ALL NEW! 3,000 PRODUCTS; 264 FACT-FILLED PAGES HIGH FIDELITY'S Buying Guide to memer Stereo Components 5 kevs to successful

- Which Components to Buy First
- How Much Should You Spend?
- What One Tape Type is Best?
- Secrets of Super-Sounding Stereo
- Simple System Repairs You Can Make

PLUS SPECIAL REPORT How to Stretch Your Car Stereo

# Ohm's <br>  <br> Big bass sound can come from small bookshelf loudspeakers. 

Among loudspeaker manufacturers, traditional wisdom has it that you need a big woofer in a big cabinet for really deep bass.

Once again, Ohm has defied the traditional laws of loudspeaker design.

The OhmL is a compact, reasonably-priced, vented loudspeaker which rests comfortably on a bookshelf.

Yet, its bass response is absolutely flat to 42 Hz . And it can be driven to loud levels with as little as 15 watts rms. (That's only half as much power as a comparable acoustic suspension system needs.)

But there's more to an Ohm L than superlative bass and high efficiency in an easy-to-live-with size. Using time/phase matched drivers, and Ohm's phase consistent crossover, the $L$ achieves a highly coherent sound that many expensive, widelyadvertised "phase aligned" systems can only envy.



The Ohm L woofer; output capacity unmatched by any other 8" woofer we've tested.

Here's what the audio critics have said about the Ohm L:
High Fidelity Magazine:
"In listening tests, the Ohm L's aspirations ex-

ceeded those expected of its price class by a notable margin. The overall sound is solid, yet transparent and detailed. Deep bass is tight, with a sense of ease that is maintained to relatively high listening levels...Stereo imaging is excellent - to the point where the sound seems totally detached
from the speakers."

## Sound Advice:

"This speaker also rates high in depth, ambient reproduction, and airiness... the $L$ is a very musical speaker, does a good job with the delicacy of orchestral and choral music, has great dynamic punch, is quite efficient ( 8 watts for 100 dB at $3^{\prime}$ ', sounds good in a small room... and absolutely blooms in a large room (output to spare)."

## Stereo Review:

"The Ohm L, though diminutive beside many of the floor-standing or oversize 'bookshelf' speakers we have seen, sounded in every way like a full-size system. Blindfolded, one would never guess its compact dimensions." (Copyright 1977 by the Ziff-Davis Publishing Co. Reprinted from Stereo
Review June, 1977 by per-
mission. All rights reserved.) Sound (Canada):
"...This is a loudspeaker which, despite its small size, manages to sound large...The high frequencies are crisp and one listener remarked that one could count the wires on the brushes. The low frequencies are well-controlled and there is a very good compromise between sensitivity, damping, and low bass. The lows are strong without deteriorating into the one note variety and deep without becoming lost by overdamping."


For 13 complete reviews, and full specifications, please write us at Ohm Acoustics Corp., 241 Taaffe Place, Brooklyn, N.Y. 11205.

## HIGH FIDELITY's <br> Buying Guide to Stereo Components

Editorial
What's in it for you? Plenty! ..... 2
Glossary of Technical Terms ..... 7
5 Keys to Successful Stereo
What to Spend and
How to Spend It by Ivan Berger A step-by-step budget-conscious plan for purchasing a home stereo system ..... 17
Secrets of Super-Sounding
Stereo by Edward J. Foster Straight facts on how to set up your components for top performance. ..... 23
How to Troubleshoot Your
Stereo System by Howard Roberson
Simple, money-saving steps you can take to prevent and fix most common problems ..... 30
The Right Way to
Buy Car Stereo by Robert Angus Stretch your dollars by knowing the most important questions to ask. ..... 39
What Type of Tape
Should You Use? by Larry ZideThe vital ingredients are the musicyou record and the deck you record it on44

## Buying Guide to More Than 3,000 Audio, Video, and Car Stereo Components

How to Use Our Buying Guide to Save Time and Money ..... 49
Amplifiers
(Integrated Amps, Power Amps, and Preamps) ..... 51
Tuners ..... 75
Receivers ..... 82
Tonearms ..... 97
Phono Cartridges. ..... 100
Turntables ..... 108
Open-Reel Decks ..... 122
Cassette Decks ..... 126
Speaker Systems ..... 141
Equalizers ..... 189
Headphones ..... 194
Microphones ..... 200
Car Stereo Radio/Tape Decks \& Tape Decks ..... 206
Car Amplifiers
(incl. power boosters, equalizers,
and amp/equalizers) ..... 220
Car Speakers ..... 229
Video Cassette
Recorders ..... 240
Signal Processors
(incl. noise-reduction units). 244
Open-Reel Raw Tape. ..... 249
Cassette Raw Tape ..... 250
Video Raw Tape ..... 254
System Accessories (incl. phono \& tape care products) ..... 256

## Editorial

## What's in it for you? Plenty!

F
or this, our second edition of High Fidelity‘s Buying Guide TOSTEREO COMPONENTS, our staff of top audio writers has focused on key information you should know to get the most from a stereo system-both when you buy it and after you get it home.

The first step, of course, is figuring out what equipment to buy, how much to spend on it, and where to buy it. Ivan Berger takes you step-by-step through the process of deciding how much money to apportion for each component. Then he suggests what is the best strategy to use when purchasing a stereo system that is in keeping with your budget.

All the best equipment in the world won't sound its best unless it's connected and set up correctly. Simply reversing some wires or moving a speaker a few inches here or there may give your system a certain sparkle. Ed Foster has dozens of timely tips on this subject in his article "Secrets of Super Sounding Stereo."

And what happens when you turn the power switch on and nothing happens? Before you repack your equipment and rush it off to the repair shop, consider some of the home remedies Howard Roberson discusses in "How to Troubleshoot Your Stereo System."

If you plan to use a cassette recorder in your stereo setup, sooner or later you'll have to decide what tape to use. It's not just a case of buying the most expensive tape. That may be a waste of money. Larry Zide looks at the factors affecting your choice in "What One Tape Type is Best?"

Car stereo has literally exploded during the past year. It's not difficult to spend as much on a system for your car as you have for your home. But you're much more on your own with car stereo components, as Robert Angus points out in "The Right Way to Buy Car Stereo."

Whatever you're in the market for-audio, video, or car compo-nents-you need information on which to base your decisions. Our massive 200 -page buying guide section gives you a head start. Specifications have been collected on thousands of new products from hundreds of manufacturers and assembled into more than a dozen categories. Our introduction to the section explains how you can best make use of the material.

Many of you who purchased last year's edition have written us, saying what a valuable buying/reference book it has proven. This year's edition is even more comprehensive and fact-filled, and we think it will prove a worthy addition to your bookshelf. -WT

ALL NEWI 3,000 PRODUCTS; 264 FACT.FILLED PAGES


Cover equipment (clockwise from top): KEF 105 speaker: Crown Stralght Line One preamp; Advent SoundSpace Control; Luxman T-12 tuner; Fisher RS-2007 receiver; ADC 1700DD turntable; Royal Sound RC-2000 car stereo control center; JVC KD-A8 cassette deck: Technics RSM85 cassette deck: Pioneer SA-9800 integrated amplifier; Rotel RX-504 receiver; Mitsubishi M-AO1 micro power amplifier

Cover photo: Robert Curts
Cover design: Bob Maddocks

> William Tynan Editor
> Robert S. Clark Editorial Director
> Edith Carter Senior Editor
> Cynthia Pease Associate Editor
> Edward J. Foster Consulting Editor Marion Thompson Assistant to the Editor Bob Maddocks Director of Graphics Michael Coleman Graphics Assistant Kathleen Davis Production Editor David Lee Circulation Director
> Stephen Sawicki Editorial Assistant Lynne Wesolowski Editorial Assistant Warren B. Syer Publisher


Published at Great Barrtngton, Mass. 01230. Copyright 1979 by ABC Leisure Magazines. Inc., a subsidlary of American Broadcasting Companies, Inc.. 1330 Avenue of the Amertcas. New York, N. Y 10019: Warren B. Syer, Prestdent: Herbert Keppler. Sentor Vice President. Photographic Publishing Division; Leonard Levine. Vice
President. Advertising: Warren Tuohy, Vice President, Finance: DaPresident, Advertising; Warren Tuohy, Vice President, Finance; Da-
vid Lee. Circulatoon Director Cathleen Aloisi, Personnel Director: Wayne Armentrout, Director of Manufacturing. The design and contents of this publication are fully protected by copyright and must not be reproduced in any manner. Information for the equlpment direc. tory was supplied by the manutacturers.

Advertising Main Office: Robert J Ur. Sr.. Director of Advertising Sales. The Publishing House, Great Barrington, Mass. 01230. Telephone: 413 -28-1300.
New York: ABC Lessure Magazines, inc.. 130 E. 59th St., 15 th floor. New York, N.Y. 10022 Seymour Resnick, National Advertising Man. 212-826-8383. Ruth Elliott, Eastern Advertising Manager, 212-826. 923 Janet Cermak Administratlue Assistant 212-926-8390. Classi fied Advertising Department. 212-826-8393.
Midwest: ABC Lessure Magazines. Inc. 190 N. State St. Room 632. Chicago, III. 60601. Telephone: 312-782-1173. William P. Gordon, Midwest Advertising Manager
Los Angeles: ABC Lersure Magazines. Inc.. 2020 Avenue of the Stars. Suite 245. Century City. Calit. 90067. Telephone: 213-5532000. Andrew Spanberger, Western Advertsing Manager; Janet Endrijonas. Associale Western Advertising Manager Tokyo: Japan Advertising Communications, inc. New Ginza Bldg 8748. Shigeru Kobayashi, President.

## Bought expensive speakers?



## Better not listen to ours!

## However, if you're looking for incredible sounding speakers

 at an affordable price, by all means do! You will find that for less money than youplanned on spending you can get much better sounding speakers than you dreamed you could ever afford. Polk Audio loudspeakers have received worldwide praise because peop e recognize that they offer remarkable value. Critical acclaim such as the following makes it clear why Polk speakers have become famous for offering the best possible sound for the money.
"Polk Audio is a small, Maryland-based company whose speakers enjoy an enviable reputation among audiophiles who would prefer to own such exotica as the Beveridge System 2SW-1 ( $\$ 7000$ per pair) or Pyramid Metronome ( $\$ 5200$ per pair) but don't have the golden wallets to match their golden ears!" The Complete Buyer's Guide to Stereo/Hi-Fi Equipment
"Audio experts know that the price of a speaker is not always directly proportional to its quality. Nowhere at CES was that fact more dramatically demonstrated than in room 900 of the Pick Congress where the folks from Polk Audio of Baltimore were demonstrating their speaker line..." High Fidelity Trade News
"They (Polk 10's) are a high definition speaker system deserving the very best associated electronics. And at their price, they are simply a steall"Audio Advisor-Audiogram

Monitor 5

$\frac{\text { Real-Time Array } 12}{}$

## There is only ne real pioneer <br>  <br> 1957: <br> The world's first pocket transistor <br> radio. <br> In 1954, a fledgling Japanese

tape recorder manufacturer visited America to investigate a new device called the transistor.
At first, things were less than encouraging.
for hearing aids," they were told. "And besides, they can"t be mass produced."

Undeterred, the Japanese representatives returned to Tokyo.

Thirty-six months later, the world saw its first pocket transistor radio.

Followed by the world's first all-transistor FM radio.

And, partially as a sign of their continuing dedication to audio, the Tokyo Telecommunications Engineering Corporation adapted the Latin word for sound-"sonus"and changed its name to Sony.

In the years that have followed, Sony has nevér faltered in its dedication to technological innovation. And we'd be
company that virtually founded the era of transistorized high fidelity-is still at its very forefront.

## The V5 receiver: <br> To this day, only Sony offers Sony quality.

## $0 \Omega$ <br> 3

## A few SonyAudio firsts:

1949: Obtained patent on the basic magnetic tape-recording system.
1952: Developed stereo broadcasting in Japan.
1954: Introduced condenser microphone.
1955: First consumer stereo tape recorder in Japán.
1959: Invented "Tunnel Diode"; basis of all high-speed, low-distortion semiconductors.
1965: First all-silicon solid state amplifier.
1966: The first servo-controlled turntable Forerunner of quartz-locked iurntables.
1968: First electronic end of record sensor
1969: First digital-synthesized FM tuner.
1969: Invented the ferrite tape head.
1973: Invented the V-FET: Opened era of high-speed transistors.
1973: First to manufacture ferrichrome tape.
1973: Dr. Esaki wins Nobel Prize in Physics for "Tunnel Diode."
1975: First turntable with carbon-fiber tone arm
1977: The world's first consumer digital audio processor.
1977: First consumer amplifier with pulse power supply.
1978: Patented liquid crystal recording meters. loathe to estimate how often our advances have ended up on the circuit boards and front panels
to impress you with a facade of magic buttons and switches, Sony receivers are designed to impress you with rich sound. Case in point: the V5.
In technical terms, the V5 delivers 85 watts per channel at 8 ohms from 20 to 20,000 hertz with no more thán $0.07 \%$ total harmonic distortion.

In human terms, this means the receiver can reproduce every note of music any instrument can play with no audible distortion. And it can power two sets of speakers without straining.

But that's only the beginning.

Instead of using the mundane power transformers found in competitors' products, the V5 utilizes more expensive toroidal core transformers that provide
richer bass.

the "Type G."


# in <br> <br> high 

 <br> <br> high}

## fidelity.



Instead of cutting corners by using a flimsy pressboard bottom, we've cut interference by encasing the entire receiver in metal.

And for better FM reception, instead of using the standard three- or four-gang variabletuning capacitor, we've opted for a higher quality five-gang model.

All of which explains why if you pay a few dollars less for one of our competitors' receivers, it's probably because you're getting less receiver.

## The new Sony cassette decks: The state of the art, from the people who invented it.

Since we introduced tape recording to Japan in 1950, Sony has sold millions of tape decks.

A quick look at our new TC-K65 cassette deck will explain why.

Like all two-motor cassette decks, the TC-K65 is designed for low wow and flutter. Unlike others, however, we feature "brushes and spotless" motors that reduce this problem to the point of being inaudible.

Instead of using just any tape head material, the TC-K65 features Sony "Sendust and Ferrite" heads that combine wide response with extreme durability.

Instead of using an ordinary metering system, we we developed a 16-segment LED meter whose life expectancy far exceeds the fancy blue fluorescent models other companies are currently touting.

And theres also a "Random Music Sensor" for preprogramming tapes, settings for metal

[^0]

## But you really haven't heard anything yet.

Unfortunately, we don't have enough space here to tell you the complete Sony hi-fi story. Like the way a recent dealer survey rated our turntables \#1 in value and performance.

Or the way our new separate tuners and amplifiers (not to mention micro components) utilize highly advanced light-weight pulse power supplies whose levels of distortion are virtually unmeasurable.
Or how they use a NASA developed"Thermo-

Dynamic Cooling System" that eliminates heat, excess wire and the distortion and interference that normally accompany them.

If you'd like to hear more about the complete line of Sony hi-fi components (or if you need the name of your nearest dealer) write to Sony, P.O. Box CN 04050, Trenton, New Jersey 08650. In the meantime, if somebody makes noise about innovations available in satellites
 in high fidelity, think of the biggest pioneer in audio. And remember Sony.

## SONY AUDIO

We've never put our name on anything that wasn't the best.

# The standard 

 A Alwa

## The high bias standard.

In the past few years, these fine deck manufacturers have helped to push the cassette medium ever closer to the ultimate boundaries of high fidelity. Today, their best decks can produce results that are virtually indistinguishable from those of the best reel-toreel machines.

Through all of their technical breakthroughs, they've had one thing in common. They all use TDK SA as their reference tape for the high bias position. These manufacturers wanted a tape that could extract every last drop of performance from their decks and they chose SA.

Supth antur cassettis


## SA-C90 佥TDK

state of the art perficmance

And to make sure that kind of performance is duplicated by each and every deck that comes off the assembly line, these manufacturers use SA to align their decks before they leave the factory.

Which makes SA the logical choice for home use; the best way to be sure you get all the sound you've paid for.

But sound isn't the only reason SA is the high bias standard. Its super-precision mechanism is the most advanced and reliable TDK has ever made - and we've been backing our cassettes with a full lifetime warranty* longer than anyone else in hifi-more than 10 years.

So if you would like to raise your own recording standards, simply switch to the tape that's become a recording legend-TDK SA. TDK Electronics Corp., Garden City, NY 11530.
合TDR
The machine for your machine.

# Glossary 

A/B test A listening test in which two similar audio devices (or program sources) are compared by rapidly switching between them while the rest of the system is unchanged, except for relative volume adjustment if needed. A/B tests are particularly germane in evaluating loudspeakers, although they also can reveal audible differences in any sound equipment.
alignment In a tape recorder, the physical positioning of a tape head relative to the tape itself. Alignment in all respects must conform to rigid requirements in order for a recorder to function properly. In an FM tuner, critical circuit adjustments that are needed for optimum performance.
automatic reverse Ability of some fourtrack stereo tape recorders to play the second pair of stereo tracks automatically, in the reverse direction, without need to interchange the empty and full reels after the first pair of stereo tracks has been played
azimuth The angle of a tape head's polepiece slot relative to the direction of tape travel. See "alignment."
balanced output An output, as from a microphone or antenna, in which the leads that carry the signal voltage are arranged symmetrically above and below a third neutral circuit or ground. This arrangement, in which a third conductor at ground potential is sometimes used, tends to cancel any noise picked up by long lengths of interconnecting cable
bias 1. Antiskating; a force that counteracts a pivoted arm's tendency to swing inward. 2. A critical amount of voltage applied to a device to prepare it for correct performance. In tape recording, the bias is a steady-state magnetic field applied to the tape to enable it to respond more completely and more accurately to the fluctuating magnetic impulses of the audio signal. Although sometimes a DC (fixed-magneticpolarity) field, the usual bias is provided by an ultrasonic alternating-polarity field of $50,000 \mathrm{~Hz}$ or higher frequency.
bldirectional microphone $A$ microphone which is equally sensitive to sounds arriving at it from in front or in back but discriminates against sounds arriving at it from the sides.
capstan The motor-driven spindle that feeds a tape at constant speed past the machine's heads. The tape is usually gripped between the capstan and a soft-surfaced pinch wheel or "idler" to minimize slippage at the capstan.
capture ratio A tuner's ability, expressed in decibels, to select the stronger of two signals at or near the same frequency. The lower the number, the better.
cardiold microphone $A n$ essentially
unidirectional microphone having a heartshaped "polar pattern
channel separation The degree to which the signal in any one of a set of channels is kept apart from the signal in others. Expressed in decibels. the greater the number. the more the separation
coercivity $A$ measure of the amount of applied magnetic field (or opposite polarity) that is necessary to restore a magnetized body to a state of zero magnetism High-coercivity tapes exhibit less tendency toward self-erasure and thus have enhanced high-frequency - resfionse characteristics. but they are harder to erase completely
compression A device that narrows the
dynamic range of a signal, the opposite of an expander.
decibel Abbreviated dB, the decibel is a unit used to compare levels of signal power, defined so that power in decibels equal 10 times the logarithm (base 10) of the ratio of signal power levels. This equality of levels is stated as 0 dE , and 0 dB also indicates a reference level from which changes are measured. Note that a two-toone ratio of power is 3 dE . The smallest change the ear can hear is said to be 1 dB , while a two-to-one change in apparent loudness is about 10 dB

DIN Letters stand for Deutsche Industrie Norm and designate performance slandards followed in Europe as well as the type

Audio Pulse Digital Time Delay is possibly the greatest advance in sound reproduction since sterea A strong statement indeed, but we feel strongly about it. By means of time delay, the ambience of the live performance is returned to the music in a way not possible with ordinaty stereo reproduction.
Stereo gave us left and right imaging Audio Pulse gives us the realism of depth and spatial perception by digitally processing, delaying and
recirculating program material through a secondary set of rear speakers. The apparent size and acoustic treatment of that area can be adjused by simple front-panel functions.

Digital time delay must really be heard to be appreciated... but once you do, you won't van: to listen without it.

Audio Pulse offers complete digital time delay systems. Model Two, the new Model 1000 and two sets of specially designed seconcary speakers

YOU WONT MISS IT UNTIL IT'S GONE
© 1979 Audio Pulse, Inc., 4323 Arden Drive, E1 Monte, CA. 91731 (213) 579-4673 Why Wait,


## Itsurvived acidrods,

# four years of collegeand twokis. 



## Now you're ready for JVC.

Face it. Your old compact stereo has had it.

It played you some of the best music ever put on records, but now your ears and your bank account are ready for something better.

Not just shinier and louder, though. You want a stereo that gives you more sound quality. Not just more complication.

Now you're ready for JVC.
Because while our competitors were concerned with outdoing each other, we've been concerned with giving you features you could use, performance you could afford, and durability that's legendary in the hi-fi world.

Since we invented Quartz-Lock (the most accurate turntable drive system in the world), we can offer you one of the lowest price Quartz turntables on the market. We knew you weren't a recording engineer so we developed a Multi-Peak L.E.D. metering system that lets anyone make perfect cassette recordings. And we packed our equipment
with sensible safeguards like a Triple Power Protection circuit that keeps your speakers and amplifier from getting zapped. As well as circuitry that pulls in FM better than you've ever heard it on your compact.

So before you descend into the maelstrom of hype, hearsay and technojargon, call 800-221-7502 (in NY State call 212-476-8300) and discover your nearest JVC dealer. Or write to US JVC Corp., 58-75 Queens Midtown Expressway, Maspeth, NY 11378.

He'll open up a world of sound so wide you may foresake TV and reading for the joy of discovering new sounds on your old records, and amazing sounds on new records.

When you're ready for a world of music that real, you're ready for JVC.

Shown: A separates system with the A-S7 integrated ampliffer (50w/ch $20-20 \mathrm{kHz} .8$-ohm. . $05 \%$ THD). T.V5 AM/FM tuner, QL-A2 Quartz-locked tum table. KD-A3 Metal-compatible cassette deck. SK-700MK II 3-way speakers in an LK-G342 roll-around rack with Smoked glass door. A receiver system with the R-S5 reisiver ( $25 \mathrm{w} / \mathrm{ch}, 20-20 \mathrm{kHz}$. 8 -ohms. $05 \%$ THD) L-A11 beltdrve auto matic tumtable. KD-10 Dolby "cassette deck. SK-うOOMK II 2-way speakers in an LK-G142 ack. "Dolby is a trademark of Solby Labsratories.


CIRCLE 6 ON READER-SERVICE CARD


When you listen to Sony headphones, you'll share an intimacy with the music yoc've probably never experienced before; you'll hear subtleties you've missed with most speakers.

Admittedly, this may sound rather extraordinary.
But then, so do our headphones.
sont:
We've never put our name on anything that wasn't the bes:.

CIRCLE 11 ON REEADER-SERVICE CARD

AKAI

## CHECK US OUT!

## $\checkmark$ Our prices are the lowest.

$\checkmark$ Oiscounts on over 60 major brands
$\checkmark$ Reliability: one of the oldest audio mail-order houses in the U.S.A.
$\checkmark$ Rated \#1: by a leading trade publication
$\checkmark$ Large inventory: we buy in volume getting the best deals from the manufacturers, you get the best deal from us. give us the opportunity to beat the best deal you've been able to fimo.

- QUOTES AND INFORMATION-(212)253-8888 9AM-5PM, MON . SAT . N Y TIM

Write or Call us now for the lowest
price quotes and a Free price flyer.
STEREO CORPORATION OF AMERICA
SC-1629 Flatbush Ave.
Brooklyn, New York 11210

CIRCLE 12 ON READER-SERVICE CARD

## 8 IMPORTANT REASONS WHY MORE PEOPLE BUY TOP QUALITY EQUIPMENT FROM INTERNATIONAL HI-FI THAN ANY OTHER MALL ORDER COMPANY

MORE THAN 80,000 CUSTOMERS NATIONWIDE

1. Guaranteed lowest price . . . you pay same price many dealers pay
phone orders
shipped C.O.D. or Credit Card
2. Same day shipping when ordered by $1 \mathrm{p} . \mathrm{m}$
3. Seven audio advisors provide professiona!
help for the inexperienced buyer.
4. Fully insured shipments plus full manufacturers' warranty
5. Exclusive "no Iemon" guarantee 7. Fully stafted customer service department. 8. Over 70 top name brands ... equipment most mail order and discount dealers can't supply. $\qquad$
CALL NOW (301) 488-9600 Mon.-Fri. 9-9, Sat. 9-4

Write for: - Brochure with prices and lines Tips on buying by mail


## International Hi -Fi Distributors <br> Moravia Center <br> Industrial Park. Dept. BG-9 Baltimore. Maryland 21206

CIRCLE 4 ON READER-SERVICE CARD
of unitized connecting plug and its mating socket in which a number of pins and holes enable more than one function or more than one channel to be handled by a single connector
direct drive A type of transmission system in turntables in which the rotating platter is attached directly to the motor shaft without intervening linkages, belts, idlers, or gears
directivity, speaker $A$ tendency of some speakers to "beam" or reproduce less clearly and/or strongly off, axis as frequency rises. Multidirectional or "omnidirectional" speakers represent a design effort to avoid beaming and to radiate all frequencies uniformly
Dolby A device that increases the signal-to-noise ratio of a recording medium by raising the volume of quiet passages in selected frequency ranges prior to recording, and lowering them to their original levels during playback, thus automatically reducing any noise introduced in recording or playback
double-play tape Tape having half the thickness, and hence double the running time (for a given reel size) of "standard" 1 112-mil tape
equalization Altering the frequency or phase characteristics of a signal or audio device to meet specific requirements. In disc recording the bass frequencies are de-emphasized or reduced in amplitude to restrict the movement of the cutting stylus to practicable proportions within the narrow record groove. The treble frequencies, however, are boosted or pre-emphasized to overcome surface noise. The resultant response curve is known as the RIAA recording characteristic. In playback the inverse of this characteristic must be introduced to the signal for accurate reproduction, and suitable networks for doing so are built into all modern high fidelity equipment that has a "magnetic phono" input.

Equalization also figures in tape recording and playback. In fact, correct equalization together with correct bias are essential to realizing optimum performance from a given magnetic tape. The circuitry for doing this is included in the tape preamplifier supplied as part of a specific tape deck.
In FM broadcasting a certain amount of treble boost is added to the audio signal to suit it to the transmission medium or RF carrier wave. This boost is equalized by a de-emphasis network built into all FM tuners and receivers.

The term equalization also applies to special auxiliary networks or devices which, inserted into a playback system before the loudspeaker and/or power amplifier, may be used to modify the system's sound to compensate for variations in program material, room acoustics, and the response of individual components in the system. These devices can do so more precisely and more effectively than conventional tone controls.
expander A device that automatically widens the dynamic range of an audio signal, making loud passages louder and soft passages softer.

# vanomerm inib ainemine   

Kenwood has consistently made the significant :echnical advancements that make a difference you can hear. Like the first introducticn of DC into integrated amplifiers.

And now, Kenwood does it again Our exclusive Hi -Speed amplifier has actually changed the standards by which high fidelity is measured. It reacts much laster to changes in the music, particularly in the mid to upper frequencies. So all the subtleties of the music come through - even an individual singer in a backup vocal group.

In our tuners, we've developed PulseCount Detector circuitry to digitally reduce FM distortion by half while significantly reducing background noise. You'll hear the diference in your FM reception as a more Distinct, clearer sound. And only Kenwood has it.

In fact, every Kenwood component has exclusive features that improve sound quality. Like turntables with resin-concrete bases that virtually eliminate unwanted vibrations, and an extra-heavy, high inertia platter that keeps the record speed constant. And Jur dual-belt cassette decks that use a unique, extra-heavy flywheel for constant tape speed and better reliability.

Your Kenwood dealer can demonstrate how these features actually improve the tonal quality of your music.

And that's what great performance is all about

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



It's called The System, from Mitsubishi.

And we don't call it ritzy simply to justify its price.

Because as anyone who knows woofers from tweeters will tell you, there's more to ritzy than mere expense.

There's a pre-amplifier with complete dual-monaural construction and a built-in head amp for moving coil phonograph cartridges.

A 75 watt, 100 watt, or 150 watt amplifier, each capable of 80 dB inter-channel separation, a high signal-to-noise ratio and low distortion.

A Logic Control Turntable that breaks every record in the industry for completely
automatic operation. Not to mention its specially designed high-resolution, low-resonance tone arm for faultless sound.

A three-head, closed loop, dual-capstan drive tape deck, complete with feather touch controls that let you record professional quality cassette tapes.

Impressed? Theres more.
An AM/FM stereo tuner with a quartz-PLL synthesizer, plus LED's and digital readout, for the ultimate in tuning accuracy and convenience.

Peak meters that can dock with the amplifier and monitor your equipment channel by channel. So you can maintain perfect balance and protect the system from overload.

And last, but not least ritzy, our exclusive new MS-40 loudspeakers.

They completely eliminate
They completely eliminate
the spurious vibrations caused by conventional paper cone speakers, because they aren't made from paper.

Instead, we make our cone with an aluminum honeycomb core in a sandwich of glass fiber. The honeycomb structure is rigid enough to maintain its shape, yet light enough to be exceptionally responsive.

Put each of these remarkable components together in one handsome rack, and you've got The System.

One name. One look.
From one company, with one standard of quality.

Excellence.

HAS THE BEST IN AUDIO HI-FI: TUNERS • RECEIVERS • TURNTABLES HEADPHONES • MICROPHONES AUTOSOUND • ACCESSORIES AND
Pan American Electronics, Inc. A Radio Shaek
authorized sales center

## CAN SELL IT FOR LESS

- EVEN SALE-PRICED ITEMS -

NO TAXES on out-of-state shipments. FREE delivery available in the U.S. WARRANTIES honored by most Radio Shack ${ }^{\circledR}$ stores.

CALL OR WRITE FOR INFORMATION OR QUOTE (512) 581-2765 1117 CONWAY MISSION, TEXAS 78572

## V/SA

CIRCLE 18 ON READER-SERVICE CARD


CIRCLE 1 ON READER-SERVICE CARD
extra-play Originally, all recording tapes were $1 \frac{1}{2}$ mils thick, and a 7 -inch reel would accommodate about 1200 feet of this for a half-hour of continuous recording at $71 / 2 \mathrm{ips}$. The later extra-play tapes are 1 mil thick, and allow for 45 minutes of recording, or 15 minutes "extra
flutter Rapidly-repeating fluctuations in tape or turntable speed that introduce spurious burbling, quivering or shimmering variations in the pitch of the reproduced sound. Flutter is effectively a more rapid form of "wow," and modern measurements of flutter include the "wow" content.
frequency response The measure of ability to pass signals of different frequency without affecting their relative strengths. This is shown as a graph or "curve" which assumes input signals equally strong at all frequencies, and plots their output intensities against a decibel scale. The ideal "curve" is a straight line (perfectly "flat"" response). Frequency response generally is stated with specific decibel limits indicating the maximum deviations from flat response. For instance, 30 Hz to $18 \mathrm{kHz}, \pm 2$ $d B$ means that the audio device or system will not change the relative intensities of any frequencies within that range by more than 2 dB above or 2 dB below the ideal zero-dB (volume unchanged) point.
gain Any increase in the strength of an electrical signal, as takes place in an amplifier. Gain is measured as a ratio, often expressed in decibels. A gain of 6 cB in-

creases an input voltage to an output twice as large or quadruples the power
harmonic distortion $A$ form of distortion characterized by the addition of spurious harmonics to the signal. Expressed as a percentage; the lower the number, the better
impedance Essentially, opposition to the flow of alternating current and consisting of "pure resistance" combined with inductive or capacitive reactances. Impedance values are specified for some components (such as microphones or loudspeakers) when it is important for their proper functioning that their interconnection with another component provide some specified termination or load impedance; expressed in ohms
intermodulation (IM) distortion The introduction of spurious signals (sum and difference frequencies and harmonics thereof) as the result of interaction between two or more simultaneously reproduced tones, causing a smearing or veiling of the sound. Expressed as a percentage; the lower the number, the better
limiter An amplifier whose output signal has a constant amplitude when the input signal is above a certain reference level, sometimes used to reduce the intensity of very-short-duration peaks (transient peaks) in an audio signal without audibly affecting dynamic range
loudness Generally synonymous with volume, which is the intensity of perceived sound. "Loudness compensation" refers to equalization applied to a signal according to its volume in order to compensate for the ear's tendency to change frequency response at different listening levels. Loudness compensation typically boosts the bass, and sometimes the treble to a lesser degree.
monitor head A playback head that is separate from the record head, enabling the recordist to listen to what is coming off the tape a fraction of a second after it has been recorded. Without a monitor head, a tape must be recorded to its end and then rewound and replayed before the recordist can evaluate the tape
peak bias That amount of bias current through the record head which produces maximum output from a tape at low and middle frequencies, for a given amount of audio signal to the tape.
phase-locked loop A device consisting of an oscillator locked in by a feedback control system so that it follows a reference (which may be an input signal), useful for FM demodulation, and stereo or CD-4 demodulation. It is extremely linear and wide-banded, and seldom needs realignment with aging
power output The signal produced by an amplifier into a given load when fed with a given input signal. Power, expressed in watts, should be stated with reference to several qualifying factors-the impedance
of the load; the frequency at which (or the range of frequencies over which) the power is derived; the amount of distortion present for a given power output level; whether the power stated is for one channel or the sum of all channels. The most accurate and rigorously derived power figure is for the average sine-wave power (also termed "continuous" or "RMS" power).
preamplifier A special amplifier that raises very low signal voltage (as from a magnetic phono pickup, tape head, or microphone) to the more or less standard "line" signal level ( 0.5 to 2 volts). Preamplifiers, which must have low noise and distortion figures, often incorporate some form of equalization commensurate with the signal source for which they are intended.
rumble A low-frequency noise introduced by motor and/or transmission system of a turntable or tape transport. Measured as a minus-decibel figure with reference to a standard test-tone level; the lower the figure, the better
selectivity Tuner's ability to choose a station despite strong signals on adjacent channels ( 0.2 MHz away on the dial) or on alternate channels ( 0.4 MHz away). Expressed in decibels; the higher the number, the better.
sensitivity $A$ measure of a device's input signal requirement to produce a desired output. FM sensitivity refers to the RF (radio frequency) signal, in microvolts, needed to yield an audio output of a certain level and without exceeding a certain distortion; the lower this number, the better. Amplifier sensitivity refers to the audio signal, in volts or millivolts, needed to produce rated voltage or power output without exceeding rated distortion. "High" sensitivity indicates a relatively low input signal requirement; "low" sensitivity implies a higher input signal requirement. For practical purposes, then, the term "sensitivity "-especially when applied to loudspeakers and headphones-can be regarded as indicating relative "efficiency." Thus, a "high-efficiency" loudspeaker needs relatively less amplifier signal than a "low-efficiency" speaker in order to produce a comparable output level
separation The degree to which the signals in the various channels of a stereo or quadriphonic sound system are kept isolated from one another.
signal-to-noise ratio A ratio, often abbreviated as $S / N$, between a device's or system's output signal intensity and its accompanying noise content. In tape recording, for instance, the $\mathrm{S} / \mathrm{N}$ ratio usually lies between the permissible limit of distortion due to saturation of the tape, and the background hiss of the tape and/or the recorder's circuitry. $S / N$ is expressed in decibels; the greater the number, the better.
skating Tendency of a pivoted tonearm to be pulled toward the center spindle as a result of the friction between siylus tip and record surface. Antiskating bias or com-
pensation adds sufficient force to overcome this tendency and reduces distortion.
speaker enclosure A structure or cabinet specifically designed to house a loudspeaker in order to load its outpul and generally aid in its response. A bass reflex system uses a critically dimensioned port (auxiliary opening) to help smooth and extend the bass response. An infinite baffle totally encloses the speaker to suppress its rear wave, thereby permitting the speaker to respond down to its inherent resonant frequency. An acoustic or air-suspension system is relatively smaller than the previous types and uses a very loosely suspended woofer whose resonance is raised to the audible range and whose diaphragm motion is controlled by air trapped within the enclosure. A folded horn adds a constantly expanding horn structure to the front and/ or rear of a diaphragm to couple its output, via "acoustic transformer" action to the room. A transmission-line system (actually a variation of the former labyrinth system) loads a diaphragm with a critically dimensioned duct that smooths the response and helps extend the low-frequency range.
tracking angle, vertical The angle between the disc surface and an imaginary line drawn from the stylus tip to the cantilever pivot within the cartridge. The angle of 15 degrees has become the standard for the cutting, and thus the playing of records. The closer a pickup conforms to this angle, the better.
tracking force, vertical Sometimes abbreviated VTF, this is a measure, in grams, of the amount of downward force required by a phono pickup to accurately track a record groove. Insufficient VTF causes the stylus to lose contact with the groove; excessive VTF causes it to bear down too heavily. Either departure from the right amount of VTF causes distortion and hastens record and stylus assembly wear.

VUmeter Strictly, a recording-level meter whose indicator needle's motion is damped according to a specified standard, to allow it to respond at a certain speed to sudden impulses without overshooting the mark by more than a certain amount. The term is loosely applied to practically any record-level indicator that uses an indicator needle.
wavelength The distance between the beginning and the end of a complete cycle of any spatial periodic phenomenon. In acoustics it is the distance occupied by one cycle of a repetitive sound traveling through the air at a velocity of about 1,100 feet per second: A 1.1 kHz tone has a wavelength of one foot. In magnetic recording, it refers to the length of tape occupied by a full cycle of recorded signal. For instance, at $7 \frac{1}{2}$ ips tape speed, a recorded frequency of 1 kHz has a wavelength, on the tape, of 0.0075 inches
wow A relatively slow variation in the pitch of a reproduced signal, due to similar variations in the speed of the tape or disc. Wow may be caused by erratic speed of a tape transport or turntable or sometimes by a tonearm's inability to fully track a severely warped disc. See also "flutter


## Sansui is breaking up a very successful relationship. The TU-717 has a new mate: The AU-719.

Sansui has just introduced an exciting new integrated amplifier, the AU-719. It represents the very latest developments in audio and electronics technology. It is so good, in fact, that it has replaced its rave-reviewed, best-selling predecessor as the partner of the TU-717 tuner.

The TU-717's performance has been extravagantly praised by professional critics and knowledgeable consumers alike. With advanced features like switchable IF bandwidth and specs like 81 dB signal-to-noise ratio and $0.06 \%$ THD, it's only natural.

We expect the tuner's new mate to receive a tremendous reception and set industry amplifier standards for a long time to come. Here's why.

## INTRODUCING DD/DC

What particularly distinguishes the new AU-719 amp is Sansui's patent-pending DD/DC (Diamond Differential/DC) circuitry that provides the extremely high drive current needed to reduce THD by adding large amounts of negative feedback without compromising slew rate or adding TIM.

Slew rate refers to an amplifier's ability to respond to rapidly changing musical signals. The slew rate of the $\mathrm{AU}-719$ is an astounding $170 \mathrm{~V} / \mu \mathrm{Sec}$.

## MAGNIFICENT MUSIC

Many modern amplifiers have extremely low total harmonic distortion specs. And that's importen:But THD is measured with steady test signals and is not really representative of an amp's ability to decl
with music. Sansui alone, with it's DD / DC technology, is able to provide both low THD and lowest TIM simultaneously. Instead of the harsh metallic sound you sometimes get on a conventional amp when the musical signals are complex, with the AU-719 you hear only magnificent music.

THD is less than $0.015 \%$ at full rated power of $90 \mathrm{w} /$ channel, min. RMS, both channels into 8 ohms from $10-20,000 \mathrm{~Hz}$. Overall frequency response is awesome: DC $-400,000 \mathrm{~Hz},+0,-3 \mathrm{~dB}$. Hum and noise are a super-silent -100 dB on aux and -88 dB on phono. The phono equalizer, which adheres to the standard RIAA curve within $\pm 0.2 \mathrm{~dB}$ from $20-20,000$ Hz , also uses our unique DD/DC circuit for record reproduction that's second-to-none.

## CONTROL YOURSELF

The unit is equipped with a full complement of versatile controls and connections to create the system and sound that's right for you, including two phono and two tape inputs, defeatable tone controls with switchable center frequencies, deck-to-deck tape dubbing and a very convenient 20 dB muting switch.

Audition the new AU-719 and matching TU-717 at your authorized Sansui dealer. We think it will be the start of a very successful relationship.

## SANSUI ELECTRONICS CORP.

Lyndhurst. New Jersey 07071. Gardena. Ca. 90247
Sansuil Electric Cors. Lf. Tokyo. Japana
Sansui Audio Europe S.A.Antwerp. Belglum
In Canada: Electronic Distributors



A step-by-step budget-conscious plan for purchasing a home stereo system

B
uying your first stereo system, or just considering some additions or replacements to your current setup? Either way, you probably already

## Listen to the best speakers available, regardless of whether or not you can afford them.

realize that knowing what to spend and how to spend it conflict with each component's demands for your hi-fi dollar. Spend a little more on one piece and there's less to spend elsewhere. And prices for a particular component type-speakers, for example-can cover a wide range, from $\$ 100$ or so to several thousand. So how do you begin?

Start by setting up a temporary budget for the entire system. If this is your first system, keep it as basic as possible. Remember, you want good sound; you can add extras later. A good rule of thumb is to allocate onethird of your budget to your speaker system (the most critical element), one-third to a receiver, one-fourth to your turntable and phono cartridge, and the remaining for accessories, etc. (If you're getting a separate amplifier and tuner instead of a receiver, spend about one-fourth of your budget on the speakers, one-fourth on the amplifier, one-fourth on the tuner, one-fifth on the turntable and cartridge, and the remainder on miscellany.) Use these figures as a starting point-but only that. Components rarely cost exactly what you've allocated for them.

No question, the more places you shop for your hi-fi equipment, the more you'll learn from exposure to different flavors of opinion. But visiting too many is like seeking advice from a crowd-it's difficult to find a consensus. Sampling several should give you a reasonable idea.

But what kind of a dealer should you consult: an audio salon, a mailorder house, or a discount or department store? All have something to offer.

Discount and department stores offer low prices, with discounters often being the lower of the two. But remember, low prices result in part from low overhead. This may translate into less elaborate listening facilities, less knowledgeable clerks and less sophisticated in-house service facilities. Department stores usually stock fewer models than discounters. Although they too are unlikely to have service facilities, they usually are more helpful, since they want your business in their other departments.

Audio salons are, on the whole, the most informative of all hi-fi equipment sources. They have elaborate listening facilities with (in most cases) good acoustics; their salespeople know something about what they're selling; and they have the best service facilities. They also offer a wide selection, including many brands you won't find at discount or department stores, and are a good source for used-equipment bargains, usually with warranties. All this costs money, which means that you'll end up paying more. But it's worth it. In general, the more information and assistance you need, the more you should consider buying from an audio dealer.

If there are no dealers near you, then mail-order is your only choice. Mail-order prices are frequently low; on the other hand, their prices do not include shipping costs, and if your components ever need servicing, you won't have a specific dealer to go to.

Your first purchase should be a pair of speakers. They will be the heart of your system. It's not merely enough to spend one-third of your hi-fi budget on them; try to budget about half your shopping time as well. Listen to the best speakers available, regardless of whether or not you can afford them. Analyze what you hear, and how it differs from what you hear from less expensive, but quality speakers.

Judge how each speaker handles the bass, midrange, and treble, both separately and together. Bass should be clean and firm, but not omnipresent. Beware of speakers that seem to have "lots of bass" at all times. This is a sign of an overemphasized upper-bass resonance, and you'll quickly tire of it. If possible, listen to the speaker while using a record with a descending run of notes in the low bass (organ, cello, or string bass are good
sources). Reject the speaker if the notes stay at one pitch instead of gradually lowering until they die away.

If you want a lot of bass, you will have to compromise on some other aspect of speaker performance. Designers must trade off bass performance against speaker efficiency (which governs the power-and hence the cost-of your amplifier) and speaker size (which governs the cost of the speaker itself). That's one reason speakers with the best bass tend to cost more.

Treble should be high, clean, and "airy," with no tendency to spit, crackle, or sound harsh. (But listen to several records and sound sources to be sure that a particular problem isn't occurring elsewhere in the system.) Voices and solo instruments are good tests of midrange responsethey should neither jump out at you (a sign of too much midrange "presence") nor recede into the background. Also, they should not sound hollow or nasal.

Wide-band noise is a good test of overall frequency balance. And every dealer demo setup has just such a noise source-an FM tuner. Set it to a frequency between stations, turn the muting off, and the interstation noise becomes, in effect, a crude noise generator. While you're listening to this noise source, walk across the speakers' sound field. If the sound appears to change only at the far edges, the speaker system has good highfrequency dispersion; if high frequencies fade out quickly once you leave their on-axis "beam," or if the highs fade in and out at several locations, reject the system.

Use these preliminary screening tests to determine which speakers are worth listening to more closely. Once you narrow your choice, restrict your listening to only two speakers at a time, and don't audition more than three or four speakers per session. This avoids mental confusion. During each comparison, try to verbalize how each speaker sounds-it's easier to remember that way. It also helps to write down your impressions. And don't forget that the speaker system you choose will bear directly on what amplifier you'll need. Thus, it's a good idea to check out your final choice with a number of different amps to make sure you'll be pleased with the combination.

You can, of course, save money on speakers if you buy them in kit form, as a used pair, or a model that has been damaged or discontinued. How do such buys stack up?

Kit speakers, of course, are hard to evaluate, unless you can find someone with a finished pair that you can listen to. Actual construction generally requires little electrical skill and knowledge but you do need some skill in wood handling and finishing. Some kits include only the drivers and crossover kits, and you must construct the enclosures from scratch. So make sure you know whether or not you're getting one that includes precut wood panels.

Used speakers are probably the safest used-equipment buys. Speakers seldom "wear out" gradually-they usually suffer a component failure, such as blown drivers or rubbing voice coils. So a used speaker that sounds as good as a new one probably is, although it may not be covered by warranty, and may have a few scratches on its cabinet. New speakers are sometimes marked down because of scratches. But they don't affect the sound. If a speaker drops in price because it is being replaced, you can expect the replacement to sound better. But if you like the sound, why not buy it?

Amplifiers aren't perfect, but they are the most perfected components in the hi-fi chain. You can therefore narrow down your search to amplifiers with the power and the features that you need without worrying too

## Don't forget that the speaker system you choose will bear directly on what amplifier you will need.

## There's no such thing as too much power-only too much for your budget.

much about how they sound.
That doesn't mean that all amplifiers sound alike. There are subtle differences between them. If one sounds substantially different from the others, however, there's usually something wrong with it.

Let's start with just how much power you need. Your best bet is an amplifier falling somewhere in the upper half of your speaker's recommended power range. Amplifiers with less than the minimum recommended power are no bargain: you're more likely to run an underpowered amplifier at or near its clipping point, where it generates harmonics that not only sound harsh but can overload and burn out a tweeter.

There's no such thing as too much power-only too much for your budget. All music contains transient peaks far higher than the average sound level. Every dBW of amplifier power over and above the amount needed to reproduce the average power levels cleanly means fewer peaks will be distorted. But small peaks are more common than large ones, so doubling the power once does more to clean up the sound than would doubling it a second time. Jumping from 25 watts ( 14 dBW ) to 50 watts ( 17 dBW ) per channel may make an easily perceptible difference in listening fatigue; a jump from 50 to 100 watts ( 20 dBW ) will be less perceptible. And so on.

Using our rather inefficient speakers, we've found the best sound values are in amplifiers delivering 50 to 100 watts per channel. But your ears, your listening levels, your room, and your speakers will be different.

The louder the listening levels, the longer you listen at that level; the bigger your room; the more sound-absorbent its furnishings; and the less efficient your speakers, the more power you will need. Bear these factors in mind when comparing what you hear from an amplifier in the showroom with what you can expect to hear when you listen to that amplifier at home.

One man's frill is another man's necessity when it comes to amplifier features. For example, you'll need a volume control and an input selector switch. Make sure that the selector switch gives you the right number and kind of inputs for all your foreseeable needs. Most people don't need more than one RIAA phono input; some need two or more, some need a moving-coil input. You may need "external processor" loops for use with noise reducers, expanders, equalizers, or other such devices. You can also use tape-monitor loops with these devices. But will that interfere with the way you plan to use them and your tape equipment? Will you need one tape monitor or two? And if two, will you need one- or two-way tapedubbing facilities?

Bass and treble controls are standard equipment too. But perhaps you'll want something more elaborate-a three-control setup that includes midrange presence; bass and treble controls with switch-selectable turnover frequencies; or even a built-in equalizer.

Built-in five-band equalizers are about as complex as you'll want for tone-control use. More elaborate separate equalizers are better used for adjusting system and room response, then left alone. If you have a separate equalizer, you will not, of course, need tone controls.

Other amplifier features, such as filters and loudness compensation switches, also affect tone. High filters cut down tape hiss, record scratch, and some distortion. Ideally, they should start fairly high (around 12 kHz , and certainly not below 10 kHz ) and roll off steeply- 12 dB or more per octave. Otherwise, they are no more effective than your treble control. Low filters come in two types: "infrasonic" (which eliminates the effects of record warps and similar problems) and "low" (which reduces AC hum, turntable rumble, and some rumble on the discs themselves). Infrasonic problems occur in all systems; the others occur in some.

Most integrated amplifiers have speaker switches, so you can turn on a second set of speakers in another room, or turn all speakers off when using headphones. If you plan to use two pairs of speakers simultaneously, make certain that they are rated at 8 ohms impedance, at the very least. Lower-rated speakers will cause problems with your amp in this situation.

What matters most in tuners is how easily and precisely you can tune in a station. A station that is mistuned only slightly, loses all the benefits of superior circuitry and specifications to distortion. If you can't afford a digital-synthesis tuner (which only hits the FM channel frequencies, skipping the irrelevant frequencies between them), look for one with quartz or some other frequency-lock system. (If it's AFC, make sure you can switch it off, or you may be unable to receive weak stations that are adjacent to strong ones on the dial.) A center-channel tuning meter helps too-if it's properly calibrated (not all such meters are). Signal-strength meters are more useful in aligning your antenna than in precise, distor-tion-free tuning. Multipath, or signal-quality meters help even more.

A good antenna, especially a directional one that can be aimed for the cleanest signal pickup, is a must. A few dollars spent on that will pay off more than double that amount spent on a better tuner. That's especially true of rooftop arrtennas. If multipath is a problem in your area, you might consider a tuner with a high-blend switch, which takes out some of the high-frequency distortion without reducing stereo entirely to mono. Some tuners let you switch between wide IF response (for better fidelity on the uncrowded sections of the band) and narrow IF response (to filter out adjacent-station interference in more crowded sections).

The importance of the different FM tuner specs varies according to reception conditions in your area. If all the stations you'll want to listen to are nearby, you won't need ultra-high sensitivity. The greater the number of stations away from your immediate area, the more you'll need good sensitivity. If there are many FM stations nearby, you'll need a tuner with more selectivity than if the FM signals are few and widely spaced along the dial.

Multipath may be a problem if you live near tall buildings (as in cities) or near mountains. In this case, consider a tuner with the highest possible AM suppression and the lowest possible capture ratio. Image rejection is most important for those who live near airports, where interference from air-to-ground radio can be a problem. Spurious response rejection counts most when you live near a very strong signal source (within a mile of a transmitter, for instance).

Some tuner specifications are equally important everywhere: specifically, signal-to-noise ratio and distortion, which should be as high and as low as possible, respectively. And pay more attention to the stereo than the mono $\mathrm{S} / \mathrm{N}$ and distortion specs.

Sure, a receiver costs less than a separate integrated amp and tuner, and saves you more money than a tuner plus a separate amp and preamp. But is it always your best buy? No, not always.

Receivers cost less because they use a single power supply and cabinet instead of two or three smaller ones. And they offer you a carefully balanced set of characteristics-a medium-performance tuner with a me-dium-power amp, a high-performance tuner with a high-power amp, and so on.

But suppose that balance isn't what you need either now or in the future? Separates give you the option of putting together a super tuner and a modestly-powered amp, for example, or a kilowatt and amplifier with a very modest tuner. They also let you start with moderate performance

## The importance of different FM tuner specs varies according to reception conditions in your area.

and build up to higher performance, component by component. With a receiver, you'd have to trade in everything at once.

As with speakers, used, discontinued, and kit-built amplifiers, and tuners cost less. Are they worth buying? Used electronics are almost as good a buy as used speakers.

Discontinued models are apt to sound much like the new models that replace them, though the new ones may have additional features. The performance of a tuner is more likely to improve with each succeeding model than the performance of the amplifier, but the difference still may not be that significant.

Kits for amplifiers and turners take longer to build than do speaker kits, which means they have more steps and are more complicated. This kind of kit-building requires slow and careful work, so be certain you can handle the task before you choose to build a kit. Companies offering kits include Heath and Hafler.

If you have to choose between tape and a turntable, the turntable is usually a better bet. You'll find a lot more music available on disc-and with better sound and lower prices too. And a good turntable costs a lot less than a high-quality tape deck.

The main turntable specifications to worry about are wow and flutter, and rumble, which should be as low as possible. With cartridge specs you should check compliance, mass, and frequency response. A reliable dealer's recommendation is well worth considering in deciding which arms and cartridges work best together.

Where a manufacturer makes manual, semiautomatic, and fully automatic versions of essentially the same turntable, the price usually increases with the degree of automation. A "best buy" here would be the semiautomatic, which raises the arm when the record ends.

Oddly, manual operation is to be found in the most expensive turntables, while multiplay operation is found in least expensive models.

Buying a tape recorder is more complex. Here, the correlation is closer between what you spend and the sound quality and features you receive. A good quick test of record/playback quality is to record FM interstation noise, then compare the taped version to the original. The smaller the audible difference, the better the sound quality. But, of course, check the machine with some music too.

Recording is easier if the deck has wide-range level meters or bar-graph displays (the usual 20 to 25 dB range is a little limited) and switchable limiters to keep transients within bounds. Recording quality will also improve if your tape deck has a bias fine-adjust control and some means of calibrating the deck for best results with any tape.

Kits are rare in this department Closeouts, however, are worth looking into-the march of new technology is currently a little faster here (especially in tape). This may mean that performance differs substantially between old and new models, but it often means more significant price reductions.

Used equipment? Well, anything with moving parts will wear, and the more complex the unit, the more likely it is that some part inside will need replacing soon. Direct-drive manual turntables (and, to a slightly lesser extent, belt-drive ones) are fairly good bets, as are automatic versions that use separate tonearm motors. Tape decks with three motors seem to last the longest, followed hy two-motor decks; They're actually simpler in design than single-motor types.

Some final tips: Don't buy much more performance than you need, but never buy less. A hi-fi system that you don't enjoy is no bargain. Shop carefully and take your time. Get acquainted with the prices that prevail. That way, you'll know a bargain when you see one.

# Super-Sounding Stereo 

## Straight facts on how to set up your components for top performance

I
f you find that your new system, once it has been hooked up, does not sound as exciting as it did in the showroom, it's a good idea to check it over to make sure that everything is properly connected and that the speakers are placed in locations that will give you the best performance possible.

Hooking up your system requires a number of interconnections. Invariably, equipment sold in America is interconnected via cables that terminate on both ends with male RCA-phono plugs (sometimes called "pin plugs"). Some equipment also is fitted with multi-pin DIN connectors, but in general you're best off using phono-plug cables, which are available in high-fidelity stores or radio-parts outlets. These cables come in various lengths, with the plugs molded onto the wire for security. Each cableconsisting of a center conductor and an overlaid shield-handles one stereo channel, but usually two cables (with color-coded plugs) are molded together to form a stereo pair. Which color to use for which channel is unimportant. What is important is consistency. Once you've designated a color for a channel, use that throughout your system, otherwise you can easily end up reversing left for right.

Cables are usually supplied with the equipment, but sometimes they are either too short or are of inferior construction. When buying a cable, pick one of suitable length-long enough to let you move the equipment and check back-panel connections, but not too long for your particular setup. Avoid cables with an extra-long center pin; on some jacks, they don't seat all the way in. The center pin should extend about 5/16 inch beyond the split-ring outer portion. (Long ones protrude about $1 / 2$ inch.) The outer ring should grip the jack sleeve firmly to assure a good connection. If it doesn't, remove it, squeeze it gently, and try again. (A loud hum on one channel may indicate a bad connection on the outer ring, which grounds the system.) Inserting and removing phono jacks with a twisting motion will scrape off oxide that can impair the connection. Clean a badly tarnished connector with steel wool or fine-grit sandpaper, but don't leave scraps of steel wool in the connector. And always

Fig. 1. Most interconnections in a stereo system are made with single-conductorshielded cables that terminate in male RCA-phono plugs. However, loudspeakers must be connected with heavy gauge cable. Two cables-often molded together as a single entity-are used for each hookup. One carries the left-channel signal, the other the right. They are distinguished by color-coded plugs. Tape recorders require two sets of cables: one to carry the signal to them for recording, the other to conduct the playback signal to the preamp. A single ground wire is used to connect the turntable frame to the chassis of the preamp. External devices such as signal processors and equalizers may be connected between the preamp output and the power amp input or in a special external-processor loop. Sometimes they are connected in lieu of one of the tape recorders (not shown).
grip the cable by the molded plug. Yanking it may break the internal wiring.

Several "special" cables featuring gold-plated connectors and/or lowcapacitance wiring are available. Gold is an excellent, tarnish-resistant, electrical conductor; it's also expensive. Gold needn't (and shouldn't) be physically abraded; you can count on it to remain a good conductor indefinitely. But best results are obtained only when gold-plated plugs are used on gold-plated jacks. While gold connectors are not a requirement, they do assure the best transfer of the very low signal levels generated by a phono cartridge.

Low-capacitance cables between high-level inputs and outputs are usually not required, unless your cable runs are very long (say, over 10 feet). However, if a piece of equipment has a high output impedance (greater than 5,000 ohms), low-capacitance cables may be needed to assure full high-frequency response on a 10 -foot run. Fixed-coil phono cartridges are sensitive to the amount of capacitive loading they "see," and low-capacitance cables between turntable and preamp are often required. Most modern turntables have permanently affixed cables that should be sufficiently long enough to reach the preamp. However, if you must lengthen them, use female-to-female splicing connectors. We do not recommend lengthening the turntable cable unless absolately necessary and then only if low-capacitance wiring is used.

The proper sequence of interconnections is fairly obvious and is always clearly illustrated in owners' manuals. Leads from the turntable connect to the left and right phono inputs. A third (single) wire that serves to ground the turntable frame to the system is usually supplied, and it is connected to the ground post that normally is near the phono inputs on the preamp. (Occasionally, connecting this ground wire increases the hum level rather than reduces it. If hum occurs only on the phono input, try removing this wire.)


Ideal Listening Position

A choice of phono inputs is available on most preamps and many receivers. Fixed-coil (moving-magnet, induced-magnet, moving-iron, vari-able-reluctance and similar) cartridges should be connected to the "normal" phono input. Typical moving-coil cartridges require a matching transformer or pre-preamp to make the signal level compatible with standard preamps. Some preamps have this circuitry built in and can accept moving-coil cartridges directly. Your owner's manual should tell you how your system handles this type of cartridge. Some high-output, moving-coil cartridges are designed to feed the normal phono input. The cartridge data sheet should indicate this fact.

Some preamps have more than one phono input. One might be for mov-ing-coil cartridges, the other for the fixed-coil type. Obviously, use the one that is suitable for your cartridge. On many preamps, though, the inputs are the same, and you may choose either one for a fixed-coil cartridge. Others afford a choice of cartridge loading on one of the inputs.

If the value of the fixed-load input matches that of your cartridge, it may be the better choice, since less internal wiring and switching often yield slightly lower noise. However, if the fixed-load value isn't suitable, use the selectable input. Most fixed-coil cartridges require a 47 -kilohm resistive termination; ideal capacitance can range from under 200 pF to as much as 450 pF . The cartridge data sheet will tell you what's best. Total load capacitance is the sum of the preamp input capacitance and the capacitance of the turntable/tonearm wiring, so select a preamp capacitance that is equal to the desired capacitance minus that of the tonearm wiring.

Double-ended phono cables are also used to connect the tuner and tape deck(s) to the preamp. One set of cables is used to feed signals from the preamp to the deck for recording; a second set to feed signals from the deck to the preamp for playback. Usually the preamp's Tape out jacks supply signal for recording and are wired to the deck's LINE IN jacks. The

Fig. 2. Ideal dimensions for a rectangular listening room with an 8 -foot ceiling are 20 feet, 2 inches by 12 feet, 9 inches. Setup shown here should give good results with most speakers. Note that the separation of each speaker from the side wall is different. Also, the distance from the front of the speaker and a round the cabinet to the rear wall differs from the speaker's spacing from either wall. A good woofer height for this arrangement is 2 feet, 23 inches. Speakers are about 10 feet apart; distance from either speaker to the listener is also a bit over 10 feet.

> Preamp capacitance should be equal to cartridge capacitance minus that of the tonearm wiring.
tape deck's output jacks are wired to the preamp's TAPE in jacks. (Terminology differs among manufacturers, so check your manuals.) If your preamp handles two decks but provides only one-way dubbing (from TAPE 1 to TAPE 2), connect your open-reel deck to TAPE 1 and the cassette system to TAPE 2). This enables you to copy from open-reel to cassettethe usual direction-although not vice versa. You can record on either or both decks from your phono or cuner. If your preamp allows two-way dubbing, it makes no difference which deck is connected to which input.

The preamp output is connected to the power amp with the same phono-plug-terminated cables. An outrigger equalizer or some other signal processor frequently is connected between the preamp and the power amp. Some preamps have EXTERNAL processor inputs and outputs and a bypass switch. In this case, the ExT Proc out jacks are connected to the input of the equalizer, and the equalizer's output is connected to the ExT proc in jacks. Alternately, one set of TAPE OUT/IN jacks can be used to feed and receive signals from an external device. In this case, the signals will be routed through the outrigger device when you have the TAPE MONITOR switch in the MONITOR (or TAPE) position and bypass the device in the source position. Of course, you sacrifice one tape-deck hookup this way.

Consult your owner's manual to determine if your external processor will work best in a tape-monitor or external-processor "loop," or bet ween the preamp and power amp. The two hookups differ in that the tape and external-processor loops usually precede the volume and tone controls so the signal being fed to the external device is uncontrolled in level. In a hookup between preamp and power amp, the volume and tone controls affect the signal prior to external processing. Many integrated amps and receivers have an external link between the preanp and the power-amp circuitry so that the two sections are electrically separate even though they are physically integrated. By removing the link and cabling to and from the external processor, you get the same hookup you would have had if you had used a separate preamp and power amp.

Speaker cables connect the power amp to the loudspeakers. Although several exotic (and expensive) cables are available, we see no particular advantage in so-called impedance-matched or low-inductance wiring. The important factor is low resistance. This means a heavy (low-numbergauge) wire should be used. The minimum recommended wire size is 18 gauge, and that should be used only for relatively short (less than 15 foot) runs to relatively high-impedance ( 8 -ohm) speakers. Sixteengauge wire is appropriate for 25 -foot hookups to 8 -ohm speakers or $12 \frac{1}{2}$ foot hookups to 4 -ohm speakers.

These guidelines are based on achieving an effective damping factor of 40 when an amp of very high internal damping is used. We're undoubtedly being very conservative, since an effective damping factor of 20 is probably good enough. For this damping factor, you could come close to doubling the length of cable for each of the situations described.

To insure proper speaker phasing, connect the red (or positive) output terminal from each channel to corresponding terminals on each speaker. Some speaker wire is color-coded to help you keep the two wires straight. With "see-through" wire, you can use the copper-colored strands for positive and the silver ones for negative (or vice versa as long as you're consistent). The two wires in ordinary zip cord can be distinguished either by a colored thread that accompanies each wire or by the "mold mark" embossed on the plastic covering.

To check the system's phasing, play a mono record, or select the mono mode on your preamp. Stand along the center line between the speakers. The sound should appear to come from a point midway between them. If
you can't locate the position of the sound, if it seems to be diffuse and directionless, the system is out of phase. Turn it off and reverse the leads at either (but not both) of the speakers (or at the amp), but not at both the amplifier and the speaker. Again, check the sound. It should be easily located.

Your hookup is now complete, but a few hints may help you to get better performance. First, route input leads away from output leads and away from all power cords. This helps minimize hum pickup, especially on phono wiring. Reversing the power plug in its socket will sometimes reduce hum. Flip the power plugs over one at a time and select the orientation that results in lower hum. You'll have to listen to the system after each reversal. Be sure to turn off the power and wait a few seconds before each switchover.
Most preamps, integrated amps, and receivers have convenience outlets to accommodate the power plugs of other equipment. Some outlets are "switched" (controlled by the amp's on/off switch), others are always "live." An automatic turntable's cord usually is plugged into an unswitched outlet so it can complete its cycle even if you turn the amp off. Most other equipment is handled more conveniently by the switched outlets. Make sure that the ancillary equipment does not draw more power than the outlets are rated for.
Turntables and tape decks are highly sensitive to hum generated by the AC magnetic fields that frequently surround power transformers and motors. In general, the more power a device consumes, the greater the magnetic field created by its transformer. So keep the turntable and tape decks away from the power amp. System hum may be cured by relocating the components.

External shock and vibration also affect record players. Place your turntable on a solid platform away from the loudspeakers. While playing a record under reasonably loud conditions, lightly place your finger on the turntable frame. If the frame vibrates in sympathy with the music (an effect most noticeable on passages with a lot of deep bass), the system is receiving "acoustic feedback." Under severe conditions, the system may oscillate the "howl" miuch like an ill-adjusted public-address system. If this happens, try a different location for the turntable-one that is more remote from the speaker and/or provides a more secure support. If this doesn't help, try removing the dust cover entirely. (It acts like a big microphone and picks up the sound waves that vibrate the turntable.) Turntable isolation pads (or feet) are often helpful in reducing vibration transmitted through the turntable's own isolation system.

Heat adversely affects the reliability of electronics. Place your gear away from a radiator and any window that receives direct sunlight. Make certain that components-particularly the power amp-are well ventilated. Don't block off air flow and remember that heat rises. A power amp placed below other equipment will cook the gear up on top. Vinyl records soften and deform under heat, so store them-vertically and under slight pressure-in a cool place. Tapes too should be stored in a cool, relatively dry area, and also well away from stray magnetic fields that can erase their contents.

The size, shape, and furnishings of your listening room color the sound that reaches your ears, as does the placement of your speakers vis-à-vis walls, floor, ceiling, and corners. Listening position relative to the speakers also affects the uniformity of the sound you hear and the quality of the stereo image.

Standing waves are created in any room. How severely they affect the

## If the sound is diffuse and directionless, the system is out of phase.

## Ideally, you'd want a listening room without parallel walls.

sound quality depends largely on the shape and dimensions of the room. Under standing-wave conditions, sound at certain frequencies is concentrated in certain areas of the room and is missing in others. A standing wave is created between every pair of parallel, reflecting surfaces at every frequency at which the spacing between the walls is an integral number of half wavelengths of the sound. For example, since sound travels through the air at a speed of approximately 1,130 feet per second, the first standing wave along a 12 -foot dimension will be at 47 Hz . Others will occur at $94 \mathrm{~Hz}, 141 \mathrm{~Hz}$, etc. In fact, there is a nother eigenmode every 47 Hz . At high frequencies, the standing waves are clustered so close together (relative to the logarithmic music scale) that they're not noticeable. At low frequencies, they are.

An ideal listening room is one without parallel walls-concert halls and recording studios are so constructed. (A room with a cathedral ceiling at least avoids the floor-ceiling eigenmodes.) But most rooms are rectangular. You can help "break up" standing waves with room furnishings. Anything that will make the walls irregular will help-bookcases, room dividers, etc.

If you have a choice of listening rooms, try to pick one whose dimensions are not either integrally related or have a common submultiple. This avoids the possibility of having the three sets of standing waves (set up between the two opposite pairs of walls and between floor and ceiling) accumulate at the same frequencies. One set of room-dimension ratios that assure that eigenmodes won't coincide is $1: 1.26: 1.59$. With a typical 8 -foot ceiling, this work out to a $10^{\prime} 1^{\prime \prime} \times 12^{\prime} 9^{\prime \prime}$ room-which is rather small.
Fortunately, you can double or triple any of these dimensions and still have correct acoustics. Height, width, and length are irrelevant. For example, you can double the "width" measurement listed above ( $10^{\prime} 1^{\prime \prime}$ ) and use that value $\left(20^{\prime} 2^{\prime \prime}\right.$ ) for the "height" of a room $12^{\prime} 9^{\prime \prime}$ wide by $8^{\prime}$ long,

The "liveness" or "deadness" of a room also affects the sound quality, particularly at the high end of the spectrum. A heavily carpeted room, furnished with overstuffed chairs and heavy draperies, will sound dull because the treble will be absorbed by the soft material more thoroughly than the bass. Advancing the tweeter-sensitivity control on your loudspeakers or boosting the treble on the preamp may help to achieve a more pleasing balance. To add liveness to a room, you can open the drapes or hang mirrors or other hard reflecting surfaces. The sound in a sparsely furnished room with bare wood floors and hard walls is likely to be too bright. Adding some absorbent material will help. While you can follow these general guidelines to ascertain which way to go, it's basically a matter of adjusting the individual room elements until you get a pleasing sound.

Speaker location vis-à-vis its immediate surroundings has a strong impact on how smooth the speakers' bass and midrange response will be and on the effectiveness of the stereo image. Some speakers are designed for specific placement, i.e., in the corner, against a wall, raised above the floor or standing on the floor. The speaker should be placed where it was designed to go. With those whose manufacturers do not specify an ideal placement, you may need to experiment.

An old adage says that placement at the floor-wall interface increases bass response; corner placement increases it further. In general this is true, since sound reflects from these nearby surfaces and strengthens the radiation at very low frequencies. However, at higher frequencies (in the midbass), the reflected sound may become out of phase with the direct sound and reduce the sound-pressure level. So although bass response may be strengthened on average by placing the speaker near the wall,
floor, or in the corner, midbass response may become quite irregular (colored). Exactly where frequency irregularities occur depends upon the distance from the active driver to the reflecting surface. That, in turn, depeinds upon the size of the enclosure, the placement of the driver within the enclosure, and the distance from the wall (or floor) to the system.

Again, the word is experiment, but we can offer you some guidelines. Unless the system is designed specifically for corner placement, don't put it there. A tower-type speaker is meant to stand on the floor, but it may perform better at some distance from the wall. Place each speaker at a different distance from the side walls and keep each of them at least a couple of feet away from those walls.

Measure the distance from the center of the woofer to the floor and place the speakers so that the distance from the center of the woofer, around the cabinet, to the rear wall is not the same as the distance from the woofer to the floor. Nor should the distance to the sidewall be a multiple of the distance from the woofer to any other reflector. The idea is to avoid having each of the reflected sound waves end up out of phase at the same frequencies.

Bookshelf-sized speakers are generally not meant for floor placement, but this is far from certain. Some speakers seem to be designed in a compact format simply because such speakers sell well. Sometimes raising a small speaker on a speaker stand smooths out the bass noticeably.

In general, speakers should be placed so that the midrange and tweeter drivers are at ear level (when you're seated) and so that the sound coming from them is not muffled by interposing furniture. For the best stereo image, the speakers should be roughly the same distance apart as either of them is from your listening position. The best setup is essentially an equilateral triangle with a speaker at each corner and you at the apex. Sometimes imagery is improved by pivoting each speaker toward you so that you're more on the axis of the high-frequency drivers. If this improves the illusion but makes the sound too hot on the high end, try turning down the tweeter sensitivity.

A graphic equalizer can help smooth out room-induced response irregularities. But perfect compensation seldom can be realized and certainly never at all places in the room. Furthermore, a complete equalization job requires test instruments and a flexible parametric equalizer. So it's best to count on your equalizer simply for fine-tuning and to first experiment with speaker location and room furnishings to obtain a goodsounding system.

One of the newer high-fidelity accessories is the so-called "ambience simulator" or "ambience-restoration" device. Such systems strive to extract or synthesize the ambience (or hall sound) from the program material and present the reconstructed concert-hall "reflections" via a second set of speakers. Another power amp and another pair of speakers are required, and these are sometimes included in the system package. These speakers need not be as good as the primary set, for most present-day ambience systems do not go much beyond 7 kHz Contrary to popular belief, the best place for these secondary speakers usually is not behind the listener but to the sides of the listener, and frequently, slightly to his front. Again, for best results consult your owner's manual and experiment.

Setting up a high-fidelity system is as quick and easy as you wish to make it. Within an hour or so, you can have everything out of the boxes, set up, and, more likely than not, sounding good. Those bitten by the experimenter's bug can obtain even better performance from their sys-tem-and gain a basic understanding of acoustics-by spending the time to experiment with the arrangement until the best is achieved.

# How to Troubleshoot Your <br> Stereo System <br> Simple, money-saving steps you can take to prevent and fix the most common problems 

by Howard Roberson

Silence. Sometimes golden; other times troublesome. Let's be specific. Say you bought your stereo system within the past year or so. At first you didn't worry about things going wrong because the warranties covered most problems. Now you're probably outside the warranties. If you were to flip the power switch and all you heard from your stereo system was silence, what would you do?

You have two main courses of action: fix the problem yourself or take your system to a repair shop. What you may not realize is that many problems are less serious than they first appear to be, and may be easily fixed at home. We've outlined below two "home remedies," including how to prevent problems from occurring in the first place. Then we suggest what to do when you must seek professional repairs.

A preventive maintenance plan is a must for any stereo system. Regular inspections and cleaning not only eliminate common trouble spots, but assure that your system is delivering the best sound it can.

In the case of turntables and tape recorders, cleanliness is important. Both employ transducers that must contact a moving surface to generate the small electrical signals they produce. Keep these contact areas clean. The effects of dirt as noise or dropouts are magnified by the necessary preamplification.

Even if your discs are kept immaculate, a brush specifically made to clean a stylus should be employed as often as close inspection dictates. Don't use any "handy little brush"; it may damage the stylus mounting.

You should clean the heads of a tape recorder regularly to prevent accumulation of oxide particles and other material deposited by the tape. Some machines and tape types will require cleaning much more frequently than others. Do it regularly. At the same time, clean other areas where dirt is accumulating, especially the capstan and its idler. Examine all arms, lifters, flutter filters, guides-anything over which the tape must pass.

Isopropyl alcohol and cotton-tipped swabs, both available in drugstores, are a good combination for most cleaning tasks, including removal of oxide particles that build up around the heads. Do not use rubbing alcohol, which has additives that will goo things up. Special cleaning solvents for recorders may do a hetter job and not attack plastic parts or head var'nish, as alcohol sometimes does. Try to keep pressure pads clean by brushing them; solvents like alcohol could loosen the mounting glue. Demagnetize (with a degausser designed for the purpose) the heads, guides, etc., after several hours of operation and immediately before any recording of particular interest.

Signal sometimes is lost because controls and switches have not been moved from day to day. The majority have contacts that are designed to scour, so to speak, as they are used. Without this scouring action, corrosion can develop right around the point of contact, causing the control to become intermittent in the very setting where you want to keep it. To forestall this eventuality, regularly rotate all switches and controls through all positions (and activate all levers and pushbuttons), whether you normally use them or not. Don't overlook those that are built into your speakers. Do this with the power off, perhaps once a month-more or less, depending upon your local pollution rating. You also should check the indexing of the knobs and tighten any that are loose.

Less frequently, perhaps twice a year, examine all power and signal cabling, and its connectors, for evidence of damage or poor contact. Don't forget to check the FM antenna, downlead, and rotator. Clean. repair, or replace according to need. Unplug the cartridge shell and examine the mating contacts of the shell and arm. Clean as needed, using a soft, pen-cil-type eraser (such as Faber No. 7066), being careful not to leave debris in contact areas. Tools made for cleaning battery contacts may also work, but take care not to bend the "fingers" or scratch contact points. Check the stylus mounting for evidence of damage. (Note: The normal nonplaying position of the cantilever may slope steeply downward.) It is possible to detect gross damage with a pocket microscope, but this is not an adequate means to check for wear. In fact, it is difficult to examine styli with many microscopes because of poor resolution and mechanical positioning. If your dealer has a good inspection setup, take advantage of it. If not, it is probably best to replace the stylus every six months to a year, depending on use. Having a spare stylus is a good idea; a sudden change in record quality may indicate damage, which may be confirmed or ruled out by substituting the spare.

Most turntables and recorders require some oil periodically on rotating shafts, so adhere rigidly to the lubrication schedules in your manuals. Ob serve strictly the cautions on excessive oiling, which can cause the transfer of oil to surfaces that must be kept clean and dry. At the same time you do this, look for signs of bent parts, rubbing, or wear-particularly in tape heads. If you find any, maintenance may be called for to prevent deterioration of performance.

Periodic, but less frequent, cleaning and lubrication are required for the mechanisms inside a recorder or turnt able to assure top performance. First, with the aid of your manuals and the dealer, find out whether any

## Signal sometimes is lost because controls and switches have not been moved from day to day.



## Draw Your Own Troubleshooting Map

A homemade "map" of your stereo system can be a big help when you come to troubleshoot it. In this basic collection of separates we are assuming a turntable. tuner, and tape deck; a separate preamp with fairly simple controls; a power amplifier with its own gain controls; and a pair of speakers. Your diagram should show all elements-including any speaker controls-that may affect the signal path in ways that you can check. To show how you might use such a diagram, let's suppose that, when you furn on the system to play FM, you find the right speaker dead. You might check the speaker first and work backward (any systematic approach will do), but let's begin at the input to the control preamp Is the tuner not feeding it a right-channel signal, or is it killing the right channel input for any source?
Fig. 1) Put a record on the turntable and rotate the selector switch. The phono right channel is dead too, so the problem is not peculiar to the tuner and appears to be after the selector switch. You set up the tape deck to record and find that the meters indicate a right-channel signal for both tuner and phono. You have established that the fault is after the taperecording feed. Perhaps the mode switch or the use of headphones at the preamp's output will help pinpoint the fault
Fig. 2) The right speaker remains dead in both positions of the mode switch but both earpieces are live in both switch positions. The fault therefore is somewhere between the headphone connections and the speaker. It could be at the very output of the preamp, at the input of the power amp, or at its output.
Fig. 3) You can narrow the field by adding masking tape "flags" to the demonstrably faultless left-channel cable from the preamp output to the amp input and interchanging it, at the power-amp input, with the right-channel cable. Suddenly (when you restore power) it is the left channel that has gone bad, and the right speaker has revived. That eliminates the power amp and the speakers as the source of the system's trouble
Fig. 4) The fault may be at the output of the preamp, or it may be in the rightchannel cable. Switch the other ends of the cables, this time at the preamp, so that the questionable unflagged cable now runs from the left preamp output to the left power-amp input. The left speaker remains dead. You can now deduce that the problem is in the cable and the cure easy: Buy a new cable
measures are recommended. Those not explained in the manual should not be attempted by the neophyte and will require the step-by-step instructions provided in a service manual, which sometimes can be obtained directly from the manufacturer by writing to the address on the warranty card. Expect to pay a nominal charge. Radio parts stores will have the Howard Sams Fotofact series on various types of equipment. Each manual covers more than one unit, but it is well worth the cost if you are bent on doing this sort of work. Remember that even simple removal of a chassis from a cabinet can quickly become a disaster if the wrong screws are loosened. If you do take steps to bare the guts of your machine, take the time to examine the various mechanisms and learn the function of all the clutches, belts, and so on.

If you're feeling a little adventurous and want to get some reference data to help you in later troubleshooting, your tape recorder's meters can be used to measure levels throughout a system that is operating correctly at present. If, for example, you have a separate tuner, you can compare its direct output to that normally delivered via the tape-recording output of your preamp or integrated amp. The levels may be worth recording both for your favorite station and for interstation noise. You can note the differences in dB that the two hookups deliver with the same type of signal and recording-level setting, or you can adjust levels for the same meter reading and note the settings required. You can make a similar check on the output from the turntable (using the mike input), noting the level settings for a 0 -VU meter reading. The output from a preamp can be checked for normal listening level, or whatever. There are other variations, of course, but the idea is to get some data on your "standard" levels, noting control settings to permit rechecking in the future. But don't forget to turn off the power whenever you change a connection in the signal path.

And never, under any circumstances, switch from one source to the other with the volume control turned up. The resulting transient can be very damaging both to the power amplifier and to the speakers. It is true that you might be able to get away with the practice most of the time, but it takes just one misadventure to cause a lot of damage, including a noticeable assault on your wallet. Don't forget: If you have tubed equipment, you should test the tubes perhaps once every two years, depending on use. This is most important for rectifier and power-output tubes, which may become emission-limited, if maximum performance is to be maintained.

When something goes wrong with the sound of your system, the change will occur in one of two basic ways: Either the quality will deteriorate over a period of time or the change will be abrupt. If the latter is the case, ask yourself a couple of questions. First, what did you do last? Second, what might someone else have done? There are many so-called cockpit errors that we miss if we don't stop and think. Here are some examples: You forgot to turn the circuit-breaker back on after replacing a wall switch; someone turned off a wall switch that no one "ever" turns off; perhaps someone inadvertently pushed a normally unused tape monitor or remote speaker switch. It also is possible that a knob has slipped, giving an incorrect indication of system settings. Mr. Nobody is responsible for many such goofs, so be prepared for anything.

If there is no sound at all from your system, check the pilot lights. If they are all dead, see whether the turntable will operate or use a lamp to make certain the wall outlet has power. If necessary; use an extension cord to feed power to the system. If it remains dead, turn off the power switch and check the condition of the various fuses-line, $\mathrm{B}+$, and speaker-that protect circuitry. Manuals normally give fuse locations.

# BUYING GUIDE <br> TO <br> STEREO COMPONENTS <br> '80 

KEY NO.
PAGE NO.
Audio Pulse, Inc
.7

1 ....Discount Music Club............ 14
2....Discwasher, Inc...........Cover IV

3 ...Illinois Audio ....................... 14
4 ....International Hi Fi............... 10
5....J \& R Music World................. 15

6 ....JVC America, Inc................8, 9

7 ....Kenwood ............................ 11
19.... Maxell Corp....................... 248

8 .... Mitsubishi Audio Systems 12, 13

9....Ohm Acoustics<br>Cover II

18 ....Pan American Electronics. ..... 14
16 ....Polk Audio ..... 3
17 ....Sansui
Electronics Corp ..... 16
11 ....Sony Audio
of America ..... 10
10 ....Sony Corp.
of America ..... $.4,5$
12 ....Stereo Corp. ..... 10
20 ....TDK Electronics ..... 6
13....TEAC Corp ..... Cover III

## If one channel is working, that's good news from a troubleshooting standpoint.

You may find that there is a fuse inside some equipment; before you check it, be certain of two things; that the power plug is disconnected from the outlet and that you understand the procedure of disassembly required. Before replacing blown fuses, check the condition of the connections, particularly the amplifier outputs to the speakers. Clean up poor connections, making certain there are no stray bared wires that could short an output. If replacement fuses blow immediately, a trip to a service agency is in order.
If all of the pilot lamps are on, listen very closely to the speakers, one at a time. If there is complete absence of sound from either of the speakers, even with the volume control all the way up, double-check for shorted amplifier outputs or blown B+ or speaker fuses. If these seem in order, disconnect the output cables from the amplifier. It is doubtful that the speakers could have been blown out without your knowing about it, but you can check them by alternately making and breaking connections from a flashlight battery to the speaker leads. Current passing from the battery through the voice coils should produce a noticeable "clunk" with each make or break.

A "positive" speaker test means that you must now use logic to localize the problem-keeping in mind the signal routing in your system. A good signal at the headphone jack may prove, for example, that signals are normal most of the way through the amplifier or only through the preamp, depending on the circuit point from which the headphone signal is taken. It may be helpful to use your recorder as a diagnostic tool-with the headphones in its jack and your eye on the meters, you can monitor - whatever the recorder is connected to. You can, for instance, compare the signal at the normal tape-out jacks with those at the pre-out connections.

If one channel is dead, that's bad news; but it also means that one channel is working, and that's good news from a troubleshooting standpoint. Set the selector switch to each of the possible sources to confirm that the condition affects all of them. Now, if your preamp has a mono/ stereo mode switch, work it back and forth several times to clear a possible intermittency and then leave it in MONO if the defective channel remains silent. The pre-out connections normally will be the next "checkpoint" in the signal path after this switch. If, when you monitor Pre-out, there is normal sound in both sides, switch back to STEREO. If the signal now disappears on one side, the problem is at or before the mode switch. If the signal, even in mono, is on only one side, the break in signal flow is after the mode switch.

Of course, it is possible that the break in the signal path is in the cables from preamp to amplifier or from amplifier to speakers. If your cables are not coded, mark each end of the good-channel cables with pieces of masking tape so you don't lose track of them when you change connections. Let's say that the left channel is good. Disconnect the cables from the preamp at the amplifier's left and right inputs (power off!) and reverse them. If sound still comes from the left speaker when you turn the power back on, and the right one remains silent, the break in the signal flow occurs after the right input connection on the amplifier. If the live and dead speakers have switched positions, the signal loss is before the end of the "dead" cable to the amplifier and after any earlier point that is working correctly. Interchanging the connections at the preamp end of the stereo cable will show whether the faiture is in the cable itself.

Drawing a block schematic of your stereo system will help diagnose the problem. Your drawing should show all the units with their switches and other controls that affect the signal path, together with all inter-
connect points. By penciling in the temporary connections, you can see what the path should be as an aid in deducing where the fault lies. And as you eliminate one possibility after another, you can check it off on the diagram.

Sometimes poor contact between a cable plug and the jack creates a problem. Whenever you change connections for any reason, look to see whether either would benefit from cleaning with the eraser. If there is a loud buzz in one channel, it might be caused by poor contact between the jack shell and the tabs on the plug. With the power off, pull out the plug and bend down the tabs to hold the jack shell tightly upon reinsertion. If the tabs will not hold, replace the cables with a quality product that will make such contact tightly.

Any switch or control in the signal paths can cause a loss of sound from your speakers. A volume control will rarely break the path over its entire rotation, though its wiper may lose contact at some point. When it does, it is time to use a control cleaning solvent-best applied with the knob removed. After application, rotate the control over a large arc to aid in the cleaning. If the control remains intermittent, perhaps even after you have removed its cover to spray cleaner directly into the elements, it will have to be replaced. Switches that lose contact can also be treated with cleaner in a similar fashion, but the cover or cabinet must be removed so you can gain access to the contacts.

Sometimes the contacts of a rotary switch will make and break when you push back and forth on the shaft. With careful observation, you may be able to pinpoint what the problem is. Dirty contact areas, warped switch wafers, and cold-solder joints on connecting wires are among the possibilites. Follow the general rule that contact areas are to be worked on only when the power is off. A blade-type burnishing tool may restore contact, but it must be used with care or it may bend contact fingers. If you are inclined to repair, be ready with your pencil soldering iron (not a gun, which can too easily damage delicate parts) for the suspicious connections. Finally, remember that the cleaner is needed only on pot elements and switch contacts; do not spray anywhere else.

Gradual deterioration in sound quality can be caused by such things as a dirty or worn phono stylus, dirty or worn tape recorder heads, and various electronic components-including, of course, aging vacuum tubes. A sneaky one for FM listeners is the loosening of antenna clamps and the rotation of the antenna to an undesired (and unknown) orientation. A drop in level of the highest audio frequencies could be caused by loss of contact in the tweeter's level control. A sudden drop in the maximum output level, perhaps in just one channel, could be caused by the failure of an output transistor. In rare instances, the corrosion in a control makes it behave like a semiconductor: There is no sound in the output until the voltage at the contact point reaches a critical value, and thus the sound jumps in, so to speak, at a medium to high level out of silence. The cure is contact cleaner and rotation to help buff off the corrosion.

What do you do if you can't fix the problem yourself? Perhaps you have proven to your own satisfaction that in the tuner's left channel the signal path is broken with the preamp. Even though you have not been able to find the exact point of the failure, you know which unit is at fault. Your observations will be an aid to a professional, saving him time and perhaps minimizing the charges.

There are two basic repair categories: warranty and nonwarranty. Almost invariably, warranty work must be done at an authorized repair station. Not only will most manufacturers refuse to pay for work done anywhere else, but many warranties stipulate that they become void if such work is done. It can be very frustrating to have the original dealer tell you

## Your observations will help a professional, saving him time, and saving you money.

he is not authorized to perform a warranty repair, but do accept that this practice is a protection for you as well.

A manufacturer-approved service agency is probably a good place for nonwarranty repairs as well. For one thing, it will have information direct from the manufacturer on parts and procedures for repairing your equipment. A needed part is more likely to be in stock, and there will be no question of what to order if something else is needed. If the failure in your unit is the result of a design limitation, the agency could have modification data from the manufacturer to ensure that the failure does not recur. If you are particular about keeping equipment performance to the manufacturer's specifications, substitution of parts made by others may not suffice.

Expect the hourly rate for repair work to be around $\$ 20-\$ 25$-perhaps more. The minimum charge usually is at least half the hourly rate. Sometimes there will be a fixed charge for repairing a certain type of equipment, whatever the problem. Such charges might be $\$ 25$ for a turntable, $\$ 30-\$ 35$ for a cassette deck, and $\$ 35-\$ 45$ for a receiver. Many shops will provide estimates only on request-at a charge of $\$ 15$ or so, applied against the total charge for the repair.

You will want to know how long the repair will take, but don't be surprised when the time estimate is given reluctantly or not at all. Without knowing which specific part(s) need replacement, your serviceman cannot promise results within a certain length of time. If you push him for speedy action, you could get inadequate procedures or parts-and, consequently, marginal performance. The typical dealer/service agency handles a number of lines of equipment with many models using literally thousands of parts, not all of which it can afford to stock.

Dealers commonly give a parts-and-labor warranty of 90 days on repairs. Some will lend you equipment to use while yours is laid up, but this is not a widespread practice.

As in doing your own servicing, you must be sensible and logical if you are to get the best out of a repair service. It is all too easy, for example, to be suspicious about whether the charges represent fair value. Perhaps you feel that the hourly rate for labor is too high, but remember that the overhead costs for servicing high fidelity equipment are higher than those for most comparable businesses. These costs include the investment not only in parts inventory, but in test equipment: $\$ 10,000$ is common for the latter, but the tab can easily run $\$ 5,000$ or more for each test bench. The parts investment, too, can vary greatly-up to $\$ 50,000$ or more. These costs must be covered by the income from service charges, a good proportion in the labor charge and some applied to parts. Understand that the technician working on your amplifier does not get the $\$ 20$ per hour, but only what is left after the overhead costs are covered.

The high investment in sophisticated instrumentation is required to test to the specifications you find in the advertisements and in your owner's manuals-and included in more and more warranties. Even one expensive, recently introduced FM alignment generator hardly meets the specs of new tuners and receivers. So, in general, it is difficult for a dealer to be enthusiastic about warranty work. Most feel that reimbursements by many of the manufacturers are inadequate to cover the high costs involved.

One hopes that your repairman will be patient with you, realizing that you are being deprived of more than an assembly of transistors and switches: You are without music. But understanding the problems he encounters will help you to be patient with the time and money service will cost you. Patience will encourage maximum help when you need it-and may even save you from seeking help when you don't. HF

# The Right Way to <br> Buy Car Stereo 

Shopping for a car stereo system used to be both reasonably inexpensive and easy. For less than $\$ 100$ you could buy a single unit incorporating a tape deck, an FM stereo tuner and a rudimentary amplifier, plus a pair of wedge speakers. Today you can spend that much for just the speakers. With that in mind, here's what we think is the most intelligent way to select the system that fits your type of car. We assume, of course, that you're interested in quality sound.

First, collect as much product literature as possible. (You might use the postage-free bind-in card in this magazine, for example.) If you take a quick glance the names of car stereo manufacturers, you may think you've stumbled into the world of high fidelity in microcosm, and in a sense you have. There are familiar names like James B. Lansing Sound and Rotel, Jensen and Advent, Marantz and Bose, and so on. Many of the products look like miniature home components (some, like ADS loudspeakers and Uher tape decks, the Rotel receiver and JVC mini-speaker, actually were designed originally for home use). The array of components includes power amplifiers and preamps, separate tuners and tape decks, woofers and tweeters, and equalizers.

A car stereo system, like a home audio system, consists of three main parts: one or more program sources (in this case, the most common ones are an FM stereo tuner and tape deck), a control center (i.e., amplifier and preamp), and loudspeakers. Systems come in as few as three pieces or as many as 13 . The first decision you will have to make is whether you want an all-in-one unit or separate components.

More than personal taste should enter into your final decision. Cars such as the VW Rabbit, for example, have very limited room for mounting separate speakers and components, and many smaller cars don't have a separate trunk, so that rules out an entire family of speaker systems designed to use the trunk as a baffle. In other words, the type of car you drive bears directly on your choice of components. And it's not just size and physical shape that are important but age, value, and the length of time you plan to own the car. Also, your listening habits must be taken into consideration, as well as where you drive (country road vs. freeway), and, of course, how much money you have to spend.

Okay. Let's be specific. For our first example we'll use a six-year-old Ford. It has a roomy interior, and you could install anything from a simple under-dash tuner/amp unit with rear deck speakers to a preamp/ tuner/cassette deck with external amp, trunk-mounted woofers, in-dash tweeters, and door-mounted midrange speakers. But if you intend to sell your car in the not too distant future, a simple, easy-to-remove system is a more logical choice.

Cars, such as the Rabbit, have limited interior space and don't have a

## Knowing which questions to ask is the most important factor

Before you buy any car stereo component, make certain that what you have in mind will fit in your car. The only way to determine this is to sit in your car and visualize where the components and speakers would be installed. Be certain that you can reach all the controls easily from the drivers seat, so that you won't have to take your eyes off the road to install a tape or change a control setting.

rear deck for speaker mounting. You may prefer Bose 1401s or Jensen Triaxials, but circumstances dictate having to settle for lower performance speakers which are thin enough to fit in to the door panels. Fitting a separate cassette deck and tuner under the dash would be very difficult, although you could tuck a remote power amp under one of the front seats. Smaller cars also tend to have less soundproofing than larger ones, so a more powerful amp is generally best. Also, quadriphonic sound or a time delay system is generally more effective in a larger car. Vans have almost unlimited space for stereo installations. Remember, though, that interior carpeting will soak up a lot of high frequencies; this may mean that your best choice is a high-power amp.

Now it's time to go out and sit in your car for a few minutes. Look around. Ask yourself where you would install a complete receiver, or whatever you're considering-separate amp, preamp, tuner, tape deck. Can you mount the units so that you can change tapes for FM stations easily while driving? Where would the speakers go for ideal listening? Are there locations for separate woofer, tweeter and midrange drivers, or for self-contained mini acoustic suspension systems? Do rear-deck cutouts already exist for oval coaxes or two-way or three-way systems mounted on a plate? Does the dash panel have a cutout for mounting a radio?

Armed with a good idea of what you could possibly install in your car, you're ready to start reading the product literature. Discard everything that is obviously impractical for your car. If you don't have a rear deck or trunk, forget about rear-deck trunk-loaded speakers, for example. Remain open-minded about specific brands and models, but decide whether you're shopping for all-in-ones or separate electronic components, whether you want component speakers, complete systems, or something in between, and if you want tape, FM (or both) or such extras as short wave or CB.

One factor that is often neglected is a proper antenna. If you're driving an older-model car, the factory-installed antenna may not have been designed for stereo FM. No FM tuner will perform well without a strong signal, a fact your dealer may overlook. Try to determine the quality of your current antenna. New ones, designed specifically for FM stereo, cost


Car stereo specialists (right) tend to have better selections than discount stores (left), but neither can offer a realistic demonstration of how your car system will sound; that can occur only in a cardriving on the highway.
between $\$ 10$ and $\$ 85$ depending on features such as an electric motor to retract it when not in use. Retractable models are often useful in urban and suburban areas where antenna vandalism is common. So, remember that a good portion of the cost of a retractable model is due to the motor, and that price may not be directly related to better performance.

Now you're ready to go shopping. These days you can buy car stereo equipment at discount department stores, at marinas, from autosound experts doing business in abandoned gas stations, from audio salons, and even through the mail. But where can you see the greatest selection, receive the most intelligent answers to questions, and experience the most realistic demonstration?

To answer the last question first, virtually nowhere, because acoustic conditions in stores-even in a demonstration car parked outdoorsaren't like those on the road at 55 miles per hour. FM reception is different too. Among the worst demonstration facilities are those in discount houses and auto supply shops, where a panel loaded with speakers and a variety of car stereo units attempts to create the illusion of an automobile dashboard. The speakers must compete with store noise, whose character is entirely different from that of road noise. You might just as well save time and skip the demonstration.

Discount houses and auto supply shops are less likely, anyway, to carry audiophile auto components. Your best bet for these is a hi-fi dealer who advertises and maintains a substantial car stereo department, or an autosound specialist whose showroom includes a reasonable selection of car components. Advertisements will give you some idea of the kind of autosound department to expect. If you can't find a car stereo dealer in your area, write to the manufacturers of the components you're considering. Such companies as Clarion, Altec Lansing, Bose, and Jensen will send you a list of retailers in your area. In addition, some companies maintain toll-free phone numbers to supply this information. Check with 800 Information (800-555-1212) for telephone numbers.

Where you buy your equipment should not be based solely on price. Discount stores may be less expensive, but in most cases they also provide
no post-sale services. Dealers who service what they sell-primarily audio retailers and the larger or older autosound stores-may charge more initially, but in return you usually receive a store warranty in addition to that given by the manufacturer. This means that you need only return a malfunctioning unit to the store instead of having to drive to a factoryauthorized service center or ship the unit back to the manufacturer. And remember, fully-installed systems cost about the same. If a dealer who both sells and installs equipment quotes a lower price than his competitor, be sure the "savings" won't be compensated for in slightly higher installation costs. In short, find out what the price tag includes.
Mail-order dealers obviously can't offer installation, and usually offer no additional warranty. In return, however, they may offer very low prices. And the better ones offer a wide range of brands and models than most retailers can carry. One of the largest, Crutchfield, in Charlottesville, Va., regularly publishes an excellent catalogue, which not only covers much of the information to be gleaned from a dozen manufacturers' spec sheets, but also provides excellent advice on how to buy, how to install, and how to upgrade. Unlike some others, Crutchfield maintains a technical department with a toll-free WATS line to dispense advice to customers.
At each store, tell the salesperson what model car you drive, the kind of sound system you're considering (i.e., component or all-in-one electronics, separate woofer and tweeter separately mounted, drop-in rear-deck plate, enclosed acoustic suspension speakers, which program sources, power requirements, etc.), and something about your budgetary limits. Listen to his suggestions. If he recommends a different approach or different brands or models than your plan calls for, ask him why, and note down his answers. Ask to see and operate the system he recommends as well as the system you were interested in, so that you can note any differences for yourself.

If you're not sure whether to accept his recommendations, find out whether or not other dealers agree with him. Even better, ask a friend who's familiar with car stereo systems and who already owns one. Ask before you buy. If you've done your homework, you'll have questions about which speakers can be used with which amplifiers, etc. Most important, determine: (1) the store's warranty policy-must you deal directly with the manufacturer; will the dealer do it for you; or will the dealer handle service problems himself? Is there a separate store warranty that offers additional services, such as an extra three months on labor or parts? (2) Who will do the actual installing? Does the dealer maintain his own installation setup; does he recommend an independent expediter; or are you on your own?

If you're not prepared to do your own installation, and if the store you settle on doesn't offer that service, ask for the names of a few local installers. Verify that they will put in equipment you've bought elsewhere. Most dealers with quality autosound departments have a working arrangement with one or more installers. Of course, you could install the equipment yourself. The question is, should you?

If you feel at home with electronics and don't mind working within the confines of your car, you can save a sizable amount of money by doing the job yourself, particularly if your car is an older model. If your system is relatively simple (two speakers to drop into rear-deck cutouts and a receiver to install where the car radio was, for example), the job should take considerably less than an hour and require nothing more than a wire stripper, wrench, and screwdriver. If your car is brand new and you're going all the way with components, let an expert do the job. He's generally neater, and it's possible to blow an amplifier and damage other components if the speaker leads short or there's an incorrect hookup some-

where. You may void any warranty coverage by installing it yourself. Generally, if a professional damages the equipment-particularly if he's employed by a franchised dealer or authorized service agency-his company must replace it.

In the beginning we told you to forget about in-store listening demonstrations. So what happens if you get a system that falls below your expectations once it's installed? Some dealers permit you to exchange components, but find out what the dealer's policy is before you buy. Exchanging a component, however, may be expensive, especially if yours is a custom installation in a new car. The component must be very carefully removed-probably by a custom installer-since no dealer will take something back that he can't resell. The cost of initial installation, removal, and installation of the substitute could equal or exceed the cost of the component itself.

Some dealers maintain cars with demonstration systems already installed. This type of field test is certainly better than nothing, and by all means take advantage of such opportunities. Make sure that the demonstration isn't held in the parking lot; you'll want to hear how the FM tuner operates while you're in motion, and what effect road and car noise have on the overall system. Although these demonstrations are not directly relevant to your situation unless your car is very similar in passenger compartment size and acoustics, and the system you're going to buy is identical, they do offer some guidance.

One final suggestion. If you're a little uncertain whether the system you've selected will sound good in your car, you should consider an equalizer. While it's not a cure-all, it does an excellent job of tailoring the sound of everything-especially speakers-to the acoustical peculiarities of your car and the road.

As you can see, planning for and buying a car stereo system is similar in many ways to purchasing a home stereo system. In other ways, though, you're on your own a lot more. Take your time. Choose wisely and carefully. Remember that car stereo specifications are not regulated by the FTC as are those of home components. Remember too that sound demonstrations are basically worthless. You can have an excellent system, but as the adage goes: "There's no free lunch." HF

Should you install your own car stereo system? That depends on whether you're handy with tools, and whether you're ready to accept the possibility that if you connect something incorrectly and damage a component, the repairs may not be covered by the warranty. Professional installers often assume the liability for any damage to your system. Many dealers also offer installation services. At left, installer works behind cramped dashboard of a van to install an amp/ equalizer.

by Larry Zide

# What One Type of Tape Should You Use? 

## The vital ingredients are the music you record and the deck on which you record it

0ne thing is certain: the "best" tape depends on more than one thing. Two primary considerations are what tape your cassette recorder has been adjusted for at the factory and what type(s) of recording you plan to do. But first it's helpful to know how the tape and machine interface and what each tape formulation is composed of.

Modern cassette decks are generally outfitted with switches for changing bias and equalization, thereby providing some versatility in the types of tapes that can be used. Essentially, the controls tailor the electronics of the deck to the tape. To better understand these controls, let's look at the theory behind tape recording.

Some years back, it was a rule that a tape system's high-frequency limit in kHz was equal to the speed at which the tape was traveling. A tape running at 15 ips was capable of flat response to about 15 kHz ; one running at $71 / 2 \mathrm{ips}$ experienced high-end dropoff at 7.5 kHz . In short, recording density was limited to about 1,000 cycles per inch of tape.

By this logic, the use of a cassette at $1 / 8$ speed would be impossible. This isn't the case, of course. Improvements in tape formulation and in mag-netic-head design now make it possible to record at densities upwards of 10,000 cycles per inch, and we see cassette recorders capable of $20-\mathrm{kHz}$ response at $1 \% / 8 \mathrm{ips}$. All this does not negate the truism that the more information one tries to crowd on the tape, the harder the task becomes. The main tool used to overcome tape's inherent short-wavelength losses is record equalization-a form of high-frequency boost.

While specifications might lead you to think that wide-range, flat frequency response is independent of speed considerations, this is true only at relatively low recording levels. At 15 ips , almost no high-frequency boost in the record circuit is needed; at slower speeds, increasing amounts are required.

But equalization doesn't solve everything. Tape has a limited maximum recording level. Once the signal you are putting on the tape is raised beyond that level (by recording pre-emphasis) the tape becomes magnetically saturated (can take no more magnetism) and the signal distorts. Distortion increases gradually from the point where signal level rises above the noise floor, but once saturation is reached, distortion jumps to double-digit numbers.

Tape-recorder manufacturers recognized this fact and set the maximum recording level at a point well below tape saturation. In an openreel machine, operating at $15 \mathrm{ips}, 10$ to 15 dB (and even more) of head-

room can exist between the manufacturer's zero VU on his meters and the saturation level of the tape. And since little high-frequency boost was used, this headroom is virtually the same at all frequencies.

What happens at the $1 / 8$-ips speed used by cassette decks? The slow speed means that a good deal of record high-frequency boost ( 10 to 15 dB at 10 kHz ) is needed. Therefore, if a manufacturer has provided 6 dB of headroom at 1 kHz , he has run out of headroom (and into saturation) at 10 kHz at zero level. This explains why, when you see a frequency-response curve run at zero VU on a cassette, high frequencies roll off significantly. A response curve run on a cassette at -20 dB avoids high-frequency saturation and so frequency response may "spec" as good as a professional open-reel deck. But with the professional deck, you can achieve $20-\mathrm{kHz}$ response at zero dB .

The amount of recording equalization needed to produce "flat" highfrequency response depends not only on the tape speed but on the characteristics of the tape and heads used. And a key ingredient is bias. The bias level affects both distortion and high-frequency response. Too much bias reduces high-frequency sensitivity; therefore, more recording boost is needed to compensate. That, of course, means even less high frequency headroom. Too little bias results in greater low-frequency distortion. Suffice it to say that different tapes require different amounts of bias current in order to perform at their best. Improperly set bias affects high-frequency response, headroom, and distortion.

Now, what about the tape itself? Standard tape, both open-reel and cassette, has always been composed of a backing coated with gamma-fer-ric-oxide particles as the magnetic medium. This finely powdered rust has been the mainstay of the tape industry, and while it continues to serve the open-reel industry well, cassette manufacturers are finding it less than ideal. The first "improved" (high-energy) cassette tapes added very minute amounts of cobalt to the ferric oxide. These tapes had higher "coercivity" and provided better dynamic range (saturation level to noise) especially at high frequencies. The slight performance advantage required a slight change in bias-one that deck manufacturers could easily achieve.

The shape of the frequency response curve depends on the level at which measurements were taken. Response curves shown here were made at - 20 $\mathrm{dB},-10 \mathrm{~dB}, 0 \mathrm{~dB}$ (or 0 VU ), and +10 dB . Note that recording at $\mathbf{- 2 0} \mathrm{dB}$ avoids high-frequency saturation, and that the higher the level of recording, the sooner high-frequency falloff occurs.

Metal-particle tapes offer significant improvement in dynamic range over conventional and chrome tape formulations. Graph compares 3 M 's Metafine metal tape with its Master II tape and a conventional chrome tape. Essentially, metal tapes allow you to record at higher levels without driving the tape into saturation.


Then DuPont introduced a tape coated with chromium dioxide, a new magnetic formulation, and the revolution in cassette began. Chrome offered a significant improvement in dynamic range at the slow cassette speeds. But it required substantially higher bias, as well as a change in equalization, to provide best frequency response and signal-to-noise ratio. Accordingly, cassette decks were equipped with a switch for chrome recording to increase the bias and to change the equalization appropriately. The "standard" playback equalization setting, which is still used for ferric tapes, is commonly referred to as 120 -microsecond equalization; the new equalization required for chrome tapes has been established at 70 microseconds, which continues to be referred to as such.

Advances in technology have yielded improved ferric-oxide formulations, some of which are "chrome-equivalent" and use similar bias and equalization. One tape-ferrichrome-is double-layered, with a ferricoxide base and a chrome coating over it. It offers the better high end of chrome, along with the extremely good low end of ferric-oxide materials. It requires yet another choice of bias and equalization.

Today's most talked about formulation is a new metal-particle tape. This tape, which essentially uses pure iron alloys (not in oxide form) as the magnetic medium, offers a significant improvement in dynamic range. It requires less high-frequency record equalization than other tapes, but it needs considerably more bias current to record the signal on the tape. Metal tapes promise substantial improvements in signal-tonoise ratio and in high-frequency freedom from saturation.

The industry has settled on the "chrome-standard" 70 -microsecond playback equalization for metal tape so that any standard cassette deck with the 70 -microsecond (chrome) position can play back this type of tape. However, the bias and recording equalization that are required are so radically different that new cassette decks with metal-record capability must be employed to record on it.

If there were only one manufacturer of tape in the world, matching a tape to a cassette deck would be simple. But there are dozens of manufacturers, and while each manufacturer has a tape that will work with a particular deck, that operative word "work" needs some explaining.


The construction of cassettes is less a factor than it once was. Typical quality construction is visible in this TDK cassette. Tape pancake (A) feeds past molded stud (B) and idler assembly (C), which consists of a stainless-steel pin or axle (D) and a flanged plastic wheel (E). Screws (F) hold shell halves together via molded holes. Hub (G) has, in this case, a C-clamp tapeend lock ( H ). Shield ( I ) is a plain rectangle of mumetal; pressure pad ( $J$ ) is felt, mounted on a metal spring assembly. Viewing window is a separate piece of clear plastic, neatly and securely attached to shell. Slip sheet (L) covers all of both pancakes, with cutouts only for hubs and windows. Ribs (M) not only stiffen shell, but help guide eape onto idler wheel.

Even so-called "standard" tapes-those meant for use with "normal" or "ferric" bias settings-differ substantially from manufacturer to manufacturer. When a manufacturer offers more than one ferric tape, you can rest assured that they will differ in sensitivity and the amount of bias and equalization needed for optimum performance. One tape may be +2 dB at 10 kHz , another, -2 dB . How well a particular tape works on your machine depends on how the deck's manufacturer set the internally-fixed bias and equalization. Frequently, you can only adjust your deck to one of several fixed positions. Thus, any given cassette deck can actually perform differently depending on the type and brand of tape-even though the tapes were designed for the same settings. For optimum performance, it is important to find out what type and brand of tapes your deck was set up for.

Some modern decks have been designed to get around this problem by providing a separate bias adjustment-a kind of vernier control of bias amount around the nominal settings of the switch. Even more advanced are the decks that incorporate microcomputers to automatically set the bias to conform with the type of tape being used. When both recording equalization and bias are microcomputer-adjusted, you have the ultimate in performance potential.

The construction of the cassette itself is less a factor than it once was. Some years ago, a controversy existed over whether internal roller bearings or fixed bearings allowed the best tape motion. Because the mechanical construction of the cassette can profoundly affect overall performance, particularly as regards flutter and the stability of high-frequency response, all quality cassettes now use roller bearings. All manufacturers of quality tape seem to have achieved sufficient reliability, regardless of their approach, so that the cassette shell itself no longer is a significant factor in the purchase of tape. This, of course, does not apply to the socalled "white-box" brands, which we recommend you do not buy.

Should you, then, always use the best tape you can get? No, if only because it can be a considerable waste of money much of the time. It all depends on the types of recordings you plan to make. At one end there is baby's first coo (or cry); at the other end, sophisticated on-location mate-
rial. Four basic categories (recording speech, copying from radio, copying from discs, and recording live music) cover most situations. We'll take these one at a time.

The demands of speech recording require good signal-to-noise but not extended frequency response (as it applies to high-frequency headroom). Accordingly, you can use standard ferric-oxide formulations. For most speech applications, the second line offered by premium manufacturers works well. More exotic formulations offer no particular additional benefits. Stick with name-brand manufacturers; you still want a reliably made cassette shell as well as good quality tape.

If you're thinking of off-the-air taping and your source will be rock radio stations, you can use the premium-ferric type of tape. Most rock stations process their signal via compressors, equalizers, and other devices to reduce dynamic range to a virtual zero. Actually, any tape system with a $30-\mathrm{dB}$ dynamic range will capture most rock and all disco.

A few stations are attempting to offer greater dynamic range. Classicalmusic stations are the leaders here, but even rock stations have discovered that listeners want quality. Some stations (WNCN in New York and WFMT in Chicago, for example) offer signal-to-noise figures in excess of 70 dB , but they are clearly the exception. All stations are limited to approximately 15 kHz at the high end, because they must suppress the audio to prevent it from interfering with the $19-\mathrm{kHz}$ stereo-pilot signal.
For high-quality, wide-dynamic-range signals, we suggest the chrome (or chrome-equivalent) tapes. One note of caution when recording rock music: Don't modulate the audio at zero on your tape deck; use -10 dB as a reference. This will better cont rol the middle high-frequency accenting of some rock stations, and prevent further distortion.

Until recently, we would have recommended that you use the same tapes for recording from dises as you would for taping from the radio, with the additional warning that the high energy on the discs at high frequencies can overload the tape unless you lower the record level somewhat.

The new technology of direct-to-disc and digital mastering of the discs has altered this recommendation. If you plan to copy such audiophile discs, begin with the premise that you will not be able to transfer to any cassette the full dynamics and frequency response of the disc. The best copy will be that which follows the suggestions for live-music recording.

What we suggest here encompasses a solo guitarist or other soloist recorded at home, to a rock band, to a chamber orchestra, and to a full symphony orchestra. Let's begin with the understanding that any recording of live music requires more dynamic capability than any tape can give you. A noise-reduction system, such as Dolby-B, which is standard on virtually all quality cassette decks, increases the dynamic-range capability of the tape and should always be used.
In live recording, or in audiophile-disc dubbing, you want the best tape possible. Metal tape seems to be the ultimate choice because of its performance superiority at cassette speeds. There are certain instruments you should beware of, notably those that are percussive or plucked, such as piano and guitar. They produce intense spikes that overload any tape if the level is too high, and therefore should not be recorded at zero recording level even on high-speed open-reel decks. If you bring the level down to about -12 dB or so, a metal-equipped cassette deck can, and will, produce a master tape with impressive sound.
Which tape is best? By this time, you may have answered that question for yourself. Always buying the best tape can result in overkill. Sure you can use a metal-particle tape to record the baby's first word, but will you get a better recording? The only certainty is that you will be recording on a more expensive tape.

# Buying Guide to more than 3,000 Stereo components 

There are literally thousands of stereo components available today, and as we've pointed out elsewhere in this magazine, one of the best ways to select the units you want is to compare what's available. We think this special buying guide section is a good place to begin. Here's how to use it to your best advantage.

First, we make no claims that we have tested any of the equipment listed here, nor that the specs represent lab results. In compiling the information, we faced a problem: since not all manufacturers rate their equipment in the same way, and since it would be impossible for us to test every piece of equipment, how could we come up with comparable data that would allow you-the buyer-to use this information effectively?
We settled on a series of guidelines, which we sent to the manufacturers and asked them to adhere to when providing the performance specs. If they deviated from the guidelines, we asked them to state how they had obtained their particular measurements

Where a particular spec does not appear, it means that the manufacturer did not supply it. N/A, or "not available," is generally re-
served for new products on which complete information was unavailable at press time Prices were supplied by the manufacturer and may vary from area to area and among stores

Because of space limitations, not every model produced by every manufacturer has been fully listed. Those on which complete specifications do not appear are summarized at the end of the manufacturer's product listing, and generally are those designated by the manufacturer as of lowest priority for listing.

