 20 Speaker System
Two-way foam-suspension floor-standing speaker system with 8-in cone woofer and 2-in direct radiating tweeter; crossover at 4000 Hz; 8-ohm nominal impedance; frequency response 35-20,000 Hz; 160-degree dispersion; input range 10-80 W continuous; simulated wood veneer finish; 18¼" H × 11" W × 8⅜" D..... $60

## JVC

### SK-1000 Speaker System
Three-way bass reflex speaker system with 12-in woofer, 5-in mid-range, and 1-in dome tweeter; frequency response 30-20,000 Hz; crossovers at 1000 and 8000 Hz; 8-ohm nominal impedance; max. input 150 W music; continuous input 75 W; sensitivity 93-dB SPL/W/m; mid-range and high-frequency level controls; walnut veneer cabinet or silver tone on wood finish; 25½" H × 15¾" W × 12¾" D ..... $250

### SK-700 Speaker System
Three-way bass reflex speaker system with 10-in woofer, 5-in cone midrange, and 1-in dome tweeter; crossovers at 1000 and 10,000 Hz; 8-ohm impedance; frequency response 35-20,000 Hz; sensitivity 92 dB/W/m; handles 120 W peak power, 60 W continuous; continuous controls for mid- and high-range; walnut or silver finish; 22¼" H × 13½" W × 12⅜" D ..... $170


# An inside look at Jensen's Total Energy Response.

You're looking at the heart of one of the most uniformly accurate sound reproducers made today. A Jensen Lifestyle Speaker.

Unlike many speakers that require special on-axis listening positions—or others that bounce the sound all over your room—Lifestyle is engineered to deliver a wide spectrum of musical information throughout the listening area. In proper perspective. With all the depth and imaging your source material is capable of. And at real-life volume levels. That's what Total Energy Response is all about.

In fact, for perfectly integrated speaker systems and total quality control, we make every element that goes into the manufacture of our Lifestyle speakers. From the heavy duty magnets to our handwound, high power voice coils. Even the computer-designed crossover network. And of course, all of our precision woofers, midrange drivers and 170° dispersion dome tweeters.

But please, give a critical listen to these speakers in person. We think you'll agree, a notably superior design concept has resulted in audibly superior sound reproduction.

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LIFESTYLE SPEAKER SYSTEMS
Division of Pemcor, Inc.
Schiller Park, Illinois 60176

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# 10 SPEAKER SYSTEMS

### SK-500 Speaker System
Two-way bass reflex speaker system with 10-in woofer and 2½-in cone tweeter; crossover at 2000 Hz; 8-ohm impedance; frequency response 40-20,000 Hz; efficiency 91 dB/W/m; handles 70 W peak power, 35 W continuous; tonal transitions employed by Phase Moire Propagation method; walnut or silver finish; 19⅝" H × 12½" W × 11¼" D.. ..... $200 pr.

## KEF

### Model 105 Speaker System
Three-way two-enclosure floor-standing speaker system with 12-in woofer, 5-in midrange, and 2-in Mylar dome tweeter; crossovers at 400 and 2500 Hz; 8-ohm nominal impedance; sensitivity 86 dB SPL/W/m; input range 40-200 W program; frequency response 38-22,000 Hz ±2 dB; switchable peak-level indicator; separate woofer and midrange enclosures geometrically piled; walnut finish with black cloth grille; 38" H × 16.3" W × 17.9" D..... ..... $875

### Cantata Speaker System
Three-way speaker system with crossovers at 250 and 3000 Hz; frequency response 35-20,000 Hz ±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; 32.1" H × 15.4" W × 13.4" D ..... $550

### Model 104 aB Speaker System
Three-way speaker system with crossovers at 45 and 3000 Hz; frequency response 50-20,000 Hz ±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; 24.8" H × 13" W × 10.2" D..... ..... $375

### Calinda Speaker System
Three-way speaker system with crossovers at 45 and 3000 Hz; frequency response 40-30,000 Hz ±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 × 13.8" W × 11" D..... ..... $325

### Corelli Speaker System
Two-way speaker system with crossover at 3500 Hz; frequency response 50-30,000 Hz ±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 × 11" W × 8.6" D ..... $195

## KLH

### Baron 355 Speaker System
Three-way tuned phase-inverted floor-standing speaker system with 11-in woofer, 1¾-in soft dome midrange, and 1-in soft dome tweeter; crossovers at 900 and 3000 Hz; 8-ohm nominal impedance; frequency response 32.5-22,000 Hz; efficiency 91 dB SPL/W/m; input range 20-120 W/ch continuous; front-mounted variable tweeter and midrange level controls; four-panel walnut finish with removable black knit grille and smoked glass top; 35½" H × 14" W × 12¾" D..... ..... $399

### Magnum CT 44 Speaker System
Two-way floor-standing speaker system with two 10-in woofers, two 2½-in tweeters, and 1-in soft dome tweeter; 4-ohm impedance; frequency response 45-22,000 Hz; efficiency 92-dB SPL/W/m; input range 15-100 W/ch continuous; four-side oak finish mid-panels, wrap-around cloth top and bottom panels, and removable smoked glass top; 41" H × 12" W × 12" D ..... $349

### Little Baron 345 Speaker System
Two-way acoustic-suspension floor-standing speaker system with 11-in woofer and 1-in soft dome tweeter; crossover at 1200 Hz; 8-ohm nominal impedance; frequency response 39-22,000 Hz; sensitivity 90.5 dB; input range 20-70 W/ch continuous; bottom-mounted variable tweeter level control; four-panel walnut finish with black removable grille and smoked glass top insert; 29¼" H × 13" W × 11¾" D..... ..... $299

### Classic Five Speaker System
Three-way floor-standing speaker system with 12-in woofer, 1¾-in soft dome midrange, and 1-in soft dome tweeter; 8-ohm impedance; input range 20-120 W/ch continuous; oak veneer rim panels, wrap-around cloth mid-panel, and removable smoked glass top; 26" H × 14" W × 12¾" D.. $299

### Pistol CT 38 Speaker System
Two-way floor-standing speaker system with two 8¼-in woofers and two 2½-in tweeters; 4-ohm impedance; input range 10-75 W/ch continuous; oak finish mid-panel, wrap-around cloth top and bottom panels, and removable smoked glass top; 41" H × 11" W × 11" D ..... $259

### Baroness 335 Speaker System
Two-way acoustic-suspension 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; rear-mounted variable tweeter level control; walnut finish with removable black knit grille and smoked plexiglass top insert; 23" H × 12" W × 11" D..... $249

### 319B Speaker System
Three-way tuned phase-inverted speaker system with 12-in woofer, 5¼-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 × 14½" W × 11¼" D ..... $230

### Ten CL-4 Speaker System
Three-way floor-standing speaker system with 10-in woofer, 4½-in cone midrange, and 1-in dome tweeter; frequency response 30-22,000 Hz ±3 dB; 8-ohm nominal impedance; input range 25-200 W/ch continuous; tweeter and midrange control switches; oiled walnut finish with brown jersey grille; 26¹³⁄₁₆" H × 14¼" W × 12¹³⁄₁₆" D..... $225

### 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 × 14½" W × 11¼" D..... $199

### Classic One Speaker System
Two-way floor-standing speaker system with 10-in woofer and 1-in soft dome tweeter; 8-ohm impedance; input range 15-60 W/ch continuous; oak veneer rim panels, removable wrap-around cloth mid-panel, and removable smoked glass top; 24 " H × 12" W × 12" D..... $199

### 327 Speaker System
Three-way acoustic-suspension speaker system with 10-in woofer, 4-in cone midrange, and 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; 23¼" H × 14" W × 10¾" D. $170

### Ten CL-3 Speaker System
Two-way speaker system with 10-in woofer, 2½-in cone tweeter, and 2-in cone super tweeter; 8-ohm

# 1979 STEREO DIRECTORY & BUYING GUIDE

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nominal impedance; frequency response 35-20,000 Hz; input range 20-100 W/ch continuous; tweeter control switch; oiled walnut finish with brown jersey grille; 25⅞" H × 13⅞" W × 11 11/16" D ..... $170

### CL-2 Speaker System
Two-way acoustic-suspension 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 SPL/W/m; input range 15-60 W/ch continuous; 23" H × 12" W × 9¾" D..... $135

### 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 × 12" W × 9¾" D. $130

### CL1W Speaker System
Two-way acoustic-suspension speaker system with 8-in woofer and 2½-in cone tweeter; crossover at 3000 Hz; 8-ohm nominal impedance; frequency response 64-18,000 Hz; efficiency 90.5-dB SPL/W/m; input range 8-50 W/ch continuous; 21" H × 12" W × 8¾" D..... $115

### 331B Speaker System
Two-way acoustic-suspension speaker system with 8-in woofer and 2½-in cone tweeter; crossover at 3000 Hz; 8-ohm nominal impedance; frequency response 64-18,000 Hz; efficiency 90.5 dB; input range 8-50 W/ch continuous; walnut vinyl finish with black matte baffle and removable black knit grille; 21" H × 12" W × 8¾" D..... $99

### 300 Speaker System
Two-way acoustic-suspension speaker system with 8-in woofer and 2½-in cone tweeter; crossover at 2200 Hz; 8-ohm nominal impedance; frequency response 75-18,000 Hz; efficiency 91 dB; input range 8-35 W/ch continuous; walnut vinyl finish with black matte baffle and removable black knit or non-removable black foam grille; 17½" H × 10½" W × 7¼" D..... $79

### CL-Jr Speaker System
Two-way acoustic-suspension speaker system with 8-in woofer and 2½-in cone tweeter; crossover at 2200 Hz; 8-ohm nominal impedance; frequency response 75-18,000 Hz; efficiency 91-dB SPL/W/m; input range 8-35 W/ch continuous; walnut vinyl finish with black painted front/rear baffle and removable brown knit grille ..... $75

## KLIPSCH

### Klipschorn Speaker System
Three-way speaker system with folded-type horn

woofer with 15-in driver and straight-axis horns for high frequencies; frequency response 35-17,000 Hz ±5 dB; crossovers at 400 and 6000 Hz; max. input 105 W program; 104-dB SPL at 4 ft with 1 W; 8-ohm nominal impedance; priced according to finish; rosewood lacquer, oil on teak, oak lacquer, or cherry lacquer finish; 52" H × 31¼" W × 28½" D.. ..... $1651 max.

### Belle Klipsch Speaker System
Three-way speaker system with folded-type horn woofer with 15-in driver and straight-axis horns for high frequencies; frequency response 45-17,000 Hz ±5 dB; crossovers at 400 and 6000 Hz; max. input 105 W program; 104-dB SPL at 4 ft with 1 W; 8-ohm nominal impedance; priced according to finish; rosewood lacquer, oil on teak, oak lacquer, or cherry lacquer; 35⅝" H × 30⅛" W × 18¾" D..... ..... $1374 max.

### Cornwall Speaker System
Three-way speaker system with direct-radiating ducted-port woofer with 15-in driver and straight-axis horns for high frequencies; frequency response 38-17,000 Hz ±5 dB; crossovers at 600 and 6000 Hz; max. input 105 W program; 98.5 dB SPL at 4 ft with 1 W; 8-ohm nominal impedance; priced according to finish; rosewood lacquer, oil on teak, oak lacquer, or cherry lacquer; 35¾" H × 25½" W × 15½" D ..... $746 max.
**RV-2.** Riser base for custom-finished models.... $15

### La Scala Speaker System
Three-way speaker system with folded-type horn woofer with 15-in driver and straight-axis horns for high frequencies; frequency response 45-17,000 Hz ±5 dB; crossovers at 400 and 6000 Hz; max. input 105 W program; 104-dB SPL at 4 ft with 1 W; 8-ohm nominal impedance; priced according to finish; birch, walnut, or maple plywood-lacquer; 35¼" H × 23¾" W × 24½" D..... ....$671 max.
Top grille..... $25

### Heresy Speaker System
Three-way speaker system with direct-radiating 12-in woofer and straight-axis horns for high frequencies; frequency response 50-17,000 Hz ±5 dB; crossovers at 700 and 6000 Hz; max. input 105 W program; 96-dB SPL at 4 ft with 1 W; 8-ohm nominal impedance; priced according to finish; rosewood lacquer, oil on teak, cherry lacquer, or oak lacquer; 21⅜" H × 15½" W × 13⅛" D. $436 max.
**RV-1.** Riser base for custom-finished models.... $14

## KOSS

### CM 1030 Speaker System
Four-way, four-bandpass, dual-port, floor-standing speaker system with 10-in woofer, two 4½-in mid-

range drivers, 1-in dome treble tweeter, and 1-in dome tweeter; crossovers at 300, 2500, and 7000 Hz; bandpass response 3 dB down point ($f_3$) 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); 5-ohm nominal impedance; efficiency 96-dB SPL/W/m; input range 15-200 W/ch; midrange, treble, and tweeter spectrum-shaped controls ±3 dB range; 38⅞" H × 16½" W × 14½" D..... $425

# 10 SPEAKER SYSTEMS

### CM 1020 Speaker System
Three-way, three-bandpass, vented box, floor-standing speaker system with 10-in woofer, 4½-in midrange, and 1-in dome tweeter; crossovers at 300 and 3500 Hz; bandpass response 3 dB down point ($f_3$) 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); 6-ohm nominal impedance; efficiency 95-dB SPL/W/m; input range 15-150 W/ch; midrange and tweeter spectrum-shaped controls ±3 dB range; 33" H × 15½" W × 13¾" D ..... $325

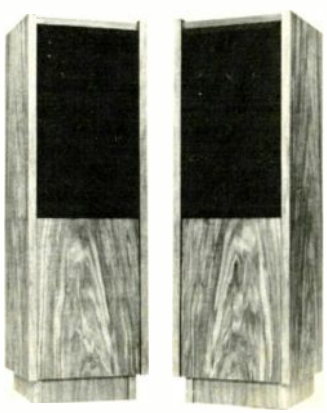
### CM 1010 Speaker System
Two-way, two-bandpass, vented box, floor-standing speaker system with 8-in woofer, 10-in passive radiator, and 1-in dome tweeter; crossover at 3500 Hz; bandpass response 3 dB down point ($f_3$) at 35 Hz (low frequency), 3 dB down point at 17,500 Hz (high frequency), and 6 dB down points from 32-18,500 Hz (overall); 7-ohm nominal impedance; efficiency 92-dB SPL/W/m; input range 15-100 W/ch; tweeter spectrum-shaped control ±3 dB; 28" H × 15½" W × 11" D ..... $225

### 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 ($f_3$) at 36 Hz (low frequency), 3 dB down point at 17 Hz (high frequency), 6 dB down points from 30-20,000 Hz (overall); 7-ohm nominal impedance; efficiency 87-dB SPL/W/m; input range 15-75 W/ch; tweeter spectrum-shaped control ±3 dB range; 24" H × 13¾" W × 11¾" D ..... $175

## KUSTOM ACOUSTICS

### Trapezium
Four-way floor-standing speaker system with 12-in woofer, 5-in cone midrange, 1¼-in dome tweeter, and 1-in dome super tweeter; crossovers at 200, 2500, and 9000 Hz; 8-ohm nominal impedance; frequency response 16-30,000 Hz ±2 dB; min. input 50 W; sensitivity 90 dB SPL/W/m; midrange, tweeter, and super tweeter controls; electronic or passive crossover in bass; walnut finish with black grille; 60" H × 18" W × 12" D ..... $1999

### Labyrinth
Four-way speaker system with 12-in woofer, 5-in midrange, 1¼-in mid-tweeter, and 1-in dome super



tweeter; frequency response 24-25,000 Hz ±3 dB; crossovers at 350, 2500, and 9000 Hz (12 dB/octave); input range 15-150 W/ch continuous into 8 ohms; 8-ohm nominal impedance; sensitivity 91-dB SPL/W/m; mid-ranges and tweeters adjustable via four super-duty front-mounted T-pads; walnut veneer finish; 48" H × 16" W × 18" D ..... $899

### Trapezoid
Four-way floor-standing speaker system with 12-in woofer, 5-in cone midrange, 1¼-in dome tweeter, and 1-in dome super tweeter; crossovers at 350, 2500, and 9000 Hz; 8-ohm nominal impedance; frequency response 29-25,000 Hz ±3 dB; input range 15-150 W/ch continuous into 8 ohms; sensitivity 93-dB SPL/W/m; midrange, tweeter, and super tweeter controls; 40" H × 16" W × 13" D . $569

### Regency
Three-way speaker system with 12-in woofer, 5-in mid-range, and 1¼-in dome super tweeter; frequency response 30-22,000 Hz ±3 dB; crossovers at 350 and 2500 Hz (12 dB/octave); input range 15-150 W/ch continuous into 8 ohms; 8-ohm nominal impedance; sensitivity 92-dB SPL/W/m; midrange and tweeter adjustable via super-duty front-mounted T-pads; walnut veneer finish; 26" H × 16" W × 13" D ..... $399

### Impulse
Three-way floor-standing speaker system with 12-in woofer, 5-in cone midrange, and 1-in dome tweeter; crossovers at 750 and 2500 Hz; 8-ohm nominal impedance; frequency response 39-22,000 Hz ±3 dB; input range 10-150 W/ch continuous into 8 ohms; sensitivity 91-dB SPL/W/m; midrange anc tweeter controls; walnut finish; 24" H × 14" W × 9" D ..... $239

### Imp
Two-way speaker system with 12-in woofer and 1¼-in dome tweeter; crossover at 1600 Hz; 8-ohm nominal impedance; frequency response 39-20,000 Hz ±3 dB; min. input 15 W; sensitivity 93-dB SPL/W/m; tweeter control; walnut finish; 24" H × 14" W × 9" D ..... $189

## LAFAYETTE

### Criterion 3003 Speaker System
Two-way speaker system with 12-in woofer and 7.65 in² "Corona Field" Heil air-motion transformer; frequency response 30-25,000 Hz; crossover at 2000 Hz; efficiency 91-dB SPL/W/m; max input 180 W music power; 6 ohm nominal impedance; horizontal dispersion 120°; vertical dispersion 50°; brilliance level control ..... $300

### Criterion 3002 Speaker System
Two-way speaker system with 10-in woofer and 7.65 in² "Corona Field" Heil air-motion transformer; frequency response 35-25,000 Hz; crossover at 2000 Hz; efficiency 90-dB SPL/W/m; max input 160 W music power; 6-ohm nominal impedance; horizontal dispersion 120°; vertical dispersion 50°; brilliance level control ..... $230

### Criterion 3001 Speaker System
Two-way speaker system with 10-in woofer and 7.65 in² "Corona Field" Heil air-motion transformer; frequency response 40-25,000 Hz; crossover at 2000 Hz; efficiency 89-dB SPL/W/m; max input 150 W music power; 6-ohm nominal impedance; horizontal dispersion 120°; vertical dispersion 50°; brilliance level control ..... $200

### Criterion 2003A Speaker System
Three-way speaker system with 15-in woofer, 16¼-in × 4¾-in horn midrange, and two phenolic ring tweeters; crossovers at 2000 and 4000 Hz; 8-ohm impedance; frequency response 20-20,000 Hz max. input 120 W program; tweeter and compensation/equalization controls; walnut vinyl finish with cafe brown knit grille; 29⁷/₁₆" H × 17¾" W × 11⁷/₁₆" D ..... $200

### Criterion 2002A Speaker System
Three way speaker system with 12-in woofer, 2-in × 6 in exponential horn midrange, and two phenolic ring tweeters; crossovers at 2000 and 4000 Hz; 8-ohm impedance; frequency response 20-20,000 Hz; max. input 90 W program; tweeter and compensation/equalization controls; walnut vinyl finish with cafe brown knit grille; 26" H × 15⅜" W × 12⅜" D ..... $160

### Criterion 2001A Speaker System
Three way speaker system with 10-in woofer, 2-in × 6-in exponential horn midrange, and wide-dispersion phenolic ring tweeter; crossovers at 2000 and 4000 Hz; 8-ohm impedance; frequency response 30-20,000 Hz; max. input 70 W program; tweeter and compensation/equalization controls; walnut vinyl finish with cafe brown knit grille; 25" H × 13½" W × 12¼ D ..... $120

### Criterion 1009 Speaker System
Three-way speaker system with 12-in foam-edged woofer, midrange, and tweeter; frequency response 40-18,000 Hz; 8-ohm impedance; max. input 60 W/ch; midrange and tweeter controls; birch vinyl finish with removable brown foam grille; 24" H × 14½ W × 10½"D ..... $100

### Criterion 1007 Speaker System
Three-way speaker system with 10-in foam-edged woofer, 5-in midrange, and 3-in tweeter; frequency response 45-17,000 Hz; 8-ohm impedance; max. input 50 W/ch; tweeter level control; removable brown foam grille; 22" H × 12½" W × 10⁷/₁₆" D ..... $80

### Criterion 1005 Speaker System
Three-way speaker system with 10-in foam-edged woofer, 3-in midrange, and 3-in tweeter; frequency response 50-17,000 Hz; 8-ohm impedance; max. input 45 W/ch; birch vinyl finish with removable brown grille; 20" H × 12½" W × 8³/₁₆" D ..... $60

### Pip Speak Speaker System
Two-way bookshelf speaker system with 4-in long-throw woofer and 1-in soft-dome tweeter; crossover at 2500 Hz; frequency response 80-20,000 Hz; input 40 W music; die-cast aluminum with perforated metal grille; 7⅛" H × 4½" W × 4⁹/₁₆" D .... $50

### Criterion 1003 Speaker System
Two-way speaker system with 8-in foam-edged woofer and tweeter; frequency response 60-17,000 Hz; 8-ohm impedance; max. input 30 W/ch; birch vinyl finish with removable brown foam grille; 18" H × 11½" W × 6⁹/₁₆" D ..... $45

## LANCER

### Lancer SC-9T Three-Way System
Dynamic acoustic-suspension system with 10-in woofer, 5-in midrange, and two 1-in dome tweeters; frequency response 20-20,000 Hz; crossovers at 500 and 4500 Hz; min. input 10 W; max. input 100 W; impedance 8 ohms; mid-range and high-frequency controls; multi-radiational tower design; oiled-walnut veneer and solids cabinet; removable black double-knit fabric grille; 38" H × 12" W × 12" D ..... $230

**SC-7.** Similar to SC-9T except 12-in woofer, 5-in midrange, one 1-in dome tweeter; frequency response 20-20,000 Hz ±5 dB; removable brown foam grille; 25½" H × 15" W × 11¾" D ..... $230

### Lancer SC-4 Three-Way System
Dynamic acoustic-suspension system with 12-in woofer, 5-in midrange, and 2¼-in tweeter; frequency response 20-20,000 Hz; crossovers at 750 and 6000 Hz; min. input 10 W; max. input 50 W; impedance 8 ohms; mid-range and high-frequency controls; oiled-walnut veneers and solids cabinet; removable brown foam grille; 23½" H × 15" W × 12½" D ..... $170

**SC-10A.** Similar to SC-4 except two-way system with 10-in woofer and 2¼-in tweeter; crossover at 2500 Hz; high-frequency control; 20¼" H × 12½" W × 10" D ..... $120

### Lancer 9535-2 Two-Way System
Dynamic bass-reflex design with 12-in woofer and 2¼-in tweeter; frequency response 30-20,000 Hz; crossover at 3000 Hz; impedance 8 ohms; min. input 5 W; max. input 35 W; oiled-walnut veneer cabinet with brown/white grille cloth; 25" H × 14¼" W × 11¾" D ..... $100

**9534X.** Similar to 9535-2 except 8-in woofer, 3-in tweeter; min. input 5 W; max. input 30 W; frequency response 40-18,000 Hz; 23½" H × 11¼" W × 11¼" D ..... $70

**9711.** Similar to 9535-2 except 8-in full-range driver; input range 3-20 W; frequency response 45-15,000 Hz; 20¼" H × 10" W × 9½" D ..... $55

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# 10 SPEAKER SYSTEMS

## LEAK

### 3090 Monitor Speaker System
Four-way speaker system with 15-in woofer in transmission-line bass cabinet and 7-in and 4-in mid-

range drivers and Rank isotweeter in swiveling upper section; 6-ohm impedance; efficiency 88-dB SPL/W/m; max. input 160 W; 47" H × 20" W × 15" D..... $870

### 3080 Speaker System
Three-way speaker system with 250-mm woofer, 170-mm mid-range, and 19-mm dome tweeter; crossovers at 450 and 3500 Hz; max. input 80 W (DIN 45573); recommended amp power 12-90 W continuous; sensitivity 85-dB SPL/W/m; 8-ohm impedance; 33¼" H × 13½" W × 17¼" D.... $550

### 3050 Speaker System
Two-way speaker system with 170-mm woofer and 19-mm dome tweeter; crossover at 4000 Hz; max. input 50 W (DIN 45573); recommended amp power 12-60 W continuous; sensitivity 85-dB SPL/W/m; 8-ohm impedance; 25¼" H × 11¾" W × 13¾" D.. ..... $355

### 3030 Speaker System
Two-way speaker system with two 130-mm bass/midranges and 19-mm dome tweeter; crossover at 4000 Hz; max. input 35 W (DIN 45573); recommended amp power 12-35 W continuous; sensitivity 85-dB SPL/W/m; 8-ohm impedance; 20½" H × 9¾" W × 11" D..... $230

### 3020 Speaker System
Two-way speaker system with 130-mm bass/midrange and 19-mm dome tweeter; crossover at 3000 Hz; max. input 25 W (DIN 45573); recommended amp power 12-25 W continuous; sensitivity 85 dB SPL/W/m; 8-ohm impedance; 17¼" H × 8¼" W × 10½" D ..... $175

## LENTEK

### S4 Speaker System
Two-way moving-coil bookshelf speaker system with 200-mm styrene-cone woofer/midrange and 25-mm hemispherical dome tweeter; crossover at 2500 Hz (18 dB/octave); 8-ohm impedance; frequency response 60-18,000 Hz ±3 dB; sensitivity 78-dB SPL/2.83 V/m; input range 25-100 W/ch sine wave; walnut or teak finish with brown grille; 19½" H × 9¾" W × 10" D..... $640

## MAGITRAN

### G401P Built-In Speaker
Consists of flush-mount poly-planar speaker; frequency response 55-20,000 Hz; 8-ohm impedance; 25 W continuous; 1⁹⁄₁₆-in mounting depth; ivory white or walnut brown finish; 13¼" H × 16¼" W × 1⁹⁄₁₆" D..... $29

### P-40 Built-In Speaker
Bi-directional, electromagnetic poly-planar speaker combines 12-in woofer and tweeter to 1⁷⁄₁₆-in depth; frequency response 40-20,000 Hz; 8-ohm impedance; input range 25-40 W continuous; sensitivity 85 dB/W/m; 14¹¹⁄₁₆" H × 11¾" W × 1⁷⁄₁₆" D ..... $21

## MAGNEPAN

### MG-IIA Speaker System
Two-way floor-standing speaker system with 500-in² woofer and 68-in² tweeter; crossover at 2100 Hz; 6-ohm impedance; frequency response 45-16,000 Hz ±4 dB; sensitivity 82-dB SPL/W/3 ft; input range 25-200 W; mirror-image pair; oak frame with off-white or black grille; 71" H × 22" W × 2" D..... ..... $825 pr.

### MG-I Speaker System
Two-way floor-standing speaker system with 428-in² woofer and 68-in² tweeter; crossover at 2400 Hz; 5-ohm impedance; frequency response 50-16,000 Hz ±4 dB; sensitivity 82-dB SPL/W/3 ft; input range 25-200 W; mirror-image pair; oak frame with off-white or black grille; 60" H × 22" W × 2" D..... ..... $495 pr.

## MARANTZ

### Design Series

### 940 Speaker System
Four-way floor-standing speaker system with 12-in woofer, 5-in mid-range, 1½-in wide-dispersion dome tweeter, and 1-in dome super tweeter; frequency response 30-22,000 Hz ±3 dB; max. input 250 W program; hand-rubbed oiled walnut finish cabinet with inlaid veneers; 45¾" H × 15" W × 12" D..... $440

### 930 Speaker System
Four-way bookshelf speaker system with 12-in woofer, 5-in mid-range, 1½-in wide-dispersion dome tweeter, and 1-in dome super tweeter; frequency response 33-22,000 Hz ±3 dB; max. input 200 W program; hand-rubbed oiled walnut finish cabinet with inlaid veneers; 28¼" H × 15" W × 12" D..... $380

### 920 Speaker System
Three-way floor-standing speaker system with 12-in woofer, 5-in mid-range, and 1½-in wide-dispersion dome tweeter; frequency response 33-20,000 Hz ±3 dB; max. input 200 W program; hand-rubbed oiled walnut finish cabinet with inlaid veneers; 38¼" H × 15" W × 12" D ..... $380

### 900 Speaker System
Three-way speaker system with 10-in woofer, 5-in mid-range, and 1½-in wide-dispersion dome tweeter; frequency response 35-20,000 Hz ±3 dB; max. input 125 W program; hand-rubbed oiled walnut finish cabinet with inlaid veneers; 28¼" H × 15" W × 12" D..... ..... $320

### High Definition Series

### HD880 Speaker System
Four-way floor-standing speaker system with 12-in woofer, 5-in midrange, 1½-in wide-dispersion dome tweeter, and 1-in dome super tweeter; frequency response 30-22,000 Hz ±3 dB; max. input 250 W program; 40¼" H × 16" W × 12" D.... $380

### HD770 Speaker System
Four-way bookshelf speaker system with 12-in woofer, 5-in midrange, 1½-in wide-dispersion dome tweeter, and 1-in dome super tweeter; frequency response 33-22,000 Hz ±3 dB; max. input 200 W program; 26½" H × 15" W × 11¾" D. $290

### HD660 Speaker System
Three-way bookshelf speaker system with 10-in woofer, 5-in midrange, and 1½-in wide-dispersion dome tweeter; frequency response 35-20,000 Hz ±3 dB; max. input 125 W program; 24¼" H × 14⅜" W × 11½" D..... $240

### HD550 Speaker System
Three-way bookshelf speaker system with 8-in woofer, 5-in midrange, and 1½-in wide-dispersion dome tweeter; frequency response 40-20,000 Hz ±3 dB; max. input 75 W program; 22½" H × 12¾" W × 9½" D..... $190

### HD440 Speaker System
Three-way bookshelf speaker system with 8-in woofer, 3½-in midrange, and 3½-in tweeter; frequency response 45-18,000 Hz ±3 dB; max. input 50 W program; 19⅛" H × 11¼" W × 8½" D.. $100

### Mk II Series

### 8MkII Speaker System
Three-way floor-standing speaker system with 15-in woofer, 5-in midrange, and 1¾-in tweeter; frequency response 30-20,000 Hz ±3 dB; max. input 250 W program; 37½" H × 16¼" W × 12" D. $260

### 7MkII Speaker System
Three-way bookshelf speaker system with 12-in woofer, 5-in mid-range, and 1¾-in tweeter; frequency response 35-20,000 Hz; max. input 200 W program; 25½" H × 14¾" W × 11½" D ..... $180

### 6MkII Speaker System
Two-way bookshelf speaker system with 10-in woofer and 1¾-in tweeter; frequency response 35-20,000 Hz; max. input 125 W program; 25½" H × 14¾" W × 11½" D..... $140

### 5MkII Speaker System
Two-way bookshelf speaker system with 8-in woofer and 1¾-in tweeter; frequency response 40-18,000 Hz; max. input 60 W program; 23" H × 12" W × 9½" D ..... $115

### 4MkII Speaker System
Two-way bookshelf speaker system with 8-in woofer and 1¾-in tweeter; frequency response 60-15,000 Hz; max. input 50 W program; 19⅛" H × 11¼" W × 8¼" D ..... $80

## MARLBORO SOUND

### BLS-1 Bass Speaker System
Folded-horn speaker system with 15-in woofer; frequency response 25-3500 Hz ±2 dB; power input 150 W continuous, 200 W music; 32½" H × 18½" W × 18½" D ..... $375

### LS15H Speaker System
Two-way speaker system with 15-in woofer and two piezo super horn tweeters; frequency response 40-20,000 Hz ±2 dB; power input 80 W continuous, 95 W music; 24" H × 19" W × 13" D..... $200

### LS24H Speaker System
Two-way speaker system with two 12-in woofers and piezo super horn tweeter; frequency response 50-20,000 Hz ±3 dB; power input 75 W continuous, 90 W music; 30" H × 16" W × 10" D..... $170

### LS15B Speaker System
Bass speaker system with 15-in woofer; frequency response 40-8000 Hz ±2 dB; input 80 W continuous, 95 W music; 24" H × 19" W × 13" D..... $165 ..... $165

### LS12FH Speaker System
Two-way speaker system with 12-in woofer and piezo super horn tweeter; frequency response 40-20,000 Hz ±3 dB; input 75 W continuous, 90 W music; 19" H × 19" W × 9½" D..... $155

### LS20H Speaker System
Two-way speaker system with two 10-in woofers and piezo super horn tweeter; frequency response 70-20,000 Hz ±3 dB; power input 65 W continuous, 80 W music; 24" H × 16" W × 10" D..... $145

### LS12H Speaker System
Two-way speaker system with 12-in woofer and

piezo super horn tweeter; frequency response 40-20,000 Hz ± 3 dB; power input 40 W continuous, 50 W music; 19" H × 19" W × 9½" D .... $130

## MARTIN LOUDSPEAKER

### 840 Sound Tower Column System
Three-way sealed enclosure columnar system with 8-in woofers, two 4-in mid-ranges, and four compression horn tweeters; frequency response 28-20,000 Hz; max. input 100 W dynamic; mid-range and tweeter level controls; walnut Formica finish ..... $419

### Magnificat Speaker System
Three-way, floor-standing, sealed infinite baffle speaker system with two 12-in woofers, 6-in mid-range, and four compression horn tweeters; frequency response 28-20,000 Hz; max. input 80 W dynamic; 4-ohm impedance; mid-range and tweeter level controls; walnut Formica finish; 37½" H × 18" W × 14¾" D ..... $409

### Gamma 1500 Speaker System
Three-way floor-standing speaker system with 15-in woofer, 5-in curvilinear mid-range, and four compression horn tweeters; frequency response 28-20,000 Hz; crossovers at 350 and 5000 Hz (12 dB/octave); max. input 80 W; 8-ohm impedance; 28" H × 18" W × 14" D ..... $389

### Gamma 412 Speaker System
Three-way, sealed infinite baffle speaker system with 12-in woofer, 3½-in mid-range, and wide-dispersion 2½-in tweeter; frequency response 30-18,000 Hz; 8-ohm impedance; mid-range and tweeter level controls; walnut Formica finish; 14½" H × 25½" W × 12" D ..... $249

### Super Spectrum Speaker System
Three-way, sealed infinite baffle speaker system with two 8-in woofers, 3½-in mid-range, and wide-dispersion 2½-in tweeter; frequency response 30-18,000 Hz; max. input 60 W dynamic; 4-ohm impedance; mid-range and tweeter level controls; walnut Formica finish; 12½" H × 21½" W × 10" D ..... $219

### Gamma 310 Speaker System
Three-way, sealed infinite baffle speaker system with 10-in woofer, 3½-in mid-range, and wide-dispersion 2½-in tweeter; frequency response 35-18,000 Hz; max. input 50 W dynamic; 8-ohm impedance; mid-range and tweeter level controls; walnut Formica finish; 12½" H × 21½" W × 10" D ..... $169

### Gamma 208 Speaker System
Two-way sealed enclosure speaker system with 8-in woofer and wide-dispersion 3-in tweeter; 8-ohm impedance; tweeter level control; walnut Formica finish; 10¾" H × 18" W × 9¾" D ..... $89

## MATRECS

### Classic Series

### MA-254 Speaker System
Four-way speaker system with 15-in woofer, 10-in tuned slave, two 4½-in mid-ranges, 1¾-in direct-radiating tweeter, and 3¼-in square dual-horn piezoelectric tweeter; frequency response 25-24,000 Hz; max. input 65 W continuous; min. input 20 W; 8-ohm impedance; push-terminal connections; authentic walnut cabinet with simulated slate top and soft-black sculptured foam grille (deep brown optional); 28" H × 28" W × 13" D ..... $206

### MA-224 Speaker System
Three-way speaker system with 12-in woofer, 4½-in mid-range, and two 3¼-in square dual-horn piezoelectric tweeters; frequency response 30-24,000 Hz; max. input 50 W continuous; min. input 10 W; 8-ohm impedance; push-terminal connections; authentic walnut cabinet with simulated slate top and soft-black sculptured foam grille (deep brown optional); 28" H × 19½" W × 13" D ..... $176

### MA-203 Speaker System
Three-way speaker system with 10-in woofer, 4½-in mid-range, and 2¾-in broad-range tweeter; frequency response 30-22,000 Hz; max. input 40 W continuous; min. input 5 W; 8-ohm impedance; push-terminal connections; walnut cabinet with simulated slate top and soft-black sculptured foam grille; 26" H × 15" W × 11" D ..... $133
15" W × 11" D ..... $133

### Sensation Series

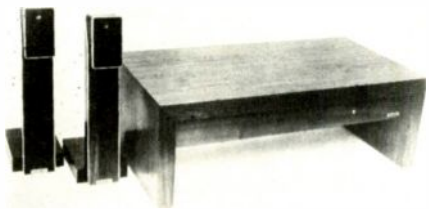
### MA-123 Speaker System
Three-way speaker system with 12-in woofer, 4½-in mid-range, and 1¾-in direct-radiating tweeter; frequency response 35-22,000 Hz; max. input 45 W continuous; min. input 8 W; 8-ohm impedance; connections are screw terminals with RCA jacks; walnut-vinyl finish cabinet with brown knit grille cloth (beige, orange, and black optional); 24" H × 15" W × 10" D ..... $110

### MA-102 Speaker System
Two-way speaker system with 10-in woofer and 2¾-in broad range tweeter; frequency response 35-22,000 Hz; max. input 35 W continuous; min. input 5 W; 8-ohm impedance; connections are screw terminals with RCA jacks; walnut-vinyl finish cabinet with brown knit grille cloth (beige, orange, and black optional); 20" H × 12" W × 10" D .... $66

### MA-82 Speaker System
Two-way speaker system with 8-in woofer and 3-in broad-range tweeter; frequency response 35-22,000 Hz; max. input 25 W continuous; min. input 2 W; 8-ohm impedance; connections are screw terminals with RCA jacks; walnut-vinyl finish cabinet with brown knit grille cloth (beige, orange, and black optional); 18½" H × 11¼" W × 7½" D .. ..... $45

### MA-62 Speaker System
Two-way speaker system with 6-in woofer and 3-in broad-range tweeter; frequency response 40-20,000 Hz; max. input 20 W continuous; min. input 1 W; 8-ohm impedance; connections are

screw terminals with RCA jacks; walnut-vinyl finish cabinet with brown grille cloth (beige, orange, and black optional); 17" H × 10" W × 6" D ..... $38



### MESA

**Environ-Mesa Subwoofer**
Mini-Mesa subwoofer designed as hand-rubbed walnut-veneer coffee table; features 10-in woofer and 12 in bass reciprocator; crossover 100 Hz; frequency response 18-200 Hz; max. input 100 W continuous; complements Mini-Mesa 30 speakers; 15½" H × 48" W × 24" D ..... $745

**Mesa 125 Speaker System**
Four-way speaker system with 12-in bass reciprocator, 12-in woofer, 5-in mid-range with mini-enclosure, and 3-in Prismadome tweeter; frequency response 30-22,000 Hz; crossovers at 65, 900, and 6000 Hz; input range 15-125 W/ch continuous; 11-position double VICOM control with ±5 dB range; 8-ohm impedance; built-in circuit breaker with automatic reset; base reciprocator vented cabinet with walnut vinyl finish; 27½" H × 16" W × 13" D..... $279

**Mesa 85 Speaker System**
Four-way speaker system with 12-in bass reciprocator, 10-in woofer, 5-in mid-range and mini-enclosure, and 3-in Prismadome tweeter; frequency response 36-22,000 Hz; crossovers at 65, 900, and 6000 Hz; input range 15-85 W/ch continuous; 8-ohm impedance; 11-position double VICOM control with ±5-dB range; built-in circuit breaker with automatic reset; bass reciprocator vented cabinet with walnut vinyl finish; 25¼" H × 14¼" W × 11¾" D ..... $229

**Mesa 65 Speaker System**
Three-way speaker system with 10-in bass reciprocator, 10-in woofer, and 3-in Prismadome tweeter; frequency response 40-22,000 Hz; crossovers at 80 and 2500 Hz; input range 15-65 W/ch continuous; 8-ohm impedance; 11-position VICOM control with ±5-dB range; built-in circuit breaker with automatic reset; bass reciprocator vented cabinet with walnut vinyl finish; 23" H × 12½" W × 10⅜" D..... ..... $169

**Mesa 45 Speaker System**
Three-way speaker system with 8-in bass reciprocator, 8-in woofer, and 3-in Prismadome tweeter; frequency response 45-22,000 Hz; crossovers at 85 and 3000 Hz; input range 15-45 W/ch continuous; 8-ohm impedance; 11-position VICOM control with ±5-dB range; built-in circuit breaker with automatic reset; bass reciprocator vented cabinet with walnut vinyl finish; 21" H × 11½" W × 9⅜" D ..... ..... $119

**Mini-Mesa 50 Speaker System**
Three-way bookshelf speaker system with 4-in foam-suspension woofer, 3-in midrange, and 25 × 12-mm horn tweeter; crossovers at 1800 and 9000 Hz; 4- or 8-ohm impedance; frequency response 50-25,000 Hz; input range 10-50 W/ch continuous, 80 W max.; walnut vinyl cabinet with black cloth grille; 9½" H × 6½" W × 4¾" D..... $150

**Mini-Mesa 30 Speaker System**
Two-way bookshelf speaker system with 4-in foam-suspension woofer and hard-dome tweeter; can be used in mobile situations; crossover at 3500 Hz; 4- or 8-ohm impedance; frequency response 60-25,000 Hz; input range 10-30 w/ch continuous, 50 W max.; high-temperature resin and asbestos cabinet with black aluminum grille; 7¼" H × 4⅜" W × 4¼" D..... $109
Walnut and aluminum Mini-Mesa 30 pedestal stands ..... $119 pr.
Mounting brackets..... $13 pr.

**Mini-Mesa 15 Speaker System**
Two-way compact speaker system with 3-in foam suspension woofer and 2¼-in cone tweeter; crossover at 3000 Hz; 4 or 8 ohm impedance; frequency response 60-20,000 Hz ±6 dB; input range 5 15 W/ch continuous, 30 W max.; high-temperature resin and asbestos cabinet with black aluminum grille; includes mounting brackets and 30 ft speaker cable; 6" H × 3⅝" W × 3" D..... $120 pr.

