

**DOLBY**  
**B-TYPE NOISE**  
**REDUCTION SYSTEM**

# Audio

THE AUTHORITATIVE MAGAZINE ABOUT HIGH FIDELITY • SEPTEMBER 1973 60¢  

**Audio's 1974**  
**Stereo**  
**Directory**



**Right this way**



U.S. Pioneer Electronics Corp.,  
178 Commerce Rd., Carlstadt, New Jersey 07072

AN OPEN LETTER TO EVERYONE WHO HAS EVER BOUGHT  
PIONEER EQUIPMENT -- OR HOPES TO

Many people who are ardent followers of the progress of high fidelity - and Pioneer's advancements, in particular - have asked us why we have limited our involvement in quadraphonic. The answer is quite simple.

By definition, high fidelity means pure, perfect sound reproduction. The number of channels has nothing to do with this state of perfection. Consequently, we have been directing our primary efforts to producing the finest 2-channel high fidelity equipment available. And we are continuing to do so.

During the past two years we have listened with great interest to the comments of consumers and audio dealers throughout the country. There appeared to be a 'wait and see' attitude because of the lack of 4-channel standardization on the part of manufacturers of equipment, records and tape.

However, the choice of a standard quadraphonic system has presently been narrowed down to where 4-channel is a viable, practical and delightful reality.

For this reason we have proceeded with every bit of enthusiasm and know-how at our command. The result is this new line of Pioneer quadraphonic receivers. These are total capability instruments. They embody all the presently known quadraphonic state-of-the-art. And they compare in all respects to the magnificent capabilities of Pioneer stereo instruments to produce the virtually perfect sound reproduction demanded by the audiophile.

If you've waited to buy a 4-channel receiver that could reproduce all quadraphonic reproduction systems - Pioneer has made the waiting worthwhile. We are proud to present to this industry these superb Pioneer "all-in-one" quadraphonic receivers.

Sincerely,

A handwritten signature in blue ink that reads 'Bernard Mitchell'.

Bernard Mitchell  
President





**Four-Channel Level Indicator** — See what you hear. Make instant adjustments with left/right, front/rear level controls.

electronic trigger relay system is used to protect the speakers from DC leakage or overload.

#### **New and exclusive Power Boosting circuit**

When switching from four-channel to two-channel reproduction, power is substantially increased with the new and advanced Power Boosting circuit, as described above. This exclusive circuit is built into both the QX-949 and QX-747 models.

Another plus feature attributable to the Power Boosting circuit is simplified switching from four-channel to two-channel operation. It can be instantly achieved without the usual re-connecting of speaker wires. This, too, is a Pioneer exclusive.

#### **A tuner section the equal of separate components**

The FM tuner section of the QX-949 is truly an engineering accomplishment. It incorporates two dual-gate MOSFET's in the front end, plus three ceramic filters and 6-stage limiters in a monolithic IC in the IF stage. The result is superb sensitivity and selectivity, and excellent signal to noise ratio.

#### **Advanced circuitry includes Dolby adaptor input/output and 4-channel broadcasting multiplex output terminal**

In anticipation of the future use of discrete quadraphonic broadcasting, the QX-949 and QX-747 include a quadraphonic multiplex output terminal. Depending on the system finally approved, all that ever will be required is a simple adaptor unit. And speaking of adaptor units, both the QX-949 and QX-747 highlight an input/output for a Dolby noise reduction adaptor unit.

#### **Unique 4-channel level indicator**

Regardless which quadraphonic

source is in operation, the sound level of each channel can be monitored by viewing the large scope-type level indicator on the top two models. Left and right front/rear controls permit instant adjustment. Indicator sensitivity controls allow for a maximum of -30dB adjustments at any sound level. The level indicator may also be used to view CD-4 channel separation adjustments made with the CD-4 separation controls.

#### **Inputs/Outputs for total versatility**

Pioneer has endowed these models with terminals for a wide range of program sources. The only limitation is your own listening interests and your capability to experiment with sound.

#### **Convenient features increase listening enjoyment**

Along with the total capability of these receivers, Pioneer has incorporated a wide array of additional, meaningful features. All three instruments include: loudness contour, FM muting, an extra wide tuning dial, two sets of bass/treble

controls for front and rear channels, function and mode selector with multi-colored indicator lights. Further refinement is offered with the QX-949's multiplex noise and high/low filters, plus signal strength and center tuning meters in one housing.

Admittedly, these new Pioneer quadraphonic receivers, like fine sports cars or cameras, are not inexpensive. However, they represent the high fidelity industry's most outstanding value. We have built them with the same quality, precision and performance you've come to expect from Pioneer stereo equipment. We offer them to you with the same price and conviction that has always compelled you to say — "Pioneer, the very best."

QX-949 — \$699.95; QX-747 — \$599.95; QX-646 — \$499.95. Prices include walnut cabinets.

U.S. Pioneer Electronics Corp.,  
178 Commerce Road, Carlstadt,  
New Jersey 07072  
West: 13300 S. Estrella, Los Angeles  
90248 / Midwest: 1500 Greenleaf,  
Elk Grove Village, Ill. 60007  
Canada: S. H. Parker Co.

#### **Specifications**

| <b>Amplifier</b>  | <b>QX-949</b>                    | <b>QX-747</b>                    | <b>QX-646</b>                   |
|---|----------------------------------|----------------------------------|---------------------------------|
| 4-ch. RMS power, 8 ohms, 4 channels driven, 20-20KHz    | 40 watts/channel                 | 20 watts/channel                 | 10 watts/channel (1KHz)         |
| 4-ch. IHF   | 240 watts (8Ω)<br>380 watts (4Ω) | 160 watts (8Ω)<br>220 watts (4Ω) | 80 watts (8Ω)<br>108 watts (4Ω) |
| 2-ch. RMS power, 8 ohms, both channels driven, 20-20KHz | 60 watts/channel                 | 40 watts/channel                 | 13 watts/channel (1KHz)         |
| 2-ch. IHF   | 150 watts (8Ω)<br>230 watts (4Ω) | 120 watts (8Ω)<br>170 watts (4Ω) | 40 watts (8Ω)<br>54 watts (4Ω)  |
| THD/IM Distortion                                       | 0.3%<br>(20-20KHz)               | 0.5%<br>(20-20KHz)               | 1%<br>(1KHz)                    |
| <b>FM Tuner</b>   |                                  |                                  |                                 |
| FM Sensitivity (IHF)<br>(the lower the better)          | 1.8uV                            | 1.9uV                            | 2.2uV                           |
| Selectivity<br>(the higher the better)                  | 80dB                             | 60dB                             | 40dB                            |
| Capture Ratio<br>(the lower the better)                 | 1dB                              | 1dB                              | 3dB                             |
| S/N Ratio<br>(the higher the better)                    | 70dB                             | 70dB                             | 65dB                            |
| <b>Inputs</b>   |                                  |                                  |                                 |
| Phono   | 2                                | 1                                | 1                               |
| Tape Monitor  | 2 (4-ch.)<br>2 (2-ch.)           | 1 (4-ch.)<br>1 (2-ch.)           | 1 (4-ch.)<br>1 (2-ch.)          |
| Dolby adaptor input                                     | 1 (4-ch.)                        | 1 (4-ch.)                        | —                               |
| Auxiliary   | 1                                | 1                                | 1                               |
| <b>Outputs</b>  |                                  |                                  |                                 |
| Speakers  | 2 (Front)<br>2 (Rear)            | 1 (Front)<br>2 (Rear)            | 1 (Front)<br>2 (Rear)           |
| Headset   | 1<br>(Front/Rear)                | 1<br>(Front/Rear)                | 1<br>(Front)                    |
| Dolby adaptor output                                    | 1 (4-ch.)                        | 1 (4-ch.)                        | —                               |
| Tape Rec.   | 2 (4-ch.)<br>2 (2-ch.)           | 1 (4-ch.)<br>1 (2-ch.)           | 1 (4-ch.)<br>1 (2-ch.)          |
| 4-ch. MPX output  | 1                                | 1                                | —                               |

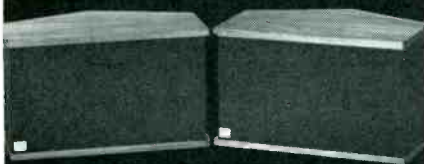
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# Audio

SEPTEMBER, 1973

Vol. 57, No. 9

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Reduction System

*Robert Berkovitz and  
Kenneth Gundry*

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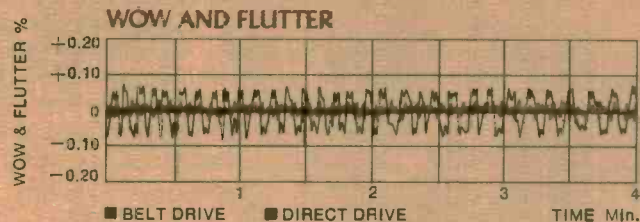
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# The better the turntable the fewer the moving parts. Ours have only one.

The one is the Technics direct drive DC motor. A DC motor to escape wow, flutter and hum. A DC motor that is brushless and spins at  $33\frac{1}{3}$  or 45 rpm so it doesn't have the vibration and noise problems of its faster competitors.



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The SL-1200 includes most of the same features at a more modest price. And the SP-10 is for those who insist on choosing their own tone arm.

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by Panasonic



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# Behind The Scenes

THIS YEAR'S Consumer Electronics Show in Chicago began in typical fashion . . . milling throngs, cocktail parties, press and PR poohbah, and weather hot enough to fry your brains. However, once everything had settled down, it was apparent that quadraphonic sound was once again the dominant theme of the show . . . but this year there was an important variation.

As predicted in this column some months ago, most manufacturers of receivers and related equipment decided to furnish the full spectrum of quadraphonic decoding facilities. Call it what you will . . . a quadraphonic rapprochement, truce, compromise, co-existence . . . the fact is that in addition to decoders for SQ and Regular Matrix (QS), some 29-odd manufacturers incorporated CD-4 demodulators into their receivers. Some companies had just a single unit with CD-4, while others had as many as three or four models in this category. Among companies which opted for this approach were Pioneer, Fisher, Kenwood, Harman-Kardon, Onkyo, Technics by Panasonic, JVC (naturally), Akai, Braun, Nikko, Marantz, Pilot, Sanyo, Sharp, and Claricon.

The audio community being as tight-knit as it is, with very few secrets surviving the rumor mills, it was not too unexpected that the phono cartridge manufacturers would keep pace, and thus there were CD-4 cartridges exhibited by Audio-technica, Pickering/Stanton, Ortofon, Empire, Shure, Elac, Microstatic, and Grace.

Quite obviously, this move to across-the-board quadraphonic facilities was prompted by the decision of the Warner record group to back the CD-4 discrete disc. I think it would be also safe to say that there has been a general hard-nosed reassessment of the quadraphonic market, with a blunt realization that customers and dealers alike have been resisting the purchase of equipment highly susceptible to obsolescence. Now with most receivers able to handle SQ, QS, and CD-4 software, those dealers who have been soft-pedaling quadraphonic sound, no longer have valid grounds for their indifference. Of course, from a strictly consumer viewpoint all these new receivers constitute a "safe" buy . . . but they are at substantially higher prices. Nonetheless, I personally feel that the

extra costs will not be a significant factor. Far more important is that for some time to come, we can expect relative stability in the field of quadraphonic sound, which will enable us to get on with the major task of producing high quality four-channel stereo recordings, whatever the format.

Confronted with the vastness of McCormick Place, you arm yourself with an exhibit directory and wearily wend your way towards your particular target. At the risk of offending some people, it must be said that to an audio man, there is a great deal in McCormick place that is entirely irrelevant. I wish the powers-that-be of the CES would adopt the layout I saw at the Firato Electronic Show in Amsterdam a few years ago where all the audio exhibits were concentrated in one area. Not only was it very easy to cover everything of interest, but the Firato management had provided some quite acceptable sound rooms for demonstrations.

Needless to say, I visited many exhibits and saw most of the handsome new quadraphonic receivers. There were far too many to individually detail in these pages, but it was interesting to note various trends in control facilities on these units. Four-channel "joystick" balance controls were much in evidence, including some of the remote control variety. In addition to the traditional bass and treble controls, mid-range equalization controls are a frequent item. Four VU type meters are used in some units, while others use a visual indication of a four-channel stereo field. These are not to be confused with the real four-channel oscilloscope display units, which are offered as accessory units by several manufacturers. I have the Panasonic 'scope unit and it is not only fascinating to watch, but also is extremely helpful in studying both discrete and matrix quadraphonic fields.

One of the highlights of the show was the new Wollensak 8-track cartridge player with built-in Dolby B noise reduction. As you may know, I have been bugging my friends at Ampex Stereo Tapes to produce some experimental Dolby B cartridges. Some weeks before the show I was sent a Dolbyized cartridge featuring the 5th and 6th Symphonies of Beethoven. At the show, Ampex made available a

demonstration cartridge containing *Also Sprach Zarathustra*, plus some pop items from Frank Chacksfield, Mantovani and Ronnie Aldrich, and a ballad sung by Melissa Manchester. Programs one and two were Dolbyized, while programs three and four repeated the music without Dolby. By using the program selector switch on the 8-track unit, a fair "A/B" comparison can be made. The results are what we have come to expect from the Dolby B system. The particularly intrusive hiss of the 8-track cartridge format is dramatically attenuated, so much so that at average domestic listening levels, hiss is virtually inaudible! To playback my Dolbyized cartridges, I used a Wollensak deck with an external Dolby B box. The Dolby reference level is the same as open reel . . . 185 n W6/m. In production, the Wollensak unit will use the Dolby B IC chip. I understand other manufacturers are contemplating production of similar units. It follows that with the availability of the Dolby chip quadraphonic cartridge units will be forthcoming and will furnish one of the least expensive, good quality sources of four-channel discrete stereo.

One of the most significant developments at the show also involved integrated circuits. Lou Dorren of Quadricast Systems, the pioneer in the discrete four-channel stereo FM broadcasts, announced that his company had a prototype CD-4 IC chip, Model 5022. Said to be the largest linear integrated circuit ever developed, the chip includes phase-lock loop circuitry. Lou's booth, against a wall of McCormick Place, featured a lofty cruciform antenna, since he was demonstrating closed-circuit discrete quadraphonic FM broadcasting. Two of the 5022 chips will be needed in the CD-4 systems, one each for left and right. It is a sure bet that all those manufacturers who had incorporated CD-4 into their receivers were wishing they could have utilized these cheaper and better components in their units. Marketing of the 5022 chip will be handled here and in Japan by Matsushita Electric (Panasonic).

While still roaming around the main floor of McCormick Place, I noted such items as Marantz receivers with not only CD-4 but built-in Dolby B circuitry as well. And they even went as far as having a switch in the rear



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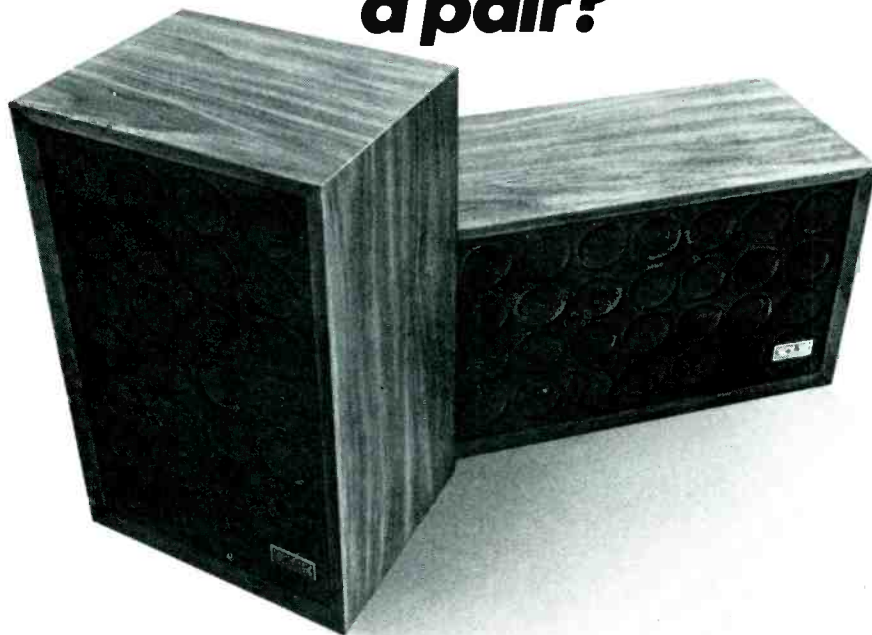
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with virtually any decent amplifier or receiver. They're handsome, featuring a new sculptured acoustically transparent foam grille. Rugged. And best of all, incredibly inexpensive. With the money you save, you might even trade-up to a better turntable or receiver, perhaps even get into quadraphonic sound. The Thirty-Ones can help make it happen. A pair is at your KLH dealer now. Listen to them soon. We're sure you'll agree that no one has ever offered you a better value in sound.

And we've had a lot of practice.

For more technical information, write to KLH Research and Development, 30 Cross Street, Cambridge, Mass. 02139. Or visit your KLH dealer.

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to convert to 25 microsecond de-emphasis, in anticipation of a favorable FCC decision on this matter.

At Panasonic's booth, as I had surmised from my trip to Japan, their high quality, high end Technics line of equipment was placed on the American market. It includes receivers, integrated amplifiers, tuners, and the brushless direct-drive turntables and turntable/arm combinations. I understand the SP-10 turntable, their top of the line model, is being used in increasing numbers in the broadcast industry. Another choice item at Panasonic was an elaborate Dolby cassette deck featuring a special third head to permit monitoring while recording.

At the Teac booth there were a number of upgradings of existing open-reel recorders, as well as a new four-channel stereo unit. In addition to the Model 450 Dolby cassette deck, for which Teac claims a wow and flutter figure of 0.06%, there was a high end Dolby deck with true three-head monitoring facilities.

The lower floor of McCormick Place, known as the "Ghetto," lived, at least in part, up to its name. There was the damndest collection of knick-knackery you can imagine, from dolls to cuckoo clocks, record racks, grille cloth in the wildest patterns, etc. But interspersed among all this were some interesting items. For example, one nervy guy, taking a cue from what is increasingly a practice in magazines and in radio commercials, was actually demonstrating his speaker, a columnar affair known as "Equasound," against the ESS Heil speaker and the JBL Century. As is usual in this place, live demos are really a lost cause because of the high noise levels. Nonetheless, he A/B flipped between the units. Under these circumstances, no really valid conclusions could be drawn, but on this superficial level he didn't fare too badly.

In another booth, the very sophisticated Ohm speakers were being demonstrated. This is radically different from conventional speakers, with a very steeply-angled titanium/aluminum cone facing down into an enclosure. A heavy magnet is at the apex of the speaker. The company takes the position that loudspeakers cannot be made to act like a piston and instead espouses a wave transmission line, the principle of the Ohm speaker. This is said to have low impulse distortion and near zero time delay distortion. Again, it was nearly impossible under the circumstances to have any meaningful

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## Separation saved our marriage thanks to Marantz speakers.

"Where's the flute Henry?" my wife complained constantly. I was about ready to leave her. Then we saw a Marantz dealer. He told us that separation of sound is a true test of a speaker system. He suggested we put Marantz and other popular speakers to the test by listening to a familiar recording so we'd be able to hear for ourselves that it's the speaker and not the recording that makes the difference. Oh, what a difference Marantz made! What we thought were two oboes were clearly an oboe and a flute. And that barbershop quartet...well, they're really a quintet.

The proof is in the listening. And that's where Marantz design concepts come into play. The transducers in Marantz speaker systems are engineered to handle an abundance of continuous power, so you get distortion-free

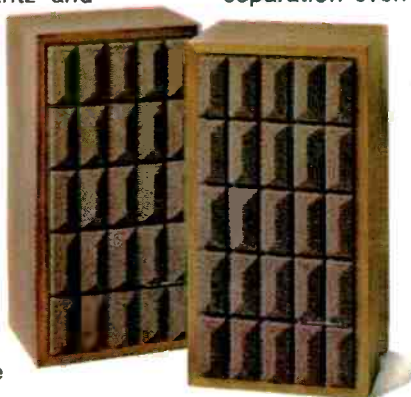
sounds that are as pleasing as a nibble on the ear.

We bought the Marantz Imperial 5G Two Way Speaker for just \$99. Perfect for our budget and it delivers fine sound separation even with minimum power equipment. And there are five other quality Marantz speaker models starting as low as \$59 and all are available with the new Marantz acoustically transparent foam grill.

Whatever your power and budget requirements, keep this in mind. Marantz speaker systems are built by the people who make the most respected stereo and 4-channel equipment in the world.

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# PACESETTING VALUES

from **Dokorder**

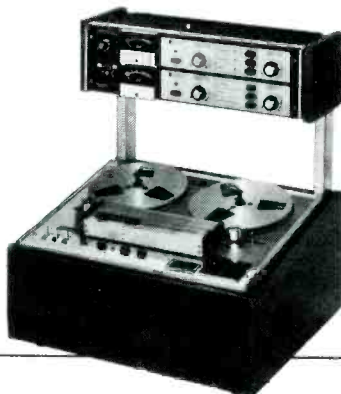
## 7140

The only 4-channel/2-channel tape deck with built-in circuitry for multi-sync recording for under \$500. Other features include 3-motor transport; electronic echo/SOS/SWS; bias selector. Exciting possibilities for musicians, composers, creative tape experimentalists.



## 9100

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## 7500

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audition. Things were not helped by monotonous percussion recording that revealed very little of the basic sound of the unit. These folks really should have used a suite in a nearby hotel to demonstrate this unusual speaker. One would have to live with it a while and A/B it against others in familiar surroundings. Perhaps we can arrange something in the future.

Speaking of nearby hotels, this is where much of the real audio action was taking place. Crown was showing a number of new items, hardly the least of which was their blockbuster M600 amplifier. How about 600 watts at 8 ohms continuous power? How about 1200 watts at 2.5 ohms, or a mere 2000 watts when specially strapped? This is a mono brute that uses two cooling fans. Then there is a companion unit to their IC-150 pre-amp, an output control center. This reads, via two big meters, the peak and average output levels, has a peak holding device which operates from 1/2 second to indefinite, has switching facilities to operate three pairs of speakers simultaneously, and other assorted goodies.

At the Phase Linear room, a most interesting pre-amp, the Model 4000, was being demonstrated. It has an updated version of the "compandor" circuit which is quite effective . . . they call it a "peak unlimiter" . . . and a "downward expander," rather awkward terminology. There is also an "autocorrelator," an "after the fact" noise reduction circuit, which in essence uses a level-sensitive, voltage-controlled dynamic filter. Add an active equalizer for boost below 50 Hz and above 7 kHz, plus unusually flexible tone controls and this is quite a package, yours for \$599.

The ESS Heil speaker added another dimension to its present configuration. The original speaker was the Heil unit operating from about 700 Hz upwards with a conventional dynamic woofer from that point downwards. In their hotel demonstration room, there was added to the top Heil unit, a virtually hand-built bass section prototype, using the same Heil principle. The bass Heil unit was mounted in a fairly large open-backed baffle. In the little I heard, under less than ideal conditions, the overall sound was impressive in its clean delineation, but I would have liked a bit more weight and solidity to the bass end.

There were other audio goodies spotted here and there around the show, and I wish I could cover them too, but I have had to concentrate on what in my opinion are the most newsworthy items.



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EVERY YEAR since 1958 AUDIO has presented a Product Preview Directory, giving specifications and photos for as many high fidelity products as is possible with the space allotted. In 1965, the tabular presentation was adopted in order to facilitate comparisons of the various figures. It should be noted that these figures are manufacturer's specifications, rather than the results of our tests, since it is impossible to test the more than 1000 products listed in such a short time span. However, it has been our experience that performance is generally as specified, though methods of test and measurement do differ from maker to maker.

For purposes of clarity, letter codes are employed in some sections, usually to show the speeds at which a unit will

operate. Other uses of letter codes are (B) for basic amp with the model number; (K) with a price for kit, and (D) for Dolbyized with a recorder's price. In addition, we have tried to note under the model number when a unit is four channel, listing the type of system used in the Special Features column.

Amplifier power ratings are again listed in rms or continuous watts, at 8 ohms, both channels driven—or in the case of quadraphonic amps, with all channels driven.

For more information on any product, or on any product which is not listed because of our space limitations, the reader is invited to write to the manufacturer at the address listed below.

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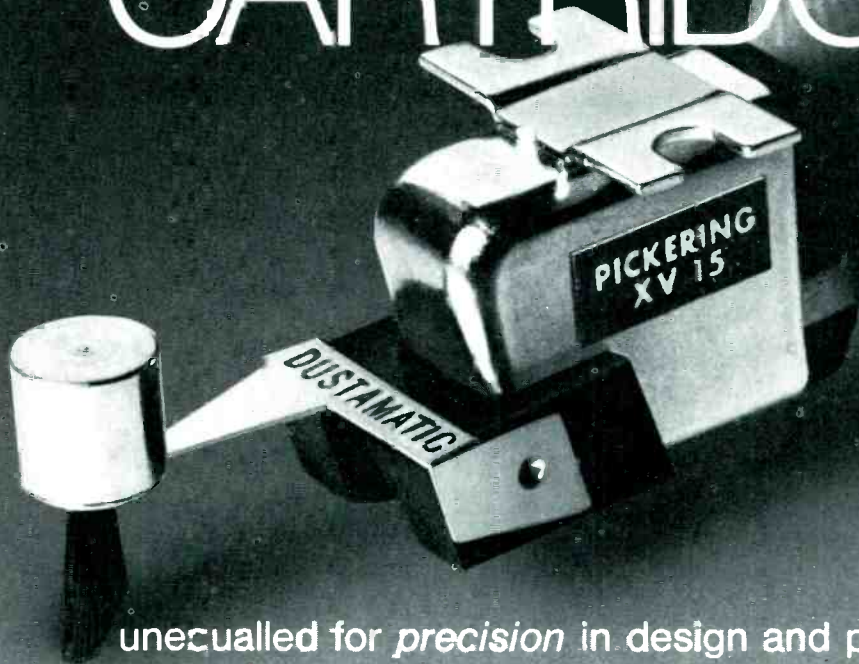
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# Dolby B-Type Noise Reduction System

Robert Berkovitz and Kenneth Gundry\*

**A**N UNSATISFACTORY signal-to-noise ratio has remained the major obstacle to attaining an adequate level of performance from consumer media for music reproduction. This is especially true of the music-cassette, because of its slow tape speed and narrow track width, but it is also true of stereo FM broadcasting and the phonograph record. Although hopes were raised in recent years that further development of magnetic tape would eliminate its inherent noise as a problem, these hopes have been frustrated by the relatively modest gains achieved, and by studies which indicate that the available signal-to-noise ratio of present-day tapes is very near the maximum value imposed by theory.

It is therefore not surprising that numerous attempts have been made to devise methods of noise reduction satisfactory for professional and consumer use. However, almost all of the methods proposed have had unacceptable drawbacks.

The effectiveness of single-ended (non-complementary) systems, for example, which are designed to be used only during playback, extends only as far as the listener's willingness to sacrifice musical information. In principle, all playback-only systems depend upon the idea that the signal and the objectionable noise occupy separate domains; if this is correct, then the problem of noise reduction is one of defining the boundary between the domains, in terms of frequency and/or level, and designing a circuit to suppress everything on the "noise" side of the boundary. However, if the noise spectrum of ferric oxide cassette tape is taken as an example (see Fig. 1), it is seen that the noise, when passed through a standard DIN weighting network simulating the ear's sensitivity, remains considerable in the 1-4 kHz range. Since this range includes many of the lower harmonics and upper fundamental tones in music, it is not possible to suppress it, even at low listening levels, without serious loss of information. On the other hand, the noise within this range is so disturbing that if it is not reduced by such a circuit, the amount of subjective improvement obtained is minimal.

Complementary methods, i.e., those which require some signal processing or encoding during both recording and playback, offer greater promise, but can also present difficulties when put into practice. Pre- and de-emphasis schemes, for example, in which high frequencies are increased during recording and decreased by the same amount during playback, are only of limited value. Even in FM broadcasting, where such standardized pre-emphasis has been employed for many years, the usefulness of its continued application is in doubt. The primary problem is that modern microphones and recording equipment now routinely reproduce high frequencies at amplitudes so high that they were considered unlikely when current FM standards were set. Broadcasters are now forced to use limiters to prevent overmodulation, if they also wish to maintain reasonable levels at middle and low frequencies. In magnetic tape recording, pre-emphasis is difficult to use because tape saturation occurs at lower levels at high frequencies. Since high-frequency signals already present problems in cassette recording because of their short wavelength, added pre-emphasis would complicate a task which is already difficult.

The compandor type of noise reduction system, in which the dynamic range of the signal is compressed during recording and expanded again during playback, offers more promise. However, a simple compandor, even if precise in its action, also presents problems. In recordings and broadcasting, one of the most serious drawbacks of the compandor is the danger of signal overshoot, which can result in distortion or overmodulation of a transmitter.

An even more serious problem of compandors, from the listener's point of view, is noise modulation. When a conventional full-band compandor is used, low-level passages are recorded at a level higher than normal. They are then played back at reduced level, restoring correct signal dynamics and reducing noise at the same time (see Fig. 2). There can be no noise reduction effect during high-level passages, because this would require increasing the level of such passages during recording, resulting in overload. The simple compandor therefore requires that one assume that noise is not objectionable when the signal level is high. However, this is not always the case. A high-level bass drum beat, for example, does not mask high-frequency tape hiss; as a result the drum and other instruments introduce noise modulation during playback—each note is accompanied by a "swish" as the noise level rises for the duration of the note. While it is not audible with all types of program material, noise modulation limits the usefulness of the compandor considerably.

The extreme diversity of available source material and the high quality of present-day master recordings are the factors which really determine the conditions to be met by a satisfactory noise reduction system for home use. It must be remembered that many home listeners own playback equipment with very low distortion and wide frequency range, disclosing audible effects which might have passed unnoticed

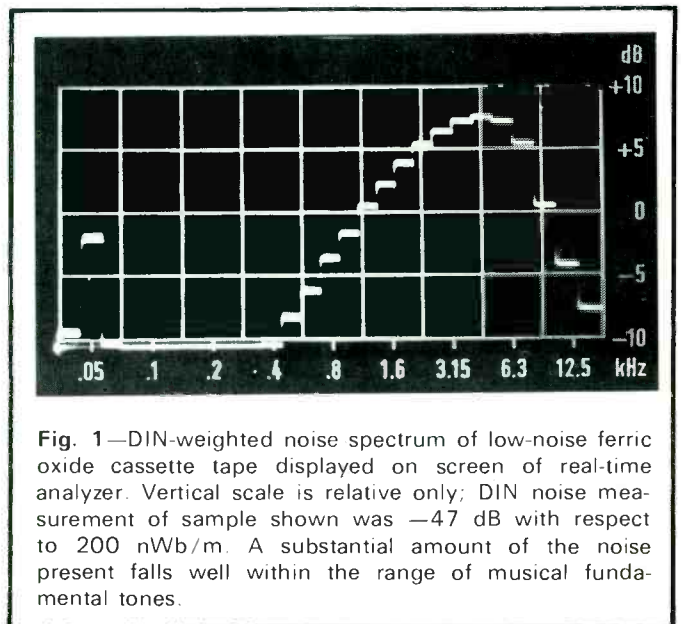


Fig. 1—DIN-weighted noise spectrum of low-noise ferric oxide cassette tape displayed on screen of real-time analyzer. Vertical scale is relative only; DIN noise measurement of sample shown was  $-47$  dB with respect to  $200$  nWb/m. A substantial amount of the noise present falls well within the range of musical fundamental tones.

\*Dolby Laboratories, Inc.



in earlier times. Therefore, it is especially important that the program be recovered accurately after noise reduction, without addition of any audible sound. For the listener's sake accuracy of recovery and effectiveness of the system should not require adjustment of system parameters to match various kinds of program material. At the same time, the

size and cost of the system should introduce no obstacle to its use. Furthermore, as a practical matter for the industry, it is clear that the system should require no modification of present professional practice in master recording, duplicating, or broadcasting.

(To Be Continued)

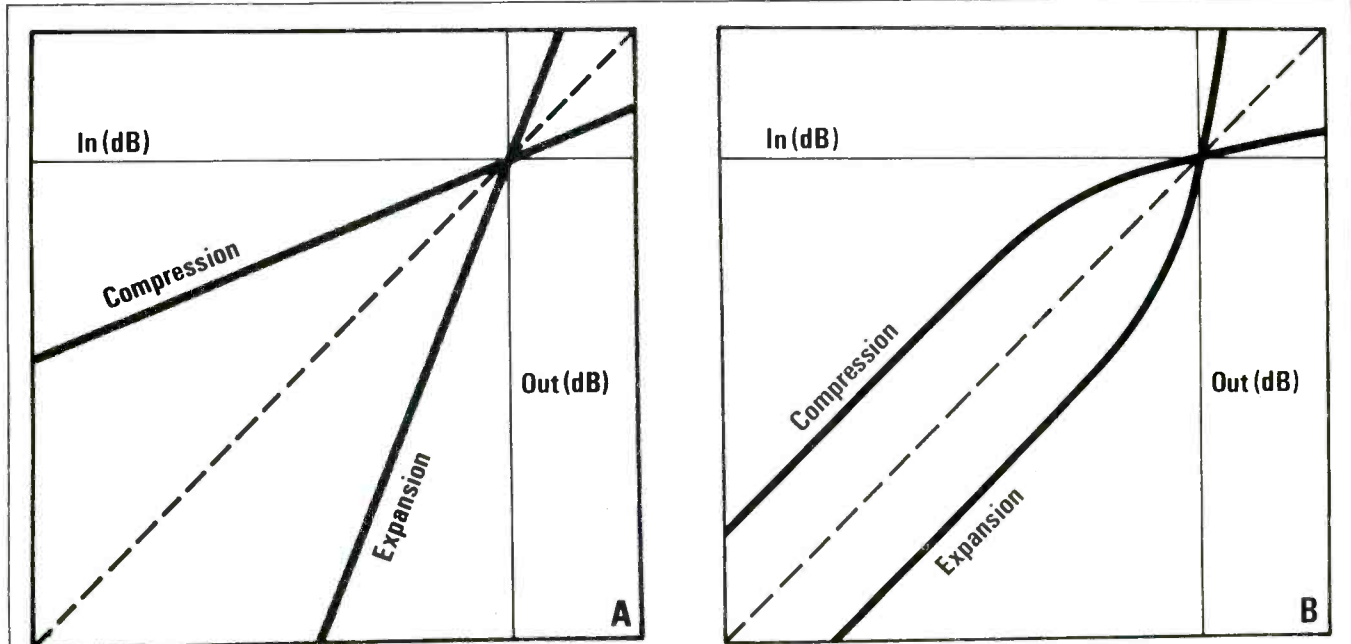


Fig. 2—Transfer characteristics of two conventional companders (solid lines). A, constant-slope type; B, high-level type. Since compression and expansion are

functions of signal amplitude only, in a single frequency band, such companders fail to suppress noise whenever natural masking fails (see text).

## audio research STEREO PREAMPLIFIER MODEL SP-3



Available with natural front panel with black trim or black front panel with gold trim. Accessory solid walnut cabinet also available (model WC-1).

A few of the outstanding features:

1. All aluminum construction—2 color anodized finishes as permanent as the metal itself.
2. All American-made premium quality parts. Over-engineered for extreme reliability and long life.
3. 5 year guarantee
4. Partial Specs: Less than .005% THD or IM @ 5V RMS; (guaranteed) RIAA  $\pm$  1 db equalization; hi level inputs better than 90 db sn; low level 3 microvolt equivalent noise input; gain 2 mv in @ 1kHz = 1 volt out.
5. Front panel size 15½" wide by 5" high.
6. Competitively priced at \$595.00.

SEE YOUR FRANCHISED DEALER FOR  
ADDITIONAL INFORMATION AND DEMONSTRATION

The SP-3 was conceived and executed for the perfectionist—not only is it constructed to near military quality, but its sound quality is without equal.

This unit can be directly substituted in any good audio system with an immediate audible improvement in the sound quality. Subtleties of the music completely missing before will be opened to you. An increased depth of music will also be apparent. Listening fatigue will be dramatically reduced. Probably this one product can do more to improve your audio system musical quality than anything else that can be done.

We invite you to see your franchised AUDIO RESEARCH dealer for a demonstration. Many will arrange a home demonstration—See for yourself how your musical satisfaction can be dramatically improved.

What do the really "Golden Eared" Audiophiles think of this product? J. Gordon Holt in the "Stereophile" says it is the closest thing yet to the (impossible) straight wire with gain. It is the *ONLY* Preamp to occupy the "A" rating category. The "Stereophile" Magazine, Box 49, Elwyn, Pa. 19063.

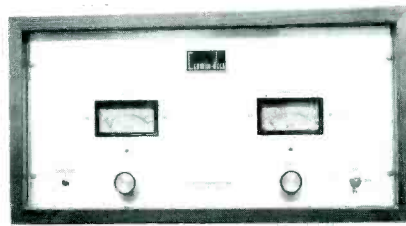
A note about specifications: While the distortion figures for the SP-3 are certainly impressive (the lowest in the industry) they do not explain the obvious aural improvement from this product. The difference lies in part from the fact that the SP-3 is designed for total stability under dynamic conditions, and so is able to deliver its promised performance with musical information and not just from test signals (which are of a much more simple nature).

**audio research corporation**  
P.O. Box 6003 Minneapolis, Minnesota 55406

# Amplifiers—Basic & Integrated



Bose 1801



Cerwin-Vega A-3000S



Crown DC-300A

- Notes: (1) All models solid-state except when model number is preceded by (T).  
 (2) Basic power amplifiers have model number preceded by (B).  
 (3) "K" indicated kit price; "W" wired.

| MANUFACTURER    | MODEL             | RMS power/chan., W, 8 ohms | THD at rated power, % | THD at 1 watt, % | IM at rated power, % | IM at 1 watt, % | Power bandwidth, Hz - kHz | Freq. resp. at 1 watt, Hz ± 2 dB | Rated output S/N, ohms, dB | Phone sensitivity, mV | Phone overload, mV | Tape head input, mV | High level input, mV | Output Z, ohms | Damping factor         | Dimensions, w x d x h, in. | Weight, lbs. | Price  | SPECIAL FEATURES  |
|-----------------|-------------------|----------------------------|-----------------------|------------------|----------------------|-----------------|---------------------------|----------------------------------|----------------------------|-----------------------|--------------------|---------------------|----------------------|----------------|------------------------|----------------------------|--------------|--|---|
| ACOUSTICAL MFG. | (B) Quad 303      | 45                         | .03                   | .03              |                      |                 | 20-30k                    | 30-35k -1                        | 100                        |                       |                    |                     | 8                    |                | 4 3/4 x 12 3/4 x 6 1/4 | 18                         | 237.00       |  |   |
| ALTEC           | 770A              | 90                         | 0.3                   |                  |                      |                 | 15-25k                    | 20-20k -0.5                      |                            |                       |                    |                     | 0.5                  | 8              | 25                     | 6 1/2 x 9 3/4 x 9          | 16           | 284.00   | Built-in elect. x-over switchable to 800 or 500Hz; 2 basic pwr. amps on 1 chassis.                |
| AUDIO RESEARCH  | (BT) D51          | 50                         | 0.1                   | 0.01             | 0.5                  | 0.01            | 15-30k                    | 5-20k ± 1                        | 90                         |                       |                    |                     | 4.8, 16              | 20             | 19 x 13 x 7            |                            | 695.00       |  |   |
|                 | (BT) D75          | 75                         | 0.1                   | 0.01             | 0.5                  | 0.01            | 15-30k                    | 5-20k ± 1                        | 90                         |                       |                    |                     | 4.8, 16              | 20             | 19 x 13 x 7            |                            | 995.00       |  |   |
|                 | (BT) D400         | 400                        | 0.1                   | 0.01             | 0.5                  | 0.01            | 15-30k                    | 5-20k ± 1                        | 90                         |                       |                    |                     | 4.8, 16              | 20             | 19 x 13 x 10 1/4       |                            | 2950.00      | 3 chassis; built-in fans; meters.  |   |
| BGW SYSTEMS     | (B) 1000          | 250                        | 0.1                   | 0.1              | 0.1                  | 0.1             | 5-20k                     | 2-80k +0-3                       | 100                        |                       |                    | 2                   | 4                    | 1000           | 19 x 17 x 7            | 70                         | 1200.00      | SCR crow bar; no fuses; adj. power limit.; forced air cool.; LEDs                                |   |
|                 | (B) 4X250 4-chan. | 250                        | 0.1                   | 0.1              | 0.1                  | 0.1             | 5-20k                     | 2-80k +0-3                       | 100                        |                       |                    | 2                   | 4                    | 1000           | 19 x 17 x 7            | 70                         | 1450.00      | 4-channel; sim. to above; anti-trans. ON-OFF; SCR crow bar.                                      |   |
|                 | (B) 500R          | 200                        | 0.2                   | 0.2              | 0.1                  | 0.1             | 5-20k                     | 2-65k +0-3                       | 100                        |                       |                    | 2                   | 4                    | 1000           | 19 x 11 x 5 1/4        | 42                         | 685.00       | Mod. const.; SCR crow bar.   |   |
|                 | (B) 250           | 100                        | 0.2                   | 0.2              | 0.1                  | 0.1             | 5-20k                     | 2-65k +0-3                       | 100                        |                       |                    | 2                   | 2                    | 1000           | 19 x 8 x 5 1/4         | 30                         | 430.00       | Will drive 2 ohm loads; for use with sm. sys. & multiple speakers.                               |   |
|                 | (B) 1500          | 1500*                      | 0.1                   | 0.1              | 0.1                  | 0.1             | 5-10k                     | 5-20k +0-3                       | 100                        |                       |                    | 2                   | 1                    | 2000           | 19 x 17 x 7            | 75                         | 1350.00      | *Mono-1500 watts 1 ohm; high power bass repro.   |   |
| BOSE            | (B) 1801          | 250                        | 0.2                   | 0.2              | 0.2                  | 0.2             | 5-50k                     | 20-20k ± 0.4                     |                            |                       |                    |                     | 1.5                  | 4              | 200                    | 18 x 18 1/2 x 7 1/4        | 82           | 986.00   | Mtrs.; LED display; 2 inputs; 2 outputs; 400 W. into 4 ohms.                                      |
|                 | (B) 1800          | 250                        | 0.2                   | 0.2              | 0.2                  | 0.2             | 5-50k                     | 20-20k ± 0.4                     |                            |                       |                    |                     | 1.5                  | 4              | 200                    | 19 x 15 x 8 1/4            | 80           | 1000.00  | LED display; rack mountable; field serviceable; 400 W. into 4 ohms.                               |
| CERWIN-VEGA     | A-3000            | 400                        | 0.08                  | 0.08             | 0.08                 | 0.1             | 20-20k                    | 5-70k ± 1                        | 110                        | 1.8V                  |                    |                     | 2                    | 500            | 19 x 9 x 9             | 55                         | 895.00       |  |   |
|                 | A-2800            | 700                        | 0.08                  | 0.08             | 0.08                 | 0.1             | 20-20k                    | 5-70k ± 1                        | 110                        | 1.8V                  |                    |                     | 2                    | 500            | 19 x 6 1/2 x 9         | 50                         | 850.00       | Short ckt. output protect.; avail. w/elect. x-over; mono.  |   |
| CRISMAN         | Monolith Mk XI    | 100                        | 0.1                   | 0.1              | 0.2                  | 0.2             | 10-100Hz                  | 10-100Hz ± 5                     |                            |                       |                    |                     | 0.1                  | 150            | 42 x 20 x 26           | 200                        | 1149.00      | Incl. 30" woofer in air susp. cab.   |   |
| CROWN           | (B) D-60          | 30                         | 0.05                  | 0.05             | 0.05                 | 0.05            | 5-30k*                    | 20-20k 0.1                       | 106                        |                       |                    |                     | 0.775                | 4.8, 16        | 200                    | 17 x 18 3/4 x 1 3/4        | 10           | 249.00   | * - 1 dB; wal. cab., \$29.00; frnt. pnl. phone jack; mono conv. to 90 W. 25 volt line out (bal.). |
|                 | (B) D-150         | 75                         | 0.05                  | 0.05             | 0.05                 | 0.05            | 10-20k*                   | 4-100k ± 1                       | 110                        |                       |                    |                     | 1.19                 | 4.8, 16        | 200                    | 16 1/2 x 8 x 5             | 22           | 399.00   | * - 1 dB; wal. cab., \$33.00; frnt. pnl. \$30.00; mono conv. to 250 W. 50 volt line out (bal.).   |
|                 | (B) DC-300A       | 150                        | 0.05                  | 0.05             | 0.05                 | 0.05            | DC-20k*                   | DC-100k ± 1                      | 110                        |                       |                    |                     | 1.75                 | 1-16           | 200                    | 19 x 9 3/4 x 7             | 45           | 695.00   | * - 1 dB; wal. cab., \$37.00; mono conv. to 600 W. 70 volt line out (bal.).                       |
| DAYTON WRIGHT   | (B) DWIK          | 500                        | 0.06                  | 0.03             | 0.09                 | 0.03            | 10-21k                    | 10-25k ± 5                       |                            |                       |                    |                     |                      | 500            | 19 x 14 x 7            | 92                         | 1460.00      | All output dev. ind. fused; each chan. (incl. output) plug-in cond.; fan cooled; avail. 11/1/73. |   |
| DUKANE CORP.    | IA901B            | 50                         | 1.5                   | 0.5              |                      |                 |                           | 20-20k ± 1                       |                            |                       |                    |                     |                      |                | 19 x 6 1/2 x 5 1/4     | 25                         |              | Circuit protecting devices.  |   |
|                 | IA911B            | 100                        | 1.5                   | 0.5              |                      |                 |                           | 20-20k ± 1                       |                            |                       |                    |                     |                      |                | 19 x 7 x 8 3/4         | 36                         |              | Same as above.   |   |
|                 | IA921B            | 200                        | 1.5                   | 0.5              |                      |                 |                           | 20-20k ± 1                       |                            |                       |                    |                     |                      |                | 19 x 8 x 12 1/4        | 55                         |              | Same as above.   |   |



# Amplifiers-Basic & Integrated



Dynaco ST-400



Heath AA-2010



JVC VN-900

- Notes: (1) All models solid-state except when model number is preceded by (T).  
 (2) Basic power amplifiers have model number preceded by (B).  
 (3) "K" indicated kit price; "W" wired.

| MANUFACTURER      | MODEL              | RMS power/channel, W, 8 ohms | THD at rated power, % | THD at 1 watt, % | IM at rated power, % | IM at 1 watt, % | Power bandwidth, Hz - MHz | Freq. resp. at 1 watt, Hz | Rated output S.M. phone, dB | Phone sensitivity, mV | Phone overload, mV | Tape head input, mV | High level input, V | Output Z, ohms | Damping factor          | Dimensions, w x h x d, in. | Weight, lbs.       | Price   | SPECIAL FEATURES   |
|-------------------|--------------------|------------------------------|-----------------------|------------------|----------------------|-----------------|---------------------------|---------------------------|-----------------------------|-----------------------|--------------------|---------------------|---------------------|----------------|-------------------------|----------------------------|--------------------|---|--|
| DYNACO            | Stereo 400 (B)     | 200                          | 0.18                  | 0.05             | 0.1                  | 0.05            | 5-35k                     | 8-50k ± 0.1               | 95                          |                       |                    |                     |                     |                |                         | 17 x 14 x 7                | 54                 | 449.00K<br>599.00W  | Spkr. prot.: relay d.c. load prot. 1000 sq. in. heat sink; opt. output mtrs., flts., lev. controls |
|                   | SCA-80Q 4-chan     | 40                           | 0.5                   | 0.1              | 0.5                  | 0.1             | 8-50k                     | 15-50k ± 1/2              | 60                          | 3.0                   | 80                 | 0.13                | 8                   | 40             | 13 1/2 x 10 x 4         | 16                         | 169.95K<br>249.95W | Built-in matrix circ. for 4-D sound w/4 spkrs.  |  |
|                   | Stereo 120 (B)     | 60                           | 0.5                   | 0.1              | 0.5                  | 0.1             | 5-50k                     | 5-100k ± 1/2              | 100                         |                       |                    | 1.5                 | 8                   | 40             | 13 x 10 1/2 x 4         | 20                         | 159.95K<br>199.95W | Regulated pwr. supply.  |  |
|                   | Stereo 80 (B)      | 40                           | 0.5                   | 0.1              | 0.5                  | 0.1             | 8-50k                     | 10-50k ± 1/2              | 90                          |                       |                    | 1.3                 | 8                   | 40             | 14 x 8 x 4              | 13                         | 119.95K<br>159.95W |   |  |
| ESS               | 500                | 250                          | 0.1                   | 0.1              | 0.1                  | 1-100k          | 3-150k ± 1                |                           |                             |                       |                    |                     |                     | 1000           | 16 1/2 x 15 x 6         |                            | 625.00             | Active constant current source ctry. no turn-on surges; 1.7 μS rise time.   |  |
| EPIURE            |                    | 125                          | 0.1                   | 0.05             | 0.1                  | 0.05            | 5-35k                     | 3-100k ± 3                | 100                         |                       |                    |                     |                     | 4-8            | 100                     | 13 x 19 x 8                |                    |   | 200 W. into 4 ohms spec. protect. circ.  |
| HARMAN/<br>KARDON | Citation 12 Deluxe | 60                           | 0.2                   | 0.2              | 0.15                 | 0.15            | 5-35k                     | 1/2-100k ± 1              | 100                         |                       |                    |                     |                     |                | 12 1/2 x 12 1/2 x 5 1/2 | 32                         | 340.00             | W. face plate & wood encl.; Citation 12 less faceplate & encl., \$295.00W. \$225.00K.   |  |
| HEATH             | AA-14              | 10°                          | 1.0°                  | 0.5              | 1.0                  |                 | 7-90k                     | 12-60k ± 1                | 60                          | 4.5                   |                    |                     |                     |                |                         | 12 x 10 1/4 x 3            | 8 1/2              | 59.95K  | Stereo phone jack; spkr. swit.; full power 20-20k at rated THD (all channels driven).              |
|                   | AA-1214            | 15°                          | 0.5°                  | 0.25             | 0.5                  | 0.2             | 5-30k                     | 7-100k ± 1                | 65                          | 2.0                   | 75                 | 0.19                |                     | 50             | 12 1/2 x 12 x 3 1/2     | 10                         | 89.95K             | *Pwr. rating as above; tape mon. input; stereo phone jack; spkr. swit.  |  |
|                   | AA-29              | 35°                          | 0.25°                 | 0.1              | 0.2                  | 0.1             | 5-30k                     | 7-60k ± 1                 | 65                          | 2.2                   | 155                | 0.18                |                     | 50             | 16 1/2 x 14 1/2 x 5 1/2 | 22 1/2                     | 159.95K            | *Pwr. rating as above; mod. constr.; 6 inputs incl. tape mon.; 2 spkr. swit.  |  |
|                   | AA-15              | 50°                          | 0.5°                  | 0.2              | 0.5                  | 0.2             | 6-30k                     | 8-40k ± 1                 | 60                          | 2.2                   | 155                | 0.2                 |                     | 45             | 16 1/2 x 12 1/2 x 4 1/2 | 21 1/2                     | 189.95K            | *Pwr. rating as above; 5 inputs incl. tape mon.; tone flat; loudness; 2 spkr. swits.  |  |
|                   | AA-2010 4-chan.    | 35°                          | 0.25°                 | 0.1              | 0.2                  | 0.1             | 5-45k                     | 7-50k ± 1                 | 65                          | 2.2                   | 155                | 0.18                |                     | 100            | 18 1/2 x 13 1/2 x 6 1/2 | 28                         | 359.95K            | *Pwr. rating as above; 4-ch. amp (incorp. 2 compl. stereo amps); 4 meters w/3-pos. atten. swit.; handles all matrix material. |  |
| HITACHI           | IA 600             | 32                           | 0.5                   |                  |                      |                 | 20-30k                    | 10-100k +0, -1            | 95                          | 2.5                   |                    | 0.22                | 8                   | 50             | 16 x 5 x 12             | 19                         | 219.95             |   |  |
|                   | IA 1000            | 55                           | 0.5                   |                  |                      |                 | 20-35k                    | 10-100k +0, -1            | 100                         | 0.25                  | 2.0                | 0.14                | 8                   | 50             | 18 x 5 x 13             | 28                         | 329.95             |   |  |
| INTEGRAL SYSTEMS  | (B) 200            | 100                          | 0.2                   | 0.2              | 0.2                  | 0.2             | 20-25k                    | 10-200k ± 1               |                             |                       |                    |                     |                     | 100            | 19 x 12 1/2 x 5 1/4     |                            | 240.00             | Model (B) 200U, utility, \$200.   |  |
| JVC               | 4VN770 4 chan.     | 12.5                         | 0.5                   | 0.2              | 0.8                  | 0.3             | 10-30k                    | 18-40k ± 1                | 65                          | 2.5                   | 100                | 0.1                 | 4-16                | 50             | 16 1/2 x 12 x 5 1/2     | 21 1/2                     | 279.95             | 4 chan. integ. amp; 4 VU mtrs.  |  |
|                   | 4VN990 4 chan.     | 35                           | 0.5                   | 0.1              | 0.8                  | 0.2             | 10-30k                    | 10-50k ± 1                | 65                          | 2.5                   | 100                | 0.15                | 4-16                | 50             | 16 1/2 x 15 1/2 x 5 1/2 | 35 1/2                     | 499.95             | 4 chan. integ. amp; 4 VU mtrs.; dual SEA contls.  |  |
|                   | VN700              | 35                           | .25                   | .05              | 0.4                  | 0.1             | 25-20k                    | 20-50k ± 5                | 65                          | 2.5                   | 170                | 0.2                 | 4-16                | 50             | 16 1/2 x 12 1/2 x 5 1/2 | 22                         | 299.95             | SEA tone contls.  |  |
|                   | VN900              | 50                           | .25                   | .05              | 0.4                  | 0.1             | 20-20k                    | 20-50k ± 0.5              | 65                          | 2.5                   | 250                | 0.2                 | 4-16                | 50             | 16 1/2 x 12 1/2 x 5 1/2 | 28                         | 369.95             | SEA tone contls.; pink noise tester.  |  |
|                   | (B) VB-10          | 60                           | .07                   | .05              | 0.1                  | .05             | 10-70k                    | 10-100k ± 0.2             |                             |                       |                    | 1.0                 | 4-16                | 80             | 19 x 13 1/2 x 6         | 36                         | 599.95             | 2 VU mtrs.  |  |
|                   | (B) VB-100         | 50                           | .07                   | .05              | .15                  | 0.1             | 20-30k                    | 18-45k ± 0.5              |                             |                       |                    | 0.8                 | 4-16                | 0.5-50         | 8 1/2 x 12 1/2 x 5 1/2  | 16 1/2                     | 259.95             | 2 VU mtrs.; var. damp.  |  |

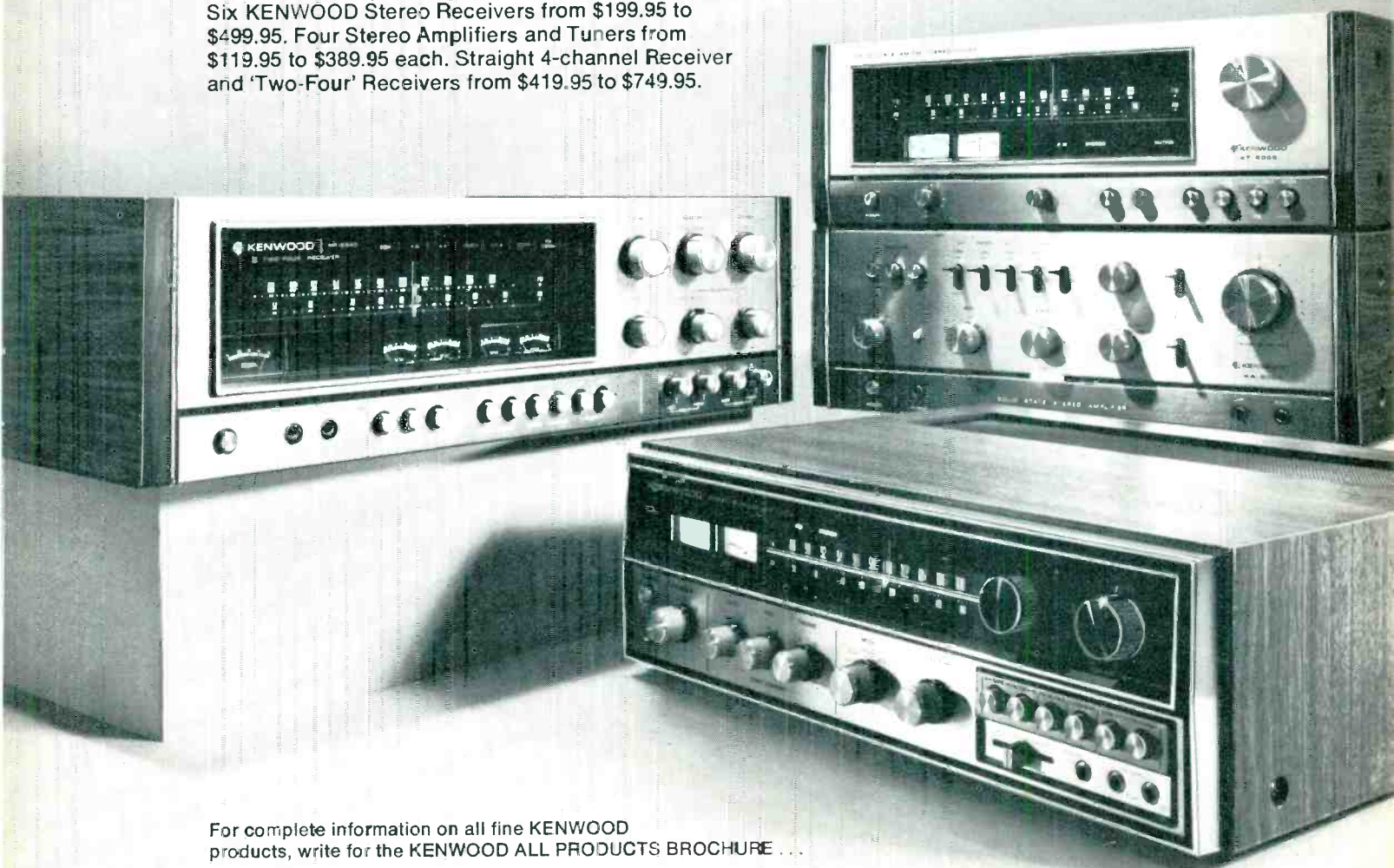
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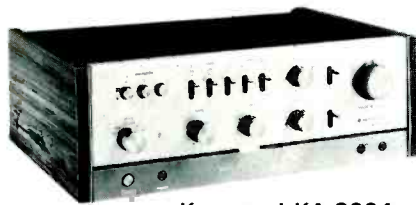
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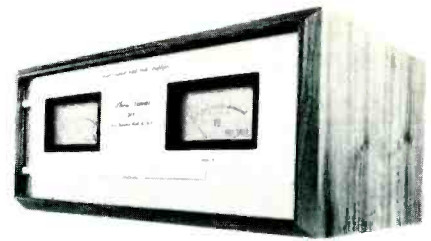
# Amplifiers-Basic & Integrated



Kenwood KA-8004



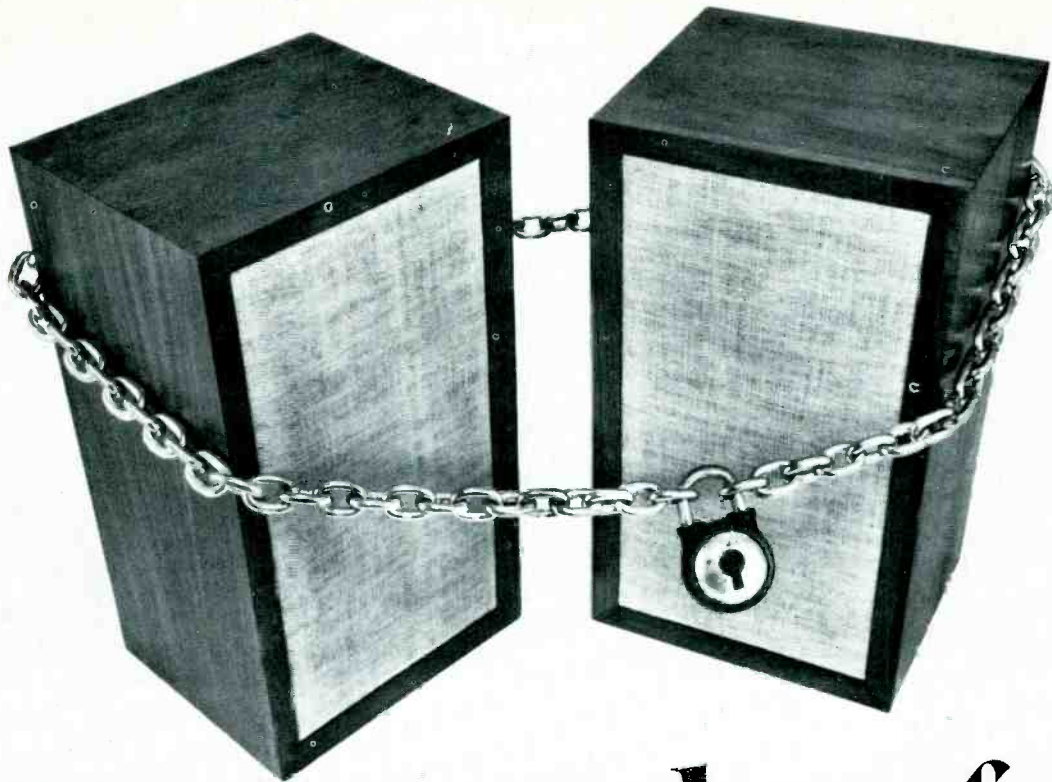
Marantz 250



Phase Linear 400

- Notes: (1) All models solid-state except when model number is preceded by (T).  
 (2) Basic power amplifiers have model number preceded by (B).  
 (3) "K" indicated kit price; "W" wired.

| MANUFACTURER       | MODEL             | RMS power/chan., W & ohms | THD at rated power, % | THD at 1 watt, % | IM at rated power, % | IM at 1 watt, % | Power bandwidth, Hz - Hz | Freq. resp. at 1 watt, Hz | Rated output S/N, phono, dB | Phono sensitivity, mV | Tape overload, mV | High level input, mV | Output Z, ohms | Damping factor          | Dimensions, w x d x h, in. | Weight, lbs. | Price  | SPECIAL FEATURES   |
|--------------------|-------------------|---------------------------|-----------------------|------------------|----------------------|-----------------|--------------------------|---------------------------|-----------------------------|-----------------------|-------------------|----------------------|----------------|-------------------------|----------------------------|--------------|--|--|
| KENWOOD            | KA-8004           | 60                        | 0.4                   | 0.4              |                      |                 | 10-50k                   | 20-50k<br>-2              | 65                          | 2.5                   |                   |                      | 30             | 17 1/2 x 11 1/4 x 6     | 28.4                       | 389.95       | Dir. cplg.; dual protect. crt.; bass & treb. contls. w/ sel. x-over pts.; 2 sys. tape; A-B-C spkr.       |  |
|                    | KA-6004           | 40                        | 0.5                   | 0.3              |                      |                 | 10-50k                   | 20-40k<br>+0, -1          | 68                          | 2.5                   |                   |                      | 32             | 17 1/2 x 11 1/4 x 6     | 25.4                       | 299.95       | Dir. cplg.; dual protect.; PNP can-type trans.; 2 sys. tape; 40 & 80 lo filters; A-B spkr. sys.          |  |
|                    | KA-4004           | 36                        | 0.5                   | 0.5              |                      |                 | 10-50k                   | 20-40k<br>+0, -1.5        | 65                          | 2.5                   |                   |                      | 32             | 17 1/2 x 11 1/4 x 6     | 20 1/2                     | 189.95       | Dir. cplg.; dual protect. crt.; PNP trans.; 2 sys. tape; inputs for 2 phono, 2 aux. tuner, mic A-B spkr. |  |
|                    | KA-2002A          | 13                        | 0.8                   | 0.8              |                      |                 | 20-30k                   | 20-30k<br>-2              | 60                          | 2.0                   |                   |                      | 50             | 13 1/2 x 9 1/2 x 4 1/2  | 11.9                       | 119.95       | Bass & treb. contls.; inputs for 2 phono, tuner, aux. tape.  |  |
| LAFAYETTE          | LA-74<br>4-chan.  | 30                        | 1                     | 0.07             |                      |                 | 18-25k                   | 20-20k<br>± 1.5           | 65                          | 3.7                   |                   | 0.55                 |                | 15 1/2 x 11 1/4 x 4 1/2 | 18.7                       | 279.95       | Full logic SQ crty. w/ Variblend.  |  |
|                    | LA-222<br>4-chan. | 7                         | 1                     | 0.15             |                      |                 |                          | 20-20k<br>± 1.5           | 55                          | 2.5                   | 55                | 0.27                 | 4.8, 16        | 13 1/2 x 8 1/4 x 4 1/2  | 14                         | 129.95       | SQ crty.; main/rem. spkr. swit.  |  |
|                    | LA-150            | 33                        | 1                     | 0.05             |                      |                 | 13-35k                   | 22-20k<br>± 1             | 56                          | 2.2, 7                | 40, 120           | 0.25                 | 4.8, 16        | 13 x 9 1/4 x 3 1/2      | 19                         | 169.95       | Main/rem. spkr. swit.; lev. contls.  |  |
|                    | LA-975<br>4-chan. | 25                        | 1                     | 0.07             |                      |                 | 20-35k                   | 20-20k<br>± 1             | 60                          | 4.5                   | 60                | 0.25                 | 4.8, 16        | 13 x 10 1/2 x 4 1/2     | 20                         | 169.95       | SQ crty.   |  |
| H.J. LEAK (ERCONA) | Stereo 70         | 35                        | 0.1                   | 0.1              | 0.3                  |                 | 20-30k                   | 66                        | 2.0                         | 2.0                   |                   | 8                    | 40             | 13 x 4 1/4 x 8 3/4      | 12                         | 299.00       | 7 pushbutton controls; Mono "L" & "R" inputs; headphone output; remote & main spkrs.                     |  |
| MARANTZ            | 500               | 250                       | 0.05                  | 0.05             | 0.05                 | 0.05            | 3-60k                    | 20-20k<br>± 0.1           |                             |                       |                   |                      | 4-16           | 400                     | 17 1/2 x 16 x 7            | 81.3         | 1200.00  | Output mtrs. pwr. limit. swit. for 50W, 150W, 250W.  |
|                    | 250               | 125                       | 0.1                   | 0.1              | 0.1                  | 0.1             | 7-60k                    | 20-20k<br>± 0.1           |                             |                       |                   |                      | 4-16           | 100                     | 15 1/2 x 9 1/2 x 6 1/2     | 31           | 495.00   | Output mtrs.; mtr. rng. swit. for -20dB; 240 same but w/o output mtrs. or mtr. rng. swit., \$395.00.   |
|                    | 1200              | 100                       | 0.15                  | 0.15             | 0.15                 | 0.15            | 10-40k                   | 20-20k<br>± 0.25          | 100°                        | 1.35                  | 100               | 0.134                | 4-16           | 100                     | 15 1/2 x 14 x 5 1/2        | 34           | 595.00   | *Phono dyn. rng.; ratio of overload to equiv. input noise.   |
|                    | 1120              | 60                        | 0.2                   | 0.2              | 0.2                  | 0.2             | 10-40k                   |                           | 96°                         | 1.1                   | 100               | 0.11                 | 4-16           | 40                      | 15 1/2 x 14 x 5 1/2        | 32 1/2       | 395.00   | *Same as above.  |
|                    | 1060              | 30                        | 0.5                   | 0.5              | 0.5                  | 0.5             | 15-50k                   | 20-20k<br>± 1             | 96°                         | 1.8                   | 100               | 0.15                 | 4-16           | 45                      | 14 1/2 x 12 x 4 1/2        | 26           | 229.95   | *Same as above.  |
|                    | 1030              | 15                        | 0.5                   | 0.5              | 0.5                  | 0.5             | 15-40k                   | 20-20k<br>± 1             | 93°                         | 2.1                   | 100               | 0.18                 | 4-16           | 40                      | 14 1/2 x 12 x 4 1/2        | 25           | 169.95   | *Same as above.  |
|                    | 4140<br>4-chan.   | 25**                      | 0.3                   | 0.3              | 0.3                  | 0.3             | 7-70k                    | 20-20k<br>± 0.5           | 96°                         | 1.9                   | 100               | 0.18                 | 4-16           | 40                      | 15 1/2 x 14 x 5 1/2        | 40.7         | 549.95   | **4/chan., 70W./chan. in 2-chan. mode; 2-ch./4 ch. bridging; Vari-Matrix synth. w/dim. contl.; rem. contl. capability; *same as above. 4100 same but 60W./chan. in 2-ch. mode. |
| ONKYO              | 7055              | 26                        | 0.1                   | 0.03             | 0.05                 |                 | 10-100k                  | 10-70k<br>to -1           | 75                          | 1.2/<br>2.4/<br>4.8   | 230               |                      | 8/4            | 80                      | 16 1/2 x 4 1/2 x 5 1/2     | 25           | 219.95   | 3 pos. phono gain switch; 250 prot. circuitry.   |
|                    | 7022              | 52                        | 0.1                   | 0.03             | 0.05                 |                 | 10-100k                  | 10-70k<br>+0-1            | 75                          | 1.2/<br>2.4/<br>4.8   | 300               |                      | 8/4            | 80                      | 16 1/2 x 14 1/2 x 5 1/2    | 29           | 329.95   | -300 mV phono overload capacity; sep. swit. between pre and main amp.; choice of turnover freq.  |
| P & M              | (B) S-100         | 120                       | 0.3                   |                  |                      |                 | 2-90k                    | 3-55k<br>± 1              |                             |                       |                   |                      | 50             | 15 1/2 x 11 x 5         | 29                         | 369.50       | W. 2 VU mtrs. Mono-100, \$199.50.  |  |
|                    | (B) S-50          | 50                        | 0.5                   |                  |                      |                 | 10-45k                   | 15-50k<br>± 1             |                             |                       |                   |                      | 40             | 15 1/2 x 10 x 3         | 14                         | 199.95       | Mono-50, \$124.50.   |  |
|                    | (B) S-25          | 25                        | 0.5                   |                  |                      |                 | 15-45k                   | 20-150k<br>± 1            |                             |                       |                   |                      | 40             | 7 1/2 x 7 x 3           | 10                         | 129.50       | Mono-25, \$79.50.  |  |
| PHASE LINEAR       | 400               | 200                       | 0.25                  | 0.25             | 0.25                 | 0.25            | 5-20k                    | 5-250k<br>± 0             | 100                         |                       |                   |                      | 4-16           | 1000                    | 19 x 10 x 7                | 35           | 499.00   |  |
|                    | 700               | 350                       | 0.25                  | 0.25             | 0.25                 | 0.25            | 0-20k                    | 0-250k<br>± 0             | 100                         |                       |                   |                      | 4-16           | 1000                    | 19 x 10 x 7 1/2            | 45           | 779.00   |  |



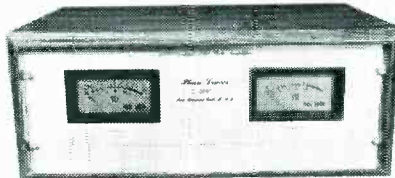
# Set your speakers free!

Your amplifier is probably too weak to break the chains that bind your speakers. An under-powered amplifier will lock your stereo system into clipping during low frequency passages or on musical peaks, forcing you down to a less than realistic listening level.

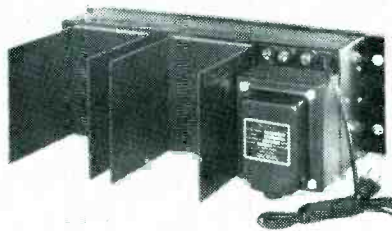


The key to the solution is a high-powered amplifier, specifically, the Phase Linear 400. Listen to Julian Hirsch of Stereo Review: "Anyone using a low efficiency speaker system with an amplifier in the 30 to 50 watt class cannot approach a realistic listening level without severe clipping."

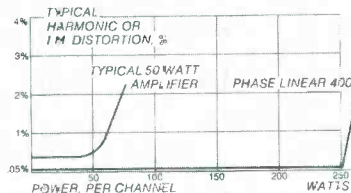
The Phase Linear 400 will unlock music you never dreamed existed in your favorite records. How long has it been since you've had a dream fulfilled? Listen to the Phase Linear 400 at your dealer's soon.



**Phase Linear 400**  
400 watts RMS direct coupled solid state stereo power amplifier.



Advanced design heat sink provides protective cooling.



GREATER POWER PROVIDES IMPROVED SOUND REPRODUCTION

## SPECIFICATIONS

**POWER**—Greater than 200 watts/channel RMS both channels driven into 8 ohms. Power at clipping typically 250 watts/channel into 8 ohms and 400 watts/channel RMS into 4 ohms.

**HARMONIC OR I.M. DISTORTION**—Less than .25%; typically less than .05%.

**PROTECTION**—Patented protection circuit monitors output voltage and current, shuts down amplifier instantly if safe operating levels are exceeded.