You may want more information about specific products, in which case we suggest that you use our handy reader-service card or write directly to the manufacturers at the addresses in the directory. We also should add that though manufacturers have assured us that all products listed here will be available at the time you buy this magazine, this has not always proved to be the case in the past

Guidelines for each of the equipment types follow

Power Amplifiers. Manufacturers were asked to specify power in watts (and dBW) delivered on a continuous basis into a specified resistance in ohms over a specified frequency range at a specified percentage of total harmonic distortion (THD). An intermodulation distortion (IM) rating was requested as a percentage at à specified output in watts. Frequency response was to be reported over a frequency range of the manufacturer's choice, plus or minus a dB figure. also of the manufacturer's choice. Signal-tonoise ratio ( $S / N$ ) was to be expressed in $d B$ with a specified weighting relative to a specified output in watts.

Preampllifers. Specifications requested included'frequency, response, output in volts, THD expressed as a percentage, $I M$ expressed as a percentage, sensitivity of both phono and high-level inputs expressed in millivolts, the phono overload point in millivolts, and phono equalization specifications Also requested were bass, midrange (if available), and treble control ranges, along with high- and low-filter furnover points and slopes

Integrated Amplifiers. Because these combine the characteristics of power amps and preamps, all of the above specifications were requested

Tuners. Ouieting refers to 50 dB quieting, unless otherwise speclfied. Both $\mathrm{S} / \mathrm{N}$ and THD are given at 65 dBf . Selectivity is alter-nate-channel; subcarrier rejection refers only to stereo operation. When two sets of specifications are given, divided by a slash mark, the figure before the slash refers to mono operation; the figure after the slash, to stereo operation. If a manufacturer has submitted figures for only the mono mode, the mode is specitied in parentheses.

Receivers. Information requested for tuners applies to the tuner section of receivers; that requested for amplifiers applies to the power section of receivers with the following additions. Sensitivity of the amp sec-
tion is specified in the number of millivalts necessary to produce 0 dBW (1 watt). In amp S/N specifications, the weighting and reference specified by the manufacturer is in parentheses

Turntables. Five types are covered: manual (single-play, no automatic features on tonearm); semiautomatic (raises and returns arm at end of play); fully automatic (positions arm at lead-in groove automatically and returns arm to rest at end of play); automatic repeat (fully automatic with repeat-play capability); and changer (fully automatic with multiple-record capability). All turntables are presumed to have cueing levers, unless otherwise indicated. Manufacturers were requested to specify rùmble in dB , referenced to a specific standard, wow and flutter in percent, and the specific measuring method, the recommended tracking force range, and the range of tracking error in degrees and minutes.

Tonearms. Length is measured from pivot to stylus. Friction is specified in milligrams. Resonance point is specified in Hz with reference to a specific cartridgè

Phono Cartridges. Both lateral and vertical compliance were requested. Output was to be referenced to a certain number of cen-timeters-per-second at a specific frequency. Separation was to be measured at 1 kHz

Open-Reel Decks. Reel size refers to the largest reel the deck can accommodate. Flutter and frequency response was requested for each of the deck's playing speeds. Separation and erasure were to be measured at 1 kHz . Each manufacturer was asked to specify $\mathrm{a}=1$ recommended tape and $\mathrm{a} \# 2$ recommended tape, and to supply performance specifications using the recommended tapes.

Cassette Decks. The same information was requested for cassette decks as for open-reel decks.

Speaker Systems. Manufacturers were requested to designate the design of the speaker system, the number and type of drivers, the system's response with reference to a certain number of dB SPL measured at one meter at one watt, the recommended minimum and maximum power in watts and dBW, the crossover points, and any special controls.

Equalizers. "Bands" refers to the number of equalization points in each channel, and "range" specifies the degree (in $d B$ ) to which each band can be adjusted. A parametric equalizer is one in which the center frequency of the bands can be adjusted.

Signal Processors. These incluce both noise-reduction units, and what might be called a variety of signal-enhancement devices. An expander (sometimes called a "dynamic range enhancer ${ }^{\prime \prime}$ ) exaggerates loudness differences in the program source and is used to compensate for the compression system often used in recording and broad-
casting. While compression can help prevent distortion in the loudest signals (and masking of the quietest by noise), it robs the program material of some of its dramatic impact. Expansion can restore the original dynamics precisely only when the compression characteristics are known and the expander is designed to react reciprocally to them
Companders offer both compression and expansion of signal dynamics, usually with options that allow reciprocal actions in these iwo modes of operation
Some noise-reduction devices are specialpurpose companders that compress dynamic values for recording or broadcast and supply reciprocal expansion for playback or reception. With only rare exceptions, the same system must be used in both "encoding" (compression) and "decoding' (expansion) if dynamic values-and, often, other sound properties-are to be restored accurately. This makes most systems mutually incompatible.

The amount of compression and/or expansion is expressed as a ratio

Headphones. Specifications were requested for frequency response; sensitivity, expressed in dB with a specific input in milliwatts; impedance; maximum power, expressed either in millivolts or dB ; and total harmonic distortion, expressed as a percentage, either at a given sound pressure level (SPL) and a given frequency, or at a given input level measured in millivolts

Microphones. Manufacturers were requested to indicate transducer type, polar pattern, frequency response, output (relative to 1 milliwatt output, at a sound pressure of 10 microbars), and impedance

Raw Tape. For open-reel, cassette, and video tape, manufacturers were asked to indicate the type of coating and the lengths in which the tape is available. Special construction or packaging features are also noted.

Car Stereo Systems. In general, the specifications requested for car stereo tuners, tape players, amps, and speakers were the same as those of home component models. Manufacturers were also asked to indicate where in a vehicle the components were designed to be installed

Video Cassette Equipment. This includes only VCRs intended for home use. "'Format' ' refers to the design of the VCR system, such as VHS, Beta, etc. The "halfspeed" mode reflects the current status of VHS and Beta VCRs. Some recorders offer only a single (high) speed; others offer two speeds, the second one usually $331 / 3 \%$ slower. Specifications for video resolution and video $S / N$ were requested for both the black and white and color modes.

Accessories. Essentially, this is a wideopen category where manufacturers were simply requested to "describe" the item. In most cases the listings represent only a sampling of a company's entire accessory line. Complete catalogues generally are available directly from the particular company.

## Amplifiers

# (including Power Amps, Preamps, and Integrated Amps) 

## ACE

Ace Audio Co.
532 5th St.
East Northport, N.Y. 11731

| 3100 Preamplifier |  |
| :---: | :---: |
| Price | \$325 (wired) |
| Dimensions | $23 / 4 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 7 \mathrm{D}$ (separate power supply, $31 / 4 \times 3 \times 2$ ) |
| Welght | 5 lbs . |
| Inputs | Phono; 2 tape; tuner; aux |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$ |
| Output | 10 V |
| THD | 0.02\% |
| IM | 0.02\% |
| Sensitivity | 1 mV (phono); 100 mV (high level) |
| Overload | 90 mV (phono) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Features | Two-way tape dubbing; separate |
| power supply for lowest possible hum and noise on phono |  |


| $35 \times 2$ Super Power Amplifier |  |
| :---: | :---: |
| Dimensions | $31 / 2 \mathrm{H} \times 14 \mathrm{~W} \times 81 / 2 \mathrm{D}$ |
| Weight | 13 lbs |
| Power | 35 watts ( 15.5 dBW ) continuous into 4 or 8 ohms from 20 Hz to 20 kHz at no more than $0.1 \%$ THD |
| IM | 0.1\% at 35 watts |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| S/N | 90 dB (unweighted re 35 watts) |
| Features sion; special c | Heavy aluminum heat sink extrudrcuitry for tow distortion at normal |
| , listening levels tains double-si | ( 50 mW to 1 watt); $35 \times 2$ Super conzed filter capacitors |
| 8000 "Chunky" Power |  |
| Amplifier |  |
| Price | \$189; 2 or more \$185 each |
| Dimensions | $71 / 4 \mathrm{H} \times 91 / 2 \mathrm{~W} \times 61 / 2 \mathrm{D}$ |
| Weight | $7 \mathrm{lbs}$.8 oz . |
| Power | 70 watts ( 18.5 dBW ) continuous into 4 or 8 ohms from 20 Hz to 10 |
| 1 M | kHz at no more than $0.1 \%$ THD $0.1 \%$ at 70 watts |
| Response | 15 Hz to $20 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$ |
| S/N | 90 dB (unweighted re 70 watts) |

## Models also available

3000 Preamplifier, $\$ 250$ (wired)

## ACOUSTAT

Acoustat Corp.
3101 S.W. 1st Terrace
Ft. Lauderdale, Fla. 33315

| Refe | Pr |
| :---: | :---: |
| Price | \$950 |
| Dimensions | $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 113 / 4 \mathrm{D}$ |
| Weight | 10 lbs . |
| Inputs | 3 phono; 1 tape; 3 (high lev |

Features Two-way tape dubbing; electronic muting; crowbar relay to protect DC-coupled equipment; balance control

ADCOM
Adcom
11A Jules Lane
New. Brunswick, N.J. 08901
$\begin{array}{ll}\text { GFA-1 Power Amplifier } \\ \text { Price } & \$ 400 \\ \text { Dimensions } & 101 / 2 \mathrm{H} \times 81 / 2 \mathrm{~W} \times 61 / 2 \mathrm{D} \\ \text { Weight } & 25 \mathrm{lbs} \\ \text { Power } & 200 \text { watts ( } 23 \mathrm{dBW} \text { ) continuous } \\ & \text { into } 8 \text { ohms from } 20 \mathrm{~Hz} \text { to } 20 \mathrm{kHz} \\ & \text { at no more than } 0.05 \% \mathrm{THD} \\ \text { IM } & 0.1 \% \\ \text { Features } & \text { Fully complementary; bridged }\end{array}$ Features Fully complementary; brldged
mode; uses toroidal transformer dual power supplies; built-in fan; thermal overload protection; damping factor, 200 ; slew rate, $80 \mathrm{~V} / \mathrm{ms}_{\text {; finished }}$ in black

AEA
Analog Engineering
Associates, Inc.
520 Park Ave., S.
Winter Park, Fla. 32789

| Analogue | 620 Power Am |
| :---: | :---: |
|  | \$1,340 |
| Dimen | 7H $\times 19$ |
| Weight | 78 lbs |
| Power | 350 wats (25.5 dBW) continuous |
|  | into 8 ohms from 10 Hz to 40 kHz |
|  |  |
| IM |  |
| Response | 10 Hz to $40 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| S/N | 110 dB (A-weighted re 350 watts) |
|  |  |
| Featur | Slew rate, $65 \mathrm{~V} / \mathrm{ms}$; peak-reading |


| Analogue | 520 Preamplifier |
| :---: | :---: |
| Price | \$600 |
| Dimensions | $43 / 4 \mathrm{H} \times 143 / 4 \mathrm{~W} \times 101 / 4 \mathrm{D}$ |
| Welght | 119 lbs . |
| Inputs | 2 phono; 2 tape; tuner; aux |
| Response | 10 Hz to $60 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Output | 2.5 V |
| THD | 0.005\% |
| IM | 0.005\% |
| Sensitivity | 1.7 mV (phono); 100 mV (high level) |
| Overload | 125 mV (phono) |
| Phono EQ | 20 Hz to $60 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Bass control | $\pm 12 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 12 \mathrm{~dB}$ at 10 kHz |
| High filter | 6 dB /octave above 7.5 kHz |
| Low filter | $12 \mathrm{~dB} / \mathrm{octave}$ below 15 Hz |
| Features | All components to NASA specifica- |



| 511A Preamplifier |  |
| :---: | :---: |
| Price | \$495 |
| Dimensions | $51 / 4 \mathrm{H} \times 14 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | 13 lbs . |
| Inputs | Phono; 2 tape; tuner; aux |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$ |
| Output | 5 V |
| THD | 0.005\% |
| IM | 0.005\% |
| Sensitivily | 5.1 mV (phono); 230 mV (high level) |
| Overload | 160 mV (phono) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$ |
| High filler | 12 dB /octave at user-specified.frequency |
| Low filter | $12 \mathrm{~dB} /$ octave at user-specified frequency |
| Features | Two-way tape dubbing; "Tone |
| Send" button crosecand ph phono at no | for external equalizer; $250 \mathrm{~V} / \mathrm{mi}$ ono slew rate; optional high-gain xtra charge; optional filter, $\$ 50$ |

## AIWA

Aiwa America
35 Oxford Dr.
Moonachie, N.J. 07074

| A | d Amplifier |
| :---: | :---: |
| Price | \$550 |
| Dimensions | $63 / 16 \mathrm{H} \times 189 / 16 \mathrm{~W} \times 1413 / 15 \mathrm{D}$ |
| Weight | $38 \mathrm{lbs}$.6 oz . |
| Inputs | 2 phono; tape; tuner; aux |
| Power | 75 watts ( 18.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.02 \%$ THD |
| IM | 0.02\% at 75 watts |
| Response | 5 Hz to $100 \mathrm{kHz},+0,-3 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (moving magnet); 220 mV (moving coil); 150 mV (high level) |
| Overioad | 280 mV (phono) |


| S/N | A-weighted re 75 watts short-cir cuited) |
| :---: | :---: |
| Phono |  |
| Bass contro | $\pm 8 \mathrm{~dB}$ at 200 or 400 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 2.5 kHz or 5 kHz |
| High filter | $12 \mathrm{~dB} /$ octave above 10 kHz |
| Low filter | $12 \mathrm{~dB} /$ octave b |
| Features | One-way tape dubbing; two-way |
| tape dubbing; separable power and preamp; builtin moving-coil head amp; 2-position frequency turnover switches for bass and treble; 2 -system tape dubbing; -20 dB muting; 3-position tape monitoring; DC amplifier; peak-reading power meters |  |
|  |  |
|  |  |
|  |  |
|  |  |

## SA-P22U Power Amplifier

Dimensions $27 / 6 \mathrm{H} \times 85 / 16 \mathrm{~W} \times 83 / 16 \mathrm{D}$
Weight $\quad 8 \mathrm{lbs} 6 \mathrm{oz}$

| Power | 30 watts (14.75 dBW) continuous <br> into 8 ohms from 20 Hz to 20 kHz |
| :--- | :--- |
|  | at no more than $0.06 \% \mathrm{THD}$ |
| IM | $0.04 \%$ at 30 watts |
| Response | 10 Hz to $50 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| $\mathbf{S} / \mathrm{N}$ | 95 dB |
| Features $\quad \mathrm{DC}$ circuitry; 5 -LED power indica- |  |
| tor; self-resetting protection circuit; mini design |  |

SA-C22U Preamplifier
Price $\$ 140$
Dimensions $213 / 16 \mathrm{H} \times 85 / 16 \mathrm{~W} \times 67 / 4 \mathrm{D}$
Weight $\quad 3 \mathrm{lbs} .11 \mathrm{oz}$
Inputs Phono; tape; tuner; aux
Aesponse 20 Hz to $20 \mathrm{kHz},+0.5 \mathrm{~dB}$
Output
THD
Sensitivity 2.5 mV (phono); 150 mV (high level)
Overload $\quad 200 \mathrm{mV}$ (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz},+0.2 \mathrm{~dB}$
Bass confrol $\pm 8 \mathrm{~dB}$ at 100 Hz
Treble $\quad \pm 8 \mathrm{~dB}$ at 10 kHz
Low filter $\quad 12 \mathrm{~dB}$ /octave below 30 Hz
Features One-way tape dubbing; low-filter switch; -20 dB muting; dual positive and negative power supply; click-stop tone control; mini design

## Models also available

AA-8300U Integrated Amplifier, $\$ 300$

AKAI
Akai America, Ltd.
2139 E. Del Amo Blvd.
Compton, Calif. 90220

| AM-2850 | Integrated Amplifier |
| :---: | :---: |
| Price | \$475 |
| Dimensions | $67 / 10 \mathrm{H} \times 173 / 10 \mathrm{~W} \times 169 / 10 \mathrm{D}$ |
| Weight | 34 lbs .8 oz . |
| Inputs | 2 phono; 2 tape; 1 tuner; 1 aux |
| Power | 95 watts ( 19.75 dBW ) continuous into 4 ohms from 20 Hz to 20 kHz at no more than $0.08 \%$ THD |
| Response | 3 Hz to $60 \mathrm{kHz},+0,-1 \mathrm{~dB}$ |
| $\mathbf{S} / \mathrm{N}$ | 75 dB (phono); 95 dB (aux) (IMFweighted) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, 30,-1 \mathrm{~dB}$ |
| Bass control | $\pm 9 \mathrm{~dB}$ at 100 Hz |
| Midrange | $\pm 10 \mathrm{~dB}$ at 1 kHz |
| Treble | $\pm 9 \mathrm{~dB}$ at 10 kHz |
| High filter | 6 dB /octave above 10 kHz |
| Low filter | 6 dB /octave below 30 Hz |
| Features | Two-way tape dubbing; separable |
| and | np : DC amolifier |


| AM-2450 Integrated Amplifier |  |
| :--- | :--- |
| Price | $\$ 225$ |
| Dimensions | $57 / 10 \mathrm{H} \times 173 / 10 \mathrm{~W} \times 133 / 5 \mathrm{D}$ |

AM-2450 Integrated Amplifier
Dimensions $57 / 10 \mathrm{H} \times 173 / 10 \mathrm{~W} \times 133 / 5 \mathrm{D}$

| Weight | $21 \mathrm{lbs}$.13 oz . |
| :---: | :---: |
| Inputs | 1 phono; 2 tape; 1 tuner; 1 aux |
| Power | 45 watts ( 16.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.1 \%$ THD |
| Response | 6 Hz to $60 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| S/N | 75 dB (phono); 95 dB (aux) (IHFweighted) |
| Phono EO | 30 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Bass control | $\pm 9 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 9 \mathrm{~dB}$ at 10 kHz |
| Features | Two-way tape dubbing |

## Models also available

AM-2650 Integrated Amplifier, $\$ 300$; AM-2250 integrated Amplifier, \$150

APT
Apt Corp.
147 Sidney St.
Cambridge, Mass. 02139

Holman Preamplifier
Price $\$ 493$ (East coast); $\$ 502$ (West coast)
Dimensions $31 / 8 \mathrm{H} \times 151 / 32 \mathrm{~W} \times 81 / 5 \mathrm{D}$
Weight 10 lbs.
Inputs 2 phono; 2 tape; 1 tuner; 2 aux
Response 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Output
THD
IM $\quad 0.01 \%$
Sensitivity 1.25 mV (phono); 80 mV (high level)
Overload $\quad 130 \mathrm{mV}$ (phono)
Phono EQ $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 15 \mathrm{~dB}$ at 20 Hz
Treble $\pm 10 \mathrm{~dB}$ at 20 kHz
High filter $\quad 12 \mathrm{~dB}$ /octave above 40 kHz
Low filter $\quad 18 \mathrm{~dB} /$ octave below 15 Hz
Features Two-way tape dubbing; ultrasonic
filter; mono/stereo/difference mode control; cartridge termination resistance and capacitance; anti-crosstalk switching

1 Power Amplifier
Price N/A
Dimensions $31 / 8 \mathrm{H} \times 151 / 32 \mathrm{~W} \times 101 / 4 \mathrm{D}$
Weight 20 lbs .
Power 200 watts ( 23 dBW ) continuous into 4 or 8 ohms from 20 Hz to 20 kHz at no more than $0.01 \%$ THD
IM $\quad 0.01 \%$ at 200 watts
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$
S/N $\quad 100 \mathrm{~dB}$
Features Dynamic headroom of +6 dB ; class ABD amplification with 12 MOSFET output stage and tracking supply for combined efficiency with low distortion

## Models also available

2 Power Amplifier, N/A

## ARMSTRONG

Armstrong Audio (U.S.A.) Inc. Sindell Organization
11046 Santa Monica Blvd.
Los Angeles, Calif. 90025

| 621 |  |
| :--- | :--- |
| Price | $\$ 395$ |
| Dimensions | $31 / 4 \mathrm{H} \times 121 / \mathrm{WW} \times 11 \mathrm{yD}$ |
| Weight | 10 lbs .8 oz. |
| Power | 40 watts (16 dBW) continuous into |
|  | 4 to 16 ohms from 20 Hz to 20 kHz |
|  | at no more than $0.08 \% \mathrm{THD}$ |

IM
Response
Sensitivity
Overload
S/N
Phono EQ $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Bass control $\pm 15 \mathrm{~dB}$ at 70 Hz
Treble $\quad \pm 13 \mathrm{~dB}$ at 14 kHz
High filter 6 or 12 dB/octave above 3 or 5
kHz
12 dB/octave below 20 Hz
Features One-way tape dubbing

## AUDIO DEVELOPMENTS <br> INTERNATIONAL

Audio Developments
International
644 Emerson St.
Palo Alto, Calif. 94301

1252 Power Amplifier
Price $\$ 1,500$
Dimensions $10 \mathrm{H} \times 19 \mathrm{~W} \times 20 \mathrm{D}$
Weight 80 lbs
Power $\quad 185$ watts ( 22.75 dBW ) continuous into 8 ohms from DC to 50 kHz at no more than 0.005\% THD
IM $\quad 0.005 \%$ at 185 watts
Response $\quad D C$ to $50 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
S/N $\quad 106 \mathrm{~dB}$ (unweighted re 1 watt)
Features Class A operation; studio applica-
tions; LED peak meters

AUDIO RESEARCH
Audio Research Corp.
2843 26th Ave. South
Minneapolis, Minn. 55406

D-350B Power Amplifier
Price \$3,500
Dimensions $101 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 171 / 4 \mathrm{D}$
Weight 105 lbs .
Power $\quad 350$ watts ( 25.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.25 \%$ THD
$0.1 \%$ at 350 watts
Response $\quad 1 \mathrm{~Hz}$ to $50 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
S/N
do (unweighed re 350 watts)
Fans, meters, relays and logic for constion; industrial grade components and construction; rated for continuous commercial service

D-79 Power Amplifier
Price $\$ 3,250$
Dimensions $101 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 171 / 4 \mathrm{D}$
Weight 85 lbs .
Power $\quad 75$ watts ( 18.75 dBW ) continuous into $4 / 8 / 16$ ohms from 20 Hz to 20 kHz at no more than $1 \%$ THD
IM $\quad 0.5 \%$ at 75 watts
Response $\quad 15 \mathrm{~Hz}$ to $40 \mathrm{kHz},+3 \mathrm{~dB}$
$\mathrm{S} / \mathrm{N} \quad 90 \mathrm{~dB}$ (unweighted re 75 watts)
Features Vacuum tube amplifier; meters;
fans; level controls; industrial grade components
and construction

## D-100B Power Amplifier

Price $\$ 1,495$
Dimensions $7 \mathrm{H} \times 19 \mathrm{~W} \times 101 / 2 \mathrm{D}$
Weight 44 lbs .
Power $\quad 100$ watts ( 20 dBW ) continuous into 8 ohms from 1 Hz to 20 kHz at no more than $0.25 \%$ THD
IM $\quad 0.1 \%$ at 100 watts


A01511


## Akal AM-2850

Response $\quad 1 \mathrm{~Hz}$ to $50 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
S/N $\quad 90 \mathrm{~dB}$ (unweighted re 100 watts) Features Industrial grade construction and components; rated for continuous commerclal service

MCP-22 Preamplifier
Price $\$ 1.195$
Dimensions $5 \mathrm{~V} / \mathrm{H} \times 19 \mathrm{~W} \times 10 \mathrm{y} / \mathrm{D}$
Weight 22 lbs .
$\begin{array}{ll}\text { Inputs } & 31 \text { phono } \\ \text { Response } & 1 \mathrm{~Hz} \text { to } 250 \mathrm{kHz}, \pm^{3} \mathrm{~dB}\end{array}$
Output $\quad 2 \mathrm{~V}$ ( 50 V rms max)
THO
0.02\%

IM
$0.01 \%$
Sensitlvity $\quad 0.25 \mathrm{mV}$ (phono)
Overload $\quad 400 \mathrm{mV}$ (phono)
Phono EQ $\quad 20 \mathrm{~Hz}$ to $40 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$ Features Vacuum tube moving-coil preamplifier; connects to conventional preamplifier at AUX input

SP-6A Preamplifier
Price $\$ 1,19$
Dimensions $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 10 \mathrm{MD}$
Weight 22 lbs .
Inputs 1 phono; 1 tape; 1 tuner; 2 aux
Response 1 Hz to $250 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Output $\quad 2 \mathrm{~V}$ ( 50 V ms max)
THD 0.02\%
IM $\quad 0.01 \%$
Sensitivity $\quad 2 \mathrm{mV}$ (phono): 100 mV (high level)
Overload 700 mV (phono)
Phono EQ $\quad 20 \mathrm{~Hz}$ to $40 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
Features One-way tape dubbing; vacuum
tube unit

## SP-5 Preamplifier <br> Price $\$ 895$

Dimensions $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 81 / 2 \mathrm{D}$
Weight 20 lbs .
Inputs 1 phono; 1 tape; 1 tuner; 2 aux
Response 5 Hz to $100 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Output $\quad 5 \mathrm{~V}$
THD 0.005\%
IM 0.005\%
Sensitivity $\quad 5 \mathrm{mV}$ (phono); 100 mV (high level)
Overload 150 mV (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Features Provision for internal pre-preamp for moving-coil cartridges

## Models also available

D-1108 Power Amplifier, $\$ 2,750$; D-52B Power Amplifier, $\$ 1,195$; SP-4A Preamplifier, $\$ 1,195$

## A Note on Prices

Prices shown in these pages are manufacturers' or importers" nationally advertised values, updated as is feasible by press time.


Audionice BA-150


Audio Scientinc 1500
AUDIO SCIENTIFIC by SUPEREX
Superex Electronics Corp.
151 Ludlow St.
Yonkers, N.Y. 10705

1500 Power Amplifier
Price $\$ 750$
Dimensions $5 \mathrm{H} \times 19 \mathrm{~W} \times 12 \mathrm{D}$
Power $\quad 85$ watts ( 19.25 dBW ) continuous Into 8 ohms from 8 Hz to 150 kHz at no more than $0.1 \%$ THD
IM
$0.1 \%$ at 85 watts
Response
S/N
8 Hz to $150 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
115 dB (A-weighted re 85 watts)
Class A design; 3.4 dB clipping channel

## 1550 Power Amplifier <br> Price $\$ 550$ <br> Dimensions $5 \mathrm{H} \times 19 \mathrm{~W} \times 12 \mathrm{D}$ <br> Power 50 watts ( 17 dBW ) continuous into 8 ohms from 8 Hz to 150 kHz at no more than $0.1 \%$ THD <br> IM $\quad 0.1 \%$ at 50 watts <br> Response $\quad 8 \mathrm{~Hz}$ to $150 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ <br> S/N <br> Features Class $A$ design

## AUDIONICS

Audionics of Oregon
10950 S.W. 5th St.
Building 160
Beaverton, Ore. 97005

| BA-150 | Power Amplifier |
| :--- | :--- |
| Price | $\$ 2,950$ |
| Dimensions | $101 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 85 lbs. |
| Power | 150 watts ( 21.75 dBW ) continuous |
|  | into $4,8,16$ ohms from 30 Hz to 30 |
|  | kHz at no more than $0.25 \% \mathrm{THD}$ |
|  | (depends upon switchable feed- |
|  | back setting) |
|  | $0.25 \%$ at 150 watts |
| IM | 30 Hz to $30 \mathrm{kHz} \pm 1 \mathrm{~dB}$ |
| Response |  |
| S/N | 90 dB (weighted re 150 watts) |
| Features | Hybrid analog/digital design with |
| patented tube output stage allowing cool opera- |  |
| tion; all bias functions controlled by digital com- |  |
| puter |  |

BP-1 Mono Power Amplifier Price $\$ 499$
Dimensions $5 \mathrm{~V} / \mathrm{H} \times 19 \mathrm{~W} \times 14 \mathrm{D}$


Berning TF. 10


BOW 410
Weight 38 lbs.
Power 125 watts (21 dBW) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
IM $\quad 0.05 \%$ at 125 watts
Response $\quad 5 \mathrm{~Hz}$ to $70 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N
Features 90 dB (unweighted re 125 watts) Low-TIM design

PZ3 Series II Power Amplifier
Price $\quad \$ 499 \$ 589$ with peak-reading meters)
Dimensions $61 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 14 \mathrm{D}$
Weight 35 lbs
Power 100 watts ( 20 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.03 \%$ THD
IM $\quad 0.03 \%$ at 100 watts
Response $\quad 5 \mathrm{~Hz}$ to $70 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 95 \mathrm{~dB}$ (weighted re 100 watts)
Features Optional version with peak-reading VU meters and input-level controls; biasing circuit controls biasing of output stage under dynamic conditions, allowing cool operation of output stage

## BT-2 Preamplifier <br> Price $\$ 449$

Dimensions $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 8 \mathrm{D}$
Weight 12 lbs.
Inputs Phono; tape; tuner; aux
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Output 7V
THD 0.015\%
IM
Sensitivity $\quad 1.5 \mathrm{mV}$ (phono); 75 mV (high level)
Overload $\quad 150 \mathrm{mV}$ (phono)
Phono EQ $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Low silter $12 / 18$ dB/octave below 15 Hz (switchable)
Features Straight-line design without tone controls; Class A; RIAA circuit eliminates phono cartridge interaction with feedback loop; modified power supply/dual tracking regulator; modified RIAA circuitry

## Models also available

P23 Professional Power Amplifier. \$589; CC-2 Power Ampllfier, $\$ 489$ with peak-reading LEDs and handies

BEDINI
Bedini Electronics, Inc. 13000 San Fernando Rd. Sylmar, Calif. 91342

45/45 Power Amplifier
Price $\quad \$ 1,200$

Dimensions $61 / 4 \mathrm{H} x-19 \mathrm{~W} x-15$ B

Weight
Power
$42 \mathrm{los}, 8 \mathrm{oz}$.
45 watts ( 16.5 dBW) consinuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.1 \%$ THD
IM $0.1 \%$ at 45 watts
Response 20 Hz to $20 \mathrm{kHz},+0.5 \mathrm{~dB}$
S/N 100 dB
Features Class A, forced-air cooling, auto bias tracking: special feedback, current monitoring 25-amp outout current capacity bridgeable, for 240 watis Class A at 4 ohms cap coupled to speakers

## BERNING

Precedent Audio Products, Inc. 306 E. Oliver St.
Baltimore, Md. 21202

## TF-10 Preamplifier

| Price | $\$ 1,395$ |
| :--- | :--- |
| Dimensions | $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 120$ |

Weight 6 lbs

Inputs 3 phono; 2 tape; 1 tuner 2 aux Response $\quad 10 \mathrm{~Hz}$ to $100 \mathrm{kHz} \pm 1 \mathrm{~dB}$
Oulput 8 V (into 10 K )
THO 05\%
IM 0.5\%
Sensitivity $\quad 0.8 \mathrm{mV}$ (phono), 60 mV (high level), ref IV out
Overload 130 mV (phono)
Phono EQ , 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
Features One-way tape dubbing, iwo-way tape dubbing: remote mute; passive RIAA local feedback only; monitoring of any input; individually butfered tape outputs for each tape out

## BEVERIDGE

Harold Beveridge, Inc.
505 E. Montecito
Santa Barbara, Calif. 93103

RM-1 Preamplifier

| Price | \$2,000 |
| :---: | :---: |
| Dimensions | $31 / 2 H \times 19 \mathrm{~W} \times 9 \mathrm{~V}$ D |
| Inputs | 2 phono; 2 tape; 1 tuner, 1 aux |
| Response | 0.15 Hz to $600 \mathrm{kHz}+0.05 \mathrm{~dB}$ |
| Output | 1 V |
| THD | 0.03\% |
| 1 M | 0.03\% |
| Sensitivity | 20 mV (phono: 100 mV (high level) |
| Overload | $1,000 \mathrm{mV}$ (phono) |
| Phono EQ | 0.15 Hz to $600 \mathrm{kHz},+0005 \mathrm{~dB}$ |
| High filter | $6 / 12 / 18 \mathrm{~dB} /$ octavé above 20 kHz (progressive) |
| Low filter | 1/36 dB'loctave below 20 Hz (progressive) |
| Features power suppl | Two-way tape dubbing: separate |

BGW
BGW Systems, Inc.
13130 S. Yukon Ave.
Hawthorne, Calif. 90250

| Price | \$879 |
| :---: | :---: |
| Dimensions | $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 113 / 4 \mathrm{D}$ |
| Weight | 35 lbs . |
| Power | 200 watts ( 23 dBW ) contiruous into 8 ohms from $20 . \mathrm{Hz}$ to 20 kHz at no more than $0.07 \%$ THD |
| IM | $002 \%$ from 0.25 to 200 watts |
| Response | 3 Hz to $100 \mathrm{kHz},+0,-3 \mathrm{~dB}$ |
| S/N | 110 dB (unweighted re 200 watts) |

Features Dual channel, ten-segment lightmotering power display; modular construction; speaker switching: TMM-ftee design

## 203 Preamplifier

Price $\$ 710$
Dimensions $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 113 / 4 \mathrm{D}$
Welght $\quad 18 \mathrm{lbs} .8 \mathrm{oz}$
Inputs 2 phono; 2 tape: 1 tuner; 2 aux
Response 20 Hz to $20 \mathrm{kHz} \pm 0.2 \mathrm{~dB}$
Output $\quad 4 \mathrm{~V}$ (rated) ( 8 V max into 600 ohms)
THO $0.01 \%$
IM.
Sensitivity $\quad 1.3 / 5 \mathrm{mV}$ (phono); 10 V (high level)
Overload $\quad 100 \mathrm{mV}$ (phono)
Phona EQ 20 Hz to $20 \mathrm{kHz} \pm 0.25 \mathrm{~dB}$
Bass control $\pm 18 \mathrm{~dB}$ at 50 Hz (in precise 3 dB steps)
Treble $\quad \pm 18 \mathrm{~dB}$ at $15-\mathrm{kHz}$ (in precise 3 dB steps)
High liller $18 \mathrm{~dB} /$ octave above 12 kH z
Low filler 18 dB/octave below 20 Hz
Features One-way tape dubbing; two-way tape cubbing; seven-postion mode controf; Class A circuitry individual switched tone controls: precson detented volume and balance controls; separate power and preamp power switches; provislon for 12 V relay signat; front panel dubbing jacks (phono stage gain is 42 dB , line amp gain is either 22 dB or 10 dB ; to produce 2 volts output at the main output terminals with full gain the input required would therefore be 1.3 or 5 milivolts, front panel fain switch therefore accommodates a wide range of carridges)

110 Power Amplifier

## Price $\$ 439$

Dimensions $13 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 111 / 2 \mathrm{D}$
Weight $\quad 18 \mathrm{lbs} 8 \mathrm{oz}$
Power $\quad 50$ watrs ( 17 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $007 \%$ THD
IM $\quad 0.02 \%$ trom 0.25 to 50 watts
Response 3 Hz to $100 \mathrm{kHz}+0,-3 \mathrm{~dB}$
S/N 106 dB

## Mocels also available

210 Power Amplifier, '\$659; 103 Preamplifier. \$439

## BIAMP

Biamp Systems, Inc.
10950 S.W. 5th Ave., \#110
Beaverton, Ore. 97005

## TC/120 Power Amplifier

Price $\$ 565$
Dimensions $5 \mathrm{~V} / 4 \mathrm{H} \times 19 \mathrm{~W} \times 100$
Weight 29 Jbs
Power $\quad 150$ wat!s (2175 dBW) continuous wito 8 ohms from 7 Hz to 107 kHz at no more than $0.005 \%$ THD
Mi $0.0021 \%$ at 150 watts
Response $\quad 7 \mathrm{~Hz}$ to $107 \mathrm{kHz}+3 \mathrm{~dB}$
S/N $\quad 105 \mathrm{~dB}$
Features Balanced or unbatanced inputs:
DC outpul protection relay short proof protection; convection cootrig

## TC/60 Power Amplifier

Price \$445
Dimensions $31 / 2 H \times 19 \mathrm{~W} \times 91 / 2 \mathrm{D}$
Weight $\quad 19 \mathrm{lbs}$
Power $\quad 60$ watts ( 1775 dBW ) continuous into 8 ohms frem 4 Hz to 80 kHz al no more than $0.08 \%$ THD
IM $0.01 \%$ at 60 watts
Response $\quad 4 \mathrm{~Hz}$ to $80 \mathrm{kHz}+0.5 \mathrm{~dB}$
S/N $\quad 105 \mathrm{~dB}$
Fealures Mono bridgeable complementary outputs, short proof protected; positive track bies regulation

Models also available
TC-225 Power Amplifer, $\$ 390$

BOZAK
Bozak, Inc.
P.O. Box 1166

Darien, Conn. 06820

929 Powér Amplifier
Price $\$ 925$

Dimensions $7 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 12 \mathrm{D}$
Weight 46 lbs .
Power $\quad 150$ watts ( 21.75 dBW ) continuous
into 8 ohms from 20 Hz to 20 kHz at no more than $0.2 \%$ THD
M $0.2 \%$ at any wattage below 150 watts
Response 20 Hz to $20 \mathrm{kHz}+0.1 \mathrm{~dB}$
S/N $\quad 100 \mathrm{~dB}$ (unweighted re 150 watts)
Features DC protection; input-level controls; thermal protection; all-silicon circuitry; direct-reading power meters

## 909 Preamplifier

Price $\$ 490$
Dimensions $51 / 4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 61 / 2 \mathrm{D}$
Weight 21 lbs .
Inputs 2 phono; 2 tape; tuner; aux
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
Output 10 V
THD $0.1 \%$
$0.1 \%$
Sensitivity 2.5 mV (phono): 260 mV (high level)
Overtoad 100 mV (phono)
Phono EQ $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz} . \pm 0.5 \mathrm{~dB}$
High fllter $\quad 12 \mathrm{~dB} /$ octave above 6.5 kHz
Low filter $\quad 12$ dB/octave below 85 Hz
Features One-way fape dubbing; equalized tape outputs; separate bass and treble for each channel; all-silicon discrele circuitry

## CMA-10-2DL Stereo

Mixer/Preamplifier
Price $\$ 825$
Dimensions $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 101 / 2 \mathrm{D}$
Welght 31 lbs
Inputs 2 phono; 1 tape; 2 mic; 2 aux
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
Oufput $\quad 2.5 \mathrm{~V}(+24 \mathrm{dBm}$ maximum)
THD 0.2\%
IM $\quad 0.1 \%$
Sensitivity 1.4 mV (phono): 140 mV (high
Overload 100 mV (phono)
Phono EQ $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Bass control +10 dB at 50 Hz
Treble $\pm \$ 0 \mathrm{~dB}$ at 10 kHz
Features One-way tape dubbing; monitor
output 10 V ms at 200 ohms; convertible inputs

## Models also available

919 Preamplifier. \$875; 939 Power Amplifier, \$525

## BRYSTON

Bryston Vermont (Distributor)
RFD 4, Berlin
Montepelier, Vt. 05602

3B Power Amplifier
$\begin{array}{ll}\text { Price } & \$ 795 \\ \text { Dimensions } & 51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 9 \mathrm{D}\end{array}$
Weight 35 lbs .
Power $\quad 100$ watts ( 20 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD

IM
$0.025 \%$ from 10 mW to 100 watts
Response
S/N
100 dB
Features 400 watts bridged into 8 ohms (bridging switch); 500-sq. in. heat sink (over 1,000 sq. In. with chassis); no-fail LED pilot light; red LED clipping Indicators

| 1 P Preamplifier |  |
| :---: | :---: |
| Price | \$600 |
| Dimensions | $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 10 \mathrm{D}$ |
| Inputs | 2 phono; 2 tape |
| Response | 0.5 Hz to $50 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Output | 9 V (max) |
| THD | 0.005\% |
| IM | 0.005\% |
| Features | One-way tape dubbing |
| 2B Power Amplifier |  |
| Price | \$495 |
| Dimensions | $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | 25 lbs . |
| Power | 50 watts ( 17 dBW ) continuous into |
|  | 8 ohms from 20 Hz to 20 kHz at no more than 0.05\% THD |
| IM | 0.025\% from 10 mW to 50 watts |
| Response | 1 Hz to 100 kHz |
| S/N | 100 dB |
| Features | 200 watts bridged into 8 ohms |
| (bridging switch); 250 -sq. in. heat sink; no-fail LED |  |
| pilot light; red | LED clipping indicators |

## CARVER

Carver Corp.
1214 Highway 99
Everett, Wash. 98072

## C-4000 Preamplifier

Dimensions $61 / 4 \mathrm{H} \times 99 \mathrm{~W} \times 8 \mathrm{D}$
Weight $\quad 10 \mathrm{lbs}$.
Inputs 2 phono; 2 tape; 1 tuner; 2 aux
Response 5 Hz to $200 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$
Output $\quad 2.5 \mathrm{~V}$
THD 0.02\%
$\begin{array}{ll}\text { IM } & 0.01 \% \\ \text { Sensitivity } & 0.85 \mathrm{mV} \text { (phono); } 50 \mathrm{mV} \text { (high }\end{array}$ level)
Overload 150 mV (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
Bass contral 40 Hz
Midrange Turnover or loudness control (selectable)
Treble $\quad 2 \mathrm{kHz}$ or 8 kHz turnover (selectable)
Features One-way tape dubbing; two-way tape dubbing; sonic hologram generator; peak unlimiter; autocorrelator; 3-channel time delay with 25 -watt amplifier

M-400 Power Amplifier
Price
$\$ 349$
Dimensions $63 / 4 \mathrm{H} \times 63 / 4 \mathrm{~W} \times 63 / 4 \mathrm{D}$
Welght 12 lbs
Power 200 watts ( 23 dBW ) continuous into 8 ohms from 1 Hz to 20 kHz at no more than $0.05 \%$ THD
IM $\quad 0.06 \%$ at 200 watts
Response $\quad 1 \mathrm{~Hz}$ to $250 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
S/N
100 dB (A-weighted re 200 watts)
Features Moving LED displays with VU bal-
listics; 50 dB dynamic range

## Models also available

C-500 Power Amplifier, $\$ 689$

CM LABS
Audio International, Inc.
3 Cole Place
Danbury, Conn. 06810

CM-920 Power Amplifier
$\begin{array}{ll}\text { Price } & \$ 899 \\ \text { Dimensions } & 7 H \times 19 W \times 10 D\end{array}$
Weight $\quad 50 \mathrm{lbs}$.
Power 225 watts ( 23.5 dBW ) continuous Into 8 ohms from 20 Hz to 20 kHz at no more than $0.1 \%$ THD
M $\quad 0.1 \%$ at 225 watts
Response $\quad 5 \mathrm{~Hz}$ to $100 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
S/N $\quad 100 \mathrm{~dB}$ (unweighted re 225 watts)
Features LED output indicators; input level'
controls; speaker-protection relays

## CM-300 Preamplifier

Price $\$ 549$
Dimensions $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 17 \mathrm{D}$
Weight $\quad 30 \mathrm{jbs}$
Inputs 2 phono; 2 tape; tuner; aux
Response 2 Hz to $80 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Output 2 V (rated 10 V max)
THD 0.05\%
M $\quad 0.02 \%$
Sensitivity 0.6 mV (phono); 200 mV (high level)
Overload $\quad 300 \mathrm{mV}$ (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
Bass control $\pm 12 \mathrm{~dB}$ at 20 Hz
Treble $\quad \pm 12 \mathrm{~dB}$ at 20 kHz
High filter $12 \mathrm{~dB} /$ octave above 6 kHz
Low filter $\quad 6 \mathrm{~dB} /$ octave below 5 C Hz
Features Two-way tape dubbing; headphone output; adjustable phono level; FET buffers at all inputs

## CM-620 Preamplifier

Price
$\$ 499$
Dimensions $101 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 7 \mathrm{D}$
Weight $\quad 16 \mathrm{lbs}$.
Inputs
3 phono; 2 tape; 1 turer; 2 mic; 1 aux
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Output 10V
THD $0.05 \%$
IM $0.05 \%$
Sensitivity 3 mV (phono); 200 mVV (high level)
Overload 200 mV (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Bass control $\pm 12 \mathrm{~dB}$ at 20 Hz
Midrange $\pm 12 \mathrm{~dB}$ at 1 kHz
Treble $\quad \pm 12 \mathrm{~dB}$ at 20 kHz
Low filter $\quad 6 \mathrm{~dB} /$ octave below 50 Hz
Features One-way tape dubbing; all inputs may be mixed; all inputs may be previewed via headphone prior to mixing; each mic has EQ-LED output display

CM-301 Preamplifier
Price $\$ 250$
Dimensions $13 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 8 \mathrm{D}$
Weight 5 lbs .
Inputs Phono; tape; tuner; aux
Response 2 Hz to $80 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Output $\quad 2 \mathrm{~V}$ (rated 10 V max)
THD $\quad 0.05 \%$
IM 0.02\%
Sensitivity 1.6 mV (phono); 200 mV (high level)
Overload $\quad 300 \mathrm{mV}$ (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
Low filter $\quad 6 \mathrm{~dB}$ loctave below 50 Hz
Features Rack-mountable; FET buffer at all
inputs

## Models also available

CM-914a Power Amplifier, \$499;
CM-610 Preamplifier, \$399

## CROWN

Crown International
1718 W. Mishawaka Road
Elkhart, Ind. 46514

| DL-2 Preamplifier |  |
| :---: | :---: |
| Price | \$2,195 |
| Dimensions | $7 \mathrm{H} \times 19 \mathrm{~W} \times 141 / 2 \mathrm{D}$ |
| Weight | 20 lbs. |
| Inputs | 9 phono; 9 tape; 9 tuner; 9 mic; 9 aux |
| Response | 1 Hz to $100 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Output | 12V |
| THD | 0.0008\% at rated output |
| 1 M | 0.0003\% |
| Sensitivity | 2.5 mV (phono), adjustable $\pm 10$ dB |
| Overload | 33 to 330 mV (phono) (depending on gain) |
| Phono EQ | $\pm 0.5 \mathrm{~dB}$ (RIAA or flat; switch provided) |
| Bass control | $\pm 15 \mathrm{~dB}$ at $20 / 40 / 80 \mathrm{~Hz}$ |
| Midrange | $\pm 15 \mathrm{~dB}$ at $400 \mathrm{~Hz} / 800 \mathrm{~Hz} / 1.6 \mathrm{kHz}$ |
| Treble | $\pm 15 \mathrm{~dB}$ at $5 / 10 / 20 \mathrm{kHz}$ |
| High filter | 18 dB/octave above 4/7/12/20 kHz |
| Low filter | 18 dB/octave below |
|  | 20/30/50/100 Hz |
| Features | Three-way tape dubbing; can be |
| computer-controlled; panorama control; precision |  |
| gain control in $1 / 2 \mathrm{~dB}$ steps; separate power supply |  |
| ternal process | sors inputs separate from tape sysphono input can be set by user |
|  |  |

SA-2 Power Amplifier
Price $\$ 1.595$
Dimensions $7 H \times 19 W \times 14 D$
Weight $\quad 55 \mathrm{lbs}$.
Power 220 watts ( 23.5 dBW ) continuous into 8 ohms from DC to 20 kHz at no more than $0.05 \%$ THD
IM
Response $\quad 0 \mathrm{C}$ to $100 \mathrm{kHz}+1 \mathrm{~dB}$
S/N $\quad 115 \mathrm{~dB}$ at full rated output
Features Two-speed fan cooling (inaudible); remote mute; stereo/mono switch; four on-board computers that analyze demand and immediate history of amplifier and load to deliver maximumsafe output power; walnut veneer or rosewood cabinets available; IOC ${ }^{\text {® }}$ Music Distortion Indicator

## PSA-2 Power Amplifier

Price $\$ 1,495$
Dimensions $7 \mathrm{H} \times 19 \mathrm{~W} \times 143 / 4 \mathrm{D}$
Weight $\quad 57 \mathrm{lbs}$.
Power $\quad 220$ watts ( 23.5 dBW ) contifuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
IM $\quad 0.01 \%$ at 220 watts
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$
S/N
115 dB (A-weighted re 220 watts)
Features $100^{*}$ Music Distortion Indicator;
signal presence indicator; standby LED indicator; power on indicator; balanced inputs (high " $Z$ "); high pass and low pass filters (switchable in or out and frequency rolloff points can be changed to make the PSA-2 a true biamplifier); test tone generator ( 50 pulses per second); limiter compressor (with variable threshold); 5 -second delay; low-frequency protection (DC to 10 Hz ) mono dual switch; chassis/circult ground separatlon (with removal of ground strap); unbalanced input-overrides balanced input (high "Z"); 2-speed fan

| Straight | Line One Preamplifier |
| :--- | :--- |
| Price | $\$ 599$ |
| Dimensions | $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 73 / 4 \mathrm{D}$ |
| Weight | 10 lbs |
| Inputs | $1 \mathrm{phono} ; 2$ tape; 1 luner; 1 aux |
| Response | 10 Hz to $20 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$ |
| Output | 1 QV |
| THD | $0.0003 \%$ |
| IM | $0.00055 \%$ |
| Sensitivity | 2.5 mV (phono) (adjustable $\pm 10$ |
|  | $\mathrm{~dB})$ |
| Overload | 33 to 330 mV (phono) (depending |
|  | on gain) |
| Phono EQ | $\pm 0.5 \mathrm{~dB}$ (RIAA) |

Low filter
$18 \mathrm{~dB} /$ octave below 30 Hz Features Separate phono preamp module precision-stepped gain control in 2 dB steps preamp overload; indicators; stepped rotary balance control; handles standard; walnut or rose wood cabinets optional

Power Line One Power Amplifier
$\begin{array}{ll}\text { Price } & \$ 499 \\ \text { Dimensions } & 31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 121 / 4 \mathrm{D}\end{array}$
Weight $\quad 15 \mathrm{lbs}$
Power $\quad 50$ watts ( 17 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
IM
Response $\quad 5 \mathrm{~Hz}$ to $100 \mathrm{kHz},+0,-3 \mathrm{~dB}$
S/N $\quad 110 \mathrm{~dB}$ (A-weighted re 50 watts) Features IOC Music Distortion Indicator; 3 speaker connections per channel; LED ladder signal display; chassis-circuil ground separation (with removal of ground strap); stereo/mono switch stereo headphone output; phase response, +10 to -15 degrees, 20 Hz to 20 kHz at one watt; NTIM distortion, $0.0035 \%$ at $50 \mathrm{~W} /$ channel, 8 ohms: handies standard; rosewood or walnut veneer cabinets optional

## IC-150A Preamplifier <br> $\begin{array}{ll}\text { Price } & \$ 469 \\ \text { Dimensions } & 51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 81 / 6 \mathrm{D}\end{array}$ <br> Weight $\quad 10 \mathrm{fbs}$ <br> Inputs 2 phono; 2 tape; tuner; 3 aux <br> Response $\quad 3 \mathrm{~Hz}$ to $100 \mathrm{kHz}, \pm 0.6 \mathrm{~dB}$ <br> Output 12V <br> THD 0.0005\% <br> IM 0:02\% <br> Sensitivity $\quad 2.5 \mathrm{mV}$ (phono), adjustable $\pm 10$ <br> Overload 33 to 330 mV (phono) (at 1 kHz . depending on gain) <br> Phono EQ $\pm 0.5 \mathrm{~dB}$ (RIAA) <br> Bass control $\pm 15 \mathrm{~dB}$ at 30 Hz <br> Treble $\quad \pm 15 \mathrm{~dB}$ at 15 kHz <br> High filter $\quad 12 \mathrm{~dB} /$ octave above 5 kHz <br> Low filter 6 dB/octave below 24 Hz <br> Features Panorama control; stepped at tenuator; output attenuator

## Models also available

M-2000 Power Amplifler, $\$ 4.390$; M-600 Mono Power Amplifier, \$2,195; DC-300A Power Amplifier, \$899; D-150A Power Amplifier \$599; D-75 Power Amplifier, $\$ 399$

## DAYTON WRIGHT <br> Dayton Wright Associates, Ltd. 350 Weber St., N. Waterloo, Ont. N2J 4E3, Canada

## SPA Preamplifier

Price $\quad \$ 1,399$ (with head amp)
Dimenslons $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 13 \mathrm{D}$
Weight 20 lbs
Inputs 4 phono; 2 tape; tuner; 2 aux
Response 1 Hz to $200 \mathrm{kHz},+0,-1 \mathrm{~dB}$
Output 9 V
THD $\quad 0.001 \%, 20 \mathrm{~Hz}$ to .20 kHz at iV out
IM $\quad 0.002 \%, 20 \mathrm{~Hz}$ to 20 kHz at 1 V out
Sensitivity $\quad 1.5 / 0.03 \mathrm{mV}$ (phono); 60 mV (high level)
Overload $\quad M M, 100 \mathrm{mV} ; M C, 14 \mathrm{mV}$
Phono EQ $\quad 30 \mathrm{~Hz}$ to $15 . \mathrm{kHz},+0.5 \mathrm{~dB}$
Features Two-way tape dubbing: DC powersupply pre-preamp included; available without head amp, \$1,199

DW-535 535 Pre-Preamplifier

| Price | $\$ 499$ |
| :--- | :--- |
| Dimensions | $2 \mathrm{H} \times 10 \mathrm{~W} \times 7 \mathrm{D}$ |
| Weight | 7 lbs. |
| Inputs | Phono |
| Response | 5.5 Hz to $200 \mathrm{kHz},+0,-3 \mathrm{~dB}$ |
| Output | 800 mV |
| THD | $0.002 \%, 20 \mathrm{~Hz}$ to 20 kHz at 10 mV |
|  | out |
| IM | $0.002 \%, 20 \mathrm{~Hz}$ to 20 kHz at 10 mV |
|  | out |
| Sensitivity | 0.03 mV (phono) |
| Overload | 14 mV (phono) |


| DM-73S | Power Amplifier |
| :---: | :---: |
| Price | \$1,000 |
| Dimensions | $8 \mathrm{H} \times 14 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 50 lbs . |
| Power | 35 watts ( 15.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.1 \%$ THD |
| IM | 0.05\% |
| Response | 20 Hz to 20 kHz |
| Features | Tube design |
| Antares | Power Amplifier |
| Price | \$450 |
| Dimensions | $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 8 \mathrm{D}$ |
| Weight | 35 lbs . |
| Power | 100 watts ( 20 dBW ) continuous into 8 ohms from 5 Hz to 50 kHz at no more than $0.05 \%$ THD |
| IM | $0.05 \%$ at 100 watts |
| Response | 5 Hz to $50 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Features | Power MOSFET |

Sirius Preamplifier
$\begin{array}{ll}\text { Price } & \$ 350 \\ \text { Dimensions } & 13 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 6 \mathrm{D} \\ \text { Weight } & 5 \mathrm{HE}\end{array}$
Weight 5 lbs .
Inputs 1 phono; 1 tape; 1 tuner; 1 aux
Response 0 Hz to $100 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$
Output 5 V
THD 0.001 d
IM $\quad 0.001 \%$
Overload $\quad 3000 \mathrm{mV} 20 \mathrm{kHz}$ (nhono)
Phono EQ R1AA $\pm 0.1 \mathrm{db}$
Features One-way tape dubbing; plug-in
crossover (2 or 3 way) available; 40 or 60 dB selectable phono gain

## Models also available

DM IV Power Amplifier, $\$ 700$

DENON
American Audioport, Inc.
1407 N. Providence Road
Columbia, Mo. 65201

## POA-1003 Power Amplifier

Price $\$ 900$
Dimensions $200 \mathrm{~mm} \mathrm{H} \times 410 \mathrm{~mm} \mathrm{~W} \times 280 \mathrm{~mm} \mathrm{D}$
Weight 48 lbs 6 oz
Power $\quad 85 / 100$ watts ( $19.25 / 20 \mathrm{dBW}$ ) continuous into $8 / 4$ ohms from 20 Hz to 20 kHz at no more than $0.03 \%$ THD
IM $\quad 0.02 \%$ at 85 watts into 8 ohms
Response $\quad 0 \mathrm{~Hz}$ to $100 \mathrm{kHz},+0,-1 \mathrm{~dB}$
S/N $\quad 119 \mathrm{~dB}$ (A-weighted re 85 watts)
Features Two separate power-supply transformers; damping factor of 200 ; gold RCA connectors; large peak meters; infrasonic filters; A/B speaker switchíng for each channel

PMA-850 Integrated Amplifier

| Price | $\$ 800$ |
| :--- | :--- |
| Dimensions | $164 \mathrm{~mm} \mathrm{H} \times 434 \mathrm{~mm} \mathrm{~W} \times 400 \mathrm{~mm} \mathrm{D}$ |

Weight $\quad 37 \mathrm{~mm} 6 \times 434 \mathrm{~mm} \mathrm{~W} \times 400 \mathrm{~mm}$
Inputs 3 phono; 2 tape; 1 tuner; 1 aux
Power $\quad 85$ watts ( 19.25 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.01 \%$ THD
IM $0.02 \%$ at 85 watts
Response $\quad 5 \mathrm{~Hz}$ to $100 \mathrm{kHz},+0,-1 \mathrm{~dB}$
Sensitivity $\quad 2.5 \mathrm{mV}$ (phono); 320 mV (high level); $0.37 \mathrm{mV} / 40$ ohms (moving coil input)
Overload 200 mV (phono)
S/N $\quad 89 \mathrm{~dB}$ (phono); 105 dB (aux) (Aweighted re 85 watts)
Phono EQ $\quad 20 \cdot \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 8 \mathrm{~dB}$ at 100 Hz
Treble $\quad \pm 8 \mathrm{~dB}$ at 10 kHz
High filter $\quad \frac{1}{12} \mathrm{~dB}$ /octave above 9 kHz

DENNESEN
Dennesen Electronics
P.O. Box 51

Beverly, Mass. 01915


Carver C-4000

## CM Labs 301

Low filter $\quad 12 \mathrm{~dB}$ /octave below 20 Hz Festures Two-way tape dubbing; separable power and preamp; phono 3 is high quality lownoise moving-coil head amp input; all sections including head amp and tone controls are symmetrical complementary push-pull círcuitry; phono crosstalk canceller; low flux leakage toroidal power transformer

## PRA-1003 Preamplifier

Price $\$ 600$
Dimensions $152 \mathrm{~mm} \mathrm{H} \times 410 \mathrm{~mm} \mathrm{~W} \times 271 \mathrm{~mm} \mathrm{D}$ Weight $\quad 17 \mathrm{lbs} .10 \mathrm{oz}$. Inputs 2 phono; 3 tape; 1 tuner; 1 aux Response 10 Hz to $100 \mathrm{kHz},+0,-1 \mathrm{~dB}$ Output $\quad 10 \mathrm{~V}$ (rated output 1 V ) THD $\quad 0.003 \% 20$ to $20 \mathrm{kHz}, 3 \mathrm{~V}$ Sensitivity $\quad 2.5 \mathrm{mV}$ (phono) Overload 320 mV (phono) Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ Bass control $\pm 10 \mathrm{~dB}$ at .50 Hz Treble $\pm 10 \mathrm{~dB}$ at 20 kHz Low filter 6 dB/octave above 9 kHz Features Two-way tape dubbing; switchable phono input impedance; $86 \mathrm{~dB} \mathrm{~S} / \mathrm{N}$ ratio; direct coupled FET input phono equalization with differential circultry throughout; 100 dB channel separation; gold-plated terminals; headphone level control

## Models also available

PMA-630 Integrated Amplifier, \$450; PMA-501 Integrated Amplifier, $\$ 340$

## DYNACO/DYNAKIT <br> Dynaco, Inc. <br> P.O. Box 612 <br> Needham, Mass. 02198

Mk 600 Power Amplifier
Price $\$ 300$ (assembled)
Dimensions $6 \mathrm{~V} / 4 \mathrm{H} \times 10 \mathrm{~W} \times 10 \mathrm{D}$
Weight 28 lbs .
Power 60 watts ( 17.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.03 \%$ THD
IM $0.03 \%$ at 60 watts
Response $\quad 8 \mathrm{~Hz}$ to $50 \mathrm{kHz},+0,-1 \mathrm{~dB}$
S/N $\quad 100 \mathrm{~dB}$ (unweighted re 100 watts)
Features Bridge circuit for mono 150 watts
rms at 8 ohms; LED peak-clipping indicator


Crown SA-2


## Eumig M-1000

| Inputs | 2 phono; 2 tape; 1 tuner; $2 \mathrm{mic} ; 1$ |
| :--- | :--- |
|  | aux |
| Response | 10 Hz to $50 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Output | $2 \mathrm{~V} \mathrm{(7V} \mathrm{max)}$ |
| THD | $0.01 \%$ |
| IM | $0.01 \%$ |
| Sensitivity | 2.1 mV (phono); 0.2 mV (high level) |
| Overload | 115 mV (phono) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Bass control | $\pm 10 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 15 kHz |
| High filter | $15 \mathrm{~dB} / o c t a v e(-10 \mathrm{~dB}$ at 10 kHz ) |
| Low filter | $6 \mathrm{~dB} / 0 \mathrm{ctave}(-4 \mathrm{~dB}$ at 10 Hz$)$ |
| Features | Two-way tape dubbing; moving- |
| Coil cartridge phono input |  |

EDINBURGH WIRELESS CO. Import Audio 13430 Clayton Rd.
St. Louis, Mo. 63131

| A-50 Integrated Amplifier |  |
| :--- | :--- |
| Price | $\$ 750$ |
| Inputs | 2 phono (1 moving-magnet; 1 mov- |
|  | ing-coil) |
|  |  |
| Power | 50 watts (17 dBW) continuous into |
|  | 8 ohms at no more than $0.03 \%$ |
|  | THD |
|  | Compact size |

## EUMIG

Eumig USA, Inc.
Lake Success Business Park
225 Community Drive
Great Neck, N.Y. 11020

## M-1000 Power Amplifier <br> Price $\$ 795$

Dimensions $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times \mathrm{N} / \mathrm{AD}$
Power $\quad 100$ watts ( 20 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.0075 \%$ THD
Response $D C$ to $150 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
S/N
105 dB (A-weighted re 100 watts) Features Slew rate of $172 \mathrm{~V} /$ microseconds; dual 12-segment peak-power LED display with switchable 10:1 attenuator; 30 dB muting switch; 2-system speaker selector with headphone jack; champagne or matte-black finish; rack-mountable

## PAT-6 Preamplifier

Price $\$ 300$ (assembled)
Dimensions $31 / 3 \mathrm{H} \times 19 \mathrm{~W} \times 10 \mathrm{D}$
Weight
13 lbs .

C-1000 Preamplifier
Price $\$ 580$
Dimensions $25 / 3 \mathrm{H} \times 19 \mathrm{~W} \times \mathrm{N} / A \mathrm{D}$


Fleher CA-2420


Inputs $\quad 2$ (1 moving-coil, 1 moving-magnet) phono; 2 tape; 1 tuner; 1 aux DC to $150 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Response
Output
THD
Sensitivity $0.005 \%$
2.5 mV (MM, 47K ohms); $250 \mu \mathrm{~V}$ (MC, 150 ohms) (phono)
Overload $200 \mathrm{mV}, \mathrm{MM}$; $10 \mathrm{mV}, \mathrm{MC}$ (phono) Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Bass control $\pm 12 \mathrm{~dB}$
Treble $\pm 12 \mathrm{~dB}$
High filter 12 dB/octave above 12 or 8 kHz (switchable)
Low filter 12 dB/octave below 70 or 15 Hz (switchable)
Features Full 2-way tape dubbing; champagne or matte-black; tone-defeat switch; straight DC from AUX input; switch provision for insert of external equalizer; loudness contour and lowboost (switchable)

## FISHER

Fisher Corp.

## 21314 Lassen St.

Chatsworth, Calif. 91311

## CA-2420 Integrated Amplifier

Price $\$ 549.95$
Dimenslons $51 / 4 \mathrm{H} \times 171 / 3 \mathrm{~W} \times 13 \mathrm{D}$
Weight 24 lbs .
Inputs 2 phono; 2 tape; 1 tuner; 1 aux
Power $\quad 80$ watts ( 19 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.02 \%$ THD
IM $0.02 \%$ at 80 watts
Aesponse $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.05 \mathrm{~dB}$
Sensitivily 2.5 mV (phono); $60 \mu \mathrm{~V}$ (phono moving coll)
Overload 230 mV (phono); 6 mV (phono moving coil)
100 dB (aux); 65 dB (phono moving coil) (A-weighted re 80 watts)
S/N
20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
$\begin{array}{ll}\text { Phono EQ } \quad 20 \mathrm{~Hz} \text { to } 20 \mathrm{kHz} \text {, } \pm 0.5 \mathrm{HB} \\ & 12 \mathrm{~dB} \text { /octave below } 20 \mathrm{~Hz}\end{array}$
Features Two-way tape dubbing; separable
power and preamp; 5-band graphic equalizer $\pm 10$ d8 at $50 \mathrm{~Hz}, 250 \mathrm{~Hz}, 1 \mathrm{kHz}, 4.5 \mathrm{kHz}, 15 \mathrm{kHz}$; large power meters; 5-position tape selector

## CA-2220 Integrated Amplifier

Price $\$ 399.95$
Dimensions $51 / 4 \mathrm{H} \times 171 / 3 \mathrm{~W} \times 13 \mathrm{D}$
Weight 22 lbs.
Inputs 1 phono; 2 tape; 1 tuner; 1 aux Power 50 watts ( 11.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.02 \%$ THD
$0.02 \%$ at 50 watts
20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
2.5 mV (phono)

Phono EQ
Low filter
Features

230 mV (phono)
80 dB (phono); 90 dB (aux) (A weighted re 50 watts) 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ wo-way tape dubbing; separable large power meters

## Models also available

CA-2320 Integrated Amplifier, \$399.95; CA-2120 Integrated Amplifier, \$329.95

## GLI

GLI Division of VSC Corp.
29-50 Northern Blvd.
Long Island City, N.Y. 11101

| SA-2125 | Power Amplifier |
| :--- | :--- |
| Price | $\$ 675$ |
| Dimensions | $51 / \mathrm{H} \times 19 \mathrm{~W} \times 15 \mathrm{D}$ |
| Weight | 27 lbs .8 oz. |
| Power | 120 watts (21 dBW) continuous |
|  | into 8 ohms from 20 Hz to 20 kHz |
|  | at no more than $0.1 \% \mathrm{THD}$ |
| IM | $0.1 \%$ at 120 watts |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$ |
| S/N | 100 dB (unweighted re 100 watts) |
| Features Circuit breakers for each channel; |  |
| plug-in circuit boards; cooling fan; clipping lights; |  |
| thermal overload light and auto reset |  |

## 3990 Preamplifier

| Price | $\$ 615$ |
| :--- | :--- |
| Dimensions | $7 \mathrm{H} \times 19 \mathrm{~W} \times 4 \mathrm{D}$ |

Weight $\quad 15$ tbs.
Inputs 3 phono; 3 aux
Output $\quad 12 \mathrm{~V}$ (at 10 K ohms clipping)
THD $0.01 \%$
M $\quad 0.01 \%$
Sensitivity $\quad 2 \mathrm{mV}$ (phono); 500 mV (high level)
Overload 320 mV (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
Low filter $18 \mathrm{~dB} / 0$ ctave below 18 Hz (infrasonic on phono input)
Features Mixing of all inputs; mic talkover: complete input cueing; companion unit to Model 1010

1010 Preamplifier/Processor
$\begin{array}{ll}\text { Price } & \$ 310 \\ \text { Dimensions } & 312 \mathrm{H} \times 19 \mathrm{~W} \times 4 \mathrm{D}\end{array}$
Weight $\quad 7 \mathrm{lbs}$.
Inputs 2 tape
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
Output $\quad 1.5 \mathrm{~V}$ (12V clipping)
THD 0.01\%
IM $0: 01 \%$
Bass control $\pm 12 \mathrm{~dB}$ at 20 Hz
Midrange $\quad \pm 6 \mathrm{~dB}$ at 1.2 kHz
Treble $\quad \pm 12 \mathrm{~dB}$ at 15 kHz
Features Two-way tape dubbing; stereo blend; balancing; calibrated meters; stereo mode switching; defeatable tone controls; companion piece to Model 3990

## Models also available

PMX-9000 Preamplifier, $\$ 400$

## GREAT AMERICAN SOUND Great American Sound Co. 20940 Lassen St. <br> Chatsworth, Calif. 91311 <br> Godzilla (Class A) Power Amplifier <br> Price

| Dimensions | $7 \mathrm{H} \times 19 \mathrm{~W} \times 191 / 2 \mathrm{D}$ |
| :--- | :--- |
| Weight | 100 lbs. |
| Power | 90 watts (19.5 dBW) continuous |
|  | into 8 ohms from 20 Hz to 20 kHz |
|  | at no more than $0.05 \% \mathrm{THD}$ |
| IM | $0.05 \%$ at 90 watts |
| Response | DC to $350 \mathrm{kHz},-3 \mathrm{~dB}$ |
| Features | Class A circuitry; 1-ohm capability |
| (400 watts/channel); servo-controlled, balanced- |  | (400 watts/channel); servo-controlled, balancedbridge output; $600 \mathrm{~V} / \mu \mathrm{sec}$ slew rate; damping factor $>400$

## Godzilla (Class AB) Power Amplifier

Price $\$ 3,500$
Dimensions $7 \mathrm{H} \times 19 \mathrm{~W} \times 191 / 2 \mathrm{D}$
Weight $\quad 100 \mathrm{lbs}$
Power $\quad 350$ watts ( 25.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.1 \%$ THD
$0.1 \%$ at 350 watts
Mesponse $\quad D C$ to $350 \mathrm{kHz},-3 \mathrm{~dB}$
Features Servo-controlled, balanced-bridge
output; 2 -ohm capability ( 1,000 watts/channel);
$600 \mathrm{~V} / \mu$ sec slew rate; damping factor $>400$
Thaedra II Preamplifier

| Price | $\$ 1,099$ |
| :--- | :--- |
| Dimensions | $6 \mathrm{H} \times 17 \mathrm{~W} \times 123 / 4 \mathrm{D}$ |

Weight $\quad 33 \mathrm{lbs}$

Inputs 2 phono; 3 tape; tuner; 2 aux
Response $\quad \mathrm{DC}$ to $100 \mathrm{kHz}, \pm 3 \mathrm{~dB}(20 \mathrm{~Hz}$ to 20 $\mathrm{kHz}, \pm 0.1 \mathrm{~dB})$
Output
10 V
THD $\quad 0.01 \%$
IM $\quad 0.01 \%$
Sensitivity 0.07 mV (head amp); 3.2 mV (phono): 200 mV (high level)
Overload 3.5 mV (head amp); 220 mV (phono)
Phono EQ $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
Bass control $\pm 12 \mathrm{~dB}$ at 20 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 20 kHz
Low filter $\quad 12 \mathrm{~dB} /$ octave below 10/20/30/50 Hz (switchable)
Features Two-way tape dubbing; built-in moving-coil phono capability; tape monitor and copy for 3 decks; line amp capable of driving headphones directly

Thoebe Preamplifier
Price $\$ 649$

| Dimensions | $51 / 4 \mathrm{H} \times 1.7 \mathrm{~W} \times 8 \mathrm{D}$ |
| :--- | :--- |
| Weight | 28 lbs. |
| Inputs | $2 \mathrm{phono} ; 2$ tape; tuner; 2 aux |
| Response | 1 Hz to $100 \mathrm{kHz}, \pm 1 \mathrm{~dB}(20 \mathrm{~Hz}$ to |
|  | $20 \mathrm{kHz}, \pm 0.1 \mathrm{~dB})$ |
| Output | 10 V |
| THD | $0.01 \%$ |
| IM | $0.01 \%$ |
| Sensitivity | 3.2 mV (phono); 200 mV (high |
|  | level) |
| Overload | 100 mV (phono) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$ |
| Bass control | $\pm 12 \mathrm{~dB}$ at 20 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 20 kHz |
| Low filter | $12 \mathrm{~dB} /$ octave below $10 / 20 / 30 \mathrm{~Hz}$ |
|  | (switchable) |

Features Two-way tape dubbing; full complementary Class A circuitry; headphone-driving capability; separate left and right tone controls

## Thalia II Preamplifier <br> Price $\$ 399$

Dimensions $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 10 \mathrm{D}$
Weight $\quad 18 \mathrm{lbs}$

## A Note on Prices

Prices shown in these pages are manufacturers' or importers' nationally advertised values, updated as is feasible by press time

Inputs
Response 20 Hz to $20 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$
Output
THD
IM
Sensitivity $\quad 3.0 \mathrm{mV}$ (phono); 190 mV (high level)
Overload $\quad 250 \mathrm{mV}$ (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$
Bass control $\pm 12 \mathrm{~dB}$ at 20 Hz
Treble $\pm 8 \mathrm{~dB}$ at 20 kHz
Low filter $\quad 6 \mathrm{~dB} /$ octave below 10 Hz
Features Output mute; servo-controlled line and phono; full complementary Class A circuitry: direct-coupled outputs

## Models also available

Ampzilla lla Power Amplifier, $\$ 1,099$; Son of Ampzilla Power Amplifier, \$579; Grandson Power Amplifier, $\$ 399$; $\$ 449$ with meters

GREAT WHITE WHALE
Great White Whale Distr., Inc. 348 E. 84th St.
New York, N.Y. 10028

| 625 Power Amplifier |  |
| :--- | :--- |
| Price | $\$ 1,150$ |
| Dimensions | $6 \mathrm{H} \times 18 \mathrm{~W} \times 13 \mathrm{D}$ |
| Weight | 55 tbs. |
| Power | 200 watts (23 dBW$)$ continuous |
|  | into 8 ohms from 20 Hz to 20 kHz |
|  | at no more than $0.05 \% \mathrm{THD}$ |
| IM | $0.05 \%$ |
| Response | 1 Hz to 150 kHz |
| S/N | 110 dB |


| 846 | Preamplifier |
| :--- | :--- |
| Price | $\$ 395$ |
| Dimenslons | $21 / 2 \mathrm{H} \times 18 \mathrm{~W} \times 7 \mathrm{D}$ |
| Weight | 20 lbs. |
| Inputs | 1 phono; 1 tape; 1 tuner; 1 aux |
| Response | 1 Hz to 150 kHz |
| Output | 10 V |
| THD | $0.001 \%$ |
| IM | $0.001 \%$ |
| Senslitivity | 0.1 mV (phono) |
| Overload | 500 mV (phono) |
| Features | One-way tape dubbing |


| 308 Pre-P | reamp |
| :---: | :---: |
| Price | \$90 |
| Dimensions | $2 \mathrm{H} \times 7 \mathrm{~W} \times 5 \mathrm{D}$ |
| Weight | 5 lbs. |
| Response | 1 Hz to 1 mHz |
| Output | 8 V |
| THD | 0.001\% |
| IM | 0.001\% |
| Sensitivity | 0.1 mV (phono); 0.01 mV (high level) |
| Overload | 200 mV (phono) |
| Models a | Iso available <br> 615 Power Amplifier, $\$ 750$ |

HAFLER
David Hafler Co.
5817 Roosevelt Ave.
Pennsauken, N.J. 08109
DH-200 Power Amplifier
Price $\quad \$ 299.95$ (kit); $\$ 399.95$ (assembled) Dimensions $43 / 4 \mathrm{H} \times 16 \mathrm{~W} \times 91 / 4 \mathrm{D}$ Weight 30 lbs .
Power $\quad 100$ watts (20 dBW) continuous into 8 ohms from 20 Hz to $20 \cdot \mathrm{kHz}$ at no more than $0.02 \%$ THD

## Response

S/N
Features 100 dB (unwelghted re 100 watts)
Features MOSFET output stage; rackmountable; mono strapable 300 W into 8 ohms

| DH-101 | Preamplifier |
| :--- | :--- |
| Price | $\$ 199.95$ (kit); $\$ 299.95$ (assembled) |
| Dimenslons | $31 / 4 \mathrm{H} \times 133 / 4 \mathrm{~W} \times 83 / 8 \mathrm{D}$ |
| Weight | 9 lbs. |
| Inputs | 2 phono; 2 tape; 1 tuner; 1 aux |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$ |
| Output | 3 V |
| THD | $0.001 \%$ |
| Overioad | 180 mV (phono) |
| Phono EQ $\quad 30 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |  |
| Bass control | $\pm 12 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 20 kHz |
| Features $\quad$ One-way tape dubbing; two-way |  |
| tape dubbing; accessory moving coil pre-preamp; |  |
| accessory rack-mount kit; black knob set and |  |
| wooden cabinet |  |

HAPI
Hegeman Audio Products, Inc. 176 Linden Ave. Glen Ridge, N.J. 07028

| HAPI Two Preamplifier |  |
| :--- | :--- |
| Price | $\$ 900$ |
| Dimensions | $13 / \mathrm{H} \times 19 \mathrm{~W} \times 9 \mathrm{D}$ |
| Weight | 5 lbs |
| Inputs | 1 phono; 1 tape; 1 tuner; 1 aux |
| Response | 2 Hz to 350 kHz |
| Output | $6 \mathrm{~V}(\mathrm{rms})$ |
| THD | $0.03 \%$ |
| IM | $0.03 \%$ |
| Sensitlvity | 2 mV (phono); 100 mV (high level) |
| Overload | 300 mV (phono) |
| Phono EQ | 2 Hz to $100 \mathrm{kHz} \pm 0.1 \mathrm{~dB}$ |
| Features | One-way tape dubbing |


| HAPI One Preamplifier Control |  |
| :--- | :--- |
| Unit |  |
| Price | $\$ 720$ |
| Dimensions | $31 / 2 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 9 \mathrm{D}$ (control unit); |
|  | $15 / \mathrm{H} \times 21 / \mathrm{W} \times 7 \mathrm{D}$ (preamp) |
| Weight | 4 Hbs . |
| Inputs | 1 phono; 1 tape; 1 tuner; 1 aux |
| Response | 2 Hz to 350 kHz |
| Output | 6 V (rms) |
| THD | $0.03 \%$ |
| IM | $0.03 \%$ |
| Sensitivity | 2 mV (phono) |
| Overload | 300 mV (phono) |
| Phono EQ | 2 Hz |
| Features | One-way tape dubbing |

## HARMAN KARDON

Harman Kardon
55 Ames Court
Plainview, N.Y. 11803

## Citation 16A Power Amplifier <br> Price $\quad \$ 699$ (with power LEDs) <br> Dimensions $93 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 14 \mathrm{D}$ <br> Weight 55 lbs . <br> Power $\quad 150$ watts ( 21.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD $0.05 \%$ at 150 watts 4 Hz to $120 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ <br> Response <br> S/N $\quad 100 \mathrm{~dB}$ <br> Features Two separate power supplies; DC coupled; available without power LEDs as Citation 16S (\$599)

Citation 17
Preamplifier/Equalizer
$\begin{array}{ll}\text { Price } & \$ 499 \\ \text { Dlmensions } & 43 / 4 \mathrm{H} \times 16 \mathrm{~W} \times 12 \mathrm{D}\end{array}$
Weight 20 lbs .
Inputs 2 phono; 1 tape; 1 tuner; 3 aux

| Response | 3 Hz to $270 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ |
| :--- | :--- |
| Output | 14 V |
| THD | $0.001 \%$ |
| IM | $0.0025 \%$ |
| Sensitivity | 2.8 mV (phono); 200 mV (high |
|  | level) |
| Overload | 180 mV (phono) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$ |
| Bass control | $\pm 12 \mathrm{~dB}$ at 50 Hz |
| Midrange | $\pm 12 \mathrm{~dB}$ at 70 Hz |
| Treble | $\pm 12 \mathrm{~dB}$ at 8 kHz |
| High filter | $12 \mathrm{~dB} / o c t a v e ~ a b o v e ~$ |
| Low fHz |  |
| featurer | $12 \mathrm{~dB} / 0 \mathrm{ctave}$ below 20 Hz |
| Feature | One-way tape dubbing; two-way |
| tape dubbing; five-band equalizer; 4 -stage, fully |  |
| discrete phono preamp; equalizer defeat switch; |  |

HK-505 Integrated Amplifier
$\begin{array}{ll}\text { Price } & \$ 399 \\ \text { Dimensions } & 53 / 4 \mathrm{H} \times 163 / 4 \mathrm{~W} \times 141 / 2 \mathrm{D}\end{array}$
Weight 31 tbs .
Inputs I phono; 2 tape; 1 tuner; 1 aux
Power $\quad 60$ watts continuous into 8 ohms from 20 Hz to 20 kHz at no more than 0.03\% THD
IM $\quad 0.06 \%$ at 60 watts
Response $\quad 1 \mathrm{~Hz}$ to $140 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$
Sensitivity 2.2 mV (phono); 130 mV '(high level)
Overload $\quad 22.5 \mathrm{mV}$ (phono)
$\mathrm{S} / \mathrm{N} \quad 88 \mathrm{~dB}$ (phono); 100 dB (aux) (Aweighted)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Bass control $\pm 12 \mathrm{~dB}$ at 20 Hz
Treble $\quad \pm 12 \mathrm{~dB}$ at 2 akHz
High filter $\quad 12 \mathrm{~dB}$ /octave above 6 kHz
Low fitter $\quad 12 \mathrm{~dB}$ /octave below 18 Hz
Features Two-way tape dubbing; separable power and preamp; DC-coupled 4 -stage phono preamp; detented controls; capacitance matching switch; tape monitor LED; tone defeat switch; twin power supplies; variable bass/treble hinge points

## Citation 175 Preamplifier

$\begin{array}{ll}\text { Price } & \$ 175 \\ \text { Dimensions } & 43 / 4 \mathrm{H} \times 16 \mathrm{~W} \times 120\end{array}$
Weight 20 lbs
Weight 20 lbs
Inputs 2 phono; 2 tape; 1 tuner, 3 aux
Response 3 Hz to $270 \mathrm{kHz}, \pm 1.5 \mathrm{CB}$
Output 14 V
THD $0.002 \%$
IM 0.0025\%
Sensitivity 2.8 mV (phono); 200 mV (high level)
Overload 180 mV (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
High filter $\quad 12 \mathrm{~dB}$ /octave above 8 kHz
Low filter $\quad 12 \mathrm{~dB} /$ octave below 20 Hz
Features One-way tape dubbing; two-way tape dubbing; four-stage, fully discrete phono preamp; detented controls; two preamp sutputs

## Models also available

Citation 19 Power Amplifier, $\$ 499$; hk-503 Integrafed Amplifler, \$279

HEATHKIT
Heath Co.
Benton Harbor, Mich. 49022

AA-1640 Power Amplifier
Price $\$ 450$ (kit)
Dimensions $71 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 18 \mathrm{D}$
Weight $\quad 58 \mathrm{lbs}$.
Power 200 watts ( 23 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.1 \%$ THD $0.1 \%$ at 200 watts

Response $\quad 7 \mathrm{~Hz}$ to $50 \mathrm{kHz},-1 \mathrm{~dB}$
S/N $\quad 100 \mathrm{~dB}$ at 200 watts
Features Optional peak-responding meters

| AP-1800 | Preamplifier |
| :---: | :---: |
| Price | \$379.95 (kit) |
| Dimensions | $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 111 / 4 \mathrm{D}$ |
| Weight | 20 lbs . |
| Inputs | 3 phono; 2 tape; 1 tuner; 2 aux |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| Output | 9 V |
| THD | 0.03\% |
| IM | 0.02\% |
| Sensitivity | $100 \mu \mathrm{~V} / 200 \mu \mathrm{~V} / 400 \mu \mathrm{~V}$ (selectable); (phono); 200 mV (high level) |
| Overload | 200 mV (phono) |
| Bass control | $\pm 12 \mathrm{~dB}$ at 20 Hz |
| Treble | $\pm 12 \mathrm{~dB}$ at 20 kHz |
| High filter | 12 dB /octave above $6 / 12 \mathrm{kHz}$ (selectable) |
| Low filter | 12 dB /octave below $20 / 50 \mathrm{~Hz}$ (selectable) |

AA-1600 Power Amplifier
Price $\quad \$ 359.95$ (kit)
Dimensions $71 / 6 \mathrm{H} \times 19 \mathrm{~W} \times 13 \mathrm{D}$
Weight $\quad 38 \mathrm{lbs} .4 \mathrm{oz}$.
Power $\quad 1.25$ watts ( 21 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
IM $\quad 0.05 \%$ at 125 watts
Response $\quad 7 \mathrm{~Hz}$ to 50 kHz , $\pm 1 \mathrm{~dB}$
S/N $\quad 100 \mathrm{~dB}$
Features Optional oak finish cabinet, $\$ 34.95$; preassembled amplifier and power supply circuit
boards; rack-mount or free standing

## Models also available

AA-1515 Power Amplifier, $\$ 300$ (kit); AP-1615 Preamplifier, $\$ 139.95$ (kit)

## HITACHI

Hitachi Sales Corp. of America
401 W. Artesia Blvd.
Compton, Calif. 90220

| HMA-3300 Power Amplifier |  |
| :--- | :--- |
| Price | $\$ 800$ |
| Dimensions | $71 / 3 \mathrm{H} \times 171 / \mathrm{sW} \times 16 \mathrm{D}$ |
| Weight | 53 lbs |
| Power | 200 watts ( 23 dBW ) continuous |
|  | into 8 ohms from 20 Hz to $20 \mathrm{kH} /$ |
|  | at no more than $0.1 \% \mathrm{THD}$ |
| IM | $0.05 \%$ at 100 watts |
| Response | 20 Hz to $20 \mathrm{kHz} \pm 0.5 \mathrm{~dB}$ |
| $\mathrm{~S} / \mathrm{N}$ | $110 \mathrm{~dB}(1 \mathrm{HF} \mathrm{A-weighted} \mathrm{re} 200$ |
|  | watts) |
| Features | Class G design (400 watts $\times 2)$; in- |
| frasonic filter |  |

frasonic filter

| HA-5700 | Integrated Amplifier |
| :--- | :--- |
| Price | $\$ 429.95$ |
| Power | 50 watts (17 dBW ) continuous into |
|  | 8 ohms from 20 Hz to 20 kHz at no |
|  | more than $0.02 \% \mathrm{THD}$ |
| Response | 5 Hz to $100 \mathrm{kHz},+0,-1 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono) |
| $\mathrm{S} / \mathrm{N}$ | 83 dB (phono); 90 dB (aux) |
| Bass control | $\pm 9 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 9 \mathrm{~dB}$ at 10 kHz |
| Low filter | $6 \mathrm{~dB} /$ octave below 20 Hz |
| Features Power MOSFET output devices; |  |
| LED power indicators |  |

## HCA-8300 Preamplifier

Price $\quad \$ 350$
Dimensions $6 H \times 171 / 8 \mathrm{~W} \times 121 / 8 \mathrm{D}$
Weight $\quad 14$ tbs. 5 oz .

| Inputs | 2 phono; 2 tape; tuner; 2 aux |
| :---: | :---: |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| Output | 1 V |
| THD | 0.01\% |
| IM | 0.01\% |
| Sensitivity | 2 mV (phono); 6 mV (high level) $(50 \mathrm{~K})$ (50K) |
| Overioad | 400 mV (phono) ( 1 kHz ) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| Bass control | $\pm 10 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ |
| High filter | $6 \mathrm{~dB} /$ octave above 8 kHz |
| Low filter | 12 dB /octave below 20 Hz |
| Features | Two-way tape dubbing; gain se |
| controls ( -5 dB defeat switche | , $-10 \mathrm{~dB},-20 \mathrm{~dB}$ ); tone furnover s; phono 1 level control |

HMA-6500 Power Amplifier Price $\$ 350$

| Dimensions | $6 \mathrm{H} \times 171 / \mathrm{BW} \times 121 / 16 \mathrm{D}$ |
| :--- | :--- |
| Weight | 20 lbs. 11 oz. |
| Power | 50 watts (17 dBW) continuous into |
|  | 8 ohms from 20 Hz to 20 kHz at no |
|  | more than $0.02 \% \mathrm{THD}$ |
| Response | 5 Hz to $100 \mathrm{kHz},+0,-1 \mathrm{~dB}$ |
| $\mathrm{~S} / \mathrm{N}$ | 115 dB |
| Features | Power MOSFET output devices; |
| power meters |  |

power meters
HA-4500 Integrated Amplifier
Price $\$ 249.9$
$\begin{array}{ll}\text { Dimensions } & 43 / \mathrm{HH} \times 17 \mathrm{~W} \times 10 \mathrm{mD} \\ \text { Weight } & 16 \mathrm{lbs} 5 \mathrm{oz} . \\ \text { Power } & 40 \text { watts ( } 16 \mathrm{dBW} \text { ) continuous into }\end{array}$
$\begin{array}{ll}\text { Power } & 40 \text { watts ( } 16 \mathrm{dBW} \text { ) continuous into } \\ & 8 \text { ohms from } 20 \mathrm{~Hz} \text { to } 20 \mathrm{kHz} \text { at no }\end{array}$ more than $0.05 \%$ THD
Response $\quad 10 \mathrm{~Hz}$ to $40 \mathrm{kHz},+0,-1 \mathrm{~dB}$
Sensitivity $\quad 2.5 \mathrm{mV}$ (phono)
Overload 250 mV (phono)
S/N $\quad 75 \mathrm{~dB}$ (phono)
Bass control $\pm 10 \mathrm{~dB}$ at 100 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz
Features Intrasonic filter ( 12 dB /octave be-
low 20 Hz ): LED power indicators

| C Integrated Amplifier |  |
| :--- | :--- |
| Price | $\$ 795$ |
| Dimensions | $21 / 4 \mathrm{H} \times 181 / \mathrm{bW} \times 81 / 2 \mathrm{D}$ |
| Weight | 10 lbs. |
| Inputs | 2 phono; 2 tape; 1 tuner; 1 aux |
| Power | 50 watts (17 dBW) continuous |
| lM | $0.01 \%$ |
| Response | 15 Hz to $150 \mathrm{kHz},+0,-3 \mathrm{~dB}$ |
| Sensitivity | $7 / 26 \mathrm{mV}$ (phono; dual gain); 630 |
|  | mV (high level) |
| Overload | $30 / 110 \mathrm{mV}$ (phono) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Low filter | $12 \mathrm{~dB} / 0 \mathrm{ctave}$ below 15 Hz |
| Features | Two-way tape dubbing; includes |
| moving-coil cartridge amp |  |

A Line Preamplifier/Equalizer Price $\$ 545$
Dimensions $13 / 4 \mathrm{H} \times 123 / 4 \mathrm{~W} \times 61 / 2 \mathrm{D}$
Weight 7 lbs.
Inputs 2 tape; 3 line
Power $\quad 50$ watts ( 17 dBW ) continuous
Response $\quad 15 \mathrm{~Hz}$ to $150 \mathrm{kHz},+0,-3 \mathrm{~dB}$
Sensitivity 630 mV (high level)
Features Two-way tape dubbing; contains 3-
band equalizer with funable parameters; companion unit to Model T

T Phono Preamplifier
$\begin{array}{ll}\text { Price } & \$ 435 \\ \text { Dimensions } & 13 / 4 \mathrm{H} \times 123 / 4 \mathrm{~W} \times 61 / 2 \mathrm{D}\end{array}$
Weight 6 lbs
Inputs 2 (1 moving-magnet; 1 moving-coll) aux
IM $\quad 0.01 \%$
Sensitivity $\quad 7 / 26 \mathrm{mV}(\mathrm{MM}) ; 0.15 / 0.57 \mathrm{mV}$ (MC) (phono; dual gain)

Overload $\quad 30 / 110 \mathrm{mV}$ (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Features Input capacitance selection for car-
tridge loading; output level control
Models also available
245, \$595

JVC
U.S. JVC Corp.

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

M-7050 Power Amplifier
$\begin{array}{ll}\text { Price } & \$ 1,450 \\ \text { Dimensions } & 65 / 16 \mathrm{H} \times 169 / 16 \mathrm{~W} \times 165 / 16 \mathrm{D}\end{array}$
Weight $\quad 63 \mathrm{lbs} .1 \mathrm{oz}$.
Power $\quad 150$ watts ( 21.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.003 \%$ THD
$0.003 \%$ at 150 watts
DC to $300 \mathrm{kHz},+0,-3 \mathrm{~dB}$
$\begin{array}{ll}\text { Response } & D C \text { to } 300 \mathrm{kHz},+0,-3 \mathrm{~dB} \\ \mathrm{~S} / \mathrm{N} & 120 \mathrm{~dB}(\mathrm{IHF}-\mathrm{A} \text { weighted) }\end{array}$
Features Class D power supply: 12 LED
peak-power indicators

| EQ-7070 | Preamplifier |
| :---: | :---: |
| Price | \$950 |
| Dimensions | $21 / 2 H \times 161 / 2 W \times 141 / 8 D$ |
| Weight | 16 lbs 8 oz . |
| Inputs | 5 phono; 2 tape; tuner; aux |
| Output | 15 V |
| THD | 0.003\% |
| Sensitivity | 1.8 mV (phono); 160 mV (high level) |
| Overioad | 300 mV (phono) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |

A-X9 Integrated Amplifier
Price $\$ 900$
Dimensions $61 / 4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 165 / 8 \mathrm{D}$
Weight $\quad 36 \mathrm{lbs} .8 \mathrm{oz}$.

Inputs
Power
2 phono; 2 tape; 1 tuner; ' 1 aux 100 watts ( 20 dBW ) continuous Into 8 ohms from 20 Hz to 20 kHz at no more than $0.005 \%$ THD
IM
Response
Sensitivity
$0.002 \%$ at 100 watts
DC to $200 \mathrm{kHz},+0,-3 \mathrm{~dB}$
2.5 mV (phono); 200 mV (high level)
Overload
S/N
350 mV (phono)
85 dB (phono); 110 dB (aux) (IHF A-weighted)
Phono EQ $\quad 20 \mathrm{HHz}$ to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 8 \mathrm{~dB}$ at 100 Hz
Treble $\quad \pm 8 \mathrm{~dB}$ at 10 kHz
Low filter $\quad 6 \mathrm{~dB} /$ octave below 18 Hz
Features Two-way tape dubbing; super-A amp; input for moving-coil and moving-magnet cartridges

A-MI Integrated Amplifier
Price $\quad \$ 600$
Dimensions $311 / 16 \mathrm{H} \times 91 / 16 \mathrm{~W} \times 103 / 16 \mathrm{D}$ Weight $\quad 9 \mathrm{lbs} .3 \mathrm{oz}$.
Inputs $\quad 1$ phono; 1 tape; 1 tuner; 1 aux
Power $\quad 50$ watts ( 17 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.03 \%$ THD
Response $\quad D C$ to $70 \mathrm{kHz},+0,-3 \mathrm{~dB}$
Sensitivity $\quad 2.5 \mathrm{mV}$ (phono); 150 mV (high level)
Overload 200 mV (phono)
$\mathrm{S} / \mathrm{N} \quad 82 \mathrm{~dB}$ (phono), 105 dB (aux) (IHF A-weighted)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$
Bass control $\pm 8 \mathrm{~dB}$ at 100 Hz
Treble $\pm 8 \mathrm{~dB}$ at 10 kHz
P-3030 Preamplifier
Price $\$ 440$
Dimensions $23 / 6 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 133 / 4 \mathrm{D}$
Weight $\quad 12 \mathrm{lbs} .13 \mathrm{oz}$.
Inputs 3 phono; 2 tape; tuner; aux
Response 10 Hz to $40 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Output 1 V
THD $\quad 0.005 \%$
Sensitivity $\quad 2 \mathrm{mV}$ (phono); 140 mV (high level)
Overload 300 mV (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$
Bass control $\pm 8 \mathrm{~dB}$ at 100 Hz
Treble $\quad \pm 8 \mathrm{~dB}$ at 10 kHz
Low filter $\quad 6 \mathrm{~dB} /$ octave below 18 Hz
Features Moving-coil phono input

| JA-S44 In | tegrated Amplifier |
| :---: | :---: |
| Price | \$340 |
| Dimensions | $6 \mathrm{H} \times 163 / 4 \mathrm{~W} \times 125 / 6 \mathrm{D}$ |
| Weight | 22 lbs . |
| Inputs | 2 tape; tuner; aux |
| Power | 45 watts ( 16.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.02 \%$ THD |
| 1 M | 0.01\% at 45 watts |
| Response | 5 Hz to $100 \mathrm{kHz},+0,-2 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono); 160 mV (high level) |
| Overload | 200 mV (phono) |
| S/N | 80 dB (phono); 100 dB (aux) (IMF A-weighted) |
| Phono EQ | $20 . \mathrm{Hz}$ to $20 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$ |
| Low filter | $6 \mathrm{~dB} /$ octave below 18 Hz |
| Features | Two-way tape dubbing; 2 power |

A-S3 Integrated Amplifier
Price $\$ 150$

Dimensions $31 / 2 H \times 169 / 16 \mathrm{~W} \times 111 / 32 \mathrm{D}$
Weight $\quad 11 \mathrm{lbs} .3 \mathrm{oz}$
Inputs 1 phono; 1 tape; 1 tuner
Power $\quad 20$ watts ( 13 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.08 \%$ THD
$0.08 \%$ at 20 watts
20 Hz to $40 \mathrm{kHz},+1,-2 \mathrm{~dB}$ 2.5 mV (phono); 150 mV (high level)


GLI 1010


JVC M-7050


Hitachi HCA 830D

| L-07M Mark Two Mono PowerAmplifier |  |
| :---: | :---: |
| Price | \$600 |
| Dimensions | $63 / 32 \mathrm{H} \times 7 \% / 6 \mathrm{~W} \times 1511 / 32 \mathrm{D}$ |
| Weight | 30 lbs .11 oz . |
| Power | 150 watts ( 21.75 dBW ) continuous |
|  | into 8 ohms from 20 Hz to 20 kH |
|  | at no more than 0.003\% THD |
| IM | $0.003 \%$ at 150 watts |
| Response | DC to $600 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Features | High-speed circuitry |

## KA-701 Integrated Amplifier

Price $\$ 499$
Dimensions $66 / 32 \mathrm{H} \times 1710 / 32 \mathrm{~W} \times 166 / 32 \mathrm{D}$
Weight 29 lbs. 12 oz .
Inputs 2 phono; 2 tape; 1 tuner, 1 aux
Power $\quad 80$ watts ( 19 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.2 \%$ THD
IM
Response $\quad D C$ to $400 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Sensitivity 2.5 mV (phono); 200 mV (high level)
Overload 220 mV (phono)
S/N 89 dB (phono); 110 dB (aux)
Phono EO $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 7.5 \mathrm{~dB}$ at 200 Hz
Treble $\pm 7.5 \mathrm{~dB}$ at 3 kHz
High fliter $\quad 6 \mathrm{~dB}$ /octave above 8 kHz
Features One-way tape dubbing; high-speed design; dual power supply

KA-601 Integrated Amplifier
Price $\$ 399$
Dimensions $66 / 32 \mathrm{H} \times 1710 / 32 \mathrm{~W} \times 166 / 32 \mathrm{D}$
Weight $\quad 26 \mathrm{lbs} .6 \mathrm{oz}$.
Inputs 2 phono; 2 tape; 1 tuner; 1 aux
Power 60 watts ( 17.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.02 \%$ THD
IM
$0.004 \%$ at 60 wats
Sensitivity 2.5 mV (phono): 200 mV (high level)
Overload 220 mV (phono)
S/N 93 dB (phono); 105 dB (aux)
Phono EQ $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz},+0.02 \mathrm{~dB}$
Bass control $\pm 7.5 \mathrm{~dB}$ at 100 Hz
Treble $\quad \pm 7.5 \mathrm{~dB}$ at 10 kHz
Features $\quad \hat{O} n e-w a y ~ t a p e ~ d u b b i n g ; ~ h i g h-s p e e d ~$ design; dual power supply

## KA-305 Integrated Amplifier <br> Price \$199

Dimensions $515 / 32 \mathrm{H} \times 156 / 8 \mathrm{~W} \times 1125 / 32 \mathrm{D}$
Weight 15 lbs .
Inputs 1 phono; 1 tape; 1 tuner; 1 mic; 1 aux
Power $\quad 40$ watts ( 16 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.08 \%$ THD

Metron M-200


Kenwood L-07C MkII


IM
Response
Overioad
S/N
Phono EO
Bass control
Treble
Features
$0.004 \%$ at 40 watts
3 Hz to $100 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ 260 mV (phono)
83 dB (phono); 105 dB (aux)
20 Hz to $20 \mathrm{kHz},+0.4 \mathrm{~dB}$
$\pm 10 \mathrm{~dB}$ at 100 Hz
$\pm 10 \mathrm{~dB}$ at 10 kHz
Mic mixing

## Models also available

L-09M Mono Power Amplifier, \$700; KA-801 Integrated Amplifier, \$699; L-05M Mark Two Power Amplifier, $\$ 425$; KA-405 Integrated Amplifier, $\$ 299$; 600 integrated Amplifier, $\$ 550$; KA-3700 Integrated Amplifier, \$159

## LUXMAN

Lux Audio of America, Ltd. 160 Dupont St.
Plainview, N.Y. 11803

## 5M-21 Laboratory Reference

Series Power Amplifier

| Price | $\$ 1,295$ |
| :--- | :--- |
| Dimensions | $53 / 4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 16 \mathrm{D}$ |

ons $534 \mathrm{H} \times 173 / 4 \times 160$
Weight 42 lbs .
Power 100 watts (20 dBW) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.008 \%$ THD
IM
Response $\quad D C$ to $100 \mathrm{kHz},+0,-1 \mathrm{~dB}$
S/N
D to $100 \mathrm{kHz},+0,-1 \mathrm{~dB}$
Features Direct-current, direct-coupled design; illuminated power meters; separate power supplies for each channel; ampllier- and speakerprotection circuitry; terminals for electrostatic speakers; available without meters as $5 \mathrm{M}-20$ at \$1,095

| 5L-15 Laboratory Reference |  |
| :---: | :---: |
| Series Integrated Amplifier |  |
| Price | \$995 |
| Dimensions | $53 / 4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 16 \mathrm{D}$ |
| Weight | 29 lbs. 50 oz . |
| Inputs | Phono; 2 tape; funer; 2 aux |
| Power | 80 watts ( 19 dBW ) continuous into |
|  | 8 ohms from 20 Hz to 20 kHz at no more than 0.02\% THD |
| 1 M | 0.02\% at 80 watts |
| Response | DC to $100 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Sensitivity | 3 mV (phono); 300 mV (high level) |
| S/N | 80 dB re 2.5 mV (phono); 100 dB (aux) (IHF A-weighted) |
| Phono EO | $\pm 0.2 \mathrm{~dB}$ (RIAA) |
| Low filter | Active below 17 Hz (infrasonic) |

Features Two-way tape dubbing; separable power amp and preamp; volume attenuator for instant muting; terminals for electrostatic speakers: illuminated power meters with adjustable sensitivity; direct-current, direct-coupled design

## 5C-50 Laboratory Reference <br> Series Preamplifier

Price $\$ 895$
Dimensions $4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 16 \mathrm{D}$
Weight
Inputs 3 phono; 2 tape; tuner; aux
Response $\quad 0.5 \mathrm{~Hz}$, to $200 \mathrm{kHz},+0,-0.5 \mathrm{~dB}$
Output $\quad 1 \mathrm{~V}$ (rated) ( 18 V max)
THD
IM
Sensitivity 2.5 mV (phono); 150 mV (high
Overload level)
300 mV (phono)
High filter $\quad \frac{12}{}$ dB/octave above $12 / 18 \mathrm{kHz}$ (switchable); infrasonic notch with sharp-to-broad notch selector
Low filter Below 7 Hz or 4 Hz
Features Two-way tape for dubbing; Lux linear equalizer for adjustments of phono response; volume attenuator for instant muting; phono inputs for moving-coil cartridge; direct-current, directcoupled design

L-10 Integrated Amplifier
Price $\$ 795$
Dimensions $78 \mathrm{~mm} \mathrm{H} \times 438 \mathrm{~mm} \mathrm{~W} \times 363 \mathrm{~mm}$ D Weight $\quad 23 \mathrm{lbs} 1 \mathrm{oz}$
Inputs 1 phono; 2 tape; 1 tuner; 2 aux
Power $\quad 55$ watts ( 17.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.015 \%$ THD
IM
DC 0 100
Sensitivity $\quad 3 \mathrm{mV}$ (phono); 300 mV (high level) S/N

Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Low filter $\quad 20 \mathrm{~Hz}$; infrasonic filter below 10 Hz Features One-way tape dubbing; two-way dubbing; separable power and preamp; REC OFF position on tape selector

## L-3 Integrated Amplifier <br> \section*{Price $\$ 395$}

Inputs Phono; 2 tape; tuner; aux
Power $\quad 35$ watts ( 15.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.04 \%$ THD IM 0.08\%
Response $\quad 30 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ (phono); 15 Hz to $60 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ (high level)
Sensitivity 2.5 mV (phono); 150 mV (high level)
S/N $\quad 87 \mathrm{~dB}$ (phono) (A-weighted re 10 mV )
Bass control $\pm 11 \mathrm{~dB}$
Treble $\quad \pm 11 \mathrm{~dB}$
High filter Above 7 kHz
Low filter Below 25 Hz

## Models also available

L-11 Integrated Amplifier, \$895; M-12 Power Amplifier, \$795; B-12 Mono Power Amplifier, \$645; C-12 Preamplifier, \$645; L-5 Integrated Amplifier, \$595

MARANTZ
Marantz Co., Inc.
20525 Nordhoff St.
Chatsworth, Calif. 91311

## A Note on Prices

Prices shown in these pages are manufacturers' or importers ${ }^{\circ}$ nationally advertised values, updated as is feasible by press time.