### MICRO/ACOUSTICS

**FRM-1A Speaker System**
Two-way speaker system with 10-in acoustic-suspension woofer and five 1¼-in drivers mounted in pentaxial array; dispersion 180 degrees horizontal and vertical at 10 kHz; frequency response 32 18,000 Hz ±4 dB; RC crossover at 1700 Hz; power requirement 18 W continuous min., 70 W continuous max.; 8-ohm impedance; high-frequency level control and dispersion control; walnut vinyl enclosure; choice of brown, black, blue, sandalwood, or orange grille cloth; 25¾" H × 15⅜" W × 12¾" D ..... $210

**FRM-2A Speaker System**
Two-way speaker system with 10-in acoustic-suspension woofer and three 1¼-in tweeters mounted

in triaxial array; dispersion 160 degrees; frequency response 40-16,000 Hz ±4 dB; RC crossover at 1750 Hz; power requirement 10 W continuous min., 60 W continuous max.; 8-ohm impedance; high-frequency level control; walnut vinyl enclosure; brown foam grille; 25¾" H × 15⅜" W × 12¼" D ..... $167

**FRM-3 Speaker System**
Two-way speaker system with 8-in woofer and 1½-in tweeter pivoted on vari-axis dispersion assembly; dispersion 140 degrees; frequency response 45 15,000 Hz ±4 dB; LC crossover at 2500 Hz; power requirement 7 W continuous min., 50 W continuous max.; 8-ohm impedance; mechanical vari-axis control; walnut vinyl enclosure; brown foam grille; 12¾" H × 22" W × 9⅜" D (packaged in matched pairs) ..... $132

**MS-1 Speaker System**
One-way miniature microstatic system with four 1¼-in tweeters; frequency response 3500-18,000 Hz + 3 dB; dispersion 180 degrees horizontal, 140 degrees vertical; has range selector and level control; 16-ohm impedance; max. input range 15-60 W continuous; for use with low- and medium-efficiency systems to augment treble; walnut; 3¾" H × 9⅛" W × 5¼" D..... $127

## MITSUBISHI

**MS-30 Speaker System**
Three-way, acoustic air-suspension, bookshelf speaker system with 12-in cone woofer, 4-in cone midrange, and 2¼-in dome tweeter; crossovers at 800 and 5000 Hz; 6-ohm nominal impedance; frequency response 30-20,000 Hz; efficiency 88-dB SPL/W/m; max. input 150 W; 12-dB/octave slope; four-step attenuated mid-range and high level controls; detachable grille in walnut cabinet; 26⅜" H × 15⅜" W × 13⅓" D..... $380

**MS-20 Speaker System**
Two-way, acoustic air-suspension, bookshelf speaker system with 12-in woofer and 2-in cone tweeter; crossover at 1500 Hz; 8-ohm nominal impedance; frequency response 35-20,000 Hz; efficiency 88-dB SPL/W/m; max. input 120 W; 12 dB/octave slope; four-step attenuated level control for 1500-20,000 Hz range; detachable grille in walnut cabinet; 24¾" H × 14⅜" W × 11⅞" D..... $250

**MS-10 Speaker System**
Two-way, acoustic air-suspension, bookshelf speaker system with 10-in cone woofer and 2-in cone tweeter; crossover at 1500 Hz; 6-ohm nominal impedance; frequency response 35-20,000 Hz; efficiency 87-dB SPL/W/m; max. input 100 W; 12-dB/octave slope; detachable grille in walnut cabinet; 22⅓" H × 12⅜" W × 11⅓" D..... $165

## MONITOR by AUDIOSOURCE

**MA1 Series II Speaker System**
Three way speaker system with 13-in × 9-in bass radiator acoustically coupled to 8-in bass driver and dome tweeter; impedance 8 ohms; frequency response, 45-19,000 Hz ±3.5 dB; recommended amplifier power 40 to 80 W/ch; cabinet is matched walnut wood veneer or rosewood veneer over particle board; sold in matched pairs; each ..... $429
**MA1 Speaker Stands.** Matching stands with castors, per pair..... $90

**MA3 Series II Speaker System**
Three-way bass-reflex floor-standing speaker system with 9¼-in × 14-in elliptical woofer, sub-enclosed midrange, and polycarbonate dome tweeter (mounted off-center); frequency response 40 19,000 Hz ±2.5 dB; 8-ohm impedance; input range 60-125 W/ch; walnut finish (rosewood slightly higher) ..... $549
Speaker stands..... $90 pr.

**MA4 Speaker System**
Two-way speaker system with tweeter mounted off-center; frequency response 45-18,000 Hz ±2.5 dB; input range 15-75 W/ch; walnut finish.... $309

**MA5 Series II Speaker System**
Two-way acoustic-suspension speaker system; tweeters mounted off center; frequency response 50 18,000 Hz ±3 dB; input range 20-50 W/ch; walnut finish..... $228

**MA8 Speaker System**
Two-way acoustic-suspension bookshelf speaker system with woofer/midrange and baffle tweeter; frequency response 45-20,000 Hz ±3 dB; input range 10-40 W/ch; walnut finish..... $180

**MA7 Speaker System**
Two-way speaker system; frequency response 55 22,000 Hz ±4 dB; input range 8-30 W/ch; walnut finish ..... $150

## MORDAUNT-SHORT

**Signifer Speaker System**
Three-way infinite baffle floor-standing speaker system with 300-mm woofer, 135-mm midrange, and 25 mm wide-dispersion synthetic dome tweeter; crossovers at 500 and 4000 Hz; frequency response 38-20,000 Hz ±2 dB; sensitivity 96 dB/4.5 W/m; input range 25-250 W/ch; THD less than 1.0%; 31⅛" H × 15⅛" W × 12¾" D..... $1400 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; 8-ohm impedance; 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; mid-range and tweeter level controls; teak or walnut veneer finish (others optional) with deep brown woven fabric grille; 21" H × 13" W × 9" D ..... $480 pr.

**Festival Series 2**
Two-way speaker system with 140-mm woofer/midrange and 19-mm wide-dispersion synthetic dome

# 10 SPEAKER SYSTEMS

tweeter; frequency response 75-20,000 Hz ±3 dB; crossover at 3500 Hz; 8-ohm impedance; 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; teak or walnut veneer finish with deep brown woven fabric grille; 17⅞" H × 11" W × 7¼" D..... $320 pr.

### Carnival Series 2
Two-way 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; 8-ohm impedance; 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; teak or walnut finish with deep brown woven fabric grille; 15¾" H × 9½" W × 5¾" D..... $240 pr.

## NAKAMICHI

### Slimline Reference Monitor
Two-way phase-inverter bass reflex speaker system with 8-in woofer and 1½-in tweeter; frequency response 50-16,000 Hz ±5 dB; mechanical crossover; sensitivity 94-dB SPL/W/m; max. input 60 W; 16-ohm impedance; walnut-finished cabinet; 36¾" H × 16⅝" W × 12¾" D..... $480

## OHM ACOUSTICS

### Model F Speaker System
Floor-standing speaker system with 12-in diameter Walsh radiator; frequency response 37-19,000 Hz ±4 dB; input range 75-250 W; 4/3.7-ohm impedance; oiled walnut cabinet; 44" H × 17¾" W × 17¾" D (tapers to 13" W × 13" D at top)..... $700

### Model H Speaker System
Three-way floor-standing speaker system with 8-in woofer, 2-in mid-range, and 1-in dome tweeter; frequency response 32-20,000 Hz ±4 dB; input range 10-100 W; 8-ohm impedance; three-position tweeter level control; ¾-in stock oiled walnut finish; 26" H × 15" W × 10¾" D..... $340

### Model C2 Speaker System
Three-way speaker system with 10-in woofer, 2-in tweeter, and 1-in super 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 × 9¾" D..... $260

### Model D2 Speaker System
Two-way speaker system with 10-in woofer and 2-in tweeter; frequency response 37-19,000 Hz ±4 dB; crossover at 1700 Hz; input range 10-100 W; 8/6-ohm impedance; three-position tweeter level control switch; oiled walnut finish on ¾-in stock; 25" H × 14" W × 9¾" D..... $200

### Model L Speaker System
Three-way speaker system with 8-in woofer, 2-in low tweeter, and 2-in high tweeter; frequency response 42-20,000 Hz ±4 dB; crossovers at 1700 and 10,000 Hz; 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 × 10" D..... $165

## OPTONICA

### CP-5151 Speaker System
Three-way floor-standing speaker system with 12-in woofer, 2-in dome mid-range, and ribbon tweeter; frequency response 40-50,000 Hz; max. input 90 W; min. input 20 W; 8-ohm impedance; mid-range and tweeter level controls; individual speaker terminals allow multi-amping; rosewood veneer with removable grille; 27.6" H × 15.7" W × 13.3" D..... $400

### Model E Speaker System
Two-way speaker system with 8-in woofer and 2-in tweeter; crossover at 1700 Hz; impedance 6-8 ohms; frequency response 65-19,000 Hz ±4 dB; input range 7-50 W; three-position tweeter level control; walnut-grained vinyl finish on ⅝-in stock; 21½" H × 11½" W × 7¼" D..... $110

### CP-2121 Speaker System
Two-way floor-standing speaker system with 10-in woofer, 10-in passive radiator, and 3-in tweeter frequency response 40-20,000 Hz; max. input 35 W; min. input 10 W; 8-ohm impedance; rosewood vinyl with removable grille; 28.7" H × 14.6" W × 12.1" D..... $170

## PANASONIC

### SB-1800 Speaker System
Two-way speaker system with 10-in woofer, 10-in passive radiator, and 3-in tweeter; crossover at 3500 Hz; 8-ohm impedance; max. input 60 W simulated wood cabinet; 28¹¹/₃₂" H × 18³/₁₆" W × 11¹³/₁₆" D..... $430 pr

### SB-1600 Speaker System
Two-way speaker system with 10-in woofer, 10-in passive radiator, and 2½-in tweeter; crossover at 3000 Hz; max. input 40 W; 8-ohm impedance; simulated wood cabinet 25³/₁₆" H × 15¹¹/₃₂" W × 11¹³/₁₆" D..... $220 pr.

### SB-1100 Speaker System
Two-way speaker system with 8-in woofer. 8-in passive radiator, and 2½-in tweeter; crossover at 5000 Hz; max. input 30 W; 8-ohm impedance; simulated wood cabinet; 22³/₃₂" H × 13³/₁₆" W × 9⁷/₁₆" D..... $190 pr.

### SB-350R Speaker System
Two-way speaker system with two 5¼-in woofers, 8 in passive radiator, and 2½-in tweeter; crossover at 6500 Hz; 8-ohm impedance; max. input 30 W; simulated wood cabinet; complements Systems 5000 compact home stereo entertainment units..... $125 pr.

## PETROFF LABS

### PL-2 Transducer Panel Speaker
Floor-standing air-suspension speaker with 10-in extended range (150-4000 Hz) and 1-in soft dome tweeter; crossover at 4000 Hz (also at 150 Hz with PL-2 Sub-Woofer); 4-ohm impedance; frequency response 150-20,000 Hz ±1 dB; input range 5-200 W; must be used with PL-2 Sub-Woofer; 44" H × 12½" W × 10" D..... $200

### PL-2 Sub-Woofer
Floor-standing air-suspension speaker with 15-in woofer; crossover at 150 Hz; 4-ohm impedance; frequency response 30-150 Hz ±3 dB; input range 50-200 W; features two-channel input and internal two-channel crossover; walnut enclosure; 19½" H × 19" W × 19" D..... $195

### PL-2 Speaker System
Combines Transducer Panel and Sub-Woofer into three-way speaker system with frequency response 30-20,000 Hz ±3 dB..... $595

## PHASE LINEAR

### Model III Speaker System
Four-way four-piece speaker system with two subbass drivers, four bass drivers, four midranges, and 10 tweeters; frequency response 24-22,000 Hz ±3 dB; max. input 350 W/ch continuous; min. input 100 W/ch continuous; 6-ohm nominal impedance; fuse protection; electronic motion control module: has bass, mid-range, and tweeter trim controls and spatial imaging control; input impedance 22,000 ohms; output impedance less than 600 ohms; max. output 8 V rms; noise 100 μV; 0.1% dist.; 18½" H × 22" W × 22" D (commode), 63" H × 24" W × 5" D (panels)..... $1350

## PHILIPS

### RH545 Speaker System
Motional feedback three-way speaker system with three built-in amplifers; 12-in woofer powered by 50-W amp (0.2% THD), 2-in dome mid-range powered by 35-W amp (0.2% THD), and 1-in dome tweeter powered by 15-W amp (0.2% THD); frequency response 20-20,000 Hz; 4-ohm impedance; crossovers at 500 and 3000 Hz; input sensitivity 1-23 V variable; 25³/₁₆" H × 17⁴/₂₅" W × 12³/₁₆" D..... $1400

### RH567 Speaker System
Motional feedback three-way speaker system with two built-in amplifiers; 10-in woofer powered by 40-W amp (0.2% THD), 2-in dome midrange and 1-in dome tweeter powered by 20-W amp (0.2% THD); crossovers at 500 and 3500 Hz; 4- and 8-ohm impedance; frequency response 27-20,000 Hz; input sensitivity 1-20 V variable; 21¼" H × 13" W × 10¾" D..... $450

### RH544 Speaker System
Motional feedback three-way speaker system with two built-in amplifiers; 8-in woofer powered by 40-W amp (0.2% THD) and 2-in dome mid-range and 1-in wide-dispersion dome tweeter powered by 20-W amp (0.2% THD); frequency response 35-20,000 Hz; 8-ohm impedance; crossovers at 500 and 4000 Hz; input sensitivity 1-20 V variable; 15½" H × 11¹³/₁₀₀" W × 8½" D..... $400

### AH477 Speaker System
Three-way air-suspension speaker system with 12-in woofer, 2-in dome mid-range, and 1-in dome tweeter; frequency response 32-20,000 Hz; 8-ohm impedance; crossovers at 1500 and 5500 Hz; max. input 80 W continuous, recommended input 20 W/ch; mid-range and tweeter level controls; oiled walnut veneer finish with removable black grille; 27⅞" H × 15⅜" W × 14¹¹/₃₂" D..... $300

### AH476 Speaker System
Three-way air-suspension speaker system with 10-in woofer, 2-in dome mid-range, and 1-in dome tweeter; frequency response 35-20,000 Hz; 8-ohm impedance; crossovers at 1500 and 5500 Hz; max. input 60 W continuous, recommended input 20 W/ch; mid-range level control; oiled walnut finish with removable black grille; 26" H × 13¾" W × 11¹/₁₀" D..... $230

### RH541 Speaker System
Motional feedback two-way speaker system with one built-in amplifier; 6-in woofer and 1-in dome tweeter powered by 30-W amplifier (0.4% THD); crossover at 1400 Hz; 4-ohm impedance; frequency response 35-20,000 Hz; input sensitivity 1 V at 10,000 ohms, 19 V at 100 ohms; 11½" H × 9" W × 7" D..... $200

### SJ2932 Speaker System
Three-way tuned-port speaker system with 10-in woofer, two 5-in cone midrange drivers, and 1-in dome tweeter; crossovers at 2000 and 6000 Hz; 8-ohm impedance; frequency response 46-20,000 Hz; max. input 60 W; walnut vinyl finish with removable black grille; 27" H × 14½" W × 12½" D..... $125

### AH475 Speaker System
Two-way air-suspension speaker system with 8-in woofer and 1-in dome tweeter; frequency response 40-20,000 Hz; 8-ohm impedance; crossover at 3500 Hz; max. input 40 W continuous, recommended input 10 W/ch; walnut-grain vinyl finish with removable black grille; 23¾" H × 13¾" W × 11" D..... $120

### SJ2931 Speaker System
Two-way tuned-port speaker system with 10-in woofer and 1-in dome tweeter; crossover at 4000 Hz; 8-ohm impedance; frequency response 47-20,000 Hz; max. input 45 W; walnut vinyl finish with removable black grille; 24" H × 13¾" W × 11½" D..... $110

### SJ2930 Speaker System
Two-way tuned-port speaker system with 8-in woofer and 2¾-in cone tweeter; crossover at 4500

Hz; 8-ohm impedance; frequency response 48-17,500 Hz; max. input 20 W; walnut vinyl finish with removable black grille; 21½" H × 13" W × 11 37/100" D ..... $80

## PIONEER

### HPM-200 Speaker System
Five-way acoustic suspension speaker system with two 10-in woofers, 2½-in soft-dome mid-range, high-polymer molecular film tweeter and super tweeter; frequency response 25-25,000 Hz; crossovers at 100, 700, 2000, and 5000 Hz; 6-ohm nominal impedance; sensitivity 89-dB SPL/W/m; max. input 200 W; 32" H × 29" W × 19" D ... $550

### HPM-150 Speaker System
Four-way bass-reflex floor-standing speaker system with 15¾-in woofer, 4-in cone mid-range, 1¾-in cone tweeter, and omnidirectional horn-loaded high polymer film super tweeter; frequency response 25-40,000 Hz; crossovers at 750, 2600, and 8500 Hz; 6.3-ohm impedance; sensitivity 92.5 dB/W/m; nominal input 125 W; min. input 10 W; grain finish; 38 25/32" H × 17 11/16" W × 17 11/16" D ..... $500

### HPM-100 Speaker System
Four-way bass reflex bookshelf speaker system with 12-in woofer, 4-in cone mid-range, 1¾-in cone tweeter, and high polymer molecular film super tweeter; frequency response 30-25,000 Hz; crossovers at 1200, 4000, and 12,000 Hz; 8-ohm impedance; sensitivity 92.5 dB/W/m; max. input 200 W; 26⅜" H × 15⅜" W × 15½" D ..... $300

### HPM-60 Speaker System
Four-way bass reflex bookshelf speaker system with 10-in woofer, 4-in cone mid-range, 1¾-in cone tweeter, and high polymer molecular film super tweeter; frequency response 35-25,000 Hz; crossovers at 1200, 4000, and 12,000 Hz; 8-ohm impedance; sensitivity 92.5 dB/W/m; max. input 120 W; 24" H × 13 25/32" W × 12⅜" D ..... $225

### HPM-40 Speaker System
Three-way bass reflex bookshelf speaker system with 10-in woofer, 1¾-in cone tweeter, and high polymer molecular film super tweeter; frequency response 35-25,000 Hz; 8-ohm impedance; sensitivity 91 dB/W/m; max. input 100 W; 22 7/16" H × 12 13/16" W × 12½" D ..... $150

### CS-63DX Speaker System
Sealed four-way floor-standing speaker system with 15-in woofer, two 5-in mid-range drivers, horn tweeter, and two super tweeters; frequency response 20-22,000 Hz; 8-ohm irnpedance; max. input 80 W dynamic; mid-range and tweeter controls; oiled walnut finish; 28⅜" H × 18⅞" W × 13 1/16" D ..... $350

### CS-99A Speaker System
Sealed five-way floor-standing speaker system with 15-in woofer, 5-in midrange, 4-in midrange, multicellular horn tweeter, and two ½-in dome super tweeters; frequency response 25-22,000 Hz; 8-ohm impedance; sensitivity 97 dB/W/m; max. input 100 W; midrange and tweeter controls; walnut finish; 24 13/16" H × 16½" W × 11 13/32" D ..... $275

### Project 120 Speaker System
Three-way, ducted port, bookshelf speaker system with 10-in cone woofer, 5-in cone midrange and 1⅞-in cone tweeter; crossovers at 1000 and 4000 Hz; 8-ohm impedance; frequency response 30-20,000 Hz; sensitivity 92 dB/W/m; max. input 60 W; walnut vinyl cabinet; 23" H × 13" W × 10¼" D ..... $145

### Project 100A Speaker System
Three-way, bass-reflex, bookshelf speaker system with 10-in woofer, 1½-in soft dome midrange, and 2-in cone tweeter; crossovers at 700 and 6000 Hz; 8-ohm impedance; frequency response 40-20,000 Hz; max. input 60 W; walnut vinyl cabinet with removable foam grille; 23" H × 13" W × 10½" D ..... $125

### Project 80 Speaker System
Two-way, ducted port, bookshelf speaker system with 8-in cone woofer and 1⅞-in cone tweeter; crossover at 1500 Hz; 8-ohm impedance; frequency response 35-20,000 Hz; sensitivity 92 dB/W/m; max. input 20 W; wood cabinet; 18½" H × 10½" W × 8⅜" D ..... $99

### Project 60A Speaker System
Two-way, bass-reflex, bookshelf speaker system with 8-in cone woofer and 1¾-in cone tweeter; crossover at 3000 Hz; 8-ohm impedance; frequency response 50-20,000 Hz; max. input 20 W; wood cabinet with foam grille; 18½" H × 10¾" W × 9 3/16" D ..... $80

## POINT THREE

### DB VIII Speaker System
Three-way acoustic-suspension speaker system with two 10-in woofers, two 5-in cone midrange drivers, and two 1-in dome tweeters; crossovers at 100 and 4000 Hz; 8-ohm impedance; frequency response 20-20,000 Hz ±3 dB; efficiency 89-dB SPL/W/m; input range 50-400 W; tweeter and midrange level controls; walnut or oak finish with black grille; 42" H × 24" W × 11" D ..... $1600 pr.

### Point 3 Speaker System
Three-way, three-piece, acoustic-suspension speaker system with two 10-in woofers, 5-in cone midrange, and 1-in soft dome tweeter; includes two satellites and subwoofer; crossovers at 125 and 4000 Hz; 8-ohm impedance; frequency response 20-20,000 Hz ±3 dB; efficiency 90-dB SPL/W/m; input range 30-200 W; walnut or oak finish with black cloth grille; subwoofer 24" H × 15" W × 12" D, satellites 11¾" × 6¾" × 6¾" D ..... $395

## POLK AUDIO

### Ten Speaker System
Three-way floor-standing speaker system with 10-in

# 10 SPEAKER SYSTEMS

sub-bass radiator, two 6½-in bass/midranges, and 1-in soft-dome tweeter; frequency response 22-25,000 Hz ±2 dB; crossovers at 60 and 3000 Hz; 6-ohm impedance; max. input 200 W; min. input 10 W continuous; walnut or rosewood wood-grained finish; 28" H × 16" W × 11½" D.....$210

### 7 Speaker System

Three-way speaker system with 10-in sub-bass radiator, 6½-in bass/mid-range, and 1-in soft-dome tweeter; frequency response 26-25,000 Hz ±2 dB; crossovers at 60 and 3000 Hz; 8-ohm impedance; max. input 100 W; min. input 10 W continuous; walnut or rosewood wood-grained finish; 24" H × 14" W × 9¼" D.....$150

**Five.** Similar to 7 but with 8-in sub-bass radiator; frequency response 31-25,000 Hz; 21⅜" H × 10½" W × 9" D.....$110

### Mini-Monitor Speaker System

Designed for limited space applications; 4½-in fluid-coupled sub-woofer, 4½-in bass/mid-range, and

1-in soft-dome tweeter; crossovers at 100 and 3000 Hz; frequency response 34-25,000 Hz; max. input 80 W, handles 30 W continuously; walnut vinyl finish; 15" H × 6⅛" W × 4½" D.....$100

### Optimus-10 Speaker System

Sealed acoustic suspension speaker system with 8-in woofer, 10-in drone, and 3¼-in dome tweeter; frequency response 42-20,000 Hz ±3 dB; max. input 75 W peak program; 8-ohm impedance; brilliance control; phono jack and screw terminal connections; walnut veneer with removable grille; 25" H × 15⅜" W × 10⅜" D.....$140

### Optimus 25 Speaker System

Sealed three-way acoustic-suspension floor-standing 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 fijnish with removable grille; includes phono jacks and screw terminals; 25" H × 14" W × 11½" D.....$130

### Nova 7B Speaker System

Sealed two-way bookshelf speaker system with 10-in woofer and two 3-in tweeters; frequency response 30-20,000 Hz; max. input 70 W continuous; 8-ohm impedance; oiled walnut finish; 22¼" H × 12½" W × 11¼" D.....$130

### Optimus-21 Speaker System

Sealed three-way acoustic suspension speaker system with 10-in woofer and two wide-range 3-in tweeters with aluminum voice coils; max. input 70 W peak program; frequency response 58-18,000 Hz; 8-ohm impedance; adjustable treble response; phono jack and screw terminal connections; oiled walnut veneer with removable grille; 22¼" H × 12⁵⁄₁₆" W × 11¼" D.....$110

### MC-2000 Speaker System

Two-way speaker system with 8-in woofer and 2½-in wide-dispersion tweeter; frequency response 60-17,000 Hz; 8-ohm impedance; max. input 60 W; includes phono jacks and screw terminals; walnut finish with removable grille; 23½" H × 13¾" W × 8⅛" D.....$90

### Nova-6 Speaker System

Two-way acoustic-suspension bookshelf speaker system with 8-in woofer and 3-in tweeter; frequency response 30-20,000 Hz; 8-ohm impedance; max. input 60 W; L-C crossover; treble response switch; includes phono jacks and screw terminals; walnut finish with latticed grille; 19¼" H × 11½" W × 9⅞" D.....$80

### MC-1400 Speaker System

Two-way bass-reflex bookshelf speaker system with 8-in woofer with tuned passive port and 4¼-in tweeter; frequency response 65-20,000 Hz; 8-ohm impedance; input range 5-55 W; includes phono jacks and screw terminals; walnut finish with grille; 18" H × 11½" W × 7½" D.....$70

### MC-1200 Speaker System

Two-way acoustic-suspension bookshelf speaker system with 8-in woofer and 2½-in tweeter; frequency response 85-17,000 Hz; 8-ohm impedance; max. input 50 W; walnut finish with grille; 17¾" H × 10⅝" W × 7½" D.....$60

### MC-500 Speaker System

Two-way acoustic-suspension bookshelf speaker system with 5-in woofer and 2-in tweeter; 8-ohm impedance; max. input 35 W; walnut finish; 11¾" H × 9" W × 5¼" D.....$40

## 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 Speaker System

Three-way floor-standing speaker system with 15-in woofer, multi-cell mid-range horn, and high-compliance tweeter horn; frequency response 20-25,000 Hz; crossovers at 800 and 8000 Hz; 8-ohm impedance; LC crossover network; walnut veneer cabinet with acoustically transparent grille cloth; 28⅜" H × 17⅝" W × 12" D.....$220

### Optimus T-100 Tower

Two-way floor-standing speaker system with two 8-in woofers and 3-in tweeter; frequency response 55 18,000 Hz ±3 dB; crossover at 3500 Hz; 8-ohm impedance; max. input 75 W peak program; treble adjustment control; phono jack and screw terminal connections; oiled walnut veneer cabinet; 35½" H × 13" W × 12½" D.....$160

## RECOTON

### SM200 "Little D" Speaker System

Two-way portable speaker system with 4-in woofer and 6½ oz. magnet and 1-in tweeter and 5-oz magnet; frequency response 60-21,000 Hz; 8-ohm impedance; input range 30-50 W continuous; solid-state crossover network and computer-designed voice coils; black aluminum casing; 7" H × 4½" W × 4½" D.....$150

**SM100.** Mini speaker mounting brackets for car or home installation; 180-degree swivel capacity; black-oxide steel.....$14 pr.

## ROHN ELECTRONICS

Speaker systems for ceiling mounting.

**RSQ8-F.** Completely recessed 8-in speaker; impedance 8 ohms; power handling 45 W.....$70

**RS-69F.** Completely recessed 6-in × 9-in speaker; impedance 8 ohms; power handling 40 W.....$65

**DK5-F.** 5-inch speaker with swivel tube construction protruding 3-in; chrome grille and all-white construction; impedance 8 ohms; power handling 25 W.....$55

**RSQ5-F.** Completely recessed square 5-in cloth-roll suspension speaker; 8-ohm impedance; power handling 25 W.....$50

**RS5-F.** Completely recessed 5-in cloth-roll suspension speaker; 8-ohm impedance; 25 W power handling.....$50

## RTR

### DR-1 Speaker System

Electrostatic dual-tandem speaker system with two 10-in woofers and one 12-in woofer; frequency response 28-375 Hz; power handling 125 W continuous, 250 W peak, crossover at 325 Hz; 8-ohm impedance. Electrostatic system: 27-element circumaxial, variable area radiator; frequency response 375-40,000 Hz ±2 dB. Direct-drive power amp: frequency response 375-30,000 Hz; drives electrostatic element, woofer system requires 75-150 W power amp. Woofer system and electrostatic amp housed in one cabinet plus one electrostatic cabinet; volume and tweeter control; hand-rubbed walnut veneer finish with black fabric grille; 49" H × 16½" W × 16½" D.....$1495

### 600 D Speaker System

Three-way acoustic-suspension speaker system with two 12-in woofers, 1½-in dome mid-range, 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 mid-range 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 Speaker System

Differential ac subwoofer with one 12-in and two 15 in woofers; crossover at 120 Hz; 6-ohm nominal impedance; frequency response 16-150 ±1.5 dB; min. input 40 W; includes casters; oiled walnut finish with black knit grille; 21¼" H × 29½" W × 28" D.....$600

### 800 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; crossovers at 150, 1500, and 9000 Hz; 6-ohm impedance; frequency response 36-20,000 Hz ±2 dB; efficiency 90.5 dB SPL/W/m; min. input 25 W; woofer, mid-range, and tweeter level controls; oiled walnut finish with black knit grille; 37½" H × 13¼" W (bottom) and 4" W (top) × 23⅜" D.....$500

### ESR-15 Speaker System

Electrostatic speaker system; frequency response 1250 20,000 Hz; incorporates 15 HF-50 electrostatic radiators; crossover frequency 1250 Hz; 8-ohm nominal impedance; recommended power 15-100 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 veneer finish; 19½" H × 16½" W × 16½" D.....$400

### 300D Speaker System

Three way acoustic-suspension speaker system with two 10 in woofers, 1½-in dome mid range, 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 mid-range 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

### HPR-12 Magnum Speaker System

Four-way speaker system with 12-in woofer, 12-in passive radiator, 5 in mid-range, two 2½ in tweeters, and 3-in super tweeter; frequency response 38 22,000 Hz; 8 ohm nominal impedance; crossovers at 1500, 7500, and 12,000 Hz; recommended amp power 12-100 W continuous; has continuously variable mid-range and tweeter level

"at their price, they are simply a steal!"

THE AUDIO ADVISOR

# AUDIOGRAM

VOLUME 1, NUMBER 7

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## POLK MODEL 10 LOUDSPEAKER

POLK AUDIO
1205 South Carey Street
Baltimore, MD 21230

When we heard the Polk speakers at Summer CES we knew we had to test them. We were so impressed that we could not believe the prices. But first let us say that there are a few factors that might make us prejudiced in their favor. The Polk people use the Spendor as a reference. They like the sound of ARC tubes. They are the East coast distributors of the Formula 4 tone arm. We, at AUDIOGRAM, share so many likes with the folks at Polk that it is hard for us not to like their speakers. And the company is a local one that has made good — the pride of Baltimore and Washington.

Nonetheless, the sound coming forth from the Model 10 "monitors" is something really special. It is a sound that is open, well defined and very low in coloration. One does not generally expect such low coloration in a modestly priced box speaker, and certainly not anything like the definition exhibited by these speakers. How does Polk do it? We think it is mostly execution. They hear very well and they care.

The Model 10 uses a 1-inch soft dome tweeter, two 6 1/2-inch plasticized midrange drivers and one 10-inch sub-base radiator (which is really a passive radiator). Polk calls the crossover between the bass and midrange drivers "fluid-coupling". It occurs at 60 Hz and provides fourth order Butterworth loading for the energizing cones.

We auditioned the speaker on the optional stand which Polk sells. The stand, or one like it, is highly recommended. It tilts the front of the speaker slightly back from the listener, providing better phasing between drivers and reducing undesirable floor-coupled resonant effects. We would say that the sound of most bookshelf speakers currently placed on the floor would certainly be improved by such a stand.

Inasmuch as Polk had indicated that they use the Spendor as a reference and inasmuch as we had one on hand, we compared the Model 10 to this speaker. In fact, we have compared many speakers to the Spendor and most of them have sounded extremely colored by comparison. (The only speaker systems that have been able to make the Spendor sound colored have been a well-tuned Fulton J and the Rogers LS3/5A's.) Although the Spendor did manage to make the Model 10 sound a trifle nasal, we were amazed at the similarity of sound — and that's good.

But the Spendors cost upwards from $700 a pair (if one can find them), will not handle much power and cannot reproduce the bass of the Polks. It really isn't fair to compare the Model 10 to a reference monitor. It should be compared with other modestly priced speakers. However such a comparison is no fairer than the Spendor comparison. Other $200 speakers simply do not come close to the standards set by the Model 10. In fact the Polks compare very favorably with the Magnepan and Dahlquist DQ 10's. Bass response of the Model 10 surpasses that of the DQ 10. Definition is almost on the par with the Magnepan (stereo imaging is better). Driver blending is excellent, the midrange is open and exceptionally clear, and there is much less hint of boxiness than that which is found in most box speakers.

If we had to fault the Model 10's, we would say that they are slightly bright and just a little fat in the low end. However, they are extremely neutral throughout most of their range. Only in comparison with some of the world's best speaker systems do they sound the least bit colored. They are a high definition speaker system deserving the very best associated electronics. And at their price, they are simply a steal.

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# 10 SPEAKER SYSTEMS

controls, resetttable circuit breaker protection, and five-way binding post connectors; hand-rubbed walnut veneer finish; 36" H × 14¼" W × 13" D .. $400

### 100D Speaker System
Three-way acoustic-suspension speaker system with 12 in woofer, 1½-in dome mid-range, and 1-in soft dome super tweeter; frequency response 40-20,000 Hz; crossovers at 1250 and 10,000 Hz; 6-ohm nominal impedance; recommended amp power 25-80 W continuous; has continuously variable mid-range and tweeter level controls, resettable circuit breaker protection, and five-way binding post connectors; walnut veneer finish with walnut corners and black doubleknit grille; 26½" H × 15" W × 14" D..... $350

### 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; crossovers at 1500 and 9000 Hz; 6-ohm impedance; frequency response 65-20,000 Hz ±2 dB; efficiency 90.5-dB SPL/W/m; min. input 25 W; pyramid-shaped satellite designed for use with DAC/1; tweeter high-pass level control; oiled walnut finish with black knit grille; 21⅞" H × 12¾" W (bottom) and 5" W (top) × 8" D. ..... $300

### 75D Speaker System
Three-way acoustic-suspension speaker system with 10 in woofer, 1½-in soft dome midrange, and 1 in soft dome tweeter; crossovers at 1250 and 10,000 Hz; 6-ohm impedance; frequency response 40 20,000 Hz ±3 dB; efficiency 90.5-dB SPL/W/m; min. input 20 W; midrange and tweeter level controls; textured vinyl finish with black knit grille; 25¼" H × 14¼" 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; 14½" H × 14½" W × 12" D..... $250

### EXP-12V Speaker System
Two-way acoustic-suspension bookshelf speaker system with 12-in woofer and 3¼-in tweeter; frequency response 40-18,500 Hz; crossover at 2000 Hz; 8-ohm nominal impedance; recommended amp power 20-80 W continuous; has continuously variable tweeter level control, resettable circuit breaker protection, and five-way binding post connectors; hand-rubbed walnut vinyl finish..... $185

### EXP-8V Speaker System
Two-way acoustic-suspension bookshelf speaker system with 8 in woofer and 3¼ in tweeter; frequency response 48-18,500 Hz; crossover at 2000 Hz; 8-ohm nominal impedance; recommended amp power 12-60 W continuous; has continuously variable tweeter level control, resettable circuit breaker protection, and five-way binding post connectors; hand-rubbed walnut vinyl finish..... $100

## SANSUI

### SP-L800 Speaker System
Two-way speaker system with two 12-in woofers (with staggered frequency responses) and 2¾-in rear-driven horn tweeter; crossover at 1500 Hz; rotatable acoustic lens covers 120° area; max. input 300 W; sensitivity 95 dB/W/m; 8-ohm impedance; may be bi-amped via separate terminals; solid walnut corner insets and walnut veneer finish with removable grille; four casters; 38" H × 18⅛" W × 15⁷⁄₁₆" D ..... $950

### SP-L700 Speaker System
Two-way speaker system with two 10-in woofers (with staggered frequency responses) and multiport rear-driven horn tweeter; crossover at 2000 Hz; rotatable acoustic lens covers 120° area; max. input 200 W; sensitivity 93 dB/W/m; 8-ohm impedance; may be bi-amped via separate terminals; solid walnut corner insets and walnut veneer finish with removable grille; four casters; 35¹⁄₁₆" H × 16⁵⁄₁₆" W × 14¹³⁄₁₆" D ..... $680

### SP-X9000 Speaker System
Four-way speaker system with 16-in woofer, 8-in mid-range, two 6-in × 2-in horn tweeters, and two 1¾-in Mylar horn super tweeters; crossovers at 1000, 6000, and 10,000 Hz; sensitivity 100 dB/W/m; 8-ohm impedance; max. input 220 W; has three-step level control; simulated walnut grain enclosure with Kumiko grille; 26⅜" H × 17¹¹⁄₁₆" W × 11¹⁄₁₆" D ..... $370

### SP-X8000 Speaker System
Four-way speaker system with 16-in woofer, two 5-in mid-ranges, 6-in × 2-in horn tweeter, and two 1¾-in Mylar horn super tweeters; crossovers at 1000, 6000, and 10,000 Hz; sensitivity 98 dB/W/m; max. input 160 W; 8-ohm impedance; simulated walnut grain enclosure with Kumiko grille; 26⅜" H × 17¹¹⁄₁₆" W × 11¹⁄₁₆" D..... $320

### SP-X7000 Speaker System
Four-way speaker system with 12-in woofer, 5-in mid-range, 6-in × 2-in horn tweeter, and two 1¹³⁄₁₆-in horn super tweeters; frequency response 30-23,000 Hz; crossovers at 1500, 5000, and 10,000 Hz; sensitivity 97 dB/W/m; 8-ohm impedance; max. input 130 W; three-step level control; simulated walnut-grain enclosure with Kumiko grille; 21¼" H × 15⁹⁄₁₆" W × 11¹⁄₁₆" D..... $270

### SP-X6000 Speaker System
Three-way speaker system with 10-in woofer, 5-in mid-range, and 2⅜-in horn tweeter; frequency response 30-23,000 Hz; crossovers at 1500 and 6000 Hz; sensitivity 95 dB/W/m; 8-ohm impedance; max. input 100 W; three-step level control; simulated walnut-grain enclosure with Kumiko grille; 21¼" H × 15⁹⁄₁₆" W × 11¹⁄₁₆" D..... $220

### SPA-3100 Speaker System
Three-way speaker system with 12-in woofer, 5½-in midrange, and 5-in × 2-in oval piezoelectric tweeter; frequency response 35-22,000 Hz; max. input 85 W; mid- and high-level controls; circuit breaker; walnut-grain vinyl finish; 24¹³⁄₁₆" H × 15¹³⁄₁₆" W × 12" D ..... $200

### SPA-2100 Speaker System
Three-way speaker system with 10-in woofer, 5½-in midrange, and 5-in × 2-in oval piezoelectric tweeter; frequency response 40-22,000 Hz; max. input 45 W; mid- and high-level controls; circuit breaker; walnut-grain vinyl finish; 22¹³⁄₁₆" H × 13⁵⁄₁₆" W × 11¼" D ..... $150

### SPA-1100 Speaker System
Two-way speaker system with 10-in woofer and 5-in × 2-in oval piezoelectric tweeter; frequency response 45-22,000 Hz; max. input 30 W; circuit breaker; walnut-grain vinyl finish; 22¹³⁄₁₆" H × 13³⁄₁₆" W × 11¼" D..... $100

## H.H. SCOTT

### Pro-100B Speaker System
Three-way bi-directional air-suspension speaker system with 15-in woofer, two 4½-in midrange drivers and two 1-in dome tweeters; crossovers at 700 and 3500 Hz; min. 4-ohm controlled impedance; frequency response 36-20,000 Hz; efficiency 94-dB SPL/W/m; input range 20-300 W; three-position tweeter and midrange level controls and top speaker adjust control; oiled walnut finish with two removable grilles; 29¼" H × 19" W × 14½" D..... ..... $550

### 197B Speaker System
Three-way air-suspension speaker system with 15-in woofer, 4½-in midrange, and 1-in dome tweeter; crossovers at 750 and 3500 Hz; controlled impedance 6-8 ohms; frequency response 38-20,000 Hz; efficiency 95-dB SPL/W/m; input range 15-150 W; three-position tweeter and midrange level controls; walnut vinyl finish with removable grille; 27¼" H × 16⁷⁄₈" W × 13¼" D ..... $280

**196W.** Similar to 197B except with 12-in woofer; efficiency 96-dB SPL/W/m; crossovers at 800 and 3500 Hz; input range 15-120 W; oiled walnut finish; 25½" H × 15" W × 10⅜" D ..... $280

**196B.** Similar to 196W except walnut vinyl finish .. ..... $240

### 188T Speaker System
Three-way air-suspension speaker system with 10-in woofer, 4½-in midrange, and 1-in dome tweeter; crossovers at 900 and 3500 Hz; controlled impedance 6-8 ohms; frequency response 38-20,000 Hz; efficiency 95.4-dB SPL/W/m; input range 10-100 W; three-position tweeter and midrange level controls; walnut vinyl finish with removable grille; 33⅜" H × 13⅛" W × 10½" D ..... $200

**186B.** Similar to 188T except 95-dB SPL/W/m efficiency; 24" H × 13½" W × 10½" D..... $180

### 177B Speaker System
Three-way air-suspension speaker system with 8-in woofer, 5-in midrange, and 1¾-in tweeter; crossovers at 1200 and 3500 Hz; controlled impedance 6-8 ohms; frequency response 50-18,000 Hz; efficiency 94-dB SPL/W/m; input range 7-70 W; walnut vinyl finish with removable grille; 19" H × 11" W × 9⅛" D..... $120

### 176B Speaker System
Two-way bass reflex speaker system with 8-in woofer and 1¾-in tweeter; crossover at 3500 Hz; controlled impedance 6-8 ohms; frequency response 60-18,000 Hz; efficiency 93.5-dB SPL/W/m; input range 5-60 W; walnut vinyl finish with removable grille; 18" H × 10½" W × 8½" D .... $90

## SHARP

### The Tower I Speaker System
Two-way floor-standing speaker system with two 8-in woofers and 3-in tweeter; has Tri-Bass Accelerator to increase efficiency and low-end response; frequency response 30-20,000 Hz; crossover at 5000 Hz; 8-ohm impedance; simulated wood grain vinyl finish; 31⅜" H × 11⅞" W × 11⅞" D ..... ..... $170 pr.

### SP 4000A Speaker System
Two-way speaker system with two 8-in woofers and 3-in wide-band tweeter; has Tri-Bass Accelerator to increase efficiency and low-end response; frequency response 35-20,000 Hz; crossover at 5000 Hz; 8-ohm impedance; simulated wood grain vinyl finish; 24⅞" H × 15" W × 9½" D ..... $110 pr.

**SP-4500B.** Same as SP-4000A except black vinyl finish ..... $110 pr.

### SP 3000 Speaker System
Two-way speaker system with 8-in woofer and 3-in wide-band tweeter; has Tri-Bass Accelerator to increase efficiency and low-end response; frequency response 40-20,000 Hz; crossover at 5000 Hz; 8-ohm impedance; simulated wood grain vinyl finish; 24⅞" H × 15" W × 9½" D..... $100 pr.