**HUM AND NOISE**—Better than 100 db below 200 watts.

**STABILITY**—Absolutely stable with all speaker loads including electrostatic units.

**WARRANTY**—Three years, parts and labor for normal use.

**PRICE**—\$499.00 Cabinet: \$37.00

## Phase Linear 400

THE POWERFUL DIFFERENCE

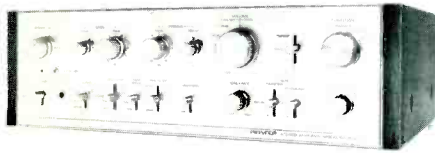
PHASE LINEAR CORPORATION, P.O. BOX 549, EDMONDS, WASHINGTON 98020

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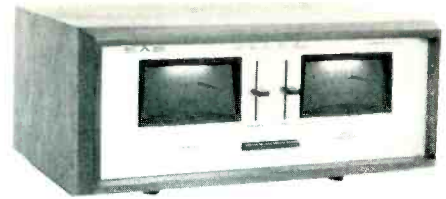


# Amplifiers-Basic & Integrated

Pioneer SA-9100



Rotel RA-1210



SAE Mark IVCM

Notes: (1) All models solid-state except when model number is preceded by (T).  
 (2) Basic power amplifiers have model number preceded by (B).  
 (3) "K" indicated kit price; "W" wired.

| MANUFACTURER        | MODEL             | RMS power/chan., W, 8 ohms |                    | THD at rated power, % |       | IM at 1 watt, % |                  | Power bandwidth, Hz - kHz | Freq. resp. at 1 watt, Hz - dB | Rated output S/N, phono, dB | Phono sensitivity, mV | Phono overload, mV | Tape head input, mV | High level input, mV | Output Z, ohms | Damping factor             | Dimensions, w x d x h, in. | Weight, lbs. | Price   | SPECIAL FEATURES |
|---------------------|-------------------|----------------------------|--------------------|-----------------------|-------|-----------------|------------------|---------------------------|--------------------------------|-----------------------------|-----------------------|--------------------|---------------------|----------------------|----------------|----------------------------|----------------------------|--------------|---|------------------|
|                     |                   | 25                         | 0.5                | 0.5                   | 0.5   | IM at 1 watt, % | IM at 1 watt, %  |                           |                                |                             |                       |                    |                     |                      |                |                            |                            |              |   |                  |
| PILOT               | 210               | 25                         | 0.5                | 0.5                   | 0.5   | 20-25k          |                  | 65                        | 2.5<br>4.5                     |                             |                       |                    |                     | 4.8<br>16            | 35             | 15 x 11<br>x 5 1/4         |                            | 159.90       |   |                  |
|                     | 310               | 30                         | 0.5                | 0.5                   | 0.5   | 10-40k          |                  | 70                        | 2.5<br>4.5                     |                             |                       |                    |                     | 4.8<br>16            | 35             | 18 1/2 x 17 1/2<br>x 6 1/2 |                            | 349.90       | 4 Mtrs. Pilotone oscillator; mic mixing.  |                  |
| PIONEER             | SA-5200           | 13                         | 0.8                | 0.2                   | 0.8   | 0.4             | 10-40k           |                           |                                | 2.5                         | 100                   |                    |                     | 8                    | 30             | 16 x 12<br>x 5             | 16                         | 129.95       | 2 aux.; 2 spkr. sys.; click-stop tone contls.   |                  |
|                     | SA-7100           | 22                         | 0.5                | 0.05                  | 0.5   | 0.01            | 5-70k            | 7-80k<br>+0, -1           |                                | 2.5                         | 190                   |                    |                     | 8                    | 40             | 17 x 13<br>x 5             | 22                         | 199.95       | 2 phono; 2 aux.; 2 tape mon. dup. 1-2, 2-1; tone defeat swit.; freq. turnover swits.; -20 dB cut muting.  |                  |
|                     | SA-8100           | 44                         | 0.3                | 0.05                  | 0.3   | 0.05            | 5-40k            | 7-80k<br>±1               |                                | 2.5                         | 250                   |                    |                     | 8                    | 60             | 17 x 13<br>x 5             | 26                         | 299.95       | Twin tone contls. main & sub.; vol. lvl. set contl.; tone defeat swit.; 2 tape mon., 1-2, 2-1; 2 aux.; 2 phono; -20 dB cut muting.  |                  |
|                     | SA-9100           | 65                         | 0.1                | 0.04                  | 0.1   | 0.04            | 5-40k            | 7-80k<br>±1               |                                | 2.5                         | 250                   |                    |                     | 8                    | 70             | 17 x 13<br>x 5             | 30                         | 399.95       | Twin tone contls. main & sub.; vol. level set contls.; tone defeat swit. 2 tape mon., 1-2, 2-1; 2 aux.; 2 (phono 2 imp. sel.); -20 dB muting cut; aux 2 phono 2 & spkr. B level contls. |                  |
| QUINTESSENCE        | (B) Power Amp II  | 120                        | 0.05               | 0.05                  | 0.05  | 0.05            | 10-45k           | 10-500k<br>±0.25          |                                |                             |                       |                    | 0.5                 | 8                    | 1000           | 17 x 10<br>x 6             | 55                         | 750.00       | Lev. sens.; bal.; compl. sym. drivers & output; op amp 1st stg.; fan cooled.  |                  |
|                     | (B) Power Amp IID | 120                        | 0.05               | 0.05                  | 0.05  | 0.05            | 10-45k           | 10-500k<br>±0.25          |                                |                             |                       |                    | 0.5                 | 8                    | 1000           | 17 x 10<br>x 6             | 60                         | 1000.00      | Same as above w/liq. crys. dig. watt mtr.; reading peak or RMS lev.   |                  |
| RADFORD (AUDIONICS) | (B) HD-60         | 60                         | 0.005              | 0.005                 | 0.02  | 0.02            | 10-70k           |                           |                                |                             |                       |                    | 1.0                 | 4-16                 | 50             | 16 x 4 1/2<br>x 8 3/4      | 22                         | 429.95       |   |                  |
|                     | HD-2260           | 60                         | 0.01               | 0.01                  | 0.02  | 0.02            | 10-70k           |                           | 80                             | 1.0                         | 750                   |                    | 0.08                | 4-16                 | 50             | 16 x 4 1/2<br>x 8 3/4      | 30                         | na           |   |                  |
| RADIO SHACK         | QA-621<br>4 chan. | 2 1/2                      |                    |                       |       |                 | 30-20k           | 20-25k<br>±3              |                                | 150                         |                       |                    |                     | 4-16                 |                | 12 x 8<br>x 4              |                            | 79.95        | SQ  |                  |
|                     | QA-681            | 25                         |                    |                       |       |                 | 30-20k           | 20-25k<br>±3              |                                |                             |                       |                    |                     | 4-16                 |                | 14 1/2 x 11 1/4<br>x 4     |                            | 199.95       | SQ  |                  |
|                     | SA-500            | 30                         | 1                  |                       |       |                 | 30-20k           | 20-20k<br>±1              |                                |                             |                       |                    |                     | 4-16                 |                | 14 3/4 x 11<br>x 3 3/4     |                            | 119.95       |   |                  |
| REVOX               | A78               | 40                         | 0.1                | 0.1                   | 0.3   |                 | 10-40k           | 20-20k<br>±1              | 80                             | 2.0                         |                       |                    | 0.25                | 4-16                 | 20             | 16 3/8 x 7 7/8<br>x 6 1/4  | 18                         | 449.00       | Step tone contls.; sep. adj. inputs; 2 phone outputs; ind. low, hi & pres.  |                  |
| ROTEL               | RA-211            | 10                         | 0.2                |                       | 0.5   | 1.1             | 20-35k           | 20-75k                    | 63                             | 2.7                         | 50                    | 8.0                |                     | 8                    | 35             | 11 3/4 x 7 1/2<br>x 4      | 10                         | 109.95       | Spkr. sys.: 1-2, 1+2; tape mon.; wood cab.  |                  |
|                     | RA-311<br>4 chan. | 18                         | 0.1                |                       | 0.3   |                 | 15-50k           | 15-90k                    | 65                             | 2.7                         | 50                    |                    |                     | 8                    | 35             | 12 3/4 x 8 3/4<br>x 4      | 12                         | 159.95       | Spkr. sys.: 1-2, 1+2; 4 ch. syn.; hi fil.; tape mon. 1+2; tape dub. 1+2; wood cab.  |                  |
|                     | RA-611            | 30                         | 0.1                |                       | 0.2   |                 | 5-50k            | 10-100k<br>±0.5           | 65                             | 2.5                         | 100                   |                    |                     | 8                    | 35             | 16 1/2 x 12<br>x 5 1/2     | 14                         | 239.95       | Dual slide bass & treble; tape mon. 1-2; tone defeat, loudness; phono 1+2; Aux. 1-2; low & hi fil.; wood cab.   |                  |
|                     | RA-810            | 40                         | 0.2                |                       | 0.1   |                 | 5-50k            | 4-75k<br>+0, -3           | 65                             | 2.0                         | 125                   |                    |                     | 8                    | 38             | 16 1/2 x 12<br>x 5 1/2     | 22                         | 299.95       | Tape dub. 1-2, 2-1; adj. phono imp./sens. on phono 2; hi-lo fil.; 20dB muting.  |                  |
|                     | RA-1210           | 60                         | 0.05<br>to<br>0.09 | 0.02                  | 0.1   |                 | 3-100k<br>+0, -3 | 70                        | 1.0                            | 130                         |                       |                    |                     | 8                    | 38             | 16 1/2 x 12<br>x 5 1/2     | 30                         | 349.95       | 2 power transf. adj. imp. & sens. on phono 2; tape dub. 1-2, 2-1; 3 stage diff. preamp; bass & treble roll-off.   |                  |
| SAE                 | (B) MK III<br>CM  | 200                        | 0.05               | 0.05                  | 0.025 | 0.025           | 8-50k            | 1-100k<br>±1              | 100                            |                             |                       |                    |                     |                      | 150+           | 17 x 5 3/4<br>x 14 1/2     | 49                         | 850.00       | Series D output; dir. rdg. pwr. mtrs. in rms; MK IIIC same but w/o pwr. mtrs.; \$750.00.  |                  |
|                     | (B) Mk IV<br>CM   | 100                        | 0.05               | 0.05                  | 0.025 | 0.025           | 8-50k            | 5-100k<br>±1              | 100                            |                             |                       |                    |                     |                      | 150+           | 17 x 15<br>x 5 3/4         | 33                         | 500.00       | VU mtrs.; MK IVC same but w/o VU mtrs.; \$500.00.   |                  |
|                     | (B) Mk 31B        | 50                         | 0.05               | 0.05                  | 0.025 | 0.025           | 8-50k            | 5-100k<br>±1              | 100                            |                             |                       |                    |                     |                      | 150+           | 15 x 8<br>x 4 3/4          | 18                         | 225.00       | Series D output.  |                  |
|                     | (B) Mk 31<br>Mono | 60                         | 0.05               | 0.05                  | 0.05  | 0.05            | 8-50k            | 5-100k<br>±1              | 100                            |                             |                       |                    |                     |                      | 150+           | 15 x 8<br>x 4 3/4          | 16                         | 150.00       |   |                  |



# the Sansui AU 9500: hottest-selling integrated amplifier in the field.



AU7500



AU6500

Here's the power amplifier that not only boasts 85 hefty watts per channel, but also boasts a host of other fantastic features. It's designed and made for people who want only the best—and are willing to pay for it. And, judging by the way the AU9500 is selling, there must be a lot of those folks around.

The new Sansui AU9500 is the most advanced stereo product we make. Its superior performance characteristics include total harmonic distortion and intermodulation distortion below 0.1% throughout the entire audio spectrum and well beyond. Power bandwidth is extremely wide (5-40,000Hz) and RMS true power, conservatively rated, is 85 watts per channel into 8 ohms.

Among the many exciting features of the AU9500 are a wide variety of conveniences, such as a 4-channel adaptor switch, for QS, SQ, or CD-4 add-on units, the ability to handle up to four tape decks, and provision for tape-to-tape dubbing. Triple tone controls allow even the fussiest listener to adjust the AU9500's response to his taste.

As eye-catching as it is functional, the AU9500's elegant front-panel styling is a standout in any audio display. And it has two counterparts, the AU7500 and AU6500, which offer many of the same features, the same quality engineering and manufacturing, but slightly less power. All three are powerful, quality units that are unequalled for fine high fidelity reproduction.



## SANSUI ELECTRONICS CORP.

Woodside, New York 11377 • Gardena, California 90247

SANSUI ELECTRIC CO., LTD., Tokyo, Japan • Sansui Audio Europe S. A., Antwerp, Belgium

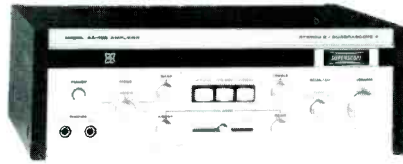
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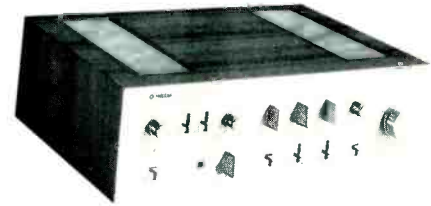
# Amplifiers—Basic & Integrated



Sherwood S-9400



Superscope QA-450



Yamaha CA-1000

- Notes: (1) All models solid-state except when model number is preceded by (T).  
 (2) Basic power amplifiers have model number preceded by (B).  
 (3) "K" indicated kit price; "W" wired.

| MANUFACTURER           | MODEL             | RMS power/Chan., W, 8 ohms | THD at rated power, % | THD at 1 watt, % | IM at rated power, % | IM at 1 watt, % | Power bandwidth, Hz - kHz | Freq. resp. at 1 watt, dB | Rated output S/N, phono, dB | Phono sensitivity, mV | Phono overload, mV | Tape head input, mV | High level input, V | Output Z, ohms | Damping factor             | Dimensions, w x d x h, in. | Weight, lbs. | Price   | SPECIAL FEATURES   |
|------------------------|-------------------|----------------------------|-----------------------|------------------|----------------------|-----------------|---------------------------|---------------------------|-----------------------------|-----------------------|--------------------|---------------------|---------------------|----------------|----------------------------|----------------------------|--------------|---|--|
| SANSUI                 | AU9500            | 85                         | 0.1                   | 0.1              |                      |                 | 5-40k                     | 15-50k<br>+0 -0.5         | 2.5                         |                       | 100                | 0.8                 | 4, 8                | 50             | 19% x 13%<br>x 5 1/2       | 5 1/4                      | 519.95       |   |  |
|                        | AU7500            | 43                         | 0.1                   | 0.1              |                      |                 | 5-40k                     | 10-50k<br>±1              | 2.5                         |                       | 100                | 0.8                 | 4, 8                | 40             | 17% x 12%<br>x 5 1/2       | 28                         | 299.95       | 6500 sim. but 32W/chan. & freq. resp. 10-40k, \$249.95.   |  |
|                        | (B) BA-60         | 20                         | 0.3                   | 0.3              |                      |                 | 20-40k                    | 20-60k<br>±1              |                             |                       |                    | 0.7                 | 4-16                | 46             | 6 x 10%<br>x 4 1/2         | 9-1/6                      | 99.95        |   |  |
|                        | QA7000<br>4-chan. | 20                         | 0.1                   |                  |                      |                 | 10-30k                    | 20-40k<br>±0.5            | 2.5                         | 270                   | 100                | 0.8                 | 4-16                | 100            | 17% x 12%<br>x 5 1/2       | 30.9                       | 549.95       | Decoder; signal avail. at Tape 2; dir. dubbing.   |  |
| SCHOBER                | BTR-3M            | 70                         | 0.09                  | 0.08             | 0.07                 | 0.05            | 5-40k                     | 5-57k<br>±0.5             |                             |                       |                    | 0.15<br>to<br>1.0   | 4-16                | 28             | 5 1/2 x 11%<br>x 8         | 20                         | na           | Mono, conv. to 2-chan.; fully protected.  |  |
|                        | BTR-3D            | 70                         | 0.09                  | 0.08             | 0.07                 | 0.05            | 5-40k                     | 5-57k<br>±0.5             |                             |                       |                    | 0.15<br>to<br>1.0   | 4-16                | 28             | 5 1/2 x 11%<br>x 8         | 21                         | na           | Stereo; fully protected.  |  |
| SHERWOOD               | S-9400<br>4-chan. | 50                         | 0.8                   | 0.15             | 0.6                  | 0.3             | 5-45k                     | 20-20k<br>±0.5            | 60                          | 1.8                   | 80                 | 2.1                 | 0.2                 | 8              | 40                         | 17 1/2 x 14<br>x 5 1/2     | 29           | 259.95  | 2 phono; 2 aux; mics; Dynaquad; spkr. overload prot.                                       |
| SINCLAIR<br>(HERVIC)   | 2000              | 8                          | 0.06                  |                  | 0.1                  |                 | 25-25k                    | 25-35k<br>±3              | 65                          | 3.0<br>&<br>30.0      |                    | 0.125               | 8                   | 55             | 12 x 6<br>x 2              | 3                          | 129.50       | Push-button concls.; and blk. alum. case; 3000 same w/17 W./chan.; THD at rtd. pwr., 0.04.  |  |
| SOUTHWEST<br>TECHNICAL | (B) 540           | 15                         | 1.0                   | 0.2              | 1.5                  | 0.5             | 10-50k                    | 5-100k                    |                             |                       |                    | 1.0                 | 8                   | 100            | 9 x 8<br>x 2 1/2           | 6                          | 37.50K       | Integ. crt. driver.   |  |
|                        | (B) 185           | 30                         | 0.1                   | 0.05             | 0.5                  | 0.1             | 10-80k                    | 5-150k                    |                             |                       |                    | 1.25                | 4.8                 | 100            | 10 x 9<br>x 3              | 8                          | 55.00K       | Current src. driver sys.; compl. outputs.   |  |
|                        | (B) 175           | 80                         | 0.1                   | 0.02             | 0.3                  | 0.1             | 10-100k                   | 5-200k                    |                             |                       |                    | 1.5                 | 4.8                 | 100            | 13 x 6<br>x 5              | 14                         | 60.00K       | Mono; current src. driver; compl. output stg. w/volt-amp limit sys.   |  |
|                        | (B) 207           | 60                         | 0.02                  | 0.015            | 0.01                 | 0.005           | 10-100k                   | 5-250k                    |                             |                       |                    | 1.5                 | 4.8                 | 100            | 13 x 4<br>x 5              | 13                         | 75.00K       | Mono; all compl. push-pull x-cpld. crt.; triple output stg.; volt-amp limiting.   |  |
| SUPERSCOPE             | A-235             | 5                          | 1.0                   |                  |                      |                 | 30-50k                    |                           | 3.0                         |                       |                    |                     |                     |                | 14 1/2 x 7 1/2<br>x 4 1/2  | 6.6                        | 79.95        | Mag./cer phono swit.  |  |
|                        | A-245             | 10                         | 1.0                   |                  |                      |                 | 13-23k                    |                           | 2.5                         |                       |                    |                     |                     |                | 14 1/2 x 7 1/2<br>x 4 1/2  | 8                          | 99.95        | Tape mon.; mag./cer phono swit.; loudness swit.   |  |
|                        | A-260<br>4-chan.  | 15                         | 0.05                  |                  |                      |                 | 20-50k                    |                           | 2.0                         |                       |                    |                     |                     |                | 14 1/2 x 11 1/4<br>x 5 1/4 |                            | 169.95       | Quadraphase (spkr. matrix sys.); loudness contl.; tape mon.; de-tented sliding tone concls.; mic jack for p.a.  |  |
|                        | QA 450<br>4-chan. | 10*                        | 1.0                   |                  |                      |                 | 30-30k                    |                           | 3.5                         |                       |                    |                     |                     |                | 14 1/2 x 12 1/2<br>x 5 1/4 |                            | 279.95       | *4 chan., 25W/chan. in 2-chan. mode; discrete, SQ; ambience; 2ch/4 ch. bridging; swit. preamp/pwr. amp modes; loudness; tape mon.; hi freq. filter swit.; 4-ch. vol. contl. |  |
| TOMLINSON              | 1002              | 100                        | 0.1                   | 0.05             | 0.1                  | 0.05            | 10-25k                    | 10-100k<br>±1             |                             |                       |                    |                     |                     | 500            | 17 x 11 1/4<br>x 7         | 42                         | 480.00       | Level contl.; short-proof protect. circuit.   |  |
|                        | 3501              | 350                        | 0.1                   | 0.05             | 0.1                  | 0.05            | 10-25k                    | 10-100k<br>±1             |                             |                       |                    |                     |                     | 500            | 17 x 11 1/4<br>x 7         | 42                         | 530.00       | Similar to above—mono.  |  |
| V-M                    | 1538              | 4                          | 5.0                   | 0.8              |                      |                 | 70-10k                    | 55                        |                             |                       |                    | 0.1                 | 8                   |                |                            |                            |              | 24-chan. discrete inputs; 2 E-V decoded stereo inputs.  |  |
| YAMAHA                 | CA 600            | 30                         | 0.1                   | 0.04             | 0.1                  | 0.05            | 5-70k                     | 10-50k<br>+0.5<br>-1.0    | 80*                         | 3.0                   | 310                |                     | 0.12                | 4-8            | 70                         | 17 x 6<br>x 13             | 25           | 299.95  | *HF A netwrk.; OCL pure compl. cont. loud. contl.; trans. & spkrs. prot.; 2 tape dub. ckt. |
|                        | CA 800            | 45                         | 0.1                   | 0.04             | 0.1                  | 0.05            | 5-70k                     | 10-50k<br>+0.5<br>-1.0    | 80*                         | 3.0                   | 310                |                     | 0.12                | 4-8            | 70                         | 17 x 6<br>x 13             | 31           | 469.95  | *As above; sel. tone contl.; turnover freq.; 2-step hi & lo fil.                           |
|                        | CA 1000           | 70                         | 0.1                   | 0.04             | 0.1                  | 0.05            | 5-50k                     | 10-50k<br>+0.5<br>-1.0    | 80*                         | 3.0                   | 310                |                     | 0.12                | 4-8            | 70                         | 17 x 6<br>x 13             | 34           | 569.95  | *As above; FET phono input; spec. mic amp; 3 spkrs output.                                 |



# THE PROBLEM SOLVER

Say farewell to the grand old DC300, and welcome to THE PROBLEM SOLVER, the amp that is going to make your job easier and your customers happier. The original model DC300 was a great amp — the first super-power low distortion amp in the world, when Crown introduced it five years ago. Meanwhile, top sound systems designers have used it successfully in hundreds of demanding situations, and made some excellent recommendations for improvements. The response of the Crown design team was *not* an updated DC300, but a totally *new* and different amplifier, the DC300A. It is the *only* high power low distortion amp specifically *designed* for commercial sound applications. (CAUTION: *There are some large consumer-type amps attempting to sell in the commercial sound field without providing adequate continuous power for all load impedances.*)

### Power You Can Count On

The New DC300A has *double* the number of output transistors, effectively twice the muscle of the old DC300 at the same price. Each channel has eight 150-watt devices for 1200 watts of transistor dissipation per channel. The DC300A is rated at 150 watts per channel continuous into 8 ohms or 300 w/ch continuous into 4 ohms (both channels driven) and 500 watts continuous into 2.5 ohms (single channel driven).

### Two Amplifiers in One

As a dual-channel amplifier with separate level controls and circuitry for each channel, the DC300A is almost *two* amplifiers in one. This gives you additional flexibility in controlling your speaker load, as when driving separate front and back speaker systems in a large auditorium, or when bi-amping a system. For 600 watts continuous output at 8 ohms, the DC300A converts to a mono amp with two plug-in parts. This makes it possible to drive a 70-volt line directly without a matching transformer.

### Superior Output Protection

The DC300A output protection circuitry is a radically new design which completely eliminates DC fuses and mode switches and further reduces service problems to the negligible level. It is superior in every way to the old VI-limiting circuit pioneered by Crown and now used by most other high power amplifiers, since it introduces *no* flyback pulses, spikes or thumps into the output signal, whether operating as a single- or dual-channel amp.

Gone too is the need to baby the amp by carefully juggling load configurations. The Problem Solver can drive *any* speaker load — resistive or even totally reactive — with *no* protection spikes! Parallel speakers with no deterioration of sound quality, since changing the load impedance only affects the maximum power available, not the ability of the amp to keep on producing clean sound.

### Lowest Distortion and Noise

Also new is the DC300A's IC front end, which sets new world's records for low distortion and noise. At the 8-ohm rated output, IM and harmonic distortion is less than 0.05% full spectrum; hum and noise is 110db below. Servicing — if ever necessary — is a snap, since removing the front panel accesses the entire circuitry.

Although it is a completely redesigned model, the DC300A has inherited some characteristics from its predecessor:

**PRICE** - still under \$700. As two amps in one, it will probably give you or your customers a welcome cost/break when you design your next multiple-amp system.

**WARRANTY** - three years, covering all costs of parts, labor and round-trip shipping.

**COOLING** - excellent heat dissipation provided by massive cooling fins and the entire chassis itself.

**DEPENDABILITY** - stringent pre- and post-inspection and testing proves every electronic component, every circuit module and every finished unit, to bring you one step closer to install-and-forget field dependability.

**PEOPLE** - the same innovative design team and careful craftsmen who made the DC300 such a sound success. And the same knowledgeable customer-service men ready to discuss your special application and send you detailed technical data. Phone 219 + 294-5571 or write Crown International, Box 1000, Elkhart, Indiana 46514.



## CROWN

MADE ONLY IN AMERICA

Check No. 19 on Reader Service Card



# Pre-amplifiers

Notes: (1) All models solid-state except when model number is preceded by (T).  
 (2) "K" indicates kit price; "W" wired

| MANUFACTURER        | MODEL                   | Frequency response, Hz<br>± dB | Rated output, V | THD at rated output, % | IM at rated output, % | Rated output S/N, phono, dB | Phono sensitivity, mV | Phono overload, mV | Tape-head sens., mV | High-level sens., V | Tape monitor, Z, ohms     | Dimensions<br>H x D x H | Weight, lbs.               | Price  | SPECIAL FEATURES       |
|---------------------|-------------------------|--------------------------------|-----------------|------------------------|-----------------------|-----------------------------|-----------------------|--------------------|---------------------|---------------------|---------------------------|-------------------------|----------------------------|--|------------------------|
| ACE AUDIO CO.       | Basic Stereo Preamp     | 20-20k<br>-0.1 dB              | 2.0             | .05                    | .05                   | -70                         | 2.2                   | 250                | 0.1                 | 50k                 | 11 x 8<br>x 3             | 5                       | 69.95K                     | No tone contr.; flat resp. only; can be used with equalizer.                                       |                        |
|                     | Zero-dist. Preamp       | DC-267k<br>to -3               | 1.0             | 0                      | 0                     | -65                         | 10.0                  | 110                | 1.0                 | 50k                 | 11 x 8<br>x 3             | 5                       | 99.95W<br>69.95K<br>99.95W | Indent. to above but w/o high-level amps   |                        |
|                     |                         |                                |                 |                        |                       |                             |                       |                    |                     |                     |                           |                         |                            |  |                        |
| ACOUSTICAL MFG.     | Quad 33                 | 30-20k<br>-0.5                 | 0.5             | .02                    |                       | 85                          | 2.0                   | 120                | *                   | *                   | 10 1/4 x 6 1/2<br>x 3 3/8 | 6 1/2                   | 196.00                     | *Phono & tape inputs adj. w/plug-in boards   |                        |
| AUDIO RESEARCH      | (1) SP-3                | 5-30k<br>+1                    | 5               | 0.005                  | 0.005                 | 70                          | 2.0                   | 400                | 0.1                 | 10k                 | 15 1/2 x 12<br>x 5        |                         | 595.00                     | Opt. finish on front panel.  |                        |
| BGW SYSTEMS         | 4XPA<br>4-chan.         | 20-20k<br>-0.1                 | 10              | 0.02                   | 0.006                 | 100+                        | 1.0                   | 125                | 0.1                 | 600                 | 19 x 10<br>x 7            | 20                      | 750.                       | Scope display, CD-4 decoder, mic line inputs avail.; 12 eq. filters.                               |                        |
|                     | 2XPA                    | 20-20k<br>-0.1                 | 10              | 0.02                   | 0.006                 | 100+                        | 1.0                   | 125                | 0.1                 | 600                 | 19 x 10<br>x 7            | 20                      | 500.                       | Can be converted to 4-chan.  |                        |
| CROWN               | IC-150                  | 3-100k<br>-0.6                 | 2.5             | 0.05                   | 0.01                  | 90                          | 0.8<br>8°             | 33<br>330°         | 0.22                | 600                 | 17 x 8 1/4<br>x 5 1/4     | 10                      | 299.00                     | *Adjustable; wal. cab., \$33.00; rack mtg. brackets, \$10; stereo image contr.; 2 tape mon.        |                        |
| DAYTON WRIGHT       | SPM                     | 7-50k<br>+2                    | 8               | 0.005                  | 0.01                  | 75                          | 1.2                   | 270                | 0.4                 | 10k                 | 5 1/2 x 6 1/2<br>x 10     | 6                       | 260.00                     |  |                        |
|                     | SPG                     | 7-50k<br>+2                    | 8               | 0.004                  | 0.01                  | 80                          | 1.0                   | 250                | 0.4                 | 10k                 | 17 x 6 1/2<br>x 10        | 19                      | 725.00                     | Invert. & non-invert. outputs; 8 freq. contrs. mon. & dial for 2 tape decks, 2 switchable UV mtrs. |                        |
|                     | SPX                     | 10-40k<br>+2                   | 8               | 0.007                  | 0.015                 | 75                          | 1.0                   | 270                | 0.4                 | 10k                 | 13 x 6 1/2<br>x 10        | 14                      | 500.00                     | Built-in comp./exp. sys.   |                        |
| DYNACO              | PAT-4                   | 10-100k<br>+ 1/2               | 2.0             | 0.05                   | 0.05                  | 70                          | 3                     | 80                 | 0.15                | 600                 | 13 1/2 x 9<br>x 4         | 10                      | 94.95K<br>159.95W          | Front panel input & output; 3-pos. hi filt.  |                        |
|                     | PAS-3(T)                | 10-40k<br>+ 1/2                | 2               | 0.05                   | 0.05                  | 70                          | 2                     | 250                | 0.2                 | 47k                 | 13 1/2 x 9<br>x 4         | 11                      | 79.95K                     | 3-pos. blend swit.   |                        |
| ESS                 |                         | 2-2000k<br>-1                  | 2.5             | 0.0075                 | 0.005                 | 80                          | 2.5                   | 70                 | 0.3                 | *                   | 16 1/2 x 9<br>x 6         |                         | 395.00                     | Suppressed on/off transients; sq. wave rise time, 50 nano Sec.                                     |                        |
| EPICURE             |                         | 10-100k<br>+1                  | 5               | 0.01                   | 0.02                  | 80                          | 1-3                   | 140<br>250         | 0.2                 | 5K                  | 19 x 13<br>x 8            |                         |                            | Multi-purpose 'scope; 7-pos. equal.  |                        |
| HARMAN/KARDON       | Citation 11             | 2-250k<br>-1                   | 6.0             | 0.05                   | 0.05                  | 72                          | 2.5                   | 200                |                     | 20k                 | 16 1/2 x 12<br>x 4 3/4    | 20                      | 350.00                     | 5 pt. eqizr.; spkr. swit. w. 'phones; *0.15V, Aux. 1 & 2; 3V., Aux. 3.                             |                        |
| INTEGRAL SYSTEMS    | 10                      | 20-100k<br>-0.25               | 3.5             |                        |                       | 90                          | 1.4                   | 140:<br>35         | 0.2                 |                     |                           |                         | 240.00                     |  |                        |
| JVC                 | VP-10                   | 10-100k<br>+0.5                | 3.0             | 0.03                   | 0.05                  | 84                          | 1.0                   | 120                | 1.2                 | 0.17                | 10k                       | 19 x 13 1/2<br>x 6      | 22                         | 599.95   | 7 pos. SEA tone contr. |
|                     | VP-100                  | 18-50k<br>-0.5                 | 1.0             | 0.03                   | 0.1                   | 80                          | 1.2                   | 120                | 0.12                | 12k                 | 17 x 11 1/2<br>x 5 1/2    | 19                      | 259.95                     | 7 pos. SEA tone contr.; pink noise tester.   |                        |
|                     | 4DD-5<br>4-chan.        | 20-16k                         | 0.3             |                        |                       | 1.5                         |                       |                    |                     |                     | 7 x 13<br>x 3 1/2         | 5                       | 119.95                     | CD-4   |                        |
| MARANTZ             | 3300                    | 20-20k<br>+0.25                | 3.0             | 0.02                   | 0.02                  | 100°                        | 1.25                  | 100                | 0.135               | 900                 | 15 1/2 x 8 1/4<br>x 5 1/4 | 22                      | 395.00                     | *Phono dyn. rng.; ratio of overload to equiv. input noise.   |                        |
|                     | 4000<br>4-chan.         | 20-20k<br>+0.5                 | 2.1°            | 0.1                    | 0.1                   | 0.1                         |                       |                    | 0.18                | 900                 | 15 1/2 x 8 1/4<br>x 5 1/4 | 22                      | 249.95                     | *Rear: front, 180mV; 4-chan. preamp adapt.; rear chan. tone contrs.; vari-matrix; rem. contr. opt. |                        |
| PHASE LINEAR        | 4000                    | 20-20k<br>+0.25                | 2.0             | 0.25                   | 0.25                  | 82                          | 2.5                   | 120                | 0.25                | 600                 | 19 x 10<br>x 7            | 18                      | 599.00                     |  |                        |
| QRK (CCA)           | Ultimate I<br>(mono)    | 50-15k<br>+1                   | 1.0             | 0.2                    | 0.2                   | -75                         | 12                    |                    |                     |                     | 9 x 3<br>x 3              | 2.5                     | 149.50                     | 600 ohm bal. output; built-in rumble filter.   |                        |
|                     | Ultimate II<br>(stereo) | 50-15k<br>+1                   | 1.0             | 0.2                    | 0.2                   | -75                         | 12                    |                    |                     |                     | 9 x 3<br>x 3              | 4 1/4                   | 194.50                     | As above.  |                        |
| QUINTESSENCE        | Preamp 1                | 10-100k<br>-0.5                | 7.0             | 0.025                  | 0.025                 | 70                          | 15                    | 165                | 0.1                 | 600                 | 14 x 10<br>x 4            | 14                      | 329.50                     |  |                        |
|                     | Equalizer 1             | 10-100k<br>+0.5                | 7.0             | 0.025                  | 0.025                 | 95                          |                       |                    | 0.1                 | 10k                 | 14 x 10<br>x 4            | 14                      | 329.50                     | Act. equal.: -12 dB at 120 Hz, 12 kHz shelvg.; -12 dB at 400 Hz, 1.2 kHz, 4 kHz peak & dip         |                        |
| RADFORD (AUDIONICS) | 5C24 Mk II              | 20-50k<br>+1                   | 1.0             | 0.01                   | 0.01                  | 75                          | 2.0                   | 200                | 0.08                | 150                 | 16 x 4 1/2<br>x 8 3/4     | 18                      | 429.95                     | Mid. phono, sensitivity contrs.  |                        |
|                     | HD22                    | 20-50k<br>+1                   | 10              | 0.01                   | 0.01                  | 80                          | 1.0                   | 750                | 0.08                | 150                 | 16 x 4 1/2<br>x 8 3/4     | 14                      | 395.00                     | Two tape inputs.   |                        |
| SAE                 | Mk IB                   | 10-100k<br>+0.25               | 14              | 0.02                   | 0.02                  | 80                          | 2.5                   | 100                | 0.25                | 5k                  | 17 x 5 1/4<br>x 10 1/2    | 20                      | 650.00                     | Step contrs.; 7-band tape or line out act. eqizr.; 3-pos. tape copy.                               |                        |
|                     | Mk IM                   | 10-100k<br>+0.25               | 14              | 0.02                   | 0.02                  | 80                          | 2.5                   | 100                | 0.25                | 5k                  | 17 x 5 1/4<br>x 10 1/2    | 20                      | 500.00                     | Dir. rdg. VU mtrs.; no tone contrs. Can be used w. eqizr.  |                        |
|                     | Mk IX                   | 10-100k<br>+0.25               | 14              | 0.02                   | 0.02                  | 75                          | 2.5                   | 100                | 0.25                | 5k                  | 17 x 7<br>x 5 1/2         | 15                      | 400.00                     | 5-band act. eqizr.; slide contrs.; tape copy.  |                        |
|                     | Mk XXX                  | 10-100k<br>+0.25               | 9               | 0.03                   | 0.03                  | 72                          | 2.5                   | 100                | 0.28                | 5k                  | 15 x 8<br>x 4 1/2         | 10                      | 225.00                     | Slide contrs.; mil. spec. epoxy crt. brds.   |                        |
| SOUNDCRAFTSMEN      | PRP 18-12               | 10-100k<br>-0.29               | 3.5             | 0.02                   | 0.02                  | 85                          | 2.0                   | 110                | 0.2                 | 600                 | 18 x 12<br>x 5 1/4        | 28                      | 499.50                     | Comb. Equal. w/9-oct. contr./chan., plus compl. preamp contr. ctr.                                 |                        |
|                     | 20-12                   | 20-20k<br>+0.5                 | 7.0             | 0.05                   | 0.05                  | 90                          |                       |                    | 0.2                 | 3k                  | 18 x 11<br>x 5 1/4        | 22                      | 299.50                     | Stereo equal. preamp; freq. bal.   |                        |
|                     | RP10-12                 | 20-20k<br>+0.25                | 7.0             | 0.01                   | 0.01                  | 95                          |                       |                    | 0.2                 | 600                 | 18 x 11<br>x 5 1/4        | 22                      | 349.50                     | Prof. model; switched rec. & PB; input-output level metering.                                      |                        |
| SOUTHWEST           | 198                     | 1-80k<br>+1                    | 5.0             | 0.05                   | 0.02                  | 65                          | 2                     | 100                | 100mV               | 10k                 | 8 x 12<br>x 6             |                         | 69.50K                     | Pushbutton tone controls; push-pull compl. amp. mods.  |                        |

# Tuners



Heath AJ-1510



JVC VT-900

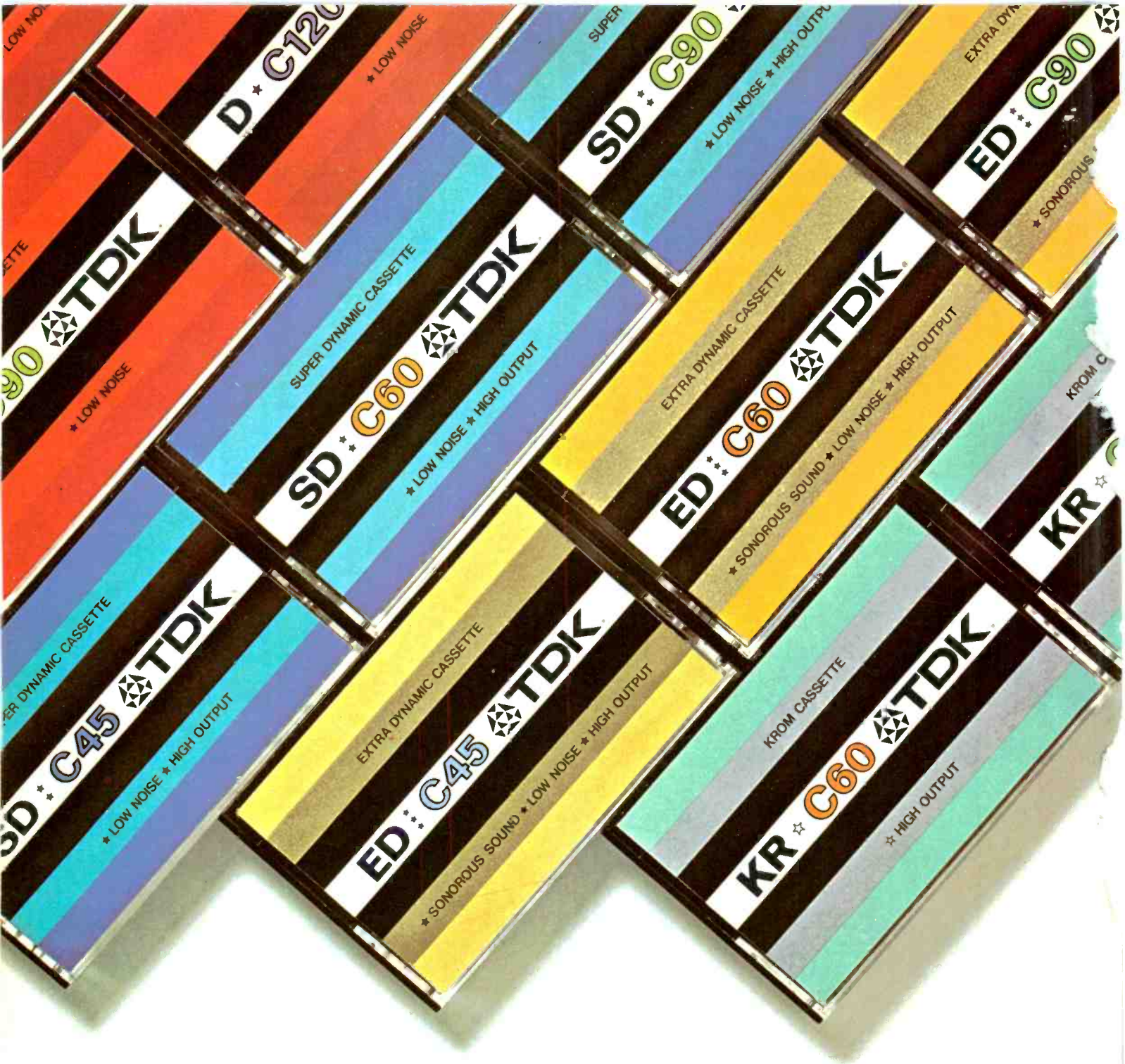


Kenwood KT-8005

Notes: (1) All models solid-state except when model number is preceded by (T).  
 (2) "K" indicates kit price; "W" wired.

| MANUFACTURER    | MODEL                | IHF sensitivity, $\mu$ V | Capture ratio, dB | AM suppression, dB | AM chan. selectivity, dB | Frequency response, Hz | Stereo separation, 1000 Hz, dB | Stereo separation, 10 kHz, dB | THD, mono, 100% mod., % | THD, stereo, 100% mod., % | Tuning indicator | S.W., dB | Number of meters | AM band?               | Dimensions w x d x h, in. | Weight, lbs. | Price  | SPECIAL FEATURES  |
|-----------------|----------------------|--------------------------|-------------------|--------------------|--------------------------|------------------------|--------------------------------|-------------------------------|-------------------------|---------------------------|------------------|----------|------------------|------------------------|---------------------------|--------------|--|---|
| ACOUSTICAL MFG. | Quad FM3             | 1.0                      | 3                 | 46                 |                          | 20-15k<br>-1           | 40                             | 25                            | 0.3                     | 0.5                       |                  |          | no               | 10 1/2 x 6 1/2 x 3 3/4 | 6                         | 237.00       | Quad twin lamp tuning sys.                         |   |
| ALTEC           | 724A                 | 1.8                      | 13                |                    |                          | 20-15k<br>-1           | 40                             |                               | 0.3                     |                           | mtr              |          | 2                | yes                    | 17 3/4 x 16 1/2 x 5       | 34           | 499.00   | Incl. preamp: phono sens. 2.0mV or 5.0mV switchbl; S/N: 80dB, hi lev., 60dB, lo lev.                                    |
| DYNACO          | AF-6                 | 1.75                     | 1.5               | 65                 | 58                       | 50-15k<br>+1           | 40                             | 30                            | 0.5                     | 0.5                       | 1t.<br>mtr       | 65       | 1                | yes                    | 13 1/2 x 11 x 4           | 13           | 225.00K<br>325.00W                                 | Dynatune auto. tuning circ.   |
|                 | FM-5                 | 1.75                     | 1.5               | 65                 | 58                       | 50-15k<br>+1           | 40                             | 30                            | 0.5                     | 0.5                       | 1t.<br>mtr       | 65       | 1                | no                     | 13 1/2 x 9 x 4            | 11           | 159.95K<br>249.95W                                 | Same as above.  |
| HARMAN KARDON   | Citation 14          | 2.0                      | 1.5               | 60                 | 60                       | 4-80k<br>-1            | 45                             | 35                            | 0.25                    | 0.35                      | 2<br>mtrs*       | 70       | 2                | no                     | 16 x 13 3/4 x 4 1/2       | 27           | 525.00   | *"Quieting" mtr. (pat.); PLL demod.; Dolby decod.; test outputs: 4-chan. output.  |
|                 | Citation 15          | 2.0                      | 1.5               | 60                 | 60                       | 4-80k<br>-1            | 45                             | 35                            | 0.25                    | 0.35                      | 2<br>mtrs*       | 70       | 2                | no                     | 16 x 13 3/4 x 4 1/2       | 27           | 395.00   | "Quieting" mtr. (pat.); PLL demod.; 4-chan. output  |
| HEATH           | AJ-14                | 5.0                      | 3                 |                    | 35                       | 20-15k<br>-3           | 30                             |                               | 1.0                     |                           |                  |          | no               | 12 x 9 3/4 x 3         | 4 1/4                     | 49.95K       | Preassembled FM front-end.                         |   |
|                 | AJ-1214              | 2.0                      | 2                 | 60                 | 50                       | 20-15k<br>-1           | 40                             |                               | 0.5                     | 1.0                       |                  |          | yes              | 12 3/4 x 13 x 3 3/4    | 7 3/4                     | 89.95K       | Same as above w/ FET RF; ceramic filters; PLL mpx. |   |
|                 | AJ-29                | 1.8                      | 1.5               | 70                 | 50                       | 20-15k<br>-1           | 40                             | 30                            | 0.5                     | 0.5                       | mtr              | 60       | 2                | yes                    | 16 3/4 x 4 1/2 x 5 1/2    | 14 1/2       | 179.95K  | Mod. constr; preassem. FM front end w/FET RF; 9-pole L-C filt.; 3-FM-i.f. ICs; AM w/adj. rod antenna                    |
|                 | AJ-15                | 1.8                      | 1.5               | 70                 | 50                       | 20-15k<br>-1           | 40                             | 25                            | 0.5                     | 1.0                       | mtr              | 65       | 2                | no                     | 16 1/4 x 12 1/2 x 4 1/4   | 11 1/4       | 199.95K  | Preassem. FET FM front-end; x-tal. filts.; noise oper. squelch; stereo only swit.; 2 stereo 'phone jacks w/lev. contls. |
|                 | AJ-1510              | 1.8                      | 1.5               | 95                 | 60                       | 20-15k<br>-1           | 40                             | 30                            | 0.3                     | 0.35                      | *                | 65       | 1                | no                     | 16 3/4 x 14 3/4 x 6       | 16           | 539.95K  | *PLL tune & MPX; 4 digit readout; sweep. card, & push button tune   |
| HITACHI         | FT-600               | 1.8                      | 1.5               | 45                 | 50                       |                        | 40                             |                               |                         | 0.8                       | mtr              | 70       | 2                | yes                    | 16 x 5 x 12               | 19           | 229.95   |   |
| JVC             | VT-900               | 1.7                      | 0.8               | 70                 | 55                       |                        | 38                             | 25                            | 0.3                     | 0.5                       | mtr*             | 65       | mtr*             | no                     | 16 3/4 x 12 1/2 x 5 1/2   | 19 1/2       | 369.95   | *Dig. readout; IC & FET; dual element FM filters.   |
|                 | VT-700               | 1.7                      | 0.8               | 70                 | 55                       |                        | 35                             | 25                            | 0.3                     | 0.5                       | 2<br>mtrs        | 65       | 2<br>mtrs        | yes                    | 17 x 12 x 5 1/2           | 16 1/2       | 299.95   | 4 FM mech. filt.; mpx filter.   |
| KENWOOD         | KT-8005              | 1.5                      | 1.0               | 100                | 65                       | 50-15k<br>-0.5         | 40                             | 40                            | 0.2                     | 0.3                       | mtr              | 75       | 2                | yes                    | 17 1/2 x 11 3/4 x 6       | 28.4         | 389.95   | 4 FET; 5-gang front-end; ICs & four 2 element filt. in i.f.; dbl. swit. demod.  |
|                 | KT-6005              | 1.5                      | 1.3               | 80                 | 60                       | 20-15k<br>+0.2, -1.0   | 45                             | 38                            | 0.3                     | 0.5                       | mtr              | 70       | 2                | yes                    | 17 1/4 x 11 3/4 x 6       | 17.8         | 289.95   | Dbl. swit. demod. (DSD); FET front-end; mpx filter; linear dial.  |
|                 | KT-4005              | 1.9                      | 2.0               | 60                 | 55                       | 20-15k<br>+0.2, -1.5   | 40                             | 35                            | 0.4                     | 0.7                       | mtr              | 70       | 2                | yes                    | 17 1/4 x 11 3/4 x 6       | 17.8         | 189.95   | Dbl. swit. demod.; FET front-end; IC i.f. stg.; mpx filter; muting.   |
|                 | KT-2001A             | 2.0                      | 4.0               | 45                 | 45                       |                        | 30                             | 20                            | 0.5                     | 0.7                       | mtr              | 60       | 1                | yes                    | 13 3/4 x 9 1/2 x 4 3/4    | 10           | 119.95   | FET 3-gang front-end; mpx filter  |
| LAFAYETTE       | LT-725A              | 1.7                      | 1.5               | 50                 |                          | 50-15k                 | 40                             |                               | 0.25                    |                           | mtr              | 75       | 2                | yes                    | 12 x 9 1/4 x 3 3/4        | 12 1/2       | 149.95   | Mute; tape out; internal FM antenna.  |
|                 | LT-670B<br>4-chan.   | 3.5                      | 5                 | 35                 |                          | 50-15k                 | 30                             |                               | 0.7                     |                           | 1t.              | 50       |                  | yes                    | 10 3/4 x 8 3/4 x 3 1/2    | 12           | 109.95   | 4 chan. output jack; AFC; MPX filter swit.; built-in antennas.  |
|                 | LT-D10               | 1.65                     | 1.5               | 60                 | 45                       | 50-15k<br>-1           | 40                             |                               | 0.2                     |                           | mtr              | 70       | 2                | yes                    | 15 3/4 x 11 1/4 x 4 1/2   | 11           | 229.95   | Dolby noise reduc. & de-emphas.; front. rear tape outs; PLL MPX; MPX hi filt & mute.                                    |
| LEAK (ERCONA)   | Stereofetic FM Tuner | 2.0                      | 3.5               | 55                 | 50                       |                        | 30                             | 20                            |                         | 0.25                      | mtr              | 60       | 1                | no                     | 11 1/2 x 4 1/4 x 7 3/4    | 6            | 225.00   |   |
| MARANTZ         | 120                  | 1.4                      | 1.5               | 80                 | 60                       | 30-15k<br>-1           | 42                             | 30                            | 0.15                    | 0.25                      | scope            | 70       |                  | yes                    | 15 3/4 x 13 x 5 3/4       | 29.4         | 429.00   | 'Scope display for tuning, multipath audio & ext. src.; FM quadradial output (detector output).                         |
|                 | 115B                 | 1.9                      | 1.5               | 60                 | 50                       | 30-15k<br>-1           | 42                             | 28                            | 0.3                     | 0.4                       | mtr              | 70       | 2                | yes                    | 15 3/4 x 13 x 5 3/4       | 24           | 279.95   | PLL mpx demod.; FM quadradial output.   |
|                 | 105                  | 3.5                      | 3.0               | 48                 | 55                       | 30-15k<br>-2           | 40                             | 25                            | 0.6                     | 0.8                       | mtr              | 55       | 1                | yes                    | 14 1/4 x 12 x 4 3/4       | 20           | 149.95   |   |





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\*The DYNAMIC series includes TDK's top-of-the-line EXTRA DYNAMIC (ED), the famous tape-of-the-pro SUPER DYNAMIC (SD), and the all-new DYNAMIC (D) lines.

\*The BRILLIANT series includes TDK's KROM (KR) high-performance chromium-dioxide cassette line.

All models in both series are capable of capturing the true essence of hi-fi music — the subtle harmonics and overtones, the richness, depth, timbre and warmth that give music its unique "real-life" sound quality. They all reflect TDK's dedication to leadership in the development of new and better tape products.

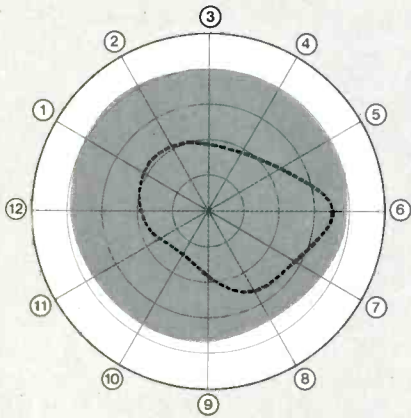
## ...plus a whole new way to evaluate tape performance

A tape's high-fidelity sound reproduction capabilities depend not only on its frequency response characteristics, but also on a number of other properties. TDK has arranged twelve of the most important of these characteristics on their exclusive CIRCLE OF TAPE PERFORMANCE shown below. Each of the twelve "spokes" of the wheel repre-

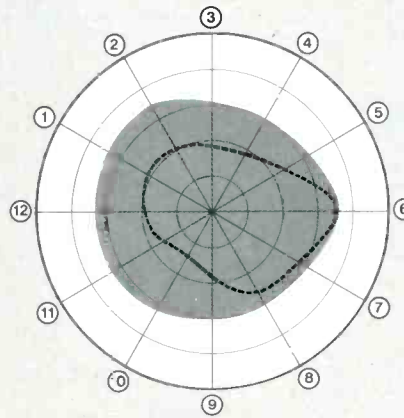
sents one of the twelve factors; the outer circle represents the ideal characteristics of a "perfect" tape. By plotting the characteristics of various cassette tapes on the circle, we can compare them directly: the closer they approach the size and shape of the ideal tape, the better their hi-fi sound reproduction capabilities.

Shown below are the Circle of Tape Performance characteristics of TDK's ED, SD, D and KR cassettes, compared with those of a typical conventional cassette (dotted line) and with one of the leading so-called "hi-fi" competitive cassettes. Judge for yourself which cassettes provide the best-balanced hi-fi performance characteristics.

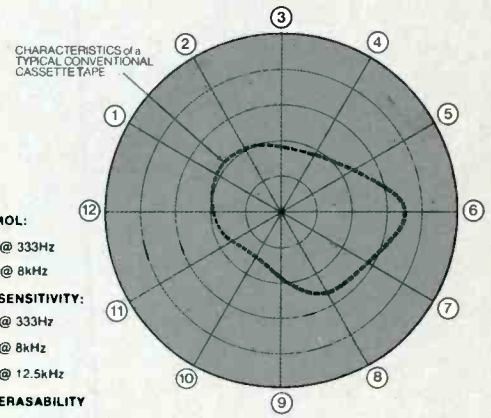
**ED EXTRA DYNAMIC**



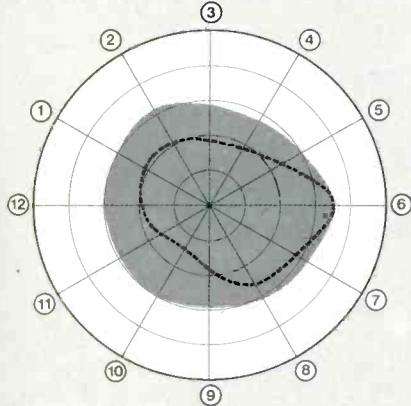
**SD SUPER DYNAMIC**



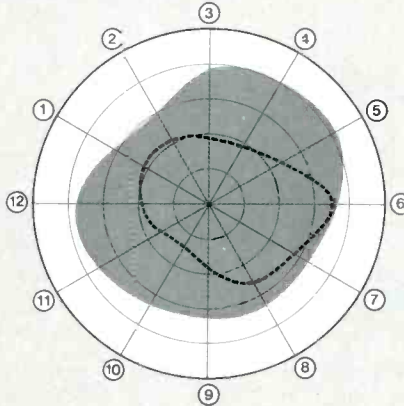
**Ideal Circle**



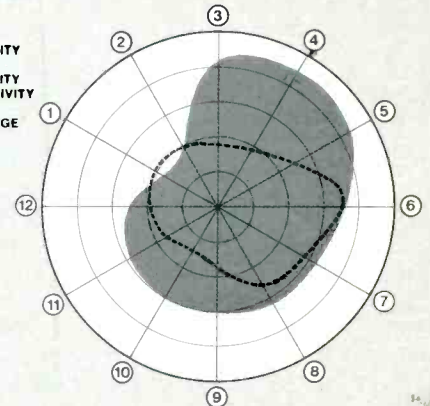
**D DYNAMIC**



**KR KROM**



**Competitor's Circle**



- MOL:
- 1 @ 333Hz
  - 5 @ 8kHz
- SENSITIVITY:
- 2 @ 333Hz
  - 3 @ 8kHz
  - 4 @ 12.5kHz
- 6 ERASABILITY
  - 7 BIAS NOISE
  - 8 PRINT-THROUGH
  - 9 MODULATION NOISE
  - 10 OUTPUT UNIFORMITY
  - 11 UNIFORMITY of SENSITIVITY
  - 12 BIAS RANGE

**SD SUPER DYNAMIC**, the tape that turned the cassette into a high-fidelity medium. Very high maximum output levels (MOL) and very broad dynamic range assure outstanding reproduction of the complex characteristics of "real life" sound. Clear, crisp, delicate sound reproduction. Available in 45, 60, 90 and 120 minute lengths.

**D DYNAMIC** the entirely new hi-fi cassette from TDK, offering excellent quality at moderate prices with well balanced performance characteristics superior to most "premium" cassettes. New coating formulation assures bright, warm and mellow sound reproduction. Available in 45, 60, 90, 120 and 180 minute lengths, world's only 3 hour cassette.

**KR KROM** cassettes, available in 60 and 90 minute lengths, are the "more than equal" chromium dioxide cassettes for those who prefer its brilliant, crisp, sharp sound. For use only on decks equipped with a bias or tape type selector switch, KROM cassettes offer unequalled response and outstanding linearity at high frequencies.



# Tuners

Pioneer TX-9100



Sansui TU-7500

Superscope T-220



Notes: (1) All models solid-state except when model number is preceded by (T).  
(2) "K" indicates kit price; "W" wired.

| MANUFACTURER         | MODEL   | IHF sensitivity, $\mu$ V | Capture ratio, dB | All. chan. selectivity, dB | AM suppression, dB | Frequency response, Hz | Stereo separation, 1000 Hz, dB | Stereo separation, 10 MHz, dB | THD, mono, 100% mod., % | THD, stereo, 100% mod., % | Tuning indicator | S/N, dB | Number of meters | AM band: | Dimensions, w x d x h, in.                               | Weight, lbs.     | Price   | SPECIAL FEATURES   |
|----------------------|---------|--------------------------|-------------------|----------------------------|--------------------|------------------------|--------------------------------|-------------------------------|-------------------------|---------------------------|------------------|---------|------------------|----------|--|------------------|---------|--|
| ONKYO                | T 4055  | 1.7                      | 12                | 80                         | 55                 | 20-15k<br>+0.2-2       | 40                             | 35                            | 0.2                     | 0.5                       | mtr              | 70      | 2                | yes      | 16 $\frac{1}{2}$ x 14<br>x 5 $\frac{1}{2}$               | 20               | 199.95  | Audible multipath dist. contrl.; 1.7 $\mu$ v sens.   |
| PILOT                | 211     | 1.8                      | 15                |                            | 65                 | 20-15k                 | 36                             |                               | 0.4                     | 0.8                       | mtr              | 65      | 2                | yes      | 15 x 11 $\frac{1}{2}$<br>x 5 $\frac{1}{2}$               |                  | 199.90  | Mute, MPX filter, 4 gang FM tuning   |
| PIONEER              | TX 6200 | 1.9                      | 1.5               | 60                         | 50                 | 20-15k<br>+0.2-2       | 40                             | 30                            | 0.2                     | 0.4                       | mtr              | 70      | 1                | yes      | 17 x 13<br>x 5 $\frac{1}{2}$                             | 15               | 129.95  | Muting; mpv filter; fixed & var. output levels; FM multipath output.   |
|                      | TX 7100 | 1.9                      | 1.0               | 60                         | 55                 | 20-15k<br>+0.2-2       | 40                             | 30                            | 0.2                     | 0.4                       | mtr              | 70      | 2                | yes      | 17 x 13<br>x 5 $\frac{1}{2}$                             | 17               | 179.95  | Output lev. AM & FM; mpv noise fil.; muting; multipath output; fixed & var. output level contrls.  |
|                      | TX 8100 | 1.8                      | 1.0               | 80                         | 55                 | 20-15k<br>-2           | 40                             | 30                            | 0.2                     | 0.4                       | mtr              | 70      | 2                | yes      | 17 x 13<br>x 5 $\frac{1}{2}$                             | 17               | 229.95  | Output lev. contrls. for phones, AM & FM modes; mpv noise fil.; muting; multipath output; fixed & var. output.                                   |
|                      | TX 9100 | 1.5                      | 1.0               | 90                         | 65                 | 20-15k<br>+0.2-2       | 40                             | 30                            | 0.2                     | 0.3                       | mtr              | 75      | 2                | yes      | 17 x 13<br>x 5 $\frac{1}{2}$                             | 19               | 299.95  | Output lev. contrls. for phones AM & FM modes; pulse noise sup. swit.; 2 lev. mut. swit.; mpv noise fil.; multipath outputs, output fixed & var. |
| RADFORD<br>AUDIONICS | FMT 4/5 | 1.2                      | 1                 | 100                        | 60                 | 30-15k<br>-1           | 45                             | 40                            | 0.2                     | 0.5                       | mtr              | 70      | 2                | no       | 16 x 4 $\frac{1}{2}$<br>x 8 $\frac{3}{4}$                | 20               | 475.00  | Avail. in 2 exter. finishes to match MK I or Mk II series  |
| RADIO SHACK          | TM-90   | 4                        | 2.5               |                            |                    | 20-20k<br>-2           | 34                             | 20                            |                         | 0.3                       | mtr              | 55      | 1                | yes      | 14 $\frac{1}{2}$ x 11<br>x 3 $\frac{1}{2}$               | 13               | 119.95  | FET front-end; wood case.  |
|                      | TM-175B | 5                        | 2.5               |                            |                    | 20-20k<br>-2           |                                | 25                            |                         | 0.3                       | mtr              | 48      | 1                | yes      | 7 x 10<br>x 4  | 8                | 79.95   | FET front-end; wood case.  |
|                      | TM-100  | 5                        | 3.0               |                            |                    | 20-20k<br>-2           | 25                             | 15                            |                         | 0.3                       |                  | 40      | 0                | yes      | 9 x 3<br>x 6 $\frac{1}{2}$                               | 7                | 49.95   | Wood case.   |
| REVOX                | A76     | 1.0                      | 1.0               | 80                         | 54                 | 30-15k<br>-1           | 40                             | 30                            |                         | 0.2                       | mtr              | 70      | 2                | no       | 16 $\frac{1}{2}$ x 9 $\frac{1}{2}$<br>x 6 $\frac{1}{4}$  | 18               | 599.00  | Var. trigger lev.; multipath ind.; ctr. tuning mtr.; sig. str. mtr.  |
| ROTEL                | RT-222  | 4.0                      | 3                 | 20                         |                    |                        | 32                             |                               |                         | 1.0                       | mtr              | 63      | 1                | yes      | 11 $\frac{3}{4}$ x 7 $\frac{1}{2}$<br>x 4                | 7                | 109.95  | Wood cabinet.  |
|                      | RT-322  | 2.0                      | 2.5               | 55                         |                    |                        | 35                             |                               |                         | 1.0                       | mtr              | 65      | 1                | yes      | 12 $\frac{1}{2}$ x 8 $\frac{3}{4}$<br>x 4                | 9                | 159.95  | Mplx. filter; FM muting.   |
|                      | RT-622  | 1.7                      | 1.5               | 60                         |                    |                        | 40                             |                               |                         | 0.9                       | mtr              | 65      | 2                | yes      | 16 $\frac{1}{2}$ x 12<br>x 5 $\frac{1}{2}$               | 11               | 239.95  | Mplx. filter; hi & lo level outputs; adj. muting level.  |
|                      | RT-1210 | 1.5                      | 1.0               | 90                         |                    |                        | 46                             |                               |                         | 0.5                       | mtr              | 70      | 2                | yes      | 16 $\frac{1}{2}$ x 12<br>x 5 $\frac{1}{2}$               | 17               | 299.95  | Built-in preamp; 3-pos. FM muting.   |
| SAE                  | MkVI    | 1.6                      | 1.5               | 140                        | 100                | 20-15k<br>-0.5         | 50                             | 38                            | 0.1                     | 0.15                      | °                | 75      |                  | no       | 17 x 10 $\frac{1}{2}$<br>x 5 $\frac{1}{4}$               | 25               | 950.00  | °Dig. readout; 3" scope; 14 pole filt.; 4 ganged FET front end.  |
| SANSUI               | TU 9500 | 1.7                      | 1.5               | 80                         |                    | 30-15k<br>+0.5-2       | 40                             | 30                            | 0.2                     | 0.3                       | mtr              | 75      | 2                | yes      | 19 $\frac{1}{2}$ x 13 $\frac{1}{2}$<br>x 5 $\frac{1}{2}$ | 21               | 299.95  |  |
|                      | TU 7500 | 1.9                      | 2                 | 70                         |                    | 30-15k<br>+0.5-2.5     | 40                             |                               | 0.3                     | 0.5                       | mtr              | 70      | 2                | yes      | 17 $\frac{3}{4}$ x 12 $\frac{1}{2}$<br>x 5 $\frac{1}{2}$ | 17 $\frac{1}{2}$ | 249.95  |  |
| SEQUIERRA            | 1       | 2.0                      | °                 | 130                        | 70                 | 20-15k<br>-0.2         | 50                             | 36                            | 0.1                     | 0.2                       | **               | 80      | 0                | no       | 16 x 14 $\frac{1}{4}$<br>x 5.3/16                        | 30               | 1800.00 | °Co. does not pub. fig.; °scope 4 $\frac{1}{2}$ " flat face; panoramic spect. analyzer; \$400.; rem. pushbtn. tuning; 4-chan. scope display.     |
| SHERWOOD             | S-2400  | 1.8                      | 1.5               | 65                         | 60                 | 20-15k<br>-1           | 40                             | 25                            | 0.25                    | 0.5                       | 2 mtrs           | 70      | 2                | yes      | 17 $\frac{1}{2}$ x 14<br>x 5                             | 29               | 229.95  | Wal. case; scope outputs; var. output; 4 chan. FM out.   |
|                      | SEL300  | 1.5                      | 1.7               | 80                         | 65                 | 20-15k<br>-1           | 40                             | 30                            | 0.15                    | 0.25                      | 2 mtrs           | 70      | 2                | no       | 16 $\frac{1}{4}$ x 14<br>x 5 $\frac{1}{4}$               | 25               | 499.00  | Dig. readout; scope outputs; tape mon.; tape dubbing; phone am; 4-chan. FM out.  |
| SINCLAIR<br>(HERVIC) | 2000    | 2.0                      | 1.5               |                            |                    |                        | 40                             |                               | °                       | °                         | 2 mtrs           | 65      | 2                | no       | 12 x 6<br>x 2  | 3                | 129.50  | °0.15% THD 30% mod.; var. tuning; rem. contl.; PLL disc.; anod. blk. alum. case; 3000 same w/silver anod. alum. case.                            |
| SUPERSCOPE           | T 210   | 5.0                      | 6                 | 35                         |                    | 30-15k<br>-3           | 30                             | 15                            |                         |                           | mtr              | 60      | 1                | yes      | 14 $\frac{1}{2}$ x 8<br>x 4 $\frac{1}{2}$                | 5.3              | 99.95   | Sig. strength tun. mtr.; bal. flywheel tuning; stereo ind.; AFC for FM.  |
|                      | T 220   | 2.8                      | 3                 | 35                         |                    | 20-15k<br>1.5          | 32                             | 20                            |                         |                           | mtr              |         | 1                | yes      | 20 $\frac{1}{2}$ x 19<br>x 12 $\frac{1}{4}$              | 18.7             | 159.95  | Oversize tuning mtr.; ill. ind.; mono/stereo swit.; FM muting swit.; 4-chan. FM output jack; adj. output lev.                                    |



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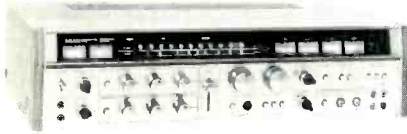
# Receivers



Altec 710



Concord CR-550



Akai AS-980

- Notes: (1) All models solid-state except when model number is preceded by (T).  
 (2) "K" indicates kit price; "W" indicates wired price.

| MANUFACTURER        | MODEL          | AMPLIFIER          |                       |                      |                 |                     |                        |                             |                       |                    |                          | TUNER             |                     |                        |                          |                         |                  |                            | Dimensions, w x d x h, in. | Weight, lbs.            | Price  | SPECIAL FEATURES |  |
|---------------------|----------------|--------------------|-----------------------|----------------------|-----------------|---------------------|------------------------|-----------------------------|-----------------------|--------------------|--------------------------|-------------------|---------------------|------------------------|--------------------------|-------------------------|------------------|----------------------------|----------------------------|-------------------------|--------|------------------|--|
|                     |                | RMS Power/chan., W | THD at rated power, % | IM at rated power, % | IM at 1 watt, % | Power bandwidth, Hz | I-watt freq. resp., Hz | Rated output S/N, Phono, dB | Phono sensitivity, mV | Phono overload, mV | IHF sensitivity, $\mu$ V | Capture ratio, dB | Frequency resp., Hz | THD Mono, 100% mod., % | THD stereo, 100% mod., % | Stereo sep., 1000Hz, dB | Tuning indicator | Alt. chan. selectivity, dB |                            |                         |        |                  | No. of meters  |
| AKAI                | AS-980 4-chan. | 40                 | 0.03                  | 1.0                  |                 | 10-60k              | 5-80k -3               | 85                          | 3                     | 2                  | 2                        |                   | 0.2                 | 0.6                    | 40                       | Mtr.                    | 80               | 6                          | Yes                        | 26 x 17 x 6 3/4         | 45     | 799.95           | SQ, matrix, CD-4; rem. cont'l. avail.; 4 input VU mtrs. FM 4 ch. output; rosewood cab.   |
|                     | AS-970 4-chan. | 30                 | 0.03                  | 1.0                  |                 | 10-60k              | 5-80k -3               | 85                          | 3                     | 2.0                | 2                        |                   | 0.4                 | 0.8                    | 40                       | Mtr.                    | 70               | 4                          | Yes                        | 23 x 15 1/2 x 6 3/4     | 36     | 599.95           | SQ, matrix, opt. front pnl. rem. cont'l.; l. & r. chan. VU mtrs.; FM 4-chan. output; rosewood cab.   |
|                     | AS-960 4-chan. | 25                 | 0.03                  | 1.0                  |                 | 10-60k              | 5-80k -3               | 85                          | 3                     | 2.3                | 3.5                      |                   | 0.4                 | 0.8                    | 35                       | Mtr.                    | 70               | 1                          | Yes                        | 19 x 16 x 6 3/4         | 28     | 499.95           | SQ, matrix; FM 4-chan. output; rosewood cab.   |
|                     | AA-910         | 18                 | 0.2                   | 1.0                  |                 | 20-45k              | 20-70k -3              | 75                          | 3                     | 2                  | 2.5                      |                   | -0.4                | -0.8                   | 40                       | Mtr.                    | 65               | 1                          | Yes                        | 18 x 14 1/2 x 6 3/4     | 24     | 229.95           | Vol. cont'l. w/mem. set.; front pnl. stereo mic inputs; FM sens. swit. Model AA-910B; built-in Dolby & 3 mtrs. May be used as sep. amps & preamps. |
|                     | AA-930         | 37 1/2             | 0.03                  | 1.0                  |                 | 10-60k              | 7-80k -3               | 85                          | 3                     | 1.8                | 1.5                      |                   | 0.2                 | 0.6                    | 40                       | Mtr.                    | 80               | 2                          | Yes                        | 19 x 15 1/2 x 6 3/4     | 33     | 399.95           |  |
| ALTEC               | 704            | 12 1/2             | 0.5                   | 0.5                  | 0.5             | 10-30k              |                        | 60                          | 2.5                   | 2.5                | 3                        | 20-15k $\pm$ 1    | 0.5                 | 0.8                    | 35                       | Mtr.                    |                  | 1                          | Yes                        | 15 1/2 x 13 3/4 x 4 3/4 | 15 1/2 | 249.00           |  |
|                     | 710            | 30                 | 0.5                   | 0.5                  | 0.5             | 10-30k              |                        | 60                          | 2.5/8                 | 2.5                | 1.5                      | 20-15k $\pm$ 1    | 0.5                 |                        | 40                       | Mtr.                    |                  | 1                          | Yes                        | 16 1/2 x 15 1/2 x 5 3/4 | 23 1/2 | 375.00           |  |
|                     | 714            | 44                 | 0.5                   | 0.5                  | 0.5             | 15-25k              |                        | 60                          | 2/5                   | 1.9                | 2                        | 20-15k $\pm$ 1    | 0.5                 |                        | 40                       | Mtr.                    |                  | 2                          | Yes                        | 16 1/2 x 13 3/4 x 5 3/4 | 34     | 449.00           |  |
|                     | 725            | 60                 | 0.3                   | 0.3                  | 0.3             | 20-20k $\pm$ 1/2    |                        | 60                          | 2/5                   | 1.8                | 1.3                      | 20-15k $\pm$ 1    | 0.3                 |                        | 40                       | Mtr.                    |                  | 2                          | Yes                        | 17 3/4 x 16 1/2 x 5     | 48     | 599.00           |  |
| AUDIOSON-KIRKSAETER | RTX 120.85     | 85                 | 0.09                  |                      |                 | 8-30k               | 6-50k -3               | 90                          | 1.5                   | 1.5                | 2.5                      | 10-15k            | 0.2                 | 0.8                    | 36                       |                         | 60               | 2                          | No                         | 19 x 14 x 5 1/4         | 31     | 749.95           |  |
|                     | RTX 85.55      | 65                 | 0.09                  |                      |                 | 8-30k               | 6-50k -3               | 90                          | 1.5                   | 1.5                | 2.5                      | 10-15k            | 0.2                 | 0.8                    | 36                       |                         | 60               | 2                          | No                         | 19 x 14 x 5 1/4         | 29     | 649.95           |  |
| B & O               | 4000           | 60                 | 0.1                   | 0.3                  | 0.3             | 10-35k              | 20-30k $\pm$ 1.5       | 65                          | 3                     | 2                  | 3                        | 20-15k            | 0.4                 | 0.4                    | 35                       | Mtr. & Lt.              | 55               | 1                          | No                         | 22 3/4 x 10 3/4 x 3 3/4 | 22     | 520.00           | Var. diode tuning w/preset sel. of 6 stations Same as above.   |
|                     | 3000.2         | 40                 | 0.5                   | 0.6                  | 0.6             | 20-30k              | 30-30k $\pm$ 1.5       | 65                          | 3                     | 2                  | 3                        | 20-15k            | 0.4                 | 0.4                    | 35                       | Mtr. & Lt.              | 55               | 1                          | No                         | 22 3/4 x 10 3/4 x 3 3/4 | 19     | 400.00           |  |
| CONCORD (BENJAMIN)  | CR100          | 6                  | 1.0                   |                      |                 | 27-30k              | 28-25k $\pm$ 1         | 58                          | 2.8                   | 3.5                | 2                        | 20-15k            | 1.0                 | 1.5                    | 30                       | Mtr.                    | 40               | 1                          | Yes                        | 16 x 11 1/2 x 4 3/4     | 10     | 129.95           |  |
|                     | CR200          | 12                 | 1.0                   |                      |                 | 26-33k              | 23-38k $\pm$ 1         | 58                          | 2.8                   | 2.9                | 1.8                      | 20-15k            | 1.0                 | 1.5                    | 35                       | Mtr.                    | 43               | 1                          | Yes                        | 15 1/2 x 12 3/4 x 5     | 16     | 179.95           | Fine tuning; duoglow ind.; elect. ckt. breaker.  |
|                     | CR250          | 25                 | 1.0                   |                      |                 | 20-35k              | 22-40k $\pm$ 1         | 60                          | 2.5                   | 2.3                | 1.5                      | 20-15k            | 1.0                 | 1.5                    | 35                       | Mtr.                    | 46               | 2                          | Yes                        | 18 x 14 x 5 1/4         | 20     | 229.95           | Same as above.   |
|                     | CR550          | 55                 | 0.5                   |                      |                 | 20-60k              | 10-40k $\pm$ 1         | 65                          | 2.2                   | 1.7                | 1.5                      | 20-15k            | 0.7                 | 1.2                    | 40                       | Mtr.                    | 55               | 2                          | Yes                        | 17 3/4 x 15 1/2 x 6     | 31     | 379.95           | Fine tuning; Glow-point <sup>TM</sup> tuning; pushbutton cont'l. swits.; ckt. brkr.  |

# FOR THOSE THAT CAN UNDERSTAND IT, THE SECRET OF EPI'S LINEAR SOUND:

Most people would have neither the understanding nor the inclination to read an ad like this.

But that doesn't make it a waste of our money. Because the few people that *would* read it are, by definition, the best prospects for our EPI loudspeakers.

The subject is linearity.

On a frequency response graph, an EPI speaker records a remarkably linear curve, measured from both on-axis and off-axis (60°) positions.

Why is that?

It has a lot to do with the kind of tweeter that goes into an EPI speaker.

## EPI'S 1-INCH "AIR SPRING" TWEETER.

If you've never heard of an "air spring" tweeter, there's a very good reason for that: We made the name up.

We had to. EPI's tweeter is unlike any other made.

Our air spring tweeter has a concave diaphragm which is driven around its full circumference by a 1-inch voice coil. This is coupled with a 14,000-gauss magnetic field contained in a 9-ounce, permanently charged magnet and suspended in a conically-structured, air-sealed acoustic chamber, designed to create an equi-dispersed recoil effect.

The 1-inch diameter permits

radiation of a nearly perfect hemispherical sound pattern throughout the tweeter's entire frequency range, from 1800 to 18,000hz  $\pm 3$ db. And as

*Stereo Review Magazine* points out, wide dispersion at all levels is the major factor separating an excellent speaker from a merely good one. (*Stereo Review* placed our EPI 400 in the "superb" category.)

So, now that you know the secret of EPI's Linear Sound, all you need to know is where it comes from:

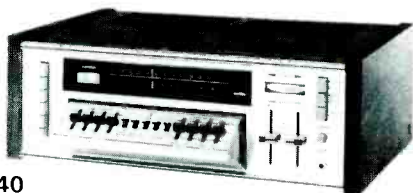
Out of eight great speakers, from \$55 to \$1000, made only by Epicure Products Inc., Newburyport, Mass. 01950.