PM-700 Integrated
Amplifier/Equalizer
Price $\$ 420$
Dimensions $53 / 4 \mathrm{H} \times 163 / 6 \mathrm{~W} \times 13 \mathrm{D}$
Weight 20 lbs 14 oz
Inputs 2 phono; 2 tape; 1 tuner; 1 aux
Power 87 watts (19.5 dBW) continuous into 4 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
$0.05 \%$ at 87 watts
IM
Response 10 Hz to $70 \mathrm{kHz}, \pm 1.0 \mathrm{~dB}$
Sensitivity 2.8 mV (phono); 150 mV (high level)
Overioad 220 mV (phono)
$\mathbf{S} / \mathrm{N} \quad 92 \mathrm{~dB}$ (phono); 98 dB (aux) (IHF A-weighted re 87 watts)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
High filter 6 dB /octave above 9 kHz
Low filter $\quad 6 \mathrm{~dB} /$ octave below 20 Hz
Features One-way tape dubbing; two-way tape dubbing; dual LED power meters; dual 5 -band graphic equalizer; true power DC amplifier; mov-ing-coil cartridge head amp; independent record mode selector; detented volume control

## PM-300 Integrated <br> Amplifier/Equalizer

| Price | $\$ 225$ |
| :--- | :--- |
| Dimensions | $53 / 4 \mathrm{H} \times 163 / 8 \mathrm{~W} \times 99 / 16 \mathrm{D}$ |
| Weight | $13 \mathrm{lbs} 120 z$ |


| Weight <br> Inputs | 13 lbs 12 oz. |
| :--- | :--- |
|  | 1 phono; 1 tape; 1 tuner; 1 aux |

Power $\quad 38$ watts ( 15.75 dBW ) continuous into 4 ohms from 20 Hz to 20 kHz at no more than $0.08 \%$ THD
IM $\quad 0.08 \%$ at 38 watts
Response 15 Hz to $50 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$
Sensitivity 2.8 mV (phono); 150 mV (high level)
Overload $\quad 130 \mathrm{mV}$ (phono)
S/N 87 dB (phono); 98 dB (aux) (Aweighted re 38 watts)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 100 Hz
Midrange $\quad \pm 6 \mathrm{~dB}$ at 0.7 kHz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz
Low filter $\quad 6 \mathrm{~dB} /$ octave below 20 Hz
Features One-way tape dubbing; dual power meters; true power direct coupled; detented volume control; loudness control

## Models also available

PM-500 Integrated Amplifier/Equalizer, $\$ 330$

## McINTOSH

Mcintosh Laboratory, Inc.
2 Chambers St.
Binghampton, N.Y. 13903

## C-32 Preamplifier

Price $\$ 1,499$
Dimensions $5 \mathrm{H} \times 16 \mathrm{~W} \times 13 \mathrm{D}$
Weight 27 lbs
Inputs 2 phono; 3 tape; tuner; aux
Response 20 Hz to $20 \mathrm{kHz},+0,-0.25 \mathrm{~dB}(10$
Hz to $100 \mathrm{kHz}, \pm 0.5 \mathrm{~dB})$
Output
2.5 V (10V max)
0.05\%

Sensitivity 2 mV (phono); 250 mV (high level)
Overload 100 mV (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
High filter $12 \mathrm{~dB} / o c t a v e$ above 7 kHz
Low filter $\quad 12 \mathrm{~dB}$ /octave below 50 Hz
Features Three-way tape dubbing; separate listen and record channels; volume expander; 12-watt-per-channel headphone-monitor amplifier; precision-tracking step attenuator volume control; loudness contour; 5 -band equalizer ( +12 dB at 30 $\mathrm{Hz}, 150 \mathrm{~Hz}, 500 \mathrm{~Hz}, 1.5 \mathrm{kHz}, 10 \mathrm{kHz}$ ); electronic switching; Panloc mounting; turntable actuated system on/ off power control circuit

MA-6200 Integrated Amplifier

## Price $\$ 1,199$

Dimensions $57 / 16 \mathrm{H} \times 16 \mathrm{~W} \times 13 \mathrm{D}$
Weight $\quad 30 \mathrm{lbs}$.
inputs 2 phono; 1 tuner; 2 aux
Power $\quad 75$ watts ( 19 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than 0.05\% THD
IM $\quad 0.05 \%$ max, 250 mW to rated powe
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz},+0,-0.5 \mathrm{~dB}$
Sensitivity 2 mV (phono); 250 mV (high level)
$S / N$
85 dB (phono); 100 dB (aux) (Aweighted re 75 watts)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Features Two-way tape dubbling; separable power and preamp; Power-Guard clipping-prevention circuit; output limit indicators; heavy duty, timecontrolled speaker relay; turntable-actuated system on/off power control circuit; 5-band equalizer ( $\pm 12 \mathrm{~dB}$ at $30 \mathrm{~Hz}, 150 \mathrm{~Hz}, 500 \mathrm{~Hz}, 1.5 \mathrm{kHz}$, 10 kHz )

MC-2200 Power Amplifier
Price $\$ 1,099$
Dimensions $7 \mathrm{H} \times 16 \mathrm{~W} \times 145 / \mathrm{BD}$
Weight 73 lbs .
Power $\quad 200$ watts ( 23 dBW ) continuous into $1,2,4,8$ ohms from 20 Hz to 20 kHz at no more than $0.1 \%$ THD $0.1 \%$ max, 250 mW to rated power
IM
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz},+0,-0.25 \mathrm{~dB}(10$ Hz to $100 \mathrm{kHz},+0,-3 \mathrm{~dB}$ )
S/N $\quad 95 \mathrm{~dB}$ (unweighted re 200 watts)
Features Full power output for 1, 2, 4, 8
ohms; switchable for 240-watt mono operation; Power-Guard clipping-prevention circuit; outputlimit indicators; relay rack-mounting

## C-29 Professional Preamplifier

 Price $\$ 949$Dimensions $57 / 16 \mathrm{H} \times 16 \mathrm{~W} \times 13 \mathrm{D}$
Weight 19 lbs.
Inputs 2 phono; 2 tape; 1 tuner; 1 mic; 2
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz},+0,-0.5 \mathrm{~dB}$
Output $\quad 2.5 \mathrm{~V}$
THD 0.02\%
IM $\quad 0.02 \%$
Sensitivity $\quad 2.2 \mathrm{mV}$ (phono); 0.25 mV (high
Overioad $\quad 100 \mathrm{mV}$ (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Bass control $\pm 20 \mathrm{~dB}$ at 20 Hz
Treble $\quad \pm 18 \mathrm{~dB}$ at 20 kHz
High filter $\quad \frac{1}{12} \mathrm{~dB}$ /octave above 7 kHz
Low filter $\quad 1.2 \mathrm{~dB} /$ octave below 50 Hz
Features Two-way tape dubbing; low-noise phono-amp; loudness contour; precision-step attenuator volume control; speaker swilching; switch-type tone controls; Panloc mounting; turnta-
ble actuated system on/off power control circuit
MC-502 Power Amplifier
Price $\$ 699$
Dimensions $35 / 3 \mathrm{H} \times 16 \mathrm{~W} \times 141 / 2 \mathrm{D}$
Weight 27 lbs .
Power $\quad 75$ watts ( 19 dBW ) continuous into 4 ohms from 20 Hz to 20 kHz at no more than 0.02\% THD

IM

Response
S/N $0.02 \%$ max, 250 mW to rated power
20 Hz to $20 \mathrm{kHz}+0,-0.25 \mathrm{~dB}$
Features Power-Guard clipping-prevention
circuit; output limit indicators; switchable for 150 -
watt mono operation; speaker on/off switch

## Models also available

MC-2300 Power Amplifier, \$1,799; MC-2205 Power Amplifier, \$1,499; MC-2125 Power Amplifier, \$1,099; MC-2120 Power Amplifier, $\$ 899$; C-27 Preamplifier, $\$ 749$

| MCS ${ }^{\text {* }}$ SERIES |  |
| :---: | :---: |
| J.C. Penney |  |
| 1301 Ave. of the Americas |  |
| New York | k, N.Y. 10019 |
| 3865 Int | grated Amplifier |
| Price | \$400 |
| Dimensions | $51 / 2 \mathrm{H} \times 163 / 32 \mathrm{~W} \times 1113 / 160$ |
| Welght | 41 lbs |
| Inputs | 1 phono; 1 tape; 1 tuiner; 1 mic; aux |
| Power | 65 watts ( 18 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than 005\% THD |
| IM | $0.02 \%$ at 65 watts |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono) |
| Overload | 360 mV (phono) |
| S/N | 86 dB (phono), 100 dB (aux) ( A weighted re 1 watt) |
| Phono Ea | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Bass control | $\pm 9 \mathrm{~dB}$ |
| Treble | $\pm 9 \mathrm{~dB}$ |
| Features | One-way tape dubbing, two-way |
| dual separable power and preamp; |  |
| monitor; dual power supply; power meters ca |  |

## 3835 Integrated Amplifier

| Price | \$200 |
| :---: | :---: |
| Dimensions | $51 / 2 \mathrm{H} \times 169 / 16 \mathrm{~W} \times 113 / 16 \mathrm{D}$ |
| Weight | 24 lbs . |
| Inputs | 1 phono; 1 tape; 1 tuner; 1 mic; ? aux |
| Power | 35 watts ( 15.5 dBW ) continuous into 8 ohms from 10 Hz to 30 kHz at no more than $0.08 \%$ THD |
| IM | 0.08\% at 35 watts |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono) |
| Overload | 170 mV (phono) |
| S/N | 75 dB (phono) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Bass control | $\pm 8 \mathrm{~dB}$ |
| Features | One-way tape dubbing; Iwo-way |
| tape dubbing; | parable power and preamp |

## Models also available

3845 Integrated Amplifier, \$240

MEGA
Mega Electronics, Inc.
12737 Garvey Ave.
Baldwin Park, Calif. 91706

Add-On Power Amplifier
Dimensions $41 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 17 \mathrm{D}$
Power 150 watts ( 22 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
IM $\quad 0.05 \%$ at 150 watts
S/N $\quad 120 \mathrm{~dB}$
Features Can be used with inexpensive receivers to increase power output

## MERIDIAN <br> Anglo-American Audio <br> P.O. Box 653 <br> Buffalo, N.Y. 14240

103D Power Amplifier
Price $\$ 699$
Dimensions $4 \mathrm{H} \times 11 \mathrm{~W} \times 12 \mathrm{D}$

Weight 26 lbs

Power

IM
Response
S/N
Features
each channel
101 Preamplifier
Price $\$ 465$
Dimensions $2 H \times 51 / 2 W \times 121 / 2 \mathrm{D}$
Weight 4 lbs
Inputs 1 phono; 1 lape; 1 iuner
Response $\quad 5 \mathrm{~Hz} 1050 \mathrm{kHz},+0.5 \mathrm{~dB}$
Output $\quad 775 \mathrm{mV}$
THD $0.01 \%$
IM $\quad 0.01 \%$
Sensitivity $\quad 1.4 \mathrm{mV}$ (phono): 450 mV (high level)
Overload $\quad 160 \mathrm{mV}$ (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz},+0.5 \mathrm{~dB}$
Features One-way tape dubbing. choice of input modules to optimize phono cartridge response

Models atso available
103 Power Amplifier. \$485: 105 Power Amplifier, \$449

## METEOR

Hammond Industries, Inc.
155 Michael Drive
Syossett, N.Y. 11791

Powermaster 90 Power Amplifier
Price $\$ 499$
Dimensions $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 131 / 2 \mathrm{D}$
Weight $\quad 20 \mathrm{lbs}$
Power $\quad 85$ watts ( 19.25 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.1 \%$ THD
Response 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
$\mathrm{S} / \mathrm{N} \quad 85 \mathrm{~dB}$ (uriweighled re 85 watis)
Features Rack-mount style with handles
Powermaster 75 Power Amplifier
Price $\$ 449$
Dimensions $7 \mathrm{H} \times 93 / 4 \mathrm{~W} \times 121 / 2 \mathrm{D}$
Welght 20 tos
Power $\quad 85$ watts ( 19.25 dEW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.1 \%$ THD
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.5 \mathrm{cB}$
S/N $\quad 85 \mathrm{~dB}$ (unweighted re 85 watts)
Features Portable format; front panel gain
and tone controls; tone defeat switch, meters

## METRON

Cerwin-Vega, Inc.
12250 Montague St.
Arleta, Calif. 91331


Features Sample: and-hold peak-reading meters; step attenuator controls; forced-air coaling

PR- 1 Preamplifier
Price $\quad \$ 500$
Dimensions $23 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 140$
Weight 15 los
Inputs 2 phono: 2 tape; tuner; mic; aux
Response 5 Hz to $200 \mathrm{kHz},+0,-3 \mathrm{~dB}$
Output 2 V . outputs 1 and $2 ; 3 \mathrm{~V}$, output 3 .
THD $0.005 \%$
IM $\quad 0.005 \%$
Sens tivity 2 mV (phono); 250 mV (high level)
Overload 230 mV (phono)
Phono EQ 30 Hz to $15 \mathrm{kHz}+0.2 \mathrm{~dB}$
Bass control +10 dB at 50 Hz
Treblz $\pm 10 \mathrm{~dB}$ at 10 kHz
Low tilter $\quad 18 \mathrm{~dB}$ /octave below 20 Hz
Features Precision-step attenuators on ail controls: complete two-way tape dubbing capabil-
ity; muting switch

## Models also available

M-200 Power Amplifier, $\$ 600$

## MITSUBISHI

Melco Sales, Inc.
3030 E. Victoria
Compton, Calif. 90221

## DA-A15DC Power Amplifier

Price $\$ 700$
Dimensions $63 / 4 \mathrm{H} \times 163 / 4 \mathrm{~W} \times 11 \% \mathrm{D}$
Weighr 39 lbs
Power $\quad 150$ watts ( 21.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.01 \%$ THD
IM $0,008 \%$ at 150 watts
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$ S/N $\quad 123 \mathrm{~dB}$ (A-weighled re 150 watts) Features Dual monaural construction; completely separate right- and left-channel power amp will dock with preamp to provide integrated-amp configuration; DC amplifier

| M-A01 M Price | Micro'Power Amplifier $\$ 500$ |
| :---: | :---: |
| Dimensions | as $51 / 8 \mathrm{H} \times 105 / 8 \mathrm{~W} \times 95 / 6 \mathrm{D}$ |
| Weight | 22 lbs |
| Power | 70 watts ( 18.5 dBW ) continuous into 8 . ohms from 15 Hz to 20 kHz at no more than $0.01 \%$ THD |
| IM | 0.008\% at 70 watts |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$ |
| S/N | 123 dB (A-weighted re 70 watts) |
| Features | Micro-size component; peak-level |

LED, DC amplifier

M-PO1 Micro Preamplifier
Frice $\$ 370$
Dimensions $23 / 4 \mathrm{H} \times 105 / \mathrm{aW} \times 93 / 4 \mathrm{D}$
Weight 7 lbs .
Inputs 2 phono, tape, tumer; aux
Aesponse $\quad 10 \mathrm{~Hz}$ to $100 \mathrm{kHz},+0 \mathrm{~dB}$
Output $\quad 1 \mathrm{~V}$ (rated); 18V (max)
THD 0.002\%
M 0.002\%
Senslitivity 2.3 mV (phono): 150 mV (high level)
Overloac 290 mV (phono)
Phono ED 20 Hz to $20 \mathrm{kHz} \pm 02 \mathrm{~dB}$
Bass control $\pm 8 \mathrm{~dB}$ at 100 Hz
Treble $\quad+8 \mathrm{~dB}$ at 10 kHz
Low filter $\quad \overline{6}$ dB/octave below 18 Hz
Features Two-way tape dubbing; micro-size component, built-In moving-coil head amp; digital tone control with LED indication

| DA-P10 Preamplifier |  |
| :---: | :---: |
| Price | \$330 |
| Dimensions | $63 / 4 \mathrm{H} \times 163 / 4 \mathrm{~W} \times 8 \mathrm{D}$ |
| Weight | 13 lbs . |
| Inputs | 2 phono; tape; tuner; aux |
| Response | 10 Hz to $70 \mathrm{kHz},+0,-0.5 \mathrm{~dB}$ |
| Output | 1 V (rated); 9V (max) |
| THD | 0.02\% |
| IM | 0.02\% |
| Sensitivity | 2.2 mV (phono); 150 mV (high level) |
| Overioad | 270 mV (phono) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| Bass control | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| Low filter | 12 dB /octave below 18 Hz |
| Features | Off/A/B speaker switching; head- |
| phone output; | separate level controls for each |
| channel; prof | sional stepped attenuator; preamp |
| can be docked | to power amp to provide integrated- |
| amp configuration; dual monaural constructio |  |

Models also available
DA-A10DC Power Amplifier, \$470; DA-P20 Preamplifier, $\$ 30$; DAA7DC Power Amplifier, $\$ 330$

NAD
NAD (USA), Inc.
Mackintosh Lane
P.O. Box 529

Lincoln, Mass. 01773

NAD-3080 Integrated Amplifier
$\begin{array}{ll}\text { Price } & \$ 485 \\ \text { Dimensions } & 51 / 2 \mathrm{H} \times 191 / 3 \mathrm{~W} \times 153 / 50\end{array}$
$\begin{array}{ll}\text { Dimensions } & 51 / 2 \mathrm{H} \times 191 / 3 \mathrm{~W} \times 153 / 5 \mathrm{D} \\ \text { Weight } & 35 \mathrm{lbs} .\end{array}$
Inputs 1 phono; 1 tape; 1 tuner; 1 mic; 1 aux
Power $\quad 90$ watts ( 19.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.03 \%$ THD
IM $0.03 \%$ at 90 watts
Response 5 Hz to $50 \mathrm{kHz},+0,-3 \mathrm{~dB}$
Sensitivity 0.5 mV (phono); 30 mV (high level) (IHF A-standard)
Overload $\quad 200 \mathrm{mV}$ (phono) (at 1 kHz )
S/N
82 dB (phono); 80 dB (aux) (IHF A-weighted)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$
Bass control +11 or 13 dB at 50 Hz
Treble $\quad \pm 6$ or 9 dB at 10 kHz
High filter $\quad 12 \mathrm{~dB}$ /octave above 8 kHz
Low filter $\quad 12 \mathrm{~dB}$ /octave below 20 Hz
Features Two-way tape dubbing; separable
power and reamp; Holman-style preamp; in-
depéndant selection of bass and treble turnover
frequencies; output relay for speaker protection;
infrasonic filter; stability down to 2 ohms
NAD-3045 Integrated Amplifier
Price $\$ 315$
Dimensions $51 / 2 \mathrm{H} \times 177 / 10 \mathrm{~W} \times 153 / 5 \mathrm{D}$

| Weight | 26 lbs. |
| :--- | :--- |
| Inputs | 1 phono; 1 tape; 1 ituner; 1 aux |

Power $\quad 45$ watts ( 16.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
$\begin{array}{ll}\text { IM } & 0.09 \% \text { at } 45 \text { watts } \\ \text { Response } & 5 \mathrm{~Hz} \text { to } 50 \mathrm{kHz},+0,-3 \mathrm{~dB}\end{array}$
Sensitivity 0.4 mV (phono); -30 mV (high level) (IHF A standard)
Overload $\quad 200 \mathrm{mV}$ (phono) (at 1 kHz )
$\mathrm{S} / \mathrm{N} \quad 80 \mathrm{~dB}$ (phono); 80 dB (aux) (IHF A-weighted)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 50 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz
High filter $\quad 6 \mathrm{~dB}$ /octave above 7 kHz
Low filter 12 dB /octave below 20 Hz

Features One-way tape dubbing; separable power and preamp; Holman-style preamp; JHF dynamic power in excess of 100 watts per channel at 4 ohms; infrasonic filter

## Models also available <br> NAD-3060 integrated Amplifier, \$410; NAD-3030 Integrated Amplifier, \$230; NAD-3020 Integrated Amplifier, \$175 <br> \author{ | DSM Portable Power Amplifier |  |
| :---: | :---: |
| Price | \$1,297 |
| Dimensions | $91 / 2 \mathrm{H} \times 10^{1 / 2 \mathrm{~W}} \times 51 / 4 \mathrm{D}$ |
| Weight | 14 lbs . |
| Power | 15 watts ( 11.75 dBW ) continuous into 8 ohms from 60 Hz to 16 kHz at no more than $0.3 \%$ THD |
| Response | 60 Hz to $20 \mathrm{kHz},+0,-3 \mathrm{~dB}$ | <br> NAGRA <br> Nagra Magnetic Recorders, Inc. <br> 19 W. 44th St. <br> New York, N.Y. 10036

NAIM AUDIO
Audiophile Systems
5750 Rymark Court
Indianapolis, Ind. 46250

NAP-160 Power Amplifier
$\begin{array}{ll}\text { Price } & \$ 1,200 \\ \text { Dimensions } & 5 \mathrm{H} \times 17 \mathrm{~W} \times 12 \mathrm{D}\end{array}$
Weight 20 lbs .
Power $\quad 50$ watts ( 17 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than 0.02\% THD
IM $\quad 0.02 \%$ at 0.1 to 50 watts
Response 5 Hz to $40 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Features Will not limit slew rate between 5 Hz and 40 kHz ; able to drive reactive loads from $\pm 90^{\circ}$ at no appreciable change in distortion

| NAC-12 Preamplifier |  |
| :--- | :--- |
| Price | $\$ 700$ |
| Dimensions | $3 \mathrm{H} \times 5 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight | 5 lbs. |
| Inputs | Phono; tape; tuner |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | $0.02 \%$ |
| IM | $0.02 \%$ |
| Sensitivity | 0.1 mV (phono); 75 mV (high level) |
| Overload | 10 mV (phono) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |


| NAC-42 | Preamplifier |
| :--- | :--- |
| Price | $\$ 440$ |
| Dimensions | $3 \mathrm{H} \times 8 \mathrm{~W} \times 11 \mathrm{D}$ |
| Weight | 6 lbs. |
| Inputs | 1 phono; 1 tape; 1 tuner |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | $0.02 \%$ |
| IM | $0.02 \%$ |
| Sensitivity | 2.0 mV (phono); 75 mV (high level) |
| Overload | 200 mV (phono) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |

## PNAG Moving-Coil Preamplifier

Price $\$ 300$
Dimensions $2 \mathrm{H} \times 5 \mathrm{~W} \times 3 \mathrm{D}$
Weight 3 lbs .
Inputs Phono
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Output 2V
THD 0.02\%

Sensitivity $\quad 0.1 \mathrm{mV}$ (phono)
Overload

## Models also available

NAP-250 Power Amplifier, \$2,000; NAC-32, \$920; NAP- ${ }^{-1} 10$ Power Amplifier, $\$ 650$

## NAKAMICHI <br> Nakamichi U.S.A. Corp. 1101 Colorado Ave. Santa Monica, Calif. 90401

| 620 P | Amplifier |
| :---: | :---: |
| Price | \$740 |
| Dimensions | $71 / 2 \mathrm{H} \times 16 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | 28 lbs . |
| Power | 100 watts ( 20 dBW ) continuous into 8 ohms from 5 Hz to 20 kHz at no more than $0.01 \%$ THD |
| IM | $0.02 \%$ at 100 watts |
| Response | 5 Hz to $100 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| S/N | 120 dB (IHF A-weighted re 100 watts) |
|  |  | complementary-symmetry output core power transformer, 350 watts/8 ohms monaural output with external Nakamichi bridging adapter

## 610 Preamplifier

Price $\quad \$ 660$ (black, \$680)
Dimensions $71 / 2 \mathrm{H} \times 16 \mathrm{~W} \times 10 \mathrm{D}$
Weight $\quad 16 \mathrm{lbs}$.
Inputs 2 phono; 3 tape; tuner; 5 mic; aux
Response $\quad 20 \mathrm{~Hz}$ to $100 \mathrm{kHz}, \pm 0.75 \mathrm{~dB}$
Outpur $\quad 5 \mathrm{~V}$ at clipping
THD 0.005\%
IM $\quad 0.005 \%$
Sensitivity $\quad 1 \mathrm{mV}$ (phono); 75 mV (high level) Overload 250 mV (phono)
Phono EQ 30 Hz to $15 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$
Features Two way tape dubbing: $5-$ to- 2 mix
ing from any input; built-in 7-frequency test oscillator and pink-noise generator; phase-check and invert circuits; 50 dB -range peak-level meters; speaker switching with optional RM-610 remote switching unit

## 410 Preamplifier

Price $\$ 370$
Dimensions $3 H \times 16 \mathrm{~W} \times 9 \mathrm{D}$
Weight 9 lbs.
Inputs Phono; tape; tuner; 2 aux
Response $\quad 20 \mathrm{~Hz}$ to $50 \mathrm{kHz}, \pm 0.75 \mathrm{~dB}$
Output $\quad 5 \mathrm{~V}$ at clipping
THD 0.003\%
IM 0.003\%
Sensitivity $\quad 1 / 2 / 5 \mathrm{mV}$ (phono) (switched); 100 mV (high $\mid \mathrm{e} \% \mathrm{e}$ )
Overload $\quad 250 \mathrm{mV}$ (phono)
Phono EQ $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$
Bass control $\pm 9 \mathrm{~dB}$ at 20 Hz
Treble $\quad t 9 \mathrm{~dB}$ at 20 kHz
Features Öne-way tape dubbing; variable
contour; stepped-attenuator volume control; fully defeatable tone controls; triple-transistor phono input with switchable active phono infrasonic filter

## Models also available

420 Power Amplifier, $\$ 390$

NIKKO
Nikko Electric Corp. of America
12670 Raymer St.
Van Nuys, Calif. 91406


Mtteublehi DA.P10


## Onkyo A-7090

| Alpha VI Power Amplifier |  |
| :--- | :--- |
| Price | $\$ 1,399.95$ |
| Dimensions | $71 / 0 \mathrm{H} \times 19 \mathrm{~W} \times 18 \mathrm{1/3D}$ |
| Weight | 62 lbs |
| Power | $300 \mathrm{watts}(24.75 \mathrm{dBW})$ continuous |
|  | into 8 ohms from 20 Hz to 20 kHz |
|  | at no more than $0.01 \% \mathrm{THD}$ |
|  | $0.01 \%$ at 300 watts |
| IM | 10 Hz to $40 \mathrm{kHz} \pm 3 \mathrm{~dB}$ |
| Response | 115 dB |
| S/N | DC amplifler; power meters; 2 |
| Features |  |
| speaker systems; 2-speed coollng fan |  |


| Beta Ill Preamplifier |  |
| :--- | :--- |
| Price | $\$ 419.95$ |
| Dimensions | $23 / 32 \mathrm{H} \times 19 \mathrm{~W} \times 13 \mathrm{D}$ |
| Weight | 13 lbs. |
| Inputs | $2 \mathrm{phono} ; 2$ tape; 1 tuner; 1 aux |
| Response | 10 Hz to $50 \mathrm{kHz} \pm 0.5 \mathrm{~dB}$ |
| Output | 1 V |
| THD | $0.005 \%$ |
| Im | $0.005 \%$ |
| Sensitivity | 2 mV (phono); 110 mV (high level) |
| Overioad | 350 mV (phono) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz} \pm 0.2 \mathrm{~dB}$ |
| Bass control | $\pm 10 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 20 kHz |
| Low filter | $6 \mathrm{~dB} / 0 \mathrm{~Hz}$ ave below 40 Hz |
| Features | Two-way tape dubbing; Infrasonic |
| filter; PHONO 2 level control; selectable phono |  |
| impedance |  |

## NA-890 Integrated Amplifier <br> Price $\$ 349.95$

Dimensions $51 / 2 H \times 161 / 2 W \times 133 / 16 \mathrm{D}$
Weight $\quad 24 \mathrm{lbs} .3 \mathrm{oz}$.
Inputs 1 phono; 2 tape; 1 tuner; 1 aux
Power 70 watts ( 18.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.04 \%$ THD
IM
Response $\quad 10 \mathrm{~Hz}$ to $50 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Senslitivity $\quad 2.3 \mathrm{mV}$ (phono); 150 mV (high
Overload
S/N 85 JB (phono); 100 dB (aux)
Phono EQ $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass controi $\pm 10 \mathrm{~dB}$ at 70 Hz
Treble $\pm 10 \mathrm{~dB}$ at 10 kHz
High filter $\quad 6 \mathrm{~dB}$ /octave above 7 kHz
Low filter 6 dB /octave below 20 kHz
Features Two-way tape dubbing; power me-
ters; rack-mount adaptable; tone defeat switch
Beta II Preamplifier

| Price | $\$ 239.95$ |
| :--- | :--- |
| Dimensions | $23 / 32 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | $9 \mathrm{lbs.14oz} \mathrm{l}$ |
| Inputs | 2 phono; 2 tape; tuner; aux |
| Response | 10 Hz to $100 \mathrm{kHz},+0,-1 \mathrm{~dB}$ |
| Output | 1 V |
| THD | $0.007 \%$ |



Ploneer SA-8800


Nalm
IM $\quad 0.007 \%$
Sensitivity 2.5 mV (phono); 150 mV (high leval)
Overload 250 mV (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 70 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz
Low filter $\quad 6$ dB/octave below 15 Hz
Features Two-way tape dubbing; detent-
type dB gain control; phono-input selector switch;
audio muting ( -20 dB ) swltch

## NA-590 Integrated Amplifier

## \$209.95

Dimensions $33 / 8 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 141 / 8 \mathrm{D}$
Weight $\quad 16 \mathrm{lbs}$.
Inputs 1 phono; 1 tape; 1 tuner; 1 aux
Power $\quad 35$ watts ( 15.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
IM $\quad 0.05 \%$ at 35 watts
Response 10 Hz to $50 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Sensitivity 2.3 mV (phono); 150 mV (high level)
Overload $\quad 130 \mathrm{mV}$ (phono)
$\mathrm{S} / \mathrm{N} \quad 80 \mathrm{~dB}$ (phono); 90 dB (aux)
Phono EQ $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 70 Hz
Treble $\pm 10 \mathrm{~dB}$ at 10 kHz
Low filter $\quad 6 \mathrm{~dB} /$ octave below 20 Hz
Features Slimline; rack-mount adaptable

## Models also available

Alpha III Power Amplifier, \$539.95; Alpha II Power Amplifier, \$479.95; NA-790 integrated Amplifier. \$280; NA-690 Integrated Amplifier, $\$ 249.95$

## NYTECH AUDIO LTD. <br> Import Audio Ltd. <br> 13430 Clayton Road <br> St. Louis, Mo. 63131

## CPA-602 Power Amplifier

$\begin{array}{ll}\text { Price } & \$ 600 \\ \text { Dimensions } & 3 H \times 81 / 4 W \times 135 / 6 D\end{array}$
Weight 11 lbs.
Power $\quad 50$ watts ( 17 dBW ) continuous into 8 ohms at no more than $0.03 \%$ THD
$\mathrm{S} / \mathrm{N} \quad 90 \mathrm{~dB}$
Features Compact design

## ONKYO

Onkyo U.S.A. Corp.
42-07 20th Ave.
Long Island City, N.Y. 11105


MAD 3080


Nakamichl 610

## A-7090 Integrated Amplifier

Price $\$ 699.95$
Dimensions $61 / 8 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 163 / 160$
Weight $\quad 39 \mathrm{lbs} .9 \mathrm{oz}$.
Inputs 2 phono; 2 tape; 1 tuner; 1 aux
Power $\quad 110$ watts ( 20.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.018 \%$ THD
IM $\quad 0.018 \%$ at 110 watts
Response 5 Hz to $80 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Sensitivity $\quad 2.5 \mathrm{mV}$ (phono)
Overload $\quad 250 \mathrm{mV}$ (phono)
S/N
Phono EQ
Bass conirol 10 th at $100 / 400 \mathrm{~Hz}$
Treble $\pm 10 \mathrm{~dB}$ at $2 / 10 \mathrm{kHz}$
High filtel $\quad 12 \mathrm{~dB}$ /octave above 6 kHz
Low filter $\quad 12 \mathrm{~dB}$ /octave below 15 Hz
Features Two-way tape dubbing; super
servo; moving-coil head amp; peak LED

## M-505 Power Amplifier

Price $\quad \$ 580$
Dimensions $61 / 2 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 123 / 40$
Weight $\quad 37 \mathrm{lbs} .6 \mathrm{oz}$.
Power $\quad 105$ watts ( 20.25 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
$\begin{array}{ll}\text { IM } & 0.01 \% \text { at } 105 \text { watts } \\ \text { Response } & D C \text { to } 150 \mathrm{kHz},+0,-1.5 \mathrm{~dB}\end{array}$
Response
S/N
110 dB (A-weighted re 105 watts)
Features DC amplitier; dual line construc-
tion; 3-step low-frequency cutoff (DC, $0.15 \mathrm{~Hz}, 10$
Hz ); left and right level controls

## P-303 Preamplifier

Price $\$ 410$
Dimensions $31 / 4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 141 / 2 \mathrm{D}$
Weight $\quad 16 \mathrm{lbs} .8 \mathrm{oz}$
Inputs 2 phono (1 moving-coll, 1 movingmagnet); tape; tuner
Response $\quad 3.5 \mathrm{~Hz}$ to $200 \mathrm{kHz},+0,-1.5 \mathrm{~dB}$
Output
THD
$0.006 \%$ thru MM at $3 \mathrm{~V} ; 0.03 \%$ thru MC at 3 V
IM
Sensitlvity MC 0.1 mV ( 10 ohms ), MM 2.5 mV , (30K, 50K, 100K-switchable): tuner $150 \mathrm{mV}, 50 \mathrm{~K}$
Overload
330 mV rms, (MM) (phono) 1 kHz , $0.05 \%$ THD; 1600 mV rms, 10 kHz , $0.05 \%$ THD; phono MC 13 mV rms , $1 \mathrm{kHz}, 0.05 \%$ THD; $63 \mathrm{mV} \mathrm{rms}, 10$ kHz, 0.05\% THD
Phono EQ $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Features Full Class $A$; moving-coil head
amp; buss feeder line system; dual line construc-
tion; accessory out and in

## Models also available

A-7070 Integrated Amplifier, $\$ 429.95$; A- 7040 Integrated Amplifier, \$299.95

OPTONICA
Optonica
10 Keystone Place
Paramus, N.J. 07652

SX-9305 Power Amplifier
Price $\$ 850$
Dimensions $27 / 8 \mathrm{H} \times 167 / 8 \mathrm{~W} \times 1711 / 16 \mathrm{D}$
Weight
Power

IM
Respons
S/N
Features Three-color digitron audio spectrum display; 3 -color digitron power output meters; 2 -color LED power protection indicator; switchable output load selector

## SO-9205 Preamplifier

Price $\$ 350$
Dimensions $\quad 27 / 6 \mathrm{H} \times 167 / \mathrm{W} \times 15 \mathrm{D}$
Weight $\quad 14 \mathrm{lbs} 13 \mathrm{oz}$.
Inputs $\quad 3$ phono; 2 tape; 1 tuner; 1 aux
Response $\quad 3 \mathrm{~Hz}$ to $100 \mathrm{kHz},+0,-1.5 \mathrm{~dB}$
Output
THD
IM
0.003\%

Overload
3 mV (phono); 150 mV (high level) 300 mV (phono); 27 mV (phono moving coil)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 100 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 20 kHz
High filter $\quad 6 \mathrm{~dB}$ /octave above $8 / 15 \mathrm{kHz}$
Low filter $\quad 6 \mathrm{~dB} /$ octave below $15 / 30 \mathrm{~Hz}$ (infrasonic)
Features Two-way tape dubbing; slimline; built-in MC head amp; 3-position IMP selector and 3-position CAP selector for PHONO 2

## SM-4305 Integrated Amplifier

Dimensions $27 / 6 \mathrm{H} \times 16 \% \mathrm{~W} \times 15 \mathrm{D}$
Weight $\quad 20 \mathrm{lbs} 14 \mathrm{oz}$
Inputs 1 phono; 2 tape; 1 tuner; 1 aux
Power $\quad 40$ watts ( 16 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than 0.02\% THD
M $\quad 0.005 \%$ at 20 watts
Response $\quad 8 \mathrm{~Hz}$ to $70 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Sensitivity 2.9 mV (phono); 150 mV (high level)
Overload $\quad 250 \mathrm{mV}$ (phono)
$\mathrm{S} / \mathrm{N} \quad 85 \mathrm{~dB}$ (phono) (re 10 mV input); 89 dB (aux) (A-weighted re rated power)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.4 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 100 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz
High filter $\quad 6$ dBHoctave above 7 kHz
Low filter $\quad 6 \mathrm{~dB}$ /octave below 30 Hz
Features Two-way tape dubbing; separable power and preamp; slimline; operation indicators; audio muting; loudness; detent volume control

## Models also available

SM-7305 Integrated Amplifier, $\$ 460 ;$ SM-3201 Integrated Amplifier, \$260

## PHASE LINEAR

Phase Linear Corp.
20181 48th Ave., West
Lynnwood, Wash. 98036

| D-500 Series Two Amplifier |  |
| :--- | :--- |
| Price | $\$ 1.499 .95$ |
| Dimensions | $7 \mathrm{H} \times 19 \mathrm{~W} \times 15 \mathrm{D}$ |
| Weight | 65 lbs. |
| Power | 505 watts per channel ( 27 dBW ) |
|  | continuous into 8 ohms from 20 Hz |
|  | to 20 kHz at no more than $0.09 \%$ |
|  | THD |
| IM | $0.09 \%$ at 505 watts |
| Response | 12 Hz to $40 \mathrm{kHz} \pm 1 \mathrm{~dB}$ |
| S/N | 110 dB (A-weighted re 505 watts) |
| Features $\quad$ Input sensitivity controls; power |  |
| switch; LED meters; high/low impedance switch; |  |
| high-temperature LED; high-frequency limiters |  |

Dimensions $8 \mathrm{H} \times 18 \mathrm{~W} \times 15 \mathrm{D}$
Weight 63 lbs .
Power $\quad 210$ watts ( 23.25 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.06 \%$ THD $0.04 \%$ at 210 watts
IM
10 Hz to $30 \mathrm{kHz}, \pm 0.15 \mathrm{~dB}$
S/N $\quad 100 \mathrm{~dB}$ (A-weighted re 210 watts)
Features Touch switches; thermal and speaker protection; power meters; infrasonic filter; speaker selector switch; step-detent level controls; available with black front panel as AH-5781 at $\$ 700$

## AH-572 Preamplifier

$\begin{array}{ll}\text { Price } & \$ 480 \\ \text { Dimensions } & 51 / 2 \mathrm{H} \times 18 \mathrm{~W} \times 131 / 2 \mathrm{D}\end{array}$
Weight 22 lbs .
Inputs Phono; tape; tuner; aux
Response 10 Hz to $50 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Output 2 V
THD 0.008\%
IM 0.008\%
Sensitivity 2 mV (phono); 200 mV (high level)
Overload 750 mV (phono)
Phono EQ $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 50 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz
High filter $\quad \frac{1}{12} \mathrm{~dB}$ /octave above 5 kHz
Low filter $\quad 12 \mathrm{~dB}$ /octave below 90 Hz
Features Two-way tape dubbing; touch controls; illuminated function readouts; front access tape jacks; step-detent controls; available with black front panel as AH-5721 at $\$ 500$

## AH-384 Integrated Amplifier

Price $\$ 330$
Dimensions $51 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 14 \mathrm{D}$
Inputs 2 phono; 2 tape; tuner; aux
Power $\quad 40$ watts ( 16 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than 0.1\% THD
IM
$0.1 \%$ at 20 watts
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Sensitivity $\quad 2 \mathrm{mV}$ (phono); 150 mV (high level)
Overload $\quad 130 \mathrm{mV}$ (phono) S/N 65 dB (phono); 85 dB (aux) ( A weighted re 40 watts)
Phono EQ 30 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 100 Hz
Treble $\quad+12 \mathrm{~dB}$ at 10 kHz
High filter $6 \mathrm{~dB} /$ octave above 5 kHz
Low filter $\quad 6 \mathrm{~dB} /$ octave below 100 Hz
Features One-way tape dubbing; audio muting; step-defent volume; power-output meters; speaker-selector switch; available with black front panel as AH-3841, \$350

## Models also available

AH-388 Integrated Amplifier, \$470; AH-386 Integrated Amplifier, $\$ 360$

## PICKERING

Pickering \& Co., Inc.
101 Sunnyside Blvd.
Plainview, N.Y. 11803

## PP-1 Phono Preamplifier

## PHILIPS

Philips High Fidelity
Laboratories
P.O. Box 2218

Fort Wayne, Ind. 46801

Treble Low filter $\quad 5 \mathrm{~dB}$ /octave below 100 Hz
Features Equivalent input noise, 109 dB ; interchańnel crosstalk better than 60 dB

## PIONEER

U.S. Pioneer Electronics Corp. 85 Oxford Drive
Moonachie, N.J. 07074

| SPEC-2 Power Amplifier |  |
| :--- | :--- |
| Price | $\$ 995$ |
| Dimensions | $71 / \mathrm{H} \times 187 / \mathrm{WW} \times 171 / 2 \mathrm{D}$ |
| Weight | 54 lbs. |
| Power | 250 watts ( 24 dBW ) continuous |
|  | into 8 ohms from 20 Hz to 20 kHz |
|  | at no more than $0.1 \% \mathrm{THD}$ |
| IM | $0.1 \%$ at 250 watts |
| Response $\quad 5 \mathrm{~Hz}$ to $80 \mathrm{kHz},+0,-1 \mathrm{~dB}$ |  |
| $\mathrm{~S} / \mathrm{N}$ | $110 \mathrm{~dB}(\mathrm{~A}$-weighted re 250 watts) |
| Features $\quad$ Twin power meters; level controls; |  |
| toroidal transformer; dual power supply |  |

## SPEC-1 Preamplifier

Price $\$ 650$
Dimensions $71 / 4 \mathrm{H} \times 187 / 8 \mathrm{~W} \times 143 / 8 \mathrm{D}$
Weight $\quad 24 \mathrm{lbs} 10 \mathrm{oz}$.
Inputs 2 phono; 2 tape; tuner; mic; 2 aux
Response 10 Hz to $70 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Output $\quad 2 \mathrm{~V}$ (rated); 7 V (max)
THD $0.03 \%$
Sensitivity 2.5 mV (phono); 150 mV (high level)
Overload $\quad 500 \mathrm{mV}$ (phono)
Phono EQ $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 7.5 \mathrm{~dB}$ at $100 \mathrm{~Hz}( \pm 4.5 \mathrm{~dB}$ at 50 Hz ) (switchable)
Treble $\quad \pm 7.5 \mathrm{~dB}$ at $10 \mathrm{kHz}( \pm 4.5 \mathrm{~dB}$ at 20 kHz ) (switchable)
High filter $12 \mathrm{~dB} /$ octave above $8 / 12 \mathrm{kHz}$ (switchable)
Low filter $12 \mathrm{~dB} /$ octave below $15 / 30 \mathrm{~Hz}$ (switchable)
Features Two-way tape dubbing; mic mixing; speaker selection

SA-8800 Integrated Amplifier
$\begin{array}{ll}\text { Price } & \$ 550 \\ \text { Dimensions } & 61 / 6 \mathrm{H} \times 1711 / 16 \mathrm{~W} \times 163 / 4 \mathrm{D}\end{array}$
Weight $\quad 34 \mathrm{lbs} .8 \mathrm{oz}$.
Inputs 2 phono; 2 tape; 1 tuner; 1 aux
Power $\quad 80$ watts ( 19 dBW ) continuous into 8 ohms from 10 Hz to 20 kHz at no more than 0.005\% THD
IM $\quad 0.002 \%$ at 80 watts
Response $\quad 5 \mathrm{~Hz}$ to $2 \mathrm{kHz},+0,-2 \mathrm{~dB}$
Overload 250 mV (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 100 Hz
Treble
High fitter $\quad 6 \mathrm{~dB} /$ octave above 8 kHz
Low filter $\quad 6 \mathrm{~dB}$ /octave below 15 Hz
Features One-way tape dubbing; two-way
tape dubbing; Fluroscan power meters; non-
switching amp; DC power

## SA-6800 Integrated Amplifier

Price $\$ 300$ Amplifier
Dimensions $515 / 16 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 1011 / 16 \mathrm{D}$ Weight 18 lbs
Inputs 1 phono; 2 tape; 1 tuner; 1 aux
Power $\quad 45$ watts ( 16.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.03 \%$ THD $0.03 \%$ at 45 watts
IM
Response $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$
Overload
Phono EQ $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$
Bass control $\pm 7.5 \mathrm{~dB}$ at 100 Hz
Treble $\quad \pm 7.5 \mathrm{~dB}$ at 10 kHz
Low filter $\quad 6 \mathrm{~dB} /$ octave below 15 Hz

Features One-way tape dubbing; Fluroscan power meters: DC power

## Models also available

SPEC-4 Power Amplifier, $\$ 795$ SA-9800 Integrated Amplifier, \$750; SA-7800 Integrated Amplifier, \$450; SA-5800 integrated Amplifier, $\$ 200$
P.S. AUDIO

## P.S. Audio

1529 C. Stowell Center Plaza
Santa Maria, Calif. 93454

| 1 Power | Amplifier |
| :---: | :---: |
| Price | \$379.95 |
| Dimensions | $7 \mathrm{H} \times 19 \mathrm{~W} \times 8 \mathrm{D}$ |
| Weight | 25 lbs |
| Power | 80 watts ( 19 dBW ) continuous into 8 ohms from 2 Hz to 150 kHz at no more than $0.1 \%$ THD |
| IM | 0.1\% at 80 watts |
| Response | 2 Hz to $150 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| S/N | 100 dB (IHF A-weighted) |
| Features (patent pendin | Dual-Dash mono power supply g): linearized amplifier |
| PS III Ph | ono Preamplifier |
| Price | \$184.95 |
| Dimensions | $4 \mathrm{H} \times 81 / 2 \mathrm{~W} \times 7 \mathrm{D}$ |
| Weight | 5 lbs . |
| Inputs | 1 phono |
| Response | 0.5 Hz to $200 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$ |
| Output | 16 V (rms) |
| THD | 0.01\% |
| IM | 0.01\% |
| Sensitivity | 1 mV (phono) |
| Overload | 160 mV (MM), 16 mV (MC) (phono) |
| Phono EQ | 3 Hz to $20 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$ |
| Features rized equalizer | Passive RIAA EQ; storage lineaswitchable moving-coil input |

## Models also available

PS II Preamplifier, \$99.95

## PYRAMID

Pyramid Industries
12970-7N Branford St.
Arleta, Calif. 91331

X-1000VL Integrated
Amplifier/Equalizer
Price
Dimensions $13 / 2 \mathrm{H} \times 7 \mathrm{~W} \times 61 / 2 \mathrm{D}$
Weight 2 lbs 13 oz .
Inputs Tuner
Power $\quad 50$ watts ( 17 dBW ) continuous into 4 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 50 \mathrm{~dB}$ (low); 65 dB (high)
Features Ten control frequencies; input
impedance: 2.5 V (low); 250 mV (high)
X-40 Integrated Amplifier
Price $\$ 59.95$
Dimensions $11 / 2 \mathrm{H} \times 5 \mathrm{~W} \times 3 \mathrm{D}$
Weight 2 lbs 8 oz
Power $\quad 40$ watts continuous into 4 ohms from 35 Hz to 18 kHz at no more than $0.05 \%$ THD
Response $\quad 35 \mathrm{~Hz}$ to $18 \mathrm{kHz}+3 \mathrm{~dB}$
Bass control $\pm 12 \mathrm{~dB}$ at 200 Hz
Treble $\quad \pm 12 \mathrm{~dB}$ at 7.5 kHz
Features Input sensitivity lights; front-to-
rear-fader control

Models also available
X-700VL Integrated Amplifier/Equalizer, \$139.95

## RANDIX <br> Randix Industries, Ltd. 991 Broadway <br> Albany, N.Y. 12204

| Randix Audiologic Integrated |  |
| :---: | :---: |
| LX52A/LX62A |  |
| Price | $\$ 299.95$ (both amp and matching tuner as a pair) |
| Dimensions | $101 / 4 \mathrm{H} \times 11 / 2 \mathrm{~W} \times 7 \mathrm{D}$ |
| Weight | 7 lbs . |
| Inputs | 1 phono (moving-magnet); 1 tape; <br> 1 tuner |
| Power | 15 watts ( 11.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.5 \%$ THD |
| Response | 15 Hz to $25 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Sensitivity | 3 mV (phono); 150 mV (high level) |
| Overload | 60 mV (phono) |
| S/N | 70 dB (phono); 70 dB (aux) (unweighted re 15 watts) |
| Fhono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Eass control | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| Features. protection fuse | Single tape in/out loop; loudness; |

## Models also available

Randix Audiologic LX40A, \$299.95 (both amp and matching tuner as a pair)

## REVOX

Studer Revox America, Inc. 1819 Broadway Nashville,Tenn. 37203

## B-750 Integrated Amplifier

Price $\$ 999$
Dimensions $6 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 135 / 8 \mathrm{D}$
Weight 28 lbs .10 oz
Inputs 2 phono; 3 tape; tuner; 2 aux
Power $\quad 80$ watts ( 19 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.1 \%$ THD and at any power level
IN $\quad 0.05 \%$ at any power level
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Sensitivity $\quad 1.5$ to 7 mV variable (phono)
Overload $\quad 400 \mathrm{mV}$ (phono)
S/N $\quad 70 \mathrm{~dB}$ (phono); 90 dB (aux) (un.
weighted re 75 watts)
Phono EQ $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Bass control $\pm 8 \mathrm{~dB}$ at 120 Hz
Midrange $\quad \pm 8 \mathrm{~dB}$ at 3 kHz
Treble $\quad+8 \mathrm{~dB}$ at 8 kHz
High filter $\quad 12 \mathrm{~dB}$ /octave above 8 kHz
Low filter $\quad 12 \mathrm{~dB}$ /octave below 50 Hz
Features Two-way tape dubbing; separable power amp and preamp; tone control defeats; separate power supplies; short and overload protection; turn-on delay for transient suppression.

RG DYNAMICS
RG Dynamics, Inc.
4448 W. Howard St.
Skokie, III. 60076

RGD-3W Preamplifier
Price $\$ 595$

| Dimensions |  |
| :---: | :---: |
| Weight | 14 lbs |
| Inputs | 2 phono; 2 tape; 1 tuner; 1 aux; 1 external processor |
| Response | $\begin{aligned} & 20 \mathrm{~Hz} \text { to } 20 \mathrm{kHz}, \pm 0.05 \mathrm{~dB} ; 0.5 \mathrm{~Hz} \\ & \text { to } 170 \mathrm{kHz},+3 \mathrm{~dB} \end{aligned}$ |
| Output | 7 V (max at 1 kHz ) |
| THD | $0.02 \%$ at rated output, 20 Hz to 20 kHz |
| IM | $0.02 \%$ at 60 Hz and 7 kHz , mixed 1:1 at rated output |
| Sensitivity | 2 mV (phono); 200 mV (high level) |
| Overload | 200 mV (phono) at 1 kHz , (sine wave) |
| Phono EO | 20 Hz to $20 \mathrm{kHz}, \pm 0.05 \mathrm{~dB}$ |
| Bass control | $\pm 14 \mathrm{~dB}$ at 20 Hz |
| Midrange | None |
| Treble | $\pm 14 \mathrm{~dB}$ at 15 kHz |
| High filter | None |
| Low filter | 12 dB /octave below 20 Hz |
| eatures | Two-way tape dubbing; |
| ono input | as independently adjustable input |
| pacity for | oper matching of any cartridge; $32-$ |
| ep precisio | volume control; true center "flat" |
| sitions on | one controls; selector section pro |
| as for an | mbination of source and/or tape |
| h the sele | ed mode clearly indicated by an LED |
| 俍. | efeat switch (also avallable |
| ode | panel, \$615 mod |
| GD 3BW 17 | black panel with walnut ends) |

## ROGERS

Reference Monitor International, Inc. 2330 C Camino Vida Roble Carlsbad, Calif. 92008

| A-75 Integrated Amplifier |  |
| :---: | :---: |
| Price | \$530 |
| Dimensions | $41 / 2 \mathrm{H} \times 141 / 4 \mathrm{~W} \times 111 / 4 \mathrm{D}$ |
| Weight | 15 lbs 8 oz . |
| Inputs | 1 phono; 2 tape |
| Power | 45 watts ( 16.5 dBW ) continuous into 8 ohms from 30 Hz to 30 kHz at no more than $0.3 \%$ THD |
| IM | 0.08\% at 40 watts |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Sensitivity | 2.7 mV (phono); 90 mV (high level) |
| Overload | 80 mV (phono) |
| S/N | 70 dB (phono); 80 dB (aux) (CCIRweighted re 45 watts) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Bass control | $\pm 16 \mathrm{~dB}$ at 30 Hz |
| Treble | $\pm 16 \mathrm{~dB}$ at 10 kHz |
| High filter | 0 to 20 dB /octave above $6 / 9 \mathrm{kHz}$ (infinitely variable) |
| Low filter | 30 dB /octave below 20 Hz |
| Features | One-way tape dubbing; Darlington |
| DC coupled Class AB output |  |

ROTEL
Rotel of America, Inc.
1055 Saw Mill River Road
Ardsley, N.Y. 10502

RB-5000 Power Amplifier
$\begin{array}{ll}\text { Price } & \$ 2,700 \\ \text { Dimensions } & 91 / 2 H \times 191 / 2 W \times 171 / 4 D\end{array}$
$\begin{array}{ll}\text { Dimensions } & 91 / 2 \mathrm{H} \times 191 / 2 \mathrm{~W} \times 171 / 2 \mathrm{D} \\ \text { Weight } & 120 \mathrm{lbs} .\end{array}$
Power 500 watts ( 27 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.009 \%$ THD
IM
Response
S/N
DC $10100 \mathrm{kHz}+3 \mathrm{~dB}$
120 dB (A-weighted re 500 watts)
readout in dB can bereading pow 2 toroidal power transformers; $2 \mathrm{~dB} /$ step right and left level control; input off/on switch

## RC-5000 Preamplifier

Price $\quad \$ 1,600$
Dimensions $91 / 2 \mathrm{H} \times 191 / 2 \mathrm{~W} \times 171 / 2 \mathrm{D}$
Weight $\quad 33 \mathrm{lbs}$
Inputs 3 phono; 3 tape; tuner; 2 mic; 2 aux
Response 3 Hz to $30 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Output 1 V
THD 0.003\%
IM 0.003\%
Sensitivity $\quad 2,4,8 \mathrm{mV}$ (phono) (switchable); 150 mV (high level)
Overload $\quad 500 \mathrm{mV}$ (phono)
Phono EO 10 Hz to $30 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ (RIAA)
Bass control $\pm 10 \mathrm{~dB}$ at 100 Hz
Midrange $\quad \pm 10 \mathrm{~dB}$ at 5 kHz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz
High filter $\quad 12 \mathrm{~dB}$ /octave above $7.4 / 2.4 \mathrm{kHz}$ (switchable)
Low filter 12 dB/octave below $60 / 15 \mathrm{~Hz}$ (switchable)
Features Three-way tape dubbing; phonc 1 adjustable sensitivity, impedance and galn; tape 3 input on front; phono 3 moving-coil cartridge; tull 10 -band octave equalizer; DC configuration

RA-2040 Intergated Amplifier
Price $\$ 880$
Dimensions $\quad 53 / 4 \mathrm{H} \times 191 / 4 \mathrm{~W} \times 161 / 4 \mathrm{D}$
Weight $\quad 48 \mathrm{lbs} .8 \mathrm{oz}$
Inputs 3 phono; 2 tape; tuner; aux
Power $\quad 120$ watts ( 20.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.01 \%$ THD
IM
Response $\quad D C$ to $200 \mathrm{kHz},+3 \mathrm{~dB}$
Sensitivity 2 mV (phono); 150 mV (high level)
Overload 450 mV (phono)
S/N
80 dB (phono); 100 dB (aux) (Aweighted re 120 watts)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 100 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz
High filter 12 dB/octave above 24 kHz
Low filter $\quad 12 \mathrm{~dB} /$ octave below 15 Hz
Features Two-way tape dubbing; separable power and preamp; DC amp configuration; Class AB; bar-chart LED power indicators; moving-coil head amp; variable additional capacitance and Impedance on phono 1

RA-2020 Integrated Amplifier
Price $\$ 485$
Dimensions $53 / 4 \mathrm{H} \times 191 / 4 \mathrm{~W} \times 131 / 8 \mathrm{D}$
Weight 28 lbs. 8 oz.
Inputs 2 phono; 2 tape; tuner; aux
Power $\quad 60$ watts ( 17.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.02 \%$ THD
IM
Response $\quad \mathrm{DC}$ to $100 \mathrm{kHz},+3 \mathrm{~dB}$
Sensitivity 2 mV (phono); 150 mV (high level)
Overload $\quad 200 \mathrm{mV}$ (phono)
$\mathbf{S} / \mathrm{N} \quad 75 \mathrm{~dB}$ (phono); 95 dB (aux) (Aweighted re 60 watts)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 100 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz
High filter $\quad 12 \mathrm{~dB}$ /octave above 24 kHz
Low filter 12 dB /octave below 15 Hz
Features Two-way tape dubbing; separable power and preamp; DC amp configuration; barchart LED power indicators

RC-1000 Preamplifier/Equalizer

## Price $\$ 320$

Dimensions $327 / 32 \mathrm{H} \times 1615 / 16 \mathrm{~W} \times 11$ 13/32D
Weight $\quad 10 \mathrm{lbs} .12 \mathrm{oz}$.
inputs 2 phono; 2 tape; 1 tuner; 1 aux
Response 5 Hz to $50 \mathrm{kHz},+0,-3 \mathrm{~dB}$
Output $\quad 500 \mathrm{mV}$
THD 0.03\%
$\begin{array}{ll} & 0.03 \% \\ \text { Sensitivity } & 2.5 \mathrm{mV} \text { (phono); } 150 \mathrm{mV} \text { (high }\end{array}$ level)

Overload $\quad 400 \mathrm{mV}$ (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 100 Hz
Midrange $\quad \pm 10 \mathrm{~dB}$ at 5 kHz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz
Low filter $\quad \frac{1}{12} \mathrm{~dB}$ /octave below 15 Hz
Features Two-way tape dubbing; ten-band octave equalizer; moving-coil head amp; switchable moving-magnet impedance; slimline deslgn

## Models also available

RA-2030 Integrated Amplifier, \$680; RB-2000 Power Amplifier, \$610; RC-2000 Preamplifier, \$530; RA-1000 Integrated Amplifier/E qualizer, \$360; RB-1000 Power Amplifier, \$320

SAE
Scientific Audio Electronics, Inc.
710 E. Macy St.
Los Angeles, Calif. 90012

2600 Power Amplifier
Price $\$ 1,350$
Dimensions $7 \mathrm{H} \times 19 \mathrm{~W} \times 141 / 2 \mathrm{D}$
Weight 65 lbs .
Power $\quad 400$ watts ( 26 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
IM $\quad 0.05 \%$ at 400 watts
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
$\mathrm{S} / \mathrm{N} \quad 100 \mathrm{~dB}$ (unweighted re 400 watts)
Features Parallel-series output; forced-alr
cooling; power meters; relay protection

## X-25A Power Amplifier

Price $\$ 1.200$
Dimensions $7 \mathrm{H} \times 19 \mathrm{~W} \times 12 \mathrm{D}$
Weight 50 lbs .
Power 250 watts ( 24 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.02 \%$ THD
IM $\quad 0.02 \%$ at 250 watts
Response $\quad 20 \mathrm{~Hz}$ to 20 kHz 。 $\pm 0.2 \mathrm{~dB}$
S/N $\quad 110 \mathrm{~dB}$ (unweighted re 250 watts)
Features Class A; hypersonic output; fully
complementary design
2300 Power Amplifier
$\begin{array}{ll}\text { Price } & \$ 700 \\ \text { Dimensions } & 51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 121 / 2 \mathrm{D}\end{array}$
Weight 35 lbs .
Power $\quad 150$ watts ( 21.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
IM $\quad 0.05 \%$ at 150 watts
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
S/N
100 dB (unweighted re 150 watts)
design; 30 struction

## X-10A Power Amplifier

Price $\$ 650$
Dimenslons $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 12 \mathrm{D}$
Power $\quad 100$ watts ( 20 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.02 \%$ THD
$\begin{array}{ll}\text { IM } & 0.02 \% \text { at } 100 \text { watts } \\ \text { Response } & 20 \mathrm{~Hz} \text { to } 20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}\end{array}$
S/N
110 dB (unweighted re 100 watts)
Features Class A; hypersonic output; fully
complementary design

## 3100 Power Amplifier

Price $\$ 350$
Dimensions $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 81 / 2 \mathrm{D}$
Welght 19 lbs .


Pyramid Model X Spec 5


SAE 24001

Power $\quad 50$ watts ( 17 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than 0.05\% THD
IM
$0.05 \%$ at 50 watts
Response
S/N 20 Hz to $20 \mathrm{kHz},+0.25 \mathrm{~dB}$ 100 dB (unweighted re 50 watts)
Features Fully complementary design; relay speaker protectión; LED power display; monocoque construction

## 2100L Preamplifier

| Price | $\$ 800$ |
| :--- | :--- |
| Dimensions | $7 \mathrm{H} \times 19 \mathrm{~W} \times 7 \mathrm{D}$ |
| Weight | 20 lbs. |
| Inputs | 2 phono; 3 tape; tuner; 2 aux |
| Response | 20 Hz to $20 \mathrm{kHz} \pm 0.25 \mathrm{~dB}$ |
| Output | 2.5 V |
| THD | $0.005 \%$ |
| IM | $0.005 \%$ |
| Sensitivity | 1.4 to 2.8 mV (phono); 120 mV |
|  | (high level) |
| Overload | 100 to 200 mV (phono) |
| Phono EQ | 20 Hz to 20 kHz , $\pm 0.25 \mathrm{~dB}$ |
| Low filter | $12 / 6 \mathrm{~dB} / 0 \mathrm{ctave}$ below $30 / 100 \mathrm{~Hz}$ |
|  | (Switchable) |
| Features $\quad$ Two-way tape dubbing; LED level |  |
| display; external processor; speaker switching; |  | phono gain controls; stepped volume controls

## 3000 Preamplifier

| Price | $\$ 350$ |
| :--- | :--- |
| Dimensions | $51 / \mathrm{H} \times 19 \mathrm{~W} \times 31 / 2 \mathrm{D}$ |
| Weight | 10 lbs. |
| Inputs | 2 phono 2 tape; tuner; aux |
| Response | 20 Hz to $20 \mathrm{kHz} \pm 0.25 \mathrm{~dB}$ |
| Output | 2.5 V |
| THD | $0.02 \%$ |
| IM | $0.02 \%$ |
| Sensitivity | 2.5 mV (phono); 140 mV (high |
|  | level) |
| Overload | 150 mV (phono) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Bass control | $\pm 16 \mathrm{~dB}$ at 100 Hz |
| Midrange | $\pm 8 \mathrm{~dB}$ at 2 kHz |
| Treble | $\pm 16 \mathrm{~dB}$ at 10 kHz |
| Low filter | $12 / 6 \mathrm{~dB} /$ octave below $30 / 100 \mathrm{~Hz}$ |
|  | (Switchable) |
| Features | Two-way tape dubbing; tape $\mathrm{EQ} ;$ |
| mute |  |


| 3022 Integrated Amplifier |  |
| :---: | :---: |
| Price | \$700 |
| Dimensions | $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 15 \mathrm{D}$ |
| Weight | 42 lbs . |
| Inputs | 2 phono; 2 tape; tuner; aux |
| Power | 100 watts ( 20 dBW ) continuous |
|  | Into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD |
| IM | $0.05 \%$ at 100 watts |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$ |
| Sensitivity | 1.5 mV (phono); 80 mV (high level) |
| Overload | 150 mV (phono) |



Revor B. 750


Rotel RC. 5000

S/N
Phono EO Bass control Midrange Treble Low filter $\quad \frac{ \pm}{12 / 6 ~ d B / o c t a v e ~ b e l o w ~} 30 / 100 \mathrm{~Hz}$ (switchable)
Features Two-way tape dubbing; separable power amp and preamp; relay speaker protection; tape EQ

## SAE TWO Series

A-14 Integrated Amplifier
Price $\$ 650$
Dimensions $51 / 4 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 134 / 5 \mathrm{D}$
Inputs 2 phono; 2 tape; 1 tuner; 2 aux Power $\quad 140$ watts ( 21.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
IM
Response Sensitivity $0.05 \%$ al 100 wats
20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$ 2.5 mV (phono); 150 mV (high level) 200 mV (phono)
S/N

Phono EQ
Low filter 94 dB (phono); 100 dB (aux) (unweighted re 140 watts)

Two-way tape dubbing; separable power and preamp; parametric equalizer; bar graph display; moving coil input

## A-7 Integrated Amplifier <br> Price $\$ 400$

Dimensions $51 / 4 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 134 / 5 \mathrm{D}$
Inputs 2 phono; 2 tape; 1 tuner; 1 aux
Power $\quad 70$ watts ( 18.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
IM $\quad 0.05 \%$ at 70 watts
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
Sensitivity 2.5 mV (phono); 150 mV (high level)
Overlaad $\quad 150 \mathrm{mV}$ (phono)
S/N
Phono
50 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
10 dB at 20 Hz
$\pm 10 \mathrm{~dB}$ at 1 kHz
Low filter $\quad 6 \mathrm{~dB}$ /octave below 30 Hz
Features Two-way tape dubbing; separable power and preamp; bar graph power and level display; external processing circuit

## A Note on Prices

Prices shown in these pages are manufacturers' or importers' nationally advertised values, updated as is feasible by press time.


Sansul BA-F1

## Models also available

X-15A Power Amplifier, $N / A$; 2400L Power Amplifier, $\$ 850 ; 2200$ Power Amplifier, $\$ 500 ; 2100$ Preamplifier, $\$ 950$; 2900 Pream plifier, \$500; 2922 Integrated Amplifier, $\$ 850$; 3031 Integrated Amplifier, \$550; C3A Integrated Amplifier, \$325

SANSUI
Sansui Electronics Corp. 1250 Valley Brook Ave. Lyndhurst, N.J. 07071

## AU-X1 Integrated Amplifier

Price $\$ 1,450$
Dimensions $713 / 16 \mathrm{H} \times 1815 / 16 \mathrm{~W} \times 173 / 4 \mathrm{D}$ Weight 61 lbs .1 oz .
Inputs 2 phono (MM or MC); 2 tape; tuner: 1 aux
Power $\quad 160$ watts ( 22 dBW ) continuous into 8 ohms from 5 Hz to 20 kHz at no more than $0.007 \%$ THD
IM $\quad 0.007 \%$ at 160 watts
Response $D C$ to $500 \mathrm{kHz},+0,-1 \mathrm{~dB}$
Sensitivity 2.5 mV (MM), 0.1 mV (MC) (phono); 200 mV (high level)
Overload $\quad 330 \mathrm{mV}(\mathrm{MM}) ; 40 \mathrm{mV}$ (MC) (phono)
S/N 91 dB (MM), 76 dB (MC) (phono); 100 dB (aux) (A-weighted re 160 watts)
Phono EQ 20 Hz to $20 \mathrm{kHz},+0.2 \mathrm{~dB}$
Low filler $\quad 6 \mathrm{~dB}$ /octave below 16 Hz
Features Full 2-way tape dubbing; separable power and preamp; slew rate of $260 \mathrm{~V} / \mathrm{mi}$ croseconds; 0.5 microsecond rise time; Diamond Differential DC power amp and phono equalization DC pre-preamp and flat amp; front panel pre-main switch; 2-system speaker switch; "jump" switch for pure DC operation

## AU-819 Integrated Amplifier <br> Price

Dimensions $65 / 8 \mathrm{H} \times 19 \mathrm{~W} \times 171 / 2 \mathrm{D}$ (with rack mount adapters)
Weight $\quad 46 \mathrm{lbs} .8 \mathrm{oz}$
Inputs $\quad 2 \mathrm{MM}, 1 \mathrm{MC}$ phono; 2 tape; 1 tuner; 1 aux
Power $\quad 90$ watts ( 19.5 dBW ) continuous into 8 ohms from 10 Hz to 20 kHz at no more than $0.008 \%$ THD $0.008 \%$ at 90 watts
IM
Response
Sensitivity
DC to $500 \mathrm{kHz},+0,-3 \mathrm{~dB}$ 2.5 mV (MM), 0.1 mV (MC) (phono); 150 mV (high level)
Overload $\quad 350 \mathrm{mV}$ (MM), 30 mV (MC) (phono) 100 dB (aux) (A-weighted re 90 watts)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control +6 dB at 50 Hz
Treble
+6 dB at 15 kHz
Low filter $\quad 6 \mathrm{~dB} /$ octave below 16 Hz
Features Full 2-way tape dubbing; separable power and preamp; slew rate of $200 \mathrm{~V} / \mathrm{mi}$ croseconds; 0.5 microsecond rise time; Diamond Differential DC power amp and phono equalization; switch-selected tone turnover frequencies; 2 speaker system switch loudness compensation; detachable rack-mount handles

## BA-F1 Power Amplifier

Price $\$ 665$
Dimensions $73 / 8 \mathrm{H} \times 19 \mathrm{~W} \times 173 / 4 \mathrm{D}$
Weight 44 lbs 15 oz
Power $\quad 110$ watts ( 20.5 dBW ) continuous into 8 ohms from 10 Hz to 20 kHz at no more than $0.008 \%$ THD
IM $\quad 0.008 \%$ at 110 watts
Response $\quad D C$ to $600 \mathrm{kHz},+0,-3 \mathrm{~dB}$
S/N $\quad 125 \mathrm{~dB}$ (A-weighted re 110 watts) Features Slew rate of $200 \mathrm{~V} /$ microseconds: 0.5 microsecond rise time; Diamond Differential DC drive circuit; dual peak-power meters; detachable rack-mounting handles

## AU-717 Integrated Amplifier

## Price

 \$550Dimensions $65 / 6 \mathrm{H} \times 19 \mathrm{~W} \times 161 / 2 \mathrm{D}$
Weight $\quad 39 \mathrm{lbs} .3 \mathrm{oz}$
Inputs $\quad 2$ phono; 2 tape; tuner; aux
Power $\quad 85$ watts ( 19.25 dBW ) continuous into 8 ohms from 10 Hz to 20 kHz at no more than $0.015 \%$ THD
IM $0.015 \%$ at 85 watts
Response $\quad \mathrm{DC}$ to $200 \mathrm{kHz},+0,-3 \mathrm{~dB}$
Sensitivity 2.5 mV (phono); 150 mV (high level)
Overload 350 mV (phono)
$\mathrm{S} / \mathrm{N} \quad 80 \mathrm{~dB}$ (phono); 100 dB (aux) (Aweighted re 85 watts)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 50 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 15 kHz
High filter $\quad 6 \mathrm{~dB} / o c t a v e$ above 10 kHz
Low filter $6 \mathrm{~dB} /$ octave below 16 Hz (infrasonic filter)
Features Two-way tape dubbing; separable power amp and preamp; DC amp; rack-mountable by detachable handles; switchable bass and treble turnover points; volume control via precisionstepped attenuator

## CA-F1 Preamplifier

Price $\$ 495$
Oimensions $23 / 8 \mathrm{H} \times 19 \mathrm{~W} \times 171 / 8 \mathrm{D}$
Weight $\quad 13 \mathrm{lbs} 6 \mathrm{oz}$.
Inputs $\quad 2$ phono (1 moving coil, 1 moving magnet); 2 tape; 1 tuner; 1 aux
Response $\quad 5 \mathrm{~Hz}$ to $600 \mathrm{kHz},+0,-3 \mathrm{~dB}$
Output $\quad 1 \mathrm{~V}$ (nominal); 10 V (max)
THD
Sensitivity 2.5 mV (MM) 0.1 (MC) (phono); 150 mV (high level)
Overload $\quad 350 \mathrm{mV}(\mathrm{MM}), 24 \mathrm{mV}(\mathrm{MC})$ (phono)
Phono EQ $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 7 \mathrm{~dB}$ at 50 Hz
Treble $\quad \pm 7 \mathrm{~dB}$ at 15 kHz
Low filter $\quad \frac{1}{6} \mathrm{~dB} /$ octave below 16 Hz
Features Slew rate of $50 \mathrm{~V} /$ microseconds; 0.6 microsecond rise time; Diamond Differential DC phono equalizer; dual outputs; click-stop tone controls; switchable loudness contour; detachable rack-mounting handles

## AU-317 Integrated Amplifier <br> Price <br> Dimensions $433 / 8 \mathrm{H} \times 19 \mathrm{~W} \times 133 / 4 \mathrm{D}$ <br> Weight <br> 21 lbs. $6 \mathrm{oz} \times 133 / 4 \mathrm{D}$ <br> Inputs Phono; tape; tuner; mic; aux

Power $\quad 50$ watts ( 17 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.03 \%$ THD
IM
Response $\quad D C$ to 200 kHz , to $\mathrm{dB},-2.5 \mathrm{~dB}$
Sensitivity 2.5 mV (phono); 150 mV (high level)
Overload 200 mV (phono)
$\mathrm{S} / \mathrm{N} \quad 77 \mathrm{~dB}$ (phono); 100 dB (aux) (Aweighted re 50 watts)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 11 \mathrm{~dB}$ at 50 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 15 kHz
High filter $\quad 6 \mathrm{~dB}$ /octave above 7 kHz
Low filter $\quad 6 \mathrm{~dB}$ /octave below 13 Hz (phono infrasonic filter)
Features Separable power amp and preamp; $40 \mathrm{~V} /$ microseconds slew rate; 1.4 mi crosecond rise time; DC amp; rack-mountable by detachable handles; volume control via precisionstepped attenuator; mic mixing

## Models also available

AU-919 Integrated Amplifier, $\$ 800$ AU-719 Integrated Amplifier, $\$ 575$ AU-519 Integrated Amplifier, \$500; AU-417 Integrated Amplifier, \$395; AU-217-II Integrated Amplifier, \$230; AU-117-II Integrated Amplifier, \$190

SANYO
Sanyo Electric, Inc.
1200 W. Artesia Blvd.
Compton, Calif. 90220

Plus P55 Power Amplifier
$\begin{array}{ll}\text { Price } & \$ 349.95 \\ \text { Dimensions } & 31 / 2 \mathrm{H} \times 173 / 8 \mathrm{~W} \times 105 / 8 \mathrm{D}\end{array}$
$\begin{array}{ll}\text { Dimensions } & 31 / 2 \mathrm{H} \times 173 / 8 \mathrm{~W} \times 105 / 8 \mathrm{D} \\ \text { Weight } & 26 \mathrm{lbs}\end{array}$
Power $\quad 100$ watts ( 20 dBW ) continuous into 4 or 8 ohms from 20 Hz to 20 kHz at no more than $0.009 \%$ THD
Response $\quad 7 \mathrm{~Hz}$ to $100 \mathrm{kHz},+0,-1 \mathrm{~dB}$
$\mathbf{S} / \mathrm{N} \quad 100 \mathrm{~dB}$ (IHF A-weighted)
Features Left and right channel LED psak
power indicators with 12 -segment display range selector; 200 watts available in mono mode; 150 microvolts slew rate; fluid connection radiator

Plus A35 Integrated Amplifier

## Price $\quad \$ 299.95$ Amplifier

Dimensions $31 / 2 \mathrm{H} \times 173 / 8 \mathrm{~W} \times 105 / 8 \mathrm{D}$
Weight 24 lbs.
Inputs $\quad 2$ phono (1 moving coil, 1 moving
Power magnet); 1 tape; 1 tuner; 1 aux
50 watts ( 17 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than 0.02\% THD
Response $\quad 7 \mathrm{~Hz}$ to $100 \mathrm{kHz},-1 \mathrm{~dB}$
S/N $\quad 110 \mathrm{~dB}$ (phono) (IHF A-weighted)
Bass control $\pm 10 \mathrm{~dB}$ at 100 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz
High filter $\quad 6 \mathrm{~dB} / 0 \mathrm{ctave}$ above 8 kHz
Low filter 12 dB /octave below 30 Hz (subsonic)
Features Two-way tape dubbing; movingcoil preamp; 12-step LED power Indicators, 90 V slew rate; loudness control; two tape monitor switches

Plus C55 Preamplifier
Price $\quad \$ 249.95$
Dimensions $13 / 4 \mathrm{H} \times 173 / \mathrm{aW} \times 105 / 6 \mathrm{D}$
Weight
13 lbs
Inputs 2 phono ( 1 moving-coil, 1 movingmagnet); 1 tape; 1 tuner; 1 aux
Response 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 100 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz

Features Two-way tape dubbing; two-position infrasonic filter; 3-position bass and treble turnover; tone defeat

## Models also available

DCA-611 Integrated Amplifier, \$269.95; DCA-411 Integrated Amplifier, \$199.95; DCA-311 Integrated Amplifier, $\$ 179.95$

SCOTT
H. H. Scott, Inc.

20 Commerce Way Woburn, Mass. 01801

Alpha 6 Power Amplifier<br>Price $\$ 400$<br>Dimensions $51 / 8 \mathrm{H} \times 19 \mathrm{~W} \times 121 / 2 \mathrm{D}$<br>Weight 40 lbs<br>Power $\quad 60$ watts ( 17.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.1 \%$ THD<br>IM $\quad 0.1 \%$ at 60 watts<br>Response $\quad 10 \mathrm{~Hz}$ to $50 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$<br>S/N 100 dB (A-weighted $r e 60$ watts)<br>Features Two logarithmic power meters; speaker switching for 2 sets of speakers; separate channel-level controls

## Alpha 1 Preamplifier

Price $\$ 400$
Olmensions $51 / 6 \mathrm{H} \times 19 \mathrm{~W} \times 121 / 2 \mathrm{D}$
Weight $\quad 15 \mathrm{lbs}$.
Inputs 2 phono; 2 tape; tuner; 2 mic; 2 aux
Response $\quad 15 \mathrm{~Hz}$ to $35 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
Output $\quad 2.5 \mathrm{~V}$
THD 0.1\%
IM $\quad 0.1 \%$
Sensitivity $\quad 2.5 \mathrm{mV}$ (phono); 9 mV (high level)
Overload $\quad 125 / 450 \mathrm{mV}$ (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
Bass control $\pm 7 \mathrm{~dB}$ at $50 \mathrm{~Hz}(100 \mathrm{~Hz}$ position $)$; $\pm 11 \mathrm{~dB}$ at $100 \mathrm{~Hz}(300 \mathrm{~Hz}$ position)
Midrange $\quad \pm^{7} \mathrm{~dB}$ at 1 kHz
Treble $\quad \pm 11 \mathrm{~dB}$ at $10 \mathrm{kHz}(3 \mathrm{kHz}$ position); $\pm 7 \mathrm{~dB}$ at $20 \cdot \mathrm{kHz}$ ( 8 kHz position)
High filter $\quad \frac{1}{12} \mathrm{~dB}$ /octave above 8 kHz (or 12 kHz )
Low filter $\quad 12 \mathrm{~dB}$ /octave below 40 Hz (or 80 Hz )
Features Two-way tape dubbing; switchable accessory; -20 dB muting; contour and bypass functions; bass, treble, and midrange controls with switchable 4-position turnover points; 4-position filters

## 460A Integrated Amplifier

## Price $\$ 430$

Dimensions $\quad 51 / 4 \mathrm{H} \times 17 \mathrm{~W} \times 141 / 4 \mathrm{D}$
Weight 27 lbs
Inputs 2 phono; 2 tape; funer; aux
Power $\quad 70$ watts ( 18.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.04 \%$ THD
IM $\quad 0.04 \%$ at 70 watts
Response $\quad 10 \mathrm{~Hz}$ to $40 \mathrm{kHz}, \pm 1.0 \mathrm{~dB}$
Sensitivity 2.5 mV (phono 1); $2.5 / 50 \mathrm{mV}$ (phono 2)
Overload $\quad 180 / 360 \mathrm{mV}$ (phono)
$\mathrm{S} / \mathrm{N} \quad 90 \mathrm{~dB}$ (phono); 95 dB (aux)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 100 Hz
Midrange $\quad \pm 6 \mathrm{~dB}$ at 1 kHz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz
High filter $\quad 13 \mathrm{~dB}$ /octave above 8 kHz
Low filter $12 \mathrm{~dB} /$ octave below 18 Hz
Features Two-way tape dubbing; 2 in-
dependent phono preamps and separate recording
and input selectors for simultaneous recording \&

Ilstening to any two sources; protection circuitry with LED indication; active low and high filters; accessory in/out

## Models also available

480A Integrated Amplifier, \$500; 440A Integrated Amplifier, \$350; 420A Integrated Amplifier, \$250

SERIES 20
Series 20
20 Jewell St.
Moonachie, N.J. 07074

## M-25 Power Amplifier <br> $\begin{array}{ll}\text { Price } & \$ 1,200 \\ \text { Dimensions } & 6 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 141 / 2 \mathrm{D}\end{array}$ <br> $\begin{array}{ll}\text { Dimensions } & 6 \mathrm{H} \times 161 / 2 \mathrm{~W} \\ \text { Weight } & 51 \mathrm{lbs} .12 \mathrm{oz}\end{array}$ <br> Power 120 watis ( 20 dBW ) continuous into 8 ohms from 5 Hz to 30 kHz at no more than $0.01 \%$ THD <br> M $\quad 0.006 \%$ at 120 watts <br> Response 5 Hz to $20 \mathrm{kHz},+0,-1 \mathrm{~dB}$ <br> S/N $\quad 120 \mathrm{~dB}$ (A-weighted re 120 watts) <br> Features Class AB; FET output transistors;

gold-plated terminals

| C-21 Preamplifier |  |
| :---: | :---: |
| Price | \$390 |
| Dimensions | $31 / 4 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 15 \mathrm{D}$ |
| Weight | 13 lbs .14 oz . |
| Inputs | Phono; tape; 2 aux |
| Response | 10 Hz to $100 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| Output | 1 V ( 20 V max) |
| THD | 0.005\% |
| Sensitivity | 2.5 mV (phono); 150 mV level) |
| Overload | 300 mV (phono) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 02 \mathrm{~dB}$ |
| Low fliter | $6 \mathrm{~dB} /$ octave below 15 Hz |
| Features | Phono-input resistance |

capacitance selectors
A-27 Integrated Amplifier
Price $\quad \$ 1,300$
Dimensions $65 / 8 \mathrm{H} \times 17 \% / \mathrm{W} \times 183 / 8 \mathrm{D}$
Weight $\quad 55 \mathrm{lbs} 8 \mathrm{oz}$.
Inputs 2 phono; 2 tape; 1 tuner; mic; 2 aux
Power 120 watts ( 20 dBW ) continuous into 8 ohms from 5 Hz to 30 kHz at no more than 0.015\% THD
$\begin{array}{ll}\text { IM } & 0.006 \% \text { at } 120 \text { watts } \\ \text { Response } & 5 \mathrm{~Hz} \text { to } 200 \mathrm{kHz},+0,-1 \mathrm{~dB}\end{array}$
Sensitivity 2.5 mV (phono); 150 mV (high level); 250 mV (moving-coil phono)
Overload $\quad 300 \mathrm{mV}$ (phono)
S/N $\quad 90 \mathrm{~dB}$ (phono); 100 dB (aux) (A weighted re 120 watts)
Phono EQ $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 5 \mathrm{~dB}$ at $100 \mathrm{~Hz} ; \pm 4 \mathrm{~dB}$ at 50 Hz Treble Low filter $\pm 5 \mathrm{~dB}$ at $10 \mathrm{kHz} ; \pm 4 \mathrm{~dB}$ at 20 kHz (switchable)
Features Two-way tape dubbing; separable power and preamp; Class $A B$; moving-coil input; phono-input resistance and capacitance selector; FET output transistors

## Models also available

M-22 Power Amplifier, \$790

## SHERWOOD <br> Sherwood <br> 4300 North California Ave. Chicago, III. 60618

S-702CP Integrated Amplifier Price \$325<br>Dimensions $51 / 2 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 123 / 4 \mathrm{D}$

| Weight | 30 lbs . |
| :---: | :---: |
| Inputs | 2 phono; 2 tape; 1 tuner; 1 mic; 2 aux |
| Power | 60 watts ( 17.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.2 \%$ THD |
| IM | $02 \%$ at 60 watts |
| Response | 5 Hz to $110 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono); 160 mV (high level) |
| Overload | 200 mV (phono) |
| S/N | 80 dB (phono); 95 dB (aux) (IHF A-weighted re input sensitivity) |
| Phono EQ | 30 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Bass control | $\pm 14 \mathrm{~dB}$ at 50 Hz (detented) |
| Treble | $\pm 12 \mathrm{~dB}$ at 15 kHz (detented) |
| High filter | $12 \mathrm{~dB} /$ octave above 7 kHz |
| Low filter | $12 \mathrm{~dB} /$ octave below 20 Hz |
| Features power and pr cuits; tone defe (notarized cert formance) | Two-way tape dubbing; separable eamp; mic mixing; 3 protection cireat; loudness; certified performance rificate with each unit for exact per- |
| Models | so available |
|  | S-402CP Integrated Amplifier, \$225 |
| SHURE |  |
| Shure Br | others, Inc. |
| 222 Hartr | y Ave. |
| Evanston | , III. 60025 |
| SR-105A | Power Amplifier |
| Price | \$541 |
| Dimensions | $7 \mathrm{H} \times 19 \mathrm{~W} \times 105 / 8 \mathrm{D}$ |
| Weight | $34 \mathrm{lbs}$.8 oz . |
| Power | 200 watts ( 23 dBW ) continuous into 4 ohms from 20 Hz to 20 kHz at no more than $2 \%$ THD |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ |
| Features coupled; cons able; rack-mo | Single-channel unit; transformer-stant-voltage 70 V output also availount; optional A105A carrying case |
| M-64 Pre | amplifier |
| Price | \$73.75 |
| Dimensions | $241 / 64 \mathrm{H} \times 519 / 32 \mathrm{~W} \times 41 / 2 \mathrm{D}$ |
| Weight | 1 lb .12 oz . |
| inputs | Two switch-selectable for phono, flat, or tape |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ flat |
| Output | 5.3 V |
| THD | 1\% |
| Overload | 100 mV (phono) |
| Phono EQ | 40 Hz to $15 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Models also available |  |
|  | SR-105B Power Amplifier, \$502 |

## SONY

Sony Industries
9 W. 57th St.
New York, N.Y. 10019

| TA-E88B | Preamplifier |
| :--- | :--- |
| Price | $\$ 1,300$ |
| Dimensions | $31 / 8 \mathrm{H} \times 187 / \mathrm{WW} \times 141 / 2 \mathrm{D}$ |
| Weight | 20 lbs |
| Inputs | 2 phono; 2 tape; 1 tuner; 1 aux |
| Response | DC to $500 \mathrm{kHz},+0,-1 \mathrm{~dB}$ |
| Output | 1.5 V |
| THD | $0.002 \%$ at 10 V out |
| IM | $0.002 \%$ at 10 V out |
| Sensitivity | 2.5 mV (phono); 150 mV (high |
|  | level) |

Phono EQ RIAA $\pm 0.2 \mathrm{~dB}$
Low filter $12 \mathrm{~dB} / 0 \mathrm{ctave}$ below 15 Hz Features Dual mono construction; movingcoil capability

TA-N88B Power Amplifier
$\begin{array}{ll}\text { Price } & \$ 1,050 \\ \text { Dimensions } & 31 / 8 \mathrm{H} \times 187 / \mathrm{WW} \times 141 / 2 \mathrm{D}\end{array}$
Weight 24 lbs .3 oz
Power $\quad 160$ watts ( 22 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.5 \%$ THD
IM $0.1 \%$ at 22 watts
Response 5 Hz to $40 \mathrm{kHz},+05,-1 \mathrm{~dB}$
$\mathrm{S} / \mathrm{N} \quad 110 \mathrm{~dB}$ (IMF A-weighted)
Features High-efficiency, high-power pulse width modulation circuitry with vertical FET power switching stage; pulse power supply; three stages of amplifier/speaker protection circuitry

## TA-E7B Preamplifier

Price $\$ 820$
Dimensions $63 / 4 \mathrm{H} \times 181 / 8 \mathrm{~W} \times 125 / 8 \mathrm{D}$
Weight 26 lbs. 8 oz.
Inputs 2 phono; 2 tape; 1 tuner; 2 aux
Response $\quad 1 \mathrm{~Hz}$ to $150 \mathrm{kHz},+0,-1 \mathrm{~dB}$
THD 0.003\%
IM 0.003\%
Sensitivity 250 mV (phono); 12.5 mV (head amp phono)
Phona EQ RIAA, $\pm 0.2 \mathrm{~dB} ; 1 \mathrm{~Hz}$ to 150 kHz , $+0,-1 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 25 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 20 kHz
High filter $\quad 12 \mathrm{~dB}$ /octave above 9 kHz
Low filter $\quad 12 \mathrm{~dB}$ /octave below 30 Hz
Features Two-way tape dubbing; direct-coupled FET input circuit and direct-coupled DC unit amplifiers; Sony LEC transistors for moving-coil cartridyes; four power supply circuits for each channel; gold-plated phono inputs

TA-F70 Integrated Amplifier $\begin{array}{ll}\text { Price } & \$ 725 \\ \text { Dimensions } & 65 / 16 \mathrm{H} \times 17 \mathrm{~W} \times 1613 / 16 \mathrm{D}\end{array}$
Weight $\quad 19 \mathrm{lbs} 3 \mathrm{oz}$.

Inputs $\quad 2$ phono ( 1 moving-coil, 1 movingmagnet): 1 tape; 1 tuner; 1 aux
Power $\quad 90$ watts ( 19.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.007 \%$ THD
IM
DC to $+00 \mathrm{kHz},+0,-1 \mathrm{~dB}$
Sensitivity $\quad 2.5 \mathrm{mV}$ (phono); 0.125 mV (high level)
100 dB (phono); 105 dB (aux) (IHF
$\begin{array}{ll}\text { S/N } & \text { A-weighted) } \\ \text { Phono EQ } & \text { RIAA }+0.2 \mathrm{~dB}\end{array}$
Phono EQ RIAA, $\pm 0.2 \mathrm{~dB}$
Treble $\pm 10 \mathrm{~dB}$
Low filter $\quad \frac{1}{12} \mathrm{~dB}$ loctave below 15 Hz
Features Two-way tape dubbing; pulse power supply; thermodynamic coding; high "ft" transistors; 20-segment power-output display

| TA-F60 | Ategrated Amplifier |
| :---: | :---: |
| Price | \$450 |
| Dimensions | $65 / 16 \mathrm{H} \times 17 \mathrm{~W} \times 137 / 16 \mathrm{D}$ |
| Weight | $14 \mathrm{lbs}$.11 oz . |
| inputs | 2 phono (1 moving-coil, 1 movingmagnet); 1 tape; 1 tuner; 1 aux |
| Power | 75 watts ( 18.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.01 \%$ THD |
| IM | 0.01\% at rated output |
| Response | 3 Hz to $70 \mathrm{kHz},+0,-1 \mathrm{~dB}$ |
| Sensitivity | $\begin{aligned} & 2.5 \mathrm{mV} \text { (phono); } 0.25 \mathrm{mV} \text { (high } \\ & \text { level) } \end{aligned}$ |
| S/N | 100 dB (phono); 100 dB (aux) (IHF A-weighted) |
| Phono EQ | RIAA, $\pm 0.2$ DB |
| Bass control | $\pm 10 \mathrm{~dB}$ at 300 Hz |

Dimensions $65 / 16 \mathrm{H} \times 17 \mathrm{~W} \times 137 / 16 \mathrm{D}$ Weight $\quad 14 \mathrm{lbs} 11 \mathrm{oz}$. magnet) 1 tape 1 tuner: 1 aux 75 watts ( 18.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz nore than 0.01\% THD $0.01 \%$ at rated output
Response $\quad 3 \mathrm{~Hz}$ to $70 \mathrm{kHz},+0,-1 \mathrm{~dB}$
Sensitivity 2.5 mV (phono); 0.25 mV (high level)
100 dB (phono); 100 dB (aux) (IHF -weighted)

Bass control $\pm 10 \mathrm{~dB}$ at 300 Hz

Treble
Low filter $\quad 6 \mathrm{~dB}$ /octave below 15 Hz Features Two-way tape dubbing; pulse power supply; thermodynamic cooling; high " ft " transistors

F-30 Integrated Amplifier
Price $\$ 260$
Dimensions $31 / 4 \mathrm{H} \times 17 \mathrm{~W} \times 131 / 4 \mathrm{D}$
Weight $\quad 13 \mathrm{lbs}$
Inputs 1 phono; 1 tape; 1 tuner; 1 aux
Power $\quad 30$ watts ( 14.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
IM $\quad 0.02 \%$ at 30 watts
Response $\quad 5 \mathrm{~Hz}$ to $60 \mathrm{kHz},+0,-2 \mathrm{~dB}$
Sensitivity 2.5 mV (phono); 140 mV (high
level)
$\mathrm{S} / \mathrm{N} \quad 86 \mathrm{~dB}$ at 5 mV (phono); 100 dB
(aux)
Phono EQ RIAA, $\pm 0.3 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$
Treble $\pm 10 \mathrm{~dB}$
Features Electronic tonal defeat

## Models also available

TA-P7F Integrated Amplifier, N/A; TA-E86B Preamplifier, $\$ 1,300$; TAN7B Power Amplifier, \$920; TAF6B Integrated Amplifier, \$610; TA-N86B Power Amplifier, $\$ 600$; TA-F40 Integrated Amplifier, $\$ 350$

## SOUNDCRAFTSMEN

Soundcraftsmen, Inc. 2200 S. Ritchey
Santa Ana, Calif. 92705

| EA-5003 Power |  |
| :--- | :--- |
| Amplifier/Equalizer |  |
| Price | $\$ 949$ |
| Dimensions | $7 \mathrm{H} \times 19 \mathrm{~W} \times 15 \mathrm{D}$ |
| Weight | 54 lbs. |
| Power | 250 watts ( 24 dBW ) continuous |
|  | into 8 ohms from 20 Hz to 20 kHz |
|  | at no more than $0.05 \% \mathrm{THD}$ |
| IM | $0.05 \%$ at 250 watts |
| Response | 20 Hz to $20 \mathrm{kHz} \pm 0.25 \mathrm{~dB}$ |
| S/N | 105 dB |
| Features $\quad$ Ten band stereo equalizer; input |  |
| level controls; clipping indicators, Class H circuitry |  |


| MA-5002 | Power Amplifier |
| :---: | :---: |
| Price | \$799 |
| Dimensions | $7 \mathrm{H} \times 19 \mathrm{~W} \times 15 \mathrm{D}$ |
| Weight | 54 lbs . |
| Power | 250 watts ( 24 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD |
| IM | 0.05\% at 250 watts |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$ |
| S/N <br> Features | 105 dB <br> Input level controls; speaker |
| switching: Clas indicators | ss H circuitry; output meters; clipping |
| SP-4002 | Preamplifier/Equalizer |
| Price | \$699 |
| Dimensions | $7 \mathrm{H} \times 19 \mathrm{~W} \times 11 \mathrm{D}$ |
| Weight | 28 lbs. |
| Inputs | 1 phono; 1 tape; 1 tuner; 1 aux |
| Response | 5 Hz to $100 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$ |
| Output | 10 V |
| THD | 0.01\% |
| IM | 0.01\% |
| Sensitivity | 0.28 mV (phono) |
| Overload | 300 mV (phono) |

Phono EQ
Low filter
Features Two-way tape dubbing; three-way dual 10-band equalizer; moving-coil cartridge input; 4 mono-phono preamps: 2 amplified headphone outputs; 2 external processing loops; zero-detents slide box, front panel TAPE IN and OUT; test record; EQ charts; walnut case included

## Models also available

PA-5001 Power Amplifier, \$649; PE-2217R Preamplifier/Equalizer. $\$ 549$

## SOURCE ENGINEERING

Source Engineering
Box 506
Wilmington, Mass. 01887

## Specialist Preamplifier

Price $\$ 495$
Dimensions $2 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 12 \mathrm{D}$ (rack-mount

Inputs 2 phono; 1 tape; 1 tuner; 1 aux; 1 mono aux
Response $\quad 20 \mathrm{~Hz}$ to $70 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Output $\quad 1 / 3.2 \mathrm{~V}$ (switchable)
THD 0.1\%
IM 0.1\%
Sensitivity 3.5 mV (phono); 316 mV (high level)
Overload $\quad 75 \mathrm{mV}(1 \mathrm{kHz}), 300 \mathrm{mV}(8 \mathrm{kHz})$ (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Bass control None
Midrange None
Treble $\quad+0,-14 \mathrm{~dB}$ at 10 kHz (mono only)
High filter 50 dB /octave above $7 / 3 \mathrm{kHz}$ (mono only)
$\begin{array}{ll}\text { Low filter } & 24 \mathrm{~dB} / \text { octave below } 25 / 140 \mathrm{~Hz} \\ \text { (mono only) } \\ \text { Features } & \text { Mono disc equalization options to }\end{array}$
$\begin{array}{ll}\text { Low fitter } & 24 \mathrm{~dB} \text { /octave below } 25 / 140 \mathrm{~Hz} \\ \text { Features } & \begin{array}{l}\text { (mono only) }\end{array} \\ \text { Mono disc equalization options to }\end{array}$ suit most LP, 45, and 78 rpm records; stereo volume expander (like VRE); mono noise-reduction system (like Source Noise Suppressor); constantpower balance control; headphone jack ( 30 mW into 600 ohms each channel)

## Models also available

PNS Preamplifier Noise Suppressor \$395

SPECTRO ACOUSTICS
Spectro Acoustics, Inc.
3200 George Washington Way
Richland, Wash. 99352
500R Power Amplifier
$\begin{array}{ll}\text { Price } & \$ 650 \\ \text { Dimensions } & 7 \mathrm{H} \times 19 \mathrm{~W} \times 12 \mathrm{D}\end{array}$
$\begin{array}{ll}\text { Dimensions } & 7 \mathrm{H} \times 19 \mathrm{~W} \times 120 \\ \text { Weight } & 40 \mathrm{lbs}\end{array}$
Weight 40 lbs .
Power $\quad 250$ watts ( 23.9 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.15 \%$ THD
IM $0.15 \%$ at 250 watts
Response 10 Hz to $40 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
S/N 107 dB (A-weighted re 250 watts)
Features Pro/Com amplifier; modular construction; Class AB circuitry; standard EIA rackmount; optional solid oak or walnut end panels

## 200SR Power Amplifier

$\begin{array}{ll}\text { Price } & \$ 500 \\ \text { Dimensions } & 6 \mathrm{H} \times 19 \mathrm{~W} \times 10 \mathrm{D}\end{array}$
Weight 25 lbs .
Power $\quad 110$ watts ( 20.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.08 \%$ THD
IM $\quad 0.08 \%$ at 110 watts
Response $\quad 10 \mathrm{~Hz}$ to $40 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
S/N
Features Modular construction; Class AB
100 dB (unweighted re 110 watts.
circultry; 20 -segment LED power monitor per
channel; standard EIA rack-mount; optional solid oak or walnut end panels

## 217R Preamplifier

$\begin{array}{ll}\text { Price } & \$ 285 \\ \text { Dimensions } & 31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 71 / 2 \mathrm{D}\end{array}$
Weight $\quad 10 \mathrm{lbs}$.
Inputs 2 phono; 2 tape; tuner; aux
Response $\quad 5 \mathrm{~Hz}$ to $100 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Output 2V
THD 0.05\%
IM $\quad 0.0075 \%$
Sensitivity $\quad 3 / 10 \mathrm{mV}$ (phono) (switchable); 300 mV (high level)
Overload $\quad 100 / 300 \mathrm{mV}$ (phono) (switchable)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Low fitter $18 \mathrm{~dB} /$ octave below $10 \mathrm{~Hz}(-3 \mathrm{~dB}$ at .20 Hz )
Features Straight-line design (no tone controls): two-way tape dubbing; capacitive and resistive cartridge loading; IC circuitry in phono and output stages; optional solid oak or walnut end panels

## Models also available

500-SR Amplifier, \$750; 200R
Power Amplifier, $\$ 400$

## STANTON

Stanton Magnetics, Inc.
Terminal Drive
Plainview, N.Y. 11803
210B Preamplifier
$\begin{array}{ll}\text { Price } & \$ 240 \\ \text { Dimensions } & 3 H \times 81 / 2 W \times 7 D\end{array}$
Weight $\quad 5 \mathrm{lbs} 12 \mathrm{oz}$.
Inputs 2 phono
Response $\quad 30 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Output $\quad 7.75 \mathrm{~V}$ (rms into 600 ohms )
THD $\quad 0.10 \%$ (at max output)
IM $\quad 0.15 \%$
Sensitivity $\quad 1.5 \mathrm{mV}$ (phono)
Overload 150 mV (phono) ( 1 kHz )
Phono EQ 20 Hz to $20 \mathrm{kHz}_{0} \pm 1 \mathrm{~dB}$ (max)
Treble $\quad \pm 3 \mathrm{~dB}$ at 20 kHz
Features NAB flat switch transformer out
puts; 110 dBV input noise; interchannel crosstalk better than 60 dB

STAX
American Audioport
1407 N. Providence Road Columbia, Mo. 65201
DA-80 Power Amplifier
Price $\quad \$ 1,500$
Dimensions $161 / 2 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 61 / 2 \mathrm{D}$
Weight 43 lbs .
Power $\quad 45$ watts ( 16.5 dBW ) continuous into 8 ohms from DC to 25 kHz at no more than $0.0018 \%$ THD
IM $\quad 0.01 \%$ at 0.25 watt
Response $\quad \mathrm{DC}$ to $60 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
S/N $\quad 100 \mathrm{~dB}$ (A-weighted re 10 mV )
Features Protective circuits for short circuit,
thermal, DC; pure Class A operation; DC coupling
SRA-12S-R11 Preamplifier

| Price | $\$ 500$ |
| :--- | :--- |
| Dimensions | $41 / 2 \mathrm{H} \times 7 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight | $91 / 2 \mathrm{lbs}$. |
| Inputs | Phono; tape tuner; aux |
| Response | 5 Hz to $100 \mathrm{kHz},+0,-3 \mathrm{~dB}$ |
| Output | 7 V |
| THD | $0.007 \%$ |
| IM | $0.021 \%$ |
| Sensltivity | 1 mV (phono); 100 mV (high level) |
| Overload | 70 mV (phono) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz} \pm 0.5 \mathrm{~dB}$ |
| Features $\quad$ One-way tape dubbing; built-in |  |
| headphone amplifier |  |

Models also available
DA-80M Power Amplifier, \$1,450


Sanyo P-55


Sherwood S-702P

## STRELIOFF <br> Strelioff Systems Designs <br> 5305 Tendilla Ave. <br> Woodland Hills, Calif. 91364

DC 1 200/200 Power Amplifier Price $\$ 2,250$
Dimensions $7 \mathrm{H} \times 19 \mathrm{~W} \times 12 \mathrm{D}$
Weight $\quad 50 \mathrm{lbs}$.
Power 200 watts ( 23 dBW ) contínuous into 8 ohms from 20 Hz to 20 kHz at no more than $1.0 \%$ THD
IM $\quad 1.0 \%$ at 200 watts
Response 10 Hz to $25 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
S/N
98 dB (unweighted re 200 watts)
Features Class $A B$ circuit design employs only discrete devices; 220 Joule power supply; fully modular chassis design

TA 1/RS 1 Preamplifier
Price $\quad \$ 1,750$
Dimensions $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 15 \mathrm{D}(\mathrm{TA}-1) ; 31 / 2 \mathrm{H} \times$ $19 \mathrm{~W} \times 11 \mathrm{D}$ (RS-1)
Weight $\quad 25$ lbs. (both units)
Inputs 2 phono; 1 tape; 1 tuner; 1 mic; 2
Response $\quad 10 \mathrm{~Hz}$ to $100 \mathrm{kHz}, \pm 1.0 \mathrm{~dB}$
Output $\quad 10 \mathrm{~V}$
THD $\quad 0.1 \%$
IM $\quad 0.1 \%$
Sensitlvity 0.20 mV (phono); 20 mV (high (evel)
Overload $\quad 500 \mathrm{mV}$ (phono)
Phono EQ $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Features Two fully separate phono sections; circult design employs only discrete devices on plug-in circuit boards; all AC functions Isolated within RS-1 chassis

## Models also available

DC 1 100/100 Power Amplifier $\$ 1,750$

## TEAC

Teac Corp.
7733 Telegraph Road
Montebello, Calif. 90640
MA-7 Power Amplifier
Price $\$ 830$
Power $\quad 150$ watts ( 21.75 dBW ) continuous into 8 ohms from 10 Hz to 20 kHz at no more than $0.03 \%$ THD
IM
Response $D C$ to $300 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 121 \mathrm{dBV}$ (A-weighted re 150 watts) Features Two mono amps on one chassis slew rate of +170 V ; output bandwldth, 350 kHz (IMF -3 dB ); low drift output, $\pm 50 \mathrm{mV}$ or less: equivalent input noise of $\mathbf{- 1 2 1}$ dBV (at short input A-weighted); input sensitivity of 150 W re 1V


Sony TA-E7B


Soundcraftsmen EA-5003
$\underset{\text { Price }}{\text { PA-7 }} \underset{\$ 750}{ }$ Preamplifier
$\begin{array}{ll}\text { Inputs } & 2 \text { phono; } 2 \text { tape; } 1 \text { tuner; } 1 \text { mic; } 1\end{array}$ aux
Response $\quad 0.5 \mathrm{~Hz}$ to $100 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Output $\quad$ IV (18V max)
THD 0.03\%
IM 0.003\%
Sensitlvity $\quad 200 \mathrm{~V}$ (MM) 0.54 mV (MC) (phono)
Overload $\quad 270 \mathrm{mV}$ (phono) at 1 kHz
Phono EQ 5 Hz to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 200 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz
High filter 18 dB/octave (infrasonic)
Features Two-way tape dubbing; $\mathrm{S} / \mathrm{N}$ of
-159 dBV direct-coupled servo amp; slew rate of $\pm 100 \mathrm{~V} / \mathrm{microsecond}$; $\mathrm{S} / \mathrm{N}$ of $-159 \mathrm{~dB} / \mathrm{V}$
BX-500 Integrated Amplifier Price $\$ 330$
Dimensions $51 / 2 \mathrm{H} \times 161 / 8 \mathrm{~W} \times 1011 / 16 \mathrm{D}$
Weight $\quad 18 \mathrm{lbs} .11 \mathrm{oz}$.
Inputs 2 phono; 2 tape; 1 tuner; 1 aux
Power $\quad 55$ watts ( 17.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.08 \%$ THD
IM $\quad 0.008 \%$ at 55 watts
Response $\quad 5 \mathrm{~Hz}$ to $50 \mathrm{kHz}, \pm 2 \mathrm{~dB}$
Sensitivity $\quad 160 \mathrm{~V}(\mathrm{MM}), 0.50 \mathrm{mV}(\mathrm{MC})$ (phono)
S/N $\quad 150 \mathrm{dBV}$ (phono); 120 dBV (aux)
(unwelghted re 55 watts)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 20 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 20 kHz
Low filter $\quad \frac{\ddagger}{6} \mathrm{~dB}$ /octave below 20 Hz
Features Two-way tape dubbing; peak me-
ter; -20 dB muting; damping factor of 50

## Models also available

BX-300 Integrated Amplifier, \$250

## TECHNICS

Panasonic Co.
One Panasonic Way
Secaucus, N.J. 07094

## SU-8099 Integrated Amplifier Price $\$ 1,000$

Dimensions $519 / 32 \mathrm{H} \times 1723 / 32 \mathrm{~W} \times 16$ 17/32D

## Weight 44 lbs 102

Inputs $\quad 2$ phono (moving coil and moving magnet); 2 tape; 1 funer; 1 aux
Power 115 watts ( 20.5 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.007 \%$ THD
IM $\quad 0.007 \%$ at 115 watts
Response $\quad D C$ to $130 \mathrm{kHz},-1 \mathrm{~dB} ; 20 \mathrm{~Hz}$ to 20 $\mathrm{kHz},+0,-0.1 \mathrm{~dB}$
Sensitivity $\quad 2.5 \mu \mathrm{~V}$ moving magnet, 100 mV moving coll (phono); 200 mV (high level)
Overload


Teac BX-50V


## Yamaha C-6

moving coil (phono)
S/N $\quad 90 \mathrm{~dB}$ moving magnet. 72 dB moving coil (phono); 110 dB (aux) (1HF A-weighted re 115 watts)
Phono EQ RIAA, $\pm 0.15 \mathrm{~dB}$
Bass control $\pm 7.5 \mathrm{~dB}$ at 50 Hz
Treble $\quad \pm 7.5 \mathrm{~dB}$ at 20 kHz
High filter $\quad 6 \mathrm{~dB} /$ octave above 7 kHz
Low fiter $12 \mathrm{~dB} / 0 \mathrm{ctave}$ below 20 Hz
Features Two-way tape dubbing; separable power and preamp; straight DC input-output; fastacting fluorescent peak-power indicators; independent tape record-Input and amplifier input function selectors; moving-coil phono input; three turnover frequencies for bass and treble controls, plus tone defeat selector

## SU-9070 Preamplifier

Dimensions $4 \mathrm{H} \times 19 \mathrm{~W} \times 141 / 2$
Weight $\quad 15 \mathrm{lbs} .14 \mathrm{oz}$.
Inputs 3 phono (1 moving-coil, 2 movingmagnet); 3 tape; tuner; aux
Response $\quad D C$ to $100 \mathrm{kHz},+0,-1 \mathrm{~dB} ; 20 \mathrm{~Hz}$ to $20 \mathrm{kHz},+0,-0.1 \mathrm{~dB}$ 1 V (20V max)
Output
THD
Sensitivity $\quad 2.5 \mathrm{mV}(\mathrm{MM}), 60$ microvoits (MC) (phono): 150 mV (high level)
Overload $\quad 380 \mathrm{mV}(\mathrm{MM}) ; 9 \mathrm{mV}(\mathrm{MC})$ (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Low filter $\quad 12 \mathrm{~dB} /$ octave below 20 Hz
Features Three-way tape dubbing; DC circuitry; direct input for magnetic cartridge; 6-gang volume control; rack-mountable

## SE-C01 Micro Power Amplifier

Price $\$ 360$
Dimensions $115 / 16 \mathrm{H} \times 1111 / 16 \mathrm{~W} \times 927 / 32 \mathrm{Q}$
Weight $\quad 7 \mathrm{lbs} .11 \mathrm{oz}$.
Power $\quad 40$ watts ( 16 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than 0.03\% THD
IM $\quad 0.03 \%$ at 40 watts
Response DC to $100 \mathrm{kHz}_{1}+0,-1 \mathrm{~dB}$
S/N
110 dB (IHF A-weighted re 40 watts)
Features DC throughout; putsed power supply improves efficiency, permits space reductions; color-coded LED power metering; may be strapped for higher power mono operation; positive relay protection and muting; residual hum and noise, MM 0.1 mV

| SU-8055 | Integrated |
| :---: | :---: |
| Price | \$300 |
| Dimensions | $519 / 32 \mathrm{H} \times 1615 / 16 \mathrm{~W} \times 101 / 32 \mathrm{D}$ |
| Weight | 16 lbs .13 oz . |
| Inputs | 1 phono moving magnet and moving coil; 2 tape; 1 tuner; 1 aux |
| Power | 48 watts ( 16.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.02 \%$ THD |
| IM | 0.02\% at 48 watts |
| Response | 10 Hz to $60 \mathrm{kHz},+0,-1 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV moving magnet, $170 \mu \mathrm{~V}$ |


|  | moving coil (phono); 150 mV (high <br> level) |
| :--- | :--- |
| Overload | 150 mV moving magnet, 6.5 mV |
| moving coil (phono) |  |

## SU-CO1 Micro Preamplifier Price $\$ 260$

Dimensions $115 / 16 \mathrm{H} \times 1111 / 16 \mathrm{~W} \times 91 / 4 \mathrm{D}$
Weight 6 lbs. 10 oz .
Inputs 2 phono moving magnet and moving coil; 1 tape; 1 tuner; 1 aux
Response $\quad 3 \mathrm{~Hz}$ to $100 \mathrm{kHz},+0,-1 \mathrm{~dB}$
Output 3 V
THD 0.003\%
Sensitivity $\quad 2.5 \mathrm{mV}$ moving magnet, $100 \mu \mathrm{~V}$ moving coil (phono); 150 mV (high level)
Phono EQ RIAA, $\pm 0.2 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 50 Hz
Treble $\quad+10 \mathrm{~dB}$ at 20 kHz
High filter $\quad 6 \mathrm{~dB}$ /octave above 7 kHz
Low filter $12 \mathrm{~dB} / 0 c t a v e$ below $30 \mathrm{~Hz}_{2}$
Features Built-in MC pre-preamp; tone controls with center-defeat position; infrasonic filter; gold-plated connection jacks

## Models also available

 SU-8088 Integrated Amplifier, \$600; SE-9060 Power Amplifier, \$460; SU-8077 Integrated Amplifier, \$450; SU-8044 Integrated Amplifier, \$260; SU-8011 Integrated Amplifier, \$175
## THRESHOLD

Threshold Corp.
1832 Tribute Road, \#E
Sacramento, Calif. 95815
Stasis 1 Power Amplifier
Price $\$ 3,000$
Dimensions $83 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 161 / 2 \mathrm{D}$
Weight 96 lbs
Power $\quad 150$ watts ( 21.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0 \mathrm{~dB}$
Features Signal amplifier operated under conditions at constant voltage/constant current, and without feedback

4000 Power Amplifier

## Price $\quad \$ 2,160$

Dimensions $615 / 16 \mathrm{H} \times 19 \mathrm{~W} \times 171 / 4 \mathrm{D}$
Weight 83 lbs
Power 200 watts ( 23 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.05 \%$ THD
IM $\quad 0.05 \%$ at 200 watts
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0 \mathrm{~dB}$
S/N $\quad 105 \mathrm{~dB}$
Features Cascode/Class A operation
throughout; LED peak-average display

## SL-10 Preamplifier

## Price $\quad \$ 943$

Dimensions $25 / 8 \mathrm{H} \times 19 \mathrm{~W} \times 8 \mathrm{D}$
Weight $\quad 18 \mathrm{lbs} 4 \mathrm{Oz}$
Inputs $\quad 9$ phono; 1 tape; 1 tuner; 1 aux
Response
Output
THD
Overload $\quad 320 \mathrm{mV}$ (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$

Features Cascode/Class A design; Interna MC preamp; external power supply

## Models also available

400A Power Amplifier, \$1,395; CAS-2 Power Amplifier, \$895

## TOSHIBA

Toshiba America, Inc.
280 Park Ave.
New York, N.Y. 10017
SC-665 Power Amplifier
Price $\quad \$ 349.95$
Dimensions $34 / 5 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 139 / 10 \mathrm{D}$
Weight $\quad 18 \mathrm{lbs} 11 \mathrm{oz}$
Power $\quad 65$ watts ( 18 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no
more than 0.02\% THD
$0.02 \%$ at 65 watts
S/N
DC to $80 \mathrm{kHz},+1 \mathrm{~dB}$ 117 dB (IHF A-weighted)
SC-335 Power Amplifier
Price $\$ 179.95$
Dimensions $34 / 5 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 91 / 2 \mathrm{D}$
Weight $\quad 13 \mathrm{lbs} 602$
Power $\quad 40$ watts ( 16 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.1 \%$ THD
Response 5 Hz to $80 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
S/N $\quad 95 \mathrm{~dB}$
SY-335 Preamplifier
Price $\$ 119.95$
Dimensions $34 / 5 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 91 / 2 \mathrm{D}$
Weight $\quad 6 \mathrm{lbs} 10 \mathrm{oz}$.
Inputs $\quad 2.5 \mathrm{mV}$ (phono); 150 mV (tape); 150 mV (tuner); 2 mV (mic); 150 mV (aux)
Response $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Output 1V
THD $\quad 0.1 \%$
Overioad 150 mV (phono)
Bass control $\pm 10 \mathrm{~dB}$ at 100 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 10 kHz

## Models also available

M-15 Power Amplifier, \$339.95; C-15 Preamplifier, $\$ 299.95$; SY665 Preamplifier, \$199.95

VA SYSTEMS
VA Systems, Inc.
1444 Cliff Road
Burnsville, Minn. 55337
Model Two Power Amplifier
Price $\quad \$ 1,200$
Dimensions $7 \mathrm{H} \times 19 \mathrm{~W} \times 14 \mathrm{D}$
Weight 46 lbs .
Features Remote power switch; DC relay speaker protection; forced-air cooling; capable of driving low-impedance speakers

| Mod | Preamplifier |
| :---: | :---: |
| Price | \$550 |
| Dimensions | $31 / 2 \mathrm{H} \times 17 \mathrm{~W} \times 9 \mathrm{D}$ |
| Weight | 9 lbs |
| Inputs | Phono; tuner; reserve 1; reserve 2; 2 tape monitors |
| Output | 12 V (peak) |
| Features digitally con | Fully butfered inputs and outp Iled switching |

## Models also available

Model Three Power Amplifier \$900; Model Seven Preamplifier, $\$ 850$

[^1]M-2 Power Amplifier
Price $\quad \$ 1,200$
Dimiensions $73 / 16 \mathrm{H} \times 171 / \mathrm{BW} \times 141 / 2 \mathrm{D}$
Weight $\quad 50 \mathrm{lbs}$
Power $\quad 240$ watts ( 23.75 dBW ) continuous into 8 ohms from 20 Hz to 20 kHz at no more than $0.005 \%$ THD IM $\quad 0.002 \%$ at 120 watts
Response $\quad 10 \mathrm{~Hz}$ to $100 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
S/N $\quad 123$ dB (A-weighted re 240 watts)
Features DC amplifier; peak-level meters;
level control

## C-2a Preamplifier

$\begin{array}{ll}\text { Price } & \$ 950 \\ \text { Dimensions } & 27 / 8 \mathrm{H} \times 17 \mathrm{~W} \times 129 / 16 \mathrm{D}\end{array}$
Weight $\quad 17 \mathrm{lbs}$
Inputs 2 phono (1 moving-coil, 1 moving magnet); 2 tape; 1 tuner; 1 aux
Response 10 Hz to $100 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Output 2V
THD 0.003\%
IM $0.003 \%$
Sensitivity 2.5 mV (phono); 150 mV (high level)
Overload $\quad 350 \mathrm{mv}$ (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 10 \mathrm{~dB}$ at 20 Hz
Treble $\quad \pm 10 \mathrm{~dB}$ at 50 kHz
Low filter $12 \mathrm{~dB} /$ octave below 15 Hz Features Two-way tape dubbing; movingcoil cartridge head amp; selectable cartridge load resistance and capacitance

CA-2010 Integrated Amplifier
Price $\$ 800$
Dimensions $65 / 6 \mathrm{H} \times 181 / 6 \mathrm{~W} \times 141 / 4 \mathrm{D}$
Weight 44 lbs .
Inputs 3 phono; 2 tape; tuner; aux
Power $\quad 120$ watts ( 20.75 dBW ) continuous Into 8 ohms from 20 Hz to 20 kHz at no more than $0.03 \%$ THD
IM $\quad 0.03 \%$ at 120 watts
Response 5 Hz to $50 \mathrm{kHz}, \pm 0,-1 \mathrm{~dB}$ (tuner to speaker out)
Sensitivity 2 mV (phono)
Overload $\quad 310 \mathrm{mV}$ (phono)
S/N $\quad 96 \mathrm{~dB}$ (phono); 100 dB (aux) (A. weighted re 115 watts)
Bass control $\pm 10 \mathrm{~dB}$ at $20 \mathrm{~Hz}(500 \mathrm{~Hz})$
Treble
$\pm 10 \mathrm{~dB}$ at $20 \mathrm{kHz}(2.5 \mathrm{kHz})$

Features Two-way tape dubbing; separable power amp and preamp; switchable 30 -watt Class A operation; output meters; built-in head amp; switchable phono impedance; muting; continuously variable loudness control

## C-6 Preamplifier

Price $\$ 450$
Dimensions $41 / 2 \mathrm{H} \times 171 / 8 \mathrm{~W} \times 135 / 16 \mathrm{D}$
Weight $\quad 13 \mathrm{lbs}$.
Inputs 2 phono: 2 tape; 1 tuner; 1 aux
Response 10 Hz to $100 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$
Output 2V
THD
IM
$.015 \% ; 0.003 \%$ aux to pre out 2.5 mV (phono); 150 mV (high level)
Overload $\quad 240 \mathrm{mV}$ (phono)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass control $\pm 12 \mathrm{~dB}(31.5$ to 640 Hz$)$
Treble $\quad \pm 12 \mathrm{~dB}(640$ to 12.5 kHz$)$
High filter 12 dB /octave above 10 kHz
Low filter $\quad 12 \mathrm{~dB} /$ octave below 15 Hz
Features Parametric tone control; movingcoil cartridge head amp; independent input and record-out selector

## Models also available

CA-1010 Integrated Ampllfier, \$670; M-4 Power Amplifier, $\$ 650$; A-1 Integrated Amplifier, $\$ 630 ;$ C-4 Preamplifier, \$550; CA-610 II Integrated Amplifier, $\$ 300$; CA-410 II Integrated Ampilfier, \$250

## Tuners

AIWA
Aiwa America
35 Oxford Dr.
Moonachie, N.J. 07074

## AT-9700U

Price $\$ 520$
Dimensions $63 / 16 \mathrm{H} \times 189 / 16 \mathrm{~W} \times 1413 / 16 \mathrm{D}$
Weight $\quad 21 \mathrm{lbs} .3 \mathrm{oz}$
Quieting $\quad 15.3 \mathrm{dBt} / 35.3 \mathrm{dBf}(50 \mathrm{~dB})$
S/N
$80 \mathrm{~dB} / 78 \mathrm{~dB}$
Response $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz},+0.2,-0.5 \mathrm{~dB} / 50$
Hz to $15 \mathrm{kHz}+0.2 \mathrm{~dB}$
THD $\quad 0.03 \%(1 \mathrm{kHz}) / 0.05 \%(1 \mathrm{kHz})$
Separation $50 \mathrm{~dB}, 1 \mathrm{kHz}$
Subcarrier 65 dB
Capture 1 dB
Selectivity 80 dB
Features Quartz PLL-MPX circultry; quartz servo-lock; digital frequency readout; 10 -point LED indicators; 3 -point fine tuning; auto selectivity switch; built-in recording level oscillator; -40 to
+13 dB peak meters level oscillator; -40 to +13 dB peak meters

## ST-R22U

$\$ 200$
Dimensions $23 / 16 \mathrm{H} \times 85 / 16 \mathrm{~W} \times 67 / 8 \mathrm{D}$
Weight 4 lbs .6 oz
Quleting $\quad 18.2 \mathrm{~dB} / / 37.9 \mathrm{dBf}(50 \mathrm{~dB})$
S/N
$73 \mathrm{~dB} / 70 \mathrm{~dB}$
Response $\quad 50 \mathrm{~Hz}$ to $10 \mathrm{kHz} \pm 0.5 \mathrm{~dB} / 30 \mathrm{~Hz}$ to
$15 \mathrm{kHz},+0.5,-1.5 \mathrm{~dB}$
THD $\quad 0.15 \%(1 \mathrm{kHz}) / 0.25 \%(1 \mathrm{kHz})$
Separation $45 \mathrm{~dB}, 1 \mathrm{kHz}$
Capture $\quad 1.5 \mathrm{~dB}$
Selectivity 70 dB
Features Digital frequency display; 4-LED signal strength meter; hi-blend switch; AFC/muting switch; dual gate MOSFET; quartz oscillation; mini size

## Models also available AT-9300, \$210

## AKAI

Akai America, Ltd.
2139 E. Del Amo Blvd.
Compton, Calif. 90220

AT-2650

Price
Weight
Quieting
S/N
Response
THD
Separation
Subcarrier
Capture
Selectivity

Dimensions $57 / 10 \mathrm{H} \times 173 / 10 \mathrm{~W} \times 141 / 2 \mathrm{D}$
$\$ 300$

16 lbs 8 oz
$14.7 \mathrm{dBF} / 35.8 \mathrm{dBf}$
75 dB
20 Hz to $15 \mathrm{kHz}, \pm 1,-3$
$0.1 \%$ ( 1 kHz )
$45 \mathrm{~dB}(1 \mathrm{kHz})$
65 dB
1.2 dB

80 dB

AT-2250

| Price | $\$ 150$ |
| :--- | :--- |
| Dimensions | $51 / 10 \mathrm{H} \times 15 \mathrm{~W} \times 87 / 10 \mathrm{D}$ |
| Weight | 10 lbs 5 oz. |
| Quieting | $17.7 \mathrm{~dB} / 37.7 \mathrm{~dB}$ |
| $\mathrm{~S} / \mathrm{N}$ | 70 dB |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| THD | $0.2 \%(1 \mathrm{kHz})$ |
| Separation | $42 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Subcarrier | 40 dB |
| Capture | 1.3 dB |
| Selectivity | 65 dB |