## SONY

### SS-G7 Speaker System
Three-way bass-reflex floor-standing speaker system with carbon-fiber woofer, 4-in midrange, and 1½-in tweeter; features "plumb-inline" arrangement where tweeter, midrange, and woofer are aligned at points where sound begins, the uniform distances between baffle board and sound wave origins in individual speaker units; tweeter has 20-micron titanium magnet and midrange has ferrite magnet, both located at cone's center of gravity; frequency response 30-20,000 Hz; efficiency 94 dB/W/m; max. input 200 W ..... $1000

### SSU-4000 Speaker System
Three-way bass-reflex floor-standing speaker system with 10-in cone woofer, 9-in passive radiator, 3¼-in midrange, and 1-in dome tweeter; crossovers at

500 and 5500 Hz; 8-ohm impedance; frequency response 30-20,000 Hz; input range 20-150 W; midrange and tweeter level controls; hand-rubbed lacquer coating and hardwood veneer finish; 45 15/16" H × 13 1/2" W × 14 3/16" D ..... $400

### SSU-3000 Speaker System
Three-way bass-reflex floor-standing speaker system with 10-in cone woofer, 3 1/4-in midrange, and 1-in dome tweeter; crossovers at 600 and 5500 Hz; 8-ohm impedance; frequency response 35-20,000 Hz; input range 20-150 W; midrange and tweeter level controls; hand-rubbed lacquer coating and hardwood veneer cabinet; 34 3/16" H × 13 1/2" W × 14 3/16" D ..... $300

### SSU-2000 Speaker System
Two-way acoustic-suspension bookshelf speaker system with 10-in cone woofer and 2 1/4-in cone tweeter; crossover at 2500 Hz; 8-ohm impedance; frequency response 35-20,000 Hz; efficiency 90-dB SPL/W/m; input range 20-100 W; tweeter level control; walnut veneer finish with removable grille; 21 1/4" H × 13 1/4" W × 14 1/8" D..... $150

### SSU-1250 Speaker System
Two-way bass-reflex bookshelf speaker system with 8-in cone woofer, 8-in passive radiator, and 2 1/4-in cone tweeter; crossover at 4000 Hz; 8-ohm impedance; frequency response 45-20,000 Hz; efficiency 90-dB SPL/W/m; input range 10-60 W; teak vinyl finish with removable grille; 25 5/8" H × 13 1/2" W × 11 3/4" D ..... $100

### SSU-1050 Speaker System
Two-way acoustic-suspension bookshelf speaker system with 8-in cone woofer and 2 1/4-in cone tweeter; crossover at 1000 Hz; 8-ohm impedance; frequency response 50-20,000 Hz; input range 10-50 W; teak vinyl finish with removable knit grille; 17 11/16" H × 11 11/16" W × 8 1/4" D ..... $130 pr.

## SPEAKERKIT

### Lambda Seven Speaker System
Three-way acoustic suspension speaker system with 15-in woofer, two 2-in soft-dome mid-ranges, and four 1-in soft-dome tweeters; frequency response 28-20,000 Hz; crossovers at 700 and 3600 Hz; max. input 160 W; min. input 20 W; 8-ohm impedance; supplied with drivers, crossover, assembled and finished veneered cabinet, acoustic dampening filler, and foam grille; floor-standing system.
Kit ..... $260

### Lambda Six Speaker System
Three-way acoustic suspension speaker system with 12 in woofer, two 2-in soft-dome tweeters, and four 1-in soft-dome tweeters; frequency response 30-20,000 Hz; crossovers at 700 and 3600 Hz; max. input 140 W; min. input 20 W; 8-ohm impedance; supplied with drivers, crossover, assembled and finished veneered cabinet, acoustic dampening filler, and foam grille; floor-standing system.
Kit ..... $235

### Lambda Five Speaker System
Three-way acoustic suspension speaker system with 12-in woofer, 2-in soft-dome tweeter, and 1-in soft-dome tweeter; frequency response 32-20,000 Hz; crossovers at 600 and 4000 Hz; max. input 120 W; min. input 15 W; 8-ohm impedance; supplied with drivers, crossover, assembled and finished veneered cabinet, acoustic dampening filler, and foam grille; floor-standing system.
Kit ..... $145

### Lambda Four Speaker System
Three-way acoustic suspension speaker system with 10-in woofer, 2-in soft-dome tweeter, and 1-in soft-dome tweeter; frequency response 35-20,000 Hz; crossovers at 600 and 4000 Hz; max. input 100 W; min. input 15 W; 8-ohm impedance; supplied with drivers, crossover, assembled and finished veneered cabinet, acoustic dampening filler, and foam grille; designed for shelf mounting.
Kit ..... $130

### Lambda Three Speaker System
Two-way acoustic suspension speaker system with 10-in woofer and 1-in soft-dome tweeter; frequency response 40-20,000 Hz; crossover at 2400 Hz; max. input 100 W; min. input 10 W; 8-ohm impedance; supplied with drivers, crossover, assembled and finished veneered cabinet, acoustic dampening filler, and foam grille; designed for shelf mounting.
Kit ..... $100

### Lambda Eight Speaker System
Three-way acoustic suspension speaker system with 2-in dome mid-range and 1-in dome tweeter; designed for use with Dynaquad adaptor; frequency response 600-20,000 Hz; crossovers at 600 and 4000 Hz; max. input 120 W; min. input 15 W; 8-ohm impedance; supplied with drivers, crossover, assembled and finished veneered cabinet, acoustic dampening filler, and foam grille; designed for wall mounting.
Kit ..... $90

### Lambda Two Speaker System
Two-way acoustic suspension speaker system with 8-in woofer and 1-in soft-dome tweeter; frequency response 45-20,000 Hz; crossover at 2400 Hz; max. input 80 W; min. input 10 W; 8-ohm impedance; supplied with drivers, crossover, assembled and finished veneered cabinet, acoustic dampening filler, and foam grille; designed for shelf mounting.
Kit ..... $85

## SPEAKERLAB

### SK Speaker System
Three-way horn-loaded speaker system with 15-in woofer, 17 in × 6 in (mouth) horn mid-range, and 4 1/2 in × 1 1/4 in (mouth) horn tweeter; 8-ohm impedance; crossovers at 400 and 5000 Hz; efficiency 101 dB SPL/W/m; input range 10-150 W; mid range and tweeter level controls; oiled-walnut finish with brown grille cloth; 50 1/2" H × 32 1/4" W × 28" D ..... $650
Walnut kit (available only in pairs) ..... $455

### Super 7 Speaker System
Three-way acoustic-suspension speaker system with 10 in and 12 in woofers, 14 in × 3 1/4-in horn mid-range, and 4 1/2 in × 1 1/4-in horn tweeter; crossovers at 1000 and 6000 Hz; 4-ohm impedance; efficiency 92-dB SPL/W/m; input range 15-150 W; midrange and tweeter level controls; oiled walnut finish with brown grille; 29 H × 18" W × 15" D .....
..... $520
Vinyl kit ..... $341
Walnut kit ..... $385

### S7 Speaker System
Three-way acoustic suspension speaker system with 10 in and 12 in woofers (driven in parallel), 14-in × 3 1/4-in (mouth) horn mid-range, and 4 1/2-in × 1 1/4-in (mouth) horn tweeter; 4-ohm impedance; crossovers at 1000 and 6000 Hz; efficiency 92-dB SPL/W/m; input range 15-150 W; mid-range and tweeter level controls; oiled-walnut finish with brown grille cloth; 29" H × 18" W × 15" D .... $430
Vinyl kit ..... $275
Walnut kit ..... $319

### S30 Speaker System
Three-way speaker system with 8-in and 10-in "Nestorovic" woofers in separate enclosures, 4 in cone midrange, and 1-in recessed dome tweeter; crossovers at 750 and 4000 Hz; 8-ohm impedance; frequency response 100-10,000 Hz ±1 dB; efficiency 91 dB SPL/W/m; input range 25-350 W; three position woofer damping switch; midrange and tweeter level controls; oiled walnut finish with brown cloth grille; available only as kit; 31" H × 12 7/8" W × 10 3/4" D ..... $330
Vinyl kit ..... $285

### S6 Speaker System
Three-way acoustic suspension speaker system with 12 in woofer, 14-in × 3 1/4 in (mouth) horn mid range, and 4 1/2-in × 1 1/4-in (mouth) horn tweeter; 8 ohm impedance; crossovers at 1000 and 6000 Hz; efficiency 91-dB SPL/W/m; input range 15 100 W, mid range and tweeter level controls; oiled walnut finish with brown grille cloth; 28" H × 16 1/4" W × 11 3/4" D ..... $325
Vinyl kit ..... $224
Walnut kit ..... $255

### S4 Speaker System
Three-way acoustic suspension speaker system with 12-in woofer, 6-in cone mid-range, and 4 1/4-in × 1 1/4-in (mouth) horn tweeter; 8 ohm impedance; crossovers at 500 and 4000 Hz; efficiency 91-dB SPL/W/m; input range 15-100 W; mid-range and tweeter level controls; oiled-walnut finish with brown grille cloth; 28" H × 16 1/4" W × 11 3/4" D.....
..... $295
Vinyl kit ..... $184
Walnut kit ..... $215
**S3.** Same as S4 except 1-in dome tweeter ..... $265
Viny kit ..... $160
Walnut kit ..... $191

### S2.5 Speaker System
Three-way acoustic-suspension speaker system with 10-in woofer, 6-in cone midrange, and 1-in dome tweeter; crossovers at 500 and 1000 Hz; 4-ohm impedance; efficiency 88-dB SPL/W/m; input range 10-50 W; midrange and tweeter level controls; oiled walnut finish with brown cloth grille; 26 1/4" H × 15 1/4" W × 10 3/4" D..... $205
Vinyl kit ..... $132
Walnut kit ..... $152

### S2 Speaker System
Two-way acoustic suspension speaker system with 10-in woofer and 1-in recessed dome tweeter; 4-ohm impedance; crossover at 1500 Hz; efficiency 92-dB SPL/W/m; input range 10-50 W; tweeter level control; oiled-walnut finish with brown grille cloth; 26 1/4" H × 15 1/4" W × 10 3/4" D..... $159
Viny kit ..... $94
Walnut kit ..... $114

### S1 Speaker System
Two way acoustic suspension speaker system with 8-in woofer and 1-in dome tweeter; 8-ohm imped-

ance; crossover at 2500 Hz efficiency 92-dB SPL/W/m; input range 5-40 W; tweeter level control; oiled-walnut finish with brown grille cloth; 18¾" H × 11¾" W × 9½" D..... $105
Vinyl kit ..... $60
Walnut kit ..... $74

### Point One Speaker System

Two-way acoustic-suspension speaker system with 6-in woofer and 1-in dome tweeter; crossover at 2500 Hz; 4- and 8-ohm impedance; efficiency 88-dB SPL/W/m; input range 15-50 W; tweeter level control; oiled walnut finish with brown cloth grille; 10" H × 7" W × 5" D..... $95
Walnut kit ..... $77

## SYNERGISTICS

### S-92 Speaker System

Sealed three-way 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, bi-polar screen tweeters; crossovers at 140 and 2000 Hz; frequency response 24-20,000 Hz; efficiency 92 dB/W/m; max. input 600 W/ch continuous; midrange and tweeter level controls; external electronic crossover for bi-amp; designed to accommodate digital recording/playback; screens 62" H × 22" W × 4" D; commode 40" H × 14" W × 16" D..... $2500

### S-72A Speaker System

Four-way acoustic suspension speaker system with two 10-in high-compliance woofers, two 4½-in midrange drivers, three 2½-in extended-range tweeters, and one piezoelectric super tweeter; usable audio range 26-24,000 Hz; min. input 6 W continuous; max. input 200 W; 4-ohm impedance; crossovers at 1000, 7500, and 12,500 Hz; midrange and tweeter level controls; 40" H × 30" W × 12½" D... $600

### S-62A Tower Speaker System

Four-way acoustic suspension speaker system with 12-in high-compliance woofer, 4½-in midrange driver, three 2½-in extended-range tweeters, and one super tweeter; usable audio range 26-24,000 Hz; min. input 8 W continuous; max. input 150 W continuous; 8-ohm impedance; crossovers at 1000, 7500 and 12,500 Hz; mid-range and tweeter level controls; 33" H × 16½" W × 12½" D..... $400

### S-51A Speaker System

Four-way acoustic suspension speaker system with 12-in high-compliance woofer, 4½-in midrange driver, 2½-in extended-range tweeter, and one piezoelectric super tweeter; usable audio range 30-20,000 Hz; min. input 8 W continuous; max. input 150 W continuous; 8-ohm impedance; crossovers at 1000, 7500, and 12,500 Hz; mid-range and tweeter level controls; 25½" H × 14¼" W × 11½" D ..... $325

### S-52A Tower Speaker System

Two-way speaker system with two 8-in high-compliance woofers and four extended-range tweeters; usable audio range 28-20,000 Hz; min. input 6 W continuous; max. input 150 W continuous; 4-ohm impedance; crossover at 3200 Hz; tweeter level control; 30" H × 13½" W × 13½D..... $325

### S-42A Speaker System

Three-way acoustic suspension speaker system with 10-in high-compliance woofer, 4½-in mid-range driver, and 2½-in extended-range tweeter; usable audio range 28-20,000 Hz; min. input 10 W continuous; max. input 100 W continuous; 8-ohm impedance; crossovers at 1500 and 7500 Hz; mid-range and tweeter level controls; 25½" H × 14¼" W × 11½" D..... $230

### S-32A Speaker System

Two-way acoustic suspension speaker system with 10-in high-compliance woofer and 2½-in extended-range tweeter; usable audio range 28-20,000 Hz; min. input 10 W continuous; max. input 80 W continuous; 8-ohm impedance; crossover at 2500 Hz; tweeter level control; 25½" H × 14¼" W × 11½" D ..... $170

### S-22A Speaker System

Two-way acoustic suspension speaker system with 8-in high-compliance woofer and 2½-in extended-range tweeter; usable audio range 33-20,000 Hz; min. input 6 W continuous; max. input 60 W continuous; 8-ohm impedance; crossover at 3200 Hz; tweeter level control; 23" H × 12" W × 9½" D..... $130

**S-12A.** Similar to S-22A but without tweeter level control; usable audio range 38-20,000 Hz; 17¾" H × 9¾" W × 8½" D ..... $100

## TANDBERG

### Studio Monitor Speaker System

Three-way floor-standing speaker system with 12-in woofer, 2-in dome midrange, and two 1-in dome tweeters; crossovers at 600 and 3500 Hz; 8-ohm impedance; frequency response 25-20,000 Hz (DIN); efficiency 6 W (DIN); max. input 100 W continuous sine wave, 160 W music power; midrange and tweeter level controls; tweeter protection system; 30" H × 18½" W × 13½" D..... $1500 pr.

### TL 5020 Speaker System

Three-way speaker system with 12-in woofer, 5-in midrange, and two 1-in dome tweeters; frequency response 33-20,000 Hz; 8-ohm impedance; efficiency 3 W (DIN); max. input 60 W continuous sine wave, 100 W music power; 14¾" H × 25¾" W × 11" D ..... $800 pr.

### TL 3520 Speaker System

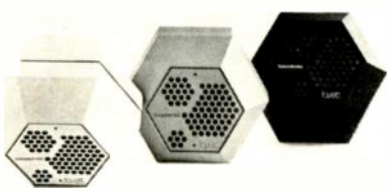
Three-way speaker system with 10-in woofer, 3⅜-in midrange, and 1-in dome tweeter; frequency response 38-20,000 Hz; 8-ohm impedance; efficiency 4 W (DIN); max. input 50 W continuous sine wave, 75 W music power; 14" H × 23¼" W × 10¼" D..... $600 pr.

### TL 2520 Speaker System

Three-way speaker system with 8-in woofer, 3⅜-in midrange, and 2-in tweeter; frequency response 43-20,000 Hz; 8-ohm impedance; efficiency 4 W (DIN); max. input 40 W continuous sine wave, 65 W music power; 12" H × 21" W × 8¾" D .....$400 pr.

### Fasett Speaker System

Two-way bass-reflex multi-dimensional speaker system with 5-in woofer and 2¼-in tweeter; frequency



response 50-20,000 Hz; 4-ohm impedance; efficiency 6 W (DIN); max. input 25 W continuous sine wave, 40 W music; black, antique white, or orange enclosure; 10½" H × 11" W × 8¾" D .....$200 pr

## TANNOY

### Buckingham Speaker System

Three-way ducted port speaker system with integrated phase coherent 8-in midrange/tweeter and two 12-in bass drivers; frequency response 40-20,000 Hz ±3 dB; crossovers at 350 and 3500 Hz; 8-ohm impedance; input range 10-150 W; treble rolloff and treble energy controls; 46" H × 24" W × 18" D..... $2250

### Windsor Speaker System

Three-way ducted port speaker system with integrated phase coherent mid-range/tweeter and separate 12-in bass driver; frequency response 40-20,000 Hz ±3 dB; crossovers at 350 and 3500 Hz; 8-ohm impedance; input range 10-150 W; treble rolloff and treble energy controls; 33" H × 23" W × 16" D..... $1250

### Arden Speaker System

Two-way phase coherent integrated speaker system with 15 in direct-radiating woofer integrated with high-frequency compression driver and crossover network; ducted port design; frequency response 45-20,000 Hz ± 4 dB; crossover at 1000 Hz; 8-ohm impedance; input range 10-150 W; treble rolloff and treble energy controls; 39" H × 26" W × 14½" D ..... $777

### Berkeley Speaker System

Two-way ducted port speaker system with 15-in direct radiating woofer and high frequency compression tweeter mounted on common axis; phase coherent integrated design; frequency response 45-20,000 Hz ±4 dB; crossover at 1000 Hz; 8-ohm impedance; input range 10-150 W; treble energy and treble rolloff controls; 33" H × 21" W × 12" D ..... $655

### T225 Speaker System

Two-way passive radiator glass-top floor-standing speaker system with 10-in woofer and high-frequency compression tweeter mounted on common axis; frequency response 45-20,000 Hz ±3 dB; crossover at 3500 Hz; 8-ohm impedance; input range 10-150 W; treble rolloff and treble energy control; 28" H × 15" W × 12" D..... $495

### T185 Speaker System

Two-way passive radiator speaker system with 10-in woofer and high-frequency compression tweeter on common axis; frequency response 45-20,000 Hz ±3 dB; crossover at 3500 Hz; 8-ohm impedance; input range 10-150 W; treble rolloff and treble energy controls; phase coherent integrated design; 26" H × 15" W × 11" D ..... $425

### T125 Speaker System

Two-way ducted port speaker system with 10-in woofer and high-frequency compression driver; frequency response 50-20,000 Hz ±3 dB; crossover at 5000 Hz; 8-ohm impedance; input range 10-150 W; treble rolloff and treble energy controls; 24" H × 12" W × 10" D ..... $228

## TECHNICS by PANASONIC

### SB-7000A Speaker System

Linear phase three-way bass reflex speaker system with 13¾-in cone woofer, 4¾-in cone midrange, and 1¼-in dome tweeter; frequency response 37-22000 Hz; crossovers at 700 and 6000 Hz; 6-ohm impedance; instantaneous max. input 150 W; sensitivity 90.5-dB SPL/W/m; mid-range and high-frequency level controls; 33¼" H × 18⅞" W × 16⅛" D ..... $440

### SB-6000A Speaker System

Linear phase two-way vented speaker system with 12-in cone woofer and 1¼-in dome tweeter; frequency response 39-22,000 Hz; crossover at 1800 Hz; 6-ohm impedance; instantaneous max. input 100 W; sensitivity 91-dB SPL/W/m; 33⅝" H × 16¾" W × 13⅜" D..... $340

### SB-X50 Speaker System

Linear phase three-way vented bookshelf speaker system with 10-in cone woofer, 3½-in cone midrange, and 1-in soft dome tweeter; crossovers at 1000 and 3000 Hz; 6-ohm impedance; frequency response 43-20,000 Hz; efficiency 93 dB/W/m; input range 50-120 W continuous (DIN); includes thermal-relay speaker protection device and tweeter and midrange attenuators; 24" H × 13⅜" W × 12⅞" D ..... $500 pr.

### SB-5000A Speaker System

Linear phase two-way vented speaker system with 10 in cone woofer and 2⅜-in cone tweeter; frequency response 40-20,000 Hz; crossover at 1500 Hz; 8-ohm impedance; instantaneous max. input 75 W; sensitivity 92-dB SPL/W/m; 28¼" H × 13¾" W × 12¹¹⁄₁₆" D ..... $180

### SB-X30 Speaker System
Linear phase three-way vented bookshelf speaker system with 8 in woofer, 3½ in cone midrange, and 1 in soft dome tweeter; crossovers at 1200 and 3000 Hz; 6 ohm impedance; frequency response 44 20,000 Hz; efficiency 93 dB/W/m; input range 40 90 W continuous (DIN); includes thermal-relay speaker protection device and tweeter and midrange attenuators; 21'₈" H × 11" W × 10" D.....$360 pr.

### SB-4500A Speaker System
Linear phase two-way vented floor standing speaker system with 10-in cone woofer and 2⅜ in cone tweeter; crossover at 2000 Hz; 6 ohm impedance; frequency response 40 20,000 Hz; efficiency 90.5 dB/W/m; input range 50-75 W continuous (DIN); 24'₈" H × 13¾" W × 12¾" D.....$300 pr.

## ULTRALINEAR

### 265 Speaker System
Four way tuned-port floor-standing speaker system with 15-in foam-suspension woofer with dual-aperture tuned bass port, 6-in midrange in separate sealed enclosure, 1 in soft dome tweeter, and 1-in soft dome super tweeter; crossovers at 700, 4000, and 6000 Hz; 8-ohm nominal impedance; frequency response 25 22,500 Hz; input range 12-75 W continuous; front-mounted midrange and tweeter level controls; walnut grain finish with black or brown knit grille; 31'¼" H × 18" W × 16⅜" D.$360
**265 W/O.** Walnut/oak hardwood finish.....$400

### 275A Speaker System
Four-way air-suspension speaker system with 12-in foam edge woofer, 2-in soft dome midrange, 1-in soft dome tweeter, and 1-in soft dome super tweeter; crossovers at 900, 2200, and 5500 Hz; 8-ohm impedance; frequency response 26-23,000 Hz; input range 7-75 W continuous; front-mounted midrange and tweeter level controls; walnut or oak finish with black or brown knit grilles; 28" H × 16" W × 12¾" D.....$350

### 228 Speaker System
Three-way air-suspension speaker system with 12 in woofer, 6-in foam-suspension midrange in separate sealed enclosure, and 1-in soft dome tweeter; crossovers at 700 and 4500 Hz; 8-ohm impedance; frequency response 27-22,000 Hz; input range 10-65 W continuous; front-mounted midrange and tweeter level controls; walnut-grain finish with black/brown knit or herringbone acoustic-foam grille; 24⅜" H × 14½" W × 12" D.....$230
**228 W/O.** Walnut or oak hardwood veneer.....$260

### 210 Speaker System
Three-way air-suspension speaker system with 12 in foam-edge woofer, 5-in self-enclosed midrange, and 1-in soft dome tweeter; crossovers at 1400 and 5000 Hz; 8-ohm impedance; frequency response 29-21,000 Hz; input range 10-50 W continuous; front-mount tweeter level control; walnut grain finish with black knit, transparent or brown acoustic-foam grille; 24⅜" H × 14½" W × 12" D.....$190
**210 W/O.** Walnut or oak hardwood veneer.....$220

### 175 Speaker System
Three-way air suspension speaker system with 12 in woofer, 4½ in self enclosed sealed midrange, and 2½-in tweeter; crossovers at 1500 and 4000 Hz; 8 ohm nominal impedance; frequency response 30 19,000 Hz; input range 8-45 W continuous; walnut grain finish with black/brown acoustic foam or knit grille; 24⅜" H × 14½" W × 12" D.....$160

### 77C Speaker System
Three-way air-suspension speaker system with 10 in foam-edge woofer, 5-in self-enclosed sealed midrange, and 2½-in tweeter; crossovers at 1800 and 4000 Hz; 8-ohm nominal impedance; frequency response 32-18,000 Hz; input range 8-40 W continuous; front-mounted midrange level control; walnut grain finish with black transparent, brown knit, or black/brown herringbone acoustic foam grille; 23⅞" H × 11¾" W × 9¼" D.....$145
**77C W/O.** Walnut or oak hardwood veneer cabinet.....$175

### 100C Speaker System
Three-way bass reflex speaker system with 12-in woofer, 4½ in sealed midrange, and 2½-in tweeter; crossovers at 1500 and 4000 Hz; 8-ohm nominal impedance; frequency response 32-18,000 Hz; input range 5-40 W continuous; walnut-grain finish with black/brown knit or acoustic-foam grille; 24⅜" H × 14½" W × 12" D.....$140

### RM-19 Rack Monitor
Two-way air-suspension bookshelf speaker system designed in receiver/amplifier studio rack look; includes two 4½-in midrange/woofers and 1-in soft dome super tweeter; crossover at 3900 Hz; 4-ohm impedance; frequency response 36-22,000 Hz; input range 6-70 W continuous; LED overload indicator; laminated matte black finish with charcoal steel escutcheon front panel and handles for shelf/rack mounting; 5¾" H × 19" W × 5⅝" D.....$140

## VISONIK

### Sub-1 Speaker
Floor-standing subwoofer with 12-in woofer and matrix crossover at 160 Hz; frequency response 16-200 Hz; 6 ohm impedance; input range 50-300 W/ch continuous; walnut finish with brown knit grille; designed for use with D-502 or D-602 speakers; 23¾" H × 17" W × 13¾" D.....$360

### Euro 7 Speaker System
Three-way bookshelf speaker system with two 7-in woofers, 1½-in midrange, and 1-in soft dome tweeter; crossovers at 550 and 4000 Hz; 4-ohm impedance; power response 45-18,000 Hz ±2 dB; input range 20 70 W/ch; walnut finish with brown knit grille; 23' H × 13" W × 9³₁₆" D.....$295

### D-803 Speaker System
Compact three-way speaker system with 6¾-in woofer, 1½ in dome mid-range, and ¾-in dome tweeter; frequency response 30-30,000 Hz; crossovers at 700 and 4600 Hz; recommended amp power 25 90 W; impedance 4-8 ohms; grey cabinet with black grille; 12⅞" H × 7⅞" W × 7⅞" D.$235
**D-803WN.** Same as D-803 but walnut cabinet.....$250

### D-702BL Speaker System
Two-way compact speaker system with 6¾-in woofer and ¾-in dome tweeter; frequency response 30-25,000 Hz; impedance 4-8 ohms; max. input 90 W; LED overload indicator; grey cabinet with black grille.....$185
**D-702WN.** Same as D-702BL except walnut finish with brown knit grille.....$200

### Euro 5 Speaker System
Two-way air-suspension bookshelf speaker system with 8-in woofer and 1-in sealed soft-dome tweeter; crossover at 1300 Hz; 4-ohm impedance; frequency response 30-25,000 Hz +4/−8 dB (DIN); input range 10-60 W/ch; walnut finish with brown knit grille; 19" H × 11" W × 9½" D.....$170

### D-602 Speaker System
Compact two-way speaker system with 5¼-in woofer and 1 in dome tweeter; frequency response 38-25,000 Hz; crossover at 1600 Hz; recommended amp power 18-80 W; impedance 4-8 ohms; LED overload indicator; grey cabinet with black grille; 9⅛" H × 5¾" W × 5¼" D.....$150
**D-602WN.** Same as D-602 but walnut cabinet with brown metal grille.....$160

### D-502BL Speaker System
Two-way compact speaker system with 4-in cone woofer/midrange and ¾-in soft dome tweeter; crossover at 1400 Hz; 6-ohm impedance; frequency response 45-30,000 Hz; max. input 70 W; LED overload indicator; silver-trim grey cabinet with black foam grille; 6¾" H × 4⅛" W × 4¼" D.....$115
**D-502M0.** Bracket-mount version of D-502 ...$122

### D-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; nextrel-finished, wedge metal cabinet; 6¾" H × 4⅓" W × 4⅓" D..... $110
Brackets for car mount ..... $15 pr.

**D-302 Speaker System**
Compact two-way speaker system with 3¾-in woofer and 2-in cone tweeter; frequency response 50-22,000 Hz; crossover at 1800 Hz; recommended amp power 8-40 W; impedance 4-8 ohms; 6¾" H × 4⅛" W × 4¼" D ..... $80
**D-302 M0.** Bracket-mount version of D-302..... $92

## WHARFEDALE

**E70 Speaker System**
Three-way computer-optimized bass-reflex speaker system with 10-in woofer, two 4-in midrange drivers, and 1-in horn tweeter; crossovers at 800 and 7000 Hz (6 and 12 dB/octave network); 8-ohm impedance; frequency response 50-18,000 Hz ±3 dB; efficiency 94-dB SPL/W/m; input range 13-100 W; high- and low-frequency contour controls; hand-finished walnut veneer with black cloth grille; 32" H × 13½" W × 14" D ..... $475

**E50 Speaker System**
Three-way speaker system with 10-in woofer, 4-in midrange, and 1-in compression-drive horn tweeter; crossovers at 800 and 7000 Hz; 8-ohm impedance; frequency response 55-18,000 Hz ±3 dB; efficiency 94-dB SPL/W/m; input range 3-80 W continuous; high- and low-frequency contour controls; walnut finish with semi-opaque grille ..... $390

**SP120 "Dovedale" Speaker System**
Three-way computer-optimized bass-reflex speaker system with two 7-in woofers, 4-in midrange, and isodynamic super tweeter; frequency response 35-26,000 Hz ±3 dB; 6-ohm impedance; efficiency 88-dB SPL/W/m; input range 10-60 W; hand finished walnut veneer; 25" H × 15½" W × 12½" D ..... $355

**SP100 "Teesdale" Speaker System**
Three-way speaker system with 8-in woofer; 4-in midrange, and isodynamic tweeter; crossovers at 800 and 5000 Hz; 6-ohm impedance; frequency response 40-26,000 Hz ±3 dB; efficiency 87-dB SPL/W/m; max. input 40 W continuous, 80 W peak ..... $270

**XP80 "Glendale" Speaker System**
Three-way computer/holograph acoustic-suspension speaker system with 9.8-in woofer, 3.9-in midrange, and 0.75-in dome tweeter; frequency response 50-20,000 Hz; 6-ohm impedance; efficiency 86-dB SPL/W/m; input range 15-50 W; walnut finish; 22⅛" H × 12" W × 10⅜" D .... $210

**XP60 "Linton" Speaker System**
Three-way computer/holograph acoustic-suspension speaker system with 7.9-in woofer, 3.9-in midrange, and 0.75-in dome tweeter; frequency response 60-20,000 Hz; 6-ohm impedance; efficiency 87-dB SPL/W/m; input range 10-40 W; walnut finish; 18.7" H × 10.4" W × 9.4" D ... $160

**XP40 "Shelton" Speaker System**
Two-way computer/holograph acoustic-suspension speaker system with 7.9-in woofer and 0.75-in dome tweeter; frequency response 63-20,000 Hz; 6-ohm impedance; efficiency 86-dB SPL/W/m; input range 10-35 W; walnut finish; 16.7" H × 9.7" W × 9.4" D..... $115

**XP20 "Denton" Speaker System**
Two-way computer/holograph acoustic-suspension speaker system with 6.7-in woofer and 2-in tweeter; frequency response 65-18,000 Hz; 6-ohm impedance; efficiency 88-dB SPL/W/m; input range 10-30 W; walnut finish; 14" H × 9.7" W × 8.7" D.. ..... $90

## WINDSOR LABS

**6000V Speaker System**
Four-way vented floor-standing speaker system with 15-in low-frequency radiator, 8-in midrange/woofer, 2½-in tweeter, and 2½-in super tweeter; crossovers at 58, 1500, and 8000 Hz; 8-ohm nominal impedance; frequency response 35-20,000 Hz; input range 10-200 W; 30" H × 19½" W × 10¾" D ..... $275

**5000V Speaker System**
Three-way vented floor-standing speaker system with 12-in low frequency radiator, 8-in midrange/woofer, and 2½-in tweeter; crossovers at 67 and 1500 Hz; 8-ohm impedance; frequency response 40-20,000 Hz; input range 10-200 W; 29" H × 18" W × 10¾" D..... $210

**4000S Speaker System**
Three-way acoustic-suspension speaker system with 12-in woofer, 4-in midrange, and 2½-in tweeter; crossovers at 700 and 3000 Hz; 8-ohm impedance; frequency response 45-20,000 Hz; input range 10-200 W; 26" H × 15¾" W × 11⅛" D..... $150

## YAMAHA

**NS-1000 Speaker System**
Three-way speaker system with 11.8-in woofer, 3.46-in mid-range, and 1.18-in tweeter; drivers are vapor-deposition beryllium-dome type; frequency response 40-20,000 Hz; crossovers at 500 and 6000 Hz; 8-ohm impedance; max. input 100 W; 90-dB SPL/W/m; mid-range and tweeter level controls; ebony enclosure with polyurethane finish; sold in mirror-image pairs only; 28" H × 15½" W × 14½" D ..... $735
**NS-1000 M.** Same as NS-1000 but with semi-gloss black finish and detachable black grille; 26½" H × 14¾" W × 12¾" D..... $535

**NS-690II Speaker System**
Three-way speaker system with 12-in woofer, 3-in mid-range, and 1¼-in tweeter; frequency response 35-20,000 Hz; crossovers at 800 and 6000 Hz; 8-ohm impedance; max. input 80 W; mid-range and tweeter level controls; may be multiamped via separate driver terminals; walnut finish; 24¾" H × 13¾" W × 11½" D..... $325

**NS-500 Speaker System**
Two-way speaker system with 10-in woofer and 1¼-in beryllium dome tweeter; frequency response 40-20,000 Hz; crossover at 1800 Hz; 8-ohm impedance; max. input 60 W; black finish with removable grille..... $260

**NS-325 Bookshelf Speaker System**
Three-way bass reflex speaker system with 9⅞-in woofer, 4¾-in midrange, and 2-in tweeter; drivers are vapor deposition, beryllium dome type; crossovers at 600 Hz and 5000 Hz (12 dB/octave); 8 ohm impedance; frequency response 40-20,000 Hz; efficiency 92 dB/W/m; max. input 70 W; oak finish; 24" H × 14" W × 11¾" D ..... $225

**NS-225 Bookshelf Speaker System**
Two-way bass reflex speaker system with 9⅞-in woofer and 2-in tweeter; drivers are vapor deposition, beryllium dome type; crossover at 1800 Hz; 8 ohm impedance; frequency response 40-20,000 Hz; efficiency 92.5 dB/W/m; max. input 60 W; oak finish; 22⅛" H × 13⅛" W × 12⅜" D..... $175

**NS-10M Speaker System**
Two-way acoustic suspension speaker system with 7-in cone woofer and 1⅛-in soft dome tweeter; crossover at 2000 Hz (12 dB/octave); 8-ohm impedance; frequency response 60-20,000 Hz; efficiency 90 dB/W/m; max. input 50 W peak; black wood finish; 15" H × 8½" W × 7⅞" D..... $130

# 11 COMPACT SYSTEMS

## AIWA

### AF-3090U AM/Stereo FM/Cassette Deck

Combines AM-FM stereo receiver and front-load cassette deck with Dolby noise-reduction system. Cassette section: wow and flutter 0.05% wrms; S/N 65 dB (Dolby on, FeCr tape); frequency response 20-15,000 Hz (LH tape), 20-17,000 Hz ($CrO_2$ and FeCr tape), ferrite guard head; 38-pulse FG servomotor. Tuner: FM sensitivity 1.8 μV (IHF); FM frequency response 30-15,000 Hz +0.3/−2 dB (Dolby FM noise-reduction system); FM S/N 78 dB; FM dist. 0.15% (mono), 0.25% (stereo); FM stereo separation 45 dB at 1000 Hz. Amplifier section: 50 W/ch continuous from 20-20,000 Hz with 0.1% THD; input sensitivity/impedance 2.5 mV/50k ohms (phono), 150 mV/50k ohms (aux.), 1 mV/5k ohms (mic), 150 mV/50k ohms (tape input); output level/impedance 150 mV/50k ohms (tape record), 4-8 ohms (speaker), 8 ohms (headphone); pure complementary SEPP OCL circuitry; 6 3/16" H × 22 1/8" W × 17 1/16" D ..... $750

### AF-5080A Compact Music System

Combines record player, cassette recorder/player, and AM-FM stereo receiver. Amplifier section: 22

W/ch min. continuous into 8 ohms over 40-20,000 Hz with 1% THD; FM tuner section: sensitivity 13.2 dBf (2.5 μV); dist. 0.4% (mono), 0.7% (stereo); stereo separation 38 dB (1kHz); AM sensitivity 300 μV/m. Cassette deck section: allows direct automatic recording from turntable to deck; features Dolby noise-reduction system; wow and flutter 0.1% wrms; frequency response 30-12,000 Hz (normal tape), 30-16,000 Hz ($CrO_2$ and FeCr tape); S/N 58 dB (Dolby on, FeCr tape). Record player section: belt drive with automatic arm return; wow and flutter 0.1% wrms; S/N 45 dB; Shure M-91ED cartridge. 8 1/16" H × 23 1/4" W × 16 9/16" D ..... $570
Hardwood decorator cabinet ..... $80

## CENTREX by PIONEER

### RH-7744 AM-FM/8-Track/Phono

Combines AM-FM stereo receiver, 8-track record/playback, automatic record changer, and three-way speaker system; min. 12 W/ch continuous into 8 ohms from 40-30,000 Hz at 0.8% THD; FM usable sensitivity 1.9 μV; capture ratio 1 dB; FM muting; flywheel tuning; center tuning meter; stereo/mono switch; loudness contour; click-stop bass and treble; A + B selector; headphone jack. 11-in, three-speed automatic changer; moving magnet cartridge; diamond stylus; 45 rpm adapter; sleep feature; damped cue lever. Tape deck has twin VU meters, dual mike jacks, aux. input, resettable time counter and program indicator, function switch for selecting one or four programs or endless playing. 10-in three-way speaker system; Speakers 22 1/2" H × 13" W × 10 1/2" D; Control Center 10" H × 20" W × 15" D..... $450

### KH-767 AM-FM Stereo/Cassette

Combines AM-FM stereo receiver, cassette record/playback, and three-way speaker system; min. 12 W/ch continuous into 8 ohms from 40-30,000 Hz at 0.8% THD; FM usable sensitivity 1.9 μV; capture ratio 1.0 dB; FM muting; PLL multiplex demodulator; flywheel tuning; center tuning meter; stereo/mono switch; loudness contour; click-stop bass and treble; A + B speaker selector; headphone jack. Tape deck has twin VU meters, chromium dioxide tape switch, dual mike jacks, aux. input, resettable tape counter. 10-in three-way speaker system in walnut cabinets; Speakers 22 1/2" H × 13" W × 10 1/2" D; Control Center 5 7/8" H × 20" W × 15" D ... ..... $370

**KH-7766.** Same as KH-767 except with 11-in three-speed automatic changer, moving magnet cartridge, diamond stylus, 45 rpm adapter, sleep feature, damped cue lever; Control Unit 10" H × 20" W × 15" D..... $450

### KH-5511 Compact Music System

Combines AM-FM receiver, cassette record/play player, automatic record changer, and two-way speaker system. Receiver features PLL multiplex demodulator; two large VU meters. Cassette has pause and fast-forward controls; wow and flutter 0.25% wrms; S/N 40 dB. Full-size automatic changer has magnetic cartridge with diamond stylus; four-pole induction motor; cueing and pause control; calibrated stylus pressure gauge. Speakers 22 1/2" H × 13" W × 8" D; Control Center 9 7/8" H × 20 1/8" W × 15" D..... $350

### KH-505 Compact Music System

Incorporates AM-FM stereo, cassette player/recorder, and two speakers. Receiver: 4 W/ch continuous into 8 ohms over 70-20,000 Hz with 2% THD; crosstalk −50 dB; sensitivity 2.5μV (IHF), 300 μV/m AM (with bar antenna, IHF); S/N 40 dB; has mike, line, and phono inputs. Tape player: wow and flutter 0.25% wrms; fast-winding time 95 sec (C-60). Speakers: infinite baffle bookshelf system with 8-in woofer and 2 3/8-in tweeter; 8-ohm impedance; Speakers 22 1/2" H × 13" W × 8" D..... $310

## CRAIG

### H421 Compact Music System

Combines AM-FM stereo receiver with cassette tape recorder/player. Features locking fast-forward and rewind pushbuttons, pause button, automatic cassette shutoff, loudness pushbuttons, ac-bias recording, instant reset digital counter, and separate left/right recording meters and controls. Radio: i-f rejection 60 dB; FM stereo separation 37 dB; 30-dB selectivity; AM ferrite bar/external and FM line cord/external antennas; frequency response 30-12,000 Hz. Tape: wow and flutter 0.15% min. wrms; S/N and crosstalk 40 dB min.; stereo separation 35 dB; fast forward/rewind time 85 sec (C-60). Includes three mic, two aux., two magnetic phono, and ceramic phono inputs; two tape, one headphone, and four speaker outputs. 5 7/16" H × 21 1/4" W × 10 3/4" D..... $240

## HITACHI

### SDP/9600 Compact Music System

Combines record/play stereo cassette deck, AM/FM stereo receiver, BSR record changer with ADC magnetic cartridge, and two three-way speakers (8-in woofer, 8-in passive radiator, and 3-in tweeter); two recording VU meters; five function LED indicators; pause control; three-digit tape counter ..... $300

### SDT/8700H Compact Music System

Combines record/play stereo cassette deck, AM/FM stereo receiver, BSR C-123R2 record changer and ceramic cartridge with diamond/sapphire stylus, and two three-way bass reflex speakers (8-in woofer, 2-in tweeter); aux. frequency response 40-18,000 Hz; left and right channel VU meters and record controls; pause control; digital tape counter; automatic stop; supplied with dust cover, microphone, and 45 rpm spindle; speaker size 23" H × 13" W × 8" D; unit size (with dust cover) 8 3/4" H × 23 5/8" W × 15 3/8" D ..... $280

### SDP/8500H Compact Music System

Combines 8-track record/play deck, AM/FM stereo receiver, BSR C-123R2 record changer and ceramic cartridge with diamond/sapphire stylus, and two three-way bass reflex speakers (8-in woofer, 2-in tweeter); aux. frequency response 40-18,000 Hz; two VU meters; record, program, and auto-stop indicators; pause, fast forward, repeat, and manual and automatic program selection functions; supplied with dust cover, microphone, and 45 rpm spindle; speaker size 23" H × 13" W × 8" D; unit size (with dust cover) 8 3/4" H × 23 5/8" W × 15 3/8" D..... $280

## JULIETTE

### C960-184 Compact System

AM-FM stereo receiver with front-loading stereo cassette recorder, automatic record changer, and matched air-suspension speaker system and microphones. Cassette has record/rewind/fast forward/play/pause/stop and eject keyboard controls; auto stop at end of tape; digital tape counter; dual lighted recording level meters; separate left/right recording level controls; left/right mic jacks; headphone jack; records stereo direct from any part of unit; monitors recordings through speakers or headphones. Receiver features auto system shut-off; speaker control for two-channel stereo or four-speaker quad effect; pushbutton function selectors; slide rule vernier tuning dial; stereo indicator lamp; loudness contour control; rotary controls for bass, treble, speaker balance, and volume; built-in automatic frequency control; 40-step click-stop volume control; noise filter; built-in AM and FM antennas; terminal for external FM antenna. Record changer has jeweled stylus, cue and pause control, stylus pressure adjustment, and hinged dustcover. Speakers are sealed-air-suspension system with speaker grilles. Receiver 10 1/4" H × 22" W × 15 1/2" D; speakers 26 1/2" H × 14" W × 9" D ..... $350