**THE LINEAR SOUND  
OF EPI.** 





# Receivers



Dokorder MR-940



Fisher 504

Notes: (1) All models solid-state except when model number is preceded by (T).  
 (2) "K" indicates kit price; "W" indicates wired price.

| MANUFACTURER        | MODEL          | AMPLIFIER          |                       |                      |                 |                         |                          |                             |                       |                    |                          |                   | TUNER               |                        |                          |                         |                  |                            |               |          |     |                         | Dimensions, w x d x h, in. | Weight, lbs. | Price  | SPECIAL FEATURES |
|---------------------|----------------|--------------------|-----------------------|----------------------|-----------------|-------------------------|--------------------------|-----------------------------|-----------------------|--------------------|--------------------------|-------------------|---------------------|------------------------|--------------------------|-------------------------|------------------|----------------------------|---------------|----------|-----|-------------------------|----------------------------|--------------|--|------------------|
|                     |                | RMS Power/chan., W | THD at rated power, % | IM at rated power, % | IM at 1 watt, % | Power bandwidth, Hz-kHz | I-weight freq. resp., Hz | Rated output S/N, Phono, dB | Phono sensitivity, mV | Phono overload, mV | IHF sensitivity, $\mu$ V | Capture ratio, dB | Frequency resp., Hz | THD Mono, 100% mod., % | THD Stereo, 100% mod., % | Stereo sep., 1000Hz, dB | Tuning indicator | All. chan. selectivity, dB | No. of meters | AM band? |     |                         |                            |              |  |                  |
| DOKORDER            | MR-900         | 100                | 0.3                   | 3.0                  |                 | 30-45k                  | 30-40k                   | 45                          | 2.5                   | 150                |                          | 1.5               | 1.5                 |                        | 0.5                      | 0.5                     | 35               | Mtr.                       | 50            | 1        | Yes | 20 x 14 x 6 3/4         | 33                         | 439.95       | "Kangaroo pouch" cont. pni.; FET frnt. end; FM mut.; tape mon. term. for 2 sets spkrs.; 2 phonos, 2 aux. tape.                       |                  |
|                     | MR-940 4-CHAN. | 30*                | 0.3                   | 3.0                  |                 | 30-45k                  | 30-40k                   | 45                          | 2.5                   | 150                |                          | 1.5               | 1.5                 |                        | 0.5                      | 0.5                     | 35               | Mtr.                       | 50            | 1        | Yes | 20 x 14 x 6 3/4         | 33                         | 539.95       | Matrix & discr. 4-ch. E-V decod.; BTL bridging; fold-away cont. pni. 4-ch. tone, vol. bal. concls.; *4-CHAN. 58W/chan. in 2-ch. mode |                  |
| FISHER              | 180            | 36                 | 1.0                   | 0.5                  | 0.1             | 30-20k                  | 20-20k -2                | 60                          | 2.5                   | 50                 | 2.5                      | 3                 |                     | 20-15k                 | 0.5                      | 0.8                     | 35               | Mtr.                       | 40            | 1        | Yes | 16 1/2 x 12 x 5 3/4     | 19                         | 249.95       | Model 170 similar, but 28W/chan. & pwr. bndwidth, 40-20k \$199.95.   |                  |
|                     | 4060 4-CHAN.   | 60                 | 1.0                   | 0.8                  | 0.3             | 30-30k                  | 20-20k -2                | 60                          | 2.5                   | 45                 | 2.5                      | 2.5               |                     | 20-15k                 | 0.5                      | 0.8                     | 35               | Mtr.                       | 40            | 2        | Yes | 19 1/4 x 16 1/2 x 5 1/2 | 24 1/2                     | 369.95       | Strpd. amps.; 4020 sim. but 40W/chan. & 1 meter, \$299.95.   |                  |
|                     | 304B 4-CHAN.   | 80                 | 0.5                   | 0.8                  | 0.15            | 12-30k                  | 20-20k -2                | 56                          | 2.7                   | 60                 | 1.8                      | 1.2               |                     | 20-15k                 | 0.2                      | 0.3                     | 38               | Mtr.                       | 60            | 1        | Yes | 21 1/2 x 16 1/2 x 6 1/2 | 39                         | 399.95       | Joystick bal. cont.; 304 same but w/o joystick, \$329.95.  |                  |
|                     | 504 4-CHAN.    | 160                | 0.5                   | 0.8                  | 0.15            | 8-40k                   | 20-20k -2                | 56                          | 2.7                   | 60                 | 1.8                      | 1.2               |                     | 20-15k                 | 0.2                      | 0.3                     | 38               | Mtr.                       | 60            | 2        | Yes | 21 1/2 x 16 1/2 x 6 1/2 | 43                         | 529.95       | 404 sim. but 112W/chan., \$429.95.   |                  |
| GTE SYLVANIA        | CR2742A        | 25                 | 0.5                   | 0.5                  | 0.2             | 17-35k                  | 17-35k +1.5              | 50                          | 2.6                   | 80                 | 1.9                      | 1.5               |                     | 20-15k                 | 1.0                      | 0.6                     | 40               | Mtr.                       | 55            | 1        | Yes | 16 1/2 x 13 x 5 1/2     | 24                         | 219.95       | Sylvania Phase Q-4 matrix.   |                  |
|                     | CR2743A        | 50                 | 0.5                   | 0.5                  | 0.2             | 17-35k                  | 17-35k +1.5              | 50                          | 2.6                   | 80                 | 1.9                      | 1.5               |                     | 20-15k                 | 1.0                      | 0.6                     | 40               | Mtr.                       | 55            | 1        | Yes | 16 1/2 x 15 1/2 x 5 1/2 | 30                         | 299.95       | As above.  |                  |
|                     | RQ3747 4-CHAN. | 25                 | 0.5                   | 0.5                  | 0.2             | 18-35k                  | 20-30k +1.5              | 60                          | 2.6                   | 100                | 1.9                      | 1.5               |                     | 20-15k                 | 1.0                      | 0.6                     | 35               | 2 Mtrs.                    | 55            | 2        | Yes | 21 1/4 x 15 x 6 1/2     | 35                         | 449.95       | Brdg. strp. ckt. gives 60W/60W RMS in 2-ch.  |                  |
|                     | RQ3748 4-CHAN. | 50                 | 0.5                   | 0.5                  | 0.2             | 18-35k                  | 20-30k +1.5              | 60                          | 2.6                   | 100                | 1.9                      | 1.5               |                     | 20-15k                 | 1.0                      | 0.6                     | 35               | 2 Mtrs.                    | 55            | 2        | Yes | 21 1/4 x 15 x 6 1/2     | 38                         | 549.95       | Brdg. strp. ckt. gives 125W/125W RMS in 2-ch.  |                  |
| GROMMES (PRECISION) | 600            | 20                 | 0.3                   | 0.5                  | 0.1             | 20-20k                  | 20-20k +1                | 60                          | 2                     | 75                 | 3.5                      | 5                 |                     | 20-15k                 | 0.5                      | 0.7                     | 30               | Mtr.                       | 40            | 1        | Yes | 14 x 4 3/4 x 6 1/2      | 17                         | 179.95       |  |                  |
|                     | 503A           | 40                 | 0.3                   | 0.5                  | 0.1             | 20-20k                  | 20-20k +1                | 60                          | 2                     | 75                 | 2                        | 2.5               |                     | 20-15k                 | 0.5                      | 0.7                     | 35               | Mtr.                       | 45            | 1        | Yes | 16 x 5 1/4 x 13         | 30                         | 359.50       |  |                  |
| HARMAN KARDON       | 900+ 4-CHAN.   | 32*                | 0.5                   | 0.15                 | 0.15            | 10-40k                  | 1-100k +1                | 65                          | 3                     | 85                 | 1.8                      | 1.6               |                     | 50-15k                 | 0.4                      | 0.5                     | 37               | Mtr.                       | 60            | 1*       | Yes | 20 1/2 x 17 x 6 1/4     | 45                         | 749.95       | CD-4, SQ. "quieting" mtr.; 4-ch. FM output; *2-ch., 90W/chan.  |                  |
|                     | 800+ 4-CHAN.   | 22*                | 0.5                   | 0.15                 | 0.15            | 10-40k                  | 1-100k +1                | 65                          | 3                     | 75                 | 2.0                      | 2.5               |                     | 50-15k                 | 0.6                      | 0.7                     | 35               | Mtr.                       | 40            | 2        | Yes | 18 1/2 x 16 1/4 x 6 1/4 | 39                         | 599.95       | As above, *2 ch. output 50W/chan.  |                  |
|                     | 700+ 4-CHAN.   | 18*                | 0.5                   | 0.15                 | 0.15            | 10-40k                  | 5-70k +1                 | 65                          | 3                     | 60                 | 3                        | 2.5               |                     | 50-15k                 | 0.6                      | 0.7                     | 35               | Mtr.                       | 40            | 1        | Yes | 18 1/2 x 16 1/4 x 6 1/4 | 34                         | 499.95       | As above, *4-ch. output.   |                  |
| HEATH               | AR-14          | 10*                | 1.0*                  | 1.0                  |                 | 7-90k                   | 12-60k +1                | 60                          | 4.5                   |                    | 5                        | 3.0               |                     | 20-15k                 | 1.0                      |                         | 30               |                            |               |          | No  | 15 1/2 x 12 x 3 3/4     | 14                         | 99.95K       | *Full pwr. 20-20k at rated THD (both chans. driven); stereo phone jack; spkr. swit.  |                  |
|                     | AR-1214        | 15*                | 0.5*                  | 0.5                  | 0.2             | 5-30k                   | 7-100k +1                | 65                          | 2.0                   | 75                 | 2                        | 2.0               |                     | 20-15k                 | 0.5                      | 1.0                     | 40               |                            |               |          | Yes | 17 x 13 x 3 3/4         | 13                         | 169.95K      | *Pwr. rating as above, cer. filts.; PLL mpx. AM.   |                  |
|                     | AR-1302        | 20*                | 0.25*                 | 0.25                 | 0.1             | 5-30k                   | 6-35k +1                 | 65                          | 2.4                   | 155                | 1.9                      | 1.8               |                     | 20-15k                 | 0.5                      | 0.5                     | 40               | Mtr.                       | 60            | 2        | Yes | 16 1/2 x 14 1/2 x 5 1/2 | 26 1/2                     | 239.95K      | *Pwr. rating as above; mod. constr.; cer. filts., preassem. FM front end; 2 spkr. swit.  |                  |
|                     | AR-29          | 35*                | 0.25*                 | 0.2                  | 0.1             | 5-30k                   | 7-60k +1                 | 65                          | 2.2                   | 155                | 1.8                      | 1.5               |                     | 20-15k                 | 0.5                      | 0.5                     | 40               | Mtr.                       | 70            | 2        | Yes | 16 1/2 x 14 1/2 x 5 1/2 | 26 1/2                     | 299.95K      | *Pwr. rating as above; mod. constr.; 9-pole L-C filt.; preassem. FM front end; 2 spkr. swit.   |                  |
|                     | AR-1500        | 60*                | 0.25*                 | 0.1                  | 0.1             | 8-30k                   | 7-80k +1                 | 63                          | 1.8                   | 145                | 1.8                      | 1.5               |                     | 20-15k                 | 0.5                      | 0.5                     | 40               | Mtr.                       | 90            | 2        | Yes | 18 1/2 x 13 1/2 x 5 1/2 | 32                         | 379.95K      | *Pwr. rating as above; mod. constr. LC filts. in FM/AM; noise oper. squelch; tape mon.; tone flat.                                   |                  |



# This is "one powerful set!"

**"It was in the area of audio amplification, however, that we got our biggest surprise. The S-7200 is one powerful set."**

This quote from Audio Magazine, May 1973, evaluating the Sherwood S-7200 AM/FM stereo receiver, surprised us.

Not that the reviewers found it to be such a powerful set. But that they found it so surprising.

The fact is, most people who are into Hi-Fidelity components, are discovering that Sherwood delivers on its claims. And then some.

Or, to quote further from the review:

"The 40 dB mid-band separation figure is exceeded by 3 dB."

"With a signal as little as 5 uv, quieting had already reached an impressive 52 dB."

"THD in mono exceeded

published claims, reaching a low figure of just 0.2% at mid-audio frequencies."

"Our power amplifier tests were confined to 8-ohm loads, but at that, the Sherwood S-7200 exceeded its claims and pumped nearly 43 watts into each load, with both channels driven."

"Based upon a 40-watt rated output per channel, power bandwidth extended from 10 Hz to 40 kHz, quite a bit better than claimed. At the audio limits of 20 Hz and 20 kHz, 1% THD was reached at 36 watts per channel and 40.5 watts respectively, while at all power levels below 40 watts, THD remained well under 0.5% for all audible frequencies."

"The loudness-volume control of the S-7200 deserves special mention. The tracking of the two sections of this control was excellent—with no more than 1 dB

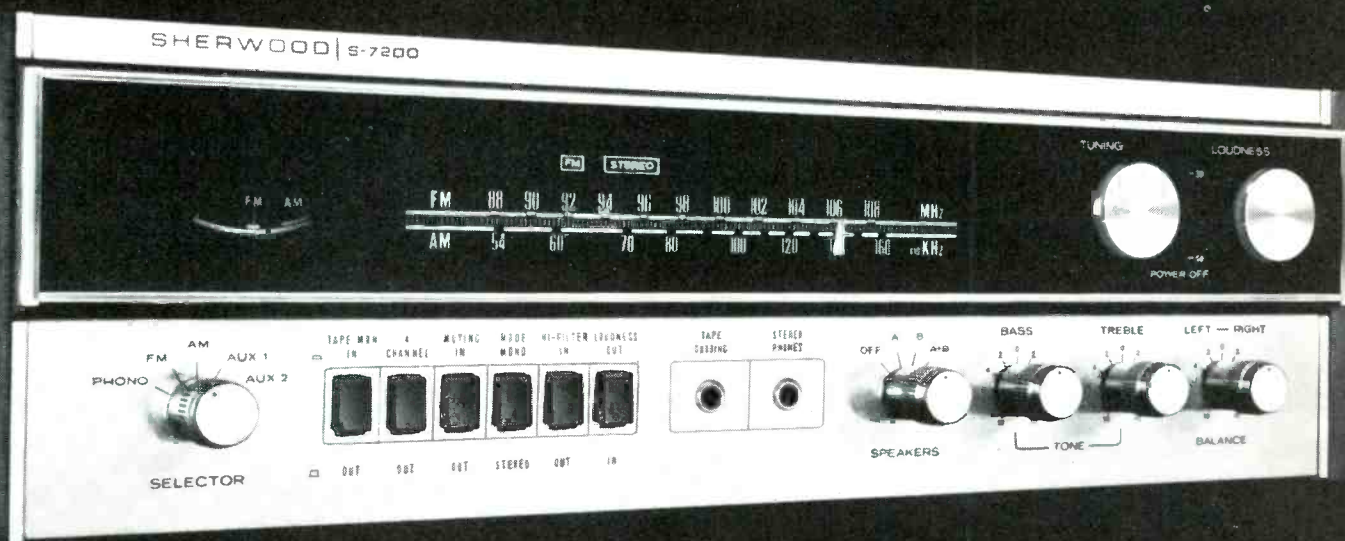
variation all the way down to 60 dB from the full clockwise position—which means that high quality potentiometers are used in this all important control."

But in the end, it is the power of Sherwood receivers that normally turns people on.

"Using low efficiency speaker systems in our main listening area, we just could not overdrive the amplifier portion at any desired listening level—and we mean all the way up to over 100 dB sound-pressure levels."

Which perhaps brings us to this point. If there is one impressive factor about Sherwood receivers, it is that they often not only outperform their specs: they almost always out-spec competition.

Sherwood Electronics Laboratories, Inc.  
4300 North California Avenue,  
Chicago, Illinois, 60618



**Sherwood**  
The word is getting around.  
Check No. 56 on Reader Service Card



# Receivers



Pioneer QX-949

Notes: (1) All models solid-state except when model number is preceded by (T).  
 (2) "K" indicates kit price; "W" indicates wired price.

| MANUFACTURER | MODEL           | AMPLIFIER         |                       |                      |                 |                         |                              |                            |                       |                         |                   | TUNER               |                        |                          |                         |                  |                            |               |          |     |                         | Dimensions, w x d x h, in. | Weight, lbs. | Price   | SPECIAL FEATURES |
|--------------|-----------------|-------------------|-----------------------|----------------------|-----------------|-------------------------|------------------------------|----------------------------|-----------------------|-------------------------|-------------------|---------------------|------------------------|--------------------------|-------------------------|------------------|----------------------------|---------------|----------|-----|-------------------------|----------------------------|--------------|---|------------------|
|              |                 | RMS Power/Chan, W | THD at rated power, % | IM at rated power, % | IM at 1 watt, % | Power bandwidth, Hz-kHz | Frequency response, Hz -2 dB | Rated output S/N, Phono dB | Phono sensitivity, mV | HF sensitivity, $\mu$ V | Capture ratio, dB | Frequency resp., Hz | THD Mono, 100% mod., % | THD Stereo, 100% mod., % | Stereo sep., 1000Hz, dB | Tuning indicator | Air. chan. selectivity, dB | No. of meters | AM band? |     |                         |                            |              |   |                  |
| LAFAYETTE    | LR-4000 4-chan. | 41                | 1.0                   |                      |                 | 13-35k                  | 20-20k -1                    | 70                         | 4                     |                         | 1.65              | 1.5                 |                        | 0.15                     |                         | 40               | Mtr.                       | 60            | 2        | Yes | 21 x 13 x 5 1/4         | 40                         | 569.95       | Full logic SQ matrix, discrete, PLL MPX decode.   |                  |
|              | LR-441 4-chan.  | 28                | 1.0                   |                      |                 | 15-25k                  | 20-20k                       | 65                         | 2.5, 6                |                         | 1.65              | 1.5                 |                        | 0.1                      |                         | 40               | Mtr.                       | 60            | 2        | Yes | 19 1/2 x 12 3/4 x 5     | 35                         | 479.95       | As above.   |                  |
|              | LR-221          | 18                | 1.0                   |                      |                 | 30-35k                  | 20-20k -1 1/2                | 62                         | 2.5, 6                |                         | 2.2               | 2.5                 |                        | 0.25                     |                         | 35               | Mtr.                       | 40            | 1        | Yes | 17 1/2 x 11 1/2 x 4 1/2 | 23                         | 359.95       | Full logic SQ matrix, discrete, Variaband.  |                  |
|              | LR-2500 4-chan. | 50                | 1.0                   |                      |                 | 18-55k                  | 20-20k -3/4                  | 75                         | 2.5, 6                |                         | 1.65              | 1.5                 |                        | 0.1                      |                         |                  | Mtr.                       | 60            | 2        | Yes | 19 1/2 x 13 3/4 x 5 1/4 | 32                         | 379.95       | Derived 4-chan. tone flat swt.; loudness, mute, hi filtr.; audio mute.                          |                  |
| MAGNAVOX     | KD1000          | 10                | 0.5                   | 1.0                  | 0.2             | 20-20k                  | 20-30k -1                    | 60                         | 2.5                   | 60                      | 4                 | 4                   | 20-15k                 | 1.0                      | 1.0                     | 30               | Mtr.                       | 50            | 1        | Yes | 16 x 14 x 5             | 24                         | 169.95       | Also avail. w/top mntd. chgr.   |                  |
|              | KD1001          | 18                | 0.5                   | 1.0                  | 0.2             | 20-20k                  | 20-30k -1                    | 60                         | 2.5                   | 60                      | 4                 | 4                   | 20-15k                 | 1.0                      | 1.0                     | 30               | Mtr.                       | 50            | 1        | Yes | 16 x 14 x 5             | 26                         | 199.95       | Same as above.  |                  |
|              | KD1002          | 25                | 0.5                   | 1.0                  | 0.2             | 15-20k                  | 20-25k -1                    | 60                         | 2.5                   | 70                      | 3                 | 4                   | 20-15k                 | 1.0                      | 1.0                     | 30               | Mtr.                       | 60            | 1        | Yes | 18 x 16 x 5             | 35                         | 229.95       | Also avail. 32W./chan.  |                  |
|              | KD-1004         | 50                | 0.5                   | 1.0                  | 0.2             | 15-20k                  | 20-25k -1                    | 60                         | 2.5                   | 70                      | 3                 | 4                   | 20-15k                 | 1.0                      | 1.0                     | 30               | Mtr.                       | 60            | 1        | Yes | 18 x 16 x 5             | 40                         | 319.95       | Also avail. w/dig. freq. readout.   |                  |
| MARANTZ      | 19              | 50                | 0.15                  | 0.15                 | 0.15            | 8-80k                   | 20-20k -1/4                  |                            | 1                     | 100                     | 1.7               | 1.5                 | 30-15k -1/2            | 0.15                     | 0.15                    | 45               | Scope                      | 80            |          | No  | 18 1/4 x 16 x 6 1/4     | 40                         | 200.00       | "Scope display for tuning, multipath and audio.   |                  |
|              | 2270            | 70                | 0.3                   | 0.3                  | 0.3             | 7-70k                   | 20-20k -1/4                  |                            | 1.8                   | 100                     | 1.9               | 1.6                 | 30-15k -1              | 0.15                     | 0.25                    | 42               | Mtr.                       | 80            | 2        | Yes | 16 1/2 x 14 x 5         | 50                         | 599.95       | Multipath ind.; 2 tape recs.; pre-out, main in.   |                  |
|              | 2245            | 45                | 0.3                   | 0.3                  | 0.3             | 7-70k                   | 20-20k -1/2                  |                            | 1.8                   | 100                     | 2                 | 1.6                 | 30-15k -1              | 0.15                     | 0.3                     | 42               | Mtr.                       | 60            | 2        | Yes | 16 1/2 x 14 x 5         | 45                         | 499.95       | Pre-out, main in; front pnl. tape dub. jcks.; mdrng. tone contl.                                |                  |
|              | 2230            | 30                | 0.5                   | 0.5                  | 0.5             | 15-50k                  | 20-20k -1/2                  |                            | 1.8                   | 100                     | 2                 | 2.5                 | 30-15k -1              | 0.15                     | 0.3                     | 42               | Mtr.                       | 60            | 1        | Yes | 16 1/2 x 14 x 5         | 40                         | 399.95       | Same as above.  |                  |
|              | 2220            | 20                | 0.9                   | 0.9                  | 0.9             | 15-50k                  | 20-20k -1                    |                            | 2.1                   | 100                     | 2.1               | 3                   | 30-15k -2              | 0.3                      | 0.5                     | 40               | Mtr.                       | 50            | 1        | Yes | 16 1/2 x 14 x 5         | 34.6                       | 299.95       | 2010 similar but 10W/ch., 20-20k bandwidth; \$199.95.   |                  |
|              | 4300 4-chan.    | 40                | 0.15                  | 0.15                 | 0.15            | 7-70k                   | 20-20k -1/4                  |                            | 2                     | 100                     | 1.9               | 1.5                 | 30-15k -1              | 0.2                      | 0.3                     | 40               | Mtr.                       | 70            | 2        | Yes | 18 1/4 x 16 x 6 1/4     | 62.7                       | 899.95       | 100W/ch. in 2-chan.; Dolby; PLL FM demod.; Remote contl.  |                  |
|              | 4230 4-chan.    | 12                | 0.5                   | 0.5                  | 0.5             | 15-50k                  | 20-20k -1                    |                            | 1.8                   | 100                     | 2.8               | 2.5                 | 30-15k -2              | 0.6                      | 1.0                     | 32               | Mtr.                       | 48            | 2        | Yes | 16 1/2 x 14 x 5         | 40                         | 449.95       | 30 W/ch. in 2-chan.; remote control.  |                  |
| ONKYO        | TS-500          | 25 x 4            | 0.5                   | 0.4                  |                 | 20-20k                  | 20-30k                       | 100                        | 2.5                   | 100                     | 2                 | 2                   | 20-15k                 | 0.4                      | 0.8                     | 40               | Mtr.                       | 65            | 1        | Yes | 21 x 14 1/2 x 5 1/2     | 35                         | N/A          | Auto swt. for CD-4, SQ & RM.  |                  |
|              | TX-440          | 28                | 0.5                   | 0.4                  |                 | 20-20k                  | 20-30k                       | 65                         | 2.5                   | 100                     | 2                 | 2                   | 20-15k                 | 0.4                      | 0.8                     | 40               | Mtr.                       | 65            | 2        | Yes | 18 1/2 x 14 1/4 x 5 1/2 | 26                         | 329.95       | Dir. cp/d. diff. amp crty.; s.s. & CT mtrs.; 2 tape mon. inputs.                                |                  |
| PILOT        | 253             | 35                | 0.5                   | 0.5                  |                 | 15-30k                  |                              | 75                         | 2.5, 4.5              |                         | 1.8               | 1.5                 | 20-15k                 | 0.4                      | 0.8                     | 36               | Mtr.                       | 65            | 1        | Yes | 18 x 13 1/2 x 5 1/4     | 30                         | 299.90       | FM tuning ind.; elect. protect. circuit; large linear FM dial scale.                            |                  |
|              | 254             | 65                | 0.4                   | 0.5                  |                 | 10-40k                  |                              | 80                         | 2.5, 4.5              |                         | 1.8               | 1.5                 | 20-15k                 | 0.4                      | 0.8                     | 36               | Mtr.                       | 65            | 2        | Yes | 18 1/2 x 17 1/2 x 7     | 42                         | 429.90       | FM tuning ind.; large linear FM dial; access to main & preamps.                                 |                  |
| PIONEER      | SX-828          | 60                | 0.5                   | 0.5                  |                 | 10-60k                  |                              | 2.7                        |                       |                         | 1.7               | 1.5                 |                        | 0.2                      | 0.4                     | 40               | Mtr.                       | 75            | 2        | Yes | 19 x 15 x 6             | 32                         | 469.95       | 2 tape mon. w/dup.; 2 phono inputs; FM & audio mut.; mic inputs; lo & hi fil.; FM linear scale. |                  |
|              | SX-727          | 40                | 0.5                   | 0.5                  |                 | 10-60k                  |                              | 3.0                        |                       |                         | 1.8               | 2.0                 |                        | 0.3                      | 0.5                     | 40               | Mtr.                       | 70            | 2        | Yes | 19 x 15 x 6             | 31                         | 399.95       | 2 tape mon. w/dup.; 2 phono in.; audio & FM mut.; lo & hi fil.; FM linear scale.                |                  |
|              | SX-626          | 27                | 1.0                   | 1.0                  |                 | 10-70k                  |                              | 2.5                        |                       |                         | 2.0               | 2.5                 |                        | 0.4                      | 0.5                     | 40               | Mtr.                       | 70            | 1        | Yes | 18 x 14 x 6             | 22                         | 329.95       | 2 tape mon. w/dup.; 2 phono in.; lo & hi fil.; FM muting.                                       |                  |
|              | SX-525          | 17                | 1.0                   | 1.0                  |                 | 15-30k                  |                              | 2.7                        |                       |                         | 2.2               | 3.0                 |                        | 0.6                      | 0.8                     | 40               | Mtr.                       | 45            | 1        | Yes | 18 x 14 x 6             | 18                         | 259.95       | 2 tape mon.; FM muting; FM noise filter; Loudness contl.  |                  |

# AKAI's best...in black & white (you should see and hear them in color!)

You're in for a surprise if you thought that AKAI only makes tape recorders.

Fact is, AKAI makes a *full line* of audio and tape equipment. And we want to acquaint you with the ultimate model in each product category.

Introducing from left to right . . .

A. AKAI's GXC-46D stereo cassette deck. Near distortion-free recordings are possible thanks to the combination of a Dolby® Noise Reduction System with AKAI's unique ADRS (Automatic Distortion Reduction System) and AKAI's exclusive GX head . . . virtually wear-free and dust-free.

B. AKAI's GX-280D-SS discrete 4-channel tape deck. Magnificent musical clarity and unique sound quality are the results of AKAI innovations: 4 separate heads—including 2 AKAI exclusive GX heads—and 3 outstanding motors make this unit *the* professional 4-channel deck.

C. AKAI's AS-980 4-channel stereo amplifier/tuner. Loaded with sophisticated

features for unparalleled performance. Sensitive and powerful, the AS-930 provides a continuous output of 120W (30 x4). Plus 4 separate 4-channel modes . . . Discrete, SQ, RM, and CD-4 with individual separation controls. AKAI's *ultimate* receiver.

D. AKAI's CR-80C-SS discrete 4-channel cartridge tape deck. A fantastic host of features include Automatic Stop . . . Continuous Play . . . Fast-Forward . . . and Public Address System Convertibility.

All surrounded by:

E. AKAI's SW-175 (5-way) speaker systems. Each cabinet encloses 5 separate speakers. They'll take up to 80W of input power and provide excellent frequency response from 20 to 23,000 Hz.

Introduce yourself to the rest of our family. In person at your nearest AKAI Dealer. You'll find that AKAI products speak for themselves.

Dolby is a Trade Mark of Dolby Laboratories, Inc.



From  
**AKAI**  
The Innovators

AKAI America, Ltd./P.O. Box 55055, Los Angeles, CA 90055



# Receivers



Rotel RX-454

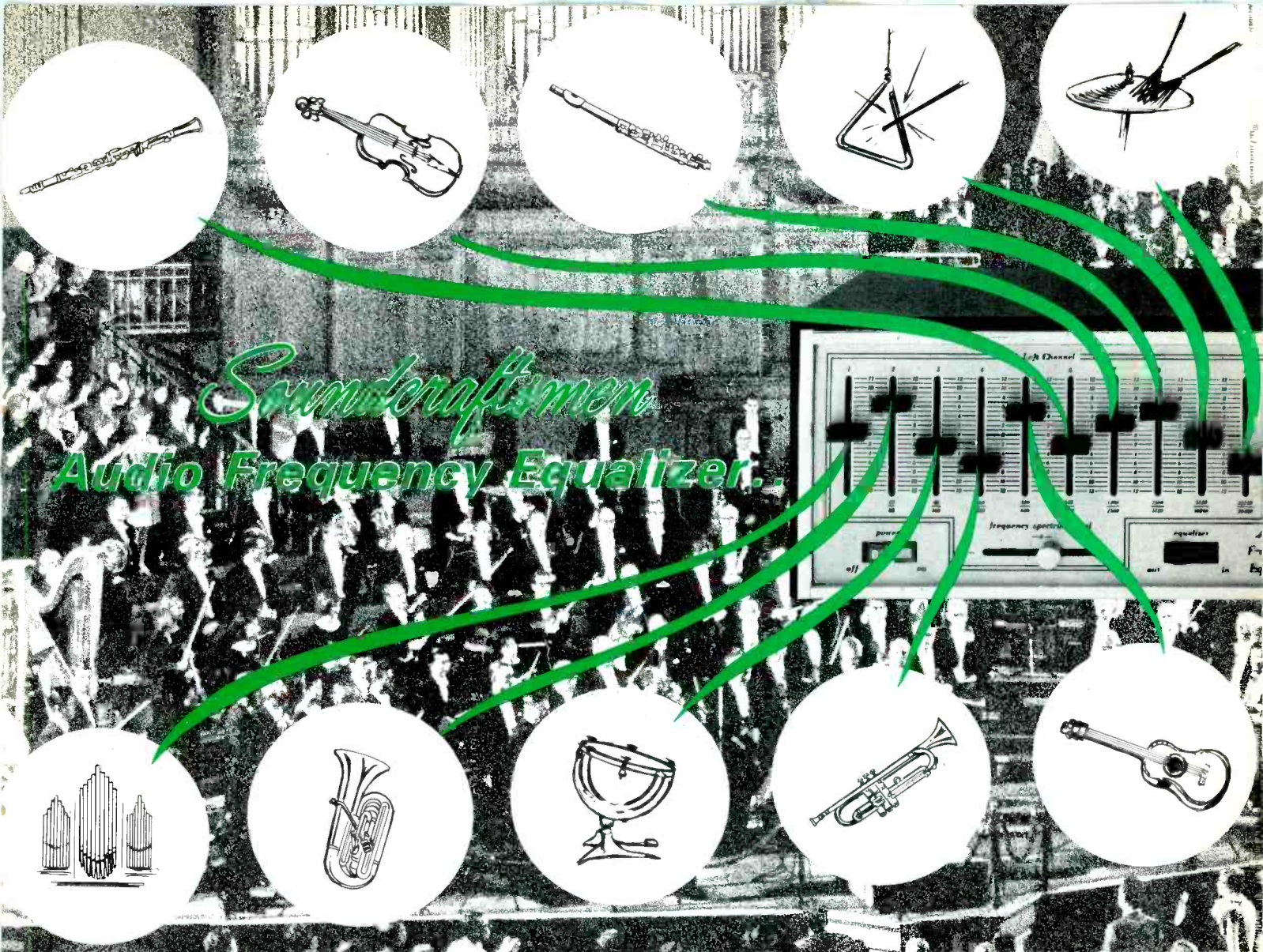


Sansui QRX-6500

- Notes: (1) All models solid-state except when model number is preceded by (T).  
 (2) "K" indicates kit price; "W" indicates wired price.

| MANUFACTURER | MODEL                 | AMPLIFIER          |                       |                      |                 |                          |                        |                             |                       |                    |                          | TUNER             |                     |                        |                          |                         |                  |                            |               |          |  | Dimensions, w x d x h, in. | Weight, lbs. | Price  | SPECIAL FEATURES  |                            |        |   |
|--------------|-----------------------|--------------------|-----------------------|----------------------|-----------------|--------------------------|------------------------|-----------------------------|-----------------------|--------------------|--------------------------|-------------------|---------------------|------------------------|--------------------------|-------------------------|------------------|----------------------------|---------------|----------|--|----------------------------|--------------|--------|---|----------------------------|--------|---|
|              |                       | RMS Power/chan., W | THD at rated power, % | IM at rated power, % | IM at 1 watt, % | Power bandwidth, Hz -4Hz | 1-watt freq. resp., Hz | Rated output S/N, Phono, dB | Phono sensitivity, mV | Phono overload, mV | IHF sensitivity, $\mu$ V | Capture ratio, dB | Frequency resp., Hz | THD Mono, 100% mod., % | THD stereo, 100% mod., % | Stereo sep., 1000Hz, dB | Tuning indicator | All. chan. selectivity, dB | No. of meters | AM band? |  |                            |              |        |   |                            |        |   |
| RADIO SHACK  | QTA-790<br>4-chan.    | 36                 | 1                     |                      |                 | 18-45k                   | 20-20k                 | 2.5/<br>5.0                 |                       | 2.0                | 1.5                      |                   |                     |                        |                          |                         |                  |                            |               |          |  | 35                         | Mtr.         | 1      | Yes   | 18 1/2 x 16<br>x 5 1/2     | 598.00 | SQ, wireless rem. FM<br>tune & vol. contl.            |
|              | QTA-751<br>4-chan.    | 15                 | 0.8                   |                      |                 | 20-25k                   | 20-20k<br>±1           |                             |                       | 3.3                | 2.5                      |                   |                     |                        |                          |                         |                  |                            |               |          |  | 30                         | Mtr.         | 2      | Yes   | 13 x 19<br>x 5 1/4         | 299.95 | SQ, synthesizer,<br>wood case.                        |
|              | STA-200               | 33                 | 1                     |                      |                 | 20-20k                   | 20-30k                 | 50                          | 2.5/<br>5.0           | 2.0                | 3.0                      |                   |                     |                        |                          |                         |                  |                            |               |          |  | 30                         | Mtr.         | 1      | Yes   | 18 1/2 x 13 1/2<br>x 6 1/4 | 439.95 | Wireless rem. on/off,<br>FM tune, vol.; wood<br>case. |
|              | STA-150               | 32 1/2             | 1                     |                      |                 | 15-70k                   | 20-20k                 |                             | 2.5/<br>5.0           | 1.6                |                          |                   |                     |                        |                          |                         |                  |                            |               |          |  | 45                         | Mtr.         | 1      | Yes   | 19 1/4 x 14 1/4<br>x 5 1/2 | 349.95 | Auto tune; dub.;<br>wood case.                        |
| ROTEL        | RX150A                | 7.5                | 0.6                   | 1.0                  | 1.0             | 30-70k                   |                        | 60                          | 2.8                   | 70                 | 5                        | 7                 | 30-20k              | 1.3                    | 32                       | Mtr.                    | 25               | 1                          | Yes           |          |  | 16 1/2 x 6 1/2<br>x 5 1/4  | 10           | 149.95 | 2 spkr. sys.; tape<br>mon.; tape dub. 1-2.  |                            |        |   |
|              | RX800                 | 40                 | 0.2                   | 0.2                  | 0.1             | 5-50k                    |                        | 65                          | 2.2                   | 125                | 1.7                      | 1.5               | 4-75k               | 0.5                    | 38                       | Mtr.                    | 70               | 2                          | Yes           |          |  | 16 1/2 x 12<br>x 5 1/2     | 26           | 439.95 | Tape dub. 1-2; 2<br>phono, 2 aux.; hi-lo<br>filter; aud. & FM<br>muting; split power<br>sply.; DCC circuit.   |                            |        |   |
|              | RX154A<br>4-chan.     | 20                 | 0.5                   | 0.7                  | 0.8             | 30-30k                   |                        | 60                          | 3.0                   | 70                 | 4                        | 7                 | 20-50k              | 1.0                    | 32                       | Mtr.                    | 30               | 1                          | Yes           |          |  | 16 1/2 x 13 1/2<br>x 5 1/4 | 17           | 289.95 | 2-ch. 20W/ch. rms;<br>SQ; matrix.   |                            |        |   |
|              | RX 454A<br>4-chan.    | 45                 | 0.1                   | 0.2                  | 0.1             | 20-50k                   |                        | 65                          | 2.5                   | 125                | 2.5                      | 3                 | 15-90k              | 0.5                    | 40                       | Mtr.                    | 45               | 1                          | Yes           |          |  |                            | 26           | 479.95 | 45 W./ch. in 2-ch.;<br>45/45 stereo dual<br>prog. source, SQ.   |                            |        |   |
| SANSUI       | QRX 6500<br>4-chan.   | 37                 | 0.5                   | 0.5                  |                 | 20-30k                   | 30-30k<br>±1.5         | 2.5                         |                       | 1.8                | 1.5                      |                   | 0.5                 | 0.8                    | 35                       | Mtr.                    | 70               | 2                          | Yes           |          |  | 21 1/4 x 14 1/4<br>x 7 1/4 | 57           | 749.95 | Vario-matrix decod./<br>synth.; phase matrix.   |                            |        |   |
|              | QRX 5500<br>4-chan.   | 30                 | 0.3                   | 0.3                  |                 | 10-30k                   | 30-30k<br>±1 1/2       | 2.5                         |                       | 1.9                | 2                        |                   | 0.3                 | 0.5                    | 40                       | Mtr.                    | 60               | 2                          | Yes           |          |  | 23 1/2 x 14 1/2<br>x 8     | 47 1/2       | 699.95 | Same as above plus<br>4 VU mtrs.  |                            |        |   |
|              | QRX 3500<br>4-chan.   | 22                 | 0.5                   | 0.5                  |                 | 10-33k                   | 30-30k<br>±1.5         | 2.5                         | 100                   | 2.2                | 2                        |                   | 0.4                 | 0.6                    | 35                       | Mtr.                    | 50               | 1                          | Yes           |          |  | 20 1/4 x 13 1/2<br>x 7 1/4 | 40.8         | 579.95 | Vario-matrix decod./<br>synth.; phase matrix;<br>3000 sim. but 15W/<br>chan. & bandwidth<br>20-30k, \$439.95. |                            |        |   |
|              | QR 1500<br>4-chan.    | 15                 | 0.8                   | 0.8                  |                 | 20-30k                   | 30-30k<br>±2           | 3                           |                       | 3                  | 3                        |                   | 1.0                 |                        | 35                       | Mtr.                    | 45               | 1                          | Yes           |          |  | 19 x 12 1/4<br>x 5 1/4     | 19.8         | 339.95 | 500 sim. but 8W/<br>chan. & bandwidth<br>30-30k, \$229.95.  |                            |        |   |
|              | 8 Deluxe              | 60                 | 0.2                   | 0.3                  |                 | 5-40k                    | 5-50k<br>+0.5 -1       | 2.5                         |                       | 1.7                | 1.5                      | 30-12k            | 0.3                 | 0.5                    | 35                       | Mtr.                    | 80               | 2                          | Yes           |          |  | 17 1/2 x 13<br>x 5 1/2     | 42           | 599.95 | 4-chan. ready.  |                            |        |   |
|              | 771                   | 40                 | 0.5                   | 0.5                  |                 | 15-40k                   | 20-40k<br>±2           | 2.5                         |                       | 2                  | 2                        | 30-12k            | 0.4                 | 0.6                    | 35                       | Mtr.                    | 60               | 1                          | Yes           |          |  | 18 1/2 x 12 1/2<br>x 5 1/4 | 26 1/2       | 339.95 | 4-chan. ready; 661<br>sim but 25W/chan.<br>\$289.95.  |                            |        |   |
|              | 350A                  | 20                 | 1                     | 1                    |                 | 30-30k                   | 30-30k<br>±1           | 2.2                         |                       | 3                  | 3                        |                   | 1.0                 |                        | 30                       | Mtr.                    | 32               | 1                          | Yes           |          |  | 16 1/4 x 12<br>x 5 1/4     | 21           | 239.95 |   |                            |        |   |
| SANYO        | DCX 2700K<br>4-chan.  | 30                 | 1.0                   | 1.0                  | 0.5             | 30-30k                   | 30-30k<br>+0-3         | 60                          | 5                     | 150                | 2.7                      | 2.5               | 25-30k              | 1.0                    | 1.0                      | 30                      | Mtr.             | 1                          | Yes           |          |  | 18 x 14 1/4<br>x 5         | 15           | 269.95 | Matrix & SQ; 2/4<br>chan. tape inputs/<br>outputs.  |                            |        |   |
|              | DCX 3000KA<br>4-chan. | 40                 | 0.5                   | 1.0                  | 0.5             | 25-40k                   | 25-40k<br>+0-3         | 60                          | 5                     | 150                | 2.2                      | 2                 | 25-40k              | 0.8                    | 0.8                      | 30                      | Mtr.             | 1                          | Yes           |          |  | 18 1/2 x 11 1/2<br>x 4 1/4 | 16 1/2       | 299.95 | 2 Matrix, SQ, dis-<br>crete, indiv. &<br>master vol. contls.  |                            |        |   |
|              | DCX 3100K<br>4-chan.  | 60                 | 0.5                   | 1.0                  | 0.5             | 25-45k                   | 25-45k<br>+0-3         | 60                          | 3                     | 150                | 2.2                      | 2                 | 20-45k              | 0.8                    | 0.8                      | 30                      | Mtr.             | 1                          | Yes           |          |  | 19 1/2 x 13 1/4<br>x 5     | 17 1/2       | 349.95 | Same as above plus<br>amps may be "strap-<br>ped" for 2-ch.<br>stereo.  |                            |        |   |
|              | DCX 3300KA<br>4-chan. | 80                 | 0.5                   | 1.0                  | 0.5             | 20-50k                   | 20-50k<br>+0-3         | 60                          | 3                     | 150                | 2                        | 2                 | 18-50k              | 0.8                    | 0.8                      | 30                      | Mtr.             | 1                          | Yes           |          |  | 19 1/2 x 12 1/2<br>x 6     | 30           | 419.95 | 2 Matrix, SQ, dis-<br>crete, indiv. &<br>master vol. contls.;<br>4 output pwr. mtrs.                          |                            |        |   |
|              | DCX 3500K<br>4-chan.  | 80                 | 0.5                   | 1.0                  | 0.5             | 20-50k                   | 20-50k<br>+0-3         | 60                          | 3                     | 150                | 2                        | 1.5               | 18-50k              | 0.5                    | 0.8                      | 33                      | Mtr.             | 1                          | Yes           |          |  | 19 1/2 x 12 1/2<br>x 6     | 31           | 549.95 | 4 output pwr. mtrs.;<br>matrix, SQ & CD-4;<br>amps have strapping<br>cap.                                     |                            |        |   |





# Soundcraftsmen Audio Frequency Equalizer..

## Guaranteed to enhance any fine stereo system!

(Following quotes from 20-12 owners' Warranty cards on file at Soundcraftsmen)

"One of the best investments I ever made!!" . . . "Even made a believer out of my wife" . . . "I thought my system was the best sounding system going, but this equipment makes it sound un-real" . . . "Incredible! Every system should have one" . . . "Excellent — superb improvement of system" . . . "One Hell of an improvement to what I thought was a good sounding system" . . . "It would be a very great boon to anyone's stereo system — I love it" . . . "Has made a big improvement in the sound of my system" . . . "Great improvement to my system!!!!" . . . This is a very fine piece of equipment. It tremendously improves the sound of my system" . . . "Can't believe how good it makes my set-up sound" . . . "WOW!!! What a change in my system!"

### SPECIFICATIONS and SPECIAL FEATURES

**TOROIDAL** and ferrite-core inductors, ten octave-bands per channel.

**FREQUENCY** response:  $\pm 1/2$  db from 20-20, 480 Hz at zero setting.

**HARMONIC DISTORTION:** Less than .1% THD @ 2 v., Typ: .05% @ 1 v.

**IM DISTORTION:** Less than .1% @ 2 v., Typ: .05% @ 1 v.

**SIGNAL-TO-NOISE RATIO:** Better than 90 db @ 2v. input.

**INPUT IMPEDANCE:** Operable from any source 100K ohms or less — (any Hi-Fi Pre-amp, Receiver or Tape Recorder.)

**OUTPUT IMPEDANCE:** Operable into 3K ohms or greater — (any Hi-Fi Amp, Receiver or Tape Recorder.)

**CIRCUIT BOARDS:** Military grade G-10 glass epoxy.

**RESISTORS:** Low-noise selected carbon-film.

**RANGE:** 12 db boost and 12 db cut, each octave.

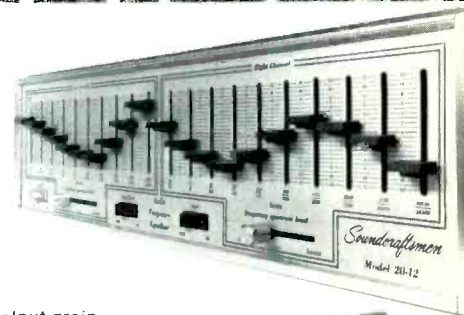
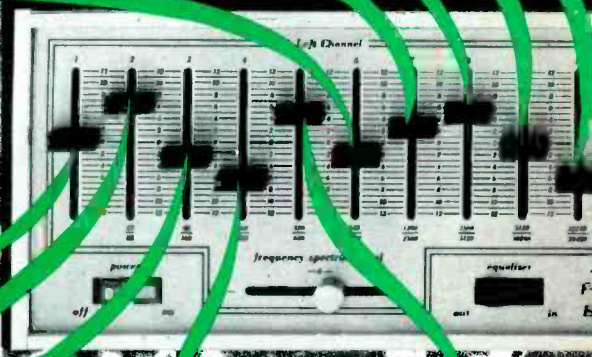
**MASTER OUTPUT LEVEL:** "Frequency-spectrum-level" controls for left and right channels, continuously variable 18 db range, for unity gain compensation from minus 12 db to plus 6 db.

**MAXIMUM OUTPUT SIGNAL:** variable Master "frequency spectrum level" Controls allow adjustment of optimum output voltage for each channel, to exactly match amplifier capability, up to 7 v.

**SIZE:** designed to coordinate with receivers, comes installed in handsome walnut-grained wood receiver-size case, 5 1/4" x 18" x 11", or rack mount.

**WARRANTY:** 2-year parts and labor.

Check No. 59 on Reader Service Card



**\$299.50**  
includes walnut-grain cabinet, or rack-mount.

## FREE!



**The "Why's and How's of Equalization",** an easy-to-understand explanation of the relationship of acoustics to your environment. This 8-page booklet also contains complete specifications, an editorial review of the 20-12 by J. Gordon Holt's *Stereophile* magazine, many unique ideas on "How the Equalizer can measurably enhance your listening pleasure," and "How typical room problems are eliminated by Equalization."

*Soundcraftsmen*

1310 EAST WAKEHAM  
SANTA ANA, CALIFORNIA 92705



# Receivers



Superscope QRT-440



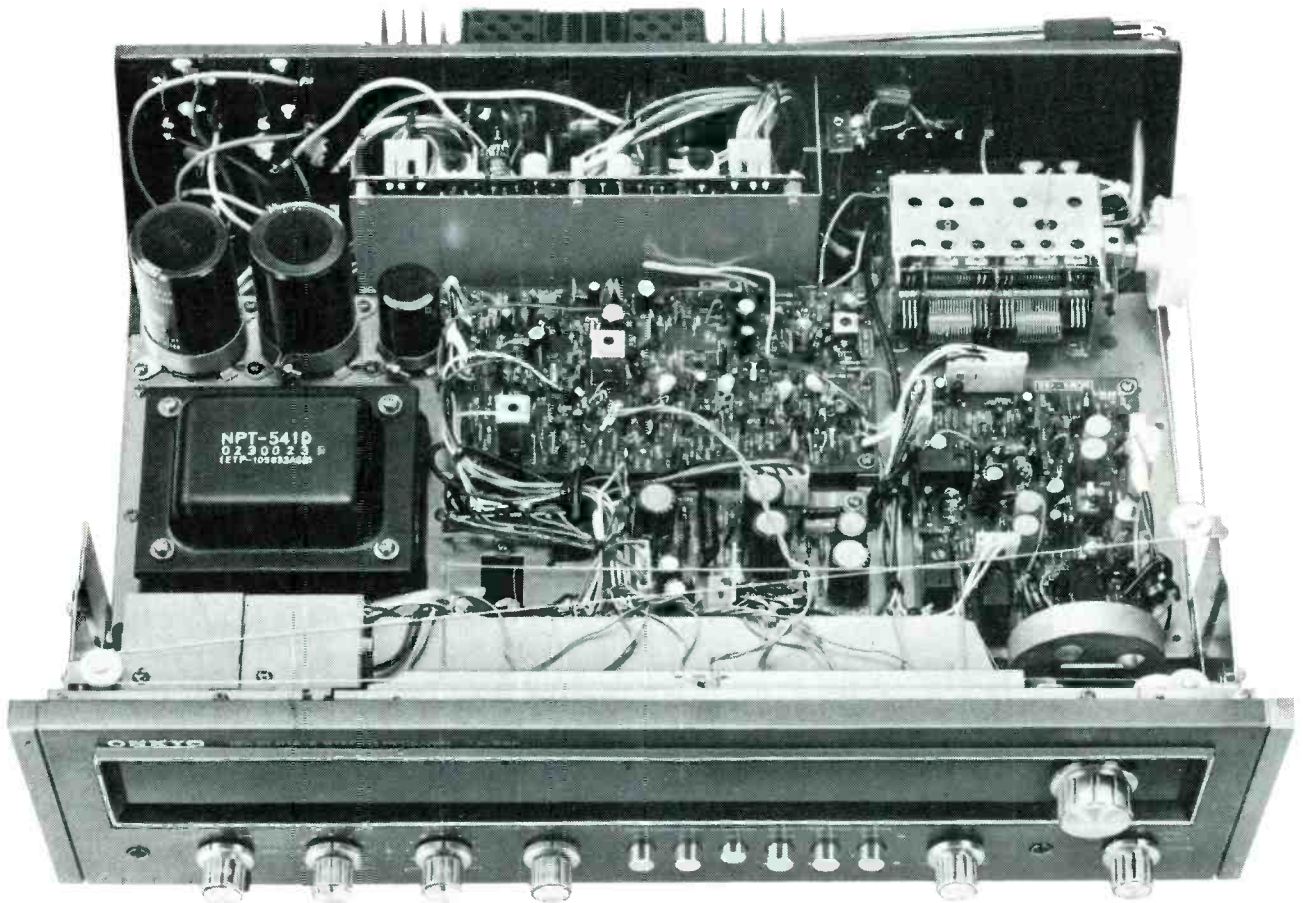
Technics by Panasonic SA-800X

| MANUFACTURER             | MODEL               | AMPLIFIER           |                       |                      |                 |                         |                        |                             |                       |                    |                     |                   | TUNER               |                        |                          |                         |                  |                            |                 |                     |                            |                        |   | Dimensions, w x d x h, in.  | Weight, lbs.   | Price  | SPECIAL FEATURES |
|--------------------------|---------------------|---------------------|-----------------------|----------------------|-----------------|-------------------------|------------------------|-----------------------------|-----------------------|--------------------|---------------------|-------------------|---------------------|------------------------|--------------------------|-------------------------|------------------|----------------------------|-----------------|---------------------|----------------------------|------------------------|---|---|--|--|------------------|
|                          |                     | RMS Power, chan., W | THD at rated power, % | IM at rated power, % | IM at 1 watt, % | Power Bandwidth, Hz-kHz | 1-watt freq. resp., Hz | Rated output S/N, Phono, dB | Phono sensitivity, mV | Phono overload, mV | IHF sensitivity, mV | Capture ratio, dB | Frequency resp., Hz | THD Mono, 100% mod., % | THD Stereo, 100% mod., % | Stereo sep., 1000Hz, dB | Tuning indicator | Alt. chan. selectivity, dB | No. of meters   | AM band?            |                            |                        |   |   |  |  |                  |
| SHERWOOD                 | S-7050              | 10                  | 0.9                   | 1.0                  | 0.35            | 15-50k                  | 30-20k<br>-1           | 65                          | 2                     | 50                 | 3.5                 | 4.0               | 20-15k<br>+2        | 0.6                    | 1.0                      | 35                      | Mtr.             | 40                         | 1               | Yes                 | 16 x 12<br>x 5 1/2         | 24                     | 174.95  | Wood case; A B<br>spkr. swit.   |  |  |                  |
|                          | S-7100A             | 20                  | 0.9                   | 1.0                  | 0.35            | 15-50k                  | 20-20k<br>-1           | 65                          | 1.5                   | 60                 | 1.9                 | 2.8               | 20-15k<br>+1        | 0.5                    | 0.8                      | 40                      | Mtr.             | 50                         | 1               | Yes                 | 17 1/2 x 13 1/2<br>x 5 5/8 | 30                     | 219.95  | Wal. case; tape dub<br>bing.  |  |  |                  |
|                          | 7200                | 40                  | 0.7                   | 0.7                  | 0.25            | 12-35k                  | 20-20k<br>±0.5         | 60                          | 2.2                   | 60                 | 1.8                 | 1.9               | 20-15k<br>+1        | 0.25                   | 0.5                      | 40                      | Mtr.             | 60                         | 1               | Yes                 | 17 1/2 x 14<br>x 5 5/8     | 32                     | 339.95  | Wal. case; Tape dub<br>bing; 4-chan. switch-<br>ing.  |  |  |                  |
|                          | SEL 200             | 60                  | 0.2                   | 0.6                  | 0.1             | 8-35k                   | 20-20k<br>±0.5         | 65                          | 1.7;<br>3.6;<br>8.2   | 100                | 1.5                 | 1.7               | 20-15k<br>-1        | 0.15                   | 0.25                     | 40                      | 2<br>Mtrs.       | 70                         | 2               | No                  | 18 1/2 x 13<br>x 5 5/8     | 37                     | 599.00  | LeGendre torroidal<br>FM i.f. filters; FET<br>mash ckt.   |  |  |                  |
| SOUNDCRAFTSMEN           | 2000A<br>4-chan.    | 20                  | 0.2                   | 0.4                  | 0.08            | 25-30k                  | 15-50k<br>±1           | 65                          | 3                     |                    |                     |                   | 20-15k              | 0.6                    | 0.9                      | 36                      | Mtr.             | 45                         | 1               | Yes                 | 17 1/2 x 12 1/2<br>x 5     | 16                     | 299.50  | Matrix; wal. case<br>incl.; 120-240 V.  |  |  |                  |
|                          | 3000A<br>4-chan.    | 30                  | 0.2                   | 0.2                  | 0.07            | 15-45k                  | 9-100k                 | 67                          | 2.5                   |                    |                     |                   | 15-15k              | 0.3                    | 0.5                      | 38                      | Mtrs.            | 50                         | 2               | Yes                 | 17 1/2 x 12 1/2<br>x 5     | 21                     | 349.50  | Same as above, plus<br>spl't. pwr. spl'y. 3<br>phono inputs; 2<br>tape inputs; dir.<br>cp'd.                    |  |  |                  |
| SUPERSCOPE               | R-330               | 9                   | 1.0                   |                      |                 | 30-30k                  |                        |                             | 2.5                   | 5                  | 5                   | 30-15k<br>-3      | 1.0                 | 1.0                    | 32                       | Mtr.                    |                  | 1                          | Yes             | 23 x 19<br>x 12 1/2 | 19                         | 179.95                 | Tape mon.; loud-<br>ness; 4-ch. FM out-<br>put; flywheel tuning.  |   |  |  |                  |
|                          | R-350<br>4-chan.    | 25                  | 1.0                   |                      |                 | 15-40k                  |                        |                             | 2.5                   | 2.8                | 3                   | 20-15k<br>±1.5    | 0.6                 | 1.0                    | 32                       | Mtr.                    |                  | 1                          | Yes             | 23 x 19<br>x 12 1/2 | 25                         | 279.95                 | Flywheel tun.; FM<br>mut.; loudness;<br>mono; tape mon.;<br>Quadraphase; slide<br>bal.; 4 ch. FM out-<br>put w/Hi filt. swit.       |   |  |  |                  |
|                          | QRT440<br>4-chan.   | 12"                 | 1.0                   | 1.0                  |                 | 20-20k                  |                        |                             | 2.2                   | 5                  | 5                   | 20-12k<br>-1.5    | 1.0                 | 1.5                    | 32                       | Mtr.                    |                  | 1                          | Yes             |                     |                            | 349.95                 | *2-ch., 6W./chn in<br>4-ch. mode; 2/4 ch.<br>8 tk play.; SQ amb.<br>discrete; joy stick<br>bal. cont'l. (4-ch);<br>flywheel tuning. |   |  |  |                  |
| TANDBERG                 | 1020A               | 40                  | 0.2                   | 0.2                  | 0.1             | 7-30k                   | 12-70k                 | 76                          | 2.8                   | 100                | 2                   | 0.9               | 20-15k              | 0.2                    | 0.3                      | 40                      | Mtr.             | 80                         | 2               | Yes                 | 17 x 12<br>x 5 1/4         | 21                     | 499.90  | Pwr. ind.; input lev.<br>cont'l. for phono;<br>tape 1 & 2; tape 3<br>preamp rec.; elec.<br>tune; 2 pwr. supply. |  |  |                  |
|                          | 1055                | 55                  | 0.2                   | 0.2                  | 0.1             | 6-40k                   | 12-70k                 | 76                          | 2.8                   | 100                | 2                   | 0.9               | 20-15k              | 0.2                    | 0.3                      | 40                      | Mtr.             | 80                         | 2               | Yes                 | 17 x 12<br>x 4 1/4         | 23                     | 579.90  | Same as above.  |  |  |                  |
| TECHNICS BY<br>PANASONIC | SA-6800X<br>4-chan. | 53                  | 0.5                   | 0.7                  |                 | 7-40k                   | 10-70k<br>+0-1         | 73                          | 3                     |                    |                     |                   | 1.8                 | 1.5                    | 0.4                      |                         | 35               | 2 Mtrs.                    | 70              | 2                   | Yes                        | 16 x 17 1/2<br>x 6 1/4 | 35  | 599.95  | AFD matrix decoder<br>w/sel. phase shift,<br>matches any sys.;<br>rem. bal. cont'l.; mic<br>input; 3 tape mon. |  |                  |
|                          | SA-6700X<br>4-chan. | 45                  | 0.5                   | 0.7                  |                 | 7-40k                   | 15-50k<br>+0-3         | 70                          | 2.5                   |                    |                     |                   | 1.8                 | 1.5                    | 20-15k                   | 0.3                     | 0.4              | 40                         | Mtr. &<br>Scope | 65                  | 1                          | Yes                    | 16 1/2 x 17 1/2<br>x 6 1/4  | 35  | 569.95   | AFD matrix decoder<br>(as above) BTL pwr.<br>amp brdg.; 4 VU<br>mtrs.            |                  |
|                          | SA-8000X<br>4-chan. | 30                  | 0.5                   | 0.7                  |                 | 5-40k                   | 10-50k<br>+0-3         | 70                          | 1.5                   |                    |                     |                   | 1.9                 | 1.8                    | 20-15k                   | 0.3                     | 0.4              | 40                         | Mtr.            | 65                  | 5                          | Yes                    | 19 1/2 x 15 1/2<br>x 6 1/4  | 35  | 499.95   | CD-4; AFD matrix<br>decoder; BTL pwr.<br>amp brdg.; 4 VU<br>mtrs.                |                  |
|                          | SA-5400X<br>4-chan. | 14                  | 0.8                   | 1.0                  |                 | 7-28k                   | 10-50k<br>+0-3         | 70                          | 2.5                   |                    |                     |                   | 2                   | 2                      | 20-15k                   | 0.4                     | 0.7              | 37                         | Mtr.            | 65                  | 1                          | Yes                    | 16 1/2 x 13 1/2<br>x 5 1/2  | 20  | 269.95   | 2 matrix decoders;<br>BTL pwr. amp brdg.<br>tape mon.; opt. rem.<br>bal. cont'l. |                  |
|                          | SA-5200             | 16                  | 0.8                   | 1.0                  |                 | 7-30k                   | 10-50k<br>+1-3         | 70                          | 3                     |                    |                     |                   | 1.9                 | 2                      | 20-15k                   | 0.4                     |                  | 35                         | Mtr.            | 60                  | 1                          | Yes                    | 16 1/2 x 14 1/4<br>x 5 1/4  | 18  | 199.95   | Matrix; 2 tape mon.;<br>dir. cp'd. output.                                       |                  |
| V-M                      | 1545<br>4-chan.     | 4                   | 5.0                   |                      |                 | 70-10k                  |                        | 55                          |                       |                    |                     |                   | 15                  |                        | 30-15k                   |                         |                  | 20                         | Mtr.            |                     | 1                          | Yes                    |   |   |  | E-V decoding; 1548<br>same W. 8-Tk player.                                       |                  |
| YAMAHA                   | CR 400              | 16                  | 0.5                   | 0.5                  | 0.1             | 15-50k                  | 20-50k<br>+0.5<br>-3   | 72"                         | 3                     | 135                | 2.5                 | 2.0               | 20-15k<br>±3        | 0.3                    | 0.8                      | 40                      | Mtr.             | 65                         | 2               | Yes                 | 17 x 6<br>x 12             | 18                     | 299.95  | *IHF A netwk.; LED<br>ind.; mic mix.; OCL<br>built-in filter.   |  |  |                  |
|                          | CR 600              | 30                  | 0.1                   | 0.1                  | 0.05            | 5-70k                   | 10-50k<br>+0.5<br>-1   | 75"                         | 3                     | 135                | 2.0                 | 1.5               | 20-15k<br>+2        | 0.3                    | 0.5                      | 40                      | Mtr.             | 75                         | 2               | Yes                 | 19 x 6<br>x 12             | 29                     | 449.95  | *Same as above;<br>auto-tch. AFC; cont.<br>loud. cont'l.; 2 tape<br>input.                                      |  |  |                  |

# TX-666

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(Quote from Hirsch-Houk Laboratories  
Test Report; March, 1973)



Furthermore, High Fidelity Magazine's experts (May, 1973 issue) joined Hirsch-Houk (Stereo Review; March, 1973) in praising this outstanding AM-FM stereo receiver. Both subjected the TX-666 to rigorous procedures. Both were impressed by the high quality construction, solidly built design and the outstanding performance characteristics, *extraordinary* phono overload capability... *excellent* harmonic distortion ratings... *flawless* FM muting... *fine* sensitivity... *quite*

*conservative* amplifier ratings... *unusually accurate* dial calibration.

But, yours is the final expert opinion — the judgement we value most. Please do this. See your dealer. Listen to the TX-666 and other outstanding products in the Onkyo fine quality audio component group — tuners, amplifiers, receivers and speaker systems. Send for these and other reports from major critics. You'll agree that Onkyo is "unquestionably, the world's finest sound."

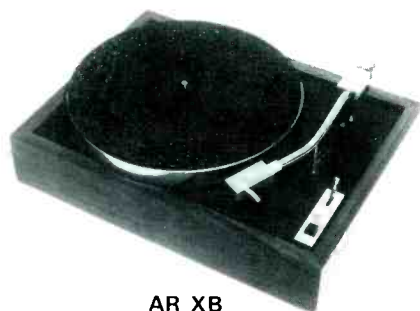
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# Manual Turntables & Tonearms



AR XB



Pioneer PL-61



Empire Troubador 59811



Dual 701

SPEEDS (see letter code)

A-33, 45, 78      D-16, 33, 45, 78  
 B-33, 45          E-16, 33, 45  
 C-33 only         F-cont. variable

| MANUFACTURER        | TURNTABLES |                          |                           |                 |            |                       |                      |        |                        |                            |              | TONE ARMS                 |                     |                         |                  |                 |                     |                           |                              |                   |                          |                      | SPECIAL FEATURES   |                                   |
|---------------------|------------|--------------------------|---------------------------|-----------------|------------|-----------------------|----------------------|--------|------------------------|----------------------------|--------------|---------------------------|---------------------|-------------------------|------------------|-----------------|---------------------|---------------------------|------------------------------|-------------------|--------------------------|----------------------|--|-----------------------------------|
|                     | MODEL      | Speeds (see letter code) | Wow & Flutter at 33 1/3 % | Rumble (NRB) dB | Motor type | Platter diameter, in. | Platter weight, lbs. | Drive  | Arm mounting provision | Dimensions, W x D x H, in. | Weight, lbs. | MODEL (for separate arms) | Overall length, in. | Pivot-stylus dist., in. | Vertical bearing | Lateral bearing | Stylus force method | Max. tracking error, deg. | Cartridge weight range, gms. | Arm resonance, Hz | Stylus force range, gms. | Weight, if sep., oz. |  | Price                             |
| ACOUSTIC RESEARCH   | XB         | B                        | 0.5                       | *38             | Syn.       | 11 3/4                | 4                    | Belt   | Integ.                 | 16 1/2 x 12 x 5 1/2        | 13 1/2       |                           | 12                  | 9                       | Cone point       | Ball            | Bal                 | 0.35                      |                              | 10-15             | 0.5<br>8.0               | 99.95                | *CBS RRLL, 58 w. stylus inc. gauge, base cover; damped cue. XB 91 w. Shure M91 ED cart., \$154.90. XBU, 110-120V, 50-60 Hz, \$106.95 |                                   |
| AUDIO RESEARCH      |            |                          |                           |                 |            |                       |                      |        |                        |                            |              | TA-1                      | 11 1/2              | 9                       | Ball             | Ball            | Bal                 | 2.0                       | 3-15                         | 8                 | 0.6                      | 175.00               | Ultra low spur resp.   |                                   |
| DECCA (PAOLI)       |            |                          |                           |                 |            |                       |                      |        |                        |                            |              | Int'l                     | 11 1/2              | 9                       | Unipivot         | Unipivot        | Bal.                |                           | 2-20                         | 14                | 0.4                      | 130.00               | Visc. damp; Adj. mag. anti-skate. Decca lift, \$35.00.   |                                   |
| DUAL (UNITED AUDIO) | 701        | B                        | 0.03                      | 70              | Elect.     | 12                    | 9.7                  | Direct | Integ.                 | 16.5 x 14.4 x 5.8          | 24           |                           | 12 3/4              | 8 1/2                   | Ball             | Ball            | Bal & spg.          | 0.16                      | 2-10                         |                   | 0.3                      | 350.00               | *2 reson. cancel. filters; twin gimbal tonearm susp.; self-reg. elect. speed mon.; pitch contl.; ill. strobe; auto start & stop.     |                                   |
| EMPIRE              | 598 II     | B                        | 0.01                      | 70              | Hys.       | 12                    | 7                    | Belt   | Integ.                 | 17 1/2 x 15 1/4 x 8        | 30           | 990                       | 12                  | 9                       | Ball             | Ball            | Calib. Bal. & spg.  | 0.7                       | 4-14                         | 6                 | 0.6                      | 349.95               | Incl. 1000ZE FX low trkg. cart.  |                                   |
| HITACHI             | PS 33      | B                        | 0.1                       |                 | Hys.       | 12                    | 2 1/2                | Belt   | Static Bal.            | 19 x 7 x 15                |              |                           |                     | 9                       | Ball             | Ball            | Wt.                 |                           |                              |                   | 0.4                      | 249.95               |  |                                   |
| JVC                 | VL 8       | B                        | 0.05                      | 60              | Servo      | 12                    | 4                    | Belt   | Integ.                 | 19 1/4 x 16 1/4 x 7 1/2    | 22           |                           | 13                  | 10                      | Ball             | Ball            | Bal.                | 0.94                      | 5-20                         | 7                 | 0.4                      | 259.95               | CD-4 ready.  |                                   |
|                     | VL 5       | B                        | 0.1                       | 50              | Syn.       | 12                    | 2                    | Belt   | Integ.                 | 18 1/2 x 14 1/2 x 7 1/2    | 15           |                           | 12                  | 9                       | Pivot            | Ball            | Static bal.         |                           | 5-25                         | 10                | 0.3                      | 109.95               | CD-4 ready; arm lifts at end of record.  |                                   |
| LENCO (BENJAMIN)    | L75        | F                        | 0.07                      | 38              | Ind.       | 11 3/4                | 8.8                  | Idler  | Integ.                 | 17 1/2 x 13 1/4 x 6 1/4    | 32           |                           | 8                   |                         | Knife edge       | Ball            | Bal.                |                           |                              |                   | 0.5                      | 109.50               | Anti-skate adj.; Infinite speed adj.   |                                   |
|                     | L78        | F                        | 0.06                      | 40              | Ind.       | 11 3/4                | 8.8                  | Idler  | Integ.                 | 17 1/2 x 13 1/4 x 6 1/4    | 32           |                           | 8                   |                         | Knife edge       | Ball            | Bal.                |                           |                              |                   | 0.5                      | 179.50               | Auto shutoff & arm lift; anti-skate.   |                                   |
|                     | L85        | B                        | 0.06                      | 45              | Syn.       | 12 1/2                | 3.6                  | Belt   | Integ.                 | 18 1/2 x 14 1/4 x 3        | 30           |                           | 8 1/2               |                         | Ball             | Ball            | Bal.                | 0.6                       |                              |                   | 0.5                      | 249.50               | 3% speed var.; auto shutoff & arm lift; ill. strobe; anti-skate adj.   |                                   |
| PHILIPS             | GA 212     | B                        | 0.1                       | 40              | d.c.       | 11 1/2                | 6                    | Belt   | Integ.                 | 15 1/2 x 13 1/4 x 6 1/4    | 13 1/4       |                           | 10 1/2              | 8 1/2                   | Pin & Bush       | Ball            | Bal.                | 0.7                       | 0-18                         | 7                 | 3/4                      | 164.50               |  |                                   |
|                     | GA 407     | B                        | 0.2                       | 35              | syn.       | 11 1/2                | 6                    | Belt   | Integ.                 | 12 1/2 x 10 1/4 x 6        | 12           |                           |                     |                         |                  |                 | Bal.                |                           | 6-18                         | 7                 | 1.4                      | 99.50                |  |                                   |
| PIONEER             | PL 61      | B                        | 0.05                      | 55              | DC servo   | 12 1/4                | 4                    | Belt   | Integ.                 | 19 x 17 x 7                | 24           |                           |                     |                         |                  |                 |                     |                           |                              |                   |                          | 299.95               | Built-in strobe; anti-skate; var. speed contl.; dust cover.  |                                   |
|                     | PL 51      | B                        | 0.06                      | 55              | DC servo   | 12 1/4                | 3                    | Direct | Integ.                 | 18 x 16 x 7                | 23           |                           |                     |                         |                  |                 |                     |                           |                              |                   |                          | 249.95               | DC direct drive; anti-skate; var. elec. speed contl.; dust cover.  |                                   |
|                     | PLA35      | B                        | 0.1                       | 47              | Syn.       | 12                    | 3                    | Belt   | Integ.                 | 19 x 16 x 7                | 20           |                           |                     |                         |                  |                 |                     |                           |                              |                   |                          | 149.95               | 2 mtrs.; fully auto or manual; dust cover  |                                   |
|                     | PL 12D     | B                        | 0.10                      | 47              | Syn.       | 12                    | 3                    | Belt   | Integ.                 | 17 x 14 x 6                | 16           |                           |                     |                         |                  |                 |                     |                           |                              |                   |                          | 99.95                | Built-in overhang checker; var. anti-skate; dust cover.  |                                   |
| RABCO               | ST 4       | B                        | 0.08                      | 60              | Sync.      | 11                    |                      | Belt   | Integ.                 | 15 1/2 x 18 x 6            | 15           | SL 8E                     | 14                  |                         | Cone             | Cone            | Bal.                | 0                         |                              |                   | 1/4 min.                 | 36                   | 199.00   | Straight line trkg.; elec. servo. |

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# Manual Turntables & Tonearms



Thorens TD-125AB Mk II



Technics by Panasonic SP-10



Yamaha YP-700

SPEEDS (see letter code)

A-33, 45, 78

B-33, 45

C-33 only

D-16, 33, 45, 78

E-16, 33, 45

F-cont. variable

| MODEL                 | TURNTABLES      |                          |                          |                |             |                       |                      |        |                        |                            | TONE ARMS    |                           |                     |                         |                  |                 |                     |                           |                              |                   | SPECIAL FEATURES |                          |                      |  |   |
|-----------------------|-----------------|--------------------------|--------------------------|----------------|-------------|-----------------------|----------------------|--------|------------------------|----------------------------|--------------|---------------------------|---------------------|-------------------------|------------------|-----------------|---------------------|---------------------------|------------------------------|-------------------|------------------|--------------------------|----------------------|--|---|
|                       | MANUFACTURER    | Speeds (see letter code) | Wow & Flutter at 33 1/3% | Rumble (MM) dB | Motion type | Platter diameter, in. | Platter weight, lbs. | Drive  | Arm mounting provision | Dimensions, W x D x H, in. | Weight, lbs. | MODEL (for separate arms) | Overall length, in. | Pivot-stylus dist., in. | Vertical bearing | Lateral bearing | Stylus force method | Max. tracking error, deg. | Cartridge weight range, gms. | Arm resonance, Hz |                  | Stylus force range, gms. | Weight, if sep., oz. | Price  |   |
| REK-O-KUT (CCA)       | B12-71          | A                        | 0.05                     | 40             | Sync.       | 12                    | 6                    | Idler  | On order               | 15 1/4 x 15 1/4 x 6        | 16           |                           |                     |                         |                  |                 |                     |                           |                              |                   |                  |                          |                      |  |   |
|                       | 12-72           | A                        | 0.08                     | 40             | Sync.       | 12                    | 4                    | Idler  | Drid. in base          | 15 1/4 x 15 1/4 x 6        | 16           |                           |                     |                         |                  |                 |                     |                           |                              |                   |                  |                          | 194.50               |  |   |
|                       | CVS-12          | F                        | 0.09                     | 35             | Sync.       | 12                    | 4                    | Idler  | Drid. in base          | 15 x 16 x 5                | 15           |                           |                     |                         |                  |                 |                     |                           |                              |                   |                  |                          | 169.50               |  |   |
|                       |                 |                          |                          |                |             |                       |                      |        |                        |                            |              | S-320                     | 12                  | 8%                      | Ball             | Ball            | Bal. & spg.         | 1.0                       | 7-20                         | 9-12              | 0-10             | 24                       |                      | 54.95  |   |
|                       |                 |                          |                          |                |             |                       |                      |        |                        |                            |              | S-260                     | 16                  | 11                      | Ball             | Ball            | Bal. & spg.         | 1.0                       | 7-20                         | 9-12              | 0-10             | 28                       |                      | 64.50  |   |
|                       |                 |                          |                          |                |             |                       |                      |        |                        |                            | S410         | 12                        | 9                   | Ball                    | Ball             | Bal.            | 1.25                | 7-20                      | 10                           | 0-8               |                  |                          | 69.50                |  |   |
|                       |                 |                          |                          |                |             |                       |                      |        |                        |                            | 102          | 13                        | 9%                  | Ball                    | Ball             | Bal.            | 1.25                | 7-20                      | 10                           | 0-8               |                  |                          | 59.95                |  |   |
| SANSUI                | SR 1050C        | B                        | 0.07                     | 40             | Sync.       | 12                    | 2.9                  | Belt   | Integ.                 | 17 1/4 x 13 1/4 x 7 1/2    | 21 1/2       |                           | 8%                  | Knife                   | Knife            | Bal.            | 1.5                 |                           |                              |                   |                  |                          | 139.95               | Damped cueing; cart. incl.   |   |
|                       | SR 2050C        | B                        | 0.07                     | 40             | Sync.       | 12                    | 2.9                  | Belt   | Integ.                 | 17 1/2 x 13 1/4 x 7 1/2    | 26           |                           | 8%                  | Knife                   | Knife            | Bal.            | 1.5                 |                           |                              |                   |                  |                          | 169.95               | Damped cueing; cart. incl.   |   |
| SANYO                 | TP 80SA         | B                        | 0.1                      | 42             | Hys. sync.  | 11.8                  | 2 1/4                | Belt   | Integ.                 | 18 1/2 x 15 x 7 1/4        | 22           |                           |                     | Ball                    | Ball             | Bal.            | +2                  | 12 max.                   | 10                           | 1/4-4             |                  |                          | 199.95               | Auto tonearm p/u & platter shutoff.  |   |
| SHURE                 |                 |                          |                          |                |             |                       |                      |        |                        |                            | 3009 Imp.    | 9                         |                     | Knife edge              | Ball             | Bal.            |                     | 4-9                       |                              | 0-1.5             |                  |                          | 135.00               |  |   |
|                       |                 |                          |                          |                |             |                       |                      |        |                        |                            | 3009 S/2     | 9                         |                     | Knife edge              | Ball             | Bal.            |                     | 4-9                       |                              | 0-1.5             |                  |                          | 147.50               | Detachable shell.  |   |
| SUGDEN (HERVIC)       | Connoisseur BD2 | B                        | 0.1                      |                | Hys.        | 10 1/4                | 2                    | Belt   | Integ.                 | 13 3/4 x 15 1/2 x 4 1/2    | 7            |                           |                     |                         |                  |                 |                     |                           |                              |                   |                  |                          | 129.20               | Hyd. cueing; 60 dB rumble RIAA   |   |
| TECHNICS BY PANASONIC | SP-10           | B                        | 0.03                     | 70*            | Direct      | 12                    | 6                    | Direct | Sep. base              | 14 x 14 x 4                | 20           |                           |                     |                         |                  |                 |                     |                           |                              |                   |                  |                          |                      | 369.95   | Direct drive; strobe; var. pitch. *DIN B, DIN A-65.   |
|                       | SL-1100 A       | B                        | 0.03                     | 70*            | Direct      | 13 1/4                | 4.4                  | Direct | Integ.                 | 20 1/4 x 15 1/4 x 7 1/4    | 28           |                           | 9%                  |                         |                  | Bal.            | 1.75                | 2-9.5                     | 10                           | 0-5               |                  |                          | 329.95               | Direct drive; var. pitch; strobe; damp. cueing; *DIN B, DIN A-65; dust cover incl. |   |
|                       | SL-1200         | B                        | 0.03                     | 7*             | Direct      | 13                    | 3.9                  | Direct | Integ.                 | 16 1/4 x 13 1/4 x 7 1/4    | 22           |                           | 8%                  |                         |                  | Bal.            | 2.0                 | 2-9.5                     | 10                           | 0-4               |                  |                          | 269.95               | Same as above.   |   |
| THORENS (ELPA)        | TD-125AB Mk II  | E                        | 0.08                     | 48             | sync.       | 12                    | 8 1/2                | Belt   | Int.                   | 18 x 14 x 5                | 32           | TP-16                     | 12                  | 9.06                    | Ball             | Ball            | Bal. & spg.         | 0.2                       | max. 14                      | 8                 | 0-4              | 10%                      |                      | 275.00   |   |
|                       | TD-125B Mk II   | E                        | 0.08                     | 48             | syn.        | 12                    | 8 1/2                | Belt   | mnt. board             | 18 x 14 x 5                | 32           |                           |                     |                         |                  |                 |                     |                           |                              |                   |                  |                          |                      | 375.00   |   |
|                       | TD-160C         | B                        | 0.09                     | 37             | syn.        | 12                    | 8 1/2                | Belt   | Int.                   | 15 1/2 x 12 1/2 x 5        | 16 1/2       | TP-16                     | 12                  | 9.06                    | Ball             | Ball            | Bal. & spg.         | 0.2                       | max. 14                      | 8                 | 0-4              | 10%                      |                      | 200.00   |   |
| V-M                   | 1579            | B                        | 0.1                      |                | Sync.       | 11 1/4                | 3                    | Belt   | Integ.                 | 17 x 13 x 5                | 12           |                           | 12%                 | 9%                      | Flex.            | Cone pt.        | Bal. & spg.         | 1.5                       | 3-9                          | 11                | 0-4              |                          |                      |  |   |
| YAMAHA                | YP-700          | B                        | 0.05                     |                | Syn.        | 12                    | 2.6                  | Belt   | Integ.                 | 19 x 16 x 6                | 20           |                           | 12                  | 8.7                     | Ball             | Ball            | Static              | 1.5                       | 5-15                         | 8                 | 0-4              |                          |                      | 239.95   | W/cart. base cover; adj. anti-skate; auto cut/return. |

# Some of the reasons why other turntables don't perform quite like a Dual.

Because of the wide acceptance and acclaim Dual has earned over the years, especially among audio experts, many Dual features inevitably appear on competitive turntables.