Models also available
AT-2450, \$225

ARMSTRONG
Armstrong Audio (U.S.A.), Inc.
Sindell Organization
11046 Santa Monica Blvd.
Los Angeles, Calif. 90025

623
Price $\quad \$ 395$
Dimensions $31 / 4 \mathrm{H} \times 121 / 4 \mathrm{~W} \times 111 / 4 \mathrm{D}$
Weight $\quad 7 \mathrm{lbs} 12 \mathrm{oz}$
$\mathrm{S} / \mathrm{N} \quad 65 \mathrm{~dB}$ (mono)
Response $\quad 30 \mathrm{~Hz}$ to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (mono)
THD
dB, 100 Hz to 8 kHz

Selectivity 56 dB
Features Three FM and three AM preset
switches

## Models also available

624. \$295

## CROWN

Crown International
1718 W. Mishawaka Road
Elkhart, Ind. 46514

FM-1
Price
Dimensions $5 \mathrm{y} / 4 \mathrm{H} \times 19 \mathrm{~W} \times 15 \mathrm{D}$
Weight
Quieting
S/N
Response
THD
Separation
Subcarrier
Capture
Selectivity $\quad 75 \mathrm{~dB}$ at 25 dB
Features Sensitivity: $10-8 \mathrm{dBf}$; image re-
sponse ratio: 114 dB spurious response ratios: 114 dB antenna inputs: $\mathbf{3 0 0}$ ohms balanced; 750 ohms unbalanced

## DENON

American Audioport, Inc.
1407 N. Providence Rd.
Columbia, Mo. 65291

## TU-850

| Price | \$480 |
| :---: | :---: |
| Dimensions | $629 / 64 \mathrm{H} \times 175 / 64 \mathrm{~W} \times 153 / 4 \mathrm{D}$ |
| Weight | $24 \mathrm{lbs}$.5 oz . |
| Quieting | $50 \mathrm{~dB} / / 11.6 \mathrm{dBf}$ |
| S/N | 84 dB (mono)/82 dB (stereo) |
| Response | 20 Hz to $15 \mathrm{kHz}+0.2,-1.5$ |
| THD | $\begin{aligned} & 0.06 \%(20 \text { to } 15 \mathrm{kHz}) / 0.05 \%(20 \\ & \text { to } 15 \mathrm{kHz}) \end{aligned}$ |
| Separation | $50 \mathrm{~dB}, 1 \mathrm{kHz}$ to 10 kHz |
| Subcarrier | 80 dB |
| Capture | 1.5 dB |
| Selectivity | 65 dB |
| Features | Multi-function meters; wide/narrow |

## Models also available

TU-630, \$340

| DYNACO |  |
| :---: | :---: |
| Dynaco, Inc. <br> P.O. Box 612 |  |
|  |  |
| Needham, Mass. 02195 |  |
| FM-30 |  |
| Price | \$300 (assembled) |
| Dimensions | $41 / 4 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 9 \mathrm{D}$ |
| Weight | 11 lbs . |
| Quleting | 19.2 dBf |
| S/N | 65 dB |
| Response | 20 Hz to $15 \mathrm{kHz} \pm 1 \mathrm{~dB}$ (mono) |
| THD | 0.5\% ( 1 k Hz ) $/ 0.9 \%$ |
| Separaton | $30 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 50 dB |
| Capture | 1.5 dB |
| Selectivity | 65 dB |

EDINBURGH WIRELESS CO.
Import Audio Ltd.
13430 Clayton Rd
St. Louis, Mo. 63131

SMT-2

| Price | $\$ 600$ |
| :--- | :--- |
| Response | 30 Hz to 15 kHz |
| THD | $0.7 \%$ at $100 \%$ modulation; $0.2 \%$ at |
|  | $30 \%$ modulation (stereo) |
| Capture | 1.5 dB |
| Selectivity | 60 dB |
| Features $\quad$ Eight preset buttons on front panel; |  |
| no scale on front at all-stations are preset on |  |
| back only; stereo and center-tuning LED on front |  |
| panel |  |

## EUMIG

Eumig (U.S.A.), Inc.
Lake Success Business Park 225 Community Drive Great Neck, N.Y. 11020

T-1000
Price \$795
Dimensions 19W
Quieting $\quad 12 \mathrm{dBf} / 36.1 \mathrm{dBf}$
S/N $\quad 75 \mathrm{~dB} / 75 \mathrm{~dB}$
Response $\quad 15 \mathrm{~Hz}$ to $16 \mathrm{kHz}+0.5,-1 \mathrm{~dB}$
THD
Separation $\quad 45 / 50 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz
Subcarrier
Capture
Features Ten preset memory with Nicad battery for storage; 4-digit readout; push button up/down tuning; muting with adjustable threshold manual or auto tuning; narrow or wide band with switch

## FISHER

Fisher Corp.
21314 Lassen St.
Chatsworth, Calif. 91311

## FM-2421

| Price | $\$ 449.95$ |
| :--- | :--- |
| Dimensions | $31 / 2 \mathrm{H} \times 171 / 3 \mathrm{~W} \times 13 \mathrm{D}$ |
| Weight | 15 lbs |
| Quieting | $13.2 \mathrm{dBf} / 35.9 \mathrm{dBf}$ |
| $\mathrm{S} / \mathrm{N}$ | $75 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 20 Hz to $15 \mathrm{kHz} \pm 1 \mathrm{~dB}$ |
| THD | $0.1 \%(1 \mathrm{kHz}) / 0.15 \%(1 \mathrm{kHz})$ |
| Separation | $46 \mathrm{~dB}(1 \mathrm{kHz}) ; 36 \mathrm{~dB}(10 \mathrm{kHz})$ |
| Subcarrier | $60 / 70 \mathrm{~dB}$ |
| Capture | 0.8 dB |
| Selectivity | 75 dB |
| Features | Digital synthesizer; MPX |
| switchable IF fandwidth |  |

## Models also available

## HARMAN KARDON <br> Harman Kardon <br> 55 Ames Court <br> Plainview, N.Y. 11803

HK-500

| Price | $\$ 279$ |
| :--- | :--- |
| Dimensions | $53 / 4 \mathrm{H} \times 163 / 4 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight | 17 lbs |
| S/N | 75 dB |
| Response | DC to $60 \mathrm{kHz} \pm 1.5 \mathrm{~dB} / 20 \mathrm{~Hz}$ to 15 |
|  | $\mathrm{kHz} \pm 0.5 \mathrm{~dB}$ |
| THD | $0.1 \%(1 \mathrm{kHz})$ |
| Separation | $45 \mathrm{~dB}, \mathrm{DC} \mathrm{to} 1 \mathrm{kHz}$ |
| Capture | 1.3 dB |
| Selectivity | 70 dB |
| Features | Switchable de-emphasis for Dolby |
| FM; variable FM muting; phase lock-loop; stereo |  |
| threshold control |  |

## Models also available <br> Citation 18, \$449

HEATHKIT
Heath Co.
Benton Harbor, Mich. 49022

AJ-1219

| Price | $\$ 120$ (kit) |
| :--- | :--- |
| Dimensions | $35 / 8 \mathrm{H} \times 13 \mathrm{~W} \times 11 \mathrm{D}$ |
| Weight | 12 lbs |
| Quieting | 11.25 dBf (mono; 30 dB ) |
| Separation | 40 dB |
| Subcarrier | 2 dB |
| Capture | 2 dB |
| Selectivity | 60 dB |

## HITACHI

Hitachi Sales Corp. of America
401 W. Artesia Blvd.
Compton, Calif. 90220
FT-8000

| Price | $\$ 460$ |
| :--- | :--- |
| Dimensions | $31 / 16 \mathrm{H} \times 17 \mathrm{YWW} \times 15 \mathrm{3/32D}$ |
| Weight | 13 lbs .6 oz |
| Quieting | $15.7 \mathrm{dBt} / 37.2 \mathrm{dBf}$ |
| S/N | $72 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| Response | 20 Hz to $15 \mathrm{kHz}+0.5,-1.2 \mathrm{~dB}$ |
| Separation | 50 dB, to 1 kHz |
| Subcarrier | 68 dB |
| Selectivity | 80 dB |
| Features | FM digital synthesizer tuner; quartz |
| crystal frequency base; digital frequency readout; |  |
| clock function; programmable 6 -station memory; |  |
| all-electronic front end; 70 dB image rejection; 85 |  |

dB IF rejection
FT-440B
Price $\$ 300$
Dimensions $62 / 3 \mathrm{H} \times 13 / 4 \mathrm{~W} \times 151 / 10 \mathrm{D}$
Weight $\quad 15 \mathrm{lbs} .6 \mathrm{oz}$
Quieting $\quad 16.1 \mathrm{dBf} / 37 \mathrm{dBf}$
S/N $\quad 76 \mathrm{~dB} / 70 \mathrm{~dB}$
Response $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
THD
Separation
Subcarrier 65 dB
Capture 1 dB
Selectivity 80 dB
Features Four-stage variable capacitor front
Models also available
FT-5000, \$330; FT-4000, \$180

## JVC <br> JVC America, Inc. <br> 58-75 Queens Midtown <br> Expressway <br> Maspeth, N.Y. 11378

T-M1
Price $\$ 500$
Dimensions $311 / 16 \mathrm{H} \times 91 / 16 \mathrm{~W} \times 109 / 16 \mathrm{D}$
Weight $\quad 8 \mathrm{lbs} .3 \mathrm{oz}$.
Quieting $\quad 17.3 \mathrm{dBf}$
S/N $\quad 75 \mathrm{~dB} / 72 \mathrm{~dB}$
Response $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz},+0.3,-1 \mathrm{~dB}$
THD $\quad 0.08 \%(1 \mathrm{~Hz}) / 0.12 \%(1 \mathrm{~Hz})$
Separation $40 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz
Capture 1 dB
Selectivity 75 dB
Features Quartz synthesizer FM tuner; 5
preset FM stations; phase tracking loop detector;
digital frequency readout with clock function

## T-40P

Price

Weight $\quad 7 \mathrm{lbs}$.
Quieting
S/N
THD
Separation
Subcarrier
Capture

Weinsions $45 / 16 \mathrm{H} \times 169 / 16 \mathrm{~W} \times 115 / 8$

Response $\quad 20 \mathrm{~Hz}$ to $15 \mathrm{kHz},+0.5,-3 \mathrm{~dB}$
370
$21.7 \mathrm{dBf} / 39.2 \mathrm{dBf}(50 \mathrm{~dB})$
$0.15 \%(1 \mathrm{~Hz}) / 0.3 \%(1 \mathrm{~Hz})$
$38 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz
70 dB
1.5 dB

Selectivity $\quad 65 \mathrm{~dB}$
Features Quartz-PLL frequency synthesizer; 8 preset FM/AM stations; direct readout digital frequency display

| JT-V77 |  |
| :--- | :--- |
| Price | $\$ 320$ |
| Dimensions | $61 / \mathrm{H} \times 173 / 4 \mathrm{~W} \times 131 / 2 \mathrm{D}$ |
| Weight | 14 lbs 40 Oz |
| Quieting | $16.8 \mathrm{dBf} / 36.8 \mathrm{dBf}$ |
| S/N | $78 \mathrm{~dB} / 72 \mathrm{~dB}$ |
| Response | 20 Hz to $15 \mathrm{kHz},+0.5,-0.8$ |
|  | $\mathrm{~dB} / \mathrm{same}$ |
| THD | $0.08 \%(1 \mathrm{kHz}) / 0.1 \%(1 \mathrm{kHz})$ |
| Separation | $40 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 70 dB |
| Capture | 1 dB |
| Selectivity | 75 dB |
| Features | Phase-tracking loop-detector; auto |
| tuning hold |  |
| T-V3 |  |
| Price | $\$ 140$ |
| Dimensions | $31 / 2 \mathrm{H} \times 169 / 16 \mathrm{~W} \times 121 / 16 \mathrm{D}$ |
| Weight | 7 lbs .8 oz. |
| Quieting | $17.2 \mathrm{dBi} / 38.3 \mathrm{dBf}(50 \mathrm{~dB})$ |
| S/N | $70 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| THD | $0.25 \%(1 \mathrm{~Hz}) / 0.45 \%(1 \mathrm{~Hz})$ |
| Separation | $30 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz |
| Capture | 1.5 dB |
| Selectivity | 55 dB |

## Models also available

T-3030, \$650; T-X5, \$300; JT-V22, \$190; T-V5, \$180

## KENWOOD

Kenwood Electronics, Inc.
75 Seaview Drive
Secaucus, N.J. 07094

KT-917
Price $\quad \$ 1,000$
Dimensions $181 / 1 / \mathrm{H} \times 611 / 32 \mathrm{~W} \times 187 / 32 \mathrm{D}$
Weight $\quad 15 \mathrm{lbs}$.
Quieting $\quad 15.8 \mathrm{dBf} / 37.2 \mathrm{dBf}$
S/N $\quad 90 \mathrm{~dB} / 84 \mathrm{~dB}$
Response $\quad 10 \mathrm{~Hz}$ to $16 \mathrm{kHz},+0.2,-0.5 \mathrm{~dB}$
THD
Separation $50 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz
Subcarrier 70 dB
Capture $\quad 0.8 \mathrm{~dB}$
Selectivity 60 dB
Features Distortion-detecting loop tuning
system; pulse-count detector

## L-077 II

| Price | \$625 |
| :---: | :---: |
| Dimensions | $35 / 16 \mathrm{H} \times 1829 / 32 \mathrm{~W} \times 1315 / 32 \mathrm{D}$ |
| Weight | 17 lbs 3 oz . |
| Quieting | $14.7 \mathrm{dBf} / 37.2 \mathrm{dBf}$ |
| S/N | $84 \mathrm{~dB} / 80 \mathrm{~dB}$ |
| Response | 20 Hz to $15 \mathrm{kHz},+0,-1 \mathrm{~dB}$ |
| THD | 0.06\% ( 50 Hz )/0.7\% ( 15 Hz ) |
| Separation | $45 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 70 dB |
| Capture | 0.7 dB |
| Selectivity | 100 dB |
| Features | Pulse count detector |
| KT-615 |  |
| Price | \$270 |
| Dimensions | $1710 / 32 \mathrm{H} \times 66 / 32 \mathrm{~W} \times 15$ 27/32D |
| Weight | $15 \mathrm{lbs}$.13 oz . |
| Quleting | $15.8 \mathrm{dBf} / 37.2 \mathrm{dBf}$ |
| S/N | $81 \mathrm{~dB} / 78 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+0.2,-1.5 \mathrm{~dB} /$ |
| THD | 0.05\% ( 100 Hz )/0.065\% ( 10 kHz ) |
| Separation | $40 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 65 dB |
| Capture | 1 dB |
| Selectivity | 54 dB |
| Features | Pulse-count detector |


| KT-5500 |  |
| :---: | :---: |
| Price | \$175 |
| Dimensions | $1431 / 32 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 117 / 16 \mathrm{D}$ |
| Weight | 13 lbs 6 oz . |
| Quieting | $17.2 \mathrm{dBt} / 38.3 \mathrm{dBf}$ |
| S/N | $72 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+0.2,-2 \mathrm{~dB}$ |
| THD | 0.15\% ( 1 Hz ) $0.2 \%$ ( 1 kHz ) |
| Separation | $35 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 15 kHz |
| Subcarrier | 40 dB |
| Capture | 1 dB |
| Selectivity | 60 dB |

## Models also available

KT-815, \$440; KT-413, \$250; KT313, \$179

LUX
Lux Audio of America, Ltd.
160 Dupont St.
Plainview, N.Y. 11803

| 5T-50 |  |
| :---: | :---: |
| Price | \$1,595 |
| Dimensions | $4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 16 \mathrm{D}$ |
| Weight | 19 lbs . |
| Quieting | $13.2 \mathrm{dBf} / 36.1 \mathrm{dBf}$ |
| $S / N$ | 70 dB (mono) |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| THD | 0.08\%/0.1\% (1 kHz) |
| Separation | $40 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 65 dB |
| Capture | 1.1 dB |
| Selectivity | 72 dB |
| Features ory; Dolby; | Digital frequency synthesis; mem-uilt-in 400 Hz test tone; 7 -station |
| memory; mu | path detector switch |
| T-12 |  |
| Price | \$695 |
| Dimensions | $3 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 123 / 4 \mathrm{D}$ |
| Weight | $15 \mathrm{lbs}$.7 oz . |
| Quieting | 16 dBf (mono) |
| S/N | 80 dB (mono) |
| Response | 20 Hz to $17 \mathrm{kHz}, \pm 0.5 \mathrm{~dB} / 20 \mathrm{~Hz}$ to $17 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | 0.05\% ( 1 kHz )/0.06\% ( 1 kHz ) |
| Separation | $50 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Capture | 0.8 dB (wide); 2 dB (narrow) |
| Selectivity | 60 dB |
| IF bandwidth | Automatic tuning locking system; |
|  | selector; multipath check switch; |
| recording tes | tone; LED signal stength indicator |

## T-2

| Price | $\$ 375$ |
| :--- | :--- |
| Quieting | 14.2 dBf (mono) |
| S/N | 75 pB (mono) |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| THD | $0.2 \%(1 \mathrm{kHz}) / 0.3 \%(1 \mathrm{kHz})$ |
| Separation | $46 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Subcarrier | 65 dB |
| Capture | 9.5 dB |
| Selectivity | 70 dB |
| Features | LED signal-strength and center- |
| tuning indicators; $F M$ muting level control |  |

Models also available

\[\)| $5 \mathrm{~T}-10$ |
| :--- |
| $\$ 495$ | Tuner, \$795; T-4 Tuner.

\]

MARANTZ
Marantz, Inc.
20525 Nordhoff St.
Chatsworth, Calif. 91311
ST-400
Price $\$ 280$
Dimensions $53 / 4 \mathrm{H} \times 163 / 3 \mathrm{~W} \times 99 / 16 \mathrm{D}$

| Weight | 11 lbs, |
| :--- | :--- |
| Quieting | $13.9 \mathrm{dBt} / 36.8 \mathrm{dBf}$ |
| S/N | $78 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | $30 \mathrm{~Hz} \mathrm{to} 15 \mathrm{kHz},+0.2,-1 \mathrm{~dB} / 30$ |
|  | Hz to $15 \mathrm{kHz},+0.2,-1 \mathrm{~dB}$ |
| THD | $0.15 \%(1 \mathrm{kHz}) / 0.25 \%(1 \mathrm{kHz})$ |
| Separation | $45 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Subcarrier | 65 dB |
| Capture | 1 dB |
| Selectivity | 65 dB |
| Features | Digital AM/FM frequency display; |
| servo-lock fine tuning; FM center channel meter; |  |
| AM/FM signal strength meter; Dolby de-emphasis |  |
| network; PLL FM multiplex demodulator; MOSFET |  |
| FM front end |  |

## Models also available <br> ST-300, \$225

MCS ${ }^{*}$ SERIES
J.C. Penney

1301 Ave. of the Americas
New York, N.Y. 10019

3710

| Price | $\$ 230$ |
| :--- | :--- |
| Dimensions | $51 / 2 \mathrm{H} \times 161 / \mathrm{WW} \times 1113 / 16 \mathrm{D}$ |
| Weight | 26 lbs |
| Quieting | $14.8 \mathrm{dBt} / 37.3 \mathrm{dBf}$ |
| S/N | $75 \mathrm{~dB} / 72 \mathrm{~dB}$ |
| Response | 9 Hz to 16 kHz |
| THD | $0.2 \% / 0.25 \%$ |
| Separation | $45 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Capture | 0.6 dB |
| Selectivity | 70 dB |
| Features | Muting switch; MPX filter; dual-gate |
| MOSFET front end; quadrature detector |  |

MOSFET front end; quadrature detector

## Models also available

3701, \$160

## MERIDIAN

Anglo American Audio
P.O. Box 653

Buffalo, N.Y. 14240

| 104 |  |
| :--- | :--- |
| Price | $\$ 555$ |
| Dimensions | $2 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight | 4 lbs. |
| S/N | 67 dB |
| Response | 15 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | $0.1 \%$ |
| Separation | $50 \mathrm{~dB}, 15 \mathrm{~Hz}$ to 15 kHz |

## MICRO CPU

Draco Labs, Inc. 1005 Washington St.
Grafton, Wisc. 53024

| Micro CPU |  |
| :---: | :---: |
| Price | \$1,000 |
| Dimensions | $63 / 3 \mathrm{H} \times 20 \mathrm{~W} \times 1415 / 16 \mathrm{D}$ |
| Weight | 34 lbs . |
| S/N | $75 \mathrm{~dB} / 82 \mathrm{~dB}$ |
| Response | 20 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB} 20 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | 0.07\% ( 1 kHz )/0.07\% ( 1 kHz ) |
| Separation | $40 \mathrm{~dB}, 30 \mathrm{~Hz}$ to 15 kHz |
| Subcarrler | 80 dB |
| Capture | 0.5 dB |
| Selectivity | 85 dB |
| Features | Programmablé station call letters; |
| 6 -section varactor front end; digital detector; laser tuning; auto scan; self-testing |  |

MITSUBISHI
Melco Sales, Inc.
3030 E. Victoria St.
Compton, Calif. 90221

| DA-F20 |  |
| :--- | :--- |
| Price | $\$ 430$ |
| Dimensions | $63 / 4 \mathrm{H} \times 163 / \mathrm{W} \times 103 / \mathrm{BD}$ |
| Weight | 14 lbs .8 oz. |
| Quieting | $19 \mathrm{~dB} / / 39.2 \mathrm{dBi}$ |
| S/N | $80 \mathrm{~dB} / 75 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB} / \mathrm{same}$ |
| THD | $0.05 \%(1 \mathrm{kHz}) / 0.08 \%(1 \mathrm{kHz})$ |
| Separation | $40 \mathrm{~dB}(10 \mathrm{kHz})$ |
| Subcarrier | 70 dB |
| Capture | 0.8 dB |
| Selectlvity | $75 \mathrm{~dB} / 45 \mathrm{~dB}$ |
| Features | Quartz-PLL synthesizing tuner; |
| digital frequency display; recording-level-checking |  |
| signal output; multipath output; selectivity switch |  |

## M-F01

Price $\$ 34$
Dimensions $\quad 23 / 4 \mathrm{H} \times 105 / 6 \mathrm{~W} \times 93 / 4 \mathrm{D}$
Weight $\quad 7 \mathrm{lbs} .11 \mathrm{oz}$.
Quieting $\quad 19.2 \mathrm{dBf} / 39.2 \mathrm{dBf}$
$\mathrm{S} / \mathrm{N} \quad 80 \mathrm{~dB} / 77 \mathrm{~dB}$
Response $\quad 30 \mathrm{~Hz}$ to $16 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
THD $\quad 0.08 \%(1 \mathrm{kHz}) / 0.1 \%(1 \mathrm{kHz})$
Separation $40 \mathrm{~dB}, 1 \mathrm{kHz}$ to 10 kHz
Subcarrier 70 dB
Capture 1 dB
Selectivity 70 dB
Features Micro-size; quartz-PLL synthe-
sizer; LED signal-strength and tuning-lock indica-
iors; record-level check signal; pilot cancel circuit

## Models also available <br> DA-F10. \$300

NAD
NAD (U.S.A.) Inc.
New Acoustic Dimension
Mackintosh Lane
P.O. Box 529

Lincoln, Mass. 01773

| 4080 |  |
| :---: | :---: |
| Price | \$285 |
| Dimensions | $51 / 2 \mathrm{H} \times 177 / 10 \mathrm{~W} \times 153 / 5 \mathrm{D}$ |
| Weight | 24 lbs . |
| Quieting | $14.8 \mathrm{dBt} / 36.1 \mathrm{dBf}$ |
| S/N | $74 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | 0.2\% (1 kHz)/0.3\% (1 kHz) |
| Separation | $30 \mathrm{~dB}, 30 \mathrm{~Hz}$ to 15 kHz |
| Subcarrier | 70 dB |
| Capture | 1 dB |
| Selectivity | 70 dB |
| Features | Multipath meter |
| 4020 |  |
| Price | \$175 |
| Dimensions | $34 / 5 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 91 / 2 \mathrm{D}$ |
| Weight | $9 \mathrm{lbs}$. |
| Quieting | $16 \mathrm{dBt} / 38 \mathrm{dBf}$ |
| S/N | $75 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | 0.2\% ( 1 kHz / $/ 0.3 \%$ ( 1 kHz ) |
| Separation | $32 \mathrm{~dB}, 30 \mathrm{~Hz}$ to 15 kHz |
| Subcarrier | 70 dB |
| Capture | 1.5 dB |
| Selectivity | 62 dB |
| Features | LED tuning indicators |
| Models a | Iso available 4030, \$220 |



Harman Kardon hk-500


Onkyo T-909


Revox B-760


Crown FM-1


Hitachi FT 8000


JVC T-mı


NAD 4020


Pioneer TX-9800



Scott 570 T

NAKAMICHL
Nakamichi USA Corp.
1101 Colorado Ave.
Santa Monica, Calif. 90401

430

| Price | $\$ 440$ |
| :--- | :--- |
| Dimensions | $31 / 4 \mathrm{H} \times 16 \mathrm{~W} \times 9 \mathrm{D}$ |
| Weight | 11 lbs |
| Quieting | $17.3 \mathrm{dBt} / 37.3 \mathrm{dBf}$ |
| $\mathrm{S} / \mathrm{N}$ | $70 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}($ mono $)$ |
| THD | $0.06 \%(1 \mathrm{kHz}) / 0.09 \%(1 \mathrm{kHz})$ |
| Separatlon | $50 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Subcarrier | 75 dB |
| Capture | 1.5 dB |
| Selectivity | 90 dB |
| Features | Optional Dolby FM circuit board |
| available at $\$ 44$ |  |

Price
Dimensions
Weight
Quieting
Response
THD
Separation
Subcarrie
Caplure
Features Optional Dolby FM circuit board
available at $\$ 44$

## NIKKO

Nikko Audio
16270 Raymer St.
Van Nuys, Calif. 91406

## Gamma V

Price $\quad \$ 700$
Dimensions $21 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 13 \mathrm{D}$
Weight $\quad 13 \mathrm{lbs} .3 \mathrm{oz}$.
Quieting $\quad 13.2 \mathrm{dBt} / 34.8 \mathrm{dBf}$
S/N
Response
THD
Separation $48 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz
Subcarrier 65 dB
Capture
Selectivity
Features LED digital station frequency readout; automatic and manual electronic tuning with 6-station electronic preset; selectable IF stage and


Teac TX-300
adjustable FM muting threshold; 25-microsecond Dolby de-emphasis; fixed and variable output level

## NT-790

Price $\$ 180$
Dimensions $35 / 8 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 13 \mathrm{D}$
Weight $\quad 10 \mathrm{lbs} .14 \mathrm{oz}$.
Quieting $\quad 20 \mathrm{dBt} / 35 \mathrm{dBf}$
$\mathrm{S} / \mathrm{N} \quad 72 \mathrm{~dB} / 60 \mathrm{~dB}$
Response $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 2 \mathrm{~dB}$
THD $\quad 0.2 \%(1 \mathrm{kHz}) / 0.5 \%(1 \mathrm{kHz})$
Separation $30 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz
Subcarrier 45 dB
Capture $\quad 1.5 \mathrm{~dB}$
Selectivity 55 dB
Features Quadrature FM detector; PLL dual
gate MOSFET FM; FM muting; high blend; LED
signal strength and center tuning indicators

## Models also available

Gamma I, \$400; NT-890, \$220

## ONKYO

Onkyo U.S.A. Corp.
42-07 20th Ave.
Long Island City, N.Y. 11105

T-909

| Price | $\$ 950$ |
| :--- | :--- |
| Dimensions | $31 / 4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 1315 / 16 \mathrm{D}$ |
| Weight | 13 lbs. |
| Quieting | $14.7 \mathrm{dBt} / 36 \mathrm{dBf}$ |
| S/N | $80 \mathrm{~dB} / 74 \mathrm{~dB}$ |
| Response | 30 Hz to $16 \mathrm{kHz},+0.5,-2 \mathrm{~dB}$ |
| THD | $0.08 \%(1 \mathrm{kHz}) / 0.15 \%(1 \mathrm{kHz})$ |
| Separation | $40 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 70 dB |
| Capture | 1.5 dB |
| Selectivity | 80 dB |
| Features $\quad$ Quartz-controlled digital synthe- |  |
| sized FM tuner, 7 preset-buttons; gold-plated out- |  | put terminals

## T-4090

| Price | $\$ 339.95$ |
| :--- | :--- |
| Dimensions | $415 / 16 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 153 / / \mathrm{D}$ |
| Weight | 13 lbs |
| Quieting | $14.7 \mathrm{~dB} / / 36 \mathrm{dBf}$ |
| S/N | $76 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+0.5,-1.5 \mathrm{~dB}$ |
| THD | $0.1 \% / 0.25 \%$ |
| Separation | $35 \mathrm{~dB}, 70 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 60 dB |
| Capture | 1.3 dB |
| Selectivity | 70 dB |
| Features | Quartz lock; human touch sensor; |
| LED function readout |  |

## Models also available <br> T-4040, \$229.95

OPTONICA
Sharp Electronics Corp.
10 Keystone Place
Paramus, N.J. 07652

ST-7405
Price $\$ 400$
Dimensions $29 / 10 \mathrm{H} \times 169 / 10 \mathrm{~W} \times 15 \mathrm{D}$
Weight $\quad 13 \mathrm{lbs} 8 \mathrm{oz}$.
Quieting $\quad 9.8 \mathrm{dBi}$
S/N $\quad 75 \mathrm{~dB} / 70 \mathrm{~dB}$
Response $\quad 35 \mathrm{~Hz}$ to $15 \mathrm{kHz} \pm 1.5 \mathrm{~dB} / 35 \mathrm{~Hz}$ to $15 \mathrm{kHz} \pm 1.5 \mathrm{~dB}$
THD $\quad 0.2 \%(1 \mathrm{kHz}) / 0.3 \%(1 \mathrm{kHz})$
Separation $50 \mathrm{~dB}, 1 \mathrm{kHz}$
Capture $\quad 1.2 \mathrm{~dB}$
Selectivity 80 dB
Features Opto lock tuning; digital frequency display; hi-blend; FM muting; multipath monitor switch; variable output; IF band selector with indicator; pilot canceller

ST-4201

| Price | $\$ 2 / \mathrm{H} \times 173 / \mathrm{W} \times 10 \% \mathrm{D}$ |
| :--- | :--- |
| Dimensions | $55 / 8 \mathrm{H} \times 17 \mathrm{l}$ |
| Weight | 12 lbs. |
| Quieting | $20.2 \mathrm{dBf} / 38.2 \mathrm{dBf}$ |
| $\mathrm{S} / \mathrm{N}$ | $72 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 1.5 \mathrm{~dB} / 30 \mathrm{~Hz}$ to |
|  | $15 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ |
| THD | $0.2 \%(1 \mathrm{kHzz}) / 0.3 \%(1 \mathrm{kHz})$ |
| Separation | $45 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Subcarrier | 51 dB |
| Capture | 1.2 dB |
| Selectivity | 65 dB |
| Features | Air-check calibrator; hi-blend; mut- |
| ing switch |  |

PHASE LINEAR Phase Linear Corp. 20121 48th Ave., W. Lynnwood, Wash. 98036

## 5100 Series Two

Price $\$ 449.95$
Dimensions $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 12 \mathrm{D}$
Weight $\quad 10 \mathrm{lbs}$
Quieting $\quad 15.2 \mathrm{dBf} / 37.5 \mathrm{dBf}$
S/N $\quad 75 \mathrm{~dB} / 80 \mathrm{~dB}$
Response $\quad 20 \mathrm{~Hz}$ to $15 \mathrm{kHz},+0.2,-0.5 \mathrm{~dB}$
THD $\quad 0.05 \%(1 \mathrm{kHz})$
Separation $40 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz
Subcarrier 75 dB
Capture $\quad 1.0 \mathrm{~dB}$
Selectivity 60 dB
Features Digital PLL synthesized AM/FM; 6-
station memory; AM/FM auto/manual tuning
Models also available
5000 Series Two, $\$ 580$
PHILIPS
Philips High Fidelity
Laboratories
1700 Magnavox Way
Fort Wayne, Ind. 46804

AH-673
Price
Dimension
Weight
Quieting
$\mathrm{S} / \mathrm{N}$
Response
JHD
Separation $40 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz
Subcarrier 65 dB
Capture $\quad 1 \mathrm{~dB}$
Selectivity 110 dB
Features Multipath indicator; wideband $A M$; also available with black front panel as $\mathrm{AH}-6731$ at $\$ 550$

## Models also available

AH-185 Tuner, $\$ 330$

PIONEER
U. S. Pioneer Electronics Corp. 85 Oxford Drive
Moonachie, N.J. 07074

TX-9800
Price $\$ 450$
Dimensions
Weight
Quieting
S/N
Response $\quad 20 \mathrm{~Hz}$ to $15 \mathrm{kHz},+0.2,-0.5 \mathrm{~dB}$
THD
Separation
Capture
Selectivity
Features Quartz locked tuning; 11 2/5" long
dial scale with station memory markers

| TX-7800 |  |
| :--- | :--- |
| Price | $\$ 350$ |
| Dimensions | $61 / 8 \mathrm{H} \times 1711 / 16 \mathrm{~W} \times 153 / \mathrm{BD}$ |
| Weight | 18 lbs .5 oz. |
| Quieting | $15.5 \mathrm{~dB} / 37 \mathrm{dBf}$ |
| S/N | $83 \mathrm{~dB} / 79 \mathrm{~dB}$ |
| Response | 20 Hz to $15 \mathrm{kHz},+0.2,-0.5 \mathrm{~dB}$ |
| THD | $0.08 \%(100 \mathrm{~Hz}) / 0.1 \%(100 \mathrm{~Hz})$ |
| Separation | $35 \mathrm{~dB}, 20 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 70 dB |
| Capture | 1 dB |
| Selectivity | 75 dB |
| Features | Servo-lock touch sensor |

## Models also available

TX-6800, \$200

## REVOX

Studer Revox America, Inc. 1819 Broadway
Nashville, Tenn. 37203

## B-760

Price $\quad \$ 1.649$
Dimensions $6 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 133 / 4 \mathrm{D}$
Weight $\quad 26 \mathrm{lbs} .7 \mathrm{oz}$
Quiefing $\quad 12.8 \mathrm{dBf} / 35.1 \mathrm{dBf}(50 \mathrm{~dB})$
S/N $\quad 75 \mathrm{~dB}$ (stereo)
Response $\quad 30$ to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ (stereo)
THD $\quad 0.15 \%(1 \mathrm{kHz})$
Separation $42 \mathrm{~dB}(1 \mathrm{kHz})$
Subcarrier 65 dB
Capture $\quad 0.9 \cdot \mathrm{~dB}$
Selectivity 95 dB
Features Digital frequency synthesizer (25 kHz incremented), quartz-controlled to within 50 PPM accuracy; 15-station memory, pushbutton programmable; Dolby B card optlon; adjustable muting; multipath scope output; seven-diglt LED display of station frequency and station number; non-volatile CMOS memory

## ROGERS

Reference Monitor
International, Inc.
2330 C Camino Vida Roble
Carisbad, Calif. 92008

## T-75 Tuner

Price $\$ 360$
Dimensions $4 \frac{1}{2} \mathrm{H} \times 141 / 4 \mathrm{~W} \times 111 / 4 \mathrm{D}$
Weignt 7 lbs .

## ROTEL

Rotel of America, Inc.
1055 Saw Mill River Rd.
Ardsley, N.Y. 10502

RT-2100
Price $\$ 640$
Dimensions $53 / 4 \mathrm{H} \times 191 / 4 \mathrm{~W} \times 131 / 8 \mathrm{D}$
Weight
Quiefing
S/N
Response $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz},+0.2 \mathrm{~dB} /$ (mono)
THD $0.05 \%$ (stereo/wide); 0.15\% (stereo/narrow)
Separation $47 \mathrm{~dB}(1 \mathrm{kHz})$
Subcarrier 80 dB
Capture - 0.8 dB
Selectivity 80 dB
Features Quartz phase lock; digital station readout; MOSFET front end; LED signal/multipath indicator; rack-mountable; Dolby
Models also available
RT-2000; $\$ 460$

| $\mathbf{8 0 0 0}$ |  |
| :--- | :--- |
| Price | $\$ 700$ |
| Dimensions | $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 11 \mathrm{D}$ |
| Weight | 20 lbs. |
| Quieting | $9.3 \mathrm{dBf} / 17.3 \mathrm{dBf}$ |
| S/N | $75 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | $20 \mathrm{~Hz} 1015 \mathrm{~Hz}, \pm 0.5 \mathrm{~dB} /$ same |
| THD | $0.15 \% / 0.2 \%(1 \mathrm{kHz})$ |
| Separation | $35 \mathrm{~dB}, 20 \mathrm{~Hz}$ to 15 kHz |
| Subcarrier | 65 dB |
| Capture | 1.5 dB |
| Selectivity | 120 dB |
| Features | Digital readout; muting MOSFET |
| input |  |

## SAE TWO SERIES

T-14
Price
Dimensions $31 / 2 \mathrm{H} \times 181 / 4 \mathrm{~W} \times 143 / 10 \mathrm{D}$
Welght 12 lbs
Quieting $\quad 17.3 \mathrm{dBf} / 34.8 \mathrm{~dB}$
S/N $\quad 76 \mathrm{~dB} / 70 \mathrm{~dB}$
Response $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz},+0.5,-2 \mathrm{~dB} / 30$
Hz to $15 \mathrm{kHz},+0.5,-2 \mathrm{~dB}$
THD
Separation $40 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz
Subcarrier 65 dB
Capture $\quad 1 \mathrm{~dB}$
Selectivity 70 dB
Features Digital readout; quartz-lock tuning; synthesized touch tuning; 5-station AM/FM memory; wide/narrow IF

## Models also available

3200, \$400; T-7, \$375; T-3U, \$275

## SANSUI <br> Sansui Electronics Corp. <br> 1250 Valley Brook Ave. <br> Lyndhurst, N.J. 07071

TU-X1
$\begin{array}{ll}\text { Price } & \$ 980 \\ \text { Dimensions } & 713\end{array}$
Dimensions $713 / 16 \mathrm{H} \times 1815 / 16 \mathrm{~W} \times 173 / 4 \mathrm{D}$
Weight $\quad 35 \mathrm{lbs} .11 \mathrm{oz}$.
Quieting $\quad 12.5 \mathrm{dBf} / 34 \mathrm{dBf}$
$\mathrm{S} / \mathrm{N} \quad 86 \mathrm{~dB} / 83 \mathrm{~dB}$
Response $\quad 20 \mathrm{~Hz}$ to $15 \mathrm{kHz},+0.2,-0.5 \mathrm{~dB} / 20$ Hz to $15 \mathrm{kHz},+0.2,-0.5 \mathrm{~dB}$
THD $\quad 0.02 \%(1 \mathrm{kHz}) / 0.03 \%(1 \mathrm{kHz})$
Separation $50 \mathrm{~dB}(1 \mathrm{kHz})$
Subcarrier 70 dB
Capture $\quad 1 \mathrm{~dB}$
Selectivity $\quad 80 \mathrm{~dB}$
Features Completely separate funing, metering (4), and dual If bandwidth selection for both FM and AM; selectable AM beat canceller; flat group delay RF and IF amplifiers; 7-gang tuning capacitor; record calibration tone

## TU-919

| Price | $\$ 585$ |
| :--- | :--- |
| Dimensions | $65 / 6 \mathrm{H} \times 19 \mathrm{~W} \times 161 / 2 \mathrm{D}$ |
| Weight | 21 lbs .9 Oz |
| Quieting | $12.5 \mathrm{~dB} / 34 \mathrm{dBt}$ |
| S/N | $82 \mathrm{~dB} / 76 \mathrm{~dB}$ |

Response

THD
Separation Subcarrier Capture Selectivity Features

30 Hz to $15 \mathrm{kHz}+0.2,-0.5 \mathrm{~dB} / 30$ Hz to $15 \mathrm{kHz},+0.2,-0.5 \mathrm{~dB}$ $0.04 \%(1 \mathrm{kHz}) / 0.06 \%(1 \mathrm{kHz})$ $50 \mathrm{~dB}(1 \mathrm{kHz})$ 60 dB 0.9 dB 80 db
Digitally quąrtz-locked tuning and dual selectable IF bandwidths on both AM and FM; FM noise filter; record calibration tone; matte black with detachable rack-mounting handles

TU-717
Price $\$ 37$
Dimensions $65 / 6 \mathrm{HH} \times 19 \mathrm{~W} \times 161 / 2 \mathrm{D}$
Weight 20 lbs. 5 oz
Quieting $\quad 12.5 \mathrm{dBf} / 34 \mathrm{dBf}$
S/N $\quad 81 \mathrm{~dB} / 78 \mathrm{~dB}$
Response $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz},+0.2,-1 \mathrm{~dB} /$ same
THD $\quad 0.06 \% / 0.07 \%(1 \mathrm{kHz})$
Separation $36 \mathrm{~dB}, 30 \mathrm{~Hz}$ to $15 \mathrm{kHz} ; 48 \mathrm{~dB}$ (1 kHz )
Subcarrier 68 dB
Capture 1 dB
Selectivity 80 dB
Features Selectivity switch; Dolby calibration tone; rack-mountable by detachable handles; MPX noise canceller

## Models also available

TU-517, \$260; TU-417, \$275; TU317, \$240; TU-217, \$190

SANYO PLUS
Sanyo Electric, Inc.
Consumer Electronics Div.
1200 W. Artesia Blvd.
Compton, Calif. 90220

PLUS T-55

| Price | $\$ 349.95$ |
| :--- | :--- |
| Dimensions | $13 / 4 \mathrm{H} \times 171 / \mathrm{W} \times 105 / \mathrm{BD}$ |
| Quieting | $14.7 \mathrm{~dB} / 36.3 \mathrm{dBf}$ |
| S/N | 45 dB |
| Response | 20 Hz to $16 \mathrm{kHz},+1,-2 \mathrm{~dB}$ |
| THD | $0.15 \%(100 \mathrm{~Hz}) / 0.3 \%(100 \mathrm{~Hz})$ |
| Separation | $42 \mathrm{~dB}(1 \mathrm{kHz}$ to 10 kHz$)$ |
| Capture | $1.8 / 1.2 \mathrm{~dB}$ |
| Selectivity | 35 dB |
| Features | Quartz-locked frequency synthe- |
| sizer tuning; electronic frequency display; $6+6$ |  |
| pushbutton tuning; narrow/wide IF band selector; |  |
| preset tuning and memory on; memory setting; |  |
| black finish with rack-mount handles |  |

## Models also available

PLUS T-35, \$299.95

## SCOTT

H. H. Scott, Inc.
20 Commerce Way
Woburn, Mass. 01801
$570 T$

| Price | $\$ 250$ |
| :--- | :--- |
| Dimensions | $51 / 4 \mathrm{H} \times 17 \mathrm{~W} \times 113 / 4 \mathrm{D}$ |
| Weight | 13 lbs. |
| Quieting | $16.1 \mathrm{dBf} / 35.6 \mathrm{dBf}$ |
| S/N | $75 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 25 Hz to $15 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ (mono) |
| THD | $0.1 \%(65 \mathrm{dBf})$ |
| Separation | $50 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Subcarrier | 65 dB |
| Capture | 1 dB |

Selectivity 70 dB
Features $\quad$ Switchable multiplex filter; muting switch; signal-strength and center-channel tuning meters

## Models also available 530T, \$200

SERIES 20
Series 20
20 Jewell St.
Moonachie, N.J. 07074

| F-26 Reference Quartz |  |
| :---: | :---: |
| Price | \$1,000 |
| Dimensions | $31 / 4 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 16 lbs 12 oz . |
| Quieting | $13.2 \mathrm{dBf} / 35.7 \mathrm{dBf}$ |
| S/N | $87 \mathrm{~dB} / 84 \mathrm{~dB}$ |
| Response | 20 Hz to $15 \mathrm{kHz},+0.1,-0.3 \mathrm{~dB}$ (mono) |
| THD | 0.03\% ( 1 kHz / $/ 0.05 \%$ ( 1 kHz ) |
| Separation | $40 \mathrm{~dB}, 20 \mathrm{~Hz}$ to 15 kHz |
| Subcarrier | 75 dB |
| Capture | 7.0 dB (narrow IF band) |
| Selectivity | 80 dB (narrow IF band) |
| Features auto wide/narrow | Quartz-sampling locked tuning; |
| Models also available |  |

## SHERWOOD

## Sherwood Electronic Labs 4300 N. California Ave. Chicago, III. 60618

## S-32 CP

Price
Dimensions $51 / 4 \mathrm{H} \times 17 \mathrm{~W} \times 123 / 4 \mathrm{D}$
Weight $\quad 14 \mathrm{lbs} 8 \mathrm{oz}$.
Quieting $\quad 9.84 \mathrm{dBf} / 1.7 \mathrm{uV}$
S/N $\quad 68 \mathrm{~dB} / 74 \mathrm{~dB}$
Response 20 Hz to $15 \mathrm{kHz},+1,-2 \mathrm{~dB} /$ same
THD $\quad 0.1 \%(100 \mathrm{~Hz}) / 0.1 \%(1 \mathrm{kHz})$
Separation $40 \mathrm{~dB}, 20 \mathrm{~Hz}$ to 10 kHz
Subcarrier 65 dB
Capture $\quad 1 \mathrm{~dB}$
Selectivity 70 dB
Features Certified performance (notarized certificate with each unit shows exact performance): linear phase IF; switchable de-emphasis; multiplex noise filter; twin tuning meters

## SONY

Sony Industries
9 West 57th St.
New York, N.Y. 10019

ST-A7B

| Price | $\$ 900$ |
| :--- | :--- |
| Dlmensions | $63 / 4 \mathrm{H} \times 181 / 6 \mathrm{~W} \times 165 / 6 \mathrm{D}$ |
| Weight | 31 lbs. |
| Quieting | $14.2 \mathrm{dBf} / 34.6 \mathrm{dBf}(50 \mathrm{~dB})$ |
| $\mathrm{S} / \mathrm{N}$ | $80 \mathrm{~dB} / 75 \mathrm{~dB}$ |
| Response | $20 \mathrm{~Hz} 1015 \mathrm{kHz},+0.2,-0.5 \mathrm{~dB}$ |
| THD | $0.04 \%(1 \mathrm{kHz}) / 0.08 \%(1 \mathrm{kHz})$ |
| Separation | $40 \mathrm{~dB}, 100 \mathrm{~Hz}$ to $10 \mathrm{kHz} ; 50 \mathrm{~dB}$ |
|  | 100 Hz to 1 kHz |
| Subcarrier | 70 dB |
| Capture | 0.8 dB |
| Selectivity | 50 dB (narrow) |

Features Quartz-crystal frequency synthesis with digital and analogue readout; switchable 25 microsecond de-emphasis; IF bandwidth selector; adjustable muting

| ST-J60 |  |
| :--- | :--- |
| Price | $\$ 400$ |
| Dimensions | $31 / 4 \mathrm{H} \times 17 \mathrm{~W} \times 12 \mathrm{y} / \mathrm{D}$ |
| Weight | 8 lbs .10 oz. |
| Quieting | $16.1 \mathrm{~dB} / 37.3 \mathrm{dBf}(50 \mathrm{~dB})$ |
| S/N | $77 \mathrm{~dB} / 72 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+0.2,-0.5 \mathrm{~dB}$ |
| THD | $0.06 \%(1 \mathrm{kHz}) / 0.08 \%(1 \mathrm{kHz})$ |
| Separation | $45 \mathrm{db}, 100 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 70 dB |
| Capture | 1 dB |
| Selectivity | 85 dB |
| Features | Quartz frequency synthesis tun |
| varactor diode memory; 3 -way tuning flexibility |  |
| bult-in 400 Hz calibration tone |  |
|  |  |
| ST-A3A |  |
| Price | $\$ 200$ |
| Dimensions | $53 / 4 \mathrm{H} \times 17 \mathrm{~V} / \mathrm{BW} \times 1213 / 16 \mathrm{D}$ |
| Weight | 12 lbs .5 oz. |
| Quieting | $16.4 \mathrm{dBf} / 37.9 \mathrm{dBf}$ |
| S/N | $70 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| Response | 20 Hz to $15 \mathrm{kHz},+1,-2 \mathrm{~dB}$ |
| THD | $0.2 \%(1 \mathrm{kHz}) / 0.5 \%(1 \mathrm{kHz})$ |
| Separation | $40 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Subcarrier | 50 dB |
| Capture | 1 dB |
| Seiectivity | 50 dB |

## Models also available

ST-P7J, \$500; ST-A6B, \$310; STA30, $\$ 220$

## SPECTRO ACOUSTICS Spectro Acoustics Co. 3200 George Washington Way Richland, Wash. 99352

| 220R |  |
| :---: | :---: |
| Price | \$500 |
| Dimensions | $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 9 \mathrm{D}$ |
|  | 14 lbs . |
| Quieting | $50 \mathrm{dBf} / 34 \mathrm{dBf}(75$ |
| S/N | $70 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| Response | 30 Hz to 15 kH |
|  | 0.15\% (1 kHz) |
| Separation | $32 \mathrm{~dB}, 50 \mathrm{~Hz}$ to |
| Subcarrier | 80 dB |
| Capture | 1.5 dB |
| Selectivity | 75 dB |
| Features High, low, and tuned tur built-in digital clock in tuner display; 12 L connector on back; fixed and variabie |  |
|  |  |
|  |  |
|  |  |
| TEAC |  |
| Teac Corp. of America |  |
| 7733 Telegraph Rd. |  |
| Montebello, Calif. 90640 |  |

TX-300

| Price | $\$ 250$ |
| :--- | :--- |
| Dimensions | $51 / 2 \mathrm{H} \times 161 / 5 \mathrm{~W} \times 113 / 10 \mathrm{D}$ |
| Weight | 13 lbs 4 oz |
| Quieting | $17 \mathrm{dBf} / 37 \mathrm{dBf}(50 \mathrm{~dB})$ |
| S/N | $72 \mathrm{~dB} / 60 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz} \pm 1 \mathrm{~dB}$ |
| THD | $0.2 \% / 0.2 \% \mathrm{at} 65 \mathrm{dBf}$ |
| Separation | 45 dB to 1 kHz |
| Subcarrier | 55 dB |
| Capture | 1.5 dB at 65 dBf |
| Selectivity | 65 dB at 45 dBf |

blend; muting; input and tuning indicator

## Models also available <br> TX-500, N/A



## ST-CO1

Price $\$ 260$
Dimensions $115 / 16 \mathrm{H} \times 1111 / 16 \mathrm{~W} \times 101 / 32 \mathrm{D}$
Weight 6 lbs 6 oz.
Quieting $\quad 17 \mathrm{dBf} / 38.3 \mathrm{dBf}(50 \mathrm{~dB})$
S/N $\quad 75 \mathrm{~dB} / 70 \mathrm{~dB}$
Response $\quad 20 \mathrm{~Hz}$ to $15 \mathrm{kHz},+0.5,-1.5$
THD $\quad 0.1 \%(1 \mathrm{kHz}) / 0.15 \%(1 \mathrm{kHz})$
Separation $45 \mathrm{~dB}(1 \mathrm{kHz}) ; 35 \mathrm{~dB}(10 \mathrm{kHz})$
Subcarrier -40 dB
Capture 1 dB
Selectivity $\quad 75 \mathrm{~dB}$
Features Micro size; active servo-lock tun-
ing: LED indicators replace tuning meters
ST-8044

| Price | $\$ 260$ |
| :--- | :--- |
| Dimensions | $519 / 32 \mathrm{H} \times 1615 / 16 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | 9 lbs .5 oz |
| Quieting | $17 \mathrm{dBf} / 38.6 \mathrm{dBf}(50 \mathrm{~dB})$ |
| $\mathrm{S} / \mathrm{N}$ | $75 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 20 Hz to 15 kHz |
| THD | $0.15 \%(1 \mathrm{kHz}) / 0.3 \%(1 \mathrm{kHz})$ |
| Separation | 45 dB |
| Subcarrier | -40 dB |
| Capture | 1 dB |
| Selectivity | 75 dB |
| Features | Signal-strength and center-chan- |
| nel LED indicator array; "active servo-lock" circuit |  |
| automatically tunes for minimum distortion |  |

## Models also available

ST-9030 Tuner, \$460; ST-8077, \$280; ST-8011, \$170

TOSHIBA
Toshiba America, Inc.
280 Park Ave.
New York, N.Y. 10017

## F15

Price $\quad \$ 359.95$
Dimensions $101 / 10 \mathrm{H} \times 21 / 10 \mathrm{~W} \times 77 / 10 \mathrm{D}$
Weight
S/N
Response
THD
$72 \mathrm{~dB} / 68 \mathrm{~dB}$
0.15\%

Separation 45 dB

| Capture | 1 dB |
| :--- | :--- |
| Selectivity | 75 dB |
|  |  |
| ST-665 |  |
| Price | $\$ 299.95$ |
| Dimensions | $163 / 5 \mathrm{H} \times 23 / 10 \mathrm{~W} \times 111 / 2 \mathrm{D}$ |
| Weight | 7 bs. |
| $\mathbf{S} / \mathrm{N}$ | $72 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| Respense | 20 Hz to $15 \mathrm{kHz}+0.2,-0.8 \mathrm{~dB}$ |
| Capture | 1 dB |
| Selectivity | 80 dB |

## YAMAHA

Yamaha International Corp. 6600 Orangethorpe Ave. Buena Park, Calił. 90620

| T-2 |  |
| :---: | :---: |
| Price | \$750 |
| Dimensions | $23 / 4 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 133 / 4 \mathrm{D}$ |
| Weight | 15 lbs . |
| Quieting | $13.2 \mathrm{dBi} / 34.2 \mathrm{dBf}$ |
| S/N | $88 \mathrm{~dB} / 85 \mathrm{~dB}$ |
| Response | 30 Hz to $10 \mathrm{kHz},+0.3,-0.5 \mathrm{~dB} / 10$ Hz to $18 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$ |
| THD | 0.03\% ( 100 Hz )/0.05\% ( 100 Hz ) |
| Separation | 55 dB (1 kHz) |
| Subcarrier | 72 dB |
| Capture | 1 dB |
| Selectivity | 100 dB |
| CT-1010 |  |
| Price | \$385 |
| Dimensions | $65 / 8 \mathrm{H} \times 181 / 6 \mathrm{~W} \times 16 \mathrm{D}$ |
| Weight | 17 lbs . |
| Quieting | $15.3 \mathrm{dBf} / 37.2 \mathrm{dBf}$ |
| S/N | $80 \mathrm{~dB} / 75 \mathrm{~dB}$ |
| Response | 50 Hz to $10 \mathrm{kHz}, \pm 0.3 \mathrm{~dB} / 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.4 \mathrm{~dB}$ |
| THD | 0.07\%/0.09\% ( 100 Hz ) |
| Separation | $45 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 70 dB |
| Capture | 1 dB |
| Selectivity | 85 dB |
| Features | Recording-calibration signal; out- |

put-level control
CT-810

| Price | \$285 |
| :---: | :---: |
| Dimensions | $61 / 4 \mathrm{H} \times 171 / 6 \mathrm{~W} \times 133 / 4 \mathrm{D}$ |
| Weight | 13 lbs . |
| Quieting | $15.3 \mathrm{dBt} / 37.2 \mathrm{dBf}$ |
| S/N | $80 \mathrm{~dB} / 75 \mathrm{~dB}$ |
| Response | 50 Hz to $10 \mathrm{kHz}, \pm 0.3 \mathrm{~dB} / 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.4 \mathrm{~dB}$ |
| THD | 0.08\%/0.15\% ( 100 Hz ) |
| Separation | $45 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 60 dB |
| Capture | 1 dB |
| Selectivity | 80 dB |
| Features put-level cont | Recording-calibration signal; outol |
| CT-61011 |  |
| Price | \$225 |
| Dimensions | $61 / 4 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 131 / 4 \mathrm{D}$ |
| Weight | 14 lbs . |
| Quieting | $15.3 \mathrm{dBf} / 37.2 \mathrm{dBf}$ |
| S/N | $80 \mathrm{~dB} / 75 \mathrm{~dB}$ |
| Response | 50 Hz to $10 \mathrm{kHz}, \pm 0.5 \mathrm{~dB} / 30 \mathrm{~Hz}$ to $15 \mathrm{kHz},+0.5,-1 \mathrm{~dB}$ |
| THD | 0.07\% ( 100 Hz )/0.10\% ( 100 Hz ) |
| Separation | $45 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 45 dB |
| Capture | 1 dB |
| Selectlvity | 85 dB |
| Features | Recording calibration signal; out- |

## Models also available

T-1, \$365; CT-41011, \$185

## Receivers

ADVENT
Advent Corp.
195 Absany St.
Cambridge, Mass. 02139

300
Dimensions

Weight
Quieting
S/N
Response
THD
$\begin{array}{ll}\text { Separation } & 28 \mathrm{~dB}, 30 \mathrm{~Hz} \text { to } 10 \mathrm{kHz} \\ \text { Subcarrier } & 60 \mathrm{~dB}\end{array}$
$\begin{array}{ll}\text { Subcarrier } & 60 \mathrm{~dB} \\ \text { Capture } & 1.6 \mathrm{~dB}\end{array}$
Selectivity 70 dB
Power

IM
Respons
Sensitivity
Overload
S/N

Phono EQ
Bass
Treble
Features $\quad \mathrm{N}_{0}^{10 \mathrm{~dB} \text { at } 10 \mathrm{kHz}}$ imos'ance interaction on
phono input; infrasonic filter on phono input

AIWA
Aiwa America, Inc.
35 Oxford Drive
Moonachie, N.J. 07074

## AX-7800V

Price
Dimensions
Weight
Quieting
S/N
THD $\quad 0.1 \%(1 \mathrm{kHz}) / 0.2 \%(1 \mathrm{kHz})$
Separation
Selectivity
Power
$\$ 590$
$41 / 4 \mathrm{H} \times 201 / 16 \mathrm{~W} \times 175 / 16 \mathrm{D}$
23 lbs .3 oz
from 20 Hz to 20 kHz at no more
than $0.04 \%$ THD

Response
S/N
Phono EQ $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz} \pm 0.5 \mathrm{~dB}$
Features FM synthesized tuning; 6-station preset controls; digital frequency readout; 9-point LED peak-indicator; selectable bass and treble frequency turnover

Sensitivity $3 / 6 \mathrm{mV}$ (phono): 120 mV (high
level)
Overload $\quad 75 / 150 \mathrm{mV}$ (phono)
$\mathrm{S} / \mathrm{N} \quad 65 \mathrm{~dB}$ (phono); 65 dB (tuner); 65 dB (aux) (unweighted)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Bass
Treble
High filter
+13 dB at 14 kHz
6 or 12 dB/octave above 3 or 5 kHz
Low filter $\quad 12 \mathrm{~dB}$ /octave below 20 Hz
Features Three (each) preset FM/AM sta-
tions

AKAI
Akai America, Ltd.
2139 E. Del Amo Blvd.
P.O. Box 6010
Compton, Calif. 90224

AA-R50
$\begin{array}{ll}\text { Price } & \$ 450 \\ \text { S/N } & 75 \mathrm{~dB} \\ \text { Response } & 50 \mathrm{~Hz} \text { to } 15 \mathrm{kHz}, \pm 1 \mathrm{~dB} \\ \text { THD } & 0.1 \%\end{array}$
THD
Separation $45 \mathrm{~dB}(11 \mathrm{kHz})$
Capture 1 dB
Selectivity 75 dB
Power
62 watts ( 17.75 dBW ) continuous from 10 Hz to 40 kHz into 8 ohms at no more than $0.04 \%$ THD
$\begin{array}{ll}\text { Response } & 5 \mathrm{~Hz} \text { to } 50 \mathrm{kHz}, \pm 1 \mathrm{~dB} \\ \text { Sensitivity } & 3 \mathrm{mV} \text { (phono); } 150 \mathrm{mV} \text { (high level) }\end{array}$
Overload
S/N
75 dB (phono); 90 dB (aux)
Phono EQ $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz} . \pm 1 \mathrm{~dB}$
AA-R40
Price $\$ 400$
S/N $\quad 72 \mathrm{~dB}$
Response $\quad 50 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
THD
$\begin{array}{ll}\text { Separation } & 42 \mathrm{~dB}(1 \mathrm{kHz}) \\ \text { Capture } & 1 \mathrm{~dB}\end{array}$
Selectivity 70 dB
Power $\quad 50$ watts ( 17 dBW ) continuous from 10 Hz to 40 kHz into 8 ohms at no more than 0.04\% THD
Response 5 Hz to $50 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Sensitivity $\quad 3 \mathrm{mV}$ (phono); 150 mV (high level)
Overload
S/N
Phono EQ

## Models also available

## 625, \$545

## AUDIO PRO

## Intersearch, Inc.

4720-Q Boston Way
Lanham, Md. 20801

TA-150

Models also available
AA-R30, \$300; AA-R20, \$250

## ARMSTRONG

Armstrong Audio (U.S.A.), Inc.
Sindell Organization
11046 Santa Monica Blvd.
Los Angeles, Calif. 90025

626

| Price | $\$ 625$ |
| :--- | :--- |
| Dimensions | $31 / 4 \mathrm{H} \times 193 / 4 \mathrm{~W} \times 111 / 4 \mathrm{D}$ |
| Weight | 15 lbs |
| S/N | 65 dB |
| Response | 30 Hz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (mono) |
| THD | $0.2 \%(1 \mathrm{kHz})(\mathrm{mono})$ |
| Separation | $40 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 8 Hz |
| Subcarrier | 50 dB |
| Capture | 1.75 dB |
| Selectivity | 56 dB |
| Power | 40 watts ( 16 dBW ) continuous from |
|  | 15 Hz to 45 kHz at no more than |
|  | $0.08 \%$ THD |
| IM | $0.08 \%$ at 40 watts |

## Price

Dimensions $41 / 2 \mathrm{H} \times 191 / 2 \mathrm{~W} \times 101 / 4 \mathrm{D}$
Weight 25 lbs.
Quieting $\quad 15 \mathrm{dBf} / 30 \mathrm{dBf}$
S/N $\quad 70 \mathrm{~dB} / 65 \mathrm{~dB}$
Response 30 Hz to $15 \mathrm{kHz}, \pm 1.5 \mathrm{~dB} / 30 \mathrm{~Hz}$ to
$15 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$
THD $\quad 0.2 \%(1 \mathrm{kHz}) / 0.3 \%(1 \mathrm{kHz})$
Separation $35 \mathrm{~dB}, 60 \mathrm{~Hz}$ to 10 kHz
Subcarrier 60 dB
Capture $\quad 1.5 \mathrm{~dB}$
Selectivity 75 dB
Power
70 watts ( 18.5 dBW ) continuous from 20 Hz to 20 kHz at no more
than $0.1 \%$ THD
\$1,135

IM $\quad 0.1 \%$ at 70 watts
Response $\quad 20 \mathrm{~Hz}$ to $100 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Sensitivity 0.30 mV (phono)
Overload $\quad 150 \mathrm{mV}$ (phono)
S/N
Phono EQ
Bass
Treble
High filter
Low filter
Features All electronic receiver with computer control; one knob controls all variable functions - volume, balance, bass, midrange, treble, tuning; 4 -digit frequency readout counts actual funer oscillator frequency against crystal clock; also available as TPA-150 "receiver" at \$995 without power amplifier but with headphone amplifier

## BANG \& OLUFSEN

Bang \& Olufsen of America, Inc.
515 Busse Road
Elk Grove Village, III. 60007

## Models also available

AX-7700V, \$300; AX-7300, \$210

## Beomaster 4400



| Beomaster 2400 |  |
| :---: | :---: |
| Price | \$650 |
| Dimensions | $21 / 2 \mathrm{H} \times 241 / 4 \mathrm{~W} \times 93 / 4 \mathrm{D}$ |
| Weight | 16 lbs .12 oz . |
| Quieting | $18.5 \mathrm{~dB} / 38.9 \mathrm{dBf}$ |
| S/N | $70 \mathrm{~dB} / 66 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 1.5 \mathrm{~dB} /$ same |
| THD | 0.7\% $10.5 \%$ (1 kHz) |
| Separation | 35 dB ( 1 kHz ) |
| Subcarrier | 50 dB |
| Capture | 4.5 dB |
| Selectivity | 58 dB |
| Power | 30 watts ( 14.8 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.2 \%$ THD ( 4 -ohm load) |
| IM | 0.15\% at 30 watts |
| Response | 20 Hz to $40 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ |
| Sensitivity | 3.0 mV (phono); 220 mV (high level) |
| S/N | 60 dB (phono); 65 dB (aux) |
| Bass | $\pm 18 \mathrm{~dB}$ at 40 Hz |
| Treble | $\pm 15 \mathrm{~dB}$ at 12.5 kHz |
| Features | Remote-control operation and can |
| remotely control Beogram 4004 turntable |  |

Models also available
Beomaster 1900, \$550
bOSE
Bose Corp.
100 Mountain Rd.
Framingham, Mass. 01701

| Spatial Control |  |
| :---: | :---: |
| Price | \$799 |
| Dimensions | $65 / 8 \mathrm{H} \times 201 / 2 \mathrm{~W} \times 163 / 6 \mathrm{D}$ |
| Weight | 36 lbs .8 oz . |
| Quieting | $16.11 \mathrm{dBt} / 36.11 \mathrm{dBf}$ |
| S/N | $70 \mathrm{~dB} / 65 \mathrm{~dB}$ ( 65 dBf ) |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm .6 \mathrm{~dB} / 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}_{\mathrm{i}} \pm 1.0 \mathrm{~dB}$ |
| THD | 0.1\%/0.25\% |
| Separation | 45 dB ( 1 kHz ) |
| Capture | 1.8 dB |
| Selectlvity | 70 dB |
| Power | 100 watts ( 20 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.09\% THD |
| IM | 0.09\% |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Sensitivity | 2.0 mV (phono); 200 mV (high level) |
| Overload | 145 mV (phono) |
|  | 90 dB (phono); 83 dB (tuner); 83 dB |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$ |
| Features speaker owne age from nar equalizer, and sation contro | Spatial slide control allows 901 s to vary spaciousness of sound imw to wide; 4 power amps, base 901 special source and room compenincluded |
| Models also available |  |
|  |  |
| CALIBRE |  |
| CBS Retail Stores |  |
| 1301 65th St. |  |
| Emeryville, Calif. 94608 |  |
| 240 |  |
| Price | \$375 |
| Dimensions | $31 / 2 \mathrm{H} \times 17^{3 / 4 \mathrm{~W} \times 12^{3 / 4} \mathrm{D}}$ |
| Weight | 24 lbs 8 oz . |
| Quieting | $14.2 \mathrm{dBt} / 37.2 \mathrm{dBf}$ |
| S/N | $72 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{d3}$ (mono) |
| THD | 0.1\% ( 1 kHz) |
| Separation | 50 dB (1 kHz) |
| Subcarrier | 55 dB |
| Capture | 1.5 dB |
| Selectivity | 72 dB |
| Power | 42 watts ( 16.25 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.05\% THD |
| IM | 0.05\% at 1 watt |
| Response | 20 Hz to 20 kHz . $\pm 0.5 \mathrm{~dB}$ |
| Sensitivity | 1.9 mV (phono); 250 mV (high level) |
| Overioad | 210 mV (phono) |
| S/N | 80 dB (phono); 72 dB (tuner); 90 dB (aux) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |

Bass
Treble
High filter $\quad 6 \mathrm{~dB} /$ octave above 8 kHz
Feature Dolby $\mathrm{FM}_{\mathrm{s}}$; plot phase canceller;
digital LED tuning; independent tape dubbing

## Models also available

225, \$280; 215, \$230

## CONCEPT <br> Concept <br> 1601 W. Glenlake Ave. <br> Itasca, III. 60143

| 4.5 D |  |
| :---: | :---: |
| Price | \$490 |
| Dimensions | $6 \mathrm{H} \times 18^{3 / 6 \mathrm{~W}} \times 15 \mathrm{D}$ |
| Weight | 30 lbs . |
| Quieting | $14.1 \mathrm{dBt} / 36.8 \mathrm{dBf}$ |
| S/N | $68 \mathrm{~dB} / 72 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB} /$ same |
| THD | $0.1 \%$ ( 1 kHz )/0.1 ( 1 kHz ) |
| Separation | 48 dB (1 kHz) |
| Subcarrier | 65 dB |
| Capture | 1.1 dB |
| Selectivity | 78 dB |
| Power | 45 watts ( 16.5 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.1 \%$ THD |
| IM | 0.04\% at 1 watt |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| Sensitivity | 1.9 mV (phono); 160 mV (high level) |
| Overload | 220 mV (phono) |
| S/N | 82 dB (phono); 72 dB (tuner); 85 dB (aux) |
| Phono EQ | 30 Hz to $15 \mathrm{KHz}, \pm 0.2 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | $6 \mathrm{~dB} /$ octave above 7 kHz |
| Features al-color mutin | Four-gang tuner; dual meters; duLED: DC amp |

Models also available
12.0D, \$900; 7.5D, \$620

CRITERION
Lafayette Radio Electronics
Corp.
111 Jericho Turnpike
Syosset, N.Y. 11791

Mk VII
Price $\quad \$ 369.99$
Dimenslons $51 / 2 \mathrm{H} \times 191 / 2 \mathrm{~W} \times 141 / 8 \mathrm{D}$

| Weight | 26 lbs. |
| :---: | :---: |
| S/N | 67 dB (mono) |
| Response | 30 Hz to $15 \mathrm{kHz},+0.5,-2 \mathrm{~dB}$ (mono) |
| THD | 0.4\% (1 kHz) (mono) |
| Separation | $40 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Subcarrier | 60 dB |
| Capture | 1.25 dB |
| Selectivity | 80 dB |
| Power | 75 watts ( 18.75 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.1 \%$ THD |
| IM | 0.1\% at 75 watts |
| Response | 5 Hz to $40 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Sensitivity | 5 mV (phono); 2.5 mV (high level) |
| Overload | 150 mV (phono) |
| S/N | 70 dB (phono); 67 dB (tuner); 90 dB (aux) |
| Bass | $\pm 10 \mathrm{~dB}$ at 125 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | 10 dB /octave above 10 kHz |
| Low filter | $10 \mathrm{~dB} /$ octave below 40 Hz |
| Features | Tape-to-tape dubbing; triple tone |
| controls; dual tape monitors; dual tuning meters; connections for 3 sets of speaker systems; stereo/mono switch |  |
|  |  |
|  |  |

## Mk V

Price
Dimensions
Weight
Weight
S/N
Response
THD
Separation
Subcarrier
Capture
Selectivity Power

IM
Response $\quad 10 . \mathrm{Hz}$ to $35 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Sensitivity 4 mV (phono)
Overload
S/N
Bass
Treble
High fitter $\quad 10 \mathrm{~dB}$ /octave above 10 kHz
Features Two tape monitors; dual tuning me-
ters; connections for 2 sets of speaker systems; stereo/mono switch

## Models also available

Mk III, \$159.99; Mk I, \$109.99

FISHER
Fisher Corp.
21314 Lassen St.
Chatsworth, Calif. 91311

RS-2015
Price
Weight
Quieting
S/N
Response
THD
Separation
Subcarrier
$\$ 900$
$71 / 4 \mathrm{H} \times 23 \mathrm{~W} \times 171 / 4 \mathrm{D}$
52 lbs.
$13.2 \mathrm{dBf} / 35.9 \mathrm{dBf}$
20 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB} /$ same $0.1 \% / 0.2 \%$

Capture $\quad 0.8 \mathrm{~dB}$
Selectivity
Power

IM
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$

Sensitivity
Overload
S/N
Phono EQ $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$

## Models also available

RS-2010, \$700; RS-2007, \$550; RS-2003, \$379.95; RS-1035A, \$299.95; MC-2500, \$229.95

HARMAN KARDON
Harman Kardon
55 Ames Court
Plainview, N.Y. 11803
hk-670
Price $\quad \$ 569$
Dimensions $63 / 4 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 14 \mathrm{D}$
Weight $\quad 36 \mathrm{lbs}$.
S/N $\quad 75 \mathrm{~dB}$
Response $\quad \mathrm{DC} \mathrm{Hz}$ to $60 \mathrm{kHz}, \pm 1.5 \mathrm{~dB} / 20 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
THD $\quad 0.09 \%(1 \mathrm{kHz})$
Separation $50 \mathrm{~dB}, \mathrm{DC}$ to 1 kHz
Capture $\quad 1.3 \mathrm{~dB}$
Selectivity 75 dB
Power
60 watts ( 17.75 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.03\% THD
M $\quad 0.06 \%$ at 60 watts
Response $\quad 1 \mathrm{~Hz}$ to $140 \mathrm{kHz}, \pm 11 / 2 \mathrm{~dB}$
Sensitivily 2.2 mV (phono); 130 mV (high level)
Overload 225 mV (phono)
S/N $\quad 88 \mathrm{~dB}$ (phono); 100 dB (tuner); 100 dB (aux)
Phono EQ $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz} \pm 5 \mathrm{~dB}$
Bass $\quad \pm 12 \mathrm{~dB}$ at 20 Hz
Treble $\quad \pm 12 \mathrm{~dB}$ at 20 kHz
High filter 12 dB/octave above 6 kHz
Low filter 12 dB/octave below 18 Hz
Features Patented signal strength, multipath, quieting (SSQ) meter; electronic speaker protection; DC coupled; tone defeat; 2 tape copy and tape monitor positions; 25-microsecond deemphasis for Dolby broadcasts; infrasonic filter
hk-560
Price
Dimensions $\quad 51 / 2 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 121 / 2 \mathrm{D}$
Weight $\quad 25 \mathrm{lbs}$.
Quieting $\quad 75 \mathrm{~dB}$
Response $D C$ to $60 \mathrm{kHz} \pm 1.5 \mathrm{~dB} / 20 \mathrm{~Hz}$ to
$15 \mathrm{kHz} \pm 0.5 \mathrm{~dB}$
Separation 45 dB , DC to 1 kHz
Capture $\quad 1.3 \mathrm{~dB}$
Selectivity 70 dB
Power $\quad 40$ watts ( 16 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.04\% THD

IM
$0.06 \%$ at 40 watts
1 Hz to $120 \mathrm{kHz}+11 / 2 \mathrm{~dB}$
Sensitivity $\quad 2.2 \mathrm{mV}$ (phono); 175 mV (high lev)
Overload 120 mV (phono)
S/N
Phono EQ $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz} \pm 1 \mathrm{~dB}$
Bass $\quad \pm 12 \mathrm{~dB}$ at 20 Hz
Treble
Low filter $\quad \pm 12 \mathrm{~dB}$ at 20 kHz
Circuit breaker speaker protection,
DC coupled; tone defeat; 2 tape monitor positions;
switchable FM mute; 4 -stage phono preamp

## Models also available

hK-450, \$319; hK-340, \$219
HEATHKIT
Heath Co.
Benton Harbor, Mich. 49022

AR-1515

| Price | \$600 (kit) |
| :---: | :---: |
| Dimensions | $63 / 16 \mathrm{H} \times 211 / 2 \mathrm{~W} \times 15 \mathrm{D}$ |
| Weight | 36 lbs . |
| Quieting | 10.3 dBf (mono; 30 dB ) |
| S/N | 70 dB (mono) |
| Response | 20 Hz to $15 \mathrm{kHz} . \pm 1 \mathrm{~dB}$ (mono) |
| THD | 0.3\%/0.35\% |
| Separation | 40 dB (mldband) |
| Subcarrier | 60 dB |
| Capture | 1.3 dB |
| Selectivity | 700 dB |
| Power | 70 watts ( 18.5 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.08\% THD |
| IM | 0.08\% at 70 watts |
| Response | 8 Hz to $45 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Sensitivity | 0.24 mV (phono); 24 mV (high level) |
| Overload | 100 mV (phono) |
| S/N | 65 dB (phono) (re 2 mV input); 80 dB (aux) (re 200 mV input) |
| Features | Digital readout; Dolby FM module |

accessory (\$40)

AR-1429

| Price | $\$ 350$ (kit) |
| :--- | :--- |
| Dimensions | $43 / 4 \mathrm{H} \times 20 \mathrm{~W} \times 131 / 2 \mathrm{D}$ |
| Weight | 32 lbs |
| S/N | 65 dB |
| Response | 20 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| THD | $0.1 \%(20 \mathrm{~Hz}) / 0.1 \%(20 \mathrm{kHz})$ |
| Separation | $40 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Capture | 1.8 dB |
| Selectivity | 65 dB |
| Power | $35 \mathrm{watts}(15.5 \mathrm{dBW})$ continuous |
|  | from 20 Hz to 20 kHz at no more |
|  | than $0.1 \% \mathrm{THD}$ |
| Response | 5 Hz to $45 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Sensitivity | 2 mV (phono); 200 mV (high level) |
| Overioad | 90 mV (phono) |
| S/N | 65 dB (phono); 75 dB (tuner) |
| Phono EQ | 30 Hz to 20 $\mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Features | Optional Dolby module ( $\$ 40)$ |

## Models also available

AR-1219, \$200 (kit)

## HITACHI

Hitachi Sales Corp. of America 401 W. Artesia Blvd.
Compton, Calif. 90220

SR-2004

| Price | \$1,095 |
| :---: | :---: |
| Dimensions | $71 / 4 \mathrm{H} \times 223 / 4 \mathrm{~W} \times 171 / 2 \mathrm{D}$ |
| Weight | 56 lbs .3 oz . |
| Quieting | $12.5 \mathrm{dBf} / 36 \mathrm{dBf}$ |
| S/N | $75 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ (mono) |
| THD | 0.15\%/0.25\% ( 100 Hz ) |
| Separation | $50 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Subcarrier | 70 dB |
| Capture | 1 dB |
| Selectivity | 85 dB |
| Power | 200 watts ( 23 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.08\% THD |
| IM | 0.08\% at 200 watts |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Sensitivity | 0.18 mV (phono); 11 mV (high level) |
| Overload | 500 mV (phono) |
| S/N | 75 dB (phono); 90 dB (aux) (A. weighted) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | 12 dB /octave above 10 kHz |
| Low filter | 12 dB /octave below 150 Hz |
| Features | Class G; midrange control |


| SR-804 |  |
| :---: | :---: |
| Price | \$449.95 |
| Dimensions | $53 / 4 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 141 / 4 \mathrm{D}$ |
| Weight | 22 lbs 5 oz . |
| Quieting | $17 \mathrm{dBt} / 37 \mathrm{dBf}$ |
| S/N | $74 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm{ }^{1} \mathrm{~dB}$ (mono) |
| THD | 0.2\%/0.3\% ( 100 Hz ) |
| Separation | 45 dB (1 kHz) |
| Subcarrier | 50 dB |
| Capture | 1 dB |
| Selectivity | 80 dB |
| Power | 50 watts ( 17 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.09\% THD |
| IM | 0.05\% at 25 watts |
| Response | 10 Hz to $40 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Sensitivity | 0.35 mV (phono); 21 mV (high level) |
| Overload | 100 mV (phono) |
| S/N | 75 dB (phono); 87 dB (aux) (A. weighted) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High fitter | $6 \mathrm{~dB} /$ octave above 10 kHz |
| Low filter | $6 \mathrm{~dB} /$ octave below 50 Hz |
| Features | Class G |
| SR-4010 |  |
| Price | \$250 |
| Dimensions | $41 / 6 \mathrm{H} \times 171 / 8 \mathrm{~W} \times 1015 / 16 \mathrm{D}$ |
| Weight | 11 lbs 6 oz . |
| Quieting | $17 \mathrm{~dB} / 37 \mathrm{dBf}$ |
| S/N | $75 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 30 Hz to $12 \mathrm{kHz}, \pm^{2} \mathrm{~dB}$ |
| Separation | 40 dB ( 1 kHz ) |
| Subcarrier | 50 dB |
| Capture | 1 dB |
| Selectivity | 76 dB |
| Power | 25 watts ( 14 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.05 \%$ THD |
| Response | 15 Hz to $30 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Sensitivity | 3 mV (phono); 50 K ohms (high level) |
| Overload | 130 mV (phono) |
| S/N | 75 dB (phono); 92 dB (tape) |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 8 \mathrm{~dB}$ at 10 kHz |
| Low filter | 15 dB /octave below 10 Hz |
| Features | IC/FET low-distortion circuitry: |
| LED tuning/p | ower level metering |

## Models also available

SR-904, \$630; SR-504, \$280; SR2010, \$200

## JVC

JVC America, Inc.
58-75 Queens Midtown
Expressway
Maspeth, N.Y. 11378

## JR-S501

| Price | $\$ 730$ |
| :--- | :--- |
| Dimensions | $61 / 2 \mathrm{H} \times 22 \mathrm{~W} \times 17 \mathrm{D}$ |
| Weight | 46 tbs .3 oz |
| Quieting | $14 \mathrm{dBf} / 37.2 \mathrm{dBf}$ |
| S N | $78 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 20 Hz to $15 \mathrm{kHz},+0.3,-0.8 \mathrm{~dB} / 20$ |
|  | Hz to $15 \mathrm{kHz},+0.3,-0.8 \mathrm{~dB}$ |
| THD | $0.08 \% / 0.1 \%(1 \mathrm{kHz})$ |
| Separation | $45 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz |
| Capture | 1 dB |
| Selectivity | 80 dB |
| Power | 120 watts $(20.75 \mathrm{dBW})$ continuous |
|  | from 20 Hz to 20 kHz at no more |
|  | than $0.03 \% \mathrm{THD}$ |
| IM | $0.01 \%$ at 120 watts |
| Response | 5 Hz to $40 \mathrm{kHz},+1 \mathrm{~dB}$ |

Sensitivity
Overload S/N

Phono EQ
DC power amp, 2 power meters
5-position SEA equalizer; FM pilot signal canceller

JR-S201

## Price $\quad \$ 390$

Dimensions $61 / 2 \mathrm{H} \times 193 / 4 \mathrm{~W} \times 15 \mathrm{D}$
Weight $\quad 23$ lbs 5 oz
Quieting $\quad 14.8 \mathrm{dBf} / 37.2 \mathrm{dBf}$
S/N $\quad 78 \mathrm{~dB} / 70 \mathrm{~dB}$
Response 20 Hz to $15 \mathrm{kHz},+0.3,-0.8$
dB/same
THD $\quad 0.08 \% / 0.1 \%(1 \mathrm{kHz})$
Separation $40 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 Hz
Capture
Selectivity
Power
$0.01 \%$ at 35 watts
Response $\quad 5 \mathrm{~Hz}$ to $40 \mathrm{kHz},+0,-1 \mathrm{~dB}$
Sensitivity 2.5 mV (phono); 150 mV (high level)
Overload $\quad 180 \mathrm{mV}$ (phono)
S/N $\quad 75 \mathrm{~dB}$ (phono); 95 dB (aux)
Phono EQ $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Features DC power amp; 2 power meters;
5 -position SEA equalizer

| R-57 |  |
| :---: | :---: |
| Price | \$300 |
| Dimensions | 5\%/8H $\times 1711 / 16 \mathrm{~W} \times 1313 / 16 \mathrm{D}$ |
| Weight | 18 lbs .11 oz . |
| Quie ${ }^{\text {sing }}$ | $14.8 \mathrm{dBf} / 38.3 \mathrm{dBf}(50 \mathrm{~dB})$ |
| S/N | $82 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+0.5-1 \mathrm{~dB}$ |
| THD | 0.15\% (1 Hz)/0.3\% (1 Hz) |
| Separâtion | $35 \mathrm{~dB}(50 \mathrm{~Hz}$ to 10 kHz$)$ |
| Capture | 1 dB |
| Selectivity | 65 dB |
| Power | 50 watts ( 17 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.03\% THD |
| IM | 0.03\% at 50 watts |
| Response | 15 Hz to $50 \mathrm{kHz}, \pm{ }^{1} \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono): 170 mV (high level) |
| Overload | 140 mV (phono) |
| S/N | 82 dB (phono); 100 dB (aux) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Bass | $\pm 8 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 8 \mathrm{~dB}$ at 10 kHz |

## Models also available

JR-S401, \$630; JR-S301, \$500 R-55, $\$ 220$

## KENWOOD

Kenwood Electronics, Inc.
75 Seaview Drive
Secaucus, N.J. 07094

| KR-9050 |  |
| :--- | :--- |
| Price | $\$ 1,150$ |
| Dimensions | $631 / 32 \mathrm{H} \times 2311 / 16 \mathrm{~W} \times 185 / 16 \mathrm{D}$ |
| Weight | 52 lbs .14 oz. |
| Quieting | $14.1 \mathrm{~dB} / / 36.1 \mathrm{dBf}$ |
| S/N | $83 \mathrm{~dB} / 76 \mathrm{~dB}$ |
| Resp.snse | 20 Hz to $15 \mathrm{kHz} \pm 0.5 \mathrm{~dB}$ |
| THD | $0.07 \% / 0.08 \%$ |
| Separation | $40 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 73 dB |
| Capture | 1 dB |
| Selectivity | 60 dB |


| Power | 200 watts ( 23 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.02\% THD | Moderato <br> Price <br> Dimensions | $\begin{aligned} & \text { r } 50-75 \\ & \$ 1,000 \\ & 51 / 4 \mathrm{H} \times 191 / 8 \mathrm{~W} \times 1.21 / 4 \mathrm{D} \end{aligned}$ | Power | 90 watts (19.5 dBW) continuous from 20 Hz to 20 kHz at no more than 0.1\% THD |
| :---: | :---: | :---: | :---: | :---: | :---: |
| IM | $0.0045 \%$ at 200 watts | Dimensions <br> Weight | $51 / 4 \mathrm{H} \times 191 / 8 \mathrm{~W} \times 1.21 / 4 \mathrm{D}$ 29 lbs. | Sensitivity | 0.26 mV (phono); 16 mV (high |
| Response | DC to $280 \mathrm{kHz},-3 \mathrm{~dB}$ | Quieting | $13 \mathrm{dBt} / 35 \mathrm{dBf}$ | Sensitivily | level) |
| Sensitivity | 2.5 mV (phono); 200 mV (high | S/N | $74 \mathrm{~dB} / 70 \mathrm{~dB}$ | Overload | 180 mV (phono) |
| Overload | level) 260 mV (phono) | Response THD | 20 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ $15 \%$ ( 1 kHz )/2\% (1 kHz) | S/N | $\begin{aligned} & 65 \mathrm{~dB} \text { (phono); } 67 \mathrm{~dB} \text { (tuner); } 80 \mathrm{~dB} \\ & (\mathrm{aux}) \end{aligned}$ |
| S/N | 91 dB (phono); 110 dB (tuner); 110 dB (aux) | Separation | $40 \mathrm{~dB}, 20 \mathrm{~Hz}$ to 12 kHz | Bass | $\pm 12 \mathrm{~dB} \text { at } 100 \mathrm{~Hz}$ |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ | Capture | 1.5 dB | High filter | $\frac{ \pm}{12 \mathrm{~dB} \text { /octave above } 7 \mathrm{kHz}}$ |
| Bass | $\pm 12 \mathrm{~dB}$ at 100 Hz | Selectivity | 90 dB | Low filter | $12 \mathrm{~dB} /$ octave below 40 Hz |
| Treble | $\pm 12 \mathrm{~dB}$ at 10 kHz | Power | 45 watts ( 16.5 dBW ) continuous | Features | Bullt-in FM Dolby; switchable |
| High filter Low filter | 6 dB/octave above 5 kHz <br> 6 dB /octave below 18 Hz |  | from 20 Hz to 20 kHz at no more than 0.025\% THD | phono sens choices of b | vity (figures given for high); two s and treble turnover; two choices of |
| Features | High-speed DC àmplifier | IM <br> Response Sensitivity | $0.008 \%$ at 45 watts <br> 2 Hz to $120 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ <br> 1.5 mV (phono); 36 mV (high level) | high- and low nections fo triple tone | ilter cutoffs; dual tuning meters; consets of speakers; dual tape monitors; trols; audio and FM mute; two head- |
| KR-7050 |  | Overload | 70/170 mV (phono) | phone jacks; |  |
| Price | \$660 | S/N | 75 dB (phono); 95 dB (aux) |  |  |
| Dimensions | $63 / 4 \mathrm{H} \times 211 / 2 \mathrm{~W} \times 163 / 16 \mathrm{D}$ | Phono EQ | 20 Hz to $20 \mathrm{kHz} \pm 0.2 \mathrm{~dB}$ |  |  |
| Quieting | 16.1 dBt/37.9 dBf | Bass | $\pm 12 \mathrm{~dB}$ at 20 Hz |  |  |
| S/N | $83 \mathrm{~dB} / 75 \mathrm{~dB}$ | Treble | $\pm 12 \mathrm{~dB}$ at 20 kHz | LR-55 |  |
| Response | 30 Hz to $15 \mathrm{kHz}+.5,-1 \mathrm{~dB}$ | High filter | $12 \mathrm{~dB} /$ octave above 8 kHz | Price | \$349.99 |
| THD | 0.8\%/0.09\% | Low filter | $12 \mathrm{~dB} /$ octave below 80 Hz | Dimensions | $63 / 4 \mathrm{H} \times 20 \mathrm{~W} \times 131 / 2 \mathrm{D}$ |
| Separation | $40 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz | Features | Phono blend; two phono inputs; 5 | Weight | 24 lbs . |
| Subcarrier | 70 dB | FM pre-tuning | keys; tape copy; midrange control | Quieting | $17.2 \mathrm{dBf} / 39 \mathrm{dBf}$ |
| Capture | 1 dB | $\pm 6 \mathrm{~dB}$ at 1 kH | Hz ); presence control; tone defeat; | S/N | $72 \mathrm{~dB} / 67 \mathrm{~dB}$ |
| Selectivity | 60 dB | ambience for rear | rear speakers; audio out jacks; de- | Response | 30 Hz to $15 \mathrm{kHz}, \pm 1.25 \mathrm{~dB}$ (mono) |
| Power | 80 watts ( 19 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.02\% THD | coder out; prea speaker pairs | amp in; main amp out; connects 3 | THD <br> Separation Subcarrier | $\begin{aligned} & 0.2 \% / 0.4 \%(1 \mathrm{kHz}) \\ & 40 \mathrm{~dB}(1 \mathrm{kHz}) \\ & 85 \mathrm{~dB} \end{aligned}$ |
| IM | $0.007 \%$ at 80 watts |  |  | Capture | 1.25 dB |
| Response | DC Hz to $320 \mathrm{kHz},-3 \mathrm{~dB}$ | LAFAYET |  | Selectivity | 80 dB |
| Sensitivity | 2.5 mV (phono): 200 mV (high level) | Lafayette | Radio Electronics | Power | 55 watts ( 17.4 dBW ) continuous from 20 Hz to 20 kHz at no more |
| Overload | 200 mV (phono) | Corp. |  |  | than $0.3 \%$ THD ${ }^{0.34 \mathrm{mV}}$ (phono), 20 mV (high |
| S/N | 91 dB (phono); 108 dB (tuner); 108 dB (aux) | 111 Jerich | o Turnpike | Sensitivit | 0.34 mV (phono); 20 mV (high level) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ | Syosset, | Y. 11791 | Overload S/N | 150 mV (phono) <br> 65 dB (phono): 67 dB (tuner); 80 dB |
| Bass | $\pm 12 \mathrm{~dB}$ at 100 Hz |  |  |  | 65 dB (phono); 67 dB (tuner); 80 dB (aux) |
| Treble High filter | $\pm 12 \mathrm{~dB}$ at 10 kHz <br> 6 dB /octave above 5 |  |  | Bass | $\pm 12 \mathrm{~dB}$ at 50 Hz |
| Low filter | $6 \mathrm{~dB} /$ octave below 18 Hz | LR-120DB |  | Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| Features | High-speed DC amplif | Price | \$549.99 | High filter | $6 \mathrm{~dB} /$ octave above 10 kHz |
|  |  | Dimensions | $7 \mathrm{H} \times 211 / 2 \mathrm{~W} \times 171 / 4 \mathrm{D}$ | Features | Switchable phono sensitivity (fig- |
|  |  | Weight | 42 lbs | es given for | high); midrange control; two choices |
| KR-4010 |  | Quieting | $14.1 \mathrm{dBt} / 36.8 \mathrm{dBi}$ | bass and | eble turnover; two choices of high- |
| KR-40 |  | S/N | 70 dB (mono) | nd low-filte | utofis; dual tuning meters; connec- |
| Price | \$330 | Response | 30 Hz to $15 \mathrm{kHzz} \pm 1.5 \mathrm{~dB}$ (mono) | tions for 3 | S of speaker systems; dual tape |
| Dimensions | $515 / 32 \mathrm{H} \times 1817 / 32 \mathrm{~W} \times 143 / 32 \mathrm{D}$ | THD | 0.15\%/0.3\% ( 1 kHz ) | monitors; aud | o and FM mute; overload protection |
| Weight | $18 \mathrm{lbs}$. | Separation | $45 \mathrm{~dB}(1 \mathrm{kHz})$ |  |  |
| Quieting | 16.1 dBt/37.9 dBf | Capture | 1.3 dB |  |  |
| S/N | $76 \mathrm{~dB} / 70 \mathrm{~dB}$ | Selectivity | 80 dB | Models | O available |
| Response THD | 30 Hz to $15 \mathrm{kHz},+0.5,-2 \mathrm{~dB}$ $0.08 \% / 0.05 \%$ | Power | 120 watts ( 20.8 dBW ) continuous from 20 Hz to 20 kHz at no more |  | LR-3030A, \$259.99; LR-2020A, |
| Separation | $40 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz |  | than 0.09\% THD |  | \$169.99; LR-1515A, \$139.99 |
| Subcarrier | 50 dB | IM | 0.09\% at 120 watts |  |  |
| Capture | 1 dB | Response | 15 Hz to $40 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |  |  |
| Selectivity | 50 dB | Sensitivity | 2.5 mV (phono); 5 mV (high level) | LUX |  |
| Power | 35 watts ( 15.5 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.03\% THD | Overload $\mathrm{S} / \mathrm{N}$ | 150 mV (phono) <br> 70 dB (phono); 70 dB (tuner); 90 dB <br> (aux) | $\begin{aligned} & \text { Lux Aus } \\ & 160 \text { Dup } \end{aligned}$ | o of America, Ltd. St. |
| IM | 0.02\% at 35 wats | Bass | $\pm 12 \mathrm{~dB}$ at 50 Hz | Plainview | N.Y. 11803 |
| Response | 5 Hz to $170 \mathrm{kHz},+0.5,-3 \mathrm{~dB}$ | Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz | Plainview | N.Y. 11803 |
| Sensitivity | 2.5 mV (phono): 150 mV (high level) | High filter Low filter | 3 dB /octave above 12 kHz <br> 3 dB /octave below 15 Hz |  |  |
| Overioad | 150 mV (phono) | Features | Adjustable FM muting; Dolby FM; | R-1120 |  |
| S/N | 86 dB (phono); 104 dB (tuner); 104 dB (aux) | frequency turn trols; dual pow | overs for bass and midrange coner meters; dual tuning meters; con- | Price | $\$ 995$ |
| Phono EQ | 20 Hz to $20 \mathrm{kHz} \pm 0.3 \mathrm{~dB}$ | nections for 3 s | sets of speaker systems; 3-position | Quieting | $14.1 \mathrm{dBf} / 36.8 \mathrm{dBf}$ |
| Bass | $\pm 8 \mathrm{~dB}$ at 100 Hz | phono sensitivil | ity switch; dual tape monitors; two | S/N | $74 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Treble | $\pm 8 \mathrm{~dB}$ at 10 kHz | headphone jac | cks; hi-blend; dual range loudness | Response | 30 Hz to $15 \mathrm{kHz},+1 \mathrm{~dB}$ |
| High filter | $\frac{1}{6} \mathrm{~dB}$ /octave above 3 kHz | contour; mic mi | mixing; overload protection | THD | 0.08\% $/ 0.1 \%$ ( 1 kHz ) |
| Features | DC amplifier |  |  | Separation | $.42 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 6 kHz |
|  |  |  |  | Subcarrier | 70 dB |
|  |  |  |  | Capture | 1.3 dB |
| Models a | aiso available | LR-9090 |  | Selectivity | 80 dB |
|  | KR-8050, \$820; KR-6050, \$499; | Price | \$499.99 | Power | 120 watts ( 20.75 dBW ) continuous |
|  | KR-5010, \$399; KR-3010, \$280 | Dimensions. | $61 / 2 H \times 21 \mathrm{~W} \times 151 / 2 \mathrm{D}$ |  | from 20 Hz to 20 kHz at no more |
|  |  | Weight | 47 lbs . |  | than 0.03\% THD |
|  |  | Quieting | $16.5 \mathrm{dBf} / 39.3 \mathrm{dBf}$ | IM | $0.03 \%$ at 120 watts |
| KIRKSAE | TER | S/N | $72 \mathrm{~dB} / 67 \mathrm{~dB}$ | Response | 15 Hz to $70 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
|  | Fin | THD | 0.2\%/0.4\% (1 kHz) | Sensitivity | 0.24 mV (phono); 15 mV (high |
| Saga Hi-F | Fi, Inc. | Separation | 40 dB ( 1 kHz ) |  | level) |
| 398 Sout | th Pickett St. | Subcarrier | 60 dB | Overload | 160 mV (phono) |
| Alexandr | ia, Va. 22304 | Capture Selectivity | $\begin{aligned} & 1.25 \mathrm{~dB} \\ & 80 \mathrm{~dB} \end{aligned}$ | S/N | 75 dB (phono); 95 dB (aux) (Aweighted re 120 watts) |



Harman Kardon hk-670


Kenwood KR-9050

Phono EQ
Bass
Treble
High filter
Low filter $\quad 12 \mathrm{~dB} /$ octave below 15 Hz or 70
Features Dual turnover tone controls; LED peak indicators; electrostatic speaker outputs; closed locked-loop tuning

## R-1050

| Price | \$595 |
| :---: | :---: |
| Dimensions | $71 / 8 \mathrm{H} \times 191 / 4 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 34 lbs . |
| Quieting | $14.1 \mathrm{dBf} / 36.8 \mathrm{dBf}$ |
| S/N | $74 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| THD | 0.1\%/0.2\% (1 kHz) |
| Separation | $40 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 60 dB |
| Capture | 1.3 dB |
| Selectivity | 70 dB |
| Power | 55 watts ( 17.5 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.05\% THD |
| IM | $0.05 \%$ at 55 watts |
| Response | 10 Hz to $50 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Sensitivity | 0.34 mV (phono); 20 mV (high level) |
| Overioad | 150 mV (phono) |
| S/N | 66 dB (phono); 86 dB (aux) (unweighted re 55 watts) |
| Phono EQ | $\pm 0.3 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | $6 \mathrm{~dB} /$ octave above 7 kHz |
| Low filter | $6 \mathrm{~dB} /$ octave below 70 Hz |
| Features IF | LED peak indicators; phase-linear |
| R-1040 |  |
| Price | \$495 |
| Dimensions | $67 / 6 \mathrm{H} \times 19 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | $30 \mathrm{lbs}$.13 oz . |
| Quieting | $18.2 \mathrm{dBt/39.8} \mathrm{dBf}$ |
| S/N | $74 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 30 Hz to 15 kHz , $\pm 0.75 \mathrm{~dB}$ |
| THD | 0.2\%/0.3\% (1 kHz) |
| Separation | $40 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 60 dB |
| Capture | 1.2 dB |
| Selectivity | 55 dB |
| Power | 40 watts ( 16 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.05\% THD |
| IM | 0.05\% at 40 watts |
| Response | 10 Hz to $50 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Sensitlvity | 0.40 mV (phono); 24 mV (high level) |
| Overload | 150 mV (phono) |
| S/N | 69 dB (phono); 89 dB (aux) (unweighted re 40 watts) |
| Phono EQ | $\pm 0.3 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |



Hitachi SR-4010


MiteubishI DA-C20
Treble
High filter
Low filter
Features
$\pm 10 \mathrm{~dB}$ at 10 kHz
above 7 kHz
6 dB /octave below 70 Hz
Phase-linear IF; LED peak indica-

Models also available
R-1070 Receiver, \$795; R-1030 Receiver, $\$ 395$

MARANTZ
Marantz Co., Inc.
20525 Nordhoff St.
Chatsworth, Calif. 91311

2600
Price $\quad \$ 1600$
Dimensions $7 \mathrm{H} \times 191 / 4 \mathrm{~W} \times 171 / 4 \mathrm{D}$
Weight
Quieting
S/N
Response 30 Hz to $15 \mathrm{kHz},+0.2 \mathrm{~dB},-1$
dB/same
THD $\quad 0.1 \% / 0.2 \%(1 \mathrm{kHz})$
Separation $50 \mathrm{~dB}(1 \mathrm{kHz})$
Subcarrier 75 dB
Capture
Selectivity
Power

IM
Response $\quad 10 \mathrm{~Hz}$ to $60 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Sensitivity 1.8 mV (phono); 180 mV (high level)
Overload
S/N
Phono EQ
Bass Treble
High filter
Low filter
Features Two-inch oscilloscope; midrange control; switchable bass and treble furnover; frontpanel dubbing jacks; tape-to-tape duplicating while listening to independent source; optional Dolby module; quartz-locked tuning

## 23308

Price
Dimensions
Welght

## Quieting

S/N
Response
THD
Separation
Subcarrier
$\$ 800$
$53 / 4 \mathrm{H} \times 191 / 4 \mathrm{~W} \times 151 / 4 \mathrm{D}$
49 lbs. 8 oz
$13.2 \mathrm{dBf} / 36 \mathrm{dBf}$
$78 \mathrm{~dB} / 70 \mathrm{~dB}$
30 Hz to $15 \mathrm{kHz},+0.2 \mathrm{~dB},-1$ $\mathrm{dB} / 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ $0.1 \% / 0.25 \%$ ( 1 kHz )
$50 \mathrm{~dB}(1 \mathrm{kHz})$ 70 dB


JVC R-S7


NAD 70 O

| Capture | dB |
| :---: | :---: |
| Selectivity | 80 dB |
| Power | 180 watts ( 22.5 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.1 \%$ THD at 4 ohms |
| iM | 0.1\% at 180 watts |
| Respanse | 10 Hz to $60 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Sensitivity | 1.8 mV (phono); 180 mV (high level) |
| Overicad | 200 mV (phono) |
| S/N | 83 dB (phono); 98 dB (aux) ( weighted re 180 watts) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz} \pm 0.5 \mathrm{~dB}$ |
| B | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | 18 dB /octave above 9 kHz |
| Low fitter | 18 dB /octave below 15 Hz |
| Features and trible | Midrange confrol; switchable ba rnover; front-panel dubbing jac |
| pe-to-ta pendent | duplicating while listening to urce; optional Dolby module |

dependent source; optional Dolby module

## SR-6000

$\begin{array}{ll}\text { Price } & \$ 550 \\ \text { Dimensions } & 51 / 2 \mathrm{H}\end{array}$
Weight
Quleting
S/N
Response 30 Hz to 15 kHz , $+0.5,-1 \mathrm{~dB} / 30$
Hz to $15 \mathrm{kHz}+0.5,-1 \mathrm{~dB}$
THD $\quad 0.15 \%(1 \mathrm{kHz}) / 0.2 \%(1 \mathrm{kHz})$
Separation $45 \mathrm{~dB}(1 \mathrm{kHz})$
Subcarrier 65 dB
Capture $\quad 1 \mathrm{~dB}$
Selectivity 65 dB
Power
88 watts ( 19.5 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.05\% THD
$0.05 \%$ at 88 watts
Response $\quad 10 \mathrm{~Hz}$ to $70 \mathrm{kHz}, \pm 1.0 \mathrm{~dB}$
Sensitivity 2.7 mV (phono); 160 mV (high level)
Overload 225 mV (phono)
S/N $\quad 90 \mathrm{~dB}$ (phono); 98 dB (aux)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass
Treble
High filter
Low filter
Features
$\pm 10 \mathrm{~dB}$ at 100 Hz
$\pm 10 \mathrm{~dB}$ at 10 kHz
6 dB /octave above 8 kHz
6 dB/octave below 20 Hz
Dual LED power meters; true power DC amplifier; midrange controls; dual tuning meters; walnut grain vinyl cabinet; independent record mode selector with two tape monitors

## SR-1000

| Price | $\$ 265$ |
| :--- | :--- |
| Dimensions | $51 / 2 \mathrm{H} \times 187 / \mathrm{W} \times 123 / 4 \mathrm{D}$ |
| Weight | 14 lbs 5 oz |
| Quieting | $14.9 \mathrm{dBf} / 37.7 \mathrm{dBf}$ |
| S/N | $75 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+0.5,-1 \mathrm{~dB} / 30$ |
|  | Hz to $15 \mathrm{kHz},+0.5,-1 \mathrm{~dB}$ |
| THD | $0.15 \%(1 \mathrm{kHz}) / 0.3 \%(1 \mathrm{kHz})$ |
| Separation | $45 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Subcarrier | 60 dB |


| Capture | 1 dB |
| :--- | :--- |
| Selectivity | 60 dB |
| Power | 25 watts (14 dBW) continuous from |
|  | 20 Hz to 20 kHz at no more than |
|  | $0.2 \% \mathrm{THD}$ |
| IM | $0.2 \%$ at 25 watts |
| Response | 15 Hz to $40 \mathrm{kHz}, \pm 1.0 \mathrm{~dB}$ |
| Sensitivity | 2.7 mV (phono); 160 mV (high lev) |
| Overioad | 130 mV (phono) |
| S/N | 84 dB (phono); $96 \mathrm{~dB} \mathrm{(aux)}$ |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.75 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |

## Models also available

2385 Receiver, $\$ 1,000$; SR-4000, $\$ 400 ;$ SR-2000, $\$ 325$

MCS ${ }^{\text {® }}$ SERIES
J.C. Penney

1301 Ave. of the Americas
New York, N.Y. 10019

3125

| Price | $\$ 900$ |
| :--- | :--- |
| Dimensions | $83 / 16 \mathrm{H} \times 1911 / 16 \mathrm{~W} \times 173 / \mathrm{DD}$ |
| Weight | 65 lbs. |
| Quieting | $3 \mathrm{uV} / 8 \mathrm{dBi} / 5 \mathrm{uV} / 12.5 \mathrm{dBf}$ |
| S/N | $75 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 20 Hz to $15 \mathrm{kHz} \pm 0.5 \mathrm{~dB}$ |
| THD | $0.05 \%$ |
| Separation | $35 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 Hz |
| Capture | 1 dB |
| Selectivity | 80 dB |
| Power | $125 \mathrm{watts}(21 \mathrm{dBW}$ ) continuous |
|  | from 20 Hz to 20 kHz at no more |
|  | than $0.05 \% \mathrm{THD}$ |
| IM | $0.02 \%$ at 130 watts |
| Response | 30 Hz to $20 \mathrm{kHz} \pm 0.3 \mathrm{~dB}$ |
| Sensitivity | 2.7 mV (phono) |
| Overload | 200 mV (phono) |
| S/N | 78 dB (phono); $100 \mathrm{~dB} \mathrm{(aux)}$ |
| Phono EQ | 30 Hz to $18 \mathrm{kHz} \pm 0.75 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 60 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 1 kHz |
| Features | DHz |

Features Digital FM frequency readout; LED wattage power meters; mic mixing volme control; graphic equalizer with LED readout; touch sensitivity tunlng dial; FM Dolby adaptor; FM mute; MPX FM filter; clipping indicator; record level check power protection circuit

## Models also available

3275, \$600; 3233, \$300

## MITSUBISHI

Melco Sales, Inc.
3030 E. Victoria St.
Compton, Calif. 90221

| DA-C20 | Tuner/Preamplifier |
| :--- | :--- |
| Price | $\$ 510$ |
| Dimensions | $63 / 4 \mathrm{H} \times 163 / / \mathrm{W} \times 111 / 2 \mathrm{D}$ |
| Weight | 16 lbs. |
| Quieting | $19.2 \mathrm{dBf} / 39.2 \mathrm{dBf}$ |
| S $/ \mathrm{N}$ | $80 \mathrm{~dB} / 75 \mathrm{~dB}$ |
| Response | $30 \mathrm{~Hz} 1015 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| THD | $0.05 \% / 0.08 \%(1 \mathrm{~Hz})$ |
| Separation | $40 \mathrm{~dB}(10 \mathrm{kHz})$ |
| Subcarrier | 70 dB |
| Capture | 0.8 dB |
| Selectivity | $75 \mathrm{~dB} / 45 \mathrm{~dB}$ |
| Response | 10 Hz to $100 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Sensitivity | 2.3 mV (phono): 150 mV (high |
|  |  |
| Overload | level) |
|  | 290 mV (phono) |

Phono EQ

## Bass

Treble
Low filter
Features Two-way tape dubbing; dual monaural construction; built-in moving-coll head amp; can be docked to either DA-A10DC, DAA7DC or DA-A15DC power amplifiers; selectivity switch; tone defeat

## Models also available

DA-C7 Tuner/Preamplifier, \$360

NAD
NAD (U.S.A.), Inc.
New Acoustic Dimension
MacKintosh Lane
P.O. Box 529

Lincoln, Mass. 01773

NAD-7080

| Price | \$610 |
| :---: | :---: |
| Dimensions | $59 / 10 \mathrm{H} \times 193 / 10 \mathrm{~W} \times 153 / 5 \mathrm{D}$ |
| Weight | 42 lbs . |
| Quieting | $14.8 \mathrm{dBf} / 36.1 \mathrm{dBf}$ |
| S/N | $74 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | 0.2\% ( 1 kHz )/0.3\% ( 1 kHz ) |
| Separation | $30 \mathrm{~dB}, 30 \mathrm{~Hz}$ to 15 kHz |
| Subcarrier | 70 dB |
| Capture | 1 dB |
| Selectivity | 70 dB |
| Power | 90 watts ( 19.5 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.03 \%$ THD |
| IM | 0.03\% at 90 watts |
| Response | 5 Hz to $50 \mathrm{kHz},+0,-3 \mathrm{~dB}$ |
| Sensitlvity | 0.25 mV (phono); 20 mV (high level) |
| Overload | 2 mV (phono) |
| S/N | 90 dB (phono); 74 dB (tuner); 95 dB (aux) |
| Phono EQ | RIAA, $\pm 0.3 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | 12 dB /octave above 8 kHz |
| Low filter | $12 \mathrm{~dB} /$ octave below 20 Hz |
| Features | Two-way tape dubbing; indepen |
| ent selection of bass and treble turnover frequencies; high-speed output relay for speaker |  |
|  |  | protection


| NAD-7060 |  |
| :---: | :---: |
| Price | \$510 |
| Dimensions | $51 / 2 \mathrm{H} \times 127 / 10 \mathrm{~W} \times 153 / 5 \mathrm{D}$ |
| Weight | 33 lbs . |
| Quieting | $16 \mathrm{dBf} / 38.3 \mathrm{dBf}$ |
| S/N | $72 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | 0.2\% ( 11 kHz )/0.3\% (1 kHz) |
| Separation | $30 \mathrm{~dB}, 30 \mathrm{~Hz}$ to 15 kHz |
| Subcarrier | 70 dB |
| Capture | 1.5 dB |
| Selectivity | 62 dB |
| Power | 60 watts ( 17.8 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.03\% THD |
| IM | 0.03\% at 60 watts |
| Response | 5 Hz to $50 \mathrm{kHz},+0,-3 \mathrm{~dB}$ |
| Sensitivity | 0.3 mV (phono); 20 mV (high level) |
| Overload | 2 mV (phono) |
| S/N | 84 dB (phono); 72 dB (tuner); 95 dB (aux) |
| Phono EQ | RIAA, $\pm 0.3 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | 6 dB /octave above 7 kHz |
| Low filter | 12 |

Features High-speed instrument-grade output relay for speaker protection; ambience recovery circuit

## Models also available

NAD-7045, \$415; NAD-7030, \$320

## NAKAMICHI <br> Nakamichi USA Corp. <br> 1101 Colorado Ave. <br> Santa Monica, Calif. 90401

730

| Price | \$1,200 |
| :---: | :---: |
| Dimensions | $33 / 4 \mathrm{H} \times 193 / 4 \mathrm{~W} \times 15 \mathrm{D}$ |
| Weight | 38 lbs . |
| Quieting | $18.3 \mathrm{dBf} / 38.3 \mathrm{dBf}$ |
| S/N | $75 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| THD | 0.1\%/0.15\% ( 1 kHz ) |
| Separation | $45 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Subcarrier | 70 dB |
| Capture | 1.5 dB |
| Selectivity | 70 dB |
| Power | 105 watts ( 20.25 dBW ) continuous at 8 ohms from 5 Hz tr 20 kHz at no more than 0.0 c |
| IM | $0.004 \%$ at 105 watts |
| Response | 10 Hz to $30 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$ |
| Sensitivity | 2 mV (phono); 100 mV (high level) |
| Overload | 120 mV (phono) |
| S/N | 83 dB (phono); 94 dB (aux) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 20 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 20 kHz |
| Features | Motorized auto-tuning with four |

preset FM stations; touch-sensitive controls; op
tional wireless remote control available at $\$ 190$

| 630 Tuner/Preamplifier |  |
| :---: | :---: |
| Price | \$730 |
| Dimensions | $71 / 2 \mathrm{H} \times 16 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | 16 lbs . |
| Quieting | $19 \mathrm{dBf} / 39 \mathrm{dBf}$ |
| S/N | $70 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| Response | 30 Hz to 15 kHz ) $\pm 0.3 \mathrm{~dB} /$ same |
| THD | 0.05\%/0.08\% ( 1 kHz ) |
| Separation | 50 dB ( 1 kHz ) |
| Subcarrier | 75 dB |
| Capture | 1 dB |
| Selectivity | 80 dB |
| IM | 0.004\% |
| Response | 20 Hz to $50 \mathrm{kHz}, \pm 0.75 \mathrm{~dB}$ |
| Sensitivity | 1 mV (phono); 100 mV (high level) (1V out) |
| Overload | 250 mV (phono) |
| S/N | 80 dB (phono); (A-weighted re 1 mV input); 102 dB (aux) (A. weighted re 100 mV input) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.3 \mathrm{~dB}$ |
| Bass | $\pm 9 \mathrm{~dB}$ at 20 Hz |
| Treble | $\pm 9 \mathrm{~dB}$ at 20 kHz |
| Features | Built-in Dolby; selectable IF band- |

## Models also available

530, \$850

## NIKKO

Nikko Electric Corp. of America
16270 Raymer St.
Van Nuys, Calif. 91406

| NR-1219 |  |
| :---: | :---: |
| Price | \$650 |
| Dimensions | $7 \mathrm{H} \times 22 \mathrm{~W} \times 150$ |
| Weight | $38 \mathrm{lbs}$.8 oz . |
| Quieting | 13.5 dBf |
| S/N | $81 \mathrm{~dB} / 75 \mathrm{~dB}$ |
| Response | 50 Hz to $15 \mathrm{kHz},+0.2,-0.8 \mathrm{~dB}$ |
| THD | 0.07\% ( 1 kHz )/0.15\% ( 1 kHz ) |
| Separation | $35 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 65 dB |
| Capture | 1.5 dB |
| Selectivity | 75 dB |
| Power | 100 watts ( 20 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.03\% THD |
| IM | 0.03\% at 100 watts |
| Response | 10 Hz to $.50 \mathrm{kHz},+0,-1 \mathrm{~dB}$ (aux; tape) |
| Sensitivity | 2.5 mV (phono); 150 mV (high level) |
| Overioad | 250 mV (phono) |
| S/N | 84 dB (phono); 95 dB (tape); 95 dB (aux) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 0.3$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 70 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | 6 dB /octave above 10 kHz |
| Low filter | $12 \mathrm{~dB} /$ octave below 20 Hz |
| Features | Touch-tuning lock system; DC |
| amp; LED po | wer display system; PLL dual gate |
| MOSFET FM | midrange control ( $\pm 6 \mathrm{~dB}$ at 1 kHz ) |