**C652-184.** Similar to C960-184 except has 8-track recorder with ac bias and erase system and built-in tape storage compartment; no automatic recording level control; receiver 10 1/4" H × 21" W × 18 3/4" D; speakers 26 1/2" H × 14" W × 9" D ..... $330

# 11 COMPACT SYSTEMS

## MARANTZ

### 4025 AM-Stereo FM/Cassette

Combines AM-FM stereo receiver and cassette deck with Dolby noise-reduction system; 25 W/ch into 8 ohms from 20-20,000 Hz at 0.1% THD, 28 W/ch into 4 ohms at 0.2% THD; combination AM signal-strength/FM center-channel tuning meter; high filter; super-hard permalloy record/playback head; bias and equalization switches for normal, $CrO_2$, and FeCr tape; total shut-off ..... $400

## OPTONICA

### SG-400 Stereo Component System

Incorporates four-band receiver, semi-automatic belt-drive turntable, and record/play cassette deck with Dolby noise-reduction system. FM tuner: sensitivity 2.2 μV; S/N 60 dB; capture ratio 1.5 dB; frequency response 30-14,000 Hz; i-f response −80 dB; image response −50 dB; stereo separation 40 dB. AM tuner: sensitivity 300 μV/m; i-f response −55 dB; image response −46 dB; LW band: frequency response 150-370 kHz; sensitivity 300 μV/m; SW band: frequency response 5.95-18 MHz; sensitivity 63 μV/m; power output 15 W/ch continuous into 4 ohms over 60-20,000 Hz with 1.0% THD. Turntable: two-speed (33⅓ and 45 rpm); wow and flutter 0.08%; frequency response 30-12,500 Hz; rumble −60 dB; tracking pressure 2.5 g. Cassette deck: frequency response 30-13,000 Hz (normal tape), 30-15,000 Hz ($CrO_2$ tape); S/N ($CrO_2$, ANR on) −55 dB; wow and flutter 0.09%; distortion 1.0%; channel separation 33 dB; fast-winding time 90 sec (C-60). 7.1" H × 29.6" W × 13.9" D ..... $500

## JC PENNEY

### 1991 Compact System

AM-FM stereo receiver with Dolby cassette play/record deck and two-speed (33⅓ and 45 rpm) automatic belt-drive turntable. Receiver: 15 W/ch continuous, both channels driven into 8 ohms from 40-20,000 Hz with 1.0% THD; AM-FM stereo indicator light; LED Dolby-FM indicator; flywheel tuning; FM muting; signal-strength and tuning meters; switchable AFC; PLL FM multiplex detector; built-in AM rod and FM line cord antennas; lighted tuning dial and indicator; rotary volume, balance, treble, bass, and speaker controls; pushbuttons for function modes; toggle switches for mic mixing, AFC/FMS, loudness, hi-filter, Dolby, and FM mute; headphone, four speaker, two aux., and two tape jacks; bias oscillator slide switch; 9³/₁₆" H × 23" W × 17⁵/₈" D. Cassette player/recorder has two LED record level meters; auto stop; LED record, auto stop, and Dolby indicator lights; two pencil microphones with stands; digital tape counter with reset button; two record level rotary controls; record/rewind/fast forward/play/stop and eject/pause levers; pushbutton reset. Turntable is single play with 24-pole synchronous motor; 11-in platter; S-shaped tubular chrome arm with viscous damped cue/pause control, adjustable anti-skate and tracking force; magnetic cartridge; removable center spindle for manual play; programmed to play single record once or up to six times automatically; includes dust cover and 45 rpm adaptor ..... $350

**1970.** Similar to 1991 except has 8-track tape play/record player instead of cassette deck .... $350

### 3112 Compact System

AM-FM stereo receiver with Dolby cassette play/record deck. Receiver: 12 W/ch continuous, both channels driven into 8 ohms from 50-20,000 Hz with 1.0% THD; includes five LED function indicator lights; FM stereo indicator light; lighted tuning dial; loudness and scratch filters; AM-FM signal-strength meter; switchable AFC; FM stereo muting; rotary controls; pushbutton power; scratch filter, muting, loudness, mode, AFC, and tape monitor toggle switches; headphone jack; two magnetic input, two ceramic input, two aux., two tape input/output, four speaker, and two mic jacks. Cassette player has fast forward, rewind, stop, pause, and eject controls; auto shut-off; digital tape counter; two record level meters; LED record light..... $350

**3012.** Similar to 3112 except has 8-track play/record player instead of cassette deck ..... $350

## PANASONIC

### SE-5808 Compact Music System

AM-FM stereo radio with built-in stereo 8-track player/recorder, three-speed automatic record changer and two Panasonic Thrusters multidriver speakers; PLL multiplex circuitry; 10 W/channel continuous at 8 ohms from 70 Hz-20,000 Hz; 2% dist.; FET r-f tuner with IC and ceramic filter; illuminated linear tuning dial; flywheel tuning; afc on FM; loudness control; manual recording level controls; auto stop in record mode; auto eject; level meter; tape counter; repeat, fast-forward, and pause controls; magnetic cartridge with diamond stylus; auto shut-off; speaker selector switch A or B; dust cover; includes 45 rpm adaptor ..... $430

### SE-5508 Compact Music System

AM-FM stereo radio with stereo cassette player/recorder, three-speed automatic record changer and two Panasonic Thrusters multidriver speakers; PLL multiplex circuitry; 10 W/channel continuous at 8 ohms from 70-20,000 Hz; 2% dist.; FET r-f tuner with IC and ceramic filter; illuminated tuning dial; afc on FM; loudness control; $CrO_2$/normal tape selector; automatic/manual recording level; auto stop; two VU meters; magnetic cartridge with diamond stylus; auto shut-off; speaker selector switch for A or B; dust cover; includes 45 rpm adaptor ..... $430

### SE-5008 Compact Music System

AM-FM stereo radio with three-speed automatic record changer and two SB-350 "Thrusters" multidriver speakers. Receiver: 10 W/ch continuous into 8 ohms from 70-20,000 Hz at 2% THD; ITL-OTL circuitry; FET r-f tuner with IC and ceramic filter; PLL multiplex circuitry; illuminated FM/AM dial; flywheel tuning knob; afc on FM; signal strength and FM center-tuning meters; bass and treble controls with loudness switch; speaker select switch for A or B; left/right power meters; tape monitor switch. Turntable: automatic record changer with automatic shut-off tonearm; anti-skating adjustment; stylus pressure adjustment; viscous damped cueing; four-pole motor; dust cover. Speakers: multidrive with two 5¼-in woofers, 8-in passive radiator, and 2½-in tweeter. Includes jacks and terminals for headphones, main and remote speakers, and FM extension antennas; simulated wood cabinet. 9¹³/₁₆" H × 22⁵/₁₆" W × 16⁵/₁₆" D (center unit) ..... $370

## SANYO

### GXT5000 Compact Music System

Deluxe music system combines four-band receiver, stereo cassette deck with Dolby noise-reduction system, turntable with magnetic cartridge, and two SX830 acoustic suspension speakers. Receiver: 25 W/channel at 1% THD; frequency response 20-20,000 Hz; features varactor touch tuning for up to seven FM stations; has four separate meters; calibrated bass, treble, volume, loudness and balance controls; FM muting; FM/stereo/mono switching; A+B speaker select; separate signal strength. Cassette deck records from discs, AM/FM or external source; has separate level controls, tape select switch, ac bias erase, locking pause, left and right VU meters, memory digital counter, and permalloy tape heads. Turntable has end-of-record automatic arm return, adjustable stylus and drop weight, anti-skate, viscous damped cueing up and down, magnetic stylus, and detachable head shell. Includes dustcover; 7⅜" H × 28" W × 16⅜" D. Speakers contain 8-in rolled fiber flex suspension woofer and 2½-in hardened conical high-frequency dispersion tweeter, and three tuned ports. 25" H × 13" W × 9¼" D ..... $650

### JXT4800 Compact Music System

Unit combines four-band receiver, semi-automatic turntable, cassette deck with Dolby noise-reduction system, and two SX830 BL speakers. Receiver: 17 W /channel continuous into 8 ohms; power bandwidth 50-20,000 Hz with 1% THD; seven-station FM tuning memory with electronic touch buttons; preset controls in drawer in front of unit; flywheel tuning; slide-rule tuning scale; IC power amplifier; bass, treble, loudness contour, and left and right volume controls. Cassette record/playback deck features tape select switch and digital counter. Turntable has automatic arm return, precision stylus force gauge, anti-skate, induction motor, manual cueing, and magnetic cartridge. Unit 6⅞" H × 27" W × 14" D. Speaker has 8-in woofer, 2½-in tweeter, three reflex ports, and two-way capacitive 1000 Hz crossover network; 25" H × 13" W × 9¼" D ..... $550

### JXT6910 Compact Music System

Incorporates AM-FM stereo receiver, dual front-loading 8-track and cassette decks with Dolby noise-reduction system, three-speed automatic record changer, and two SX830 speakers. Receiver: 12 W /channel continuous into 8 ohms with 1% THD; power bandwidth 50-20,000 Hz; A-B speaker switch; stereo/mono switch; FM and AM signal meters; detented bass and treble controls; two/four channel speaker matrix; volume and bass controls. 8-track and cassette decks have tape transfer capability, off-air or live recording, separate record level controls, and two calibrated VU meters; cassette has full-function piano key controls, separate fast-forward and rewind, tape selector switch, and full automatic stop. Record changer features stylus force gauge, manual cueing control, and stereo magnetic cartridge. Unit 10⅞" H × 22⅝" W × 14¼" D. Speakers are acoustically tuned with three ports; 25" H × 13" W × 9¼" D ..... $390

## SHARP

### SG-200 Compact Music System

Incorporates AM-FM stereo receiver, front-loading cassette deck, top-loading 8-track record/playback deck, built-in automatic record changer, and Tower

I SP-3000 speakers; features Automatic Program Search System (The Sharp Eye); professional, attenuator-type volume control; individual rotary balance, bass, and treble controls; speaker selector switch; LED indicator on dial pointer for precise tuning; LED FM indicator; push-button function selector switches; two VU meters; automatic level control; pause control; automatic shut-off in record/play mode; PLL multiplex circuitry; recording from cassette to 8-track or vice versa ..... $390

### SG220 Compact Music System

Incorporates AM-FM stereo receiver, front-loading cassette deck, built-in automatic record changer, and Tower 1, SP4000, or SP3000 Sharp Tri-Bass Accelerator speakers; has Auto Program Search System; two VU meters; automatic level control; center detent bass, treble, and balance controls; tuning meter; switchable loudness control; cue/review; price with SP-3000 speakers ..... $380

**SC210.** Similar to SG220 without built-in record changer ..... $320

## SUPERSCOPE

### CRS-4000 AM-Stereo FM/Cassette

Combines AM-FM stereo radio with servo-controlled stereo cassette recorder; sleep timer switch; automatic record level; record/battery/tuning meter; left/right VU meters; pause control; mic/line switch; tape counter; tape select switch for standard, $CrO_2$, and FeCr tapes; function switch; matrix/stereo/mono switch; loudness contour switch; FM LED; auto shut-off; variable sound monitor; built-in condenser microphone; frequency response 50-10,000 Hz (standard tape), 50-13,000 Hz (FeCr); S/N 45 dB; wow and flutter 0.15% wrms ..... $300

# 12 HEADPHONES & MICROPHONES

## AKG

### K-240 Free-Field Headphones
Free-field stereo headphones; dynamic moving-coil transducer and six passive radiators; frequency response 16-20,000 Hz; 600 ohms ±20% impedance over 16-20,000 Hz; sensitivity 13 μbar/V (96.5 dB SPL at 1μV) per channel; power requirements 1 mW (0.775 V) for 10 μbar (94 dB SPL) per channel, 50 mW (5.5. V) for 72 μbar (111 dB SPL) per channel; max. continuous power for 1% THD or less at 100 Hz 200 mW (11 V) for 143 μbar (117 dB SPL) per channel; supplied with 3-m four-conductor cable and ¼-in phone plug; 295 g.....$79

### K-140S Stereo Headphones
Stereo headphones with dynamic sound transducers; frequency response 20-20,000 Hz; 600 ohms

±20% impedance over 20-20,000 Hz; sensitivity 15 μbar/V (97.5 dB SPL); power requirements 0.75 mW (0.67 V) for 10 μbar (94 dB SPL), 50 mW (5.5 V) for 80 μbar (112 dB SPL); max. continuous power for 1% THD or less at 100 Hz 240 mW (12 V) for 119 dB SPL per system; supplied with 3-m four-conductor cable and ¼-in phone plug; 175 g...$49
**K-141.** Same as K-140S except ultraspacious at 9 oz.....$64

### K-40 Stereo Headphones
Ultra-lightweight supra-aural stereo headphones; matches 4-200 ohm outputs; 9.8-ft four-conductor cable; three-conductor stereo phone plug; 4½ oz...
.....$24

## AUDIO-TECHNICA

### ATH-7 Stereophones
Electret condenser stereophones; frequency response 20-22,000 Hz ±2 dB; sensitivity 98 dB SPL at 1 kHz ( 0 dB −0.0002 μbar/V); impedance 4-16 ohms; includes impedance-matching adapter with headphone/speaker switching and normal/high-level LED indicators; 6-ft cord; adapter size 3½" H × 2⅜" W × 7" D; headset weight (less cord) 7.4 oz .....$150

### ATH-6 Stereophones
Electret condenser stereophones; frequency response 20-22,000 Hz; sensitivity 98 dB SPL at 1 kHz; impedance 4-16 ohms; includes impedance-matching adapter with headphone/speaker switching; 6-ft cord; adapter size 1¾" H × 3" W × 3⅜" D; headset weight (less cord) 7.4 oz .....$100

### ATH-5 Stereophones
Moving coil dynamic stereophones; frequency response 20-20,000 Hz; sensitivity 96 dB SPL at 1 kHz; impedance 4-16 ohms; 7.25 oz .....$80

### ATH-3 Stereophones
Moving coil dynamic stereophones; frequency response 25-20,000 Hz; sensitivity 94 dB SPL at 1 kHz; impedance 4-16 ohms; 7.25 oz .....$60

### ATH-1 Stereophones
Planar moving coil dynamic stereophones; frequency response 30-20,000 Hz; sensitivity 93 dB SPL at 1 kHz; impedance 4-16 ohms; 4.75 oz .$30

### AT-706 Headphones
Electret condenser headphones; frequency response 10-22,000 Hz ±2 dB; sensitivity 98-dB SPL at 1 kHz (0 dB = 0.0002 μbar/V); max. output 114 dB; impedance 4-16 ohms; includes impedance-matching adapter with headphone/speaker switching; 6-ft cord; adapter size 3¼" H × 3⅛" W × 8½" D; headset weight (less cord) 9 oz .....$150

### AT-705 Headphones
Electret condenser headphones; frequency response 20-22,000 Hz ±3 dB; sensitivity 98-dB SPL at 1 kHz; max. output 110 dB; impedance 4-16 ohms; includes impedance-matching adapter with headphone/speaker switching; 6-ft cord; adapter size 1¾" H × 3" W × 3⅜" D; headset weight (less cord) 9 oz .....$100

### AT-703 Headphones
Dynamic headphones; frequency response 20-20,000 Hz; sensitivity 94-dB SPL at 1 kHz; impedance 16 ohms; 10.5 oz.....$80

### AT-702 Headphones
Dynamic headphones; frequency response 25-20,000 Hz; sensitivity 97-dB SPL at 1 kHz; impedance 4-16 ohms; 10.5 oz.....$60

### AT-701 Headphones
Dynamic headphones; frequency response 30-20,000 Hz; sensitivity 97-dB SPL at 1 kHz; impedance 4-16 ohms; 10.5 oz.....$40

## AUDIOTEX

### 30-5207 Stereo Headphones
Frequency response 30-20,000 Hz; impedance 8-16 ohms padded earpieces with adjustable padded headband; comes with 10-ft coiled cord, black vinyl carrying case. .....$41

### 30-5203 Stereo Headphones
Response 20-25,000 Hz; impedance 8 ohms; adjustable padded headband; padded earpieces; matches amps with 4-16 ohm output; comes with 10-ft coiled cord, black vinyl carrying case .....$36

### 30-5201 Stereo Headphones
Frequency response 20-25,000 Hz; impedance 8 ohms; cushioned earpieces and adjustable padded headband; comes with 10-ft coiled cord .....$34

### 30-5205 Stereo Headphones
Open-air, lightweight design; response 20-20,000 Hz; 8-ohm impedance; matches all amplifier 4-16 ohm outputs; 6-ft cord and plug; cushioned earpieces and adjustable padded headband.....$33

### Headphone Remote Control
Plugs directly into amplifier to control volume and balance of headphones; noise-free slide controls for each earpiece permit adjustment of volume and balance; special switch allows for mono/stereo selection; has 5-ft cord and 3-conductor stereo phone plug. 30-5250 .....$13

## BANG & OLUFSEN

### U-70 Headphones
Orthodynamic stereo headphones; frequency response 16-20,000 Hz; sensitivity 8 mW for 94-dB

SPL; continuous load 2 W; dist. 1% max.; 140-ohm impedance; 10-ft straight cord with three-conductor phone jack; 10.6 oz.....$85

## BURWEN RESEARCH

### PMB 8 Orthodynamic Headphones
Around-the-ear style with leatherette foam ear cushions; max. SPL 112 dB (1 kHz); 150-ohm impedance; max. input 2 W; sensitivity 130 mW for 100-dB SPL (1 kHz); 0.3% THD at 100-dB SPL (1 kHz); frequency response 15-26,000 Hz; has 10-ft cord; 12 oz.....$115

### PMB 6 Orthodynamic Headphones
On-the-ear style with leatherette foam ear cushions; max. SPL 121 dB (1 kHz); 140-ohm impedance; max. input 2 W; sensitivity 7 mW for 100-dB SPL (1 kHz); 0.3% THD at 100-dB SPL (1 kHz); frequency response 16-23,000 Hz; has 10-ft cord; 9 oz...$95

### PMB 4 Dynamic Headphones
Around-the-ear style with leatherette foam ear cushions; max. SPL 114 dB (1 kHz); 400-ohm impedance; max. input 0.1 W; sensitivity 4 mW for 100-dB SPL (1 kHz); 0.3% THD at 100-dB SPL (1 kHz); frequency response 20-20,000 Hz; has 10-ft cord; 7.5 oz .....$85

### PMB 40 Dynamic Headphones
On-the-ear style with reticulated foam ear cushions; max. SPL 128 dB (1 kHz); 400-ohm impedance; max. input 0.1 W; sensitivity 0.2 mW for 100-dB

# 12 HEADPHONES

SPL (1 kHz); 0.3% THD at 100-dB SPL (1 kHz); frequency response 20-20,000 Hz; has 10-ft cord; 7.5 oz ..... $70

### PMB 20 Dynamic Headphones
On-the-ear style with reticulated foam ear cushions; max. SPL 118 dB (1 kHz); 400-ohm impedance; max. input 0.1 W; sensitivity 2 mW for 100-dB SPL (1 kHz); 0.3% THD at 100-dB SPL (1 kHz); frequency response 20-20,000 Hz; has 10-ft cord; 3.9 oz ..... $50

## ERCONA

### D-42 Headphones
Dynamic stereo/mono headphones; supplied with detachable, washable soft rubber ear cushions; frequency response 30-20,000 Hz; output impedance 2 × 200 ohms (stereo), 100 or 400 ohms (mono); power/voltage at normal listening 0.3 mW/0.25 V; 100-dB SPL with 0.3 mW input; 5 mW max. power with 2% dist.; supplied with 6-ft unterminated 2 × 2 cable; 9.5 oz ..... $50

### RDF-224 Dynamic Headphones
Dynamic stereo/mono headphones; removable soft-foam-padded vinyl ear cushions; supplied with 8-ft coiled cable and three-conductor phone plug; frequency response 20-18,000 Hz; output impedance 8 ohms ±20% (1 kHz); output level 100 dB (1 kHz); max. input 100 mW; 12 oz ..... $26

## INFINITY

### ES-1 Stereo Headphone System
System consists of one headphone set and walnut-enclosed adapter housing power supply and matching transformers; front-panel output accommodates two headsets; frequency response 20-25,000 Hz ±2 dB; THD 0.3% at 100 dB SPL; sensitivity 98 dB SPL (2 V at 1000 Hz); max. output 118 dB SPL at 1000 Hz; max. input 50 W at 100 Hz; impedance 4-16 ohms; phones operate in push-pull mode; polyurethin diaphragms; adjustable headband; 98-in headphone cord; adapter size 3" H × 5¼" W × 7¼" D ..... $275

## JENSEN

### 230 Stereo Headphones
Frequency response 15-22,000 Hz; 0.8% HD at 1 kHz, 100-dB SPL; max. input power 50 mW; impedance 4-600 ohms; ambient noise isolation 40 dB at 1 kHz; patented dual cavity; liquid-filled ear cushions; volume control for each earphone; 14-ft coiled cord with strain relief; chromeplated headband; 19 oz without cord ..... $60

**220.** Similar to 230 except frequency response 18-20,000 Hz; 0.9% HD; weight 18 oz ..... $50

### 210 Stereo Headphones
Frequency response 20-18,000 Hz; 0.9% HD at 1 kHz, 100-dB SPL; max. input power 50 mW; impedance 4-600 ohms; ambient noise isolation 18 dB at 1 kHz; foam-filled ear cushions; polypropylene headband; 14-ft coiled cord ..... $30

## JVC

### HM-200E Headphone/Microphone
Designed for binaural recording and monitoring; matched electret condenser mike with simulated auricle in each earpiece; mikes powered by AA cells contained in earpieces; three-way headphone level selector; mike tone selector; supplied with dummy head for off-the-operator recording; Mikes: sensitivity −67 dB ±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 (5/16", 3/8", 5/8", PF 1/2", 1/4"); 1.32 lb. ..... $100

## KOSS

### ESP/10 Electrostatic Stereophones
Electrostatic design with energizer; headset bandpass response 10-22,000 Hz ±2 dB; sensitivity for

100-dB SPL 1.9 V rms at 1 kHz into E/1U energizer, 2.0 V rms pink noise; THD at 1 kHz and 100 dB SPL 0.5%; radiating surface area of electrostatic element 25 cm²/ch; semivented design; black with silver accents; 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-peaked-reading VU meters; LED overload indicators; automatic overload detector; wood-grain trim ..... $300

### Technician/VFR Stereophones
Stereo headphones with variable-frequency-response controls; slide-type controls at base of each earcup permit fine tuning the shape of the response curve; frequency response 10-22,000 Hz; THD 0.3% at 1 kHz (100-dB SPL); 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

### PRO/4AAA Dynamic Stereophones
Frequency response 20-22,000 Hz; dist. less than 0.5% at 1 kHz, 100-dB SPL; impedance 220 ohms at 1 kHz; supplied with Pneumalite ear cushions for noise isolation and 10-ft coiled cord; 15.5 oz ... $75

### HV/1A Stereophones
Features low-mass "Decilite" driver elements for coverage 15-30,000 Hz; will operate from outputs of 3.2 to 600 ohms; dist. 0.5% at 100-dB SPL; handles 5 V rms continuous with provision for 14-dB SPL transient peaks; acoustical sponge ear cushions; extendable headband with self-adjusting, pivoting yokes and padded vinyl cover; 3-conductor coiled cord (10-ft extended); 10 oz ..... $55

**HV1LC.** Same as HV/1A except volume/balance control per earcup; 10.8 oz ..... $60

### K/145 Dynamic Stereophones
Features 1.5-in polyester driver; frequency response 20-20,000 Hz impedance 90 ohms at 1 kHz; level controls; Pneumalite ear cushions; padded simulated leather earcups, adjustable brushed stainless steel yokes and sidebars; 10-ft coiled Y cord; molded plug; sensitivity at 100-dB SPL 0.25 V rms sine wave at 1 kHz, 0.10 V rms pink noise; THD 0.5% at 1 kHz for 100-dB SPL; weight (less cord) 12.6 oz ..... $50

**K/135.** Similar to K/145 except response 10-18,000 Hz; 2.5-in dynamic elements; impedance 100 ohms at 1 kHz; sensitivity at 100-dB SPL 0.09 V rms sine wave, 0.11 V rms pink noise; THD 1% at 1 kHz for 100-dB SPL; weight (less cord) 13.4 oz ..... $40

**K/125.** Similar to K/135 except response 10-16,000 Hz; sensitivity 0.14 V rms sine wave, 0.13 V rms pink noise; 12.8 oz (less cord) ..... $30

### HV/1 Dynamic Stereophones
Has 2-in dia. driver and will operate from 3.2 to 600 ohm outputs; response 20-20,000 Hz; capacity 5 V continuous with provision for 14-dB SPL transient peaks; 10 oz; 10-ft coiled cord ..... $45

### KO/727B Dynamic Stereophones
Frequency response 10-18,000 Hz; THD 1.0% at 100-dB SPL; 3.2 to 600 ohms impedance; 10-ft coiled cord; 16.5 oz; black ..... $40

### K/6ALC Dynamic Stereophones
Frequency response 10-16,000 Hz; THD less than 1% at 1 kHz, 100-dB SPL; impedance 94 ohms at 1 kHz; individual volume controls; supplied with 10-ft coiled cord; 14 oz ..... $35

**K/6A.** Same as K/6ALC but without volume controls ..... $25

### K/7 Stereophones
Lightweight dynamic stereo headphones; features shockproof, polypropylene construction; one-piece flexible headband; foam-filled vinyl ear cushions; will operate from outputs with source impedances of 3.2-600 ohms; response 20-16,000 Hz; sensitivity 0.39 V rms sine wave at 1 kHz (100-dB SPL); 4-conductor Y cord; 10.3 oz ..... $18

### *4-Channel*

### Phase/2 + 2 Quadraphones
Incorporates one Decilite driver element and one high-velocity dynamic element in each earcup; response 20-20,000 Hz; programmer permits 127 personal listening perspectives in 4-channel sound without adjusting amp controls; features comparator switch for normal 4-channel mode vs Phase/2 + 2 mode; soft acoustical sponge ear cushions; vinyl-covered headband with pivoting self-adjusting yokes; 17.3 oz ..... $155

### K/6LCQ 4-Channel Quadrafones
Can be used for either 2- or 4-channel operation; dual 1½-in dynamic drivers in each earpiece; 3.2-600-ohm impedance; dist. 0.5% at 109-dB SPL; capacity 5 V continuous, 14 dB transient peaks; response 20-17,000 Hz; foam-filled vinyl ear cushions for average 18 dB ambient noise isolation; 21.6 oz ..... $60

## LAFAYETTE

### F-780 Stereo Headphones
Professional-style two-way stereo headphones with separate woofer and tweeter in each earpiece; lightweight open-air design; frequency response 20-20,000 Hz; max. input 0.1 W; 4-150 ohm impedance ..... $50

### F-700 Stereo Headphones
Lightweight headphones feature ultra-thin diaphragm with rare-earth-magnet transducer; adjustable vinyl leatherette headband; foam-padded earcups; frequency response 18-22,000 Hz; max. input 100 mW; 4-150 ohm impedance; 6½-ft cord with ¼-in plug; 4.6 oz ..... $40

### SP-78 Stereo Headphones
Deluxe closed-acoustic stereo headphones; Mylar dome two-way design; independent volume control on each earpiece; 15-ft coiled cord; frequency response 18-25,000 Hz ..... $35

### SP-77 Stereo Headphones
Features separate slide-rule volume control on each ear cup, pre-adjusted to prevent speaker blast; frequency response 20-18,000 Hz; 8-ohm impedance; 6-ft coiled cord ..... $17

## MURA

### SP-205 Dynamic Headphones
Stereo headphones; Mylar cone elements; separate volume and tone controls on each earcup; stereo/mono switch; frequency response 30-20,000 Hz ±5 dB; impedance 8 ohms; padded adjustable headband, cushioned earcups, 15-ft coiled cord with plug ..... $70

### HV-230 Stereo Headphones
Stereo headphones with high velocity polymer film

diaphragms; individual knob volume controls; frequency response 20-20,000 Hz; 8-ohm impedance; 10-ft coiled cord with plug..... $40

**HB-1500 Polymer Headphones**
Stereo headphones; high-polymer diaphragm transducers; sensitivity 100 dB SPL/1 mW; frequency response 20-20,000 Hz; open-air design; max. input 0.2 W; matching impedance 4-150 ohms/ch; 10-ft coiled cord with plug; 5 ounces ..... $30

**SP-504 Dynamic Headphones**
Stereo headphones; 3-in dynamic speakers; separate slide-type volume and tone controls; 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 but without tone controls; cushioned headband and earcups; response 30-18,000 Hz..... $20

**HV-100 Stereo Headphones**
High-velocity vented stereo headphones with thin mylar diaphragm speakers; individual volume controls for each ear; stereo/mono switch; frequency response 30-15,000 Hz; 10-ft coiled cord ..... $20

**SP-502 Dynamic Headphones**
Stereo headphones with 2¼-in diaphragms; individual slide volume controls; adjustable headband and cushion-soft earcups; frequency response 30-18,000 Hz; 8-ohm impedance; 10-ft coiled cord with plug ..... $15

**SP-500 Dynamic Headphones**
Stereo headphones with 2¼-in diaphragms; frequency response 35-15,000 Hz; 8-ohm impedance; oversize earcups; 8-ft cord with plug ..... $11

**SP-94 Stereo Headphones**
Lightweight dynamic headphones; 2¼-in speakers; frequency response 40-15,000 Hz; impedance 8 ohms; 8-ft cord with plug ..... $8

## NAKAMICHI

**HF-100 Monitor Headphones**
Dynamic headphones; frequency response 20-20,000 Hz; impedance 8 ohms ±20% at 1 kHz; 90-dB SPL output (±3 dB) per mW at 1 kHz; channel balance within 3 dB at 1 kHz; vinyl-covered, foam-padded earpieces; adjustable headband; supplied with 8-ft coiled cord with molded plug and strain relief; 14.3 oz ..... $55

## PANASONIC

**EAH-520 Headphones**
Duo-cone headphone system; high efficiency; lightweight; separate bass and treble controls; adjustable head cushion; high-velocity design; 10-ft coiled line cord; bronze and chrome finish ..... $60
**EAH-510.** Similar to EAH-520 except straight line cord; black and chrome finish ..... $50
**EAH-500.** Similar to EAH-520 except straight line cord; gray and chrome finish ..... $40

## 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-3A Headphones**
Lightweight open-audio design; input impedance 15 ohms ±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

## PIONEER

**SE-700 Stereo Headphones**
Features high-polymer driver elements; frequency range 20-20,000 Hz; matching impedance 4 to 16 ohms; sensitivity 100 dB/3 V ..... $80

**Monitor 10 Stereo Headphones**
Dynamic type covering a frequency range of 20-20,000 Hz, with 2¼-in free-edged polyster-film cone speaker in each earpiece; sensitivity 100 dB/mW; max. input power 700 mW/ch; comes with 16-ft, 5-in coiled cord; 23 oz ..... $70

**SE-505 Headphones**
Two-way stereo dynamic design with a woofer and tweeter in each phone; 8-ohm impedance each channel; response 20-20,000 Hz; sensitivity 108 dB/0.3 V; features both tone and volume controls on each phone; max. input 500 mW each phone; 16-ft, 5-in coiled cord ..... $65

**SE-500 Stereo Headphones**
Incorporates high-polymer film diaphragm; frequency range 20-20,000 Hz; sensitivity 100 dB/3V; max. input power 30 V/channel; resistant to temperature/humidity changes; plugs directly into headphone jack of any amplifier or receiver..... $50

**SE-4 Hear-Through Headphones**
Features super-thin polyester film dome drivers; frequency range 20-20,000 Hz; hear-through earpads; impedance 250 ohms; sensitivity 96 dB/mW (1000 Hz); max. input power 200 mW/channel; comes with 9-ft, 5-in Y-type cord; weight 7⅗ oz without cord, 9⅕ oz with..... $50

**SE-405 Stereo Headphones**
Dynamic type covering a frequency range of 20-20,000 Hz; 8-ohm impedance; input power 500 mW each channel; unit features polyester-film diaphragm; special ear pads with sliding-type adjusting headband and clickstops for easy listening; volume controls for both left and right channels; 16½-ft coiled cord ..... $45

**SE-305 Stereo Headphones**
Dynamic type covering a frequency range of 20-20,000 Hz; 8-ohm impedance each channel; matching impedance 4 to 16 ohms; max. input power 500 mW each channel; comes with 16-ft, 5-in coiled cord; 15 oz..... $35

**SE-205 Stereo Headphones**
Dynamic type covering a frequency range of 20-20,000 Hz; cone-type speaker in each earpiece; matching impedance 4 to 16 ohms; max. input power 500 mW each channel; comes with 8.2-ft cable; 16 oz..... $25

## REALISTIC

**PRO-II Stereo Headphones**
Air-filled ear cushions; 12 sq in mylar diaphragm speakers with 1-in voice coil; adjustable padded headband; frequency response 10-22,000 Hz; comes with 10-ft coiled cord and standard ¼-in plug; 4-16 ohms impedance; 19 oz ..... $50

# 12 HEADPHONES

### LV-10 Stereo Headphones
Features electroacoustical design with 2-in dynamic elements; frequency response 20-20,000 Hz; dist. 0.5%; acoustical sponge earpieces and soft vinyl-covered headband with self-adjusting yokes; 4- to 16-ohm impedance; 10-ft coiled cord and plug ..... $40

### PRO-10 Stereo Headphones
Open back design; polyester-film dynamic elements; vinyl headband with self-adjusting yokes; sponge ear cushions; frequency response 20-20,000 Hz; 10-ft coiled cord and standard ¼-in plug; 4-16 ohms impedance; 10 oz ..... $40

### Nova-Pro Stereo Headphones
Stereo dynamic design; volume controls on each earcup; frequency response 20-20,000 Hz; 8-ohm impedance; 10-ft coiled cord ..... $35

### PRO-20 Stereo Headphones
Dynamic-type; frequency response 20-20,000 Hz; 4-16 ohm impedance; base port ..... $24

### Nova-30 Headphones
3½-in speakers for wide response; frequency response 30-18,000 Hz; separate controls on each earcup; soft cushion earcups; padded adjustable headband; 4- to 16-ohm impedance; supplied with 10-ft coiled cord and ¼-in plug ..... $22

### Nova-14 Stereo Headphones
Has Glide-Path volume/balance controls; frequency response 50-15,000 Hz; cushioned aluminum earcups with 2-in speakers; adjustable padded headband; has 7-ft cord and ¼-in plug; 4-16 ohm impedance ..... $17

### Nova-10 Stereo Headphones
Has cushioned earpads with 2-in speakers; adjustable vinyl headband; frequency response 50-15,000 Hz; has cord and ¼-in plug; 4-16 ohm impedance ..... $13

## RECOTON

### ST-33 Stereo Headphones
High-velocity stereo headphones with super thin diaphragms; leather adjustable headband; frequency response 20-20,000 Hz; 50-ohm impedance; 4-150 ohms matching impedance; sensitivity 103 dB at 1000 Hz; max. input 20 mW; 10-ft coiled cord with stereo phone plug; 5 oz..... $33

### 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..... $25

### 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..... $18

### ST-11 Stereo Headphones
Volume control for each channel; stereo-mono slide switch; frequency response 20-20,000 Hz; 8-ohm impedance; matching impedance 4-16 ohms; sensitivity 110 dB at 1000 Hz with 1 mW; max. 0.5 W/ch; soft padded ear cushions; 10-ft coiled cord with stereo phone plug..... $15

## ROBINS

### 47-921 Stereo/Mono Headphones
Deluxe headphones; stereo/mono switch; each earcup has imprinted left/right positioning with individual volume controls; 3-in dynamic speakers; lightweight foam-padded headband with ear cushions; frequency response 20-20,000 Hz; 8-ohm impedance; 9-ft coiled cord with ¼-in phone plug.. ..... $20

### 47-901 Stereo Headphones
Stereo headphones; frequency response 30-18,000 Hz; 8-ohm impedance; 2¼-in speakers; padded earcups; 6-ft cord with ¼-in stereo phone plug. $11

## SANSUI

### SS100 Stereo Headphones
Omni-dynamic driver full-range speaker in each earpiece; matching amp impedance 4-100 ohms, 600 ohms nominal; frequency response 20-20,000 Hz; HD 0.3% at 94 dB SPL; max. input power 250 mW; sensitivity 94 dB/mW (at 200 Hz); 6.5-ft cord; weight 13.2 oz ..... $118

### SS-80 Headphones
Two-way thin film headphones; has 50-μ-thick polyester diaphragms (2¼-in wide); sensitivity 108 dB/mW; 200-ohm impedance; separate volume and tone controls for each channel; frequency response 20-20,000 Hz; adjustable stainless steel headband; 17.3 oz ..... $72

### SS-60 Headphones
Has 50-μ-thick polyester diaphragms (2¼-in wide); max. input 500 mW; separate volume controls for each channel; frequency response 20-20,000 Hz; 25-ohm impedance; 15 oz ..... $54

### SS-40 Headphones
Thin polyester 2¼-in wide dynamic drivers; frequency response 20-20,000 Hz; 25-ohm impedance; 13.1 oz..... $42

### SS-30 Headphones
Thin polyester 2¼-in wide dynamic cones; frequency response 20-20,000 Hz; max. input 500 mW; 8-ohm impedance; 11.5 oz..... $30

## *4-Channel*

### QH-44-4-/2-Channel Headphones
Features four ¾-in high-velocity speakers (one front/one back each housing); matches 4-25 ohm amplifier impedances; 25 ohms nominal impedance; frequency response range 20-20,000 Hz; maximum input power 100 mW; sensitivity 98 dB at 1000 Hz; acoustical foam urethane earpads; adjustable headband; 8.2-ft. cord; weight 15.2 oz (headphones only)..... $70

## SENNHEISER

### HD244 Headphones
Dynamic circumaural headphones; frequency response 16-20,000 Hz; SPL at 1000 Hz 94 dB/ch; impedance 200 ohms; 10-ft cable; 5 oz (without cable)..... $121

### HD424 Headphones
Deluxe "open aire" 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) ..... $101

### HD414 Headphones
"Open aire" design dynamic headphones; frequency response 20-20,000 Hz; sensitivity 17.7 μbar/V; 1 mW (1.41 V) per channel for SPL of 102 dB; dist. 1% at 22V, 1 kHz; 2000-ohm impedance per channel; 10-ft cable; 5 oz (without cable) .. $67

### HD400 Headphones
"Open aire" design dynamic headphones; frequency response 20-18,000 Hz; sensitivity 1 mW for SPL of 88 dB; 600-ohm impedance per channel; 10-ft cable; 3 oz (without cable)..... $40

### HD44 Headphones
"Open aire" design dynamic headphones; under-the-chin configuration; frequency response 52-10,000 Hz; 600-ohm impedance per channel; 10-ft cable; 1.2 oz (without cable) ..... $36

## SONY

### ECR-500 Electrostatic Headphones
Uni-electret open-back electrostatic stereo headphones with asymmetrical pentagon-shaped diaphragm; frequency response 20-20,000 Hz; sensitivity 91-dB SPL at 1 V rms (600 Hz); max. 114-dB SPL; HD less than 0.03% at 4 V rms, 1000 Hz in; lightweight construction; adjustable headband; push-pull driver system; includes adaptor with 30-ohm input impedance and 12-V max. input level; 3⅛" H × 3⅞" W × 7⅝" D; cable 7 ft, 6 in; weight 12 oz ..... $150

## STANTON

### Stereo/Wafers XXI Headphones
Ultra-lightweight professional-standard headphone; frequency response 20-22,000 Hz ±4 dB; sensitiv-

ity 2 V for 100 dB; 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 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

## STAX

### SR-Σ Earspeakers
Panoramic sound headphones; electrostatic push-pull type; frequency response 30-35,000 Hz; SPL 94 dB at 100 V rms input; max. sound pressure 103 dB weight 460 g (includes cord) ..... $450

### SRX-III Earspeakers
Electrostatic push-pull type; response 20-27,000 Hz ±1 dB; SPL 95 dB at 100 V rms input; maximum level 115 dB; weight 370 g including cord;

comes with SRD-7 energizer, a polarizing supply and signal source; response 10-30,000 Hz ±2 dB; dist. 0.02% at 1 W, 1000 Hz; 4¾" H × 2⅞" W × 8" D ..... $270

**SR-5 Earspeakers**
Electrostatic push-pull type; response 30-25,000 Hz ±1 dB; SPL 95 dB at 50 V rms input; maximum level 115 dB; weight 432 g including cord; comes with SRD-6 energizer, a polarizing supply and signal source; response 20-20,000 Hz ±1 dB; dist. 0.1% at 1 W, 1000 Hz; overall size 2⅝" H × 2¹¹/₁₆" W × 6½" D ..... $150

**SR-44 Earspeakers**
Electret condenser system combines SR-40 headphones with SRD-4 adapter; features wide-latitude in headband adjustment; requires ac power source ..... $90

**SRA-12S Headphone Preamp/Amp**
Input sensitivity: phono 2.0 mV, tuner, tape, aux. 250 mV; phono overload 100 mV; hum and noise: phono 58 dB, tuner, aux. 80 dB; frequency response 10-60,000 Hz ±1.5 dB; THD 0.05%; DIN output jacks; preamp can be used separately; designed specifically for use with Stax Earspeakers ..... $550

## 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" × 3¼" × 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 2¾-in Mylar diaphragm; 35-ohm impedance; frequency response 10-20,000 Hz ±3 dB; sensitivity 10 mW (0.6 V) for 110-dB SPL at 400 Hz; 0.25% dist. at 400 Hz, 110-dB SPL; padded, fully adjustable steel and aluminum headband; foam-filled vinyl cushions; supplied with 15-ft cable, clothing clip, and molded stereo plug; 10 oz (less cable) ..... $65

**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; supplied with 10-ft coil cord with molded stereo plug ..... $60

**Classic CL-1 Headphones**
Lightweight, isolating-type headphones; frequency response 10-20,000 Hz; 35 ohm impedance; 0.3% dist. at 110-dB SPL (400 Hz); sensitivity 10 mW (0.6 V) for 110-dB SPL at 400 Hz; padded fully adjustable steel and aluminum headband with foam-filled vinyl cushions; 15-ft (extended) retractable cable with clothing clip and molded stereo plug; 10.6 oz (without cable) ..... $55

**TRL-99 Headphones**
Dynamic headphones with 2¾-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,

# 12 HEADPHONES

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)..... $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) ..... $40

**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) ..... $30

**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

**TRL-66 Headphones**
Dynamic headphones with 66-mm transducer; 8-ohm impedance; frequency response 40-15,000 Hz; high impact unbreakable plastic headband with padding and foam-filled vinyl cushions; supplied with 7-ft Y cord with molded plug; 9 oz (less cable). ..... $20

**SC-3 Control Box**
For use with receivers and amps without headphone jacks; left and right channel level controls; speaker/headphone switch; speakers off when phones are on ..... $10

**STEX-10R Coiled Cord**
15-ft extension coiled cord for stereo headsets; supplied with special stereo jacks and plugs ..... $6