To copy a Dual feature is one thing; to achieve Dual performance and reliability is quite another matter. The true measure of a turntable's quality is not its features alone, but how well the entire unit is designed and manufactured.

Following are just some of the ways in which Duals differ from other automatic turntables.

## Gyroscopic gimbals suspension.

The gyroscope is the best known scientific means for supporting a precision instrument that must remain perfectly balanced in all planes of motion. That is why the tonearms of the 1218 and 1229 are suspended in true, twin-ring gimbals.

Every Dual gimbal is hand-assembled and individually checked with gauges especially developed by Dual for this purpose. This assures that the horizontal bearing friction of the 1229 for example, will be no greater than 0.015 gram, and vertical friction no greater than 0.007.

## True single-play automatic tonearm.

A turntable of the 1229's caliber is used primarily in its single play mode, so the tonearm is designed to parallel a single record on the platter. For multiple-play, the entire tonearm base is moved up to parallel the tonearm to the center of the stack.

The 1218 tonearm provides the single-play adjustment within the cartridge housing, and the cartridge pivots around the stylus tip to maintain the correct overhang.

## Stylus pressure around pivot.

Today's finest cartridges, designed to track at around one gram, have little margin for error. In the 1229, therefore, the tracking pressure scale is calibrated within 0.10 gram from 0 to 1.5 grams.

To maintain perfect balance on every Dual tonearm, stylus pressure is applied internally and around the pivot. This is accomplished by a very long spring coiled around the pivot. Only a small portion of the spring's length is needed to apply the required pressure, thus contributing greatly to the accuracy of the calibrations.

## Avoiding sounds that weren't recorded.

The rotor of every Dual motor is dynamically balanced in all planes of motion. Each motor pulley and drive wheel is also individually examined with special instruments to assure perfect concentricity.

Any residual vibration within the motor is isolated from the chassis by a three-point damped suspension. Finally, every assembled Dual chassis is "tuned" to a resonance frequency below 10 Hz.

## The best guarantee.

All these precision features and refinements don't mean that a Dual turntable must be handled with undue care. So we're not being rash when we include a full year guarantee covering both parts and labor for every Dual. That's up to four times the guarantee you'll find on other automatic units.

Now, if you'd like to know what several independent test labs say about Dual, we'll send you complete reprints of their reports.

Better yet, just visit your franchised United Audio dealer. You'll see for yourself that only a Dual performs precisely like a Dual.

Dual 1214, \$109.50

Dual 1216, \$139.50

Dual 1218, \$169.50

Dual 1229, \$225.00



United Audio Products, Inc., 120 So. Columbus Ave., Mt. Vernon, N.Y. 10553

Exclusive U.S. Distribution Agency for Dual.

Check No. 67 on Reader Service Card



# Automatic Turntables



B&O Beogram 3000



Dual 1216



Elac 50HII



BSR-McDonald 810

Speeds (use letter code)

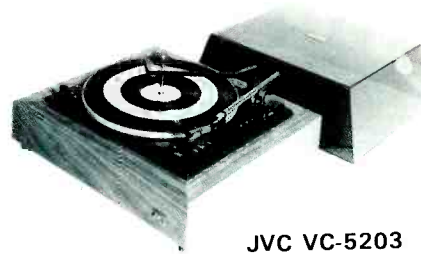
A - 33, 45, 78    D - 16, 33, 45, 78  
 B - 33, 45        E - 16, 33, 45  
 C - 33 only       F - Cont. variable

| MANUFACTURER        | MODEL     | Speeds (see letter code) | Platter diameter, in. | Wow and flutter at 33 $\frac{1}{3}$ , % | Rumble (MM) dB | Max. tracking error, deg. | Pivot-stylus dist., in. | Arm type            | Tracking force range | Arm resonance, Hz | Max. slack records | Change cycle at 33 $\frac{1}{3}$ , secs. | Clearance below board, in. | Clearance above board, in. | Overall W x D, in.                  | Overall height, in. | Weight, lbs.     | Price  | SPECIAL FEATURES  |
|---------------------|-----------|--------------------------|-----------------------|---|----------------|---------------------------|-------------------------|---------------------|----------------------|-------------------|--------------------|--|----------------------------|----------------------------|-------------------------------------|---------------------|------------------|--------|---|
| B & O               | 3000      | B                        | 12                    | 0.075                                   | 37**           | 0.126                     | 9                       | Bal. & spg.         | 0-3.5                | 13                | 0                  | 5  | *                          | *                          | 17 $\frac{1}{4}$ x 13               | 4 $\frac{1}{2}$     | 20               | 250.00 | *Auto/integ. sys.; incl. base cover & SP-12A cart. (\$85.00. **DIN                        |
| BSR                 | 810/X     | B                        | 12                    | *                                       | -55            | 0.5                       | 8.562                   | Cntr. wt. ball brg. | 0-4                  | 7                 | 6                  | 14                                       | 3                          | 4 $\frac{1}{2}$            | 17 $\frac{1}{4}$ x 15               | 9 $\frac{1}{4}$     | 22               | 239.45 | *Wow less than 0.1%, flutter less than 0.05%; seq. cam sys.; dual volt. motor.            |
|                     | 710/X     | B                        | 12                    | *                                       | -55            | 0.5                       | 8.562                   | Cntr. wt. ball brg. | 0-4                  | 7                 | 6                  | 14                                       | 3                          | 4 $\frac{1}{2}$            | 17 $\frac{1}{4}$ x 14 $\frac{1}{2}$ | 8 $\frac{3}{4}$     | 19               | 204.80 | Same as above.  |
|                     | 610A/X    | A                        | 11                    | 0.26                                    | -30            | 4.5                       | 7.476                   | Cntr. wt.           | 0-6                  | 11                | 6                  | 8  | 3                          | 4                          | 15 $\frac{1}{4}$ x 14 $\frac{1}{2}$ | 7 $\frac{1}{4}$     | 17               | 130.45 |   |
|                     | 510A/X    | A                        | 11                    | 0.26                                    | -30            | 4.5                       | 7.476                   | Cntr. wt.           | 0-6                  | 11                | 6                  | 8  | 3                          | 4                          | 15 $\frac{1}{4}$ x 14 $\frac{1}{2}$ | 7 $\frac{1}{4}$     | 14               | 105.45 |   |
| DUAL (UNITED AUDIO) | 1229      | A                        | 12                    | 0.04                                    | -55            | 0.3                       | 8 $\frac{1}{2}$         | Bal. & spg.         | 1-12                 | 8-14              | 6                  | 13                                       | 3                          | 5                          | 14 $\frac{1}{4}$ x 12               | 8                   | 19               | 225.00 | Gimbal susp.; adjust. vert. track angle; 6% pitch contl. sync. mtr.; cueing; ill. strobe. |
|                     | 1218      | A                        | 10 $\frac{1}{2}$      | 0.06                                    | -45            | 0.5                       | 8 $\frac{1}{4}$         | Bal. & spg.         | 1-12                 | 8-14              | 6                  | 11                                       | 2 $\frac{1}{2}$            | 5                          | 13 x 10 $\frac{1}{4}$               | 7 $\frac{1}{2}$     | 14               | 169.50 | As above less strobe.   |
|                     | 1216      | A                        | 10 $\frac{1}{2}$      | 0.08                                    | -45            | 0.5                       | 8 $\frac{1}{4}$         | Bal. & spg.         | 1-8                  | 8-14              | 6                  | 11                                       | 2 $\frac{1}{2}$            | 5                          | 13 x 10 $\frac{1}{4}$               | 7 $\frac{1}{4}$     | 13               | 139.50 | Pitch contl.; damped cueing; sep. anti-skate for con. & ellip. stylus; diecast platter.   |
|                     | 1214      | A                        | 10 $\frac{1}{2}$      | 0.08                                    | -45            | 0.5                       | 8 $\frac{1}{4}$         | Bal. & spg.         | 1-8                  | 8-14              | 6                  | 11                                       | 2 $\frac{1}{2}$            | 5                          | 13 x 10 $\frac{1}{4}$               | 7 $\frac{1}{4}$     | 13               | 109.50 | Pitch contl.; damped cueing; built-in antiskate.  |
| ELAC (BENIAMIN)     | 50H Mk II | A                        | 12                    | 0.06/0.02                               | -40            | 0.4                       | 7 $\frac{1}{4}$         | Bal. & Spg.         | 5-6.5                | 8                 | 10                 | 10                                       | 3 $\frac{1}{2}$            | 5 $\frac{1}{2}$            | 14 x 12 $\frac{1}{2}$               | 10                  | 18               | 225.00 | Hys. syn. mtr.; pitch adj.; ill. dig. strobe; sty. overhang adj.                          |
|                     | 760       | A                        | 12                    | 0.06/0.02                               | -44            | 0.4                       | 7 $\frac{1}{4}$         | Bal. & Spg.         | 5-6.5                | 8                 | 10                 | 10                                       | 2 $\frac{1}{2}$            | 5 $\frac{1}{2}$            | 14 x 12                             | 10                  | 18 $\frac{1}{4}$ | 179.00 | Pitch adj.  |
|                     | 650       | D                        | 10 $\frac{1}{2}$      | 0.07/0.03                               | -38            | 0.5                       | 7 $\frac{1}{4}$         | Bal. & Spg.         | 0.5-6.5              | 10                | 10                 | 12                                       | 2 $\frac{1}{2}$            | 5 $\frac{1}{2}$            | 13 $\frac{1}{2}$ x 11 $\frac{1}{2}$ | 9                   | 17               | 149.50 |   |
|                     | 625       | D                        | 10 $\frac{1}{2}$      | 0.07/0.03                               | -38            | 0.5                       | 7 $\frac{1}{4}$         | Bal.                |                      | 10                | 10                 | 12                                       | 2 $\frac{1}{2}$            | 5 $\frac{1}{2}$            | 13 $\frac{1}{2}$ x 11 $\frac{1}{2}$ | 9                   | 15               | 119.95 |   |

# Automatic Turntables



Garrard Zero 100



JVC VC-5203



Radio Shack 45



Glenburn

Speeds (use letter code)

A - 33, 45, 78    D - 16, 33, 45, 78

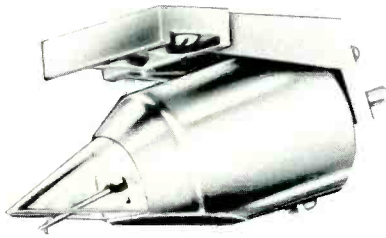
B - 33, 45    E - 16, 33, 45

C - 33 only    F - Cont. variable

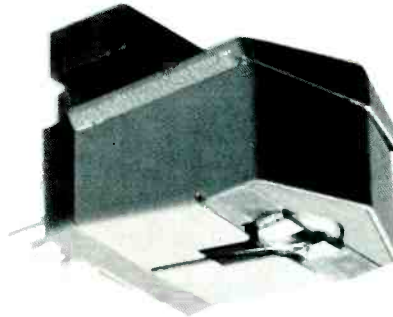
| MANUFACTURER      | MODEL               | Speeds (see letter code) | Platter diameter, in. | Wow and flutter at 33 1/3, % | Rumble (NRB) dB | Max. tracking error, deg. | Phono-stylus dist., in. | Arm type    | Tracking force range | Arm resonance, Hz | Max. stack recongs | Change cycle at 33 1/3, secs. | Clearance below board, in. | Clearance above board, in. | Overall W x D, in. | Overall height, in. | Weight, lbs. | Price   | SPECIAL FEATURES   |
|-------------------|---------------------|--------------------------|-----------------------|------------------------------|-----------------|---------------------------|-------------------------|-------------|----------------------|-------------------|--------------------|-------------------------------|----------------------------|----------------------------|--------------------|---------------------|--------------|---|--|
| GARRARD (BIC)     | Zero 100            | B                        | 11 1/2                | 0.06/0.025                   |                 | 7 1/2                     | Bal.                    | 0.15        | 8                    | 6                 | 10                 | 3                             | 4 1/4                      | 15 1/4 x 14 1/4            | 6 1/2              | 12                  | 199.95       | Zero tang. track arm; ill. strobe; var. spd.; mag. anti-skate; visc. damp. arm.         |  |
|                   | SL-95B              | A                        | 11 1/2                | 0.07/0.025                   | 0.75            | 8 1/4                     | Bal.                    | 0-15        | 8                    | 6                 | 10                 | 3                             | 4 1/4                      | 16 x 14 1/2                | 7 1/4              | 11                  | 149.95       | Visc. damp. arm; 2 pt. disc support; oversize platter; anti-skate; slide-in cart. clip. |  |
|                   | SL-72B              | A                        | 10 1/2                | 0.08/0.025                   | 0.75            | 7 1/2                     | Bal.                    | 0-15        | 8                    | 6                 | 10                 | 3                             | 4 1/4                      | 15 1/4 x 14 1/2            | 7 1/4              | 10 1/2              | 109.95       | Visc. damp. arm; anti-skating; cart. clip.  |  |
|                   | SL-65B              | D                        | 10 1/2                | 0.09/0.025                   | 0.85            | 7 1/2                     | Bal.                    | 0-18        | 10                   | 8                 | 12                 | 2 1/2                         | 4                          | 15 1/4 x 13 3/4            | 6 1/4              | 9                   | 84.95        | As above.   |  |
|                   | SL-55B              | D                        | 10 1/2                | 0.12/0.025                   | 0.85            | 7 1/2                     | Bal. & Spg.             | 0-12        | 12                   | 8                 | 12                 | 2 1/2                         | 4                          | 15 1/4 x 13 3/4            | 6 1/4              | 9                   | 64.95        | As above.   |  |
|                   | 40B                 | D                        | 10 1/2                | 0.14/0.03                    | 0.85            | 7 1/2                     | Bal. & Spg.             | 0-12        | 12                   | 8                 | 12                 | 2 1/2                         | 4                          | 15 3/4 x 13 3/4            | 6 1/4              | 9                   | 49.95        | Visc. damp. cueing; cart. clip; tubular tone arm; super-sens. trip.                     |  |
| GLENBURN/McDONALD | 2110                | D                        | 11                    | 0.2                          | -39             | 2.0                       | 7 1/2                   | Spg.        | 1.5-6                | 15                | 8                  | 10                            | 2                          | 4                          | 13 1/2 x 11 1/4    | 6                   | 8            | 74.00   | Incl. base, dust cover & Shure M75 cart.; cueing; fact. adj. anti-skate                      |
| JVC               | VC-5203             | D                        | 11                    | 0.1                          | -45             |                           | 8                       | Bal. & Spg. |                      |                   | 6                  | 10                            |                            |                            | 16 1/4 x 14 1/4    | 7 1/4               | 13 1/4       | 89.95   | With mag. cart., base, dust cover.   |
|                   | 4VC-5244<br>4 chan. | B                        | 11                    | 0.1                          | -45             |                           | 8                       | Bal. & Spg. |                      |                   | 6                  | 10                            |                            |                            | 15 3/4 x 17 1/4    | 7 1/2               | 19           | 249.95  | CD-4 4-chan. demodulator built-in; base, cover, mag. cart. w/Shibata stylus.                 |
| MAGNAVOX          | 1K8821              | A                        | 11                    | 0.28*                        | -43*            | 5.0                       | 7 1/2                   | Bal. & Spg. | 0-5                  | 15                | 6                  | 10                            |                            |                            | 16 1/2 x 14 1/2    | 7 3/4               | 15           | 89.95   | *DIN   |
| PE (IMPRO)        | 3060                | A                        | 10 1/2                | 0.08                         | 59              | 0.5                       | 8 1/4                   | Bal. & Spg. | 1-10                 |                   | 6                  | 13                            | 2 1/2                      | 4                          | 13 x 10 1/2        | 6 1/4               | 10 1/2       | 169.95  | Sep. anti-skate for con. & ellip.; sync. mtr.; gimbal arm; track angle adjust.               |
|                   | 3015                | A                        | 10 1/2                | 0.12                         | 58              | 0.5                       | 8 1/4                   | Bal. & Spg. | 3-15                 |                   | 6                  | 13                            | 2 1/2                      | 4                          | 13 x 10 1/2        | 6 1/4               | 9 1/2        | 129.95  | Fail safe stylus conti.; pitch conti.; rotat. single play spindle; damp. cueing; anti-skate. |
|                   | 3012                | A                        | 10 1/2                | 0.15                         | 56              | 0.5                       | 8 1/4                   | Spg.        | 3-15                 |                   | 6                  | 13                            | 2 1/2                      | 4                          | 13 x 10 1/2        | 6 1/4               | 9 1/2        | 89.95   | As above less anti-skate.  |
| RADIO SHACK       | 45                  | D                        | 11 1/4                | 0.1                          | -50             | 0.6                       | 7 1/4                   | Bal. & Spg. | 3/4-6                | 12                | 6                  | 12                            |                            |                            | 16 3/4 x 14 1/4    | 4 1/4               | 20           | 164.95  | W base, \$33.95 mag. cart.   |
|                   | 40C                 | D                        | 11 1/4                | 0.1                          | -50             | 0.6                       | 7 1/4                   | Bal. & Spg. | 1-6                  | 12                | 6                  | 12                            |                            |                            | 16 3/4 x 14 1/4    | 4 1/4               | 20           | 134.50  | W base, \$22.95 mag. cart.   |
|                   | LAB-36A             | A                        | 11                    | 0.18                         | -29             |                           |                         | Bal. & Spg. | 2 min.               |                   | 6                  |                               |                            |                            | 15 1/4 x 13 1/4    | 6 1/2               | 10 1/4       | 79.95   | W. base, \$22.95 mag. cart.  |
|                   | LAB-24C             | A                        | 11                    | 0.18                         | -29             |                           |                         | Bal. & Spg. | 2 min.               |                   | 6                  |                               |                            |                            | 15 1/4 x 13 1/4    | 6 1/2               | 8            | 64.50   | W. base, \$17.95 mag. cart.  |
| V-M               | 1670                | D                        | 11                    | 0.28/0.14                    |                 |                           |                         |             | 2 1/2-3 1/2          | 15                |                    |                               |                            |                            | 15 1/2 x 14 1/4    | 7 3/4               | 16           | 79.95   | Damp.; Shure mag. cart. w/dia. stylus; pop filt.; muting swit.; cover; base; auto off.       |



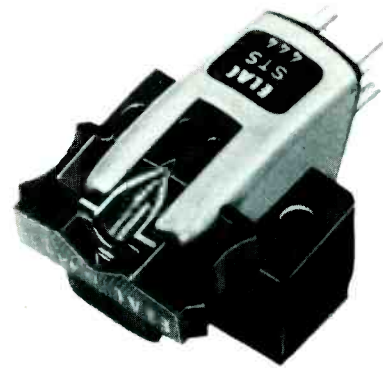
# Phono Cartridges



B&O

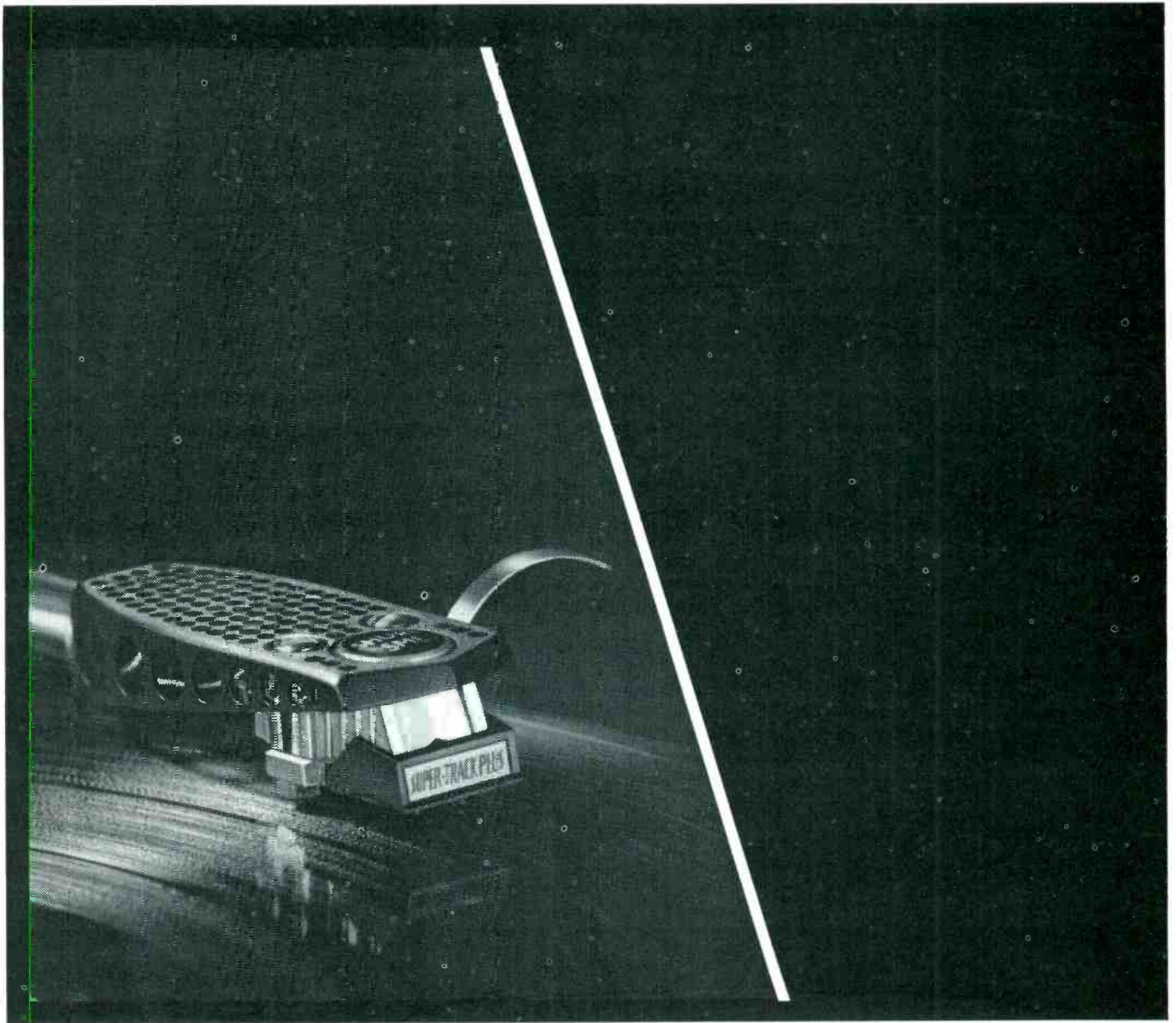


Decca London Export



Elac STS-444

| MANUFACTURER    | MODEL                 | Frequency response, Hz |        | Separation, 1000 Hz, dB | Separation, 10 kHz, dB | Output, mV/cm/sec | Tracking-force range, gms. | Load resistance, ohms | Stylus type (See letter code) | Stylus radius (radii) mils | Replacement | Weight, gms. | Price   | Special Features | Stylus Type<br>C - Conical<br>E - Elliptical |
|-----------------|-----------------------|------------------------|--------|-------------------------|------------------------|-------------------|----------------------------|-----------------------|-------------------------------|----------------------------|-------------|--------------|---|------------------|--|
|                 |                       | ± 2 dB                 | ± 6 dB |                         |                        |                   |                            |                       |                               |                            |             |              |   |                  |  |
| ASTATIC         | 181d                  | 60-12k<br>= 6          | 25     | 18                      | 31                     | 2-3               | 143k                       | C                     | 0.7 x 3.0                     | user                       | 1.7         | (14.50       | Piezoelectric ceramic.<br>Nominal Response relative to RIAA.<br>No electrical equalization required.<br>Same as above.  |                  |  |
|                 | 157d                  | 90-14k<br>= 6          | 24     | 14                      | 33                     | 3-4.5             | 143k                       | C                     | 0.7 x 3.0                     | user                       | 3.4         | \$13.50      |   |                  |  |
|                 | 155d                  | 70-11k<br>= 6          | 23     | 11                      | 125                    | 3.5-5             | 1 mag                      | C                     | 0.7 x 3.0                     | user                       | 3.4         | \$11.95      |   |                  |  |
|                 | 139d                  | 90-13k<br>= 6          | 24     | 14                      | 78                     | 4.5-6             | 500k                       | C                     | 0.7 x 3.0                     | user                       | 3.4         | \$13.75      |   |                  |  |
| AUDIO DYNAMICS  | XLM                   | 10-25k                 | 30     | 30                      | 4                      | 0-6               | 47k                        | E                     | 0.3 x 0.7                     | User                       | 3.8         | 50.00        | IM = 0.3% @ 14.2 cmS.   |                  |  |
|                 | VLM                   | 10-22k                 | 30     | 30                      | 4                      | 1-1.4             | 47k                        | E                     | 0.3 x 0.7                     | User                       | 3.8         | 46.00        |   |                  |  |
|                 | 20XE                  | 10-18k                 | 20     | 20                      | 6                      | 1-2½              | 47k                        | E                     | 0.3 x 0.7                     | User                       |             | 22.00        |   |                  |  |
|                 | Q-36                  | 10-22k<br>= 3          | 25     | 25                      | 4.5                    | ¾-1½              | 47k                        | E                     | 0.3-0.7                       | User                       |             | 45.00        |   |                  |  |
|                 | Q-32                  | 10-20k<br>± 3          | 30     | 30                      | 4.5                    | 1-2               | 47k                        | E                     | 0.3-0.7                       | User                       |             | 36.00        |   |                  |  |
|                 | Q-30                  | 10-20k<br>± 3          | 30     | 30                      | 4.5                    | 1-2               | 47k                        | C                     | 0.5                           | User                       |             | 27.00        |   |                  |  |
| AUDIO-TECHNICA  | AT20SL                | 5-50k                  | 25     |                         | 2.7                    | 1½-2              |                            | E*                    | *                             |                            |             | 150.00       | *Shibata configuration.<br>*Shibata configuration.<br>*Shibata configuration.   |                  |  |
|                 | AT15S                 | 5-45k                  | 25     |                         | 2.7                    | 1½-2              |                            | E*                    | *                             |                            |             | 100.00       |   |                  |  |
|                 | AT14S                 | 5-45k                  | 25     |                         | 2.7                    | 1½-2              |                            | E*                    | *                             |                            |             | 75.00        |   |                  |  |
|                 | AT13E                 | 10-45k                 | 25     |                         | 3.5                    | 1-2               |                            | E                     | 0.2 x 0.7                     |                            |             | 64.95        |   |                  |  |
|                 | AT12E                 | 15-30k                 | 22     |                         | 3.5                    | 1½-2              |                            | E                     | 0.4 x 0.7                     |                            |             | 54.95        |   |                  |  |
|                 | AT11E                 | 15-28k                 | 20     |                         | 4.8                    | 2-3               |                            | E                     | 0.4 x 0.7                     |                            |             | 44.95        |   |                  |  |
|                 | AT11                  | 15-25k                 | 20     |                         | 4.8                    | 2-3               |                            | C                     | 0.7                           |                            |             | 34.95        |   |                  |  |
|                 | AT10                  | 20-20k                 | 20     |                         | 4.8                    | 2½-4              |                            | C                     | 0.7                           |                            |             | 24.95        |   |                  |  |
| B & O           | SP-12                 | 15-25k<br>- 3          | 25     | 20                      | 1.0                    | 1-1½              | 47k                        | E                     | 0.2 x 0.7                     | User                       | 8.5         | 85.00        | Naked diamond stylus: pat. moving micro-cross constr.   |                  |  |
|                 | SP-14                 | 20-16k<br>- 2.5        | 20     | 16                      | 1.0                    | 1½-2½             | 47k                        | C                     | 0.6                           | User                       | 8.5         | 40.00        |   |                  |  |
|                 | SP-10                 | 15-25k<br>- 3          | 25     | 20                      | 1.0                    | 1-1½              | 47k                        | C                     | 0.6                           | User                       | 8.5         | 75.00        |   |                  |  |
| DECCA (PAOLI)   | London Export<br>Mk V | 30-18k                 | 25     | 18                      | 1.5                    | 2.5-3             | 50k                        | C                     | 0.5-0.6                       | fty                        | 5           | 135.00       | W/resp. curve: pos. scan., no cantil.: <1.0 mgm. tip mass: hand polished.<br>Pos. scan., no cantil.: <1.0 mgm. tip mass: hand polished.<br>Same as above exc. 78 rpm discs. |                  |  |
|                 | London Mk V           | 40-16k                 | 20     | 18                      | 1.5                    | 2.5-3             | 50k                        | C                     | 0.5                           | fty                        | 5           | 109.50       |   |                  |  |
|                 | 78C                   | 40-16k                 |        |                         | 1.5                    | 3.5-4             | 50k                        | C                     | 2.5                           | fty                        | 14          | 35.00        |   |                  |  |
| ELAC (BENJAMIN) | STS 244-17            | 20-20k                 | 22     |                         | 1.5                    | 1.5-3             | 47k                        | C                     | 0.7                           | user                       | 6.5         | 25.00        |   |                  |  |
|                 | STS 344-E             | 20-22k                 | 24     |                         | 1.0                    | 1-2               | 47k                        | E                     | 0.2 x 0.8                     | user                       | 6.5         | 60.00        |   |                  |  |
|                 | STS 444-E             | 10-24k                 | 26     | 17                      | 1.0                    | ¾-1.5             | 47k                        | E                     | 0.2 x 0.8                     | user                       | 6.5         | 80.00        |   |                  |  |



## anything II could do III can do better!

Several years ago, we decided that our next challenge would be to go beyond the best there was. Our computers told us we had taken the existing cartridge structure and stylus assembly of the V-15 Type II Improved as far as we could, and that hereafter, any improvement in one performance parameter would be at the expense of performance in some other parameter.

Therefore, over the past several years, a wholly new *laminated* cartridge structure has been developed, as was an entirely new stylus assembly with a 25% reduction in effec-

tive stylus mass! These developments have resulted in optimum trackability at light tracking forces ( $\frac{3}{4}$ - $1\frac{1}{4}$  grams), a truly flat, unaccented frequency response, and more extended dynamic range than was possible even with the Type II Improved, without sacrificing output level!

If you like its sound today, you will like it even more as time goes on. In fact, to go back to any other cartridge after living with the Type III for a short while is simply unthinkable, so notable is its neutral, uncolored sound. You must hear it. \$72.50.

INTRODUCING THE NEW

 **SHURE** V-15 TYPE III  
Super-Track "Plus" Phono Cartridge

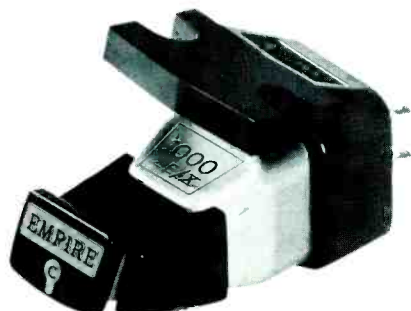
Shure Brothers Inc. • 222 Hartrey Ave. • Evanston, Ill. 60204

In Canada: A. C. Simmonds & Sons Ltd.,

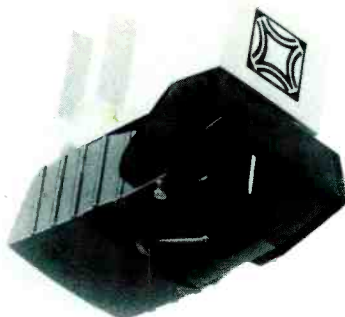
Check No. 57 on Reader Service Card



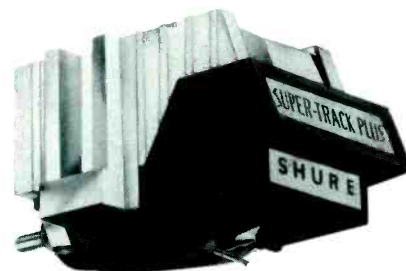
# Phono Cartridges



Empire 1000 ZE/X



JVC 4MD-20X



Shure V-15 III

| MANUFACTURER | MODEL             | Frequency response, Hz |      | Separation, 1000 Hz, dB | Separation, 10 kHz, dB | Output, mV/cm/sec. | Tracking force range, gms. | Load resistance, ohms | Stylus type (see letter code) | Stylus radius (radii) mils | Replacement | Weight, gms. | Price  | Special Features  | Stylus Type<br>C - Conical<br>E - Elliptical |
|--------------|-------------------|------------------------|------|-------------------------|------------------------|--------------------|----------------------------|-----------------------|-------------------------------|----------------------------|-------------|--------------|--|---|--|
|              |                   | ± 2 dB                 |      |                         |                        |                    |                            |                       |                               |                            |             |              |  |   |  |
| EMPIRE       | 1000 ZE/X         | 4-40k                  | 35   | 25                      | 1.2                    | ¼-1¼               | 47k                        | E                     | 0.2 x 0.7                     | User                       | 7           | 99.95        |  |   |  |
|              | 999 VE/X          | 6-36k                  | 35   | 25                      | 1.2                    | ¼-1¼               | 47k                        | E                     | 0.2 x 0.7                     | User                       | 7           | 79.95        |  |   |  |
|              | 999 TE/X          | 8-36k                  | 35   | 25                      | 1.2                    | ½-1½               | 47k                        | E                     | 0.2 x 0.7                     | User                       | 7           | 64.95        |  | 999SE/X similar but freq. resp. of 8-32k. \$59.95.  |  |
|              | 999E/X            | 10-30k                 | 35   | 25                      | 1.5                    | ¾-1¾               | 47k                        | E                     | 0.2 x 0.7                     | User                       | 7           | 39.95        |  | 909E/X same but resp. of 12-25k. \$29.95.   |  |
|              | 90EE/X            | 15-25k                 | 35   | 25                      | 1.5                    | ¾-2                | 47k                        | E                     | 0.2 x 0.7                     | User                       | 7           | 24.95        |  |   |  |
|              | 66PE/X            | 8-30k                  | 35   | 25                      | 1.8                    | ½-2                | 47k                        | E                     | 0.2 x 0.7                     | User                       | 6           | 44.95        |  |   |  |
|              | 4000 D III        | 6-60k                  | 35   | 35*                     | 1.0                    | ½-1½               | 47k                        | 4-ch.                 | 0.1**                         | User                       | 5           | 149.95       |  | 66E/X sim. but resp. is 10-30k; radii, 0.3 x 0.7. \$29.95. 66/X sim. but resp. 10-25k, trkg. rng. ¾-2 & conical (0.7 mils) stylus, \$19.95. |  |
|              | 4000 D II         | 6-60k                  | 35   | 35*                     | 1.0                    | ½-1½               | 47k                        | 4-ch.                 | 0.1***                        | User                       | 5           | 99.95        |  | Designed for 4-chan.; *rear, 30dB; **4 dimens.  |  |
| 4000 D I     | 6-50k             | 35                     | 35** | 1.0                     | ¾-2                    | 47k                | 4-ch.                      | 0.1***                | User                          | 5                          | 74.95       |              | Designed for 4-chan.; *rear, 30dB; **4 dimens. |   |  |
| JVC          | 4MD-20X           | 20-60k                 | 30   | 25                      | 2.0                    | 1.5-2              | 47k                        | *                     |                               | User                       | 8           | 69.95        |  | *Shibata stylus, for use w/4-chan. discs  |  |
| PICKERING    | UV 2400Q          | 10-50k                 | 35   |                         | 0.7                    | 1-3                | *                          |                       |                               | User                       | 5           | 124.95       |  | *Quadrilateral for CD-4; Dustamatic™ brush.   |  |
|              | XV15/1200E        | 10-30k                 | 35   | 25                      | 0.8                    | ½-1¼               | 47k                        | E                     | 0.2 x 0.7                     | User                       | 5           | 79.95        |  |   |  |
|              | XV15/750E         | 10-25k                 | 35   | 25                      | 0.8                    | ½-1½               | 47k                        | E                     | 0.3 x 0.7                     | User                       | 5           | 65.00        |  |   |  |
|              | XV15/400E         | 10-25k                 | 35   | 25                      | 1.0                    | 1-2                | 47k                        | E                     | 0.4 x 0.7                     | User                       | 5           | 54.95        |  |   |  |
|              | XV15/350          | 10-25k                 | 35   | 25                      | 1.1                    | 1-3                | 47k                        | C                     | 0.7                           | User                       | 5           | 39.95        |  |   |  |
|              | XV15/200E         | 10-25k                 | 35   | 18                      | 1.4                    | 2-4                | 47k                        | E                     | 0.4 x 0.7                     | User                       | 5           | 49.95        |  | XV15/150 sim. but 0.7 mil con. stylus, \$34.95.   |  |
|              | XV15/140E         | 10-20k                 | 35   | 16                      | 1.4                    | 3-5                | 47k                        | E                     | 0.5 x 0.7                     | User                       | 5           | 34.95        |  | XV15/100 sim. but 0.7 mil con. stylus, \$29.95.   |  |
|              | V-15 Micro IV AME | 20-20k                 | 30   | 24                      | 1.0                    | 1.2                | 47k                        | E                     | 0.4 x 0.7                     | User                       | 5           | 49.95        |  | V-15 Micro IV AM sim. but 1.1 mV output; 0.7 con. stylus, \$34.95.  |  |
|              | V-15 Micro IV ATE | 20-18k                 | 28   | 15                      | 1.2                    | 2-4                | 47k                        | E                     | 0.4 x 0.7                     | User                       | 5           | 39.95        |  | V-15 Micro IV AT sim. but 1.4 mV output; 0.7 mil. stylus, \$29.95.  |  |
|              | V-15 Micro IV ACE | 20-17k                 | 26   | 14                      | 1.4                    | 3-5                | 47k                        | E                     | 0.5 x 0.7                     | User                       | 5           | 29.95        |  | V-15 Micro IV AC sim. but 0.7 mil. stylus, \$24.95.   |  |
| QRK (CCA)    | F3                | 20-20k                 | 25   | 25                      | 4.0                    | 1.5-3.5            | 47k                        | C                     | 0.6                           | User                       | 5.5         | 29.95        |  |   |  |
| RADIO SHACK  | R700E             | 10-25k                 | 25   |                         | 6.2                    | ¾-1¼               |                            | E                     | 0.2-0.7                       | User                       |             | 33.95        |  |   |  |
|              | R27E              | 20-20k                 | 25   |                         | 6.2                    | 1-1½               |                            | E                     | 0.2 x 0.7                     | User                       |             | 22.95        |  |   |  |
|              | R47EB             | 20-20k                 | 20   |                         | 6.2                    | 1½-3               |                            | E                     | 0.4-0.7                       | User                       |             | 17.95        |  |   |  |
|              | R25EC             | 20-20k                 | 25   |                         | 6.2                    | 2.5-5              |                            | E                     | 0.4-0.7                       | User                       |             | 15.95        |  |   |  |
| SHURE        | V15 III           | 10-25k                 | 28   | 20                      | 3.5                    | ¾-1¼               | 47k                        | E                     | 0.7 x 0.2                     |                            | 6           | 72.50        |  |   |  |
|              | M91ED             | 20-20k                 | 25   |                         | 5.0                    | ¾-1½               | 47k                        | E                     | 0.7 x 0.2                     |                            | 5.5         | 54.95        |  | M75ED Type 2 similar but with stylus guard.   |  |
|              | M91E              | 20-20k                 | 25   |                         | 5.0                    | ¾-1½               | 47k                        | E                     | 0.7 x 0.2                     |                            | 6           | 49.95        |  |   |  |
|              | M93E              | 20-20k                 | 25   |                         | 6.2                    | 1½-5               | 47k                        | E                     | 0.4 x 0.7                     |                            | 6           | 39.95        |  |   |  |
|              | M75C Type 2       | 20-20k                 | 25   |                         | 5.0                    | ¾-1½               | 47k                        | C                     | 0.6                           |                            | 6           | 38.45        |  |   |  |
| STANTON      | 780 4DQ           | 10-50k                 | 35   |                         | 0.7                    | 1-3                | *                          |                       |                               | User                       | 5           | 125.00       |  | *Quadrilateral for CD-4; "Longhair brush."  |  |
|              | 600A              | 20-20k                 | 35   |                         | 1.0                    | 2-4                | 47k                        | C                     | 0.7                           | User                       | 5           | 45.00        |  |   |  |
|              | 600EE             | 20-20k                 | 35   |                         | 1.0                    | 1-2                | 47k                        | E                     | 0.3 x 0.7                     | User                       | 5           | 55.00        |  | 600E sim. but trkg. force rng. 1½-3 gms. \$50.00.   |  |
|              | 681SE             | 10-20k                 | 35   | 26                      | 1.1                    | 1½-3               | 47k                        | E                     | 0.4 x 0.7                     | User                       | 5           | 66.00        |  | 681A sim. but 0.7 con. stylus, \$66.00.   |  |
|              | 681EE             | 10-20k                 | 35   | 26                      | 0.8                    | ¾-1½               | 47k                        | E                     | 0.2 x 0.7                     | User                       | 5           | 72.00        |  |   |  |
|              | 500E              | 20-20k                 | 35   | 22                      | 1.0                    | 2-5                | 47k                        | E                     | 0.4 x 0.7                     | User                       | 5           | 35.00        |  | 500A sim. but 0.7 mil. con. stylus, \$30.00.  |  |
|              | 500EE             | 20-20k                 | 35   | 22                      | 1.0                    | 1-2                | 47k                        | E                     | 0.3 x 0.7                     | User                       | 5           | 40.00        |  | 500AA sim. but 1-2½ trkg. frc.; 0.5 con. stylus, \$35.00.   |  |



# Stanton. Benchmark for an Industry.



## Stanton's 681 Series is the Calibration Standard to recording engineers such as Robert Ludwig.

Whatever the requirements for recording and playback, Stanton's Series 681 cartridges are the Calibration Standard. And there is a 681 model engineered specifically for each of these critical applications. That's why Stanton is truly the Benchmark for the industry.

**The Stanton 681A—For Cutting Head Calibration.** With Stanton's Model 681A, cutting heads can be accurately calibrated with the cartridge, for it has been primarily designed as a calibration standard in recording system checkouts. Frequency response is factory calibrated to the most rigid tolerances and the flattest possible response is assured for precise alignment of recording channels.



**The Stanton 681EE—for Critical Listening.**

Stanton's Model 681EE is designed for low-distortion tracking with minimum stylus force, regardless of the recorded velocity or the distance of the groove from the disc center. High compliance, low mass and low pressure assure perfect safety even on irreplaceable records.

All Stanton Calibration Standard cartridges are guaranteed to meet the specifications with exacting limits. Their warranty comes packed with each unit—the calibration test results for that individual cartridge.

*For complete information and specifications write Stanton Magnetics, Inc., Terminal Drive, Plainview, L.I., New York.*

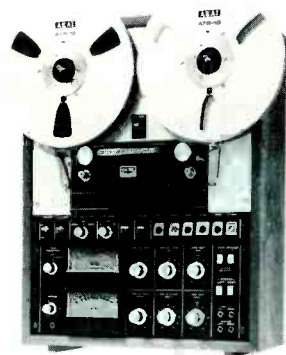


All Stanton cartridges are designed for use with all two- and four-channel matrix derived compatible systems.

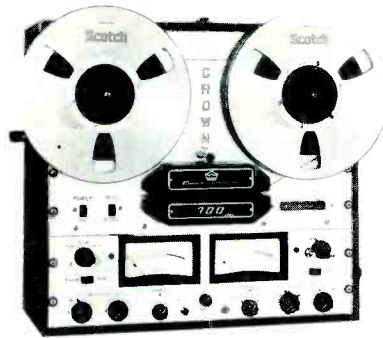
Check No. 61 on Reader Service Card



# Open-Reel Tape Recorders



Akai GX-400D



Crown SX-724



Dokorder 9100

Indicate speeds by letter code:

A B C D E F G H J

|       |   |   |   |   |   |   |   |   |  |
|-------|---|---|---|---|---|---|---|---|--|
| 15    |   |   |   | x | x | x |   |   |  |
| 7½    | x | x | x |   | x | x | x |   |  |
| 3¾    | x | x | x |   | x |   | x | x |  |
| 1⅞    | x |   | x | x |   |   | x | x |  |
| 15/16 |   |   |   | x |   |   |   |   |  |

\* at the highest speed of the machine

D after the price indicates the machine is Dolbyized.  
All models solid state unless model number is preceded by (T)

| MANUFACTURER | MODEL             | Speed (see letter code) | Power amp(s) built in ? | Max. reel size, in. | No. of heads | No. of tracks | No. of motors | Drive motor type | Drive to capstan | Frequency response * Hz to kHz, ± dB | Wow and flutter, % | Signal-to-noise ratio, dB | Erase wind 1200 ft., sec. | Mic input Z, ohms | Reeling level indicator type | Dimensions, W x D x H, in. | Weight, lbs.   | Price  | SPECIAL FEATURES |
|--------------|-------------------|-------------------------|-------------------------|---------------------|--------------|---------------|---------------|------------------|------------------|--------------------------------------|--------------------|---------------------------|---------------------------|-------------------|------------------------------|----------------------------|--|--|------------------|
| AKAI         | GX-400D           | E no                    | 10½                     | 4                   | 4            | 3             | Servo         | Belt             | 20-26k ± 3       | 0.04                                 | 55                 | 75                        | 10k                       | 2 Mtrs            | 18 x 22¼ x 8                 | 75                         | 1195.00  | ADRS; rev. in rec. & PB w/ sens. foil; line/mic mix; SOS; Auto off/stop; PB vol. contl.; dual capstan.                   |                  |
|              | GX-370D           | B no                    | 7                       | 3                   | 4            | 3             | Servo         | Direct           | 20-24k ± 3       | 0.07                                 | 55                 | 60-75                     | 10k                       | 2 Mtrs.           | 17.7 x 9.8 x 19.9            | 57                         | 799.95   | Gl. & crys. ferr. hds.; compute-o-matic; rev. rec. & PB; Auto off/stop; SOS; line/mic mix.; direct func. chg. contl.     |                  |
|              | GX-260D           | B no                    | 7                       | 4                   | 4            | 3             | Hys           | Belt             | 30-22k ± 3       | 0.1                                  | 48                 | 75                        | 10k                       | 2 Mtrs.           | 17½ x 18.6 x 8.9             | 52                         | 579.95   | Rev. rec. & PB; center capstan; rear pnl. vol. PB contl.; line/mic mix; SOS; auto stop.                                  |                  |
|              | 4440D             | B no                    | 7                       | 3                   | 4            | 3             | Hys           | Belt             | 30-24k ± 3       | 0.12                                 | 50                 | 90                        | 10k                       | 2 Mtrs.           | 16.4 x 17.7 x 8.9            | 42                         | 349.95   | Dual mon.; SOS; SWS; sound mix.; auto off; pause contl.; tape sel. swit.   |                  |
|              | 4000DS            | B no                    | 7                       | 3                   | 4            | 1             | Ind           | Belt             | 30-20k ± 3       | 0.15                                 | 48                 | 120-150                   | 5k                        | 2 Mtrs.           | 15.9 x 7.6 x 12.4            | 25                         | 269.95   | Dual mon.; tape sel. swit.; SOS; SWS; Sound mix.; Auto off, pause.   |                  |
|              | 4400              | B yes                   | 7                       | 3                   | 4            | 1             | Ind           | Belt             | 30-22k ± 3       | 0.15                                 | 50                 | 190-180                   | 5k 150k                   | 2 Mtrs.           | 16.3 x 7.6 x 14              | 30.1                       | 349.95   | Conv. to deck w/frnt. pnl. swit.; SOS; SWS; sound mix.; dual mon.; auto off; pause.                                      |                  |
|              | GX-280DDS 4 chan. | B no                    | 7                       | 4                   | 4            | 3             | Servo         | Direct           | 20-25k ± 3       | 0.10                                 | 55                 | 90                        | 10k                       | 4 Mtrs            | 17.4 x 10 x 20.2             | 49½                        | 799.95   | Gl. & crys. ferr. hds.; dual mon.; 4 ch. repeat cir.; 2-ch. cont. rev. PB; auto off, stop; SOS; sound mix; pause w/lock. |                  |
|              | 1730DSS 4 chan.   | B no                    | 7                       | 4                   | 4            | 1             | Hys           | Belt             | 30-22k ± 3       | 0.12                                 | 50                 | 75                        | 30k                       | 4 Mtrs.           | 16.8 x 9.6 x 14              | 19                         | 399.95   | Auto off; pause contl.; 'phone jacks; 4-dig. index ctr.  |                  |
|              | X-2000SD          | A yes                   | 7                       | 2                   | 4            | 2             | Ind           | Belt             | 30-20k ± 3       | 0.2                                  | 48                 | 75                        | 0.5 mV                    | 2 Mtrs.           | 10.6 x 13.8 x 18.3           | 49.4                       | 549.95   | Comb. reel-to-reel, cart. & cassette; crossfld. hds.; auto shutoff/pause contl.; tk. sel.; tape lifter.                  |                  |
|              | X-1810D           | A no                    | 7                       | 5                   | 4            | 3             | Hys           | Belt             | 30-22k ± 3       | 0.08                                 | 50                 | 60-75                     | 100k                      | 2 Mtrs.           | 17.4 x 9.6 x 18              | 47                         | 499.95   | Comb. reel-to-reel & cart.; crossfld. hds.; auto rev.; auto shutoff/stop.  |                  |
| X-1800SD     | A yes             | 7                       | 3                       | 4                   | 1            | Ind           | Belt          | 30-23k ± 3       | 0.12             | 50                                   | 150                | 0.5 mV                    | 2 Mtrs.                   | 13½ x 15 x 9½     | 37.4                         | 399.95                     | Reel-to-reel & cart.; tk sel.; auto shutoff/stop; tape cleaner; tape lifter in FF & rew. |  |                  |
| ASTROCOM     | 407A              | B no                    | 7                       | 4                   | 4            | 3             | Hys           | Idler            | 30-20k ± 3       | 0.06                                 | 60                 | 45                        | 10k                       | 2 Mtrs.           | 21 x 14¼ x 10¼               | 40                         | 459.95   | Auto rev.  |                  |
|              | 711 4-chan.       | B; F no                 | 10½                     | 4                   | 4            | 3             | Hys           | Idler            | 30-20k ± 3       | 0.03                                 | 65                 | 60                        | Lo                        | 4 Mtrs.           |                              |                            | Under 2000.00  | Headphone amps; mixing.  |                  |
| CROWN        | SX-724            | B Opt.                  | 10½                     | 3                   | 4            | 3             | Hys           | Belt             | 20-25k ± 2       | 0.09                                 | 60                 | 45                        | 350k                      | 2 Mtrs.           | 19 x 9 x 15¼                 | 45                         | 1095.00  | Dual mic, line mixing; 5 in. VU mtrs.; also in ½ tk.   |                  |
|              | SX-824            | B; F Opt.               | 10½                     | 3                   | 4            | 3             | Hys           | Belt             | 20-25k ± 2       | 0.09                                 | 60                 | 45                        | 350k                      | 2 Mtrs.           | 19 x 9 x 15¼                 | 48                         | 1495.00  | Comp. logic; wal. cab.; ctr. opt.; also in 2 tk.   |                  |
|              | SX-822            | E Opt.                  | 10½                     | 3                   | 2            | 3             | Hys           | Belt             | 30-30k ± 2       | 0.06                                 | 60                 | 45                        | 250 bal.                  | 2 Mtrs.           | 19 x 9 x 17½                 | 53                         | 1995.00  | As above; also in ¼ tk. or 4-chan.   |                  |
|              | SX-744 4-chan.    | B Opt.                  | 10½                     | 3                   | 4            | 3             | Hys           | Belt             | 20-25k ± 2       | 0.09                                 | 60                 | 45                        | 350k                      | 4 Mtrs.           | 19 x 9 x 21                  | 60                         | 1995.00  | 8 mic inputs.  |                  |
| DOKORDER     | 9100              | B no                    | 7                       | 6                   | 4            | 3             | Hys.          | Ind.             | 40-21k ± 3       | 0.06                                 | 55                 | 95                        | 10k                       | 2 VU              | 17¼ x 15¼ x 20               | 55                         | 799.95   | Bi-dir. rec.; auto rpt. PB; auto rev.; bias adj.; line/mic mix; tape/src. mon; console.                                  |                  |
|              | 7500              | B no                    | 7                       | 6                   | 4            | 3             | Hys.          |                  | 25-23k ± 3       | 0.08                                 | 55                 | 95                        | 10k                       | 2 VU              | 16¼ x 6¼ x 17¼               | 41.9                       | 599.95   | Bi-dir. rec./play; auto rev./rpt. PB; bias sel.; elect. contls.; echo; SOS; SWS; quick chg. head hsg.                    |                  |
|              | 7200              | B no                    | 7                       | 4                   | 4            | 3             | 4-p Sync      |                  | 25-23k ± 3       | 0.08                                 | 53                 | 95                        | 10k                       | 2 VU              | 16¼ x 6¼ x 17¼               | 40.8                       | 499.95   | Cont. PB; auto rev.; bias sel.; tape/src. mon.; line/mic mix; MBD heads.   |                  |
|              | 7100              | B no                    | 7                       | 3                   | 4            | 3             | Hys.          |                  | 30-22k ± 3       | 0.08                                 | 55                 | 95                        | 10k                       | 2 VU              | 16¼ x 6¼ x 17¼               | 40                         | 399.95   | Bias contl.; src./tape mon.; echo; SOS; SWS; easy load design. *Interchg. 4-ch. PB head.                                 |                  |
|              | 7140 4-chan.      | B no                    | 7                       | 3                   | 4            | 3             | Sync.         | Ind.             | 30-22k ± 3       | 0.08                                 | 55                 | 95                        | 10k                       | 4 VU              | 16¼ x 6¼ x 17¼               | 40.7                       | 499.95   | Multi sync. function; tape/src. mon.; bias sel.; echo; SOS; SWS; 4-ch. rec./play.  |                  |

# The 400 millisecond miracle.



Most people seem to take for granted the smooth, effort-

less way in which a Revox works.

And that is as it should be.

For a great deal of time, effort and sophisticated engineering have gone into translating extremely complex function into lightning quick, responsive operation.

For example, when you press the play button of a Revox, you set in motion a sequence of events that take place with the precision of a rocket launching.

It begins with a gold plated contact strip that moves to close two sections of the transport control circuit board.

Instantaneously, the logic is checked for permissibility. If acceptable, a relay is activated.

Within 15 milliseconds, power is supplied to the pinch roller solenoid, the brake solenoid, the back tension motor, a second relay and, at the same time, the photocell is checked for the presence of tape. If present, Relay One self-holds.

Elapsed time, 25 milliseconds.

At 30 milliseconds, Relay Two closes and puts accelerating tension

on the take-up motor.

The logic checks are now complete and power is available to actuate all necessary functions.

From 30 milliseconds to 300 milliseconds, mechanical inertia is being overcome and the motors and solenoids are settling down.

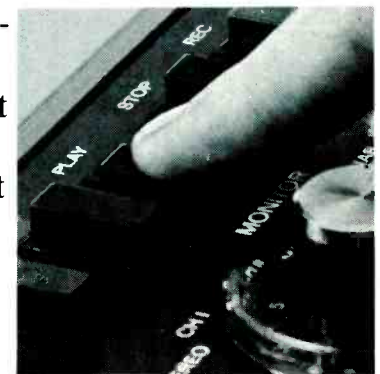
By 300 milliseconds, the brakes have been released, the pinch roller is in contact with the capstan shaft, the tape lifter retracted, the playback muting removed and the motors have come up to operating speed.

At 350 milliseconds power is cut off from Relay Two, which changes over to another set of contacts, releasing the accelerating tension on the take-up motor and completing a circuit through Relay One that, in turn, restores normal tension to the take-up motor.

Total elapsed time, 400 milliseconds. The Revox is now in the play mode.

And it's all happened in a fraction of the time it takes to read this sentence.

The 400 millisecond miracle. **More proof that Revox delivers what all the rest only promise.**





# Open-Reel Tape Recorders



JVC RD-1555



Pioneer RT-1020L



Nagra SL Stereo

Indicate speeds by letter code:

|       | A | B | C | D | E | F | G | H | J |
|-------|---|---|---|---|---|---|---|---|---|
| 15    |   |   |   |   | x | x | x |   |   |
| 7 1/2 | x | x | x |   | x | x | x |   |   |
| 3 3/4 | x | x | x |   | x |   | x | x |   |
| 1 7/8 | x |   | x | x |   |   |   | x | x |
| 15 16 |   |   |   | x |   |   |   |   |   |

at the highest speed of the machine

D after the price indicates the machine is Dolbyized.  
All models solid state unless model number is preceded by (T)

| MANUFACTURER | MODEL               | Speeds (see letter code) |     | Power amp(d) built in ? | Max. reel size, in. | No. of heads | No. of tracks | No. of motors | Drive motor type | Drive to capstan | Frequency response<br>Hz to kHz. ± dB | Wow and flutter, % | Signal-to-noise ratio, dB* | Fast wind, 1200 ft., sec. | Mic input Z, ohms | Rec'ing level indicator type | Dimensions,<br>W x D x H, in. | Weight, lbs. | Price   | SPECIAL FEATURES |
|--------------|---------------------|--------------------------|-----|-------------------------|---------------------|--------------|---------------|---------------|------------------|------------------|---------------------------------------|--------------------|----------------------------|---------------------------|-------------------|------------------------------|-------------------------------|--------------|---|------------------|
|              |                     | E                        | G   |                         |                     |              |               |               |                  |                  |                                       |                    |                            |                           |                   |                              |                               |              |   |                  |
| FERROGRAPH   | 704 AW              | E                        | no  | 8 3/4                   | 3                   | 2            | 3             | ind           | idler            | 30-17k<br>± 2    | 0.08                                  | 60                 | 60                         | 10k                       | 2 Mtrs.           | 14 1/2 x 16<br>x 8 3/4       | 37 1/2                        | 649.00       | Model 704 ADW, Dolby \$850.; 724 ADW \$900.   |                  |
| JVC          | RD-1555             | B                        | no  | 7                       | 4                   | 4            | 3             | Hys           | Belt             | 40-18k<br>± 3    | 0.12                                  | 52                 | 80                         | 600                       | 2 Mtrs.           | 16 x 8 1/4<br>x 17           | 34                            | 499.95       | Auto rev. w/direct cpld. circuitry.   |                  |
| JVC          | RD-1553             | B                        | no  | 7                       | 3                   | 4            | 3             | Hys           | Belt             | 20-24k<br>± 3    | 0.1                                   | 53                 | 80                         | 600                       | 2 Mtrs.           | 16 x 8<br>x 18               | 33                            | 499.95       | 2/4-chan.; lo-noise & mon. swit.; retract. pinch roller.  |                  |
| JVC          | RD-1552             | B                        | no  | 7                       | 3                   | 4            | 3             | Hys           | Belt             | 20-24k<br>± 3    | 0.1                                   | 52                 | 80                         | 600                       | 2 Mtrs.           | 16 x 8<br>x 18               | 33                            | 329.95       | Solenoid batt.; SOS; flip-up head cover; retract. pinch roller.   |                  |
| JVC          | RD-1450             | B                        | no  | 7                       | 3                   | 4            | 3             | Ind           | Belt             | 30-20k<br>± 3    | 0.1                                   | 52                 | 160                        | 600                       | 2 Mtrs.           | 16 x 7<br>x 13               | 21                            | 239.95       | Tape/src. swit.; auto stop; flip up head cover; retract. pinch roller.                                      |                  |
| JVC          | RD-1695             | A                        | no  | 7                       | 2                   | 4            | 1             | Ind           | Belt             | 30-18k<br>± 3    | 0.13                                  | 52                 | 190                        | 600                       | 2 Mtrs.           | 15 1/4 x 7 1/2<br>x 12 1/4   | 19                            | 189.95       | Rec. contls.; SOS; tape sel. swit.  |                  |
| JVC          | 4RD-1401<br>4 chan. | B                        | no  | 7                       | 3                   | 4            | 1             | Ind           | Belt             | 30-20k<br>± 3    | 0.1                                   | 53                 | 160                        | 600                       | 4 Mtrs.           | 16 x 8<br>x 18               | 27                            | 449.95       | 2/4 chan.; lo-noise & mono swits.; retract. pinch roller.   |                  |
| JVC          | 4RD-1405<br>4-chan. | B                        | no  | 7                       | 3                   | 4            | 1             | Ind           | Belt             | 30-18k<br>± 3    | 0.1                                   | 52                 | 160                        | 600                       | 4 Mtrs.           | 16 x 7 1/4<br>x 13 1/2       | 22                            | 329.95       | 4 rec. contls.; tape bias.  |                  |
| MAGNAVOX     | 8877                | A                        | no  | 7                       | 3                   | 4            | 1             | Ind           | Idler            | 50-15k<br>± 4    | 0.1                                   | 45                 | 150                        | 10k                       | 2 Mtrs.           | 15 1/2 x 13 1/4<br>x 7 1/2   |                               | 199.95       | SOS; echo; noise suppr.; tape/src. mon.; phone mon.; tape sel.; bias freq. swit.                            |                  |
| MAGNAVOX     | 8980                | A                        | no  | 7                       | 2                   | 4            | 1             | Ind           | Idler            | 50-15k<br>± 4    | 0.15                                  | 45                 | 180                        | 10k                       | 2 Mtrs.           | 15 1/4 x 12 1/4<br>x 7       |                               | 159.95       | 'Phone mon.; 8981 same plus SOS; tape sel.; norm & hi O.D.; \$179.95.                                       |                  |
| NAGRA        | SD                  | E                        | no  | 7                       | 3                   | 2            |               | Servo         |                  | 30-18k<br>± 2    | *                                     | 70                 |                            | 200<br>50k                | Mtr.              | 12.5 x 8.7<br>x 4.3          | 11 1/2                        | 2600.00      | 2 mic inputs; mixing; opt. remote; "D" cell pwrd.; *0.1% speed var.   |                  |
| NAGRA        | SNN                 | H                        | no  |                         | 3                   |              |               |               |                  | 80-15k           | 0.1                                   | -60                |                            | 200                       | Mtr.              | 3.8 x 4<br>x 1.02            | 1.3                           | 1340.00      | Auto lev. contl.; mang. cell pwrd.  |                  |
| NAGRA        | 4.2                 | E                        | no  | 7                       | 4                   | 1            |               |               |                  | 30-20k<br>± 2    | *                                     | 70                 |                            | 100k                      | Mtr.              | 12.5 x 8.7<br>x 4.3          | 11 1/2                        | 2100.00      | "D" cell pwrd.; film sync.; AGC; *0.1% speed var.   |                  |
| PIONEER      | RT-1020L<br>4 chan. | B                        | no  | 15                      | 3                   | 4            | 3             | Hys<br>syn    | Idler            | 40-20k<br>± 3    | 0.08                                  | 55                 | 90                         | 20k                       | 2 Mtrs.           | 17 x 9<br>x 16               | 46                            | 599.95       | 4-ch. playbk.; snd. on snd.; rec. bias & equal. sel.; mic & lin input contls.; output level contls.; pause. |                  |
| PIONEER      | T-6600              | B                        | no  | 7                       | 4                   | 4            | 1             | Hys<br>syn    | Idler            | 50-15k<br>± 2    | 0.12                                  | 55                 | 110                        | 50k                       | 2 Mtrs.           | 17 x 7<br>x 17               | 28                            | 349.95       | Rec. & playbk. auto. rev.; pause; 4 dig. ctr.; 1. & r. rec. levels; playbk. levels.                         |                  |
| PIONEER      | T-6100              | B                        | no  | 7                       | 3                   | 4            | 1             | Hys<br>syn    | Idler            | 50-15k<br>± 2    | 0.12                                  | 55                 | 110                        | 50k                       | 2 Mtrs.           | 15 x 7<br>x 15               | 26                            | 279.95       | Auto rev.; pause; 1. & r. rec. levels; 4 dig. ctr.  |                  |
| RADIO SHACK  | 494<br>4 chan.      | A                        | no  | 7                       | 3                   | 4            | 1             | Ind.          | Belt             | 50-18k           | 0.13                                  | 48                 | 160                        | 10k                       | 4 Mtrs.           | 14 1/4 x 6 1/4<br>x 16       | 27                            | 299.95       |   |                  |
| RADIO SHACK  | 999B                | A                        | no  | 7                       | 3                   | 4            | 1             | Ind.          | Belt             | 40-20k           | 0.2                                   | 47                 |                            | 10k                       | 2 Mtrs.           | 13 1/4 x 7 1/4<br>x 16       | 20                            | 199.95       |   |                  |
| RADIO SHACK  | 909B                | A                        | yes | 7                       | 2                   | 4            | 1             | Ind.          | Belt             | 50-18k           | 0.25                                  |                    |                            | 10k                       | 2 Mtrs.           | 24 1/2 x 14<br>x 7 1/2       | 26                            | 239.95       | W. 2 dyn. mics; detach. wing spkrs.   |                  |
| REVOX        | A77<br>1104         | B                        | opt | 10 1/2                  | 3                   | 4            | 3             | Servo         | Direct           | 30-20k<br>+2-3   | 0.08                                  | 62                 | 60                         | hi/lo                     | 2 VU<br>Mtrs.     | 16 1/4 x 7 1/4<br>x 14 1/4   | 34                            | 799.00       | w/amps & spkrs., \$949.00; opt. rem. contl.   |                  |
| REVOX        | A77<br>1102         | B                        | opt | 10 1/2                  | 3                   | 2            | 3             | Servo         | Direct           | 30-20k<br>+2-3   | 0.08                                  | 66                 | 60                         | hi/lo                     | 2 VU<br>Mtrs.     | 16 1/4 x 7 1/4<br>x 14 1/4   | 34                            | 799.00       | W/amps & spkrs., \$899.00; 7 1/2/15 ips avail., \$949.00; opt. rem. contl.                                  |                  |
| REVOX        | A77<br>1134         | B                        | no  | 10 1/2                  | 3                   | 4            | 3             | Servo         | Direct           | 30-20k<br>+2-3   | 0.08                                  | 67                 | 60                         | hi/lo                     | 2 VU<br>Mtrs.     | 16 1/4 x 7 1/4<br>x 14 1/4   | 34                            | 999.00D      | Opt. rem. contl.  |                  |
| REVOX        | A77<br>1132         | B                        | no  | 10 1/2                  | 3                   | 2            | 3             | Servo         | Direct           | 30-20k<br>+2-3   | 0.08                                  | 70                 | 60                         | hi/lo                     | 2 VU<br>Mtrs.     | 16 1/4 x 7 1/4<br>x 14 1/4   | 34                            | 999.00D      | Opt. rem. contl.  |                  |



If you're seriously into music or sound reinforcement you want more than hi-fi products can give you. But full professional studio gear costs an arm and a leg, and you pay for a lot of things you may not really need.

## You pay for what you need

up to four additional input modules and other optional accessories including talkback, remote transport control, quad pan-ner, and headphone monitor.

That's why there's a TASCAM Model 10. It's an 8-in, 4-out mixing console, and it's just \$1890.

With the Model 10 you get what you have to have. Without sacrificing a single necessary function.

Each input module gives you mic and line attenuation, three bands of peak and dip equalization (two with frequency selection), pre- and post-echo send and receive circuitry, pan function, and a unique straight-line fader.

Each of the four submasters has a meter control switch (line/echo), independent monitor level control, echo receive level control, and a straight-line fader. You also get a master gain module and 4" VU meters with LED peak indicators. Plus pre-wired facilities for

That's what you need and that's what you pay for. Some things, however, you may or may not need, and we leave that choice up to you. For instance, the basic Model 10 is high impedance in and out, but studio line impedances are available optionally. You'll probably want low impedance mic inputs, but you may not need all low impedance line inputs. So we don't make you pay for them. You can order any combination of high and low input/output impedances according to your application.

Details and specs on the Model 10 are available for the asking. At the same time we'll tell you about our new Series 70 Recorder/reproducers.

We've got what you need.