NR-519

| Price | $\$ 250$ |
| :--- | :--- |
| Dimensions | $53 / 5 \mathrm{H} \times 174 / 5 \mathrm{~W} \times 11 \mathrm{D}$ |
| Weight | 15 lbs 14 oz. |
| Quieting | 15.2 dBf |
| S/N | $70 \mathrm{~dB} / 60 \mathrm{~dB}$ |
| Response | 50 Hz to $13 \mathrm{kHz},+0.5,-1 \mathrm{~dB}$ |
| THD | $0.2 \%(1 \mathrm{kHz}) / 0.3 \%(1 \mathrm{kHz})$ |
| Separation | $30 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 43 dB |
| Capture | 1.8 dB |
| Selectivity | 55 dB |
| Power | $20 \mathrm{watts}(13 \mathrm{dBW})$ continuous from |
|  | 20 Hz to 20 kHz at no more than |
|  | $0.08 \% \mathrm{THD}$ |
| IM | $0.08 \%$ at 20 watts |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 1.0 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono); 150 mV (high |
|  | level) |
| Overioad | 130 mV (phono) |
| S/N | 80 dB (phono); 90 dB (tape); 90 dB |
|  | (aux) |
| Phono EO | 30 Hz to $15 \mathrm{kHz}, \pm 0.05 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 70 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| Low filter | $6 \mathrm{~dB} /$ octave below 20 Hz |
| Features | Infrasonic filter |

## Models also available

NR-1019, \$540; NR-819, \$370; NR-719, \$320

## NYTECH AUDIO LTD. <br> Import Audio Ltd. <br> 13430 Clayton Rd.

St. Louis, Mo. 63131

| CTA-252XDI |  |
| :---: | :---: |
| Price | \$1,000 |
| Dimensions | $45 / 8 \mathrm{H} \times 81 / 4 \mathrm{~W} \times 135 / 6 \mathrm{D}$ |
| Weight | 10 lbs . |
| S/N | 60 dB |
| Response | 30 Hz to 15 kHz |
| THD | $0.7 \%$ at $100 \%$ modulation; $0.2 \%$ at $30 \%$ modulation (stereo) |
| Selectivity | $60 \cdot \mathrm{~dB}$ |
| Power | 25 watts ( 14 dBW ) at no more than $0.1 \%$ THD |
| Sensltivity | $2 \mathrm{mV}(\mathrm{MM}) ; 150 \mathrm{mV}(\mathrm{MC}) ; 100 \mathrm{mV}$ (high level) |

## S/N

Features input standard

## CTP-102 Tuner/Preamplifier <br> $\begin{array}{ll}\text { Price } & \$ 700 \\ \text { Dimensions } & 45 / 6 \mathrm{H} \times 81 / a \mathrm{~W} \times 135 / 6 \mathrm{D}\end{array}$ <br> Weight <br> THD <br> Overload $\quad 20 \mathrm{mV}(M M) ; 150 \mathrm{mV}$ (MC) <br> Features One-way tape dubbing; output variable up to 2 V : may be purchased with either mov-ing-magnet or moving-coil phono input

ONKYO
Onkyo U.S.A. Corp. 42-07 20th Ave.
Long Island City, N.Y. 11105

| -8500 | Mk II |
| :---: | :---: |
| Price | \$1,000 |
| Dimensions | $73 / 6 \mathrm{H} \times 21 / 1 / \mathrm{W} \times 183 / 4 \mathrm{D}$ |
| Weight | 63 lbss 13 oz . |
| Quieting | 14.7 dBi/36 dBf |
| S/N | $70 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ (mono) |
| THD | 0.7\%/0.3\% |
| Separation | $35 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 60 dB |
| Capture | 1.3 dB |
| Selectivity | 70 dB |
| Power | 160 watts ( 22 dBW) continuous from 20 Hz to 20 kHz at no more than $0.05 \%$ THD |
| IM | $0.1 \%$ at 160 watts |
| Response | 1 Hz to $80 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono) |
| Overload | 250 mV (phono) |
| S/N | 87 dB (phono); 95 dB (aux) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz} \pm 0.2 \mathrm{~dB}$ |
| Bass | $\pm 12 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | 12 dB /octave above 6 kHz |
| Low filter | $12 \mathrm{~dB} /$ octave below 100 Hz |
| Features | Quartz-locked; DC AMP; digital FM |
| readout; 7 presets for $F M$; dual power supply; Dolby FM; Accutact control |  |
|  |  |


| TX-4500 | Mk II |
| :---: | :---: |
| Price | \$460 |
| Dimensions | $61 / 2 \mathrm{H} \times 211 / 4 \mathrm{~W} \times 157 / 8 \mathrm{D}$ |
| Weight | 33 lbs . |
| Quieting | $17.2 \mathrm{dBf} / 37.2 \mathrm{dBf}$ |
| S/N | $70 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 1.75 \mathrm{~dB}$ (mono) |
| THD | 0.2\%/0.4\% |
| Separation | $30 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 60 dB |
| Capture | 1.5 dB |
| Selectivity | 70 dB |
| Power | 60 watts ( 17.75 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.1 \%$ THD |
| IM | 0.3\% at 60 watts |
| Response | 15 Hz to $30 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Senslitivity | 2.5 mV (phono) |
| Overload | 200 mV (phono) |
| S/N | 86 dB (phono); 95 dB (aux) |
| Bass | $\pm 12 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | 12 dB /octave above 6 kHz |
| Low filter | $12 \mathrm{~dB} /$ octave below 50 Hz |
| Features | Quartz-locked; full complimentary |
| output; dual-gate MOSFET front end; multiple protection circuitry |  |
|  |  |

## Models also available

TX-6500 Mk H, \$650; TX-2500 Mk II, \$320; TX-1500 Mk H, \$215

OPTONICA
Sharp Electronics Corp.
10 Keystone Place
Paramus, N.J. 07652

| SA-5901 |  |
| :---: | :---: |
| Price | \$800 |
| Dimensions | $71 / 10 \mathrm{H} \times 213 / 5 \mathrm{~W} \times 16 \mathrm{D}$ |
| Weight | 46 lbs .6 oz . |
| Quieting | $13.0 \mathrm{dBt} / 35.2 \mathrm{dBf}$ |
| S/N | $84 \mathrm{~dB} / 75 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 1.5 \mathrm{~dB} / 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ |
| THD | 0.1\% ( 1 kHz )/0.3\% (1 kHz) |
| Separation | 35 dB ( 50 Hz to 10 kHz ) |
| Subcarrier | 51 dB |
| Capture | 1.2 dB |
| Selectivity | 85 dB |
| Power | 125 watts (21 dBW) continuous from 20 Hz to 20 kHz at no more than $0.02 \%$ THD |
| IM | 0.02\% at 125 watts |
| Response | 10 Hz to $55 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono); 150 mV (high level) |
| Overload | 330 mV (phono) |
| S/N | 80 dB (phono); 100 dB (aux) |
| Phono EQ | 30 Hz to $20 \mathrm{kHz} \pm 0.2 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High tilter | $6 \mathrm{~dB} /$ octave above 7 kHz |
| Low filter | $12 \mathrm{~dB} /$ octave below 30 Hz |
| Features | Delta power; DC circuitry; 5-way |
| power protection; opro lock tuning; 2-way tape dubbing; air check calibrator; dual phono input; 2 tone turnover controls rec out Selector |  |
|  |  |
|  |  |

## SA-5101

| Price | \$280 |
| :---: | :---: |
| Dimensions | $51 / 3 \mathrm{H} \times 171 / 3 \mathrm{~W} \times 111 / 2 \mathrm{D}$ |
| Weight | 14 lbs .5 oz . |
| Quieting | $16.2 \mathrm{dBf} / 35.2 \mathrm{dBf}$ |
| S/N | $73 \mathrm{~dB} / 66 \mathrm{~dB}$ |
| Response | 35 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB} / 35 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| THD | 0.2\% (1 kHz)/0.4\% (1 kHz). |
| Separation | $31 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 41 dB |
| Capture | 1.2 dB |
| Selectivity | 60 dB |
| Power | 25 watts ( 14 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.04\% THD |
| IM | 0.08\% at 25 watts |
| Sensitivity | 2.5 mV (phono); 150 mV (high level) |
| Overlcad | 150 mV (phono) |
| S/N | 73 dB (phono); 96 dB (aux) |
| Phono EQ | 30 Hz to 20 kHz |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| Features | Air check calibrator; tape dub |

LED tuning meter; LED signal strength meter; loudness control

## Models also available

SA-5602, \$620; SA-5402, \$470; SA-5202, \$360

## PHILIPS

Philips High Fidelity Laboratories 1700 Magnavox Way Fort Wayne, Ind. 46804

[^2]from 20 Hz to 20 kHz at no more than 0.03\% THD
Features Digital FM tuning indicator; midrange control

AH-901

| Price | $\$ 549.95$ |
| :--- | :--- |
| Power | 80 watts $(19 \mathrm{dBW})$ continuous from |
|  | 20 Hz to 20 kHz at no more than |
|  | $0.05 \% \mathrm{THD}$ |
|  | Features $\quad$ Vertical, fluorescent power meters; |
| 20 dB muting: loudness control |  |

20 dB muting; loudness control

| AH-787 |  |
| :---: | :---: |
| Price | \$450 |
| Dimensions | $6 \mathrm{H} \times 203 / 4 \mathrm{~W} \times 151 / 2 \mathrm{D}$ |
| Weight | 35 lbs . |
| Quieting | $2.8 \mathrm{mV} / 30 \mathrm{mV}$ |
| S/N | $70 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| Response | 20 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| THD | 0.15\%/0.3\% (1 kHz) |
| Separation | 50 dB (1 kHz) |
| Capture | 1.3 dB |
| Selectivity | 100 dB |
| Power | 60 watts ( 17.75 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.04 \%$ THD |
| IM | 0.04\% at 60 watts |
| Response | 15 Hz to $30 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono); 150 mV (high level) |
| Overload | 210 mV (phono) |
| S/N | 70 dB (phono); 70 dB (tuner); 90 dB (aux) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| Features at $\$ 470$ | Also available in black as AH-7871 |

## Models also available

AH-786 Receiver, \$400; AH-785 Receiver, \$280; AH-784 Receiver, $\$ 220$

## PIONEER

U. S. Pioneer Electronics Corp. 85 Oxford Drive Moonachie, N.J. 07074

## SX-1980

SX-1080

| Price | $\$ 750$ |
| :--- | :--- |
| Dimensions | $7 \mathrm{H} \times 203 / \mathrm{WW} \times 151 / 4 \mathrm{D}$ |
| Weight | 47 lbs . |
| Quieting | $14.2 \mathrm{~dB} / 36 \mathrm{dBf}$ |
| S/N | $80 \mathrm{~dB} / 71 \mathrm{~dB}$ |
| Response | $30 \mathrm{~Hz} 1015 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ (mono) |
| THD | $0.1 \% / 015 \%(1 \mathrm{kHz})$ |
| Separation | $35 \mathrm{~dB}, 30 \mathrm{~Hz}$ to 15 kHz |
| Subcarrier | 65 dB |
| Capture | 1 dB |
| Selectivity | 80 dB |
| Power | 120 watts $(20.75 \mathrm{dBW}$ ) continuous |
|  | from 20 Hz to 20 kHz at no more |
|  | than $0.05 \% \mathrm{THD}$ |
| IM | $0.05 \%$ at 120 watts |
| Response | 5 Hz to $100 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono); 150 mV (high |
|  | $1 e v e l)$ |
| Overload | 200 mV (phono) |
| S/N | 76 dB (phono); 80 dB (tuner); 90 dB |
|  | (aux) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| Bass | $\pm 7 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 7 \mathrm{~dB}$ at 10 kHz |
| High filter | $6 \mathrm{~dB} /$ octave above 6 kHz |
| Low fitter | $6 \mathrm{~dB} /$ octave below 15 Hz |
| Features | $\mathrm{DC} \mathrm{power} \mathrm{amp;} \mathrm{twin} \mathrm{power} \mathrm{meters}$ |

## SX-880

Price

## Dimensions

Weight
Quieting
S/N
Response
THD
Separation
Subcarrier
Capture
Selectivity
Power

## IM

Response $\quad 5 \mathrm{~Hz}$ to $80 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Sensitivity 2.5 mV (phono); 150 mV (high level)
$\begin{array}{ll}\text { Overload } & 200 \mathrm{mV} \text { (phono) } \\ \mathrm{S} / \mathrm{N} & 76 \mathrm{~dB} \text { (phono); } 80 \mathrm{~dB} \text { (tuner); } 95 \mathrm{~dB}\end{array}$ (aux)
$\begin{array}{ll}\text { Phono EQ } & 20 \mathrm{~Hz} \text { to } 20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB} \\ \text { Bass } & +8,-7 \mathrm{~dB} \text { at } 100 \mathrm{~Hz} \\ \text { Treble } & +7,-6 \mathrm{~dB} \text { at } 10 \mathrm{kHz} \\ \text { Low filter } & 6 \mathrm{~dB} / \text { octave below } 15 \mathrm{~Hz} \\ \text { Features } & \text { DC power amp; twin power meters }\end{array}$

SX-680
$\$ 475$
$51 / 2 \mathrm{H} \times 187 / 8 \mathrm{~W} \times 125 / 8 \mathrm{D}$
27 lbs.
$16.2 \mathrm{~dB} / / 37 \mathrm{dBf}$
$80 \mathrm{~dB} / 72 \mathrm{~dB}$
30 Hz to $15 \mathrm{kHz},+0.2,-0.8 \mathrm{~dB}$ (mono)
$0.07 \% / 0.15 \%$ ( 1 kHz )
$35 \mathrm{~dB}, 30 \mathrm{~Hz}$ to 15 kHz
55 dB
1 dB
75 dB
60 watts ( 17.75 dBW) continuous from 20 Hz to 20 kHz at no more than 0.05\% THD
$0.05 \%$ at 60 watts

| Pric | \$1.295 |
| :---: | :---: |
| Dimensions | $81 / 4 \mathrm{H} \times 22 \mathrm{~W} \times 191 / 2 \mathrm{D}$ |
| Weight | 78 lbs . |
| Quieting | $11.5 \mathrm{dBt} / 36 \mathrm{dBf}$ |
| S/N | $83 \mathrm{~dB} / 74 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+0.2,-0.5 \mathrm{~dB}$ (mono) |
| THD | 0.07\%/0.11\% (1 kHz) |
| Separation | $40 \mathrm{~dB}, 30 \mathrm{~Hz}$ to 15 kHz |
| Subcarrier | 65 dB |
| Capture | 1 dB |
| Selectivity | 80 dB |
| Power | 270 watts ( 24.25 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.03 \%$ THD |
| IM | 0.03\% at 270 watts |
| Response | 5 Hz to $100 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono); 150 mV (high level) |
| Overload | 300 mV (phono) |
| S/N | 87 dB (phono); 83 dB (tuner); 100 dB (aux) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at $100 \mathrm{Hz/} \pm 5 \mathrm{~dB}$ at 50 Hz |
| Treble | $\begin{aligned} & \pm 10 \mathrm{~dB} \text { at } 10 \mathrm{kHz} \pm 5 \mathrm{~dB} \text { at } 20 \\ & \mathrm{kHz} \end{aligned}$ |
| High filter | 12 dB /octave above 8 kHz |
| Low filter | 12 dB /octave below 15 Hz |
| Features | DC amplifier; twin power meters; |

Price
Dimensions
Weight
Quieting
S/N
Response 30 Hz to $15 \mathrm{kHz},+0.2,-1 \mathrm{~dB}$ (mono)
THD
Separation
Subcarrier
Capture
Selectivity
Power

## IM

Response 10 Hz to $60 \mathrm{kHz},+0.5,-1.5 \mathrm{~dB}$
Sensitivity 2.5 mV (phono); 150 mV (high level)
Overload
S/N
Phono EQ
Bass
Treble
Features
$\$ 300$
$53 / 4 \mathrm{H} \times 17^{1 / 8 W} \times 123 / 6 \mathrm{D}$
19 lbs 12 oz.
$16.7 \mathrm{dBt} / 37 \mathrm{dBf}$
$80 \mathrm{~dB} / 70 \mathrm{~dB}$
$0.07 \% / 0.15 \%(1 \mathrm{kHz})$
$30 \mathrm{~dB}, 30 \mathrm{~Hz}$ to 15 kHz
50 dB
1 dB
60 dB
30 watts ( 14.75 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.1\% THD
$0.1 \%$ at 30 watts

200 mV (phono)
75 dB (phono); 80 dB (tuner); 90 dB (aux)
quartz-sampling locked tuner

STA-820

| Price | $\$ 359.95$ |
| :--- | :--- |
| S/N | 69 dB |
| THD | $0.5 \%$ |
| Separation | $45 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Capture | 1.9 dB |
| Selectivity | 57 dB |
| Power | $40 \mathrm{watts}(16 \mathrm{dBW}$ ) continuous from |
|  | 20 Hz to 20 kHz at no more than |
|  | $0.06 \% \mathrm{THD}$ |
| IM | $0.06 \%$ at 28 watts |
| Response | 10 Hz to $50 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Sensitivity | 2.2 mV (phono) |
| Overload | 200 mV (phono) |
| S/N | 65 dB (phono); 87 dB (aux) |
|  |  |

STA-100
Price $\$ 280$
Dimensions $6 \mathrm{H} \times 17 \mathrm{~W} \times 121 / 2 \mathrm{D}$
Quieting $\quad 39 \mathrm{dBf} / 14.2 \mathrm{dBf}$
$\mathrm{S} / \mathrm{N} \quad 65 \mathrm{~dB} / 75 \mathrm{~dB}$
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ (mono)
THD
Separation $38 \mathrm{~dB}(1 \mathrm{kHz})$
Subcarrier 50 dB
Capture $\quad 1.5 \mathrm{~dB}$
Selectivity 65 dB
Power
22 watts ( 13.5 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.1 \%$ THD
Response 20 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$
Sensitivity 2.2 mV (phono); 160 mV (high
Overload 120 mV (phono)



Reallstic STA-2200


Rotel RX.504

Sansul G.33000


Onkyo TX. 4500 Mk II

Senyo Plus 200

| S/N | 75 dB (aux) |
| :--- | :--- |
| Phono EO | 50 Hz to 20 kHz |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| Features | FM Dolby; taping |
| jacks |  |
|  |  |
| Models also available |  |

STA-2100D, \$699.95; STA-2000D, \$500; STA-95, \$399.95; STA-800, \$319.95; STA-7, \$179.95

## REFERENCE <br> Quadraflex <br> P.O. Box 2504 <br> Santa Ana, Calif. 92707

## 650 FETR

Price $\$ 480$
Dimensions $\quad 51 / 4 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 14 \mathrm{D}$
Weight $\quad 33 \mathrm{lbs}$.
Quieting $\quad 13.5 \mathrm{dBf} / 35.9 \mathrm{dBf}$
S/N
Response
THD
Separation $44 \mathrm{~dB}(100 \mathrm{~Hz}$ to 10 kHz$)$
Subcarrier
Capture
Selectivity
Power

IM
Response $\quad 5 \mathrm{~Hz}$ to $65 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Sensitivity $\quad 2 \mathrm{mV}$ (phono); 160 mV (high Tevel)
Overioad
S/N
Phono EQ
Bass
Treble
High filter
Features
dual LED power display; pilot-cancelling IC

## 240R

| Price | $\$ 270$ |
| :--- | :--- |
| Dimenslons | $53 / 4 \mathrm{H} \times 163 / 4 \mathrm{~W} \times 111 / 4 \mathrm{D}$ |
| Weight | 21 lbs |
| Quieting | $14.2 \mathrm{~dB} / 36.4 \mathrm{dBf}$ |
| S/N | 70 dB |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | $0.22 \% / 0.45 \%(1 \mathrm{kHz})$ |
| Separation | $40 \mathrm{~dB}(100 \mathrm{~Hz}$ to 10 kHz$)$ |
| Subcarrier | 55 dB |
| Capture | 1.9 dB |
| Selectivity | 68 dB |
| Power | $24 \mathrm{watts}(13.75 \mathrm{dBW})$ continuous |
|  | from 20 Hz to 20 kHz at no more | from 20 Hz to 20 kHz at no more than 0.15\% THD


| IM | 0.05\% at 1 watt |
| :---: | :---: |
| Response | 20 Hz to $30 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Sensitivity | 2 mV (phono); 220 mV (righ level) |
| Overload | 120 mV (phono) |
| S/N | 72 dB (phono); 70 dB (tuner); 78 dB $(\mathrm{aux})$ |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | $6 \mathrm{~dB} /$ octave above 10 kHz |
| Features indicator | Two tape monitors; LED overload |
| 180R |  |
| Price | \$240 |
| Dimensions | $51 / 4 \mathrm{H} \times 163 / 4 \mathrm{~W} \times 111 / 4 \mathrm{D}$ |
| Weight | 19 lbs. 12 oz . |
| Quieting | 14.8 dBt/36.8 dBf |
| S/N | 70 dB |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | 0.25\%/0.5\% ( 1 kHz ) |
| Separation | $38 \mathrm{~dB}(100 \mathrm{~Hz}$ to 10 kHz$)$ |
| Subcarrier | 55 dB |
| Capture | 2 dB |
| Selectivity | 65 dB |
| Power | 18 watts ( 12.5 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.15 \%$ THD |
| IM | 0.05\% at 1 watt |
| Response | 20 Hz to $30 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Sensitivity | 2.0 mV (phono); 220 mV (high level) |
| Overload | 120 mV (phono) |
| S/N | 70 dB (phono): 70 dB (tuner); 75 dB (aux) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| Features controls; LED | MPX blend; FM mute; detented overload indicator |
| Models also available |  |
|  | 450R, \$400; 300R, \$310 |
| ROTEL |  |
| Rotel of America, Inc. |  |
| 1055 Saw Mill River Road |  |
| Ardsley, N.Y. 10502 |  |
| RX-1603 |  |
| Price | \$1,100 |
| Dimensions | $71 / 4 \mathrm{H} \times 24 \mathrm{~W} \times 191 / 4 \mathrm{D}$ |
| Weight | $72 \mathrm{lbs}$.8 oz . |
| Quieting | $11.5 \mathrm{dBf} / 36 \mathrm{~dB}{ }^{\text {f }}$ |
| S/N | $80 \mathrm{~dB} / 75 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ (mono) |
| THD | 0.1\%/0.2\% ( 1 kHz ) |
| Separation | $35 \mathrm{~dB}, 30 \mathrm{~Hz}$ to 15 kHz |
| Subcarrier | 75 dB |
| Capture | 1 dB |
| Selectivity | 80 dB |

Power

## IM

Respons
Sensitivity
Overloas
S/N
Fhono EQ
Bass
Treble
High filter
Low filter
Features switch; high-blend switch; FM detector output; 2-position phono sensitivity; mic mixing; 2 position bass furnover; 2-position treble furnover

RX-2002
Price $\$ 850$
Dimensions $6 \mathrm{H} \times 191 / 4 \mathrm{~W} \times 133 / 4 \mathrm{D}$
Guieting
S/N
Response
THD
$0.02 \%$ ( 20 Hz to 20 kHz )
Subcarrier 75 dB
Capture $\quad 1.5 \mathrm{~dB}$
Selectivily 75 dB
Power 80 watts ( 18 dBW ) continuous at
no more than 0.02\% THD
$0.03 \%$ at 90 watts
Response $\quad 5 \mathrm{~Hz}$ to 100 kHz
Sensitivity $\quad 2.4 \mathrm{mV}$ (phono); 150 mV (high level)
Overload $\quad 350 \mathrm{mV}$ (phono)
S/N
Phono EQ 30 Hz to $15 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Bass
Treble
High filter
Low filter
Features FM PLL MPX; LED peak indicator; digital station readout; audio muting, -15 dB ; full tape dubbing; FM de-emphasis switch for Dolby; built-in head amp for moving-coil cartridge; rackmount design; direct-coupled NF phono equalizer and tone control amp

RX-504

| Price | $\$ 350$ |
| :--- | :--- |
| Dinensions | $5 \mathrm{H} \times 17 \mathrm{~W} \times 13 \mathrm{D}$ |
| Weight | 20 lbs. |
| Qsieting | $15.5 \mathrm{~dB} \uparrow / 37 \mathrm{dBf}$ |
| SiN | $70 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+1,-3 \mathrm{~dB}$ |
| THD | $0.04 \%$ |
| Separation | $45 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Subcarrier | 60 dB |
| Cepture | 15 dB |


| Selectivity Power | 50 dB |
| :---: | :---: |
|  | 40 watts ( 16 dBW ) continuous from |
|  | 20 Hz to 20 kHz at no more thân $0.04 \%$ THD |
| IM | $0.05 \%$ at 40 watts |
| Sensitivity | 2.5 mV (phono); 150 mV (high level) |
| Overload | 180 mV (phono) |
| S/N | 70 dB (phono); 85 dB (tuner); 88 dB (aux) |
| Phono EQ | 30 Hz to 15 kHz |
| Bass | $\pm 10 \mathrm{~dB}$ at 25 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 20 kHz |
| Low filter | 12 dB /octave below 15 Hz |
| Features tuning meter | Dual power meters; dual function |
| RX-203A |  |
| Price | \$220 |
| Dimensions | $5 \mathrm{H} \times 16 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | 15 lbs 8 oz . |
| Quieting | $16 \mathrm{dBt} / 39 \mathrm{dBl}$ |
| S/N | $75 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+0.5,-1 \mathrm{~dB}$ (mono) |
| THD | 1.5\%/0.2\% |
| Separation | 40 dB (1 kHz) |
| Capture | 2 dB |
| Selectivity | 50 dB |
| Power | 20 wafts ( 13 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.2 \%$ THD |
| 1 M | $0.2 \%$ at 20 watts |
| Response | 20 Hz to $50 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Sensilivity | 2.5 mV (phono): 150 mV (high level! |
| Overload | 120 mV (phono) |
| S/N |  |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 1 / \mathrm{dB}$ |
| Bass Treble | $\pm 10 \mathrm{~dB} \text { at } 100 \mathrm{~Hz}$ |
|  |  |
| Models a | also available <br> RX-2001, \$750; RX-604, \$400; RX1000, \$300; RX-404, \$290 |
| SAE TWO |  |
| Scientific A |  |
| Inc. |  |
| 701 East Macy St. |  |
| Los Angeles, Calif. 90012 |  |
| R-18 |  |
| Price | \$1,350 |
| Dimensions | $61 / 2 \mathrm{H} \times 22 \mathrm{~W} \times 18 \mathrm{D}$ |
| Weight | 55 lbs . |
| Quieting | $17.3 \mathrm{dBf} / 34.7 \mathrm{dBf}$ |
| S/N | $76 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+0.5,-2 \mathrm{~dB} / 30$ Hz to $15 \mathrm{kHz},+0.5,-2 \mathrm{~dB}$ |
| THD | 0.08\% ( 1 kHz ) $/ 0.15 \%$. 1 kHz ) |
| Separation | $40 \mathrm{~dB}, 50 \mathrm{~Hz}$ to 15 kHz |
| Subcarrier | 65 dB |
| Capture | 1 dB |
| Selectivity | 70 dB |
| Power | 180 watts ( 22.5 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.05\% THD |
| 1 m | $0.05 \%$ at 180 watts |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono); 150 mV (high level) |
| Overload | 150 to 300 mV (phono) |
| S/N | 94 dB (phono); 100 dB (aux) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Low filter | $6 \mathrm{~dB} /$ octave below 30 Hz |
| tuning; parametric equalizer; 5 -station AM/FM memory; bar-graph display of signal strength, multipath, tape out, and power |  |


| $\underset{\text { Price }}{\text { R-3C }}$ | \$335 |
| :---: | :---: |
| Dimensions | $51 / \mathrm{HH} \times 171 / 2 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 20 lbs . |
| Quieting | $11.2 \mathrm{~dB} / 1 / 19.2 \mathrm{dBf}$ |
| S/N | $65 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB} /$ same |
| THD | 0.15\% $10.25 \% ~(1 \mathrm{kHz}$ ) |
| Separation | $30 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 60 dB |
| Capture | 1.5 dB |
| Selectivity | 80 dB |
| Power | 30 watts ( 14.75 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.09 \%$ THD |
| 1 M | $0.09 \%$ at 30 watts |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono): 150 mV (high level) |
| Overioad | 125 mV (phono) |
| S/N | 78 dB (phono): 95 dB (tuner); 95 dB (aux) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| Low filter | 6 dB /octave below 30 Hz |
| Features | Signal-strength and center-tune |
| meters; full | mplementary circuit |

## Models also available

R-12, \$1,100; R-9, \$800; R-6, \$650

## SANSUI <br> Sansui Electronics Corp. 1250 Valley Brook Ave. Lyndhurst, N.J. 07071

| G-33000 |  |
| :---: | :---: |
| Price | \$1,900 |
| Dimensions | $9 \mathrm{H} \times 25 \mathrm{~W} \times 213 / 4 \mathrm{D}$ |
| Weight | 100 lbs |
| Quieting | $12.5 \mathrm{dBf} / 34 \mathrm{dBf}$ |
| S/N | $82 \mathrm{~dB} / 77 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+0.2,-1 \mathrm{~dB} /$ same |
| THD | 0.05\%/0.07\% (1 kHz) |
| Separation | $30 \mathrm{~dB}, 30 \mathrm{~Hz}$ to $15 \mathrm{kHz} ; 50 \mathrm{~dB}$ ( 1 kHz ) |
| Subcarrier | 65 dB |
| Capture | 0.9 dB |
| Selectivity | 90 dB |
| Power | 300 watts ( 24.75 dBW ) continuous from 5 Hz to 20 kHz at no more than $0.009 \%$ THD |
| IM | 0.009\% at 300 watts |
| Response | DC to $300 \mathrm{kHz},-3 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono); 150 mV (high level) |
| Overload | 350 mV (phono) |
| S/N | 87 dB (phono); 105 dB (aux) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | 6 dB /octave above 3 kHz |
| Low filter | $6 \mathrm{~dB} /$ octave below 16 Hz |
| Features | Separable preamp and power |
| amp; 4 meters; triple tone controls; switchable turnovers; mic/mixing input; phono impedance selector; Dolby FM de-emphasis; AM and FM dual bandwidth IF switching; 2 phono; 2 tape inputs with |  |
|  |  |
| 2-way copying; 2-system speaker selector; mi drange control ( $\pm 5 \mathrm{~dB}$ at 1.5 kHz ); slew rate: 175 volts per microsecond |  |
| G-9700 |  |
| Price | \$1,100 |
| Dimensions | $715 / 16 \mathrm{H} \times 221 / 16 \mathrm{~W} \times 191 / 2 \mathrm{D}$ |
| Weight | 48 lbs .14 |
| Quieting | $12.5 \mathrm{dBf} / 35 \mathrm{dBf}$ |
| S/N | $82 \mathrm{~dB} / 76 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+0.2,-1 \mathrm{~dB} / 30$ |


| THD | 0.05\% (1 kHz)/0.07\% |
| :---: | :---: |
| Separation | $\begin{aligned} & 30 \mathrm{~dB}(30 \mathrm{~Hz} \text { to } 15 \mathrm{kHz}) ; 45 \mathrm{~dB}(1 \\ & \mathrm{kHz}) \end{aligned}$ |
| Subcarrier | 40 dB |
| Capture | 1 dB |
| Selectivity | 80 dB |
| Power | 200 watts ( 23 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.02\% THD |
| IM | 0.02\% at 200 watts |
| Response | DC to $200 \mathrm{kHz},+0,-3 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono); 150 mV (high level) |
| Overload | 280 mV (phono) |
| S/N | 78 dB (phono); 95 dB (funer); 95 dB (aux) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | 6 dB /octave above 3 kHz |
| Low filter | $\pm 6 \mathrm{~dB}$ /octave below 16 Hz |
| Features | Patented FM/AM digitally quartz- |
| locked tuning system; 3-point tune and 8 -point signal indicator; LED peak power level display (12 points each channel); mic mixing; dual bandwidth FM; 2-way tape copying; dual phono inputs; 2-system speaker selector; midrange control ( $\pm 5 \mathrm{~dB}$ at 1.5 kHz ); slew rate: 80 volts per microsecond; 1.4 microsecond rise time |  |
|  |  |
|  |  |
|  |  |
|  |  |


| G-6700 |  |
| :---: | :---: |
| Price | \$730 |
| Dimensions | $73 / 16 \mathrm{H} \times 19$ 15/16W $\times 165 / 8 \mathrm{D}$ |
| Weight | $35 \mathrm{lbs}$.8 oz . |
| Quieting | $15 \mathrm{dBf} / 37 \mathrm{dBf}$ |
| S/N | $75 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+0.5,-1 \mathrm{~dB} / 30$ Hz to $15 \mathrm{kHz},+0.5,-1 \mathrm{~dB}$ |
| THD | 0.1\% (1 kHz)/0.15\% ( 1 kHz ) |
| Separation | $40 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Subcarrier | 40 dB |
| Capture | 1 dB |
| Selectivity | 50 dB |
| Power | 90 watts ( 19.5 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.025 \%$ THD |
| IM | 0.025\% at 90 watts |
| Response | DC to $200 \mathrm{kHz},+0,-3 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono); 150 mV (high level) |
| Overload | 250 mV (phono) |
| S/N | 78 dB (phono); 95 dB (tuner); 95 dB (aux) |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | $6 \mathrm{~dB} / 0$ ctave above 3 kHz |
| Low filter | 6 dB /octave below 16 Hz |
| Features | Patented digitally quartz-locked |
| funing system; 15-segment peak power output; |  |
| LED display; 2 phono, 2 tape, and mic mixing In puts; switchable audio muting; loudness compen- |  |
| sation; 2-system speaker selector; slew rate: 60 |  |
| volts per mi | second; 1.4 microsecond rise time |


| G-7500 |  |
| :--- | :--- |
| Price | $\$ 620$ |
| Dimensions | $71 / 6 \mathrm{H} \times 1915 / 16 \mathrm{~W} \times 16 \mathrm{y} / \mathrm{BD}$ |
| Weight | $37 \mathrm{lbs}, 14 \mathrm{oz}$. |
| Quieting | $14 \mathrm{dBi} / 36 \mathrm{dBf}$ |
| S/N | $72 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+0.2,-1 \mathrm{~dB} / \mathrm{same}$ |
| THD | $0.13 \%(1 \mathrm{kHz}) / 0.18 \%(1 \mathrm{kHz})$ |
| Separation | $25 \mathrm{~dB}, 30 \mathrm{~Hz}$ to $15 \mathrm{kHz} ; 42 \mathrm{~dB}(1$ |
|  | $\mathrm{kHz})$ |
| Subcarrier | 60 dB |
| Capture | 1 dB |
| Selectivity | 75 dB |
| Power | $90 \mathrm{watts}(19.5 \mathrm{dBW})$ continuous |
|  | from 20 Hz to 20 kHz at no more |
|  | than $0.025 \% \mathrm{THD}$ |
| IM | $0.025 \%$ at 90 watts |
| Response | DC to $200 \mathrm{kHz},-3 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono); 150 mV (high |
|  | level) |

Overload S/N Phono EO
Bass
Treble
High filter
Low filter
Features DC power amplifier; 4 meters; Dolby FM de-emphasis; 2-way tape copy; mic mixing; 4-channel or noise-reduction adapter; slew rate: 60 volts per microsecond

TA-500

| Price | \$465 |
| :---: | :---: |
| Dimensions | $65 / 8 \mathrm{H} \times 19 \mathrm{~W} \times 163 / 16 \mathrm{D}$ |
| Weight | 24 lbs. |
| Quieting | $15 \mathrm{dBf} / 38 \mathrm{dBf}$ |
| S/N | $75 \mathrm{~dB} / 70 \mathrm{~dB}$ |
| Response | 30 Hz to $15 \mathrm{kHz},+0.5,-1 \mathrm{~dB} / 30$ <br> Hz to $15 \mathrm{kHz},+0.5,-1 \mathrm{~dB}$ |
| THD | 0.1\% (1 kHz)/0.15\% (1 kHz) |
| Separation | $40 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Capture | 1 dB |
| Selectivity | 50 dB |
| Power | 50 watts ( 17 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.05\% THD |
| IM | 0.05\% at 50 watts |
| Response | DC to $70 \mathrm{kHz},+1,-3 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono); 150 mV (high level) |
| Overioad | 210 mV (phono) |
| S/N | 75 dB (phono); 95 dB (tuner); 95 dB (aux) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High filter | 6 dB /octave above 10 kHz |
| Low filter | $6 \mathrm{~dB} /$ octave below 20 Hz |
| Features | Two tape monitors; FM mode |

switch; loudness switch; matte black finish; remov able rack-mounting handles

G-4700

| Price | $\$ 430$ |
| :--- | :--- |
| Dimensions | 61 |

Weight 19
Quieting $\quad 15 \mathrm{dBf} / 38 \mathrm{dBt}$
S/N $\quad 75 \mathrm{~dB} / 70 \mathrm{~dB}$
Response $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz},+0.5,-1 \mathrm{~dB} / 30$
THD
Separation
Subcarrie
Capture
Selectivity
Power

IM
Response $\quad 10 \mathrm{~Hz}$ to $70 \mathrm{kHz},+1,-2 \mathrm{~dB}$
Sensitivity 2.5 mV (phono); 150 mV (high lev)
Overioad
S/N
Phono EQ
Bass
Treble
Low filter
Features
atented digitally quartz-locked , 2-system speaker selector, tape monitor; switchable FM muting; loudness contour subsonic filtering

## G-4500

Price
Dimensions
Weight
Quieting
S/N
Response
THD
Separation
Subcarrier
$\$ 320$
$61 / 16 \mathrm{H} \times 171 / 16 \mathrm{~W} \times 14 \mathrm{D}$
17 lbs. 14 oz.
$15 \mathrm{dBf} / 38 \mathrm{dBf}$
$71 \mathrm{~dB} / 68 \mathrm{~dB}$
30 Hz to $15 \mathrm{kHz},+0.5,-1 \mathrm{~dB} /$ same $0.15 \%(1 \mathrm{kHz}) / 0.25 \%$ ( 1 kHz ) $20 \mathrm{~dB}, 30 \mathrm{~Hz}$ to $15 \mathrm{kHz} ; 40 \mathrm{~dB}(1$ kHz )

| Capture | 1.3 dB |
| :---: | :---: |
| Selectivity | 50 dB |
| Power | 40 watts ( 16 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.1 \%$ THD |
| IM | $0.1 \%$ at 40 watts |
| Response | 10 Hz to $50 \mathrm{kHz},+1,-2 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phono); 150 mV (high level) |
| Overload | 200 mV (phono) |
| S/N | 75 dB (phono); 95 dB (aux) |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| Features | Twin tuning meters; 2 -system |
| speaker swit ing | ing; mic mixing; switchable FM mut- |

## Models also available

G-22000, \$1,400; G-7700, \$800; G-5700, \$630; G-5500, \$465; TA$300, \$ 340$; G-3500, $\$ 270$

## SANYO

Sanyo Electric Co.
1200 W. Artesia Blvd.
Compton, Calif. 90220
JCX-2900
Price $\quad \$ 549.95$
Dimensions $21 / 1 / 4 \mathrm{H} \times 61 / 2 \mathrm{~W} \times 163 / 4 \mathrm{D}$
Quieting $\quad 9.3 \mathrm{dBt}$
$\mathrm{S} / \mathrm{N} \quad 78 \mathrm{~dB} / 78 \mathrm{~dB}$
Response $\quad 20 \mathrm{~Hz}$ to $15 \mathrm{kHz},+1,-2 \mathrm{~dB}$
THD $\quad 0.1 \%(1 \mathrm{kHz}) / 0.15 \%(1 \mathrm{kHz})$
Separation $45 \mathrm{~dB}(1 \mathrm{kHz})$
Capture 1 dB
Selectivity 80 dB
Power
120 watts ( 20.8 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.08 \%$ THD
Response $\quad 20 \mathrm{~Hz}$ to $30 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$
Sensitivity $\quad 2.5 \mathrm{mV}$ (phono); 150 mV (high level)
Overioad 250 mV (phono)
S/N $\quad 70 \mathrm{~dB}$ (phono); 90 dB (tuner); 90 dB (aux)
Phono EQ
Bass
Trebie
High filter
Low filter
30 Hz to $15 \mathrm{kHz}, 02 \mathrm{~dB}$
$\pm 10 \mathrm{~dB}$ at 100 Hz
$\pm 10 \mathrm{~dB}$ at 10 kHz
EdB/octave above 8 kHz
Features Two tape inputs with dubbing; fone
control, turnover switch; midrange tone control

2033
Price $\$ 249.95$
Dimensions $151 / 4 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 105 / 8 \mathrm{D}$
S/N $\quad 75 \mathrm{~dB} / 70 \mathrm{~dB}$
Response $\quad 20 \mathrm{~Hz}$ to $40 \mathrm{kHz} ; \pm 0.1 \mathrm{~dB}$
THD $\quad 02 \%(1 \mathrm{kHz})$
Separation $45 \mathrm{~dB}(1 \mathrm{kHz})$
Capture $\quad 1.5 \mathrm{~dB}$
Selectivity $\quad 70 \mathrm{~dB}$
Power 38 watts ( 15.75 dBW ) continuous from 20 Hz to 40 kHz at no more than $0.04 \%$ THD
Response $\quad 20 \mathrm{~Hz}$ to $40 \mathrm{kHz}, \pm 0.4 \mathrm{~dB}$
Overioad $\quad 2.5 / 130 \mathrm{mV}$ (phono)
S/N
Features IF amplifier; PLL; signal strength and FM center channel meters; phono preamplifier; loudness switching; full complementary hyorid Darlington output stage; high capacity power supply

## PLUS SERIES

PLUS 200
Price $\quad \$ 899.95$
Quieting $\quad 13.5 \mathrm{dBf} / 36.3 \mathrm{dBf}$
S/N
$83 \mathrm{~dB} / 78 \mathrm{~dB}$

Response
THD
Separation
Capture
Power 400 watts ( 26 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.009 \%$ THD
Response $\quad 7 \mathrm{~Hz}$ to $100 \mathrm{kHz},+0,-1 \mathrm{~dB}$
Senstrivity 2.5 mV (phono); 150 mV (high level)
Overload $\quad 250 \mathrm{mV}$ (phono)
S/N $\quad 97 \mathrm{~dB}$ (phono); 83 dB (tuner); 95 dB (aux)
Bass
Treble
High filter 6 dB/octave above 8 kHz
Features Sampling quartz-locked tuning system; separate tuner/preamp and power amp sections; Digital Plus analog and digital frequency display; ring emitter transistors in output stage for ultra-high 170 volt per microsecond slew rate; selectable wide/narrow IF bandwidth; preamp for moving coil phono cartridges; peak power indicators with 12 LEDs per channel; selectable FM deemphasis for DOLBY FM decoding; separate tape monitor and dubbing switches for bidirectional tape copying while monitoring another source

PLUS 75
Price $\$ 549.95$
Dimensions $51 / 4 \mathrm{H} \times 18 \% / 6 \mathrm{~W} \times 111 / 2 \mathrm{D}$
Quieting $\quad 13.7 \mathrm{dBf} / 37 \mathrm{dBf}$
S/N $\quad 75 \mathrm{~dB} / 70 \mathrm{~dB}$
Response $\quad 20 \mathrm{~Hz}$ to $15 \mathrm{kHz},+1,-2 \mathrm{~dB}$
THD $\quad 0.2 \%(100 \mathrm{~Hz}) / 0.35 \%(100 \mathrm{~Hz})$
Separation $45 \mathrm{~dB}(1 \mathrm{kHz}$ to 10 kHz$)$
Capture $\quad 1.2 \mathrm{~dB}$
Selectivity 75 dB
Power $\quad 150$ watts ( 21.75 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.03\% THD
IM
(60 Hz and 7 kHz )
7 Hz to $100 \mathrm{kHz},+0,-1 \mathrm{~dB}$
Sensitivity 2.5 mV (phono); 150 mV (high level)
Overłoad $\quad 200 \mathrm{mV}$ (phono)
S/N

Bass
Treble
High fitter $\quad \frac{1}{6}$ dB/octave above 8 kHz
Low filter $\quad 12 \mathrm{~dB} /$ octave below 30 Hz
Features Sampling quartz-locked tuning system; LED signat indicators; dual-gate MOSFET RF amptifier; advanced IF design; switchable FM muting; DOLBY FM de-emphasis switch; phono preamplifier with moving-coil cartridge capability; three-band discrete tone equalizer with deteat; LED power indicators

## Models also available

JCX-2600, \$449.95; 2050, \$299.95; 2016, \$169.95; PLUS 130, \$699.95; PLUS 55, \$399.95

SCOTT

## H. H. Scott, Inc.

20 Commerce Way
Woburn, Mass. 01801
390R
Price
Dimensions
Weight
Quieting
S/N
Response
THD
Separation
Subcarrier
Capture
Selectivity
Power
$\$ 775$
$61 / 2 \mathrm{H} \times 23 \mathrm{~W} \times 16 \mathrm{D}$
49 lbs.
$15.6 \mathrm{~dB} / / 35.6 \mathrm{dBf}$
$80 \mathrm{~dB} / 75 \mathrm{~dB}$
25 Hz to $15 \mathrm{kHz} . \pm 2 \mathrm{~dB}$ (mono)
$0.1 \%$ (mono)

## $50 \mathrm{~dB}(1 \mathrm{kHz})$

74 dB
1 dB
80 dB
120 watts ( 20.75 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.03\% THD

| IM | 0.03\% at 120 watts | Weight | 24 lbs . | S/N | 86 dB at 5 mV (phono); 100 dB |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Response | 10 Hz to $40 \mathrm{kHz}, \pm 1.0 \mathrm{~dB}$ | Quieting | $9.84 \mathrm{dBt} / 1.7 \mu \mathrm{~V}$ (IHF) |  | (aux); 150 dB (tape) |
| Sensitivity | 2.5 mV (phono); 5 mV (high level) | S/N | $66 \mathrm{~dB} / 70 \mathrm{~dB}$ | Phono EQ | RIAA, $\pm 0.5 \mathrm{~dB}$ |
| Overload | 300/600 mV (phono) | Response | 20 Hz to $15 \mathrm{kHz},+0.5,-1.5$ | Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| S/N | 90 dB (phono); 95 dB (tuner); 95 dB |  | dB/same | Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
|  | (aux) | THD | 0.15\% ( 1 kHz )/0.25\% ( 1 kHz ) | High filter | 6 dB /octave above 9 kHz |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ | Separation | $30 \mathrm{~dB}, 20 \mathrm{~Hz}$ to 10 kHz | Low filter | 6 dB /octave below 50 Hz |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz | Subcarrier | 65 dB | Features | Moving-coil capability |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz | Capture | 1 dB |  |  |
| High filter | 12 dB /octave above 8 kHz \& 12 | Selectivity | 70 dB | STR-V5 |  |
|  | kHz | Power | 45 watts ( 16.5 dBW ) continuous | Price | \$580 |
| Low filter | 12 dB /octave below $18 \mathrm{~Hz} \& 40 \mathrm{~Hz}$ |  | from 20 Hz to 20 kHz at no more | Dimensions | $79 / 16 \mathrm{H} \times 201 / 2 \mathrm{~W} \times 171 / 4 \mathrm{D}$ |
| Features | 18-LED power indicator; volume |  | than 0.2\% THD | Weight | 45 lbs . |
| attenuator; bass/midrange/treble tone controls |  | IM | $0.2 \%$ at 45 watts | Quieting | $14.5 \mathrm{dBf} / 37.3 \mathrm{dBf}$ |
| with turnover points and bypass |  | Response | 30 Hz to $20 \mathrm{kHz} \pm 0.5 \mathrm{~dB}$ | S/N | $75 \mathrm{~dB} / 70 \mathrm{~dB}$ |
|  |  | Sensitivity | 2.5 mV (phono); 160 mV (high | Response | 30 Hz to $15 \mathrm{kHz},+0.2,-1.5 \mathrm{~dB}$ |
| 370R |  |  | level) | THD | 0.08\% ( 1 kHz ); 0.25\% ( 1 kHz ) |
| Price | \$500 | Overload | 160 mV (phono) | Separation | $48 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Dimensions | $6 \mathrm{H} \times 203 / 4 \mathrm{~W} \times 113 / 4 \mathrm{D}$ | S/N | 92 dB (phono); 70 dB (tuner); 95 dB | Subcarrier | 60 |
| Weight | $35 \mathrm{lbs}$.8 az. |  | (aux) | Capture | 1 dB |
| Quieting | $16.1 \mathrm{dBf} / 36.3 \mathrm{dBf}$ | Phono EQ | 30 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ | Selectivity | 75 dB |
| S/N | $75 \mathrm{~dB} / 70 \mathrm{~dB}$ | Bass | $\pm 14 \mathrm{~dB}$ at 50 Hz | Power | 85 watts ( 19.25 dBW ) continuous |
| Response | 25 Hz to $15 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ (mono) | Treble | $\pm 12 \mathrm{~dB} \text { at } 15 \mathrm{kHz}$ |  | from 20 Hz to 20 kHz at no more |
| THD | 0.125\% (mono) | High filter | $12 \mathrm{~dB} /$ octave above |  | an 0.07\% THD |
| Separation | 45 dB | Features | Certified pentormance: notarized | IM | 0.07\% at 85 watts |
| Subcarrier | 60 dB | certificate with | each unit shows exact perform- | Response | 5 Hz to $50 \mathrm{kHz},+0,-2 \mathrm{~dB}$ |
| Capture | 1.25 dB | ance: linear ph | ase IF; built-in infrasonic filter; four- | Sensitivity | 2.5 mV (phono); 150 mV (high |
| Selectivity | 60 dB | section FM | dual-gate MOSFET |  | level) |
| Power | 60 watts ( 17.75 dBW ) continuous |  |  | Overload | 200 mV (phono) |
|  | from 20 Hz to 20 kHz at no more | S-7150CP <br> Price | \$230 | S/N | 81 dB at 5 mV (phono); 100 dB (aux): 100 dB (tape) |
| IM | 0.05\% at 60 watts | Dimensions | $53 / 8 \mathrm{HH} \times 17 \mathrm{~W} \times 123 / 8 \mathrm{D}$ | Phono EQ | RIAA, $\pm 0.5 \mathrm{~dB}$ |
| Response | 10 Hz to $40 \mathrm{kHz}, \pm 1.0 \mathrm{~dB}$ | Weight | 18 lbs . | Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz |
| Sensitivity | 2.5 mV (phono) | Quieting | $10.8 \mathrm{dBf} / 1.9 \mu \mathrm{~V}$ (IHF) | Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| Overload | 200 mV (phono) | S/N | $66 \mathrm{~dB} / 70 \mathrm{~dB}$ | High filter | 6 dB /octave above 9 kHz |
| S/N | $\begin{aligned} & 85 \mathrm{~dB} \text { (phono); } 95 \mathrm{~dB} \text { (tuner); } 90 \mathrm{~dB} \\ & \text { (aux) } \end{aligned}$ | Response | 20 Hz to $15 \mathrm{kHz},+1,-2 \mathrm{~dB} /$ same $0.15 \%$ ( 1 kHz )/0.25\% ( 1 kHz ) | Low filter | 6 dB /octave below 50 Hz |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ | Separation | $30 \mathrm{~dB}, 20 \mathrm{~Hz}$ to 10 kHz | STR-V3 |  |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz | Subcarrier | 50 dB | Price | \$330 |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz | Capture | 1.2 dB | Dimensions | $511 / 16 \mathrm{H} \times 1911 / 16 \mathrm{~W} \times 157 / 16 \mathrm{D}$ |
| High fither | 6 dB /octave above 8 kHz | Selectivity | 60 dB | Weight | 26 los. |
| Low filter | $6 \mathrm{~dB} /$ octave below 30 Hz | Power | 15 watts ( 11.8 dBW ) continuous | Quieting | 16.4 dBt/37.9 dBf |
| Features | Protection circuit with LED Indica- |  | from 20 Hz to 20 kHz at no more | S/N | $72 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| tors; power meters; bass/midrange/treble tone |  |  | than 0.2\% THD | Response | 30 Hz to $15 \mathrm{kHz} \mathrm{c}^{+1},-2 \mathrm{~dB}$ |
| controls |  | IM | 0.2\% at 15 watts | THD | 0.15\% (1 kHz) $/ 0.25 \%$ (1 kHz) |
|  |  | Response | 30 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ | Separation | 45 dB (1 kHz) |
| 330R |  | Sensitivity | 2.5 mV (phono); 150 mV (high | Subcarrier | 50 dB |
| Price | \$280 |  | level) | Capture | 1 dB |
| Dimensions | $51 / 4 \mathrm{H} \times 17^{1 / 4} \mathrm{~W} \times 101 / 4 \mathrm{D}$ | Overload | 140 mV (phono) | Selectivity | 60 dB |
| Weight | 21 lbs . | S/N | 91 dB (phono); 70 dB (tuner); 95 dB | Power | 35 watts ( 15.5 dBW ) continuous |
| Quieting | $16.7 \mathrm{dBt} / 37 \mathrm{dBl}$ |  |  |  | from 20 Hz to 20 kHz at no more |
| S/N | $72 \mathrm{~dB} / 67 \mathrm{~dB}$ | Phono EQ | 30 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |  |  |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ (mono) | Bass | $\pm 12 \mathrm{~dB}$ at 50 Hz | 1 M | $0.1 \%$ at 35 watts |
| THD | 0.15\% (mono) | Treble | $\pm 10 \mathrm{~dB}$ at 15 kHz | Response | 5 Hz to $50 \mathrm{kHz},+0.5,-2 \mathrm{~dB}$ |
| Separation | 45 dB (1 kHz) | Features | Certified performance: | Sensitivity | 2.5 mV (phono); 150 mV (high |
| Subcarrier | 58 dB | certificate with | h each unit shows exact perform- |  | level) |
| Capture | 2 dB | ance; linear | hase IF; built-in infrasonic filter | Overload | 200 mV (phono) |
| Selectivity Power | 50 dB |  |  | S/N | 78 dB (phono) at $5 \mathrm{mV} ; 100 \mathrm{~dB}$ |
|  | 25 watts ( 14 dBW ) continuous from | Models | aiso available |  | (tape) |
|  | 20 Hz to 20 kHz at no more than 0.08\% THD |  | S-7450CP, \$350; S-7250 CP, \$290 | Phono EQ Bass | $\begin{aligned} & \text { RIAA, } \pm 0.8 \mathrm{~dB} \\ & +10 \mathrm{~dB} \end{aligned}$ |
| IM | 0.08\% at 25 watts | SONY |  | Treble | $\pm 10 \mathrm{~dB}$ |
| Response | 10 Hz to $40 \mathrm{kHz}, \pm 1.0 \mathrm{~dB}$ | Sony Ind | dustries |  |  |
| Sensitivity | 2.5 mV (phono) | 9 West | 57th St. | STR-V1 |  |
| Overioad | 180 mV (phono) ${ }^{\text {c }}$ |  | N N Y 10019 | Price | \$220 |
| S/N | 80 dB (phono); 85 dB (tuner); 85 dB (aux) | New Yor | K, N.Y. 10019 | Dimensions | $53 / 4 \mathrm{H} \times 18 \mathrm{~V}_{6} \mathrm{~W} \times 145 / 8 \mathrm{D}$ 17 lbs |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ | STR-V7 |  | Weight Quieting | 17 lbs . <br> $18.3 \mathrm{dBf} / 38.3 \mathrm{dBf}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 Hz | Price | \$900 | S/N | $70 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz | Dimensions | $79 / 16 \mathrm{H} \times 201 / 2 \mathrm{~W} \times 173 / 4 \mathrm{D}$ | Response | 30 Hz to $15 \mathrm{kHz},+1,-2 \mathrm{~dB}$ |
| High filter | 6 dB /octave above 8 kHz | Weight | 48 lbs . | THD | 0.2\% ( 1 kHz )/0.8\% ( 1 kHz ) |
| Features | DC-configuration OCL power am- | Quieting | $14.2 \mathrm{dBt} / 37.3 \mathrm{dBf}$ | Separation | 40 dB ( 1 kHz ) |
| plifier |  | S/N | $75 \mathrm{~dB} / 70 \mathrm{~dB}$ | Subcarrier | 45 dB |
| Models also available |  | Response | 30 Hz to $15 \mathrm{kHz},+0.2,-1.5 \mathrm{~dB}$ | Capture | 2.5 dB |
|  | $380 \mathrm{R}, \$ 600 ; 350 \mathrm{R}, \$ 400 ; 320$ | THD | 0.08\% ( 1 kHz )/0.15\% ( 1 kHz ) | Selectivity | 35 dB |
| $\$ 230$ |  | Separation | 48 dB ( 1 kHz ) | Power | 15 watts ( 11.75 dBW ) continuous |
|  |  | Subcarrier | 60 dB |  | -from 30 Hz to 20 kHz at no more |
| SHERWOOD |  | Capture | 1 dB |  | than $0.2 \%$ THD |
| Sherwood |  | Selectivity Power | 150 watts ( 21.75 dBW ) continuous | Response | 2 2 Hz to $50 \mathrm{kHz},+0.5,-3 \mathrm{~dB}$ |
| 4300 N. California Ave. |  |  | from 20 Hz to 20 kHz at no more than 0.07\% THD | Sensitivity | 2.5 mV (phono); 150 mV (high level) |
| Chicago, III. 60618 |  | IM | $0.07 \%$ at 150 watts | S/N | 76 dB (at 5 mV phono); 85 dB |
|  |  | Response | 5 Hz to $50 \mathrm{kHz},+0,-2 \mathrm{~dB}$ |  | (tape) |
| S-7650CP |  | Sensitivity | 2.5 mV (phono); 150 mV (high | Phono EQ | RIAA,$\pm 1.5 \mathrm{~dB}$ |
| Price | \$425 |  | level) | Bass | $\pm 8 \mathrm{kHz}$ |
| Dimensions | $511 / 16 \mathrm{H} \times 18 \mathrm{~W} \times 14 \mathrm{D}$ | Overload | 250 mV (phono) | Treble | $\pm 8 \mathrm{kHz}$ |



Scott 390R


Sherwood S.7650


Synerglstice R-301


Thorens AT-410
Models also available
STR-V6, \$700; STR-V4, \$430; STR-V2, \$260; STR-1800, \$165

SYNERGISTICS
Maybern Co.
9565 Midwest Ave Cleveland, Ohio 44125

R-301
Price $\$ 275$
Dimensions $55 / 8 \mathrm{H} \times 187 / 16 \mathrm{~W} \times 153 / 15 \mathrm{D}$
Weight 25 lbs
Quieting $\quad 16.11 \mathrm{dBf} / 37.2 \mathrm{dBf}$
S/N
$68 \mathrm{~dB} / 65 \mathrm{~dB}$
Response $\quad 20 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 2 \mathrm{~dB} / 20 \mathrm{~Hz}$ to
$15 \mathrm{kHz}, \pm 2 \mathrm{~dB}$
THD
Separation $40 \mathrm{~dB}, 1 \mathrm{kHz}$
Capture
Selectivity
Power

IM
Response
Sensitivity
Overload
S/N
Phono EQ
Bass
Treble
High filter

## 1.5 dB

52 dB
30 watts ( 14.75 dBW ) continuous from 30 Hz to 20 kHz at no more than 0.5\% THD
$0.15 \%$ at 30 watts
20 Hz to $20 \mathrm{kHz}, \pm 1.0 \mathrm{~dB}$
2.5 mV (phono) 100 mV (phono) 90 dB (phono); 85 dB (aux)
20 Hz to $20 \mathrm{kHz}, \pm 1.0 \mathrm{~dB}$
$\pm 10 \mathrm{~dB}$ at 100 Hz
$\pm 10 \mathrm{~dB}$ at 10 kHz
3 dB /octave above 10 kHz

## Models also available

R-201, \$225

## TANDBERG

Tandberg of America, Inc.
Labriola Court
Armonk, N.Y. 10504

## TR-2080

| Price | \$1,400 |
| :---: | :---: |
| Dimensions | $6 \mathrm{H} \times 201 / 8 \mathrm{~W} \times 131 / 8 \mathrm{D}$ |
| Weight | 27 lbs .3 oz . |
| Quieting | 14.8 dBf/32 dBf (mono/stereo) |
| S/N | $78 \mathrm{~dB} / 75 \mathrm{~dB}$ (mono/stereo) |
| Response | 20 Hz to $15 \mathrm{kHz}, \pm 0.75 \mathrm{~dB} /$ (mono and stereo) |
| THD | $0.5 \%, 30 \mathrm{~Hz}$ to 15 kHz (mono/stereo) |
| Separation | $40 \mathrm{~dB}, 100 \mathrm{~Hz}$ to 10 kHz |
| Subcarrier | 60 dB |
| Capture | 0.9 dB |
| Selectivity | 80 dB |
| Power | 80 watts ( 19 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.05 \%$ THD |
| IM | 0.05\% at 80 watts |
| Response | 6 Hz to $80 \mathrm{kHz}, \pm 0.75 \mathrm{~dB}$ |

2.2 mV (phono); 10 mV (high level) adjustable
$120-500 \mathrm{mV}$ (phono), adjustable 88 dB (phono); 98 dB (aux) 20 Hz to $20 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$ $\pm 15 \mathrm{~dB}$ at 50 Hz $\pm 15 \mathrm{~dB}$ at 10 kHz 12 dB /octave above 9 kHz 12 dB /octave below 30 Hz

## Sensitlvity

Overload
S/N
Phono EQ
Bass
Treble
High filter
Low filter
Features

Electronic switching; tape contour-
Ing control system; midrange control, $\pm 7 \mathrm{~dB}$ at 1 kHz ; high filter \#2, $6 \mathrm{~dB} /$ octave above 8 kHz ; rosewood cabinet

## Models also available

TR-2060, \$800; TR-2045, \$650
TECHNICS
Technics by Panasonic
One Panasonic Way
Secaucus, N.Y. 07094
SA-1000
Price $\$ 1,700$
Dimensions $71 / 2 \mathrm{H} \times 243 / 4 \mathrm{~W} \times 211 / \mathrm{BD}$
Weight 87 lbs 1 oz .
Quieting $\quad 12.8 \mathrm{dBf} / 36.2 \mathrm{dBf}$
$\mathrm{S} / \mathrm{N} \quad 83 \mathrm{~dB} / 80 \mathrm{~dB}$
Response 20 Hz to $18 \mathrm{kHz},+0.2,-0.8 \mathrm{~dB}$
THD
Separation $50 \mathrm{~dB}(1 \mathrm{kHz})$
Subcarrier 70 dB
Capture
Selectivity
Power
1 dB
330 watts ( 25.8 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.03\% THD
IM $\quad 0.03 \%$ at 330 watts
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB} ; 5 \mathrm{~Hz}$ to $40 \mathrm{kHz}+0,-1 \mathrm{~dB}$
Sensitivity $\quad 2.5 \mathrm{mV}$ (phono); 150 mv (high level)
Overload
S/N
Phono EQ
Bass
Treble
High filter
Low filter
Features LED power display; acoustic control; phono input capacitance and resistance selectors; midrange control ( $\pm 8 \mathrm{~dB}$ at 1 kHz ); midrange cut/boost frequency adjustable from 250 Hz to 5 kHz

SA-700
Price
Dimension
Weight
Quieting
$\$ 700$
$61 / 2 \mathrm{H} \times 213 / 2 \mathrm{~W} \times 151 / 2 \mathrm{D}$
39 lbs. 11 oz
$13.2 \mathrm{dBf} / 36.2 \mathrm{dBf}$

## Ymaha CR-2040

| S/N | $77 \mathrm{~dB} / 73 \mathrm{~dB}$ |
| :---: | :---: |
| Response | 20 Hz to $15 \mathrm{kHz},+0.2-0.8 \mathrm{~dB}$ (mono) |
| THD | 0.1\%/0.2\% (1 kHz) |
| Separation | 45 dB ( 1 kHz ) |
| Subcarrier | 70 dB |
| Capture | 1 dB |
| Selectivity | 80 dB |
| Power | 100 watts ( 20 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.04 \%$ THD |
| IM | 0.04\% at 100 watts |
| Fesponse | 5 Hz to $90 \mathrm{kHz}+0,-1 \mathrm{~dB}$ |
| Sensltivily | 2.5 mV (phono); 150 mV (high level) |
| Overload | 200 mV (phono) |
| S/N | 95 dB (phono); 95 dB (aux) |
| Phono Ea | 30 Hz to $15 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| Bass | $\pm 12 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 12 \mathrm{~dB}$ at 20 kHz |
| High filter | 6 dB/octave above 7 kHz |
| Low filtep | $6 \mathrm{~dB} / 0 \mathrm{ctave}$ below 100 Hz |
| Features | Midrange control ( $\pm 7 \mathrm{~dB}$ at 1 kHz ); |
| LED power | lay; acoustic control |

LED power display; acoustic control

## SA-500

Price
Dimensions $\quad 61 / 4 \mathrm{H} \times 191 / 8 \mathrm{~W} \times 1215 / 16 \mathrm{D}$
Weight $\quad 25 \mathrm{lbs} 2 \mathrm{oz}$
Quleting $\quad 13.7 \mathrm{dBf} / 37.2 \mathrm{dBf}$
S/N $\quad 75 \mathrm{~dB} / 70 \mathrm{~dB}$
Response $\quad 20 \mathrm{~Hz}$ to $15 \mathrm{kHz},+1,-2 \mathrm{~dB}$ (mono)
THD
Separation
Subcarrier
Cepture
Selectivity
Power

IM
Response
$0.15 \% / 0.3 \%(1 \mathrm{kHz})$
$45 \mathrm{~dB}(1 \mathrm{kHz})$
50 dB
1.2 dB

70 dB
55 watts ( 17.5 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.04\% THD
$0.04 \%$ at 50 watts
20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB} ; 10 \mathrm{~Hz}$ to $40 \mathrm{kHz},-1 \mathrm{~dB}$
Sensitivity 2.5 mV (phono); 150 mV (high level)
150 mV (phono)
90 dB (phono); 95 dB (aux)
30 Hz to $15 \mathrm{kHz} \pm 0.2 \mathrm{~dB}$
$\pm 10 \mathrm{~dB}$ at 50 Hz
$\pm 10 \mathrm{~dB}$ at 10 kHz
6 dB /octave above 7 kHz
$6 \mathrm{~dB} /$ octave below 100 Hz
$\begin{array}{ll}\text { Low filter } & 6 \mathrm{~dB} / \text { octave below } 100 \mathrm{~Hz} \\ \text { Features } & \text { FGD filter; PLL; LED power display; }\end{array}$
acoustic control

SA-300
Price $\$ 300$
Dimensions $57 / 4 \mathrm{H} \times 181 / 4 \mathrm{~W} \times 113 / 4 \mathrm{D}$
Weight $\quad 17.6 \mathrm{lbs}$
Quieting $\quad 13.7 \mathrm{dBt} / 37.2 \mathrm{dBf}$
S/N $\quad 75 \mathrm{~dB} / 70 \mathrm{~dB}$
Response $\quad 20 \mathrm{~Hz}$ to $15 \mathrm{kHz},+1,-2 \mathrm{~dB}$
THD $\quad 0.15 \% / 0.3 \%(1 \mathrm{kHz})$

| Separation | $45 \mathrm{~dB}(1 \mathrm{kHz})$ |
| :--- | :--- |
| Subcarrier | 50 dB |
| Capture | 1.2 dB |
| Selectlvity | 70 dB |
| Power | 35 watts (15.5 dBW) continuous |
|  | from 20 Hz to 20 kHz at no more |
|  | than $0.04 \% \mathrm{THD}$ |
| IM | $0.04 \%$ at 35 watts |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB} ; 10 \mathrm{~Hz}$ |
|  | to $30 \mathrm{kHz},-1 \mathrm{~dB}$ |
| Sensitivity | $2.5 \mathrm{mV} \mathrm{(phono);} \mathrm{150} \mathrm{mV} \mathrm{(high}$ |
|  | level) |
| Overload | 130 mV (phono) |
| S/N | 90 dB (phono); $95 \mathrm{~dB} \mathrm{(aux)}$ |
| Phono EQ | 30 Hz to $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Bass | $\pm 10 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 10 \mathrm{~dB}$ at 10 kHz |
| High fliter | $6 . \mathrm{dB} /$ octave above 7 kHz |
| Features | $\mathrm{MOSFET} ; \mathrm{FGD} \mathrm{filter;} \mathrm{PLL}$ |

Models also available
SA-800, \$800; SA-600, \$530; SA400, \$360; SA-200, \$240; SA-80, $\$ 200$

## THORENS

Elpa Marketing Industries, Inc.
Thorens \& Atlantic Aves.
New Hyde Park, N.Y. 11040

AT-410
Price $\quad \$ 1,35$
Dimensions $\quad 173 / 4 \mathrm{H} \times 6 \mathrm{~W} \times 151 / 2 \mathrm{D}$
Weight $\quad 27 \mathrm{lbs} .12 \mathrm{oz}$
Quieting
S/N
Response
THD
Separatio
$40 \mathrm{~dB}, 30 \mathrm{~Hz}$ to 15 kHz
Capture
Selectivit
Power $\quad 50$ watts ( 17 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.1 \%$ THD
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Sensitivity 2.5 mV (phono); 235 mV (high level)
Overload $\quad 70 \mathrm{mV}$ (phono)
$\mathrm{S} / \mathrm{N} \quad 60 \mathrm{~dB}$ (phono); 62 dB (tuner); 60 dB (aux)
Phono EQ 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
Bass
Treble
High filte
18 dB /octave below 60 Hz
Features Varactor tuning with 5 FM and 2
AM presets; switch noise suppressor circuit protects output from transients when switching power on or changing inputs

| TOSHIBA |  |
| :---: | :---: |
| Toshiba America, Inc. |  |
| 280 Park Ave. |  |
| New York, N.Y. 10017 |  |
| SA-7150 |  |
| Price | \$1,100 |
| Dimensions | $796 / 10 \mathrm{H} \times 213 / 5 \mathrm{~W} \times 197 / 10$ |
| Weight | 59 lbs 6 oz . |
| S/N | $90 \mathrm{~dB} / 95 \mathrm{~dB}$ |
| Response | 10 Hz to 50 kHz |


| THD | 0.05\% |
| :---: | :---: |
| Separation | 50 dB |
| Capture | 1 dB |
| Power | 150 watts ( 21.8 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.05\% THD |
| Overload | 350 mV (phono) |
| Features | Digltally synthesized |
| SA-735 |  |
| Price | \$300 |
| Dimensions | $57 / 10 \mathrm{H} \times 189 / 10 \mathrm{~W} \times 15$ 7/10D |
| Weight | 25 lbs 5 oz . |
| Response | 10 Hz to 40 kHz |
| THD | 0.08\% |
| Separation | 45 dB |
| Capture | 1 dB |
| Power | 35 watts ( 15.5 dBW ) |

Models also available
SA-7100, \$670: SA-775, \$550; SA750, \$380

## TUNGSRAM

Anglo American Audio
P.O. Box 653

Buffalo, N.Y. 11420

## 3535

| Price | \$495 |
| :---: | :---: |
| Dimensions | $33 / 5 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 113 / 10 \mathrm{D}$ |
| Weight | 13 lbs .3 oz . |
| S/N | 40 dB |
| Response | 20 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| THD | 0.3\% |
| Separation | $40 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Capture | 1.5 dB |
| Power | 28 watts ( 14.5 dBW ) continuous from 20 Hz to 35 kHz at no more than 0.2\% THD |
| IM | 0.2\% at 35 watts |
| Response | 10 Hz to 60 kHz |
| Sensltivity | 1.5 mV (phono); 50 mV (high level) |
| S/N | 65 dB (phono); 55 dB (tuner); 72 dB |
| Phono EQ | 20 Hz to $20 \mathrm{kHz}, \pm 0.1 \mathrm{~dB}$ |
| Bass | $\pm 18 \mathrm{~dB}$ at 40 Hz |
| Treble | $\pm 16 \mathrm{~dB}$ at 12.5 kHz |
| High filter | 3 dB /octave above 8.5 kHz |
| Low filter | $3 \mathrm{~dB} /$ octave below 70 Hz |
| Features | Touch (capacitance) control for |
|  |  |

YAMAHA
Yamaha International Corp.
6600 Orangethorpe Ave.
Buena Park, Calif. 90620

| CR-3020 |  |
| :--- | :--- |
| Price | $\$ 1,500$ |
| Dimensions | $71 / 2 \mathrm{H} \times 243 / 4 \mathrm{~W} \times 191 / 2 \mathrm{D}$ |
| Welght | 82 lbs |
| Quieting | $15.3 \mathrm{dBf} / 37.2 \mathrm{dBf}$ |
| S/N | $80 \mathrm{~dB} / 75 \mathrm{~dB}$ |
| Response | 50 Hz to $10 \mathrm{kHz}, \pm 0.3 \mathrm{~dB} / 30 \mathrm{~Hz}$ to |
|  | $15 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | $0.07 \% / 0.09 \%(100 \mathrm{~Hz})$ |
| Separation | $52 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Subcarrier | 70 dB |
| Capture | 1 dB |
| Selectivity | 85 dB |

160 watts ( 22 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.05\% THD
$0.02 \%$ at 80 watts
IM
5 Hz to $100 \mathrm{kHz}, \pm 2 \mathrm{~dB}$
2 mV (phono); 120 mV (high level)
310 mV (phono)
96 dB (phono); 100 dB (aux)

## S/N

$\pm 15 \mathrm{~dB}$ at 50 Hz
Treble
High filter
12 dB /octave above 8 kHz or 12 kHz
12 dB /octave below 15 Hz or 70 Hz
Features Built-in head amp; NFB-PLL-MPX;
Auto $D X$; independent recording and audition

| CR-2040 |  |
| :---: | :---: |
| Price | \$860 |
| Dimensions | $69 / 16 \mathrm{H} \times 2213 / 16 \mathrm{~W} \times 16 \mathrm{D}$ |
| Weight | 44 lbs 14 oz . |
| Quieting | $15.3 \mathrm{dBf} / 36.1 \mathrm{dBf}$ |
| S/N | $90 \mathrm{~dB} / 84 \mathrm{~dB}$ |
| Response | 50 Hz to $10 \mathrm{kHz}, \pm 0.4 \mathrm{~dB} / 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 0.4,-1 \mathrm{~dB}$ |
| THD | 0.07\% ( 100 Hz )/0.09\% ( 100 Hz ) |
| Separation | 50 dB ( 50 Hz to 10 kHz ) |
| Subcarrier | 70 dB |
| Capture | 1.5 dB |
| Selectivity | 82 dB |
| Power | 120 watts ( 20.75 dBW ) continuous from 20 Hz to 20 kHz at no more than 0.02\% THD |
| IM | $0.02 \%$ at 120 watts |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.2 \mathrm{~dB}$ |
| Sensitivity | 2.5 mV (phonor); 270 mV (high level) |
| Overload | 270 mV (phono) |
| S/N | ```9.5 dB (phono); 90 dB (tuner); 100 dB (aux)``` |
| Bass | $\pm 10 \mathrm{~dB}$ at 100 to 500 Hz (continuously variable) |
| Treble | $\pm 10 \mathrm{~dB}$ at 2 to 8 kHz (continuously variable) |
| High filter | 6 dB/octave above $10 \mathrm{kHz} ; 6$ dB/octave above 6 kHz |
| Low filter | 12 dB /octave below 25 Hz |
| Features | Auto local/DX mode selection; |
| built-in moving-coil head amps; presence control: $\pm 6 \mathrm{~dB}$ from 1 to 5 kHz (continuously variable) |  |


| CR-220 |  |
| :---: | :---: |
| Price | \$235 |
| Dimensions | $53 / 4 \mathrm{H} \times 171 / 8 \mathrm{~W} \times 127 / 8 \mathrm{D}$ |
| Weight | $16 \mathrm{lbs}$. |
| Quieting | $17.3 \mathrm{dBf} / 39.2 \mathrm{dBf}$ |
| S/N | $70 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| Response | 50 Hz to $10 \mathrm{kHz}, \pm 0.5 \mathrm{~dB} / 30 \mathrm{~Hz}$ to $15 \mathrm{kHz},+1,-3 \mathrm{~dB}$ |
| THD | 0.2\%/0.3\% ( 1.00 Hz ) |
| Separation | 30 dB at 50 Hz |
| Subcarrier | 40 dB |
| Capture | 1.5 dB |
| Selectivity | 60 dB |
| Power | 15 watts ( 11.75 dBW ) continuous from 20 Hz to 20 kHz at no more than $0.05 \%$ THD |
| IM | 0.025\% at 7.5 watts |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Sensitivity | 2 mV (phono); 120 mV (high level) |
| Overload | 90 mV (phono) |
| S/N | 90 dB (phono) |
| Bass | $\pm 14, \pm 10 \mathrm{~dB}$ at 50 Hz |
| Treble | $\pm 12, \pm 10 \mathrm{~dB}$ at 20 kHz |
| Low filter | 12 dB /octave |
| Features contour | Continuously variable loudness |
|  |  |
| Models | Iso available <br> CR-1040, \$660; CR-840, \$495; CR-640, \$395 |

# Phono Equipment 

## Tonearms

| ADC |  |
| :---: | :---: |
| Audio Dynamics Corp. |  |
| Pickett District Road |  |
| New Milf | ord, Conn. 06776 |
| LMF-2 |  |
| Price | \$215 |
| Length | $91 / 3^{\prime \prime}$, to stylus |
| Eff. mass | 8 grams |
| VTF | 0 to 1.5 grams |
| Antiskating | 0 to 2 grams |
| Resonance | 10 Hz (with ADC ZLM Improved cartridge) |
| Track. error | 0 degrees at 3.20 R |
| Headsheli | Removable |
| Features headshell | Same as LMF-1, plus removable |

LMF-1
Price
Length $\quad 91 / 3^{\prime \prime}$, pivot to stylus
Eff. mass 5.5 grams
VTF 0 to 1.5 gram
Antiskating 0 to 2 grams
Resonance 10 Hz (with ADC ZLM Improved cartridge)
Track. error 0 degree at $3.2^{\prime \prime}$ R
Headshell Fixed
Features Tapered carbon-fiber arm with a low-mass-to-high-tensile-strength ratio; handpicked stainless steel instrument bearings, micronpolished for virtually frictionless movement; compatible with all high quality magnetic cartridges between 4 and 11 grams in weight

## ALT-1

| Price | \$149.95 |
| :---: | :---: |
| Length | 9 1/3", pivot to stylus |
| Eff. mass | 7.0 grams |
| VTF | 0 to 4 grams |
| Antiskating | 0 to 4 grams |
| Resonance | 10 Hz (with ZLM Improved cartridge) |
| Track. error | 0 degrees 2.7" in radius |
| Headshell | Removable |
| Features bon fiber hea | Aluminum arm with removable carshell |

## AUDIO-TECHNICA

Audio Technica U.S., Inc,
33 Shiawassee Ave.
Fairlawn, Ohio 44313

## AT-1010

| Price | $\$ 350$ |
| :--- | :--- |
| Length | $91 / 2^{\prime \prime}$, pivot to stylus |
| Eff. mass | 10 grams |
| VTF | 0 to 2.5 grams |
| Antiskating | 0 to 2.5 grams |
| Resonance | 10 Hz (with AT-14Sa cartridge) |
| Track. error | 1.5 degrees |
| Headshell | Removable |
| Features $\quad$ Dynamic Tracing System elimi |  |
| nates change in tracking force as groove modula |  |
| tion varies; adjustable damping and latera |  |
| balance; interchangeable diecast magnesium |  |
| headshell |  |

AT-1009

## Price

 LengthEff. mass VTF
Antiskating
Resonance
Track. error
Headshell
Features Pneumatic cueing with remote actuator; tracking force readable to 0.1 gram; antiskating may be adjusted while arm is in operation; extra AT-D universal headshell avallable separately at \$12

ATP-16T
Price $\$ 150$
Length $11^{\prime \prime}$, pivot to stylus
VTF 0 to 5 grams
Resonance 10 Hz (with ATP. 2 cartridge)
Track. error 1 degree, 30 min
Headshell Removable
Features Same, as ATP-12T, except greater
effective length to play $16^{n}$ transcriptions

ATP-12T
Price $\$ 150$
Length $10^{\prime \prime}$, pivot to stylus
VTF $\quad 0$ to 5 grams
Resonance 12 Hz (with ATP-2 cartridge).
Track. error 1 degree, 55 min
Headshell Removable
Features "Bulletproof" tonearm for rugged professional applications; thumbscrews and locking set-screws provided for major adjustments; extra ATP-H universal headshell available separately at $\$ 12$

AT-1005
Price $\$ 85$
Length $\quad 91 / 2^{n}$, pivot to styius
Eff, mass
VTF
Resonance 11 Hz (with AT-14Sa cartridge)
Track. error 1 degree, 30 min
Headshell Removable
Features Optional AT-L2 hydraullc lift, \$17; extra AT-S universal headshel available separately $\$ 8$

## CONNOISSEUR

Hervic Electronics, Inc. 18750 Oxnard St., \#406
Tarzana, Calif. 91356
SAU-4
Price
$\$ 135$
Length $\quad 87 / 16^{\circ}$, pivot to stylus
Friction $\quad 10 \mathrm{mg}$
Eff. mass 4 to 6 grams (adjustable)
VTF $\quad 0$ to 4 grams
Antiskating 0 to 4 grams
Track. error 0 degrees at $22 / 5^{\prime \prime}$ radius
Headshell Removable
Features Viscous damped unipivot with pendant balance antiskate weight (graduated); built-in spirit level; cueing damped in both directions; plug-In audio cables

## SAU-2

| Price | $\$ 80$ |
| :--- | :--- |
| Length | $10^{\prime \prime}$, pivot to stylus |
| Friction | 75 mg |
| Eff. mass | 4 to 6 grams (adjustable, decou- |
|  | pled) |
| VTF | $1 / 4$ to 6 grams |
| Antiskating | $3 / 4$ to 3 grams |
| Headshell | Removable |
| Features | Double gimbal ball bearings tilted | 45 degrees for image stability; detachable headshell; fully adjustable arm; cueing damped in both directions; plug-In audio cable

## DECCA

Rocelco, Inc.
1669 Flint Road
Downsview, Ontario M3J 2J7 Canada

| Decca International Tonearm |  |
| :---: | :---: |
| Price | \$149.50 |
| Length | 91/2" ", to stylus |
| Eff, mass | 9 grams |
| VTF | 0 to 3.5 grams |
| Antiskating | 1/4 to 3 grams |
| Resonance | 10 Hz (with Decca Gold or Plum cartridge) |
| Track. error | 0 degrees at 2.4" radius |
| Headshell | Removable |
| Features | Jeweled unipivot bearing; magnetic |
| antlskating; magnetic suspension; silicon viscousdamped |  |

## DENON

American Audioport 1407 N. Providence Road Columbia, Mo. 65201

| Length | $95 / \mathrm{m}^{\prime \prime}$, pivot to stylus |
| :--- | :--- |
| Friction | 25 mg |
| Eff. mass | 6 grams |
| VTF | 0 to 2 grams |
| Antiskating | 0 to 2 grams |
| Resonance | 7 Hz (with DL-303 cartridge) |
| Track. error | 0 degrees at $23 / \mathrm{in}$ inadius |
| Headshell | Removable |
| Features | Contoured magnetic non-contact |
| antiskating; all electrical connections gold plated; |  |
| static balanced; dynamic damping |  |

DA-307

## Price

Length
Eff. mass
VTF
to 2.5 grams
Resonance 8 Hz (with Denon DL-103D cartridge)
Track. error 2.5 degrees
Headshell Removable
Features Oil-damped cueing; contoured magnetic antiskate: laser inter-ferometry designed am tube; gold contacts

DA-309

## Length

Eff. mass
VTF
Antiskating
Resonance
Track. error
Headshell
Features Oil-damped cueing; contoured magnetic antiskating; all wiring interfaces goldplated

## FIDELITY RESEARCH OF AMERICA

Fidelity Research, Inc.
P.O. Box 5242

Ventura, Calif. 98003

FR-66s
Price $\quad \$ 1,250$
Length $12^{\prime \prime}$. pivot to stylus
Friction $\quad 5 \mathrm{mg}$
Eff. mass 38 grams (with FR/S-3 headshell)
VTF 0 to 5 grams
Antiskating 0.5 to 3 grams
Resonance 6.7 Hz (with FR Mk 2 or FR-1 Mk 3F cartridge and FR/S-3 headshell)
Track. error +1 degree, 40 min to 0 degree, 36 min
Headshell Removable
Features Nonmagnetic stainless steel seamless tube, vertical and lateral ball bearings; $16^{n}$ transcription tonearm; stylus force applied by linear dynamic balance spring; special stabilizer on bottom of pillar post allows adjustment of tracking angle of stylus while playing records; 6 gold-plated connector pins to tonearm cable; Model FR-66ss available for $\$ 1,300$ with silver wires in tonearm from head shell connector to pillar post connector

## FR-64s

| Price | $\$ 600$ |
| :--- | :--- |
| Length | $91 / 2^{*}$, to stylus to stylus |
| Friction | 5 mg |
| Eff. mass | 30 grams (with FR-1 Mk 2 or FR-1 |
|  | Mk 3F cartridge and FR/S-3 head- |
|  | shell) |
| VTF | 0 to 5 grams |
| Antiskating | 0.5 to 5 grams (weight and lever) |
| Resonance | 7 Hz (with FR-1 Mk 2 or FR-1 Mk |
|  | $3 F$ cartridge) |

Track. error +1 degree, 40 min to - 1 degree, 20 min
Features Nonmagnetic stainless steel construction; gold-plated output connectors; stylus force set by linear dynamic balance spring with 0.5 gram adjustment; accessories available include a heavy stabilizer (nonadjustable) and adjustable arm stabilized for changing stylus tracking angle while playing record; also available as Model FR64 ss for $\$ 640$ with silver wire inside tonearm Irom cartridge attachment to the pillar post

FR-14

## Price

Length $\quad 97 / 10^{\prime \prime}$, pivot to stylus

## Friction

Eff. mass

## VTF

Antiskating
Resonance
Track. error 1 degree, 50 min at $22 / 5^{\circ}$ radius:

Features Collar on tonearm permits antiskating to be set to become effective at first record groove; adjustable in $1 / 2$-gram increments

FR-12

| Price | \$400 |
| :---: | :---: |
| Length | $9{ }^{\prime \prime}$. pivot to stylus |
| Friction | 5 mg |
| Eff. mass | 33 grams |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 5 grams (adjustable in halfgram increments) |
| Resonance | 8 Hz (with FR-1Mk 2 and FR-1Mk 3F cartridges) |
| Track. error | +2 degrees, $57 \mathrm{~min} ;-0$ degrees 56 min |
| Headshell | Removable |
| Features turntables | This arm designed specifically for h as Linn Sondek, Connoissuer |
| ERA, etc. he aluminum; we | dshell machined from solid block of ght: 12 grams |

## KEITH MONKS

Keith Monks (Audio), U.S.A. 652 Glenbrook Road Glenbrook, Conn. 06906

| M-9BA Mk III |  |
| :---: | :---: |
| Price | \$179.95 |
| Length | $9^{\prime \prime}$, pivot to stylus |
| Friction | 4 mg lateral and vertical |
| Eff. mass | 6 grams/cartridge tracking at 1 gram |
| VTF | 0.5 to 2.5 grams |
| Antiskating | 0.5 to 2.5 grams |
| Resonance | 13 Hz (with 6 gram cartridge mass at 25 CU dynamic compliance at 1 gram pressure) |
| Track. error | 0 degrees at $2.375^{\prime \prime}$ radius |
| Headshell | Fixed |
| Features | No wires thru pivot point; top arm |
| removes completely to allow easy change of cartridges with interchangeable prebalanced arms |  |
|  |  |

## LINN PRODUCTS

Audiophile Systems 5750 Rymark Court Indianapolis, Ind. 46250

| LV-II |  |
| :--- | :--- |
| Price | $\$ 450$ |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 3 grams |
| Headshell | Fixed |

LUSTRE<br>Sumiko, Inc.<br>Box 5046<br>Berkeley, Calif. 94705

## GST-801

| Price | $\$ 500$ |
| :--- | :--- |
| Length | $93 / 5^{\circ}$, pivot to stylus |
| Friction | 2.0 mg |
| VTF | 0.3 to 2.5 grams |
| Antiskating | 0.0 to 2.5 grams |
| Track. error | 1.1 degree |
| Headshell | Removable |




Signet XK-50

Osawa AC-300 Mk II

Features Dynamic balance; magnetic VTF;
magnetic antiskate; silver lead wires; damped pipe; VTA fully adjustable by helicold; magnesium alloy headshell

## GST-1

| Price | $\$ 175$ |
| :--- | :--- |
| Length | $91 / 2^{\prime \prime}$, pivot to stylus |
| Friction | 10 mg |
| Eff. mass | 8.5 grams |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 3 grams |
| Resonance | 10 Hz (with Grace SF-90 cartridge) |
| Track. error | 1.5 degree |
| Features | Special pleated internal damping |

## MICHELL ENGINEERING

J. A. Michell Engineering, Ltd. 5930 Penfield Ave. Woodland Hills, Calif. 91367

## Focus

Price $\$ 225$
Length $\quad 93 / 10^{\prime \prime}$, pivot to stylus
Eff. mass
VTF 5 grams
$1 / 8$ to 6 grams
Antiskating $1 / 8$ to 6 grams
Resonance 8 Hz (with Grado III cartridge)
Track. error 0.5 degrees at $8^{n}$ radius
Headshell Removable
Features 23.75 degree headshell offset angle; fixed pivot to stylus length; double aluminum tube (concentric); triple vane damping in vertical plane on unipivot

MICRO SEIKI
Great American Sound 20940 Lassen St.
Chatsworth, Calif. 91311

MA-505LS
Price $\$ 375$
CF-1
Price $\$ 225$

SHURE
Shure Bros, Inc.
222 Hartrey Ave.
Evanston, III. 60204

M236
Price $\quad \$ 51.50$
Length $\quad 81 / 4^{n}$, pivot to stylus
VTF $\quad 1.5$ or more grams
Features For $16^{n}$ recordings; full range of adjustments for static and dynamic balance, cartridge overhang, arm height, etc.

M232
Price
Length $\quad 81 / 4^{n}$, pivot to stylus
VTF $\quad 1.5$ or more grams
Headshell Removable
Features For $12^{\prime \prime}$ recordings; full range of adjustments for static and dynamic balance, cartridge overhang, arm height, etc.

## SIGNET

Signet Co.
33 Shiawassee Ave.
Fairlawn, Ohio 44313

| XK-50 |  |
| :--- | :--- |
| Price | $\$ 400$ |
| VTF | 0.1 to 1.6 grams |
| Antiskating | 0 to 2.5 grams |
| Resonance | 10 Hz (with high compliance car- |
|  | tridge) |
| Headshell Fixed <br> Features Signatrace damped planar track- <br> ing . |  |

## SME

Shure Bros. Inc.
222 Hartrey Ave.
Evanston, III. 60204

| Series III |  |
| :---: | :---: |
| Price | \$294 |
| Length | 9 ", pivot to stylus |
| Friction | 20 mg |
| Eff. mass | 5 grams |
| VTF | 0 to 2.5 grams |
| Antiskating | 0 to 2.5 grams |
| Resonance | 11 to 12 Hz (with V15 Type IV cartridge) |
| Track. error | 1.5 degrees at 5.5 " radius |
| Headshell | Removable |
| Features | Fluid damper; titanium cartridge- |

3009 Series IIİ-S
Price $\$ 225$
Length $9^{\prime \prime}$, pivot to stylus
Headshell Removable
Features
Fluid damper FD-IIIS is available at $\$ 41$; carrier arm

3009 S/2
Price \$174
Length $9^{\prime \prime}$, pivot to stylus
Friction $\quad 20 \mathrm{mg}$
Eff. mass 8 grams
VTF
0 to 1.5 grams
8 to 9 Hz (with V15 Type III cartridge)
Track. error 1.5 degrees at $5.5^{\prime \prime}$ radius
Headshell Removable
Features Fluid damper FD200 available at
$\$ 54.60$

SME Series III


## Phono Cartridges

ADC
Audio Dynamics Corp.
Pickett District Road
New Milford, Conn. 06776

| ZLM Improved |  |
| :---: | :---: |
| Price | \$135 |
| Type | Induced magnet |
| Stylus | Aliptic: $0.2 \times 1.5 \mathrm{mil}$ |
| VTF | . 75 to 1.25 grams |
| Compliance | $36 \times 10-6 \mathrm{~cm} /$ dyne lateral |
| Output | 1 mV at $1 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB} ; 20 \mathrm{kHz}$ to $26 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ |
| Separation | 30 dB at $1 \mathrm{kHz} ; 20 \mathrm{~dB}$ at 10 kHz |
| Vertical angle 20 degrees |  |
| Load | 47K; 275 pF |
| Features | Aliptic tip combined with tapered |
| cantilever for extremely low mass; effective mov- |  | ing mass: 0.37 mg


| XLM Mk III Integra |  |
| :---: | :---: |
| Price | \$120 |
| Type | Induced magnet |
| Stylus | $0.2 \times 0.7$ mils nude elliptical (geometry) |
| VTF | 1.2, $\pm 0.3$ grams |
| Compliance | $32 \times 10^{-6} \mathrm{~cm} / \mathrm{dyne}$ lateral |
| Output | 1 mV at $1 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB} ; 20 \mathrm{kHz}$ to $24 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ |
| Separation | 28 dB at $1 \mathrm{kHz} ; 18 \mathrm{~dB}$ at 10 kHz |
| Vertical angle Adjustable |  |
| Load | $47 \mathrm{~K} ; 275 \mathrm{pF}$ |
| Features | Carbon fiber headshell; calibrated |
| ang ad |  |


| QLM 36 N | Mk III Improved |
| :---: | :---: |
| Price | \$79.95 |
| Type | Induced magnet |
| Stylus | Diasa elliptical; $0.3 \times 0.7 \mathrm{mil}$ |
| VTF | 0.75 to 1.5 gram |
| Compliance | $32 \times 10^{-6} \mathrm{~cm} /$ Dyne lateral |
| Output | 1.1 mV at $1 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 15 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Separation | 26 dB at $1 \mathrm{kHz} ; 15 \mathrm{~dB}$ at 10 kHz |
| Vertical angle | 20 degrees |
| Load | 47k; 275 pF |

Features Dlamond tip bonded to a sapphire base for lower cost while maintaining all qualities necessary for wide frequency response and separation; effective moving mass: 0.48 mg

| XLM MK | \| Integra |
| :---: | :---: |
| Price | \$69.95 |
| Type | Induced magnet |
| Stylus | $0.4 \times 0.7$ mils elliptical (geometry) |
| VTF | 1.1 to 1.9 grams |
| Output | 1.2 mV at $1 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Separation | 24 dB at 1 kHz |
| Vertical angle Adjustable |  |
| Load | 47 K ; 275 pF |
| QML 33 | Mk III |
| Price | \$54.95 |
| Type | Induced magnet |
| Stylus | 0.7 mlls spherical |


| VTF | 1 to 2 grams |
| :--- | :--- |
| Compliance | $21 \times 10^{-6} \mathrm{~cm} /$ dyne lateral |
| Output | 1.3 mV at $1 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Separation | 24 dB at 1 kHz |
| Verlical angle $20 \mathrm{degre} \mathrm{\theta s}$ |  |
| Load | $47 \mathrm{~K} ; 275 \mathrm{pF}$ |
| Features | Effective moving mass: 0.9 mg |

Models also available
XLM Mk III Improved, \$110; XLM MKII Integra, \$110; OLM 34 Mk III. \$64.95; OLM 32 Mk III, \$49.95; QLM 30 Mk III, $\$ 34.95$

## ADCOM

Adcom
11A Jules Lane
New Brunswick, N.J. 08901
CXC-2505

| Price | $\$ 250$ |
| :--- | :--- |
| Type | Moving coil |
| Stylus | $0.25 \times 1.5$ mils Shibata 3 (geome- |
|  | try) |
| VTF | 1.7 to 2.3 grams |
| Compliance | 13 lateral; 11 vertical |
| Output | 2.5 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to $50 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Separation 28 dB at 1 kHz |  |
| Vertical angle 20 degrees |  |
| Load $\quad 47 \mathrm{~K}$ |  |
| Features Crosscoil armature; low mass: 5.5 |  |
| grams; beryllium cantilever |  |

CXC-230 HE
Price $\$ 230$
Type Moving coil
Stylus $\quad 0.2 \times 1.0$ mils hyperelliptical
(geometry)
VTF $\quad 1.7$ to 2.3 grams
Compliance 13 lateral; 11 vertical
Output $\quad 2.5 \mathrm{mV}$ at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response 20 Hz to $50 \mathrm{kHz},+2 \mathrm{~dB}$
Separation 28 dB at 1 kHz
Vertical angle 20 degrees
Load 47K
Features Crosscoil armature; low mass: 5.5
grams; aluminum cantilever
CFC-200S
Price $\$ 200$
Type Moving coil
Stylus $\quad 0.25 \times 1.5$ mils Shibata 3 (geometry)
VTF $\quad 1.7$ to $\mathbf{2 . 3}$ grams
Compliance 13 lateral; 11 vertical
Output $\quad 0.3 \mathrm{mV}$ at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response $\quad 20 \mathrm{~Hz}$ to $50 \mathrm{kHz}, \pm 2 \mathrm{~dB}$
Separation 28 dB at 1 kHz
Vertical angle 20 degrees
Features Low-output version of crosscoil de sign; low mass: 5.5 grams; beryllium cantilever

## Models also available

CXC-190E, \$190; CFC-180HE \$180; CFC-160E, \$160

AKG
AKG Acoustics
91 McKee Drive
Mahwah, N.J. 07430

P-8ES
Price $\$ 165$
Type Moving iron
Stylus $\quad$ Elliptical; $0.2 \times 0.7 \mathrm{ml}$
VTF

Compliance $35 \times 10^{-8} \mathrm{~cm} /$ dyne lateral; $35 \times 10$
${ }^{-6} \mathrm{~cm} /$ dyne vertical
Output $\quad 3.75 \mathrm{mV}$ at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response 10 Hz to 28 kHz
Separation 30 dB at 1 kHz
Load $\quad 47 \mathrm{~K} ; 470 \mathrm{pF}$
Features Individual response curve; employs patented fransversal suspension

P-7E
Price $\$ 80$
Type Moving iron
Stylus Elliptical, $0.3 \times 0.7 \mathrm{mil}$
VTF $\quad 1.25$ to 2.25 grams
Compllance $25 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $25 \times 10$ ${ }^{-6} \mathrm{~cm} /$ dyne vertical
Output $\quad 4.5 \mathrm{mV}$ at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response $\quad 10 \mathrm{~Hz}$ to 21.5 kHz
Separation 25 dB at 1 kHz
Load $47 \mathrm{~K} ; 470 \mathrm{pF}$
Features Employs patented transversal sus-
pension
P-6E
Price $\$ 60$
Type Moving iron
Stylus Elliptical; $0.4 \times 0.8 \mathrm{mil}$
VTF $\quad 1.5$ to 3 mils
Compliance $20 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $20 \times 10$
${ }^{-} \mathrm{cm} /$ dyne vertical
Output $\quad 6.25 \mathrm{mV}$ at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response 20 Hz to 20 kHz
Separation 25 dB at 1 kHz
Load 47K;470 pF
Features Employs patented transversal suspension

## Models also available

P-8E, \$115; P-6R, \$5a

## ANDANTE

Sumiko, Inc.
Box 5046
Berkeley, Calif. 94705

| E |  |
| :---: | :---: |
| Price | \$90 |
| Type | Moving magnet |
| Stylus | Elliptical; $0.2 \times 0.8 \mathrm{mil}$ |
| VTF | 1 to 1.9 gram |
| Compllance | $20 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $18 \times 10$ <br> ${ }^{-6} \mathrm{~cm} /$ dyne vertical |
| Output | 4.0 mV at $5.0 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 12 Hz to $30 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Separation | 30 dB at 1 kHz |
| Vertical angle 20 degrees |  |
| Load | 47K; 250 pF |
| S |  |
| Price | \$65 |
| Type | Moving magnet |
| Stylus | Spherical; 0.5 mil |
| VTF | 1.0 to 2.5 grams |
| Compliance | $18 \times 10^{-6} \mathrm{~cm} /$ dyne lateral, $14 \times 10$ <br> - $\mathrm{cm} /$ dyne vertical |
| Output | 4.0 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 18 Hz to $27 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Separation | 28 dB at 1 kHz |
| Vertical angle 20 degrees |  |
| Load | 47K; 250 pF |
| AUDIO-TECHNICA |  |
| Audio Technica U.S., Inc. |  |
| 33 Shiawassee Ave. |  |
| Fairlawn, Ohio 44313 |  |
|  |  |
| AT-32 |  |
| Price | \$300 |
| Type | Moving coil |


| Stylus | $0.2 \times 0.7$ mils nude-mounted ellipti- |
| :--- | :--- |
|  | cal |
| VTF | 1 to 2 grams |
| Output | 0.4 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to 24 kHz |
| Separation | 30 dB at 1 kHz (or from 20 dB at 10 |
|  | kHz |
| Load | 17 K |
| Features | Beryllium cantilever |

## AT-25

| Price | $\$ 275$ |
| :--- | :--- |
| Type | Moving magnet with toroidal coils |
| Stylus | $0.2 \times 0.7$ mils nude-mounted ellipti- |
|  | cal |
| VTF | 0.8 to 1.6 grams |
| Output | 2.2 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to 25 kHz |
| Separation | 35 dB at 1 kHz (or from 25 dB at 10 |
|  | kHzz |
| Load | $47 \mathrm{~K} ; 100$ to 200 pF |
| Features | Beryllium cantilever; integrated |

headshell plugs directly into most Japanese and European tonearms; non-resonant magnesium alloy; calibrated overhang adjustment

## AT-20SS

| Price | $\$ 250$ |
| :--- | :--- |
| Type | Dual moving magnet |
| Stylus | Shibatat |
| VTF | 0.75 to 1.75 grams |
| Output | 2.7 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 5 Hz to 50 kHz |
| Separation | 30 dB at $1 \mathrm{kHz}(25 \mathrm{~dB}$ at 10 kHz$)$ |
| Vertical angle 20 degrees |  |
| Load | $47 \mathrm{~K} ; 100 \mathrm{pF}$ |
| Features | Hand-selected version of AT- |
| 15SS; availability limited |  |

## AT-23a

| Price | $\$ 225$ |
| :--- | :--- |
| Type | Moving magnet with toroidal coils |
| Stylus | $0.2 \times 0.7$ mils (nude-mounted natu- |
|  | ral diamond) |
| VTF | 0.9 to 1.7 grams |
| Output | $2.2 \mathrm{mV} \mathrm{at} 5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 15 Hz to 23 kHz |
| Separatlon | 30 dB at 1 kHz (or from 20 dB at 10 |
|  | $\mathrm{kHz})$ |
| Load | $47 \mathrm{~K} ; 100$ to 200 pF |
| Features $\quad$ Beryllium cantilever; integrated |  |
| headshell plugs directly into most Japanese and |  |

headshell plugs directly into most Japanese and European tonearms; non-resonant magnesium al-
loy; calibrated overhang adjustment

AT-15SS

| Price | \$200 |
| :---: | :---: |
| Type | Dual moving magnet |
| Stylus | Shibatat |
| VTF | 0.75 to 1.75 gram |
| Output | 2.7 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 5 Hz to 45 kHz |
| Separation | 33 dB at $1 \mathrm{kHz}(23 \mathrm{~dB}$ at 10 kHz$)$ |
| Vertical angle 20 degrees |  |
| Load | 47K; 100 pF |
| Features | Gold-plated die-cast case for sta- |
| bility; supplied with individual machine-run response curve; beryllium cantilever also available |  |
| as AT15Aa/H, premounted in universal headshell, \$158 |  |
| AT-15XE |  |
| Price | \$175 |
| Type | Dual moving magnet |
| Stylus | Elliptical; $0.2 \times 0.7 \mathrm{mil}$ |
| VTF | 0.75 to 1.75 gram |
| Output | 2.7 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 5 Hz to 30 kHz |
| Separation | 32 dB at $1 \mathrm{kHz}(22 \mathrm{~dB}$ at 10 kHz$)$ |
| Vertical angle 20 degrees |  |
| Load | 47K; 100 pf |

Features Elliptical version of AT-15SS; supplied with individual machine-run response curve

| AT-30E |  |
| :---: | :---: |
| Price | \$125 |
| Type | Moving coil |
| Stylus | $0.3 \times 0.7$ mils nude-mounted elliptical (geometry) |
| VTF | 1.4 to 2 grams |
| Output | 0.28 mV at $5 \mathrm{~cm} / \mathrm{sec}$ |
| Response | 15 Hz to 25 kHz |
| Separation | 25 dB at 1 kHz (or from 15 Hz to 10 $\mathrm{kHz})$ |
| Load | 20K |
| Features matching tra | User replaceable stylus AT-630 former available for $\$ 95$ |
| ATP-3 |  |
| Price | \$80 |
| Type | Dual moving magnet |
| Stylus | Elliptical; $0.3 \times 0.7 \mathrm{mil}$ |
| VTF | 2 to 3 grams |
| Output | 5.3 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 15 Hz to 25 kHz |
| Separation | 23 dB at 1 kHz ( 17 dB at 10 kHz ) |
| Load | 47K, 100 pF , |
| Features | High visibility coating on cantilever |

tip eases cueing in poor light

## AT-12E

| Price | $\$ 70$ |
| :--- | :--- |
| Type | Dual moving magnet |
| Stylus | Elliptical; $0.4 \times 0.7 \mathrm{mil}$ |
| VTF | 1 to 2 grams |
| Output | 4.2 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 15 Hz to 26 kHz |
| Separation | 27 dB at $1 \mathrm{kHz}(18 \mathrm{~dB}$ at 10 kHz$)$ |
| Vertical angle 20 degrees <br> Load$\quad 47 \mathrm{~K} ; 100 \mathrm{pF}$ |  |

ATP-2
Price $\$ 60$
Type Dual moving magnet
Stylus Elliptical; $0.4 \times 0.7 \mathrm{mil}$
VTF 3 to 5 grams
Output $\quad 5.3 \mathrm{mV}$ at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response 15 Hz to 22 kHz
Separation 23 dB at $1 \mathrm{kHz}(17 \mathrm{~dB}$ at 10 kHz$)$
Load 47 K ; 100 pF
Features High visibility coating on cantilever tip eases cueing in poor light

## Models also available

AT-24, $\$ 250$; AT-22, $\$ 200$; AT14Sa, $\$ 150$; AT-12Sa, $\$ 120$; AT13Ea, $\$ 100$; AT-12XE, $\$ 85$; AT-11E, \$60; AT-11, \$50; ATP-1 Cartridge, \$45; AT-10, \$40

## BANG \& OLUFSEN

Bang \& Olufsen of America, Inc.
515 Busse Road
Elk Grove Village, III. 60007

## MMC-20CL

Price $\$ 200$
Type Moving micro-cross
Stylus Contact line naked diamond (geometry) 1 gram
Compllance 40 laleral; 30 vertical
Output $\quad 2.12 \mathrm{mV}$ at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Separation 30 dB at 1 kHz
Vertical angle 20 degrees
Load $\quad 47 \mathrm{~K} ; 220 \mathrm{pF}$
Features $\quad 0.3 \mathrm{mg}$ effective tip mass; single
crystal sapphire cantilever; see-through stylus guard; response graph included

| MMC-20EN |  |
| :---: | :---: |
| Price | \$125 |
| Type | Moving micro-cross |
| Stylus | $5 \times 17$ mils naked elliptical (geome try) |
| VTF | 1.2 grams |
| Compliance | 32 lateral; 25 vertical |
| Output | 2.12 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Separation | 25 dB at 1 kHz |
| Yertical angle | 20 degrees |
| Load | $47 \mathrm{~K} ; 220 \mathrm{pF}$ |
| Features ment \$95; not | 0.4 mg effective tip mass; replace load-sensitive |
| C-20S/MB |  |
| Price | \$45 |
| Type | Moving micro-cross |
| Stylus | 15 mils framed spherical (geome try) |
| VTF | 1.5 grams |
| Compliance | 27 lateral; 20 vertical |
| Cutput | 2.12 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Separation | 20 dB at 1 kHz |
| Vertical angle 20 degrees |  |
| Load | $47 \mathrm{~K} ; 220 \mathrm{pF}$ |
| Features | 0.5 mg . effective tip mass |

## Models also available <br> MMC-20E, \$70

## DECCA

Rocelco, Inc.
1669 Flint Road
Downsview, Ontario M3J 2J7 Canada

Mk V1 Gold
Price $\quad \$ 199.50$
Type Moving iron
Stylus Elliptical; $0.6 \times 0.3 \mathrm{mil}$
VTF $\quad \mathbf{1 . 5}$ gram
Compliance $15 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $7.5 \times 10$ ${ }^{-6} \mathrm{~cm} /$ dyne vertical
Output $\quad 5 \mathrm{mV}$ at $5 \mathrm{~cm} / \mathrm{sec}$
Response 20 Hz to 20 kHz
Vertical angle 15 degrees
Load $50 \mathrm{~K} ; 250$ to 300 pF
Features "Positive Scanning" no-cantilever
suspension system for improved transient re-
sponse

## Models also available

Decca MK V1 Plum, $\$ 149.50$

## DENON

American Audioport
1407 N. Providence Road
Columbia, Mo. 65201

DL-303
Price $\quad \$ 385$
Type Moving coil
Stylus $\quad 1.97 \times 3.94$ mils special elliptical (geometry)
VTF $\quad 1.0$ to 1.4 grams
Compliance $13 \times 10^{-6} \mathrm{~cm} /$ dyne vertical at 100 Hz
Output $\quad 0.2 \mathrm{mV}$ at $50 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response 70 kHz
Separation 28 dB at 1 kHz
Load $\quad 0.1 \mathrm{~K} ; 100 \mathrm{pF}$
Features Weight: 5.8 grams; tapered doubie construction cantilever; samarium cobalt magnet; one-point suspension system

| DL-103s |  |
| :--- | :--- |
| Price | $\$ 186$ |
| Type | Moving coil |
| Stylus | Modified Shibata |
| VTF | 1.5 to 2.1 grams |
| Compliance | $8 \times 10^{-6} \mathrm{~cm} / \mathrm{dyne}$ lateral |
| Output | 0.3 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to 60 kHz |
| Separation | 25 dB at 1 kHz |
| Load | 40 ohms or more |
|  |  |
| DL-103 |  |
| Price | $\$ 140$ |
| Type | Moving coil |
| Stylus | Conical; 0.65 mil |
| VTF | 2.2 to 2.8 grams |
| Compliance | $5 \times 10^{-6} \mathrm{~cm} / \mathrm{dyne}$ lateral |
| Output | 0.3 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to 45 kHz |
| Separation | 25 dB at 1 kHz |
| Load | 40 ohms or more |
| Features | Available in a package (DL-103/T) |
| with a nonswitchable $40-o \mathrm{hm}$ transformer, at $\$ 200$ |  |

Models also available

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

## ULM-60E

| Price | $\$ 150$ |
| :--- | :--- |
| Type | Moving magnet |
| Stylus | $6 \times 18$ mils biradial (geometry) |
| VTF | 0.5 to 1.25 grams |
| Compllance | $30 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $35 \times 10$ |
|  | $-6 \mathrm{~cm} /$ dyne vertical |
| Output | 0.7 mV at $1 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to 30 kHz |
| Separation | 28 dB at 1 kHz |
| Vertical angle 20 degrees |  |
| Load | $47 \mathrm{~K} ; 400 \mathrm{pF}$ |
| Features | Same as ULM-50E |

## ULM-50E

| Price | $\$ 80$ |
| :--- | :--- |
| Type | Moving magnet |
| Stylus | $6 \times 18$ mils biradial (geometry) |
| VTF | 1.5 to 2.5 grams |
| Compliance | $18 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $20 \times 10$ |
|  |  |
| Output | $0.7 \mathrm{~cm} / \mathrm{dyne}$ vertical |
| Response $\quad 10 \mathrm{~Hz}$ to $15 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |  |
| Separation $\quad 25 \mathrm{~dB}$ at 1 kHz |  |
| Vertical angle 20 degrees |  |
| Load $\quad 47 \mathrm{~K} ; 400 \mathrm{pF}$ |  |
| Features Cartridge with mounting hardware |  |
| weighs 2.5 grams |  |

## Models also available

ULM-55E, \$110
EMPIRE
Empire Scientific Corp.
1055 Stewart Ave.
Garden City, N.Y. 11530

EDR. 9
Price
Type $\quad \$ 200$
Stylus $\quad$ Moving iron variable reluctance
VTF $\quad 0.3 \times 3.0$ mils LAC (geometry)
Compliance $\quad 0.75$ to 1.25 grams

| Output | 4.5 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz | Load <br> Features | $\text { 47K; } 300 \mathrm{pF}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Response | 20 Hz to $35 \mathrm{kHz}, \pm 1.75 \mathrm{~dB}$ |  | Designed for broadcast and disco |  |  |
| Separation | 30 dB (or from 500 Hz to 10 kHz ) | applications |  |  |  |
| Vertical angl | 20 degrees |  |  |  |  |
| Load | 47K | 2000 |  |  |  |
| Features | Insensitive to capacitive loads; in- |  |  |  |  |
| ertially damp | d, tuned stylus system | Price |  |  |  |
|  |  | Type | Moving | on/var | able reluctance |
| 4000D/III |  | Stylus | Spherical; 0.7 mil |  |  |
|  |  | VTF | 1.5 to | grams |  |
| Price | $\$ 175$ <br> Moving iron/variable reluctance | Compliance | $14 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $14 \times 10$ ${ }^{-6} \mathrm{~cm} /$ dyne vertical |  |  |
| Type |  |  |  |  |  |
| Stylus | LAC | Output Response Separation | 7 mV at $3.54 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz 20 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |  |  |
| VTF | 0.75 to 1.25 gram <br> $30 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $30 \times 10$ <br> ${ }^{6} \mathrm{~cm} /$ dyne vertical |  |  |  |  |
| Compliance |  |  | 21 dB from 500 Hz to $15 \mathrm{kHz} ; 16$ dB from 20 to 500 Hz to $15 \mathrm{kHz} \cdot 16$ |  |  |
| Output | 3 mV at $3.54 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |  | dB from 20 to 500 Hz ; 13 dB from |  |  |
| Response | 10 Hz to $50 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |  | 15 , to 20 kHz |  |  |
| Separation | 28 dB from 15 Hz to $1 \mathrm{kHz} ; 23 \mathrm{~dB}$ from 1 to $20 \mathrm{kHz} ; 15 \mathrm{~dB}$ from 20 to 50 kHz | Vertical angle 20 degrees |  |  |  |
|  |  | Load | 47 K ; 400 to 500 pF |  |  |
| Vertical angle 20 degrees |  | Models also available |  |  |  |
| Load | $100 \mathrm{~K} ; 100 \mathrm{pF}$Wide-bandwidth design; tapered |  |  |  |  |  |  |  |
| Features |  |  | $\begin{aligned} & 2000 \mathrm{X} \\ & 2000 \mathrm{~T} \\ & 2000 \mathrm{E} \end{aligned}$ | \$125; | 4000D/I, \$100; |
| cant |  |  |  |  | 2000E/II, \$70; |