**STEX-20 Cord**
20-ft extension cord for stereo headsets; supplied with special stereo jacks and plugs ..... $5

## TECHNICS by PANASONIC

**EAH-830 Linear-Drive Headphones**
Low-distortion high power-handling capacity; frequency range 15-35,000 Hz; max. input power

3000 mW; 125-ohm impedance; 0.3% dist.; 3-meter coiled cord; Supra-Aural ear pads; precise-fit, soft, wide-contact leather head pads; 450 g ..... $80

**EAH-820 Linear-Drive Headphones**
High power handling capacity; frequency range 15-30,000 Hz; max. input power 3000 mW; 125-ohm impedance; 0.3% dist.; 3-meter coiled cord; Supra-Aural ear pads; precise fit, soft, wide-contact leather head pads; 430 g ..... $60

**EAH-810 Linear-Drive Headphones**
Open-environment waveform response at eardrum; frequency range 20-25,000 Hz; max. input power 1000 mW; 63-ohm impedance; 0.5% dist. at 100 dB; 3-meter cord; Supra-Aural ear pads; precise-fit, soft, wide-contact leather head pads; 230 g..... $40

## 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..... $80

**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

## YAMAHA

**HP-1 Stereo Headphones**
Lightweight "Orthodynamic" design featuring sintered ferrite disc magnets with combination voice-coil diaphragm between; frequency response 20-20,000 Hz; output 96 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; 7-ft, 10.5-in straight cord; weight 0.64 lb with cord ..... $65
**HP-2.** Same except output 93 dB/mW SPL; weight 0.51 lb..... $50
**HP-3 Stereo Headphone.** Similar to HP-2 except 1 W rated input and 3 W max. input; 8-ft cord..... $35

## *MICROPHONES*

## AKG

**D-12E Cardioid Microphone**
Cardioid dynamic microphone; frequency response 40-17,000 Hz ±3.5 dB; sensitivity at 1,000 Hz 0.22 mV/$\mu$ bar; impedance 200 ohms ±15%, min. load impedance 400 ohms; 128 dB max. SPL at 0.5% dist. 500 $\mu$ bar; includes 10-in non-detachable cable with XLR connector, integral swivel-joint stand adapter with $^5/_8$-in 27 thread, shock-suspended transducer and wire-mesh windscreen, and case..... $190

**D-140E Cardioid Microphone**
Cardioid dynamic microphone for the professional entertainer or recording studio; frequency range 30-17,000 Hz ±2.5 dB; sensitivity −52 dBm; 200-ohm impedance; less than 1% dist. up to 128 dB; wire mesh windscreen; −10 dB bass attenuation switch; supplied with SA-25/1 stand adapter and case; $1^3/_4$" dia. × 6" L; $6^1/_4$ oz. ..... $155

**D-2000E Super Cardioid Microphone**
Super cardioid dynamic microphone for the professional entertainer or recording studio; frequency

range 35-17,000 Hz ±3 dB; sensitivity −52 dBm ASA; 200-ohm impedance; adjustable bass response; B-M-off switch; immune to handling noise; supplied with SA-12/1 stand adapter and case; nickel-plated finish; $2^1/_{16}$" dia. × $6^1/_2$" L; 11 oz. ..... $125

**D-200E Cardioid Microphone**
Cardioid dynamic microphone for the semi-professional recordist and musician; frequency range 25-16,000 Hz ±3 dB; sensitivity −56 dBm ASA; 200-ohm impedance; supplied with SA-20 stand adapter, wire mesh grille, cotton-fiber screen and case; $1^9/_{16}$" dia. × $7^5/_{16}$" L; $8^1/_2$ oz. ..... $105

**D-170E Super Cardioid Microphone**
Super cardioid dynamic microphone; shock-suspended transducer and wire-mesh windscreen for close vocal pick-up; frequency range 50-15,000 Hz; sensitivity −53.5 dBm; 200-ohm impedance; supplied with SA-12/1 stand adapter and case; $2^1/_{16}$" dia. × $6^1/_2$" L; 12 oz..... $105

**D-1000E Cardioid Microphone**
Rugged cardioid dynamic microphone doubles as both a 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; supplied with bronze windscreen, SA-12 stand adapter and case; $1^7/_{16}$" dia. × $6^1/_8$" L; $8^1/_2$ oz. .. $85

**D-190E Cardioid Microphone**
Cardioid dynamic microphone for speech or music performing and recording use; frequency range 30-15,000 Hz; sensitivity −52 dBm; 200-ohm impedance; supplied with bronze wind/pop filter, SA-11 stand adapter and case; $1^9/_{16}$" dia. × $6^5/_{16}$" L; $6^1/_2$ oz. ..... $75
**D-190ES.** Same as D-190E but with on/off switch .. ..... $80

**D-160E1 Omnidirectional Microphone**
Omnidirectional dynamic microphone; frequency response 40-20,000 Hz; nominal impedance 250 ohms, max. load impedance 500 ohms; sensitivity at 1,000 Hz 0.115 mV/$\mu$ bar, −78.8 dB V (open circuit), −59 dBm (max. power level); sound pressure level for 1% THD 134 dB at 1000 Hz; hum sensitivity −124.5 dBm in 1 mG field; nickel-plated brass case; includes SA-23/2 snap-out stand adapter with $^5/_8$-in 27 thread, W-20 foam windscreen, and vinyl case ..... $75

**D-130E Omnidirectional Microphone**
Omnidirectional microphone for field broadcast use. Designed for newsfilm and ENG applications. Includes SA-30 stand adapter and case ..... $70

**D-109 Lavalier Microphone**
Lightweight lavalier dynamic microphone designed specially for "hands free" use; frequency range 70-12,000 Hz; sensitivity −58 dBm; 200-ohm impedance; supplied with $29^1/_2$-ft non-detachable lightweight cable, lavalier clip with tie clasp, lavalier cord and case; nickel-plated brass finish; $^{11}/_{16}$" dia. × $2^7/_8$" L; $5^1/_2$ oz (including cable) ..... $70

**D-120E Cardioid Microphone**
Cardioid dynamic microphone for general-purpose applications; lightweight, rugged construction with integral windscreen/shock mounting; withstands "close-talking" applications; frequency range 100-17,000 Hz; sensitivity −54 dBm; 200-ohm impedance; supplied with SA-23/2 snap-out stand adapter and case; $2^1/_{16}$" dia. × $6^7/_{16}$" L; $5^1/_4$ oz. . $65
**D-120ES.** Same as D-120E except with on/off switch ..... $70

**Stereo-Pair Microphones**
**D-120SPL.** Low-impedance package. Includes two D-120E cardioid dynamic microphones with stand adapters and cases, two KM-231/1 collapsible-tripod table stands, and two 15-ft low-impedance cable assemblies (female XLR-transformer with phone plug)..... $140
**D120SPH.** Same as D-120SPL except high-impedance package with two 15-ft high-impedance cable assemblies (female XLR-transformer with phone plug)..... $155

**D-190SPL.** Low-impedance package; includes two D-190E cardioid dynamic microphones with stand adapters and cases; two KM-231/1 collapsible-tripod table stands; and two 15-ft low-impedance cable assemblies (female XLR-phone plug)..... $160
**D-190SPH.** Same as D-190SPL except high-impedance package with two 15-ft high-impedance cable assemblies (female XLR-transformer with phone plug)..... $175

### Electret Condenser Mike System

Modular system consisting of one basic powering module, six interchangeable capsules, and accessories; powering module has battery compartment for 5.6-V battery, on/off switch for shifting battery to clean contact points, 550-hour continuous operation, and adaptability for phantom powering off dc supply; interchangeable capsules include: CE-1 cardioid capsule plus condenser mike preamp; CE-2 omnidirectional capsule with preamp; CE-5 cardioid capsule with integral suspension and wire mesh screen plus preamp; CE-8 electret-condenser capsule with integral FET preamp; CE-10/1 miniature lavalier electret-condenser capsule with preamp and non-detachable 4-ft cable with adapter; CE-10/7 miniature lavalier electret-condenser capsule with non-detachable 23-ft cable with adapter.

**SE-5E** Powering module ..... $70
**CE-1** ..... $55
**CE-2** ..... $55
**CE-5** ..... $65
**CE-8** ..... $95
**CE-10/1** ..... $95
**CE-10/7** ..... $100
**C-501E.** For cardioid operation; consists of CE-1 capsule; SE-5E powering module; SA-11/1 stand adapter; W-20 windscreen; battery and case.. $135
**C-502E.** For omnidirectional operation; consists of CE-2 capsule; SE-5E powering module; SA-11/1 stand adapter; W-20 windscreen; battery and case.. $135
**C-505E.** For cardioid operation; consists of basic microphone body; integral suspension; CE-5 capsule; SE-5E powering module; SA-11/1 stand adapter; windscreen/pop filter; battery and case.... $140
**C-510E.** For lavalier operation; consists of CE-10/1 lavalier element and SE-5E powering module; two W-6 windscreens; battery and case..... $165

## AUDIO-TECHNICA

### AT 813 Unidirectional Microphone

Incorporates electret condenser permanently polarized element; frequency response 20-20,000 Hz; sensitivity −55 dB; 600-ohm nominal impedance; max. input SPL 155 dB; S/N 50 dB (1 kHz, 1 μbar); AA penlight battery powered; supplied with 16.5-ft cable with professional 3-pin connector, slip in stand clamp, carrying case, and battery.. $95

### AT803S Sub-Miniature Microphone

Electret condenser permanently charged element; omnidirectional pattern; frequency response 50-15,000 Hz; sensitivity −57 dB; 600-ohm impedance; balanced output; battery holder/belt clip with on/off switch; uses AA penlight battery; includes clothing clip, windscreen, battery, and carrying case; 16½-ft cable; 0.4" diameter × 0.8" L.... $80

### 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 3-pin connector, slip-in stand clamp, and carrying case..... $80

### AT811 Unidirectional Microphone

Incorporates electret condenser permanently polarized element; frequency reponse 50-20,000 Hz; sensitivty −54 dB; 600-ohm nominal impedance; max. input SPL 130 dB; S/N 50 dB (1 kHz, 1 μbar); battery powered; supplied with 16.5 -ft cable with professional 3-pin connector, slip-in stand clamp, carrying case, and battery..... $80

### AT802 Omnidirectional Microphone

Incorporates moving-coil dynamic element; frequency response 50-16,000 Hz; sensitivity −54.4 dB; 600-ohm nominal impedance; supplied with 16.5-ft cable with professional 3-pin connector, slip-in stand clamp, and carrying case..... $60

### 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 122 dB; S/N 50 dB (1 kHz, 1 μbar); AA penlight battery powered; supplied with 16.5-ft cable with professional 3-pin connector, slip-in stand clamp, carrying case ..... $60

### AT805S Miniature 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, windscreen, belt clip, battery, carrying case, and 16½-ft cable; 0.6" diameter × 2" L.. $50

## AUDIOTEX

### 30-2316 Electret Condenser Microphone

Unidirectional pattern to minimize pickup from rear and sides; on/off slide switch; frequency response 50-13,000 Hz; impedance 600 ohms; sensitivity −69 dB (1 kHz); comes with 20-ft cable, desk stand, black vinyl storage case..... $60

### 30-2314 Dynamic Microphone

For recording groups and soloists; cardioid pattern; wide, flat frequency response 50-13,000 Hz; output −58 dB (on high impedance); rugged construction, built-in windscreen. 20-ft cable with standard phone plug and adapter for floor or desk stand; built-in volume control with on/off switch; dual (hi/lo) impedance..... $34

### 30-2312 Omnidirectional Microphone

Response 55-13,000 Hz; output −62 dB (on high impedance); rugged construction; comes with 15-ft cable, standard phone plug, swivel holder, on/off slide switch, and windscreen for outdoor use; dual (hi/lo) impedance..... $28

### 30-2310 Omnidirectional Microphone

Response 80-13,000 Hz; impedance 50 and 600 ohms; comes with 10-ft cable with standard phone plug, on/off slide switch, desk stand; sensitivity −58 dB..... $26

### 30-2318 Tie Tack Lapel Microphone

For PA and voice taping; frequency response 40-16,000 Hz; impedance 1000 ohms; sensitivity −65 dB ±3 dB; comes with 13-ft cord with miniplug, tie-tack holder, mercury battery..... $21

### Microphone Mixer

Allows combination of up to four mikes mono or two mikes to each stereo channel; separate control for each mike; on/off switch; stereo/mono selector switch; 9-volt battery; ¼-in phone jack inputs, phono pin jack outputs. 30-2320..... $26

### Folding Microphone Stand

Folds and unfolds in seconds; weight 3½ pounds; chrome-plated tubing extends to 60 in; folded size 33 in; legs have rubber tips to prevent skidding and scratching. 30-2362 ..... $23

### Floor-Type Stand

Heavy cast-iron, self-leveling base with polished chrome-plated telescoping tubing; adjusts from 34 in to 64-in; top of tubing has ⅝-27 thread to fit all standard mikes. 30-2360 ..... $22

### Microphone Boom

Fits all standard mike floor stands; has adjustable counterweight; movable clamp and hinge design for any desired position; standard ⅝-27 thread; 31-in long. 30-2370 ..... $20

## ELECTRO-VOICE

### 644 Cardiline Microphone

Cardiline very directional dynamic microphone; flat

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response 40-12,000 Hz; −53 dB output; switchable high and low impedance; on/off switch; MC4F-type mike connector and 15-ft cable with matching connector; gray finish ..... $140

### 1777 Cardioid Microphone
Cardioid microphone with electret element; frequency response 60-18,000 Hz; −54 dB output; 150-ohm impedance; EIA sensitivity −144 dB; powered by 4.5 V internal battery or 24-28 V phantom supply; built-in Acoustifoam filter; supplied with 15-ft cable, A3F connector, and stand adapter; zinc and aluminum with non-reflecting gray finish .. ..... $126

### 1776 Cardioid Microphone
Single-D cardioid electret condenser microphone; frequency response 60-18,000 Hz; −50 dB output; low impedance; on/off switch; A3M-type mike connector and 15-ft cable with matching connector; supplied with stand adapter; nonreflective gray finish ..... $105
**1776P.** Same as 1776 but with 25-ft cable with two professional connectors ..... $111

### 672 Cardioid Microphone
Single D cardioid dynamic microphone; shaped response 60-14,000 Hz; −61 dB output (hi-Z), −60 dB output (lo-Z); switchable high and low impedance; on/off switch; A3M-type mike connector and 15-ft cable with matching connector; supplied with integral windscreen/pop filter; satin chrome finish . ..... $87

### 670A Cardioid Microphone
Single-D cardioid dynamic microphone; shaped response 60-14,000 Hz; −61 dB output (hi-Z), −60 dB output (lo-Z); switchable high and low impedance; on/off switch; A3M-type mike connector and 15-ft cable with matching connector; supplied with stand clamp; gray finish ..... $84
**670AP.** Same as 670A but with 25-ft cable with two professional connectors ..... $87

### 671A Cardioid Microphone
Single-D cardioid dynamic microphone; shaped response 60-14,000 Hz; −56 dB output (hi-Z), −57 dB output (lo-Z); switchable high and low impedance; on/off switch; A3M-type mike connector and 15-ft cable with matching connector; supplied with stand clamp and integral windscreen/pop filter; satin chrome finish ..... $81
**671AP.** Same as 671A but with 25-ft cable with two professional connectors ..... $84

### 636 Omnidirectional Microphone
Omnidirectional dynamic microphone; flat response 60-13,000 Hz; −58 dB output; switchable high and low impedance; on/off switch; MC4F-type mike connector and 15-ft cable with matching connector; satin chrome finish ..... $81

### 664A Super Cardioid Microphone
Continuously Variable-D super cardioid dynamic microphone; shaped response 90-13,000 Hz; −56 dB output; switchable high and low impedance; A3M-type mike connector and 15-ft cable with matching connector; satin chrome finish ..... $80
**664AA.** Same as 664A but gray finish ..... $80

### 660 Super Cardioid Microphone
Continuously Variable-D super cardioid microphone; shaped response 90-13,000 Hz; −56 dB output; switchable high and low impedance; A3M-type mike connector and 15-ft cable with matching connector; supplied with stand clamp; satin chrome finish ..... $78
**660A.** Same as 660 with gray finish ..... $78
**660P.** Same as 660 but with 25-ft cable with two professional connectors ..... $81

### 647A Omnidirectional Microphone
Omnidirectional dynamic microphone; shaped response 60-12,000 Hz; −60 dB output; high- and low-impedance models available; integral cable; supplied with lavalier neckcord, belt clip, and stand clamp; gray finish ..... $75

### 630 Omnidirectional Microphone
Omnidirectional dynamic microphone; flat response 60-11,000 Hz; −55 dB output; switchable high and low impedance; on/off switch; MC4F-type mike connector and 15-ft cable with matching connector, satin chrome finish ..... $68

### 627C Cardioid Microphone
Single-D cardioid dynamic microphone; shaped response 60-13,000 Hz; −58 dB output; switchable high and low impedance; on/off switch; A3M-type mike connector and 15-ft cable with matching connector; supplied with stand clamp; satin chrome finish ..... $60
**627CP.** Same as 627C but with 25-ft cable with two professional connectors ..... $63

### 631B Omnidirectional Microphone
Omnidirectional dynamic microphone; frequency response 80-13,000 Hz; −56 dB output; switchable high and low impedance; on/off switch; A3M-type mike connector and 15-ft cable with matching connector; satin chrome finish ..... $57
**631BP.** Same as 631B but with 25-ft cable with two professional connectors ..... $60

### 607L Noise-Cancelling Microphone
Noise-cancelling dynamic microphone; shaped response 200-4000 Hz; −54 dB output; cancels sound more than 1/4-in from face; low-impedance; MC1M-type connector and 15-ft cable with matching connector; gray finish ..... $54

## Professional Microphone Systems

### CL42S Condenser Shotgun System
Cardiline hypercardioid (distributed front above 1 kHz) microphone with electret element; frequency response 90-12,000 Hz; −33 dB output; 250 ohm impedance; A3M-type connector and small coil cord; supplied with shock mount, handle, and Acoustifoam windscreen; fawn beige micromatte finish ..... $630

### CH15S Hypercardioid Microphone
Hypercardioid microphone with electret element; frequency response 55-13,500 Hz; 150 ohm impedance; supplied with miniature shock mount, utility storage case, and windscreen; fawn beige micromatte finish ..... $486

### DL42 Cardiline Microphone
Cardiline very directional dynamic microphone; shaped response 50-12,000 Hz; −50 dB output; long-reach pickup; low impedance; integral cable; supplied with carrying case, windscreen, shock mounting, and handle; nonreflective fawn beige finish ..... $378

### RE20 Cardioid Microphone
Continuously Variable-D cardioid dynamic microphone; flat response 45-18,000 Hz; −57 dB output; built-in shock mounting and electrical shield; low impedance; bass tilt-down switch; A3M-type mike connector and 15-ft cable with matching connector; supplied with metal carrying case and stand adapter; nonreflective fawn beige finish ..... $330

### 667A Cardioid Microphone
Continuously Variable-D cardioid dynamic microphone; shaped response 40-10,000 Hz; −51 dB output; boom or fishpole use; low impedance; passive equalizer switch provides three LF and two HF variations; A3M-type mike connector and 15-ft cable with matching connector; supplied with integral windscreen/pop filter and shock mount ..... $324

### CS15P Cardioid Microphone
Single-D cardioid dynamic microphone; shaped response 40-18,000 Hz; −45 dB output; remote powering or use PS8 battery supply; low impedance; A3M-type mike connector and 15-ft cable with matching connector; supplied with windscreen, stand clamp, and metal carrying case; nonreflective fawn beige finish ..... $234

### RE55 Omnidirectional Microphone
Omnidirectional dynamic microphone; flat response 40-20,000 Hz; −55 dB output; low impedance; A3M-type mike connector and 15-ft cable with matching connector; supplied with stand clamp and metal carrying case; nonreflective fawn beige finish ..... $219

### RE16 Super Cardioid Microphone
Continuously Variable-D super cardioid dynamic microphone; shaped response 80-15,000 Hz; −56 dB output; low impedance; bass tilt down switch; A3M-type mike connector and 15-ft cable with matching connector; supplied with stand clamp, metal carrying case, and integral windscreen/pop filter; nonreflective fawn beige finish ..... $198

### CO85 "Tie-Tac" Microphone
Omnidirectional condenser element, electret microphone; shaped response 70-16,000 Hz; −56 dB output; battery housing/cable connector may be clipped to belt; low impedance; A3M-type mike connector and 15-ft cable with matching connector; supplied with windscreen, belt clip, tie clasp assembly, and metal carrying case; nonreflective fawn beige finish ..... $162

### RE51 Omnidirectional Microphone
Omnidirectional dynamic microphone; shaped response 60-10,000 Hz; output −54 dB; hands-free use; amplifier clips on belt; cough button, battery light, level adjustment, and on/off switch; low impedance; A3M-type mike connector and 15-ft cable with matching connector; supplied with preamplifier and headband; black finish ..... $144

### RE11 Super Cardioid Microphone
Continuously Variable-D super cardioid dynamic microphone; shaped response 90-13,000 Hz; −56 dB output; bass tilt down switch; low impedance; A3M-type mike connector and 15-ft cable with matching connector; supplied with stand clamp, metal carrying case, and integral windscreen/pop filter; nonreflective fawn beige finish ..... $132

### CO90 Miniature Microphone
Miniature omnidirectional microphone with electret element; frequency response 40-15,000 Hz; −57 dB output; 150 ohm impedance; EIA sensitivity −148 dB; battery powered; supplied with windscreen, belt clip, storage pouch, tie clasp, and 6-ft cable; fawn beige micromatte finish ..... $111

### DS35 Cardioid Microphone
Single-D cardioid dynamic microphone; shaped response 60-17,000 Hz; −61 dB output; low impedance; A3M-type mike connector and 15-ft cable with matching connector; supplied with stand clamp, metal carrying case, and integral windscreen/pop filter; nonreflective fawn beige finish ... ..... $108

### DO54 Omnidirectional Microphone
Omnidirectional dynamic microphone; flat response 50-18,000 Hz; −58 dB output; low impedance; A3M-type mike connector and 15-ft cable with matching connector; supplied with stand clamp and metal carrying case; nonreflective fawn beige finish ..... $105

### RE50 Omnidirectional Microphone
Omnidirectional dynamic microphone; shaped response 80-13,000 Hz; −55 dB output; double-wall, shock-isolated case and special cable for noise-free operation; low impedance; A3M-type mike connector and 15-ft cable with matching connector; supplied with stand clamp, metal carrying case, and integral windscreen/pop filter; nonreflective fawn beige finish ..... $99

### RE85 Omnidirectional Microphone
Omnidirectional dynamic microphone; shaped response 90-10,000 Hz; −61 dB output; isolated shock-mounted construction and integral cable for noise-free operation; low impedance; supplied with lavalier neckcord, tie clasp assembly, carrying pouch, and belt clip; champagne finish ..... $99

### 649B Omnidirectional Microphone
Omnidirectional dynamic microphone; shaped response 70-10,000 Hz; −61 dB output; low imped-

ance; integral cable; supplied with lavalier neck-cord, belt clip, stand clamp, and carrying pouch; nonreflective fawn beige finish ..... $96

## ERCONA

### DC-21 Cardioid Microphone
Cardioid condenser microphone; SYMSI 48 powering; frequency response 30-20,000 Hz ±3 dB; sensitivity −44 dB/Pa (over 200 ohms at 1 V); output 6.3 mV/Pa (over 200 ohms at 1 V); noise 25 dB (re 2 × 10 $^{5}$ Pa, A wtd.); 122-dB dynamic range; output impedance 200 ohms; operating voltage +48 +6/−8; current consumption 0.8 mA; satin chrome finish; supplied with stand adaptor and 33-ft cable ..... $230

**DC-20.** Similar but omnidirectional design; sensitivity −46 dB/Pa; output 5 mV/Pa; noise 26 dB; 124-dB dynamic range ..... $215

## JVC

### M-510 Electret Condenser Microphone
Super-directional/unidirectional pattern; frequency response 40-20,000 Hz; sensitivity −68 dB (super), −71 dB (uni); S/N better than 50 dB; 13-dB gain loss in passive mode ..... $190

### M-201 Electret Condenser Microphone
Frequency response 40-18,000 Hz; sensitivity −71 dB; S/N better than 47 dB at 1000 Hz; output impedance 600 ohms ..... $60

### BN-5 Biphonic Processor
Binaural processor for binaural effects through speakers; input terminals Line In/Tape Play at 80 mV/−20 dB, 100 ohms input impedance; output terminals Line Out at 300 mV, −8 dB output level, 3.5k ohms Tape Rec output impedance; consumes 7 W; 3⅞" H 15⅜" W × 9½" D ..... $280

### MI-E60 Microphone Mixer
Six-channel microphone mixer with reverberator. Frequency response 30-25,000 Hz −3 dB; reverberation time about 3 sec from 200-2,000 Hz; gain loss in passive mode 13 dB min ..... $250

### TL-E31 Microphone Boom Stand
Multiple-way boom stand; boom extension 37 7/16-105 ⅛ ..... $110

### TL-E71 Sound Focusing Reflector
Directivity ±10 at 5000 Hz (horizontal); 15 dB boost at 5000 Hz; max. elevation angle 80; 11 3/16" H × 27 9/16" W ..... $110

### TL-E41 Stereo Cord/Reel
65-ft long; weight 4.2 lbs; diameter 6 3/16" ..... $90

### TL-E35 Microphone Suspension System
Insulates vibrations; weight 5.6 oz; 5⅜" H × 4 1/16" W × 5⅛" D ..... $30

### TL-E36 Microphone Arm
Stereo stand; 1 15/16" H × 12⅜" W ..... $20

### TL-E33 Mic Holder
Clip-type microphone holder; 7 11/16" H × 1⅜" W ..... $10

### TL-E32 Microphone Stand
Two-way microphone stand; 7 1/12" H × 2 11/16" W ..... $10

## MARLBORO

### M900 Cardioid Microphone
Unidirectional dynamic cardioid microphone; built-in spherical wind screen; frequency response 50-17,000 Hz; output at 100 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 ... $132

### M500 Unidirectional Microphone
Unidirectional 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 ..... $129

## MURA

### DX-30V Cardioid Microphone
Electret condenser microphone; battery powered; output impedance 600 and 50,000 ohms; frequency response 20-18,000 Hz; sensitivity −48 dB (high impedance), −62 dB ( low impedance); on/off mike switch; supplied with 20-ft cable with ¼-in phone plug, battery, microphone holder, and styrofoam case with sleeve ..... $70

### DX-129 Cardioid Microphone
2-in ball cardioid dynamic mike; dual impedance 600/50,000 ohms; on-off switch; sensitivity: −58 dB at 1000 Hz; response 40-14,000 Hz; built-in pop and blast filters; comes with stand adapter, 20-ft cable; black satin chrome finish ..... $50

### DX-20V Cardioid Microphone
Slimline design; impedance 600 and 50,000 ohms; frequency response 60-15,000 Hz; sensitivity −56 dB (high impedance ), −74 dB (low impedance); on/off mike switch; supplied with 20-ft cable with ¼-in phone plug, microphone holder, and styrofoam case with sleeve ..... $45

### DX-285 Electret Condenser Microphone
Omnidirectional pattern; for general recording and vocal work; frequency response 50-13,500 Hz±3 dB; impedance 600 ohms; sensitivity: −71 dB at 1000 Hz (0 dB 1 V/1 μbar); removable windscreen; comes with 1.5-V battery, 20-ft cable with ¼-in phone plug, desk stand ..... $40

### WM-148 Electret Condenser Microphone
Wireless electret condenser microphone designed to transmit over FM radio; fully shielded; drift-free; battery-powered; on/off switch; operates 150 ft from radio receiver; tunable from 88-106 mHz; includes 9-V battery; weight 3½ oz; 5¼ H × ⅞" W × 1⅛" D ..... $40

## NAKAMICHI

### CM-1000 Condenser Microphone
Condenser microphone with interchangeable capsules; temperature and humidity resistant; supplied with battery power supply, CP-101 unidirectional capsule, windscreen, cables with XLR connectors, case, 10- and 20-dB attenuators, and proximity effect compensator; frequency response 20-20,000 Hz ±2.5 dB; mpedance 600 ohms balanced; sensitivity −67 dB, ±1.5 dB; 139-dB SPL max. with 3% dist., dynamic range 115 dB; S/N 50 dB (weighted) ..... $355

**CP-102.** Optional super-omni capsule ..... $125

### DM-1000 Dynamic Microphone
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 = 1 V/μbar); impedance 250 ohms; supplied with Cannon-type XLR-3 connector; anodized black matte finish; 10.4 oz ..... $245

### CM-700 Electret Condenser Microphone
Studio electret condenser microphone with 16-mm diameter element; built-in low-noise FET preamp; powered by 6-V battery; 15-dB attenuator pad; interchangeable cardioid and omnidirectional capsules; frequency response 20-20,000 Hz ±3 dB; impedance 600 ohms; sensitivity −65 dB, ±2 dB; 130-dB SPL max. with 3% dist., 145 dB with pad; 121-dB dynamic range; S/N 49 dB (weighted) ..... $185

**CP-703.** Optional super-directional (shotgun) capsule ..... $85

### CM-50 Miniature Microphone
Miniature electret microphone with built-in FET preamp; powered by 6-V battery; supplied with tie clasp holder and windscreen; frequency response 20-18,000 Hz ±3.5 dB; impedance 250 ohms; sensitivity −75 dB, ±2.5 dB; 125-dB SPL max. with 3% dist.; dynamic range 100 dB; S/N 48 dB; 0.5" diameter × 1.375" long ..... $135

### CM-300 Electret Condenser Microphone
Studio-type system with interchangeable capsules; basic set comes with CP-1 cardioid and CP-2 omnidirectional capsules, windscreen, 15-ft cable, XLR connector, battery, and stand adapter; built-in 10-dB attenuator pad; low-cut proximity effect compensator; frequency response 30-18,000 Hz (CP-1), 20-15,000 Hz (CP-2), 20-18,000 Hz (CP-3), 30-20,000 Hz (CP-4), all ±3.5 dB; impedance 200 ohms balanced; sensitivity −76 dB, ±2.5 dB (CP-1, CP-2, CP-4), −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) ..... $135

**CP-3.** Optional small-diameter, super omnidirectional capsule ..... $40

**CP-4.** Optional 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 ..... $365

**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 ..... $85

## PIONEER

### CM-1 Electret Microphone
High molecular diaphragm electret condenser element; selectable omni- or uni-directional pattern; response 40-20,000 Hz (uni), 20-20,000 Hz (omni); output impedance 600 ohms unbalanced; sensitivity −69 dB (uni), −74 dB (omni) (both 0 dB = 1 V/μ bar); 126 dB max. SPL; 1.5-V "AA" cell power supply; 1.42" dia. × 8.37" long; weight 10.56 oz; comes with 18-ft cable ..... $100

### CM-2S Electret Microphone
Dual-element electret condenser unit; hypercardioid pattern; response 20-20,000 Hz; output impedance 1000 ohms; sensitivity −68 dB at 1 kHz (0 dB = 1 V/μ bar); max. SPL 126 dB; S/N 46 dB; 1.5-V "AA" cell power supply; 6.06" H × 4.33" W; weight 11.2 oz; 21-ft cable; pair comes mounted on desk stand ..... $60

## REALISTIC

### Dual-Response Cardioid Microphone
Cardioid microphone; frequency response 80-15,000 Hz; output level 76 ±3 dB; 200 ohms; with XLR connector, cable, ¼-in plug, and mike holder ..... $60

### Highball Dynamic Microphone
Dynamic cardioid microphone; frequency response 80-13,000 Hz; switchable impedance, 50-250 and 50,000 ohms; on/off switch; ball screen pop filter; Cannon-type connector; 15-ft cable with plug .. $50

### "All-Pro" Cardioid Microphone
Cardioid microphone; frequency response 30-15,000 Hz; 600-ohm impedance; supplied with 10-ft cord, ¼-in plug, desk stand adapter, mike stand adapter, and "AA" battery ..... $30

## REVOX

### 3500 Dynamic Microphone
Dynamic unidirectional moving-coil type; cardioid pattern; response 40-18,000 Hz; impedance 600 ohms, comes with windscreen, clamp, table stand, and case; Cannon XLR connector; each unit supplied with own frequency-response curve ..... $130

## ROTEL

### RMC-1 Electret Condenser Microphone
Two-in-one unidirectional stereo microphone; fre-

quency response 50-15,000 Hz; 600-ohm impedance; sensitivity −70 dB ±3dB at 600 ohms; 0.4 lb with cable ..... $60

## SANSUI

### DM11 Dynamic Microphone
Unidirectional dynamic microphone; frequency response 100-15,000 Hz; 600-ohm output impedance; −76 dB sensitivity (frontal); meshed windscreen eliminates popping; ideal as vocal microphone; 6 meter cord ..... $110

### EM1 Electret Condenser Microphone
Unidirectional electret condenser microphone; frequency response 50-15,000 Hz; 600-ohm output impedance; sensitivity −71.5 dB (frontal); music/vocal/off switch; three urethane foam windscreens in orange, blue and black for quick channel identification; 1.5 V dc "AA" penlight battery; 6 meter cord with phone plug..... $80

### MS1 Multi-Purpose Mike Stand
Microphone boom stand with arm for stereo pairing; mike-mount holes at both ends of adjustable boom; boom is 34 1/16-in long and rotatable over 360 degrees; supplementary bar is included to extend boom to 43 1/16-in; collapsible stand; four mike-mounting screws (5/16", 3/8", 5/8" 1/2"); matte black finish ..... $200

## SENNHEISER

### MD441 Dynamic Microphone
Super cardioid dynamic microphone; frequency response 40-20,000 Hz; sensitivity 0.2 mV/μbar ±3 dB; brilliance switch for nominal 5-dB boost at 5 kHz; five-position bass attenuator; front-to-back ratio 20 dB, −3 dB; supplied with cable and quick-release mount for floor stand or MZT-441 table stand; takes MZW-441 windscreen; 1.3" H × 1.4" W × 9.6" L ..... $371

### MD431 Vocal Microphone
Super cardioid vocal microphone; 200-ohm impedance; frequency response 40-16,000 Hz; sensitivity −55.5 dB; on/off switch; front-to-back ratio 24 dB at 1000 Hz; shock-mounted..... $308

### MD-211U Dynamic Microphone
Omnidirectional dynamic microphone; frequency response 40-20,000 Hz; sensitivity −58 dBm (0.13 mV/μbar) ±2.5 dB; supplied with Cannon XLR connector and cable; 1" diameter × 4 3/4" L ..... $290

### MD421U Dynamic Microphone
Cardioid dynamic microphone; 200-ohm impedance; frequency response 30-17,000 Hz ±5 dB; sensitivity 0.2 mV/μbar ±3 dB at 1 kHz; EIA rating −145.8 dB; output level −53 dBm (1 mW/10 dynes/cm²); front-to-back ratio 18 dB, −2 dB; variable bass attenuator; supplied with XLR connector and cable; 7" × 1 7/8" × 1 13/16"..... $265

### MD416 Dynamic Microphone
Cardioid dynamic microphone; designed for close miking; frequency response 50-15,000 Hz; sensitivity 0.13 mV/μbar ±3 dB; 200-ohm impedance; built-in isolation system to eliminate handlirg noise; built-in pop filter, outdoor pop filter; supplied with Cannon XLR connector, threaded stand mount with quick-release clip, and cable ..... $244

### MD402 Dynamic Microphone
Super cardioid dynamic microphone; frequency response 50-15,000 Hz; output level at 94 dB SPL −57 dBm; complete with windscreen, 15-ft cable, and quick-release clamp..... $80

### Electret Condenser Mike System
One common powering module in balanced version (K2U) 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.
**K2U.** Powering module ..... $101
**K1.** Powering module ..... $101
**ME20.** Omnidirectional head..... $71
**ME40.** Super-cardioid head ..... $100
**ME80.** Shotgun head..... $140

## SHURE

### 300 Ribbon Microphone
Sensitivity −153 dB (EIA); response 40-15,000 Hz; user selects high or low impedance; bi-directional; hinge mount to stand; use for speech and music; has 20-ft cable and connector; gray.... $138

### 546 "Unidyne III" Microphone
Dynamic type; sensitivity −154 dB (EIA); response 50-15,000 Hz; user selects high or low impedance; cardioid pattern; hinge mount to stand; use for speech, rock vocals, and music; comes with 20-ft cable and connector; chrome finish ..... $122

### 548SD "Unidyne IV" Microphone
Dynamic type; sensitivity −141 dB (EIA); response 40-15,000 Hz; user selects high or low impedance; cardioid pattern; hand-held with slip-in stand attachment; use for speech and music; has on-off switch, 15-ft cable, and connector; chrome finish ..... $96

### 565 "Unisphere 1" Microphone
Dynamic type; sensitivity −148.5 dB (EIA); response 50-15,000 Hz; user selects high or low impedance; cardioid pattern; hinge mount to stand; use for speech, rock vocals, and music; has pop or blast filter, 15-ft cable, and connector; chrome finish..... $85
**565SD.** Same as Model 565 except has on-off switch and professional three-pin connector .... $89
**566.** Similar to Model 565 except with shock mount ..... $130

### 516EQ Dynamic Equalizer Microphone
Unidirectional type 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 25 to 3000 ohms; comes with foam wind-screen, swivel adapter, cable, mini-plug adapter cable, and carrying case ..... $84
**516EQ-PR.** Two 516EQ microphones ..... $151

### 55S "Unidyne II" Microphone
Sensitivity −148 dB (EIA); response 50-15,000 Hz; user selects high or low impedance; cardioid pattern; hinge mount to stand; use for speech and music; supplied with Amphenol-type MC3M connector and 15-ft cable..... $77
**55SW.** Same as Model 55S except has built-in on-off switch ..... $77

### 545 "Unidyne III" Microphone
Dynamic type; sensitivity −149 dB (EIA); response 50-15,000 Hz; user selects high or low impedance; cardioid pattern; with slip-in stand attachment and hinge mount to stand; designed specifically for speech, music, and tape recording; supplied with 15-ft cable and Amphenol-type MC4M connector; chrome finish..... $75
**545S.** Similar to Model 545 but has cable connection through hinge and on-off switch in upright ..... $80
**545SD.** Same as Model 545 but has on-off switch on microphone barrel and professional three-pin connector..... $80
**545L.** Similar to Model 545 but has lavalier cord, clip, and permanently attached cable..... $63

### 578 "Omnidyne" Microphone
Sensitivity −154 dB (EIA); response 50-15,000 Hz; user selects high or low impedance; omnidirectional pattern; hand-held; use for speech and music; has on-off switch, a 15-ft cable, and connector; chrome finish..... $72
**578S.** Similar to Model 578 except has swivel assembly with on/off switch ..... $80

### 585SA "Unisphere A" Microphone
Sensitivity −151 dB (EIA); response 50-13,000 Hz; user specifies high or low impedance; cardioid pattern; hand-held with slip-in stand attachment; use for speech, rock vocals, and music; has pop or blast filter, on-off switch; supplied with 15-ft cable and connector; chrome finish..... $61
**585SAV.** Similar to Model 585SA but has volume control on microphone barrel..... $67
**585SB.** Same as 585SA but low impedance .... $61

### Microphone Mixers

### SE30 Gated Compressor/Mixer
Gated memory compressor with portable three-input mixer and remote amplifier; designed for professional AM, FM, and TV broadcasting, film, tape, and disc recording, CATV, and sound reinforcement; mixer output 600 ohms; 108-132 V ac, 50/60 Hz..... $455
**M677.** Converts SE30 to nine-input system; Shure mixer or A67B battery power supply transmits power ..... $362

### M67 Professional Microphone Mixer
Designed for professional recording, TV and radio studios, remote broadcasting, and sound reinforcement installations; four low-impedance transformer-coupled balanced mic inputs (one convertible to line input); 600-ohm line and microphone level outputs; illuminated VU meter (+4, +10 dB calibrated output); 120 V ac ±10%, 50/60 Hz; 2 3/4" H × 11 3/8" W × 7 1/2" D..... $388

The following models have independent volume controls and a master volume control which simultaneously controls the gain of all inputs; 2 3/4" H × 11 3/8" W × 5 1/4" D; weight 4 lb.
**M68.** Input connections are male professional three-pin audio connectors for 120 V ac ±10%, 50/60 Hz..... $211
**M677.** Transistorized accessory mixer; privides six additional input channels..... $362
**M68FC.** Input connections are female professional three-pin connectors for 120 V ac ±10%, 50/60 Hz

..... $227

**M68FCE.** Similar to M68FC, but for both 105-130 V ac, 50/60 Hz and 210-260 V ac, 50/60 Hz with three conductor cable..... $233

**M625 Voicegate**
Voice-activated microphone gain controller with voice-frequency sensor; keeps microphone "on" up to 30 sec during pause; three-pin audio connectors; female input and male output; designed for multi-microphone systems; 120 V ac ± 10%, 50/60 Hz, 3 W; can also be powered by 9- and 30-V external dc source ..... $229

**M625AM.** Modular unit; power taken from M625.... ..... $186

## SONY

**C-38B Condenser Microphone**
Professional condenser microphone with switchable omni-directional or uni-directional characteristics; internal battery or phantom power; frequency response 30-16,000 Hz ±2.5 dB; 250-ohm output impedance; S/N 70 dB, high-cut switch; pad switch; FET circuit; windscreen and shock mounting; fixed mike connector; 20 ft cable; comes with carrying case; 3" diameter × 8 11/16" L ..... $475

**C-37P.** Similar except without pad switch and internal battery power; 1 7/8" diameter × 7 9/16" L .... $425

**F-660 Dynamic Microphone**
Unidirectional dynamic microphone for vocal/orchestral recording; frequency response 100-10,000 Hz; 250-ohm output impedance; XLR-3 mike connector; 1 1/2" diameter × 6 1/2" L. ..... $250

**ECM-56F Electret Condenser Mike**
Back electret condenser microphone; unidirectional; frequency response 20-20,000 Hz; 250-ohm output impedance; S/N 66 dB; low-cut switch; external power system or battery power; battery check lamp; 90 degree adjustable angle; rubber cushion in mounting reduces vibration; fixed mike connector; 20-ft cable; 2" diameter × 8 1/4" L. ..... $230

**ECM-65F Electret Condenser Mike**
Hand-held professional electret condenser microphone for stage, broadcasting, or studio use; unidirectional; frequency response 70-20,000 Hz; 250-ohm output impedance; S/N 66 dB; double windscreen; phantom power system or battery power; XLR-3 mike connector; 20-ft cable; 1 1/2" diameter × 7" L..... $220

**ECM-64P.** Similar except for out-door use; omnidirectional; frequency response 40-20,000 Hz ..... ..... $220

**ECM-50PS Electret Condenser Mike**
Professional omnidirectional electret condenser microphone with miniature design; frequency response 40-14,000 Hz; 250-ohm output impedance; S/N 66 dB; phantom power supply or internal battery; non-reflective satin nickel finish; comes with windscreen, carrying case and tie clip; fixed mike connector; 10-ft cable; 7/16" diameter × 13/16" L ..... $200

**F-115 Dynamic Microphone**
Omnidirectional dynamic microphone for outdoor use in all weather conditions; built-in waterproof screen; also has doubly-structured accessory windscreen; frequency response 40-12,000 Hz; 600-ohm output impedance; vibration-proof rubber mounting; balance output with "Cannon" plug; fixed mike connector; 20-ft cable; 1 7/16" diameter × 6 7/8" L..... $150

**ECM-990F Electret Condenser Mike**
Single-point stereo back electret condenser microphone for studio-quality performance; uni-directional; frequency response 40-16,000 Hz; 200-ohm output impedance; S/N 64 dB; axis selector to adjust directional quality; low-cut switch; LED battery power indicator; Sony type mike connector; 10-ft cable; 3 1/2" diameter × 8 1/4" L..... $130

**ECM-23F Electret Condenser Mike**
Uni-directional back electret condenser microphone; 20-20,000 Hz frequency response; 250-ohm output impedance; S/N 66 dB; output for both balanced and unbalanced circuit; FET impedance translator; battery power; low-cut switch; pad switch; comes with windscreen, carrying case, mike cable, and mike holder; XLR-3 mike connector; 20-ft cable; 1 1/16" diameter × 7 1/2" L..... $100

**ECM-33F.** Similar except battery or phantom powered..... ..... ..... $175

**ECM-30 Condenser Microphone**
Professional omni-directional condenser microphone with ultra-miniature design; frequency response 50-14,000 Hz; 250-ohm output impedance; S/N 60 dB; battery power; balanced output with "Cannon" XLR; fixed mike connector; 10-ft cable; 11/32" diameter × 19/32" L..... $100

## SUPERSCOPE

**EC-9P Cardioid Microphone**
Professional cardioid electret condenser microphone; low-cut filter; standard Cannon XLR-12C output; internal battery operation or 10 dB pad; on/off switch; optional phantom powering ..... $85

**EC-15P Electret-Condenser Microphone**
Professional electret condenser miniature tie-clasp microphone; standard Cannon XLR3-12C output; internal battery operation or optional phantom powering; IC FET electronics..... ..... $60

## TEAC

**ME-120 Microphone**
Electret microphone; cardioid or omnidirectional; two-position response switch, 40-18,000 Hz (cardioid), 30-16,000 Hz (omnidirectional); supplied with stand attachment, two windscreens, and 15-ft cable..... ..... $120

**ME-80.** Same except response 50-16,000 Hz .. $80

**ME-50.** Same except cardioid; unbalanced or balanced 10,000 or 200-ohms; response 50-14,000 Hz ..... ..... $50

**109-A Mike Input Transformer**
Matches low-impedance mikes to high-impedance inputs; will terminate low-impedance balanced signal to allow interfacing with most consumer tape recorders and mixes..... ..... $20

## TECHNICS by PANASONIC

**RP-3540E Cardioid Microphone**
Electret-condenser cardioid microphone; 600-ohm output impedance; −68 dB sensitivity; frequency response 40-14,000 Hz; requires "AA" batteries; comes with stand, mike holder, 3/8-in adaptor, and 5-meter cable; 42 × 227 mm ..... ..... $70

**RP-3210E Cardioid Stereo Microphone**
Electret-condenser cardioid stereo microphone; 600-ohm output impedance; −70 dB sensitivity; frequency response 50-12,000 Hz; "AA" batteries required; comes with stand, mike holder, 3/8-in adaptor, and 3-meter cable; 40 × 60 × 185 mm... ..... $60

**RP-3500E Cardioid Microphone**
Electret-condenser cardioid microphone; 600-ohm output impedance; −68 dB sensitivity; frequency response 50-12,000 Hz; requires "AA" battery; comes with stand, mike holder, 3/8-in adaptor, and 5-meter cable; 46 × 208 mm ..... ..... $60

## TOSHIBA

**EM-420 Electret Condenser Microphone**
Back electret condenser microphone; low cut switch for music or voice; frequency response 50-20,000 Hz; S/N 45 dB; long battery life ..... $65

**EM-220 Electret Condenser Microphone**
Back electret condenser microphone; frequency response 50-18,000 Hz; S/N 45 dB; long battery life ..... $35

# IT'S NOT WHAT IT DOES, BUT WHAT IT UNDOES.

It's no wonder your records are flat. Before they're pressed, about half of the music's dynamic range has been squeezed out. The vice is the recording process. Live music's dynamic range can be more than 100 dB, but the studio recorders have only approximately 58 dB of useable dynamic range capacity. So the engineer has to compress the signal, making the loud sounds quieter and the quiet ones louder. And that's where the live gets squeezed out. Your conventional discs most often offer less than 50 dB of dynamic range. You can undo much of the damage. Just add a dbx Dynamic Range Expander to your system, and you'll restore most of the missing dynamic range in your records, tapes and FM broadcasts. These extraordinary devices unsqueeze dynamics in all types of music, making everything sound richer, clearer and fuller than you've ever heard. And with dramatically less noise as well. You won't need an audio engineer's ears to hear the remarkable improvement in your music.