Check No. 65 on Reader Service Card



# Open-Reel Tape Recorders



Sansui SD7000



Sony 854-4S



Technics by Panasonic RS-740US

Indicate speeds by letter code:

A B C D E F G H J

|       |   |   |   |   |   |   |   |   |
|-------|---|---|---|---|---|---|---|---|
| 15    |   |   |   |   |   | X | X | X |
| 7 1/2 | X | X | X | X | X | X | X | X |
| 3     | X | X | X | X | X | X | X | X |
| 1 1/2 | X | X | X | X | X | X | X | X |
| 15 16 |   |   |   | X |   |   |   |   |

at the highest speed of the machine

D after the price indicates the machine is Dolbyized

All models solid state unless model number is preceded by (T)

| MANUFACTURER          | MODEL              | Speeds (See letter code) |        | Power amp(s) built in ? | Max. reel size, in. | No. of heads | No. of tracks | No. of motors  | Drive motor type  | Drive to capstan | Frequency response*<br>Hz to kHz, ± dB | Wow and flutter, % | Signal-to-noise ratio, dB* | Fast wind, 1200 ft., sec. | Mic input, Ω, ohms         | Rec'g level indicator type  | Dimensions,<br>W x D x H, in. | Weight, lbs.   | Price  | SPECIAL FEATURES |
|-----------------------|--------------------|--------------------------|--------|-------------------------|---------------------|--------------|---------------|----------------|-------------------|------------------|--|--------------------|----------------------------|---------------------------|----------------------------|-----------------------------|-------------------------------|--|--|------------------|
|                       |                    | A                        | B      |                         |                     |              |               |                |                   |                  |  |                    |                            |                           |                            |                             |                               |  |  |                  |
| SANSUI                | SD-700             | B                        | no     | 7                       | 4                   | 4            | 3             | Ind.           |                   | 20-20k<br>-2     | 0.06                                   | 60                 | 65                         | 50k                       | 2 Mtrs.                    | 17 1/4 x 10 1/4<br>x 21 1/4 | 59 1/2                        | \$49.95  | Tone or foil strip auto rev.   |                  |
|                       | QD-5500<br>4-chan. | B                        | no     | 7                       | 3                   | 4            | 3             | Ind.           | Hys.<br>sync.     | 20-20k<br>±3     | 0.07                                   | 60                 | 90                         | 50k                       | 4 Mtrs.                    | 16 1/2 x 10 1/4<br>x 21 1/4 | 24.2                          | 749.95   | Rec./PB; foil auto rev. for rec./PB.   |                  |
| SONY                  | TC-270             | A                        | yes    | 7                       | 2                   | 4            | 1             | Ind.           | Idler             | 30-18k           | 0.12                                   | 50                 | 150                        | Low                       | 2 VU<br>Mtrs.              | 20 1/4 x 15 1/4<br>x 10 1/4 | 34.3                          | 299.95   | Rec. EQ; scrape flutter filt.; bass & treb. tone contl.; lid integ. spkrs.                 |                  |
|                       | TC-353             | A                        | yes    | 7                       | 3                   | 4            | 1             | Ind.           | Idler             | 30-25k           | 0.12                                   | 55                 | 150                        | Low                       | 2 VU<br>Mtrs.              | 20 1/2 x 10 1/4<br>x 13 1/2 | 36.4                          | 399.95   | Echo; mag. phono input; auto off; rec. EQ; built in reel locks.                            |                  |
|                       | TC-630             | A                        | yes    | 7                       | 3                   | 4            | 1             | 4-pole<br>ind. | Idler             | 30-22k           | 0.09                                   | 50                 | 150                        | Low                       | 2 VU<br>Mtrs.              | 17 1/2 x 11 1/2<br>x 20     | 46.3                          | 499.95   | Auto shutoff; mic & aux inputs; 2 stereo 'phone jacks.                                     |                  |
|                       | TC-280             | A                        | no     | 7                       | 2                   | 4            | 1             | Ind.           | Idler             | 20-24k<br>±3     | 0.1                                    | 55                 | 150                        | Low                       | 2 VU<br>Mtrs.              | 15 1/2 x 14 1/4<br>x 7 1/4  | 18.1                          | 199.95   | Auto off; F & F hd.; SWS; uni-phase rec.; built-in reel locks.                             |                  |
|                       | TC-353D            | A                        | no     | 7                       | 3                   | 4            | 1             | Ind.           | Idler             | 30-25k<br>±3     | 0.1                                    | 55                 | 150                        | Low                       | 2 VU<br>Mtrs.              | 15 1/2 x 13 1/2<br>x 7 1/2  | 16.9                          | 249.95   | Mic/line mix.; built in reel locks; retractomatic pinch roller; pause w/lock.              |                  |
|                       | TC-377             | A                        | no     | 7                       | 3                   | 4            | 1             | Ind.           | Idler             | 30-25k<br>±3     | 0.09                                   | 55                 | 120                        | Low                       | 2 VU<br>Mtrs.              | 16 1/2 x 15 1/2<br>x 8 1/2  | 22.1                          | 329.95   | F & F hd.; uni-phase rec. built in reel locks; pause w/lock.                               |                  |
|                       | TC-458             | B                        | no     | 7                       | 4                   | 4            | 1             | Ind.           | Belt              | 20-30k           | 0.06                                   | 56                 | 150                        | Low                       | 2 VU<br>Mtrs.              | 15 1/2 x 8<br>x 16 1/4      | 32                            | 479.95   | Ultra hi freq. bias; auto rev. (cont.); TMS; built in reel locks.                          |                  |
|                       | TC-580             | A                        | no     | 7                       | 4                   | 4            | 3             | Servo          | Belt              | 30-25k<br>±3     | 0.06                                   | 56                 | 60                         | Low                       | 2 VU<br>Mtrs.              | 17 1/2 x 18 1/4<br>x 15 1/2 | 37.6                          | 579.95   | ESP auto rev. (cont.); elect. speed chg.; feather touch contls.                            |                  |
|                       | TC-640B            | B                        | no     | 7                       | 3                   | 4            | 3             | Hys.           | Belt              | 20-25k           | 0.07                                   | 55                 | 90                         | Low                       | 2 VU<br>Mtrs.              | 14 1/2 x 9 1/2<br>x 15 1/2  | 35 1/2                        | 449.95   | Echo; scrape flutter filt.; TMS; rec. EQ; reel locks.                                      |                  |
|                       | TC-755             | B                        | no     | 10 1/2                  | 3                   | 4            | 3             | Servo          | Belt<br>dual caps | 20-30k           | 0.05                                   | 56                 | 150,<br>2400               | Low                       | 2 VU<br>Mtrs.              | 17 1/2 x 8 1/2<br>x 17 1/4  | 50.1                          | 699.95   | Log. contl. transp.; F & F hd.; mech mem. cap.   |                  |
|                       | TC-800B            | C                        | yes    | 5                       | 2                   | 2            | 1             | Servo          | Belt              | 30-18k           | 0.1                                    | 48                 | 100                        | Low                       | 1 VU<br>Mtr.               | 12 1/4 x 10 1/4<br>x 4 1/4  | 11.1                          | 279.95   | Built in cond. mic.; 3 dig. tape cntr.; 3-pos. mic sel. swit.                              |                  |
|                       | TC-850-2           | E                        | no     | 10 1/2                  | 4                   | 2            | 3             | Servo          | Belt<br>dual caps | 30-25k<br>±2     | 0.03                                   | 57                 | 130,<br>2400               | Low                       | 2 VU<br>Mtrs.              | 17 1/2 x 10<br>x 19 1/4     | 57 1/2                        | 995.00   | *w/4-tk. play, built in SOS; mod. constr.; reel locks, TC-850-4 same w/4 tk. & 2 tk. play. |                  |
| TC-277 4<br>4-chan.   | A                  | no                       | 7      | 2                       | 4                   | 1            | Ind.          | Idler          | 50-18k<br>±3      | 0.12             | 55                                     | 150                | Low                        | 4 VU<br>Mtrs.             | 15 1/2 x 15 1/2<br>x 7 1/4 | 23.2                        | 399.95                        | Quadradiac rec./play; 2-ch. rec./play; reel lock.                      |  |                  |
| TC-388 4<br>4-chan.   | B                  | no                       | 7      | 3                       | 4                   | 1            | Ind.          | Idler          | 20-25k<br>±3      | 0.09             | 55                                     | 75                 | Low                        | 4 VU<br>Mtrs.             | 16 1/2 x 8 1/2<br>x 19 1/4 | 34.2                        | 499.95                        | Spec. pan pot when used as 2-chan. deck built in reel locks.           |  |                  |
| TC-854-4S<br>4 chan.  | E                  | no                       | 10 1/2 | 4                       | 4                   | 3            | Servo         | Belt           | 30-25k<br>±2      | 0.03             | 59                                     | 130,<br>2400       | Low                        | 4 VU<br>Calib.<br>Mtrs.   | 17 1/2 x 10<br>x 22        | 61.7                        | 1795.00                       | Sync. trak; closed loop dual capstan tape drive; Quadradiac rec./play. |  |                  |
| STELLAVOX<br>(HERVIC) | SP7                | G                        | yes    | 5, 12<br>w/acc          | 4                   | 1, 2,<br>4   | 1             | DC<br>Servo    | Direct            | 30-16k<br>±2     | 0.04                                   | 70M<br>65S         | 200                        | Dual<br>Mtrs.             | 10 1/2 x 8 1/2<br>x 3      | 7                           | 2195.66<br>to 2336.72         | Mono/stereo; sync; interchgb. plug-in heads.                           |  |                  |
|                       | SM7                | G                        | yes    | 5, 12<br>w/acc          | 3                   | 2            | 1             | DC<br>Servo    | Direct            | 20-28k<br>±2     | 0.04                                   | 72                 | 200                        | Dual<br>Mtrs.             | 10 1/2 x 8 1/2<br>x 3      | 7                           | 3528.00                       | A-B or phantom mic; pwr. plug-in modules.                              |  |                  |
|                       | SQ7<br>4-chan.     | G                        | yes    | 5, 12<br>w/acc          | 3                   | 4            | 1             | DC<br>Servo    | Direct            | 20-25k<br>±2     | 0.04                                   | 66                 | 200                        | Quad<br>Mtrs.             | 10 1/2 x 8 1/2<br>x 3      | 12                          | 5731.58                       | Compl. pwr. indepndnt. of a.c. 4-chan. rec.                            |  |                  |

# Open-Reel Tape Recorders



Tandberg 9000X



Tascam Series 70



Stellavox SQ 7

Indicate speeds by letter code:

|       | A | B | C | D | E | F | G | H | J |
|-------|---|---|---|---|---|---|---|---|---|
| 15    |   |   |   |   | x | x | x |   |   |
| 7 1/2 | x | x | x |   | x | x | x |   |   |
| 3 3/4 | x | x | x |   | x |   |   | x | x |
| 1 7/8 | x |   | x | x |   |   |   | x | x |
| 15 16 |   |   |   | x |   |   |   |   |   |

\* at the highest speed of the machine

D after the price indicates the machine is Dolbyized.  
All models solid state unless model number is preceded by (T)

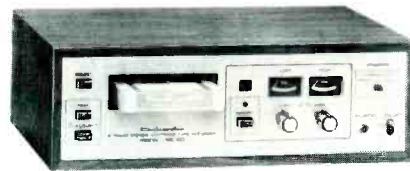
| MANUFACTURER             | MODEL                | Speeds (see letter code) |        | Power supply built in ? | Max. reel size, in. | No. of heads | No. of tracks | No. of motors  | Drive motor type | Drive to capstan | Frequency response*<br>Hz to kHz, ± dB | Wow and flutter, % | Signal-to-noise ratio, dB* | Fast wind, 1200 ft., sec. | Mic input Z <sub>o</sub> , ohms | Rec-og level indicator type | Dimensions,<br>W x D x H, in. | Weight, lbs.   | Price  | SPECIAL FEATURES |
|--------------------------|----------------------|--------------------------|--------|-------------------------|---------------------|--------------|---------------|----------------|------------------|------------------|--|--------------------|----------------------------|---------------------------|---------------------------------|-----------------------------|-------------------------------|--|--|------------------|
|                          |                      | A                        | B      |                         |                     |              |               |                |                  |                  |  |                    |                            |                           |                                 |                             |                               |  |  |                  |
| TANDBERG                 | 9000X                | A                        | no     | 7                       | 4                   | 4            | 3             | Hys            | Idler            | 40-22<br>±2      | 0.07                                   | 58                 | 55                         | 200                       | 2 pk<br>Mtr.                    | 16 1/4 x 15 3/4<br>x 7      | 34.5                          | 699.90   | Fingertip log. cont'd. drive sys.  |                  |
|                          | 3300X                | A                        | no     | 7                       | 4                   | 4            | 1             | Indc           | Idler            | 40-22<br>±2      | 0.07                                   | 57                 | 10.5                       | 200                       | 2 pk.<br>Mtr.                   | 16 1/4 x 15 3/4<br>x 7      | 20.2                          | 430.00   | SOS; echo.   |                  |
|                          | 3600XD               | A                        | no     | 7                       | 4                   | 4            | 1             | Indc           | Idler            | 40-22<br>±2      | 0.07                                   | 57*                | 10.5                       | 200                       | 2 pk.<br>Mtr.                   | 16 1/4 x 15 3/4<br>x 7      | 20.2                          | 580.00D  | Dolby B-Type noise red. sys. *w/Dolby, 67dB.   |                  |
|                          | 9200XD               | A                        | no     | 7                       | 4                   | 4            | 3             | Hys.           | Idler            | 40-22k<br>±2     | 0.07                                   | 58*                | 55                         | 200                       | 2 pk<br>Mtrs.                   | 16 1/4 x 15 3/4<br>x 7      | 34.5                          | 850.00D  | Same as above but *with Dolby, 68dB.   |                  |
| TASCAM                   | Series<br>70         | F                        | no     | 10 1/2                  | 3                   | 4            | 3             | Hys            | Ind-r            | 40-18k<br>±2     | 0.05                                   | 65                 |                            | 4 Mtrs.                   | 17 1/2 x 10 3/4<br>x 23 1/2     | 55                          | 1950.00                       | Uses 1/2" tape; incl. compl. overdub swit.; avail. in<br>8 tk, 1/2" version. |  |                  |
| TEAC                     | 1250                 | B                        | no     | 7                       | 3                   | 4            | 3             | Hys.           | Belt             | 40-18k<br>±3     | 0.08                                   | 55                 | 90                         | 600                       | 2 Mtrs.                         | 17 x 8<br>x 15              | 37                            | 499.50   | 2-pos. bias sw.; adj. trntrl. hght.; comb. erase/rec.<br>hd.; 2 play heads. 1230 dame but w/o rev. play.<br>\$399.50.                |                  |
|                          | 4010GSL              | B                        | no     | 7                       | 4                   | 4            | 3             | Hys.           | Belt             | 40-18k<br>±3     | 0.08                                   | 55                 | 90                         | 600                       | 2 Mtrs.                         | 18 x 10<br>x 18             | 45                            | 599.50   | Auto rev./play; ferrite hds.; EQ/lev. sw.; dual lev.<br>bias swit.   |                  |
|                          | 4070G                | B                        | no     | 7                       | 4                   | 4            | 3             | Hys.           | Belt             | 30-20k<br>±3     | 0.07                                   | 58                 | 90                         | 600                       | 2 Mtrs.                         | 18 x 9<br>x 18              | 51                            | 699.50   | Bi-dir. rec./play; ferrite hds.; EQ/lev. swit.; dual<br>lev. bias swit.  |                  |
|                          | 3300-10              | B                        | no     | 10 1/2                  | 3                   | 4            | 3             | Hys.           | Belt             | 30-20k<br>±3     | 0.07                                   | 58                 | 90                         | 600                       | 2 Mtrs.                         | 17 x 9<br>x 17              | 45                            | 589.50   | "Quik-loc" reel hldr.; dual lev. bias sw.; 3300-12<br>same plus 1/2 tk. rec./play, \$589.50; 3300-11 sim.<br>w/"F" speeds, \$589.50. |                  |
|                          | 2340<br>4-chan.      | B                        | no     | 7                       | 3                   | 4            | 3             | Hys.           | Belt             | 40-18k<br>±3     | 0.08                                   | 55                 | 90                         | 600                       | 2 Mtrs.                         | 17 x 9<br>x 19              | 46                            | 869.50   | 4-ch. rec./play; simul-sync mon.; dual lev. bias<br>swit.  |                  |
|                          | 3340<br>4-chan.      | F                        | no     | 10 1/2                  | 3                   | 4            | 3             | Hys.           | Belt             | 30-20k<br>±3     | 0.05                                   | 55                 | 90                         | 600                       | 2 Mtrs.                         | 17 x 9<br>x 21              | 50                            | 969.50   | Same as above.   |                  |
|                          | 6010GSL              | B                        | no     | 7                       | 4                   | 4            | 3             | Hys.           | Belt             | 30-20k<br>±3     | 0.07                                   | 58                 | 90                         | 600                       | 2 Mtrs.                         | 18 x 8<br>x 21              | 47                            | 949.50   | Auto rev./play; ferrite hds.; dual EQ/lev. swit.; dual<br>bias lev. sw.; 7010GSL sim. but 10 1/2" reel size.<br>\$1149.50.           |                  |
| 7030GSL                  | F                    | no                       | 10 1/2 | 4                       | 2/4                 | 3            | Hys.          | Belt           | 30-22k<br>±3     | 0.05             | 60                                     | 90                 | 600                        | 2 Mtrs.                   | 18 x 9<br>x 21                  | 62                          | 1099.50                       | 2/4 tk. play hd.; ferrite hds.; dual EQ/lev. sw.; dual<br>bias lev. swit.    |  |                  |
| TECHNICS BY<br>PANASONIC | RS-1030US<br>4-chan. | F                        | no     | 10                      | 4                   | 2/4          | 3             | Hys.           | Belt             | 25-26k<br>±3     | 0.08                                   | 58                 | 60                         | 600<br>50k                | 2 Mtrs.                         | 16 1/2 x 11<br>x 23 1/4     | 70                            | 899.95   | 2 chan. rec./PB & 4-chan. PB, HPF heads; solenoid<br>contl. opt. rem.; bias sel.; mixing.  |                  |
|                          | RS-715US             | B                        | no     | 7                       | 4                   | 4            | 3             | Hys.           | Belt             | 40-22k<br>±3     | 0.1                                    | 50                 | 70                         | 600<br>20k                | 2 Mtrs.                         | 17 x 9<br>x 20 3/4          | 53                            | 549.95   | Auto rev./PB; HPF heads; bias sel.; solenoid contls.<br>w/opt. rem.; SOS; overdub.   |                  |
|                          | RS-714US             | B                        | no     | 7                       | 3                   | 4            | 3             | Hys.           | Belt             | 40-22k<br>±3     | 0.1                                    | 50                 | 70                         | 600<br>20k                | 2 Mtrs.                         | 17 x 9<br>x 20 3/4          | 53                            | 499.95   | Same feat. as RS-715US, except auto rev.   |                  |
|                          | RS-7400US<br>4-chan. | B                        | no     | 7                       | 3                   | 4            | 1             | 4-pole<br>ind. | Idler            | 30-20k<br>±3     | 0.1                                    | 55                 | 175                        | 5k-<br>20k                | 4 Mtrs.                         | 17 x 8 1/2<br>x 15 3/4      | 29                            | 449.95   | 4-chan. rec./PB; HPF heads; bias sel.; separation/<br>blend contls.  |                  |
|                          | RS-736US             | E                        | no     | 7                       | 3                   | 4            | 1             | Hys.           | Idler            | 30-25k<br>±3     | 0.09                                   | 53                 | 150                        | 600-<br>20k               | 2 Mtrs.                         | 17 x 8 1/2<br>x 18 1/2      | 33                            | 329.95   | Pause contl.; bias sel.; HPF heads; SOS; echo.   |                  |
| TELEX                    | 2001 W               | A                        | yes    | 8 1/4                   | 3                   | 4            | 2             | Hys            | Belt             | 45-18k<br>±2     | 0.18                                   | 52                 | 80                         |                           | 2 Mtrs.                         | 19 1/4 x 14 1/2<br>x 8      | 48                            | 799.95   | VU mtrs.; auto off; pause contl.; solenoid oper.;<br>mon. facil.   |                  |
| WOLLENSAK (3M)           | 6150                 | A                        | no     | 7                       | 3                   | 4            | 2             | Hys            | Pulley           | 35-20k<br>±2     | 0.12                                   | 54                 | 90                         | 2.2                       | 2 Mtrs.                         | 16 1/2 x 13 1/2<br>x 6 1/2  | 18                            | 229.00   | Record bias sel.; tape src. mon.   |                  |
|                          | 6154<br>4-chan.      | A                        | no     | 7                       | 3                   | 4            | 2             | Hys            | Pulley           | 35-20k<br>±2     | 0.12                                   | 54                 | 90                         | 2.2                       | 2 Mtrs.                         | 16 1/2 x 13 1/2<br>x 6 1/2  | 18                            | 299.95   | 4-ch. preamp deck.   |                  |



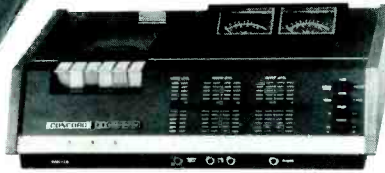
# Cassette & Cartridge Recorders



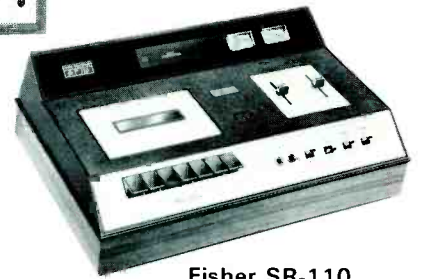
Akai GXC-46D



Dokorder MC-60



Concord Mark IX



Fisher SR-110

D after the price indicates the machine is Dolbyized.

| MANUFACTURER          | MODEL               | Cassette | Cartridge; no. of tracks | Type: portable, P; home, H; | Power amp. built in | Rated power output, W | Modes: stereo, S; mono, M | Frequency response, Hz, ± 7 dB | Wow and flutter, % | S/N, dB | Supply voltage | Channels: 1, 2 or 4      | Dimensions W x D x H, in.  | Weight, lbs. | Price                      | SPECIAL FEATURES  |
|-----------------------|---------------------|----------|--------------------------|-----------------------------|---------------------|-----------------------|---------------------------|--------------------------------|--------------------|---------|----------------|--------------------------|----------------------------|--------------|----------------------------|---|
| ADVENT                | 201                 | X        |                          | H                           | no                  |                       | S                         | 35-15k<br>+2                   | 0.15               | 60      | A.C.           | 2                        | 13 3/4 x 9 1/4<br>x 4 1/2  | 18           | 280.00D                    | CrO <sub>2</sub> bias swit.; mic preamp opt., \$25.00.  |
|                       | 202                 | X        |                          | H                           | no                  |                       | S                         | 35-15k<br>+2                   | 0.2                | 60      | A.C.           | 2                        | 9 x 10 1/2<br>x 4          | 10           | 130.00D                    | PB only. CrO <sub>2</sub> swit.   |
| AKAI                  | CR-80DSS<br>4-chan. |          | 8                        | H                           | no                  | 40                    | S                         | 30-16k<br>±3                   | 0.25               | 47      |                | 4                        | 19.4 x 11.2<br>x 5.5       | 24           | 329.95                     | 1 micron gap head; FF; auto stop/cont. play;<br>4/2 chan. prog. sel. & ind.   |
|                       | GXC-36D             | X        |                          | H                           | no                  | 7.0                   | S                         | 40-14 k<br>±3                  | 0.3                | 44      | 110<br>A.C.    | 2                        | 16.1 x 4.6<br>x 8.8        | 14           | 229.95                     |   |
|                       | GXC-38D             | X        |                          | H                           | no                  | 12                    | S                         | 40-14k<br>±3                   | 0.3                | 50      | 110<br>A.C.    | 2                        | 16.1 x 4.8<br>x 11.6       | 15           | 269.95D                    | Auto stop; gl. & crys. ferr. hds.; ind. mtr.; pause<br>contl.; tape sel. swit.; OLS swit.   |
|                       | GXC-46D             | X        |                          | H                           | no                  | 12                    | S                         | 30-18k<br>±3                   | 0.12               | 50      | 110<br>A.C.    | 2                        | 16.4 x 12<br>x 5.3         | 15.8         | 319.95D                    | Auto. dist. red. sys.; GX head; OLS swit.; auto<br>stop & tape end ind.; dir. func. chg. contl.;<br>pause contl. w/lock.            |
|                       | GXC-65D             | X        |                          | H                           | no                  | 12                    | S                         | 30-18k<br>±3                   | 0.12               | 50      | 110<br>A.C.    | 2                        | 16.6 x 11.6<br>x 7.2       | 20.2         | 349.95D                    | Auto dist. reduc. sys.; GX head; invert-o-matic<br>for auto rev. rec. & PB; tape sel.; auto stop/<br>cont. PB; pause contl. w/lock. |
| CR-81D                |                     |          | 8                        | H                           | no                  | 20                    | S                         | 50-16k<br>±3                   | 0.35               | 41      | 110<br>A.C.    | 2                        | 13.6 x 10.3<br>x 5.4       | 17.6         | 199.95                     | Auto stop & cont. PB; auto & man. prog. sel.;<br>rem. contl.  |
| ASTROCOM              | 307<br>4-chan.      | X        |                          | H                           | no                  |                       | *                         | 40-16k                         | 0.12               | 52      | AC             | 4                        |                            |              | 499.95                     | *4-chan.; dual capstan; 4 mtrs.; auto rev./off;<br>solenoid contls.   |
| BSR                   | TD8S/W              |          | 8                        | H                           | no                  | 750<br>mV             | S                         | 50-10k<br>±3                   | 0.3                | 40      | A.C.           | 2                        | 8 1/4 x 9 1/2<br>x 3 3/4   | 6 1/4        | 59.95                      |   |
|                       | TD8S                |          | 8                        | H                           | no                  | 750<br>mV             | S                         | 50-10k<br>±3                   | 0.3                | 40      | A.C.           | 2                        | 7 1/2 x 10 1/2<br>x 3 3/4  | 6 1/4        | 49.95                      |   |
| CONCORD<br>(BENJAMIN) | Mark 6              | X        |                          | H                           | no                  |                       | S                         | 30-15k                         | 0.13               | 48      | A.C.           | 2                        | 7 1/4 x 11 1/4<br>x 3 1/2  | 7            | 199.95                     | Auto stop; pause; CrO <sub>2</sub> /std. bias swit.; 2 mic<br>inputs; record.   |
|                       | Mark 7              | X        |                          | H                           | no                  |                       | S                         | 30-15k                         | 0.13               | 56      | A.C.           | 2                        | 7 1/4 x 11 1/4<br>x 3 1/2  | 7            | 264.95D                    | Auto stop; pause; CrO <sub>2</sub> /std. bias; 2 mic inputs;<br>record.   |
|                       | Mark 9              | X        |                          | H                           | no                  |                       | S                         | 30-15k                         | 0.2                | 50      | A.C.           | 2                        | 16 x 10 1/2<br>x 4         | 13 1/2       | 321.95D                    | Auto stop; pause; CrO <sub>2</sub> /std. bias swit.; 3 mic<br>inputs; record; 'phone output.  |
|                       | CD8-4<br>4-chan.    |          | 8                        | H                           | no                  |                       | S/4                       | 100-9k                         | 0.15               | 44      | A.C.           | 2/4                      | 8 3/4 x 10 1/2<br>x 4      |              | 139.95                     | 4-chan. PB; rear pnl. lev. set contls.  |
| CD-8                  |                     | 8        | H                        | no                          |                     | S                     | 100-8k                    | 0.2                            | 43                 | A.C.    | 2              | 9 1/2 x 9 1/2<br>x 4 1/4 |                            | 79.95        | Rear pnl. lev. set contls. |   |
| DOKORDER              | MC-60<br>4-chan.    |          | 8                        | H                           | no                  |                       | S                         | 30-12k                         | 0.3                | 47      | A.C.           | 4                        | 18 1/2 x 14 1/2<br>x 8 1/2 | 11           | 149.95                     | 3-in-1 head; rec/play/erase; cont. PB; auto<br>eject; rpt. play of 1 ch.; 2 VU mtrs.  |
|                       | MC-70A<br>4-chan.   |          | 8                        | H                           | no                  |                       | 2/4                       | 50-12k                         | 0.25               | 45      | A.C.           | 4                        | 14 1/4 x 8 1/2<br>x 5 1/4  | 12           | 149.95                     | Prog. rpt. swit.; sep. contls. L&R front, L&R rear<br>bal.; incl. 4 spkrs.  |
| FISHER                | RC-80B              | X        |                          | H                           | no                  |                       | S                         | 30-12k*                        | 0.2                | 50      | 120V<br>A.C.   | 2                        | 7 1/2 x 11 1/4<br>x 3 1/2  | 6            | 249.95D                    | *W/CrO <sub>2</sub> , 30-14K.   |
|                       | SR-110              | X        |                          | H                           | no                  |                       | S                         | 30-12k*                        | 0.2                | 50      | 120V<br>A.C.   | 2                        | 15 1/2 x 10 1/2<br>x 5 1/2 | 13 1/4       | 249.94D                    | *W/CrO <sub>2</sub> , 30-14K.   |
|                       | CP-100<br>4-chan.   |          | 8                        | H                           | no                  |                       | S &<br>4-ch.              | 50-12k                         |                    |         | 120V<br>A.C.   | 4                        | 10 3/4 x 10 1/2<br>x 4 1/4 | 10           | 169.95                     |   |
| GTE SYLVANIA          | CT160W              | X        |                          | H                           | no                  |                       | S                         | 30-12k                         | 0.2                | 45      | 120<br>A.C.    | 2                        | 5 1/2 x 11 1/4<br>x 8      | 5 1/2        | 119.95                     | Play/rec.; 2 VU mtrs.   |
|                       | ET2750W             |          | 8                        | H                           | no                  |                       | S                         | 40-12k                         | 0.3                | 40      | 120<br>A.C.    | 2                        | 7 3/4 x 8 1/4<br>x 4 1/4   | 7 3/4        | 59.95                      |   |
|                       | EQ3755<br>4-chan.   |          | 8                        | H                           | no                  |                       | 4-ch.                     | 30-10k                         | 0.3                | 40      | 120<br>A.C.    | 4                        | 9 1/2 x 9 1/2<br>x 4 1/4   | 6 1/2        | 99.95                      | 4-chan. PB only.  |
| GLENBURN<br>MCDONALD  | SP-10<br>4-chan.    |          | 8                        | H                           | no                  | 750<br>mV.            | S                         | 30-12k                         | 0.2                | 40      | A.C.           | 4                        | 8 1/4 x 10<br>x 4          | 7            | 49.95                      | Wal. case; vert. tape head movement.  |

# Cassette & Cartridge Recorders



Heath AD-1530



JVC CD-1669



Kenwood KX-700



Lafayette RK-D50

D after the price indicates the machine is Dolbyized.

| MANUFACTURER     | MODEL               | Cassette | Cartridge: no. of tracks | Type: portable, P; home, H; | Power amp. built in | Rated power output, W | Mode: stereo, S; mono, M | Frequency response, Hz<br>±: dB | Wow and flutter, % | S/N, dB      | Supply voltage       | Channels: 1, 2 or 4 | Dimensions<br>W x D x H, in. | Weight, lbs. | Price   | SPECIAL FEATURES  |
|------------------|---------------------|----------|--------------------------|-----------------------------|---------------------|-----------------------|--------------------------|---------------------------------|--------------------|--------------|----------------------|---------------------|------------------------------|--------------|---------|---|
| HARMAN<br>KARDON |                     | X        |                          | H                           | no                  | S                     | 30-15k<br>±1.5           | 0.13                            | 58                 |              |                      |                     | 15 1/4 x 10 1/2<br>x 4 1/4   | 12.5         | 329.95D | Dolby decod. for rec. & play; mic inputs; peak VU mtrs.; DC servo-contld. motor.  |
| HEATH            | GD-28               |          | 8                        | H                           | no                  | S                     | 50-10k<br>±6             | 0.3                             | 40                 | 115V<br>A.C. |                      |                     | 10 3/4 x 8 1/4<br>x 4 1/2    | 6 3/4        | 59.95   | Play only; kit.   |
|                  | AD-110              | X        |                          | H                           | no                  | S                     | 30-12k<br>±3             | 0.25                            | 45                 | 115V<br>A.C. |                      |                     | 13 3/4 x 11<br>x 3 3/4       | 7 1/2        | 129.95  | Rec./play; mic inputs; kit.   |
|                  | AD-1530             | X        |                          | H                           | no                  | S                     | 40-14k<br>±3             | 0.25                            | 48+*               | 115V<br>A.C. |                      |                     | 14 x 9 1/2<br>x 5 1/2        | 14           | 249.95D | *W/Dolby; rec./play; mic inputs; spec. EQ for CrO <sub>2</sub> ; kit.             |
| HITACHI          | TRQ-2000            | X        |                          | H                           | no                  | S                     | 20-16k                   | 0.12                            | 50                 | A.C.         | 2                    |                     | 17 x 4<br>x 10               | 12           | 219.95D | Mem. rewind; HPF head.  |
|                  | TRQ-2040            | X        |                          | H                           | no                  | S                     | 20-16k                   | 0.12                            | 50                 | A.C.         | 2                    |                     | 17 x 4<br>x 10               | 12           | 229.95D |   |
|                  | TRQ-2020            | X        |                          | H                           | no                  | S                     | 40-16k                   | 0.12                            | 45                 | A.C.         | 2                    |                     | 17 x 4<br>x 10               | 12           | 149.95  |   |
|                  | TRQ-154<br>4-chan.  |          | 8                        | H                           | no                  | 2/4                   | 40-12k                   | 0.2                             | 55                 | A.C.         | 4                    |                     | 15 x 4<br>x 11               | 12           | 199.95  | 2/4 chan. PB; 2-chan. rec.; time ctr.; FF/pause swit.                             |
| JVC              | ED-1261             |          | 8                        | H                           | no                  | S                     | 30-14k<br>±3             | 0.2                             | 50                 | A.C.         | 2                    |                     | 17 x 11<br>x 5               | 16           | 169.95  | Pause; FF; autorepeat & stop; 2 VU mtrs.  |
|                  | ED-1240             |          | 8                        | H                           | no                  | S                     | 30-14k<br>±3             | 0.2                             | 50                 | A.C.         | 2                    |                     | 13 1/4 x 9 1/4<br>x 4 1/4    | 9            | 129.95  | Mode sel.   |
|                  | CD-1669             | X        |                          | H                           | no                  | S                     | 30-16k<br>±3             | 0.13                            | 50                 | A.C.         | 2                    |                     | 16 1/4 x 12 1/4<br>x 5 1/2   | 21           | 429.95  | Noise red. sys. (ANRS); rem. contl. unit; tape bias; equal.                       |
|                  | CD-1668             | X        |                          | H                           | no                  | S                     | 30-16k<br>±3             | 0.13                            | 50                 | A.C.         | 2                    |                     | 17 x 15<br>x 6               | 13           | 299.95  | Noise red. sys. (ANRS); CrO <sub>2</sub> swit.; ctr.; peak lev. ind.              |
|                  | CD-1667             | X        |                          | H                           | no                  | S                     | 30-16k<br>±3             | 0.15                            | 50                 | A.C.         | 2                    |                     | 15 x 11<br>x 5               | 10           | 229.95  | Noise red. sys. (ANRS); CrO <sub>2</sub> /swit.; auto stop.                       |
|                  | CD-1666             | X        |                          | H                           | no                  | S                     | 30-16k<br>±3             | 0.15                            | 50                 | A.C.         | 2                    |                     | 15 x 11<br>x 5               | 10           | 169.95  | Noise supp. swit.; CrO <sub>2</sub> /swit.; auto stop; ctr.                       |
|                  | CD-1655             | X        |                          | H                           | no                  | S                     | 40-15k<br>±3             | 0.2                             | 50                 | A.C.         | 2                    |                     | 14 1/4 x 9 1/4<br>x 4 1/2    | 8            | 129.95  | Noise supp.; tape bias & equal.   |
|                  | CD-1665             | X        |                          | H                           | no                  | S                     | 40-14k<br>±3             | 0.15                            | 50                 | A.C.         | 2                    |                     | 11 1/4 x 9 1/4<br>x 4 1/4    | 7            | 99.95   | Tape sel.; dual VU mtrs.  |
|                  | HED-1205<br>4-chan. |          | 8                        | H                           | no                  | S                     | 40-12k<br>±3             | 0.2                             | 50                 | A.C.         | 4*                   |                     | 16 1/2 x 11<br>x 4 1/4       | 17           | 229.95  | *4-chan. play/2-chan. rec. w/tape timer.  |
| KENWOOD          | KX-700              | X        |                          | H                           | no                  | S                     | 25-15k                   | 0.13                            | 58                 |              |                      |                     | 15 1/2 x 11 1/4<br>x 4 1/2   | 13           | 199.95D | 3-way tape sel.; super ferrite head; auto stop; dbl. drive hys.-sync. motor.      |
| LAFAYETTE        | RK-760B             | X        |                          | H                           | *                   | S                     | 30-12k                   | 0.25                            | 48                 | A.C.         | 2                    |                     | 14.6 x 10<br>x 3.6           | 14           | 124.95  | Rec.; 2 mic inputs; CrO <sub>2</sub> ; *phone amp only.                           |
|                  | RK-D50              | X        |                          | H                           | *                   | S                     | 30-20k<br>±3             | 0.12                            | 59                 | A.C.         | 2                    |                     | 14.6 x 10<br>x 3.6           | 14           | 239.95D | Rec.; std.; CrO <sub>2</sub> ; UD; mem. rewind; 2 mtrs.; *phone amp only.         |
|                  | RK-890A             |          | 8                        | H                           | No                  | S                     | 30-12k                   | 0.25                            |                    | A.C.         | 2                    |                     | 12 x 9 1/4<br>x 3 3/4        | 12           | 159.95  | Rec.; 2 mic inputs; auto rec. & stop.   |
|                  | RK-48A<br>4-chan.   |          | 8                        | H                           | No                  | S                     | 30-10k                   | 0.2                             |                    | A.C.         | 4                    |                     | 9 1/2 x 10 1/2<br>x 4 1/2    | 10 1/4       | 99.95   | 2/4 chan. PB; cont. repeat.   |
| MAGNAVOX         | 8842                | X        |                          | H                           | no                  | S                     | 63-12k<br>±5             | 0.2                             | 45                 | AC           | 2                    |                     | 15 1/4 x 10 3/4<br>x 4 1/4   |              | 199.95  | Records; auto stop/eject; push button contls.; phone mon.; ANRS noise reduction.  |
|                  | 8835                |          | 8                        | H                           | no                  | S                     | 50-10k<br>±6             | 0.25                            | 40                 | AC           | 2                    |                     | 16 1/2 x 11<br>x 4 1/2       |              | 129.95  | Records; auto stop/eject; FF; ALC.  |
|                  | 9036                | X        |                          | P                           | yes                 | 0.5                   | M                        | 125-6.3k<br>±5                  | 0.35               | 35           | 6.0V<br>batt./<br>AC |                     | 10 1/4 x 5 1/2<br>x 2 1/2    |              | 79.95   | Records; built in cond. mic. batt. mtr.; ALC; push button contls.; carrying case. |
|                  | 3502                |          | 8                        | H                           | no                  | S                     | 50-10k<br>±5             | 0.25                            | 40                 | A.C.         | 2                    |                     | 8 x 9 1/4<br>x 3 3/4         |              | 69.95   | Plays; auto stop/eject.   |



# Cassette & Cartridge Recorders



Nakamichi 1000



Pioneer CT-4141



Sansui SC-737

D after the price indicates the machine is Dolbyized.

| MANUFACTURER | MODEL                            | Cassette | Cartridges: no. of tracks | Type: portable, P; home, H; | Power amp. built in | Rated power output, W | Mode: stereo, S; mono, M | Frequency response, Hz ± 1 dB | Wow and flutter, % | S/N, dB | Supply voltage | Channels: 1, 2 or 4        | Dimensions: W x D x H, in. | Weight, lbs.               | Price   | SPECIAL FEATURES   |   |
|--------------|----------------------------------|----------|---------------------------|-----------------------------|---------------------|-----------------------|--------------------------|-------------------------------|--------------------|---------|----------------|----------------------------|----------------------------|----------------------------|---|--|---|
|              |                                  |          |                           |                             |                     |                       |                          |                               |                    |         |                |                            |                            |                            |   |  |   |
| NAKAMICHI    | 1000                             | X        |                           | H                           | no                  | S                     | 35-20k<br>±3             | 0.10                          | 60                 | A.C.    | 2              | 20 3/4 x 8 1/2<br>x 11 3/4 | 39                         | 1100.00D                   | 3 head; DNL; db, capstan mixing; C logic contl. |  |   |
|              | 700                              | X        |                           | H                           | no                  | S                     | 35-20k<br>±4             | 0.1                           | 60                 | A.C.    | 2              | 20 1/2 x 5<br>x 10 3/4     | 28                         | 690.00D                    | 3 head; dbl. capstan, mixing; C logic contl.    |  |   |
| NORELCO      | 1100                             | X        |                           | P                           | yes                 | 0.625                 | M                        | 150-7k<br>±3                  | 0.5                | 45      | 9V batt.       | 2x1 ch. mono               | 10 x 6 1/4<br>x 2 1/2      | 2.5                        | 31.95   | Play only; W/FF/FR.  |   |
|              | 150                              | X        |                           | P                           | yes                 | 0.5                   | M                        | 80-10k<br>±3                  | 0.4                | 45      | 7.5V batt.     | 2x1 ch. mono               | 7 3/4 x 4 1/2<br>x 2 1/2   | 3                          | 54.95   | Play/record.   |   |
|              | 1420A                            | X        |                           | P                           | yes                 | 0.5                   | M                        | 80-10k<br>±3                  | 0.4                | 45      | 7.5V batt.     | 2x1 ch. mono               | 7 3/4 x 4 1/2<br>x 2 1/2   | 3                          | 64.95   | Auto. record.  |   |
|              | 2100                             | X        |                           | H                           | No                  |                       | S                        | 50-13k<br>±3                  | 0.18               | 47      | 117V 60Hz      | 2 x 2 chan. stereo         | 12 1/2 x 3 3/4<br>x 10 1/2 | 6.75                       | 219.95  | 3 pos. tape sel. swit.; DNL; stereo record/playback.   |   |
| PIONEER      | CT-4141                          | X        |                           | H                           | no                  |                       | S                        | 30-16k                        | 0.13               | 48/58   | 115            | built in                   | 15 x 9<br>x 3              | 11                         | 269.95D   | Peak ind. lt.; Dolby in lt.; mem. rew. swit.; 3 dig. ctr.; pause; skip button; tape sel. low noise, high output chrom. sel. slide vol. |   |
|              | CT-3131                          | X        |                           | H                           | no                  |                       | S                        | 30-15k                        | 0.13               | 50      | 115            | built in                   | 15 x 9<br>x 3              | 9                          | 199.95  | Running pilot lt.; 3 dig. ctr.; mem. markers; slide PB & rec. levels; noise cut fil; pause; skip button.                               |   |
| RADIO SHACK  | SCT-6C                           | X        |                           | H                           | No                  |                       | S                        | 30-15k<br>±2                  | 0.14               | 56      | 120 A.C.       | 2                          | 16 1/2 x 10 1/4<br>x 4 1/2 |                            | 249.95D   | Rec.: CrO <sub>2</sub> , bias swt.; auto stop.   |   |
|              | SCT-5C                           | X        |                           | H                           | No                  |                       | S                        | 50-12k<br>±2                  | 0.2                |         | 120 A.C.       | 2                          | 13 1/4 x 9 1/2<br>x 3 3/4  |                            | 149.95  | Rec.: CrO <sub>2</sub> , bias swt.; auto stop.   |   |
|              | SCT-909                          | X        |                           | H/P                         | Yes                 |                       | S                        | 50-12k                        |                    | 45      |                | 2                          | 16 3/4 x 11 1/4<br>x 9 1/4 |                            | 229.95  | As above w. 2 dyn. mics.   |   |
|              | SCT-2C                           | X        |                           | P                           | Yes                 |                       | S                        |                               |                    |         |                | 2                          | 11 x 8 1/2<br>x 6 1/2      |                            | 149.95  | Rec.; batt./a.c.; auto stop.   |   |
|              | TR-881                           |          | 8                         |                             | H                   | No                    |                          | S                             | 50-12k             | 0.3     |                | A.C.                       | 2                          | 17 1/4 x 9 3/4<br>x 5      | 14  | 109.95   | Rec.; F. forwd.; pause                                      |
|              | TR-800                           |          | 8                         |                             | H                   | No                    |                          | S                             | 30-15k             | 0.2     |                | A.C.                       | 2                          | 15 3/4 x 11 1/4<br>x 4 1/4 | 22  | 159.95   | Rec.; F. forwd.; pause; auto stop; dig. timer; power eject. |
|              | TR-284B 4-chan.<br>Q-800 4-chan. |          | 8                         |                             | H                   | Yes                   |                          | 4-ch.                         |                    |         |                | A.C.                       | 4                          | 15 x 11 3/4<br>x 5         | 23  | 169.95   | 2/4-chan.; w. 4 spkrs.                                      |
| SANSUI       | SC-700                           | X        |                           | H                           | no                  |                       | S                        | 40-16k*                       | 0.12               | 56      | A.C.           | 2                          | 15 1/2 x 10<br>x 4         | 12 1/2                     | 259.95D   | *W/CrO <sub>2</sub>  |   |
|              | SC737                            | X        |                           | H                           | no                  |                       | S                        | 35-14k*<br>±3                 | 0.12               | 50      | A.C.           | 2                          | 18 x 11 1/2<br>x 4 3/4     | 17.8                       | 299.95D   | 3 mic inputs; peak rdg.; VU mtrs.; auto off.; * as above.  |   |
| SANYO        | RD 4250                          | X        |                           | H                           | no                  |                       | S                        | 40-15k<br>±2                  | 0.2                | 50      | 120V 60Hz      | 2                          | 19 x 9<br>x 5              | 12                         | 289.95D   | Records; 2 mic inputs; 2 VU mtrs.; auto stop.  |   |
|              | RD 4300                          | X        |                           | H                           | no                  |                       | S                        | 40-15k<br>±2                  | 0.15               | 50      | 120V 60Hz      | 2                          | 17 x 9<br>x 5              | 12                         | 299.95D   | Records; 2 mic inputs.   |   |
|              | RD 4350                          | X        |                           | H                           | no                  |                       | S                        | 40-15k<br>±2                  | 0.15               | 50      | 120V 60Hz      | 2                          | 17 x 9<br>x 5              | 12                         | 329.95D   | Records; 2 mic inputs; 2 VU mtrs.; memory counter.   |   |
|              | RD 8200 4-chan.                  |          | 8                         |                             | H                   | no                    |                          | S                             | 50-12k<br>±2       | 0.2     | 45             | 120V 60Hz                  | 2/4                        | 13 x 12 3/4<br>x 4 3/4     | 10 1/2  | 149.95   | Play only; auto 2/4 chan. switching.                        |



## They're talking about Capitol 2 recording tape.

Musicians, high-fidelity perfectionists, music lovers of all sorts, are talking about Capitol 2, the world's best iron-oxide tape.

Cassette users rave about the frequency response (20-22,000 Hz), the backcoating that makes the cassette jamproof, and the new package (Stak-Pak™) that ends cassette clutter.

Everyone's giving the Stak-Pak special mention. Probably because it's without a doubt the world's ultimate cassette storage method. Stak-Paks come with two Capitol 2 cassettes, and they slide or snap together to form a tiny chest of drawers, each with its own two labels.

Reel-to-reel bugs get excited about being able to buy a tape that's as good as the best tape the recording studios themselves use.

And 8-track cartridge people are delirious with the Capitol 2 Audiopak® High Output/Low Noise cartridge, already a standard of the music industry. It's even available in a newly engineered 100-minute playing time.

Visit your favorite tape store, and try the new Capitol 2 tape. So that the next time your friends start talking about tape, you'll have something significant to add to the conversation.



**Capitol 2**<sup>TM</sup>  
Gets the good sounds right.

Cassettes/Cartridges/Reel Tape  
©1973 Audio Devices, Inc., a Capitol Industries Co., Glenbrook, Conn. 06906.

Check No. 5 on Reader Service Card



# Cassette & Cartridge Recorders



Sony TC-161SD



Superscope CD-302

D after the price indicates the machine is Dolbyized.

| MANUFACTURER | MODEL            | Cassette | Cartridge, no. of tracks | Type: portable, P; home, H; | Power amp. built in | Rated power output, W | Mode: stereo, S; mono, M | Frequency response, Hz<br>± 1 dB | Wow and flutter, % | S/N, dB        | Supply voltage    | Channels: 1, 2 or 4    | Dimensions<br>W x D x H, in. | Weight, lbs. | Price   | SPECIAL FEATURES   |
|--------------|------------------|----------|--------------------------|-----------------------------|---------------------|-----------------------|--------------------------|----------------------------------|--------------------|----------------|-------------------|------------------------|------------------------------|--------------|---|--|
|              |                  |          |                          |                             |                     |                       |                          |                                  |                    |                |                   |                        |                              |              |   |  |
| SONY         | TC-121A          | X        |                          | H                           | no                  | S                     | 40-13k                   | 0.22                             | 45                 | 120 A.C.       | 2                 | 13 x 9 x 3 3/4         | 7.4                          | 114.95       | Auto off; conv. a.c. outlet; tape sel. swit.; dual VU mtrs. (ill.).   |  |
|              | TC-129           | X        |                          | H                           | no                  | S                     | 40-14k                   | 0.22                             | 45                 | 120 A.C.       | 2                 | 13 3/4 x 9 1/4 x 4     | 8.1                          | 149.95       | F & F head; adj. & remov. dust cvr.; auto shut-off; dual ill. VU mtrs.  |  |
|              | TC-131SD         | X        |                          | H                           | no                  | S                     | 40-15k                   | 0.22                             | 58                 | 120 A.C.       | 2                 | 15 1/4 x 9 3/4 x 3 3/4 | 9.1                          | 199.95D      | F & F head; peak lmtr.; tape sel. swit.; auto total mech. shutoff; TMS; rec. ind. lamp.   |  |
|              | TC-134SD         | X        |                          | H                           | no                  | S                     | 30-17k                   | 0.2                              | 59                 | 120 A.C.       | 2                 | 16 1/2 x 8 3/4 x 4 1/2 | 10.9                         | 239.95D      | F & F head; tape sel. swit.; 3 dig. tape ctr.; peak limit.; lock. FF & rwd.; TMS; rec. ind. lamp.   |  |
|              | TC-161SD         | X        |                          | H                           | no                  | S                     | 20-17k                   | 0.1                              | 59                 | 120V 60Hz A.C. | 2                 | 15 3/8 x 10 7/8 x 5    | 14.4                         | 329.95D      | Mem. tape ctr.; clsd. loop dual capstan; 2-pos. mon. swit.; F & F head.   |  |
|              | TC-152SD         | X        |                          | P                           | yes                 | 1.5                   | S                        | 30-15k                           | 0.15               | 58             | A.C./D.C.         | 2                      | 14 3/8 x 9 3/4 x 4 1/4       | 12.2         | 299.95D   | A.c./d.c. oper.; peak limit.; tape sel. swit.; spkr. mode sel. swit. (L+L & R+R); F & F head.                  |
|              | TC-180AV         | X        |                          | H                           | yes                 | 5                     | M                        | 50-12k                           | 0.2                | 46             | 120V 60Hz A.C.    | 2                      | 13 x 11 3/4 x 4 1/4          | 11.1         | 179.95  | Sonomatic rec. conft. w. swit. & VU mtr.; 2 mic/1 aux inputs; AV use; P.A.                                     |
|              | TC-208           |          | 8                        | H                           | no                  |                       | S                        | 50-10k                           | 0.25               | 50             | 120V 60Hz A.C.    | 2                      | 8 3/4 x 9 1/2 x 4            | 7.12         | 89.95   | Prog. rpt. button; FF; auto tk. swit.; prog. sel. button.  |
|              | TC-258 4-chan.   |          | 8/4                      | H                           | no                  |                       | 4-ch.                    | 40-12k                           | 0.25               | 50             | 120V 60Hz A.C.    | 4                      | 8 3/4 x 9 1/2 x 4            | 8.3          | 119.95  | Auto 2/4 chan. swit.; FF; rpt. button; 2/4-chan. ind. lamp.  |
|              | TC-228           |          | 8                        | H                           | no                  |                       | S                        | 30-13k                           | 0.17               | 45             | 120V 60Hz A.C.    | 2                      | 14 1/4 x 8 3/4 x 4 1/4       | 11.3         | 189.95  | 3-way eject sys.; rec. ind. lamp; ill. VU mtrs.; pause conft.  |
|              | CF-350           | X        |                          | P                           | yes                 | 1.2                   | M                        | 50-10k                           | 0.28               |                | 6V d.c. 120V A.C. | 1                      | 10 x 2 1/2 x 6 1/4           | 4.3          | 139.95  | Incl. cond. mic; var. mon.; AM & FM bands; servo conft. motor; carrying case.                                  |
|              | CF-550           | X        |                          | P                           | yes                 | 3.0                   | S                        | 50-13k                           | 0.22               | 45             | 6V d.c. 120V A.C. | 2                      | 13 1/4 x 4 3/4 x 9 3/4       | 12.3         | 249.95  | Stereo rec./play; 2 built in cond. mics; end of tape alarm; var. mon.; mode sel. swit.; AM/FM bands; tape sel. |
|              | CF-620A          | X        |                          | H                           | yes                 | 12                    | S                        | 30-13k                           | 0.22               | 46             | 120 A.C.          | 2                      | 16 1/2 x 12 1/4 x 5 1/2      | 14.4         | 329.95  | AM & FM; AFC on FM; mag. phono inputs; tape sel. swit.; p.a.; 3-dig. tape ctr.                                 |
|              | TC-224           | X        |                          | P                           | yes                 |                       | S                        | 50-10k                           | 0.28               | 48             | 6V D.C. 120V A.C. | 2                      | 12 1/2 x 3 3/4 x 8 1/4       | 7.8          | 179.95  | 2 unidir. mics. 4-way powering; man. or Sonomatic rec. conft.  |
|              | TC-824CS 4-chan. |          | 8/4                      | H                           | yes                 | 5x4                   | 4-ch.                    | 50-12k                           | 0.28               | 48             | 120 A.C.          | 4                      | 15 3/4 x 10 x 4 3/4          | 14.6         |   | Auto 2/4 ch. tk. swit.; bass boost swit.; auto or man. prog. sel.; phono & aux inputs.                         |
| SUPERSCOPE   | CD-302           | X        |                          | H                           | no                  | S                     | 40-10k                   | 0.2                              | 48 <sup>o</sup>    |                | 2                 | 12 1/2 x 8 3/4 x 3 3/4 | 6                            | 149.95D      | *W/Dolby, 60dB; inbrd./outbrd. Dolby deproc.; CrO swit.; peak limit.; auto rec. lev.; wal. case incl. ill. tape compart.; CD-301 same but w/o Dolby, \$99.95. |  |
|              | C-101            | X        |                          | P                           | yes                 | 0.8                   | M                        | 100 8k ± 5                       | 0.25               | 46             | 1                 | 5 1/2 x 9 1/2 x 2 1/2  | 5                            | 42.95        | Built in cond. mic.; auto off; auto rec. lev.; a.c./d.c.  |  |
|              | C-103            | X        |                          | P                           | yes                 | 1.3                   | M                        | 90-10k                           | 0.3                | 45             | 1                 | 6 x 10 x 2 1/2         | 4.8                          | 69.95        | 4-way pwr., rechrg. (auto when using a.c.); 3 dig. ctr.; VU/batt. mtr.  |  |
|              | CS-200           | X        |                          | P                           | yes                 | 1.0                   | S                        | 60-10k ± 5                       | 0.3                | 45             | 2                 | 6 1/2 x 11 x 3         | 5                            | 129.95       | 2 built in cond. mics; auto rechrg.; auto off; auto rec. lev.; VU/batt. mtr. CrO swit.  |  |

# When Tandberg makes a cassette deck you know cassettes have come of age.

When stereo cassette tape decks first appeared on the scene, they appeared to be the perfect answer for people who wanted an easy-to-use recorder that could plug right into their stereo system.

But when it came to using cassettes as a hi-fi medium, there were problems. Tape noise was high, so it was difficult to achieve an acceptable s/n ratio. The tapes were narrow and magnetic coatings thin, so it was next to impossible to provide a wide-range frequency response or a proper dynamic range. And the low tape speed meant still more difficulty in achieving hi-fi sound and speed consistency.

So Tandberg decided that they just wouldn't produce a cassette machine until they could engineer one that could meet the same stringent standards imposed

on Tandberg's famous reel-to-reel recorders.

And that's just what's been done with the fabulous new TCD 300—Tandberg's first cassette tape deck. If you're familiar with tape recorder specifications, just listen to these:

Three motors, including one hysteresis synchronous drive motor and two D.C. reel motors that can wind or rewind a C-60 cassette in 40 seconds. Dual capstans for precise tape handling and a wow and flutter reading of 0.15% R.M.S. Dual peak-reading record level meters that also show playback level. Built-in Dolby\* system and a CrO<sub>2</sub> tape switch, allowing an incredible 63 db s/n ratio!

And that's still not the whole story. The TCD 300 has an over-all DIN frequency response of 40-15,000 hz and a speed tolerance of  $\pm 1\%$ . And

its standard features include electronic push-button controls, linear motion input level potentiometers, electronic endstop, built-in microphone preamps, an automatic tape counter with push-button reset, and constant wind and rewind tape speed.

Difficult to believe? Wait until you hear the sound of the TCD 300, and feel the precision of its controls. Then you'll know what we mean when we say that the Tandberg TCD 300 is the first cassette recorder built to stand comparison with the finest reel-to-reel machines. Our own, that is. All for just \$399.90.

\*DOLBY is a registered trademark of Dolby Laboratories, Inc.

**TANDBERG**  
We're our only competitor  
Tandberg of America,  
Labriola Court, Armonk, N.Y. 10504  
A. Allen Pringle, Ltd., Ontario, Canada.



Check No. 64 on Reader Service Card



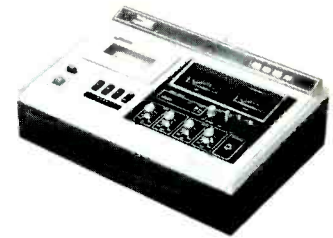
# Cassette & Cartridge Recorders



Tandberg TCD 300



TEAC 450



Technics by Panasonic RS-279US

| MANUFACTURER          | MODEL            | Cassette | Cartridge, no. of Leads | Type: portable, P; home, H; | Power amp built in | Rated power output, W | Modes: Stereo, S; mono, M                   | Frequency response, Hz; ± dB | Wow and flutter, % | S/N, dB      | Supply voltage | Channels: 1, 2 or 4     | Dimensions: W x D x H, in. | Weight, lbs. | Price   | SPECIAL FEATURES |
|-----------------------|------------------|----------|-------------------------|-----------------------------|--------------------|-----------------------|---|------------------------------|--------------------|--------------|----------------|-------------------------|----------------------------|--------------|---|------------------|
| TANDBERG              | TCD 300          | X        | 4                       | H                           | No                 | S                     | 50-12k ± 2dB                                | 0.15                         | 50                 | AC           | 2              | 16 1/2 x 9 1/2 x 4 1/2  | 14.5                       | 399.90D      | 3 motors; dual caps.; clsd. loop; 2 mic inputs; 2 peak rdg. mtrs.   |                  |
| TEAC                  | 355              | X        |                         | H                           | no                 | S                     | 30-14k ± 3                                  | 0.13                         | 58"                |              |                | 17 x 10 x 4             | 12                         | 329.50D      | 2 mic inputs; hi-density permaflux hds.; tape sel. swit.; CrO <sub>2</sub> tape; *w. Dolby.   |                  |
|                       | 250              | X        |                         | H                           | no                 | S                     | 30-14k ± 3                                  | 0.15                         | 58"                |              |                | 17 x 10 x 4             | 10                         | 269.50D      | 2 mic inputs; hi-dens. perma. hds.; tape sel. swit.; *w. Dolby.   |                  |
|                       | 220              | X        |                         | H                           | no                 | S                     | 30-13k ± 3                                  | 0.15                         | 50                 |              |                | 16 x 10 x 4             | 10                         | 239.50       | Tape sel. swit.; hi-dens. perma hds.; lge. VU mtrs.   |                  |
|                       | 210              | X        |                         | H                           | no                 | S                     | 30-12.5k ± 3                                | 0.15                         | 50                 |              |                | 16 x 10 x 4             | 9                          | 189.50       | 3 dig. index ctr.; lge. VU mtrs.  |                  |
|                       | 450              | X        |                         | H                           | no                 | S                     | 30-15k ± 3                                  | 0.07                         | 60w/Dolby          |              |                | 17 x 11 x 7             | 21                         | 399.50D      | Permaflux hds.; Dolby FM/Dolby copy; 2-pos. bias. & EQ; mic/line.   |                  |
| TECHNICS BY PANASONIC | RS-279US         | X        |                         | H                           | no                 | S                     | 20-16k                                      | 0.1                          | 59                 | A.C.         | 2              | 16 1/2 x 13 1/2 x 5 1/2 | 20                         | 499.95D      | CrO <sub>2</sub> ; 3 HPF heads; 2 motors, incl. dir. drv. for capstan; mem. rewind; lock'g pause; solenoid contls.; opt. rem.; auto stop. |                  |
|                       | RS-276US         | X        |                         | H                           | no                 | S                     | 20-16k                                      | 0.1                          | 59                 | A.C.         | 2              | 16 1/2 x 13 1/2 x 5 1/2 | 20                         | 399.95D      | Same as above but 2 heads.  |                  |
|                       | RS-277US         | X        |                         | H                           | no                 | S                     | 20-14k                                      | 0.25                         | 54                 | A.C.         | 2              | 17 1/2 x 11 1/2 x 5 1/2 | 14                         | 299.95D      | Cont. auto rev.; auto stop; CrO <sub>2</sub> .  |                  |
|                       | RS-271US         | X        |                         | H                           | no                 | S                     | 20-14k                                      | 0.15                         | 54                 | A.C.         | 2              | 15 1/2 x 10 1/2 x 5     | 13 1/2                     | 249.95D      | CrO <sub>2</sub> ; auto stop; HPF head; memory rewind; lock. pause.   |                  |
|                       | RS-263US         | X        |                         | H                           | no                 | S                     | 30-14k                                      | 0.2                          | 54                 | A.C.         | 2              | 14 x 9 1/2 x 5          | 10                         | 189.95D      | CrO <sub>2</sub> ; memory rewind; lock. pause; auto stop.   |                  |
|                       | RS-858US 4-chan. |          | 8                       | H                           | no                 | 2/4                   | 30-12k                                      | 0.2                          | 45                 | A.C.         | 4/2            | 21 1/2 x 11 1/2 x 4 1/2 | 21                         | 279.95       | 2/4 chan. sel.; auto eject. or cont. play; 4 VU mtrs.; sep. lev. contls.  |                  |
| TELEX                 | 48H              |          | 8                       | P                           | yes                | 10                    | 50-15k ± 3                                  | 0.3                          | 42                 | 110/220      | built in       | 18 1/2 x 9 x 16 1/2     | 32                         | 299.95       | Built in amp; 48D w/preamp, \$249.95.   |                  |
| TOYO                  | CHR 335          |          | 8                       | H                           | no                 | S                     | 100-10k                                     | 0.3                          | 50                 | A.C.         |                | 12 1/2 x 11 1/2 x 5     | 13 1/2                     | 119.95       | Rec./play.  |                  |
| WOLLENSAK (3M)        | 4765             | X        |                         | H                           | no                 | 1.0                   | 35-15k ± 2                                  | 0.15                         | 50                 | 115          | 2              | 17 1/2 x 10 1/2 x 6 1/2 | 16                         | 329.95D      | Dolby FM swit.  |                  |
|                       | 4770             | X        |                         | H                           | no                 | 0.775                 | 50-15k ± 3                                  | 0.2                          | 49                 | 115          | 2              | 16 x 5 1/2 x 10 1/2     | 11                         | 219.95       | Noise sup. circuit.   |                  |
|                       | 4780             | X        |                         | H                           | no                 | 1.0                   | 30-14k ± 3                                  | 0.18                         | 48                 | 115          | 2              | 16 x 14 1/2 x 10 1/2    | 14                         | 279.95D      | Memory ctr.   |                  |
|                       | 8054 4-chan.     |          | 8                       | H                           | no                 | 1.0                   | 30-18k                                      | 0.25                         | 52                 | 115          | 2.4            | 17 x 5 x 10             | 25                         | 119.95       | 4-ch. preamps player.   |                  |
|                       | 8050A            |          | 8                       | H                           | no                 | 1.0                   | 30-15k                                      | 0.25                         | 50                 | 115          | 2              | 17 1/2 x 4 1/2 x 10 1/2 | 15                         | 169.95       | Auto rec. level; player/recorder.   |                  |
|                       | 8055             |          | 8                       | H                           | no                 | 1.0                   | 30-15k                                      | 0.25                         | 50                 | 115          | 2              | 17 1/2 x 4 1/2 x 10 1/2 | 15                         | 189.95       | Dig. time ctr.; fast fwd.; swit. auto rec. level.   |                  |
|                       | 8060 4-chan.     |          | 8                       | H                           | no                 | 0.775                 | 30-15k                                      | 0.25                         | 48                 | 115          | 2              | 19 1/2 x 10 1/2 x 5     | 15                         | 219.95       | 4-ch. play 2-ch. rec./play; matrix defeat swit.; dig. time ctr.   |                  |
| YAMAHA                | TB-700           | X        |                         | H                           | no                 | S                     | 30-13k (std.)<br>30-16k (CrO <sub>2</sub> ) | 0.15                         | 48"                | 117/230 A.C. |                | 16 x 10 x 4             | 11                         | 339.95D      | Line & mic mix.; pitch contl.; HP ferrite head; auto stop; input sens. sel.; *58 W. Dolby.  |                  |



# Speakers

## Acoustic Research AR-8

## Akai SW-161

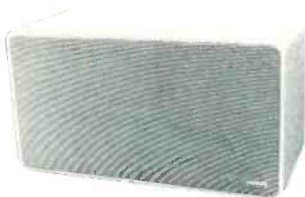
## New Advent

| MANUFACTURER      | MODEL          | WOOFER        |                           |                     | MID RANGE     |               | TWEETER        |            | Overall freq. resp. Hz to kHz<br>± 2 db | Ampl. pow. for avg. room, W | Pwr. handling capacity (RMS cont) | Crossover frequency (res.) Hz | Impedance, ohms    | Enclosure dimensions<br>W x D x H, in. | Wood finish       | Grille material<br>color | Weight, lbs.   | Price (per pair?)  | SPECIAL FEATURES |
|-------------------|----------------|---------------|---------------------------|---------------------|---------------|---------------|----------------|------------|---|-----------------------------|-----------------------------------|-------------------------------|--------------------|--|-------------------|--------------------------|----------------|--|------------------|
|                   |                | Diameter, in. | Resonance (in system), Hz | Enclosure type      | Diameter, in. | Type          | Diameter, in.  | Type       |   |                             |                                   |                               |                    |  |                   |                          |                |  |                  |
| ACOUSTIC RESEARCH | LST*           | 12            | 42                        | Acous. susp. (4) 1½ | Hem; dome     | (4) ¾         | Hem; dome      | **         | 50                                      | ***                         | 575; 5000                         | 4                             | 27½ x 20 x 9¾      | Wal.                                   | Cloth             | 90                       | 600.00 ea.     | *6 pos. swit.; contld. freq. resp. crvs.; ** compl data avail. on req.; *** data avail. on req. var. |                  |
|                   | 3a             | 12            | 42                        | Acous. susp. 1½     | Hem; dome     | ¾             | Hem; dome      | **         | 25                                      | ***                         | 575; 5000                         | 4                             | 14 x 25 x 11½      | Wal. unf.                              | Cloth             | 53                       | 269.00 ea.     | ** Compl. data avail. on req.; *** var., data avail. on req.   |                  |
|                   | 5              | 10            | 56                        | Acous. susp. 1½     | Hem; dome     | ¾             | Hem; dome      | **         | 20                                      | ***                         | 650; 5000                         | 8                             | 13½ x 24 x 11½     | Wal. unf.                              | Cloth             | 39                       | 189.00 ea.     | Same as above.   |                  |
|                   | 2ax            | 10            | 56                        | Acous. susp. 3½     | Cone          | ¾             | Hem; dome      | **         | 20                                      | ***                         | 1400; 5000                        | 8                             | 13½ x 24 x 11½     | Wal. grd.                              | Cloth             | 36½                      | 139.00 ea.     | Same as above.   |                  |
|                   | 8              | 10            | 54                        | Acous. susp. 1½     | Cone          | ¾             | Hem; dome      | **         | 15                                      | ***                         | 1800                              | 8                             | 13½ x 24 x 11½     | Wal. grd.                              | Cloth             | 32                       | 119.00 ea.     | Same as above.   |                  |
|                   | 6              | 8             | 56                        | Acous. susp. 1½     | Cone          | ¾             | Hem; dome      | **         | 15                                      | ***                         | 1500                              | 8                             | 12 x 19½ x 7½      | Wal. grd.                              | Cloth             | 20                       | 89.00 ea.      | Same as above.   |                  |
|                   | 4xa            | 8             | 65                        | Acous. susp. 1½     | Cone          | ¾             | Hem; dome      | **         | 15                                      | ***                         | 1600                              | 8                             | 10 x 19 x 9        | Wal. grd.                              | Cloth             | 18½                      | 75.00 ea.      | Same as above.   |                  |
| 7                 | 8              | 70            | Acous. susp. 1½           | Cone                | ¾             | Hem; dome     | **             | 15         | ***                                     | 2000                        | 8                                 | 9¾ x 15¾ x 6¼                 | Wal. grd.          | Cloth                                  | 11                | 65.00 ea.                | Same as above. |  |                  |
| ACOUSTICAL MFG.   | Quad ES        |               |                           | Doublet ES          |               |               |                | 45-18k ± 5 | 28                                      |                             |                                   |                               | 34½ x 10½ x 31     |  | Alum. blk.        | 40                       | 315.00 ea.     | Full range ES.   |                  |
| ADVENT            | Advent         |               | 43                        | Acous. susp.        |               | ¾             | Dome           | 30-20k ± 4 | 20                                      | *                           | 1k                                | 8                             | 14¼ x 11½ x 25½    | Wal.                                   | Cloth, light      | 44                       | 120.00         | Also in wal. vinyl. \$105.00; *avail. upon request from Advent.                                      |                  |
|                   | Smaller Advent |               | 43                        | Acous. susp.        |               | ¾             | Dome           | 30-20k ± 4 | 15                                      | *                           | 1.4k                              | 4                             | 11½ x 9¼ x 20      | Wal. vinyl                             | Cloth, light      | 26                       | 72.00          | *As above.   |                  |
|                   | New Advent     |               | 57                        | Acous. susp.        |               |               | Cone           | 40-20k     | 10                                      | *                           | 1.5k                              | 8                             | 11½ x 7¾ x 19      | White Metal. nat.                      | 17                | 58.00                    | *As above.     |  |                  |
| AKAI              | SW-175         | 15            | 20                        |                     | 5¾            | 2½, 3, 3½     | Horn Cone Dome | 20-23k     | 4-6                                     | 25-30                       | 600; 5K; 10K; 15K                 | 8                             | 17 x 24.4 x 11.2   | Wal.                                   | Lattice work      | 49                       | 295.00         |  |                  |
|                   | SW-161         | 12            | 30                        |                     | 6½            | 2 1           | Horn Dome      | 30-20k     | 4-6                                     | 25-30                       | 600; 5K; 15K                      | 8                             | 16.2 x 12 x 25.6   | Wal.                                   | Wal. grille       | 42.9                     | 200.00         | Ind. hi & midrng. lev. contls.; mag. circ.; 6½" non-leak midrng.                                     |                  |
|                   | SW-155         | 12            | 30                        |                     | 5             | 2½ 2          | Cone           | 25-21k     | 4-6                                     | 25-30                       | 1000; 5K; 15K                     | 8                             | 16 x 11¼ x 25      | Wal.                                   | Wal. grille       | 38.9                     | 175.00         | Hi & midrng. contls.; extra wide freq. resp.   |                  |
|                   | SW-135         | 10            | 25                        |                     | 5             | 2½            | Cone           | 40-20k     | 4-6                                     | 25-30                       | 1200; 6k                          | 8                             | 13.2 x 10.8 x 21.2 | Wal.                                   | Wal. grille       | 18                       | 130.00         | Tone sel.; spkr. jack & push but. term.  |                  |
|                   | SW-125         | 10            | 30                        |                     | 5             | 2             | Horn           | 40-20k     | 4-6                                     | 25-30                       | 1200; 5000                        | 8                             | 13¼ x 21 x 11½     | Oil wood                               | Oil. fin. grille  | 24.2                     | 145.00         |  |                  |
| ALTEC             | 887A           | 8             |                           | Acous. susp.        |               | 3             | Cone           |            | 12                                      | 45                          | 2.5k                              | 8                             | 10 x 9 x 19        | Wal.                                   | Cloth, dark       | 17.8                     | 75.00          |  |                  |
|                   | 891A           | 12            |                           | Acous. susp.        |               | 2½            | Cone           |            | 12                                      | 60                          | 1.6k                              | 8                             | 14½ x 12¼ x 25½    | Wal.                                   | Foam, blk.        | 35                       | 129.00         |  |                  |
|                   | Concept EQ     | 12            |                           | Acous. susp.        | 5             | 2             | Cone           | Dome       | 30                                      | 100                         | 800; 4k                           | 8                             | 15 x 10½ x 25      | Wal.                                   | Foam, blk.        | 38                       | 180.00         |  |                  |
|                   | 878B           | 15            |                           | Acous. susp.        |               | *             | *              |            | 30                                      | 60                          | 800                               | 8                             | 26¼ x 18½ x 30¼    | Wal.                                   | Foam, blk.        | 110                      | 450.00         | *Voice of the Theatre comp. horn driver.   |                  |
| AUDIOANALYST      | A76            | 10            | 52                        | Acous. susp.        |               | 1¾            | Cone           | 44-18k ± 3 | 15                                      | 50                          | 2500                              | 8                             | 12¼ x 11¼ x 21     | Wal. Vinyl                             | Foam              | 32                       | 79.00          | Linear resp.   |                  |
|                   | A100           | 10            | 48                        | Acous. susp.        | 3             | 2             | Cone           | 40-20k ± 3 | 15                                      | 60                          | 1500; 7500                        | 8                             | 13¼ x 12 x 24¼     | Wal.                                   | Cloth brn. & blk. | 37                       | 129.00         | Linear resp.   |                  |
|                   | A200           | 12            | 46                        | Acous. susp.        | 5             | (1) 3½; (2) 2 | Cone           | 38-20k ± 3 | 15                                      | 100                         | 500; 2000; 7500                   | 8                             | 15 x 12¾ x 27      | Wal.                                   | Cloth blk.        | 53                       | 225.00         | Angled supertweeters.  |                  |
|                   | Pyra-media     | 10            |                           |                     | (2) 5         | 1¾            | Cone           | 36-20k ± 3 | 20                                      | 100                         | 600; 2500                         | 8                             | 30 x 30 x 46       |  |                   | 80                       | 575.00         | Omnidir./adj. disp.; incl. functional pedestal.  |                  |
| AUDIO DYNAMICS    | 450A           | 12            |                           | Acous. susp.        |               |               | Dome           | 25-30k ± 3 | 10                                      | 65                          |                                   | 8                             | 14 x 12¾ x 25      | Wal.                                   | Cloth; char.      | 50                       | 150.00         |  |                  |
|                   | 303ax          | 10            |                           | Acous. susp.        |               | 2             | Cone           | 37-20k ± 3 | 10                                      | 45                          | 1.5k                              | 8                             | 13 x 11¼ x 23¼     | Wal.                                   | Cloth; blk.       | 37                       | 100.00         | Mid & hi contls.   |                  |
|                   | 303b           | 10            |                           | Acous. susp.        |               |               |                | 37-20k ± 3 | 10                                      | 45                          | 1.5k                              | 8                             | 12 x 11 x 21¼      | Wal.                                   | Cloth             | 37                       | 85.00          |  |                  |



# Speakers

Audioson-Kirksaeter Monitor



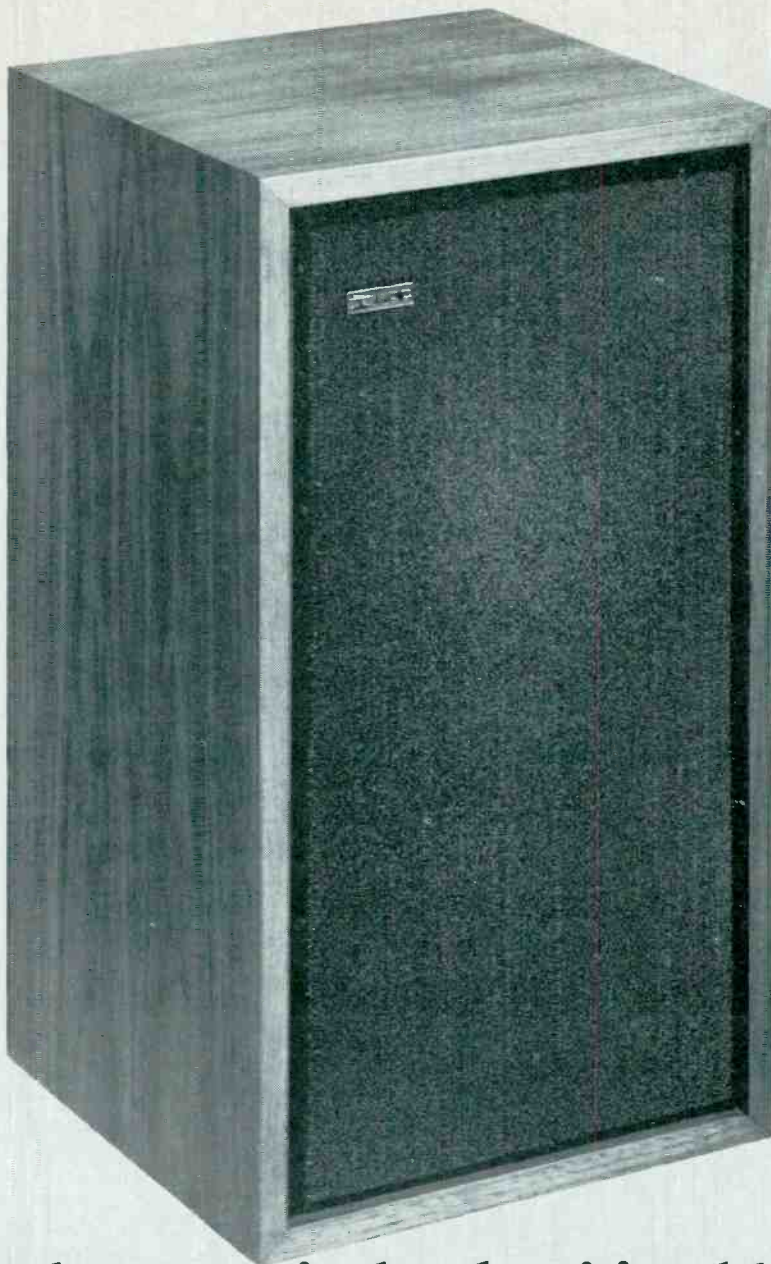
Bose 901



Cerwin-Vega 212



| MANUFACTURER         | MODEL             | WOOFER        |                           |                |               | MID-RANGE |               | TWEETER  |              | Overall freq. resp., Hz to kHz<br>± 2 db | Ampl. pwr. for avg. room, W | Pwr. handling capacity (RMS cont) | Crossover frequency (res), Hz | Impedance, ohms                    | Enclosure dimensions,<br>W x D x H, in. | Wood finish         | Grille material<br>color | Weight, lbs. | Price (per pair?)   | SPECIAL FEATURES |
|----------------------|-------------------|---------------|---------------------------|----------------|---------------|-----------|---------------|----------|--------------|--|-----------------------------|-----------------------------------|-------------------------------|------------------------------------|---|---------------------|--------------------------|--------------|---|------------------|
|                      |                   | Diameter, in. | Resonance (in system), Hz | Enclosure type | Diameter, in. | Type      | Diameter, in. | Type     |              |  |                             |                                   |                               |                                    |   |                     |                          |              |   |                  |
| AUDIO PROJECT        | V                 |               |                           | Acous. susp.   | (9) 5         | Cone      |               | PZ x-tal | 25-22k ± 3   | 30                                       | 180                         | ***                               | 8                             | 20 x 14 x 13                       | Wal.                                    | Cloth, dk. brn.     | 43                       | 500.00 pr.   | W. eqizr.; *radiating; **full range; ***capacitorless.                |                  |
| AUDIO RESEARCH       | Tympani I         |               |                           |                |               |           |               |          | 50-15k ± 2   | 50-500                                   | 100                         | 1-3k; 3200 built in               | 8                             | 4 1/2 x 6' each                    | no                                      | Cloth, sev. opt.    | 160/pr.                  | 995.00 pr.   | Magneplanar™ Idsprk.  |                  |
| AUDIOSON KIRKSAETER  | 35                | 8             |                           | Acous. susp.   | 1 1/2         | Dome      | 1             | Dome     | 30-20k       | 15                                       | 35                          | 3500                              | 4-8                           | 18 x 8 x 9                         | Wal.                                    | Cloth, brn.         | 14                       | 199.90       |   |                  |
|                      | 50                | 10            |                           | Acous. susp.   | 1 1/2         | Dome      | 1             | Dome     | 22-22k       | 25                                       | 50                          | 1200; 5500                        | 4-8                           | 18 x 9 3/4 x 11 1/4                | Wal.                                    | Cloth, brn.         | 22                       | 399.90       |   |                  |
|                      | 70                | 12            |                           | Acous. susp.   | 1 1/2         | Dome      | (2) 1         | Dome     | 20-22k       | 30                                       | 70                          | 1200; 5500                        | 4-8                           | 22 1/2 x 11 x 13                   | Wal.                                    | Cloth, brn.         | 40 1/2                   | 599.90       |   |                  |
|                      | 100               | (2) 10        |                           | Acous. susp.   | (2) 1 1/2     | Dome      | (2) 1         | Dome     | 18-22k       | 35-50                                    | 100                         | 1200; 5500                        | 4-8                           | 29 1/2 x 12 x 16 1/2               | Wal.                                    | Cloth, brn.         | 66                       | 999.90       |   |                  |
| AVID                 | 100               | 8             | 60                        | Acous.         |               | 1 1/2     | Cone          |          | 40-18k ± 5   | 10                                       | 75                          | 2500                              |                               | 13 x 8 1/2 x 24 1/2                | Wal.                                    | Knit fabric         | 22                       | 79.50*       | Fuse prot.; 3 pos. frnt. mntd. bal. swit. *\$5.00 higher in the West. |                  |
|                      | 102               | 10            | 47                        | Acous.         |               | 1         | Dome          |          | 35-18k ± 5   | 15                                       | 100                         | 2200                              | 8                             | 15 x 9 3/4 x 25                    | Wal.                                    | Knit fabric         | 36                       | 109.50*      | *Same as above.   |                  |
|                      | 103               | 10            | 47                        | Acous.         | 4 1/2         | Cone      | 1             | Dome     | 35-18k ± 5   | 20                                       | 150                         | 500; 3500                         | 8                             | 15 x 9 3/4 x 25                    | Wal.                                    | Knit fabric         | 38                       | 139.50*      | *Same as above; 5 pos. frnt. mntd. high freq. bal. swit.; base incl.  |                  |
| B & O                | 5700              | (2) 10        |                           | *              | 2 1/2         | Dome      | 3/4           | Dome     | 35-20k ± 4   | 20                                       | 60                          | 550; 7000                         | 4-8                           | 26 x 14 1/4 x 11 1/4               | Rose                                    | Cloth, blk.         | 48                       | 360.00 ea.   | *Passive bass rad.  |                  |
|                      | 4702              | 2 x 7 1/2     |                           | Acous. susp.   | 5             | Cone      | 1 1/2         | Dome     | 50-15k ± 4   | 15                                       | 60                          | 500; 3000                         | 4                             | 23 x 11 1/2 x 11 1/2               | Rose                                    | Cloth, blk.         | 29                       | 220.00 ea.   |   |                  |
|                      | 3702              | 8             |                           | Acous. susp.   | 3 3/4         | Cone      | 1             | Dome     | 50-16k ± 4   | 15                                       | 40                          | 1000; 4000                        | 4                             | 19 3/4 x 10 x 10                   | Rose                                    | Cloth, blk.         | 20                       | 145.00 ea.   |   |                  |
|                      | 2702              | 7             |                           | Acous. susp.   |               | 1 1/2     | Dome          |          | 58-15k ± 4   | 15                                       | 25                          | 3000                              | 4                             | 16 x 8 x 8                         | Rose                                    | Cloth, blk.         | 12                       | 100.00 ea.   |   |                  |
| B&W (Linear Devices) | 70CA              | 13            |                           | Acous. susp.   |               |           | (11)          | ES       | 22-18k ± 2   | 60                                       | 50                          | 400                               | 8                             | 27 x 15 1/2 x 32 1/2               | Wal./wte.                               | Cloth; brn. blk.    | 80                       | 660.00       |   |                  |
|                      | DM2a              | 8             |                           | Trans. line    | 1 1/2         | Dome      | 1             | Dome     | 50-20k ± 2   | 30                                       | 50                          | 3.5k; 14k                         | 8                             | 14 x 13 3/4 x 25 1/2               | Wal./wte.                               | Cloth; brn. blk.    | 47                       | 300.00       | Opt. pedestal.  |                  |
|                      | DM4               | 8             |                           | Bass reflex    | 1 1/2         | Dome      | 1             | Dome     | 50-20k ± 4   | 15                                       | 25                          | 3.5k; 14k                         | 8                             | 10 x 10 x 21                       | Wal./wte.                               | Cloth; brn. blk.    | 24                       | 180.00       |   |                  |
| BOSE                 | 901               |               |                           | *              | (9) 4 1/2     | Cone      |               |          |              | 25                                       | 270                         |                                   | 8                             | 20 1/2 x 12 1/2 x 12 1/4           | Wal.                                    | Cloth, bge. or brn. | 33                       | 525.00 pr.   | *Dir./reflecting; no x-overs; active equalizer.                       |                  |
|                      | 501               | 10            | 55                        | Acous. susp.   |               |           | (2) 3         | Cone     |              | 20                                       | 100                         | 1700                              | 4                             | 14 1/2 x 14 1/2 x 24               | Wal./vinyl                              | Cloth, brn.         | 38                       | 139.00       | Dir./reflecting; floor standing.                                      |                  |
| CERWIN-VEGA          | Magna-stat I      | 12            | 38                        | duct. refl.    | 4x4           | *         |               |          | 30-25k ± 2.5 | 2  | 100                         | 250                               | 4-8                           | 15 x 15 1/2 x 29                   | Wal.                                    | Cloth, choice       | 60                       | 398.00 ea.   | *4x4 rad. dia   |                  |
|                      | 212               | 12            | 40                        | duct. refl.    | 5             | Cone      | 2 1/2         | Dhorm    | 35-20k ± 3.5 | 1  | 100                         | 300; 5000                         | 4-8                           | 15 x 15 1/2 x 26                   | Wal.                                    | Cloth, choice       | 60                       | 199.50 ea.   |   |                  |
|                      | 320 Mod. Sys.     | 15 or (2) 12  | 34                        | duct. refl.    | 12            | Cone      | (2) 2 1/2 2x6 | Dhorm    | 30-20k ± 3   | 1/2                                      | 150                         | 125; 1500; 4000                   | 8                             | Mt- 18 x 6 x 16 3/4 B-20 x 25 x 25 | Wal.                                    | Cloth, red & blk.   | 41                       | 499.00 ea.   |   |                  |
|                      | 26                | 12            | 43                        | duct. refl.    |               | 2 1/2     | Dhorm         |          | 30-25k ± 4   | 2  | 60                          | 2500                              | 4-8                           | 14 1/2 x 12 x 12 1/2               | Wal.                                    | Cloth, choice       | 55                       | 279.00       |   |                  |
| CREATIVE             | 90                | 12            |                           | Acous. susp.   | 10            | Horn      | 2 1/2         |          | 30-20k       |  | 40                          | 4000; 8000                        | 8                             | 14 1/4 x 14 1/4 x 23 3/4           |   |                     | 41                       | 159.95 ea.   | Mid and hi contls.  |                  |
|                      | 99                | 15            |                           | Acous. susp.   | 5             |           | 1             | Dome     | 30-20k       |  | 55                          | 700; 3000                         | 8                             | 20 3/4 x 17 x 25 1/2               | Wal.                                    |                     | 70                       | 225.00 ea.   | Opt. marble or smkd. glass top. \$249.95.                             |                  |
|                      | 100               | 12            |                           | Acous. susp.   | 5             |           | 1             | Dome     | 30-20k       |  | 50                          | 700; 3000                         | 8                             | 14 1/4 x 12 1/4 x 23 3/4           |   |                     | 42 1/2                   | 189.95 ea.   |   |                  |
|                      | 200               | 10            |                           | Acous. susp.   | 5             |           | 1             | Dome     | 30-20k       |  | 40                          | 700; 3000                         | 8                             | 12 3/4 x 12 1/4 x 22               |   |                     | 27                       | 99.95 ea.    |   |                  |
| CRISMAN              | Book binder Mk II | 8             | 55                        | Acous. susp.   |               |           | 5x2           | Horn     | 50-18k       | 10                                       | 35                          | 3500                              | 8                             | 21 x 12 x 12                       | Wal.                                    | Cloth, choice       | 35                       | 98.00 ea.    | Cont. adj. x-over contl.  |                  |
|                      | Glendinning Mk V  | 12            | 40                        | Acous. susp.   | 10x4          | Horn      | 5x2           | Horn     | 40-18k       | 7  | 40                          | 1000; 3500                        | 8                             | 29 x 15 x 15                       | Wal.                                    | Cloth, choice       | 65                       | 165.00 ea.   | 2 cont. adj. x-over contls.   |                  |
|                      | Heffa-lump Mk VII | 15            | 35                        | Acous. susp.   | 10x4          | Horn      | 5x2           | Horn     | 35-18k       | 8  | 50                          | 1000; 3500                        | 8                             | 31 x 18 x 18                       | Wal.                                    | Cloth, choice       | 83                       | 198.00 ea.   |   |                  |
|                      | Henry III         | 15            | 25                        | Refl.          | 12 x 5        | Horn      | 8x3           | Horn     | 25-23k       | 15                                       | 90                          | 800; 3500                         | 8                             | 31 x 21 x 18                       | Wal.                                    | Cloth, choice       | 120                      | 498.00 ea.   |   |                  |
|                      | Mk IX             |               |                           |                |               |           |               |          |              |  |                             |                                   |                               |                                    |   |                     |                          |              |   |                  |



## The new ADC-XT 10.

If you believe, as we do, that the ultimate test of any speaker is its ability to produce a true audible analog of the electrical signal fed to it, you'll be very impressed with the new XT 10.