## EMT

Gotham Audio Corp.
741 Washington St.
New York, N.Y. 10014

XSD-15

| Price | $\$ 450$ |
| :--- | :--- |
| Type | Moving coil |
| Stylus | Conical; 0.6 m |

Stylus Conical; 0.6 mil
VTF 2 to 3 grams
Compliance $12 \times 10^{-6} \mathrm{~cm} /$ dyne lateral
Output
Response 20 Hz to 20 kHz
Separation 25 dB at 1 kHz
Load
than 0.5\%
0.8K

Frequency intermodulation less

## FIDELITY RESEARCH

Fidelity Research, Inc.
P.O. Box 5242

Ventura, Calif. 93003

FR-1Mk7
Price $\quad \$ 660$
Type Moving coil
Stylus Elliptical (long-line contact)
VTF $\quad 2.0$ to 3.0 grams
Compliance 6.5 lateral; $10^{-6} \mathrm{~cm} /$ dyne vertical
Output $\quad 0.2 \mathrm{mV}$ at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response 10 Hz to $45 \mathrm{kHz},+3,-0 \mathrm{~dB}$
Separation -28 dB from 200 Hz to $10 \mathrm{kHz} ;-20$ dB from 20 Hz to 200 Hz
Vertical angle 15 degrees
Load $\quad 3$ ohms impedance
Features Moving-coil afflxed to back end of cantilever; coil made from $99.9 \%$ pure silver wire; integral headshell

## FR-1Mk2

## Broadcast One

Price $\$ 45$
Type Moving iron/variable reluctance
Stylus Conical; 0.7 mil radius
VFF 2 to $31 / 2$ grams
Compliance $14 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $14 \times 10$ - $6 \mathrm{~cm} /$ dyne vertical

Output $\quad 4.5 \mathrm{mV}$ at $3.54 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$
Separation 25 dB at $1 \mathrm{kHz}(20 \mathrm{~dB}$ at 200 Hz ; 15 dB at 10 kHz )
Vertical angle 20 degrees

| Price | $\$ 150$ |
| :--- | :--- |
| Type | Moving coil |
| Stylus | Elliptical; $0.2 \times 0.8 \mathrm{mil}$ |
| VTF | 1.5 to 2 grams |
| Compliance | $12 \times 10^{-6} \mathrm{~cm} /$ dyne vertical |
| Output | 0.1 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Separation | 27 dB at 1 kHz |
| Vertical angle 15 degrees |  |
| Load | 30 ohms impedance |
| Features | Requires booster transformer or |
| bullt-in head amp |  |



Audio-Technica AT-25


Ortofon Concorde


Onkyo mc-100


Osaw MP-20



Signet TK-9E


GRACE
Sumiko, Inc.
Box 5046
Berkeley, Calif. 94705
SF-90

| Price | $\$ 250$ |
| :--- | :--- |
| Type | Moving magnet |
| Stylus | Advanced Luminal Trace; $0.2 \times 0.7$ |
|  | mil |
| VTF | 1 to 1.5 gram |
| Compliance | $20 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $20 \times 10$ |
|  | $-6 \mathrm{~cm} / \mathrm{dyne}$ vertical |
| Output | 5.5 mV at $5.0 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to $40 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Separation | 30 dB at 1 kHz |
| Vertical angle 22 degrees |  |
| Load | $47 \mathrm{KH} ; 250 \mathrm{pF}$ |
| Features $\quad$ Integrated cartridge and headshell |  |
| with Advanced Luminal Trace stylus permits an |  | with Advanced Luminal Trace stylus permits an effective tip mass of 0.4 mg for lower record wear and fonger stylus life

F-9L

| Price | $\$ 160$ |
| :--- | :--- |
| Type | Moving magnet |
| Stylus | Luminal Trace; $0.2 \times 0.7 \mathrm{mil}$ |
| VTF | 0.5 to 2 grams |
| Compliance | $20 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $18 \times 10$ |
|  | $-6 \mathrm{~cm} /$ dyne vertical |
| Output | 5.5 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to $40 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Separation | 30 dB at 1 kHz |
| Vertical angle 22 degrees |  |
| Load | $47 \mathrm{ZK} ; 250 \mathrm{pF}$ |
| Features Advanced Luminal $\quad$ Trace stylus |  |
| permits an effective tip mass of 0.4 mg for lower |  |
| record wear and longer stylus life |  |

## Models also available

F-8L, \$110

GREAT AMERICAN SOUND Great American Sound Co. 20940 Lassen St. Chatsworth, Calif. 91311
Shibata (B)
Price $\quad \$ 240$
Type Woving coil
Stylus Biradial Shibata
VTF $\quad 1.8$ gram
Compliance $15 \times 10^{-8} \mathrm{~cm} /$ dyne lateral; $15 \times 10$ ${ }^{-6} \mathrm{~cm} /$ dyne vertical
Output $\quad 0.27 \mathrm{mV}$ at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response $\quad 5 \mathrm{~Hz}$ to $40 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Separation 34 dB at 1 kHz

| Vertical angle 18 degrees  <br> Load 20 to 1 K ohms; $10,000 \mathrm{pF}$ or less |  |
| :--- | :--- |
| Features Beryllium-copper cantilever |  |
|  |  |
|  |  |
| Super-Elliptical (X) |  |

LINN PRODUCTS
Audiophile Systems
5750 Rymark Ct.
Indianapolis, Ind. $\mathbf{4 6 2 5 0}$
Linn-Asak DC-2100K

| Price | $\$ 350$ |
| :--- | :--- |
| Type | Moving coil |
| Stylus | $0.3 \times 0.8$ |
| VTF mils modified elliptical | (geometry $)$ <br>  1.6 to 2.2 grams |

## MICRO-ACOUSTICS

Micro-Acoustics Corp.
8 Westchester Plaza
Elmsford, N.Y. 10523
530-MP


| 282-e |  |
| :--- | :--- |
| Price | $\$ 95$ |
| Type | Direct-coupled electret |
| Stylus | Elliptical, $0.2 \times 0.7 \mathrm{mil}$ |
| VTF | 0.75 to 1.5 gram |
| Compliance | $20 \times 10^{-6}$ lateral; $15 \times 10$ vertical |
| Output | 3.5 mV at $5 \mathrm{~cm} / \mathrm{sec}$ |
| Response | 5 Hz to $20 \mathrm{kHz}, \pm^{2 \mathrm{~dB}}$ |
| Separatlon | 30 dB at 1 kHz |
| Vertical angle 15 degrees |  |
| Load | 10 to $100 \mathrm{~K} ; 100$ to 1.500 pF (not |
|  | critical) |
| Features | Full 2-year warranty; patented |

Full 2-year warranty; patented electret design; low mass

## Models also available

2002-e, \$125

| 9000 |  |
| :--- | :--- |
| Price | $\$ 160$ |
| Type | Moving coil |
| Stylus | $0.4 \times 0.7$ mils |
| VTF | 1.2 to 1.8 grams |
| Output | 1.8 mV at $3.54 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Separation | 20 dB at 1 kHz |
| Load | 47 K ; less than $1,000 \mathrm{pF}$ (non-critt- |
|  | cal) |
| Features | Low mass (under 6 grams); re- |

NAGATRON
Nagatronics Corp.
P.O. Box 509

Baldwin, N.Y. 11510

| HV-9100 |  |  |
| :--- | :--- | :--- |
| Price | $\$ 275$ |  |
| Type | Ribbon |  |
| Stylus | Elliptical; $0.4 \times 0.8$ mils |  |
| VTF | 1.6 to 2 grams |  |
| Output | 0.04 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |  |
| Response | 20 Hz to $30 \mathrm{kHz}, \pm 1.8 \mathrm{~dB}$ |  |
| Separation | 25 dB at 1 kHz |  |
| Load | 10 to 30 K |  |
| Features | Crystallized solid-titanium can- |  |
| tilever; integral headshell |  |  |

9600
Price $\$ 229$
Type Induced magnet
Stylus Elliptical
VTF $\quad 0.9$ to 1.3 grams (1.1 optimum)
Compliance $15 \times 10-6 \mathrm{~cm} /$ dyne $(100 \mathrm{~Hz})$ lateral
Output $\quad 2 \mathrm{mV}$ at $50 \mathrm{~mm} / \mathrm{sec}$ at 1 kHz
Response $\quad 20 \mathrm{~Hz}$ to 30 kHz
Separation 27 dB at 1 kHz
Vertical angle 20 degrees, $\pm 4$ degrees
Load 47 K
Features Boron tubular tapered cantilever:
triangle tip, super elliptical, semi-line contact stylus

## 220 CE

| Price | \$120 |
| :---: | :---: |
| Type | Induced magnet |
| Stylus | Elliptical; $0.3 \times 0.7$ mils |
| VTF | 1.70 grams |
| Compliance | $9 \times 10^{-6} \mathrm{~cm} /$ dyne $(100 \mathrm{~Hz})$ lateral $9 \times 10^{-6} \mathrm{~cm} /$ dyne ( 100 Hz ) vertical |
| Output | 4 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to 25 kHz |
| Separation | 25 dB at 1 kHz |
| Vertical angle | 22 degrees |
| Load | 50K; 350 pF |
| Features | Solid carbon-fiber cantilever |
| 360 CE |  |
| Price | \$135 |
| Type | Induced magnet |
| Stylus | Elliptical; $0.3 \times 0.7 \mathrm{mlls}$ |
| VTF | 1.7 grams |
| Compliance | $9 \times 10^{-6} \mathrm{~cm} /$ dyne $(100 \mathrm{~Hz})$ lateral; |
| Output | $9 \times 10^{-6} \mathrm{~cm} / \mathrm{dyne}(100 \mathrm{~Hz})$ vertic <br> 4 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to $25 \mathrm{kHz}, \pm 2.5 \mathrm{~dB}$ |
| Separation | 25 dB at 1 kHz |
| Vertical angle | 22 degrees |
| Load | 50K; 350 pF |
| Features | Solid carbon-fiber cantilever |
| 344 DE |  |
| Price | \$70 |
| Type | Induced magnet |
| Stylus | Bonded elliptical diamond; $0.3 \times 0.7$ mils |
| VTF | 1.5 to 2.0 grams (1.8 optimum) |


| $8 \times 10^{-6} \mathrm{~cm} / \mathrm{dyne}(100 \mathrm{~Hz})$ vertic |  |
| :---: | :---: |
| Output | 4 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to 25 kHz |
| Separation | 25 dB at 1 kHz |
| Vertical angle | 22 degrees |
| Load | 50K: 350 pF |
| Features | UT-58 aluminum cantilever |
| 200 S |  |
| Price | \$45 |
| Type | Induced magnet |
| Stylus | Spherical; 0.5 mils |
| VTF | 1.75 grams |
| Compliance | $8 \times 10^{-6} \mathrm{~cm} /$ dyne $(100 \mathrm{~Hz})$ lateral $8 \times 10^{-6} \mathrm{~cm} /$ dyne $(100 \mathrm{~Hz})$ vertica |
| Output | 4 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to 25 kHz |
| Separation | 25 dB at 1 kHz |
| Vertical angle | 22 degrees |
| Load | 50K; 350 pF |
| Features | UT-58 cantilever |
| 175 IS |  |
| Price | \$42.50 |
| Type | Induced magnet |
| Stylus | Spherical; 0.5 mils |
| VTF | 1.8 grams |
| Compliance | $7.5 \times 10^{-6} \mathrm{~cm} / \mathrm{dyne}(100 \mathrm{~Hz})$ lat eral; $7.5 \times 10^{.6} \mathrm{~cm} /$ dyne $(100 \mathrm{~Hz})$ vertical |
| Output | 4 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to 20 kHz |
| Separation | 24 dB at 1 kHz |
| Vertical angle 22 degrees |  |
| Load | 50k; 350 pF |
| Features | Integral headshell |

## Models also available

360 CEX, $\$ 165 ; 350$ E, $\$ 95 ; 210$ E \$84; 340 S, $\$ 55 ; 195$ IE, $\$ 55$; 185 E, \$45; 165 S, \$35

NAKAMICHI
Nakamichi USA Corp.
1101 Colorado Ave.
Santa Monica, Calif. 90401

| MC-1000 |  |
| :---: | :---: |
| Price | \$305 |
| Type | Moving coil |
| Stylus | Shibata, $0.3 \times 0.8 \mathrm{mil}$ |
| VTF | 1.5 to 2.1 grams |
| Complance | $16 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $16 \times 10$ ${ }^{-6} \mathrm{~cm} / \mathrm{dyn}$ e vertical |
| Output | 0.2 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to 65 kHz |
| Separation | 27 dB at 1 kHz |
| Features | Requires head amp such as |
| Nakamichi M 100; beryllium | -150 or transformer such as MCBcantilever; one-point cantilever/coil |
| support; "push core coil | h/pull" damping system; crystalloy- |
| MC-500 |  |
| Price | \$135 |
| Type | Moving coll |
| Stylus | Elliptical, $0.3 \times 0.8 \mathrm{mil}$ |
| VTF | 1.9 to 2.5 grams |
| Compliance | $7 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $7 \times 10^{-6}$ $\mathrm{cm} /$ dyne vertical |
| Output | 0.9 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to 35 kHz |
| Separation | 25 dB at 1 kHz |
| Load | 50K |
| Features | High-output moving-coil design; |
| Duralumin cantilever; one-point cantilever/coil |  |
| support; "push/pull" damping system; crystalloycore coil |  |


| NAD | 344 DE |  |
| :--- | :--- | :--- |
| NAD (USA), Inc. | Price | $\$ 70$ |
| Mackintosh Lane | Type | Induced magnet |
| P.O. Box 529 | Stylus | Bonded elliptical diamond; $0.3 \times 0.7$ |
| Lincoln, Mass. 01773 | VTF | mils |
|  |  | 1.5102 .0 grams ( 1.8 optimum) |
|  | Compliance | $8 \times 10^{-6} \mathrm{~cm} /$ dyne $(100 \mathrm{~Hz})$ lateral |

ONKYO
Onkyo U.S.A. Corp.
42-07 20th Ave.
Long Island City, N.Y. 11105

MC-100

| Price | $\$ 170$ |
| :--- | :--- |
| Type | Moving coil |
| VTF | 1.6 to 2 grams |
| Compliance | $8.5 \times 10^{6} \mathrm{~cm} /$ dyne $(100 \mathrm{~Hz})$ |
| Output | 0.4 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to 50 kHz |
| Separation | 28 dB at 1 kHz |
| Load | $24 \pm 20 \mathrm{a}$ |
| Features Carbon fiber with Duralumin; <br> layer cantilever; hand-made; computer-assisted  |  | design

## ORTOFON

Tannoy-Ortofon, Inc.
122 Dupont St.
Plainview, N.Y. 11803

| MC-30 |  |
| :---: | :---: |
| Price | \$600 |
| Type | Moving coil |
| Stylus | Fine line |
| VTF | 1.5 grams (recommended) |
| Compliance | $13 \mathrm{um} / \mathrm{mn}$ lateral; $13 \mathrm{um} / \mathrm{mn}$ horizontal |
| Output | 0.08 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Separation | $25 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Vertical angle | 20 degrees |
| Load | 47K |
| Features tem | Wide Range Damping (WRD) sys- |

Concorde 30

| Price | $\$ 165$ |
| :--- | :--- |
| Type | Moving magnet |
| Stylus | Fine line |

$\begin{array}{ll}\text { VTF } & 1.2 \text { to } 1.8 \text { grams } \\ \text { Compliance } & 25 \times 10^{-6} \mathrm{~cm} / \text { dyne lateral; } 28 \times 10\end{array}$ $-6 \mathrm{~cm} /$ dyne vertical
Output $\quad 3 \mathrm{mV}$ at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response $\quad 20 \mathrm{~Hz}$ to 25 kHz
Separation 25 dB at 1 kHz
Vertical angle 20 degrees
Load $\quad 47 \mathrm{~K} ; 400 \mathrm{pF}$
Features Cartridge/headshell combination with total weight of 6.5 grams; variable magnetic shunt principle

| LM-30 |  |
| :--- | :--- |
| Price | $\$ 150$ |
| Type | Moving magnet |
| Stylus | Fine line |
| VTF | 1.2 to 1.8 grams |
| Compliance | $25 \times 10^{-4} \mathrm{~cm} /$ dyne lateral; $28 \times 10$ |
|  | $-6 \mathrm{~cm} / \mathrm{dyne}$ vertical |
| Output | 3 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz 1025 kHz |
| Separation | 25 dB at 1 kHz |
| Vertical angle 20 degrees |  |
| Load | $47 \mathrm{~K} ; 400 \mathrm{pF}$ |
| Features | Variable magnetic shunt principle; |


| MC-10 |  |
| :--- | :--- |
| Mrice | $\$ 145$ |
| Type | Moving coll |
| Stylus | Elliptical; $0.3 \times 0.7$ mils |
| VTF | 1.7 to 2.3 grams |
| Compliance | 15 lateral; 15 vertical |
| Output | 0.1 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to $20 \mathrm{kHz},+3,-1 \mathrm{~dB}$ |
| Separation | 22 dB at 1 kHz |
| Vertical angle 20 degrees |  |
| Load | 47 K |



| FF-15XE | Mk $\\|$ |
| :--- | :--- |
| Price | $\$ \angle 5$ |
| Type | Moving magnet |
| Stylus | Eliptical; $0.3 \times 0.7$ mil |
| VTF | 1.5 to 3 grams |
| Compliance | $20 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $20 \times 10$ |
|  | $-6 \mathrm{~cm} / \mathrm{dyne} \mathrm{vertical}$ |
| Output | 5 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Separation | 20 dB at 1 kHz |
| Vertical angle 20 degrees |  |
| Load | $47 \mathrm{~K} ; 400 \mathrm{pF}$ |
| Features | Variable magnetic shunt principle |

## Models also available

$\mathrm{MC}-20, \$ 205$; $\mathrm{LM}-30 \mathrm{H}, \$ 150$; LM$20 \mathrm{H}, \$ 145$; Concorde 20, \$125; VMS-20E Mk. II, \$90; FF-15E Mk. II, \$65

OSAWA
Osawa \& Co. (USA), Inc.
521 Fifth Ave.
New York, N.Y. 10017
MP-20
Price

Stylus
VTF
Compliance $9 \times 10^{-8} \mathrm{~cm} / \mathrm{dyne}$ dynamic; $21 \times 10$ ${ }^{-6} \mathrm{~cm} /$ dyne static

Response 20 Hz to 23 kHz
Separation 25 dB at 1 kHz
Load $\quad 100$ pF
Features Boron cantilever

MP-15

| Price | $\$ 150$ (unmounted); $\$ 175$ (mounted |
| :--- | :--- |
|  | In Osawa High Performance head- |
| shell) |  | shell)

Type Induced magne
Stylus $\quad 0.3 \times 0.7$ mils elliptical diamond (Geometry)
0.5 to 2 grams

VTF $8 \times 10^{-6} \mathrm{~cm} /$ dyne dynamic. $20 \times 10$
${ }^{6} \mathrm{~cm} /$ dyne static
Output $\quad 4.5 \mathrm{mV}$ at 1 kHz
Response $\quad 20 \mathrm{~Hz}$ to 20 kHz
Separation 24 dB at 1 kHz
Load $\quad 100 \mathrm{pF}$
Features Body is a high-rigidity plastic casting reinforced with fiberglass; oversize mounting surface ensures rigid coupling to tonearm headshell

## OS-300MP

| Price | $\$ 110$ |
| :--- | :--- |
| Type | Induced magnet |
| Stylus | $0.3 \times 0.7$ mils elliptical diamond |
|  | (geometry) <br> VTF |
| 1.5 to 2 grams  <br> Compliance $9 \times 10^{-6} \mathrm{~cm} /$ dyne dynamic; $20 \times 10$ <br>  $-6 \mathrm{~cm} /$ dyne static |  |
|  |  |

Output Response
Separation 25 dB at 1 kHz
Load
47K

## Models also available

OS-200MP, \$75; OS-110MP, \$55
OS-100MP, \$45

PICKERING
Pickering \& Company, Inc
101 Sunnyside Blvd.
Plainview, N.Y. 11803

XSV/5000
Price $\$ 200$
Type Moving magne!
Stylus Stereohedron (geometry)
VTF $\quad 0.5$ to 1.5 grams
Output $\quad 0.7 \mathrm{mV}$ at $1 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response $\quad 10 \mathrm{~Hz}$ to 50 kHz
Separation 35 dB at 1 kHz
Load 100K; 100 pF
Features Features low-mass extremely
compliant stylus assembly to trace high velocity
groove modulations

## XSV/4000

| Prlce | $\$ 140$ |
| :--- | :--- | :--- |
| Type | Moving magnet |
| Stylus | Stereohedron (geometry) |
| VTF | 0.75 to 1.25 grams |
| Output | 0.7 mV at $1 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to 36 kHz |
| Separation 35 dB at 1 kHz <br> Loed $47 \mathrm{~K} ; 275 \mathrm{pF}$ <br> Features Features low-mass <br> Cobalt magnet for greater S/N  |  |

cobalt magnet for greater S/N

| XUV-45000 |  |
| :---: | :---: |
| Price | \$140 |
| Type | Moving magnet |
| Stylus | Quadrahedron |
| VTF | 0.5 to 1.5 grams |
| Response | 10 Hz to $50 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ |
| Separation | 35 dB at 1 kHz |
| Features | CD-4 cartridge |
| XV-15/1200E |  |
| Price | \$80 |
| Type | Moving iron |
| Stylus | Elliptical; $0.2 \times 0.7 \mathrm{mil}$ |
| VTF | 0.5 to 1.25 gram |
| Response | 10 Hz to $30 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ |
| Separation | $35 \mathrm{db}(1 \mathrm{kHz})$ |


| XV-15/625D.J |  |
| :--- | :--- |
| Price | $\$ 60$ |
| Type | Moving magnet |
| Stylus | $0.4 \times 0.7$ mils |
| VTF | 1 to 4 grams |
| Output | 4.4 mV at $5.5 \mathrm{~cm} / \mathrm{sec}$ |
| Response | 20 Hz to 20 kHz |
| Separation | 30 dB |
| Load | 275 pF |

## Models also available

XSV-3000, $\$ 100$; UV-15/2000Q \$70; XV-15/750E, \$65; XV. 15/625E, \$60; XV-15/400E, \$55

## PRECEDENT

Precedent Audio Products, Inc.
306 E. Oliver St.
Baltimore, Md. 21202


Features Trackability (cm/sec peak velocity) at 3 grams: 26 at $400 \mathrm{~Hz}, 37$ at $1 \mathrm{kHz}, 12$ at 10 kHz

| M55E |  |
| :---: | :---: |
| Price | \$41.95 |
| Type | Moving magnet |
| Stylus | Biradial elliptical; $0.2 \times 0.7$ mils |
| VTF | 0.75 to 2 grams |
| Output | 6.2 mV at $5 \mathrm{~cm} / \mathrm{sec}$ peak velocity at 1 kHz |
| Response | 20 Hz to 20 kHz |
| Separation | 22 dB at 1 kHz |
| Load | 47K; 450 pF |
| M44E |  |
| Price | \$36.50 |
| Type | Moving magnet |
| Stylus | Biradial elliptical; $0.4 \times 0.7$ mils |
| VTF | 1.75 to 4 grams |
| Output | 9.5 mV at $5 \mathrm{~cm} / \mathrm{sec}$ peak velocity at 1 kHz |
| Response | 20 Hz to 20 kHz |
| Separation | 20 dB at 1 kHz |
| Load | 47K; 450 pF |
| M44-7 |  |
| Price | \$31.95 |
| Type | Moving magnet |
| Stylus | Spherical; 0.7 mils |
| VTF | 1.5 to 3 grams |
| Output | 9.5 mV at $5 \mathrm{~cm} / \mathrm{sec}$ peak velocity at 1 kHz |
| Response | 20 Hz to 20 kHz |
| Separation | 20 dB at 1 kHz |
| Load | 47K; 450 pF |
| M44C |  |
| Price | \$29.95 |
| Type | Moving magnet |
| Stylus | Spherical; 0.7 mils |
| VTF | 3 to 5 grams |
| Output | 9.5 mV at $5 \mathrm{~cm} / \mathrm{sec}$ peak velocity at 1 kHz |
| Response | 20 Hz to 20 kHz |
| Separation | 20 dB at 1 kHz |
| Load | 47K; 450 pF |
| M3D |  |
| Price | \$23.95 |
| Type | Moving magnet |
| Stylus | Spherical; 0.7 mils |
| VTF | 3 to 6 grams |
| Output | 7.5 mV at $5 \mathrm{~cm} / \mathrm{sec}$ peak velocity at 1 kHz |
| Response | 20 Hz to 15 kHz |
| Separation | 20 dB at 1 kHz |
| Load | 47K; 450 pF |

## Models also available

V15 Type IV-G, \$144; V15 Type III, \$95; M95HE, \$89.50; M95ED, \$77.50; M91ED, \$66.95; M95EJ, \$61 95: SC39B, \$60; M75EJ Type 2, \$56.50; M75G Type 2, \$49.95; M75B Type 2, \$44.95; M70B, \$39.95; M75-6S, \$38.50; M44G, \$31.95; M75CS, \$30.50; SC35C, \$27.75

## SIGNET

## Signet Co

## 33 Shiawassee Ave., Fairlawn, Ohio 44313

MK-111E

| Min-11E |  |
| :--- | :--- |
| Price | $\$ 300$ |
| Type | Moving coil |
| Stylus | $0.2 \times 0.7$ mils elliptical (geometry) |
| VIF | 1 to 2 grams |
| Output | 0.4 mV at $5 \mathrm{~cm} /$ sec at 1 kHz |
| Response | $5 \cdot \mathrm{~Hz}$ to 50 kHz |
| Separation | 30 dB at 1 kHz (or from 20 Hz to 10 |
|  | $\mathrm{kHz})$ |

Vertical angle 20 degrees
Load $47 \mathrm{~K} ; 100 \mathrm{pF}$
Features Low-mass; beryllium cantilever; accessory MK-10T (\$95) or MK-12T (\$300) matching transformer available for use with magnetic phono inputs; as MK-112E (\$325) includes integrated headshell with adjustable overhang from 1 $9 / 10$ to $21 / 5$ inches

## TK-9E

| Price | $\$ 275$ |
| :--- | :--- |
| Type | Moving magnet |

Stylus $\quad 0.2 \times 0.7$ mils elliptical (geometry)
VTF $\quad 0.75$ to 1.5 grams
Output $\quad 2.2 \mathrm{mV}$ at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response $\quad 10 \mathrm{~Hz}$ to 25 kHz
Separation 35 dB at 1 kHz
Vertical angle 20 degrees
Load 47K; 270 pF

## TK-7E

Price $\$ 160$
Type Moving magnet
Stylus $\quad 0.2 \times 0.7$ mils elliptical (geometry)
VTF $\quad 0.75$ to 1.75 grams
Output $\quad 2.5 \mathrm{mV}$ at $5 \mathrm{~cm} / \mathrm{sec}$
Response $\quad 5 \mathrm{~Hz}$ to $30 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Separation 30 dB at 1 kHz
Vertical angle 20 degrees
Load $47 \mathrm{~K}: 270 \mathrm{pF}$
Features Patented dual-magnet micro-mass moving system; miniaturized diamond; micro-mass tapered tube cantilever; 14 accessory styli permit experimentation with combinatin of boron, beryllium, titanium, carbon-fiber and aluminum cantilevers

## Models also available

TK-7SU, \$185; TK-5E, \$90; TK-3E. \$55; TK-1E, \$40

## SONUS

Sonic Research, Inc.
27 Sugar Hollow Road Danbury, Conn. 06810

Dimension 5

| Price | $\$ 250$ |
| :--- | :--- |
| Type | Moving iron |
| VTF | 0.75 to 1.25 grams |
| Compliance | $50 \times 10^{-6} \mathrm{~cm} /$ dyne lateral; $50 \times 10$ |
|  | $-6 \mathrm{~cm} /$ dyne vertical |
| Output | 0.8 mV at 1 kHz |
| Vertical angle 20 degrees (nominal) |  |
| Load | 47 K |
| Features | "Lambda" stylus tip |


| Blue Cartridge Series II Gold |  |
| :--- | :--- |
| Price | $\$ 154$ |
| Type | Moving iron |
| Sylus | Line contact |
| VTF | 0.75 to 1.25 grams |
| Compliance | $50 \times 10^{-6}$ lateral; $50 \times 10^{-6}$ vertical |
| Output | 4 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to $16 \mathrm{kHz}, \pm 1 \mathrm{~dB} ; 16 \mathrm{kHz}$ to |
|  | $20 \mathrm{kHz},+2,-1 \mathrm{~dB} ; 20 \mathrm{kHz}$ to 40 |
|  | $\mathrm{kHz} \pm 5 \mathrm{~dB}$ |
| Separation | 30 dB at $1 \mathrm{kHz} \mathrm{(20} \mathrm{~dB}$ over range |
|  | of 20 Hz to 20 kHz$)$ |

Vertical angle 20 degrees
Load $47 \mathrm{~K} ; 400 \mathrm{pF}$ (max)
Features Special calibration available upon request; CD-4 capabilities

| Red Cartridge Series II Gold |  |
| :--- | :--- |
| Price | $\$ 137.50$ |
| Type | Moving iron |
| Stylus | Elliptical |
| VTF | 0.75 to 1.25 grams |
| Compliance | $50 \times 10^{-6}$ lateral $50 \times 10^{-6}$ vertical |
| Output | 4 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 5 Hz to $20 \mathrm{kHz},+2,-1 \mathrm{~dB}$ |

Separation 30 dB at 1 kHz ( 20 dB over range 20 Hz to 20 kHz )
Vertical angle 20 degrees
Load 47 K ; 400pF (max)
Features Special calibration available upon request

| Green | Cartridge Series II Gold |
| :--- | :--- |
| Frice | $\$ 121$ |
| Type | Moving iron |
| Stylus | Spherical |
| VTF | 0.75 to 1.25 grams |
| Compliance | $50 \times 10^{-6}$ lateral; $50 \times 10^{-6}$ vertical |
| Cutput | 4 mV at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 5 Hz to $20 \mathrm{kHz},+2-1 \mathrm{~dB}$ |
| Separation | 30 dB at $1 \mathrm{kHz}(20 \mathrm{~dB}$ over range |
|  | of 20 Hz to 20 kHz$)$ |

Vertical angle 20 Hz to 20 kHz
vertical angle 20 degrees
Load 47 K ; 400pF (max)
Features Special calibration available upon
request

## Models also available

"P" Cartridge Series II Silver, \$88 "E" Cartridge Series II Silver, \$77; Black A, \$77: Black C, \$66

## SONY

Sony Industries
9 W. 57th St.
New York, N.Y. 10019
XL-55 Pro

| Price | $\$ 300$ |
| :--- | :--- |
| Type | Moving coil |
| Stylus | $0.3 \times 0.8 \mathrm{~m}$ |

Stylus $\quad 0.3 \times 0.8$ mils elliptical (geometry)
VTF $\quad 1.5$ to 2.5 grams
Output $\quad 0.2 \mathrm{mV}$ at $5 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz
Response $\quad 10 \mathrm{~Hz}$ to 50 kHz
Separation $30 \mathrm{~dB}(1 \mathrm{kHz})$
Vertical angle 45 degrees

## STANTON

Stanton Magnetics, Inc.
Terminal Drive
Plainview, N.Y. 11803

| 8815 |  |
| :---: | :---: |
| Price | \$150 |
| Type | Moving magnet |
| Stylus | Stereohedron, $2(0.3 \times 2.8)$ mils |
| VTF | 0.75 to 1.25 gram |
| Output | 0.9 mV at $1 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to $20 \mathrm{kHz}, 1.5 \mathrm{~dB}$ (individually calibrated) |
| Separation | 35 dB at 1 kHz |
| Load | 47K; 275 pF |
| 681EEE (S Type) |  |
| Price | \$115 |
| Type | Moving magnet |
| Stylus | Stereohedron (geometry) |
| VTF | 0.75 to 1.25 grams |
| Output | 0.7 mV |
| Response | 10 Hz to $12 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| Separation | 35 dB |
| Load | 275 pF |
| 681EEE |  |
| Price | \$90 |
| Type | Moving iron |
| Stylus | Elliptical; $0.2 \times 0.7 \mathrm{mil}$ |
| VTF | 0.75 to 1.25 gram |
| Output | 0.7 mV at $1 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz |
| Response | 10 Hz to 22 kHz (individually calibrated) |
| Separation | 35 dB at 1 kHz |
| Load | 47K; 275 pF |
| 681EE |  |
| Price | \$78 |
| Type | Moving iron |
| Stylus | Elliptical; $0.2 \times 0.7 \mathrm{mil}$ |



## AIWA <br> Aiwa America <br> 350 Oxford Drive <br> Moonachie, N.J. 07074

| LP-3000 |  |
| :--- | :--- |
| Price | $\$ 1,200$ |
| Dimensions | $515 / 16 \mathrm{H} \times 1815 / 16 \mathrm{~W} \times 175 / 16 \mathrm{D}$ |
| Weight | 33 lbs .8 oz. |
| Type | Fully automatic |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 6 \%$ |
| Motor type | Pulse synthesizer quartz PLL servo |
| Orive type | Direct |
| Rumble | -75 dB (weighted per DIN B stan- |
|  | dard) |

Wow/Flutter $0.025 \%$ (WRMS) (weighted per JIS standard)
Cueing Yes
VTF $\quad 0$ to 3 grams
Track. error Zero degrees
Headshell Removable
Features Straight-line tracking; linear trace arm; automatic programming; auto repeat forward and back skipping; cue and review; pause; optional remote control; quartz-locked speed control

AP-2600

| Price | \$400 |
| :---: | :---: |
| Dimensions | $6 \mathrm{H} \times 1815 / 16 \mathrm{~W} \times 1515 / 16 \mathrm{D}$ |
| Weight | $27 \mathrm{lbs}$.9 oz . |
| Type | Semiautomatic |
| Speeds | 33 1/3; 45 |
| Speed adj. | $\pm 6.5 \%$ |
| Motor type | 3 phase, 8 pole, 24 slot DC quartzlocked |
| Drive type | Direct |
| Rumble | -75dB (weighted per DIN B standard) |
| Wow/Flutter | $0.025 \%$ (weighted per JIS standard) |
| Cueing | Yes |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 3 grams |
| Track. error | +2.1, -1:6 degrees |
| Headshell | Removable |
| Features | Digital speed readout; viscous |
| damped cueing feature | g: built-in muting circuit; end-up stop |

Models also available AP-2200, \$190

## AKAI

Akai America, Ltd.
2139 E. Del Amo Blvd.
P.O. Box 6010

Compton, Calif. 90224

AP-307

| Price | $\$ 280$ |
| :--- | :--- |
| Dimensions | $63 / 10 \mathrm{H} \times 173 / 5 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 19 lbs. |
| Type | Fully automatic |
| Speeds | $331 / 3 ; 45$ |
| Motor type | Quartz lock |
| Drive type | Direct |
| Rumble | -70 dB (weighted per DIN B stan- |
|  | dard) |
| Wow/Flutter | $0.035 \%$ (weighted per DIN stan- |

Wow/Flutter $0.035 \%$ (weighted per DIN standard

AP-100
Price $\$ 120$
Dimensions $54 / 5 \mathrm{H} \times 173 / 5 \mathrm{~W} \times 141 / 5 \mathrm{D}$
Weight $\quad 13 \mathrm{lbs} 6 \mathrm{oz}$.
Type Semiautomatic
Speeds $\quad 33$ 1/3; 45

Motor type
Orive type Belt
Rumble $\quad-64 \mathrm{~dB}$ (weighted per DIN B standard)
Wow/Flutter $0.05 \%$ (weighted per DIV standard)

## AP-B10C

Price $\$ 100$
Dimensions $53 / 10 \mathrm{H} \times 173 / 10 \mathrm{~W} \times 14 \mathrm{D}$
Weight 13 lbs .
Type Manual
Speeds $\quad 33$ 1/3;45
Motor type 4 -pole synchronous
Drive type Belt
Rumble $\quad-65 \mathrm{~dB}$ (weighted per DIN B standard)
Wow/Flutter $0.05 \%$ (weighted per DIN standard)
Eff. arm mass 14.9 grams
Cueing Yes
Resonance 10 Hz (with attached cartritge)
Track. error $+3,-1$ degrees
Headshell Removable

## Models also available

AP-306, \$240; AP-207, \$200; AP206, \$160

## BANG \& OLUFSEN

Bang \& Olufsen of America, Inc.
515 Busse Road Elk Grove Village, III. 60007

| Beogram | 4004 |
| :--- | :--- |
| Price | $\$ 850$ |
| Dimensions | $4 \mathrm{H} \times 19 \mathrm{~W} \times 143 / 4 \mathrm{D}$ |
| Weight | 24 lbs .3 oz. |
| Type | Fully automatic |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 3 \%$ |
| Motor type | Tach DC for platter; separate DC |
|  | servo for tonearm |
| Drive type | Belt |
| Rumble | -65 dB dB (DIN B) |
| Wow/Flutter | $0.025 \%$ (WRMS) |
| Cueing | Yes |
| VTF | 0 to 2 grams |
| Antiskating | Not applicable; tangential tracking |
| Resonance | 13 Hz (with MMC-20EN cartridge) |
| Track. error | 0.04 degrees |
| Headshell | None |
| Features | Price includes MMC-20EN car- |
| tridge, base, and dust cover; opto-electronically |  |
| controlled tangentiatly-tracking tonearm; pen- |  |
| dulum/leat-spring suspension |  | dulum/leaf-spring suspension

## Beogram 3400 <br> <br> Price $\$ 425$

 <br> <br> Price $\$ 425$}Dimensions $31 / 2 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 141 / 2 \mathrm{D}$
Weight $\quad 14 \mathrm{lbs} 5 \mathrm{oz}$.
Type fully automatic
Speeds $\quad 33$ 1/3: 45
Speed adi
Motor type Servo controlled DC
Drive type Beit

Wow/Flutter $0.03 \%$ (weighted per WRMS standard)
Cueing Yes
VTF 0 to 2 grams
Antiskating 0 to 2 grams
Resonance 12 Hz (with MMC-20EN cartridge)
Track. error 0.126 degree/cm
Features Price includes MMC-20EN cartridge, base, and dust cover; pendulum/leaf spring suspension controls outside dust cover, record detector

Models also available

Beogram 2402, \$325

B.I.C.
B.I.C./Avnet

South Service Road
Westbury, N.Y. 11590

80 Z
Price $\$ 239.95$
Dimensions $63 / 4 \mathrm{H} \times 183 / 4 \mathrm{~W} \times 151 / 4 \mathrm{D}$
Weight 21 lbs
Type Changer
Speeds $\quad 33$ 1/3;45
Speed adj. $\pm 3 \%$
Motor type $\quad 24$-pole synchronous AC servo
Drive type Belt
Rumble $\quad-70 \mathrm{~dB}$ (weighted per DIN B standard)
Wow/Flutier $0.05 \%$ (weighted per WRMS standard)
Eff. arm mass 12 grams
Cueing Yes
VTF $\quad 0$ to 3 grams
Antiskating 0 to 3 grams
Resonance 12 Hz (with Shure M-91ED cartridge)
Track. error 0.27 degree
Headshell Removable
Features Digital drive system with readout; integrated nemovable headshell/tonearm; jeweled tonearm bearings

## Sp-85

Dimensions $533 / 4 \mathrm{H} \times 183 / 4 \mathrm{~W} \times 143 / 4 \mathrm{D}$
Weight 21 lbs .
Type Automatic repeat
Speeds $\quad 331 / 3 ; 45$
Speed adj. $\pm 3 \%$
Motor type $\quad 24$-pole synchronous $A C$ servo
Drive type Belt
Rumble $\quad-70 \mathrm{~dB}$ (weighted per DIN B standard)
Wow/Flutter $0.05 \%$ (weighted per WRMS standard)
Eff. arm mass 12 grams
Cueing Yes
VTF 0 to 3 grams
Antiskating 0 to 3 grams
Resonance 12 Hz (with Shure M-91ED cartridge)
Track. error 0.27 degree
Headshell Removable
Features Same as Model 80 Z

60 Z
Price $\quad \$ 179.95$
Dimensions $\quad 63 / 4 \mathrm{H} \times 183 / 4 \mathrm{~W} \times 151 / 4 \mathrm{D}$
Weight 18 lbs .
Type Changer
Speeds $\quad 331 / 3 ; 45$
Speed adj. $\pm 3 \%$ (strobe)
Motor type 24 -pole 300-RPM synchronous
Drive type Belt
Rumble $\quad-68 \mathrm{~dB}$ (weighted per DIN B standard)
Wow/Flutter $0.06 \%$ (weighted per WRMS standard)
Eff. arm mas.s 12 grams
Cueing Yes
VTF $\quad 0$ to 3 grams
Antiskating 0 to 3 grams
Resonance 12 Hz (with Shure M-91Ed cartridge) (with Shure M-91Ed car-
Track. error 0.27 degree
Headshell Fixed
Features Programmer system; dynamically-
balanced arm


Models also available
Sp-65, \$179.95; 40Z, \$149.95; 20Z, \$99.95

BSR
BSR (USA), Ltd.
Route 303
Blauvelt, N.Y. 10913
XR-50
Price
Price $\$ 200$
Dimensions
Weight 14 lbs
Type Changer
Speeds $\quad 33$ 1/3; 45
Motor type AC synchronous
Drive type Belt
Rumble $\quad-66 \mathrm{~dB}$
Wow/Flutter 0.04\%
Cueing Yes
VTF 2 to 4 grams
Antiskating 0 to 4 grams
Resonance 10 to 12 Hz (with ADC OLM-32
cartridge supplied)
Headshell Fixed
Features Infrared total remote including volume control select records in desired order; Accuglide ${ }^{3}$ record transport system

## QUANTA SERIES

450-Sx
Price $\$ 100$
Dimensions $65 / 6 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 141 / 2 \mathrm{D}$
Weight $\quad 15 \mathrm{lbs}$.
Type Changer
Speeds 33 1/3;45
Motor type 24 -pole, 300 -rpm synchronous AC
Drive type Belt
Rumble $\quad-62 \mathrm{~dB} \mathrm{~dB}$ (DIN B)
Wow/Flutter $0.08 \%$ (WRMS)
Cueing Yes
VTF 0 to 4 grams
Antiskating 0 to 6 grams
Headshell Fixed
Features Autoglide umbrella spindle; sold completely assembled with base, dust cover and ADC OLM-32 cartridge

## Models also available

400, \$100

## A Note on Prices

Prices shown in these pages are manufacturers' or importers' nationally advertised values, updated as is feasible by press time.


CALIBRE
CBS Retail Stores
1301 65th St.
Emeryville, Calif. 94608

## 360

Price $\$ 195$
Dimensions $7 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 131 / 2 \mathrm{D}$
Speeds $\quad 33$ 1/3; 45
Speed adj. $\pm 5 \%$ (strobe)
Motor type $\overline{D C}$ servo
Driye type Direct
Rumble $\quad-70 \mathrm{~dB}$ (weighted per DIN B stan. dard)
Wow/Flutter $0.035 \%$ (weighted per DIN standard)
VTF $\quad 0$ to 3 grams
Track. error 0.2 degrees
Features
Adjustable antiskate; auto shutoff

## Models also available 330, \$145

CONCEPT
Concept Co.
1601 West Glenlake
Itasca, III. 60943

2QD
Price $\$ 295$
Dimensions $51 / 6 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 141 / 2 \mathrm{D}$
Speeds $\quad 331 / 3 ; 45$
Speed adj. $\pm 6 \%$ (LED strobe)
Motor type DC servo
Drive type Direct
Rumble $\quad-70 \mathrm{~dB}$ (weighted per DIN B standard)
Wow/Flutter $0.025 \%$ (weighted per DIN stan-
Cueing Yos
VTF
Antiskating Ad grams
Track. error 0.5 degrees

CONNOISSEUR
Hervic Electronics, Inc.
14225 Ventura Blvd.
Sherman Oaks, Calif. 91423

BD-103/SAU4
Price $\$ 380$
Dimensions $61 / 2 \mathrm{H} \times 18 \mathrm{~W} \times 15 \mathrm{D}$


Weight
25 lbs.
Type Semiautomatic
Speeds $\quad 331 / 3 ; 45 ; 78$
Speed adj. $\pm 5 \%$
Motor type Low voltage (with strobe) DC servo with servo amplifier ( 6 transistors and 1 zener diode)
Drive type
Rumble Belt
-74 dB (weighted per DIN standard)
Wow/Flutter 0.055\% (welghted per DIN standard)
Eff. arm mass 4 to 6 grams (adjustable)
Cueing Yes
VTF 0 to 4 grams
Antiskating 0 to 4 grams
Headshell Removable
Features External power supply; all-electric cueing; cue-defeat switch; comes with SAU-4 tonearm

BD-103
Price
$\$ 260$ (tonearm not included)
$61 / 2 \mathrm{H} \times 18 \mathrm{~W} \times 15 \mathrm{D}$
Weight 22 lbs .
Type Manual
Speeds $\quad 33$ 1/3; 45; 78
Speed adj. $\pm 5 \%$
Motor type Low voltage DC servo (with strobe) with servo amplifier' (6 transistors and low voltage DC sérvo 1 zener diode)
Drive type Belt
Rumble $\quad-74 \mathrm{~dB}$ (weighted per DIN standard)
Wow/Flutter $0.055 \%$ (weighted per DIN stan. dard)
Features Blank mounting board for tonearm; external power supply

## BD-2A

Price $\quad \$ 200$ (walnut veneer, $\$ 220$ )
Dimensions $51 / 2 \mathrm{H} \times 18 \mathrm{~W} \times 15 \mathrm{D}$
Weight $\quad 22 \mathrm{lbs}$.
Type Semiautomatic
Speeds $\quad 331 / 3 ; 45$
Motor type 16 -pole AC synchronous
Drive type
Rumble
-65 dB (weighted per DIN standard)
Wow/Flutter $0.065 \%$ (weighted per DIN standard)
Eff. arm mass 4 to 6 grams (adjustable)
Cueing Yes
VTF $\quad 25$ to 6 grams
Antiskating .75 to 3 grams
Headshell Removable
Features Also available as BD-2A compact
with smaller dust cover, \$190
BD-1 TRANSPORT
Price $\$ 77$
Dimensions $23 / 4 \mathrm{H} \times 9 \mathrm{~W} \times 125 / 16 \mathrm{D}$

| Weight <br> Type | 7 lbs <br> Record Transport for console |
| :--- | :--- |
| mounting |  |$\quad$| Speeds | $331 / 3 ; 45$ |
| :--- | :--- |
| Motor type | $16-$-pole AC synchronous |
| Drive type | Belt |
| Rumble | -65 dB (welghted per DIN stan- |
|  | dard) |
| Wow/Flutter | $0.065 \%$ (weighted per DIN stan- |
| dard) |  |
| Features | Also available in kit form, $\$ 68$ |

## Models also available

DB-102/SAU4, $\$ 310$; BD102/SAU2, \$235; BD-101, \$160 (tonearm not included); BD-1, \$135 (tonearm not included)

## DENON

American Audioport
1407 N. Providence Road
Columbia, Mo. 65201


## Models also available

 DP-1200, \$375; DP-30PL, \$290
## DUAL <br> United Audio Products

120 S. Columbus Ave.
Mt. Vernon, N.Y. 10553
7310
Price
$\$ 559.95$

Dimensions $161 / 2 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 51 / 50$
Weight 25 lbs .
Type Fully automatic
Speeds $331 / 3 ; 45$
Speed adj. $\pm 11 \%$
Motor type Quartz PLL
Drive type
Rumble
Direct
-78 dB (weighted per DIN B standard)
Wow/Flutter '0.015\% (weighted per WRMS standard)
Eff. arm mass 5.5 grams
Cuelng $\forall$ es
VTF $\quad 0.25$ to 2 grams
Antiskating 0 to 2 grams
Resonance 7.8 Hz (with ULM Ortoton ULM-
60E cartridge)
Track. error 0.16 degrees/cm
Headshell Removable
Features Low-mass tonearm ( 8 grams with ULM-60E); tunable antiresonator counterweight; solenoid operating controls

## 650RC

Price
Dimensions
Weight
Type
Speeds
Speed adj.
Motor type
Drive type
Rumble
Wow/Flutter $0.03 \%$ (weighted per.WFMS standard)
Eff. arm mass 5.5 grams
Cueing Yes
VTF $\quad 025$ to 3 grams
Antiskating 0 to 3 grams
Resonance 7.8 Hz (with ULM Ortofon ULM-
55E cartridge)
Track. error 0.16 degrees
Headshell Removable
Features Low-mass tonearm (8 grams with ULM-55E); tunable antiresonator counterweight; optional remote control

## 606

Price $\$ 279.95$
Dimensions $161 / 2 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 51 / 5 \mathrm{D}$
Weight $\quad 18 \mathrm{lbs}$
Type Semiautomatic
Speeds 33 1/3; 45
Speed adj. $\pm 10 \%$ (strobe)
Motor type $\bar{C} M O S$ DC electronic
Drive type
Rumble
-75 dB (weighted per DIN B standard)
Wow/Fiutter $0.03 \%$ (welghted per WRMS standard)
EH. arm mass 5.5 grams
Cueing Yes
VTF $\quad 0.25$ to 3 grams
Antiskating 0 to 3 grams
Resonance 7.8 Hz (with ULM Ortofon ULM55E cartridge)
Track. error 0.16 degrees $/ \mathrm{cm}$
Headshell Removable
Features Low-mass tonearm (8 grams with ULM-55E); tunable antiresonator counterweight

522
Price $\$ 225$
Dimensions $161 / 2 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 51 / 5 \mathrm{D}$
Weight 17 lbs.
Type Fully automatic
Speeds $\quad 331 / 3 ; 45$
Speed ad. $\quad \pm 6 \%$ (strobe)
Motor type High-torque synchronous
Drive type Belt
Rumble $\quad-70 \mathrm{~dB}$ (weighted per DIN $B$ standard)
Wow/Flutter $0.04 \%$ (weighted per WRMS standard)

Eff. arm mass 5.5 grams
Cueing Yes
VTF $\quad 0.25$ to 3 grams
Antisketing 0 to 3 grams
Resonence 7.8 Hz (with ULM Ortofon ULM-
55E cartridge)
Track. error 0.16 degrees
Headshell Removable
Features Same as Model 506

## Models also available

7140, \$479.95; 622, \$319.95;
1264, \$275; 506, \$189.95; 1257, \$179.95

## EMPIRE <br> Empire Scientific Corp. 1055 Stewart Ave. <br> Garden City, N.Y. 11530

698

| Price | \$400 |
| :---: | :---: |
| Dimensions | $81 / 4 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 151 / 8 \mathrm{D}$ |
| Weight | 30 lbs . |
| Type | Semiautomatic |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 2.25 \%$ |
| Motor type | Hysteresis synchronous |
| Drive type | Belt |
| Rumble | -68 dB (below $-3.54 \mathrm{~cm} / \mathrm{sec}$ at 1 kHz ) |
| Wow/Futter | 0.04\% |
| Ef. arm mass 12.5 grams |  |
| Cueing | Yes |
| VTF | 0 to 2.5 grams |
| Antiskating | 0 to 2.5 grams |
| Resonance | 10 Hz (with Empire 2000 Z cartridge) |
| Track. ¢rror | Under 0.5 degree per inch |
| Headshell | Removable |
| Features | Electronic cueing; antiskating uses |
| diminishing-spring principle; calibration chart sup- |  |
| plied for vario | us stylus shapes; 7-1b. dynamically |
| balanced platter; tonearm bearings have 32 sap- |  |
|  |  |

FISHER
Fisher Corp.
21314 Lassen St.
Chatsworth, Calif. 91311

## MT-6250

Price $\quad \$ 300$ ( $\$ 325$ with cartridge)
Dimensions $61 / 2 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 141 / 4 \mathrm{D}$
Weight $\quad 18 \mathrm{lbs} .11 \mathrm{oz}$.
Type Semiautomatic
Speed adj. $\pm 6 \%$
Motor twpe 120 -pole linear quartz phase-
locked loop
Drive type Direct
Rumble $\quad 70 \mathrm{~dB}$ (DIN B)
Wow/Flutter 0.03\% (WRMS)
EHf. arm mass 14.9 grams
VTF $\quad 0.6$ to 3.5 grams
Antiskating 0 to 3.5 grams
Resonance 10 Hz
Track. error $\pm 1.5$ degrees
Features Extended 5-year drive-system
warranty available; quartz-locked speed control
MT-6225A
Frice $\$ 249.95$ (\$269.95 with cartridge)
Dimensions $6 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 141 / 4 \mathrm{D}$
Weight $\quad 17 \mathrm{lbs} 11 \mathrm{oz}$.
Type Semiautomatic
Speed adj. $\pm 3 \%$
Notor type 120 -pole linear
Drive type Direct

| Rumble | -70 dB (DIN B) |
| :---: | :---: |
| Wow/Flutter | 0.03\% (WRMS; JIS) |
| Eff. arm mass 14.9 grams |  |
| VTF | 0.6 to 3.5 grams |
| Antiskating | 0 to 4 grams |
| Resonance | 10 Hz |
| Track. error | 1.5 degrees |
| Features | Strobe; electronic speed selection |
| MT-6211 |  |
| Price | \$150 (with cartridge) |
| Dimensions | $51 / 8 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 141 / 4 \mathrm{D}$ |
| Weight | 13 lbs .4 oz . |
| Type | Semiautomatic |
| Speed adj. | $\pm 3 \%$ |
| Motor type | DC servo |
| Drive type | Belt |
| Rumble | -60 dB (DIN B) |
| Wow/Flutter | 0.06\% (WRMS; JIS) |
| VTF | 0.6 to 3.5 grams |
| Antiskating | 0 to 4 grams |
| Resonance | 10 Hz (with Audio-Technica AT-10 cartridge) |
| Track. error | 1.5 degree |
| MT-6310 |  |
| Price | \$119.95 (\$149.95 with cartridge) |
| Dimensions | $6 \mathrm{H} \times 171 / 3 \mathrm{~W} \times 141 / 2 \mathrm{D}$ |
| Weight | 15 lbs . |
| Type | Semiautomatic |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 3 \%$ (strobe) |
| Motor type | DC servo |
| Drive type | Belt |
| Rumble | -68 dB (weighted per DIN B standard) |
| Wow/Flutter | $0.04 \%$ (weighted per WRMS standard) |
| Cueing | Yes |
| VTF | 0.6 to 3.5 grams |
| Antiskating | 0.6 to 3.5 grams |
| Resonance | 10 Hz (with Audio-Technica M635 V cartridge) |
| Track. error | $\pm 2.0$ degrees |
| Headshell | Removable |
| Features | Front panel controls |
| Models also available |  |
|  | MT-6335, \$249.95 (\$279.95 with cartridge); MT-6224, \$200 (\$220 with cartridge); MT-6330, \$189.95 |
|  | (\$219.95 with cartridge); MT-6320, |
|  | \$169.95 (\$199.95 with cartridge); |
|  | MT-6115, \$120 (with cartridge); |
|  | MT-611A, \$109.95 |
| FONS |  |
| Fons International Electronics, |  |
| Ltd. |  |
| 11046 Santa Monica Blvd. |  |
| Los Angeles, Calif. 90025 |  |
| International Mk I |  |
| Price | \$315 |
| Dimensions | $61 / 4 \mathrm{H} \times 14 \mathrm{~W} \times 173 / 4 \mathrm{D}$ |
| Weight | 19 lbs . |
| Type | Manual |
| Speeds | 33 1/3; 45; 78 |
| Speed adj. | 29 to 105 rpm , continuously adjustable |
| Motor type | DC servo-controlled |
| Drive type | Belt |
| Rumble | -75 dB (DIN) |
| Wow/Flutter | 0.03\% (DIN) |
| Features speed control high-mass, sin | Tachometer-generator electronic hyper-concentric main bearing; gle-piece die-cast platter |

## GARRARD

Garrard/Plessey Consumer
Products
100 Commercial St.
Plainview, N.Y. 11803

| GT-350 |  |
| :---: | :---: |
| Price | \$229.95 |
| Dimensions | $73 / 4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 141 / 2 \mathrm{D}$ |
| Weight | 15 lbs . |
| Type | Changer |
| Speeds | 33 1/3; 45 |
| Speed adj. | $\pm 3 \%$ (with strobe) |
| Motor type | DC servo |
| Drive type | Belt |
| Rumble | -68 dB (weighted per DIN B standard) |
| Wow/Flutter | $0.06 \%$ (weighted per DIN B standard) |
| Eff. arm mass 12 grams (including headshell) |  |
| Cueing | Yes |
| VTF | 0 to 4 grams |
| Antiskating | 0 to 3 grams |
| Resonance | 9 Hz (with Shure M95ED cartridge) |
| Track. error | 0.05 degrees |
| Headshell | Removable |
| Features headshell; Io changing me | Front access controls; carbon-fiber -mass tonearm; Delglide ${ }^{\text {(3) }}$ modular hanism |
| DD-132 |  |
| Price | \$219.95 |
| Dimensions | . $53 / 4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 133 / 4 \mathrm{D}$ |
| Weight | 16 lbs . |
| Type | Fully automatic |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 3 \%$ |
| Motor type | DC servo |
| Drive type | Direct |
| Rumble | -70 dB (weighted per DIN B sian: dard) |
| Wow/Flutter | $0.06 \%$ (weighted per DIN B standard) |
| Eff. arm mass 12 grams (including headshell) |  |
| Cueing | Yes |
| VTF | 0 to 4 grams |
| Antiskating | 0 to 3 grams |
| Resonance | 9 Hz (with Shure M95ED cartridge) |
| Track error | 0.05 degrees |
| Headshell | Removable |
| Features | "Fail-Safe" drive system using |
| Garrard's co | gless motor; time-integral-velocity |
| (TIV) speed automated | otor; Hall effect circuitry; Delglide ariging mechanism |
| GT-350AP |  |
| Price | \$209.95 |
| Dimensions | $53 / 4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 141 / 2 \mathrm{D}$ |
| Weight | 15 lbs . |
| Type | Fully automatic |
| Speeds | 33 1/3; 45 |
| Speed adj. | $\pm 3 \%$ (with LED strobe) |
| Motor type | DC servo |
| Drive type | Belt |
| Rumble | -68 dB (weighted per-DIN B standard) |
| Wow/Flutter | $0.06 \%$ (weighted per DIN B standard) |
| Eff. arm mass 12 grams (including headshell) |  |
| Cueing | Yes |
| VTF | 0 to 4 grams |
| Antiskating | 0 to 3 grams |
| Resonance | 9 Hz (with Shure M95ED cartridge) |
| Track. error | 0.05 degrees |
| Headshell | Removable |
| Features | Front access controls; carbon fiber |
| headshell; low matic changin | -mass tonearm; Delglide autosystem |
| GT-250 |  |
| Price | \$199.95 |
| Dimensions | $73 / 4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 141 / 2 \mathrm{D}$ |
| Weight | 15 lbs . |
| Type | Changer |
| Speeds | 33 1/3; 45 |
| Speed adj. | $\pm 3 \%$ |
| Motor type | Synchro-Lab |
| Drive type | Belt |
| Rumble | -65 dB (weighted per DIN B standard) |
| Wow/Flutter | $0.08 \%$ (weighted per DIN B standard) |

Eff. arm mass 12 grams (including headshell)
Cueing Yes
VTF $\quad 0$ to 4 grams
Antiskating 0 to 3 grams
Resonance 9 Hz (with Shure M95ED cartridge)
Track. error 0.05 degrees
Headshell Removable
Features Front controls; carbon-fiber headshell; low-mass tonearm; low-friction jewel pivots; Delglide automatic changing mechanism

## GT-25AP-1

Price $\quad \$ 169.95$
Dimensions $53 / 4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 133 / 4 \mathrm{D}$
Weight $\quad 14 \mathrm{lbs} 8$ oz.
Type Fully automatic
Speeds $\quad 33$ 1/3;45
Speed adj. None
Motor type 4 -pole synchronous
Orive type Belt
Rumble $\quad-65 \mathrm{~dB}$ (DIN B)
Wow/Fiutter 0.08\% (DIN B)
Eff. arm mass 12 grams (including headshell)
Cueing Yes
VTF $\quad 0$ to 4 grams
Antiskating 0 to 4 grams
Resonance 9 Hz (with Shure M95ED cartridge)
Track. error 0.05 degree per minute
Headshell Removable
Features Delglide modular changing
mechanism driven by its own belt
GT-15
Price
Dimensions $73 / 8 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 135 / 6 \mathrm{D}$
Weight $\quad 14$ lbs. 8 oz .
Type Automatic repeat; changer
Speeds 33 1/3:45
Speed adj. None
Motor type 4 -pole synchronous
Drive type Bell
Rumble $\quad 60 \mathrm{~dB}$ (DIN B)
Wow/Flutter $0.12 \%$ (DIN B)
Eff. arm mass 10 grams
Cueing Yes
VTF 0 to 4 grams
Antiskating 0 to 4 grams
Resonance 9 Hz (with Shure M93E cartridge)
Track. error 0.05 degrees
Headshell Removable
Features Delglide modular automatic changing mechanism driven by its own belt; lowmass tonearm

730M
Price $\$ 90$
Dimensions $\quad 81 / 2 H \times 15 W \times 161 / 2 \mathrm{D}$
Weight $\quad 14 \mathrm{lbs}$.
Type Automatic repeat; changer
Speeds $\quad 33$ 1/3; 45; 78
Speed adj. None
Motor type 4 pole
Drive type |dler
Rumble $\quad-55 \mathrm{~dB}$ (DIN B)
Wow/Flutter 0.10 (DIN B)
Eff. arm mass 7 grams
Cueing Yes
VTF 2 to 6 grams
Antiskating 2 to 6 grams
Headshell Fixed
Features Low-mass arm; factory-mounted magnetic cartridge; removable overarm stabilizer

## Models also available

GT-35, \$219.95; GT-35AP-1. \$199.95; DD-131, \$199.95; GT-25, \$190; GT-250AP, \$179.95; DD130, \$169.95; GT-12, \$119.95; 720C, \$70

## HARMAN KARDON

Harman Kardon, Inc.
55 Ames Court
Plainview, N.Y. 11803


Hitachi MT-5SO
ST-8
Price $\quad \$ 399$
Dimensions $\quad 63 / 3 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 161 / 4 \mathrm{D}$
Weight
23 lbs
Speeds $\quad 331 / 3.45$
Speed
Motor type Brushless DC Hall effect
Drive type Belt
Rumble $\quad-68 \mathrm{~dB}$ (weighted per DIN B standard)
Wow/Flutter $0.04 \%$ (weighted per NAB standard)
Eff. arm mass 6 grams
Cueing Yes
VTF $\quad 0.25$ to 2.5 grams
Antiskating None
Resonance 11 Hz (with Ortofon LM-30 cartridge)
Track. error 0 degree
Headshell Removable
Features Straight-line tracking; touch controls; built-in level; automatic liftoff; Rolamite pivot bearings; skating force; stylus overhang

## Models also available <br> ST-5, \$299

## HITACHI

Hitachi Sales Corp. of America
406 W. Artesia Blvd.
Compton, Calif. 90220

## HT-550

Price

| Dimensions | $51 / 2 \mathrm{H} \times 187 / \mathrm{W} \times 15 \mathrm{D}$ |
| :--- | :--- |
| Weight | 22 lbs |
| Type | Semiautomatic |
| Speeds | $331 / 3 ; 45$ |
| Motor type | Uni-torque quartz |
| Drive type | Direct |
| Wow/Flutter | $0.025 \%$ |
| VTF | 0 to 3 grams |
| Headshell | Removable |

HT-324

| Price | $\$ 120$ |
| :--- | :--- |
| Dimensions | $5 \mathrm{H} \times 171 / 8 \mathrm{~W} \times 145 / 8 \mathrm{D}$ |
| Weight | 10 lbs |
| Type | Semiautomatic |
| Speeds | $331 / 3 ; 45$ |
| Motor type | 4 -pole synchronous |
| Drive type | Belt |
| Rumble | -65 dB |
| Wow/Flutter | $0.06 \%$ (weighted per WRMS stan- |
|  | dard) |



JVC QL-FG


Onkyo CP-1020F

| Cueing | Yes |
| :--- | :--- |
| VTF | 0 to 3 grams |
| Track. error | 2 degrees |
| Headshell | Removable |
| Features | Antiskating control |

## Models also available

HT-463, \$240; HT-356, \$200

## JVC

JVC America Co.
58-75 Queens Midtown
Expressway
Maspeth, N.Y. 11378

| QL-10 |  |
| :--- | :--- |
| Price | $\$ 1.250$ |
| Dimensions | $73 / \mathrm{H} \times 201 / \mathrm{WW} \times 161 / 8 \mathrm{D}$ |
| Weight | 42 lbs .14 oz. |
| Type | Manual |
| Speed adj. | $\pm 6 \mathrm{~Hz}$ |
| Motor type | Coreless DC servo quartz-lock |
| Drive type | Direct |
| Rumbie | 75 dB (DIN B) |
| Wow/Flutter | $0.02 \%$ (WRMS) |
| VTF | 0103 grams (0.1-gram steps) |
| Track. error | +1 degree, 48 min; -1 degree, 31 |
|  | min |

QL-F6
Price $\$ 400$
Dimensions $519 / 32 \mathrm{H} \times 1761 / 64 \mathrm{~W} \times 153 / 4 \mathrm{D}$
Weight 24 lbs 3 oz .
Type Automatic repeat
Speeds $\quad 33$ 1/3; 45
Speed adj.
Motor type
Drive typ
Rumble
Coreless DC servomotor
wow/Fiut dard

|  | standard) |
| :--- | :--- |
| Cueing | Yes |
| VIF | 0 to 3 grams |

Track. error +2 degrees 28 seconds to 1 degree 20 seconds
Headshell Removable
Features Double servo quartz system; oil damped tonearm

## QL-F4

Price
Dimensions $53 / 4 \mathrm{H} \times 181 / 6 \mathrm{~W} \times 143 / \mathrm{BD}$
Weight
Type
Motor type Coreless DC servo quartz-lock Drive type Direct


Kenwood KD-650


Phillp: 829
Rumble $\quad 72 \mathrm{~dB}$ (DIN B)
Wow/Flutter $0.025 \%$ (WRMS)
VTF $\quad 0$ to 3 grams
Track. error +3 degrees, 35 min; -0 degree, 43 min
Headshell Removable
L-All
Price $\$ 110$
Dimensions $\quad 5 / / 6 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 1415 / 16 \mathrm{D}$
Weight $\quad 9 \mathrm{lbs} 14 \mathrm{oz}$.
Type Semiautomatic
Speeds $\quad 331 / 3 ; 45$
Motor type 4 -pole synchronous
Drive type Belt
Rumble $\quad-63 \mathrm{~dB}$ (weighted per DIN B standard)
Wow/Flutter $0.06 \%$ (weighted per WRMS standard)
Cueing Yes
VTF $\quad 0$ to 3 grams
Track. error +3 degrees 35 to 0 degree 43 seconds
Headsheil Removable
Models also available
QL-7, \$300; QL-5, \$270; QL-50, \$250; OL-A2, \$190; L-A55, \$160

## KENWOOD

Kenwood Electronics
75 Seaview Drive
Secaucus, N.J. 07094
KD-750

| Price | $\$ 520$ |
| :--- | :--- |
| Dimenslons | $61 / 2 \mathrm{H} \times 195 / 15 \mathrm{~W} \times 165 / 8 \mathrm{D}$ |
| Weight | 38 lbs 9 Oz |
| Type | Manual |
| Speeds | $331 / 3 ; 45$ |
| Motor type | Quartz PLL |
| Drive type | Direct |
| Rumble | -74 dB (weighted per DIN stan- |
|  | dard) |
| Wow/Fluterer | $0.022 \%$ |
| Cueing | Yes |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 3 grams |
| Track. error | 1.5 degrees |
| Headshell | Removable |
| Features | Antiresonance base |
|  |  |
|  |  |
| KD-650 |  |
| Price | $\$ 400$ |
| Dimensions | $61 / 2 \mathrm{H} \times 195 / 16 \mathrm{~W} \times 181 / 8 \mathrm{D}$ |
| Weight | 33 lbs .14 Oz. |
| Type | Manual |
| Speeds | $331 / 3 ; 45$ |
| Motor type | Quartz PLL |


| Drive type | Direct |
| :--- | :--- |
| Rumble | -12 dB (weighted per DIN stan- |
|  | dard) |
| Wow/Flutter | $0.025 \%$ (weighted per WRMS |
|  | standard) |
| Cueing | Yes |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 3 grams |
| Track. error | 1.8 degree |
| Headshell | Removable |
| Features | Antiresonance base |


| KD-5070 |  |
| :---: | :---: |
| Price | \$285 |
| Dimensions | $61 / 8 \mathrm{H} \times 181 / 6 \mathrm{~W} \times 141 / 2 \mathrm{D}$ |
| Weight | 25 lbs .50 oz . |
| Type | Fully automatic |
| Speed adj. | $\pm 3 \%$ |
| Motor type | 20-pole, 30 -slot brushless servo |
| Drive type | Direct |
| Rumble | -73 dB (DIN) |
| Wow/Flutter | 0.025\% (WRMS) |
| Cueing | Yes |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 3 grams |
| Track. error | $\pm 1.5$ |
| Headshell | Removable |
| Features | Antiresonance base |

KD-1500
Price $\$ 119$
Dimensions $51 / 2 \mathrm{H} \times 187 / 16 \mathrm{~W} \times 145 / 16 \mathrm{D}$
Weight $\quad 10 \mathrm{lbs} 9 \mathrm{oz}$
Type Semiautomatic
Speeds

| Motor type | 4 -pole synchronous |
| :--- | :--- |
| Drive type | Belt |
| Rumble | -65 dB |

$\begin{array}{ll}\text { Rumble } & -65 \mathrm{~dB} \\ \text { Wow/Flutter } & 0.05 \%\end{array}$
Cueing Yes
VTF $\quad 0$ to 3 grams
Antiskating 0 to 3 grams
Track. error 1.5 degree
Headshell Removable
Features Damped tonearm reduces reso-
nance peaks

## Models also available

KD-600, $\$ 350$ (tonearm not included); KD-550, \$300; KD-500. \$250; KD-3100, \$199; KD-2000, \$158

## LAFAYETTE

Lafayette Electronics Corp. 111 Jericho Turnpike
Syosset, N.Y. 11791

| T-5000 |  |
| :--- | :--- |
| Price | $\$ 249.99$ |
| Dimensions | $5 \mathrm{H} \times 17 \mathrm{t} / \mathrm{W} \times 15 \mathrm{D}$ |
| Weight | 19 lbs |
| Type | Automatic repeat |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 3 \%$ |
| Motor type | DC servo |
| Drive type | Direct |
| Rumble | 65 dB (DIN B) |
| Wow/Flutter | $0.03 \%$ |
| Cueing | Yes |
| VTF | 0.5 to 3 grams |
| Headshell | Removable |
| Features | Touch-sensitive switching; in- |
| dependent AC motor for tonearm drive; front- |  |
| mounted controls for fully-closed operation |  |

T-1000
Price Dimensions
Weight
$\$ 89.99$
$53 / 4 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 141 / 2 \mathrm{D}$

| Speeds | $331 / 3 ; 45$ |
| :--- | :--- |
| Motor type | 4-pole synchronous |
| Drive type | Belt |
| Rumble | -60 dB (weighted per DIN B Stan- |
|  | daidd) |
| Wow/Flutter | $0.08 \%$ |
| Cueing | Yes |
| VTF | 1to 3 grams |
| Antiskating | 1to 3 grams |
| Headshell | Removable |
| Features | Low-capacitance cables |

## Models also available

T-4000, \$129.99; T-2000, \$109.99
LENCO
Neosonic Corp. of America
180 Miller Place
Hicksville, N.Y. 11801

| L-833DD |  |
| :--- | :--- |
| Price | $\$ 300$ |
| Type | Semiautomatic |
| Speed adj. | $\pm 4 \%$ |
| Motor type | DC |
| Drive type | Direct |
| Rumble | -70 dB (DIN B) |
| Wow/Flutter | $\pm 0.06 \%$ (DIN) |
| VTF | 0 to 5 grams |
| Resonance | Electronic arm lift and auto stop; <br>  <br>  <br>  <br>  <br> precision-point tonearm bearing; $9^{\prime \prime}$ <br> tonearm |


| L-133 |  |
| :--- | :--- |
| Price | $\$ 130$ |
| Type | Semiautomatic |
| Motor type | 16-pole synchronous |
| Drive type | Belt |
| Rumble | -62 dB (DIN B) |
| Wow/Flutter | $\pm 0.08 \%$ (DIN) |
| Cueing | Viscous-damped |
| VTF | 0 to 5 grams |
| Features | "S"-shaped arm |

## Models also available

L-236, \$180

LINN PRODUCTS, LTD.
Audiophile Systems
5750 Rymark Court
Indianapolis, Ind. 46250

| Linn-Sondek LP-12 |  |
| :---: | :---: |
| Price | \$765 |
| Dimensions | $51 / 2 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 25 lbs . |
| Type | Manual |
| Speeds | $331 / 3$ |
| Speed adj. | None |
| Motor type | 24-pole synchronous |
| Drive type | Belt |
| Rumble | -60 dB (unweighted) |
| Wow/Flutter | 0.04\% (WRMS) |
| Features | Single-point oil-bath bearing |

LUX
Lux Audio
160 Dupont St.
Plainview, N.Y. 11803

Luxman PD-444
Price $\$ 845$

Dimensions $\quad 61 / 4 \mathrm{H} \times 261 / 4 \mathrm{~W} \times 153 / 8 \mathrm{D}$
Weight $\quad 56 \mathrm{lbs} .2 \mathrm{oz}$.
Type Manual (no arm)
Speeds $\quad 33$ 1/3; 45
Speed adj. None
Motor type Quartz-lock, DC brushless servo, load-free
Drive type Direct
Rumble $\quad-75 \mathrm{~dB}$
Wow/Flutter $0.025 \%$ (WRMS)
Features Provisions for two tonearms, one up to $16^{\prime \prime}$ in length (tonearms not included); selector switch for tonearm; detachable hinged clear lucite dust cover; lock indicator; double shock absorbing insulators (height-adjustable)

Luxman PD-277

| Price | $\$ 395$ |
| :--- | :--- |
| Type | Fully automatic |

Speeds $\quad 331 / 3 ; 45$
Motor type Brushless slotless DC servomotor
Cueing Yes
VTF $\quad 0$ to 3 grams
Track. error $+2^{\circ} 13^{\prime},-1^{\circ} 08^{\prime}$
Headshell Fixed
Features Manual-auto-repeat selector, oll-
damped queing system
Luxman PD-272
Price $\quad \$ 345$
Dimensions $6 \mathrm{H} \times 185 / 2 \mathrm{~W} \times 133 / 4 \mathrm{D}$
Weight 26 lbs 6 oz .
$\begin{array}{ll}\text { Type } & \text { Manual } \\ \text { Speeds } & 331 / 3 ; 45\end{array}$
Speed adj. $\pm 4 \%$ (independently for each speed)
Motor type DC brushless servo, slotless
Drive type Direct
Rumble $\quad-60 \mathrm{~dB}$ (IEC B)
Wow/Flutter $0.03 \%$ (WRMS)
Cueing Yes
VTF $\quad 0$ to 3 grams
Antiskating 0.5 to $\mathbf{3}$ grams
Track. error +2 degrees, $13 \mathrm{~min} ;-1$ degree, 0.08 min

Headshell Fixed
Features Detachable hinged clear lucite dust cover; double shock-absorbing insulators (heightadjustable); mirror-reflex type stroboscope

## Models also available

Luxman PD-441, \$675; PD-270, \$285

MARANTZ
Marantz, Inc.
20525 Nordhoff St.
Chatsworth, Calif. 91311

| 6370Q |  |
| :--- | :--- |
| Price | $\$ 470$ |
| Dimensions | $53 / 4 \mathrm{H} \times 185 / \mathrm{BW} \times 15 \mathrm{D}$ |
| Weight | $18 \mathrm{lbs.11} \mathrm{oz}$. |
| Type | Semiautomatic |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 6 \%$ |
| Motor type | Quartz-locked DC servo |
| Drive type | Direct |
| Rumble | 70 dB (NAB) |
| Wow/Fiutter | $0.02 \%$ (WRMS) |
| Eff. arm mass 17.5 grams |  |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 4 grams |
| Resonance | 7.7 Hz (with Shure V-15 Type III |
|  | cartridge) |
|  |  |
| Track. error | 0.07 degree/cm |
| Headshell | Removable |
| Features | Quartz-locked at any speed; digltal |
| speed readout of RPM or percentage change from |  |
| standard speed; oil-damped arm; low-distortion |  |
| tonearm; separate motor for arm lift and return; |  |
| dust cover and base; shock-absorbent feet |  |



## Models also available

TT-2000, \$200; 6025, \$130

MCS ${ }^{\text {® }}$ SERIES
J.C. Penney

1301 Ave. of the Americas
New York, N.Y. 10019

| 6700 |  |
| :---: | :---: |
| Price | \$230 |
| Dimensions | $615 / 16 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 141 / 2 \mathrm{D}$ |
| Weight | 21 lbs . |
| Type | Changer |
| Speeds | 331/3; 45 |
| Speed adj. | $\pm 6 \%$ |
| Motor type | DC servo |
| Drive type | Direct |
| Rumble | -70 dB (weighted per DIN B standard) |
| Wow/Flutter | 0.04\% (weighted per TIS-WTD standard) |
| Cueing | Yes |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 3 grams |
| Track. error | 3.5 degrees |
| Headshell | Removable |
| Features hinged dust co | Shure cartridge (\$50 value); over; 45 RPM adapter |
| 6502/6503 |  |
| Price | \$130 |
| Dimensions | $55 / 16 \mathrm{H} \times 163 / 4 \mathrm{~W} \times 133 / 4 \mathrm{D}$ |
| Weight | 13 lbs . |
| Type | Semiautomatic |
| Speeds | 33 1/3; 45 |
| Speed adj. | $\pm 6 \%$ (strobe) |
| Motor type | DC servo |
| Drive type | Belt |
| Rumble | -65 dB (weighted per DIN B standard) |
| Wow/Flutter | $0.06 \%$ (weighted per TIS-WTD standard) |
| Cueing | Yes |
| VTF | 0 to 4 grams |
| Antiskating | 0 to 4 grams |
| Track error | 3.5 degrees |
| Headshell | Fixed |
| Features | Audio-Technica cartridge (\$45 |
| value); hinged dust cover; 45 rpm adapter |  |

Models also availabie

MICHELL ENGINEERING
Dick Wagner (Distributor) 5930 Penfield Ave. Woodland Hills, Calif. 91367

| Prisma |  |
| :--- | :--- |
| Price | $\$ 650$ (tonearm not included) |
| Dimensions | $9 \mathrm{H} \times 21 \mathrm{~W} \times 15 \mathrm{D}$ |
| Weight | 27 lbs. |
| Type | Manual |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 10 \%$ |
| Motor type | Pancake type DC brushless servo |
| Drive type | Eelt |
| Rumble | -50 dB (weighted per DIN B stan- |
|  | dard), -70 dB (unweighted) |
| Wow/Flutter | $0.04 \%$ (weighted per DIN B stan- |
|  | dard) |

## Focus One

| Price | $\$ 400$ (tonearm not included) |
| :--- | :--- |
| Dlmensions | $6 \mathrm{H} \times 17 \mathrm{~W} \times 18 \mathrm{D}$ |
| Weight | 19 lbs |
| Type | Manual |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | None |
| Motor type | Low-speed synchronous recoil |
|  | start |
| Drive type | Belt |
| Rumble | -50 dB (weighted per DIN B stan |
|  | dard), -70 dB (unweighted) |
| Wow/Flutter | $0.05 \%$ (weighted per standard) |

## Models also available

Hydraulic Reference, $\$ 550$ (tone arm not included)

MICRO SEIKI
Great American Sound
20940 Lassen St.
Chatsworth, Calif. 91311

| $\underset{\text { Price }}{\text { BL-91L }}$ | \$1,099 |
| :---: | :---: |
| BL-91 |  |
| Price | \$700 |
| DQ-3 |  |
| Price | \$475 |
| DD-33 |  |
| Price | \$435 |
| Dimensions | $61 / 8 \mathrm{H} \times 183 / 8 \mathrm{~W} \times 143 / 4 \mathrm{D}$ |
| Weight | 17 lbs 6 oz . |
| Type | Semiautomatic |
| Speed adj. | $\pm 6 \%$ |
| Motor type | DC servo |
| Drive type | Direct |
| Rumble | 75 (DIN B) |
| Wow/Flutter | 0.03\% (WRMS) |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 3 grams |
| Track. error | 1.5 degree |
| Features tonearm | Variable-mass/dynamic-balanced |
| DQ-41 |  |
| Price | \$400 |
| BL-51 |  |
| Price | \$390 |
| DD-31 |  |
| Price | \$350 |

MB-14
Price $\$ 175$
Dimensions $55 / 6 \mathrm{H} \times 173 / 6 \mathrm{~W} \times 13^{3 / 4 \mathrm{D}}$
Weight $\quad 13 \mathrm{lbs} .3 \mathrm{oz}$.
Type Semiautomatic
Motor type 4-pole synchronous
Drive type Belt
Rumble 65 dB (DIN B)
Wow/Flutter $0.06 \%$ (WRMS)
VTF $\quad 0$ to 3 grams
Antiskating 0.75 to 2 grams
Resonance 1.5 degree
Track. error 1.5 degree

## Models also available <br> DD-24, \$250

MITSUBISHI AUDIO SYSTEMS
Melco Sales, Inc.
3030 E. Victoria
Compton, Calif. 90221
DP-EC20
Price $\$ 520$
Dimensions $57 / 8 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 151 / 2 \mathrm{D}$
Weight $\quad 30 \mathrm{lbs} .13 \mathrm{oz}$.
Type Automatic repeat
Speeds $\quad 33$ 1/3;45
Motor type OC PLL DC Servo
Drive type Direct
Rumble $\quad-80 \mathrm{~dB}$ (weighted per DIN standard)
Wow/Flutter $0.025 \%$ (weighted per DIN staņdard)
Cueing Yes
VTF 0 to 3 grams
Antiskating 0 to 3 grams
Track. error $+2.9 /-1.5$ degrees
Headshell Removable
Features Horizontal and vertical arm motion motor driven via front panel controls; optical speed and disc size selection; die-cast magnesium alloy headsheil; wave-shaped LED strobe; fully logic controlled

DP-EC7
Price $\$ 300$
Dimensions $53 / 8 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 151 / 2 \mathrm{D}$
Weight 20 lbs 14 oz .
Type Automatic repeat
Speeds $\quad 33$ 1/3;45
Speed adj. $\pm 3 \%$
Motor type Frequency generator DC servo
Drive type Direct
Rumble
-73 dB (weighted per DIN B standard)
Wow/Flutter $0.03 \%$ (weighted per DIN standard)
Cuëing Yes
VTF $\quad 0$ to 3 grams
Antiskating 0 to $\mathbf{3}$ grams
Track. error $+2.9 /-1.5$ degrees
Headshell Removable
Features Horlzontal and vertical arm motion motor driven via front panel controls; optical speed and disc size selection; FRP headshell; fully logic controlled

Modeds also available
DP-EC10, \$400
NAD
NAD (USA), Inc.
Mackintosh Lane
P.O. Box 529

Lincoln, Mass. 01773
NAD-5080
Price $\$ 250$

| Dimensions | $6 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 15 \mathrm{D}$ |
| :--- | :--- |
| Weight | 16 lbs .13 oz |
| Type | Semiautomatic |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 6 \%$ |
| Motor type | Brushless (with strobe) |
| Drive type | Direct |
| Rumbie | -70 dB (weighted per DIN B stan- |
|  | dard) |
| Wow/Fiutter | $0.03 \%$ (weighted per WRMS stan- |
|  | dard) |
| Cueing | Yes |
| VTF | 0 to 3.5 grams |
| Antiskating | 0 to 3 grams |
| Track. error | $0.2 / \mathrm{cm}(0.5 / \mathrm{in})$ |
| Headshell | Removable |
|  |  |

## Models also available

ONKYO
Onkyo U.S.A. Corp. 42-07 20th Ave.
Long Island, N.Y. 11105

CP-1020 F

| Price | \$219.95 |
| :---: | :---: |
| Dimensions | $51 / 4 \mathrm{H} \times 17 / 1 / \mathrm{W} \times 141 / 2 \mathrm{D}$ |
| Weight | 12 Jbs 13 oz . |
| Type | Automatic repeat |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm{ }^{2} \%$ |
| Motor type | Brushiess, cordless, slotless FG DC servo |
| Drive type | Direct |
| Wow/Flutter | 0.035\% |
| Eff. arm mass | 14 grams |
| Cueing | Yes |
| VTF | 0.5 to 3 grams |
| Antiskating | 0.5 to 3 grams |
| Track. error | +3.-1 degrees |
| Headshell | Removable |
| Features peat memory; | Straight line low mass tonearm; re2 motors; optical shutoff mechanism |

## OPTONICA

Sharp Electronics Corp.
10 Keystone Place
Paramus, N.J. 07652

| RP-7705 |  |
| :---: | :---: |
| Price | \$400 |
| Dimensions | $43 / 10 \mathrm{H} \times 189 / 10 \mathrm{~W} \times 151 / 1$ |
| Weight | 20 lbs . |
| Type | Automatic repeat |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 4 \%$ |
| Motor type | DC servo with quartz-locked sy tem |
| Drive type | Direct |
| Rumble | $-70 \mathrm{~dB}$ |
| Wow/Flutter | Weighted per DIN B standard |
| Cueing | Yes |
| VTF | 1 to 4 grams |
| Antiskating | 1 to 4 grams |
| Resonance | 8 Hz |
| Headshell | Removabie |
|  | APL |
| vise) with separate sensor arm; auto record size sensor; separate arm motor; soft-touch frontmounted controls |  |
|  |  |
|  |  |

RP 7505

| Price | $\$ 280$ |
| :--- | :--- |
| Dimensions | $57 / 6 \mathrm{H} \times 181 / 4 \mathrm{~W} \times 14 \mathrm{y} / 4 \mathrm{D}$ |
| Weight | 20 lbs. |


| Type | Fully automatic |
| :--- | :--- |
| Speed adj. | $\pm{ }^{4 \%}$ |
| Motor type | Frequency-generator DC coreless |
| Drive type | Direct |
| Rumble | -70 dB (DIN B) |
| Wow/Flutter | $0.03 \%$ (JIS) |
| VTF | 1 to 4 grams |
| Antiskating | 1 to 3 grams |
| Resonance | 8 Hz |
| Features | Metal-impregnated resin base |
|  |  |
| Models also available |  |
|  |  |
|  | RP-4705, $\$ 280 ;$ RP-7205, $\$ 200$ |

PHASE LINEAR
Phase Linear Corp. 20121 48th Ave. W. Lynnwood, Wash. 98036

| 8000 Series Two |  |
| :---: | :---: |
| Price | \$749.95 |
| Dimensions | $6 \mathrm{H} \times 192 / 5 \mathrm{~W} \times 171$ |
| Weight | 26 lbs 802. |
| Type | Fully automatic, auto ual |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 0 \%$ |
| Motor type | DC (totally enclosed) |
| Drive type | Direct quartz-locked fect |
| Rumble | -78 dB (weighted per dard) |
| Wow/Flutter | 0.013\% |
| Cueing | Yes |
| VTF | 0 to 5 grams |
| Track. error | 0 degree |
| Headshell | Removable |
| Features | Linear motor; tan |
| tonearm; spee | deviation less than |
|  |  |
| PHILIPS |  |
| Philips High Fidelity |  |
| Laboratories |  |
| P.O. Box 2208 |  |
| Ft. Wayne, Ind. 46801 |  |

AF-977

| Price | $\$ 300$ |
| :--- | :--- |
| Speeds | $331 / 3 ; 45$ |
| Drive type | Direct contro |

Drive type Direct control
Wow/Flutter 0.02\%
AF-829
Price $\$ 300$
Speeds 33 1/3;45
Wow/Flutter 0.03\%
AF-877
Price
Dimensions
Weight
Type
Speeds
Speed adj.
Motor type
Drive type
Rumble
70 dB (DIN B)
Wh
. arm mass 16.5 grams
$\begin{array}{ll}\text { VTF } & 0 \text { to } 3 \text { grams } \\ \text { Antiskating } & 0 \text { to } 3 \text { grams }\end{array}$
Resonance 10 Hz (with test cartridge)

Track. error $0^{\circ} 9^{\prime} / \mathrm{cm}$
Headshell Removable
Features Free-floating subchassis; touch controls; LED speed readout; pitch controls; directread stylus-force gauge; photoelectronic stop

| GA-406 |  |
| :--- | :--- |
| Price | $\$ 170$ |
| Dimensions | $53 / 4 \mathrm{H} \times 163 / \mathrm{WW} \times 131 / 2 \mathrm{D}$ |
| Weight | 14 lbs. |
| Type | Changer |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 3 \%$ |
| Motor type | 2 DC servomotors |
| Drive type | Belt |
| Rumble | -60 dB (DIN B) |
| Wow/Flutter | $0.1 \%$ (DIN) |
| Cueing | Yes |
| VTF | 0 to 4 grams |
| Antiskating | 0 to 4 grams |
| Track. error | 9 min/cm |
| Headshell | Fixed |
| Features | Automatic speed and record diam- |
| eter selection; separate drive systems for play and |  |
| change cycles |  |

AF-677
Price $\$ 150$
Wow/Flutter 0.04\%

## Models also available <br> AF-867, \$230; AF-777, \$200; AF685, \$139.95

## PIONEER

U.S. Pioneer Electronics Corp. 85 Oxford Drive
Moonachie, N.J. 07074
PL-630
Price $\$ 44$
Dimensions $53 / 4 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 161 / 2 \mathrm{D}$
Weight $\quad 26 \mathrm{lbs} .8 \mathrm{oz}$.
Type Automatic repeat
Speed adj. $\quad \pm 6 \%$
Motor type Quartz PLL Hall-effect
Drive type Direct
Rumble $\quad 75 \mathrm{~dB}$ (DIN B)
Wow/Flutter $0.025 \%$ (WRMS)
VTF $\quad 0$ to 4 grams
Antiskating 0 to 4 grams
Features Anti-feedback cabinet and coaxial suspension; static-balanced S-shaped tonearm with 4-point gimbal support; magnesium die-cast headshell; quick stop, quick play; LED function indicators

## PL-560

Price $\$ 329$
Dimensions $53 / 4 \mathrm{H} \times 18 \mathrm{~W} \times 143 / 8 \mathrm{D}$
Weight 23 lbs .
Type Automatic repeat
Speed adj. $\pm 6 \%$
Motor type Quartz PLL Hali-effect
Drive type Direct
Rumble $\quad 73 \mathrm{~dB}$ (DIN B)
Wow/Fiutter 0.025\% (WRMS)
VTF 0 to 4 grams
Antiskating 0 to 4 grams
Features Anti-feedback solid-board cabinet and rubber/spring insulator; static-balanced Sshaped tonearm with aluminum die-cast base; glass-fiber headshell; strobe illumination light

PL-518
Price $\$ 189$
Dimensions $55 / 8 \mathrm{H} \times 173 / 8 \mathrm{~W} \times 143 / 8 \mathrm{D}$
Weight 21 lbs.
Type Semiautomatic
Speed adj: $\pm 2 \%$


Revor B-790


| Motor type | DC servo |
| :--- | :--- |
| Drive type | Direct |
| Rumble | -73 dB (DIN B) |
| Wow/Flutter | $0.03 \%$ (WRMS) |
| VTF | 0 to 4 grams |
| Antiskating | 0 to 4 grams |
| Track. error | $+3,-1$ degrees (0.525 degree/in) |
| Features | Low-feedback construction |

## Models also available

PL-610, \$399; PL-540, \$249; PL 516, \$159; PL-514, \$139

REALISTIC
Radio Shack
1400 One Tandy Center
Ft. Worth, Texas 76102

LAB-500

| Price | $\$ 259.95$ (with cartridge) |
| :--- | :--- |
| Dimensions | $61 / 8 \mathrm{H} \times 18 \% \mathrm{~W} \times 153 / 16 \mathrm{D}$ |
| Type | Automatic repeat |
| Speeds | $331 / 3 ; 45$ |
| Motor type | $12-$ pole brushless DC servo |
| Drive type | Direct |
| Rumble | -68 dB |
| Wow/Flutter | $0.04 \%$ |
| Cueing | Yes |
| Headshell | Removable |
| Features | Quartz-locked for 0.0005\% speed |
| accuracy; 3.1 lbs. aluminum alloy die-cast platter |  |

## Models also available

LAB-400, $\$ 200$ (with cartridge);
LAB-260, $\$ 139.95$ (with cartridge)

## REFERENCE

CBS Retail Stores
1301 65th St.
Emeryville, Calif. 94608

|  |  |
| :--- | :--- |
| $620 T$ |  |
| Price | $\$ 249.95$ |
| Dimensions | $61 / 10 \mathrm{H} \times 18 \mathrm{~W} \times 131 / 5 \mathrm{D}$ |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 3 \%$ (strobe) |
| Motor type | 2 -pole 30 -slot DC servo |
| Drive type | Direct |
| Rumble | -70 dB (weighted per DIN B stan- |
|  | dard) |
| Cueing | No |
| VTF | 0 to 3 grams |
| Features | Adjustable antiskate; automatic |
| shutoff |  |



Models also available
510T, \$139.95

## REGA <br> Import Audio 13430 Clayton Rd. <br> St. Louis, Mo. 63131

Planar 3
Price $\quad \$ 360$ (without arm); $\$ 485$ (with
Oimensions $5 \mathrm{H} \times 17^{1 / 2} \mathrm{~W} \times 14 \mathrm{D}$
Type
Motor type 24 -pole synchronous
Drive type
VTF
Track. 0 to 3 grams
Track. error 1.5 degree/in
Features Precision-ground glass platter; includes base, dust cover, felt mat for records

Planar 2

| Price | $\$ 270$ (without arm); $\$ 375$ (with |
| :--- | :--- |
|  | arm) |
| Dimensions | $43 / 4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 141 / 2 \mathrm{D}$ |
| Type | Manual |
| Motor type | 24 -pole synchronous |
| Drive type | Belt |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 3 grams |
| Track. error | 1.5 degree/in |
| Features | Precision-ground glass platter; in- |
| cludes base, dust cover, rubber mat for records |  |

## REVOX

Studer ReVox America, Inc. 1819 Broadway
Nashville, Tenn. 37203

| B-790 |  |
| :--- | :--- |
| Price | 5899 with Ortofon cartridge |
| Dimensions | $55 / \mathrm{HH} \times 17 \mathrm{H} / \mathrm{W} \times 15 \mathrm{D}$ |
| Weight | $24 \mathrm{lbs.40z}$. |
| Type | Semiautomatic |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 7 \%$ |
| Motor type | Quartz-controlled PLL servo |
| Drive type | Direct |
| Rumble | -68 dB (DIN-weighted) (DIN) |
| Wow/Flutter | $0.05 \%$ (DIN-weighted) |
| Eff. arm mass 1 gram |  |
| Cueing | $Y$ OS |
| VTF | 0.5 to 2 grams |



Antiskating Not required
Resonance 12 to 15 Hz (with Ortofon cartridge)
Track. error 0.5 degree
Headshell No headshell used, due to true tan-
gential-tracking design
Features True tangential tracking with optoelectronic servo control; radical 4-cm tonearm has negligible mass; digital speed display

## ROTEL

Rotel of America, Inc.
1055 Saw Mill River Road
Ardsley, N.Y. 10502

## RP-9400

Price $\$ 375$
Dimensions $6 \mathrm{H} \times 1723 / 32 \mathrm{~W} \times 14 \mathrm{D}$
Weight 19 lbs.
Type Automatic repeat
Speeds $\quad 331 / 3 ; 45$
Speed adj. $\pm 4 \%$ (strobe)
Motor type Quartz-lock PLL DC servo
Drive type Direct
Wow/Flutter $0.025 \%$ (weighted per DIN B standard)
Cueing Yes
VTF $\quad 0.7$ to 3 grams
Antiskating 0 to 3 grams
Headshell Removable
Features Two independent motors; frontpanel controls; low mass, static balanced straight tonearm; removable cover; light glass fiber headshell

RP-2400

| Price | $\$ 160$ |
| :--- | :--- |
| Dimensions | $51 / \mathrm{H} \times 1723 / 32 \mathrm{~W} \times 1325 / 32 \mathrm{D}$ |
| Weight | 13 lbs |
| Type | Semiautomatic |
| Speeds | $331 / 3 ; 45$ |
| Motor type | 4 -pole hysteresis synchronous |
| Drive type | Selt |
| Wow/Rutter | $0.06 \%$ |
| Cueing | Yes |
| VTF | 1 to 3 grams |
| Antiskating | 0 to 3 grams |
| Headshell | Removable |

## Models also available

RP-6400, \$235; RP-4400, \$200

## SANSU <br> Sansui Electronics Corp. 1250 Valley Brook Ave. Lyndhurst, N.J. 07071

SR-929
Price
$\begin{array}{ll}\text { Price } & \$ 530 \\ \text { Dimensions } & 6 / 8 \mathrm{H} \times 195 / 16 \mathrm{~W} \times 15 \mathrm{D} \\ \text { Weight } & 36 \mathrm{los.} 6 \mathrm{oz} . \\ \text { Type } & \text { Mant }\end{array}$
Speeds $\quad 331 / 3 ; 45$
Speed adj. $\pm 3.5 \%$
Motor type $\quad 20$-pole, 30 -slot DC brushless with built-in frequency generator
Drive ty

Rumble $\quad-74 \mathrm{~dB}$ (DIN B)
Wow/Flutter $0.022 \%$ (WRMS)
Cueing Yes
VTF 0 to 2 grams
Antiskating 0 to 2 grams
Headshell Removable
Features Quartz-servo; strobe; heavyweight cabinet (a solid-particle board enclosure mounted on a resin-concrete base) with removable, free-stop hinged dust cover and height-adjustable insulators

XR-Q9
Price
$\begin{array}{ll}\text { Price } & \$ 500 \\ \text { Type } & \text { Fully automatic } \\ \text { Speeds } & 331 / 3 ; 45\end{array}$
Motor type Quartz-PLL servo
Drive type Direct
Rumble $\quad-78 \mathrm{~dB}$ (weighted per DIN B standard)
Wow/Flutter $0.018 \%$ (weighted per WRMS standard)
Cueing Yes
Features LSI logic control; DOB straight tonearm; magnetic pulse speed regulation system; acoustic and physical isolation of tonearm and motor; bulk molding compound base; black piano finish; front controls; dust cover

FR-Q5

| Price | $\$ 340$ |
| :--- | :--- |
| Dimensions | $51 / 4 \mathrm{H} \times 1711 / 32 \mathrm{~W} \times 15 \mathrm{5} / 32 \mathrm{D}$ |
| Weight | 15 lbs 2 oz. |
| Type | Fully automatic |
| Speeds | $331 / 3 ; 45$ |
| Motor type | DC brushless quartz pulse ser- |
|  | vomotor |
| Drive type | Direct |
| Rumble | -75 dB (weighted per DIN B stan- |
|  | dard) |
| Wow/Flutter | $0.018 \%$ (weighted per WRMS- |
|  | direct standard) |
| Cueing | Yes |
| Headshell | Removable |
| Features | Front controls; strobe; dust cover; |
| dyna-optimum balanced tonearm; CPU computer- |  |

dyna-optimum balanced tonearm; CPU computercontrolled; magnetic pulse speed regulator system

## Models also available

SR-838, \$440; FR-D4, \$240; FRD3, \$190; SR-B200S, \$135

SANYO
Sanyo Electric Inc.
Consumer Electronics Div.
1200 W. Artesia Blvd.
Compton, Calif. 90220

TP-1030

| Price | $\$ 169.95$ |
| :--- | :--- |
| Dimensions | $61 / 2 \mathrm{H} \times 183 / \mathrm{W} \times 15 \mathrm{D}$ |
| Type | Fully automatic |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | Pitch control (with strobe) |
| Motor type | Brushless platter motor; DC tone- |
|  | arm motor |
| Drive type | Direct |
| Rumble | -70 dB |
| Wow/Flutter | $0.03 \%$ |


| Cueing | Viscous-damped |
| :--- | :--- |
| VTF | 0 to 3 grams |
| Antiskating | Adjustable; calibrated |
| Track. error | $\pm 15$ degrees |
| Headshell | Removable |
| Features | Electronic speed control; lateral |

counter-balance; stylu
PLUS SERIES
PLUS Q-50
Price $\$ 299.95$
Dimensions $6 \mathrm{H} \times 173 / 6 \mathrm{~W} \times 145 / 6 \mathrm{D}$
Type Fully automatic
Speeds $\quad 33$ 1/3;45
Speed adj. Pitch control
Motor type 20-pole, 30-slot brushless platter motor; DC tonearm motor
Drive type Direct
Rumble $\quad-73 \mathrm{~dB}$
Wow/Flutter $0.025 \%$
Eff. arm mass 15.4 grams
Cueing Yes
VTF $\quad 0$ to 3 grams
Antiskating Adjustable; calibrated
Track. error +1.5 degrees
Headshell Removable
Features High density platter; high-torque motor; carbon-fiber headshell; disc size selector;
cue control; suspension/isolation system

## PLUS Q-25

Price $\quad \$ 179.95$
Dimensions $51 / 2 \mathrm{H} \times 173 / 8 \mathrm{~W} \times 15 \mathrm{D}$
Type Semiautomatic
Speeds 33 1/3;45
Speed adj. Strobe
Motor type 20 -pole, 30 -slot brushless
Drive type Direct
Rumble $\quad-70 \mathrm{~dB}$
Wow/Flutter $0.03 \%$
Eff. arm mass 14.7 grams
Cueing Yes
VTF $\quad 0$ to 3 grams
Antiskating Adjustable; calibrated
Track. error $\pm 1.5$ degrees
Headshell Removable
Features Quartz-locked PLL speed control; straight, arm with ABS headshell, front panel controls; cue; reject; ultra low friction tonearm mounting; high density base; sealed rubber damped suspension

## Models also available

TP-1012/A, \$139.95; TP-1005, \$89.95; PLUS Q-60, \$549.95; PLUS Q-40, \$199.95
H. H. SCOTT
H. H. Scott, Inc.