There is a dbx dynamic range expander for every application, for budget systems right up to large state-of-the-art music systems. Take your favorite record or tape to your dbx dealer and ask for a dbx expander demonstration. There are three models available: model 118, an economically-priced single band linear expander; model 128, linear expander and tape noise reduction system which lets you make tape copies that sound better than the original record; model 3BX, top-of-the-line expander which divides the audio spectrum into three sections - high, mid, and low frequencies for individual expansion.

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# 13 SIGNAL PROCESSORS
## Equalizers, Expanders, Noise-Reduction, etc.

### ACE AUDIO

**AE-2002 Audio Equalizer**
Five-band, five-channel tone-control system; can be used with company's preamps or other equipment; rated output 2 V to 10,000-ohm load, 8 V max. output; gain unity ±0.5 dB; IM and HD 0.05%; frequency range ±12 dB; bass (50 Hz and below), 250 Hz, 1000 Hz, 3500 Hz, treble (10,000 Hz and above); frequency response 5-100,000 Hz ±1 dB; hum and noise 80 dB below 2 V output; inputs: main, tape monitor; outputs: main, tape out; switches: power, defeat, tape monitor; unswitched convenience outlet; American walnut end caps..... 144
Kit version with manual ..... $95
Construction manual..... $2

### ADC PROFESSIONAL PRODUCTS

**Sound Shaper Two Mk 1 Equalizer**
Twelve-band frequency equalizer with 24 linear potentiometers, each with center-detent position; control frequencies range from 30-16,000 Hz ±12 dB; features internal switching and monitoring; EQ bypass; two-channel output meter (±1 dB) and meter adjustment..... $280
**SLM-2.** Sound level meter measures signal strength from each band on ADC Test Record for accurate equalization; includes 20-ft interconnecting cable. ..... $60

**Sound Shaper One**
Frequency equalizer with left and right channel slide controls for ±12 dB equalization at five control frequencies (60, 240, 1000, 3500, and 10,000 Hz); harmonic and IM dist. at 2 V output 0.02%; hum and noise −80 dB (1 V, inputs shorted); 10 V rms min. output into 10k ohm load; input impedance 75k ohms; has two main and two tape monitor inputs, two main and two tape outputs; 5 5/16" H × 10 1/32" W × 6 11/16" D..... $200

### 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, 0.1% THD), matching 2-way speakers. Delay section: three initial delays, first delay variable 10-40 msec, longest delay variable up to 100 msec; reverberation decay time 0-1.6 sec (variable 0 to −60 dB); controls include ambience-channel bandwidth, stage depth (first delay), hall size (remaining delays), extra outputs for additional amplifier-speaker systems; "Source Ambience Discriminator" extracts ambience in recordings, reduces reverberation of FM announcer voices; can be driven from line-level (preamp or tape out) or speaker terminals (using optional cables); LED delay indicators; ambience outputs, 30-13,000 Hz, +1/−3 dB, less than 0.3% THD+noise, 80 dB dynamic range. Power amplifier section: 94 dB S/N (A-weighted), frequency response 30-40,000 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 1/2" H × 15 3/4" W (19" w optional rack mount) × 12" D. Speakers 15" H × 9 3/4" W × 6 1/2" D..... $1000

### ALLISON

**The Electronic Subwoofer**
Two-channel bottom-octave equalizer and bandpass filter; rolloff 18 dB/octave below 20 Hz and above

20,000 Hz; frequency 0-20 Hz; turnover frequencies at −3 dB at 41 Hz, 35.5 Hz, 48 Hz, and BYPASS; S/N 100 dB min. ("A" weighted); used in tape monitor loop, external processor loop of preamp/control unit, integrated amp, or receiver; 2" H × 14 1/4" W × 4 3/8" D..... $250

### AUDIONICS OF OREGON

**Tate SQ Decoder/Synthesizer**
High-performance SQ quadraphonic decoder using Tate directional-enhancement system separation over 40 dB under static measurement conditions; full controls for input/output and balance..... $450

### AUDIO RESEARCH

**EC-5 Electronic Crossover**
Two-way fixed-frequency electronic crossover. Features two front-panel switch selectable crossover slopes (6 dB and 18 dB per octave); adjustable gain from −40 to +3 dB; field-replaceable frequency network cards available at extra cost; standard frequencies available at 50, 100, 400, 800, 1000, 2500, 5000, and 7500 Hz; low center channel output with 10,000-ohm output impedance; three switched relay-controlled amplifier power receptacles; separate left/right bass and treble controls. Frequency response 5-50,000 Hz ±1 dB; HD and IM dist. less than 0.005% at 2 V rms out; max. input and output 10 V rms; S/N 90 dB below 2 V rms. 3 1/2" H × 19" W × 8 1/2" D..... $895

### AUDIO TECHNOLOGY

**510 Peak-Responding LED Display**
Combines functions of peak power indicator and peak line level monitor; 16 LEDs/ch display peak value of complex waveforms within ±0.25 dB; dynamic range of 45 dB ±1 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 × 7 1/2" W × 5 1/2" D..... $130

### BURWEN RESEARCH

**DNF 1201A Dynamic Noise Filter**
Processes any two-channel or matrix encoded material from turntable, tape deck, cassette deck, receiver or tuner; pushbutton controls select proper noise reduction; sensitivity control with LED readouts; frequency response (minimum bandwidth) −3 dB at 500 Hz, −10 dB at 1 kHz, −20 dB at 2.5 kHz; (maximum 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 from 20 Hz to 20 kHz; has 8 phono jacks and tape deck connectors; 2 7/8" H × 17 1/2" W × 8 1/4" D..... $379

**EQ1 Hand-Held Equalizer**
Remote variable field equalizer with horizontal slide controls, tape monitor switch, and six bands/channel covering 15-25,000 Hz frequency range; max. undist. input 7.8 V, input impedance 40,000 ohms; rated output 2.5 V, 1-ohm output impedance; THD at 1000 Hz, 7.8 V, 0.03%, 0.05% max. from 20-10,000 Hz; IM dist. from 60-7000 Hz 0.01%; noise 94 dB below rated output (controls set at 0 dB); peaking and shelf slide controls at 15, 120, 500, 2000, 5000, and 25,000 Hz; 1 1/2" H × 7 3/8" W × 4 3/4" D..... $300

**TNE 7000 Transient Noise Eliminator**
Removes clicks and pops from phonograph records; blanking duration 100-600 millionths of a second; blanking period is filled by transition voltage; dynamic range 100 dB; max. input 6 V rms undistorted, 45k ohms; max. output 7 V rms before clipping, 1 ohm, dc coupled; 0.1% THD; 0.05% IM dist. (60 Hz, 7 kHz, 4:1); noise 50 μV rms; has tape monitor, threshold, and sensitivity controls; 105-125 or 210-250 V ac; 2 7/8" H × 16 3/4" W × 7 3/8" D..... $299

### CROWN

**EQ2 Equalizer**
Two-channel graphic equalizer with tone-control system. Features 11 equalizer slide switches detented at ±15 dB with octave frequency adjust controls set at 20, 40, 80, 160, 320, 640, 1250, 2500, 5000, 10,000, and 20,000 Hz, half-octave constant bandwidth filter detented at ±0.5 dB; five push-push bypass switches; four tone control knobs consisting of Bass (180-1800 Hz), Treble (1000 10,000 Hz), Channel 1 (±20 dB), and Channel 2 (±20 dB); four overload indicators with front-panel LED, automatic muting at turn-on. Specifications: frequency response from 10-100,000 Hz ±0.3 dB and 20-20,000 Hz ±0.1 dB; clipping level 10 V rms; hum and noise 90 dB below rated output; 2.5 V rms rated output (IHF load); IM dist. 0.01% max. at rated output; S/N 95 dB at rated output; input unity or 10-dB gain; input impedance 25k ohms unbalanced, 20k ohms balanced; output impedance 300 ohms normal, 600 ohms balanced; balanced (Ch. 1 and Ch. 2) and unbalanced (Ch. 1 and Ch. 2) phone jack inputs; normal (Ch. 1 and Ch. 2) and inverted (Ch. 1 and Ch. 2) phone jack outputs. Satinized aluminum

# 13 SIGNAL PROCESSORS

front panel with gray Lexan inlay chassis; 7½" H × 19" W × 14½" D..... $1100

### OC-150A Control Center
Features stereo 3½-in VU-type and peak-catching mode meters with five ranges from 1.4 −140 V, minimum hold time 600 milliseconds; three-speaker switching singly or dually to main system amplifier output; three amplifier outputs consisting of amp 1 terminals (main system amplifier), amp 2 (headphone jacks and rear-panel electrostatic headphone terminal strip), and amp 3 (monitoring only of ac line voltage); satinized aluminum front panel with charcoal grey suede; 5¼" H × 17" W × 8⅛" D ..... $349

### 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 unit gain input; output impedance 300 ohms (inverted and non-inverted), 6 V max. output into 600 ohms; IM dist. 0.01% at rated output; hum and noise 100 dB below rated output with 0 dB gain. Mono: functions as combined bandpass/two-way crossover, or as three-way crossover (tri-amping); mono jack combines two input signals to form mono output; mono bass output combines low pass section of two filters which feeds the output jack. Satinized aluminum front panel with plexiglass front-panel cover; 3½" H × 19" W × 5¾" D... ..... $329

## 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 wood end blocks; 2⅛" H × 12¾" W × 5¼" D..... $300

### DQ-MX1 Passive Matrixing Crossover
Connects power amplifier to stereo speakers and sub-woofer 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; operates with 8-ohm speakers and subwoofer; 3⅜" H × 8¾" W × 7" D..... $135

## 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 1½- or 2½-way, respectively); individual channel gains screwdriver adjustable; THD 0.0008% from 20-20,000 Hz; noise −100 dB (shorted input); frequency response of summed output within 1 dB 5-50,000 Hz.

1½-way Butterworth crossover ..... $260
2-way Gaussian crossover..... $200
2-way Butterworth crossover ..... $275
3-way Gaussian crossover..... $220
3-way Butterworth crossover ..... $370
Additional common bass (Butterworth) crossover ... ..... $10
**DB-2.** Power supply..... $78

### DB-5 Tone Control
Provides ±15 dB bass and treble gain; nominal break frequencies 1.5, 3.5, and 7.5 kHz (treble), 50, 150, and 400 Hz (bass); control functions: stereo and reverse, mono and mono left/right, stereo blend and reverse, tone in/out, and low frequency boost; THD 0.0008% over 20-20,000 Hz; noise −91 dB (A weighted); frequency response 10-20,000 Hz ±0.25 dB (tone out), 20-20,000 Hz ±0.5 dB (tone in); channel balance ±0.2 dB (tone out); max. output 8 V at 10,000 ohms; inputs: direct (100,000 ohms), attenuated (274,000 ohms, 11 dB); outputs (two each in parallel): left, right, left minus right, left plus right (inverted, three); output impedance 220 ohms; 8.5" × 3.2" × 7".. $325

## dbx

### 3BX Dynamic Range Expander
Three-band dynamic range expander; expansion control adjustable from none to 1.5 times; yellow and red LEDs comprising graphic display light when compression and expansion, respectively (−20 to +12 dB range); transition level control centers signal on graphic display; has source/tape and pre/post switches; dynamic range 110 dB; input noise 90 dB below 1 V (A wtd.); 0.1% harmonic and 0.15% IM dist.; connector for remote control box; 3¾" H × 17¾" W × 10¼" D..... $650

### 128 Range Enhancer/NR System
Combines dynamic range enhancer and tape noise reduction system; effective noise reduction 30 dB for tape recorders with 45-dB S/N, 40 dB for dbx encoded disks; compression continuously adjustable to infinity; expansion continuously adjustable from 1 to 2; max. output 7 V rms at 1 kHz into 5000 ohms; input noise −90 dB (ref. 1 V); has quad coupler jack; 3¾" H × 11" W × 10¼" D..... $450

### 118 Dynamic Range Enhancer
A compressor/expander that permits listener to restore up to 20 dB of the dynamic range missing from records, tapes, or FM broadcasts; as a classical compressor/expander, allows the recordist to make full dynamic range tapes on moderately priced recorders and obtain 20 dB or more improvement S/N; has peak limiting/unlimiting above user-selected threshold; LED indicator light..... $199

### 120 Series Noise Reduction Systems
Provide 30 dB noise reduction and 10 dB additional headroom when recording with open-reel, cartridge, or cassette recorders; eliminates tape hiss and noise in live recording; prevents additional noise build-up in tape duplicating or recording off-the-air; also decodes dbx encoded discs.

**122.** Two-channel switchable record or play .. $275
**124.** Four-channel switchable record or play.. $399

### 100 Boom Box
Subharmonic synthesizer synthesizes frequencies between 25 and 50 Hz from program material above


60 Hz to recreate signals in bottom octave; can be inserted in tape monitor circuit of receiver or amplifier; synthesize and low-frequency boost controls plus bypass switch; input impedance 47,000 ohms; output level 7 V rms; frequency response 20-20,000 Hz ±1 dB; THD 0.1%; 3¾" H × 7⅛" W × 10¼" D..... $199

## DYNACO

### SE-10 Stereo Octave Equalizer
Provides 12 dB boost or cut at octave intervals from 30-15,000 Hz; 10 separate slider adjustments for each channel; separate level adjust. each channel from −12 dB to +6 dB; response 10-35,000 Hz ±1 dB; 600 ohm outputs standard; distortion at 2 V output; THD 0.04%, IM 0.02%; S/N 85 dB below rated output; IC-regulated power supplies; 4¼" H × 13½" W × 11" D.

Kit..... $249
Assembled ..... $349

## GARRARD

### MRM 101 Music Recovery Module
Impulse noise suppression device with phono preamplifier; electronically detects clicks and pops, reducing output level to 30 dB below program level in 2.7 msec; gradual attenuation (0.5-0.75 msec) to −30 dB level; output gain stage boosts signal voltage to drive aux. inputs of phono preamp; nominal output 300 mV; rated output at 1.0% distortion 2.5 mV; dist. 0.01% (phono preamp), 0.1% (suppression circuitry); channel balance better than 2 dB; S/N 100 dB (phono preamp), 85 dB (suppression circuitry); input impedance 47,000 ohms; includes front-panel LED for suppression circuitry, LED indicator when suppression circuitry is in signal path, and defeat switch for suppression circuitry so unit can be used as phono preamp only; 2¾" H × 15" W × 12" D..... $200

## JVC

### SEA-50 Graphic Equalizer
Ten frequency "tone-zone" control ranges (one per octave) with ±12 dB boost or cut; uses resonant circuits composed of resistors, capacitors and semiconductor inductors, one for each "tone zone" or frequency range band..... $260

### SEA-20G Graphic Equalizer
Seven frequency "tone zone" control ranges (one per 1½ 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) ..... $170

## LUX

### G-11 Stereo Graphic Equalizer
Stereo equalizer with 10 bands per channel (from 28 Hz to 14,000 Hz) to cover 10-100,000 Hz (+0/−1 dB). Max. variable ±12 dB and ±6 dB selectable; S/N better than 110 dB (IHF "A"); gain 0 dB-0.5 dB; output voltage of 1 V (more than 5 V at flat position); THD and IM dist. no greater than 0.005% (20 Hz to 20 kHz, 2 V flat position). Accessories include range selector switch, bypass switch and ac power outlet..... $495

### Laboratory Reference Series

### Luxman 5G12 Stereo Graphic Equalizer
Provides 10 dB boost or cut in each of 12 octave-wide bands centered over 14-28,000 Hz; three-position range switch sets all sliders for boost/cut of 10 dB ±2 dB and has bypass function; broad/sharp response selectable for each octave band; output 1 V, 5 V max.; crosstalk −70 dB; noise 0.018 mV; S/N (IHF A) 115 dB; 4" H × 17.7" W × 16" D... $695

### Luxman 5F70 Stereo Tone Control
Designed to provide precision tonal compensation using "conventional" tone controls rather than a graphic equalizer; uses direct-coupled (dc) tone control amplifier including a Lux-developed dual-monolithic linear IC (DML-IC). Bass and treble controls each have four turnover frequencies: 125, 250, 500, and 1000 Hz for bass; 1000, 2000, 4000, and 8000 Hz for treble. 75-150 Hz notch filter included. Crosstalk 80 dB ±12 dB tonal adjustment at each crossover frequency; frequency re-

sponse 10-100,000 Hz +0/−1 dB with 0.005% THD at 2 V output; input sensitivity 1 V; input impedance 100,000 ohms; output voltage 1 V rated, 4.5 V max.; output impedance 500 ohms; 2¼" H × 17⁷/₁₆" W × 16" D ..... $395

## MXR

### One-Third Octave Equalizer

31 band-per-channel graphic equalizer with frequencies from 20-20,000 Hz set on one-third octaves; ±12 dB boost and cut on all controls; max. input and output levels +18 dBV; input impedance 20,000 ohms; output impedance 300 ohms; input noise −90 dBV from 20-20,000 Hz; max. slew rate 7 V/μsec; THD and IM dist. less than 0.01% at 0 dBV; frequency response 5-60,000 Hz −3 dB; features level controls; front-panel bypass and tape monitor switches; rack mountable ..... $350

### Fifteen Band Graphic Equalizer

15-band-per-channel stereo graphic equalizer with frequencies from 25-16,000 Hz set on alternate one-third octaves; ±12 dB boost and cut on all controls; max. input and output levels +18 dBV; input impedance 20,000 ohms; output impedance 100 ohms; input noise −92 dBV from 20-20,000 Hz; max. slew rate 7 V/μsec; THD 0.02% at 0 dBV; IM dist. 0.01% at 0 dBV; frequency response 5-60,000 Hz −3 dB; features level controls; front-panel bypass and tape monitor switches; rack mountable ..... $325

### Stereo Graphic Equalizer

Two-channel, 10-band graphic equalizer with center frequencies (per channel) at 31, 62, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz; dynamic range 110 dB; control range ±12 dB; gain: unity ±1 dB (controls centered); max. output level: +15 dBm (600 ohms), +22 dBm (unloaded); input impedance 47k; equivalent input noise −95 dBm; frequency response 20-20,000 Hz ±1 dB at 0 dBm; THD 0.05% at 0 dBm (20-20,000 Hz); IM 0.05% at 0 dBm (60/7000 Hz 4:1); 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 ..... $200

## NAKAMICHI

### 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; 2¹/₂" H × 7¹/₂" W × 4" D ..... $110

**PS-100 Power Supply.** Provides ±10 volts dc to operate EC-100 and other Nakamichi BlackBox Series components; powers up to six components ..... $75

## NIKKO

### EQ 1 Graphic Equalizer

Ten bands/channel (±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 switch; LED equalizer in/out switch, LED power on switch. Frequency response 10-50,000 Hz±1 dB; THD 0.006%; S/N 105 dB (IHF "A"); rack mountable; 3¹/₂" H × 19" W × 9" D ..... $280

## ORBAN

### Model 622A Parametric Equalizer

Four stereo bands with continuously variable controls. Frequency response ±0.25 dB, 20-20,000 Hz; gain +12 dB to −00; "Q" range 0.29-3.2; peak equalization range +16 dB to −00; typical notch depth 40 dB; THD 0.025% max.; noise −84 dBm max.; slew rate greater than 6 V/μsec; rise time less than 4 μsec; tuning range (per band) 20-500 Hz, 68-1700 Hz, 240-5850 Hz, 800-20,000 Hz. Features include overload lamp and FET input op amps. 3.5" H × 19" W × 5.2" D.. ..... $479

**622B.** Similar to 622A except two channels... $749

## PHASE LINEAR

### 1000 Noise Reduction System

Combines features of dynamic-range-recovery system with an autocorrelation 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 0.25%; input impedance 70,000 ohms; input level 2 V rms; max. output voltage 8 V rms, better than 3 V rms into 2000 ohms; frequency response 20-20,000 Hz ±1 dB; peak unlimiter 0.5 dB/μsec for +6 dB peak unlimit operation; nominal amplitude attack threshold 0.2 V peak at input to peak unlimiter; downward expander begins at −35 dB; ultimate limit is −41 dB; unlimiter window is 35 dB wide; upper and lower thresholds simultaneously variable by front-panel unlimit threshold control; 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; 5" H × 9¹/₂" W × 11⁴/₅" D ..... $350
Walnut cabinet ..... $30

## PIONEER

### SG-9500 Audio Frequency Equalizer

Stereo graphic octave equalizer for tone control with ten elements: 32, 64, 125, 250, 500, 1000, 2000, 4000, 8000, 16,000 Hz; level control range ±10 dB; frequency response 5-70,000 Hz +0/−1 dB; S/N 90 dB; input impedance 200,000 ohms; output impedance 600 ohms; THD 0.04% at 1 V (20-20,000 Hz); max. output 6 V ..... $300

### RG-1 Dynamic Processor

Combines dynamic range expander and noise reduction system; 0.1% THD at 1 kHz with 14-dB dynamic expansion (1 V output); dynamic expansion 6, 8, 10, 12, and 14 dB; impulse response: 0.5 msec attack time; 80 msec release time; 70,000-ohm input impedance (1 kHz); 300 ohm output impedance (1 kHz); constant loss −3 dB; residual noise 65 μV; S/N 100 dB (1 kHz, 14-dB dynamic expansion) ..... $195

## RG DYNAMICS

### RG Pro-20 Dynamic Processors

Provide up to 20-dB dynamic expansion; continuously variable expansion 4-20 dB; 12-element stereo LED display shows expansion ratios in 4-dB steps for each channel and noise reduction; two-position slop switch; selectable noise reduction; switchable tape output expanded or non-expanded; IM dist. 0.05% max.; THD 0.05% at 1 V (1000 Hz); attack time 600 μsec; hum and noise −86 dB at 1 V; designed for insertion in tape monitor or accessory loop; includes replacement tape monitor function.

**RG Pro-20W.** Dynamic processor with silver extruded panel, black finish case with hand-rubbed solid walnut end plates; 3¹/₂" H × 12" W × 12" D... ..... $395

**RG Pro-20B.** Dynamic processor with black extruded panel, black finish case, standard 19-in rack mount; 3¹/₂" H × 19" W × 12" D ..... $395

**RG Pro-20BW.** Dynamic processor with black extruded panel, black finish case with hand-rubbed solid walnut end plates; 3¹/₂" H × 18" W × 12" D... ..... $410

### RG Pro-16 Dynamic Processors

Provide up to 16 dB dynamic expansion; continuously variable expansion (4-16 dB); 10-element stereo LED display shows expansion ratios in 4-dB steps for each channel as well as noise reduction; two-position slope switch; 0.1% IM max.; 0.08% THD (1 V, 1 kHz); attack time 600 μsec; hum and noise −80 dB (1 V); designed for insertion in tape monitor or accessory loop; includes replacement tape monitor function.

**RG Pro-16W.** Dynamic processor with silver extruded panel, black finish case with hand-rubbed solid walnut end plates; 3¹/₂" H × 18" W × 12" D... ..... $299

**RG Pro-16B.** Dynamic processor with black extruded panel, black finish case, standard 19-in rack mounting; 3¹/₂" H × 19" W × 12" D ..... $299

**RG Pro-16BW.** Dynamic processor with black extruded panel, black case with hand-rubbed solid walnut end plates; 3¹/₂" H × 18" W × 12" D... $314

## ROTEL

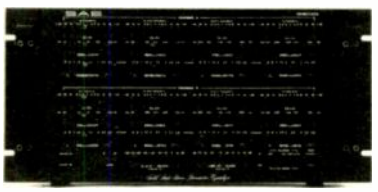
### RE-2000 Stereo Octave Equalizer

Ten octave bands per channel with center frequencies at 32, 63, 125, 250, 500, 1000, 2000, 4000, 8000, and 16,000 Hz ±12 dB; tape dubbing facility; record/play and bypass switches; input sensitivity/impedance 0.775 V/56,000 ohms; hum and noise −100 dB (IHF "A"); frequency response 10-100,000 Hz +0/−1 dB; HD 0.005%; 150 mm H × 485 mm W × 320 mm D. ..... $340

## SAE

### 2800 Parametric Equalizer

Four-band dual-channel parametric equalizer with adjustable bandwidth (0.3-3.5 octaves) and center



frequency (±16 dB) in each control group; has peak overload and tape equalization facilities plus level match controls; THD and IM dist. 0.02%; S/N 95 dB; frequency response 20-20,000 Hz ±0.25 dB; 8³/₄" H × 19" W × 3¹/₂" D ..... $600

**C-6.** Unassembled walnut cabinet ..... $45

### 1800 Parametric Equalizer

Two-band dual-channel parametric equalizer with adjustable bandwidth (0.3-3.6 octaves) and center frequency (±16 dB) in each control group; has peak overload and tape equalization facilities plus level match controls; THD and IM dist. 0.02%; S/N 95 dB; frequency response 20-20,000 Hz ±0.25 dB; 5¹/₄" H × 19" W × 3¹/₂"D ..... $350

**C-4.** Unassembled walnut cabinet ..... $45

### 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; 3¹/₂" H × 19" W × 3¹/₂" D..... $225

### 5000 Impulse Noise Reduction System

Impulse noise reduction system for reducing clicks and pops (impulse noise) on phonograph records; THD and IM dist. 0.1%; S/N 90 dB; frequency response 20-20,000 Hz ±1 dB; insertion loss 1 dB; 2³/₄" H × 10" W × 8" D ..... $225

## SANSUI

### QSD-1 Four-Ch Decoder/Synthesizer

Features three separate QS "Vario-Matrix" decoders; 20 dB separation between adjacent channels, 30 dB across diagonally opposite channels; QS synthesizer for deriving four-channel sound from stereo records, tapes, and FM stereo signals; frequency response 20-30,000 Hz; dist. 0.1% (1000 Hz); 3¹/₂" H × 19" W (rack mount) × 12" D ..... $350

# 13 SIGNAL PROCESSORS

### AX-7 Mixer
Six-input/two-output mixer with reverb; mixes any of three tape inputs with up to four guitars or mics; two special effects loops; tape dubbing; tuner input; switchable reverb, 20-dB attenuators, and pan pots for four low-level inputs; reverb time 0-2.5 sec; frequency response 20-20,000 Hz +0/−0.5 dB; THD less than 0.1%; matte black finish; rack mountable; 4³/₁₆" H × 19" W × 11⁹/₁₆" D..... $300

### RA-700 Reverberation Amplifier
Continuously adjustable reverb time with visual indication; can handle two tape recorders simultaneously; adds echo effects during recording or playback; frequency response 20-30,000 Hz ±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; 4¹⁵/₁₆" H × 11¹/₁₆" W × 10⁷/₁₆" D ... $190

## SHURE

### M615AS Equalizer Analyzer
Ten-octave band equalization analyzer from 32-16,000 Hz; adjusts sound system equalizer filters to desired equalization level with LED indicator; consists of M615 Analyzer, ES615 Analyzer Microphone, microphone cable, swivel adaptor, tilt bracket, test/interconnecting cable, and case; 108-132 V ac, 50/60 Hz ..... $515
**M615.** Analyzer only ..... $421
**ES615.** Microphone only ..... $128

### SR107 Audio Equalizer
Ten-octave audio equalizer; rotary controls for each octave (15-dB boost or cut) at 37, 63, 125, 250, 1000, 2000, 4000, 8000, and 16,000 Hz; 15-dB master level control; LED overload indicator; 20-dB additional adjustable gain; equalizer bypass switch; designed for balanced or unbalanced line input, balanced microphone output, balanced/unbalanced line level output, and unbalanced aux. level output. ..... $250

### 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 ±10%, 50/60 Hz, 3 W; 2³/₄" H × 11³/₄" W × 6" D..... $246
**M677.** Transistorized accessory mixer provides six-channel mixer, 600-ohm output, VU meter, and headphone monitor..... $362

## SONTEC

### HF-230 Stereo Parametric Equalizer
Three-band discrete parametric equalizer with separately-tuned 10-800/100-8000/400-25,000 Hz ranges; infinitely variable slope from 4-14 dB/octave; infinitely variable amplitude ±12 dB in mirror image; switchable upper and lower sections; no transformers, capacitors, or ICs in signal path; usable dynamic range 110 dB; noise 84 dB below 1 V out; THD and IM dist. 0.002% from −30 to 24 dBV; slew rate 200 V/μsec; black anodized rack mount aluminum case; 1³/₄" H × 19" W × 6" D..... $990

## SOUNDCRAFTSMEN

### SP4002 Signal Processor/Preamplifer
See Section 1, Amplifiers, under "Soundcraftsmen" ..... $699

### TG3044-R Third-Octave Equalizer
Designed to control lower frequency resonances; 22 separate controls/channel with 15 controls on ⅓-octave centers ranging from 40-1000 Hz and 6 controls on alternate ⅓-octave centers from 1800-16,000 Hz; 22-dB boost or cut (controls full), 15-dB boost or cut (controls flat); features separate level controls, LEDs for plus and minus balancing of each channel, EQ defeat, lo-shelf controls, separate pushbutton monitoring inputs and outputs; THD 0.01%; S/N 105 dB; input/output 12 V; 5¹/₄" H × 19" W ..... $550

### PE2217R Stereo Preamplifier/Equalizer
See Section 1, Amplifiers, under "Soundcraftsmen" ..... $549

### RP2215-R Octave Graphic Equalizer
PLL 10-band frequency generator operated by computer-controlled coil-winding process to ten filter circuits; visual LED input-to-output monitoring; HD and IM dist. less than 0.01% at 2 V; S/N 114 dB at 10 V out, 100 dB at 2 V out; 20 individual octave controls (±22 dB with octaves full, ±15 dB with octaves flat), total adjustment range 44 dBf; frequency spectrum level control; separate equalized signal zero-gain controls for balancing input to output with +32/−38 dB gain/cut; includes cabinet, environmental test record and computone charts ... ..... $370

### RP2201-R Octave Graphic Equalizer
Ten-band frequency generator with visual LED input-to-output monitor; 20 individual octave controls (±16 dB with octaves full, ±12 dB with octaves flat), total adjustment range 32 dB; frequency spectrum level control; S/N 105 dB below full output; THD 0.01% at 2 V; separate equalized signal zero-gain controls for balancing input to output with +22/−28 dB gain/cut; includes cabinet, environmental test record, and computone charts..... $299

### SE 450 Octave Graphic Equalizer
10-octave stereo graphic equalizer with front-panel EQ defeat, tape monitor, and tape recording selection and full frequency spectrum level controls for each channel; 20 separate octave controls (±15 dB/octave controls full, ±12 dB controls flat), 18-dB adjustment range; S/N 100 dB; THD 0.01%; input/output 10 V; brushed aluminum front panel in black vinyl cabinet; 4¹/₂" H × 18" W × 9¹/₄" D..... $249

## SPECTRO ACOUSTICS

### 210 Ten-Band Stereo Equalizer
Provides 10 bands/channel of equalization with ±15 dB boost or cut in each of the 10 audible octaves (30-15,360 Hz); uses gyrator synthesized inductors; features full line or tape equalization with lockout to prevent program destruction; unity gain controls for each channel or audible adjustments; distortion 0.1% of 1 V with any combination of equalization adjustments, 0.05% of 1 V with equalizer bypassed or set flat; S/N 90 dB below 2 V rms; output impedance 600 ohms; dynamic range: noise floor is over 100 dB below full output; 6" H × 17" W × 7" D ..... $295
**210R.** Rack mount version ..... $295

## SWTP

### EQ-1 Stereo Octave Equalizer
Has nine independent controls/channel; one-octave response per control; provides up to ±12 dB correction; controls for each channel operate independently; designed to be connected between preamp and amplifier or into tape monitor jack or preamp; frequency response 5-50,000 Hz ±1.0 dB; dist. 0.1%; all-metal enclosure with black vinyl-covered top; red-gold finished front panel; operates from 110-120 V, 50-60 Hz.
Kit..... $100

## TECHNICS BY PANASONIC

### SH-9090P Frequency Equalizer
Single-channel octave equalizer with 12 bands covering 10 to 32,000 Hz, 12-dB boost or attenuation at each frequency point; center frequency of each band variable by one octave in either direction; bandwidth ("Q") continuously variable for each band; equalizer in/out for comparisons; frequency response (at 0 dB levels) 20-20,000 Hz +0/−0.5 dB (balanced); 15-30,000 Hz +0/−0.5 dB (unbalanced); THD 0.05%; input impedance 100,000 ohms (balanced), 50,000 ohms (unbalanced); output impedance 20 ohms (balanced), 10 ohms (unbalanced); maximum output voltage +24 dBm (balanced), +20 dBm (unbalanced); master level control continuously variable at −6, 0, +6 dB; 6¹³/₁₆" H × 18²⁹/₃₂" W × 14³/₄" D..... $1000

### SH-9010 Frequency Equalizer
Stereo universal frequency equalizer (Professional Series component); five center frequencies per channel may be moved up or down 1.6 octaves; ±12 dB boost or cut; variable bandwidth of each band; equalizer in/out switch; two pairs of outputs; 0.02% THD; S/N (IHF A) 90 dB, 3³¹/₃₂" H × 19" W × 14¹¹/₃₂" D ..... $500

## WHITE INSTRUMENTS

### Series 4000 Active Equalizers
Based on combination of LC tuned circuits and latest IC op-amps for high linearity and stability; equal Q in both cut and boost conditions; 27 channels on ISO one-third centers over 40-16,000 Hz; continuously variable controls for 10 dB boost or cut; variable low-end roll-off control, 20-160 Hz with 12 dB/octave slope; 20,000 ohm input impedance; 0 dBm recommended operating level; max. output before clipping +18 dBm; noise and hum −90 dBm; 0.2% dist. up to +18 dBm; dual independent outputs, each capable of driving 600-ohm or greater load; accessory socket allows insertion of low-level crossover network for bi-amped systems; equalizers by-pass switch; 3¹/₂" H × 19" W × 9" D.
**4001.** For sound reinforcement; transformer input with floating primary; barrier-type terminal strip for connections; supplied with rack-mounting end pieces and security panel ..... $690
**4002.** For music reproduction; phono jack type connectors; input level control; end pieces with rubber feet for table use ..... $690

### 4100 Stereo Equalizer
Based on combination of LC tuned circuits and latest IC op-amps for high linearity and stability; each channel has 10 bands on ISO octave centers over 31.5-16,000 Hz; continuously variable controls for 10-dB boost or cut; equal Q in both boost and cut conditions; each channel has low-cut control for 12 dB/octave rolloff, 20-160 Hz; front-panel input-level attenuators and overload indicators for each channel; EQ In-Out and Power switches control both channels simultaneously; input impedance greater than 40,000 ohms; recommended operating level 0 dB; +18 dBm max. output before clipping; 100-ohm output impedance; output circuits capable of driving 600-ohm or greater loads; noise and hum −92 dBm; 0.1% dist. up to +18 dBm; accessory socket allows insertion of low-level crossover network for bi-amped systems; 12 or 18 dB/octave crossover networks available for virtually any frequency; supplied with security cover; 115- or 230-V ac, 50 to 60 Hz; 3¹/₂" H × 18¹/₂" W × 6³/₄" D.. $599

### 4220 Passive Equalizer
Nine one-octave filters on ISO centers 63-16,000 Hz based on single-tuned parallel L-C circuits for sound reinforcement and studio applications; designed for Hi-Z circuits; passive and introduces no noise; filter sections are designed for low distortion and no hard clipping at high levels; calibrated front panel controls; includes socket for plug-in crossover network to provide bi-amp output; range 0 to −10 dB; front panel EQ in/out switch bypasses equalization without bypassing crossovers; source impedance less than 1000 ohms; load impedance 10,000 ohms; distortion 0.05%; barrier strip, single and two conductor ¼-in phone jacks on rear panel plus octal accessory socket for bi-amp system; plastic security cover provided; 1³/₄" H × 19" W × 5¹/₂" D..... $199

# 14 ACCESSORIES

## ACE AUDIO

**4000 Subsonic Filter**
Low-frequency filter with four rear-panel connectors providing 18 dB/octave rolloff at 20 Hz or under, −3 dB; IM dist. 0.01% at 1-V output; input impedance 47,000 ohms; output impedance 150 ohms; 8 V max. output; 10,000-ohm min. output load; hum and noise −86 dB; 2¼" H × 6" W × 4⅜" D ..... $89.50
Kit ..... $59.25

## ADCOM

**Discotron**
Eliminates electronic static with dual-emission chambers and damped trigger action ..... $19.95

**Discostat**
Counter-balanced arm designed to reduce static; adjustable height; adhesive weighted base . $19.95

**Discosweep**
Dust-removing mechanism sweeps record or film dust through conductive fibers; can moderately reduce static electricity ..... $12.95

**Discoclean**
Arm with soft fibers and pad removes record dust while record plays; adjustable height; adhesive weighted base ..... $9.95

## AUDIO-KARE

**Quietone**
Anti-static record preservative lubricant ..... $7.95

## AUDIO PULSE

**Model One Digital Time-Delay System**
Ambience simulator using multiple recycling of signal through a digital delay line; initial delays 8 to 94 msec (four chosen in combination for recycling); decay time 0.2 sec to 1.2 sec (switched); echo density 20 msec max (10 msec typical); frequency response 20-40,000 Hz ±½ dB (direct), 20-8,000 Hz ±3 dB (delayed); output noise 75 dB (direct), 65 dB (delayed); THD 0.05% (direct), 1% (delayed) ..... $699.00

**Model Two Digital Time-Delay System**
Recreates multidimensional paths of live sound by electronically duplicating delayed reflected sounds; audio signals encoded digitally and fed into random access memory device at three different stages to recover audio signal; features built-in 25-W/ch integrated amplifier for precise adjustment of secondary channels and bass and treble controls; input and output level controls with LED peak level indicators; long/short delay and direct/defeat function selector; short initial delay 19, 33 and 51 msec, long delay 39, 66, and 103 msec; reverb decay time variable from 0.1-0.6 sec; input sensitivity for 0 dB 50 mV-3 3 V variable at 1000 Hz (low level), 1.2-60 V variable at 1000 Hz (high level); input impedance 47,000 ohms (low level), 470,000 ohms (high level); output 0-1.5 V/16,000 ohms (aux.); output noise from 20-20,000 Hz unweighted −80 dB below rated out (direct), −72 dB below rated out (delayed); bass tone control +2.5/−12.5 dB at 70 Hz, treble tone control +4/−7 dB at 7000 Hz; 3½" H × 15" W × 19½" D ..... $539.00
**AP52.** Speaker system designed for Model Two Digital Time-Delay System ..... $100.00 pr.