The XT 10 is a two way, three driver, system employing a newly developed ten inch, acoustic suspension woofer with an extremely rigid, light weight cone and a specially treated surround that permit exceptionally linear excursions.

Matching the XT 10's outstanding low frequency performance are two wide dispersion tweeters that extend flat frequency response to the limits of audibility (see accompanying frequency response curve) and significantly improve power handling capacity.

All three drivers are mounted in a beautifully finished, non-resonant, walnut enclosure. And in place of the conventional grille cloth is an elegant new foam grille.

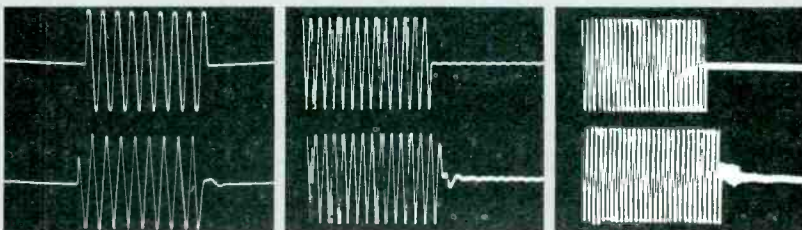
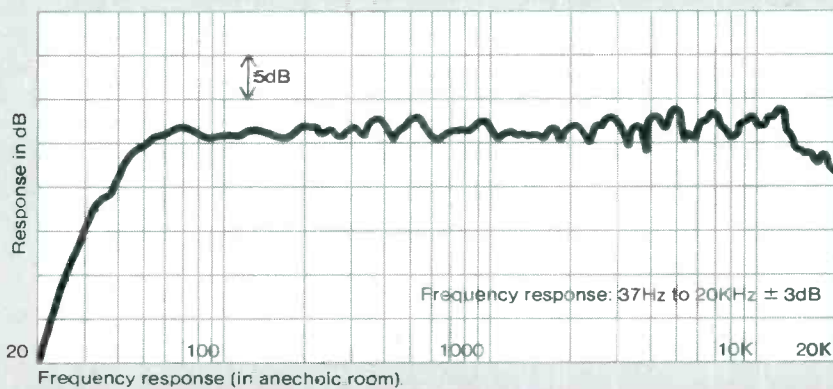
An extraordinarily accurate transducer, the XT 10 is characterized by very flat frequency response, excellent high frequency dispersion and extremely low distortion. Finally, it is distinguished by outstanding transient response assuring exceptional clarity and definition.

As a result, the ADC-XT 10 rivals and in many instances, surpasses the performance of units costing several times as much.

But why not experience for yourself what a truly well behaved speaker sounds like. Audition the XT 10 at your ADC dealer now.

For more detailed information on the ADC-XT 10 write: Audio Dynamics Corporation, Pickett District Road, New Milford, Conn. 06776.

## It does precisely what it's told.



Tone bursts at 500Hz, 1200Hz, 15,000Hz  
Virtually identical waveforms from signal generator above  
and speaker below demonstrate superior transient response.

 **Audio Dynamics  
Corporation**

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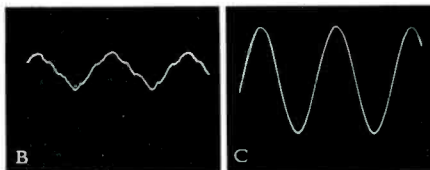
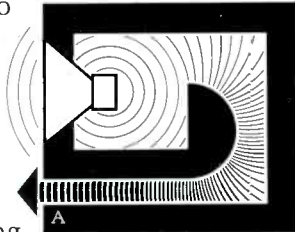
**Now BIC Venturi puts to rest  
some of the fables, fairytales, folklore,  
hearsay and humbug  
about speakers.**



## Fable

*Extended bass with low distortion requires a big cabinet.*

Some conventional designs are relatively efficient, but are large. Others are small and capable of good bass response, but extremely inefficient. The Venturi principle (patent pending) transforms air motion velocity within the speaker enclosure to realize amplified magnitudes of bass energy at the Venturi-coupled duct as much as 140 times (Fig. A) that normally derived from a woofer. And the filtering action achieves phenomenally pure signal (Scope Photos B & C). Result: pure extended bass from a small enclosure.



B—Shows output of low frequency driver when driven at a freq. of 22 Hz. Sound pressure reading, 90 dB. Note: poor waveform.

C—Output of Venturi coupled duct, (under the same conditions as Fig. B.) Sound pressure reading 111.5 dB, (140 times more output than Fig. B) Note sinusoidal (nondistorted) appearance.

## Fairytale

*It's okay for midrange speakers to cross over to a tweeter at any frequency.*

Midrange speakers cover from about 800 Hz to 6000 Hz. However, the ear is most sensitive to midrange frequencies. Distortion created in this range from crossover network action reduces articulation and musical definition. BIC Venturi's newly designed Biconex horn (patents pending) was designed to match the high efficiency of the bass section and operates smoothly all the way up to 15,000 Hz, without interruption. A newly designed super tweeter extends response to 23,000 Hz, preserving the original sonic balance and musical timbre of the instruments originating in the lower frequencies.

## Folklore

*Wide dispersion only in one plane is sufficient.*

Conventional horns suffer from musical coloration and are limited to wide-angle dispersion in one plane. Since speakers can be positioned horizontally or vertically, you can miss those frequencies so necessary for musical

accuracy. Metallic coloration is eliminated in the Biconex horn by making it of a special inert substance. The combination of conical and exponential horn flares

with a square diffraction mouth results in measurably wider dispersion, equally in all planes.



## Hearsay

*A speaker can't achieve high efficiency with high power handling in a small cabinet.*

It can't, if its design is governed by such limiting factors as a soft-suspension, limited cone excursion capability, trapped air masses, etc. Freed from these limitations by the unique Venturi action, BIC Venturi speakers use rugged drivers capable of great excursion and equipped with voice coil assemblies that handle high power without "bottoming" or danger of destruction. The combination of increased efficiency and high power handling expands the useful dynamic range of your music system. Loud musical passages are reproduced faithfully, without strain; quieter moments, effortlessly.

## Humbug

*You can't retain balanced tonal response at all listening levels.*

We hear far less of the bass and treble ranges at moderate to low listening levels than at very loud levels. Amplifier "loudness" or "contour" switches are fixed rate

devices which in practice are defeated by the differences in speaker efficiency. The solution: a dynamically acting tonal balance circuit (patents pending) adjusts speaker response as its sound pressure output changes with amplifier volume control settings. You hear aurally "flat" musical reproduction at background, average, or even ear-shattering discoteque levels—automatically.

## A system for every requirement

FORMULA 2. The most sensitive, highest power handling speaker system of its size (19<sup>3</sup>/<sub>4</sub> x 12 x 11<sup>1</sup>/<sub>2</sub>"). Heavy duty 8" woofer, Biconex mid range, super tweeter. Use with amplifiers rated from 15 watts to as much as 75 watts RMS per channel. Response: 30 Hz to 23,000 Hz. Dispersion: 120° x 120° \$98 each.

FORMULA 4. Extends pure bass to 25 Hz. Has 10" woofer, Biconex midrange, super tweeter. Even greater efficiency and will handle amplifiers rated up to 100 watts. Dispersion: 120° x 120° Size: 25 x 13<sup>1</sup>/<sub>4</sub> x 13" \$136 each.

FORMULA 6. Reaches very limits of bass and treble perception (20 to 23,000 Hz). Six elements: 12" woofer complemented by 5" cone for upper bass/lower midrange; pair of Biconex horns and pair of super tweeter angularly positioned to increase high frequency dispersion (160° x 160°). Size: 26<sup>1</sup>/<sub>4</sub> x 15<sup>3</sup>/<sub>4</sub> x 14<sup>3</sup>/<sub>4</sub>" \$239 each.

Sturdily constructed enclosures are finished in genuine oiled walnut veneer. Removable grilles in choice of 7 colors. Optional bases for floor standing placement. Write for informative brochure. Better still, audition today's most advanced speakers at your BIC Venturi dealer.



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# BIC VENTURI

Check No. 16 on Reader Service Card



# Speakers



Crown ES-212



EPI 100



ESS Seven

| MANUFACTURER     | MODEL              | WOOFER        |                           |                     |               | MID-RANGE |               | TWEETER      |              | Overall freq. resp. Hz to kHz<br>± 1 db | Ampl. pwr. for avg. room, W | Pwr. handling capacity (RMS cont) | Crossover frequency (res.), Hz | Impedance, ohms | Enclosure dimensions,<br>W x D x H, in. | Wood finish | Grille material<br>color  | Weight, lbs.  | Price (per pair)   | SPECIAL FEATURES |
|------------------|--------------------|---------------|---------------------------|---------------------|---------------|-----------|---------------|--------------|--------------|---|-----------------------------|-----------------------------------|--------------------------------|-----------------|---|-------------|---|---|--|------------------|
|                  |                    | Diameter, in. | Resonance (in system), Hz | Enclosure type      | Diameter, in. | Type      | Diameter, in. | Type         |              |   |                             |                                   |                                |                 |   |             |   |   |  |                  |
| CROWN            | ES 224             | (2) 10        | 45                        | Acous. susp.        |               |           | (24) ES pnls  | 22-30k       | 150          | 600                                     | 350                         | 4                                 | 26 x 28 x 60                   | Wal.            | Cloth, blk.                             | 135         | 1165.00 ea.   | Solid state protect. circuitry.   |  |                  |
|                  | ES 212             | (2) 10        | 45                        | Acous. susp.        |               |           | (12) ES pnls  | 22-30k       | 150          | 300                                     | 375                         | 4                                 | 26 x 21 x 42                   | Wal.            | Cloth, blk.                             | 110         | 795.00 ea.  | Same as above.  |  |                  |
|                  | ES 26              | (2) 10        | 45                        | Acous. susp.        |               |           | (6) ES pnls   | 22-30k       | 75           | 150                                     | 1500                        | 4                                 | 24 x 12 x 27½                  | Wal.            | Cloth, blk.                             | 70          | 495.00 ea.  | Same as above.  |  |                  |
|                  | ES 14              | 10            | 45                        | Acous. susp.        |               |           | (4) ES pnls   | 22-30k       | 40           | 75                                      | 1500                        | 8                                 | 18 x 12 x 27½                  | Wal.            | Cloth, blk.                             | 60          | 335.00 ea.  | Same as above.  |  |                  |
| DATHAR ACOUSTICS | DA 1               | (6) 5         | 26                        | *                   |               | (6) 2¼    | 22-22k ± 3    | 30           | 125          | **                                      | 8                           | 15 x 25 x 13¼                     | Wal.                           | Foam; brn.      | 57½                                     |             | 103 vents; **hi-pass filter for tweeters.   |   |  |                  |
| DAYTON WRIGHT    | X6-8 Mk II         |               |                           |                     |               |           | 40-16k ± 3    | 50           | 600          | none                                    | 8                           | 39½ x 9½ x 39½                    | blk. satin ano.                | Cloth, blk.     | 54 ea.                                  | 1980.00 pr. | 8 full rng. electro-static drives; mtc. transformer; bias sply. unit; conn. cables. |   |  |                  |
| DESIGN ACOUSTICS | D-12               | 10            | 47                        | Vent.               | 5             | Cone      | 2½            | Cone         | 30-15k ± 2   | 20                                      | 50                          | 700: 1500                         | 8                              | 30" high w/ped. | Wal.                                    | Cloth, blk. | 45  | 349.00 ea.  | Multi. tweet. (9); grille color opt.                         |                  |
|                  | D-6                | 10            | 50                        | Vent.               | 5             | Cone      | 2½            | Cone         | 30-15k ± 3   | 20                                      | 50                          | 700: 2000                         | 8                              | 16½ x 13¾ x 24½ | Wal.                                    | Cloth, blk. | 30  | 249.00  | Multi. tweet. (5); grille color opt.                         |                  |
| DUKANE           | 6A425              | 15            |                           | w/acous. lens       |               |           |               | 40-20k       |              | 50                                      | 1000                        | 25                                | 32 x 18½ x 28                  | Wal.            | Cloth, brn.                             | 120         |   |   |  |                  |
| DYNACO           | A-50               | (2) 10        |                           | Acous. susp. *      |               | 1½        | Dome          | 35-17k ± 5   | 25           | 50                                      | 1k                          | 8                                 | 21½ x 10 x 28                  | Wal.            | Linen, bge.                             | 47          | 189.00  | *Dual chmbr.  |  |                  |
|                  | A-35               | 10            |                           | Acous. susp. *      |               | 1½        | Dome          | 38-17k ± 5   | 20           | 35                                      | 1.2k                        | 8                                 | 12½ x 10 x 22½                 | Wal.            | Linen, bge.                             | 30          | 120.00  | *As above.  |  |                  |
|                  | A-25               | 10            |                           | Resist. loaded vent |               | 1½        | Dome          | 44-15k ± 5   | 20           | 35                                      | 1.5k                        | 8                                 | 11½ x 10 x 20                  | Wal.            | Linen, bge.                             | 24          | 89.00   | Also in rose or teak, \$99.00.  |  |                  |
|                  | A-10               | 6½            |                           | Resist. loaded vent |               | 1½        | Dome          | 60-15k ± 5   | 15           | 25                                      | 2.5k                        | 8                                 | 8½ x 8 x 15                    | Wal.            | Linen, bge.                             | 30*         | 104.00*   | *Pair.  |  |                  |
| EPI              | 50                 | 6             | 55                        | Acous. susp. *      | 4             | Cone      | 1             | Acous.       | 55-18k ± 3   | 10                                      | 35                          | 1800                              | 8                              | 10 x 13 x 8     | Wal.                                    | Cloth, blk. | 15  | 110.00  | *Organ Pipe Principle<br>*Cabinet provides base from 50-200. |                  |
|                  | MT-175             |               |                           |                     |               |           |               | 50-10k ± 5   | 4            | 25                                      |                             | 8                                 | 32 x 8½ x 8½                   |                 | Cloth, blk.                             | 15          | 120.00  |   |  |                  |
|                  | 100                | 8             | 45                        | Acous. susp.        |               | 1         | Acous.        | 45-18k ± 3   | 12           | 50                                      | 1800                        | 8                                 | 9 x 11 x 21                    | Wal.            | Cloth, blk.                             | 25          | 188.00  |   |  |                  |
|                  | 150                | 8             | 35                        | Acous. susp.        |               | 1         | Acous.        | 35-18k ± 3   | 15           | 60                                      | 1800                        | 8                                 | 11 x 15 x 25                   | Wal.            | Cloth, blk.                             | 30          | 278.00  |   |  |                  |
|                  | 201                | 8             | 33                        | Acous. susp.        |               | 1         | Acous.        | 30 x 18k ± 3 | 20           | 100                                     | 1800                        | 4/16                              | 11 x 18 x 28                   | Wal.            | Cloth, blk.                             | 40          | 398.00  |   |  |                  |
|                  | 202                | 8             | 40                        | Acous. susp.        |               | 1         | Acous.        | 35-18k ± 3   | 20           | 100                                     | 1800                        | 4/16                              | 15 x 15 x 25                   | Wal.            | Cloth, blk.                             | 40          | 438.00  |   |  |                  |
|                  | 400                | 6             | 33                        | Acous. susp.        |               | 1         | Acous.        | 28-18k ± 3   | 30           | 200                                     | 1800                        | 8                                 | 14 x 14 x 38                   | Wal.            | Cloth, blk.                             | 90          | 389.00  |   |  |                  |
|                  | 602                | 8             | 40                        | Acous. susp.        |               | 1         | Acous.        | 35-18k ± 3   | 30           | 150                                     | 1800                        | 4                                 | 15 x 24 x 16                   | Wal.            | Cloth, blk.                             | 60          | 498.00  |   |  |                  |
| 1000             | 8                  | 25            | Acous. susp.              |                     | 1             | Acous.    | 22-18k ± 3    | 60           | 250          | 1800                                    | 8                           | 18 x 18 x 75                      | Wal.                           | Cloth, blk.     | 180                                     | 2000.00     |   |   |  |                  |
| ESS              | Heil AMT 1         | 10            | 30                        | Resis. port         | 2x5           | *         | *             | 45-24k ± 2   | 15           |   |                             | 4                                 | 14½ x 14½ x 31                 | Wal.            | Cloth, brn./blk.                        |             | 299.00 ea.  | *Air motion trans.  |  |                  |
|                  | Tempest            | 12            | 30                        | Resis. port         |               |           | 1             | Dome         | 35-18k ± 4   | 20                                      |                             | 4                                 | 15½ x 12¼ x 27                 | Wal.            | Cloth, brn./blk.                        |             | 149.00 ea.  | Hi accel. drivers.  |  |                  |
|                  | Satellite 4 System | 12            | 25                        | Resis. load.        | 6             | Cone      | 2¼            | Cone         | 35-20k ± 3.5 | 15                                      |                             | 8                                 | 10 w/h 7 d. 18½ x 20 x 17      | Wal.            | Cloth, brn./blk.                        |             | 579.00 compl. sys.  | Designed for 4-chan.; 4 satellites. 1 bass cube; 100 W. rms amp & x-over. |  |                  |
|                  | Seven              | 9x12          | 40                        | Resis. port         | 5             | Cone      | 2¼            | Cone         | 35-20k ± 3.5 | 25                                      |                             | 8                                 | 16 x 14 x 27                   | Wal.            | Cloth, brn./blk.                        |             | 239.00 ea.  | Foam plast. oval woofer for zero cone breakup.                            |  |                  |

**\$600 is a lot of money for a speaker.**



## **The AR-LST is a lot of speaker.**

The AR-LST (Laboratory Standard Transducer) was developed to fill the needs of audio professionals, but its unsurpassed quality has made it greatly desired for quality home music systems.

The LST incorporates a total of 9 drivers mounted on three surfaces to provide extremely broad dispersion. And while it normally has flat frequency response, a front-panel knob may be used to select any of six pre-determined frequency response curves to suit different listening requirements and personal preferences.

You can get a great AR speaker for less money, if you're willing to settle for a little less speaker. If you've listened to the LST, you won't.

Write us for complete detailed information.



Acoustic Research, Inc. 10 American Drive, Norwood, Mass. 02062

*'Lab measurements and listening tests confirm that this is an outstanding reproducer, second to none, in linear wide-range response and low distortion. The performance of the LST is truly prodigious. Its response was found to be among the most linear yet measured for a loudspeaker... virtually no directivity or coloration could be detected throughout the LST's range.'*

*'It actually can handle power peaks up to 553.8 watts without distortion, while furnishing an output level of 112dB, which attests both to its ruggedness and dynamic capabilities.'* HIGH FIDELITY.

*'I soon found that these speakers tell me more about the sound than any others I have ever listened to. They represent for me a reference standard that is the present day state of the speaker art.'* STEREO & HI-FI TIMES.

*'In a word, it is superlative. To my ears, it can reproduce music from recordings with a verity I have never before experienced. For me, it is now the system against which others must be judged.'* AMERICAN RECORD GUIDE.

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# Speakers



Empire Grenadier 7500MII



Equasound IIa



Fairfax FESA



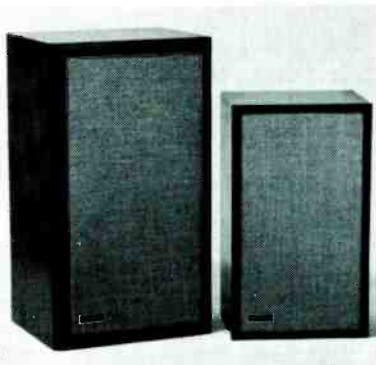
Fisher ST-465

| MANUFACTURER  | MODEL            | WOOFER        |                           |                | MID-RANGE     |            | TWEETER         |                  | Overall freq. resp., Hz to kHz |      | Ampl. pow. for avg. room, W | Pwr. handling capacity (RMS cont) | Crossover frequency (res), Hz | Impedance, ohms          | Enclosure dimensions, W x D x H, in. | Wood finish         | Grille material color | Weight, lbs.         | Price (per pair)   | SPECIAL FEATURES   |
|---------------|------------------|---------------|---------------------------|----------------|---------------|------------|-----------------|------------------|--------------------------------|------|-----------------------------|-----------------------------------|-------------------------------|--------------------------|--------------------------------------|---------------------|-----------------------|----------------------|--|--|
|               |                  | Diameter, in. | Resonance (in system), Hz | Enclosure type | Diameter, in. | Type       | Diameter, in.   | Type             | ± dB                           | ± dB |                             |                                   |                               |                          |                                      |                     |                       |                      |  |  |
| ELECTRO-MUSIC | 450              | 15            | 55                        | Bass refl.     | (2) 6x9       | Cone       | 1               | Dome             | *                              | *    | *                           | 800                               | 5K                            | *                        | 29 1/2 x 19 1/2 x 33                 | Wal.                | Cloth, brn & gold     | 227/ pr.             | 995.00/ pr.  | *Input 1.5V rms across 10K. 2 built-in 50 W rms amps; moving baffle sys. cuts standing waves |
|               | 430              | 12            | 60                        | Bass refl.     | 3 x 9 1/2     | Horn       |                 |                  | *                              | *    | *                           | 800                               | *                             | *                        | 24 1/2 x 18 1/2 x 29 1/2             | Wal.                | Cloth, brn.           | 200/ pr.             | 695.00/ pr.  | *As above  |
| ELECTRO-VOICE | Inter-face: A    | 8/12          | 32                        | Vented piston  |               |            | (2) 2 1/2       | Dome/piston      | 30-18k ± 3                     | 30   | *                           | **                                | 14 x 7 3/4 x 22               | Wal.                     | Dbt. knit cloth blk.                 |                     |                       | 400.00 pr. w/ equal. | *Elect. equalizer; **use tape monitor.   |  |
|               | E-V 13           | 8             |                           | Acous. susp.   |               |            | 2 1/2           | Cone             | 50-18k                         |      |                             | 1500                              | 8                             | 19 x 8 1/2 x 10          | Wal. vinyl                           | Cloth, brn.         | 15                    | 59.95                | Bal. contl.  |  |
| ELITE         | E-202            | 12            | 35                        | Acous. susp.   | 6             | Cone       | 4               | Flare ring       | 30-20k ± 4                     | 10   | 45                          | 3000; 8500                        | 8                             | 14 1/4 x 12 1/4 x 23 1/4 | Wal.                                 | Cloth brn/blk       | 40                    |                      |  |  |
| EMPIRE        | 9500MII          | (2) 12        | 20                        | Horn load.     | (2) 5         | Dome       | (2) 1           | Dome             | 25-20k ± 3                     | 10   | 200                         | 450; 5000                         | 8                             | 30 x 20 1/2 x 28         | Wal.                                 | none                | 120                   | 349.95               | Incl. imprtd. marble top; w/wal. top. \$319.95   |  |
|               | 7500MII          | 15            | 25                        | Horn load.     | 5             | Dome       | 1               | Dome             | 25-20k ± 3                     | 10   | 100                         | 450; 5000                         | 8                             | 20 dia. x 27             | Wal.                                 | none                | 90                    | 199.95               | Incl. imprtd. marble top; w/wal. top. \$184.95   |  |
|               | 6500             | 12            | 30                        | Horn load.     | 4             | Cone       | 2               | Cone             | 25-18k ± 3                     | 10   | 75                          | 500; 5000                         | 8                             | *                        | none                                 | 45                  | 139.95                | *Molded white.       |  |  |
|               | 6000M            | 10            | 40                        | Horn load.     | 4             | Cone       | 2               | Cone             | 30-18k ± 3                     | 10   | 75                          | 500; 5000                         | 8                             | 18 dia. x 24             | Wal.                                 | none                | 60                    | 119.95               | Incl. imprtd. marble top; w/wal. top. \$119.95   |  |
| EQUASOUND     | IIa              | 10            | 30                        | Reflex         | 4 1/2         | Cone       | 1               | Dome             | 30-20k ± 3                     | 3    | 70                          | 1000; 3000                        | 4                             | 12 1/2 x 12 1/2 x 41 1/2 | Wal.                                 | Cloth, opt.         | 65                    | 249.00               | 3 1/2 ft. col. opt. equal. (2-ch.); \$100.00; colors: blk., red white  |  |
| FAIRFAX       | F2A              | 8             | 45                        | Bass refl.     |               |            | 3 1/2           | Cone             | 35-20k                         | 8    | 25                          | 5000                              | 8                             | 12 x 9 x 18              | Wal.                                 | Cloth, brn          | 22                    | 69.95                | 3/4" board constr.   |  |
|               | FX100B           | 8             | 45                        | Duct. port     |               |            | 3 1/2           | Cone             | 32-20k                         | 8    | 30                          | 2000                              | 8                             | 12 x 10 x 22             | Wal.                                 | Cloth, brn.         | 24                    | 89.95                | Same as above.   |  |
|               | FX-300           | 10            | 37                        | Duct. port     |               |            | 3 1/2           | Cone             | 24-20k                         | 10   | 40                          | 1500                              | 8                             | 14 x 10 1/4 x 22         | Wal.                                 | Cloth, brn.         | 26                    | 109.95               | 1" board constr.   |  |
|               | Wall of Sound II | (4) 8         | 32                        | Lab.           | 5             | Cone       | 1 (2) 3 1/2     | Dome Cone        | 20-20k                         | 15   | 60                          | 750; 2000; 4000                   | 8                             | 23 1/2 x 6 1/2 x 39 1/4  | Wal.                                 | Cloth, blk.         | 60                    | 279.95               | Same as above.   |  |
|               | Wall of Sound I  | (6) 8         | 30                        | Lab.           | (2) 5         | Cone       | (2) 1 (2) 3 1/2 | Dome Cone        | 20-20k                         | 20   | 100                         | 750; 2000; 4000; 9000             | 6.5                           | 30 x 6 1/2 x 52          | Wal.                                 | Cloth, blk.         | 125                   | 399.95               | Same as above.   |  |
| FISHER        | XP7S             | 12            | 65                        | Acous. susp.   | 5             | Cone       | 3               | Cone             | 31-20k                         | 10   | 30                          | 600; 3000                         | 8                             | 13 1/2 x 24 1/2 x 12     | Wal.                                 | Sculpt. cloth, brn. | 32                    | 169.95               |  |  |
|               | XP65S            | 10            | 68                        | Acous. susp.   | 5             | Cone       | 3               | Cone             | 33-20k                         | 10   | 25                          | 600; 3000                         | 8                             | 23 x 13 x 10             | Wal.                                 | Sculpt. cloth, brn. | 27                    | 109.95               |  |  |
|               | ST550            | 15            | 52                        | Acous. susp.   | (2) 1 1/2     | Soft dome  | (2) 2 (2) 1 1/2 | Cone Soft dome   | 35-20k ± 5                     | 25   | 50                          | 600; 6000; 1000                   | 8                             | 30 x 17 x 12 3/4         | Wal.                                 | Sculpt. cloth, brn. | 76                    | 349.95               | Side-firing disp. domes; 2 angl. mdrng. domes; 2 angl. tweet. 530 sim. but w/o soft domes or angl. mdrng.; \$249.95. |  |
|               | ST500            | 12            | 55                        | Acous. susp.   | 1 1/2         | Soft dome  | (2) 2           | Cone w/ctr. dome | 40-20k ± 5                     | 25   | 25                          | 600; 6000                         | 8                             | 26 x 15 x 12             | Wal.                                 | Sculpt. cloth, brn. | 46                    | 199.95               | 1 set angl. tweet.   |  |
|               | ST465            | 12            | 42                        | Acous. susp.   | 3 1/2         | Flare dome | 1               | Mylar dome       | 40-20k                         | 25   | 50                          | 450; 5000                         | 6-8                           | 24 1/2 x 14 1/2 x 11 1/2 | Wal.                                 | Sculpt. cloth, blue | 39                    | 169.95               | Butyl-edge woofer; 2 rear lev. contls.   |  |
|               | PL 6             |               | 45                        |                |               |            |                 |                  | 40-18k                         | 8    | 30                          | 1000                              | 8                             | 29 3/4 x 23 3/4 x 2 1/2  | Wal.                                 | 9 patterns          | 21                    | 138.00               | Flat poly diaph. w/woofer & tweet.; PL3 smaller, less pwrfl. version, \$79.95.                                       |  |

# Be Sure To Hear The Advents.

If you are thinking of buying some stereo equipment, Advent products are worth looking for and listening to.

There are two Advent loudspeakers (the original Advent Loudspeaker and The Smaller Advent Loudspeaker) and two Advent cassette decks (the Models 201 and 202). They are



all best sellers in their respective categories, although they have been advertised relatively little and are sold only through a limited number of dealers, chosen for their ability to understand and display what they are selling.

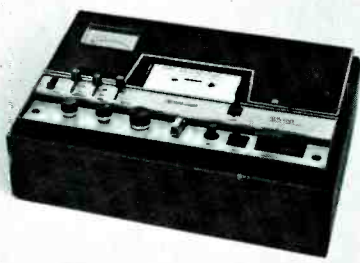
The reason for their popularity is that they do what they are represented to do. Pleased customers go out of their way to tell us and others about that.

Both Advent Loudspeakers are designed to provide the very top level of speaker performance at a fraction (half or less) of the former going cost. The only difference in performance between the two is that the original will play slightly louder in bigger rooms than The Smaller. Either of them make it possible to put together as satisfying a stereo system as you are ever likely to want for

a reasonable, thoroughly affordable amount of money. The original costs \$105-\$125, depending on cabinet finish and the part of the country it's shipped to; The Smaller costs \$70-\$75.

Both of them are intended for direct critical comparison with the most expensive and elaborate speakers available.

The Model 201 cassette deck has been called *the best* and *the state-of-the-art* cassette machine by audio reviewers, who are seldom that explicit about a product. It is the most satisfying tape machine of any kind that most music listeners can buy. It can make and play cassette recordings that equal or surpass the sound quality of the best records, and its performance also compares easily with that of far more expensive and complex open-reel tape recorders. Since cassettes are far



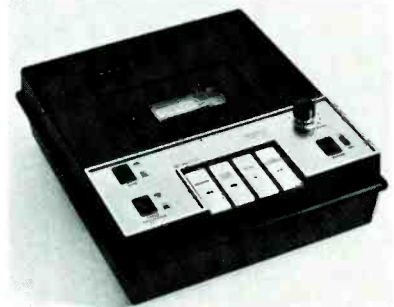
*The 201*

easier to handle than records, and subject to far less wear and tear in normal use, the 201 can add an enormous amount to the pleasure of listening to music at home. It costs \$280.

The 202 is a deck designed solely to play back cassettes. It is for people who would like the equivalent of a turntable for

commercially recorded cassettes, either because they don't want to record their own or because they already have a cassette machine that records. It costs \$130.

We also are just about to market the first real innovation



*The 202*

in television since color—a set that uses a projected image to achieve a picture more than *twenty-four square feet* in size, more than ten times the size of the biggest conventional set.

For further information on our products, including a reprint of a recent article on the new television set, please send in the coupon. We will also provide a list of the dealers where you can see and hear our equipment.

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Cambridge, Massachusetts 02139

Please send more information on your products, including the article on your VideoBeam® television set.

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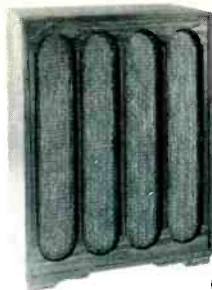
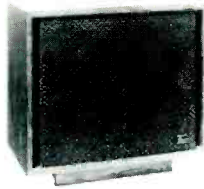
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State \_\_\_\_\_ Zip \_\_\_\_\_

**Advent Corporation, 195 Albany Street, Cambridge, Massachusetts 02139.**



# Speakers



Frazier Manhattan

GTE Sylvania AS105

Hartley  
Concertmaster

| MANUFACTURER | MODEL              | WOOFER        |                           | MID-RANGE              |                | TWEETER      |               | Overall freq. resp., Hz to kHz<br>± 1 db | Appx. SWr. for avg. room, W | Pwr. handling capacity (RMS cont) | Crossover frequency (res), Hz | Impedance, ohms             | Enclosure dimensions,<br>W x D x H, in. | Wood finish                | Grille material<br>color | Weight, lbs.             | Price (per pair?)  | SPECIAL FEATURES    |  |
|--------------|--------------------|---------------|---------------------------|------------------------|----------------|--------------|---------------|--|-----------------------------|-----------------------------------|-------------------------------|-----------------------------|---|----------------------------|--------------------------|--------------------------|--|---------------------|--|
|              |                    | Diameter, in. | Resonance (in system), Hz | Enclosure type         | Diameter, in.  | Type         | Diameter, in. |  |                             |                                   |                               |                             |   |                            |                          |                          |  |                     | Type   |
| FRAZIER      | Seven              | 12            |                           | Tuned port<br>(2)<br>4 | Cones          | (2)          | Horns         | 30-18k                                   |                             | 400;<br>3k                        | 8                             | 19 x 29<br>x 16             | Oil<br>wal.                             | Foam                       |                          | 310.00                   |  |                     |  |
|              | Mark VI            | 12            |                           | Tuned port<br>8        | Cone           |              | Horn          | 25-17k                                   |                             | 600;<br>17.5k                     | 8                             | 25 3/4 x 29<br>x 16 1/2     | Oil<br>wal.                             | Cloth                      |                          | 350.00                   |  |                     |  |
|              | Mark V             | 12            |                           | Tuned port<br>(2)<br>4 | Cone           |              | Horn          | 30-17k                                   |                             | 800;<br>3.3k                      | 8                             | 14 x 25 3/4<br>x 12         | Oil<br>wal.                             | Cloth;<br>brn.             |                          | 235.00                   |  |                     |  |
|              | Concerto           | 10            |                           | Tuned port             |                |              | Horn          | 30-17k                                   |                             | 15.k                              | 8                             | 19 x 16<br>x 17             | Oil<br>wal.                             | Foam                       |                          | 210.00                   |  |                     |  |
|              | Manhattan III      | 10            |                           | Tuned port             |                |              | Horn          | 35-17k                                   |                             | 2k                                | 8                             | 23 3/4 x 19<br>x 11 1/4     | Oil<br>wal.                             | Cloth;<br>brn.             |                          | 190.00                   |  |                     |  |
|              | Monte Carlo IV     | 8             |                           | Tuned port             |                | 3            | Cone          | 50-15k                                   |                             |                                   | 8                             | 19 x 10 3/4<br>x 11 1/4     | Oil<br>wal.                             | Cloth;<br>brn.             |                          | 85.00                    |  |                     |  |
| GTE SYLVANIA | AS85W              | 8             | 55                        | Acous. susp.           |                | 1 1/2        | Dome          | 40-20k                                   | 50                          | 3000                              | 8                             | 10 1/2 x 10 1/2<br>x 18 1/2 | Wal.                                    | Cloth.<br>blk.             | 26                       | 74.95<br>ea.             | Mid-rng./tweeter lev. swit.  |                     |  |
|              | AS105W             | 10            | 50                        | Acous. susp.           | 1 1/2          | Dome         | 1             | 30-20k                                   | 65                          | 600;<br>10000                     | 8                             | 13 3/4 x 11 1/4<br>x 24 1/4 | Wal.                                    | Cloth.<br>blk.             | 48                       | 119.95<br>ea.            | Mid-rng. lev. swit.  |                     |  |
|              | AS125B             | 12            | 42                        | Acous. susp.           | 1 1/2          | Dome         | 1             | 20-20k                                   | 100                         | 600;<br>6000                      | 8                             | 15 1/4 x 12 1/2<br>x 27 1/4 | Wal.                                    | Cloth,<br>brn.             | 76                       | 169.95<br>ea.            | 3 pos. lev. swits. for mid-rng. & tweeter.   |                     |  |
|              | AS225A             | 12            | 36                        | Acous. susp.           | 4 1/2<br>1 1/2 | Cone<br>Dome | 1             | 20-20k                                   | 150                         | 350;<br>2000;<br>9000             | 8                             | 17 1/2 x 12 1/2<br>x 28 1/2 | Wal.                                    | Mfd.<br>latt.<br>brn.      | 84                       | 249.95<br>ea.            | 3 pos. lev. swits. for lower & upper mid-rng. & tweeter; remov. grille, fin. baffle. |                     |  |
| GRACOM       | P5302/SL           | 10            |                           | Sealed                 | 6              | Cone         | (2) 1         | Dome                                     | 25-25k<br>+2<br>-8          | 17                                | 200                           | 250.<br>3k                  | 8                                       | 12 1/2 x 9 1/2<br>x 23 1/2 | Wal<br>or<br>Rose        | Metal,<br>silver         | 57   | 381.00              | 12.5k rad. angle=100°  |
|              | P4302/SL           | 8             |                           | Sealed                 | 1 1/2          | Dome         | 1             | Dome                                     | 30-25k<br>+2<br>-8          | 15                                | 150                           | 800.<br>3k                  | 8                                       | 18 x 7 1/2<br>x 9 3/4      | Wal.<br>or<br>Rose       | Metal,<br>silver         | 49   | 255.00              |  |
|              | SM640              | 10            |                           | Sealed                 | 6              | Cone         | 1             | Dome                                     | 30-25k<br>+2<br>-8          | 13                                | 100                           | 650.<br>1.6k                | 8                                       | 11 x 7 1/2<br>x 22         | Wal.<br>or<br>Rose       | Metal,<br>Silver         | 43   | 156.00              | 12.5k rad. angle=100°  |
|              | SM625              | 6 3/4         |                           | Sealed                 |                |              | 1             | Dome                                     | 45-25k<br>+4<br>-8          | 8                                 | 40                            | 1.7k                        | 8                                       | 15 x 6 3/4<br>x 8 1/2      | Wal.<br>or<br>Rose       | Metal,<br>silver         | 35   | 98.50               | Same as above.   |
| HME (HILL)   | 500C               | 8.5           | 46                        | Acous. susp.           |                | 1 1/2        | Dome          | 50-15k<br>± 7.5                          | 15                          | 60                                | 1,250                         | 6                           |   | Wal.                       | Cloth,<br>brn.           | 35                       | 239.00<br>pr.  | Sep. hi & lo fuses. |  |
|              | 750B               | 10            | 46                        | Acous. susp.           |                | 1 1/2        | Dome          | 50-15k<br>± 5                            | 25                          | 70                                | 1,250                         | 4                           | 23 x 9 3/4<br>x 14                      | Wal.                       | Cloth,<br>brn.           | 45                       | 350.00<br>pr.  | Sep. hi & lo fuses. |  |
|              | 1500               | 12            | 35                        | Acous. susp.           | (2)<br>8.5     | Cone         | (2)<br>1 1/2  | Dome                                     | 40-17.5k<br>± 5             | 35                                | 120                           | 175 &<br>1,250              | 4                                       |                            | Wal.                     | Cloth,<br>brn.           | 65<br>75   | 950.00<br>pr.       | Sep. hi, mid, & lo fuses; sep. woofer enc.                                     |
| HARTLEY      | Concert Master V   | 24            | 13                        | Semi inf.              | 10             | Poly. cone   | 7<br>1        | Dome<br>Dual cone                        | 16-25k<br>± 3               | 20                                | 50                            | 250;<br>3000;<br>6K         | 12                                      | 40 1/2 x 29<br>x 18        | Wal.                     | Cloth.<br>blk.           | 150  | 775.00/<br>pair     | Mag. susp.; cast alum. frames; Ident. cone mat.; heavy mags; 12dB/oct. x-over. |
|              | Concert Master VI  | 24            | 13                        | Semi inf.              | 10             | Poly. cone   | 7<br>1        | Dual cone<br>dome                        | 16-25k<br>± 3               | 20                                | 50                            | 250;<br>3000;<br>6K         | 12                                      | 40 1/2 x 29<br>x 18        | Wal.                     | Cloth<br>brn. &<br>gold  | 150  | 795.00/<br>pr.      | Same as above.   |
|              | Concert Master Jr. | 10            | 28                        | Acous. susp.           |                |              | 1             | Dome                                     | 30-25k<br>± 4               | 15                                | 30                            | 2500                        | 8                                       | 30 x 24<br>x 14            | Wal.                     | Cloth,<br>gold &<br>brn. | 85   | 320.00/<br>pair     | Mag. Susp.; cast alum. frame; Mediterranean styling.                           |
|              | Holton A           | 10            | 28                        | Acous. susp.           |                |              | 1             | Dome                                     | 30-25k<br>± 4               | 15                                | 30                            | 2500                        | 8                                       | 30 x 24<br>x 14            | Wal.                     | Cloth<br>blk. on<br>blk. | 85   | 300.00/<br>pair     | Same as above; tra-<br>ditional cab.   |
|              | Holton Jr.         | 10            | 28                        | Acous. susp.           |                |              | 1             | Dome                                     | 30-25k<br>± 4               | 15                                | 30                            | 2500                        | 8                                       | 30 x 15<br>x 12            | Wal.                     | Cloth<br>blk. on<br>blk. | 50   | 250.00<br>pair      | Floor unit or lge.<br>bookshelf.   |
|              | Zodiac 73          | 10            | 30                        | Acous. susp.           |                |              | 1             | Dome                                     | 38-25k<br>± 5               | 10                                | 50                            | 2500                        | 8                                       | 30 x 15<br>x 12            | Wal.                     | Foam<br>brn. &<br>mocha  | 50   | 120.00              | Treated woofer; same<br>cab. as Holton Jr.                                     |
|              | Zodiac A           | 10            | 30                        | Acous. susp.           |                |              | 1             | Dome                                     | 35-25k<br>± 5               | 10                                | 50                            | 2500                        | 8                                       | 30 x 24<br>x 14            | Wal.                     | Brn.<br>&<br>mocha       | 85   | 200.00              | Cab. same as Holton A.   |
|              | Zodiac C           | 10            | 30                        | Acous. susp.           |                |              | 1             | Dome                                     | 35-25k<br>± 5               | 10                                | 50                            | 2500                        | 8                                       | 30 x 24<br>x 14            | Wal.                     | Cloth,<br>brn. &<br>gold | 85   | 220.00              | Cab. same as Concert<br>Master Jr.   |



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The primary difference is response. As linear as our HD 414 is, the HD 424 boasts even greater accuracy—particularly at low bass and high treble frequencies. Due to an improved transducer assembly and redesigned earpiece geometry. Heard on the HD 424, low organ notes assume an additional, fundamental richness without sacrificing the "tightness" of good transient response. While violins and other high-overtone



instruments retain the additional "transparency" their overtones produce.

No less important, especially for long listening sessions, is comfort. Retaining the "unsealed" free-air feeling so many praised in the HD 414, the new HD 424 provides even less (!) pressure on the ear, distributing it over wider, thinner acoustically transparent cushions. For this reason—and an improved, cushioned headband—the HD 424 actually seems lighter than the 5 oz. HD 414, even though it is slightly heavier.

Now, there are two Sennheiser "open-aire" headphones for you to choose from. The HD 414, rated best for sound and comfort. And a new model offering something more. That's why.

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# Speakers



Hegeman I



Infinity Servo-Statik I




JBL L-26 Decade



JVC SX-3

| MANUFACTURER | MODEL              | WOOFER        |                           |                    | MID-RANGE     |       | TWEETER       |                 | Overall freq. resp., Hz to kHz | Ampl. pow. for avg. room, W | Pwr. handling capacity (RMS cont) | Crossover frequency (ies), Hz | Impedance, ohms         | Enclosure dimensions, W x D x H, in. | Wood finish    | Grille material/color    | Weight, lbs. | Price (per pair?)  | SPECIAL FEATURES                                       |
|--------------|--------------------|---------------|---------------------------|--------------------|---------------|-------|---------------|-----------------|--------------------------------|-----------------------------|-----------------------------------|-------------------------------|-------------------------|--------------------------------------|----------------|--------------------------|--------------|--|--|
|              |                    | Diameter, in. | Resonance (in system), Hz | Enclosure type     | Diameter, in. | Type  | Diameter, in. | Type            |                                |                             |                                   |                               |                         |                                      |                |                          |              |  |  |
| HEATH        | AS-38              | 12            |                           | Refl.              |               | 2     | Cone          | 45-20k          | 5                              | 40                          | 2500                              | 8                             | 14 x 11 3/4 x 23        | Wal.                                 | Cloth, brn.    | 37                       | 159.95K      | Kit version of JBL sys.  |  |
|              | AS-48              | 14            |                           | Refl.              |               | 2     | Cone          | 40-20k          | 5                              | 40                          | 2000                              | 8                             | 14 x 12 x 23 1/2        | Pecan                                | Cloth, brn.    | 42                       | 189.95K      | Kit version of JBL sys.  |  |
|              | AS-103A            | 12            | 42                        | Acous.             | 1 1/4         | Dome  | 3/4           | Dome            | 20-20k                         | 25                          | 100                               | 575; 5000                     | 4                       | 14 x 11 1/4 x 25                     | Wal.           | Cloth, brn./gold         | 53           | 189.95K  | Kit version of AR3a                                    |
|              | AS-101             | 15            |                           | Refl.              |               |       |               | Compr. driver   | 35-22k                         | 5                           | 50                                | 800                           | 8                       | 27 3/4 x 19 3/4 x 29 3/4             | Pecan          | Cloth, blk./gold         | 101          | 269.95K  | Kit version of Altec sys.                              |
| HEGEMAN      | Hegeman I          | 8             | 18                        | Clsd. box bfl.     |               | 1     | Dome          | 28-20k ± 2.5    | 25                             | 60                          | 5k                                | 8                             | 11 x 8 3/4 x 26         | Teak                                 | Cloth, blk.    | 32                       | 114.00 ea.   | Drawn alum. cone, hemis. disp. pattern.  |  |
| HITACHI      | HS-220             | 8             |                           | Acous. susp.       |               | 2 1/2 | Cone          | 60-20k +0 -8    |                                | 20                          | 3k                                | 8                             | 11 x 19 x 10            | Wal.                                 | Cloth, gray    | 16                       | 65.00        |  |  |
|              | HS-420             | 10            |                           | Bass Refl.         | 5             | Cone  | 2             | Horn            | 45-20k +0 -8                   | 40                          | 2k; 8k                            | 8                             | 15 x 26 x 10            | Wal.                                 | Cloth, gray    | 33                       | 140.00       |  |  |
|              | HS-350             | 8             |                           | Bass Refl.         |               | 2     | Horn          | 40-20k +0 -8    |                                | 50                          | 3.5k                              | 8                             | 14 x 23 x 10            | Wal.                                 | Cloth, gray    | 33                       | 185.00       | Gathered edge woofer.  |  |
|              | HS-500             | 8             |                           | Bass Refl.         |               | 2 1/4 | Horn          | 25-20k +0 -8    |                                | 50                          | 3k                                | 8                             | 14 x 24 x 14            | Wal.                                 | Cloth, brn.    | 48                       | 300.00       | Same as above.   |  |
| IMF          | Monitor III        | 8x12          | 18                        | Trans. line        | 5             | Cone  | 2 1/2         | Dome            | 18-30k ± 5                     | 60                          | 35                                | 375; 3.5k; 12k                | 8                       |                                      | Wal.           | Cloth, blk.              | 140          | 1850.00  | Dual trans. line mon. ldsprk.                          |
|              | Studio IIIa        | 8             | 24                        | Trans. line        | 4             | Cone  | 1             | Dome            | 24-30k ± 5                     | 60                          | 35                                | 375; 3.5k; 12k                | 8                       |                                      | Wal. or teak   | Cloth, blk.              | 72           | 800.00   | Dual line spkr. for mon. or home.                      |
|              | ALS 40a            | (2) 8         | 56                        | Active trans. line | 4             | Cone  | 1             | Dome            | 38-20k ± 5                     | 35                          | 35                                | 120; 500; 3.5k                | 8                       |                                      | Wal. or teak   | Cloth, blk.              | 50           | 600.00   | Pat. "Active" line produces mon. qual. bass.           |
| INFINITY     | POS I              | 10            |                           | Trans. line        |               |       | Cone          | 35-19k ± 4      | 15                             | 40                          | 1500                              | 8                             | 13 x 12 x 24            | Vin. Wal.                            | Foam, blk.     | 50                       | 196.00 pr.   |  |  |
|              | 1001               | 12            |                           | Trans. line        |               |       | Cone          | 30-21k ± 4.5    | 20                             | 60                          | 1300                              | 8                             | 14 1/2 x 12 1/2 x 25    | Wal.                                 | Cloth, blk.    | 65                       | 278.00 pr.   | Rear rad. tweeter.   |  |
|              | Monitor            | 12            |                           | Trans. line        |               | Dome  | 4"            | 26-32k          | 35                             | 100                         | 500; 3000                         | 8                             | 14 x 13 x 39            | Wal.                                 | Foam, blk.     | 95                       | 858.00 pr.   | Coherent rad. in wave trans. line tweeter.   |  |
|              | Servo-Statik I     | 18            |                           | Fdbk. clsd. box    |               | ES    | (4) 6" strips | 15-30k ± 2      | 100 mring; 35 twtr.            | 200                         | 100; 1500                         | 8                             | Screens 37 x 6 1/2 x 28 | Rose                                 | Cloth, blk.    | 115                      | 2100.00 sys. | Fdbk. bass sys; ES midrng; tweeters tri-amp'd; bass commode dim.: 22W x 19 D x 22 H. |  |
| INNERMEDIA   | Tri-Planer IIB     | 12            | 25                        | Acous. susp.       | 4 1/2         | Cone  | 2             | PZ              | 30-22k ± 2 1/2                 | 10                          | 40                                | 300; 2.2k                     | 8                       | 16 x 8 x 32                          | Wal.           | Plas.; blk.              | 50 ea.       | 250.00/pr.   |  |
| JBL          | L100 Century       | 12            |                           | Bass refl.         | 5             | Cone  | 1.4           | Cone            |                                | 2                           | 50                                | 1500; 6000                    | 8                       | 24 x 14 x 14                         | Wal.           | Foam                     | 55           | 273.00 ea.   | Foam avail. in var. colors.                            |
|              | L26 Decade         | 10            |                           | Bass refl.         |               |       | 1.4           | Cone            |                                | 2                           | 35                                | 2000                          | 8                       | 24 x 13 x 13                         | Oak            | Stretch cloth            | 41           | 129.00 ea.   | Var. colors avail. for grille.                         |
|              | L45 Flair          | 15            |                           | Bass refl.         | 5             | Cone  | 1.4           | Cone            |                                | 1                           | 75                                | 1200; 7500                    | 8                       | 30 x 18 x 22                         | Wal.           | Sculp. foam char. & brn. | 108          | 426.00 ea.   | Opt. flr. stndng encl. avail. (\$198.00).              |
|              | L200 Studio Master | 15            |                           | Bass refl.         |               |       |               | Horn            |                                | 1                           | 100                               | 1200                          | 8                       | 24 x 21 x 33                         | Wal.           | Foam                     | 139          | 597.00 ea.   | Comp. driver w/horn & acous. lens; var. grille colors. |
| JVC          | SX-3               | 10            | 60                        | Acous. susp.       |               |       | 2             | Soft Dome       | 35-20k                         | 20                          | 25                                | 2000                          | 8                       | 12 1/2 x 11 1/2 x 20 1/2             | Wal. or Spruce |                          | 29           | 159.95   | Open baffle, wide-dir. sys.                            |
|              | VS-5333            | 12            | 40                        |                    | 6 1/2         | Cone  |               | Horn w/ diff.   | 38-20k                         | 15                          |                                   | 1000; 5000                    | 8                       | 15 x 12 1/2 x 25 1/2                 | Wal.           | Cloth, brn.              | 35           | 189.95   | Var. lim. overload protector.                          |
|              | VS-5323            | 10            | 60                        |                    | 4             | Cone  |               | Multi-cell Horn | 40-20k                         | 10                          | 25                                | 2000; 7000                    | 8                       | 12 1/2 x 11 1/4 x 22 3/4             | Wal.           | Cloth, brn.              | 18           | 199.95 pr.   | Tun. duct. port sys.                                   |
|              | VS-5397            | 8             | 50                        |                    |               | 2 1/2 | Cone          | 40-20k          | 8                              | 20                          | 4000                              | 8                             | 7 1/2 x 7 1/2 x 27 1/2  | Wal.                                 |                | 9                        | 99.95/pr.    | 2-way; wide dir.   |  |



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Hitachi guarantees that nothing will go wrong with our Maxi-Fi<sup>®</sup> tuners, amplifiers, receivers or loudspeakers for three years after you buy them.

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Three years is a lot longer than most manufacturers give you. And we go even further on the transistors. We guarantee them for five.

For a very good reason.

Practically everything that goes into a Hitachi is made by Hitachi. Our own transistors. Our own IC's.

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Like distortion or coloration.

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We also did away with input and output transformers on many of our models in favor of ITL-OTL circuitry. Doing away with one of the major causes of frequency distortion and deterioration.

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# Speakers



Janszen Z-412



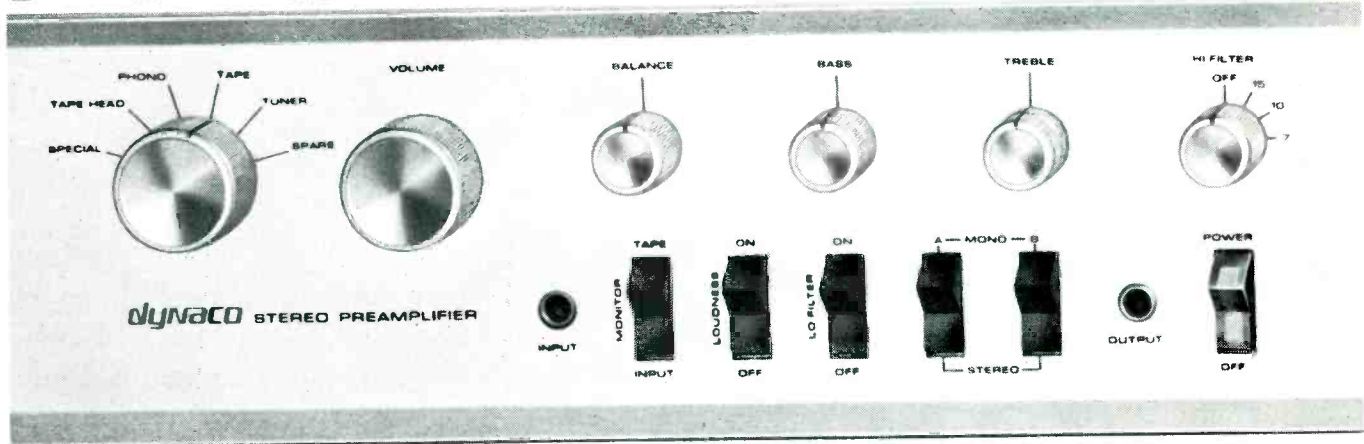
Jensen 15



KLH 38

| MANUFACTURER | MODEL            | WOOFER        |                           |                 | MID-RANGE     |                    | TWEETER               |                | Overall freq. resp. Hz to kHz<br>± 7 db | Ampl. pwr. for avg. room W | Pwr. handling capacity (RMS cont) | Crossover frequency (res), Hz | Impedance, ohms     | Enclosure dimensions,<br>W x D x H, in. | Wood finish              | Grille material<br>color | Weight, lbs.  | Price (per pair)   | SPECIAL FEATURES   |
|--------------|------------------|---------------|---------------------------|-----------------|---------------|--------------------|-----------------------|----------------|---|----------------------------|-----------------------------------|-------------------------------|---------------------|---|--------------------------|--------------------------|---------------|--|--|
|              |                  | Diameter, in. | Resonance (in system), Hz | Enclosure type  | Diameter, in. | Type               | Diameter, in.         | Type           |   |                            |                                   |                               |                     |   |                          |                          |               |  |  |
| JANSZEN      | Z-210A           | 10            | 55                        | Acous.          |               | (2)<br>32 sq. in.  | ES                    | 45-20k<br>± 3  | 15                                      | 50                         | 1800                              | 6.9                           | 12½ x 17½<br>x 11   | Wal.                                    | Foam,<br>blk.            | 30                       | 109.95        | 3 pos EST lev.   |  |
|              | Z-110            | 10            | 45                        | Acous.          |               | 16<br>sq. in.      | ES                    | 35-20k<br>± 3  | 20                                      | 50                         | 1800                              | 6.9                           | 13¼ x 24<br>x 11¼   | Wal.                                    | Foam,<br>blk.            | 40                       | 129.95        | Sint. bld. refl. lens; vert.<br>&/or horiz. oper.; 3 pos.<br>EST lev.                                |  |
|              | Z-410            | 10            | 45                        | Acous.          |               | (4) 64<br>sq. in.  | ES                    | 35-20k<br>± 3  | 20                                      | 75                         | 1800                              | 6.9                           | 13¼ x 24<br>x 11¼   | Wal.                                    | Foam,<br>choice          | 41                       | 169.95        | Frnt. pnl. cont. var. EST<br>lev.; 5 way bind. posts;<br>vert/hor. plcmnt.; JK 410<br>(kit) \$149.95 |  |
|              | Z-412A           | 12            | 43                        | Acous.          |               | (4) 64<br>sq. in.  | ES                    | 33-20k<br>± 3  | 20                                      | 100                        | 1800                              | 4.6                           | 14½ x 27¼<br>x 11¼  | Wal.                                    | Foam,<br>choice          | 44                       | 229.95        | Same as above, JK412A<br>(kit) \$179.95  |  |
|              | Z-412<br>HP      | 12            | 38                        | Acous.          |               | (4) 64<br>sq. in.  | ES                    | 30-20k<br>± 3  | 20                                      | 150                        | 800                               | 4.8                           | 14½ x 24<br>x 11¼   | Wal.                                    | Foam,<br>blk<br>abst     | 48                       | 279.95        | Hi pwr. woofer & ES<br>version of 412A. Bi-amp<br>fac., JK412A HP (kit),<br>\$222.95                 |  |
|              | Z824             | (2)<br>12     | 38                        | Acous.          |               | (8) 128<br>sq. in. | ES                    | 30-20k<br>± 3  | 20                                      | 300                        | 800                               | 8                             | 29 x 33<br>x 16     | Dk.<br>oak                              | Foam,<br>choice          | 100                      | 495.00        | Dual hi pwr. woofers;<br>hi pwr. EST; bi-amp fac.  |  |
|              | 1300W            |               |                           |                 |               | (4) 64<br>sq. in.  | ES                    | 700-20k<br>± 3 | 20                                      | 100                        | 700                               | 8                             | 22 x 7¼<br>x 13     | Wal.                                    | Cloth.<br>brn.           | 16                       | 199.95        | Mid/hi freq. EST array<br>for use w/existing woofer.   |  |
| JENSEN       | 16               | 8             | 100                       | Acous.<br>susp. |               | 2¾                 | Cone                  | 70-13k<br>± 5  | 10                                      | 30                         | 6000                              | 8                             | 14¼ x 10<br>x 8½    | Wal.                                    | Cloth.<br>brn.           | 14                       | 39.00         | Removable grille   |  |
|              | 17               | 8             | 70                        | Acous.<br>susp. |               | 3½                 | Damp.<br>dir.<br>rad. | 60-18k<br>± 5  | 10                                      | 35                         | 1200                              | 8                             | 18¾ x 11<br>x 8¾    | Wal.                                    | Cloth.<br>brn.           | 22                       | 63.00         | Remov. grille; HF bal.<br>contl.; push-type term<br>binding posts.                                   |  |
|              | 5                | 12            | 45                        | Acous.<br>susp. | (2)<br>5      | 1                  | Dome                  | 45-20k<br>± 5  | 10                                      | 60                         | 500;<br>4000                      | 8                             | 26 x 15<br>x 13     | Wal.                                    | Cloth.<br>brn. &<br>blk. | 52                       | 162.00        | Remov. grille; HF & MF<br>bal. contl.; push-type<br>binding posts.                                   |  |
|              | 15               | 15            | 30                        | Duct.<br>port   | 8             | 5<br>(2)<br>1      | Dome                  | 35-20k<br>± 5  | 10                                      | 100                        | 300;<br>1500;<br>4000             | 8                             | 31 x 23<br>x 7      | Wal.                                    | Foam.<br>blk.            | 85                       | 396.00        | Remov. grille; black<br>slate top; front<br>mounted bal.<br>contls.                                  |  |
| KLH          | Five             | 12            | 44                        | Acous.<br>susp. | (2)<br>3      | Cone               | 1¾                    | Cone           |   | 25                         | 600;<br>2500                      | 8                             | 26 x 11½<br>x 13¼   | Oil<br>wal.                             | Cloth;<br>brn.           | 54                       | 199.95        | 2 level contls.; finish 4<br>sides.  |  |
|              | Six              | 12            | 55                        | Acous.<br>susp. |               |                    | 1¾                    | Cone           |   | 10                         | 1500                              | 8                             | 23½ x 12¾           | Oil<br>wal.                             | Cloth;<br>wte.           | 40                       | 139.95        | Tweet. contl.; finished<br>4 sides.  |  |
|              | 17               | 10            | 60                        | Acous.<br>susp. |               |                    | 1¾                    | Cone           |   | 10                         | 1500                              | 8                             | 23½ x 9<br>x 11¼    | Oil<br>wal.                             | Cloth;<br>wte.           | 27                       | 79.95         | As above.  |  |
|              | 32               | 8             | 59                        | Acous.<br>susp. |               |                    | 1¾                    | Cone           |   | 12                         | 1800                              | 8                             | 19¾ x 7¼<br>x 107/8 | Oil<br>wal.                             | Cloth;<br>brn.           | 21                       | 55.00         | Packed 2 @ carton;<br>\$95.00/pair.  |  |
|              | 33               | 10            | 54                        | CAC*            |               |                    | 1¾                    | Cone           |   | 12                         | 1500                              | 8                             | 23¾ x 10¼<br>x 12¾  | Oil<br>wal.                             | Cloth;<br>brn.           | 33                       | 99.95         | *Contld. acous. com-<br>pliance; hi contl.;<br>finished 4 sides.                                     |  |
|              | 38               | 10            | 50                        | Acous.<br>susp. |               |                    | 1¾                    | Cone           |   | 12                         | 1750                              | 8                             | 21¼ x 8¼<br>x 12¾   | Oil<br>wal.                             | Cloth;<br>brn.<br>stripe | 28                       | 67.00         | Packed 2 @ carton,<br>\$125.00.  |  |
|              | 28               | (3)<br>10     | 44                        | Acous.<br>susp. |               | (3)<br>1½          | Cone                  |                | 30                                      |                            | 1750                              | 8                             | 17 x 26<br>x 15     | Oil<br>wal.                             | Foam;<br>brn.            | 70                       | 299.95        | Radiates in 3 directions.  |  |
|              | 31               | 8             | 60                        | Acous.<br>susp. |               |                    | 1¾                    | Cone           |   | 10                         | 1800                              | 8                             | 11 x 8¼<br>x 17½    | Oil<br>wal.                             | Foam                     | 16                       | 89.95<br>pair | Brn. or burgundy grille.   |  |
| LAFAYETTE    | Criterion<br>999 | 15            | 18                        | Acous.          | 8<br>5        | Cone<br>Cone       | 2                     | Cone           | 18-22k                                  | 15                         | 100                               | 400;<br>900;<br>7000          | 8                   | 30 x 20<br>x 16                         | Wal.                     | Foam,<br>brn.            | 75            | 199.95   | 3 contls. on rear.   |
|              | Criterion<br>888 | 12            | 19                        | Acous.          | 6<br>5        | Cone<br>Cone       | 2                     | Cone           | 19-20k                                  | 15                         | 100                               | 400;<br>900;<br>7000          | 8                   | 24 x 15½<br>x 12                        | Wal.                     | Foam,<br>brn.            | 50            | 159.95   | Same as above.   |
|              | Criterion<br>777 | 10            | 20                        | Acous.          | 6             | Cone               | 2                     | Cone           | 20-20k                                  | 12                         | 80                                | 800;<br>4000                  | 8                   | 23 x 15<br>x 12                         | Wal.                     | Foam,<br>brn.            | 43            | 99.95  | HF & mdrng. contls.  |
|              | Criterion<br>666 | 10            | 28                        | Acous.          | 6             | Cone               | 2                     | Cone           | 28-20k                                  | 10                         | 60                                | 800;<br>5000                  | 8                   | 22 x 14½<br>x 11                        | Wal.                     | Foam,<br>brn.            | 38            | 79.95  | Md-rng. & brilliance<br>contls.                              |
|              | 999              | 15            | 18                        | Acous.<br>susp. | 8, 5          | Cone;<br>cone      | 2                     | Dome           | 18-22k                                  | 15                         | 100                               | 400;<br>900;<br>7k            | 8                   | 30 x 20<br>x 16                         | Oil<br>wal.              | Foam;<br>char.<br>brn.   | 75            | 199.95   | 12-lb. mag. & 2½-in.<br>voice coil woofer; 3<br>contls.      |
|              | 888              | 12            | 19                        | Acous.<br>susp. | 6;<br>5       | Cone;<br>cone      | 2                     | Dome           | 19-20k                                  | 15                         | 100                               | 400;<br>900;<br>7k            | 8                   | 24 x 15½<br>x 12                        | Wal.<br>oil              | Foam;<br>char.<br>brn.   | 50            | 159.95   | As above.  |
|              | 777              | 10            | 20                        | Acous.<br>susp. | 6             | Cone               | 2                     | Dome           | 20-20k                                  | 12                         | 80                                | 800;<br>4k                    | 8                   | 23 x 15<br>x 12                         | Wal.                     | Foam;<br>char.<br>brn.   | 43            | 99.95  | 8-lb. mag. 2-in. voice<br>coil woofer; mid & hi<br>contls.   |
|              | 666              | 10            | 28                        | Acous.<br>susp. | 6             | Cone               | 2                     | Dome           | 28-20k                                  | 10                         | 60                                | 800;<br>5k                    | 8                   | 22 x 14½<br>x 11                        | Oil<br>wal.              | Foam;<br>char.<br>brn.   | 38            | 79.95  | 6-lb. mag. & 2-in. voice<br>coil woofer; mid & hi<br>contls. |

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# Speakers



LDL 749

Magnum Opus 24-D



Marantz Imperial 8



| MANUFACTURER       | MODEL        | WOOFER        |                           |                |               | MID-RANGE |                 | TWEETER         |              | Overall freq. resp. Hz to kHz | Ampl. pwr. for avg. room, W | Pwr. handling capacity (RMS cont) | Crossover frequency (res), Hz | Impedance ohms           | Enclosure dimensions, W x D x H, in. | Wood finish             | Grille material color | Weight, lbs.   | Price (per pair?)   | SPECIAL FEATURES |
|--------------------|--------------|---------------|---------------------------|----------------|---------------|-----------|-----------------|-----------------|--------------|-------------------------------|-----------------------------|-----------------------------------|-------------------------------|--------------------------|--------------------------------------|-------------------------|-----------------------|--|---|------------------|
|                    |              | Diameter, in. | Resonance (in system), Hz | Enclosure type | Diameter, in. | Type      | Diameter, in.   | Type            |              |                               |                             |                                   |                               |                          |                                      |                         |                       |  |   |                  |
| LINEAR DESIGN LABS | 749A         | (9) 4 1/2     | *                         | *              | *             | *         | *               | *               | 30           | 300                           |                             | 8                                 | 19 x 12 1/2 x 12              | Wal.                     | Cloth, brn.                          | 43                      | 330.00/pr.            | "Front & rear radiating bases, \$60; equal., \$90. "9 full-rng. 4 1/2" drvs. (cone spkrs.) trumpet bases, \$60./pr.; eqلز. avail. \$90.00. |   |                  |
|                    | 749A         | "             | "                         | "              | "             | "         | "               | "               | 30           | 300                           | n/a                         | 8                                 | 19 x 12 1/2 x 12              | Wal.                     | Cloth, dk. brn.                      | 43                      | 333.00/pr.            |  |   |                  |
| LWE                | I-B          | 15            |                           | Elect. susp.   | 6             | Cone      | 3               | Horn            | 20-20k ± 5   | 10                            | 80                          | 2000; 4500                        | 4                             | 16 x 19 x 23 1/2         | Wal.                                 | Cloth, brn.             | 73                    | 345.00   | Rm. gain, MF-HF contls.; built-in base; inv. feedback sys.                              |                  |
|                    | II-B         | (2) 15        |                           | Elect. susp.   | (2) 6         | Cone      | 3               | Horn            | 20-20k ± 5   | 25                            | 130                         | 2000; 4500                        | 4                             | 34 x 24 x 16             | Wal.                                 | Cloth, brn.             | 121                   | 600.00   | Rm. gain, MF-HF contls.; inv. feedback sys.   |                  |
|                    | III-A        | 12            |                           | Elect. susp.   | 6             | Cone      | 2               | Cone            | 25-17.5k ± 5 | 6                             | 40                          | 2000; 3000                        | 4                             | 14 x 12 x 23 1/2         | Wal.                                 | Cloth, brn.             | 43                    | 225.00   | Same as above.  |                  |
|                    | VI-A         | 8             | 85                        | Acous. susp.   |               |           | 2               | Cone            | 35-17.5k ± 5 | 5                             | 25                          | 3000                              | 8                             | 18 x 11 x 9              | Wal.                                 | Cloth, brn.             | 31                    | 80.00  | Inv. feedback sys.  |                  |
|                    | IX           | 10            |                           | Elect. susp.   |               |           | 2               | Cone            | 30-17.5k ± 5 | 6                             | 30                          | 3000                              | 4                             | 12 1/2 x 9 x 21 1/2      | Wal.                                 | Cloth, brn.             | 42                    | 120.00   | Rm. gain, HF contl.; inv. fdbk. sys.  |                  |
|                    | X            | 12            |                           | Elect. susp.   |               |           | 3               | Horn            | 25-20k ± 5   | 6                             | 40                          | 2000; 3000                        | 4                             | 14 x 12 x 23 1/2         | Wal.                                 | Pre-formed color choice | 45                    | 275.00   | Rm. gain, MF-HF contls.; inv. fdbk. sys.  |                  |
| H.J. LEAK (ERCONA) | Sandwich 600 | 13            | 19                        | Acous. susp.   | 3 1/2         | Cone      | 2               | Dome            | 40-20k       | 4                             | 70                          |                                   | 8                             | 25 1/2 x 14 1/2 x 12 1/2 | Wal.                                 | Cloth, brn.             | 55                    | 295.00   | Piston action sand. cone; 3 way sys.  |                  |
| LOUDSPEAKER DESIGN | 1            | 8             |                           | Acous. susp.   |               |           | (2) 3           | Cone            | "            | 15-20                         | **                          | 500                               | 8                             | 15 x 23 x 11             | Wal.                                 | Cloth, blk.             | 39                    | 218.00   | Treb. bal. contl.; fuse: "Info. avail. on req. **Pwr. hand suit for high pwr. amps.     |                  |
|                    | 2            | 10            |                           | Acous. susp.   |               |           | (4) 3           | Cone            | "            | 15-20                         | **                          | 450                               | 8                             | 26 x 19 x 15 1/2         | Wal.                                 | Cloth, blk.             | 56                    | 398.00   | Same as above.  |                  |
|                    | 3            | 12            |                           | Acous. susp.   |               |           | (8) 3           | Cone            | "            | 15-20                         | **                          | 400                               | 8                             | 19 x 12 x 32             | Wal.                                 | Cloth, blk.             | 59                    | 598.00   | Same as above.  |                  |
|                    | 4            | 15            |                           | Acous. susp.   |               |           | (16) 3          | Cone            | "            | 15-20                         | **                          | 350                               | 8                             | 28 x 48 x 14             | Wal.                                 | Cloth, blk.             | 74                    | 1298.00  | Same as above.  |                  |
| MAGNAVOX           | Max 15       | 15            | 43                        | Acous. susp.   | 2             | Dome      | 2               | Phen. ring cone | 20-20k       | 10                            | 100                         | 1500; 4500                        | 8                             | 20 1/2 x 15 1/4 x 29     | Oil. Wal.                            | Foam, blk.              | 55                    | 199.95 ea.   | Remov. grille w/ frnt. mntd. mdrng. & twtr. contls.                                     |                  |
|                    | Max 12       | 12            | 45                        | Acous. susp.   | 2             | Dome      | e               | Phen. ring cone | 25-20k       | 10                            | 75                          | 1500; 4500                        | 8                             | 15 1/4 x 13 1/4 x 25 1/4 | Oil. Wal.                            | Foam, blk.              | 40                    | 159.95 ea.   | Same as above.  |                  |
|                    | Max 10       | 10            | 47                        | Acous. susp.   | 2             | Dome      | 2               | Phen. ring cone | 30-20k       | 10                            | 50                          | 1500; 4500                        | 8                             | 15 1/4 x 12 1/2 x 23 1/2 | Oil. Wal.                            | Foam, blk.              | 35                    | 119.95 ea.   | Same as above.  |                  |
|                    | SD2520       | 12            | 55                        | Open back      |               |           | (3) 3 1/2       | Cone            | 40-17.5k     |                               | 50                          |                                   | 8                             | 18 x 3 x 25 1/2          |                                      | Cloth, brn.             | 22                    | 79.95 ea.  | Floor or wall; step lev. contl.; bi-dir.; angled twtrs.                                 |                  |
| MAGNUM OPUS        | Opus 24      | (4) 12        | 20                        |                | (4) 5         | Cone      | (8) 1 1/4 (8) 3 | Dome Cone       | 20-20k ± 4   | 20                            | 200                         | 750; 3000                         | 4/8                           | 36 x 18 1/2 x 32         | Wal.                                 | Cloth, brn/blk          | 200                   | 1000.00 ea.  |   |                  |
|                    | Opus 12      | 12 & 10       | 20                        |                | 5             | Cone      | (3) 1 1/4 (6) 3 | Dome Cone       | 20-20k ± 5   | 30                            | 100                         | 750; 3000                         | 8                             | 18 x 18 1/2 x 32         | Wal.                                 | Cloth, brn/blk          | 105                   | 495.00 ea.   |   |                  |
|                    | Opus 7       | (2) 10        | 25                        |                | 5             | Cone      | (2) 1 1/4 (2) 3 | Dome Cone       | 25-20k ± 5   | 30                            | 100                         | 750; 3000                         | 4                             | 15 1/4 x 13 1/4 x 28     | Wal.                                 | Cloth, brn/blk          | 65                    | 279.00 ea.   |   |                  |
|                    | Opus 4       | (2) 10        | 30                        |                | 5             | Cone      | 1 1/4           | Dome            | 30-20k ± 5   | 30                            | 100                         | 750; 3000                         | 8                             | 15 1/4 x 13 1/4 x 28     | Wal.                                 | Cloth, brn/blk          | 63                    | 229.00 ea.   |   |                  |
|                    | Opus 2       | 10            | 33                        | Acous. susp.   |               |           | (2) 1 1/4 (2) 3 | Dome Cone       | 33-20k ± 5   | 20                            | 50                          | 2200                              | 8                             | 14 1/2 x 11 x 24         | Wal.                                 | Cloth, brn/blk          | 44                    | 139.00 ea.   |   |                  |
| MARANTZ            | Imperial 9   | (2) 10        | 30                        | Duct. port     | (4) 3 1/2     | Cone      | (2) 1 1/4       | Cone            | 35-17k ± 1.5 | 6-10                          | 100                         | 700; 6500                         | 8                             | 24 x 18 x 30 1/2         | Wal.                                 | Foam, brn.              | 90                    |  | 2-pos. var. contl. x-over.  |                  |
|                    | Imperial 8   | 12            | 35                        | Duct. port     | (3) 3 1/2     | Cone      | (2) 1 1/4       | Cone            | 40-18k ± 2   | 6-10                          | 75                          | 1000; 6500                        | 8                             | 18 1/4 x 14 1/2 x 27     | Wal.                                 | Foam, brn.              | 65                    |  | 2-pos. mid. & hi. swit.; elect./acous. x-over.  |                  |
|                    | Imperial 7   | 12            | 42                        | Duct. port     | 3 1/2         | Cone      | 1 1/4           | Cone            | 40-18k ± 5   | 6-10                          | 50                          | 2000; 7000                        | 8                             | 14 1/4 x 11 1/2 x 25 1/2 | Wal.                                 | Foam, brn.              | 45                    | 179.00 ea.   | Same as above.  |                  |
|                    | Imperial 6G  | 10            | 48                        | Duct. port     |               |           | 1 1/4           | Cone            | 40-18k ± 5   | 6-10                          | 50                          | 2100                              | 8                             | 14 1/4 x 11 1/2 x 25 1/2 | Wal.                                 | Foam, brn.              | 40                    | 139.00 ea.   | Elect./acous. x-over; Hi freq. swit.; Imp. 6 same w/ brn. cloth grille cov., \$119. ea. |                  |
|                    | Imperial 5G  | 8             | 55                        | Duct. port     |               |           | 1 1/4           | Cone            | 45-16k ± 5   | 6-10                          | 15                          | 2000                              | 8                             | 12 x 9 1/2 x 23          | Wal.                                 | Foam, brn.              | 23 1/2                | 99.00 ea.  | Same as above. Imp. 5 sim. w/ brn. cloth grille cov., \$79. ea.                         |                  |
|                    | Imperial 4G  | 8             | 60                        | Duct. port     |               |           | 1 1/4           | Cone            | 60-15k ± 5   | 6-10                          | 15                          | 5000                              | 8                             | 11 1/4 x 8 1/2 x 19 1/4  | Wal. vin.                            | Foam, brn.              | 20                    | 59.00 ea.  | Elect./acous. x-over.   |                  |

# THE LAST LOUD- SPEAKER.

The news may already have reached you. We're a young company named Ohm Acoustics and we've developed the last loudspeaker.