20 Commerce Way
Woburn, Mass. 01801

PS-97XV
Price $\$ 260$
Dimensions $51 / 2 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 133 / 4 \mathrm{D}$
Weight 21 lbs
Type Automatic repeat
Speeds $\quad 33$ 1/3; 45
Speed adj.
Motor type $\quad \frac{ \pm}{72}$-pole FG AC servomotor
Orive type Direct
Wow/Flutter $0.03 \%$ (WRMS)
Eff. arm mass 15.6 grams
Cueing Yos
VTF $\quad 1$ to 3 grams
Antiskating 0 to 3 grams
Resonance 8.5 Hz
Headshell Removable

Features Quartz synthesizer speed lock with indicator; strobe light with adjustable speed control; record-size selector and spare headshell holder

PS-87A

| Price | $\$ 210$ |
| :--- | :--- |
| Dimenstons | $51 / 4 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 133 / 4 \mathrm{D}$ |

Weight 22 lbs
Type Automatic repeat
Speeds $\quad 33$ 1/3;45
Speed adj. $\pm 3 \%$
Motor type 72 -pole FG AC servomotor
Drive type Direct
Wow/Flutter $0.03 \%$ (WRMS)
Eff. arm mass 15.6 grams
Cueing Yes
VTF 1 to 3 grams
Antiskating 0 to $\mathbf{3}$ grams
Resonance 8.5 Hz
Headshell Removable
Features Strobe light with adjustable speed control; record-size selector; spare headshell holder

PS-47A

| Price | $\$ 140$ |
| :--- | :--- |
| Dimensions | $51 / 2 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 133 / 4 \mathrm{D}$ |
| Weight | 15 lbs |
| Type | Semiautomatic |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 3 \%$ |
| Motor type | DC FG servo |
| Drive type | Belt |
| Wow/Flutter | $0.05 \%$ (WRMS) |
| Eff. arm mass 15.6 grams |  |
| Cueing | Yes |
| VTF | 1 to 4 grams |
| Antiskating | 1 to 3 grams |
| Resonance | 8.5 Hz |
| Headshell | Removable |
| Features | Strōbe light with adjustable speed |
| Control |  |

## control

## Models also available <br> PS-77XV, \$235; PS-67A, \$200; PS-17A, \$130

SERIES 20
Series 20
20 Jewell St.
Moonachie, N.J. 07074
PLC-590
Price $\$ 550$
Dimensions $71 / 4 \mathrm{H} \times 191 / 4 \mathrm{~W} \times 16 \mathrm{D}$
Weight 31 lbs .
Type Manual
Speed adj. $\pm 6 \%$
Motor type Quartz PLL Hall motor
Drive type Direct
Rumble $\quad-75 \mathrm{~dB}$ (DIN B)
Wow/Flutter 0.025\% (WRMS)
Features Sold without tonearm; high-torque
motor; die-cast aluminum base

## SONEX

Anglo American Audio
P.O. Box 653

Buffalo, N.Y. 14240

## SX-100

Price $\$ 395$
Dimensions $52 / 5 \mathrm{H} \times 173 / 10 \mathrm{~W} \times 133 / 5 \mathrm{D}$
Weight $\quad 19 \mathrm{lbs} 13 \mathrm{oz}$
Type Manual single-play
Speeds $\quad 33$ 1/3; 45
Motor type 24 -pole hysterisis
Drive type Belt
Rumble $\quad-48 \mathrm{~dB}$ (weighed per DIN standard)
Wow/Flutter $0.04 \%$ (weighed per DIN standard)
Cueing Yes

| VTF | 0 to 3.5 grams |
| :---: | :---: |
| Antiskating | 0 to 3.5 grams |
| Headshell | Removable |
| Features and stop | Automatic end-of-record arm-lift |
| SX-500 |  |
| Price | \$295 |
| Dimensions | $52 / 5 \mathrm{H} \times 173 / 10 \mathrm{~W} \times 133 / 5 \mathrm{D}$ |
| Weight | 19 lbs .13 oz . |
| Type | Manual single-play |
| Speeds | 33 1/3; 45 |
| Motor type | 24-pole hysterisis |
| Drive type | Belt |
| Rumble | -48 dB |
| Wow/Flutter | $0.04 \%$ (weighted per DIN standard) |
| Features | Single-point bearing |

SONY
Sony Corp. of America
9 West 57th St.
New York, N.Y. 10019
PS-D80

| Price | $\$ 1,800$ |
| :--- | :--- | :--- | :--- | :--- |
| Dimensions | $715 / 16 \mathrm{H} \times 19 \quad 15 / 16 \mathrm{~W} \times 16$ |
|  | $15 / 16 \mathrm{D}$ |
| Weight | 33 lbs. |
| Type | Fully automatic |
| Speeds | $331 / 3 ; 45$ |
| Motor type | DC |
| Drive type | Direct |
| Rumble | -78 dB (weighted per DIN B stan- |
|  | dard) |
| Wow/Flutter | $0.02 \%$ (weighted per WRMS stan- |
|  | dard) |
|  |  |
| Eff. arm mass Electronically variable |  |
| Cueing | Yes |
| VTF | 0.5 to 3 grams |
| Antiskating | 0.5 to 3 grams |
| Headshell | Removable |
| Features | Fully electronic 4 motor velocity |
| teedback system with microprocessor control |  |

feedback system with microprocessor control
PS-X70

| Price | $\$ 500$ |
| :--- | :--- |
| Dimensions | $61 / a \mathrm{H} \times 1815 / 16 \mathrm{~W} \times 169 / 16 \mathrm{D}$ |
| Weight | 28 lbs 4 oz. |
| Type | Fully automatic |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 10 \%$ |
| Motor type | DC |
| Drive type | Direct |
| Rumble | -75 dB (weighted per DIN B stan- |
|  | dard) |
| Wow/Flutter | $0.025 \%$ (weighted per WRMS |
|  | standard) |
| Cueing | Yes |
| VTF | 0 to 2.5 grams |
| Antlskating | 0 to 2.5 grams |
| Track. error | +2 degrees, 27 min., -1 degree, 30 |
|  | min |
| Headshell | Removable |
| Features | Front-mounted controls; LED func- |

tion indicators; separate tonearm motor

## PS-X7

## Price

 Type Speed adj.$\$ 350$
Automatic
Quartz-controlled; speed accuracy 0.003\%

Motor type Brushless/slotless DC servo
Drive type Direct
Rumble $\quad-73 \mathrm{~dB}$ (DIN B)
Wow/Flutter $0.025 \%$ (WRMS)
VTF 0 to 3 grams
Antiskating 0 to 3 grams
Resonance 7 to 9 Hz
Features Carbon-flber arm; viscous-illed platter mat and rubber feet; 8-pole magnetic speed-monitoring head; acoustically dead base: optical sensor

| PS-X40 |  |
| :--- | :--- |
| Price | $\$ 275$ |
| Dimensions | $53 / 4 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 153 / 4 \mathrm{D}$ |
| Weight | 17 lbs 10 oz. |
| Type | Fully automatic |
| Speeds | $331 / 3 ; 45$ |
| Motor type | DC |
| Drive type | Direct |
| Rumble | -73 dB (weighted per DIN B stan- |
|  | dard) |
| Wow/Flutter | $0.025 \%$ (welghted per WRMS |
|  | standard) |
| Cueing | Yes |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 3 grams |
| Track. error | $+3,-1$ degrees |
| Headshell | Removable |

PS-X5
Price $\$ 245$
Type Automatic
Speed adj. Quartz-controlled; speed accuracy $\pm 0.003 \%$
Motor type Brushless/slotess quartz-controlled DC servo
Drive type Direct
Rumble $\quad-73 \mathrm{~dB}$ (DIN B)
Wow/Flutter $0.025 \%$ (WRMS)
VTF $\quad 0$ to 3 grams
Antiskating 0 to 3 grams
Resonance 7 to 9 Hz
Features Eight-pole magnetic speed-monitoring head; acoustically dead base; viscous-filled feet; safety clutch

PS-T3
Price $\quad \$ 190$
Type Automatic
Speed adj.
Motor type Brushless/slotless DC servo
Drive type Direct
Rumble $\quad-70 \mathrm{~dB}$ (DIN B)
Wow/Flutter 0.03\% (WRMS)
VTF $\quad 0$ to 3 grams
Antiskating 0 to 3 grams
Resonance 7 to 9 Hz
Features Viscous-filled rubber feet; acoustically dead base; thick rubber platter mat

PS-T1

| Price | $\$ 140$ |
| :--- | :--- |
| Dimenslons | $51 / 2 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 143 / 4 \mathrm{D}$ |
| Weight | 111 lbs. |
| Type | Semlautomatic |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 4 \%$ |
| Motor type | DC |
| Drive type | Direct |
| Rumble | -68 dB (weighted per DIN B stan- |
|  | dard) |
| Wow/Flutter | $0.04 \%$ (weighted per WRMS stan- |
|  | dart) |
| Cueing | Yes |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 3 grams |
| Headshell | Removable |
| Features | Front-mounted controls |

## Models also available

PS-P7X, \$400; PS-X60, \$400; PS. X50, \$330; PS-X6, \$290; PS-X30, \$245; PS-X20, \$210; PS-T25, \$170; PS-T2, \$150

STANTON GYROPOISE
Stanton Magnetics, Inc.
200 Terminal Drive
Plainview, N.Y. 11803
800 5A/881S
Price $\$ 500$

8005M/881S

| Price | $\$ 450$ |
| :--- | :--- |
| Type | Manual |
| Features | Includes 881S cartridge |

8005A/681EEE

| Price | $\$ 440$ |
| :--- | :--- |
| Type | Semiautomatic |
| Features | Includes 681 EEE cartridge |

8005M
Price $\$ 300$
Type Manual

## Models also available

8005M/681EEE, \$390; 8005A, $\$ 350$

TEAC
Teac Corp. of America
7733 Telegraph Road Montebello, Calif. 90640

PX-500
Price $\$ 310$
Dimensions $63 / 10 \mathrm{H} \times 173 / 10 \mathrm{~W} \times 15 \mathrm{D}$
Weight $\quad 17 \mathrm{lbs} .10 \mathrm{oz}$
Type Semiautomatic
Speeds $\quad 33$ 1/3; 45
Motor type Quartz-lock DC
Drive type Direct
Rumble $\quad-170 \mathrm{~dB}$ (weighted per DIN standard)
Wow/Flutter 0.03\% (weighted per rms stan-
dard)

Cueing Yes
Headshell Removable
Features Front panel controls; gimbal sup-
port tonearm

## PX-300

Price $\$ 210$
Dimensions $63 / 10 \mathrm{H} \times 173 / 10 \mathrm{~W} \times 15 \mathrm{D}$
Weight $\quad 15 \mathrm{lbs} .702$.
Type Manual
Speeds 33 1/3; 45
Speed adj. $\pm 6 \%$
Motor type Brushless and slatless DC
Drive type Direct
Rumble $\quad-70 \mathrm{~dB}$ (weighted per DIN standard)
Wow/Flutter 0.03\% (weighted per RMS standard)
Cuelng Yes
Headshell Removable

## TECHNICS

Panasonic Co.
1 Panasonic Way
Secaucus, N.J. 07094
SP-1C Mk II
Price $\$ 900$
Dimensions $4 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 141 / 2 \mathrm{D}$
Weight 21 lbs .
Type Manual
Speeds $\quad 33$ 1/3; 45; 78
Speed adj. None
Motor type DC servo, quartz phase-locked
Drive type Direct
Rumble $\quad 78 \mathrm{~dB}$ (DIN B)
Wow/Flutter $0.025 \%$ (WRMS)
Features Sold without tonearm; builds up to full speed in 0.25 sec; stop time (dual braking) is 0.3 sec ; remote control; separate power supply; overall speed accuracy of $+0.002 \%( \pm 0.036$ sec in $1 / 2$ hour); high torque ( 5 kg cm or 4.3 lbs in)

SP-15
Price $\$ 600$
Dimensions $321 / 32 \mathrm{H} \times 133 / 4 \mathrm{~W} \times 1441 / 64 \mathrm{D}$
Weight $\quad 13 \mathrm{lbs} .11 \mathrm{oz}$.
Type Manual
Speeds $\quad 331 / 3 ; 45 ; 78$
Speed adj.
Motor type
Drive type
Rumble
$\pm 9.9 \%$
Brushless DC
Direct
-78 dB (weighted per DIN B 1EC 98A WTD standard); -56 dB DIN A TEC 98A unweighted)
Wow/Flutter 0.025\% (weighted per JiS C55213 WRMS standard; $+0.035 \%$ peak (weighted per IEC 98A)
Features Digitally displayed quartz synthesizer pitch control in $0.1 \%$ steps; high torque; 0.4 sec start/stop time; electronic/mechanical breaking with quick release; pulsed power supply prevents hum induction; rubber-damped platter underside

## SL-1600 Mk 2

Price $\$ 400$
Dimensions $5 / / \mathrm{H} \times 1727 / 32 \mathrm{~W} \times 1545 / 64 \mathrm{D}$
Weight 22 lbs.
Type Automatic repeat
Speeds $\quad 33$ 1/3; 45
Speed adj. $\pm 6 \%$
Motor type Brushless DC
Drive type Direct
Rumble $\quad-78 \mathrm{~dB}$ (weighted per DIN B IEC 98A weighted); -56 dB (DIN A, IEC 98A unweighted)
Wow/Flutter 0.025\% (weighted per JIS C5521 standard); $+0.035 \%$ peak (weighted per IEC 98A)
Eff. arm mass 12 grams
$\begin{array}{ll}\text { Cueing } & \text { Yes } \\ \text { VTF } & 0 \text { to } 2.5 \text { grams }\end{array}$
Antiskating 0 to 2.5 grams
Headshell Removable
Features Continuous, quartz-locked pltch control; high-torque underside damping mat on platter; automatic (infrared) disc size sensing; microcomputer controlled arm motion; pop-up styles illuminator; arm height adjustment

## SL-5350

Price $\$ 34$
Dimensions $73 / 32 \mathrm{H} \times 1659 / 74 \mathrm{~W} \times 1449 / 64 \mathrm{D}$
Weight $\quad 15 \mathrm{lbs} 11 \mathrm{oz}$
Type Changer
Speeds $\quad 33$ 1/3;45
$\begin{array}{ll}\text { Speed adj. } & \pm 6 \% \\ \text { Motor type } & \text { Brushless DC }\end{array}$
Drive type Direct
Rumble $\quad-78 \mathrm{~dB}$ (weighted per DIN B IEC 98A standard); -56 dB (DIN A, IEC 98A unweighted)
Wow/Flutter 0.025\% (weighted per JIS C5521 standard); $\pm 0.035$ peak, (unweighted per IEC 98A)

## $\begin{array}{ll}\text { Cueing } & \text { Yes } \\ \text { VTF } & 0 \text { to } 2.5 \text { grams }\end{array}$

Antiskating 0 to 2.5 grams
Track. error 0 degree 32 min at inner groove; 2 degrees, 32 min at outer groove
Headshell Removable
Features Defeatable quartz-locked pitch accuracy; nonresonant base; all front-panel controls; stylus illuminator

## SL-Q3

| Price | $\$ 240$ |
| :--- | :--- |
| Dimensions | $57 / 64 \mathrm{H} \times 1659 / 64 \mathrm{~W} \times 1449 / 64 \mathrm{D}$ |
| Weight | 15 Ibs .11 oz |
| Type | Automatic repeat |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 0 \%$ |
| Motor type | Brushless DC |
| Drive type | Direct |
| Rumbie | -78 dB (weighted per DIN B, IEC |
|  | $98 A$ standard); -56 dB (DIN A, IEC |

Wow/Flutter 0.05\% (weighted per JIS C5521 standard); $\pm 0.035$ peak (weighted per IEC 98A)
Eff. arm mass 12 grams
Cueing Yes
VTF $\quad 0$ to 2.5 grams
Antiskating 0 to 2.5 grams
Track. error 0 degree 32 min at inner grove; 2 degrees, 32 min at outer groove
Headshell Removable
Features Quartz, phase-locked accuracy; front-panel controls; nonresonant base

## SL-235

Price
$\$ 180$
Dimensions
Weight
Type
Speeds
Speed adj.
Motor type
$\times 167 / 8 \mathrm{~W} \times 143 / 4 \mathrm{D}$
10 lbs .10 oz

Drive type
Rumble
70 dB (DIN B)
Eff. arm mass 13 grams
Cueing Yes
VTF $\quad 0.25$ to 3 grams
Antiskating 0 to 3 grams
Track. error 0 degree, 32 min at inner groove; 2 degrees, 32 min at outer groove
Headshell Removable
Features Front-panel controls can be operated with dust cover closed; low-capacitance cables; includes Fiberglas-and-plastic base and dust cover

## SL/D3

$\begin{array}{ll}\text { Price } & \$ 170 \\ \text { Dimensions } & 57 / 64 \mathrm{H} \times 1659 / 64 \mathrm{~W} \times 1449 / 64 \mathrm{D}\end{array}$
Weight $\quad 15 \mathrm{lbs} 6 \mathrm{oz}$
Type Automatic repeat
Speeds $\quad 33$ 1/3; 45
Speed adj.
Motor type
Drive type
Rumble
$\pm 5 \%$
Servo DC
Direct
-75 dB (welghted per DIN B, IEC 98A standard); -53 dB (DIN A, IEC 98A unweighted)
Wow/Flutter $0.03 \%$ rms (weighted per JIS C5521 standard); $+0.042 \%$ peak (weighted per IEC 98A)
Eff. arm mass 12 grams
$\begin{array}{ll}\text { Cueing } & \text { Yes } \\ \text { VTF } & 0 \text { to } 2.5 \text { grams } \\ \text { Antiskating } & 0 \text { to } 2.5 \text { grams }\end{array}$
Track. error 0 degree 32 min at inner groove; 2

| Headshell | Regrees, 32 min at outer groove |
| :--- | :--- |
| Features | Front-panel controls; nonresonant |
| Fase |  |

base

## SL-D2

Price $\$ 150$
$\begin{array}{ll}\text { Weight } & 57 / 64 \mathrm{H} \times 1659 / 64 \mathrm{~W} \times 1449 / 64 \mathrm{D} \\ \text { Wimens } 302\end{array}$
Type Semtat
Speeds $\quad 33$ 1/3:45
Speed adj. $\pm 5$
Motor type Servo DC
Drive type
Rumble
-75 dB (weighted per DIN B, IEC 98A standard); -53 dB (DIN A, IEC 98A unweighted)
Wow/Flutter $0.03 \%$ (weighted per JIS C5521 standard); $\pm 0.042 \%$ peak (weighted per IEC 98A)
Eff. arm mass 12 grams
Cueing Yes
VTF $\quad 0$ to 2.5 grams
Antiskating 0 to 2.5 grams
Track. error 0 degree 32 min at inner groove; 2 degrees, 32 min at outer groove
Headshell Removable
Features Same as Model SL-D3

SL-B2
Price $\$ 130$
Dimensions $431 / 32 \mathrm{H} \times 1659 / 64 \mathrm{~W} \times 14$ 49/64D
Weight 9 lbs. 14 oz.
Type Semiautomatic
Speeds $\quad 33$ 1/3;45
Speed adj. $\pm 3 \%$
Motor type Servo DC
Drive type Belt
Rumble $\quad-70 \mathrm{~dB}$ (weighted per DIN B, IEC 98A unweighted standard)
Wow/Flutter $0.045 \%$ (weighted per JIS C5521 standard); $\pm 0.06 \%$ peak, (weighted per IEC 98A)
Eff. arm mass 12 grams
Cueing $Y \theta s$
VTF $\quad 0$ to 3 grams
Antiskating 0 to 3 grams
Track. error 0 degree 32 min at inner groove; 2 degrees, 32 min at outer groove
Headshell Removable

## Models also available

SP-25, \$400; SL-1700 Mk.2, \$350; SL-1200 Mk.2. \$350; SL-1800 Mk.2, \$300; SL-3350, \$240; SLQ2, \$200; SL-B3, \$150; SL-D1, \$125; SL-B1, \$100

## THORENS

## Elpa Marketing <br> Thorens and Atlantic Aves. <br> New Hyde Park, N.Y. 11040

| TD-126C | MK III |
| :--- | :--- |
| Price | $\$ 825$ |
| Dimensions | $63 / 4 \mathrm{H} \times 197 / \mathrm{WW} \times 151 / 2 \mathrm{D}$ |
| Weight | 31 lbs. |
| Type | Semiautomatic |
| Speeds | $331 / 3 ; 45 ; 78$ |
| Speed adj. | $\pm 6 \%$ |
| Motor type | DC |
| Drive type | Belt |
| Rumble | -72 dB (weighted per DIN stan- |
|  | dard) |
| Wow/Flutter | $0.04 \%$ |
| Eff. arm mass 7.5 grams |  |
| Cueing | Yes |
| VTF | 0.5 to 3 grams |
| Antiskating | 0.05 to 0.30 grams |
| Resonance | 10 Hz (with Stanton 681 EEE Car- |
|  | tridge) |
| Track. error | 0.18 degree/cm radius |
| Headshell | Removable |
| Features | Automatic Pitch Control (APC) cor- |
| rects turntable speed with change in head on turn- |  |
| table |  |

table

## TD-115C

Price $\$ 450$
Dimensions $51 / 8 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 141 / 4 \mathrm{D}$
Weight $\quad 15 \mathrm{lbs} .8 \mathrm{oz}$
Type Semiautomatic
Speeds 33 1/3; 45
Speed adj.
Motor type
Drive type
Rumble
$\pm 6 \%$
-68 dB (weighted per DIN standard)
Wow/Flutter 0.05\% (weighted per DIN standard)
Eff. arm mass 7.5 grams
Cueing Yes
VTF $\quad 0.5$ to 3.0 grams
Antlskating 0.05 to 0.30 grams
Resonance 10 Hz (with Stanton 681EEE Cartridge)
Track. error 0.18 degree $/ \mathrm{cm}$ in radius
Headshell Removable
Features Automatic Pitch Control (APC) corrects turntable speed with change in load on turntable

| TD-104 |  |
| :---: | :---: |
| Price | \$285 |
| Dimensions | $5 \mathrm{H} \times 171 / 8 \mathrm{~W} \times 151 / 2 \mathrm{D}$ |
| Weight | 12 lbs . |
| Type | Manual |
| Speeds | 33 1/3; 45 |
| Speed adj. | $\pm 6 \%$ |
| Motor type | DC |
| Drive type | Belt |
| Rumble | -65 dB (weighted per DIN stan- dard) |
| Wow/Flutter | $0.05 \%$ (weighted per DIN standard) |
| Eff. arm mas | 7.5 grams |
| Cueing | Yes |
| VTF | 0.5 to 3.0 grams |
| Antiskating | 0.05 to 0.30 grams |
| Resonance | 10 Hz (with Stanton 681EEE cartridge) |
| Track. error | 0.18 degree/cm in radius |
| Headshell | Removable |
| Features | Sensor touch button control |

## Models also available

TD-126B MK III, $\$ 675$ (tonearm not included); TD-110, \$360; TD-105, \$350; TD-160B MK II, \$295 (tonearm not included)

## TOSHIBA

Toshiba America, Inc.
280 Park Ave.
New York, N.Y. 10017

SR-F770

| Price | $\$ 199.95$ |
| :--- | :--- |
| Dimensions | $59 / 10 \mathrm{H} \times 173 / 5 \mathrm{~W} \times 139 / 10 \mathrm{D}$ |
| Weight | 16 lbs .2 oz. |
| Type | Fully automatic |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 3 \%$ |
| Motor type | DC servo |
| Drlve type | Direct |
| Rumble | -70 dB |
| Wow/Flutter | $0.026 \%$ |
| Cueing | Yes |
|  |  |
| SR-F451 |  |
| Price | $\$ 149.95$ |
| Dimensions | $51 / 2 \mathrm{H} \times 163 / 5 \mathrm{~W} \times 14 \mathrm{1/10D}$ |
| Weight | 12 lbs 2 oz |
| Type | Fully automatic |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | $\pm 3 \%$ |
| Motor type | DC servo |
| Drive type | Belt |
| Rumble | -65 dB |

SR-A272

| Price | $\$ 144.95$ |
| :--- | :--- |
| Dimensions | $57 / 10 \mathrm{H} \times 173 / 5 \mathrm{~W} \times 14 \mathrm{1/10D}$ |
| Weight | 13 lbs 3 oz. |
| Type | Semiautomatic |
| Speeds | $331 / 3 ; 45$ |
| Motor type | Four-pole |
| Drive type | Belt |
| Rumble | -65 dB |
| Cueing | Yes |

## Models also available

SR-FX70, \$299.95; SR-F452. \$179.95; SR-F450, \$149.95; SRA270, \$114.95

TRANSCRIBER
Hortley Products Corp.
620 Island Road
Ramsey, N.J. 07446

| Transcriber |  |
| :--- | :--- |
| Trice | $\$ 799$ |
| Dimensions | $63 / 4 \mathrm{H} \times 211 / 4 \mathrm{~W} \times 143 / 8 \mathrm{D}$ |
| Weight | 37 lbs |
| Type | Manual |
| Speeds | $331 / 3 ; 45$ |
| Speed adj. | None |
| Motor type | DC servo |
| Drive type | Belt |
| Wow/Flutter | $0.05 \%$ |
| Eff. arm mass 13.4 grams |  |
| Cueing | Yes |
| VTF | 0.1 to 0.5 grams |
| Track. error | 0.1 degree |
| Headshell | Removable |
| Features | With Ortofon cartridge; transversal |
| moving platter; all glass housing |  |

## VISONIK HI FI Visonik of America 701 Heinze Ave.

Berkeley, Calif. 94710

| VT-9300 |  |
| :---: | :---: |
| Price | \$400 |
| Dimensions | $53 / 3 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 143 / 8 \mathrm{D}$ |
| Weight | 23 lbs . |
| Type | Fully automatic |
| Speeds | $331 / 3 ; 45$ |
| Motor type | Quartz-locked servo |
| Drive type | Direct |
| Rumble | -75 dB (weighted per DIN standard) |
| Wow/Flutter | 4\% (weighted per DIN standard) |
| Cueing | Yes |
| VTF | 0 to 2.5 grams |
| Antiskating | 0 to 2.5 grams |
| Track. error | 0.016 degrees |
| Headshell | Removable |
| Features | Low mass straight tonearm |
| VT-7300 |  |
| Price | \$250 |
| Dimensions | $53 / 8 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 143 / 8 \mathrm{D}$ |
| Weight | $17 \mathrm{lbs}$.9 oz . |
| Type | Semiautomatic |
| Speeds | 33 1/3: 45 |
| Speed adj. | $\pm 4 \%$ |
| Motor type | DC servo |
| Drive type | Belt |
| Rumble | -68 dB (weighted per DIN standard) |
| Wow/Flutter | $0.06 \%$ (weighted per DIN standard) |
| Cueing | Yes |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 3 grams |
| Track. error | 0.016 degree |
| Headshell | Removable |
| Features | Low mass straight tonearm |
| VT-3300 |  |
| Price | \$165 |
| Dimensions | $53 / 6 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 143 / 8 \mathrm{C}$ |
| Weight | 14 lbs .6 oz . |
| Type | Semiautomatic |
| Speeds | $331 / 3 ; 45$ |
| Motor type | Hysteresis synchronous |
| Drive type | Belt |
| Rumble | -65 dB (weighted per DIN standard) |
| Wow/Flutter | . $09 \%$ (weighted per DIN standard) |
| Cueing | Yes |
| VTF | 0 to 3 grams |
| Antiskating | 0 to 3 grams |
| Track. error | 0.016 degree |
| Headshell | Removable |
| Features | Low mass straight tonearm |

## Models aiso available

VT-8300, \$300; VT-5300, \$215

YAMAHA
Yamaha International Corp. 6600 Orangethorpe Ave.
Buena Park, Calif. 90620
YP-D10
Price $\$ 670$
Dimensions $63 / 6 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 141 / 6 \mathrm{D}$
Weight $\quad 35 \mathrm{lbs}$.
Type Semiautomatic
Speeds $\quad 331 / 3 ; 45$
Speed adj. $\pm 3 \%$
Motor type $\frac{1}{12}$-pole 24 -slot Hall-effect DC
servo
Drive type Direct
Wow/Fiutter $0.03 \%$
Cueing Oil damped
Headshell Removable
Features Double FG/quartz PLL servosys-
tems; opto-electrical Silent Ending System

| YP-D71 |  |
| :---: | :---: |
| Price | \$330 |
| Dimensions | $61 / 10 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 141 / 3 \mathrm{D}$ |
| Weight | $24 \mathrm{lbs}$.4 oz . |
| Type | Semiautomatic |
| Speeds | 331/3; 45 |
| Motor type | Coreless quartz-locked Hall |
| Drive type | Direct |
| Wow/Flutter | 0.025\% (weighted per WRMS standard); $\pm 0.035 \%$ peak (weighted per IEC 98A) |
| Cueing | Yes |
| Antiskating | Yes |
| Track. error | +2 degrees, 30 min ; - 1 degree |
| Headshell | Removable |
| Features | High sensitivity gimbal support |
| tonearm; opto-electronic auto stop mechanism |  |

## YP-D4

| Price | \$230 |
| :---: | :---: |
| Dimensions | $51 / 2 \mathrm{H} \times 171 / 6 \mathrm{~W} \times 143 / 16 \mathrm{D}$ |
| Weight | 17 lbs 10 oz . |
| Type | Semiautomatic |
| Speeds | $331 / 3 ; 45$ |
| Speed ad]. | $\pm 4 \%$ |
| Motor type | Coreless Hall motor |
| Drive type | Direct |
| Wow/Flutter | $\pm 0.055 \%$ (weighted per IEC 98A standard) |
| Cueing | Yes |
| VTF | 0 to 3 grams |
| Antiskating | Yes |
| Resonance | $-10 \mathrm{~Hz}$ |
| Headshell | Removable |
| YP-82 |  |
| Price | \$140 |
| Dimensions | 51/8H $\times 171 / 6 \mathrm{~W} \times 141 / 4 \mathrm{D}$ |
| Weight | $13 \mathrm{lbs}$.3 oz . |
| Type | Semiautomatic |
| Speeds | $331 / 3 ; 45$ |
| Motor type | 4-pole synchronous |
| Drive type | Belt |
| Wow/Flutter | 0.08\% (weighted per A standard) |
| Cueing | Yes |
| VTF | 0.5 to 3 grams |
| Antiskating | 0.5 to 3 grams |
| Headshell | Removable |
| Features shaped tore | Auto return; antiskate dial; S- |
| Models also available |  |
|  | YP-D8, \$440; YP-B4, \$180 |

## A Note on Prices

Prices shown in these pages are manufacturers' or importers' nationally advertised values, updated as is feasible by press time.

# Tape Equipment 

## Open-Reel Recorders

AKAI
Akai America, Ltd.
2139 E. Del Amo Blvd.
P.O. Box 6010

Compton, Calif. 90224

## PRO-1000

Price $\quad \$ 1,995$
Reel size $101 / 2^{\prime \prime}$
Format 2, 4-track/2-channel playback; 2 -track/2-channel recording
Heads
Speeds $\quad 15 ; 71 / 2 ; 33 / 4$
Flutter $\quad 0.025 \%$ (WRMS) (15); 0.04\% (WRMS) ( $71 / 2$ ); $0.08 \%$ (WRMS) ( $3^{3 / 4}$ )
Fast-forward $120 \mathrm{sec}(1,800)$
Rewind $120 \sec \left(1,800^{\prime}\right)$
Noise red. None
Input sens. 70 mV (line); 0.3 mV (mic)
Output level 775 mV (line); 300 mV (mixer)
Impedance 100 ohms (line); less than 1 K ohms (mixer)
Min. load 10 K ohms (line); 20K ohms (mixer)
Erasure $\quad 70 \mathrm{~dB}(1 \mathrm{kHz})$
Meters $\quad 2 \mathrm{VU}$; peak and bias reading -40 $d B$ to $+5 d B$ )
Features Servomotor; direct capstan drive;
double capstan; pan-pot mixing
Tape \#1 Scotch 206
$R / P$ resp. $\quad 50 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ (15) (0) VU); 40 Hz to $24 \mathrm{kHz}, \pm 3 \mathrm{~dB}(71 / 2)$ (0 VU); 60 Hz to $12 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ ( $33 / 4$ ) ( 0 VU )
S/N 60 dB
S/N ref. IvI. DIN A
THD
THD ref. IvI. 0 VU
GX-630DSS

| Price | \$1,225 |
| :---: | :---: |
| Reel size | $10^{1 / 22^{n}}$ |
| Format | 4-track/4- or 2-channel |
| Heads | 4 |
| Speeds | 71/2; $33 / 4$ |
| Flutter | $\begin{aligned} & 0.06 \% ~(W R M S)(7 \quad 1 / 2) ; \quad 0.09 \% \\ & \text { (WRMS) (3 3/4) } \end{aligned}$ |
| Fast-forward | $120 \sec (2,400)$ |
| Rewind | $120 \mathrm{sec}(2,400)$ |
| Noise red. | None |
| Input sens. | 70 mV (line); 0.25 mV (mic) |
| Output level | 775 mV |
| Min. load | 20 K ohms |
| Erasure | 70 dB ( 1 kHz ) |
| Meters | $2 \mathrm{VU}-20 \mathrm{~dB}$ to +5 dB ) |
| Features | Direct-capstan $A C$ servo-s |

control; 4 VU meters; quadra-sync; direct function; pitch control; remote control; 3 motors; mic/line mixing
Tape \# $1 \quad$ Scotch 211
R/P resp. $\quad 30 \mathrm{~Hz}$ to $21 \mathrm{kHz}, \pm 3 \mathrm{~dB}(71 / 2)_{4} 30$ Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}(3 \mathrm{k} / 4)$
S/N 54 dB
S/N ref. IvI. +6 VU (DIN A)
THD $\quad 0.5 \%(71 / 2)$
THD ref. IvI. 0 VU

## GX-270DSS

Price $\quad \$ 1,050$
Reel size
Format
Heads 4
4-track/4- or 2-channel
Speeds $\quad 71 / 2 ; 33 / 4$
Flutter $\quad 0.07 \%$ (WRMS) ( $71 / 2$ ); $0.1 \%$ (WRMS) ( $3^{3 / 4}$ )
Fast-forward $75 \mathrm{sec}\left(1,200^{\prime}\right)$
Rewind $\quad 75 \mathrm{sec}\left(1,200^{\prime}\right)$
Noise red. None
Input sens. 70 mV (line); 0.3 mV (mic)
Output level 775 mV
Min. load 20 K ohms
Erasure $\quad 70 \mathrm{~dB}(1 \mathrm{kHz})$
Meters $\quad 2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+5 \mathrm{~dB})$
Features $\quad A C$ servo direct-capstan system: $\mathrm{mic} / \mathrm{line}$ mixing; quadra-sync recording; auto reverse; logic controls; 3 motors; pitch control; di-
rect-function; remote control
Tape \#1 Scotch 211
R/P resp. $\quad 30 \mathrm{~Hz}$ to $21 \mathrm{kHz}, \pm 3 \mathrm{~dB}(71 / 2) ; 30$ Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}(33 / 4)$
S/N $\quad 54 \mathrm{~dB}$
S/N ref. IvI. +6 VU (DIN A)
THD $1 \%\left(7^{1 / 2}\right)$
THD ref. IvI. 0 VU

GX-267D
Price $\$ 850$
Reel size
Format
Heads
Speeds 6
Flutter $\quad 0.04 \% \quad$ (WRMS) $\quad(71 / 2) ; \quad 0.06 \%$ (WRMS) $\left(3^{3} / 4\right)$
Fast-forward $120 \sec \left(2,400^{\prime}\right)$
Rewind
Noise red. None
Input sens. $\quad 70 \mathrm{mV}$ (line); 0.25 mV (mic)
Output level 775 mV
Min. load 20 K ohms
Erasure $\quad 70 \mathrm{~dB}(1 \mathrm{~Hz})$
Meters 2 VU
Features Recording in two directions; 3 motor direct-capstan-drive system; record mute
control; mixing; timer start
Tape \#1 Akai LN-150-7
R/P resp. $\quad 30 \mathrm{~Hz}$ to $25 \mathrm{kHz}, \pm 3 \mathrm{~dB}(7 \mathrm{y} / \mathrm{2}) ; 30$
Hz to $19 \mathrm{kHz}, \pm 3 \mathrm{~dB}\left(3^{3 / 4}\right)$
THD ref. IvI. 0 VU

## GX-255

Price
Reel size
Format
Heads
$\$ 650$
7"
4-track/2-channel
4 (GX)

Speeds $\quad 71 / 2,33 / 4$
Flutter $\quad 0.04 \%$ at $71 / 2 \mathrm{ips} ; 0.06 \%$ at $33 / 4 \mathrm{ips}$ (WRMS) standard
Play resp. $\quad 30 \mathrm{~Hz}$ to $24 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ at $71 / 2 \mathrm{ips}$; 30 Hz to $19 \mathrm{kHz},+3 \mathrm{~dB}$ at $33 / 4 \mathrm{ips}$
Fast-forward 75 sec for ( $1,200^{\prime \prime}$ )
Rewind $\quad 75 \mathrm{sec}$ for $\left(1,200^{\prime \prime}\right)$
Noise red. None
Input sens. 70 mV (line); 0.25 mV (mic); 2.0 mV
Output level 0.775 mV
Min. load 20 K ohms
Separation 55 dB at 1 kHz
Erasure $\quad 70 \mathrm{~dB}$ at 1 kHz
Meters 2 VU ; Scale ( -20 dB to +5 dB )
Tape \#1 Akai WR; Maxell UD
R/P resp. $\quad 30 \mathrm{~Hz}$ to $24 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ at $71 / 2 \mathrm{lps}$ 30 Hz to $19 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ at $33 / 4 \mathrm{ips}$ S/N $\quad 61 \mathrm{~dB}$ at $71 / 2$ ips
S/N ref. IvI. Peak weighting curve DIN
THD $\quad 0.5 \%$ at $71 / 2 \mathrm{ips} ; 0.5 \%$ at $33 / 4 \mathrm{ips}$
THD ref. IvI. 0 VU

1722-II
Price
P475

Heads
Speeds
Flutter
7"
4-track/2-channel; stereo/mono 2
(WRMS) (3 $3 / 4$ )
Fast-forward 80/100 sec (1,200')
Rewind $\quad 80 / 100 \mathrm{sec}\left(1,200^{\prime}\right)$
Noise red. None
Input sens. 150 mV (line); 0.5 mV (mic); 15 mV
(DIN)
Output level $1.23 \mathrm{~V} ; 5 \mathrm{~W}$ (speaker)
Impedance 30 ohms
Min. load 10 K ohms
Erasure $\quad 70 \mathrm{~dB}(1 \mathrm{kHz})$
Meters 2 VU
Features Built-in speakers; convertible P.A.
system
R/P resp. $\quad 30 \mathrm{~Hz}$ to $21 \mathrm{kHz}, \pm 3 \mathrm{~dB}(71 / 2) ; 40$
Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}\left(3^{3 / 4}\right)$
THD $2 \%(71 / 2)$
THD ref. IvI. 0 VU

## Models also available

GX-650D, \$1,295; GX-635DB
\$1,095; GX-635D. \$995; GX-620 \$725; GX-4000DB, \$500; GX4000D, \$400

## GRUNDIG

LAS Electronics East, Inc.
85C Saratoga Blvd.
Island Park, N.Y. 11558

TS-1000
Price $\quad \$ 1,680$

## NAGRA

Nagra Magnetic Recorders,
Inc.
19 W. 44th St.
New York, N.Y. 10036


IV SD
Price $\quad \$ 5,750$
Reel size $\quad 7^{\prime \prime}\left(1012^{\prime \prime}\right.$ with $\left.Q G B\right)$
Format 2-track/2-channel
Heads 3
Speeds $\quad 15 ; 71 / 2 ; 33 / 4$
Flutter $\quad 0.028 \% \quad(15) ; \quad 0.030 \% \quad(71 / 2)$; 0.043\% (33/4) (NAB)

Fast-forward $120 \mathrm{sec}\left(900^{\prime}\right)$
Rewind 120 sec (900')
Input sens. 7.8 micro-amps (line); 0.28 mV (mic)
Output level $1,000 \mathrm{mV}$
Impedance 200 ohms
Min. load 600 ohms
Separation $60 \mathrm{~dB}(1 \mathrm{kHz})$
Erasure $\quad 83 \mathrm{~dB}(1 \mathrm{kHz})$
Meters Peak-reading ( -30 dB to +5 dB )
Features Closed-loop servo; dual-needle meter; universal mic preamp for all condenser and dynamic mics; 15 lps Nagramaster equalization
Tape \#1 3M 206
R/P resp. $\quad 30 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}(15) ; 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}(71 / 2) ; 30 \mathrm{~Hz}$ to 10 $\mathrm{kHz}, \pm^{2} \mathrm{~dB}(33 / 4)$
$\mathrm{S} / \mathrm{N} \quad 74.5 \mathrm{~dB}(15) ; 68 \mathrm{~dB}(71 / 2)$
S/N ref. IvI. $730 \mathrm{nW} / \mathrm{m}$ (A-weighted)
THD $\quad 1 \%$ (15)
THD ref. Ivl. $730 \mathrm{nW} / \mathrm{m}$

## NEAL-FERROGRAPH

NEAL-Ferrograph
652 Glenbrook Rd.
Glenbrook, Conn. 06906
Logic 7
$\begin{array}{ll}\text { Price } & \$ 1,950 \\ \text { Reel size } & 101 / 2\end{array}$
Format 2,4 track/2 channel
Heads 3 super permalloy
Speeds $\quad 33 / 4,71 / 2 ; 15$
Flutter $\quad 0.08 \%$ at $15 \mathrm{ips} ; 0.10 \%$ at $71 / 2 \mathrm{ips}$; $0.17 \%$ at $33 / 4 \mathrm{ips}$
Play resp. $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ at 15 ips ; 20 Hz to $18 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ at $7 \mathrm{i} / 2 \mathrm{ips}$; 30 Hz to $15 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ at $33 / 4 \mathrm{ips}$
Fast-forward $120 \mathrm{sec}\left(1,800{ }^{\prime}\right)$
Rewind $\quad 120 \mathrm{sec}\left(1,800^{\prime}\right)$
Noise red. Dolby
Input sens. $\quad 50 \mathrm{mV}-7 \mathrm{VmV}$ (line); $200 \mathrm{uV}-50 \mathrm{mV}$ (mic)
Output level 2 V at 600 ohms; low level: 300 mV into 10 K or greater; loudspeakers: up to 10 watts rms into 8 to 16 ohms
Separation 50 dB at 1 kHz (stereo); 65 dB at 1

## Erasure

 Hz (mono)Meters $\quad 2 \mathrm{VU} ;-30 \mathrm{~dB}$ to +3 dB
Features Units available in quarter- or halftrack, with or without Dolby, with or without built-in amp and loudspeakers; variable wind control; record-cancel allows user to go into or out of
record while deck is in play mode; bass and treble controls
Tape \#1
R/P resp. $\quad 30 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ at 15 ips ; 30 Hz to $17 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ at $71 / 2 \mathrm{ips}$; 40 Hz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ at $33 / 4 \mathrm{lps}$
S/N
THD

## OTARI

Otari Corp.
981 Industrial Road
San Carlos, Calif. 94070

MX-5050-8SD
Price $\$ 4.895$
Reel size $101 /{ }^{\prime \prime}$
Format 4-track/8-channel
Heads $\quad 3$ (permalloy)
Speeds 15; $71 / 2$
Flutter
Play resp.
to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}\left(7^{1 / 2}\right)$
Fast-forward $90 \mathrm{sec}\left(2,500^{\prime}\right)$
Rewind $\quad 90 \mathrm{sec}\left(2,500^{\prime}\right)$
Noise red. Interface for Dolby or dbx std.
Input sens. 150 mV (line); 0.25 mV (mic)
Output level $1,250 \mathrm{mV}$
Impedance 600 ohms
Min. load 600 ohms
Separation $50 \mathrm{~dB}(1 \mathrm{kHz})$
Erasure $\quad 70 \mathrm{~dB}(1 \mathrm{kHz})$
Meters $\quad 2 \mathrm{VU}(-20$ to +3 dB )
Features DC servo-drive system ( $\pm 7 \%$ variation); mic/line mixing; NAB VU meters; selective reproduce; separate electronics XLR connectors; motion-sense logic; all record, playback, equalization, and level controls are front- or rearpanel accessible; $1-\mathrm{kHz}$ test oscillator; rack, console, or road case mounting available
Tape \#1 Ampex, 3M 250, op equivalent
R/P resp. $\quad 50 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}(15) ; 40 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}(71 / 2)$
$\mathrm{S} / \mathrm{N} \quad 63 \mathrm{~dB}(15) ; 62 \mathrm{~dB}(71 / 2)$ without noise reduction
S/N ref. Ivl. $520 \mathrm{nWb} / \mathrm{m}$ (NAB)
THD $\quad 1 \%(15) ; 1 \%(71 / 2)$
THD ref. Ivl. $200 \mathrm{nWb} / \mathrm{m}$

## MK-II-2

| Price | $\$ 2,445$ |
| :--- | :--- |
| Reel size | $101 / 2^{\circ}$ |
| Format | 2 -track/2-channel |
| Heads | 4 (permalloy) |
| Speeds | $15 ; 71 / 2$ |
| Flutter | $0.05 \%(15) ; 0.06 \%(71 / 2)$ |
| Play resp. | 35 Hz to $25 \mathrm{kHz}, \pm 3 \mathrm{~dB}(15): 35 \mathrm{~Hz}$ |
|  | to $18 \mathrm{kHz}, \pm 2 \mathrm{~dB}(71 / 2)$ |
| Fast-forward | $90 \mathrm{sec}\left(2,500^{\prime}\right)$ |
| Rewind | $90 \mathrm{sec}\left(2,500^{\prime}\right)$ |
| Input sens. | 150 mV (line); 0.25 mV (mic) |

Output level $1,250 \mathrm{mV}$
Impedance 600 ohms
Min. load 600 ohms
Separation $60 \mathrm{~dB}(1 \mathrm{kHz})$
Erasure $\quad 70 \mathrm{~dB}(1 \mathrm{kHz})$
Meters $\quad 2 \mathrm{VU}(-20 \mathrm{~dB}$ to +3 dB )
Features Servo capstan; variable spead ( $\pm$ $7 \%$ ); selective reproduce; minutes/seconds counter; edit \& cue modes; motion-sense logic; XLR connectors; separate electronics on plug-in cards; test oscillator
Tape \#1 Ampex 456, 3M 250, or equivalent R/P resp. $\quad 50 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}(15) ; 30 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 2 \mathrm{~dB}(71 / 2)$
$\operatorname{SiN} \quad 68 \mathrm{~dB}(15), 68 \mathrm{~dB}(71 / 2)$
S/N ref. Ivl. 520 nWb/m
THD $\quad 1 \%$ at $71 / 2 / 15 \mathrm{pss}$ at 1 kHz
THD ref. Ivl. $185 \mathrm{nW} / \mathrm{m}$

## Models aiso available

MX-5050-QXHD, \$2,845; MX-
5050-B, \$1,945

## PHILIPS

Philips High Fidelity
Laboratories
P.O. Box 2208

Fort Wayne, Ind. 46801
N-4506
Price
Reel size
Format
4-track/2-channe
3 (hardened permalloy)
Speeds $\quad 7 \frac{1}{2} ; 3 \frac{3}{4} ; 11 / 2$
Flutter $\quad 0.05 \%(71 / 2) ; 0.07 \%(33 / 4) ; 0.20 \%$ (17/8) (WRMS)
Play reap. $\quad 35 \mathrm{~Hz}$ to $26 \mathrm{kHz}, \pm 3 \mathrm{~dB}(71 / 2) ; 35$ Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}(33 / 4) ; 35 \mathrm{~Hz}$ to $11.5 \mathrm{kHz}+3 \mathrm{~dB}(1 / \mathrm{s})$
Fast-forwerd $180 \mathrm{sec}(1,800)$
Rewind $180 \mathrm{sec}(1,800)$
Noise red. Dynamic Noise Umiting (DNL)
Input sens. $\quad 100 \mathrm{mV}$ (line); 0.2 mV (mic)
Output level 250 mV
Meters Peak-reading ( -20 dB to +3 dB )
Features Tacho-control capstan motor; 3 motors; direct-drive DC; DNL; A-B monitor; solenoid controls; headphone amp; sound-on-sound; sound-mixirg; LED overload indicators; cueling; variable speed wind and rewind; adjustabie outputs

## Models also availabie

N-4504 Open-Real Deck, $\$ 480$
PIONEER
U.S. Pioneer Electronics Corp.

75 Oxfard Drive
Moonachie, N.J. 07074

RT-2044
Price

## Reel size

Format
3 (1 ferrite, 2 permalloy)
$\begin{array}{ll}\text { Speeds } & 71 / 2 ; 15\end{array}$

## Fast-forward

Rewind
Input sens. $\quad 34 \mathrm{mV}$ (line); 0.1 mV (mic)
Output level 450 mV to 930 mV into 50 K -ohm load
Separation $50 \mathrm{~dB}(1 \mathrm{kHz})$
Meters to +6 dB )
Features Two 6-pole inner rotor induction reel motors; one 4/8 pole hysteresis synchronous capstan multi-mixing facilities; metered playback; changeable head unit ( $4 \mathrm{ch} / 2 \mathrm{ch}$ ); bias and equalization selectors; bult-in tape oscillator; remote control; logic protection

| Tape \#1 | Scotch 206 |
| :--- | :--- |
| R/P resp. | 30 Hz to $28 \mathrm{kHz}, \pm 3 \mathrm{~dB}(15) ; 40 \mathrm{~Hz}$ |
|  | $1020 \mathrm{kHz} \pm 3 \mathrm{~dB}\left(7^{1 / 2)}\right.$ |
| S/N | $55 \mathrm{~dB}(15)$ |
| S/N ref. Ivi. | $+6 \mathrm{~dB}(\mathrm{NAB})$ |
| THD | $0.8 \%(15) ; 1 \%\left(7^{1 / 2}\right)$ |
| THD ref. IvI. | $0 \mathrm{~dB}(\mathrm{NAB})$ |

## RT-909

| Price | \$895 |
| :---: | :---: |
| Reel size | 101/2" |
| Format | 4-track/2 channel |
| Heads | 4 (permattoy) |
| Speeds | 71/2; $33 / 4$ |
| Flutter | 0.04\% at $71 / 2 \mathrm{ips} ; 0.08 \%$ at $33 / 4 \mathrm{ips}$ |
| Play resp. | 20 Hz to $28 \mathrm{kHz}, \pm^{3} \mathrm{~dB}$ at $71 / 2 \mathrm{ips}$ 20 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ at $33 / 4 \mathrm{ips}$ |
| Rewind | $120 \sec \left(2,400^{\prime}\right)$ |
| Input sens. | 50 mV (line); 0.316 mV (mic) |
| Output level | 450 mV |
| Impedance | 2.6 ohms |
| Erasure | 60 dB |
| Meters | 2 VU ; Peak reading; ( -30 dB to +8 dB) |
| Features | FG servo DC capstan motor; 24- |

## Models also available

RT-2022, \$1,590; RT-707, \$695; RT-701, \$595
REALISTIC
Radio Shack
1400 One Tandy Center
Ft. Worth, Tex. 76102
TR-3000

| Price | \$499.95 |
| :---: | :---: |
| Reel size | $7{ }^{7}$ |
| Format | 1/4-track/2-channel |
| Heads | 3, (hard permalloy) |
| Speeds | 334; $71 / 2$ |
| Flutter | $0.08 \%$ at $33 / 4 \mathrm{ips} ; 0.06 \%$ at $71 / 2 \mathrm{ips} ;$ (WRMS) |
| Play resp. | 33 Hz to $14 \mathrm{kHz}, \pm^{1 / 2} \mathrm{~dB}$ at $3^{3 / 4}$ $\mathrm{ips} ; 33 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 11 / 2 \mathrm{~dB}$ at $71 / 2$ ips |
| Fast-forward | $100 \mathrm{sec}\left(1,800^{\prime}\right)$ |
| Rewind | $100 \mathrm{sec}\left(1,800^{\prime}\right)$ |
| Noise red. | None |
| Input sens. | 60 mV (line); 0.25 mV (mic) |
| Output level | 450 mV |
| Impedance | 10 K ohms |
| Separation | 50 dB at 1 kHz |
| Erasure | 75 dB at 1 Hz |
| Meters | $2 \mathrm{VU} ;-20 \mathrm{~dB}$ to +3 dB |
| Features ton; 3 motors | Full logic control; record mute but- |
| Tape \#1 | Supertape Gold |
| R/P resp. | 30 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ at $33 / 4 \mathrm{ips}$; 30 Hz to 28 kHz , +3 dB at $71 / 2 \mathrm{ips}$ |
| S/N | 55 dB at $33 / 4 \mathrm{ips} ; 58 \mathrm{~dB}$ at $71 / 2 \mathrm{ips}$ |
| S/N ref. Ivi. | $185 \mathrm{nWb} / \mathrm{m}$ (A-weighted) |
| THD | 0.9\% at $33 / 4 \mathrm{ips} ; 0.9 \%$ at $71 / 2 \mathrm{ips}$ |
| THD ref. Ivt. | $185 \mathrm{nWb} / \mathrm{m}$ |

REVOX
Studer Revox America, Inc.
1819 Broadway
Nashville, Tenn. 37203
B77
Price $\quad \$ 1,499$
Reel size $\quad 101 / 2^{\prime \prime}$
Format 2-or 4-track/2-channel
Heads 3 (Revodur)
Speeds $\quad 33 / 4 ; 71 / 2 ; 15$
Flutter $\quad 0.1 \%(31 / 4) ; 0.08 \%(71 / 2) ; 0.08 \%$ (15) (DIN)

Play resp. $\quad 30 \mathrm{~Hz}$ to $16 \mathrm{kHz}+2,-3 \mathrm{~dB}(33 / 4)$; 30 Hz to $20 \mathrm{kHz},+2,-3 \mathrm{~dB}(71 / 2)$; 30 Hz to $20 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ (15)
Fast-forward $70 \mathrm{sec}\left(1,800^{\prime}\right)$
Rewind $\quad 70 \mathrm{sec}\left(1,800^{\prime}\right)$
Noise red. Optional Dolby B
Input sens. $\quad 40 \mathrm{mV}$ (line)
Output level 1.5 V
Impedance 390 ohms
Min. load 390 ohms
Separation $45 \mathrm{~dB}(1 \mathrm{kHz}) \mathrm{kHz})$
Erasure $\quad 75 \mathrm{~dB}(500 \mathrm{~Hz})$
Meters $\quad 2 \mathrm{VU}$; peak-reading ( -20 dB to +3 dB)
Features All-digital logic control of tape mo-
tion; self-contained precision tape cutter and splicer
Tape \#1 Scotch 250 or equivalent (Revox 621)

R/P resp. $\quad 30 \mathrm{~Hz}$ to $16 \mathrm{kHz},+2,-3 \mathrm{~dB}(3 \mathrm{k} /)_{\text {) ; }}$ 30 Hz to $20 \mathrm{kHz},+2,-3 \mathrm{~dB}(7 \mathrm{y} / 2)$; 30 Hz to $20 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ (15)
S/N $\quad 64 \mathrm{~dB}\left(3^{3 / 4}\right) ; 67 \mathrm{~dB}(71 / 2) ; 67 \mathrm{~dB}(15)$
S/N ref. Ivi. +6 dBm (A-weighted) at 514 $\mathrm{nWb} / \mathrm{m}$
THD $\quad 1 \%(33 / 4) ; 0.6 \%(71 / 2) ; 0.4 \%$ (15)
THD ref. IvI. $257 \mathrm{nWb} / \mathrm{m}$

## SONY

Sony Industries
9 W. 57th St.
New York, N.Y. 10019
TC-766
Price
Reel size
Format
Heads
Speeds
Flutte
Input sens. $\quad 0.06 \mathrm{~V}$ (line); 0.02 mV (mic)
Output level 0.775 V
Impedance 100 K ohms
Min. load 10 K ohms
Meters $\quad \mathrm{VU} ;(-20 \mathrm{~dB}$ to $+5 \mathrm{~dB})$
Features Three-position bias and EG; søund-
on-sound; auto shutoff; closed-loop dual capstan;
4-track playback
Tape \# 1 Sony FeCr
R/P resp. $\quad 30 \mathrm{~Hz}$ to $30 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ at 15 ips S/N $\quad 64 \mathrm{~dB}$ at 15 ips
S/N ref. IvI. $\quad-20 \mathrm{~dB}$ (IMF A-weighted)
THD $\quad 0.5 \%$ at 15 ips
THD ref. IvI. 0 dB

## Models also available

Sony TC-399, \$500

## TANDBERG

Tandberg of America, Inc.
Labriola Court
Armonk, N.Y. 10504
TD-20A

## Price

Reel size
Format
Heads
Speeds
Flutter $\quad 0.05 \%(71 / 2) ; 0.09 \%(33 / 4)$
play resp. $\quad 20 \mathrm{~Hz}$ to $26 \mathrm{kHz}, \pm^{2} \mathrm{~dB}(71 / 2) ; 20$
Hz to $18 \mathrm{kHz}, \pm 2 \mathrm{~dB}(33 \mathrm{k})$
Fast-forward $75 \mathrm{sec}\left(2,500^{\prime}\right)$
Rewind $\quad 75 \mathrm{sec}(2,500$ )
Noise red. None
Input sens. $\quad 50 \mathrm{mV}$ (line); 0.2 mV (mic)
Output level $1,500 \mathrm{mV}$
Impedance 100 ohms
Separation $64 \mathrm{~dB}(1 \mathrm{kHz})$
Erasure $\quad 70 \mathrm{~dB}$ ( 1 kHz )
Meters 2 VU ; peak-reading $(-24 \mathrm{~dB}$ to +3 dB)
Features Four motors; Prom-Brain Logic
Sel Sync; wireless, PCM, infrared remote control
Tape \#1 Maxell UDXL
R/P resp. $\quad 20 \mathrm{~Hz}$ to $26 \mathrm{kHz}, \pm 2 \mathrm{~dB}(71 / 2) ; 20$
Hz to $18 \mathrm{kHz}, \pm^{2 \mathrm{~dB}}(33 / 4)$
$\mathrm{S} / \mathrm{N} \quad 67 \mathrm{~dB}(71 / 2) ; 65 \mathrm{~dB}(31 / 4)$
S/N ref. IvI. 67 dB (IEC A)
THD $2 \%(71 / 2) ; 2 \%(33 / 4)$
THD ref. Ivi. 3\%
TEAC
Teac Corp. of America
7733 Telegraph Rd.
Montebello, Calif. 90640
80-8
Price $\$ 3,990$
Reel size $\quad 101 / 2^{\prime \prime}$
Format $\quad 1 / 2^{n} 8$-channel multitrack
Heads
Speeds
15
Play resp $\quad$.04\% (WRMS)
$\quad 40 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
(torward $120 \mathrm{sec}\left(2,500^{\prime}\right)$
Rewind $\quad 120 \mathrm{sec}\left(2,500^{\prime}\right)$
Noise red. Optional dbx
Input sens. 100 mV (line); 0.25 mV (mic)
Output level 300 mV
Impedance 10 K ohms
Min. load 5 K ohms
Separatlon 45 dB ( 1 kHz )
Erasure $\quad 68 \mathrm{~dB}(1 \mathrm{kHz})$
Meters $\quad 2 \mathrm{VU}$; peak-reading LEDs $(-20 \mathrm{~dB}$ to +3 dB )
Features Three motors (1 belt-drive capstan); solenoid-control transport; optional remote/manual cue control
Tape \# 1 Ampex 456
$R / P$ resp. $\quad 40 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 65 \mathrm{~dB}$ without noise reduction
S/N ref. Ivl. 9 dB over $185 \mathrm{nW} / \mathrm{m}$ (IEC A)
THD $\quad 1 \%$
THD ref. Ivi. $185 \mathrm{nWb} / \mathrm{m}$
Tape \# 2 Maxell UDXL
R/P resp. $\quad 40 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 65 \mathrm{~dB}$
S/N ref. Ivi. 0 VU (A-weighted)
THD 0.7\% (15)
THD ref. IvI. 0 VU
40-4
Price $\quad \$ 1,700$
Reel size $\quad 101 / 2^{\prime \prime}$
Format 4-track/4-channel
Heads 3 (2 permalloy R/P; 1 ferrite erase)
Speeds 15:71/2
Flutter $\quad 0.04 \%$ (WRMS) (15)
Play resp. $\quad 40 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}(15) ; 40 \mathrm{~Hz}$ to $15 \mathrm{kHz},+3 \mathrm{~dB}(71 / 2)$
Fast-forward $140 \mathrm{sec}\left(1,800^{\prime}\right)$
Rewind $\quad 120 \mathrm{sec}\left(2,500^{\prime}\right)$
Noise red. Optional dbx
Input sens. 100 mV (line); 0.25 mV (mic)
Output level 300 mV
Impedance 10 K ohms
Min. load 5 K ohms
Separation $50 \mathrm{~dB}(1 \mathrm{kHz})$
Erasure $\quad 68 \mathrm{~dB}(1 \mathrm{kHz})$
Meters 2 VU ; peak-reading LED ( -20 dB to +3 dB )
Features Three motors (1 belt-drive cap-
stan); solenoid-control transport; optional remote/manual cue control
Tape \#1 Ampex 456
R/P resp. $\quad 40 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}(15) ; 40 \mathrm{~Hz}$

|  | $\text { to } 15 \mathrm{kHz}, \pm 3 \mathrm{~dB}(71 / 2)$ | Tape \# 1 | Maxell UD; TDK Audua; Scotch | in | 60 mV (2,5) 0.25 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| S/N ref. Ivi. | $65 \mathrm{~dB}(71 / 2)$ without noise reductio 9 dB over $185 \mathrm{nWb} / \mathrm{m}$ (IEC A) | R/P resp. | 206; Ampex 456 | Input sens. | 60 mV (line); 0.25 mV (mic) |
| THD | 1\% ( $71 / 2$ ) | R/P resp. | $30 \mathrm{~Hz} \text { to } 22 \mathrm{kHz}, \pm 3 \mathrm{~dB}(15) ; 30 \mathrm{~h}$ $\text { to } 20 \mathrm{kHz}, \pm 3 \mathrm{~d} \text { B }(71 / 2)$ | Output level Impedance | 775 mV 3 K ohms |
| THD ref. IvI: | $185 \mathrm{nWb} / \mathrm{m}$ | S/N | 67 dB (15) without noise reduction | Min. load | 22K ohms |
| Tape \#2 | Maxell UD | S/N ref. Ivi. | 9 dB over $185 \mathrm{nWb} / \mathrm{m}$ (IEC) | Erasure | 65 dB ( 1 kHz ) |
| R/P resp. | 40 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}(15) ; 40 \mathrm{~Hz}$ | THD | 1\% (15) | Meters | 2 VU |
| S/N | to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}\left(7^{1 / 2}\right)$ $63 \mathrm{~dB}(15) ; 65 \mathrm{~dB}(71 / 2)$ | THD ref. lvi. | $185 \mathrm{nWb} / \mathrm{m}$ | Featunes | Three-motor, quart-locked isolat- drive; auto reverse; tape-tension |
| S/N ref. Ivi. | 3\% (A-weighted) | X-7 |  |  |  |
| THD | 1\% (15); $1 \%$ ( $71 / 2$ ) | Price | \$700 | Tape \#1 | Scotch 207 |
| THD ref. IvI. | $185 \mathrm{nW} / \mathrm{m}$ | Reel size | 7" | R/P resp. | 30 Hz to $30 \mathrm{kHz}, \pm 3 \mathrm{~dB}(15) ; 20 \mathrm{~Hz}$ |
| A-6100 <br> Price <br> Reel size <br> Format <br> Heads <br> Speeds <br> Flutter <br> Play resp. | MK II | Format Heads | 4-track/2-channel 3 | $\begin{aligned} & \text { to } 25 \mathrm{kHz}, \pm 3 \mathrm{~dB}(71 / 2) ; 20 \mathrm{~Hz} \text { to } 15 \\ & \mathrm{kHz}, \pm 3 \mathrm{~dB} 33 / 4 \end{aligned}$ |  |
|  | \$1,400 | Speeds | 71/2; $331 / 4$ | S/N | $66 \mathrm{~dB}(15) ; 66 \mathrm{~dB}(71 / 2) ; 64 \mathrm{~dB} 3^{3 / 4}$ |
|  | $10^{1 / 2}{ }^{\text {" }}$ | Flutter | 0.03\% ( $71 / 2$ ) | S/N ret. Ivi. | $3 \%$ |
|  | 2-track/2-channel | Play resp. | 30 Hz to 28 kHz | THD | 0.8\% (15); $0.8 \%$ (71/2); $0.8 \%$ (33/4) |
|  | 4 (permalloy) | Fast-forward | $140 \mathrm{sec}\left(1,800^{\prime}\right)$ | THD ref. Ivi. | 0 VU |
|  | 15; $71 / 2$ | Rewind | $140 \mathrm{sec}\left(1,800^{\prime}\right)$ |  |  |
|  | 0.03\% (15); 0.06\% ( $71 / 2$ ) | Input sens. | .60 mV (line); 0.25 mV (mic) | RS-1506 |  |
|  | 40 Hz to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}(15) ; 40 \mathrm{~Hz}$ | Output level | 450 mV | Price | \$1,500 |
|  | to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}(71 / 2)$ | Impedance | 10K ohms | Reel size | 101/2" |
| Fast-forward | $140 \mathrm{sec}\left(1,800^{\prime}\right)$ | Min. load | 5 K ohms | Format | 4-track/2-channel |
| Rewind | $140 \mathrm{sec}\left(1,800^{\prime}\right)$ | Meters | $2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+3 \mathrm{~dB})$ | Heads | 4 (permalloy) |
| Output level | 100 mV (line); 0.25 mV (mic) | Features | Three DC motors; dual capstan | Speeds | 15; $71 / 2 ; 33 / 4$ |
|  | 300 mV | closed-loop | ansport | Flutter | $\begin{aligned} & 0.018 \%(15) ; 0.03 \%(71 / 2) ; 0.06 \% \\ & \text { (33/4) (WRMS) (JIS) } \end{aligned}$ |
| Impedance | 10 K ohms | Tape \#1 | Maxell UD |  |  |
| Separation | $50 \mathrm{~dB}(1 \mathrm{kHz})$ | R/P resp. | 30 Hz to $28 \mathrm{kHz}(33 / 4)$; 40 Hz to 20 | Play resp. | $30 \mathrm{~Hz} \text { to } 30 \mathrm{kHz}, \pm 3 \mathrm{~dB}(15) ; 20 \mathrm{~Hz}$ |
| Erasure | $68 \mathrm{~dB}(1 \mathrm{kHz})$ |  | $\mathrm{kHz}, \pm 3 \mathrm{~dB},-10 \mathrm{VU}(71 / 2)$ | Pay resp. | $\text { to } 25 \mathrm{kHz}, \pm 3 \mathrm{~dB}(71 / 2) ; 20 \mathrm{~Hz} \text { to } 15$ |
| Meters | 2 VU ; peak-reading LEDs (-20 dB | S | 63 dB |  | kHz, $\pm 3 \mathrm{~dB}(33 / 4)$ |
|  | to +3 dB ) | THD | 0.8\% | Fast-forward | $150 \mathrm{sec}\left(2,500^{\prime}\right)$ |
| Features Three motors (1 belt-drive capstan); 2-mic/2-line mixing; solenoid-control transport; optional remote/manual cue control |  |  |  | Rewind | $150 \mathrm{sec}\left(2,500^{\prime}\right)$ |
|  |  | Models a | also available | Output Hevel | 60 mV (line); 0.25 mV (mic) |
|  |  |  | 35-2, \$1,900; A-3440, \$1,600; A- |  | 775 mV |
| R/P resp. | 40 |  | 6600, \$1,575; A-2340SX, \$1,175; | Impedance | 3 K ohms |
|  | Hz to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (15) |  | X-10, \$1,000; X-7R, \$800 | Min. load | 22 Kohms |
| S/N | 67 dB without noise reduction | TECHNICS |  | Erasure |  |
| S/N ref. Ivi. | 9 dB over $185 \mathrm{nWb} / \mathrm{m}$ (IEC A) |  |  | $65 \mathrm{~dB}(1 \mathrm{kHz})$ |  |
| THD | 1\% ( $71 / 2$ ) | Panasonic Co. |  |  | Meters | 2 VU <br> Scotch 207 |
| THD ref. IvI. | $185 \mathrm{nWb} / \mathrm{m}$ | One Panasonic Way |  | Tape \#1 R/P resp. | otch 207 |
| Tape \#2 | TDK SA | Secaucus, N.J. 07094 |  |  | $\begin{aligned} & \text { to } 25 \mathrm{kHz}, \pm 3 \mathrm{~dB}(71 / 2) ; 20 \mathrm{~Hz} \text { to } 15 \\ & \mathrm{kHz}, \pm 3 \mathrm{~dB}(33 / \mathrm{a}) \end{aligned}$ |
| R/P resp. | 40 Hz to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |  |  |  |  |
| X-10R |  | RS-152 |  | S/N | $66 \mathrm{~dB}(15) ; 66 \mathrm{~dB}\left(7^{1 / 2}\right) ; 64 \mathrm{~dB}\left(3^{3 / 4}\right)$ |
|  |  | Price | \$2,000 | S/N ref. lvi. 3\% |  |
| Reel size | 101/2" | Reel size | 101/2" | THD | 0.8\% (15); $0.8 \%$ ( $71 / 2$ ) ; 0.8\% ( $33 / 4$ ) |
| Format | 4-track/2-channel | Format | 2-track/2-channel recording and playback; 4-track/2-channel playback | THD ref. Ivi. 0 VU |  |
| Heads | 6 (2 erase, 2 play, 2 record) |  |  | Models also available |  |
| Speeds | 71/2; 33/4 | Heads Speeds | 4 (permalloy) |  |  |  |
| Flutter | 0.03\% 30 Hz |  | $15 ; 71 / 2 ; 331 / 4$ |  | RS-15 |
| Play resp. Fast-forward | 30 Hz to 28 kHz $100 \mathrm{sec}\left(1,800^{\prime}\right)$ | Flutter | 0.018\% (15); 0.03\% (71/2); 0.06\% (33/4) (WRMS) (JIS) |  |  |
| Rewind | $100 \mathrm{sec}\left(1,800^{\prime}\right)$ |  |  | UHER |  |
| Nolse red. | dbx ( | Play resp. | 30 Hz to $30 \mathrm{kHz}, \pm 2 \mathrm{~dB}(15) ; 20 \mathrm{~Hz}$ to $25 \mathrm{kHz},+2 \mathrm{~dB}(71 / 2) ; 20 \mathrm{~Hz}$ to 15 | Mineroff Electronics, Inc. |  |
| Input sens. | 60 mV (line); 0.25 mV (mic) |  | $\mathrm{kHz}, \pm 3 \mathrm{~dB}(33 / 4)$ | 946 Downing Road |  |
| Output level | 450 mV |  |  | Valley Stream, N.Y. 11580 |  |
| Impedanc | 10K ohms | Fast-forward |  | SG-6 |  |
| Min. loa | 5 K ohms | Rewind Input sens. | 77.5 mV (line); 0.25 mV (mic) | Price <br> Reel size | \$1,800 |
| Meters | $2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+3 \mathrm{~dB})$ | Input sens. Output level |  |  |  |
| Features record/pla | Three DC motors; bidirectional ual capstan closed-loop transport | Impedance | 600 ohms | Reel size <br> Format | 101/2 <br> 2 or 4 track/2-channel |
| Tape \#1 | Maxell UD | Min. load | 600 ohms | Speeds | 33/4; 1\% |
| R/P resp. | 30 Hz to 28 kHz ; (33/4) 40 Hz to 20 | Separation Erasure | $\begin{aligned} & 50 \mathrm{~dB}(1 \mathrm{kHz}) \\ & 65 \mathrm{~dB}(1 \mathrm{kHz}) \end{aligned}$ | Flutter | $0.05 \%$ at $71 / 2 \mathrm{ips} ; 0.1 \%$ at $33 / 4 \mathrm{lps}$; $0.2 \%$ at $1 / \frac{\mathrm{ips}}{}$ |
|  | $\mathrm{Hz},{ }^{ \pm}{ }^{3} \mathrm{~dB},-10 \mathrm{VU}\left(7^{1 / 2}\right)$ | Meters <br> Features lated-Loop" | 2 VU <br> Three-motor, quartz-locked, "Iso- | Play resp. | 20 Hz to $25 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ at $7 \frac{1}{2} \mathrm{ips}$; 20 Hz to $16 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ at $33 / \mathrm{ips}$; 20 Hz to $12.5 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ at $17 / 8$ |
| S/N THD | 63 dB |  |  |  |  |
|  | 0.8\% |  | lirect drive; mic/line mixing; front |  |  |
| A-3300SX |  | panel vernier bias and EO adjustments; 600 -ohm balanced Input/output |  |  | ips |
| Price | \$1,050 | Tape \# 1 | Scotch 207 | Fast-forward | $120 \mathrm{sec}(4,200)$ |
| Reel size | 101/2* | R/P resp. | 28 Hz to $45 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (15) | Input sers. | 80 mV (line); 0.1 mV (mic) |
| Format | 2-track/2-channel | S/N | 68 dB | Output level | 750 mV |
| Heads | 3 (permalloy) | S/N ref. Ivi. | +11 dB ( $650 \mathrm{nW} / \mathrm{m}$ ) | Impedance | 15 K ohms |
| Speeds | 15; $71 / 2$ | THD | 0.8\% (15) | Meters | 2 peak reading |
| Flutter | 0.04\% (15); 0.06\% (71/2) (NAB) | THD ref. Ivi. | $0 \mathrm{VU}(185 \mathrm{nW} / \mathrm{m})$ | Features | 4-motor Omega drive system; slide |
| Play resp. | 30 Hz to $26 \mathrm{kHz}, \pm 3 \mathrm{~dB}(15) ; 30 \mathrm{~Hz}$ to $24 \mathrm{kHz}, \pm 3 \mathrm{~dB}(7 \mathrm{I} / 2)$ | RS-1700 |  | and movie sync; interchangeable head assembly |  |
| Fast-forward | $140 \mathrm{sec}(1,800)$ | Price | \$2,000 | R/P resp. | 35 Hz to $20 \mathrm{kHz}+2 \mathrm{~dB}$ at $71 / 2 \mathrm{ips}$; |
| Rewind | $140 \mathrm{sec}\left(1.800^{\prime}\right)$ | Reel size |  |  | 35 Hz to $16 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ at $33 / 4 \mathrm{ips}$; |
| Input sens. | 100 mV (line); 0.25 mV (mic) | Format | 101/2" 4 -track/2-chan |  | 35 Hz to $8 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ at $1 \% \mathrm{ps}$; 35 Hz to $5 \mathrm{kHz},+2 \mathrm{~dB}$ at $15 / 16 \mathrm{ips}$ |
| Output level | 300 mV | Heads | 6 (permalloy)$15 ; 71 / 233 / 4$ |  |  |
| Impedance | 10 K ohms | Speeds |  | S/N | 64 dB at $71 / 2 \mathrm{ips}$; 63 dB at $33 / 4 \mathrm{ips}$; |
| Separation | $50 \mathrm{~dB}(1 \mathrm{kHz})$ | Flutter | $0.018 \%(15) ; 0.03 \%(71 / 2) ; 0.06 \%$(33/4) (WRMS) (JIS) |  | 60 dB at $17 / 8 \mathrm{ips}$ |
| Erasure | $65 \mathrm{~dB}(1 \mathrm{kHz})$ |  |  | S/N ref. ${ }^{\text {lut }}$ | $\mathrm{CrO}_{2}$ (SA) <br> 4400-4200 Stereo <br> 35 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ at $71 / 2 \mathrm{ips}$; 35 Hz to $16 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ at $33 / 4 \mathrm{ips}$; 35 Hz to $16 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ at 1 mips |
| Meters | $2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+3 \mathrm{~dB})$ | Play resp. | 30 Hz to $30 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (15); 20 Hz |  |  |
| Features | Three motors (belt-drive capstan); |  | to $25 \mathrm{kHz}, \pm 3 \mathrm{~dB}(71 / 2) ; 20 \mathrm{~Hz}$ to 15 | R/P resp. |  |
| 2-mic/2-line mi tional remote/m | xing; solenoid, transport control; opmanual cue control | Fast-forward | $\begin{aligned} & \mathrm{kHz}_{1} \pm 3 \mathrm{~dB}(33 / 4) \\ & 150 \mathrm{sec}\left(2,500^{\prime}\right) \end{aligned}$ |  |  |

## Cassette Recorders

## AIWA

Aiwa America, Inc.
35 Oxford Drive
Moonachie, N.J. 07074
AD-6900 II

| Price | \$1,000 |
| :---: | :---: |
| Heads | 3 (ferrite; V-cut) |
| Flutter | 0.04 |
| Fast-forward | $65 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | 65 sec (C-60) |
| Noise red. | Dolby |
| Input sens. | $\begin{aligned} & 75 \mathrm{mV} \text { (line); } 0.25 \mathrm{mV} \text { (mic); } 0.25 \\ & \mathrm{mV} \text { (DIN) } \end{aligned}$ |
| Output level | 410 mV |
| Impedance | 50 K ohms |
| Meters | 2 VU ; peak reading (double nee dle) ( -20 dB to +6 dB ) (VU); -40 dB to +12 dB (рeak) |
| Features bration tone; response tuni | Metal-tape capability; Dolby cali wireless remote; cue and review; flat ing system |
| Tape \# 1 | Scotch Metafine |
| R/P resp. | 25 Hz to $18 \mathrm{kHz},+2,-3 \mathrm{~dB}$ |
| S/N | 68 dB ( $\mathrm{w} / \mathrm{NR}$ ), 58 dB ( $\mathrm{w} / \mathrm{o}$ NR) |
| S/N ref. Ivi. | $3 \%$ THD, (IEC A) |

AD-6700U

| Price | $\$ 750$ |
| :--- | :--- |
| Heads | 2 (Sendust) |
| Flutter | $0.04 \%$ |
| Fast-forward | 65 sec (C-60) |
| Rewind | 65 sec (C-90) |
| Noise red. | Dolby |
| Input sens. | 50 mV (line); 0.25 mV (mic) |
| Output level | 410 mV |
| Impedance | 50 K ohms |
| Meters | VU; peak reading LED |
| Features | Standard wireless remote control; |
| metal tape compatibility; cue and review; continu- |  |
| ous auto repeat; 9 -point peak indicator; remaining |  |
| tape time meter; peak hold |  |
| Tape \#1 | Scotch Metafine |
| R/P resp. | 25 Hz to $1 \mathrm{kHz},+2,-3 \mathrm{~dB}$ |
| S/N | 65 dB (w/NR); 55 dB (w/o NR) |
| S/N ref. Ivl. | $3 \% \mathrm{THD}$ (IEC A) |

AD-L40U
Price $\$ 490$
$\begin{array}{ll}\text { Heads } & 2 \text { (Sendust) } \\ \text { Flutter } & 0.04\end{array}$
Fast-forward 90 sec (C-60)
Rewind $\quad 90 \mathrm{sec}$ (C-60)
Noise red. Dolby
Input sens. $\quad 50 \mathrm{mV}$ (line); 0.3 mV (mic)
Output level 410 mV
Impedance 50 K ohms
Meters $\quad 2 \mathrm{VU}$ peak reading LED (-20 dB to +10 dB )
Features Metal tape capability; 3-step tape select switch; 20 point LED optical display; LH bias fine adjustment
Tape \# 1 Scotch Metafin
R/P resp. $\quad 20 \mathrm{~Hz}$ to $17 \mathrm{kHz},+2,-3 \mathrm{~dB}$
S/N
65 dB (w/NR), 55 db (w/o NR)
AD-6550
$\begin{array}{ll}\text { Price } & \$ 450 \\ \text { Heads } & 2 \text { (ferrite) }\end{array}$

| Flutter | $0.05 \%$ (WRMS) |
| :--- | :--- |
| Fast-forward | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 50 mV (line); 0.3 mV (mic); 0.1 mV |
|  | (DIN) |
| Output level | 775 mV |
| Impedance | 50 K ohms |
| Erasure | 60 dB at 400 Hz |
| Meters | $2-$ step peak-reading LEDs |
| Features | Tape-remaining-time meter; LH |
| bias fine adjuster; memory rewind; cue and peview |  |
| Tape \# 1 | Sony Ferrichrome |
| R/P resp. | $30 \mathrm{~Hz} \mathrm{to} 15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $55 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| S/N ref. IvI. | $3 \% \mathrm{THD}$ |
| THD ref. IvI. | 0 VU at 400 Hz |


| AD-6350 |  |
| :---: | :---: |
| Price | \$320 |
| Heads | 2 (ultra hard permalloy) |
| Flutter | 0.08\% (WRMS) |
| Fast-forward | $85 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $85 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 50 mV (line); 0.3 mV (mic) |
| Output level | 775 mV |
| Impedance | 50 K ohms |
| Erasure | 60 dB at 400 Hz |
| Meters | 2-step peak-reading LEDS |
| Features bias fine adjust | Cue and review; record mute; LH ter |
| Tape \#1 | Sony Ferrichrome |
| R/P resp. | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $55 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| S/N ref. Ivi. | 3\% THD |
| THD ref. Ivi. | 0 dB at 400 Hz |

AD-1260

| Price | $\$ 260$ |
| :--- | :--- |
| Heads | 2 (ultra-hard permalloy) |
| Flutter | $0.08 \%$ (WRMS) |
| Fast-lorward | 85 sec (C-60) |
| Rewind | 85 sec (C-60) |
| Noise red. | Dolby |
| Input sens. | 50 mV (line); 0.3 mV (mic); 0.1 mV |
|  | (DIN) |
| Output level | 775 mV |
| Impedance | 50 K ohms |
| Separation | 40 dB at 1 kHz |
| Erasure | 65 dB at 1 kHz |
| Meters | 2 VU |

ejection; independent 3-step bias and EQ (FeCr,
$\mathrm{CrO}_{2} \mathrm{LH}$ ); peak indicator; full auto stop; cue and review; slant design; LH bias fine adjustment
Tape \#1 Sony. Ferrichrome
R/P resp. $\quad 30 \mathrm{~Hz}$ to 16 kHz
S/N
S/N ref. IvI. $3 \%$ THD
Models also available
AD-6800, \$550; AD-6600, \$490; AD-6450, $\$ 380$; AD-M200U, $\$ 260$ SD-L22U, \$260; AD-M100U, \$210

## AKAI

Akai America, Ltd.
2139 E. Del Amo Blvd.
P.O. Box 6010

Compton, Calif. 90224
GXC-735D
Price $\$ 500$
Heads 3, Type 1 r/p GX; 2 Erase
Flutter $\quad 0.045$
Fast-forward 60 seconds for C-60 (length)
Rewind $\quad 60$ seconds for C-60 (length)
Noise red. Dolby
Input sens. $\quad 70 \mathrm{mV}$ (line); 0.25 mV (mic); 0.25
(DIN)

| Min. load | 20K ohms |
| :---: | :---: |
| Erasure | 65 dB at 1 kHz |
| Meters | VU 2; Peak reading Lamp Meter scale -20 dB to +5 dB |
| Features | Bidirectional record/play |
| Tape \# 1 | FeCr (Sony Duad) |
| R/P resp. | 35 Hz to $16 \mathrm{kHz} \pm 3 \mathrm{~dB}$ |
| S/N | 66 dB (w/NR), 56 dB (w/o NR) |
| S/N ref. Ivi. | Weighting Curve DIN A |
| THD | 1.5\% |
| THD ref. Ivi. | 0 VU |
| Tape \#2 |  |
| R/P resp. | 35 Hz to $15 \mathrm{kHz} \pm 3 \mathrm{~dB}$ |
| S/N | 66 dB ( $\mathrm{w} / \mathrm{NR}$ ), 56 dB (w/o NR) |
| S/N ref. Ivi. | Weighting Curve DIN A |
| THD | 1.5\% |
| THD ref. lvi. | O VU |

## GX-F80

Heads $\quad$ 3, Type 1 r/p.; 1 Super GX Combo Monitoring; 1 Erase
Flutter $\quad 0.035$ (WRMS)
Fast-forward 60 seconds for C-60 length
Rewind 60 seconds for C-60 length
Noise red. Dolby
Input sens. $\quad 70 \mathrm{mV}$ (line); 0.3 mV (mic); 2 mV (DIN)
Output level 410 mV
Min. load 20K ohms
Separation 30 dB at 1 kHz
Erasure $\quad 70 \mathrm{~dB}$ at 1 kHz
Meters Bar-graph; peak reading; both; Meter scale -20 dB to +8 dB
Tape \# 1 Metal
R/P resp. $\quad 25 \mathrm{~Hz}$ to $21 \mathrm{kHz} \pm 3 \mathrm{~dB}$
S/N $\quad 72 \mathrm{~dB}(w / N R$, above 5 kHz$), 62 \mathrm{~dB}$ (w/o NR)
S/N ref. IvI. Peak, Weighting Curve DIN
THD 0.6\%
THD ref. IvI. O VU
Tape \#2 $\mathrm{CrO}_{2}(\mathrm{SA})$
R/P resp. $\quad 25 \mathrm{~Hz}$ to $17.5 \mathrm{kHz}+3 \mathrm{~dB}$
S/N $\quad 72 \mathrm{~dB}(w / N R), 61 \mathrm{~dB}$ ( $w / o \mathrm{NR}$ )
S/N ref. IvI. O VU, Weighting Cure DIN
THD 0.7\%
THD ref. IvI. O VU
CS-732D

| Price | \$350 |
| :---: | :---: |
| Heads | (3RP, 2 Erase) |
| Flutter | 0.06\% |
| Fast-forward | $90 \mathrm{sec}(\mathrm{C}-60)$ (length) |
| Rewind | $90 \mathrm{sec}(\mathrm{C}-60)$ (length) |
| Noise red. | Dolby |
| Input sens. | 70 mV (line); 0.25 mV (mic); 2.0 mV (DIN) |
| Output level | 410 mV |
| Min. load | 20 ohms |
| Erasure | 65 dB at 1 kHz |
| Meters | 2 VU ; peak-reading amp ( -20 dB to +5 dB ) |
| Features | Bidirectional record/play |
| Tape \#1 | FeCr (Sony Duad) |
| R/P resp. | 35 Hz to $15 \mathrm{kHz} \pm 3 \mathrm{~dB}$ |
| S/N | 66 dB (w/NR), 56 dB (w/o NR) |
| S/N ref. IvI. | DIN A |
| THD | 1.5\% |
| THD ref. Ivi. | 0 VL |
| Tape \#2 | $\mathrm{CrO}_{2}$ (SA) |
| R/P resp. | 35 Hz to $14 \mathrm{kHz} \pm 3 \mathrm{~dB}$ |
| S/N | 66 dB (w/NR), 56 dB (w/o NR) |
| S/N ref. ivi. | Weighting Curve DIN A |
| THD | 1.5\% |
| THD ref. IvI. | O VU |
| GX-M30 |  |
| Price | \$300 |
| Heads | (Supor GX Twin Field R/P; 1 erase |
| Flutter | 0.04 (WRMS) |
| Fast-forward | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 70 mV (line); 0.3 mV (mic); 2 mV (DIN) |
| Output level | 410 mV |
| Min. load | 20 ohms |



Akal ©X-F80

B.I.C. T-4M

| Separation | 30 dB at 1 kHz |
| :---: | :---: |
| Erasure | 70 dB at 1 kHz |
| Meters | Bar-graph; peak reading (with switch) ( -3 dB to +3 dB ) |
| Features (IPLS) | Instant Program Location System |
| Tape \#1 | Metal |
| R/P resp. | 30 Hz to $19 \mathrm{kHz} \pm 3 \mathrm{~dB}$ |
| S/N | $71 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}$, above 5 kHz$), 61 \mathrm{~dB}$ (w/o NR) |
| S/N ref. Ivl. | Peak (DIN) |
| THD | 0.6\% |
| THD ref. IvI. | 0 VU |
| Tape \#2 | $\mathrm{CrO}_{2}(\mathrm{SA})$ |
| R/P resp. | 30 Hz to $16.5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 70 dB (w/NR); 60 dB (w/o NR) |
| S/N ref. Ivi. | Peak (DIN) |
| THD | 0.7\% |
| THD ref. Ivi. | 0 VU |

## Models also available

GX-F90, \$595; GX-M50, \$375; GXC-706D, \$300

BANG \& OLUFSEN
Bang \& Olufsen of America 515 Busse Road Elk Grove Village, III. 60007

| Beocord | 5000 |
| :---: | :---: |
| Price | \$695 |
| Heads | 2 (nitrite-hardened Sendust) |
| Flutter | 0.1\% |
| Play resp. | 30 Hz to 15 kHz |
| Fast-forward | 60 sec (C-60) |
| Rewind | $60 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| input sens. | 2.2 mV (line); 0.1 mV (mic); 300 mV (aux) |
| Output level | 940 mV |
| Impedance | 23 K ohms |
| Erasure | 70 dB |
| Meters | Peak-reading ( -25 dB to +3 dB ) |
| Features | Automatic demagnetization; fade |
| In/fade out; ele | ectronic controls; automatic bias |
| Tape \#1 | DIN standard $\mathrm{CrO}_{2}$ |
| R/P resp. | 30 Hz to 15 kHz |
| S/N | $57 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| Tape \#2 | DIN standard ferric |
| S/N ref. Ivi. | DIN A |

## Models also available Beocord 1900,\$495

B.I.C.
B.I.C./Avnet

South Service Road
Westbury, N.Y. 11590
T-4M Two-Speed Deck Price


B 30 Eeocord $\$ 000$


## Denon DR-250

| Heads | 3 (Sendust R/E; hard ferrite play) |
| :---: | :---: |
| Flutter | 0.05\% (0.03\% at 33/4) |
| Fast-lorward | $48 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $48 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 20 CmV (line) |
| Output level | 2 K mV |
| Impedance | 600 ohms |
| Min. load | 3.3 K ohms |
| Separation | $35 . \mathrm{dB}(1 \mathrm{kHz})$ |
| Erasure | 75 dB (1 kHz) |
| Meters | 2 peak-reading bar graph LED display $(-36$ to +9$)$ |
| Features | Metal equipped; 2 motors; dual |
| capstan; blas | trim; pitch; MPU; mic/line |
| Tape \#1 | Metaline |
| R/P resp. | $\begin{aligned} & 20 \mathrm{~Hz} \text { to } 21 \mathrm{kHz}, \pm 3 \mathrm{~dB}(1 \mathrm{y}) ; 20 \\ & \mathrm{~Hz} \text { to } 23 \mathrm{kHz}, \pm 3 \mathrm{~dB}(33 / 4) \end{aligned}$ |
| S/N | $71 \mathrm{~dB} / 64 \mathrm{~dB}$ (33/4); $68 \mathrm{~dB} / 60 \mathrm{~dB}$ |
| S/N ref. Ivi. | (A-weighted) 3\% THD |
| THD | 1.2\% (0.9 at 3\%4) |
| THD ref. IvI. | 0 (200 nWb/m) |
| Tape \#2 | TDK SA |
| R/P resp. | $20 \mathrm{~Hz} \text { to } 23 \mathrm{kHz}, \pm 3 \mathrm{~dB}(33 / 4) ; 20$ $\mathrm{Hz} \text { to } 21 \mathrm{kHz}, \pm 3 \mathrm{~dB}(17 / 8)$ |
| S/N | $68 / 61 \mathrm{~dB}(33 / 4) ; 65 / 57 \mathrm{~dB}(1 / \mathrm{s})$ |
| S/N ref. Ivi. | $3 \%$ THD, (A-weighted) |
| THD | 1.0\% (3 $3 / 4$ ); $1.3 \%$ ( $1 / 18$ ) |
| THD ref. IvI. | 0 (200 nWb/m) |

## T-3 Two-Speed Deck

Price $\$ 530$
Heads 3 (hard ferrite)
Flutter $\quad 0.05 \%(0.03 \%$ at $3 \%$ )
Fast-forward 48 sec (C-60)
Rewind $48 \mathrm{sec}(\mathrm{C}-60)$
Noise red. Dolby
Input sens. 200 mV (line); 30 mV (mic)
Output level 2 V
Impedance 600 ohms
Min. load 3.3 K ohms
Separation $35 \mathrm{~dB}(1 \mathrm{kHz})$
Erasure $\quad 75 \mathrm{~dB}(1 \mathrm{kHz})$
Meters Peak-reading ( -40 dB to +5 dB )
Features Dual capstan; Dolby calibration; high-speed tape handling
Tape \#1 TDK SA
R/P resp. $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}(1 \%) ; 20$ Hz to $23 \mathrm{kHz}, \pm 3 \mathrm{~dB}(3 \mathrm{~m} / \mathrm{m})$
S/N $\quad 68 \mathrm{~dB} / 61 \mathrm{~dB}(33 / 4) ; 65 \mathrm{~dB} / 57 \mathrm{~dB}$ (1\%)
S/N ref. Ivl. $3 \%$ THD (A-weighted)
THD $\quad 1.3 \% ; 1.0$ at $33 / 4$
THD ref. IvI. $0(200 \mathrm{nWb} / \mathrm{m})$
Tape \#2 TDK AO
R/P resp. $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}(33 / 4) ; 20$ Hz to $19 \mathrm{kHz}+3 \mathrm{~dB}(1 \mathrm{~s})$
S/N $\quad 67 / 60 \mathrm{~dB}(33 / 4) ; 64 / 56 \mathrm{~dB}\left(1^{17 / 6}\right)$
S/N ref. IvI. $3 \%$ THD, (A-weighted)
THD $1.2 \%, 0.9 \%$ at $3 \%$
THD ref. $\mid v i$. $0(200 \mathrm{nWb} / \mathrm{m})$
T-05
Price $\$ 209.95$


Dual 839RC


Fisher CR. 4029

Heads
Flutter
Fast-forward $85 \mathrm{sec}(\mathrm{C}-60$ )
Rewind 85 seconds for C-60 (length)
Noise red Dolby
Input sens. 200 mV (line); 30 mV (mic)
Output level 1 V
Impedance 600 ohms
Min. load 3.3 K ohms
Separation 35 dB at 1 kHz
Erasure 75 dB at 1 kHz
Meters $\quad$ Peak reading ( -20 dB to +5 dB )
Features Broadband electronics; MPX filter
switch
Tape \#1 TDK SA
R/P resp. $\quad 30 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N
S/N ref. Ivt.
THD
63 dB (w/NR); 55 dB (w/o NR)
1.7\%

THD ref. IvI. 0
Tape \#2 TDK AD
R/P resp. $\quad 30 \mathrm{~Hz}$ to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N
S/N ref. Ivi. $3 \%$ (A-weighted)
THD ref. Ivi. 0

## Models also available

CS-703D, \$200; T-2 Two-Speed
Deck, \$350; T-1 Two-Speed Deck, $\$ 299.95$

## BIGSTCN

Bigston Corp.
85 Goŕdon St.
Elk Grove Village, III. 60007
BSD-400
Price $\quad \$ 249$
Heads 2 (permalloy)
Flutter $\quad 0.07 \%$ (WRMS)
Play resp. $\quad 30 \mathrm{~Hz}$ to $13 \mathrm{kHz},+3 \mathrm{~dB}$
Fast-forward 75 sec (C-60)
Rewind 75 sec (C-60)
Noise red. Dolby
Input sens_ 250 mV (line); 0.2 mV (mic)
Output level 580 mV
Impedance 220 ohms
Separation $35 \mathrm{~dB}(1 \mathrm{kHz})$
Erasure $\quad 65 \mathrm{~dB}(1 \mathrm{kHz})$
Meters $\quad 2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+3 \mathrm{~dB})$
Features DC with electric governor; LED peak indicator; vertical cassette slot loading; memory rewind; auto playback; cue and review; separate record and playback level controls; separate bias and equalization controls; 3-position tape selector; mic mixing; $1 / 4^{n}$ stereo headphone jack
Tape \#1 TDK-SD
R/P resp. $\quad 30 \mathrm{~Hz}$ to $13 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 52 \mathrm{~dB} / 58 \mathrm{~dB}$
S/N ref. |vi. 0.5 V
THD $15 \%$

| THD ref. IvI. | 0.5 V |
| :--- | :--- |
| Tape \#2 | TDK-SA |
| R/P resp. | 30 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 52 dB 58 dB |
| S/N ref. IvI. | 0.5 V |
| THD | $1.5 \%$ |
| THD ref. IvI. | 0.5 V |
|  |  |
| CALIBRE |  |
| Calibre |  |
| 1301 65 th St. |  |
| Emeryville, Calif. 94608 |  |


| 440 |  |
| :---: | :---: |
| Price | \$335 |
| Heads | 2 (permalloy) |
| Flutter | 0.06\% |
| Play resp. | 40 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $85 \mathrm{sec}(\mathrm{C}-60$ ) |
| Rewind | $85 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby B |
| Input sens. | 60 mV (line); 0.3 mV (mic) |
| Output level | 580 mV |
| impedance | 1 K ohms |
| Separation | 65 dB ( 1 kHz ) |
| Erasure | 65 dB (1 kHz) |
| Meters | Peak-reading ( -20 dB to +5 dB ) |
| Features | LED VU meters, FM Dolby; 100 |
| ${ }^{\mathrm{kHz}}$ bias; direct loading; memory stop; full auto |  |
| Tape \#1 | TDK AD |
| R/P resp. | 30 Hz to $75.5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $52 \mathrm{~dB} / 62 \mathrm{~dB}$ |
| S/N ref. Ivi. | Dolby |
| THD | 1.5\% |
| THD ref. Ivi. | Dolby |
| Tape \#2 | TDK SA |
| R/P resp. | 30 Hz to $15.5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $52 \mathrm{~dB} / 62 \mathrm{~dB}$ |
| S/N ref. Ivi. | Dolby |
| THD | 1.5\% |
| THD ref. Ivi. | Dolby |

## CONCEPT

Concept
1601 West Glenlake
Itasca, III. 60743

| ELC |  |
| :---: | :---: |
| Price | \$525 |
| Heads | 2 (Sendust alloy) |
| Flutter | 0.04\% |
| Play resp. | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $75 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $75 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 60 mV (line): 0.27 mV (mic) |
| Output level | $1,000 \mathrm{mV}$ |
| Impedance | 47K ohms |
| Separation | $50 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Meters | $2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+4 \mathrm{~dB})$ |
| Features | Computer logic control; 2-motor eat limiter peak-reading LED |
| Tape \#1 | Maxell UDXL-I |
| R/P resp. | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $52 \mathrm{~dB} / 62 \mathrm{~dB}$ |
| S/N ref. Ivi. | 0 VU |
| THD | 1\% |
| THD ref. Ivi. | +3 dB |
| Tape \#2 | TDK SA |
| DENON |  |
| American Audioport, Inc. |  |
| 1407 North Providence Road |  |
| Columbia, Miss. 65201 |  |
| DR-250 |  |
| Price | \$430 |
| Heads | 2 (Sendust R/P; 1 double gap ferrite erase) |
| Flutter | 0.05\% (WRMS) |
| Play resp. | 35 Hz to $15 \mathrm{kHz} \pm 3 \mathrm{~dB}$ |
| Fast-forward | $70 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $70 \mathrm{sec}(\mathrm{C}-60)$ |


| Input sens. | 69 mV (line); 0.3 mV (mic) |
| :--- | :--- |
| Output level | 0.416 mV |
| Min. load | 10 K ohms |
| Separation | 35 dB at 1 kHz |
| Erasure | 65 dB at 1 kHz |
| Meters | $2 \mathrm{VU} ; 5$ peak reading LEDs (-20 dB |
|  | to +5 dB ) |
| Features | 4 -position tape selector; metal- |
| ready; servo-controlled motor; auto repeat; auto |  |
| memory; front-panel bias |  |
| Tape \#1 | Denon $\mathrm{DX}-5$ |
| R/P resp. | 35 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 62 dB (w/NR) |
| S/N ref. Ivl. | +3 dB (A-weighted) |
| THD | $3 \%$ |
| THD ref. Ivl. | +3 dB |
| Tape \#2 | Denon DX-3 |
| R/P resp. | $35 \mathrm{~Hz} \mathrm{to} 14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 62 dB (w/NR) |
| S/N ref. Ivl. | +3 dB, (A-weighted) |
| THD | $3 \%$ |
| THD ref. Ivl. | 3 dB |

Models also available
DR-750, \$1,200

DUAL
United Audio Products
120 S. Columbus Ave.
Mt. Vernon, N.Y. 10553

C-839RC

| Price | \$850 |
| :---: | :---: |
| Heads | 2 (Sendust) |
| Flutter | 0.03\% |
| Play resp. | 20 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | 65 sec (C-60) |
| Rewind | 65 seconds for |
| Noise red. | Dolby |
| Input sens. | 30 mV (line): |
| Output level | 580 mV |
| Min. Ioad | 2 k ohms |
| Separation | 40 dB ( 1 kHz ) |
| Erasure | 70 dB at 1 kHz |
| Meters | 2 VU ; peak reading; (dB) |
| Features | Auto reverse; optional |
| trol; direct load | d and lock system (DLLS) |
| blas/eg; LED operation | EQ indicators; metal ready |
| Tape \# 1 | Metal |
| R/P resp. | 20 Hz to $20 \mathrm{kHz} \pm 3 \mathrm{~dB}$ |
| S/N | 69 dB (w/NR) |
| S/N ref. Ivi. | 3\% THD (DIN B) |
| THD | 0.4\% |
| THD ref. Ivi. | $0 \mathrm{~dB}(200 \mathrm{nWb} / \mathrm{m})$ |
| Tape \#2 | Ferrichrome |
| R/P resp. | 20 Hz to $19 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 69 dB (w/NR) |
| S/N ref. Ivi. | 3\% THD (DIN B) |
| THD | 0.4\% |
| THD ref. Ivi. | 0 dB |


| C-830 |  |
| :--- | :--- |
| Price | $\$ 499.95$ |
| Heads | 3 (Sendust) |
| Flutter | $0.035 \%$ |
| Play resp. | 20 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $65 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $65 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 30 mV (line); 0.2 mV (mic) |
| Output level | 580 mV |
| Min. load | 2 K ohms |
| Separation | $40 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Erasure | 70 dB at 1 kHz |
| Meters | Peak reading ( -20 dB to +5 dB) |
| Features | $\mathrm{DLLS} / \mathrm{metal}$ ready; LED indicator; |
| six-position bias/EQ |  |
| Tape \#1 | Metal |
| R/P resp. | $20 \mathrm{~Hz} \mathrm{to} 20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 69 dB (w/NR) |

S/N ref. IvI. $\quad 3 \%$ THD (DIN B)
THD 0.4\%
THD ref. $\mathrm{lvL} .200 \mathrm{nWb} / \mathrm{m}(0 \mathrm{~dB})$
Tape \#2 Ferrichrome
R/P resp. $\quad 20 \mathrm{~Hz}$ to $19 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 69 \mathrm{~dB}(w / N R)$
S/N ref. IvI. 3\% THD (DIN B)
THD 0.4\%
THD ref. IvI. 0 dB

## Models also available

C-820, $\$ 419.95$; C-810, $\$ 329.95$

## EUMIG

Eumig (U.S.A.) Inc.
Lake Success Business Park
255 Community Drive
Great Neck, N.Y. 11025

| FL-1000 |  |
| :--- | :--- |
| Price | $\$ 1,550$ |
| Heads | 3 |
| Flutter | $0.035 \%$ (WRMS) |
| Play resp. | 20 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $33 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $33 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dollby |
| Output level | 750 mV |
| Meters | Peak-reading (-20 dB to +8 dB) |
| Features | Also has -6 dB meter sensitivity for |
| higher allowable peaks of metal tape |  |
| Tape \#1 | Metal |
| R/P resp. | $20 . \mathrm{Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 72 dB (w/NR); 64 (w/o NR) |
| S/N ref. Ivl. | $3 \%$, (A-weighted) |
| Tape \#2 | TDK SA |
| R/P resp. | 20 Hz to $20 \mathrm{kHz} ; \pm 3 \mathrm{~dB}$ |
| $\mathrm{~S} / \mathrm{N}$ | 68 dB (w/NR); 60 dB (w/o NR) |
| S/N ref. Ivl. | $3 \%$, (A-weighted) |

## Models also available

Metropolitan CCD. $\$ 1,300$

FISHER
Fisher Corp.
21314 Lassen St.
Chatsworth, Calif. 91311

CR-5150

| Price | \$700 |
| :---: | :---: |
| Heads | 3 (ferrite) |
| Flutter | 0.04\% |
| Play resp. | 30 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $84 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $84 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 100 mV (line); 0.2 mV (mic) Dolby |
| Output level | 1V |
| Impedance | 5 K ohms |
| Min. load | 20K ohms |
| Separation | $40 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Erasure | 70 dB ( 1 kHz ) |
| Meters | $2 \mathrm{VU} ; 2$ peak-reading LED dB to +5 dB ) |
| Features | Full-function infrared |
| remote control; electronic digitał LED tape co with timer; double Dolby; FM MPX filter; DC se capstan motor and separate reel-drive m tape/source monitoring |  |
|  |  |
|  |  |
|  |  |
| Tape \#1 | BASF PRO II |
| R/P resp. | 30 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $55 \mathrm{~dB} / 64 \mathrm{~dB}$ |
| S/N ref. Ivi. | +3 VU (CCIR) (ARM) |
| THD | 1.4\% |
| THD ref. Ivi. | 0 VU |
| Tape \#2 | BASF PRO Ill or Sony Fecr |
| R/P res | 30 Hz to $15 \mathrm{kHz},+3 \mathrm{~dB}$ |



| R/P resp. | 30 Hz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| :---: | :---: |
| S/N | 62 dB (w/NR); 54 dB (w/o NR) |
| Tape \#2 | $\mathrm{CrO}_{2}$ |
| R/P resp. | 30 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 62 dB (w/NR) 54 dB (w/o NR) |
| D-75S |  |
| Price | \$380 |
| Heads | 2 (Sendust) |
| Flutter | 0.04\% |
| Fast-forward | 90 sec ( $\mathrm{C}-60$ ) |
| Rewind | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Input sens. | 60 mV (line); 0.30 mV (mic) |
| Output level | 500 mV |
| Impedance | 50 K ohms |
| Erasure | 65 dB at 1 kHz |
| Meters | Fluorescent meters |
| Features | Metal capable; full logic |
| Tape \# 1 | Normal |
| R/P resp. | 30 Hz to 15 kHz |
| S/N | 66 dB (w/NR); 58 dB (w/o NR) |
| S/N ref. lvi. | A-weighted |
| THD ref. IvI. | 3\% |
| Tape \#2 | $\mathrm{CrO}_{2}$ |
| R/P resp. | 30 Hz to 16 kHz |
| S/N | 66 dB (w/NR), 58 dB (w/o NR) |
| S/N ref. lvi. | A-weighted |
| THD ref. IvI. | 3\% |

## D-230

| Price | $\$ 180$ |
| :--- | :--- |
| Heads | 2 (permalloy) |

Flutter $0.09 \%$
Play resp. $\quad 30 \mathrm{~Hz}$ to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Fast-forward 100 sec (C-60)
Rewind $\quad 100 \mathrm{sec}(\mathrm{C}-60)$
Noise red. Dolby
Input sens. 60 mV (line); 250 mV (mic)
Output level 500 mV
Impedance 50 K ohms
Min. load 50 K ohms
Separation $60 \mathrm{~dB}(1 \mathrm{kHz})$
Erasure $\quad 65 \mathrm{~dB}(1 \mathrm{kHz})$
Meters $\quad 2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+3 \mathrm{~dB})$
Features Electrically controlled DC motor;
output-level control
Tape \#1 Hitachi UDEX
R/P resp. $\quad 30 \mathrm{~Hz}$ to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 53 \mathrm{~dB} / 58 \mathrm{~dB}$
S/N ref. IvI. 0 VU
THD 2\%
THD ref. Ivl. $0 \mathrm{VU}(1 \mathrm{kHz})$
Tape \#2 Hitachi UDER
R/P resp. $\quad 30 \mathrm{~Hz}$ to $12.5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 53 \mathrm{~dB} / 58 \mathrm{~dB}$
S/N ref. Ivi. 0 VU
THD 2\%
THO ref. IvI. 0 VU (1 kHz)

## Models also available

D-980, \$550; D-555, N/A; D-850, \$400; D-40S, \$229.95

## JVC

JVC America, Inc.
58-75 Queens Midtown
Expressway
Maspeth, N.Y. 11378
KD-A8

| Price | \$750 |
| :---: | :---: |
| Heads | 2 (1 X-cut SAR/P, 1 2-gap SA erase) |
| Flutter | 0.035\% (WRMS) |
| Fast-forward | $85 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | 85 sec ( (C-60) |
| Input sens. | 80 mV (line); 0.2 mV (mic) |
| Output level | 300 mV |
| Impedance | 3 to 8 K ohms |
| Separation | 35 dB at 1 kHz |
| Meters | $2 \mathrm{VU} ; 5$ peak-reading LEDs |
| Features sitivity | Computer tuning for bias/EQ/sen- |
| Tape \#1 | Metal |
| R/P resp. | 25 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |


| S/N | $70 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}) ; 60 \mathrm{~dB}$ (w/o NR) |
| :---: | :---: |
| THD | 0.4\% |
| Tape \#2 | SA chrome |
| R/P resp. | 25 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| KD-85 |  |
| Price | \$530 |
| Heads | 2 (1 SA R/P; 1 double-gap ferrite erase) |
| Flutter | 0.04\% (WRMS) |
| Play resp. | 30 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $85 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | 85 sec (C-60) |
| Noise red. | ANRS; Super ANRS |
| Input sens. | $\begin{aligned} & 80 \mathrm{mV} \text { (line); } 0.2 \mathrm{mV} \text { (mic); } 0.17 \mathrm{mV} \\ & \text { (DIN) } \end{aligned}$ |
| Output level | 500 mV |
| Impedance | 3.3 K ohms |
| Separation | 35 dB (1 kHz) |
| Meters | $2 \mathrm{VU}(-20 \mathrm{~dB}$ to +5 dB ); Spectro Peak ( 25 peak-reading LEDs) |
| Features | 2-motor full-logic solenoid control |
| Tape \# 1 | TDK SA |
| R/P resp. | 30 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $56 \mathrm{~dB} / 66 \mathrm{~dB}$ |
| THD | 0.4\% |
| THD ref. Ivi. | 0 VU (K3) |
| Tape \#2 | Maxell UD |
| R/P resp. | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $56 \mathrm{~dB} / 66 \mathrm{~dB}$ |
| THD | 0.4\% |
| THD ref. lvi | 0 VU (K3) |

THD ref. ivl. 0 VU (K3)

| KD-1636-II |  |
| :---: | :---: |
| Price | \$400 |
| Heads | 2 (1 SA R/P; 1 double-gap ferrite erase) |
| Flutter | 0.08\% (WRMS) |
| Play resp. | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | 90 sec (C-60) |
| Noise red. | ANRS; Super ANRS |
| Input sens. | 80 mV (line); 0.14 mV (mic); 0.12 mV (DIN) |
| Output level | 500 mV |
| Impedance | 2.5 K ohms |
| Separation | $35 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Meters | $2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+5 \mathrm{~dB})$; tri-color peak indicator |
| Features | Built-in monitor speaker with |
| volume control |  |
| Tape \#1 | TDK SA |
| R/P resp. | 40 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $57 \mathrm{~dB} / 67 \mathrm{~dB}$ |
| THD | 0.5\% |
| THD ref. Ivi. | 0 VU (K3) |
| Tape \#2 | Maxell UD |
| R/P resp. | 30 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $57 \mathrm{~dB} / 67 \mathrm{~dB}$ |
| THD | 0.5\% |
| THD ref. IvI. | 0 VU (K3) |
| KD-1770-11 |  |
| Price | \$380 |
| Heads | 2 (1 SA R/P; 1 double-gap ferrite erase) |
| Flutter | 0.05\% (WRMS) |
| Play resp. | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | 75 sec (C-60) |
| Rewind | 75 sec (C-60) |
| Noise red. | ANRS; Super ANRS |
| Input sens. | $\begin{aligned} & 80 \mathrm{mV} \text { (line }) ; 0.2 \mathrm{mV} \text { (mic); } 0.17 \mathrm{mV} \\ & \text { (DIN) } \end{aligned}$ |
| Output level | 500 mV |
| Impedance | 6.8 K ohms |
| Separation | $35 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Meters | $2 \mathrm{VU} ; 2$ sets of 5 peak-reading LEDs |
| Features | Timer recording; memory stop |
| Tape \# 1 | TDK SA |
| R/P resp. | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| THD | 0.5\% |
| THD ref. IvI. | 0 VU (K3) |
| Tape \#2 | Maxell UD |
| R/P resp. | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| THD | 0.5\% |
| THD ref. IvI. | 0 VU (K3) |

KD-A1

| Price | \$180 |
| :---: | :---: |
| Heads | 2 (1 Cronios R/P; 1 dual-gap ferrite erase) |
| Flutter | 0.08\% (WRMS) |
| Play resp. | 40 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $80 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $80 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | $\begin{aligned} & 80 \mathrm{mV} \text { (line); } 0.2 \mathrm{mV} \text { (mic); } 0.1 \\ & \text { (DIN) } \end{aligned}$ |
| Output level | 410 mV |
| Impedance | 3 K ohms |
| Separation | 35 dB ( 1 kHz ) |
| Erasure | $65 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Meters | 2 VU ; 5 peak-reading LEDs (-20 $d B$ to $+5 d B$ ) |
| Tape \#1 | TDK SA |
| R/P resp. | 40 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $57 \mathrm{~dB} / 67 \mathrm{~dB}$ |
| THD | 0.5\% |
| THD ref. Ivi. | K3:0 VU |
| Tape \#2 | Maxell UD |
| R/P resp. | 40 Hz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $57 \mathrm{~dB} / 67 \mathrm{~dB}$ |
| THD | 0.5\% |
| THD ref. IvI. | K3:0 VU |

## Models also available

KD-3030, \$550; KD-A6, \$480; KD65, \$430; KD-S201, \$390; KD-2, \$350; KD-10, \$210

## KENWOOD

Kenwood Electronics, Inc.
75 Seaview Drive
Secaucus, N.J. 07094

| KX-1030 |  |
| :---: | :---: |
| Price | \$450 |
| Heads | 3 (ferrite) |
| Flutter | 0.06\% (WRMS) |
| Play resp. | 35 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $80 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $80 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Yes |
| Input sens. | 77.5 mV (line); 0.19 mV (mic) |
| Output level | 775 mV |
| Impedance | 2 ohms |
| Meters | $2 \mathrm{VU} /$ peak-reading |
| R/P resp. | 35 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $65 \mathrm{~dB} / 55 \mathrm{~dB}$ |
| S/N ref. Ivi. | $160 \mathrm{nW} / \mathrm{m}$ |
| THD | 1.3\% |
| THD ref. lvi. | $160 \mathrm{nW} / \mathrm{m}$ |
| KX-830 |  |
| Price | \$325 |
| Heads | 2 (hard permalloy) |
| Flutter | 0.06\% (WRMS) |
| Play resp. | 35 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $80 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $80 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Yes |
| input sens. | 77.5 mV (line); 0.19 mV (mic) |
| Output level | 775 mV |
| Impedance | 0.5 K ohms |
| Meters | $2 \mathrm{VU} / \mathrm{peak}$-reading |
| R/P resp. | 35 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $62 \mathrm{~dB} / 52 \mathrm{~dB}$ |
| S/N ref. Ivi. | $160 \mathrm{nW} / \mathrm{m}$ |
| THD | 1.3\% |
| THD ref. Ivi. | $160 \mathrm{nW} / \mathrm{m}$ |
| KX-550 |  |
| Price | \$235 |
| Heads | 2 (hard permalloy) |
| Flutter | 0.05\% (WRMS) |
| Play resp. | 40 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $85 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | 85 sec (C-60) |
| Noise red. | Yes |
| Input sens. | 77.5 mV (line); 0.15 mV (mic) |
| Output level | 489 mV |
| Impedance | 100 K ohms |
| Meters | 2 VU |



Harman Kardon hk-3500


Kenwood KX-1030

| R/P resp. | 40 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| :--- | :--- |
| S/N | $64 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}), 54 \mathrm{~dB}(\mathrm{w} / \mathrm{ONR})$ |
| S/N ref. \|v|. | $160 \mathrm{nWb} / \mathrm{m}$ |
| THD | $1.5 \%$ |
| THD ref. Ivl. | $160 \mathrm{nWb} / \mathrm{m}$ |

## Models also available

KX-760, \$350; KY-650. \$299

## LAFAYETTE <br> Lafayette Radio Electronics Corp.

111 Jericho Turnpike
Syosset, N.Y. 11791
RKD-600

| Price | $\$ 299.99$ |
| :--- | :--- |
| Heads | 3 (permalloy R/P |
| Flutter | $0.06 \%$ |
| Play resp. | 40 Hz to 60 kH |
| Fast-forward | $100 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $100 \mathrm{sec}(\mathrm{C}-60)$ |
| Nolse red. | Dolby |
| Input sens. | 60 mV (line); 0.3 |
| Output level | 0.5 mV |
| Impedance | 4.7 K ohms |
| Separation | 35 dB (1 kHz) |
| Meters | $2 \mathrm{VU} ;$ peak-rea |
| Features | DC servomoto |
| memory rewind; mpx filter; 3-p |  |
| switches; output control; mic m |  |
| front-loading |  |
| Tape \# 1 | Lafayette |
| S/N | $54 \mathrm{~dB} / 62 \mathrm{~dB}$ |
| THD | $1.7 \%$ |
| THD ref. Ivi. | 1 kHz |

## Models also available <br> RKD-225, $\$ 199.99$ : RKD-150, $\$ 149.99$

LENCO
Neosonic Corp. of America 180 Miller Place
Hicksville, N.Y. 11801

## C-2003

## Price

$\$ 796$

## Flutter

Play resp.
Fast-forward
Rewind
Naise red.
Input sens. 60 mV (line); 350 mV (mic); 8 mV (DIN)
Output level 750 mV


Impedance 330 ohms

Erasure
Meters
$65 \mathrm{~dB}(1 \mathrm{kHz})$
2 VU ; peak-reading -20 dB to +4 dB)
Features Two-motor solenoid drive system; mixing facilities; MPX filter, memory rewind

## LUX

Lux Audio of America
160 Dupont St.
Plainview, N.Y. 11803
5K-50
Price
Heads 3 Sendust
Flutter $\quad 0.03 \%$ (WRMS)
Input sens. $\quad 100 \mathrm{mV}$ (line); 0.25 mV (mic); 2 mV (DIN)
Output level 580 mV
Meters Peak reading plasma (- 40 dB to $+4 \mathrm{~dB})$

K-5A
Price $\$ 495$
Heads 2 (Sendust)
Flutter $0.06 \%$ (WRMS)
Play resp. $\quad 30 \mathrm{~Hz}$ to 20 kHz
Input sens. 100 mV (line); 0.45 mV (mic); 2 mV (DIN)
Output level 580 mV
Meters Peak-reading fluorescent
Tape \#1 Metal
R/P resp. $\quad 30 \mathrm{~Hz}$ to 20 kHz

## Models also available

K-12 Cassette Deck, \$995; k-10
Cassette Deck, \$795
MARANTZ
Superscope, Inc.
20525 Nordhoff St.
Chatsworth, Calif. 91311

| SD-9000 | Two-Speed Deck |
| :--- | :--- |
| Price | $\$ 775$ |
| Heads | 3 (Sendust) |
| Flutter | $0.03 \%(33 / 4) ; 0.05 \%(1 / / 8)$ |
| Play resp. | 31.5 Hz to $14 \mathrm{kHz},-2 \mathrm{~dB}(17 / \mathrm{s}) ;$ |
|  | 31.5 Hz to $25 \mathrm{kHz},-2 \mathrm{~dB}(33 / \mathrm{s})$ |
| Fast-forward | $85 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | 85 seconds for $\mathrm{C}-60$ (length) |
| Noise red. | Double Dolby |
| Input sens. | 70 mV (line); 0.25 mV (mic) |
| Output level | 650 mV (line); 43 mV (headphone) |
| Impedance | 1.2 K ohms (line); 150 ohms (head- |
|  | phone) |
| Separation | 40 dB at (1 kHz$)$ |
| Erasure | 60 dB at 1 kHz |
| Meters | 2 LED peak level |



JVC KD.A. 6


Mitsublshi DT-10

Features Two speed; Compudeck microprocessor programming and selection; digital display including clock and timer; two-motor transport; auto slack take-up and bias fine adjustment; mic/line mix; record mute; sensor stop
Tape \#1 Metal (3M Metafine)
R/P resp. $\quad 25 \mathrm{~Hz}$ to $20 \mathrm{kHz},+3 \mathrm{~dB}(1 \mathrm{y}) ; 25$
Hz to $23 \mathrm{kHz}, \pm 3 \mathrm{~dB}(3 \mathrm{~m} / \mathrm{a})$
$S / \mathrm{N}$ ref. IvI. $250 \mathrm{nW} / \mathrm{m}$ over 5 kHz , (IEC A)
THD 3\%
THD ref. IvI. $250 \mathrm{nW} / \mathrm{m}$
Tape \#2 FeCr (Sony CS-30)
R/P resp $\quad 25 \mathrm{~Hz}$ to $18 \mathrm{kHz} \pm 3 \mathrm{~dB}(11 / \mathrm{B}) ; 25$
Hz to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}(3 \sqrt{4})$
$\mathrm{S} / \mathrm{N} \quad 69 / 59 \mathrm{~dB}(17 / 8) ; 72 / 62 \mathrm{~dB}(31 / 4)$
$\mathrm{S} / \mathrm{N}$ ref. IvI. $250 \mathrm{nW} / \mathrm{m}$ over 5 kHz (IEC A)
THD 3\%
THD ref. ivi. $250 \mathrm{nW} / \mathrm{m}$
SD-6000 Two-Speed Deck

## Price $\$ 500$

Heads 2 (Sendust)
Flutter $\quad 0.03 \%$ ( $33 / 4 \mathrm{ps}$;) $0.05 \%$ ( $17 /)^{\text {) }}$
Play resp. $\quad 31.5 \mathrm{~Hz}$ to $14 \mathrm{kHz},-2 \mathrm{~dB}(1 / \mathrm{s})$;
31.5 Hz to $25 \mathrm{kHz},-2 \mathrm{~dB}(33 / 4)$

Fast-forward 85 sec (C-60)
Rewind 85 sec (C-60)
Noise red. Dolby
Input sens. 70 mV (line); 0.25 mV (mic)
Output level 650 mV (line); 43 mV (headphone)
Impedance 1.2K ohms (Jine); 150 ohms (headphone)
Separation 40 dB at 1 kHz
Erasure $\quad 60 \mathrm{~dB}$ at 1 kHz
Meters 2 LED peak level
Features Two-speed; electronic feathertouch operation; memory rewind/replay; output level control; 2-motor transport; auto slack takeup; blas fine adjustment; mic/line mixing; record mute; sensor stop
Tape \#1 Metal (3M Metafine)
R/P resp. $\quad 30 \mathrm{~Hz}$ to $19 \mathrm{kHz}, \pm 3 \mathrm{~dB}(17 / \mathrm{s}) ; 30$
Hz to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}(33 / 4 \mathrm{ips})$
S/N
S/N ref. IW. $250 \mathrm{nW} / \mathrm{m}$ over 5 kHz (IEC A)
THD 3\%
THD ref. ivl. $250 \mathrm{nW} / \mathrm{m}$
Tape \#2 FeCr Sony CS-30
R/P resp. $\quad 30 \mathrm{~Hz}$ to $17 \mathrm{kHz} \pm 3 \mathrm{~dB}(17 / 8) ; 30$ Hz to $21 \mathrm{kHz},+3 \mathrm{~dB}(33 / 4)$
$\mathrm{S} / \mathrm{N} \quad 68 / 58 \mathrm{~dB}(1 / 8), 5871 / 61 \mathrm{~dB}\left(3^{3 / 4}\right)$
S/N ref. IvI. $250 \mathrm{nW} / \mathrm{m}$ over 5 kHz , Weighting Curve IECA
3\%
THD ref. IvI. $250 \mathrm{nW} / \mathrm{m}$

## SD-800

Price
Heads
Flutter
Play resp.
Noise red
$\$ 199$
2 (super-hard permalloy)
$0.08 \%$ (WRMS)
31.5 Hz to $14 \mathrm{kHz} \pm 2 \mathrm{~dB}$

Dolby

| Input sens. | 25 mV (line); 0.25 mV (mic) |
| :--- | :--- |
| Output level | 800 mV (line); 43 mV (headphone) |
| Impedance | 3.3 K ohms (line); 160 ohms (head- |
|  | phone) |
| Erasure | 60 dB at 1 kHz |
| Meters | $2 \mathrm{VU}(-20 \mathrm{~dB}$ to +5 dB ) |
| Features | DC servomotor; extended range |
| VU meters damped cassette door |  |
| Tape \#1 | FeCr (Sony $\mathrm{CS}-30)$ |
| R/P resp. | 35 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $63 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}) ; 54 \mathrm{~dB}$ (w/o NR) |
| S/N ref. IvI. | $250 \mathrm{nW} / \mathrm{m}$ (IEC A) |
| THD | $3 \%$ |
| THD ref. IvI. | $250 \mathrm{nW} / \mathrm{m}$ |
| Tape \#2 | CrO (TDK AC 511$)$ |
| R/P resp. | 35 Hz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $63 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}) ; 54 \mathrm{~dB}$ (w/o NR) |
| S/N ref. IvI. | $250 \mathrm{nW} / \mathrm{m}$ (IEC A) |
| THD | $3 \%$ |
| THD ref. IvI. | $250 \mathrm{nW} / \mathrm{m}$ |

## Models also available

SD-8000 Two-Speed Deck, \$650; SD-4000 Two-Speed Deck, \$435; SD-3000, \$295; SD-1000, \$235