## AUDIOSOURCE

**High-Definition Speaker Cable**
25− or 50-ft speaker cables; rated at 13 ohms; composed of eight insulated wires braided together for each lead; 90-degree relationship between positive and negative leads; flat design; available in pairs; 50-ft ..... $50.00
25-ft ..... $25.00

**Ultra-High-Definition Speaker Cable**
UHD speaker cable composed of 60 strands of low-resistance copper, each strand enameled; two conductors are woven at 90-degree angles; each end is pre-tinned, separated by flexible collar, and marked for polarity; dc resistance is typically 0.01 ohm/meter and 0.147 micro Henry's/meter; impedance rating 8.6 ohms; flat cable enclosed in coffee-color vinyl wrap; available in pairs of 16.4-ft and 32.8-ft lengths. UHD 10 (32.8 ft) ..... $65.00
UHD 5 (16.4 ft) ..... 32.50

## AUDIO-TECHNICA

**AT6002 Disc Cleaner**
Double-action 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
**AT-602.** Replacement Kit for AT-6002 ..... $2.95

**AT601C Record Cleaning Kit**
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 ..... $6.95
**AT6008.** Similar to AT6010 except cleaner rotates on moving record; comes with holder, cleaning brush, applicator, fluid (AT608) ..... $12.95
**AT608.** Anti-static record-cleaning fluid ..... $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

**AT620 Super Conductivity Cable Set**
Litz wire construction with double shielding and gold-plated connectors; for low impedance and maximum rejection of r-f interference; set of two .... $29.95

**AT610A Cable Set**
Low-capacitance cables for connecting turntable and amplifier; 4-ft shielded cable with molded pair phono plugs each end; golf-plated connectors and separate ground wire; only one set needed per turntable ..... $7.95

**AT609 Headshell Wire Set**
Replaces original headshell wiring; set of four color-coded connectors made of silver litz wire and gold-plated ..... $6.95

**AT607 Stylus Cleaner**
Cleaning solution dissolves foreign material on stylus without harming known stylus adhesives or record surface; in bottle with stylus brush ..... $3.95

**PDQ Record Cleaning System**
Kit including AT6002 brush, AT6010 cleaner, AT607 stylus cleaner, AT 608 solution ..... $22.95

**AT605 Audio Insulator System**
Vibration-damping feet for use under speakers, turntables or both to prevent acoustic feedback; height individually adjustable; supplied in set of 4, with bubble level ..... $26.95

**AT6005 Pneumatic Tonearm Lift**
Adapts to any tonearm, gently lifts stylus from any point on record; pneumatic action cushions motion; separate lift and control units allow control to be located where most convenient; for turntable platters 1³/₁₆" to 2" high, provides ⁹/₆₄" lift; requires just two ⁵/₁₆"-diameter holes; includes 20" control tube . ..... $29.95

**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

## AUDIOTEX

**Speaker Selector Switch**
Controls up to five pairs of stereo speakers; contains two stereo headphone jacks; barrier-type terminal connectors; constant minimum load circuit with 50 W load resistors protects amplifier, min. impedance 4 ohms. ..... $40.00

**Tape and Input Control Unit**
Stereo switching panel contains input phono pin jacks for amp, two aux. and two tapes, output phono pin jacks for amp and two tape machines, and 5-pin DIN connector for signal processor input and output; permits dubbing in either direction while listening to another input source; equalizer can be switched in and out of circuit as desired; front-mounted controls include aux. 1 and 2, tape monitors 1 and 2, two tape dubs, and processor switch .. ..... $30.00

**LP Cleaning Kit**
Includes aerosol Record Basic for removing lubricants, Record Plus lubricant, cleaning tools and book on record care ..... $11.90

The company also carries a complete line of tape accessories for use with open-reel, cassette, and 8-track equipment.
**30-126.** Kleentape for open-reel recorder heads .... ..... $3.55

# 14 ACCESSORIES

**30-129.** Tape Care Kit, Jr. contains head cleaner, cotton swabs, and cleaning cloth..... $2.70
**30-630.** "Blast-off" tape head cleaner, 3-oz aerosol can..... $2.00
**30-128.** Same except in 6-oz aerosol can..... $2.80
**30-124-1.** Recording head cleaner, 2-oz bottle..... $1.70
**30-124-2.** Recording head lubricant, 2-oz bottle... $1.70
**30-636.** Tape player care kit contains cleaner and head lubricant, two 6-in brushes, 10 plastic pouches to protect tape reels, cassettes, or cartridges..... $4.15

## B.I.C

### FM-10 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, 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; black metal with opaque plastic cover; 4¼" H × 14½" W × 14-¾" D..... $90.00
**FM-8.** Similar to FM-10, except antenna gain −7 dB (narrowband), −14 dB (broadband); for 75-ohm operation, external transformer with coaxial connector required; walnut grain vinyl; 3½" H × 12-⅞" W × 14" D..... $50.00

## DECCA

### Record Brush
Record brush with a million conductive carbon fiber bristles to clean records and remove static.. $16.95

### Record Cleaner
Arm-type "dry" cleaner with 20,000 conductive carbon fiber bristles, ground wire to amplifier for static drain path..... $16.95

### Microbe
Three-way cleaning brush that mounts on cartridge; adds ½-g tracking force; fiber brushes function as stylus protector, stylus cleaner, and record cleaner/static drainer..... $9.95

## DISCWASHER

### D3 Record Cleaning System
System comprises a two-part kit containing special fluid and soft-pile fiber brush. Removes micro-dust, fingerprints, and cigarette smoke. Also eliminates destructive biological growth. Leaves no residue.
Complete kit..... $15.00
Replacement fluid..... $2.25

### 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..... $12.50

### D'Stat II Mat
Very thin fiber turntable mat which polarizes record surface to reduce static during playback ..... $7.95

### Pro-Disc
Dry, microfilm lubricant for treating records; distributes micro-deposition of friction-reducing protection on records, one module of compound treats more than 80 record sides, heat transfer property for air-vent from stylus-play pressure..... $24.00
Refill..... $6.95

### SC-1 Stylus Cleaner
Stylus cleaning brush of calculated density nylon; won't snag cantilevers; mirror magnifies stylus and cartridge for examination; cleaning and magnifying system retracts into walnut handle..... $6.00

### 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..... $20.00

### Smoglifters
Low-resistance, low-inductance speaker cable; capacitance 480 pF/meter; resistance 0.9 $\pi$ per 10 meters; plastic "Y" tip marked + and − with silver-soldered braids; 10-meter cable ..... $32.00
6-meter cable..... $19 00
3-meter cable..... $10 50

### Gold-ens
Gold-plated connector cables: gold flashed connector pins will never corrode or add resistance with age; protective steel strain reliefs; ultra-low capacitance cords; per 1-meter length matched pair. $9 25

### DiscTraker
Damping device; attaches to tonearm head to reduce tonearm/cartridge and record-warp resonance;


attaches to cartridge mounting screws..... $29.00
Mounting kit (for tonearm heads without top-accessible mounting screws)..... $0.75

## DYMEK

### DA5 BCB Directional Antenna
Shielded ferrite-rod directional AM broadcast-band antenna; can be used with any AM tuner or receiver with or without internal antenna; table-top mounting; provides gain and tuning through improved tuner/receiver sensitivity; rotatable and tilting ferrite-rod head; base contains r-f tuned circuits and solid-state preamp,; frequency range 540-1600 kHz medium-wave band; 11" H × 13" W × 9" D; ferrite rod length 12"; head tilt range 53 degrees; rotational range 270 degrees. Kit..... $135.00
Assembled..... $185.00
**DA7.** Same except frequency range 150-300 kHz long-wave plus 540-1600 kHz medium-wave bands. Kit..... $145.00
Assembled..... $200.00

### DA 100 All-Wave
Omnidirectional antenna system in two modules: outdoor, weatherproof head amplifier and 4-ft whip mount; indoor power and control module; response claimed to equal or out-perform 100-ft long-wire antennas; covers 50 kHz to 30 MHz; control module dimensions 5" H × 9" W × 9" D ..... $135.00
Marine version, with fiberglass whip..... $165.00

## EAGLE RESEARCH

### SC48W Cassette Storage Cabinet
Simulated walnut cabinet stores 48 cassette tapes; sliding doors for easy access; programmer included for identification; 17¼" × 10¼" × 6½".... $50.00
**XT36W.** Similar except holds 36 8-track tapes ..... $51.00

### SC30M Cassette Storage Unit
Modular storage for up to 30 cassettes; self-standing; white with black keys, smoked finish with white keys, or brown with beige keys; 10¼" × 5½" × 8⅜"..... $20.00

### XT24 8-Track Storage Unit
Stores 24 8-track tapes in brown plastic cabinet with beige pushbuttons; 13¼" × 11⅝" × 6¼"..... $19.00
**XT20.** Similar except stores 20 8-track tapes; 10⅞" × 11¹⁄₁₆" × 6" ..... $17.50

### SC12A Auto Cassette Storage Unit
Stores 12 cassettes in compact cabinet; fits in mount holder that adjusts to auto; fully portable with programmer in drop door lid; push-button selection..... $15.00

### SC12B Cassette Storage Unit
Cassette storage unit has the look of a book; easy-opening door has index space on inside panel; push-button selection; stores 12 tapes; 5⅛" × 4½" × 8¾"..... $12.50
**SC8B.** Similar except stores eight tapes; 5⅛" × 3¼" × 8¾" ..... $10.00

## EDITALL

### KP-2 Editing Kit
Complete kit includes plastic splicing block, 30 CX-1 EDItabs; for ¼-in audio tape..... $4.50

### KS-2 Editing Kit
For ¼-in tape, includes a 4" × ¾" × 1¼" block, 30 CX-1 EDItabs..... $12.00

### KS-3 Editing Kit
Same as KS-2 except includes larger block (5¾" × 1" × ⅜") with countersunk mounting holes. $14.00

### KS-1 Editing Kit
For cassettes, 0.15 mil audio tape; S-1 aluminum splicing block (5¾" × 1" × ⅜"); 30 CX-3 EDItabs..... $14.00

### EDItab Pre-Cut Splicing Tabs
For splicing open-reel, cartridge, and cassette tapes; eliminates trimming of tape overhang; smooth, tapered edges prevent wow.
**CX-1.** ¼-in tabs for ¼-in tape; for open-reel and cartridge machines; 50 tabs..... $2.50
**CX-2.** ¼-in metallized tabs for ¼-in tape; for automatic reverse and/or automatic stop; metal foil sensing; 50 tabs..... $2.75
**CX-3.** 0.15 mil tabs for cassettes; 60 tabs.... $2.50

## ELECTROMEDIA DESIGN

### Control One Switch
Signal-activated control center for hi-fi component systems; shuts down system ten minutes after signal is lost; less than ten minutes and time-constant is automatically reset; front-panel "on" switch; "off" switch can shut-off entire system; switching relay contact rating 550 W; can handle 1000 W systems; rear plug-in solid state circuitry; matte black and walnut enclosure with satin aluminum panel; 2½" H × 12¾" W × 4¼" D..... $60.00
**Control II-r.** Same as Control I except remote control with three-conductor wire connected between switch and Control I in any part of house .... $90.00

## ELECTRONIC SPECIALISTS

### Speaker Interference Filter
Reduces amplifier pickup of CB and other radio interference through speaker leads.....$9.95 pr.

## FIDELITONE

### Cassette Storage Chest
Solid walnut chest holds up to 36 cassettes; partitioned with two plastic divider trays in each section; when closed, can be used as base for cassette deck ..... $38.98

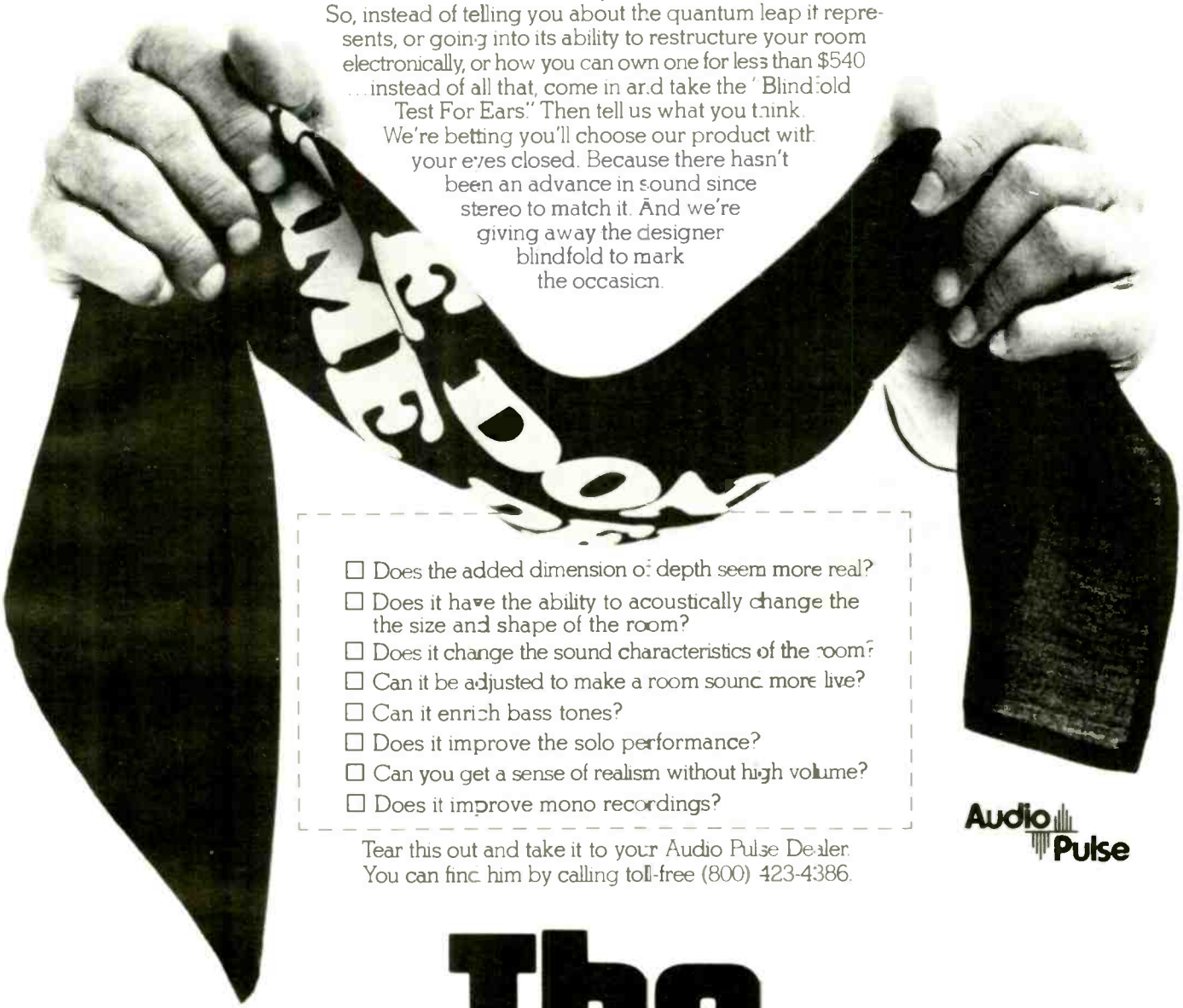
### 3056 Spin 'n Clean
Record-cleaning device to remove dirt and static charge; includes dual velvet brush system and 4-oz

**In 20 Years of Sound There's Been Nothing Like Our Programmable Digital Time Delay Computer.**

When Audio Pulse introduced the first digital time delay, people could hardly believe their ears. The computer system restored a convincing "concert hall" ambience to recorded music. Now that we've introduced the remarkable Model Two, with its built-in amplifier and affordable price, we're even more convinced that you must hear it.

So, instead of telling you about the quantum leap it represents, or going into its ability to restructure your room electronically, or how you can own one for less than $540 ...instead of all that, come in and take the "Blindfold Test For Ears." Then tell us what you think.

We're betting you'll choose our product with your eyes closed. Because there hasn't been an advance in sound since stereo to match it. And we're giving away the designer blindfold to mark the occasion.



- ☐ Does the added dimension of depth seem more real?
- ☐ Does it have the ability to acoustically change the the size and shape of the room?
- ☐ Does it change the sound characteristics of the room?
- ☐ Can it be adjusted to make a room sound more live?
- ☐ Can it enrich bass tones?
- ☐ Does it improve the solo performance?
- ☐ Can you get a sense of realism without high volume?
- ☐ Does it improve mono recordings?

Tear this out and take it to your Audio Pulse Dealer. You can find him by calling toll-free (800) 423-4386.

Audio Pulse

# The Blindfold Test For Ears

Audio Pulse Is Now A Division Of GOULD 4323 Arden Drive, El Monte, California 91731 Phone (213) 442-0123, Telex 677487

CIRCLE NO. 12 ON READER SERVICE CARD

record wash solution; record is inserted between cleaning brush pads on roller grooves and spun..... $19.95

**3052 Record Care Kit**
Contains "Fidelistat" disc jockey, stylus cleaner, and anti-static fluid ..... $11.98

**3087 Hand-Held Record Cleaner**
Hand-held cleaner is rotated as it passes over record grooves..... $7.98

**3045 Record-Cleaning Arm**
Cleaning arm attaches to turntable to clean record while it rotates; includes anti-static fluid..... $6.98

**Record Conditioner & Purifier**
Record brush is designed to pick up small particles from record in conjunction with purifier fluid; cleaning pad has unidirectional pile and is on a contoured cherry-wood handle with a purifier bottle storage compartment ..... $10.95
Purifier fluid refill; 4 oz..... $4.99

**Dust-Cover Wax**
Designed to clean and polish record player dust covers; also for speaker enclosures and other stereo equipment..... $4.99

## FULTON MUSICAL INSTRUMENTS

**Gold Speaker Leads**
Available in five precision lengths with connectors; wide-band; designed to maximize dynamic range, power bandwidth, low distortion, and phase coherency.
Shorty. 57-in ..... $39.00
Short. 14-ft ..... $90.00
Standard. 28-ft ..... $150.00
Long. 42-ft..... $195.00
Extra Long. 57-ft..... $235.00

**Brown Speaker Leads**
Interconnecting leads. 57-in..... $12.00
Short. 14-ft ..... $45.00
Standard. 28-ft ..... $75.00
Long. 42-ft..... $95.00
Extra Long. 57-ft..... $115.00

**Shielded Phono Leads**
Black phono lead designed to complement any preamplifier accessory in or out—from preamp to power amp, preamp to tuner, and to all auxiliary inputs; 57-in..... $23.50

**Phono Head Shell Leads**
Replacement headshell connects cartridge and headshell; available in color-coded set of four with gold-plated connectors ..... $6.95

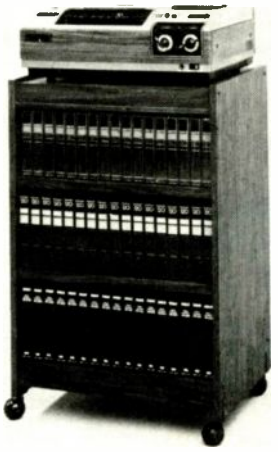
## GUSDORF

**1525 Home Entertainment Etagere**
Etagere consists of four open shelves for components or other equipment and enclosed base cabinet with slide-up door and removable record dividers; shelves include two smoked-tempered safety glass shelves, interior adjustable walnut shelf, and top base shelf; designed to support up to 19-in color TV; four pressure-sensitive retainers conceal connecting wires; brushed chrome support and simulated walnut cabinet and interior shelf; 73" H × 31⅝" W × 15" D..... ..... $140.00

**1470 Component Cabinet**
Cabinet includes three shelves with smoked glass sliding doors and storage shelf with slide-up wood door and removable record dividers for records, tape, or accessories (fourth shelf on top of cabinet can be used for professional turntable of any size); central shelf adjustable in 1⅜-in increments; adjustable feet; access holes with rear plugs; pressure-sensitive retainers for concealing connecting wires; assembly tools furnished; simulated walnut finish; 47½" H × 19½" W × 16⅞" D..... $137.00

**1760 Home Entertainment Center**
All-in-one stereo center; center section has lower compartment with recessed door, removable record dividers, and finished back-panel for storage of records, tapes, or other accessories; left and right speaker sections 26¼" H × 16" W 15" D; center shelf for black and white TV up to 22-in, color TV up to 21-in; steel tie rods; 31⅝" H × 61½" W × 15" D ..... $95.00

**2450 Video Cassette Recorder Cabinet**
Three open shelves hold up to 100 video tapes filed



two deep; top cabinet holds video cassette recorder; on casters; simulated walnut finish; 32" H × 19½" W × 15" D..... $54.00

## HEATH

**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 × 8⅛" D. Kit ..... $199.95

## INNOTECH

**SF-2 Stereo Subsonic Filter**
Active filter to remove harmful subsonics due to record warp, rumble, etc.; 12 db/octave below 22 Hz ..... $90.00

## JFD

**FM Stereo Antennas**
Log periodic antennas designed specifically for FM/FM stereo; features full-wavelength cap-electronic dipole design; high gain and S/N; extra-high front-to-back ratio: pinpoint directivity (10 to 25 degrees narrower than yagi); low VSWR; 300-ohm impedance match (convertible to 75 ohms by means of Color Shield-82 coaxial cable and 300 ohm/75 ohm matching transformer); gold anodized aircraft aluminum construction.
**LPL-FM-10** Ten cell system for far fringe reception. Gain 9.9 dB ±0.6 dB/half wavelength dipole; "E" plane half-power beamwidth 43 degrees; VSWR median 1.5:1, front-to-back ratio median 26 dB; turning radius 97"; 166" long × 112" W..... $65.69
**LPL-FM8A.** Eight cell system for fringe reception. Gain 8.7 dB; half-power bandwidth 46 degrees; VSWR median 1.8:1, front-to-back ratio median 20 dB; turning radius 84"; 121" long × 112" W..... ..... $52.26
**LPL-FM6A.** Six cell system for near fringe reception. Gain 8.3 dB; half-power beamwidth 48 degrees; VSWR median 1.5:1, front-to-back ratio median 18 dB; turning radius 72"; 98" long × 112" W. $36.46
**LPL-FM4A.** Four cell system for suburban/local reception. Gain 6.5 dB; half-power beamwidth 49 degrees; VSWR median 1.6:1, front-to-back ratio median 16.6 dB; turning radius 63"; 63" long × 112" W..... $27.72

## LE-BO

**VCM-1002 Video Cassette Module**
Walnut-finished storage cabinet holds up to 12 VHS, Beta, or V-cord videocassettes in any mix and in or out of cardboard sleeves (slide-out insert accommodates VHS format); features ejector to remove individual cassettes from module; removable index insert; vertically or horizontally stacked; removable smoked plastic interior; 10¾" H × 15¾" W × 6⅞" D..... $46.95
**VCM 1000.** Storage module without cabinet ..... ..... $29.95
**VCM-1001.** Walnut-finished cabinet..... $15.95
Company also manufactures an extensive line of cassette and 8-track carrying cases and storage units.

The company offers a complete line of tape care products for cassettes and 8-track cartridges.
**TA-99.** Cassette maintainer ..... $4.95
**TA-111.** Cartridge maintainer..... $4.95
**TA-24.** Auto tape maintenance kit ..... $3.50
**TA-87.** Cartridge cleaner ..... $2.95
**TA-90.** 8-Track maintenance kit..... $2.95
**TA-92.** 8-Track test cartridge ..... $2.95
**TA-89.** Cassette maintenance kit..... $2.95
**TA-22.** Tape head cleaner and lubricant kit... $2.50
**TA-38.** Cassette head cleaner..... $1.95
**TA-26.** 8-Track head and capstan cleaner..... $1.95
**TA-32.** ½-in splicing tape..... $.79
**TA-30.** ¼-in 8-Track/open-reel splicing tape... $.59
**TA-31.** ⅛-in cassette splicing tape ..... $.59

## LECTRO TECH

**PPI-400 Peak Power Indicator**
Designed to monitor peak audio power across loudspeaker terminals. Power range selectable in 3-dB steps from 6.25 to 800 W continuous for 4, 8, and 16-ohm loads; power level indicators are green, yellow, and red LEDs, calibrated in 8 steps from 0 to −30 dB; input impedance 20,000 ohms min.; frequency response 20-20,000 Hz; max. input power 1250 W continuous into 8 ohms; min. input sensitivity 3.13 mW at 8 ohms; speaker impedance range 2 to 35 ohms..... $130.00

## LUX

**5E24 LED Peak Indicator**
Two-channel peak level indicator; each display consists of 12 LEDs with turn-on points calibrated in 3-dB increments from −30 to +3 dB; metering ranges switchable for preamplifier (0 dB = 1 V and 0 dB = 0.316 V) and amplifier (0 dB = 20 W, 0 dB = 200 W); peak-hold button retains highest level reading until released, while continuing to display instantaneous peaks; ac convenience outlet; rack-mount and simulated wood-grain cabinet available; 2³/₁₆" H × 17¹¹/₁₆" W × 15³/₄" D..... $295.00

**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; 3¹/₃₂" H × 5⁷/₁₆" W × 12" D..... ..... $295.00

## MAGNESONICS

**Modular Tele-Cord Electronic Secretary**
Records telephone communication through hook-up with cassette recorder; includes modular duplex

# MUSIC TO YOUR EYES.

At last, a beautiful setting for your sound: Gusdorf Electronics Furniture.

Now you can take your stereo components and put them together in one handsome grouping, in a unit designed specifically for the job by stereo experts.

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CIRCLE NO. 34 ON READER SERVICE CARD

# GUSDORF.

# 14 ACCESSORIES

adaptor, sub-miniature plug connecting to remote input of recorder, miniature plug connecting to aux. or mic input of recorder, main line plug to telephone and wall, with x and y interchangeable, and plug release plunger ..... $49.95

### Erase-Sure
Erases cassette or 8-track cartridge to −65 dB from 0 reference; includes four "AA" batteries; 2¾" H × 4" W × 3½" D ..... $24.50

### Rapid Rewind
Designed to check and test cassettes before recording for cassette tape tension stabilization, tape binding elimination, and uniform tape pack; winds C-60 cassette in 30 sec; includes four "AA" batteries ..... $24.50

## MARANTZ

### RM-3100 Stack Rack
Can accept up to four Marantz components; equipped with RHA-1 or RHA-2 rack handles and two blank filler panels; walnut side panels; 19" W (EIA standard) ..... $279.95

## MITSUBISHI

### DR-720 Audio Equipment Rack
Mobile vertical five-shelf equipment rack with twin-glass double doors, the upper doors for easy access to most-used controls and the lower doors protect records from dust and for less often used meter-unit controls; lockable front two castors; 65" H × 22⅜" W × 24⅜" D ..... $350.00

### DA-M10 Power-Level Meters
Measures instantaneous power peaks on dual-channel meters. Features logarithmic scales for continuous reading without switching ranges; response independent of frequency or waveshape. Meter section: peak level −50 to +3 dB; output 1 mW-200 W (× 1), 0.1 mW-20 W (× 0.1); frequency response 20-20,000 Hz ±1 dB; input sensitivity 1 V; response times 10 msec; recovery time 0.6 sec (0 to −30 dB). Buffer amplifier section: frequency response 20-20,000 Hz± 0.2 dB; THD 0.01%; S/N 100 dB at 1 V; gain 0 dB (variable); input impedance 50,000 ohms; output impedance less than 600 ohms. Front panel A/B speaker selector and left and right channel level settings; 6¾" H × 16¾" W × 4⅞" D ..... $150.00

## MURA

### CA-88 Muradapter
Converts cassette into 8-track cartridge; cassette loads directly into unit, which then functions as regular 8-track cartridge; includes fast-forward ..... $59.95

### AMP-618 Stereo Power Meter
Measures left/right stereo channels for accurate adjustment of balance control or left/right channel level controls; lighted peak/average response meters with peak/average switch, power range 0.005-100 W; frequency response 20-20,000 Hz; includes plug and screw terminals; black and brushed aluminum finish; 3" H × 7" W × 3" D ..... $23.95

## MXR

### Compander
Can be used with open-reel and cassette decks; dynamic range 100 dB; max. signal level +12 dBV (compress in, expand out); 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% (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 range +6 dB to infinity; compatible with dbx encoded material; bypass switch for cutting unit out of system; black anodized aluminum housing with walnut side panels ..... $129.95

## NAGAOKA by OSAWA

### Rolling Cleaner
Handle-mounted rolling cylinder covered with unique tacky rubber to remove dirt and dust from record surface ..... $15.95

### Vertical Cleaner
Record cleaning device designed like record cutter: moving brush scans across record surface while suspended from stationary arm so hairs on cleaning pad meet record grooves at proper angle ..... $14.95

### HC-8000 Head Cleaner Kit
Two special liquids for cleaning tape heads and pinch rollers, plus ten cotton swabs ..... $6.75
NOTE: Nagaoka by Osawa offers more than 40 different record and tape accessories, including a wide variety of liquid and spray cleaners, brushes, tools, levels, strobe mats, demagnetizers, stylus pressure gauge, etc

## NAKAMICHI

### T-100 Audio Analyzer
Measures and verifies performance of audio equipment; combines functions of an oscillator, a VTVM, a distortion analyzer, and a wow/flutter meter. Oscillator has 21 discrete frequencies from 20 to 20,000 Hz plus wideband pink noise; measures distortion from 0.01% to 3% at 400 Hz; measures level with either peak or average ballistics; measures speed accuracy and wow/flutter (weighted or unweighted); measures noise inputs down to 10 μV. Features non-mechanical bar-graph display and logic-controlled FET switching; 9.5 lbs. Includes carrying case; 3" H × 13½" W × 9½" D ..... $800.00

### 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; 2½" H × 7½" W × 4" D ..... $85.00

### LA-100 Line Amplifier
Corrects mismatches in component impedance and sensitivity (0, +6, +12, and +18 dB gain at line level); frequency response 10-75,000 Hz +0, −0.5 dB; S/N better than 100 dB at 18-dB gain; less than 0.005% THD from 20-20,000 Hz; requires PS-100 Power Supply; 2½" H × 7½" W × 4" D ..... $75.00

### 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; 2½" H × 7½" W × 4" D ..... $75.00

### DM-10 Head Demagnetizer
Slim-line, easy-to-use recorder head demagnetizer, specially designed for company's cassette decks ..... $20.00

## NETRONICS

### Acousti-Mount Turntable Platform
Designed to reduce acoustic feedback caused by sound waves and vibrations from speakers reaching the phono cartridge; consists of four specially designed springs and dampers mounted on ¾-in platform; 4-Hz resonance in both horizontal and vertical planes; said to improve isolation 30-40 dB; 16" × 13½" ..... $15.00
19" × 13¼" ..... $17.50

### Acousti-Mount Speaker Pods
Isolating feet for use under speakers; provides up to 40 dB vibration reduction; set of four for speakers under 45 lbs (two sets required for stereo); speakers over 45 lbs require two extra pods per 15-lb weight. ..... $11.95

## NORTRONICS

### 5600 Quadrasonic Record/Play Heads
Four-track, four-channel, laminated core heads with all-metal hyperbolic face construction.
**5601.** Special record-only head, low impedance, 50 mH, 500 μin gap spacer; for use with vacuum-tube or transistor circuits; no-mount type . $127.30
**5602.** Low impedance, 90 mH, 100 μin gap spacer; for use with vacuum-tube or transistor circuits; no-mount type ..... $127.30
**5603.** Medium impedance, 370 mH, 100 μin gap spacer; for use with vacuum-tube or transistor circuits; no mount type ..... $127.30

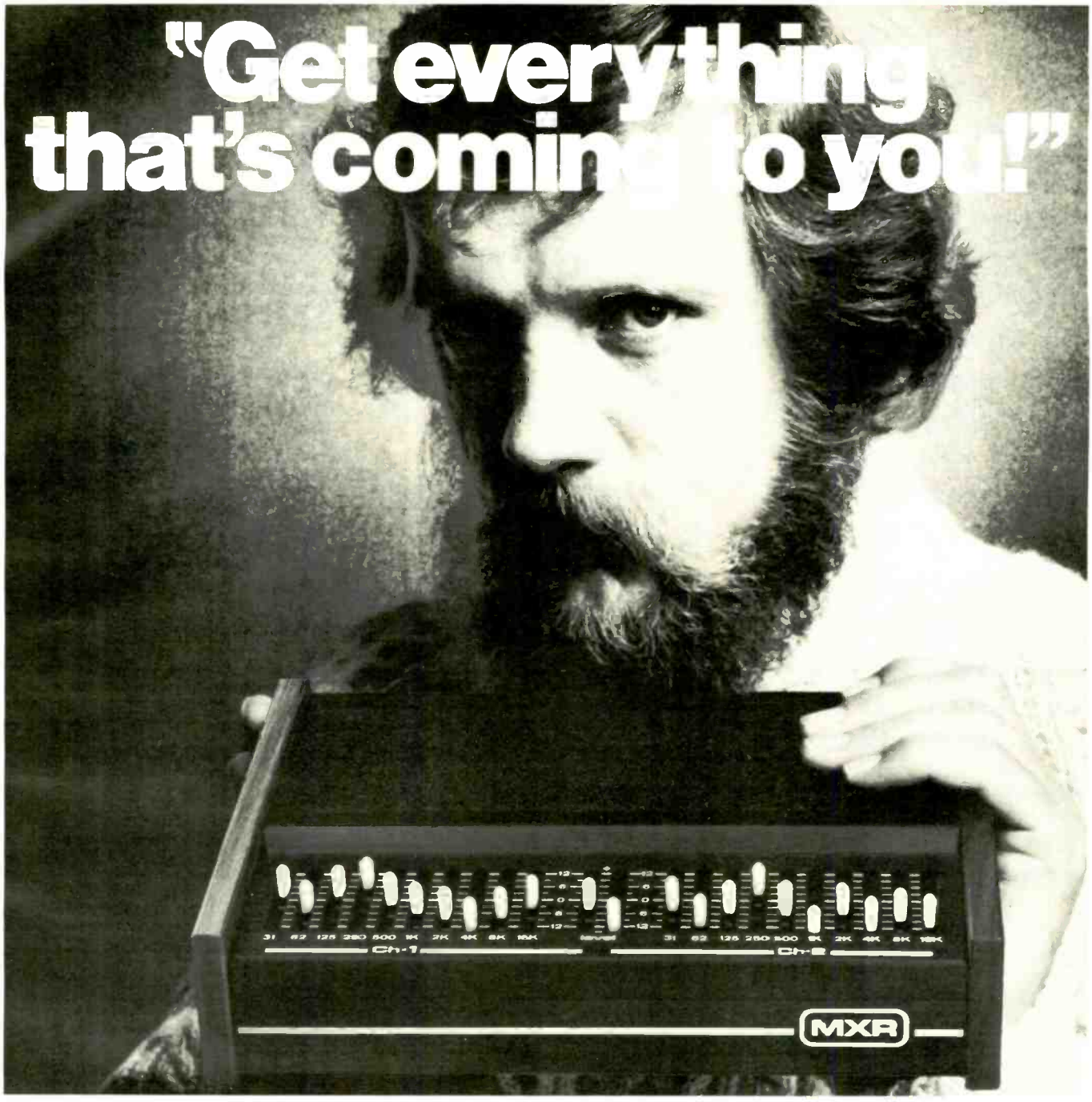
### Head Demagnetizers
**QM202.** Head demagnetizer ..... $19.20
**QM203.** 220-250 V version ..... $21.20
**QM206.** Car-stereo version, 12 V ..... $19.95
**QM280.** Demagnetizer in 8-track cartridge shell with head cleaner ..... $10.00
**QM281.** 12 V version for car use ..... $13.20

### Bulk Erasers
**QM211.** Bulk eraser, 110-120 V ac ..... $33.00
**QM212.** 220-250 V version ..... $39.50
**QM230.** Cassette bulk eraser ..... $26.20

### Tape-Head Cleaners
**QM102.** Liquid, 2 oz bottle ..... $2.60
**QM108.** Same, 8 oz ..... $4.00
**QM122.** Headsaver; 1.7 oz ..... $2.20
**QM103.** Spray cleaner, with 5-in extension nozzle, 3 oz net ..... $3.00
**QM116.** Same, 16 oz net ..... $4.95
**QM104.** Tape head lubricant; 2-oz bottle ..... $2.60
**QM140.** Cassette Head Cleaner; non-abrasive belt in cassette shell ..... $2.70
**QM141.** Cassette Life Extender. Same as QM140, but includes liquid cleaner for heavier dirt .... $3.30
**QM180.** 8-track cartridge version of QM140 . $2.90
**QM181.** 8-track version of QM141 ..... $3.50
**QM182.** 8-track head and capstan cleaner; one end of 8-track cartridge shell cleans heads, other cleans capstan ..... $3.60
**QM505.** Cellular foam swabs, package of 25 . $7.40
**QM506.** Inspection mirror with light ..... $5.10

### Editing Aids
**QM333.** Splicer for ¼-in tape and cassette tapes; built-in blades slit rather than chop tapes; easy-to-obtain blades ..... $14.95
**QM311.** Professional Splicing block with adhesive back; for ¼-in tapes ..... $12.50
**QM312.** Same, for 0.15-in cassette tapes .. $12.50
**QM313.** Same, for ½-in tapes ..... $19.80
**QM521.** Splicing tabs for ¼-in tape; pkg. of 50 ..... $3.20
**QM522.** Cassette splicing tabs; pkg. of 50 .... $3.20
**QM553.** Splicing tabs for ½-in tape; pkg. of 200 ... $24.20
**QM524.** Metal-sensing tabs for ¼-in tape; pkg. of 50 ..... $3.50
(Above tabs also available in packages of 200 and 1000.)
**QM501.** Mylar splicing tape; ½-in × 150-in roll .... $2.60

### Alignment Tapes
**AT120.** ¼-in open-reel; 7.5 ips ..... $41.60
**AT200.** Cassette alignment tape; splice-free, 1st-generation master version; zero reference, DIN frequency response test; supplied with individual response graph; 3 kHz tone for speed and flutter tests ..... $37.00
**AT210.** Quality-duplicated cassette alignment tape ..... $9.60
**AT820.** 8-track cartridge alignment tape; includes channel and program identification; track height; azimuth, frequency response; speaker phasing; tape speed; wow and flutter; switching and crosstalk tests ..... $10.00




**Everything but the effects of poor room acoustics, poor speakers or poor program quality with the MXR Stereo Graphic Equalizer.**

You've got a room that's a lot like a sponge . . . rugs, drapes, overstuffed chairs. And every time you turn on your system, most of the aural glory gets soaked up. Or, you've bought a sound system that has an impressive price but alas, a depressing sound. Your records, tapes and radio sources may sound good to some, but to you, the high fidelity just isn't high enough. And you'd lose if you made a trade.

Get into control with the MXR Stereo Graphic Equalizer. It lets you tailor frequency responses and adjust acoustics to your desires. Control 10 frequencies plus level on each of two channels. Play with the lows, boost the mid-ranges, and soar with the highs. Bring each speaker closer, or move it farther away at the touch of a slide control. The MXR Equalizer's frequency controls not only adjust for the interior of your room, but also for the interior of your system, making a small system sound big . . . a big system sound mammoth.

Hear the entire MXR line at fine audio dealers. Or write MXR Innovations, Inc., 247 N. Goodman St., Rochester, N.Y. 14607. Or call 716-442-5320.
Also distributed in Canada by
White Electronic Development Corporation,
6300 Northam Drive, Mississauga, Ontario.

MXR Consumer Products Group

CIRCLE NO. 52 ON READER SERVICE CARD

# 14 ACCESSORIES

**QM601.** Magview, magnetic tape developer; makes recording visible; easily wipes off after use; aerosol spray, 4-oz net ..... $5.50

### Cassette Storage/Carrying Cases

Book-like cases for storing unboxed cassettes; cassette and hub locked in place when inserted.
**QM408.** For 8 cassettes ..... $5.50
**QM412.** For 12 cassettes ..... $6.20
**QM416.** For 16 cassettes ..... $7.00

## NUCLEAR PRODUCTS

### 3C500 Staticmaster

Soft-hair retractable brush with extra-strength polonium element; designed to neutralize static and remove dust from records ..... $16.95
Replacement cartridge ..... $10.95

## OPTONICA

### SY-800U Audio Component Cabinet

Cabinet with four shelves (three removable) for components, two-shelf record storage cabinet; component shelves 18.4-in W × 13.7-in D; heights vary from 6.1-in to 6.3-in with all shelves in place; record storage compartment for over 200 albums, 2 shelves 13.7-in W, with record dividers; magnetically latched glass door keeps dust from records, leaves album titles visible; in rosewood-vinyl covered particle board; overall dimensions 33.3" H × 37.5" W × 17.5" D ..... $170.00

## ORBAN/PARASOUND

### 418A Stereo Limiter/Compressor

Features program-controlled attack and release times and a high-frequency limiter with user selectable time constants. Input impedance 150,000 ohms balanced (active differential); output impedance under 400 ohms unbalanced; output level range +4 dBm - +12 dBm; frequency response ±0.5 dB, 20-20,000 Hz below high frequency limiter threshold; compression ratio greater than 200:1; interchannel tracking ±1.5 dB max.; channel separation 50 dB; 3.5" H × 19" W × 10" D ..... $795.00

### 111B Dual Reverb

Floating threshold mold eliminates sharp, sudden changes of level; four springs per channel with mu-metal hum shield; max. equalization frequency adjustable from 1.5 to 5.5 kHz; equalization ±12 dB; "Q" range 0.5 - 5.0. Features front-panel left/right bass, treble, and bandwidth controls; in-out attenuator; fixed-floating limiting threshold switch ..... $749.00

### 516 EC Dynamic Sibilance Controller

De-ess function provided by limiter with frequency-selective 18 dB/octave filter in side chain; front-panel threshold control tracks constant limiting; three independent de-essing channels each with in/out switch, threshold control, and illuminated LED when gain reduction occurs; attack time 1 μsec; release time 15 μsec; output noise −80 dBm max.; dynamic range 107 dB; gain below de-essing threshold 0 dB ±1 dB; input impedance 5400 ohms unbalanced; output impedance less than 1 ohm; output clipping point +19 dBm min., +21 dBm typical into 600 ohms from 20-20,000 Hz; on 1¾" × 19" rack panel ..... $629.00

### 245E Stereo Synthesizer

Creates pseudo-stereo from mono recordings. Frequency response 20-20,000 Hz ±1 dB; THD 0.5% max. (+19 dBm, 20-20,000 Hz); noise −78 dBm max. (unweighted, 30-18,000 Hz); gain 9 dB; input impedance 25,000 ohms unbalancing bridging; output impedance 1 ohm unbalanced; 1¾" H × 19" W ..... $349.00

## OSAWA

### Mark IV AC Speaker Stand

Raises speaker ten inches above floor to eliminate bass boominess and tilts speaker slightly backward to improve high-frequency dispersion; holds most home speakers; includes swivel casters; black nylon finish ..... $49.95 pr.
**Universal Vari-Tilt.** Similar to Mark IV except variable tilting to any angle for precise dispersion ..... $74.95 pr.

### Universal Wall Bracket

Holds up to 14-in deep, 30-lb speakers; adjustable padded clamp holds speaker; swivels horizontally and vertically; black nylon finish ..... $39.95 pr.