We believe it's the last loudspeaker in the same sense as the wheel was the last device for transmitting rotary or rolling motion.

Of course, the wheel has been greatly improved since its debut in the Bronze Age. But only in construction. The design itself is unimprovable because it's inherently perfect.

The new Ohm F has the same mathematical finality. It's the absolute loudspeaker, utterly simple and complete. Only its physical makeup can evolve further; the concept is terminal.

The last loudspeaker was invented by a little-understood engineering genius, Lincoln Walsh, who patented it in 1969 (U. S. Patent 3,424,873) and died less than three years later. As exclusive licensees of the Walsh patent, we've spent the past two years developing construction techniques for the invention. The end result is the Ohm F.

The originality and stark simplicity of the Walsh design are apparent at a glance. A single, very steep 12-inch cone, oriented with its apex up and convex side out, is used to reproduce the en-

tire audio range from 30 to 20,000 Hz without crossovers. (Not to be confused with the 2-inch Walsh tweeter made by another company under license from Ohm.)

The cone is made of titanium, aluminum and paper, and it acts as a wave transmission line, completely discarding the classic piston theory of speaker design. Its output is a unique cylindrical wave front, which is kept in perfect phase with the input audio signal at all frequencies. This is "coherent sound", analogous to coherent light from a laser.

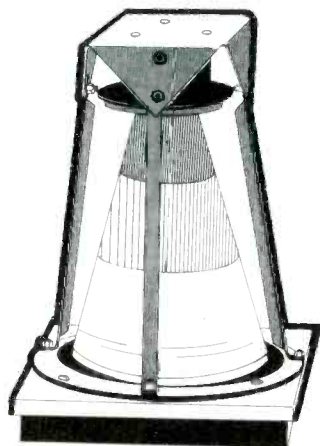
No other full-range speaker is a totally coherent sound source, with 360° direct radiation to boot. It's the theoretical ultimate.

The Ohm F comes in a striking, tapered column cabinet, about 3½ feet high, and is priced at \$400. (Also available is the \$1000 laboratory prototype Ohm A, with an 18-inch Walsh driver that goes down to 20 Hz but requires 350 watts of power.)

As the years go by and the history of the wheel is repeated, the Walsh idea will inevitably filter down to the lowest price ranges.

Meanwhile, the Ohm F is here for those who want to be the first to own the last loudspeaker.

Ohm Acoustics Corp.,  
206 Classon Avenue,  
Brooklyn, N.Y. 11205.



Check No. 39 on Reader Service Card



# Speakers



Martin Crescendo



Maximus M-400



Quadraflex Q55

| MANUFACTURER | MODEL     | WOOFER        |                           |                | MID-RANGE     |       | TWEETER       |      | Overall freq. resp. Hz to kHz<br>-7 db | Ampl. pwr. for avg. room, W | Pwr. handling capacity (RMS cont) | Crossover frequency (res), Hz | Impedance, ohms      | Enclosure dimensions,<br>W x D x H, in. | Wood finish | Grille material<br>color | Weight, lbs. | Price (per pair) | SPECIAL FEATURES |
|--------------|-----------|---------------|---------------------------|----------------|---------------|-------|---------------|------|--|-----------------------------|-----------------------------------|-------------------------------|----------------------|---|-------------|--------------------------|--------------|------------------|------------------|
|              |           | Diameter, in. | Resonance (in system), Hz | Enclosure type | Diameter, in. | Type  | Diameter, in. | Type |  |                             |                                   |                               |                      |   |             |                          |              |                  |                  |
| MARTIN       | Micro Max | 8             | 57                        | Inf.           |               | 2     | Dome          |      | 10                                     | 40                          | 2K                                | 8                             | 11 x 10 x 18         | Wal.                                    | Cloth. brn. | 20                       | 66.00        |                  |                  |
|              | Super Max | 10            | 55                        | Inf.           |               | 2     | Dome          |      | 15                                     | 45                          | 2K                                | 8                             | 12 1/2 x 10 x 21 1/2 | Wal.                                    | Cloth. brn. | 30                       | 89.95        |                  |                  |
|              | Lab Mk II | 10            | 55                        | Inf.           | 4             | Cone  | 2             | Dome | 20                                     | 50                          | 1K, 5K                            | 8                             | 12 1/2 x 10 x 21 1/2 | Wal.                                    | Cloth. brn. | 32                       | 119.95       |                  |                  |
|              | Crescendo | 12            | 50                        | Inf.           | 4             | Cone  | 2             | Dome | 25                                     | 60                          | 1K, 5K                            | 8                             | 15 x 12 x 25 1/2     | Wal.                                    | Cloth. brn. | 45                       | 169.95       |                  |                  |
| MAXIMUS      | M-400     | 12            |                           | Vent. port     | 4             | Cone  | (2) 3         | PZ   |  |                             |                                   |                               | 14 1/2 x 11 x 25 1/2 |   |             | 55                       | 200.00       |                  |                  |
|              | M-300     | 12            |                           | Vent. port     | 4             | Cone  | 3             | Cone |  |                             |                                   |                               | 14 x 12 x 24         |   |             | 53                       | 150.00       |                  |                  |
|              | M-200     | 10            |                           | Vent. port     | 4             | Cone  | 3             | Cone |  |                             |                                   |                               | 12 1/2 x 9 1/2 x 22  |   |             | 25                       | 120.00       |                  |                  |
| QUADRAFLEX   | 66        | 12            | 45                        | Acous. susp.   | 6             | Cone  | 3             | Cone | 32-20k - 5                             | 20                          | 40                                | 500-5000                      | 8                    | 25 1/2 x 16 x 13 1/4                    | Wal.        | Cloth. dk. brn.          |              | 139.95           |                  |
|              | 55        | 10            | 52                        | Acous. susp.   | 4 1/2         | Cone  | 3             | Cone | 40-20k - 5                             | 14                          | 25                                | 650-6000                      | 8                    | 24 x 15 x 11 1/4                        | Wal.        | Cloth. dk. brn.          |              | 99.95            |                  |
|              | 44        |               | 58                        | Acous. susp.   |               | 3 1/2 | Cone          |      | 45-20k 5                               | 12                          | 25                                | 750                           | 8                    | 23 x 13 1/2 x 11                        | Wal.        | Cloth. dk. brn.          |              | 69.95            |                  |

## The New Columns

Dealers:

### WEST

Garehime's Music Co.; Las Vegas, Nev.  
 Audio Arts; Livermore, CA  
 Audio Vision; Ventura, CA  
 Audio Vision; Santa Barbara, CA  
 International Sound; Modesto, CA  
 Kustom Hi Fi; Burlingame, CA  
 Calif. Hi Fi; Van Nuys, CA  
 Calif. Hi Fi; City of Commerce, CA  
 Mal Sykes, TV & Hi Fi; Sacramento, CA  
 Mission Electronics; Riverside, CA  
 Shelley's Audio Inc.; Panorama City, CA  
 Shelley's Audio Inc.; L.A. CA  
 Shelley's Audio Inc.; Berkeley, CA  
 Sound Co; San Diego, CA  
 Stereo City; Eureka, CA  
 Woodland Stereo; Woodland Hills, CA  
 Paulson's; Tacoma, Washington

### SOUTH

W. R. Gibson Audio; New Orleans, LA  
 Arnold & Morgan; Garland, Texas  
 Audio Systems of Dallas; Texas  
 Audio Concepts, Unlimited; Denton, Texas  
 Sounds Unlimited; Corpus Christi, Texas  
 Toby Corp of Amer.; Fort Worth, Texas  
 Westpark Electronics; Arlington, Texas



The RTR columns are a new concept in transducer application which by design exhibit a broad band of preferred loudspeaker characteristics. Each elegant walnut enclosure houses multiple ultralinear butyl edge suspension woofers; one of which is planar resistive loaded. This technique is accomplished by floor loading a woofer through a predetermined planar slot, which yields maximum acoustic low frequency coupling, increased damping, and a smooth rolloff above 100 Hz. This powerful low frequency concept is the cornerstone of the new RTR column speaker system. Write for complete information and specifications for:

**MODELS 180D and 280 DR' (COLUMNS)**  
**MODELS ESR 6 and HPR 12**

Patent applied for

Dealers

### MIDWEST

Tech Hi Fi; Chicago, Ill  
 George Fillip Music Co.; Aurora, Ill  
 Gill Custom House, Inc.; Chicago, Ill  
 Community Electronics; Lafayette, Ind.  
 Audio King Inc.; Minneapolis, Minn.  
 Jensen's Stereo; Stillwater, Minn.  
 Roman's Audio Classic; Minneapolis, Minn.  
 Electronics Ect.; Burlingame, Mich.  
 Stereoland; Fargo, N. Dakota  
 Affiliated Audio Engineering; Massillon, Ohio  
 Audio Warehouse; Niles, Ohio  
 L & B Sales; Columbus, Ohio  
 Hoffman's "House of Stereo"; Brookpark, Ohio  
 Frey's Electronics; Aberdeen, So. Dakota

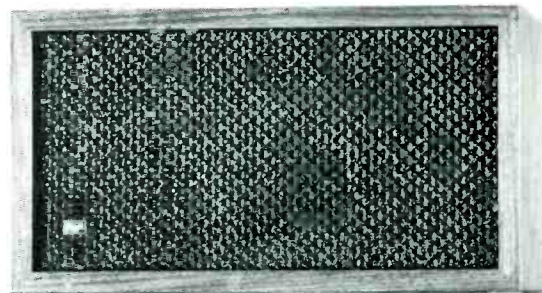
### EAST

Lawrence Sound Depot; Flemington, N.J.  
 Paul Heath; Rochester, N.Y.  
 Sego Electronics; N.Y., N.Y.  
 Suffolk Audio; Islip, N.Y.  
 Transcendental Audio; Buffalo, N.Y.  
 Utica Audio; Utica, N.Y.  
 Potomac Systems; McClean, Va.

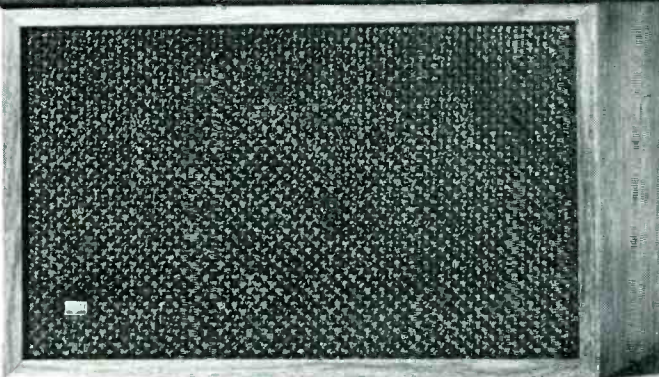
**RTR Industries, Inc., 8116 Deering Ave., Canoga Park, CA 91304 (213) 883-0116**

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# when you've made the best big speakers what next?

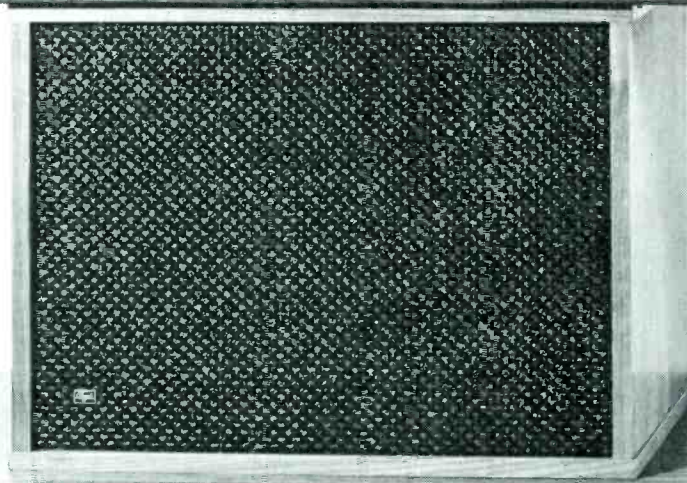


B-201



B-301

## make the best little speakers.



B-401

For a generation Bozaks have been the choice of the most critical music listeners, of musicians, and of the world's great orchestras to reinforce their sound in indoor and outdoor concerts.

Now in the tradition of the renowned Symphony No. 1 and incomparable Concert Grand, Bozak proudly offers an outstanding selection of "book-shelf" and compact speaker systems designed especially for those with an ear for superb sound, but with limited space.

SONORA (top) smallest of the Bozaks—as unobtrusive as a bookend. Two-way system with 8 inch driver and treble speaker. Outperforms many 'big' speakers.

TEMPO (center)—genuine 3-way loud-speaker system. Special high compliance 12" bass driver and unique Bozak variable density diaphragm produces true pitch bass without coloration.

RHAPSODY (bottom shelf) compact 3-way system incorporates 12" extended travel, high compliance woofer to produce remarkably full bass for its size. Also available, a Rhapsody floor-standing model with identical speaker components.

Each, "best in their class," deliver in limited space a purity and range of sound unavailable in speakers many times their size and cost. All are equal in craftsmanship and tonal-quality, matched in power. Removable front panels permit the owner to change the grille cloth to match a room's decorative scheme.

Yes, they too are all Bozak. The nicest thing anybody can say about a speaker system.

See and hear them at your Bozak Dealer, or write for full details.

BOZAK, Box 1166, Darien, Conn. 06820  
Overseas Export: Elpa Marketing Industries, Inc., New Hyde Park, N.Y. 11040



Where quality speaks for itself.



# Speakers

Ohm A



Onkyo 25



Pioneer R700



| MANUFACTURER  | MODEL      | WOOFER        |                           |                |               | MID-RANGE |               | TWEETER       |               | Overall freq. resp., Hz to kHz<br>- 2 dB | Ampl. pow. for avg. room, W | P-W handling capacity (RMS cont) | Crossover frequency (1st), Hz | Impedance, ohms    | Enclosure dimensions<br>W x D x H, in. | Wood finish              | Grille material<br>color | Weight, lbs.                        | Price (per pair?)  | SPECIAL FEATURES |
|---------------|------------|---------------|---------------------------|----------------|---------------|-----------|---------------|---------------|---------------|--|-----------------------------|----------------------------------|-------------------------------|--------------------|--|--------------------------|--------------------------|-------------------------------------|--|------------------|
|               |            | Diameter, in. | Resonance (in system), Hz | Enclosure type | Diameter, in. | Type      | Diameter, in. | Type          |               |  |                             |                                  |                               |                    |  |                          |                          |                                     |  |                  |
| OHM ACOUSTICS | A          | 18            | 27                        | Acous.         |               |           |               |               | 25-20k<br>- 4 | 150                                      | 200                         | none                             | 8                             | 22½ x 22½<br>x 48  | Wal<br>or<br>rose                      | Cloth.<br>brn.           | 200                      | 1550.00                             | Single coherent sound.<br>omni. driver                       |                  |
|               | B          | 12            | 37                        | Acous.         |               | 1         | Dome          | 35-18k<br>- 4 | 50            | 75                                       | 1700                        | 8                                | 26 x 10¾<br>x 15              | Wal                | Cloth.<br>brn.                         | 50                       | 400.00                   | Phase-linear series type<br>network |  |                  |
|               | C          | 10            | 43                        | Acous.         |               | 1         | Dome          | 40-18k<br>- 4 | 40            | 75                                       | 1700                        | 8                                | 14 x 25<br>x 9¾               | Wal.               | Cloth,<br>brn.                         | 45                       | 320.00                   | Same as above.                      |  |                  |
| ONKYO         | Radian III | (2)<br>6½     | 90                        | Bass<br>refl.  |               | (2)<br>3  | Cone          | 60-20k        | 10            | 15                                       | 1.5k                        | 8                                | 9½ x 10<br>x 33½              | Wal.               | Cloth,<br>beige                        | 27                       | 119.95                   |                                     |  |                  |
|               | 15         | 10            | 60                        | Acous.         | 1½            | Dome      | 1             | Dome          | 30-20k        | 10                                       | 20                          | 1K, 7K                           | 8                             | 11½ x 12½<br>x 23  | Wal                                    | Cloth,<br>brn.           | 33                       | 129.95                              |  |                  |
|               | 20         | 12            | 60                        | Acous.         | 2             | Dome      | 1             | Dome          | 35-20k        | 10                                       | 25                          | 700, 7k                          | 8                             | 13½ x 11½<br>x 23¾ | Wal                                    | Cloth,<br>beige          | 40                       | 199.95                              |  |                  |
|               | 25         | 14            | 53                        | Acous.         | 2             | Dome      | 1             | Dome          | 30-20k        | 10                                       | 30                          | 700, 7k                          | 8                             | 14 x 11½<br>x 25½  | Wal.                                   | Cloth,<br>beige          | 54½                      | 249.95                              |  |                  |
| PIONEER       | R-700      | 12            |                           | Bass<br>ref.   |               | Horn      | Multi<br>cell | Horn          | 35-20k        |  | 75                          | 700;<br>14k                      | 8                             | 14 x 13<br>x 26    | Wal.                                   | Cloth,<br>brn. &<br>blk. | 50                       | 229.95                              | 2-color remov. grilles;<br>horn type mid/high range<br>spkr. |                  |
|               | R-500      | 10            |                           | Bass<br>ref.   | 5             | Cone      | 3             | Horn          | 35-20k        |  | 60                          | 650,<br>6k                       | 8                             | 13 x 12<br>x 24    | Wal.                                   | Cloth,<br>blue &<br>blk. | 38                       | 159.95                              | 2-color remov. grilles.                                      |                  |
|               | R-300      | 10            |                           | Bass<br>ref.   |               |           | 3             | Horn          | 45-20k        |  | 40                          | 4200                             | 8                             | 13 x 10<br>x 22    | Wal                                    | Cloth,<br>red &<br>blk.  | 26                       | 119.95                              | Same as above.   |                  |

## Encore to excellence.

Thorens proudly presents its TD-125 AB Mark II Electronic Turntable with a new, unsurpassed transcription tonearm.

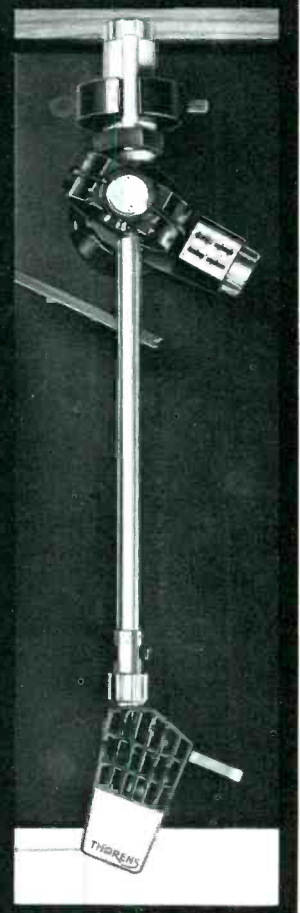
When the Thorens TD-125 first appeared on the scene, Stereo Review acclaimed it as "unquestionably one of the elite among record players. It would be hard to imagine a unit that performs better."

While a host of refinements have been added to the Mark II, such as the new TP-16 tonearm with its own automatic magnetic anti-skating control,

all the advanced features of the original TD-125 have been retained.

Visit your Thorens dealer today and learn why this new Thorens is a must in any quality stereo and 4-channel system.

Elpa Marketing Industries, Inc.  
New Hyde Park, N.Y. 11040. West: Scottsdale, Ariz. 85253. Canada: T-i-Tel Assocs.,



# THORENS

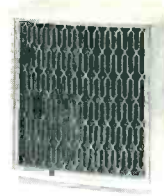
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RTR Column



Radford TL50



Radio Shack Optimus 7

# Speakers

| MANUFACTURER        | MODEL     | WOOFER        |                           |                | MID-RANGE     |            | TWEETER       |                 | Overall freq. resp., Hz to kHz<br>-7 db | Amppl. pow. (w) avg. room, W | Pwr. handling capacity (RMS cont) | Crossover frequency (res), Hz | Impedance, ohms   | Enclosure dimensions,<br>W x D x H, in. | Wood finish | Grille material<br>color | Weight, lbs. | Price (per pair?)  | SPECIAL FEATURES              |
|---------------------|-----------|---------------|---------------------------|----------------|---------------|------------|---------------|-----------------|---|------------------------------|-----------------------------------|-------------------------------|-------------------|---|-------------|--------------------------|--------------|--|-------------------------------|
|                     |           | Diameter, in. | Resonance (in system), Hz | Enclosure type | Diameter, in. | Type       | Diameter, in. | Type            |   |                              |                                   |                               |                   |   |             |                          |              |  |                               |
| RTR                 | 280DR     | (4) 10        | *                         | Inf. baf.      |               | (6) 2      | Cone          | 22-18.5k<br>± 4 | 25                                      | 100                          | 3500                              | 8                             | 16½ x 16½<br>x 39 | Wal.                                    | Cloth, blk. | 95                       | 280.00       | *Acous. fdbk. crt. (pat.); total disp. all freq.                             |                               |
|                     | 180D      | (2) 10        | 49                        | Inf. baf.      |               | (4) 2      | Cone          | 28-18.5k<br>± 4 | 30                                      | 60                           | 3500                              | 8                             | 14 x 14<br>x 33½  | Wal.                                    | Cloth, blk. | 65                       | 180.00       | One planar resist. load. woofer; total disp. hi freq.                        |                               |
|                     | HPR-12    | 12            | *                         | Rear load.     | 5             | Cone       | 2             | Cone            | 35-18.5k<br>± 4                         | 20                           | 60                                | 1.5k, 10k                     | 8                 | 14½ x 13<br>x 36                        | Wal.        | Cloth, blk.              | 65           | 169.00   | *Helmholz driven passive rad. |
|                     | ESR-6     |               |                           |                |               | (6) 3 x 5¼ | ES            | 1.5.30k         | 30                                      | 60                           | 1500                              | 8                             | 14½ x 12<br>x 14½ | Wal.                                    | Cloth, blk. | 25                       | 149.00       | ES add-on tweeter; built-in x-overs & lev. controls for both tw. & wfr. sys. |                               |
| RADFORD (AUDIONICS) | TL-30     | 7             | 45                        | Trans. line    |               | 1          | Dome          | 45-16k<br>± 5   | 10                                      | 30                           | 2500                              | 8                             | 34 x 10<br>x 10   | Rose                                    | Cloth, blk. | 48                       | 149.95       |  |                               |
|                     | TL-50-A   | 8             | 45                        | Trans. line    | 5             | Cone       | 1             | Dome            | 38-25k<br>± 4                           | 30                           | 70                                | 500, 3500                     | 8                 | 44 x 12<br>x 12                         | Rose        | Cloth, blk.              | 80           | 220.00   | Same HF unit as TL-90.        |
|                     | TL-90     | 10            | 42                        | Trans. line    | 4             | Cone       | 1             | Dome            | 35-25k<br>± 3.5                         | 25                           | 70                                | 500, 4200                     | 8                 | 44 x 13½<br>x 14½                       | Rose        | Cloth, blk.              | 98           | 370.00   | All Radford drivers & x-over. |
| RADIO SHACK         | Optimus 7 | 12            |                           | Acous. susp.   | 6½            | 2½         | Cone          | 20-25k<br>- 3   |   |                              | 850, 5k                           | 8                             | 24 x 15¾<br>x 27  | Wal.                                    | Brn.        | 55                       | 198.50       | Metal & cloth grillework   |                               |
|                     | Optimus 5 | 12            |                           | Acous. susp.   |               | (3) 4      |               | 20-20k<br>- 3   | 100                                     |                              | 800, 5k                           | 8                             | 14 x 11½<br>x 25  | Wal.                                    | Beige       | 35                       | 109.50       |  |                               |
|                     | MC-1000   | 8             |                           | Acous. susp.   |               | 3          |               |                 |   |                              |                                   | 8                             | 11¼ x 8¼<br>x 17¼ | Wal.                                    | Beige       | 20                       | 55.00        |  |                               |
|                     | MC-500    | 5             |                           | Acous. susp.   |               | 2          |               | 75-20k<br>± 3   |   |                              |                                   | 8                             | 11¾ x 9<br>x 15½  | Wal.                                    | Beige       | 10                       | 35.00        |  |                               |



## A little Traveling Music, Please

Daily frustrations make a person want to get away from it all. And, the UTAH MP-3000 Speaker will take you there better, faster than any comparable unit. With the MP-3000, you **know** you are in Tahiti, Paris or even Kentucky. Your day becomes more pleasant, too, as the MP-3000 conquers the sound barriers.

MP-3000 combines the rare attributes of sound and styling. Clean, undistorted sound comes from this 4-speaker, 3-way speaker system. The oiled and hand-rubbed walnut veneer cabinets, and unique grille of sculptured foam are both acoustically and geometrically beautiful. The system contains a 15" high compliance woofer with a 2" voice coil, as well as two horn-loaded-dome-tweeters. It's a distinguished combination of well-defined, distortion-free sound reproduction. Size: 27" x 20½" x 14" deep, excluding base. Shipping weight: 70#.

Come travel with us. Get complete information about the exciting MP-3000 Speaker System.

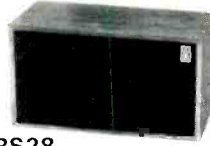


**UTAH ELECTRONICS**  
Huntington, Ind. 46750

Check No. 68 on Reader Service Card



# Speakers



Rectilinear III Lowboy

Rogersound RS28

SAE Mk XII

| MANUFACTURER            | MODEL              | WOOFER        |                           |                | MID-RANGE     |              | TWEETER         |            | Overall freq. resp. Hz to kHz<br>± dB | Ampl. pwr. for avg. room, W | Pwr. handling capacity (RMS cont) | Crossover frequency (res), Hz | Impedance, ohms | Enclosure dimensions,<br>W x D x H, in. | Wood finish  | Grille material<br>color | Weight, lbs. | Price (per pair?)                | SPECIAL FEATURES  |
|-------------------------|--------------------|---------------|---------------------------|----------------|---------------|--------------|-----------------|------------|---------------------------------------|-----------------------------|-----------------------------------|-------------------------------|-----------------|---|--------------|--------------------------|--------------|----------------------------------|---|
|                         |                    | Diameter, in. | Resonance (in system), Hz | Enclosure type | Diameter, in. | Type         | Diameter, in.   | Type       |                                       |                             |                                   |                               |                 |   |              |                          |              |                                  |   |
| RECTILINEAR             | III Lowboy         | 12            | 40                        | duct. port     | 5             | Cone         | (2) 2½<br>(2) 2 | Cone       | 22-18.5k<br>± 4                       | 20                          | 100                               | 500:<br>8k<br>11k             | 8               | 22 x 12¼<br>x 28                        | Wal.         | fret-work                | 70           | 299.00                           |   |
|                         | III                | 12            | 40                        | duct. port     | 5             | Cone         | (2) 2½<br>(2) 2 | Cone       | 22-18.5k<br>± 4                       | 20                          | 100                               | 500:<br>8k:<br>11k            | 8               | 18 x 12<br>x 35                         | Wal.         | Cloth. brn.              | 70           | 279.00                           |   |
|                         | XII                | 10            | 45                        | duct. port     | 5             | Cone         | 2½              | Cone       | 35-18k<br>± 4                         | 15                          | 85                                | 350:<br>7.5k                  | 8               | 14 x 10¼<br>x 25                        | Wal.         | Cloth. brn.              | 40           | 139.00                           |   |
|                         | Mini III           | 8             | 50                        | Acous. susp.   | 5             | Cone         | 2               | Cone       | 50-18k<br>± 4                         | 20                          | 70                                | 400:<br>8k                    | 4               | 12 x 9½<br>x 19                         | Wal.         | Cloth. brn.              | 25           | 99.50                            |   |
|                         | XIa                | 10            | 45                        | Duct. port     |               |              | 3½              | Cone       | 45-18k<br>± 4                         | 10                          | 50                                | 1k                            | 8               | 12 x 23<br>x 10¼                        | Wal.         | Cloth tan                | 31           | 79.50                            | Fretwork, grille, opt. \$10 each  |
| ROGERSOUND              | RSL 28             | 8             | 67                        | Acous. susp.   |               |              | 2½              | Cone       | 50-19k<br>± 5                         | 15                          | 30+                               | 1800                          | 8               | 18 x 9¾<br>x 8½                         | Wal.         | Cloth. blk.              | 15           | 39.95 ea                         | LC x-over.  |
|                         | RSL Mini Monitor   | 8             | 62                        | Bass refl.     |               |              | 2½              | Cone       | 40-19k<br>± 5                         | 5                           | 45                                | 1800                          | 8               | 22 x 12¼<br>x 10¼                       | Wal.         | Opt.                     | 29           | 69.95 ea                         |   |
|                         | RSL Studio Monitor | 12            | 52                        | Bass refl.     | 5             | Cone         | 2x6             | Horn       | 40-15k<br>± 3                         | 7                           | 80                                | 800:<br>5000                  | 8               | 25 x 14½<br>x 12                        | Util.        | Opt.                     | 45           | 105.00 ea.                       | Avail. in wal. in var. colors, \$130.00.  |
|                         | RSL Max            | 12            | 37                        | Abs. line      |               |              | (2) 2½          | Cone       | 30-19k<br>± 3                         | 15                          | 75                                | 1600                          | 8               | 32 x 18<br>x 12                         | Wal.         | Cloth. blk               | 55           | 160.00 ea                        | Amb tweeter; tight bass & full imp.   |
|                         | RSL 512            | (2) 12        | 30                        | Bass refl.     | 3x9           | Horn & Drive | (2) 2x6         | Horn       | 20-18k<br>± 4                         | 8                           | 100                               | 800:<br>500                   | 4               | 36 x 28<br>x 18                         | Util.        | Cloth. blk.              | 100          | 235.00                           | W/wal. encl. @ 165 lbs., \$275.00.  |
| ROLA-CELESTION (HERVIC) | 66                 | 12            |                           | Acous. susp.   | 2½            | Dome         | 2               | Dome       | 16-40k<br>± 5                         | 10                          | 80                                | 500:<br>5000                  | 4-8             | 15 x 11¼<br>x 40                        | Wal.         | Cloth. grey              | 62           | 486.00                           | Acous. bass rad.  |
|                         | 44                 | 12            |                           | Acous. susp.   | 6             | Cone         | 2               | Dome       | 30-30k<br>± 3                         | 6                           | 44                                | 500:<br>5000                  | 4-8             | 14½ x 10<br>x 30                        | Wal.         | Cloth. brn.              | 40           | 272.00                           |   |
|                         | 25                 | 12            |                           | Acous. susp.   | (2) 2         | Dome         | 2               | Dome       | 20-40k<br>± 5                         | 5                           | 60                                | 3000:<br>9000                 | 4-8             | 14 x 11<br>x 32                         | Wal.         | Cloth. brn.              | 48           | 332.65                           | Same as above.  |
|                         | 15                 | 8             |                           | Acous. susp.   |               |              | 2               | Dome       | 30-15k                                | 4                           | 30                                | 3000                          | 4-8             | 9½ x 9¼<br>x 21                         | Wal.         | Cloth. brn.              | 15           | 141.95                           | Same as above.  |
| SAE                     | Mk XIV             | 12.3          | 18                        | Acous. susp.   | (2) 5         | Cone         | (6)             | ES         |                                       | 100 rms                     | *                                 | 120:<br>240:<br>480:<br>1440  | 8               | 24 x 18<br>x 42¼                        | Wal. or Rose | Ebony                    | 250 pr.      | 1450.00 Wal.<br>1675.00 Rose pr. | *No limit; elect. prot. against d.c. & oscillations.                                  |
|                         | Mk XII             | 12.3          | 18                        | Acous. susp.   | 5             | Cone         | (3)             | ES         |                                       | 60                          | *                                 | 120:<br>240:<br>480:<br>1440  | 8               | 17 x 12¼<br>x 27                        | Wal. or Rose | Ebony                    | 175 pr.      | 900.00 Wal.<br>1000.00 Rose pr.  | *As above; ad; x-overs; hand rub. ebony base, \$30.00.                                |
|                         | Mk XI              | 12            | 18                        | Inf. baf.      | (2) 5         | Cone         | (4) 2.5         | Dome       |                                       | 30                          | 300                               | 120:<br>480:<br>1440          | 4               | 17 x 12¼<br>x 27                        | Wal.         | Ebony                    | 110 pr.      | 550.00 pr.                       | Ebony base \$300.00; hi freq. contl. -7dB to +5 dB; mid. contl. -16dB to +4dB, fused. |
|                         | Mk X               | 12            | 18                        | Inf. baf.      | 5             | Cone         | (2) 2.5         | Dome       |                                       | 20                          | 200                               | 480:<br>1440                  | 8               | 14½ x 12<br>x 25                        | Wal.         | Ebony                    | 98 pr.       | 350.00 pr.                       | Same as above.  |
| SANSUI                  | SP-3500            | 14            |                           | Bass refl.     | (2) 4<br>4x2  | Cone<br>Horn | (2) 2           | Horn       | 25-20k                                |                             | 100                               | 700:<br>2000:<br>6500         | 8               | 17¼ x 11½<br>x 25¼                      | Wal.         | *                        | 58.1         | 249.95                           | Multidir.; *Kumiko grille.  |
|                         | SP-2500            | 12            |                           | Bass refl.     | (2) 5         | Cone         | (2) 5           | Horn       | 30-20k                                |                             | 80                                | 700:<br>6500                  | 8               | 16¼ x 10¾<br>x 25¼                      | Wal.         | *                        | 51.3         | 209.95                           | Same as above.  |
|                         | SP-1700            | 12            |                           | Bass refl.     | (2) 4         | Cone         | (2) 2           | Cone       | 30-20k                                |                             | 70                                | 700:<br>6500                  | 8               | 16¼ x 10¾<br>x 25¼                      | Wal.         | *                        | 46.7         | 189.95                           | Same as above.  |
|                         | AP-1200            | 10            |                           | Bass refl.     | (2) 4         | Cone         | (2) 2           | Cone       | 35-20k                                |                             | 60                                | 700:<br>6500                  | 8               | 15¼ x 10¾<br>x 23¼                      | Wal.         | *                        | 42.7         | 169.95                           | Same as above.  |
| SCHOBER                 | LSS-10A            | 12            | 32                        | Refl.          | 8             | Cone         | *               |            | 30-18k<br>± 5                         | 2                           | 40                                | 250:<br>3500                  | 8               | 24 x 16<br>x 34                         | Wal.         | Cane bge                 | 60           | 211.50 (kit)                     | *Horn tweet opt.; **w/horn.   |
| SHERWOOD                | Wood-stock         | 8             | 40                        | Acous. susp.   |               |              | 3½              | Omni polar | 40-18k                                | 5                           | 25                                | 4000                          | 8               | 18 x 11<br>x 9                          | Wal.         | Cloth. brn.              | 35           | 59.95                            |   |
| SOLAR                   | 1000               | 10            |                           | Acous. susp.   |               |              | (2) 3½          | Cone       | 35-22k                                | 25                          | 60                                | 2600                          | 8               | 12 x 14½<br>x 24¼                       | Wal.         | Dbf. knit, chc.          | 42           |                                  | Cont. var. hi freq. contl.; opt. floor stand.   |
|                         | 100                | 12            |                           |                | 4             | Cone         | 4               | Horn       | 35-17.5k                              | 5                           | 40                                | 2500                          | 8               | 12 x 14½<br>x 24¼                       | Wal.         | Dbf. knit, chc.          | 40           |                                  | Resettable push-button crt. brkr.   |

# If they danced in the recording studio, what will they do at home?

We've gone about the serious business of designing the best possible loudspeaker for professional studio monitor use. With computers and anechoic chambers and all the rest. And, having gained a basic new insight into bass speaker performance, we've come up with what looks like a winner. The Sentry III.

We've run all the curves that prove, in a most scientific, sober fashion, that the system is really quite good. We've got polar graphs, and frequency response curves, distortion measurements, total power output curves, power handling test results, and SPL data galore.

But what happens when we demonstrate the Sentry III? Leading

engineers (whose names we hesitate to divulge — but they are top men) leap about in their control rooms DANCING for heaven's sake! Snapping their fingers and feeling the sound, and reveling in the sensory pleasure of a clean first octave. And last octave too, for that matter.

And they run from one side of the studio to the other trying to find holes in the distribution of the highs . . . and they can't . . . and they LAUGH! It's very unseemly (but secretly quite gratifying). So we try to thrust our good numbers and graphs at these serious engineers, but they'd rather listen and compare and switch speakers. And make rude remarks about their old monitors.

Perhaps you, as a serious-minded music lover will stand still long enough to heed our technical story. And appreciate that the very same sonic virtues that intoxicated these recording engineers have an honest place in your home. Especially when your goal is music reproduction at or near original concert levels.

In fact, several recording engineers have ordered Sentry III speakers for *their own* living rooms. Some with the accessory equalizer that extends response to 28 Hz.

Please write for our technical explanation of the Sentry III. You'll also get the select list of dealers who have been entrusted to demonstrate this remarkable speaker. Pay one of them a visit . . . and bring your dancing shoes.



## The New SENTRY™ III Monitor Loudspeaker

a **Gulton**  
COMPANY

**Electro-Voice®**

SENTRY III Frequency Response, 40-18,000 Hz  $\pm$  3 dB; Sound Pressure on axis at 4' with 50 watt input, 113 dB; Dispersion, 120° horizontal, 60° vertical; Size, 28 $\frac{1}{2}$ "W x 20 $\frac{1}{2}$ "D x 34 $\frac{1}{2}$ "H; Weight, 156 lbs. \$600.00 suggested resale net. SEQ active equalizer extends response to 28 Hz  $\pm$  3 dB, \$60.00.

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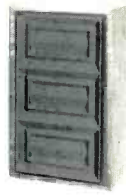
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# Speakers



Superscope S-310



Soundcraftsmen Lancer



Tannoy Mallorcan

| MANUFACTURER   | MODEL        | WOOFER        |                           |                |               | MID-RANGE |               | TWEETER   |            | Overall freq. resp., Hz to kHz<br>± 2 dB | Amp. pow. for avg. room, W | Pwr. handling capacity (RMS cont) | Crossover frequency (Hz) | Impedance, ohms          | Enclosure dimensions,<br>W x D x H, in. | Wood finish             | Grille material<br>color | Weight, lbs. | Price (per pair?)   | SPECIAL FEATURES |
|----------------|--------------|---------------|---------------------------|----------------|---------------|-----------|---------------|-----------|------------|--|----------------------------|-----------------------------------|--------------------------|--------------------------|---|-------------------------|--------------------------|--------------|---|------------------|
|                |              | Diameter, in. | Resonance (in system), Hz | Enclosure type | Diameter, in. | Type      | Diameter, in. | Type      |            |  |                            |                                   |                          |                          |   |                         |                          |              |   |                  |
| SOUNDCRAFTSMEN | SC-12ES      | 12            |                           | Acous. susp.   | 5             | Cone      | 144 sq. in.   | ES        | 20-30k     | 20                                       | 150                        | 500; 1000; 15k                    | 8                        | 18 x 14 x 28             | Wal.                                    | Cloth, red & blk.       | 76                       | 399.50       | Reflectrostatic™ back-wave emission dbr.; equal. cont. pnl. |                  |
|                | Lancer SC-6  | 12            |                           | Refl.          |               |           |               | Horn      | 18-22k     | 10                                       | 60                         | 1k; 3k                            | 8                        | 16 x 14 1/4 x 27         | Wal.                                    | Cloth, red              | 57                       | 249.50       | 4-way; cont. var. hi freq. contl.                           |                  |
|                | Lancer SC-3X | 12            |                           | *              |               |           |               | Horn      | 26-22k     | 10                                       | 60                         | 1k; 3k                            | 8                        | 15 1/4 x 12 1/2 x 23 1/2 | Wal.                                    | Cloth, red              | 45                       | 199.50       | 3-way; 2° ducted port reflex. resist. loaded                |                  |
| SUPERSCOPE     | S-26         | 6 1/2         | 80 ± 10                   | Port           |               |           | 3             | Cone      | 100-16.5k  | 1.5                                      | 10                         | 5k                                | 8                        | 11 1/2 x 6 1/4 x 19 1/4  | Wal.                                    | Vacuum form cloth, brn. | 9 1/2                    | 59.95 pr.    |   |                  |
|                | S-212        | 12            | 35                        | Port           |               |           | 2             | Cone      | 45-18k ± 5 | 4  | 30                         | 2k                                | 8                        | 14 1/2 x 11 x 23 1/2     | Wal.                                    | Vacuum form cloth, brn. | 40                       | 99.95        |   |                  |
|                | S-310        | 10            | 26                        | Port           | 3 1/2         | Cone      | 2             | Cone      | 40-18k ± 5 | 5  | 30                         | 2k; 7k                            | 8                        | 14 1/2 x 11 x 24 1/2     | Wal.                                    | Vacuum form cloth, brn. | 43                       | 139.95       | 2-pos. high freq. contl.                                    |                  |
| TANNOY         | Mallorcan    | 12            | 64                        | Refl.          |               |           | 2 1/2         | Exp. horn | 45-20k     | 20                                       | 30                         | 1000                              | 8                        | 23 1/2 x 14 1/4 x 11 1/2 | Wal.                                    | Crvd. wood with cloth   | 45                       | 237.00 each  | Dyn. & freq. bal.; cab. finished 4 sides.                   |                  |
| TELEX          | TX 10A       | 10            | 50                        | Acous. susp.   | 5 1/4         | Cone      | 3             | Cone      | 20-20k ± 6 | 5  | 45                         | 1200; 3500                        | 8                        | 25 x 12 x 11 1/2         | Wal.                                    | Cane                    | 62                       | 99.95        |   |                  |

## The perfect roommate.

If music went from your speaker system right into your ears, you'd never lose a single note. But it doesn't. It ricochets off walls, windows, ceilings, floors—until your room is filled with sound waves criss-crossing and clashing with each other.

The result: unnatural reinforcement of some frequencies and complete cancellation of others. A case of musical robbery that every speaker manufacturer knows about, but most simply ignore because they can't do anything about it.

Altec has done something about it. Concept EQ.

Concept EQ begins with a pair of superb 3-way speaker systems—speaker systems critically designed to deliver flawless reproduction in any flawless acoustical environment. But not many rooms are acoustically flawless. So Altec engineers developed something called Controlled Variable Speaker Contour and wrapped it up in an amazing little box that rediscovers the music your listening room hides from you.



The sound of experience  
1515 S. Manchester, Anaheim, Calif. 92803

**ALTEC**  
DIVISION OF ALTEC CORPORATION

For complete information on Concept EQ, please write to the Audio Information Group at Altec.

# Speakers



Venturi Formula 6



Utah MP2000



Yamaha NS-550

| MANUFACTURER  | MODEL     | WOOFER        |                           |                |               | MID-RANGE          |               | TWEETER        |                | Overall freq. resp. Hz to kHz<br>-7 dB | Appl. pwr. for avg. room, W | Pwr. handling capacity (RMS cont) | Crossover frequency (ies), Hz | Impedance, ohms    | Enclosure dimensions,<br>W x D x H, in. | Woof. finish   | Grille material<br>color | Weight, lbs.  | Price (per pair)   | SPECIAL FEATURES |
|---------------|-----------|---------------|---------------------------|----------------|---------------|--------------------|---------------|----------------|----------------|--|-----------------------------|-----------------------------------|-------------------------------|--------------------|---|----------------|--------------------------|---------------|--|------------------|
|               |           | Diameter, in. | Resonance (in system), Hz | Enclosure type | Diameter, in. | Type               | Diameter, in. | Type           |                |  |                             |                                   |                               |                    |   |                |                          |               |  |                  |
| TRANSDUCTION  | LTD-1     | 12            |                           | Trans line     | 5             | Cone               | ¾             | Dome           | 28-20k<br>-3.5 | 10                                     | 60                          | 700;<br>5000                      | 4-8                           | 15 x 13¼<br>x 30   | Wal.                                    | Cloth,<br>blk. | 60                       | 250.00<br>ea. | Plast. lam. drive sys.;<br>trans. line midrng.; synth.<br>damping mat. |                  |
| TRUSONIC      | JR-100M   | 10            | 60                        | Tuned port     | 5             | Cone               | 1             | Dome<br>w/horn | 30-20k         | 10                                     | 40                          | 1500;<br>5000                     | 8                             | 14 x 23<br>x 10    | Wal.                                    | Foam,<br>chc.  | 33                       | 119.95<br>ea. | Slid. chassis M-R; treb.<br>lev. contl.                                |                  |
|               | JR-200M   | 12            | 68                        | Tuned port     | 5             | Cone               | 1             | Dome<br>w/horn | 20-20k         | 10                                     | 50                          | 2500;<br>7000                     | 8                             | 15¼ x 24<br>x 12   | Wal.                                    | Foam,<br>chc.  | 46                       | 149.95<br>ea. | Sealed M-R; sep. M-R<br>& twtr. cont.                                  |                  |
| VENTURI (BIC) | Formula 2 | 8             |                           | *              |               | **                 | 2             | Dome           | 30-23k         | 15                                     | 75                          | 1500;<br>15k                      | 6                             | 12 x 11½<br>x 19¼  | Wal.                                    | Foam,<br>chc.  | 27                       | 98.00         | *Venturi encl.; **Biconex<br>horn.                                     |                  |
|               | Formula 4 | 10            |                           | *              |               | **                 | 2             | Dome           | 25-23k         | 15                                     | 100                         | 1500;<br>15k                      | 6                             | 13¼ x 13<br>x 25   | Wal.                                    | Foam,<br>chc.  | 40                       | 136.00        | Same as above.   |                  |
|               | Formula 6 | 12            |                           | *              |               | **2                | (2) 2         | Dome           | 20-23k         | 10                                     | 125                         | 750;<br>1500;<br>15k              | 6                             | 15¼ x 14¼<br>x 26¼ | Wal.                                    | Foam,<br>chc.  | 54                       | 239.00        | Same as above.   |                  |
| UTAH          | AS-2AX    | 8             | 100                       | Acous.         |               |                    | 3½            | Cone           | 45-17.5k       | 10                                     | 12                          | 5000                              | 8                             | 11¼ x 17¼<br>x 8¼  | Wal.                                    | Cloth,<br>brn. | 20                       | 49.95<br>ea.  | Slid. back twtr.; oil. wal.<br>vener.                                  |                  |
|               | MP-200D   | 12            | 60                        | Duct. port     | 5             | Cone               | 1             | Dome<br>w/horn | 30-20k         | 10                                     | 30                          | 2500;<br>5000                     | 8                             | 15¼ x 24<br>x 12   | Wal.                                    | Foam,<br>chc.  | 42                       | 139.95<br>ea. | Slid. chassis M-R; treb.<br>lev. contl.                                |                  |
|               | HS4-B     | 12            | 60                        | Duct. port     | 3½ x 8        | Compr. drv. w/horn | 1             | Dome<br>w/horn | 25-19.5k       | 5                                      | 45                          | 2500;<br>5000                     | 8                             | 15 x 25¼<br>x 14   | Wal.                                    | Foam,<br>chc.  | 49                       | 149.95<br>ea. | M-R compr. unit w/ellip.<br>horn; treb. lev. contl.                    |                  |
| YAMAHA        | NS-570    | 15x20         | 50                        | Clsd.          |               |                    | 2             | Horn           |                |  | 45                          | 5000                              | 8                             | 17 x 13<br>x 44    | *                                       | Cloth,<br>blk. | 88                       | 500.00        | *White poly/Rose; var.<br>tweeter lev.; remov. grille.                 |                  |
|               | NS-550    | 12x18         | 55                        | Clsd.          |               |                    | 2             | Dome           |                |  | 30                          | 5000                              | 8                             | 16 x 12<br>x 40    | *                                       | Cloth,<br>blk. | 71                       | 400.00        | *White poly/Wal.; Same<br>as above.                                    |                  |

Now, through Concept EQ's electronic frequency contouring, you can mate your speakers perfectly to the unique characteristics of your listening room. Bass you've never heard before suddenly appears as big as life—in your room. Midrange becomes as mellow as it should be—in your room. Highs purely sparkle as highs are supposed to—in your room. Music becomes a totally new adventure—in your room.

Listen to your music, not to your room. Listen to the perfect roommate. Listen to Concept EQ from Altec.

The difference you'll hear is the sound of experience.





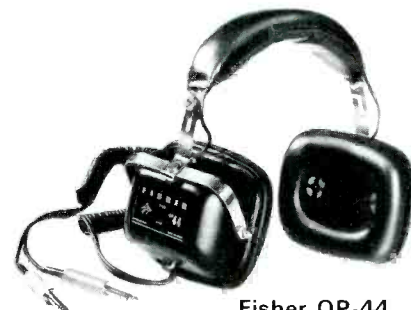
# Headphones



AKG K-180



David Clark 4CH-A



Fisher QP-44

| MANUFACTURER          | MODEL          | Type       | Frequency response, Hz | Impedance, ohms                | Sensitivity, mW input for 100 dBm cbl | Maximum input, mW | Distortion, % | Cord length, ft. | Weight, oz. | Price  | SPECIAL FEATURES  |
|-----------------------|----------------|------------|------------------------|--------------------------------|---------------------------------------|-------------------|---------------|------------------|-------------|--------|---|
| AKG (PHILIPS)         | K-100          | Dyn.       | 20-20k<br>-3           | 600                            | 1                                     | 1.0               | 8             | 13               |             | 29.00  |   |
|                       | K-150          | Dyn.       | 20-20k<br>-2           | 600                            | 1                                     | 1.0               | 6             | 9                |             | 39.00  |   |
|                       | K-180          | Dyn.       | 20-20k<br>-2           | 600                            | 1                                     | 1.0               | 8             | 21               |             | 69.00  |   |
|                       | K-158          | Dyn.       | 20-20k<br>-2           | 600                            | 1                                     | 1.0               | 6             | 15               |             | 60.00  | Boom set; 2 chan., plus bal. low imp. mic.  |
| AVID                  | Pro 730V       | Dyn.       | 20-18.5k               | 300                            | 0.3°                                  | 330 (10V)         | 0.5           | 15               | 16          | 29.95  | Vol. contrl. for ea. chan. on headset; mylar diaphragm: *for 100 dB   |
|                       | PRO 730        | Dyn.       | 20-18.5k               | 300                            | 0.3°                                  | 330 (10V)         | 0.5           | 15               | 16          | 26.95  | Mylar diaphragm: *for 100 dB  |
|                       | 885            | Dyn.       | 30-17.5k               | 300                            | 0.3°                                  | 330 (10V)         | 1.0           | 15               | 15          | 14.95  | Same as above: *for 100 dB  |
| BEYER DYNAMIC (REVOX) | DT 100         | Dyn.       | 30-20k                 | 2x200                          |                                       | 1000              | 0.2           | 10               | 9           | 57.50  | *100 dB/mW over 2x10 <sup>4</sup> μbar at 400 Hz; supplied w/ coil cbl.; avail. 2x5, 2x400, 2x1000 imp.         |
|                       | DT 480         | Dyn.       | 20-20k                 | 2x200                          |                                       | 1000              | 0.1           | 10               | 16          | 80.00  | Supplied w/coil cbl.; avail. 2x5, 2x25 imp.; *115dB/mW over 2x10 <sup>4</sup> μbar at 400 Hz                    |
|                       | DT 48          | Dyn.       | 16-20k                 | 2x200                          |                                       | 6330              | 0.1           | 6 1/4            | 17          | 110.00 | *112 dB/mW over 2x10 <sup>4</sup> μbar at 400 Hz; avail. 2x8 or 1x25 (mono) imp.; DT 48K w/coil cbl., \$115.00. |
|                       | DT 204 4-chan. | Dyn.       | 20-20k                 | 4x200 (4 ch.)<br>2x100 (2 ch.) |                                       |                   |               | 10               | 14          | 104.00 | *114dB/mW over 2x10 <sup>4</sup> μbar at 400 Hz.  |
| DAVID CLARK CO.       | 4CH-A 4-chan.  | Dyn.       | 40-16k                 | 16                             | 80                                    | 600               | 2.0           | 12               | 16          | 80.00  | With DC-2A decoder \$95.00. Allos 4-ch. sound used w/2 ch. sys. and 4-ch. encoded discs.                        |
|                       | 100A           | Dyn.       | 20-18k<br>-6           | 17                             | 105                                   | 1000              | 1.2           | 9                | 16          | 50.00  | Also avail. in 300 & 600 ohm.   |
|                       | 200            | Dyn.       | 30-16k                 | 8                              | 100                                   | 500               | 1.5           | 9                | 16          | 29.00  | Clark 250 same as 200 w/vol. contrl., \$34.00.  |
|                       | 300            | Dyn.       | 40-14k                 | 8                              | 100                                   | 500               | 2.0           | 9                | 16          | 21.00  |   |
|                       | 75             | Perm. Mag. | 40-16k                 | 8                              | 105                                   | 1000              | 2.0           | 8                | 8           | 14.95  |   |
| FISHER                | HP 70          | Dyn.       | 30-18k                 | 16                             | 2.5                                   | 500               |               | 10               | 12          | 29.95  |   |
|                       | HP-100         | Dyn.       | 18-22k                 | 50                             | 2.0                                   | 700               |               | 8                | 10          | 49.95  |   |
|                       | QP-44 4-chan.  | Dyn.       | 20-18k                 | 8                              | 10                                    | 200               |               | 10               | 20          | 69.95  |   |
| GTE SYLVANIA          | SP20BN         | Dyn.       | 20-20k                 | 16                             | 3                                     | 1000              | 1.0           | 14               | 14          | 19.95  |   |
|                       | SP40           | Dyn.       | 20-20k                 | 8                              | 1                                     | 700               | 1.0           | 8                | 24          | 39.95  |   |
| JVC                   | STH 10E        | Dyn.       | 20-20k                 | 8                              |                                       | 500               | 1.0           | 7                | 13          | 29.95  | 2 built-in vol. contrls   |
|                       | 5944 4-chan.   | Dyn.       | 20-20k                 | 8                              |                                       | 100               | 0.5           | 7                | 21          | 49.95  | Built-in phase rev. swit.   |
| JANSZEN               | Jecklin        | ES         | 30-18k<br>-3           | 8                              | 10 watts                              | 80 watts          | 0.5           | 10               | 22          | 300.00 | No air-seal to ear. Add'l. set, \$190.00.   |
| KLH                   | 80             | Dyn.       | 20-20k<br>-4           | 600                            | 0.06                                  | 166               | 0.5           | 10               | 11 1/4      | 49.95  | For use w/amp. imp. of 0 to 600 ohms  |

**A breathtaking performance  
deserves a breathtaking  
performance.**



Frank Duncan/Opera News

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Slip on a pair of Koss K2+2 Quadrafones® and slip into the closest thing to a live performance you'll ever hear. Because unlike speakers, the Koss K2+2 mixes all four channels in your head instead of on the walls of your living room. So what you'll hear is a 4-channel sound so breathtaking, you'll feel the deepest bass all the way down to your toes and the highest highs running up and down your spine.

And because all Koss

Quadrafones feature volume-balance controls on each ear cup, you'll have any seat at the opera at your fingertips. A twist of your fingers will put you front row center one minute and in the middle of the opera house the next. And all without moving from the comfort of your easy chair.

But even more importantly, Koss has added a 2-channel to 4-channel selector switch on the



left ear cup. In the 4-channel position, two 1½-inch dynamic driver elements in each ear cup deliver breathtaking quadraphonic sound from either matrix or discrete systems. In the 2-channel position, both drivers in each ear cup are connected in parallel for an unparalleled sound of 2-channel stereo. Either way, the switch to Koss Quadrafones is worth it.

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Koss K2+2 Quadrafones



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# Headphones

Lafayette F-4400



Koss Travler



Pickering PH-4955



Pioneer SE-405

| MANUFACTURER      | MODEL                | Type   | Frequency response, Hz<br>± dB | Impedance, ohms | Sensitivity<br>mW input for 100 dbm out | Maximum input, mW | Distortion, % | Cord length, ft. | Weight, oz. | Price                               | SPECIAL FEATURES   |
|-------------------|----------------------|--------|--------------------------------|-----------------|---|-------------------|---------------|------------------|-------------|-------------------------------------|--|
| KOSS              | ESP/9                | ES     | 15-15k<br>±2                   | 4-16            |   |                   | 0.2           | 19               |             | 175.00                              | W. E-9 energizer. ESP/6A similar but w. T-3 self-energizer; resp. 30-19k ±5 dB; \$95.00.                   |
|                   | Pro/4AA              | Dyn.   | 10-20k                         | 3.2-600         |   |                   |               | 19               |             | 60.00                               | PRO/600AA similar but 600 ohms impedance, \$65.00.   |
|                   | KO/747               | Dyn.   | 30-20k                         | 3.2-600         |   | 1                 | 10            | 21               |             | 45.00                               | KO/747Q, 4-chan.; 20-19k resp., \$60.00.   |
|                   | KO/727               | Dyn.   | 10-18k                         | 3.2-600         |   |                   | 10            | 19               |             | 34.95                               |  |
|                   | KRD/711<br>Red Devil | Dyn.   | 10-17k                         | 3.2-600         |   |                   | 0.5           | 10               | 12          | 29.95                               | K/711 similar but black.   |
|                   | K/6LC                | Dyn.   | 10-16k                         | 3.2-600         |   |                   |               | 10               | 17          | 29.95                               | Slide Vol. contrls. K/6 similar but no vol. contrls., \$22.50. K/6LCQ, 4-chan.; 20-17k resp.; \$45.00.     |
|                   | SP/3XC               | Dyn.   | 10-14k                         | 3.2-600         |   |                   |               | 10               | 15          | 15.95                               |  |
|                   | Travler              | Dyn.   | 20-18k                         | 3.2-600         |   |                   | 8             | 9                |             | 29.95                               | Compact, fold-up design.   |
|                   | HV/1                 | Dyn.   | 20-20k                         | 3.2-600         |   |                   | 0.5           | 10               | 9.5         | 39.95                               | Vented cup; high velocity, low mass diaphragm.   |
|                   | K/2+2<br>4-chan.     | Dyn.   | 10-20k                         | 3.2-600         |   |                   | 0.5           | 10               | 22          | 85.00                               | Vol./bal. contrls.; 2/4 chan. swit.  |
| Pro/5Q<br>4-chan. | Dyn.                 | 20-20k | 3.2-600                        |                 |   | 0.5               | 10            | 21               | 75.00       | Vol./bal. contrls.; 2/4 chan. swit. |  |
| LAFAYETTE         | F2001                | ES     | 5-35k                          | 8-16            |   |                   |               | 10               | 16          | 49.94                               | 4½ x 5" cushions; adj. headband; incl. energizer.  |
|                   | F4400<br>4-chan.     | Dyn.   | 20-20k                         | 4-16            |   |                   |               | 9½               | 26          | 44.95                               |  |
|                   | F1000                | Dyn.   | 20-20k                         | 8               |   |                   | 6             | 22               |             | 39.95                               | 2 two-way 2½" transducers; ind. left & right vol. contrls.   |
|                   | F-600                | Dyn.   | 20-20k                         | 200             |   |                   | 5             | 19               |             | 29.95                               |  |
| MAGNAVOX          | 1A9217               | ES     | 30-18k<br>±5                   | 8-30            | 3000                                    |                   | 0.5           | 10               | 14          | 99.95                               | Req. 110V. a.c. src.; pwr. supply incl.; provides ext. spkr. terminals.                                    |
|                   | 1A9216               | Dyn.   | 35-17k<br>±5                   | 30              | 3                                       |                   | 1.0           | 10               | 8           | 29.95                               |  |
|                   | 2A9186               | Dyn.   | 30-16k<br>±5                   | 8               | 20                                      | 1500              | 1.0           | 10               | 18          | 27.95                               | Coiled cable; 3-pos. treble comp. swit.  |
|                   | 1A9163               | Dyn.   | 40-14k                         | 8               | 20                                      |                   | 2.0           | 10               | 12          | 9.95                                | Coiled cable.  |
| MARANTZ           | SD-1                 | Dyn.   | 20-20k                         | 8               |   | 1000              | 2.0           | 10               | 16          | 29.95                               |  |
|                   | SE-1S                | ES     | 20-20k<br>+2, -5               | 30              | 3 V.                                    |                   | 0.15          | 10               | 48          | 129.95                              | Overload protect.; includes energizer.   |
| MURA              | SP-205               | Dyn.   | 30-20k                         | 8               |   | 1000              | 1.5           | 15               | 16          | 54.95                               | Slide tone & vol. contrls.   |
|                   | SP-600               | Dyn.   | 20-20k                         | 8               |   | 1000              | 1.5           | 10               | 6           | 26.95                               | Open-air type.   |
|                   | QP-280<br>4-chan.    | Dyn.   | 20-20k                         | 8               |   | 2000              | 1.5           | 10               | 16          | 39.95                               | 4-chan. stereo swit.   |
|                   | QP-300<br>4-chan.    | Dyn.   | 20-20k                         | 8               |   | 2000              | 1.0           | 10               | 24          | 69.95                               | 8 spkrs.; bass refl. type encl.; x-over ntwrks.  |
| PML (ERCONA)      | D42<br>Deluxe        | Dyn.   | 30-20k                         | 200             | 0.3                                     |                   | 2.0           | 6                | 9½          | 29.95                               | Stereo or mono; impd. for mono, 400 ohms (series conn.), 100 ohms (parallel conn.)                         |
|                   | RDF 224              | Dyn.   | 20-18k                         | 8               | 1.0                                     | 100               | 1.0           | 8                | 12          | 24.95                               | Retract. coil cable w/stand. 3-cond. phone plug & built-in stereo/mono swit.                               |
| PICKERING         | OA1                  | Dyn.   | 30-19k                         | 8               |   | 300               | 1.0           | 7                | 10.9        | 19.95                               | *100dB at 600 Hz, open air type; rem. contl. unit avail. #4901, \$19.95.                                   |
|                   | 4933                 | Dyn.   | 60-10k<br>±3                   | 8               | 0.11*                                   | 500               | 1.0           | 10               | 21          | 39.95                               | Rem. contl. avail. as above; *for 100 dB.  |
|                   | 4955                 | Dyn.   | 40-11k<br>±3                   | 8               | 0.11*                                   | 500               | 1.0           | 10               | 28          | 59.95                               | 2-way, sep. dyn. wfr. & twtr. spkrs. w/indiv. x-over networks; remote contl. avail. as above; *for 100 dB. |
|                   | OA3                  | Dyn.   | 20-20k                         | 15              | 0.10                                    | 200               | 0.5           | 10               | 7.5         | 39.95                               | Rem. contl. avail. as above; for 100 dB.   |
| PIONEER           | SE-505               | Dyn.   | 20-20k                         | 8               |   | 500               |               | 16               | 16          | 59.95                               | 2-way; level and tweeter contrls.  |
|                   | SE-405               | Dyn.   | 20-20k                         | 8               | 113 dB<br>0.3                           | 500               |               | 16               | 16          | 44.95                               | Level contrls.   |
|                   | SE-305               | Dyn.   | 20-20k                         | 8               |   | 500               |               | 12               | 14          | 34.95                               |  |
|                   | SEL-40               | Dyn.   | 20-20k                         | 8               | 96dB<br>0.1 V                           | 500               |               | 10               | 8           | 39.95                               | Open air type; alum. voice coils.  |

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new MAX Series 3-way speaker systems. So that you can get everything out of them: completely natural uncluttered sound, good presence, smooth, clean dispersion and response.

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75 watts rms.

**Minimum power requirements:**  
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**Level controls:**  
Separate treble and midrange rotary step switches.

**Frequency response:**  
25 Hz to 20 KHz.

**Walnut veneer instead of vinyl.**

**Impedance:**  
8 ohms.

**System resonance:**  
45 Hz.

**Tweeter:** 2" phenolic ring with viscous edge suspension and molded one-piece cone.

**Crossover frequencies:**  
1500 Hz and 4500 Hz.

**Midrange:**  
2" hemispherical dome.

**Foam grille, not cloth, for maximum transparency.**

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12" acoustic suspension.