### DISK-SE22 Turntable Mat

Replacement turntable mat with high density (specific gravity 2.2) to inhibit vibration pickup and add to turntable's flywheel effect for lessened wow and flutter; surface slightly concave to support warped discs; smooth texture for easy cleaning ..... $20.00

## PHASE LINEAR

### 6000 Analogue Delay System Series Two

Touchbutton operation recreates sonic and spatial signatures of various acoustical environments; 15 and 60 μsec initial delays adjustable by clock control to 20 and 90 μsec; five discrete delay paths available; reverb delay time adjustable from 200 μsec 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 ("AA" 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). 5½" H × 19" W × 10" D ..... $599.95

## PIONEER

### MA-62A 6-Channel Mixer

Has input facilities for up to six mikes; each channel has alternative terminal for line or phono inputs; two channels equipped with pan pots, four with location switches; mike attenuators for each channel; low-cut filters for mike input; portable design; two stereo output terminals; pointer-index markers for each of six long-throw faders (plus master volume faders); 5 9/16" H × 15¾" W × 10⅜" D ..... $250.00

### SR-202W Reverb Amplifier

Fully transistorized stereo reverb amplifier with two-tape deck control capability; five-position reverberation mode selector including on/off position; output voltage 330 mV rms at 1000 Hz, MIN reverb time; max. input level 3 V at 1000 Hz, MIN reverb time; HD less than 0.2% at MIN reverb time; frequency response 20-35,000 Hz ±2 dB (reverb time MIN), 20-50,000 Hz ±10 dB (reverb time MAX); S/N 65 dB at rated output; reverb time 0-2.5 sec; 300k ohm input impedance; output jack impedance 10k ohms (tape jack A, B); 5½" H × 13 1/16" W × 10⅜" D ..... $150.00

## POLK AUDIO

### Sound Cable

Transmission-line type speaker cable with 9-ohm characteristic impedance (lamp-cord impedance is typically 100 ohms); braided construction to minimize self-inductance and reactance; multiconductor construction for reduced high-frequency resistance. 20-ft cable pair ..... $49.95

## ROBINS

### 41-043 ROB-O-STAT Ionic 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 ..... $17.49

### "Woodee" Cleaning/Anti-Static System

Eliminates static and removes dust; corduroy velvet pad mounted on oak wood handle; anti-static fluid; cleaner brush #41-060 ..... $11.95

### Tape Recorder Head Demagnetizer

Reduces residual magnetism which causes noise build-up; interchangeable tips accommodate open-reel, cassette, and cartridge equipment; built-in switch; 110-120 V ac #25-011; UL listed ... $9.95

### "Groovie" Automatic Record Cleaner

Automatically removes dirt and dust from record surfaces and grooves while record plays; vertical-bristle brush; rotatable velvet roller. #41-037 ..... $6.99

### "Whiskee" Record Cleaner Kit

Record cleaning kit includes portable record cleaner; stylus cleaner and fluid. #40-061 ... $5.79

### 8-Track Demagnetizer and Cleaner

Cordless cleaner for operation with home or auto units; four-pole rotary magnet; magnetic window; non-abrasive cleaning tape. #46-015 ..... $4.29

### 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. #41-046 ..... $3.99

### 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. #36-008 ..... $3.49

### Stylus Pressure Gauge

Measures phono stylus pressure to within 1/10 g. #41-073 ..... $2.59

### "Disc Cleaner" Record Cleaner

Stops static and removes dust and grime; soft velvet-cushioned cylinder; comes with storage tube and cleaning brush. #41-195 ..... $1.99

### Phono Cartridge Maintenance Kit

Contains stylus microscope, screwdriver, tweezers, stylus fluid and brush; supplied in kit box. #41-039 ..... $7.49

## ROTEL

### RK-100 Rolling Record Cleaner

Removes dirt, dust and fingerprints from records; washable ..... $20.00
**RK-88A.** Arm-type record cleaner ..... $15.00
**RK-77W.** Wet-type record cleaner ..... $7.00

## ROYAL SOUND

### Add 'N Stac

Plastic storage modules for records and tape with dividers for slide-in and lock function on top and bottom; horizontal or vertical arrangement; free-standing on table or shelf or hang-on wall; black, dark blue, orange, brown, white, or red.
**Cassette unit.** Holds 8 cassettes in plastic module ... $2.50
**8-track unit.** Holds up to six 8-track ..... $2.75
**Record unit.** Holds up to 30 records; in black, blue, beige, or white ..... $8.00
**Videocassette Unit.** Holds up to 6 videocassettes .... $7.00
**Carousel.** Revolving unit; stores up to 24 8-tracks or 32 cassettes ..... $9.95

## SANSUI

### MA-7 Meter Amplifier

Rack-mountable monitor system with stereo amplifier and monitor speaker pairs switchable to several inputs; two meters calibrated in VU and watts; tone generator for calibration and trouble-shooting; black

matte finish. Meter panel 4⅜" H × 19" W; speaker panel 4⅜" H × 19" W..... $330.00

**Rack-Mount Accessory Drawers**
Hold headphones, microphones, tapes, styli, cartridge heads, tools, cables, etc.; protective foam insert can be cut to hold individual items; black matte finish.
**RX-150.** 5¹⁵⁄₁₆" H × 19" W × 11⅜" D..... $50.00
**RX-100.** 3¹⁵⁄₁₆" H × 19" W × 11⅜" D..... $40.00

## SONIC RESEARCH

**Pixoff Record Cleaner**
Roller-type, using specially-formulated adhesive tape to remove dust and dirt; pliable surface reaches into grooves; adhesive will not stick to record ..... $17.50

## SONY

**SB-5335 System Selector**
Provisions for multiple connections, noiseless system selection, and comprehensive tape monitoring/tape-to-tape duplication facilities; has connections for three amplifiers, three turntables, three tuners, three aux. sources, three tape recorders, two external adaptors, and five pairs of speakers; master volume control with instant 20-dB muting switch; headphone jack; two-speaker switching capability; operating choices include source reproduction by recording on tape recorders 1, 2, 3, duplication of tape 1 on recorders 2 and 3, or source recording on tape 1 with duplication of tape 2 on tape 3; tape 1 playback with duplication of tape 2 on recorder 3, or duplication of tape 1 on tape 2 with source recording on tape 3, or tape 1 playback with duplication of tape 1 on recorders 2 and 3; 6⅜" H × 16⅞" W × 12¾" D ..... $300.00

## SOUND GUARD

**Total Record Care System**
Includes Record Preservation Kit and Record Clean Kit..... $14.99

**Record Preservation Kit**
Dry lubricant spray; provides record surfaces with a strong protective coating without impairing record fidelity; kit includes special-formulation liquid, buffing pad, pump spray; one kit treats about 30 LP's both sides ..... $7.99
Sound Guard fluid refill; 2 oz ..... $4.99
Professional-size refill; 6 oz ..... $13.50

**Record Cleaner Kit**
For both heavy-duty record cleaning and light touch-up work; kit includes special cleaner formulation, pump spray, cellulose contaminant-extractor pad, velvet cleaning pad, foam grooming pad and instruction booklet..... $7.99
Record cleaner refill; 2 oz..... $4.99

**Record Care Work Pad**
Neoprene, lint-free work surface for record cleaning and preservation without interference from contaminants; high friction coefficient for holding records, fluid receptacle area for excess cleaner, easily washable..... $7.99

**Stylus Care Kit**
Stylus maintenance system includes cleaning solution and all necessary tools: 1-oz bottle of Stylus Cleaner with applicator, dry brush, bulb air blower, and 3× and 10× Bausch and Lomb magnifier; components housed in storage unit..... $9.99

## SUPERSCOPE

**MX-62 Stereo Disc/Microphone Mixer**
For home studio, public address, and disco mixing; six channels (1-4 for mic/line and 5-6 for phono/stereo line); straight-line gain controls; master level control; headphone monitor with separate headphone level control; separate record and amplifier outputs; input impedance 250 ohms (mic), 50k ohms (line and phono); input sensitivity for 0-dB out −73 dB (mic), −24 dB (line), 1.2 mV (phono); load impedance 3300 ohms (line), 8 ohms (monitor); max. output 3.8 V (line), +10 dB (monitor); muting −20 dB; frequency response 15-25,000 Hz ±3 dB (mic), 10-20,000 Hz ±1 dB (line), 30-20,000 Hz ±2 dB (phono); S/N −64 dB (mic), −67 dB (line), and −65 dB (phono); dist. 0.3% mic/line in to out; 4" H × 14½" W × 8¹⁹⁄₃₂" D..... ..... $239.95

## TDK

**CP-36 Cassette Cabinet**
Holds up to 36 cassettes; has three separate drawers fitting 12 cassettes in each ..... $33.95

**HD-01 Head Demagnetizer**
De-gaussing circuit demagnetizes recorder heads by loading cassette formed demagnetizer into cassette recorder and depressing play button; red LED lights up when recorder heads are demagnetized; reduces noise level in low and midrange frequencies and midrange and high frequency distortion and attenuation; battery-powered..... $21.99

**HC-03 Head-Cleaning Kit**
Includes non-toxic aerosol head spray, cleaning probe, and inspection mirror ..... $7.99

## TECHNICS by PANASONIC

**SH-9038 Micom Programmable Unit**
Functions weekly program with four-bit microprocessor, program content for day and time (hours, minutes), FM channel; two 200 W ac outlets; timer with individual second time counter capability, max. indication 59 minutes; reset, start, hold capability; 1²⁵⁄₃₂" H × 18⅜" W × 11¹⁄₃₂" D ..... $550.00

**SH-9020 Peak/Average Meter Unit**
Shorts high-energy peaks of 100μ sec at 0-dB input with peak-hold function switch (switch on, −3 dB peak level drop-off after 25 min.); attack time 330 μsec (average), 100 μsec (peak); recovery time 250 μsec (average, 0 to −20 dB), 750 μsec (peak, 0 to −3 dB); input sensitivity/impedance 20 dBm (7.75 V)/47,000 ohms (source 1, 2), 100 W (8, 6, 4 ohms)/10,000 ohms (source 3). Features peak/average meters (+10 to −50 dB), and three input selectors. 3³¹⁄₃₂" H × 19" W × 14⁹⁄₁₆" D... $360.00

## TRIO CONSOLIDATED

**SpeakerUppers**
Adjustable speaker stands; holds up to 150 lbs. each; lifts speakers seven inches off floor; felt tabs at speaker enclosure support points; walnut stain... ..... $19.95 pr.

## WATERLOO AUDIO

**Platter Pad**
Turntable pad isolates record from turntable noises and vibrations; LP record size..... $29.95

## C. E. WATTS

**Dust Bug Record Cleaner**
An easy-mounting record cleaner which tracks over the grooves; supplied with anti-static agent .. $8.99

**Record Care Equipment**
PR Disc Preener..... $6.49
PA-MK4 Hi-Fi Parastat ..... $17.50
PA-MK11B Manual Parastat ..... $17.50
NF Anti-Static Formula Fluid ..... $3.25
PR/SC Preener-Stylus Cleaner Combo ..... $7.49
HM Humid Mop Cleaner..... $4.99
RWB Record Wash Brush ..... $5.99
RMK Record Maintenance Kit (includes Preener, Dust Bug, and stylus cleaner)..... ..... $16.95
RCK Record Care Kit (includes Manual Parastat, Humid Mop, anti-static fluid, stylus cleaner, and Humid Mop replacement items)..... ..... $26.50
X-Static Anti-Static Device ..... ..... $26.50
ABK Dust Cover Cleaner..... ..... $4.95

# HIGH BIAS.

**These cassette deck manufacturers use SA as their reference for the High($CrO_2$) bias/EQ setting:**

AIWA • AKAI • CENTREX • JVC
KENWOOD • MERITON • NAKAMICHI
OPTONICA • PIONEER • ROYAL SOUND
SANSUI • SHARP • TEAC • TOSHIBA
UHER • YAMAHA

**And are joined by these in recommending SA for use in their decks:**

BANG & OLUFSEN • DUAL • FISHER
HARMAN/KARDON • LAFAYETTE
SANKYO • TANDBERG
AND MANY OTHERS.


There's been a quiet revolution going on in the cassette world. ☐ Leading makers of quality cassette decks have adopted TDK SA as their reference standard tape for "High" ($CrO_2$) bias and equalization settings. Why TDK SA? Because TDK SA's advanced tape formulation and super precision cassette mechanism let them (and you) take full advantage of today's advanced cassette deck technology. ☐ In addition, a growing number of other companies are recommending SA for use with their machines. ☐ So for the ultimate in cassette sound and performance, load your deck with SA and switch to the "High" or "$CrO_2$" bias/EQ settings. You'll consistently get less noise, highest saturation and output levels, lowest distortion and the widest dynamic range to let you get the best performance from any quality machine. ☐ But you needn't believe all this just because we say so. All you have to do is check our references.

TDK®

The machine for your machine.

TDK Electronics Corp., 755 Eastgate Blvd., Garden City, N.Y. 11530.
In Canada: Superior Electronics Industries, Ltd.

CIRCLE NO. 36 ON READER SERVICE CARD

# 15 BLANK TAPE

## AMPEX

### Grand Master II Series Cassettes
High bias; 70 μsec equalization.
- 366-C60. 60 min. ... $3.79
- 366-C90. 90 min. ... $4.79

### Grand Master I Series Cassettes
Normal bias; 120 μsec equalization.
- 365-C60. 60 min. ... $3.29
- 365-C90. 90 min. ... $4.29

### 20/20+ Series Cassettes
- 364-C45. 45 min. ... $2.19
- 364-C60. 60 min. ... $2.49
- 364-C90. 90 min. ... $3.49
- 364-C120. 120 min. ... $4.99

### Plus Series Cassettes
- 371-C45. 45 min. ... $1.29
- 371-C60. 60 min. ... $1.49
- 371-C90. 90 min. ... $2.49
- 371-C120. 120 min. ... $3.79

### Chrome Series Cassettes
- 363-C60. 60 min. ... $2.49
- 363-C90. 90 min. ... $3.49

### Low-Noise Series Cassettes
- 350-C45E. 45 min. ... $.79
- 350-C60E. 60 min. ... $.99
- 350-C90E. 90 min. ... $1.49
- 350-C120E. 120 min. ... $2.79

### Low Noise/High Output Cassettes
- 370-C45. 45 min. ... $1.59
- 370-C-60. 60 min. ... $1.69
- 370-C-90. 90 min. ... $2.49
- 370-C120. 120 min ... $3.39

### Grand Master Series 8-Track Cartridges
- 389-45. 45 min. ... $3.29
- 389-90. 90 min. ... $3.99

### 20/20+ Series Cartridges
- 388-45. 45 min. ... $2.79
- 388-90. 90 min. ... $3.49

### Grand Master Series Open-Reel Tapes
- 356-1511J1. 1200-ft, 7-in reel, 1.5 mil .. $7.99
- 357-1511J1. 1800-ft, 7-in reel, 1.0 mil .. $9.49
- 356-1731J1. 2500-ft, 10½-in NAB reel, 1.5 mil ... $21.49
- 357-1731J1. 3600-ft, 10½-in NAB reel, 1.0 mil ... $24.99

### 20/20+ Series Open-Reel Tapes
- 372-151111. 1200-ft, 7-in reel, 1.5 mil . $6.39
- 373-151111. 1800-ft, 7-in reel, 1.0 mil . $7.69
- 373-173111. 3600-ft, 10½-in NAB reel, 1.0 mil ... $19.99

### Plus Series Open-Reel Tapes
- 332-1511J1. 1200-ft, 7-in reel, 1.5 mil .. $4.89
- 342-1511J1. 1800-ft, 7-in reel, 1.0 mil .. $6.39

### Low Noise Open-Reel Cassettes
- 331-13111E. 600-ft, 5-in reel ... $2.39
- 341-13111E. 900-ft, 5-in reel ... $2.69
- 331-15111E. 1200-ft, 7-in reel ... $3.79
- 341-15111E. 1800-ft, 7-in reel ... $4.69
- 351-15111E. 2400-ft, 7-in reel ... $8.09
- 361-15111E. 3600-ft, 7-in reel ... $8.99

### Plus Series 8-Track Cartridges
- 382-45. 45 min. ... $2.29
- 382-90. 90 min. ... $2.79

### Low-Noise 8-Track Cartridges
- 381-45. 45 min. ... $1.59
- 381-90. 90 min. ... $1.99

### Accessories
- E3220BL. Demagnetizer/head cleaner for cassette players/recorders ... $4.69
- E3228BL. Demagnetizer/head cleaner for 8-track cartridge players/recorders ... $5.59
- ST-1. Cassette storage unit ... $1.49

### High-Performance Cassettes
- C-60. 60 min. ... $1.99
- C-90. 90 min. ... $2.99

## BASF

### Professional I Series Cassettes
Ferric-oxide; normal bias.
- 60 min. ... $3.29
- 90 min. ... $4.79

### Professional II Series Cassettes
Super-chrome; normal bias.
- 60 min. ... $3.49
- 90 min. ... $4.99

### Professional III Series Cassettes
- 60 min. ... $3.49
- 90 min. ... $4.99

### Chromium-Dioxide Cassettes
- 60 min. ... $2.99
- 90 min. ... $4.49
- 120 min. ... $5.99

### Studio Series Cassettes
- 60 min. ... $2.99
- 90 min. ... $4.49
- 120 min. ... $5.99

### Performance Series Cassettes
- 45 min. ... $2.29
- 60 min. ... $2.49
- 90 min. ... $3.59
- 120 min. ... $4.99

### Studio Series Cartridges
- 45 min. ... $3.29
- 64 min. ... $3.59
- 90 min. ... $3.99

### Performance Series Cartridges
- 45 min. ... $2.89
- 64 min. ... $3.19
- 90 min. ... $3.49

### Professional Series Open-Reel Tapes
- 1800-ft, 7-in reel ... $14.99
- 3600-ft, 10½-in reel ... $29.99

### Studio Series Open-Reel Tapes
- 1800-ft, 7-in reel ... $9.99
- 2400-ft, 7-in reel ... $14.99
- 3600-ft, 10½-in reel ... $19.99

### Performance Series Open-Reel Tapes
- 1800-ft, 7-in reel ... $7.49
- 2400-ft, 7-in reel ... $9.99
- 3600-ft, 7-in reel ... $15.99

### Accessories
- 8-Track headcleaner ... $1.99
- Cassette headcleaner ... $1.79
- 7-in plastic storage box ... $2.69
- 7-in plastic reel ... $1.59

## CAPITOL

### Capitol 1 Cassettes
- C-45. 45 min. ... $0.89
- C-60. 60 min. ... $0.99
- C-90. 90 min. ... $1.49
- C120. 120 min. ... $1.99
- C-60. Three pack ... $2.39
- Cassette head cleaner ... $0.99

### "The Music Tape" Cassettes
High-output low-noise with "cushion-aire" backing.
- C-45. 45 min. ... $1.79
- C-60. 60 min. ... $2.19
- C-90. 90 min. ... $3.29

### Chromium-Dioxide Cassettes
- C-60. 60 min. ... $2.79
- C-90. 90 min. ... $4.09

### Capitol 1 8-Track Cartridges
- 45 min. ... $1.79
- 60 min. ... $1.99
- 90 min. ... $2.19
- Four pack 45 min. ... $4.99
- Four pack 60 min. ... $5.49
- Four pack 90 min. ... $5.99
- Cartridge head cleaner ... $1.09

### "The Music Tape" Cartridges
High-output low-noise.
- 8T-45. 45 min. ... $2.29
- 8T-60. 60 min. ... $2.49
- 8T-90. 90 min. ... $2.69

## COLUMBIA

### Cassette Tapes
Each side color-coded for easy identification; high-output/low-noise gamma-ferric oxide; response 20-20,000 Hz; tensilized polyester base; Delrin rollers; constant-tension pressure pad for consistent tape-to-head contact; mounted in three-sided Mu-metal shield to prevent pickup of hum and noise; two re-recording labels included.
- 2CB-80040. 40 min. ... $1.99
- 2CB-80060. 60 min. ... $2.29
- 2CB-80090. 90 min. ... $3.49
- 2CB-80012. 120 min. ... $4.49
- 2CB-800HC. Head cleaner ... $1.49

### 8-Track Tapes with "ConvertaQuad"
Back-lubricated high-output/low-noise gamma-ferric oxide tape; response 20-20,000 Hz; three-point

# 15 BLANK TAPE

Delrin tape suspension; silicone/rubber pinch roller; foam pressure pad; one-piece hub; features "ConvertaQuad" slug.
8CB-80740. 40 min. ..... $2.29
8CB-80750. 50 min. ..... $2.59
8CB-80780. 80 min. ..... $2.99
8CB-80710. 100 min. ..... $3.49
8CB-807HC. Head cleaner ..... $1.49

## DENON

### DX-5 Series
Double-coated FeCr-type music tape; broad bias curve and +8-dB increase in maximum output level; bias setting of 70 μsec; compatible with variety of cassette decks and program sources; ferrichrome position.
FC-46. 46 min ..... $4.50
FC-60. 60 min ..... $5.00
FC-90. 90 min ..... $7.00

### DX-3 Series
Double-coated magnetic FeCr-type tape accommodates all types of cassette decks; normal bias setting; normal position.
NC-46. 46 min ..... $3.50
NC-60. 60 min ..... $4.00
NC-90. 90 min ..... $5.60

## FUJI

### FX-I Audiophile Cassette Series
Pure Ferrix; normal bias; 120 μsec equalization.
C46FX-I. 46 min. ..... $3.90
C60FX-I. 60 min. ..... $4.50
C90FX-I. 90 min. ..... $6.15

### FX-II Audiophile Cassette Series
Beridox; chrome bias; 70 μsec equalization.
C46FX-II. 46 min. ..... $4.10
C60FX-II. 60 min. ..... $4.60
C90FX-II. 90 min. ..... $6.15

### FL Low-Noise Cassettes
C60FL. 60 min. ..... $3.00
C90FL. 90 min. ..... $4.30
C120FL. 120 min. ..... $6.00

### 8-Track Cartridges
8T-45 ..... $3.80
8T-90 ..... $5.00

### FB-151 Audiophile Open-Reel Tapes
Ultra-low-noise, high-output, back-coated master recording tape; for use on tape recorders equipped with bias selector.
1200-ft, 7-in reel ..... $10.20
1800-ft, 7-in reel ..... $13.20
3600-ft, 10½-in metal reel ..... $36.00

### FG High Fidelity Open-Reel Tapes
¼-inch, 1.0-mil mastering tapes.
1200-ft, 7-in reel ..... $7.20
1800-ft, 7-in reel ..... $9.60
3600-ft, 10½-in metal reel ..... $27.00

## IRISH

### Professional-Series Cassettes
In album/mailer.
261-C45. 45 min. ..... $1.95
261-C60. 60 min. ..... $2.15
261-C90. 90 min. ..... $2.95
261-C120. 120 min. ..... $4.10
In flip-top plastic box.
2000-C30. 30 min. ..... $1.40
2000-C60. 60 min. ..... $1.60
2000-C90. 90 min. ..... $2.05
In flip-top plastic box and polybag.
2000-C60B. 60 min. ..... $1.75
2000-C90B. 90 min. ..... $2.20

### Low-Noise, Extended-Range Cassettes
Flip-top plastic box.
262-C60. 60 min. ..... $2.95
262-C90. 90 min. ..... $3.70

### Chromium-Dioxide Cassettes
Flip-top plastic box.
263-C60. 60 min. ..... $5.30
263-C90. 90 min. ..... $7.85

### Cassettes in Polybag
Three C60 ..... $2.95
Two C90 ..... $2.95
Three C90 ..... $3.49

### 8-Track Cartridges
8T45. 45 min. ..... $2.05
8T90. 90 min. ..... $2.35

### 270 Series Tape
Low-noise, high-output, back coated.
276-151. 1200-ft, 7-in reel ..... $11.70
276-173. 2500-ft, 10½-in NAB aluminum reel. ..... $30.35
276-273. 2500-ft, 10½-in NAB aluminum reel. ..... $51.20
277-151. 1800-ft, 7-in reel ..... $15.55
277-173. 3600-ft, 10½-in NAB aluminum reel. ..... $40.60

### 200 Series Professional Tape
Standard, 1½-mil, polyester base, ¼-in.
231-131. 600-ft., 5-in reel ..... $4.75
231-151. 1200-ft., 7-in reel ..... $7.10
Extra-length, 1-mil, polyester base, ¼-in.
241-131. 900-ft., 5-in reel ..... $5.30
241-151. 1800-ft., 7-in reel ..... $8.90
Double-length, ½-mil, polyester tensilized base.
251-151. 2400-ft., 7-in reel ..... $15.50
0.5-mil, polyester tensilized base, ¼-in.
261-151. 3600-ft., 7-in reel ..... $15.90

## MAXELL

### UD-XL-I Epitaxal Cassettes
Normal bias; 120 μsec equalization.
C-60. 60 min. ..... $5.00
C-90. 90 min. ..... $6.95

### UD-XL-II Epitaxal Cassettes
Chrome type; high-level bias; 70 μsec equalization.
C-60. 60 min. ..... $5.00
C-90. 90 min. ..... $6.95

### Ultra-Dynamic Cassettes
Normal bias.
UDC-46. 46 min. ..... $3.50
UDC-60. 60 min. ..... $3.80
UDC-90. 90 min. ..... $5.70
UDC-120. 120 min. ..... $7.50

### Low-Noise Cassettes
Normal bias.
LNC-46. 46 min. ..... $2.30
LNC-60. 60 min. ..... $2.55
LNC-90. 90 min. ..... $3.90
LNC-120. 120 min. ..... $5.20

### Ultra-Dynamic 8-Track
Normal bias.
UD8T-46. 46 min. ..... $4.99
UD8T-90. 90 min. ..... $6.19

### 8-Track Cartridges
Normal bias.
LN8T-46. 46 min. ..... $3.79
LN8T-60. 60 min. ..... $4.19
LN8T-90. 90 min. ..... $4.69

### Low-Noise Tape
1. 5-mil polyester, (normal bias).
LNE-50-60. 1200-ft, 7-in reel ..... $8.25
LNE-50-120. 2500-ft, 10½-in reel. ..... $22.50
1-mil polyester
LNE-35-90. 1800-ft, 7-in reel ..... $9.50
LNE-35-180. 3600-ft, 10½-in reel. ..... $25.75
0.5-mil polyester
LNE-25-120. 2400-ft, 7-in reel ..... $14.00
0.5-mil polyester
LNE-18-180. 3600-ft, 7-in reel ..... $19.40

### Back-Coated Extended-Range
Back-coated, ultra-dynamic, high energy, normal bias type.
1.5-mil polyester
UD-XL 50-60B. 1200-ft, 7-in reel. ..... $11.50
UD-XL 50-120B. 2500-ft, 10½-in reel .. $31.50
1-mil polyester
UD-XL 35-90B. 1800-ft, 7-in reel. ..... $13.25
UD-XL 35-180B. 3600-ft, 10½-in reel .. $35.95

### Extended-Range Tape
Ultra-dynamic, high-energy type, (normal bias).
1.5-mil polyester
UD50-60. 1200-ft, 7-in reel. ..... $9.40
UD50-120. 2500-ft, 10½-in reel ..... $26.00
1-mil polyester
UD35-90. 1800-ft, 7-in reel. ..... $10.95
UD35-180. 3600-ft, 10½-in reel ..... $29.50

## MEMOREX

### Chromium-Dioxide Cassettes
C-45. 45 min. ..... $2.99
C-60. 60 min. ..... $3.19
C-90. 90 min. ..... $4.69

### MRX, Cassettes
Ferric bias, 125 μ sec equalization.
C-30. 30 min. ..... $2.29
C-45. 45 min. ..... $2.49
C-60. 60 min. ..... $2.69
C-90. 90 min. ..... $3.99
C-120. 120 min. ..... $5.39

### 8-Track Cartridges
45 min. ..... $2.99
60 min. ..... $3.29
90 min. ..... $3.59

### "Quantum" Open-Reel Tape
90. 1800-ft, 7-in reel. ..... $8.59
120. 2400-ft, 7-in reel. ..... $11.39
180. 3600-ft, 10½-in reel ..... $21.49

### Low-Noise, High-Output Tape
Standard play, 1.5-mil polyester, ¼-in.
1200-ft, 7-in reel. ..... $5.49
Long-play, 1-mil polyester, ¼-in.
1800-ft, 7-in reel. ..... $6.59
Double-play, tensilized polyester, ¼-in.
2400-ft, 7-in reel. ..... $8.99

### Accessories
Tape recorder care kit ..... $8.99
8-track capstan cleaner ..... $3.19
Cassette cleaning kit ..... $2.79
8-track head cleaner ..... $1.99
Cassette head cleaner ..... $1.99

## NAKAMICHI

### SX Cassette Tapes
Single-coated; ionized cobalt and ferric oxide formulation; high coercivity permits use of $CrO_2$ bias and equalization (70 μs) for 4-5 dB better S/N.
C60 ..... $5.50
C90 ..... $7.20

### EX II Cassette Tapes
Single-coated; ferricobalt formulation; same bias and equalization (120 μs) as EX tape; extra-low noise, high output.
C60 ..... $5.20
C90 ..... $7.00

### EX Cassette Tapes
Specially formulated ferrocrystal tape for improved frequency response, S/N ratio, and dynamic range; special binder for even particle distribution and reduced head wear.
C60 ..... $4.50
C90 ..... $5.80

## SCOTCH

### Metafine Cassettes
Features new formulation of pure metal particles, rather than conventional metal oxides, which produ-

cer claims provides maximum output 5–10 dB greater than typical "chrome" tapes; so far, only one machine (Tandberg TCD 340AM) is capable of handling the tape's extremely high coercivity .... NA

### 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 permanence and three-head recorder equipment.
- 45 min ..... $3.29
- 60 min ..... $3.59
- 90 min ..... $4.69

### Master II Cassettes
Features chrome equivalent modified ferric oxide for use with recorders operating in the $CrO_2$ or 70 μsec equalization position; improved cassette shell for critical mechanical performance and three-head recorder equipment; 3-dB S/N improvement over current $CrO_2$ cassettes; album or "C-Box" packaging (40 cents additional for "C-box" packaging).
- 45 min (album only) ..... $3.89
- 60 min ..... $4.19
- 90 min ..... $5.29

### 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" packaging).
- 45 min (album only) ..... $3.89
- 60 min ..... $4.19
- 90 min ..... $5.29

### 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 ..... $2.39
- 60 min ..... $2.79
- 90 min ..... $3.89
- 120 min ..... $5.35

### Highlander Cassettes
Low-noise oxide formulation for all-purpose cassette use; polyester base.
- 45 min ..... $1.49
- 60 min ..... $1.69
- 90 min ..... $2.49
- 120 min ..... $3.79

### Master 8-Track Cartridges
Features high-output low-noise ferric-oxide coating for high-frequency sensitivity of 6 dB higher, 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 ..... $3.99
- M-8TR-90. 90 min ..... $4.69

### 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 ..... $2.99
- S-8TR-90. 90 min ..... $3.69

### Master Open-Reel Tapes
Features mastering quality tape for critical music applications.
- M7R-1800. 7-in reel, 60 min at 7½ ips, 1.5 mil ..... $9.95
- M7R-2400. 7-in reel, 90 min at 7½ ips, 1.0 mil ..... $12.99
- M10R-3600. 10½-in reel, 120 min at 7½ ips, 1.5 mil ..... $25.99

### 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 . $6.59
- 207. 7-in reel, 90 min at 7½ ips, 1.0 mil . $8.19

### 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..... $3.29
- 7-in reel, 60 min..... $4.89
- 212. 5-in reel, 45 min at 7½ ips, 1.0 mil . $3.79
- 90 min, 7-in reel..... $6.59
- 213. 7-in reel, 120 min at 7½ ips. 0.5 mil tensilized ..... $9.89
- 214. 5-in reel, 90 min at 7½ ips, 0.5 mil tensilized ..... $6.59
- 180 min, 7-in reel..... $13.19

### Highlander Open-Reel Tapes
All-purpose economy tape for vocals.
- 228. 7-in reel, 60 min at 7½ ips, 1.5 mil . $4.39
- 229. 7-in reel, 90 min at 7½ ips, 1.0 mil . $5.99

## SDS

### Private Label Program
High-output heavy-duty tape with heavy-duty matching Norelco box; provided with labels, index cards, and support graphics.
- 60 min ..... $3.49
- 90 min ..... $4.99
- 120 min ..... $5.99

### High Energy Cassette Tape
Low-noise, high-energy cassette tape with 4.5 dB recommended bias current for sensitivity reduction at 6300 Hz in heavy-duty five-screw cassette housing.
- 60 min ..... $3.49
- 90 min ..... $4.99
- 120 min ..... $5.99

## SONY

### Elcasets
Type-I; SLH tape.
- LC-60. 60 min ..... $7.95
- LC-90. 90 min ..... $10.55

Type-II; FeCr tape.
- LC-60. 60 min ..... $10.55
- LC-90. 90 min ..... $12.75

### Ferri-Chrome Cassettes
Normal or FeCr bias; FeCr equalization.
- C-46. 46 min ..... $4.29
- C-60. 60 min ..... $4.79
- C-90. 90 min ..... $5.89

### Chrome Cassettes
High or $CrO_2$ bias; $CrO_2$ or 70 μsec equalization.
- C-60. 60 min ..... $3.79
- C-90. 90 min ..... $5.09

### Hi-Fidelity Cassettes
Normal bias; normal or 120 μsec equalization.
- C-46. 46 min ..... $2.69
- C-60. 60 min ..... $2.99
- C-90. 90 min ..... $3.99
- C-120. 120 min ..... $4.99

### Low-Noise Cassettes
Normal bias; normal or 120 μsec equalization.
- C-30. 30 min ..... $1.79
- C-60. 60 min ..... $1.99
- C-90. 90 min ..... $2.99
- C-120. 120 min ..... $3.99

### Microcassettes
120-min total record/playback time.
- MC-60. 60 min (tape speed 2.4 cm/sec)... $3.69
- MC-120. 120 min (tape speed 1.2 cm/sec) ..... $3.69

## TDK

### SA (Super Avilyn) Cassettes
Features new magnetic particle (Avilyn); high S/N; low distortion; uses $CrO_2$ bias and equalization.
- SA-C60. 60 min ..... $3.69
- SA-C90. 90 min ..... $5.29

### AD (Audua) Cassettes
Normal bias tape with superior performance; added high-end brilliance; broad dynamic range; high output; minimum noise; uses high or normal bias and equalization settings.
- AD-C45. 45 min ..... $2.69
- AD-C60. 60 min ..... $2.89
- AD-C90. 90 min ..... $4.19
- AD-C120. 120 min..... $5.79

### D (Dynamic) Cassettes
Features dynamic performance and durable mechanics; polyester back.
- D-C30. 30 min ..... $1.59
- D-C45. 45 min ..... $1.79
- D-C60. 60 min ..... $1.99
- D-C90. 90 min ..... $2.79
- D-C120. 120 min ..... $3.49
- D-C180. 180 min ..... $4.99

### EC (Endless) Cassettes
Endless-loop design with safety features to prevent accidental reversal; usable in conventional cassette machines; polyester backing; packed in plastic boxes.
- EC 20S. 20 sec ..... $4.19
- EC 30S. 30 sec ..... $4.19
- EC 1. 1 min..... $4.19
- EC 3. 3 min..... $4.29
- EC 6. 6 min..... $4.79
- EC 12. 12 min ..... $5.79

### AD (Audua) 8-Track Cartridges
Full-fidelity 8-track cartridges with gamma ferric oxide; frequency response 20-23,000 Hz; high saturation and output level (MOL); has broad dynamic range; high S/N; minimum distortion.
- 8TR-45AD. 45 min..... $3.79
- 8TR-90AD. 90 min..... $4.89

### D (Dynamic) 8-Track Cartridges
Full-fidelity 8-track cartridges.
- 8TR-45D. 45 min ..... $2.99
- 8TR-90D. 90 min ..... $3.69

### "Audua-L" Open-Reel Tape
High-density ferric-oxide coating for high output, low noise, stability, and durability.
- L-1200. 1200-ft, 7-in low-torque reel..... $7.09
- L-1800. 1800-ft, 7-in reel ..... $8.69
- L-3600P. Plastic reel..... $20.49
- L-3600M. Metal reel..... $24.79

### "Audua-LB" Open-Reel Tape
Back-treated open-reel tape; high bias/equalization.
- LB-1800. 1800-ft, 7-in plastic reel..... $10.69
- LB-3600. 3600-ft, 10½-in NAB metal reel..... $29.19

### S Open-Reel Tape
Open-reel tape with reproduction characteristics of SD cassettes.
- S-1200 ..... $6.39
- S-1800 ..... $7.19
- S-3600P. Plastic reel..... $17.29
- S-3600M. Metal reel ..... $21.59

### HC-1 Head Cleaner
Cassette tape machine head cleaner ..... $1.49

### TA-OI Test Tape
Cassette shell conforms with IEC standards; easy adjustment and setting for optimum record/playback levels and balance between left/right channel levels recorded contents −4 dB at 315 Hz, full track width; 3½-min record time; equalization 3180 μsec + 120 μsec; recording azimuth 90 degrees ±2 min.; level deviation ±0.3 dB; level fluctuation within 0.5 VU; reference level at 0 dB 333 Hz (DIN) ..... $13.99

**NEED MORE INFORMATION?**

**Write direct to the manufacturer or distributor. A list of names and addresses starts on page 9.**

*Continued from page 10*

**SONUS,** Sonic Research, Inc.
*27 Sugar Hollow Rd., Danbury, CT 06810*

**SONY CORP. OF AMERICA**
*9 West 57th St., New York, NY 10019*

**SONY FROM SUPERSCOPE,** Superscope, Inc.
*20525 Nordhoff St., Chatsworth, CA 91311*

**SOUND CONCEPTS INC.**
*P.O. Box 135, Brookline, MA 02146*

**SOUNDCRAFTSMEN**
*1721 Newport Circle, P.O. Box 2361, Santa Ana, CA 92705*

**SOUND GUARD,** Ball Corp.
*345 High St., Muncie, IN*

**SOUND WORKSHOP**
*1324 Motor Parkway, Hauppauge, NY 11787*

**SPARKOMATIC CORP.**
*Milford, PA 18337*

**SPEAKERKIT**
*Box 12, Menomonie, WI 54751*

**SPEAKERLAB**
*735 North Northlake Way, Seattle, WA 98103*

**SPECTRO ACOUSTICS, INC.**
*3200 George Washington Way, Richland, Wa 99352*

**STANTON MAGNETICS, INC.**
*Terminal Dr., Plainview, NY 11803*

**STAX,** American Audioport, Inc.
*1407 North Providence Rd., Columbia, MO 65201*

**STUDER/REVOX**
*1819 Broadway, Nashville, TN 37203*

**SUPEREX ELECTRONICS CORP.**
*151 Ludlow St., Yonkers, NY 10705*

**SUPERSCOPE BY MARANTZ,** Superscope, Inc.
*20525 Nordhoff St., Chatsworth, CA 91311*

**SWTP,** Southwest Technical Product Corp.
*219 West Rhapsody, San Antonio, TX 78216*

**SYNERGISTICS**
*12900 Lake Ave., Suite 109, Lakewood, OH 44107*

**TANDBERG OF AMERICA INC.**
*Labriola Court, Armonk, NY 10504*

**TANNOY,** Tannoy-Ortofon, Inc.
*122 Dupont St., Plainview, NY 11803*

**TDK ELECTRONICS CORP.**
*755 Eastgate Blvd, Garden City, NY 11530*

**TEAC CORP. OF AMERICA**
*7733 Telegraph Rd., Montebello, CA 90640*

**TECHNICS BY PANASONIC,** Matsushita Electric Corp. of America
*One Panasonic Way, Secaucus, NJ 07094*

**THORENS,** Elpa Marketing Industries, Inc.
*Thorens Building, New Hyde Park, NY 11040*

**THRESHOLD CORPORATION**
*1832 Tribute Rd., Suite E, Sacramento, CA 95815*

**TOSHIBA AMERICA, INC.**
*280 Park Avenue, New York, NY 10017*

**TRACER SYSTEMS,** Subs. of EMS, Inc.
*P.O. Box 5301, Knoxville, TN 37818*

**TRIO CONSOLIDATED CORP.**
*2221 East 49th St., Vernon, CA 90058*

**TRUSONIC**
*1122 West Washington Blvd., Montebello, CA 90640*

**ULTRALINEAR,** Div. of Solar Audio Products, Inc.
*3228 East 50th St., Los Angeles, Ca 90058*

**VISONIK OF AMERICA, INC.**
*1177 65th St., Oakland, CA 94608*

**WATERLOO AUDIO SYSTEMS PLANT**
*P.O. Box 20, Waterloo, NE 68069*

**C.E. WATTS,** Elpa Marketing Industries, Inc.
*Thorens Bldg., New Hyde Park, NY 11040*

**WHARFEDALE,** Rank U.S.A., Inc.
*675 Third Ave., New York, NY 10017*

**WHITE INSTRUMENTS, INC.**
*P.O. Box 698, Austin, TX 78767*

**WINDSOR LABORATORY SERIES,** Shuco
*6730 Santa Barbara Ct., Baltimore, MD 21227*

**WINTEC OF AMERICA, INC.**
*860 Tucker Lane, City of Industry, CA 91789*

**YAMAHA INTERNATIONAL CORP.**
*Box 6600, Buena Park, CA 90620*

STEREO DIRECTORY & BUYING GUIDE 1979

## ADVERTISING INDEX

# TRY THE MARANTZ PIVOT TEST. YOUR EARS WILL NEVER KNOW OUR LOUDSPEAKERS MOVED.

In actual test speakers should be placed the same distance apart as you are away from them.

Here's the test. First, visit your Marantz dealer and listen to a pair of Marantz floor standing speakers placed in a normal listening position. Then, with your eyes closed, have the speakers turned until they're facing each other. We're betting you won't be able to hear even a slight change in the sound ...because there won't be any! Unlike conventional speakers that tend to beam certain frequencies in a narrow corridor (so you have to be directly in front of them to hear all the sound), the Marantz speakers disperse all the frequencies over a 180 degree listening pattern. Result: You'll hear the entire sound wherever you are in the room. Take the test at your Marantz dealer now.

25th Anniversary marantz.

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☐ **Convenience in use and storage.**
You shouldn't need a separate shelf, elaborate motions or an act of Congress to clean your records. A comfortable, hand-held instrument that works best on a rotating turntable is ideal.

☐ **Effectiveness against micro-dust.**
Tiny, invisible dust particles hide in delicate record grooves and can be ground into the vinyl. Only a slanted (directional) fiber using special ultra-small fiber tips can scoop up, rather than rearrange, this micro-dust contamination.

☐ **Effectiveness against chemical contamination.**
Fingerprints and vapor-borne oils will deposit into channels of a record groove. Such contamination hides from adhesive rollers and all dry cleaning systems. Only a special fluid plus micro-fibers can safely remove such audible, impacted deposits.

☐ **Total removal of contamination/fluid.**
Capillary action—the lifting of fluid by small fiber surface tension—is totally effective. You want to get contamination off the record, along with any fluid traces.

☐ **Lasting construction.**
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☐ **Ultimate economy.**
The value of a truly fine record cleaner is justified by the cost of replacing your record collection. Fifteen dollars is a small investment in long-term protection.

☑ **All of the above.**

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discwasher, inc. 1407 N. Providence Rd., Columbia, MO 65201

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