15-3/4" x 25-1/4" x 13-1/4"

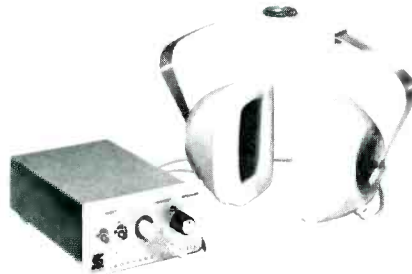
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# Headphones



Scintrex Supra



Stanton Isophase



Superex PEP-77D

| MANUFACTURER             | MODEL                         | Type   | Frequency response, Hz<br>± ? db | Impedance, ohms | Sensitivity<br>mV input for 100 dBm out | Maximum input, mW | Distortion, % | Cord length, ft. | Weight, oz. | Price  | SPECIAL FEATURES  |
|--------------------------|-------------------------------|--------|----------------------------------|-----------------|---|-------------------|---------------|------------------|-------------|--------|---|
| RCA                      | 10R201                        | Dyn.   | 20-20k                           | 4-32            | *                                       |                   | 10            | 12               |             | 29.95  | *110 dB @ 1 mW at 1 kHz.  |
|                          | 10R200                        | Dyn.   | 50-16k                           | 4-32            | *                                       |                   | 6½            | 12               |             | 19.95  | *108 dB @ 1 mW at 1 kHz.  |
|                          | 10R199                        | Dyn.   | 20-14k                           | 4-32            | *                                       |                   | 5             | 10               |             | 12.95  | *110 dB @ 1 mW at 1 kHz.  |
| RADIO SHACK              | Nova-44<br>4 chan.            | Dyn.   | 20-20k                           | 4-16            |   |                   |               | 15               |             | 39.95  |   |
|                          | Pro-1                         | Dyn.   | 10-24k                           | 4-16            |   |                   |               | 10               |             | 49.95  | Liquid-filled earcushions.  |
|                          | Custom Pro                    | Dyn.   | 20-20k                           | 4-16            |   |                   |               | 10               |             | 24.95  | Bassport design.  |
|                          | HP-100                        | ES     | 20-20k                           | 4-16            |   |                   |               |                  |             | 79.95  | Spkr. / phone swt. on junction box.   |
| SANSUI                   | SS2                           | Dyn.   | 20-18k                           | 8               |   | 500               | 1.0           | 6                | 12.6        | 16.95  |   |
|                          | SS10                          | Dyn.   | 20-20k                           | 8               |   | 500               |               | 9.8              | 22          | 32.95  | Indiv. vol. concls.; 6 ft. Y ext. cord, incl.   |
| SCINTREX                 | 88                            | Dyn.   | 15-20k                           | 300             | 4                                       | 330               | 0.9           | 14               | 9           | 24.50  |   |
|                          | 98                            | Dyn.   | 15-20k                           | 300             | 6.5                                     | 50                | 1.0           | 14               | 16          | 34.95  |   |
|                          | Supra                         | Dyn.   | 20-12k<br>± 6                    | 200             | 0.5                                     | 4                 | 1.0           | 10               | 6.5         | 39.95  |   |
|                          | HQ4                           | Dyn.   | 20-16k<br>± 6                    | 300             | 1.1                                     | 14                | 0.7           | 14               | 24          | 59.95  | Stereo/quad. swit.  |
| SENNHEISER               | HD414                         | Dyn.   | 40-20k<br>± 3                    | 2x<br>2000      | 0.64                                    | 100               | 1             | 10               | 5           | 42.95  | Open-air design.  |
| STANTON                  | 5700                          | ES     | 30-15k<br>± 3                    | 4-16            | 2V.                                     | *                 | 1.0           | 11               | 15          | 159.95 | *Prot. crt. cuts at 110dB; oper. from low imp. output of 10W rms or higher pwr. amp.. Remote contl. avail. (=5741), \$19.95.                                |
|                          | Dynaphase<br>65-4C<br>4 chan. |        | 20-20k                           | 15              | 0.1V                                    | 1.25V             | 0.5           | 11               | 19          | 64.95  | 2/4 chan., 4 spkrs.   |
|                          | Dynaphase<br>75               | Dyn.   | 40-11k<br>± 3                    | 12              | 0.11V.                                  | 500               | 1.0           | 13               | 28          | 74.95  | Sep. vol. & tone concls.; stereo/mono swit.; sep. woofer & twtr. in each cup w/ LC x-over; rem. unit attached.  |
|                          | Dynaphase<br>60               | Dyn.   | 40-11k<br>± 3                    | 8               | 0.11V.                                  | 500               | 1.0           | 10               | 28          | 59.95  | Sep. woofer & twtr. in each cup; LC x-over; rem. contl. avail., \$19.95.  |
|                          | Dynaphase<br>50               | Dyn.   | 60-10k<br>± 3                    | 8               | 0.11V.                                  | 500               | 1.0           | 10               | 21          | 49.95  | Vol. concls. on cups; Model 40 same but w/o vol. concls.; rem. avail., \$39.95.   |
| SUPEREX                  | PEP-77D                       | ES     | 10-22k<br>± 5                    | 4-16            | 3 V.                                    | 10 V.             |               | 15               |             | 120.00 | Wat. console; lev. concls. for 2 chan., self & a.c. polarization  |
|                          | PEP-79                        | ES     | 4-16                             | 4-16            | 3 V.                                    | 10 V.             |               | 15               |             | 85.00  | Wood-grain vinyl console  |
|                          | Pro-BVI                       | Dyn.   | 15-22.5k                         | 4-16            | 10                                      | 2000              |               | 15               | 18          | 60.00  | Woofer & tweeter: x-over network; acous. susp.  |
|                          | QT-4B<br>4 chan.              | Dyn.   | 20-18k                           | 4-16            | 20                                      | 500               |               | 15               | 16          | 65.00  | Stereo/quad. swit. on left earpiece.  |
|                          | QT-4<br>4 chan.               | Dyn.   | 25-17k                           | 4-16            | 20                                      | 500               |               | 15               | 16          | 50.00  |   |
|                          | ST-PRO-B                      | Dyn.   | 18-22k                           | 4-16            | 10                                      | 2000              |               | 7                | 18          | 50.00  | Woofer & tweeter: SST, sim., 20-20k freq. resp., 15 ft. cord, vol. & HF concls., \$40.00. ST-V sim., 20-18k freq. resp., 15 ft. cord, vol. concls. \$30.00. |
|                          | ST-M                          | Dyn.   | 20-20k                           | 4-16            | 10                                      | 2000              |               | 7                | 17          | 29.95  | Treb. concls.; woofer & tweeter: ST-S sim., 30-15k freq. resp., \$25.95.  |
| SW-2                     | Dyn.                          | 30-16k | 4-16                             | 8               | 2000                                    |                   | 15            | 15               | 24.95       |        |   |
| ST-F                     | Dyn.                          | 25-17k | 4-16                             | 20              | 500                                     |                   | 15            | 8                | 24.95       |        |   |
| TEAC                     | HP-101                        | Dyn.   | 18-20k                           | 500mV           | 1.0                                     |                   |               | 8                |             | 39.00  |   |
|                          | HP-102                        | Dyn.   | 18-20k                           | 10000           | 1.0                                     |                   |               | 8                |             | 39.00  |   |
| TECHNICS BY<br>PANASONIC | EAH-80A                       | ES     | 20-20k                           | 4-16            | 101dB<br>(1V.<br>500Hz)                 | 5000              | 0.8           | 13               | 12½         | 79.95  | Contl. adaptor incl.  |
| TELEX                    | Studio I                      | Dyn.   | 20-20k<br>± 3                    | 3-16            | 105dB<br>SPL*                           | 1000              | 1.0           | 15               | 24          | 69.95  | *at 1 kHz, 1 mW input.  |
|                          | 400                           | Dyn.   | 30-20k<br>± 3                    | 3-16            | 105dB<br>SPL*                           | 1000              | 1.0           | 15               | 16          | 44.95  | *at 1 kHz, 1 mW input.  |
| UNICORD                  | UHP-1                         | Dyn.   | 40-15k                           | 50k             | 100                                     | 800               | 1.0           | 8                | 22          | 36.00  | Battery-oper. mon. ampl. built-in; external power jack.   |



AKG 200E



E-V RE20

# Microphones

| MANUFACTURER  | MODEL         | Directional pattern | Operating principle | Case material  | External finish         | Impedance, ohms         | Frequency response, Hz to kHz, ± 7 dB | EIA Sensitivity, dBm   | Mic connection | Cable length, ft. | Cable plug type    | Dimensions, in.         | Weight, oz. | Mounting method          | Price                                      | SPECIAL FEATURES  |
|---------------|---------------|---------------------|---------------------|----------------|-------------------------|-------------------------|---------------------------------------|------------------------|----------------|-------------------|--------------------|-------------------------|-------------|--------------------------|--|---|
| AKG (PHILIPS) | C-451E        | Card.               | Cond.               | Metal          | Chrome                  | 200                     | 20-20k                                | -39                    | XLR            |                   | 5 7/8 x 3/4 dia.   | 4 1/2                   | 3/8-27      | 189.00                   | Mod. sys. w/interchgbie. pick-up capsules. |   |
|               | D-200E        | Card.               | Dyn.                | Metal          | Paint                   | 200                     | 30-16k                                | -55                    | XLR            | 15                | 7 1/8 x 1 1/8 dia. | 8                       | 3/8-27      | 75.00                    | Two-way card. TS, high imp., \$90.00.      |   |
|               | D-190E        | Card.               | Dyn.                | Metal          | Chrome                  | 200                     | 40-16k                                | -50                    | XLR            | 15                | 6 1/4 x 1 1/2 dia. | 6                       | 3/8-27      | 55.00                    | TS, high imp., \$70.00.                    |   |
|               | D-1000E       | Card.               | Dyn.                | Metal          | Chrome                  | 200                     | 40-16k                                | -51                    | XLR            | 15                | 6 1/4 x 1 1/4 dia. | 9 1/2                   | 3/8-27      | 65.00                    | Equal. swit. TS, high imp., \$80.00.       |   |
|               | D-160E        | Omni.               | Dyn.                | Metal          | Chrome                  | 200                     | 50-16k                                | -55                    | XLR            | 15                | 5 7/8 x 1 1/8      | 7 1/2                   | 3/8-27      | 60.00                    | Adj. resp. curve.                          |   |
| ADVENT        | MDC 1         | Card.               | Dyn.                | Metal          | Black                   | 500                     | 50-16k                                |                        | Capt.          | 20                | Phone plug         | 5 1/2 x 1 1/4           | 10          | Clamp spld.              | 90.00 pr.                                  | Mtchd. pair w. carrying case, desk stands.  |
| ASTATIC       | 810           | Card.               | Dyn.                | zinc           | Satin chrome            | 150<br>40k              | 40-15k                                | -147                   | Sw. A4M        | 18                | None               | 1 1/4 dia x 5 7/8 long  | 8           | Adapt. to 3/8-27         | \$85.00                                    | Switch version, 810S. Also avail. gold plated.  |
|               | 820           | Omni.               | Dyn.                | Steel          | Satin chrome            | 150<br>40k              | 40-18k                                | -154<br>-158           | fixed          | 18                | None               | 3/8 dia. x 9 long       | 6           | adapt to 3/8-27          | \$79.50                                    | Switch version, 820S. Also avail. gold plated.  |
|               | 840           | Omni.               | Dyn.                | Alum.          | Satin chrome            | 150                     | 50-12k and 50-16k                     | -153                   | fixed          | 30                | None               | 3/8 dia. x 2 1/2 long   | 1 1/4       | neck cord or tie clip    | \$85.00                                    | Lavalier Type. Extra-flexible cable. Dual Response choice Switch version 840S. Also avail. gold plated. |
|               | 857L          | Card.               | Dyn.                | Zinc           | Satin nickel            | 150                     | 50-15k                                | -150                   | Sw. A3M        | 18                | None               | 2 1/4 dia. x 6 1/2 long | 8           | adapt to 3/8-27          | \$66.00                                    | Ball-head filtering. Switch versions 857H & 857H-S.   |
| BEYER (REVOX) | M550S         | Omni.               | Dyn.                | Metal          | Matte blk               | 200 to 5k               | 70-18k ± 3                            | -152                   | Cap.           | 7                 | Jack               | 5 x 1 dia.              | 8           | Clamp inc.               | 35.00                                      |   |
|               | M810          | Card.               | Dyn.                | Metal          | Matte blk               | 200 to 5k               | 50-16k ± 3                            | -148                   | Can            | 16                | Jack               | 5 x 1 1/4 dia.          | 9           | Clamp inc.               | 57.50                                      |   |
|               | Soundstar XIN | Card.               | Dyn.                | Metal & plast. | Matte dk grey           | 200                     | 30-18k ± 2                            | -146                   | Can            | 16                | Open end           | 7 x 1 1/4 dia.          | 11          | Clamp inc.               | 70.00                                      |   |
|               | M69           | Card.               | Dyn.                | Metal          | Matte blk               | 200                     | 50-16k ± 3                            | -144                   | Can            | 16                | Open end           | 7 x 1 dia.              | 8           | Clamp inc.               | 85.00                                      |   |
|               | M101          | Omni.               | Dyn.                | Metal          | Matte blk               | 200                     | 40-20k ± 2                            | -150                   | Can.           | 16                | Open end           | 4 1/2 x 3/8 dia.        | 3 1/2       | Clamp inc.               | 105.00                                     |   |
|               | M67           | Card.               | Dyn.                | Metal          | Matte blk.              | 200                     | 40-18k ± 3                            | 148                    | Can.           | 16                | Open end           | 8 x 1 1/2 dia.          | 11          | Clamp inc.               | 110.00                                     |   |
|               | M201          | Spr. Card.          | Dyn.                | Metal          | Matte blk               | 200                     | 40-18k ± 2.5                          | 149                    | Can.           | 16                | Open end           | 6 x 1 1/2 dia.          | 8           | Clamp inc.               | 165.00                                     |   |
|               | M88           | Spr. Card.          | Dyn.                | Metal          | Matte blk.              | 200                     | 30-20k ± 2                            | 144                    | Can.           | 16                | Open end           | 7 x 2 dia.              | 9           | Clamp inc.               | 200.00                                     |   |
| ELECTRO-VOICE | 631A          | Omni.               | Dyn.                | Zinc           | Satin chrome            | HiZ or LoZ <sup>™</sup> | 80-13k                                | HiZ: -151<br>LoZ: -149 | A3M to A3F     | 15                | Not furn.          | 6 x 1 1/2               | 6           | Stand clamp              | 38.70                                      | Sealed mag. on/off swit. w/removable outside actuator. *Specify.  |
|               | 1710          | Omni.               | Elect. cond.        | Alum.          | Bge. anod. w/enam. trim | 150                     | 80-13k                                | -142                   | Integ. cable   | 18                | Mini plug          | 8 1/4 x 7/8             | 9           | Stand clamp              | 39.75                                      | On/off swit.  |
|               | 1750          | Card.               | Elect. cond.        | Alum.          | Bge. anod. w/enam.      | 150                     | 80-13k                                | -137                   | Integ. cable   | 18                | Mini plug          | 8 1/4 x 7/8             | 9           | Stand clamp              | 45.00                                      | Same as above.  |
|               | 670V          | Card. single "D"    | Dyn.                | Alum. alloy    | "Top Brass"             | LoZ or HiZ <sup>™</sup> | 60-14k                                | LoZ: -150<br>HiZ: -152 | A3M to A3F     | 15                | Not furn.          | 7 1/4 x 1 1/2           | 6           | Stand clamp              | 50.10                                      | Vol. contl.; integ. "pop" filter. *Select. (Specify; tie clip supplied.                                 |
|               | 624           | Omni.               | Dyn.                | Diecast metal  | Matte gray              | HiZ or LoZ <sup>™</sup> | 100-7k                                | -152                   | Integ. cable   | 18                | Not furn.          | 3 1/2 x 1 1/4           | 14          | Lav. neck cord           | 31.50                                      | *Specify; tie clip supplied.  |
|               | RE55          | Omni.               | Dyn.                | Steel          | Bge. Mico-matte         | 150                     | 40-20k                                | -149                   | A3M to A3F     | 18                | Not furn.          | 10 1/2 x 3/4            | 8 1/2       | Stand clamp              | 149.40                                     | Stand or hand held; metal carrying case incl.   |
|               | RE20          | Card.               | Dyn.                | Steel          | Bge. Mico-matte         | 50, 100, 150            | 45-18k                                | -150                   | A3M to A3F     | 18                | Not Furn.          | 8 1/2 x 2 1/4           | 26          | Stand adapt.             | 285.00                                     | Cont. Var. D <sup>®</sup> design; built-in pop filter; bass tilt-down swit.                             |
|               | DL42          | Card-line           | Dyn.                | Alum. & steel  | Bge. Mico-matte         | 150                     | 50-12k                                | -144                   | A3M to A3F     | Not furn.         | A3M                | 16 1/4 x 3 3/4          | 13          | Shock mnt. w/boom adapt. | 300.00                                     | Long-reach line mic; boom, fishpole or handheld; wind-screen, handle and carrying case incl.            |



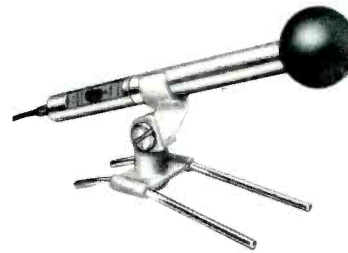
# Microphones



Hammond M-100



Lafayette Cardioid



Mura DX-285



PML EC-71

| MANUFACTURER         | MODEL             | Directional pattern | Operating principle | Case material | External finish         | Impedance, ohms      | Frequency response, Hz to kHz, ± 1 dB | EIA Sensitivity, dBm | Mic connection | Cable length, ft. | Cable plug type  | Dimensions, in.   | Weight, oz. | Mounting method        | Price          | SPECIAL FEATURES   |
|----------------------|-------------------|---------------------|---------------------|---------------|-------------------------|----------------------|---------------------------------------|----------------------|----------------|-------------------|------------------|-------------------|-------------|------------------------|----------------|--|
| EMPIRE               | TM-6              |                     | Dyn.                | Alum.         | Alum.                   | 250                  | 50-15k                                | 0.1 mV               |                | 13                | Furn.            | 7 1/4 x 1 1/4     | 5.7         | Tbl. std.              | 49.80          |  |
|                      | T-M5              | Omni                | Dyn.                | Alum.         | Alum.                   | 600                  | 70-13k                                |                      | Can. XLR3      | 15                | Can.             | 6 3/4 x 1 1/4     |             | Tbl. std.              | 89.80          |  |
| HAMMOND (MICROSOUND) | M-100             | Omni                | Cond.               | Alum.         | Anod.                   | 50-200               | 20-20k ± 3                            | -157                 | Can. XLR       | 15                | Pin & Phone      | 4 x 1 dia.        | 3           | 3/8-27 w/adapt.        | 269. * 159. ** | *Stereo pr., ** mono; Nuvistor preamp; a.c. power supply.            |
| LAFAYETTE            | Omni Elect. Cond. | Omni                | Elect. Cond.        |               |                         | 600                  | 20-13k                                |                      |                | 10                | 1/4" std.        | 6 x 3/8"          | 10          | Desk stand             | 18.95          | Foam windscreen, batt. incl.; FET crty.                              |
|                      | Card. Dual Imp.   | Card.               | Dyn.                | Diecast       | plshd. chrome           | 600/50k              | 100-10k                               |                      |                | 20                | 8 x 1            |                   | 10          | Swiv. adapt.           | 19.95          | Wiremesh grille.   |
|                      | Card Elect. Cond. | Card.               | Elect. Cond.        |               |                         | 600                  | 30-16k                                |                      |                | 20                | 1/4" std.        | 10 1/2 x 7/8"     | 24          | Desk stand             | 29.95          | Foam windscreen; batt. incl.; FET crty.                              |
|                      | Deluxe Ball       | Omni                | Dyn.                | Diecast       | Satin alum.             | 250/50k              | 100-10k                               |                      |                | 6                 |                  | 6 1/4 x 2 1/4"    | 30          | 3/8-27                 | 18.50          | Ball screen; blk. metal desk stand.                                  |
| MAGNAVOX             | 1A9226            | Omni                | Cond.               | Brass         | Nickel                  | 400                  | 50-15k +12, -6                        |                      |                | 20                | 3.5 mm MinPH     | 7 1/4 x 7/8"      |             | 1/2" pipe              | 29.95          | Stand incl.; batt. in mic case.                                      |
|                      | 1A9212            | Card.               | Dyn.                | Brass         | Nickel                  | 50k 600              | 300-10k +8 -6                         |                      |                | 20                | 3.5 mm MinPH     | 6 3/4 x 3/4"      |             | 1/2" pipe              | 29.95          | Incl. stand.   |
|                      | 1A9211            | Omni                | Dyn.                | Diecast zinc  | Black                   | 50k                  | 80-10k ± 6                            |                      |                | 10                | 3.5 mm MinPH     | 6 1/4 x 1"        |             | 1/2" pipe              | 14.95          | As above.  |
|                      | 1A9210            | Omni                | Dyn.                | Plastic       | Black                   | 50k                  | 100-10k ± 6                           |                      |                | 6                 | 3.5 mm MinPH     | 6 x 1"            |             |                        | 9.95           | As above.  |
| MURA                 | DX285             | Omni                | Elec. cond.         | Alum.         | Alum.                   | 600                  | 30-18k                                |                      |                | 20                | 1/4" Phone       | 6 x 3/8" dia.     | 5           | Stand                  | 29.95          |  |
|                      | DX-129            | Card.               | Dyn.                | Anod. Alum.   | Blk. & alum.            | 600; 50k             | 40-14k                                | -58                  | COAX           | 20                | 8 x 1 dia.       |                   | 8           | 3/8-27 stand adapt.    | 29.95          |  |
|                      | WX-172            | Omni                | FM wire-less        | Alum.         | Alum. & blk.            |                      | 100-7k                                |                      |                |                   | 1' x 1 1/2" x 6" |                   |             | 3/8-27 stand adapt.    | 39.95          |  |
| PML (ERCONA)         | EC71              | Card.               | Cond.               | Metal         | Satin chrome            | 30-50; 200; 600; HiZ | 40-18k ± 3                            | -164                 | Preh plug      | 12                | None             | 2 3/4 x 3/8" dia. | 1 1/4       | 3/8 x 27 stand adapt   | 109.50         | Micro min. cond. mic.; power supply a.c. or d.c.                     |
|                      | EK71              | Omni                | Cond.               | Metal         | Satin chrome            | 30-50; 200; 600; HiZ | 40-18k ± 3                            | -164                 | Preh plug      | 12                | None             | 2 3/4 x 3/8" dia. | 1 1/4       | 3/8 x 27 w/stand adapt | 99.50          | Micro min. cond. mic; power supply a.c. or d.c.                      |
|                      | D44               | Card.               | Dyn.                | Metal         | Blk. chrome pltd. grid  | 200                  | 60-16k                                | -165                 | att.           | 12                | None             | 5                 | 4.7         | 3/8 x 27 w/stand adapt | 34.95          | Avail. w/ on/off swit.; 30 ft. cable 2000 hms bal. or Hi-Z at 39.95. |
|                      | TC4 US-V          | Card. Omni. Bi.     | Cond.               | Metal         | Anti-refl. satin chrome | 50 or 200            | 30-20k                                | -172                 | Tuchel att.    | 20                | None             | 5 1/4 x 1/4" dia. | 5           | 3/8 x 27 w/stand adapt | 350.00         | Studio FET mic; power supply a.c.                                    |

# Microphones



Radio Shack Cardioid



Sennheiser MNH-415



Shure 585SA

| MANUFACTURER | MODEL      | Directional pattern | Operating principle | Case material | External finish     | Impedance, ohms | Frequency response, Hz to kHz | Sensitivity, dBm | Mic connection | Cable length, ft. | Cable plug type | Dimensions, in.   | Weight, oz. | Mounting method        | Price  | SPECIAL FEATURES                                     |
|--------------|------------|---------------------|---------------------|---------------|---------------------|-----------------|-------------------------------|------------------|----------------|-------------------|-----------------|-------------------|-------------|------------------------|--------|--|
| PML (HERVIC) | DC96       | Card.               | Cond.               |               | Brshd. chrome       | 200             | 30-18k                        | -61              | Can.           | 15                | Not furn.       |                   |             | Std. adapt. & sk. mts. | 242.95 |  |
|              | TC4V       | Var.                | Cond.               |               | Brshd. chrome       | 200             | 30-18k                        | -56              | Can.           | 15                | Not furn.       |                   |             | Std. adapt. & sk. mts. | 279.95 |  |
|              | DC-63      | Var.                | Cond.               |               | Brshd. chrome       | 200             | 25-18k                        | -60              | Can.           | 15                | Not furn.       |                   |             | Std. adapt. & sk. mts. | 413.95 |  |
|              | EK71       | Omni                | Cond.               |               | Brshd. chrome       | HiZ             | 80-18k                        | -38              | Dir.           | 15                | Not furn.       |                   |             | Std. adapt. & sk. mts. | 97.95  | EC71 same but cardioid, \$97.95.                     |
|              | DC73       | Card.               | Cond.               |               | Brshd. chrome       | 200             | 30-20k                        | -60              | Can.           | 15                | Not furn.       |                   |             | Std. adapt. & sk. mts. | 160.95 |  |
| RADIO SHACK  | 1045       | Card.               | Elect. cond.        | Die-cast      |                     | 600-20k         | 30-15k                        |                  | Can.           | 15                |                 |                   |             |                        | 32.95  | W. pop screen, desk std.                             |
|              | 1044       | Omni                | Elect. cond.        | Die-cast      |                     | 600-20k         | 30-15k                        |                  | Can.           | 15                |                 |                   |             |                        | 27.95  | As above.  |
|              | Highball   | Card.               | Dyn.                | Die-cast      |                     | 50-250-50k      | 50-15k                        |                  | MC1F           | 15                |                 |                   |             |                        | 39.95  | Dual-Z; w. 1/4 in. phone plug adptr.                 |
|              | Highball 5 | Card.               | Dyn.                | Die-cast      |                     | 600-20k         | 70-13k                        |                  | 1/4 in. phone  | 15                |                 |                   |             |                        | 32.95  | Dual-Z.  |
| SENNHEISER   | MD441      | Sup. Card.          | Dyn.                | Metal         | Chrome leather      | 200             | 40-20k ± 2                    | -145.8           | XLR            |                   |                 | 10.6 x 1.4 x 1.3  | 16          | 1/2"                   | 236.00 | Adj. freq. resp.                                     |
|              | MD421      | Card.               | Dyn.                | Metal/plast.  | Non-refl. flat blk. | 200             | 45-17k ± 5                    | -145.8           | XLR            |                   |                 | 7 x 1.8 x 1.7     | 14          | 1/2"                   | 154.00 |  |
|              | MKH815     | Beam                | Cond.               | Metal         | Chrome              | 20              | 60-20k ± 4                    | -115             | XLR            |                   |                 | 22 x 3/4 dia.     | 14          | Clamp                  | 599.00 |  |
|              | MKH415     | Card.               | Cond.               | Metal         | Chrome              | 20              | 40-20k ± 3                    | -121             | XLR            |                   |                 | 10 x 3/4 dia.     | 6.1         | Clamp                  | 499.00 |  |
|              | MKH435     | Sup. Card.          | Cond.               | Metal         | Chrome              | 20              | 40-20k ± 2                    | -121             | XLR            |                   |                 | 7 1/2 x 3/4 dia.  | 5           | Clamp                  | 470.00 | Studio music mic.                                    |
| SHURE        | 585SA      | Card.               | Dyn.                | Diecast zinc  | Chrome              | HiZ             | 50-13k                        | 153 1/2          | Amph. MC1F     | 15                | Not furn.       | 6 1/4 x 2 1/8     | 13 1/2      | Adapt.                 | 47.25  | Unisphere A; also avail. LoZ model 585SB.            |
|              | 588SA      | Card.               | Dyn.                | Diecast zinc  | Chrome              | HiZ             | 80-13k                        | 155              | XLR            | 15                | Not furn.       | 6 1/2 x 2 1/8     | 12          | Adapt.                 | 40.80  | Unisphere B; also avail. LoZ model 588SB.            |
|              | 515SA      | Card.               | Dyn.                | Diecast zinc  | Blk. & chrome       | HiZ             | 80-13k                        | 154              |                | 15                | Not furn.       | 6 1/2 x 1 1/2     | 12          | Adapt.                 | 28.20  | Unidyne B; also avail. LoZ model 515SB.              |
|              | 579B       | Omni                | Dyn.                | Diecast zinc  | Chrome              | LoZ             | 50-15k                        | 151              | XLR            | 20                | Not furn.       | 6 3/4 x 1 1/2     | 5 1/2       | Adapt.                 | 47.25  | Vocal sphere.  |
|              | 548        | Card.               | Dyn.                | Diecast zinc  | Blk. & chrome       | HiZ; LoZ        | 40-15k                        | 151              | XLR            | 15                | Not furn.       | 6 1/4 x 1 1/2     | 9           | Adapt.                 | 72.00  | Unidyne IV; also avail. w/ mag. reed swit. as 548SD. |
|              | 565        | Card.               | Dyn.                | Diecast zinc  | Blk. & chrome       | HiZ; LoZ        | 50-15k                        | 150 1/2          | Amph. MC4M     | 15                | Not furn.       | 6 x 2             | 11          | Adapt.                 | 67.80  | Unisphere I; also w/ mag. reed swit. as 565SD.       |
|              | 545        | Card.               | Dyn.                | Diecast zinc  | Blk. & chrome       | HiZ; LoZ        | 50-15k                        | 151              | Amph. MC4M     | 15                | Not furn.       | 5 3/4 x 1 1/4     | 9           | Adapt.                 | 60.00  | Unidyne III; also w/ mag. reed swit. as 545SD.       |
|              | 555W       | Card.               | Dyn.                | Diecast zinc  | Chrome              | HiZ; MedZ; LoZ  | 50-15k                        | 151 1/2          | Amph. MC3M     | 15                | Not furn.       | 7 1/4 x 3 1/4     | 26          | 1/2 x 27               | 61.20  | Unidyne II w/ on/off swit.                           |
|              | SM7        | Card.               | Dyn.                | Diecast zinc  | Gray enam.          | 150             | 40-16k                        | 150              | XLR            | Not furn.         | Not furn.       | 7 1/2 x 3 3/4     | 27          | 1/2 x 27               | 240.00 | Resp. tailoring sys.                                 |
|              | SM33       | Super Card.         | Ribbon              | Diecast zinc  | Gray enam.          | 30-50-150-250   | 40-15k                        | 148              | XLR            | 20                | Not furn.       | 8 x 1 1/4 x 1 1/8 | 26          | 1/2 x 27               | 156.60 |  |



# Microphones



Sony ECM-22



Turner 45



Unicord CE-2

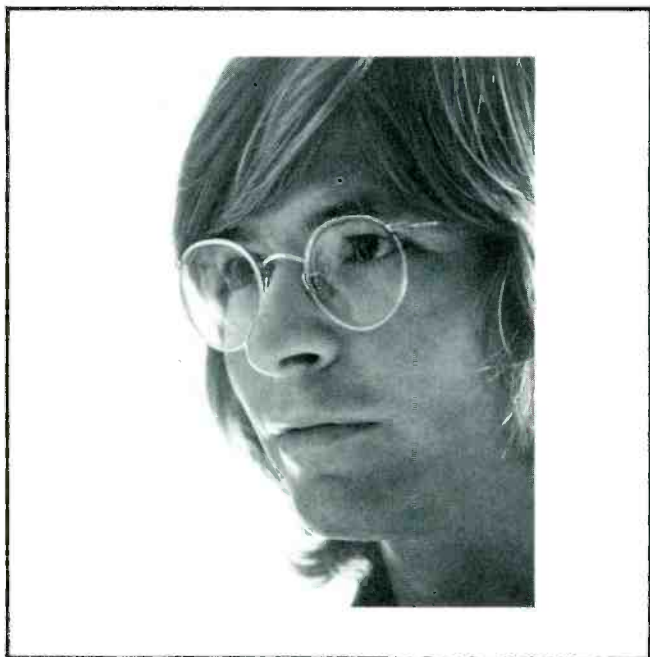
| MANUFACTURER | MODEL      | Directional pattern | Operating principle | Case material            | External finish           | Impedance, ohms | Frequency response, Hz to kHz, ± 1 dB | EM Sensitivity, dB/m | Mic connection | Cable length, ft. | Cable plug type | Dimensions, in.    | Weight, oz. | Mounting method | Price                                   | SPECIAL FEATURES                                      |
|--------------|------------|---------------------|---------------------|--------------------------|---------------------------|-----------------|---------------------------------------|----------------------|----------------|-------------------|-----------------|--------------------|-------------|-----------------|---|---|
| SONY         | ECM-250    | Card.               | Elect. Cond.        | Alum.                    | Satin                     | 200             | 50-14k                                | 57                   |                | 16½               | Mini            | 6 x 1½             | 1.3         | Hand            | 49.95                                   | FET elect.; int. batt. oper.                          |
|              | F-98       | Card.               | Dyn.                | Alum.                    | Bge.                      | Lo              | 70-14k                                | 58                   |                | 6½                | Mini            | 6½ x 1½            | 6½          | Hand            | 12.95                                   |   |
|              | ECM-51     | Omni                | Elect. Cond.        | Alum.                    | Blk. & satin              | 50; 250; 600    | 50-16k                                | 53.2                 |                | 10                | Cann. XLR-3     | 7¾" x 1¼"          | 4           | Hand            | 149.95                                  | *Out to 17½"; multi. imp.; telescopic capsule.        |
|              | ECM-54P    | Card.               | Elect. Cond.        | Alum.                    | Satin                     | 250             | 20-20k                                | 53.8                 | Cann.          | 20                | Pigtail         | 7¾ x 1             | 6.35        | Hand            | 149.95                                  | 1 low cut filt.; cond. or elect. cond. oper.          |
|              | ECM-18     | Card.               | Elect. Cond.        | Alum.                    | Satin                     | 250             | 50-12k                                | 56.8                 |                | 6½                | Mini            | 6½ x ¾             | 5.3         | Hand            | 22.95                                   |   |
|              | ECM-21     | Card.               | Elect. Cond.        | Alum.                    | Satin                     | 50; 250; 600    | 40-16k                                | 53.8                 |                | 18                | Pigtail         | 6¾ x ¾             | 8           | Hand            | 59.95                                   |   |
|              | ECM-22P    | Card.               | Elect. Cond.        | Alum.                    | Satin                     | 250; 600        | 40-15k                                | 54.8                 | Cann. XLR      | 20                | Pigtail         | 7¾ x 1             | 4           | Hand            | 99.95                                   | Low cut filt.; phantom pwr. oper.; multi. imp.; swit. |
|              | ECM-95-S   | Card.               | Elect. Cond.        | Alum.                    | Satin                     | 1500*           | 70-10k                                | 50                   |                | 4½                | Mini & sub-mini | 5½ x 1½ x 1        | 5           | Hand            | 19.95                                   | *May be term. w/ lower imp. load.                     |
|              | ECM-280    | Card. uni.          | Elect. Cond.        | Alum.                    | Satin                     | 200             | 30-18k                                | 56                   |                | 16.5              | Pigtail         | 6 x 1              | 5.1         | Hand            | 79.95                                   | Low cut filter; int. batt. oper.                      |
| ECM-220      | Card. uni. | Elect. Cond.        | Alum.               | Satin                    | 200; 10k                  | 50-20k          | 56/57                                 |                      | 16.5           | ¾" phone          | 7.28 x 1.45     | 9.6                | Hand        | 39.95           | Mic holder suppl.; multi. imp. (Hi-Lo). |   |
| ECM-16       | Omni       | Elect.              | Alum. Cond.         | satin                    | 600                       | 50-13k          | 57.8                                  |                      | 6              | Mini              | 1½ x ¾          | 1.09               | Lapel       | 29.95           | int. batt. supply; FET elect.           |   |
| TEAC         | MC-105     | Uni                 | Dyn.                |                          | Chrome                    | 10k             | 50-15k                                |                      |                | 5½                | Phone plug      | 5¾ x 1½            |             |                 | 55.00                                   | Can be conv. to 600 ohms.                             |
|              | MC-106L    | Omni                | Dyn.                |                          | Black                     | 10k             | 50-15k                                |                      |                | 5½                | Phone plug      | 5½ x 1             |             |                 | 20.00                                   | Same as above.  |
|              | MC-201     | Uni                 | Cond.               |                          | Chrome                    | 10k             | 50-15k                                |                      |                | 9                 | Phone plug      | 6 x ¾              |             |                 | 80.00                                   | Same as above.  |
| TURNER       | 35         | Omni                | Dyn.                | Alum.                    | Gold paint                | 150; 25k        | 50-12k                                | -154<br>-156         | Wired in       | 25                | Not furn        | 3 x ¾ dia.         | 1¾          | lav. clip       | 42.00                                   | Dual impedance.                                       |
|              | 500        | Card.               | Dyn.                | Diecast zinc alloy       | Satin chrome              | dual 150 40k    | 40-15k                                | 151                  | A4F            | 20                | Not furn        | 6¾ x 1½ dia.       | 12          | ¾-27 thrd hldr  | 60.00                                   | Specify S500 for rotary type on-off swit.             |
|              | 600        | Card.               | Dyn.                | Diecast zinc alloy       | Satin chrome w/blk. frnt. | 40k             | 50-15k                                | 151                  | Amph Mc2m      | 20                | Not furn        | 6 x 1¾ dia.        | 14          | ¾-27 thrd hldr  | 42.00                                   | Model 602 same w/imp. of 150 ohms, \$42.00.           |
|              | 45         | Card.               | Dyn.                | Blk. cyclac w/alum. head |                           | hi              | 100-13k                               | 151                  | Perm att       | 20                | Phone plug      | 7 x 1½ dia. caper. | 6           | ¾-27            | 27.00                                   |   |
|              | 2300       | Omni                | Dyn.                | Steel                    | Satin chrome              | 40k             | 50-15k                                | 151                  | A3F            | 20                | Not furn        | 6 x 1½ dia.        | 8           | ¾-27 thrd hldr  | 48.00                                   | Model 2302 same w/imp. of 150 ohms, \$ 8.00.          |
| UNICORD      | CE-1       | Card.               | Elect. Cond.        | Anod. Alum.              | Satin                     | 600             | 40-18k -5                             | -45                  | Con.           | 20                | Tel. plug       | 8¼ x 1¾ dia.       | 7           |                 | 42.95                                   | MT-1 Trans. avail. (plug-in) type for 50k output.     |
|              | CE-2       | Card.               | Elect. Cond.        | Anod. Alum.              | Satin                     | 600 Bal.        | 40-18k                                | -45                  | Can.           | 20                | Tel. plug       | 8¼ x 1¾ dia.       | 7           |                 | 55.00                                   | CE-1, CE-2 use FET amp. built-in w/1.5v. pen cell.    |

# Weingarten: Off The Record

Sherwood L. Weingarten

**S**IMPLICITY is making a comeback. Audio technology—some call it gimmickry—has had a field day in the recording industry. Unhoned voices were dubbed and redubbed and overdubbed, to the point where a solo voice might simulate the Mormon

Denver doesn't rely on makeup, outlandish costumes, a bevy of nearly-clad bodies, sexual deviation, drug-inspired introspection or any of the other tools prevalent in the rock arena; he merely leans on his slightly nasal voice, an acoustic guitar, and a mind that finds



Tabernacle Choir. Instruments seemed headed for their own wild flights into space, abetted by your friendly neighborhood synthesizer dealer and his bag of assorted electronic tricks. Complexity and clutter became the banners to fly.

Perhaps the public became tired, or jaded; maybe it was fed up with Watergate and Future Shock; perhaps the disc moguls regained their senses. Whatever the reason, we seem directed back to the time when a singer, supported by only enough instrumentation to complement his performance, just sings. From the heart. With soul.

*John Denver* is the almost perfect example. And his latest outing, **FAREWELL ANDROMEDA** (RCA, APL1-0101), the almost perfect vehicle.

beauty in the simple country truths around him.

His lyrics are no longer painfully poetic, his melodies not the least bit convoluted. When he wants to say something, he does it directly, honestly—with feeling.

*I'd Rather Be a Cowboy*, the biggest hit from the LP, is reminiscent of a time when country music was labeled Country & Western. Straight. The songs success, particularly on the airwaves, shows that America isn't opposed to that brand of reaction.

Denver, backed by such musical stalwarts as Eric Weissberg on electric and pedal steel guitars and "Toots" Thielemans on harmonica, is actually marvelous on *all* 11 cuts, making this his best effort to date. The highly

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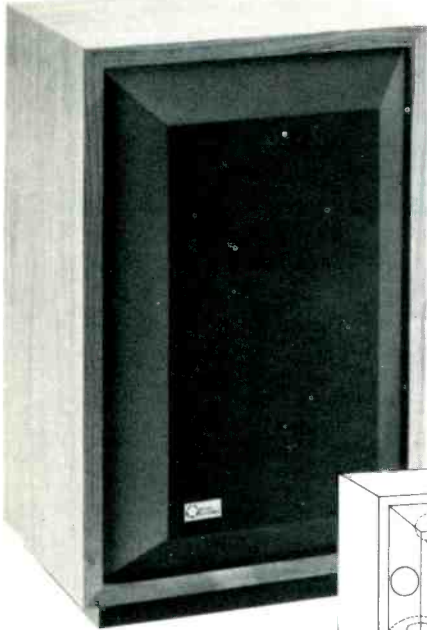
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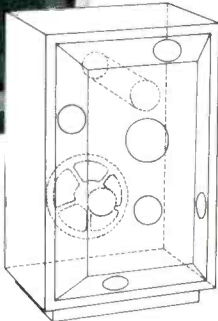
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listenable country flavor is everpresent, and the singer-composer, who himself penned five of the pieces, even tosses in some old-fashioned yodeling for spice (*Whiskey Basin Blues*).

Although *Sweet Misery* isn't quite as moving as Hoyt Axton's original, Denver's version still stands above the routine: John Prine's *Angels from Montgomery*, on the other hand, fares better than the initial rendition. Denver particularly does well with Prine tunes, probably because they too deal in simple truths. As in the thought, "How the hell can a person go to work in the morning/And come home in the evening and have nothing to say."



It's all folksy and easy, as witnessed by the title tune and *Please Daddy*, two offerings aided by the Compton Street Choir and their singalong tones. The latter, not incidentally, brings the only jarring note to the album: Although the tune is down-to-earth, an almost typical country tear-jerker, its allusions to Christmas seem ill-timed this early in the calendar.

Denver long ago crossed the bridge between country and pop, putting into his music just the right hint of rock. His growth, happy to report, can be evaluated as a return to roots rather than an expansion in the more frenetic Halls of the Hip.

**JACK THE TOAD** (Parrot-London, XPAS 71059) is hard British blues 'n' boogie from *Savoy Brown*, a group that's been through uncountable changes, nine LPs and eight years. The nine cuts, each of which slice through the listener's resistance, feature a new lead singer, Jackie Lynton, whose voice is slightly more mellow

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and less harsh than his predecessor's. Lynton, by the way, penned five of the tunes.

**ISAAC HAYES LIVE AT THE SAHARA TAHOE** (Enterprise, ENS-2-5005) provides excitement-plus from the so-called Black Moses. The two-disc package, distributed by Stax, offers 19 tracks, including two mini-rap sessions. Hayes, who excels on sax and keyboards and has a unique voice, is best on *Theme from Shaft*, *Light My Fire*, *The Look of Love*, *The First Time Ever I Saw Your Face* and *Ain't No Sunshine*.

**FANTASY** (Ode, SP 77018) finds *Carole King* in a hopeful frame of mind, with the emphasis, as usual, on the quality of her lyrics. The LP contains eight King originals sandwiched between *Fantasy Beginning* and *Fantasy Ending*, turning the album into a wishful-thinking statement of tomorrow's peace and brotherhood. Still, the singer-composer can't let go, completely, of her negatives, her inability to find freedom. Witness a passage from *Directions*: "Directions presenting themselves every day/Are bypassed/Cause of somebody else's foolish limitations." Several cuts from the LP, distributed by A&M, already are getting heavy airplay, particularly *That's How Things Go Down*, a mixture of poignancy and mildly up-tempo music.

**SUPER FLY T.N.T.** (Buddah, BDS 5136) is the best original film soundtrack in ages. Showcasing music composed, arranged and performed by *Osibisa*, a seven-man African-West Indian jazz-rock group, it is highlighted by *Come Closer (If You're a Man)*, a rousing Afro-beated winner, one of five melodies augmented by a brass section. The tunes, almost all of which contain vocals, stand on their own, unlike most soundtrack schlock that has no meaning without the visual images.

**IN DEEP** (Epic, EQ 32195) hints at the unrealized potential of the quad sound with rock. *Argent*, a four-man group, provides eight numbers of the hard stuff, best of which is *Christmas for the Free*, a slowed-down piece that's effective because of strong words. Mostly, though, it's routine rock that could be used as a backdrop to conversation, despite the talent of leader Rod Argent, who tinkers well with keyboards, acoustic guitar and his vocal cords.

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## Classical Reviews

Edward Tatnall Canby

Tchaikovsky: *Serenade in C for Strings*, Op. 48. Prokofiev: "Classical" *Symphony*. Arensky: *Variations on a Theme by Tchaikovsky*, Op. 35a. English Chamber Orchestra, Somary. **Vanguard Cardinal VCS 10099**, stereo, \$2.98.

More string music—the "Classical" Symphony is mainly a string-y piece in keeping with its classical intent—played here by a rather full sounding body appropriate to the music. The sounds are all ultra familiar but, even so, furnish a pleasant tonal contrast to the usual heavier works of the type for full orchestra. In our day of winds, percussion and electronics, the smooth eloquence of a string ensemble is increasingly special for the ear—how long can we maintain it? How long can the difficult art of string playing (and violin building and maintenance) be sustained? Is there anything sourer than inadequate string playing? The time may come when that is what we'll begin to hear.

Not on this disc. The English Chamber Orchestra rates at the top. Johannes Somary, the conductor, seems to be taking a vacation from Handel in this recording. Though the orchestra itself is beyond fault, there is for my ear a very slight stiffness to the conducting of the Tchaikovsky which is noticeable after the plastic, fluent conducting on the similar Telefunken recording of early Mendelssohn string symphonies. Just possibly, Somary is too much into Handel to adapt to these plastic, fluent string pieces. Not bad, and for some listeners the relative restraint may prove a delight. Somary moves more easily in the Arensky, and in the Prokofiev, notably the last two movements.

The exaggerated price difference between this Vanguard Cardinal disc and a corresponding Philips release, the Rossini Sonatas for Strings, points up the arbitrary quality of our current disc prices, unbalanced out of all reason. \$2.98 list for the Vanguard disc, \$6.98 for Philips! An unhealthy thing, and it does nothing to bolster the classical buyer's faith in the soundness of the classical business.

Performance: B-      Sound: B+

Scott Joplin. *Ragtime on the Harpsichord*. Vol. 2 Wm. Neil Roberts. **Klavier KS 516**, stereo, \$5.98.

So we come a full circle! Back right after the war, I acquired a snazzy little album of 10-inch 78 rpm shellac discs played by Sylvia Marlowe, now one of the leading harpsichordists of the older generation. It was boogie-woogie on the harpsichord. Not exactly inspired—she seems to have memorized all the boogies (*Pine Top's Boogie*) note for note and simply played them off on the instrument; whereas the original musicians made 'em up as they went along. But it was a novel and interesting idea, even so, and I kept the records long after (I suspect) Miss Marlowe disowned them. She'll probably blush if she reads this.

The present Scott Joplin craze—it is nothing less—has brought us everything from Scott Joplin on the Monster Steinway in the *Style of Chopin* (my title) to the present LP and its forerunner, aptly called "Great Scott!", transferring the gentle Joplin music to a most improbable instrument, one that surely was unknown to him. But the rags did occasionally sound much like a harpsichord when played on the tinny pianos which was their normal and proper medium. If you ask me, I'd rather hear Joplin *any* day on the harpsichord, as here, than in the lush, hot-house grand-piano stylings now current in other recordings.

Performances: B      Sound: B

**Heavy Organ at Carnegie Hall.** Virgil Fox, with Revelation Lights! Plus an Extra-Special Surprise! **RCA Quadradisc ARD1 0081** \$5.98.

Here the conscientious reviewer (and who isn't that?) is faced with, say, a tri-lemma, or maybe quadri. Virgil Fox, once, if I am right, the popular organist of the Riverside Church in New York, has suddenly grown longish hair, taken on light shows, and made himself the hit of the youngest generation, whole Carnegie Hallsful of them, shouting and cheering. What are we to say? Especially when (a) we cannot see the light show, only hear the music.



plain and simple, and yet (b) must listen to Mr. Fox's remarks to his youthful audience, which come—to wild cheers and yells—between every number??

Well, I'll put it this way. If I were to do a bit of tape editing so that this recording was simply that of an organist playing various well known Bach items, including non-organ music, transcribed, (and including Adeste Fidelis, *O Come All Ye Faithful*, which I would edit out, for the non-Xmas season), we would have a "classical" Bach disc. Judged as such, I would rate it around D-. Dreadful. Bach on a big old antedeluvian organ (whatever it is they have in Carnegie Hall), played unregenerately with swell stops and monster bellows, at break-neck speed, an absolute minimum of any sort of phrasing and melodic shape, in the manner of a 1920s theatre organist playing classic. (But without any of the exotic organ sound colors of the genuine theatre organ!) Just hack work, high-intensity. Sorry, but that is what this pair of ears says.

Well, better *some* Bach than none at all. Yes? I say no. I think that kids are easily and honestly misled down the musical primrose path. Maybe, maybe, OK. I suppose so. But my feeling is that what gets the kids is the show itself, Mr. Fox's coy comments between numbers, and the mere fact that a real CLASSICAL ORGANIST and a CLASSICAL COMPOSER are playing their own game with them. Great! Yet in a way pathetic. So easy to mistake form for substance.

He could have played the Bach backwards and upside down for all the difference it would make.

The Fox comments? Concerning the Bach Toccata in F: "*The word to-cahta means to touch. So if during this piece, while the rhythm is going, you wish to touch . . . the man next to you—I see no harm! Wild cheers and yells. Or: "Bach is like a jetstream. If you can get on it, you soar."* Take them or leave them as you wish!

Well, after all, the organ *is* a grand and glorious instrument and Bach is a ditto composer. Don't get me wrong—if this particular Bach seemed to me musically good, and/or new, or interestingly different, I'd be all for it in a moment. Instead, as music it seems to me pedestrian, reactionary, narrow, unperceptive, antiquated, in every respect exactly opposite to the supposed liberation of the show itself. That's what I can't take.

This, by the way, is Virgil Fox's third best selling album of heavy organ

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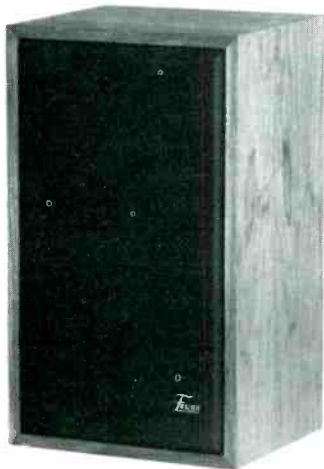
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music. Heavy in the new sense of course. So I'd better shut up.

Performance: D

Sound: B

**Robert Tear. Songs by Tchaikovsky.** Philip Ledger, piano. Argo ZRG 707, stereo, \$5.95.

If you have ever heard one of the late grand Russian operas—*Boris Goudonov*, for instance—sung by Russian singers (many recordings are available, particularly via the Melodiya-Angel label), you will know what Robert Tear is striving to achieve in these nominally small-scale songs, the late Russian version of the German Lied. He has a tremendous voice, a tremendous range of volume and of expression, and he is passionate beyond belief, singing with all the power of that highly singable language, Russian. These songs will knock you for a loop, as they used to say—and the big-handed pianist is just as energetic and as musical as Mr. Tear himself. This is no polite background music!

You also may find yourself momentarily embarrassed, as by an overly passionate stage scene: for Mr. Tear's big voice gets so excited that in moments he is out of control. Pitch gives way, tone quality is strangled, disaster threatens. Yet somehow it is all part of the show and I suspect that those who were responsible for releasing a recording with "flaws" of this sort understood this very well. I'll go along, and say that it is a powerful and interesting record and Tchaikovsky was quite a song writer.

P.S. You'll spot one song immediately, the familiar *None but the Lonely Heart*, heard in a thousand mood-music watered-down versions. The other 18 will almost surely be unfamiliar; they are not yet well known to singers.

Performance: A-

Sound: B+

**Schoenberg; Complete Songs for Voice and Piano, Vol. 2.** Helen Vanni, Donald Gramm, Cornelis Ophthof; Glenn Gould, Piano. Columbia M 31312, stereo, \$5.98.

Just in case you think . . . no! If you hadn't read the label, you might suppose some of these songs to be by Brahms, or Wolf or just maybe Richard Strauss: they are works in the great German song tradition, the *Lied* as it is usually called. Yet as you listen, it dawns on you that something is odd, a sort of vaguely seasick quality,

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(though not unpleasant), as though the decks of the great ship of music were beginning gently to heave, the solid foundation to move about. That is no less than Schoenberg leaving behind the old tradition of *key*, tonality, as it is called. Nothing new with him—Wagner had done a lot of it by mid-century. But the keylessness takes on a new quality in Schoenberg, an increasing instability, a growing chordlessness, in which his lifelong radicalism and originality is to be found.

Three good singers, all with traditional *Lied* voices, rich with vibrato as is proper but all three unerringly accurate as to pitch and ear-essential, to put it mildly, in such music. Thus the seasickness never grows unbalanced nor meaningless. Glenn Gould, as the man who sparked the original larger recorded series from which these songs are excerpted, is automatically excellent and authoritative at the piano.

The songs range from very early—just after the turn of the century—through as late as 1933. But the consistency of stylistic approach shows how strongly Schoenberg was out of German Romanticism.

Performances: A— Sound: B

**Marie-Aimée Varro in Concert.** (Liszt: Piano Concerto No. 1; Scarlatti, Schubert, Chopin, Debussy). **Orion ORS 73112**, mono, \$5.98.

Marie-Aimée Varro (also spelled Warrot) died in 1971. She was clearly one of the great heroic women pianists out of the old tradition, who played Liszt and such with enormous strength and fire. I ran into her first recording, on Baroque, some years ago—it was absolutely astonishing in its power. Like many a true old-style musician, Varro did not much like the idea of “canned music” (as James Petrillo used to call it) and only recorded in her last few years.

Since then, I have actually come to know her husband—entirely via the press, so to speak—a charming Frenchman who teaches in a small university in Canada. It was indeed a remarkable story he had to tell; for she had studied with Emil Sauer, who was an actual pupil of Liszt himself, and thus she acquired her piano styling, so to speak, almost direct from the source. As directly as our short human existence allows, in any case.

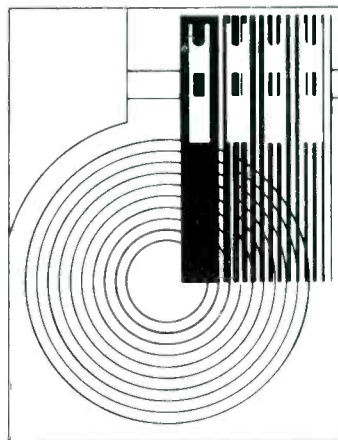
This was her last recording, made at a final concert, one side given over to the Concerto, the other to assorted solo pieces. Alas, the recording job was poorly managed and the sound is un-

pleasant, though not to the point of obscuring her musical message by any means. The Liszt Concerto is played as one might expect, with brilliance, verve and perfect style. (The Moravian Philharmonic Orchestra is the vehicle, which indicates the locale.) I found the solo works more problematical, simply for being so honest in a very old-fashioned style, straight out of the turn of the century. This indeed is the way pianists played then—everything in the same bravura fashion—just as all older music was automatically “arranged” to

suit the then modern orchestra. There was only one solid piano style in Liszt's and Sauer's day, and all types of music conformed as a matter of course. It was not a time for harpsichords and “old pianos”! The modern listener may thus find the Varro approach to Schubert, Chopin, even Debussy, somewhat strange. But never less than interesting.

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Performance: A Sound: C—



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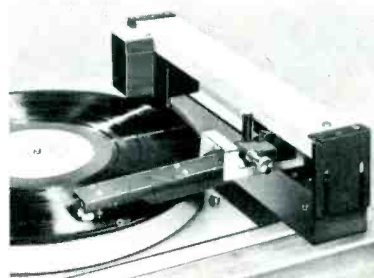
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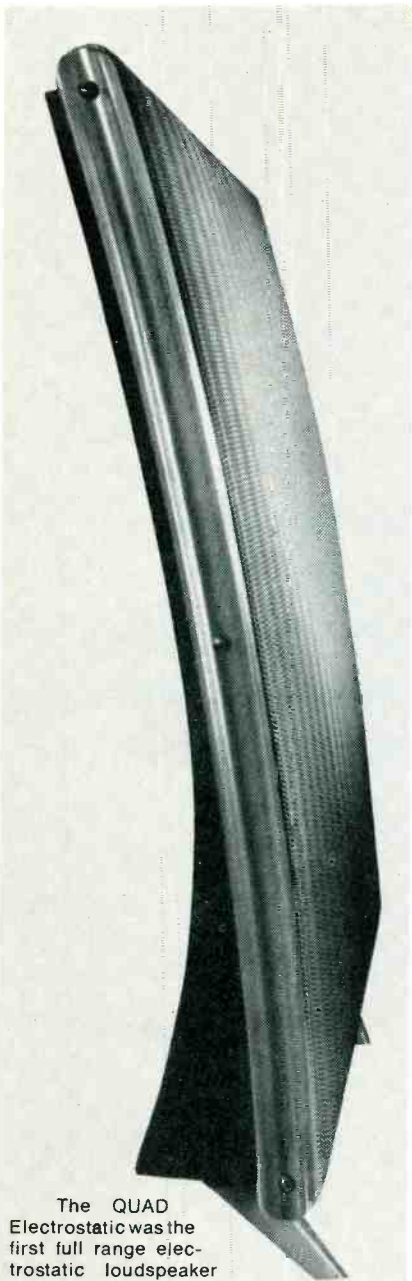
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**Rusty Bryant:** Friday Night Funk for Saturday Night Brothers

**Musicians:** Rusty Bryant, alto and tenor saxophone; Khalid (Kenneth Moss), electric piano, organ; Harold Young, guitar; Eddie Brookshire, electric bass; Fred Masey, drums; Norman Jones, conga, percussion.

**Songs:** *Friday Night Funk for Saturday Night Brothers; Down By the Cuyahoga; Have You Seen Her?; Mercy, Mercy, Mercy; Blues For a Brother.*

**Prestige PR 10053**, stereo, \$4.98.

You'd better believe this is a low-down, funky record with Rusty Bryant and friends swinging from the gut with great exuberance and not much subtlety. They romp through five numbers here, Bryant's own *Blues For a Brother*, the best as far as performance goes but unabashedly invaded by a loud hissing sound which totally envelopes the track. Guitarist Harold Young gets off some Wes Montgomery octaves and Bryant's playing on tenor is full and deep-felt. This slow blues is a compatible medium for them.

Sooner or later everyone has to take a crack at Joe Zawinul's *Mercy, Mercy, Mercy* and Bryant's group is no exception. The six take it at a furious pace—perhaps *too* furious, but Khalid (Kenneth Moss) plays a robust keyboard solo featuring blues phraseology that comes around full circle like a tiger chasing its tail. Nonetheless, Fred Masey's drumming comes on too strong and it all ends up leaving you exhausted.

Masey's *Down By the Cuyahoga* is a take-off on *Down By the Riverside* and features Young on guitar employing all sorts of electronic effects while playing carefully delineated configurations. Bryant's style has an Earl Bostic flavor to it, his tone is raspy, but it all comes out a trifle boring and predictable.

*Friday Night Funk For Saturday Night Brothers* is as dirty as the name implies, scooting along at a scintillating scamper with Moss playing some high-flying and exciting electric piano. And

there is some fine unison work in the ballad *Have You Seen Her?*, particularly the measured ending featuring Bryant and guitarist Harold Young.

The sound is, alas, tinny and unclear with a preponderance of rhythm so that the soloists aren't out front as they should be.

This is the kind of music you'd like to listen to in a smoke-filled club. It's definitely down-in-the-cellar stuff. But if it's funk you're after, you've got it here. The recording is very appropriately named!

Performance C +

Sound C +

**HOPI TALES** From Harold Courlander's book *People of the Short Blue Corn—Told By Jack Moyles*.

**Folkways FC 7778**

Four tales from Harold Courlander's book *People of the Short Blue Corn*, mystifying, enchanting as fairy tales with frogs turning into princes, plowing through thickets to reach the fairy princess, and magic carpets. These stories of the Hopi Indians, "the peaceful ones" who have independently occupied north-eastern Arizona for some eight hundred years, are beautifully conceived, poetic jewel-like vignettes that, by their simplicity, are deceptively deep. The Indian words scattered throughout interestingly enough resemble Hawaiian in animal fables of roosters and coyotes, epic adventures to the land of the dead, and victories won and obstacles overcome by individuals among this fiercely proud people. Jack Moyles gives a fine rhythmic reading, seeing into the drama and music of the language, enunciating clearly and placing emphasis at moments of magic.

Persons from six to sixty will be charmed by the grandeur of Courlander's prose and the soothing singsong hypnotic sound of Moyles' voice. In fact, it is all so bewitching that one wants to rush out and read the entire book as published in 1970 by Harcourt, Brace, Jovanovich.

**Jimmy Forrest:** Black Forrest

**Musicians:** Jimmy Forrest, tenor sax; Harold Mabern, piano; Grant Green, guitar; Gene Ramey, bass; Elvin Jones, drums.

**Songs:** *Black Forrest; Dog It; These Foolish Things; Sunkenfoal; You Go To My Head; What's New?; But Beautiful; All The Gin Is Gone.*

**Delmark 427, stereo, \$5.98.**

You may know of tenorman Jimmy Forrest from his r & b hit *Night Train* which was a sensation back in 1950, but don't end your acquaintance with him there.

Forrest is still going strong and, according to the notes, is planning a nation-wide tour to further disseminate his tremendous tenor talent. Forrest has been around for quite some time now, having played in Charley Perry's band in St. Louis, appearing with Dewey Jackson, Fate Marable, and Jeter-Pillars in the late thirties, replacing Ben Webster in the Duke Ellington Orchestra for nine months in 1949, and teaming up with Harry "Sweets" Edison from 1958-1960. His sidemen here, Harold Mabern, Gene Ramey, and Elvin Jones were also in this band. With Forrest here too is guitarist Grant Green on his first recording date.

Forrest is basically a hard-driving tenor saxophonist whose style wavers between the buoyancy of bop as we hear in two takes of *Black Forrest* and *Sunkenfoal*, to the tender romanticism of ballads as in *These Foolish Things*, *You Go To My Head*, and *What's New?* He is a highly individual soloist, producing a splendid round tone and reaching untoward high notes in *These Foolish Things* and *What's New?* Forrest begins *You Go To My Head* with a delayed low note, achieving a dark forest-deep tone, doing unpredictable things with a ballad wherein lies his strong point.

Green, whose style here bears a close allegiance to Charlie Christian's, has the floor all to himself in *But Beautiful*, playing it initially straight and subdued, then jazzing it up. In *Dog It*, Green is as funky as can be and in *Sunkenfoal* he roams all over the scale in a light, staccato style.

Elvin Jones, the late John Coltrane's formidable drummer, packs quite a wallop throughout and Gene Ramey accurate time on bass. But Harold Mabern's piano work is at best perfunctory and superficial. I have heard him in much better form in person.

The sound is a bit swampy but you'll

come quickly out of the mire when you hear Jimmy Forrest.

Performance: B

Sound: B-

**ALI AKBAR KHAN:** *Bangla Desh Connoisseur Society CS-2042, stereo, \$5.98.*

Upon listening to these fine forty minutes of Indian ragas, the melodic form that is the very basis of Indian music, as performed by Ali Akbar Khan after a program at Madison Square

Garden to benefit the UNICEF campaign to assist the children of Bangla Desh, it is no wonder that Khan has been branded "the finest Indian classical musician in the world."

In the Indian segment of the performance which also included such luminaries as George Harrison, Ringo Starr, Bob Dylan, and Ravi Shankar, a fellow musical notable from Benares, India, Ali Akbar Khan plays the sarod, a short-necked fiddle-like stringed instrument shaped like a gourd that can be bowed or plucked. It has four



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gut strings. Accompanying Khan on these two ragas of fiercely concentrated and peacefully contemplative music, each of which takes up a complete side, are an unidentified tamboura player and Shankar Ghosh on tabla. The tabla, a two-piece drum, can be heard only on the second side in the raga *Misra Shivaranjani*, lending a further textural dimension to the plucking and strumming of Khan's sarod backed up by the perpetual drone of the tamboura. One can clearly discern Ghosh's multi-fold drum pitches against

Khan's poignantly melodic theme and variations that go from major to minor as joy to pathos.

*Bhim Balashree*, a late afternoon raga—ragas depict times of day as well as the seasons—"when the birds and animals return to their homes in the trees and the forest," has a slow, serene beginning that, in its skillful slides from one note to another by sarodist Khan, bears resemblance to our Western blues. Khan creates a moving, plaintive sound which fairly throbs with intensity, displaying a keen sense of dynamics.

The engineers at Connoisseur have permitted the sound great presence. It rings with vibrancy.

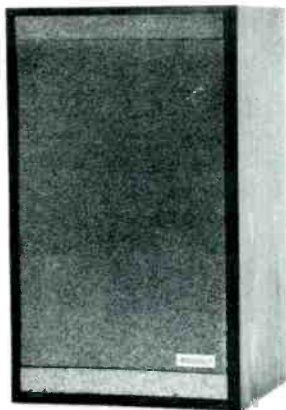
In our search for something beyond the material, it is no great surprise that this Eastern spiritual and introspective form of music has at last fallen upon Western ears. Listen to it. You will be fascinated. It will transport you to fresh euphoric fields.

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### Son House

**Musicians:** Son House, vocal and guitar; Leroy Williams, harmonica; Fiddlin' Joe Martin, vocal.

**Songs:** *Shetland Pony Blues; Camp Hollers; Delta Blues; Special Rider Blues; Low Down Dirty Dog Blues; Depot Blues; The Key of Minor; American Defense; Am I Right Or Wrong; Walking Blues; County Farm Blues; The Pony Blues; The Jinx Blues; Parts 1 and 2.*

**Folklyric Records 9002**, mono, \$5.98.

Fourteen necessarily scratchy but nonetheless authentic tracks from Son House's legendary 1941-42 recordings made by Alan Lomax for the Library of Congress, these pure and natural blues, previously released on *Roots LP RSE-1*, ring with honesty and sincerity. Three of the cuts, *Shetland Pony Blues*, *Camp Hollers*, and *Delta Blues* were made in 1941 in Lake Cormorant, Mississippi, while the other eleven were waxed in Robinsonville, Mississippi the following year.

It's mostly Son House singing and accompanying himself on acoustic guitar but Leroy Williams joins him on a wailing harmonica which interweaves quite fluently with House's guitar in *Delta Blues* in which House breaks into falsetto, twanging a single string, then strums vigorously. And on *The Key of Minor* one hears House chatting amiably with Alan Lomax, demonstrating incisively just exactly what this "key of minor" is.

It is as though House's voice and guitar are as one in *Shetland Pony Blues* in which the guitar picks up the intonations of his voice as he describes his horse. He talks and half sings in *Camp Hollers*, clucking to his mule and singing "I'm going down to the river," all in the best of humor.

In *Depot Blues*, House bounces along after starting off humming, playing and picking highly selected notes and jazzing up the ending. The recording quality sounds better here.

A glimmer of patriotism appears in *American Defense*, a non-blues tribute to "the red, white, and blue that represents you" while *Walking Blues* is taken by House at a brisk, walking pace. Although House is lamenting the loss of his loved one, he has a plucky, sunny way of playing. *County Farm Blues* is imbued with a rollicking rhythm and is prone to such vivid lyrics as *Down South when you do anything that's wrong, They'll put you down on the County Farm. . . . On a Sunday, the boys looking sad . . . Just wonderin' how much time they had.*

*The Jinx Blues*, of which we are given two takes is perhaps the most provocative of all the blues, a haunting refrain sung by House in his big barrel-chested voice that lets you come away singing it. It will come floating back into your memory on an afternoon's walk. The second take is a slower, more undulating version, set in a lower key for some added interest.

Son House is a performer of magnitude. These recordings are quite representative of his work.

Performance: B+                      Sound: C

**SONNY STITT:** Constellation

**Musicians:** Sonny Stitt, alto & tenor saxophones; Barry Harris, piano; Sam Jones, bass; Roy Brooks, drums.

**Songs:** Constellation; Ghost of a Chance; Webb City; By Accident; Ray's Idea; Casbah; It's Magic; Topsy.

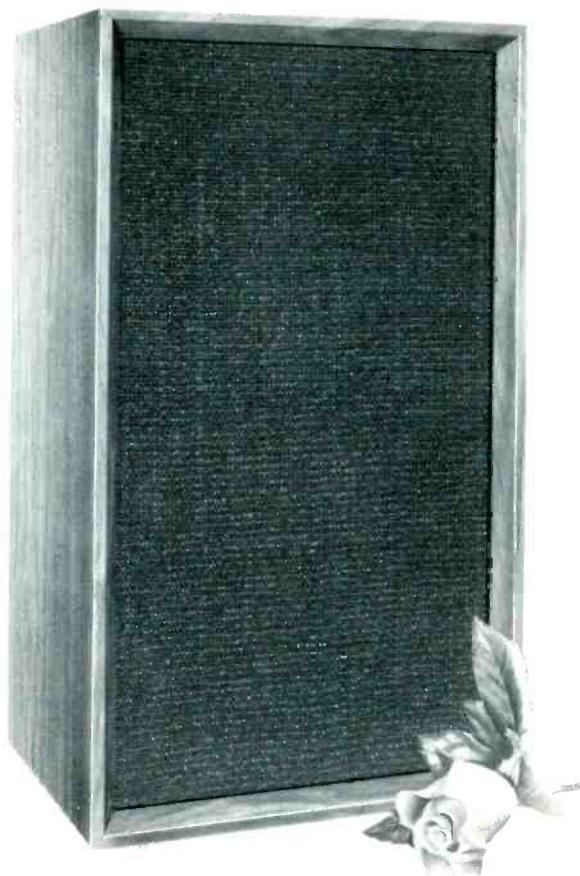
**Cobblestone CST 9021**

There is a tendency to agree with DOWN BEAT editor Dan Morgenstern that Sonny Stitt seems to get better everytime one hears him. Stitt is deservedly coming into his own in the seventies as one of the foremost bop saxophonists who has carried forward his musical message from the forties without compromise, bringing '72 Newport crowds to their feet and stealing the show with his intricate and intoxicating improvisations.

This Cobblestone collection, featuring pianist Barry Harris with whom Stitt played in the early days, could have easily been recorded twenty-five years ago. Unfortunately for jazz aficionados, Harris doesn't often wander far from his own rich musical turf of Detroit, an area which has engendered a large flock of jazz men, so it is difficult to get to hear him in person.


On both tenor and alto, Stitt wings his way over multi-noted scales like a butterfly, buoyant but authoritative, humorous yet technically brilliant. Stitt maintains his flight pattern and incisive tone in bop tunes, ballads, and his

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very own blues *By Accident*, one of the best developed tracks in which he swings loose and free. It is a pleasure to hear *Webb City* and *Ray's Idea* once again—*the discs and performers* Savoy back in 1946, as well as the rarely recorded *It's Magic* in which Stitt reaches scallor heights. Stitt is morose but a moment in *Ghost of a Chance* on tenor, tagging on his traditionally florid coda. Tadd Dameron's *Cashah* is given an exotic treatment in which Harris gets off a bristling solo, devoid of clichés and excesses and with

intimations of his colleague Horace Silver, for they *are* of the same lineage. Edgar Battle's *Topsy* lends itself well to the jazz idiom as Stitt has fun quoting "It Don't Mean a Thing If It Ain't Got That Swing", while *Constellation* is a true-blue hop tune taken at a furious tempo which leaves us with our tongues hanging out.

But despite Sonny's sunny ability to send spirits soaring with his perennially youthful style and the recording's artistic potential, it doesn't come off to be the classic it should be. Harris'

solos appear cursory and all too brief, his contribution here salvaged by his supreme competence at comping which is a joy to follow. And sadly, Harris is either hindered by a poorly tuned piano or the engineering does not sufficiently bring out his instrument, for it doesn't ring. Moreover, Stitt and Harris often sound out of tune with one another as in *It's Magic* and it is as though the sound is draped over by a fine web through which each instrument must somehow penetrate in order to be heard.

Nonetheless, the rhythm section is outstanding. Ray Brown's bass work warrants a low bow, his timing executed with the precision of a Swiss watch, his round notes well amplified, and Roy Brooks acquits himself well on drums.

That Cobblestone states when the recording was made is appreciated—June 27, 1972. More companies should follow in their footsteps.

An ebullient effort by a felicitous foursome that falls just short of reaching the stars.

Performance B+

Sound B



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Chris Strachwitz has put on wax fourteen original 78's of loosely delivered Cajun music from his own collection which include some rarities from these twenty years. Upon listening, one must deduce that the influence Cajun music has had upon country and western and the purer flowering form of bluegrass is considerable.

Side 1 devotes itself to some facile fiddling, most notably in Joe Werner and the Riverside Ramblers' hit *Wondering* and the steel guitar which predominates in Harry Choates' winning *Austin Special*, recorded shortly before his death in 1951. The accordion on Side 2 imparts a certain heaviness and old-country propensity to the polka in dance tunes such as waltzes and two-steps, belloyed in fractured French.

Strachwitz's notes painstakingly delineate the period's recording history of the genre which he says is alive and well and still evolving along the Texas-Louisiana coast. The whole show rings with honesty and authenticity but is more for the collector who has imbedded himself in this folk art than for the casual listener.

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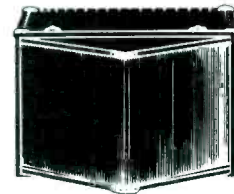
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## MISCELLANEOUS

**SEND \$1.00 RECEIVE JEWELRY CATALOGUE** \$3.00 certificate. Schick Enterprise, 6519 South Claremont, Chicago, Ill. 60636.

**AUDIO BACK-ISSUES WANTED.** 1968/73. Price? Condition? Dates? Cone, 775 South Madison, Pasadena 91106.

**HOW INTELLIGENT ARE YOU?** Self-scoring test reveals I.Q. in 45 minutes! Send \$2 today—guaranteed! Kimco, 289 Main, Cornwall, NY 12518, Dept. 1HH9.

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**CASH FOR YOUR** unwanted stereo LP's and reel to reel tapes. Record House, Hillburn, New York 10931.

**BOZAK COLONIAL 305's** and/or equipment cabinet; or bargain 4000 classics; or plans, kit instructions. John Farris, 13184 Putnam Circle, Woodbridge, Va. 22191.

**ALTEC 808-B CAST MULTICELLULAR HORNS,** Marantz SLT-12 turntables. Box AJul 3-1.

**WANTED: CROWN, R.O.M.** Write Jim Hollinger, Galen Hall Rd., Rt. #3, Wernersville, Pa. 19565.

**WANTED: SONY SRA-3** recording amplifier. Contact: R. Singer, 25 Edwards St., Roslyn Hts., N.Y. 11577.

**WANTED: MARANTZ** model No. 7, 8B; JBL model SG-520, SE-400; McIntosh model C-22, MC-275. Kazuo Takishima, 33-7-1421, 2 cho-me, Itabashi-ku, Tokyo, Japan 175.

**KLIPSCHORNS, USED.** State style and condition. C. C. Bonsell, 2201 Martin Ave., Dayton, Ohio 45414.

**BIG BAND RADIO TRANSCRIPTIONS.** Will pay \$25.00 for certain pre-1947 remotes . . . Have 500 to trade. Ed Burke, 580 Jann Ave., Opa Locka, Fla. 33054.

**LOOKING FOR AN AMPEX MICRO 155** which came out last year (1972 model). Anyone owning one and willing to sell—must be in excellent shape—please call me. Willing to pay fair price for unit, A. Licata, 85 Livingston St., Apt. 56, Brooklyn, N.Y. 11207.

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**WANT USED E-V PATRICIAN IV** Speaker System, Mahogany or Blonde, Finish not important as long as cabinet and driver integrity not damaged and cabinet can be refinished. Will pay shipping. Send picture and price/condition to J.L. Koenreich, Box 553, International Falls, Minn. 56649.

**HIGHEST CASH PAID FOR YOUR EQUIPMENT.** Quick action, full details to Box 4, Tennant, N.J. 07763.

**WANTED—DYNACO FM3 TUNER KIT.** Best price for original, unopened carton. Gill White, 815 Guthrie Ct., Winter Park, Florida 32789.

## PHOTOGRAPHY

**12 EXPOSURE ROLL KODACOLOR FILM** developed-printed jumbo, \$1.50. Capri Color, Box 831, Laredo, Texas 78040.

**CAMERA**—Lubricant Kit, Guns, Instruments, Catalog. Sentry, 12 Intervale, Needham, Massachusetts 02192.

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**BIBLE** Degrees—Correspondence—Fundamental Bible Seminary, P.O. Box 942, Elk City, Oklahoma 73644.

**LOGIC** trainers catalogs 50¢. UTI, POB 252, Waldwick, N.J. 07463.

**TAPE RECORDING COURSE:** Taught by studio engineers. Free information, NNA, Box 721E, Rye, New York 10580.

**EARN COLLEGE DEGREES AT HOME.** Many subjects. Ministerial studies, high school equivalency diploma. Florida State Christian University, Post Office Box 1674, Fort Lauderdale, Florida, 33302.

## RECORDS

**CATALOGS** Broadcasts, soundtracks. Personalities of Thirties, Forties, Box 225, New York, N.Y. 10028.

**SHOW ALBUMS**—Rare. Out of Print Lp's. Free large list. Broadway/Hollywood Recordings Georgetown, Conn. 06829.

**RARE** Deleted Motion Picture Soundtrack and Show Albums. Steiner, North, Goldsmith, Waxman, Young, Bernstein, Styne, etc. "ONLY THE BEST." Send 25¢ for new quality catalog to ReCollections, P.O. Box 197, Roselle Park, New Jersey 07204.

**FILM-STAGE SOUNDTRACKS.** Large free list. A. Lutsky, Box 7342, Miami, Fla. 33155.

**OLDIES—45 RPM** Original hits. Catalog 50¢ C&S Record Sales, Box 197, Wampsville, N.Y. 13163.

**RARE RECORDS**—Send wants. Box 410, Bronx, N.Y. 10469.

**FREE LP CATALOG**—Deleted Soundtracks, Shows, Nostalgia. A. Roseman, P.O. Box 16083, Phila., Pa. 19114.

**THREE GREAT JAZZ ALBUMS!** Write: Bountiful Records, 12311-A Gratiot, Detroit, Michigan 48205.

**WANTED: ORIGINAL RECORDING OR TAPE COPY** (Reel-reel or cassette) of "Jet" by Les Baxter and "If You Love Me" by Vera Lynn. State condition of record and terms. R. Gleitz, 606 Norway, York, Pa. 17403.

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**SOUNDTRACKS—O.C.**—Personalities & Jazz Want lists to: Theo's Records, P.O. Box 4994, Panaroma City, Ca. 91412.

**SOUNDTRACK RECORD ALBUM** (new) and list—\$2.00. Whalon, 2321A Hill Lane, Redondo Beach, Calif. 90278.

## BOOKS AND PUBLICATIONS

**YOU'VE SEEN THE REPRINTS** of our nice equipment reports. If you want to read the nasty ones you'll have to subscribe. For free prospectus, write: STEREOPHILE, Box 49A, Elwyn, Pa. 19063.

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**KENNEDY/TIPPIT/OSWALD MURDERS!** Actual episodes & police recordings! Reels/cassettes: \$10. Majestic, 9651 Foxbury, Rico-Rivera, California.

**NEW TAPE EXCHANGE CLUB.** All Formats. Details 25¢. Bob Musial, Box 11907-A, Chicago, Ill. 60611.

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**NOSTALGIA RADIO PROGRAMS** traded. Private collection. Drawer 3226, Newport, Delaware 19804.

**OLD RADIO PROGRAMS** Large selection, sample tape and catalog \$1.00. Audio Antiques Box 6651, Cleveland, Ohio 44101.

## TUBES

**TUBES** receiving, factory boxed, low prices, free price list. Transletronic Inc., 1306 40th Street, Brooklyn, N.Y. 11218. Telephone: 212—633-2800.

## MUSIC

**RARE ROMANTIC PIANO SCORES**—Moscheles, Henselt, Herz, Litoff, Scharwenka, Scriabin, etc. Free catalog. MUSIC TREASURE PUBLICATION, Box 127, Highbridge Station, Bronx, New York 10452.

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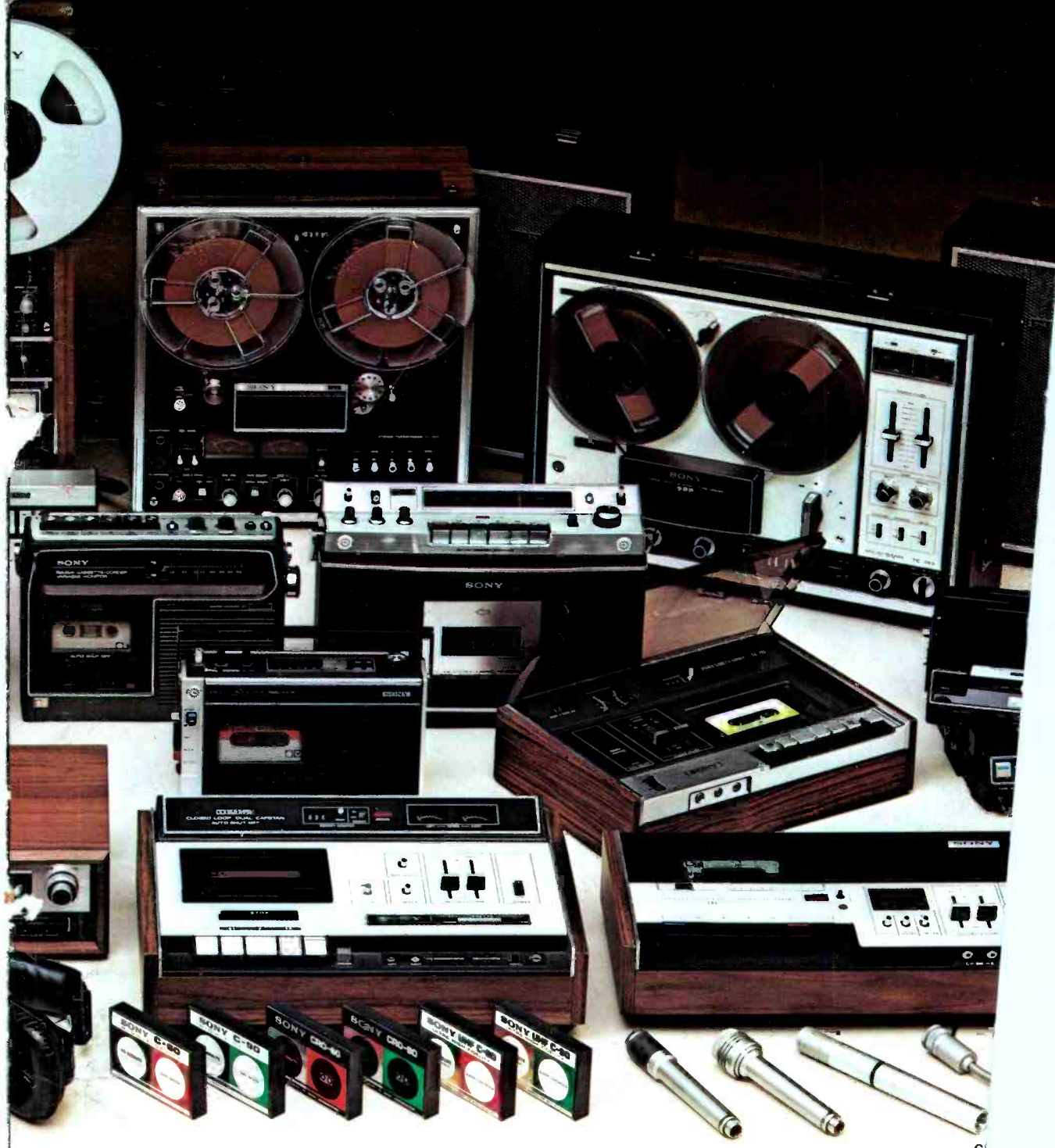




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