MCS* ${ }^{*}$ SERIES
J.C. Penney

1301 Ave. of the Americas
New York, N.Y. 10019
3552
$\begin{array}{ll}\text { Price } & \$ 180 \\ \text { Heads } & 21 \text { (R/P; 1 erase) }\end{array}$
Flutter $\quad 0.14 \%$ (WRMS) (JIS)
Play resp. $\quad 40 \mathrm{~Hz}$ to $14 \mathrm{kHz} \pm 3 \mathrm{~dB}$
Fast-forward 110 sec (C-60)
Rewind $\quad 110 \mathrm{sec}(\mathrm{C}-60)$
Input sens. $\quad 250 \mathrm{mV},+3 \mathrm{~dB}$ (line); $0.25 \mathrm{mV},+2$ dB (mic)
Output level 800 mV
Impedance 10 Kohms
Min. load 47 K ohms
Separation $50 / 35 \mathrm{~dB}$
Erasure $\quad 65 \mathrm{~dB}$ at 1 kHz
Meters +3 VU ; peak-reading
Tape \# 1 3M Master 1
R/P resp. $\quad 40 \mathrm{~Hz}$ to $12.5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 47 \mathrm{db}(w / N R) ; 54 \mathrm{~dB}$ (w/o NR)
S/N ref. Ivl. 2 dB over 0 VU (CCIR) (ARM)
THD $1.5 \%$
THD ref. IvI. 0 UV
Tape \#2 3M Master III
R/P resp. $\quad 40 \mathrm{~Hz}$ to $12.5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 47 \mathrm{~dB}(w / N R), 56 \mathrm{~dB}$ (w/o NR)
S/N ref. Ivi. +2 dB 0 UV (CCIR) (ARM)
THD $\quad 1.5 \%$
THD ref. IvI. 0 UV

## MITSUBISHI

Melco Sales, Inc.
3030 E. Victoria St.
Compton, Calif. 90221
MT-01 Micro
Price $\$ 560$
Heads $\quad 2$ (Sendust R/P; ferrite erase)
Flutter $\quad 0.05 \%$
Play resp. $\quad 40 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Fast-forward 80 sec (C-60)
Rewind $80 \mathrm{sec}(\mathrm{C}-60)$
Noise red. Dolby
Input sens. 100 mV (line); 0.3 mV (mic)
Output level 447 mV ( 0 dB )
Impedance 2.2 K ohms
Min. load 22 K ohms
Separation 35 dB at 1 kHz
Erasure $\quad 70 \mathrm{~dB}$ at 1 kHz
Meters Peak reading ( -20 dB to +5 dB )
Features Closed-loop dual-capstan DC quartz PLL servo drive; logic control transport; bias and EO switching; ASPS; timer start; memory play/stop; line/mic mixing; MPX filter
Tape \#1 FeCr
R/P resp. $\quad 40 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$

S/N $\quad 64 \mathrm{~dB}(w / N R) ; 56 \mathrm{~dB}$ (w/o NR)
S/N ref. Ivl. 0 dB (DIN A)
$\begin{array}{ll}\text { THD } & 1 \% \\ \text { THD ref. Ivl. } & 160 \mathrm{pwb} / \mathrm{mm} 400 \mathrm{~Hz}\end{array}$
Tape \# 2 Special (UDXL I, SA, otc.)
R/P resp. $\quad 40 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N
$64 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}) ; 56 \mathrm{dBw} / 0 \mathrm{NR})$
S/N ref. Ivl. 0 dB (DIN A)
THD $\quad 1 \%$
THD ref. IvI. $160 \mathrm{pwb} / \mathrm{mm}$
DT-10
Price $\$ 370$
Heads 2 (permalloy R/P, territe erase)
Flutter 0.06\%
Play resp. $\quad 40 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Fast-forward $80 \mathrm{sec}(\mathrm{C}-60)$
Rewind $80 \mathrm{sec}(\mathrm{C}-60)$
Noise red. Dolby
Input sens. 80 mV (line); 0.24 mV (mic)
Output level $447 \mathrm{mV}(+3 \mathrm{~dB})$
Impedance 2.2 K ohms
Min. load 22 K ohms
Separation 35 dB at 1 kHz
Erasure $\quad 70 \mathrm{~dB}$ at 1 kHz
Meters VU; peak reading LED (-20 dB to +5 dB )
Features DC servo drive; residual tape meter; line/mic mixing; timer control; bias and EQ switching; memory rewind; master level
Tape \#1 Special (UDXL II, SA, etc.)
R/P resp. $\quad 40 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 64 \mathrm{~dB}(w / N R) ; 56 \mathrm{~dB}$ (w/o NR)
S/N ref. Ivi. $\quad+3$ (DIN A)
THD $1 \%$
THD ref. IvI. $160 \mathrm{pwb} / \mathrm{mm} 400 \mathrm{~Hz}$
Tape \#2 Normal (UDXL I, ED, etc.)
R/P resp. $\quad 40 \mathrm{~Hz}$ to $12 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 64 \mathrm{~dB}(w / N R), 56 \mathrm{~dB}(w / 0 \mathrm{NR})$
S/N ref. IvI. +3 (DIN A)
THD $1 \%$
THD ref. Ivl. 160 pwb/mm
Models also available
DT-30, \$650
NAD
NAD (USA), Inc.
Mackintosh Lane
P.O. Box 529

Lincoln, Mass. 01773
NAD-6100
Price $\$ 425$
Heads $\quad 2$ (Sendust R/P; ferrite erase)
Flutter $0.045 \%$ (WRMS)
Play resp. $\quad 35 \mathrm{~Hz}$ to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Fast-forward $70 \mathrm{sec}(\mathrm{C}-60)$
Rewind $\quad 70 \mathrm{sec}(\mathrm{C}-60$ )
Input sens. 35 mV (line); 0.5 mV (mic)
Output level 580 mV
Impedance 2 K ohms (output)
Separation 35 dB
Erasure $\quad 65 \mathrm{~dB}$
Meters $\quad V \cup(-20 \mathrm{~dB}$ to $+8 \mathrm{~dB})$
Features DC servomotor; IC logic solenoid transport; fluorescent meters
THD $1.5 \%$
THD ref. IvI. 0 dB (less at lower recording levels)

| NAKAMICHI |  |
| :---: | :---: |
| Nakamichi USA Corp. |  |
| 1101 Colorado Ave. |  |
| Santa Mon | nica, Calif. 90401 |
| 1000-II |  |
| Price | \$1,650 |
| Heads | 3 (1 ferrite record; 1 crystallo play; 1 ferrite erase) |
| Flutter | 0.05\% (WRMS); $0.1 \%$ (DIN) |
| Play resp. | 35 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | 50 sec (C-60) |
| Rewind | 50 sec (C-60) |
|  | Dolby; playback |

NAKAMICHI
Nakamichi USA Corp.
1101 Colorado Ave.
Santa Monica, Calif. 90401
1000-II
en

Flutter $\quad 0.05 \%$ (WRMS); $0.1 \%$ (DIN)
Pay resp. $\quad 35 \mathrm{~Hz}$ to $20 \mathrm{kHz},+3 \mathrm{~dB}$
Rewind $50 \mathrm{sec}(\mathrm{C}-60)$
Noise red. Dolby; playback NR

Input sens. $\quad 50 \mathrm{mV}$ (line); 0.2 mV (mic); 5 mV (DIN radio)
Output level 1 V
Impedance 1 K ohms
Separation $35 \mathrm{~dB}(1 \mathrm{kHz})$
Erasure $\quad 60 \mathrm{~dB}(1 \mathrm{kHz})$
Meters $\quad 2$ peak-reading -40 dB to +10 dB )
Features DC servomotor closed-loop dual
capstan; $3 \mathrm{ml} / 2$ line; auto rewind; memory rewind;
azimuth alignment beacon; phase-corrected PB
circuitry; logic-controlled transport
Tape \#1 Nakamichi SX
R/P resp. $\quad 35 \mathrm{~Hz}$ to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 58 \mathrm{~dB} / 65 \mathrm{~dB}$
S/N ref. Ivl. 3\% THD (WRMS)
THD $1.5 \%$
THD ref. Ivi. $0 \mathrm{~dB}(200 \mathrm{nW} / \mathrm{m})(400 \mathrm{~Hz})$
Tape \#2 Nakamichi EX II
R/P resp. $\quad 35 \mathrm{~Hz}$ to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 54 \mathrm{~dB} / 61 \mathrm{~dB}$
S/N ref. IvI. 3\% THD (WRMS)
THD $\quad 1.5 \%$
THD ref. Ivi. $0 \mathrm{~dB}(200 \mathrm{nW} / \mathrm{m})(400 \mathrm{~Hz})$
680
Price $\quad \$ 1,350$
Heads 3 (Sendust-on-ferrite direct-flux
erase; Crystalloy record/play)
Flutter $\quad 0.08 \%$ wid peak; 0.04\% (WRMS) at $7 / 8 \mathrm{ips} ; 0.14 \%$ wid peak, $0.08 \%$ (WRMS) at $15 / 16 \mathrm{ips}$
Play resp. $\quad 20 \mathrm{~Hz}$ to $\mathrm{kHz}, \mathrm{kHz} \pm 3 \mathrm{~dB}$
Noise red. Dolby
Input sens. 50 mV (line)
Output level 1 V
Impedance 3.3 K ohms
Separation 37 dB at 1 kHz
Erasure $\quad 60 \mathrm{~dB}$ at 1
Meters $\quad 2 \mathrm{VU}(-40 \mathrm{~dB}$ to $+10 \mathrm{~dB})$
Features Two speed (normal \& half); ran-
dom access music memory; fluorescent display
Tape \#1 Nakamichi ZX metalloy
R/P resp. $\quad 20 \mathrm{~Hz}$ to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}(1 / \mathrm{ips}) ;$ 20 Hz to $15 \mathrm{kHz},+3 \mathrm{~dB}$ ( $15 / 16 \mathrm{ips}$ )
S/N $\quad 66 \mathrm{~dB}(w / N R) ; 58 \mathrm{~dB}$ ( $\mathrm{w} / \mathrm{o} \mathrm{NR}$ )
( $17 / \mathrm{ips}$ ); $60 \mathrm{~dB},-52 \mathrm{~dB}(15 / 16 \mathrm{ips})$
S/N ref. Ivl. 3\% THD (IHA A-weighted) (both speeds)
THD $\quad 0.8 \%(17 / 8 \mathrm{ips}) ; 1.5 \%(15 / 16 \mathrm{ips})$
THD ref. Ivl. $0 \mathrm{~dB}(200 \mathrm{nWb} / \mathrm{m}), 400 \mathrm{~Hz}$ (both speeds)
Tape \#2 Nakamichi SX
R/P resp. $\quad 20 \mathrm{~Hz}$ to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N 63 dB (w/NR); 55 dB (w/o NR)
S/N ref. IvI. 3\% THD (IHF A-weighted)
THD 1.0\%
THD ref. lvI. 0 dB
580
$\begin{array}{ll}\text { Price } & \$ 650 \\ \text { Heads } & 2(1 \text { direct-flux erase; } 1 \text { crystalloy }\end{array}$
2 (1 direct-flux erase; 1 crystalloy
R/P)
Flutter $\quad 0.1 \%$ (DIN wid. peak); $0.05 \%$ (WRMS)
Play resp. $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Fast-forward 60 sec ( $\mathrm{C}-60$ )
Rewind $\quad 60 \mathrm{sec}(\mathrm{C}-60$ )
Noise red. Dolby
Input sens. 50 mV (line)
Output level 1 V
Impedance 3.3 K ohms
Separation $37 \mathrm{~dB}(1 \mathrm{kHz})$
Erasure $\quad 60 \mathrm{~dB}(1 \mathrm{kHz})$
Meters $\quad 2$ peak-reading -40 dB to +7 dB )
Features $\quad 0.9$ micron rec/play head; diffusedresonance double-capstan 3 -motor transport; active double NF rec/play electronics; full IC logic control; front panel bias and rec. cal.; built-in 400 Hz test tone; memory rewind; timer auto-start; optional wireless remote control
Tape \#1 Nakamichi SX
R/P resp. $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 56 \mathrm{~dB} / 63 \mathrm{~dB}$
S/N ref. Ivl. 3\% THD (IHF A)
THD $\quad 1.5 \%$
THD ref. IvI. $0 \mathrm{~dB}(200 \mathrm{nW} / \mathrm{m})$
Tape \#2 Nakamichi EX-II

| R/P resp. | 20 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ | Separation | 40 dB ( 1 kHz ) | Tape \#1 | Maxell UD |
| :---: | :---: | :---: | :---: | :---: | :---: |
| S/N | $52 \mathrm{~dB} / 59 \mathrm{~dB}$ | Erasure | 65 dB at 1 kHz | R/P resp. | 30 Hz to $16 \mathrm{kHz},+3 \mathrm{~dB}$ |
| S/N ref. Ivi. | 3\% THD (IHF A) | Meters | Peak-reading ( -25 dB to +5 dB ) | S/N | 70 dB (w/NR); 60 dB (w/o NR) |
| THD | 1.5\% | Features | Built-in bias test tone and record | S/N ref. Ivi. | 250 pwb/mm (IHF A) |
| THD ref. Ivi. | $0 \mathrm{~dB}(200 \mathrm{nW} / \mathrm{m})$ | calibration tone; optional remote control; 3 motors |  | THD | 1\% |
| 500 |  | Tape \#1 | Special ferric and $\mathrm{CrO}_{2}$ | THD ref IvI. | 160 pwb/mm |
|  |  | R/P resp. | 35 Hz to $15 \mathrm{kHz},+1,-3 \mathrm{~dB}$ | Tape \#2 | Maxell UDXL II |
| Price | \$480 |  | 64 dB (w/NR); 55 dB (w/o NR) | R/P resp. | 30 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Heads | 2 (1 ferrite erase; 1 crystalloy R/P) |  | Dolby, (CCIR) | S/N | 70 dB (w/NR); 60 dB (w/o NR) |
| Flutter | 0.08\% (WRMS); $0.13 \%$ (DIN) | S/N ref. IvI. THD | 2\% | S/N ref. Ivi. | 250 pwb/mm (IHF A) |
| Play resp. | 40 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ | THD ref. Ivl. Tape \# 2 | $22 \mathrm{nM} / \mathrm{mm}$ | THD | 1\% |
| Noise red. Input sens. | Dolby |  | Normal ferric oxide | THD ref. Ivi. | 160 pwb/mm |
|  | 70 mV (line); 0.2 mV (mic); 13 mV (DIN radio) | R/P resp. <br> S/N | 35 Hz to $12 \mathrm{kHz},+1,-3 \mathrm{~dB}$ $62 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}), 53 \mathrm{~dB}$ ( $\mathrm{w} / \mathrm{o} \mathrm{NR)}$ | RT-6232 |  |
| Output level | 1 V | S/N ref. Ivi. | Dolby (CCIR) | Price | \$470 |
| Impedance | 1 K ohms | $\begin{aligned} & \text { THD } \\ & \text { THD ref. IvI. } \end{aligned}$ | 2\% | Heads | 2 (hard permalloy; 1 sendust) |
| Separation | $35 \mathrm{~dB}(1 \mathrm{kHz})$ |  | $22 \mathrm{nM} / \mathrm{mm}$ | Flutter | $0.04 \%$ |
| Erasure | $60 \mathrm{~dB}(1 \mathrm{kHz})$ | ONKYO |  | Play resp. | 31.5 Hz to $14 \mathrm{kHz}, \pm{ }^{3} \mathrm{~dB}$ |
| Features | 2 peak-reading -40 dB to +10 dB ) |  |  | Fast-forward | $100 \mathrm{sec}(\mathrm{C}-60)$ |
| mic/2 line; memory rewind; peak limiter; 400 Hz test tone; MPX filter |  | Onkyo U.S.A. Corp. |  | Rewind | $100 \mathrm{sec}\left(\mathrm{C}_{7} 60\right)$ |
|  |  | 42-07 20th Ave. |  | Noise red. | Dolby |
| Tape \#1 | Nakamichi SX | Long Island City, N.Y. 11105 |  | Input sens. Output level | 50 mV (line); 0.2 mV (mic) 500 mV |
| R/P resp. | $40, \mathrm{~Hz}$ to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |  |  | Output level Impedance | 500 mV <br> 47K ohms |
| S/N S/N ref. Ivi. | $56 \mathrm{~dB} / 63 \mathrm{~dB}$ $3 \% \mathrm{THD}$ (WR | TA-2080 |  | Min. load | 47K ohms |
| THD | 1.5\% | Price | \$799.95 | Separation | 45 dB at 1 kHz |
| THD ref. Ivi. | $0 \mathrm{~dB}(200 \mathrm{nW} / \mathrm{m})(400 \mathrm{~Hz})$ | Heads | 3 (Sendust) | Erasure | 70 dB at 1 kHz |
| Tape \#2 | Nakamichi EX H1 | Flutter | 0.045 | Meters | 2 fluorescent; peak-reading both |
| R/P resp. | 40 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ | Play resp. | 20 Hz to $20 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ (metal |  | hold switch ( -20 dB to +8 dB ) |
| S/N | $52 \mathrm{~dB} / 59 \mathrm{~dB}$ ( ${ }^{\text {d }}$ |  | tape) | Features | LSI tape transport mechanism- |
| S/N ref. Ivi. | 3\% THD (WRMS) | Fast-forward | $90^{\circ} \mathrm{sec}(\mathrm{C}-60)$ | ;opto peak- | al display; 9-position APLD ${ }^{\text {a }}$, met |
| THO | 1.5\% | Rewind | $90 \mathrm{sec}(\mathrm{C}-60)$ | capable |  |
| THD ref. Ivi. | $0 \mathrm{~dB}(200 \mathrm{nW} / \mathrm{m})(400 \mathrm{~Hz})$ | Noise red, | Dalby | Tape \#1 | Maxell UD |
| 250 |  | Input sens. 50 mV Output level 775 mV |  | R/P resp. | 30 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
|  |  | S/N | 67 dB (w/NR); 57 dB (w/o NR) |
| Price | \$310 (playback only); \$335 (with |  |  | Impedance 5 <br> Min. load 8 | 50 K ohms | S/N ref. Ivi. | $250 \mathrm{pwb} / \mathrm{mm}$ (IHF A) |
|  | AC adapter) | 8 ohms | THD |  |  |
| Heads | 1 (crystalloy play only) | Meters | 2 VU ; peak-reading ( -40 dB to +5 | THD ref. lvl. | $160 \mathrm{pwb} / \mathrm{mm}$ |
| Flutter | 0.08\% (WRMS); $0.13 \%$ (DIN) |  | dB) | Tape \#2 | Maxell UDXL II |
| Play resp. | 40 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ | Features | Closed loop dual capstan; solenoid | R/P resp. | 30 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Noise red. | Dolby | controls; Auto-Accubias; front-panel Dolby calibra- |  | S/N | 67 dB (w/NR), 57 dB (w/o NR) |
| Output level | 580 mV into 1 K ohm load | tion; auto fadeout |  | S/N ref. Ivi. | $250 \mathrm{pwb} / \mathrm{mm}$. Weighting Curve |
| Separation | 35 dB (1 kHz) |  |  |  | IHF A |
| Features | Pulse-controlled DC servomotor; |  |  | THD | 1\% |
| 12V DC external power or AC with adapter; mates with ADS biamped mini-speakers; mobile-mounting bracket included; tone and balance controls |  | $\begin{array}{ll}\text { TA-630D } \\ \text { Price } & \\ \$ 350\end{array}$ |  | THD ref. IvI. | $160 \mathrm{\rho wb} / \mathrm{mm}$ |
|  |  | Heads | 2 (hyperbolic Sendust) | RT-6201 |  |
|  |  | Flutter | 0.055\% | RT-6201 |  |
| Tape \# 1 | Nakamichi SX (70 microsecond playback position) | Play resp. Noise red. | 20 Hz to 18 kHz Dolby | Price <br> Heads | $\$ 370$ <br> 2 (1 Sendust R/P; 1 ferrite erase) |
| R/P resp. | 40 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (play) | Input sens. | 50 mV (line); 0.3 mV (mic) (at 50 K | Flutter | 0.05\% (WRMS) |
|  | $55 \mathrm{~dB} / 62 \mathrm{~dB}$ |  | ohm) | Play resp. | 31.5 Hz to $12.5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N ref. Ivi. | 3\% THD (WRMS) | Output level | 50 K ohms | Fast-forward | $100 \mathrm{sec}(\mathrm{C}-60)$ |
| THD | 1.5\% ( | Impedance Meters | 0.775 V at 0 VU | Rewind | $100 \mathrm{sec}(\mathrm{C}-60)$ |
| THD ref. IvI. | $200 \mathrm{nW} / \mathrm{m}(400 \mathrm{~Hz})$ |  | 2 VU ; peak-reading LEDs | Noise re | Dolby |
| Tape \# 2 | Nakamichi EX II (120 microsecond playback position) | Features Accu-Blas adjustable circult: Dolby |  | Input sens. Output level | 50 mV (line); 0.2 mV (mic) 500 mV |
| R/P resp. | 40 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (play) | Tape \# 1 | Sony Ferrichrome | Impedance | 50 K ohms 50 K ohms |
| S/N | $51 \mathrm{~dB} / 58 \mathrm{~dB}$, $\pm$ d | S/N | $58 \mathrm{~dB} / 68 \mathrm{~dB}$ | Separation | $45 \mathrm{~dB}(1 \mathrm{kHz})$ |
| S/N ref. IvI. | $3 \%$ THD (WRMS) |  |  | Erasure | $70 \mathrm{~dB}(1 \mathrm{kHzz})$ |
| THD <br> THD ref. IvI. | $\begin{aligned} & 1.5 \% \\ & 200 \mathrm{nW} / \mathrm{m}(400 \mathrm{~Hz}) \end{aligned}$ | Models al | so available TA-2010, \$259.95 | Meters | $2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+5 \mathrm{~dB}) ; 3$ LED (0. |
|  |  |  |  |  | +4, +8) peak indicators |
| Models also available |  | OPTONICA |  | trol; auto program search system; edit button; |  |
|  | 700-11, \$1,140; 582, \$890; 550, | Sharp Electronics Corp. |  | timer start; avala | ailable in black as RT-6205 |
|  | \$630; 350, \$440 (\$565 with op- | 10 Keystone Place |  | Tape \# 1 | Maxell UDXL-II |
|  | tional carrying case including builtin 12V rechargeable battery) | Paramus, N.J. 07652 |  | R/P resp. S/N | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ $57 \mathrm{~dB} / 67 \mathrm{~dB}$ |
| NEAL-FERROGRAPH |  | RT-6905 |  | S/N ref. Ivi. THD | $4 \mathrm{VU}(250 \mathrm{nWb} / \mathrm{m})$ |
| Neal-Ferrograph |  | Price | \$1,800 | THO ref. Ivi. | $0 \mathrm{VU}(160 \mathrm{nWb} / \mathrm{m})$ |
| 652 Glentrook Rd. |  | Heads | 4 (Sendust) | Tape \#2 | Sony FeCr |
| Glenbrook, Conn. 06906 |  | Flutter | 0.038\% | R/P resp. | 30 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
|  |  | Play resp. | 31.5 Hz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ | S/N | $57 \mathrm{~dB} / 67 \mathrm{~dB}$ ( ${ }^{\text {d }}$ |
| 302 |  | Fast-forward | 100 sec (C-60) | S/N ref. Ivi. | $4 \mathrm{VU}(250 \mathrm{nWb} / \mathrm{m})$ |
|  |  | Rewind | 100 sec ( $\mathrm{C}-60$ ) | THD | 1.5\% |
| Price | \$995 | Noise red. | Dolby | THD ref. Ivi. | $0 \mathrm{VU}(160 \mathrm{nWb} / \mathrm{m})$ |
| Heads | 2 (super permalloy) | input sens. 50 | 50 mV (line); 0.3 mV (mic) |  |  |
| Flutter | 0.09\% | Output level 1 | 1 V | RT-6001 |  |
| Fast-forward | 50 sec ( $\mathrm{C}-60$ ) | Impedance 5 | 50 K ohms | Price | \$270 |
| Rewind | 50 sec (C-60) | Min. load | 50 K ohms | Heads | 2 (ultra-hard permalloy) |
| Noise red.input sens. | Dolby | Separation | 45 dB at 1 kHz | Flutter | 0.06\% |
|  | 50 mV 〈high level, 200 K ohms | Erasure Meters | 70 dB | Play resp. | 31.5 Hz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| input sens. | impedance); 500 mV ( $\mathrm{mic}, 2 \mathrm{~K}$ |  | Fluorescent; peak reading hold-3 | Fast-forward | 100 sec ( $\mathrm{C}-60$ ) |
|  | ohms impedance); 2.5 mV (low |  | sec or hold ( -20 dB to +8 dB ) | Rewind | $100 \mathrm{sec}(\mathrm{C}-60)$ |
|  | level, 10K ohms impedance) | Features | Computer controlied; clock timer; | Noise red. | Dolby |
| Output level | 600 mV | 42 memories; | sensitivity and bias fine calibration; | Input sens. | 63 mV (line); 0.2 mV (mic) |
| Impedance | 5 K ohms | APMS ${ }^{\text {a }}$ metal | capable; 7 day programmable | Output | 550 mV |


| Impedance | 50 ohms |
| :---: | :---: |
| Min. load | 50 ohms |
| Erasure | 70 dB at 1 kHz |
| Meters | Fluorescent; peak reading ( -20 dB to +8 dB ) |
| Features | Opto peak level display; APSS* |
| (auto program EQ switches | search system); separate bias and |
| Tape \#1 | Maxell UD |
| R/P resp. | 30 Hz to $13 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 67 dB (w/NR); 57 dB (w/o NR) |
| S/N ref. Ivi. | 250 pwb/mm (IHF A) |
| THD | 1.5\% |
| THD ref. IvI. | 160 pwb/mm |
| Tape \#2 | Maxell UDXL II |
| R/P resp. | 30 Hz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 67 dB (w/NR); 57 dB (w/o.NR) |
| S/N ref. Ivi. | 250 pwb/mm |
| THD | 1.5\% |
| THD ref. Ivi. | 160 pwb/mm |

## Models also available

RT-6502, \$540; RT-6501, \$420;
RT-6101, \$350; RT-1515, \$250

## PHASE LINEAR

Phase Linear Corp.
20121 48th Ave. W. Lynnwood, Wash. 98036

| 7000 Series Two | CT-F650 |  |
| :---: | :---: | :---: |
| Price \$1,349.95 | Heads | 2 (hard permalloy) |
| Heads 3 (Uni-crystal) | Flutter | $0.05 \%$ |
| Flutter 0.003\% (WRMS) | Play resp. | 25 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward 75 sec (C-60) | Rewind | 90 sec ( $\mathrm{C}-60$ ) |
| Noise red. Double Dolby | Noise red. | Dolby |
| Input sens. 60 mV (line); 0.3 mV (mic) | Input sens. | 50 mV (line); 0.3 mV (mic) |
| Output level 450 mV | Output level | 450 mV |
| Impedance 10 K ohms ${ }^{\text {a }}$ (0) | Impedance | 75 ohms |
| Meters $\quad 2 \mathrm{VU}(-30 \mathrm{~dB}$ to $+8 \mathrm{~dB})$ | Meters | $2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+8 \mathrm{~dB})$ |
| Features MicroScan fully automatic bias/EQ/Ievel setting with memory; mic/line mixing | Features | DC servo motor; metal adaptable, |
| Tape \#1 Metal | electronic fluoroscan peak meter |  |
| R/P resp. $\quad 25 \mathrm{~Hz}$ to $19 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ | S/N | 69 dB (w/NR); 59 dB (w/o NR |
| S/N $70 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}) ; 60 \mathrm{~dB}$ (w/o NR) |  |  |
| S/N ref. Ivi. 0 dB (DIN) | Models also available |  |
| THD ref. Ivi. 0 dB |  | CT-F950, \$595; CT-F750, \$395; |
| Tape \#2 $\mathrm{CrO}_{2}$ |  | CT-F500, \$195 |
| R/P resp. $\quad 25 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |  |  |
| S/N $\quad 70 \mathrm{~dB}$ (w/NR); 60 dB (w/o NR) | REALISTIC |  |
| S/N ref. IvI. 0 dB (DIN) | Radio Shack |  |
| PHILIPS | Tandy Corp. |  |
| Philips High Fidelity | Fort Worth, Tex. 76102 |  |
| Laboratories |  |  |
| P.O. Box 2208 | SCT-3000 |  |
| Fort Wayne, Ind. 46801 | Price | \$579.95 |
|  | Heads | 3 (territe) |
| $\mathrm{N}-2535$ | Flutter | 0.05\% (WRMS) |
| Price $\$ 210$ (silver); (N2535BK, black, | Play resp. | 33 Hz to $14 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| $\$ 230)$ | Fast-forward | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Heads 2 | Rewind | 90 sec (C-60) |
| Flutter 0.2\% | Input sens. | 78 mV (line); 0.43 mV (mic). |
| Play resp. $\quad 40 \mathrm{~Hz}$ to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ | Output level | 550 mV ( |
| Fast-forward $90 \mathrm{sec}(\mathrm{C}-60)$ | Impedance | 10 K ohms |
| Rewind 90 sec ( $\mathrm{C}-60$ ) | Separation | 43 dB at 1 kHz |
| Noise red. Dolby | Erasure | 68 dB at 1 kHz |
| Input sens. 100 mV (line); 1 mV (mic) | Meters | 2 VU ; peak-reading LED (-20 dB to |
| Output level 0.700 mV (variable) |  | $+5 \mathrm{~dB})$ |
| Separation $60 \mathrm{~dB}(40 \mathrm{~Hz}$ to 14 kHz ) | Features | Two-solenoid operation; variable |
|  | bias with twin-tone oscillator; dual capstans <br> Tape \#1 Supertape chrome |  |
| Features Viscous-damped eject; record | Tape \#1 |  |
| overload indicator | S/N | $61 \mathrm{~dB}(\mathrm{w} / \mathrm{NR})$ |
| ONE | S/N ref. Ivi. | $200 \mathrm{nWb} / \mathrm{m}$ (CCIR) |
| PIONE | THD | 1.2\% |
| U.S. Pioneer Electronics Corp. | THD ref. Ivi. | $140 \mathrm{nWb} / \mathrm{m}$ |
| 75 Oxford Drive | Tape \#2 | Supertape Gold |
| Moonachie, N.J. 07074 | R/P resp. S/N | 30 Hz to $19 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ 57 dB (w/NR) |
|  | S/N ref. Ivi. | $200 \mathrm{nWB} / \mathrm{m}$ (CCIR) |
| CT-F 1250 | THD | 0.9\% |
| Price \$695 | THD ref. Ivi. | $140 \mathrm{nWb} / \mathrm{m}$ |


| Heads | 3 (uni-crystal ferrite) |
| :---: | :---: |
| Flutter | 0.03\% (WRMS) |
| Play resp. | 25 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Rewind | 85 sec ( $\mathrm{C}-60$ ) |
| Noise red. | Dolby |
| Input sens. | 63 mV (line); 0.3 mV (mic) |
| Output level | 450 mV |
| Impedance | 50 K ohms |
| Meters | $2 \mathrm{vU}(-30 \mathrm{~dB}$ to $+8 \mathrm{~dB})$ |
| Features memory stop | Three-mode fluoroscan meter; repeat control |
| S/N | 69 dB (w/NR); 59 dB (w/o NR) |
| THD | 1\% |
| CT-F850 |  |
| Price | \$495 |
| Heads | 3 (Sendust) |
| Flutter | 0.04\% |
| Play resp. | 25 Hz to $15 \mathrm{kHz} \pm 3 \mathrm{~dB}$ |
| Rewind | 85 sec (C-60) |
| Noise red. | Dolby |
| Input sens. | 64 mV (line); 0.3 mV (mic) |
| Output level | 450 mV |
| Impedance | 85 ohms |
| Meters | $2 \mathrm{vU}(-20 \mathrm{~dB}$ to $+8 \mathrm{~dB})$ |
| Features | Two-mode fluoroscan meter; two |
| DC motors; small window erase head |  |
| S/N | 69 dB (w/NR); 59 dB (w/o NR) |
| THD | 1.2\% |

CT-F650

## Models also available

CT-F950, \$595; CT-F750, \$395; CT-F500, \$195

REALISTIC
Radio Shack
Tandy Corp.
Fort Worth, Tex. 76102

SCT-30

| Price | \$400 |
| :---: | :---: |
| Heads | 3 (ferrite) |
| Flutter | 0.06\% (WRMS) |
| Play resp. | 32 Hz to $14 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ |
| Fast-forward | $100 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $100 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 80 mV (line); 0.31 mV (mic) |
| Output level | 550 mV |
| Impedance | 10 K ohms |
| Min. load | 5 K ohms |
| Separation | $35 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Erasure | $69 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Meters | Peak-reading -20 dB to +3 dB ) |
| Features | Dual capstan; auto stop; bias ad- |
| just control; s ches | eparate bias and equalization swit- |
| Tape \#1 | Radio Shack Supertape Gold |
| R/P resp. | 30 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $52 \mathrm{~dB} / 60 \mathrm{~dB}$ |
| S/N ref. Ivi. | $200 \mathrm{nW} / \mathrm{m}$ (CCIR) |
| THD | 0.9\% |
| THD ref. Ivi. | 220 nW/m |
| Tape \#2 | Radio Shack Supertape Chrome |
| R/P resp. | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $53 \mathrm{~dB} / 61 \mathrm{~dB}$ |
| S/N ref. Ivi. | $200 \mathrm{nW} / \mathrm{m}$ (CCIR) |
| THD | 1\% |
| THD ref. Ivi. | $220 \mathrm{nW} / \mathrm{m}$ |
| Models also available |  |
|  | SCT-16, \$300; SCT-19, \$200; |
|  | SCT-20, \$149.95 |

REFERENCE
CBS Retail Stores
1301 65th St.
Emeryville, Calif. 94608
412D

| Price | $\$ 249.95$ |
| :--- | :--- |
| Heads | 2 |
| Flutter | $0.06 \%$ |
| Play resp. | 30 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Noise red. | Dolby |
| Meters | Peak-reading |
| Features | Metal capability; auto shutoff |

ROTEL
Rotel of America, Inc.
1055 Saw Mill River Road
Ardsley, N.Y. 10502
RD-2200M

| Price | \$450 |
| :---: | :---: |
| Heads | 2 (Sendust) |
| Flutter | 0.05\% |
| Play resp. | 30 Hz to $19 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 66 mV (line); 0.8 mV (mic); 10 (DIN) |
| Output level | 650 mV |
| Impedance | 5 K ohms |
| Min. Ioad | 20K ohms |
| Meters | 2 VU ; peak-reading |
| Features | Full metal capabllity; fluorescent |
| peak meters; $\dagger$ | fine bias adjust; 3 tape selectors, |
| rack-mount des |  |
| Tape \#1 | Metal Particle |
| R/P resp. | 30 Hz to 19 kHz |
| S/N | 64 dB (w/NR); 56 dB (w/o NR) |
| RD-25F |  |
| Price | \$340 |
| Heads | 2 (permalloy) |
| Flutter | 0.07\% |
| Play resp. | 20 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}\left(\mathrm{CrO}_{2}\right)$ |
| Fast-forward | 75 sec (C-60) |
| Rewind | $75 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 63 mV (line); 0.5 mV (mic); 10 mV (DIN) |



Phase Linear 7000 Serles Two


Ploneer CT-F1250


Onkyo TA.630D


Realistic Optimus SCT-3000


Sanyo D. 45

| SC-5330 |  |
| :---: | :---: |
| Pric | \$520 |
| Heads | 2 (ferrite head R/P for metal tape; 1 ferrite erase) |
| Flutter | 0.038\% |
| Fast-forward | $70 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $70 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 70 mV (line); 0.2 mV (mic) |
| Output level | 400 mV |
| Min. Ioad | 47 K ohms |
| Separation | 50 dB at 1 kHz |
| Erasure | 70 dB (full range) |
| Meters | $2 \mathrm{VU} ;(-20 \mathrm{~dB}$ to $+5 \mathrm{~dB})$ |
| Features | Feather-touch solenoid controls; |
| auto play; VU meters with 5 LED peak level indicators; repeat and memory by logic control circuitry; one-touch tape lead in; rec. mute; timer rec. and play function; mic/mixing; MPX filter; output level control; matte black finish; detachable rack-mounting handles; Direct-O-Matic ${ }^{\text {mo }}$ front-loading |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Tape \#1 |  |
| R/P resp. | 20 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 69 dB (w/NR); 59 dB (w/o NR) |
| S/N ref. Ivi. | $3 \%$ (A-weighted) |
| THD | 1\% |
| THD ref. IvI. | 0 VU |
| Tape *2 | $\mathrm{CrO}_{2}$ |
| R/P resp. | 20 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |


| D-90 |  |
| :---: | :---: |
| Price | \$200 |
| Heads | 2 (1 1 super-hard permalloy R/P; ferrite erase) |
| Flutter | 0.055\% |
| Noise red. | Dolby |
| Input sens. | 70 mV (line); 0.2 mV (mic) |
| Output level | 400 mV (line) |
| Min. load | 47K ohms |
| Separation | 45 dB (1 kHz) |
| Erasure | 65 dB at 1 kHz |
| Meters | 2 VU |
| Features | Timer rec. and play potential; |
| dependent bias/EQ switches; full auto-stop |  |
| Tape *1 | $\mathrm{CrO}_{2}$ |
| R/P resp. | 35 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $69 \mathrm{~dB}(\mathrm{w} / \mathrm{NR})$; 59 dB (w/o NR) |
| S/N ref. Ivi. | 3\% (A-weighted) |
| THD | 1.5\% |
| THD ref. IvI. | 0 VU |
| Tape \#2 | LH |
| R/P resp. | 35 Hz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |

SANSUI
Sansui Elecţronics Corp.

## 55-11 Queens Blvd.

Woodside, N.Y. 11377
$550 \mathrm{mV} / 5 \mathrm{~K}$ ohms

| Output level | $550 \mathrm{mV} / 5 \mathrm{~K}$ ohms |
| :--- | :--- |
| Impedance | 5 K ohms |
| Min. load | 20 Khms |
| Erasure | $60 \mathrm{~dB}(1 \mathrm{kHz})$ |
| S/N | $53 \mathrm{~dB} / 60 \mathrm{~dB}$ |
| THD | $1.5 \%$ |

## Models also available

 RD-2000, $\$ 370$; RD-1000, N/A
## SAE TWO

## Scientific Audio Electronics,

 Inc.701 E. Macy St.
Los Angeles, Calif. 90012

C-4

| Price | \$500 |
| :---: | :---: |
| Heads | 2 (Sendust) |
| Flutter | 0.06 |
| Play resp. | 30 Hz to $14 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Fast-forward | $70 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $70 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 57 mV (line); 0.18 mV (mic) |
| Output level | 350 mV |
| Separation | 40 dB at 1 kHz |
| Erasure | 65 dB at 1 kHz |
| Meters | Peak-reading ( -25 dB to +5 dB ) |
| Features full logic | Fluorescent display; variable bias; |
| Tape \#1 | Metal |
| R/P resp. | 30 Hz to $18 \mathrm{kHz}, \pm 2.5 \mathrm{~dB}$ |
| S/N | $65 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}) ; 57 \mathrm{~dB}$ (w/o NR) |
| S/N ref. Ivi. | 0 VU ( (CCIR) (ARM) |
| THD | 0.9\% |
| THD ref. IvI. | 0 Vu |
| Tape \#2 | High output |
| R/P resp. | 30 Hz to $18 \mathrm{kHz}, \pm 2.5 \mathrm{~dB}$ |
| S/N | $63 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}) ; 55 \mathrm{~dB}$ ( $\mathrm{w} / \mathrm{o} \mathrm{NR}$ ) |
| S/N ref. Ivi. | 0 VU (CCIR) (ARM) |
| THD | 1.1\% |
| THD |  |

## Models also available

C-3D, \$400

Features auto stop
S/N
Tape select for normal or $\mathrm{CrO}_{2}$; full

PLUS D-65
Price $\quad \$ 399.95$
Heads 3 (1 Sendust R/P; 12 ferrite erase)
Flutter $0.04 \%$
Play resp. $\quad 20 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Noise red. Dolby
Input sens. 50 mV (IIne); 0.3 mV (mic)
Output level 530 mV
Meters 2 VU
Features Two-motor full-logic solenoid con trols; full auto reverse; LED tape direction; 8 fullfunction electronic-touch controls; timer standby

| Tape \#1 | Metal |
| :--- | :--- |
| R/P resp. | 20 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $70 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}) ; 62 \mathrm{~dB}(\mathrm{w} / \mathrm{o} \mathrm{NR})$ |
| THD | $0.8 \%$ |
| Tape \#2 | $\mathrm{CrO}_{2}$ |
| R/P resp. | 20 Hz to $16 \mathrm{kHz} \pm 3 \mathrm{~dB}$ |
| S/N | $67 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}) ; 59 \mathrm{~dB}(\mathrm{w} / 0 \mathrm{NR})$ |
| THD | $0.8 \% / 1.5 \%$ |


| PLUS D-45 |  |
| :---: | :---: |
| Price | \$259.95 |
| Heads | 2 (1 Sendust alloy R/P; 1 ferrite erase) |
| Flutter | 0.05\% |
| Play resp. | 30 Hz to $19 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Noise red. | Dolby |
| Input sens. | 0.3 mV (line); 50 mV (mic) |
| Output level | 530 mV |
| Meters | 1 peak-hold |
| Features | Defeatable FM MPX filter; mic/line |
| mixing; record stop | mute control; timer standby; auto- |
| Tape \#1 | Metal |
| R/P resp. | 30 Hz to $19 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 59 dB (w/NR); 67 dB (w/o NR) |
| THD | 0.8\% |
| Tape \#2 | $\mathrm{CrO}_{2}$ |
| R/P resp. | 30 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $56 \mathrm{~dB} / 64 \mathrm{~dB}$ |
| THD | 0.8\% |

## Models also available

RD-5370, $\$ 400$; RD-5350, $\$ 250$; RD-5340, \$230; RD-5035 \$189.95; Plus D-62, \$329.95; Plus D-60, $\$ 329.95$; Plus D-55, $\$ 289.95$

## SCOTT

H. H. Scott

20 Commerce Way
Woburn, Mass. 01801

| 670D |  |
| :---: | :---: |
| Price | \$250 |
| Heads | 1 (permalloy) |
| Flutter | 0.07\% (WRMS) |
| Play resp. | 25 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | 90 sec ( $\mathrm{C}-60$ ) |
| Nolse red. | Dolby |
| Input sens. | 60 mV (line); 0.5 mV (mic) |
| Output level | 580 mV |
| Impedance | 2.5 K ohms |
| Min. laad | 10 K ohms |
| Separation | $40 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Erasure | $70 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Features | Soft-eject front loading; tape-mem- |
| ory rewind; peak indicator; record \& Dolby LEDs; 19" rack-mount handle option |  |
| Tape \#1 | Maxwell UD |
| R/P resp. | 25 Hz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $56 \mathrm{~dB} / 64 \mathrm{~dB}$ |
| S/N ref. Ivi. | 3\% THD (IHF A-weighted) |
| THD | 1.5\% |

THD ref. IvI. 0 dB VU
Tape \#2 TDK SA
$R / P$ resp. $\quad 25 \mathrm{~Hz}$ to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 56 \mathrm{~dB} / 64 \mathrm{~dB}$
S/N ref. ivl. 3\% THD (IHF A-welghted)
THD $\quad 1.5 \%$
THD ref. IvI. 0 dB VU

SHARP
Sharp Electronics Corp.
10 Keystone Place Paramus, N.J. 07652

RT-4488

| Price | \$499 |
| :---: | :---: |
| Heads | 2 (permalloy plus) |
| Flutter | 0.048 WRMS |
| Play resp. | 31.5 Hz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | 95 sec (C-60) |
| Rewind | 95 sec (C-60) |
| Noise red. | Dolby |
| Input sens. | 50 mV (line); 0.3 mV (mic) |
| Output level | 775 mV |
| Impedance | 50K ohms |
| Min. load | 50 K ohms |
| Separation | 70 dB at 1 kHz |
| Erasure | 70 dB at 1 kHz |
| Meters | Fluorescent; peak reading; hol switch ( -20 dB to +8 dB ) |
| Features | Bullt-in clock; 5 memories; me |
| capable; mic/line mixing; MPX filter; Sharpscan peak-level display |  |
| Tape \#1 | Maxell UD |
| R/P resp. | 30 Hz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 68 dB (w/NR), 58 dB (w/o NR) |
| S/N ref. Ivl. | $250 \mathrm{pwb} / \mathrm{mm}$ (IHF A) |
| THD | 1\% |
| THD ref. ivi. | 160 pwb/mm |
| Tape \#2 | Sony FeCr |
| R/P resp. | 30 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 68 dB (w/NR); 58 dB (w/o NR) |
| S/N ref. Ivi. | $250 \mathrm{pwb} / \mathrm{mm}$ (IHF A) |
| THD | 1\% |
| THD ref. IvI. | 160 pwb/mm |

## RT-3388

| Price | \$409 |
| :---: | :---: |
| Heads | 2 (ultra-hard permailoy) |
| Flutter | 0.06\% (WRMS) |
| Play resp. | 31.5 Hz to $12.5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | 100 sec (C-60) |
| Rewind | 100 sec (C-60) |
| Noise red. | Dolby |
| Input sens. | 50 mV ( (line); 0.2 mV (mic) |
| Jutput level | 775 mV |
| Impedance | 50 K ohms |
| Min. Ioad | 50 K ohms |
| Separation | $60 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Erasure | $70 \mathrm{~dB}(1 \mathrm{kHz}$ ) |
| Meters | 2, VU -20 dB to +5 dB ); peak-reading LED |
| Features | Front-loading; bullt-in clock; 5 |
| memories; separate bias and equalization controls; second counter |  |
|  |  |
| Tape \#1 | Maxell UDXL-II |
| R/P resp. | 30 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $58 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| S/N ref. Ivi. | 250 nWb/m |
| THD | 1.5\% |
| THD ref. Ivi. | $160 \mathrm{nWb} / \mathrm{m}$ |
| Tape \#2 | Sony FeCr |
| R/P resp. | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $58 \mathrm{~dB} / 68 \mathrm{~dB}$ |
| S/N ref. lvi. | $250 \mathrm{nWb} / \mathrm{m}$ |
| THD | 1.5\% |
| THD ref. IvI. | $160 \mathrm{nWb} / \mathrm{m}$ |

## RT-1199

| Price | $\$ 329$ |
| :--- | :--- |
| Heads | 2 (permalloy) |
| Flutter | $0.058 \%$ |

Flutter $\quad 0.058 \%$
Play resp. $\quad 31.5 \mathrm{~Hz}$ to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$

Fast-forward 100 sec (C-60)
Rewind $\quad 100 \mathrm{sec}$ (C-60)
Noise red. Dolby
Input sens. 63 mV (line); 0.2 mV (mic)
Output level 710 mV
Impedance 50 K ohms
Min. load 50 K ohms
Separation $45 \mathrm{~dB}(1 \mathrm{kHz})$
Erasure 70 dB
Metefs Fluorescent; peak reading; hold switch ( -20 dB to +8 dB )
Features Sharpscan peak level display; 9 -
position APLD, metal capable; mic/line mixing
Tape \#1 Maxell UD
R/P resp. $\quad 40 \mathrm{~Hz}$ to $12.5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $67 \mathrm{~dB}(w / N R) ; 57 \mathrm{~dB}$ (w/o NR)
S/N ref. Ivl. $250 \mathrm{pwb} / \mathrm{mm}$ (IHF A)
THD $\quad 1 \%$
THD ref. IvI. $160 \mathrm{pwb} / \mathrm{mm}$
Tape \#2 Maxell UDXL-II
R/P resp. $\quad 40 \mathrm{~Hz}$ to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N 67 dB (w/NR); 57 dB (w/o NR)
S/N ref. IvI. $\quad 250 \mathrm{pwb} / \mathrm{mm}$
THD $\quad 1 \%$
THD ref. Ivi. 160 pwb/mm

## RT-1165-1I

Heads 2 (1 ultra-hard permalloy R/P; 1 ferrite erase)
Flutter $\quad 0.08 \%$ (WRMS)
Play resp. $\quad 31.5 \mathrm{~Hz}$ to $12.5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Fast-forward 100 sec (C-60)
Rewind 100 sec (C-60)
Noise red. Dolby
Input sens. 50 mV (line); 0.2 mV (mic)
Output level 500 mV
Impedance 50 K ohms
Min. load 50 K ohms
Separation $40 \mathrm{~dB}(1 \mathrm{kHz})$
Erasure $\quad 70 \mathrm{~dB}(1 \mathrm{kHz})$
Meters $2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+5 \mathrm{~dB})$; LED peak-
reading indicator
Features DC servo-drive system; mic/line
mixing; auto program search system; edit button;
record and Dolby indicators
Tape \#1 Maxell UDXL-II
R/P resp. $\quad 30 \mathrm{~Hz}$ to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
$\mathrm{S} / \mathrm{N} \quad 54 \mathrm{~dB} / 62 \mathrm{~dB}$
S/N ref. Ivl. $4 \mathrm{VU}(250 \mathrm{nWb} / \mathrm{m})$
THD $\quad 1.5 \%$
THD ref. IvI. $0 \mathrm{VU}(160 \mathrm{nWb} / \mathrm{m})$
Tape \#2 Sony 2 FeCr
$R / P$ resp. $\quad 30 \mathrm{~Hz}$ to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 54 \mathrm{~dB} / 62 \mathrm{~dB}$
S/N ref.. IvI. $4 \mathrm{VU}(250 \mathrm{nWb} / \mathrm{m})$
THD $\quad 1.5 \%$
THD ref. Ivi. 0 VU ( $160 \mathrm{nWb} / \mathrm{m}$ )
RT-1144
Price $\$ 189$
Heads 2 (1 hard permalloy R/P; 1 territe erase)
Flutter $\quad 0.08 \%$ (WRMS)
Play resp. $\quad 40 \mathrm{~Hz}$ to $12.5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Fast-forward 100 sec (C-60)
Rewind 100 sec (C-60)
Nolse red. Dolby
input sens. $\quad 50 \mathrm{mV}$ (line); 0.2 mV (mic)
Output level 410 mV
Impedance 50 K ohms
Min. load 50 K ohms
Separation 35 dB (1 kHz)
Erasure $\quad 70 \mathrm{~dB}(1 \mathrm{kHz})$
Meters $\quad 2 \mathrm{VU}(-20 \mathrm{~dB}$ to +5 dB )
Features Front-loading; auto program search system; separate bias and equalization; record indicator
Tape \#1 Maxell UDXL-II
R/P resp. $\quad 40 \mathrm{~Hz}$ to $13 \mathrm{kHz}, \pm^{3} \mathrm{~dB}$
S/N
$52 \mathrm{~dB} / 62 \mathrm{~dB}$
S/N ref. IvI. $4 \mathrm{VU}(250 \mathrm{nWb} / \mathrm{m})$
THD 1.5\%
THD ref. IVI. 0 VU ( $160 \mathrm{nWb} / \mathrm{m}$ )
Tape \#2 Sony 2 FeCr
R/P resp. $\quad 40 \mathrm{~Hz}$ to $13 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 52 \mathrm{~dB} / 62 \mathrm{~dB}$
$\begin{array}{ll}\text { S/N ref. lvi. } & 4 \mathrm{VU}(250 \mathrm{nWb} / \mathrm{m}) \\ \text { THD } & 1.5 \%\end{array}$

## Models also available

RT-2266, \$449; RT-2251, \$359; RT-1177, \$269; RT-1157-II, \$219; RT-1125, \$169

SHERWOOD
Sherwood Co.
4300 N. California Ave.
Chicago, III. 60618

| CD-200 CP |  |
| :---: | :---: |
| Price | \$330 |
| Heads | 2 (Sendust) |
| Play resp. | 30 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | 95 sec (C-60) |
| Rewind | $95 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 90 mV (line); 0.4 mV (mic); 2.0(DIN) |
| Output level | 720 mV |
| Impedance | 100 K ohms |
| Min. load | 10K ohms |
| Separation | 40 dB at 1 kHz |
| Erasure | 60 dB at 1 kHz |
| Meters | 2 VU ; peak-reading LED (-20 dB to . $+5 \mathrm{~dB})$ |
| Features | Certified Performance: notorized |
| cerificate with each unit shows exact performance |  |
| Tape \#1 | Scotch Master III FeCr |
| R/P resp. | 30 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $68 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}) ; 58 \mathrm{~dB}$ ( $\mathrm{w} / \mathrm{o} \mathrm{NR}$ ) |
| S/N ref. Ivi. | $3 \%$ above 5 kHz |
| THD | 1.2\% |
| THD ref. Ivi. | 0 VU |
| Tape \#2 | TDK SA |
| R/P resp. | 30 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 68 dB (w/NR); 58 dB (w/o NR) |
| $\mathrm{S} / \mathrm{N}$ ref. Ivi. | $3 \%$ above 5 kHz |
| THD | 1.2\% |
| THD ref. Ivi. | 0 VU |

## SONY

Sony Industries, Inc.
9 West 57th St.
New York, N.Y. 10019

TC-K8B

| Price | $\$ 850$ |
| :--- | :--- |
| Heads | 2 (ferrite-and-farrite) |
| Flutter | $0.045 \%$ (WRMS) |
| Play resp. | $30 \mathrm{~Hz} 1016 \mathrm{kHHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $70 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 60 mV (line); 0.2 mV (mic) |
| Output level | 775 mV |
| Impedance | 10 K ohms |
| Meters | 2 liquid-crystal bar signal-level in- |
|  | dicators with auto/manual peak- |
|  | hold; (-o to +5 dB ) |
| Features | Peak-limiter |
| Tape \#1 | FeCr |
| R/P resp. | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 60 dB |
| Tape $\# 2$ | CrO |
| R/P resp. | 30 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 56 dB |


| TC-K96R |  |
| :--- | :--- |
| Price | $\$ 260$ |
| Heads | 3 (ferrite-and-ferrite) |
| Flutter | $0.05 \%$ (WRMS) |
| Play resp. | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |


| Fast-forward | $85 \mathrm{sec}(\mathrm{C}-60)$ | Rewind | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| :---: | :---: | :---: | :---: |
| Rewind | $85 \mathrm{sec}(\mathrm{C}-60)$ | Noise red. | Dolby |
| Noise red. | Dolby | Input sens. | 77.5 mV (line); 0.25 mV (mic); |
| Input sens. | 77.5 mV (line); 0.25 mV (mic) | Output level | 435 mV |
| Output level | 435 mV (fixed); 77.5 mV to 775 mV (variable) | Impedance Min. load | 50 K ohms 10K ohms |
| Impedance | 100K ohms | Separation | $35 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Min. load | 10 K ohms | Erasure | 60 dB at 400 Hz |
| Separation | 35 dB at 1 kHz | Neters | 2 VU ; peak reading LED ( $\pm 20 \mathrm{~dB}$ |
| Erasure | 60 dB at 40 Hz |  | to +5 dB ) |
| Meters | VU; 1 peak-reading LED | Features | Auto play; recording mute |
| microprocessor tape-function control; Dolby and |  | Tape \#1 | Sony FeCr |
|  |  | R/P resp. | 30 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
|  |  | S/N | 68 dB (w/NR); 58 dB (w/o NR) |
| Tape \#1 | FeCr | S/N ref. ivi. | -20 dB (IHF A) |
| R/P resp. | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ | THD | 1.3\% |
| S/N | 69 dB (w/NR); 59 dB (w/o NR) | THD ref. Ivi. | 0 dB |
| S/N ref. Ivi. | -20 dB (IHF A) | Tape \#2 | Sony EHF |
| THD | 1.3\% | R/P resp. | 30 Hz to $15 \mathrm{kHz}, \pm{ }^{3} \mathrm{~dB}$ |
| THD ref. Ivi. | 0 dB | S/N | 66 dB (w/NR); 56 dB (w/o NR) |
| Tape \#2 | Sony EHF | S/N ref. ivl. | -20 dB (IHF A) |
| R/P resp. | 30 Hz to $15 \mathrm{kHz} . \pm 3 \mathrm{~dB}$ |  |  |
| S/N | 65 dB (w/NR); 55 dB (w/o NR) |  |  |
| S/N ref. Ivi. | $-20 . \mathrm{dB}$ (IHF A) | TC-K1A |  |
|  |  | Price | \$180 |
|  |  | Heads | 2 |
| TC-K55 |  | Flutter | 0.08\% (WRMS) |
| Price | \$400 | Play resp | 50 Hz to $13 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Heads | 2 (sendust and ferrite) | Fast-forward | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Flutter | 0.04\% (RMS) | Noise red | Dolby |
| Fast-forward | $80 \mathrm{sec}(\mathrm{C}-60)$ | Input sens. | 77.5 mV (line): 0.25 mV (mic) |
| Rewind | $80 \mathrm{sec}(\mathrm{C}-60)$ | Output level | 435 mV |
| Noise red. | Dolby | Impedance | 10K ohms |
| input sens. | 77.5 mV (line); 0.25 mV (mic) | Meters | $2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+5 \mathrm{~dB})$ |
| Output level | 935 mV | Tape \#1 | FeCr |
| Impedance | 50 K ohms | R/P resp. | 50 Hz to $13 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Min. load | 10 K ohms |  | 55 dB |
| Separation | 35 dB ( 1 kHz ) | Tape \#2 | $\mathrm{CrO}_{2}{ }_{50}$ |
| Erasure | 60 dB at 400 Hz | R/P resp. | 50 Hz to $13 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Meters | 2 VU ; peak reading ( -20 dB to +5 dB) | S/N | 53 dB |
| Features Auto-space; recording mute; full logic IC operation; auto play |  | Models also available |  |
|  |  |  |  |  |
| Tape \#1 | Sony FeCr |  | TC-D5, \$680; TC-K75, \$600; TC- |
| R/P resp. | 30 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |  | K60, \$550; TC-K65, \$500; TC- |
| S/N | $68 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}) ; 58 \mathrm{~dB}$ ( $\mathrm{w} / 0 \mathrm{NR}$ ) |  | 158SD, \$390; TC-K2A Cassette |
| S/N ref. Ivi. | -20 dB (IHF A) |  | Deck, \$200 |
| THD | 1\% |  |  |
| THD ref. IvI. | 0 dB |  |  |
| Tape \#2 | Sony EHF |  |  |
| R/P resp. | 30 Hz to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ | SUPERSCOPE |  |
| S/N | 66 dB (w/NR): 56 dB ( $\mathrm{w} / 0 \mathrm{NR}$ ) |  |  |
| S/N ref. Ivi. | -20 dB (IHF A) | Superscope, Inc. <br> 20525 Nordhoff St |  |
| TC-K45 |  | Chatsworth, Calif. 91311 |  |
| Price | \$320 |  |  |
| Heads | 2 (ferrite and ferrite) |  |  |
| Flutter | 0.05\% (WRMS) |  |  |
| Play resp. | $90 \mathrm{sec}(\mathrm{C}-60)$ | CD-330 P | Ortable |
| Fast-forward | 90 sec (C-60) | Price | $\$ 290$ |
| Noise red. | Dolby | Heads | 3 (superhard permalloy) |
| Input sens. | 77.5 mV (line); 0.25 mV (mic) | Flutter | $0.12 \%$ (WRMS) |
| Output level | 435 mV | Play resp. | 40 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Impedance | 50 K ohms | Fast-forward | $110 \mathrm{sec}(\mathrm{C}-60)$ |
| Min. load | 10 K ohms | Rewind | $110 \mathrm{sec}(\mathrm{C}-60)$ |
| Separation | $35 \mathrm{~dB}(1 \mathrm{kHz})$ | Nolse red. | Dual-Process Dolby |
| Erasure | 60 dB at 400 Hz | Input sens. | 77.5 mV (line); 0.2 mV (mic) |
| Meters | peak reading: ( -40 to +5 dB ) | Output level | 775 mV |
| Features | Recording mute; memory; auto | Impedance | 5 K ohms (line) |
| play |  | Min. load | 1.5 K ohms |
| Tape \# 1 | Sony FeCr | Separation | 38 dB ( 1 kHz ) |
| R/P resp. | 30 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ | Erasure | $55 \mathrm{~dB}(100 \mathrm{~Hz})$ |
| S/N | $68 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}) ; 58 \mathrm{~dB}$ ( $\mathrm{w} / 0 \mathrm{NR}$ ) | Meters | $2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+5 \mathrm{~dB})$ |
| S/N ref. Ivi. | 20 dB (IHF A) | Features | Tape/source monitoring; automat- |
| THD | 1.3\% | ic-manual-limi | ter recording; portable |
| THD ref. IvI. | 0 dB | Tape \#1 | $\mathrm{CrO}_{2}$ |
| Tape \#2 | Sony EHF | R/P resp. | 40 Hz to $13 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| R/P resp. | 30 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ | S/N | $50 \mathrm{~dB} / 60 \mathrm{~dB}$ |
| S/N | 66 dB (w/NR); 56 dB (w/o NR) | S/N ref. Ivi. | Dolby (CCIR) |
| S/N ref. Ivi. | -20 dB (IHF A) | THD | 1.5\% |
|  |  | THD ref. IvI. | 0 VU |
|  |  | Tape \#2 | FeCr |
| TC-K35 |  | R/P resp. | 40 Hz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Price | \$250 | S/N | $50 \mathrm{~dB} / 60 \mathrm{~dB}$ |
| Heads | 2 (ferrite and ferrite) | S/N ref. Ivi. | Dolby (CCIR) |
| Flutter | 0.05\%(WRMS) | THD | 1.8\% |
| Fast-forward | $90 \mathrm{sec}(\mathrm{C}-60)$ | THD ref. Ivi. | 0 VU |

Rewind 85 sec (C-60)
Noise red. Dolby
$\begin{array}{ll}\text { Output level } & \begin{array}{l}435 \mathrm{mV} \text { (fixed); } 77.5 \mathrm{mV} \text { to } 775 \mathrm{mV} \\ \text { (variable) }\end{array} \\ \text { Impedance } & 100 \mathrm{~K} \text { ohms } \\ \text { Min. Ioad } & 10 \mathrm{~K} \text { ohms } \\ \text { Separation } & 35 \mathrm{~dB} \text { at } 1 \mathrm{kHz} \\ \text { Erasure } & 60 \mathrm{~dB} \text { at } 40 \mathrm{~Hz} \\ \text { Meters } & V \mathrm{U} ; 1 \text { peak-reading LED } \\ \text { Features } & \text { Automatic reverse; roto-bilateral; }\end{array}$ microprocessor tape-function control; Dolby and
FM MPX filter

## -K1A

Play resp $\quad 50 \mathrm{~Hz}$ to $13 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
sec (C-60)
Input sens. 77.5 mV (line); 0.25 mV (mic)
Output level 435 mV
mpedance 10 K ohms
Meters $\quad 2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+5 \mathrm{~dB})$
R/P resp. $\quad 50 \mathrm{~Hz}$ to $13 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N
resp. 53 dB

## Models also available

TC-D5, \$680; TC-K75, \$600; TCK60, $\$ 550$; TC-K65, $\$ 500$; TC158SD, \$390; TC-K2A Cassette Deck, \$200

## SUPERSCOPE

Superscope, Inc.
20525 Nordhoff St.
Chatsworth, Calif. 91311

Models also available
CD-320, \$220

TANDBERG
Tandberg of America, Inc. Labriola Court
Armonk, N.Y. 10504

| TCD-440 |  |
| :---: | :---: |
| Price | , 00 |
| Heads | 3 (ferrite erase and record; permalloy playback) |
| Flutter | 0.06\% |
| Play resp. | 20 Hz to $20 \mathrm{kHz} \pm \pm^{3 \mathrm{~dB}}$ |
| Fast-forward | $60 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $60 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 80 mV (line); 0.15 mV (mic) |
| Output level | 1.5 V |
| Impedance | 100 ohms |
| Separation | 60 dB ( 1 kHz ) |
| Erasure | 80 dB at 1 kHz |
| Meters | 2 peak-reading ( -30 dB to +5 dB ) |
| trol; three motors; flying start |  |
|  |  |
| Tape \#1 | Maxell. UDXL-1 |
| R/P resp. | 20 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $55 \mathrm{~dB}(\mathrm{w} / \mathrm{NR})$; 65 dB ( $\mathrm{w} / \mathrm{o} \mathrm{NR}$ ) |
| S/N ref. Ivi. | 3 (IEC A) |
| THD | 2\% |
| THD ref. Ivt. | 3 |
| Tape \# 2 | Maxell UDXL-II |
| R/P resp. | 20 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $66 \mathrm{~dB}(\mathrm{w} / \mathrm{NR})$; 55 dB (w/o NR) |
| S/N ref. Ivt. | 3\% (IEC A) |
| THD | 2\% |
| THD ref. IvI. | 3\% |


| TCD-320 |  |
| :---: | :---: |
| Price | \$700 |
| Heads | 2 (1 ferrite erase; 1 hard permalloy R/P) |
| Flutter | 0.09\% |
| Play resp. | 40 Hz to $17 \mathrm{kHz}, \pm{ }^{3} \mathrm{~dB}$ |
| Fast-forward | $60^{\circ} \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $60 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 40 mV (line); 0.15 mV (mic) |
| Output level | 775 mV |
| Impedance | 1.5 K ohms |
| Separation | 60 dB ( 1 kHz ) |
| Erasure | 65 dB ( 1 kHz ) |
| Meters | 2 peak-reading ( -30 dB to +5 dB ) |
| Features | Three motors; dual-capstan |
| closed-loop; solenoid operation; servo spooling |  |
| Tape \# 1 | Maxell UDXL-I |
| R/P resp. | 40 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $55 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| S/N ref. lvi. | 3\% (IEC A) |
| THD | 2\% |
| THD ref. Ivi. | 3\% |
| Tape \#2 | Maxell UDXL-II |
| R/P resp. | 40 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $55 \mathrm{~dB} / 65 \mathrm{~dB}$ |
| S/N ref. Ivi. | 3\% (IEC A) |
| THD | 2\% |
| THD ref. Ivi. | 3\% |

Models also available
TCD-340A, \$1,200

TEAC
Teac Corp. of America
7733 Telegraph Road
Montebello, Calif. 90640

| C-1 (Champagne) or $\mathrm{C}-1 \mathrm{~B}$ (Brown) |  |
| :---: | :---: |
| Price | \$1,350 |
| Heads | 3 (ferrite) |
| Flutter | 0.04\% |
| Play resp. | 30 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $70 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $70 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby, plus optional outboard dbx (RX-8) |
| Input sens. | 60 mV (line); 0.25 mV (mic) |
| Output level | 0.3 V |
| Impedance | 50 K ohms |
| Min. load | 50 K ohms |
| Separation | 45 dB ( 1 kHz ) |
| Erasure | 65 dB ( 1 kHz ) |
| Meters | 2 peak-reading ( dB to +5 dB ) |
| Features | Dual capstan; outboard dbx provi- |
| sion; interchangeable bias and EQ cards; 202B mic attenuation; 3 motor's |  |
| Tape \#1 | Maxell UDXL |
| R/P resp. | 30 Hz to $18 \mathrm{kHz},+3 \mathrm{~dB}$ |
| S/N | $60 \mathrm{~dB} / 70 \mathrm{~dB}$ above 5 kHz |
| S/N ref. IvI. | $3 \%$ THD (NAB) |
| THD ref. Ivi. | 0 VU |
| Tape \#2 | TDK SA |
| R/P resp. | 30 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $60 \mathrm{~dB} / 70 \mathrm{~dB}$ above 5 kHz |
| S/N ref. IvI. | $3 \%$ THD (NAB) |
| C-2 |  |
| Price | \$1,000 |
| Heads | 3 |
| Flutter | 0.05\% |
| Play resp. | 20 Hz to 20 kHz |
| Fast-forward | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 60 mV (line); 0.25 mV (mic) |
| Output level | 300 mV |
| Impedance | 50K ohms |
| Min. load | 50K ohms |
| Meters | 2 peak-reading ( -20 dB to +5 dB ) |


| Impedance | 50 K ohms |
| :--- | :--- |
| Min. Ioad | 50 K ohms |
| Meters | $2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+5 \mathrm{~dB})$ |
| Features | Auto blas |

M-124

| Price | $\$ 475$ |
| :--- | :--- |
| Heads | 2 |
| Flutter | $0.07 \%$ |


| Play resp. | 30 Hz to 16 kHz |
| :--- | :--- |

Fast-forward 90 sec (C-60)
Rewind $\quad 90 \mathrm{sec}(\mathrm{C}-60)$
Noise red. Dolby
Input sens. 60 mV (line); 0.25 mV (mic)
Output level 300 mV
Impedance 50 K ohms
Min. load 50 K ohms
Meters $\quad 2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+3 \mathrm{~dB})$
Features Sync-cassette

CX-270
$\begin{array}{ll}\text { Price } & \$ 250 \\ \text { Heads } & 2\end{array}$
Flutter $\quad 0.07 \%$
Play resp. $\quad 30 \mathrm{~Hz}$ to 16 kHz
Fast-forward 90 sec (C-60)
Rewind $\quad 90 \mathrm{sec}(\mathrm{C}-60)$
Noise red. Dolby
Input sens. 60 mV (line): 0.25 mV (mic)
Output level 300 mV
Impedance 50 K ohms
Min. load 50 K ohms
Meters 2 Fluorescent meters ( -20 dB to +3 dB )

## Models also available

CX-650R, \$700; C-30, \$600; A 550RX, \$550; A-510, \$475; A-500 $\$ 425 ;$ A-300, \$425; CX-210, \$200

TECHNICS
Panasonic Co.
One Panasonic Way
Secaucus, N.J. 07094

RS-9900US

| ce | \$2,000 |
| :---: | :---: |
| Heads | 3 (1 hot-pressed territe record; hot-pressed ferrite playback; double-gap ferrite erase) |
| Flutter | 0.04\% (WRMS) |
| Play resp. | 25 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $70 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $70 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 60 mV (line); 0.25 mV (mic) |
| Output level | 420 mV |
| Min. Ioad | 22K ohms |
| Meters | 2 VU ; peak-reading |
| Features | Two rack-mountable cha |
| ectronics, | transport); 3-position bias and |
| selectors, plus | continuously variable bias and |
| ustment; | parately controlled mic/line/a |
| xing; tape | me meter; pitch (variable spe |
| ntrol ( $\pm 5 \%$ | ; memory rewind; memory play; |
| able az | h; Dolby FM function; built-in |
| tones ( 400 Hz | and 8 kHz ); built-in mic attenua |
| fully transisto | zed switching; volume control |
| headphone ou |  |
| Tape \# 1 | TDK SA or any $\mathrm{CrO}_{2}$ |
| R/P resp. | 25 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| $S / N$ |  |



Scott 670D


Sharp RT-4488
1.4\%

THD ref. Ivl. $160 \mathrm{nWb} / \mathrm{m}$
Tape \#2 High-output, low-noise ferric oxide R/P resp. $\quad 25 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ S/N $55 \mathrm{~dB} / 63 \mathrm{~dB}$

## RS-M95

Price $\$ 1,300$
Heads $\quad 3$ (2 HPF; 1 Sendust ferrite)
Flutter 0.03\%
Play resp. $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Fast-forward 80 sec (C-60)
Rewind 80 sec (C-60)
Noise red. Dolby
Input sens. 60 mV (line); 0.25 mV (mic)
Output level 650 mV
impedance 6 K ohms
Min. load 22 K ohms
Meters $\quad 2$-color fluorescent peak-reading with peak-hold ( -40 dB to +8 dB )
Features Two quartz DD motors; microprocessor tape tension control; fine bias (separate
for each tape type)
Tape \#1 Metal
R/P resp. $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 70 \mathrm{~dB}(w / N R) ; 60 \mathrm{~dB}(w / 0 \mathrm{NR})$
Tape \#2 TDK SA
R/P resp. $\quad 20 \mathrm{~Hz}$ to $19 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $70 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}) ; 60 \mathrm{~dB}$ (w/o NR)

| RS-M85 Mk 2 |  |
| :---: | :---: |
| Price | \$700 |
| Heads | 2 (1 SX Sendust R/P; 1 ferrite erase) |
| Flutter | 0.035\% (WRMS) (JIS) |
| Play resp. | 20 Hz to 20 kHz |
| Fast-forward | $80 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | 80 sec ( $\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 60 mV (line); 0.25 mV (mic) |
| Output level | 700 mV |
| Min. load | 22 K ohms |
| Meters | 2 VU ; peak-reading ( -20 dB to +8 dB) |
| Features | FL meter; quartz-locked direct |
| drive; IC logic control; |  |
| Tape \#1 | $\mathrm{CrO}_{2}$. FeCr; Metal |
| R/P resp. | 20 Hz to 20 kHz |
| S/N | $59 \mathrm{~dB} / 69 \mathrm{~dB}$ |



Sherwood CD-200CP


Tandberg'TCD-440A

Tape \#2 $2 \mathrm{CrO}_{2} ; \mathrm{FeCr}$ R/P resp. $\quad 30 \mathrm{~Hz}$ to 16 kHz

## RS-M56

Price $\$ 500$
Heads 2 (HPF; + ferrite)
Flutter 0.05\%
Play resp. $\quad 30 \mathrm{~Hz}$ to 17 kHz
Fast-forward 86 sec (C-60)
Rewind $\quad 36 \mathrm{sec}$ (C-60)
Noise red. Dolby
Input sens. 60 mV (line); 0.25 mV (mic)
Output level 420 mV
Impedance 1 K ohms
Min. load 22K ohms
Meters $\quad 2$-color fluorescent peak reading ( -20 dB to +8 dB )
Features MMS (micro-computer music selector); vertical load; mic/line; separate 3-position bias/EQ switches
Tape \#1 TDK SA
R/P resp. $\quad 30 \mathrm{~Hz}$ to 17 kHz
S/N $\quad 67 \mathrm{~dB}(w / N R) ; 57 \mathrm{~dB}$ (w/o NR)

## RS-M63

## Price $\$ 450$

Heads $\quad 3$ (HPF; Sendust/ferrite)
Flutter $0.05 \%$
Play resp. $\quad 20 \mathrm{~Hz}$ to 20 kHz
Fast-forward 90 sec (C-60)
Rewind $\quad 90 \mathrm{sec}$ (C-60)
Input sens. $\quad 60 \mathrm{mV}$ (line); 0.25 mV (mic);
Output level 650 mV
Impedance 2.7 K ohms

## A Nole on Prices

Prices shown in these pages are manufacturers' or importers' suggested retail values, updated as is feasible by press time. They may be subject to variation in different locales and to discounts among different retailers.


Uher CR-240


Yamaha TC-920B

Min. loed 22K ohms
Meters $\quad 2$-color fluorescent peak-reading $(-20 \mathrm{~dB}$ to $+8 \mathrm{~dB})$
Features Line/mic mixing; separate bias/EQ
switches; cue/review; double Dolby; vertical load;
fine blas adjustment
Tape \# 1 Metal
R/P resp. $\quad 30 \mathrm{~Hz}$ to $17 \mathrm{kHz}, \pm^{3} \mathrm{~dB}$
Tape \#2 TDK SA
R/P resp. $\quad 30 \mathrm{~Hz}$ to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 67 \mathrm{~dB}(w / N R) ; 57 \mathrm{~dB}$ (w/o NR)

RS-M33

| Price | $\$ 350$ |
| :--- | :--- |
| Heads | $2(1 \mathrm{HPF}$ R/P; 1 ferrite erase) |
| Flutter | $0.05 \%$ |
| Play resp. | 30 Hz to 17 kHz |
| Fast-forward | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 60 mV (line); 0.25 mV (mic) |
| Output level | 650 mV |
| Impedance | 22 K ohms |
| Min. toad | 22 K ohms |
| Meters | Peak-reading fluorescent bar |
|  | graph meters (-20 dB to +8 dB) |
| Features | Vertical drive; memory auto play |
| system; timer standby; oil-damped cassette-eject |  |
| door; 3-position blas and equalization selectors |  |
| Tape $\# 1$ | CrO |
| R/P resp. | 30 Hz to 17 kHz |
| S/N | $57 \mathrm{~dB} / 67 \mathrm{~dB}$ (w/NR) |

RS-M22

| Price | $\$ 300$ |  |
| :--- | :--- | :--- |
| Heads | $2(\mathrm{LH}$ and ferrite) |  |
| Flutter | $0.06 \%$ |  |
| Play resp. | 30 Hz to 16 kHz |  |
| Fast-forward | $90 \mathrm{sec}(\mathrm{C}-60)$ |  |
| Rewind | $90 \mathrm{sec}(\mathrm{C}-60)$ |  |
| Noise red. | Dolby |  |
| Input sens. | 60 mV (line); 0.25 mV (mic) |  |
| Output level | 650 mV |  |
| Impedance | 2.2 K ohms |  |
| Min. load | 22 K ohms |  |
| Meters | Peak-reading fluorescent bar |  |
|  | graph meters (-20 dB to +8 dB) |  |
| Features | Vertical drive; rewind auto play; 3- |  |

position hias and equalization selectors; oildamped cassette-elect door
Tape \# 1 TDK SA
R/P resp. $\quad 30 \mathrm{~Hz}$ to 16 kHz
S/N $\quad 57 \mathrm{~dB} / 67 \mathrm{~dB}(\mathrm{w} / \mathrm{NR})$

RS-M 18

| Price | \$250 |
| :---: | :---: |
| Heads | 2 (LH: ferrite) |
| Flutter | 0.061\% |
| Play resp. | 30 Hz to 16 kHz |
| Fast-forward | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | 90 sec ( $\mathrm{C}-60$ ) |
| Noise red. | Dolby |
| Input sens. | 60 mV (line); 0.25 mV (mic) |
| Output level | 420 mV |
| Impedance | 2 K ohms |
| Meters | Peak reading fluorescent bar graph ( -20 dB to +8 dB ) |
| Features | Front-loading vertical drive; rewind |
| auto play; 3 -position bias and selectors |  |
| Tape \# 1 | TDK SA |
| R/P resp. | 30 Hz to 16 kHz |
| S/N | 66 dB (w/NR); 56 dB (w/o NR) |

RS M-7

| Price | $\$ 175$ |
| :--- | :--- |
| Heads | 2 (LH; ferrite) |
| Flutter | 0.08 (WRMS) |
| Play resp. | 30 Hz to 15 kHz |
| Fast-forward | $86 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $86 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 60 mV (line); 0.25 mV (mic) |
| Output level | 420 mV |
| Impedance | 1 K ohms |
| Meters | $2 \mathrm{VU}(-20 \mathrm{~dB}$ to $+5 \mathrm{~dB})$ |
| Features | Front load vertical drive |
| Tape \# | TDK SA |
| R/P resp. | 30 Hz to 15 kHz |
| S/N | 66 dB (w/NR); 56 dB (w/o NR) |
|  |  |

## Models also available

RS-M68, \$550; RS-M44, \$400; RS-M11, \$200

## TOSHIBA

Toshiba America, Inc.
280 Park Ave.
New York, N.Y. 10017

PC-5460

| Price | $\$ 370$ |
| :--- | :--- |
| Heads | 2 (Sendust) |
| Flutter | $0.05 \%$ |
| Play resp. | 20 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $105 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $105 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 70 mV (line); 0.25 mV (mic) |
| Output level | 500 mV |

Output level 500 mV
Impedance 50 ohms
Separation 40 dB
Meters 2 VU ; peak-reading LED ( -20 dB to $+4 \mathrm{~dB})$
Features Peak-hold VU meter function; editor/fade control; Dolby FM; feather-touch tape control

| R/P resp. | 20 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| :--- | :--- |
| S/N | 69 dB (with NR) |
| THD | $0.07 \%$ |

PC-4460
Price $\$ 300$

| Heads | 2 (hard permalloy) |
| :--- | :--- |
| Flutter | $0.05 \%$ |
| Play resp. | 30 Hz to $16.5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $105 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $105 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 70 mV (line); 0.25 mV (mic) |
| Output level | 500 mV |
| Impedance | 50 ohms |
| Separation | 40 dB |
| Meters | 2 VU ; peak-reading LED |
| Features | Soft-touch tape control; Dolby FM |
| R/P resp. | 30 Hz to $16.5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 69 dB |
| THD | $1 \%$ |

PC-2460
Price $\$ 170$
Heads $\quad 2$ (hard permalloy)
Flutter $\quad 0.1 \%$
Play resp. $\quad 30 \mathrm{~Hz}$ to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Fast-forward 90 sec (C-60)
Rewind $\quad 90 \mathrm{sec}(\mathrm{C}-60)$
Noise red. Dofby
Input sens. 70 mV (line); 0.25 mV (mic)
Output level 500 mV
Impedance 50 K ohms
Separation 30 dB
Meters $\quad 2 \mathrm{VU}(-20 \mathrm{~dB}$ to +4 dB )
R/P resp. $\quad 30 \mathrm{~Hz}$ to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 65 \mathrm{~dB}$
THD $2 \%$
Models also available
PC-3460, \$230

## UHER

Mineroff Electronics, Inc.
946 Downing Road
Valley Stream, N.Y. 11580

| CR-240 |  |
| :--- | :--- |
| Price | $\$ 1.211$ |
| Heads | 2 |
| Flutter | $0.15 \%$ |
| Play resp. | 30 Hz to $16 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Fast-forward | $60 \mathrm{sec}(\mathrm{C}-90)$ |
| Rewind | $60 \mathrm{sec}(\mathrm{C}-90)$ |
| Noise red. | Dolby |
| Input sens. | 750 mV (line); 0.2 mV (mic); 1.5 mV |
|  | car radio input |
| Output level | 775 mV |
| Impedance | $1 \mathrm{~K} \mathrm{ohms;} \mathrm{also} 2 \mathrm{~V}$ at 8 ohms |
| Min. load | 4 ohms |
| Separation | 45 dB |
| Erasure | -70 dB |
| Meters | 2 peak-reading ( -25 dB to +3 dB ) |
| Features | Built-in power amps, speaker, mic; |
| photo-electronic control; ALC; remote; sync |  |
| Tape \# | TDK SA |
| R/P resp. | 30 Hz to $16 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| S/N | $58 \mathrm{~dB} / 66 \mathrm{~dB}$ |
| Tape \# 2 | TDK AD |

## Models also available

CG-362, \$1,119; CR-210, \$990

YAMAHA
Yamaha International Corp.
P.O. Box 6600

Buena Park, Calif. 90620

TC-1000

| Price | $\$ 650$ |
| :--- | :--- |
| Heads | 2 (Sendust) |
| Flutter | $0.05 \%$ |
| Play resp. | 30 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |

Fast-forward 70 sec (C-60)
Rewind $\quad 70 \mathrm{sec}$ (C-60)
Noise red. Dolby
Input sens. $\quad 50 \mathrm{mV}$ (line); 0.25 mV (mic)
Output level 340 mV
Separation $30 \mathrm{~dB}(1 \mathrm{kHz})$
Erasure $\quad 60 \mathrm{~dB}$ (1 kHz)
Meters $\quad 2 \mathrm{VU}$; peak-reading ( -40 dB to +5 dB)
Features Mic/line mixing; dual line output;
universal headphone amp; bias and EQ adjust-
ment
Tape \# 1 LH
R/P resp. $\quad 30 \mathrm{~Hz}$ to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
THD $1 \%$
THD rel. Ivl. 1 kHz
Tape \#2 $\mathrm{CrO}_{2}$
R/P resp. $\quad 30 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 60 \mathrm{~dB} / 69 \mathrm{~dB}$
THD $\quad 1.6 \%$
THD ref. Ivl. 1 kHz

TC-920B

| Price | \$600 |
| :---: | :---: |
| Heads | 2 (Sendust) |
| Flutter | 0.03\% |
| Fast-forward | $75 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | $75 \mathrm{sec}(\mathrm{C}-60)$ |
| Noise red. | Dolby |
| Input sens. | 60 mV (line); 0.3 mV (mic) |
| Output level | 340 mV |
| Separation | $30 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Erasure | 60 dB at 400 Hz |
| Meters | 2 VU : Switches ( -30 dB to +2 dB ) |
| Tape \#1 | LH |
| R/P resp. | 30 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| THD | 1\% |
| THD ref. Ivi. | $160 \mathrm{nWb} / \mathrm{m}$ |
| Tape \#2 | $\mathrm{CrO}_{3}$ |
| R/P resp. | 30 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 69 dB (w/NR); 60 dB (w/o NR) |
| S/N ref. Ivi. | JIS |
| THD | 1.6\% |
| THD ref. Ivi. | $160 \mathrm{nWb} / \mathrm{m}$ |
| TC-720 |  |
| Price | \$450 |
| Heads | 3 (ferrite) |
| Flutter | 0.06\% |
| Play resp. | 40 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Fast-forward | $90 \mathrm{sec}(\mathrm{C}-60)$ |
| Rewind | 90 sec (C-60) |
| Noise red. | Dolby |
| Input sens. | 50 mV (line); 0.3 mV (mic) |
| Output level | 400 mV |
| Separation | 30 dB ( 1 kHz ) |
| Erasure | 60 dB |
| Meters | $2 \vee \cup(-20 \mathrm{~dB}$ to $+5 \mathrm{~dB})$ |
| Tape \#1 | $\mathrm{CrO}_{2}$ |
| R/P resp. | 40 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 66 dB (w/NR); 57 dB (w/o NR) |
| S/N ref. Ivi. | (JIS) |
| THD | 2\% |
| THD ref. Ivi. | $160 \mathrm{nWb} / \mathrm{n}$ |
| Tape \#2 | LH |
| R/P resp. | 40 Hz to $13 \mathrm{kHz} . \pm 3 \mathrm{~dB}$ |

## Models also available

TC-520, \$320; TC-320, \$240

## A Note on Prices

Prices shown in these pages are manufacturers' or importers' suggested retail values, updated as is feasible by press time. They may be subject to variation in different locales and to discounts among different retailers.

# Speaker Systems 

ACCULAB
Acculab
8116 Deering Ave.
Canoga Park, Calif. 91304


340
Price $\quad \$ 220$
Dimensions $251 / 2 \mathrm{H} \times 141 / 4 \mathrm{~W} \times 11 \mathrm{D}$
Weight $\quad 39$ lbs.
Type Acoustic suspension
Drivers $\quad 12^{\prime \prime}$ woofer; $35 / 8^{" 1}$ midrange; $-23 / 4^{"}$ tweeter

| Response | 33 Hz to $18.5 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 91 dB |
| :--- | :--- |
|  | SPL at 1 meter at 1 watt |
| Crossover | $3.3 \mathrm{~Hz} ; 7.5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 4 watts $(6 \mathrm{dBW})$ |
| Max. power | 40 watts ( 16 dBW ) |
| Features | Controlled dispersion |

220
Price $\$ 150$
Weight $26 \mathrm{lbs} \times 13 \mathrm{~W} \times 101 / 2 \mathrm{D}$
Type
Drivers
Response $\quad 40 \mathrm{~Hz}$ to $18.5 \mathrm{kHz}, \pm 4.5 \mathrm{~dB}$ re 90
dB SPL at one meter at one watt
6.5 kHz

Impedance 8 ohms
Min. power 4 watts ( 6 dBW)
Max. power 20 watts ( 13 dBW )
Features Controlled dispersion
Models also available
320, \$175

## ACOUSTAT

Acoustat Corp.
3101 S.N. 1st Terrace
Ft. Lauderdale, Fla. 33315

## Acoustat Monitor <br> Price $\$ 3,000 / \mathrm{pr}$.

Dimensions $62 \mathrm{H} \times 37 \mathrm{~W} \times 19 \mathrm{D}$ at pedestal; $85 / 8 \mathrm{D}$
at top
Type Full-range elecirostatic
Drivers 4 full-range electrostatic drivers per unit

Response
Min. power Controls

Features
Integral self-contained ServoCharge amplifiers specially designed for highcapacitance load characteristics of electrostatic transducers

| Monitor | Three |
| :--- | :--- |
| Price | $\$ 2,335$ |
| Dimensions | $\$ 2 \mathrm{H} \times 30 \mathrm{~W} \times 19 \mathrm{D}$ |
| Weight | 85 lbs. |
| Type | Full-range electrostatic |
| Drivers | 3 full-range electrostatic drivers |
|  | oer unit |
| Response | 30 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 110 dB |
|  | SPL at 1 meter |
| Controls | Overall gain; high frequency gain <br> (on amplifier) |

## Models also available

Monitor Four, $\$ 3,000$

ACOUSTIC 626
Acoustic Control Corp.
7949 Woodley Ave.
Van Nuys, Calif. 91406
648
Price
Dimensions $29 \mathrm{H} \times 23 \mathrm{~W} \times 21 \mathrm{D}$
Welght
Type
Drivers
Response
Crossover
Impedance
Min. power
Max. power
Controls
Features
tweeter
626
Price $\quad \$ 319$
Dimensions $24 \mathrm{H} \times 16 \mathrm{~W} \times 11 \mathrm{D}$
Weight 40 lbs .
Type
Drivers
Response $\quad 35 \mathrm{~Hz}$ to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover $\quad 1.2$ kHz; 6 kHz
Impedance 4 ohms
Min. power 10 watts ( 10 dBW )
Max. power 100 watts ( 20 dBW ) at 8 ohms
Controls Midrange; tweeter
Features Circuit breaker protection for midrange and tweeter

ACOUSTICAL ENGINEERING
AcOustical Engineering
P.O. Box 60221
Sunnyvale, Calif. 94088

| Mach IV |  |
| :---: | :---: |
| Price | \$995 |
| Dimensions | $41 \mathrm{H} \times 42 \mathrm{~W} \times 30 \mathrm{D}$ (at sides) |
| Weight | 150 lbs . |
| Type | Corner horn |
| Drivers | $15^{\prime \prime}$ woofer; $8^{\prime \prime}$ midrange; two horn iweeters |
| Response | 16 Hz to $20 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Crossover | 400 Hz ; 2.5 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 100 watts ( 20 dBW ) |
| Contrcls | L-pad |
| Features | Walnut finish with black grille-cloth |
| Mini Corner Horn |  |
| Price | \$495 |
| Dimensions | $24 \mathrm{H} \times 18 \mathrm{~W} \times 12 \mathrm{D}$ (at sides) |
| Weight | 75 lbs . |
| Type | Corner horn |
| Drivers | $8^{*}$ woofer; 4" midrange; horn tweeter |
| Response | 32 Hz to 18 kHz |
| Crossover | $800 \mathrm{~Hz} ; 5 \mathrm{kHz}$ |
| impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 60 watts ( 17.75 dBW ) |
| Contrcls | L-pad |
| Features | Same as Mach IV |

The "Mule"
Price $\$ 295$
Dimensions $24 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 12 \mathrm{D}$
Weight $\quad 35 \mathrm{lbs}$.
Type Vented
Drivers 10" woofer; 4" midrange; horn tweeter
Response $\quad 40 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 5 \mathrm{~dB}$
Crossover $800 \mathrm{~Hz} ; 5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 5 watts ( 5 dBW )
Max. power 40 watts ( 16 dBW )
Contrcls Tweeter potentiometer
Features Dark wood finish with black grille
cloth
Models also available
5. $\$ 795$ (in flat black finish, $\$ 695$ )

## ACOUSTI-PHASE

Acousti-Phase
P.O. Box 207

Proctorsville, Vt. 05153
Disco II
Price $\$ 449.95$
Dimensions $29 \mathrm{H} \times 18 \mathrm{~W} \times 15 \mathrm{y} / 2 \mathrm{D}$
Weight 75 lbs .
Type Bass reflex
Drivers $\quad 15^{\prime \prime}$ wooter; 2 midrange horns; 4
super horn tweeters
Respense $\quad 28 \mathrm{~Hz}$ to $30 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover $900 \mathrm{~Hz} ; 3 \mathrm{kHz}$
Impedance 4 ohms
Min. power 20 watts (13 dBW)

Max. power 200 watts ( 23 dBW )
Features High gloss black finish; side mount carrying handles; slide casters; accepts $1 / 4^{\text {n }}$ phone plug connection

## PHASE III+

Price $\quad \$ 309.95$
Dimensions $25 \mathrm{H} \times 15 \mathrm{~W} \times 14 \mathrm{D}$
Weight 47 lbs .
Type Bass reflex
Drivers $\quad 12^{\prime \prime}$ woofer; $5^{\prime \prime}$ midrange; $1^{\text {" }}$ Mylar dome tweeter
Response $\quad 32 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover $700 \mathrm{~Hz} ; 4.5 \mathrm{kHz}$
Impedance 4 to 8 ohms
Min. power 10 watts ( 10 dBW ) continuous
Max. power 100 watts ( 20 dBW )
Controls Tweeter
Features Circuit breaker; also available in solid-wood butcher-block cabinet for $\$ 359.95$

| Phase Monitor |  |
| :---: | :---: |
| Price | \$189.95 |
| Dimensions | $25 \mathrm{H} \times 15 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 47 lbs . |
| Type | Bass reflex |
| Drivers | 12" woofer; $1^{\prime \prime}$ Mylar dome tweeter |
| Response | 38 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Crossover | 2 kHz |
| Impedańce | 4 to 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 70 watts ( 18.5 dBW ) |
| Controls | Tweeter |
| Features | Circuit breaker |
| Microphase |  |
| Price | \$99.95 |
| Dimensions | $171 / 2 \mathrm{H} \times 101 / 2 \mathrm{~W} \times 80$ |
| Weight | 19 lbs . |
| Type | Bass reflex |
| Drivers | 61/2" woofer; 1" Mylar dome tweeter |
| Response | 48 Hz to $20 \mathrm{kHz}, \pm 4.5 \mathrm{~dB}$ |
| Crossover | 1.6 kHz |
| Impedance | 4 to 8 ohms |
| Min. power | 5 watts ( 7 dBW ) |
| Max. power | 30 watts (14.75 dBW) |

## Models also available

Phase II, \$229.95; Phase I, \$139.95

| ACOUSTIQUE 3A |  |
| :---: | :---: |
| Acoustique 3A International, Inc. |  |
|  |  |
| 871 Montėe de Liesse, St. |  |
| Laurent |  |
| Montreal, P.Q., Canada |  |
| TRIPHONIC SYSTEMS |  |
| Reference |  |
| Price | \$2,900 |
| Dimensions | $47 \mathrm{H} \times 13 \mathrm{~W} \times 13 \mathrm{D}$ |
| Weight | 110 lbs |
| Type | Acoustic pressure feedback biamplified |
| Drivers | Two $11^{\prime \prime}$ special woofers; $8^{\prime \prime}$ cone and $2^{\text {" }}$ dome midrange; Equiphase flat ribbon tweeter |
| Response | 20 Hz to $40 \mathrm{kHz},+3 \mathrm{~dB}$ re 94 dB SPL at 1 meter at 1 watt |
| Crossover | $150 \mathrm{~Hz} ; 1.8 \mathrm{kHz} ; 6 \mathrm{kHz}$ |
| Impedance | 100 ohms |
| Controls | Room control adjustment |
| Features | Preamplifier required; anechoic re- |

ACOUSTIQUE 3A
Acoustique 3A International, Inc.

Montee de Liesse, St Laurent
Montreal, P.Q., Canada

## TRIPHONIC SYSTEMS

## Reference

Dimensions $47 \mathrm{H} \times 13 \mathrm{~W} \times 130$
Type Acoustic pressure feedback biamplified
Drivers $\quad$ Two $11^{\prime \prime}$ special woofers; $8^{\prime \prime}$ cone flat ribbon tweeter
$\begin{array}{ll} & \text { SPL at } 1 \text { meter at } 1 \text { watt } \\ \text { Crossover } & 150 \mathrm{~Hz} ; 1.8 \mathrm{kHz} ; 6 \mathrm{kHz} \\ \text { Impedance } & 100 \mathrm{ohms} \\ \text { Controls } & \text { Room control adjustment } \\ \text { Features } & \text { Preamplifier required; anechoic re- } \\ \text { sponse supplied with speaker }\end{array}$

TR-1000 Bass Module
$\begin{array}{ll}\text { Price } & \$ 1,800 \\ \text { Dimensions } & 47 \mathrm{H} \times 27 \mathrm{~W} \times 12 \mathrm{D}\end{array}$
Weight 220 lb
Type Acoustic pressure feedback
Drivers Three $11^{\prime \prime}$ feedback woofers
Response $\quad 30 \mathrm{~Hz}$ to $100 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$
Crossover 100 Hz
Impedance 400 ohms
Controls Rock/linear switch; efficiency adjustment
Features Unit is in coffee-table configuration; includes 150 -watt ( 21.75 dBW ) built-in amplifier, microphone, and VU meter

## Atom 2 Triphonic Satellite

Price $\$ 600 / \mathrm{pr}$
Dimensions $19 \mathrm{H} \times 9 \mathrm{~W} \times 3 \mathrm{D}$
Weight 10 lbs
Type Peripheral laminar decompression
Drivers $\quad 8^{\prime \prime}$ midrange; flat-ribbon tweeter
Response 100 Hz to $40 \mathrm{kHz}, \pm 2 \mathrm{~dB}$
Crossover 6 kHz
Impedance 8 ohms
Min. power 20 watts ( 13 dBW )
Max. power 150 watts ( 21.75 dBW )
Features Time-aligned; laminated back
wave through flat tunnel

## Andante Linear <br> Price $\$ 679$

Dimensions $18 \mathrm{H} \times 12 \mathrm{~W} \times 8 \mathrm{D}$
Weight 50 lbs .
Type Acoustic pressure feedback
Drivers $\quad 11^{\prime \prime}$ special woofer; $2^{\prime \prime}$ dome midrange; $3 / 4$ " ferrofluid dome tweeter
Response $\quad 25 \mathrm{~Hz}$ to $30 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 93 dB SPL at 1 meter at 1 watt
Crossover $400 \mathrm{~Hz} ; 6 \mathrm{kHz}$
Impedance 8 ohms
Min. power 5 watts ( 7 dBW )
Max. power 80 watts ( 19 dBW )
Controls Room control; 4-position equalizer
Features 120 watt ( 20.75 dBW ) built-in am-
plifier; anechoic response supplied with speaker

## Allegro

## Price $\$ 539$

Dimensions $37 \mathrm{H} \times 13 \mathrm{~W} \times 13 \mathrm{D}$
Weight
Type
Acoustic doublet (3A patent)

Response $\quad 50 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 94 dB SPL at 1 meter at 1 watt
Crossover $800 \mathrm{~Hz} ; 6 \mathrm{kHz}$
Impedance 8 ohms
Min. power 5 watts ( 7 dBW )
Max. power 150 watts ( 21.75 dBW )
Features
supplied with speaker
Apogee Monitor
$\begin{array}{ll}\text { Price } & \$ 449 \\ \text { Dimensions } & 31 \mathrm{H} \times 12 \mathrm{~W} \times 13 \mathrm{D} \\ \text { Weight } & 45 \mathrm{lbs}\end{array}$
Weight $\quad 45 \mathrm{lbs}$.
Type Dynamic
Drivers $\quad 11^{\prime \prime}$ woofer; $13 / 8^{n \prime}$ dome midrange driver; $3 / 4^{"} 3 A$ hemispheric ferrofluid dome tweeter
Response 45 Hz to 30 kHz
Crossover $\quad 1.2 \mathrm{kHz} ; 7 \mathrm{kHz}$
Impedance 8 ohms
Min. power 20 watts ( 13 dBW )
Max. power 80 watts ( 19 dBW )
Features Time-aligned
Allegretto Mk II

| Price | $\$ 375$ |
| :--- | :--- |
| Dimensions | $31 \mathrm{H} \times 12 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight | 34 lbs. |
| Type | Bass reflex |

Drivers
Response $\quad 55 \mathrm{~Hz}$ to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 94 dB
SPL at 1 meter at 1 watt
Crossover 1.5 kHz; 6 kHz
Impedance 8 ohms
Min. power 5 watts ( 7 dBW )
Max. power 80 watts ( 19 dBW )
Controls Midrange
Features Controlled damping; anechoic response supplied with speaker

## Alphase

| Price | $\$ 179$ |
| :--- | :--- |
| Dimensions | $21 \mathrm{H} \times 10 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | 32 lbs. |
| Type | Dynamic |
| Drivers | $8^{\prime \prime}$ woofer; $5 / \mathbf{g}^{\prime \prime}$ dome tweeter |
| Response | 55 Hz to 30 kHz |
| Crossover | 5 kHz |
| Impedance | 80 hms |
| Min. power | 20 watts $(13 \mathrm{dBW})$ |
| Max. power | 50 watts $(17 \mathrm{dBW})$ |
| Features | Time-aligned |

## Models also available

TR-1200 Bass Module, \$1,665; TR-800 Bass Module, $\$ 1,300$; Atom 3 Triphonic Satellite \$660/pr.; Andante Master Control, $\$ 1,000$; Adagio, $\$ 559$; Prelude, \$499; Auditorat, \$299; Apogee Mk II, \$249; Alto, \$219

## ACUSTA CRAFT

Acusta Craft
P.O. Box 12030

Shawnee Mission, Kans. 66212
CV-19
Price
Weight $44 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 123 / 4 \mathrm{D}$
Type
Drivers $\quad 12^{\prime \prime}$ woofer; two $6^{\prime \prime}$ midrange drivers; horn iweeter
Response 42 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 96 dB SPL at 1 meter at 1 watt
Crossover $400 \mathrm{~Hz} ; 4 \mathrm{kHz}$
Impedance 4 ohms
Min. power 20 watts ( 13 dBW )
Max. power 200 watts ( 23 dBW )
Controls None
Features Constant-voltage crossover net-
works

## CVW-10 Bass Module

| Price | $\$ 239$ (kit); $\$ 299$ (assembled) |
| :--- | :--- |
| Dimensions | $211 / 2 \mathrm{H} \times 21 \mathrm{~W} \times 210$ |
| Weight | 70 lbs |
| Type | Vented |
| Drivers | Two $10^{n}$ wooters |
| Response | 50 Hz to $100 \mathrm{~Hz}, \pm 3 \mathrm{~dB}$ re 91 dB |
|  | SPL at 1 meter at 1 watt |
| Crossover | 100 Hz |
| Impedance | 80 ohms |
| Min. power | 20 watts (13dBW) |
| Max. power | 250 watts ( 24 dBW ) |
| Controls | None |
| Features | Constant-voltage crossover |

## CVS-3 Satellite Panel

Price $\$ 224(\mathrm{klt}) ; \$ 285$ (as
Weight 55 lbs
Type Acoustic suspension
Drivers $\quad 10^{\circ}$ woofer; $6^{\prime \prime}$ midrange; horn tweeter
Response $\quad 65 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 91 dB
SPL at 1 meter at 1 watt
Crossover $400 \mathrm{~Hz} ; 4 \mathrm{kHz}$
Impedance 8 ohms
Min. power 20 watts ( 13 dBW )
Max. power 175 watts ( 22 dBW )
Controls None


Adcom GFW-1


Akal SW-7

Features Constant-voltage crossover networks; slimline panel styling

CV-15
Price $\$ 165$ (vinyl kit); $\$ 185$ (walnut kit); $\$ 215$ (walnut assembled)
Dimensions $30 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 117 / 8 \mathrm{D}$
Weight 60 lbs .

Type Vented
Drivers $10^{\prime \prime}$ woofer; $6^{\prime \prime}$ midrange; horn tweeter
Response $\quad 42 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 91 dB SPL at 1 meter at 1 watt
Crossover $400 \mathrm{~Hz} ; 4 \mathrm{kHz}$
Impedance 8 ohms
Min. power 20 watts ( 13 dBW )
Max. power 175 watts ( 22.5 dBW )
Controls None
Features Constant-voltage crossover networks

## CVS-2 Satellite Panel

Price $\quad \$ 125$ (kit); $\$ 150$ (assembled)
Dimensions $211 / 2 \mathrm{H} \times 12 \mathrm{~W} \times 51 / 2 \mathrm{D}$
Weight
Type Acoustic suspension
Drivers $\quad 8^{\prime \prime}$ woofer; $6^{\prime \prime}$ midrange; $1^{\prime \prime}$ dome tweeter
Response $\quad 70 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 91 dB
SPL at 1 meter at 1 watt

Min. power 15 watts ( 11.75 dBW )
Max. power 125 watts ( 21 dBW )
Controls None
Features Constant-voltage crossover networks; slimline panel styling
Model 10

| Price | $\$ 64$ (vinyl kit); $\$ 74$ (walnut kit); $\$ 90$ (wainut assembled) |
| :---: | :---: |
| Dimensions | $183 / 4 \mathrm{H} \times 113 / 4 \mathrm{~W} \times 91 / 2 \mathrm{D}$ |
| Weight | 30 lbs . |
| Type | Acoustic suspension |
| Drivers | 8" woofer/midrange; 1" dome tweeter |
| Response | 65 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 92 dB SPL at 1 meter at 1 watt |
| Crossover | 1.5 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts (10 dBW) |
| Max. power | 60 watts ( 17.75 dBW) |
| Controls | None |
| Features | Constant-voltage crossover ne |

## Models also available

CV-18, \$249 (kit); \$299 (assembled); CVW-12 Bass Module, \$180 (kit). $\$ 240$ (assembled); CV-14, $\$ 120$ (vinyl kit); $\$ 135$ (walnut kit) $\$ 160$ (wainut assmebled); CV-12 $\$ 90$ (vinyl kit); $\$ 105$ (walnut kit); $\$ 130$ (walnut assembled); CVS-1 Satellite Panel, $\$ 65$ (kit); $\$ 85$ (assembled); Model 6, \$55 (kit); \$75 (assembied)

ADCOM Adcom Co. 11A Jules Lane
New Brunswick, N.J. 08901

## GFW-1 Subwoofer

Price $\quad \$ 229.95$ (vinyl); $\$ 289.95$ (walnut) Dimensions $151 / 2 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 17 \mathrm{l} / 2 \mathrm{D}$
Weight
36 lbs.
Type Infinite baffle
Drivers $\quad 10^{\prime \prime}$ long-throw woofer
Response $\quad 22 \mathrm{~Hz}$ to $150 \mathrm{~Hz}, \pm 3 \mathrm{~dB}$ re 86 dB SPL at 1 meter at 1 watt

## Crossover 150 Hz

impedance 4 ohms
Min. power 20 watts ( 13 dBW )
Max. power 120 watts ( 20.75 dBW )
Features Two-way passive crossover built
in; terminals for input from amp and output to satel-
lites; a phasing switch provided to increase installation flexibility; compact, end-table styled

ADS
Analog \& Digital Systems, Inc. One Progress Way Wilmington, Mass. 01887

L-630

| Price | $\$ 285$ |
| :--- | :--- |
| Dlmensions | $255 / 8 \mathrm{H} \times 1413 / 16 \mathrm{~W} \times 113 / 4 \mathrm{D}$ |
| Weight | 42 lbs. |
| Type | Acoustic suspension |
| Drivers | $1^{\prime \prime}$ sott-dome tweeter; $11 / 2$ soft- |
|  | dome midrange; $10^{\circ}$ woofer |
| Response | 22 Hz to $22 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 91 dB |
|  | SPL at 1 meter at 1 watt |
| Crossover | $650 \mathrm{~Hz} ; 4 \mathrm{kHz}$ |
| Impedance | 8 ohms nominal, 6 ohms minimum |
| Min. power | 20 watts ( 13 dBW ) |
| Max. power | 200 watts (23 dBW) |
| Features | Optional black metal base |


| 520 |  |
| :--- | :--- |
| Price | $\$ 150$ |
| Dimensions | $213 / \mathrm{HH} \times 121 / 4 \mathrm{~W} \times 101 / \mathrm{D}$ |
| Weight | 30 lbs. |
| Type | Acoustic suspension |
| Drivers | $8^{n}$ wooter; $1^{\prime \prime}$ soft-dome tweeter |
| Response | 26 Hz to $22 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 91 dB |
|  | SPL at 1 meter at 11 watt |
| Crossover | 1.5 kHz |
| Impedance | 8 ohms |
| Min. power | $10 \mathrm{watts}(10 \mathrm{dBW})$ |
| Max. power | $100 \mathrm{watts}(20 \mathrm{dBW})$ |
| Features | Fused tweeter; drivers flush- |
| mounted |  |

## SERIES II

ADS 810

| Price | $\$ 370$ |
| :--- | :--- |
| Dimensions | $251 / 2 \mathrm{H} \times 141 / \mathrm{WW} \times 113 / 4 \mathrm{D}$ |
| Weight | 46 lbs .8 oz . |
| Type | Acoustic suspension |
| Drivers | Two $8^{\prime \prime}$ woofers; $2^{\prime \prime}$ soft-dome mi- |
|  | drange; $3 / 4^{\prime \prime}$ soth-dome tweeter |
| Response | 35 Hz to $23 \mathrm{kHz}, \pm 3 \mathrm{~dB} ; 20 \mathrm{~Hz}$ to |
|  | $30 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Crossover | $550 \mathrm{~Hz} ; 4 \mathrm{kHz}$ |
| Impedance | 6 ohms |
| Min. power | $20 \mathrm{watts}(13 \mathrm{dBW})$ |
| Max. power | 200 watts ( 23 dBW ) |
| Features | Optional speaker stand; drivers |
| flush-mounted for minimum diffraction |  |

flush-mounted for minimum diffraction

## ADS 2001

| Price | $\$ 599 / \mathrm{pr}$. |
| :--- | :--- |
| Dimensions | $41 / 4 \mathrm{H} \times 63 / 4 \mathrm{~W} \times 41 / 2 \mathrm{D}$ |
| Weight | 4 lbs. |
| Type | Acoustic suspension |
| Drivers | $4^{\prime \prime}$ woofer; $1^{\prime \prime}$ dome tweeter |
| Response | 70 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB} ; 50 \mathrm{~Hz}$ to |
|  | $22 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Crossover | $2.5 \mathrm{kHz}($ (electronic) |
| Impedance | 47 K ohms |
| Min. power | 60 watts (17.75 dBW) continuous |
|  | for woofer; 20 watts (13 dBW) con- |
|  | tinuous for tweeter (built-in) |
| Controls | Tweeter |
| Features | Blamplified miniature speaker for |
| 12 V operation |  |

12 V operation

## 300 C

| Price | \$150 |
| :---: | :---: |
| Dimensions | $81 / 2 \mathrm{H} \times 53 / 4 \mathrm{~W} \times 51 / 4 \mathrm{D}$ |
| Weight | 7 lbs . |
| Type | Acoustic suspension |
| Drivers | $51 / 4{ }^{*}$ woofer; $1^{\prime \prime}$ sott-dome tweeter |
| Response | 40 Hz to $23 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 90 dB SPL at 1 meter at 1 watt |
| Crossover | 2.5 kHz |
| Impedance | 4 ohms |
| Min. power | 5 watts (7 dBW) |
| Max. power | 75 watts ( 18.75 dBW ) |
| Features | Solid aluminum miniature speakers |

300
Price $\quad \$ 145$
Dimensions $81 / 2 \mathrm{H} \times 53 / 2 \mathrm{~W} \times 51 / 2 \mathrm{D}$
Weight 7 lbs .
Type Acoustic suspension
Drivers $\quad 51 / 4^{"}$ woofer; $1^{\prime \prime}$ soft-dome tweeter
Response $\quad 40 \mathrm{~Hz}$ to $23 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 90 dB
SPL at 1 meter at 1 watt
Crossover 2.5 kHz
Impedance 4 ohms
Min. power 5 watts ( 7 dBW )
Max. power 75 watts ( 18.75 dBW )
Features Solid aluminum loudspeaker

| 420 |  |
| :---: | :---: |
| Price | \$115 |
| Dimensions | $20 \mathrm{H} \times 111 / 2 \mathrm{~W} \times 81 / 2 \mathrm{D}$ |
| Weight | 24 lbs . |
| Type | Acoustic suspension |
| Drivers | $7{ }^{\text {P }}$ woofer; $1^{1 "}$ sott-dome tweeter |
| Response | 30 Hz to $22 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 91 dB SPL at 1 meter at 1 watt |
| Crossover | 1.5 kHz |
| Impedance | 8 ohms |
| Min. power | 15 watts ( 11.75 dBW ) |
| Max. power | 75 watts ( 18.75 dBW ) |
| Features mounted | Fused tweeter; drivers flush- |

## Models also available

620, \$200; ADS 910, \$720; ADS
710, \$285; ADS 2002, \$470/pr.;
200C, \$118; ADS 200, \$113

## ADVENT

Advent Corp.
195 Albany St.
Cambridge, Mass. 02139

| Powered | Advent |
| :---: | :---: |
| Price | \$499 |
| Dimensions | $283 / 8 \mathrm{H} \times 141 / 8 \mathrm{~W} \times 13 \mathrm{D}$ |
| Weight | 70 lbs |
| Type | Blamplified acoustic suspension |
| Drivers | $10^{-}$woofer; $13 / \mathrm{m}^{\prime \prime}$ dome tweeter |
| Crossover | 1.5 kHz |
| Controls | Input sensitivity; bass boost (below 100 Hz ); treble boost and cut (above 3 kHz ) |
| Features ter | Integral amplifier with infrasonic fil- |
| New Adv | ent |
| Price | \$179 (wood cabinet): \$155 (vinylclad utility cabinet) |
| Dimensions | $25 \% / 4 \mathrm{H} \times 1 / 4 \mathrm{~W} \times 111 / 2 \mathrm{D}$ |
| Weight | 44 lbs . |
| Type | Acoustic suspension |
| Drivers | 10" woofer; 13/8" dome tweeter |
| Response | 30 Hz to $15 \mathrm{kHz} \pm 3 \mathrm{~dB} \mathrm{re} 89 \mathrm{~dB}$ SPL at 1 meter at 1 watt |
| Crossover | 1.5 kHz |
| Min. power | 15 watts ( 11.75 dBW ) continuous |
| Max. power | Avaliable upon request |
| Controls | 3 -way high-frequency balance |

## Advent/1

| Price | \$120; (wood cabinet, \$135) |
| :---: | :---: |
| Dimensions | $22 \mathrm{H} \times 13^{1 / 4} \mathrm{~W} \times 91 / 4 \mathrm{D}$ |
| Weight | 30 lbs |
| Type | Acoustic suspension |
| Drivers | $10^{\prime \prime}$ wooter; $13 / 8{ }^{\text {" }}$ dome tweeter |
| Response | 30 Hz to $15 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 89 dB SPL at 1 meter at 1 watt |
| Cr | 1.5 kHz |
| Impedance | 8 ohms |
| Min. power | 15 watts ( 11.75 dBW ) |
| Max. power | Available upon request |


| Advent/2 |  |
| :---: | :---: |
| Price | \$89 |
| Dimensions | $191 / 2 H \times 111 / 4 \mathrm{~W} \times 71 / 2 \mathrm{D}$ |
| Weight | 18 lbs .4 oz |
| Type | Acoustic suspension |
| Drivers | $9{ }^{\text {" }}$ woofer; two 15/8" cone tweeters |
| Response | 40 Hz to $15 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 88 dB SPL at 1 meter at 1 watt |
| Cros | 1.5 kHz |
| impedance | 8 ohms |

Min. power
10 watts ( 10 dBW )
Max. power Available upon request

## Models also available

Advent/4 System, \$178 to 188/pr. Advent/3, \$65: 400, \$35

AKAI
Akai America, Ltd.
2139 E. Del Amo Blvd.
P.O. Box 6010

Compton, Calif. 90224

## SW-177 II

| Price | $\$ 395$ |
| :--- | :--- |
| Dimensions | $271 / 4 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 121 / 4 \mathrm{D}$ |
| Weight | 46 lbs. |
| Type | Dynamic |
| Drivers | $15^{\prime \prime}$ woofer; $51 / 4^{* *}$ midrange; two |
|  | $13 / 4^{\circ}$ tweeters |
| Response | 25 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Crossover | $700 \mathrm{~Hz} ; 5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 40 watts ( 16 dBW ) |
| Max. power | 100 watts (20 dBW) |
| Controls | Midrange; tweeter |

SW-137 II

| Price | \$200 |
| :---: | :---: |
| Dimensions | $231 / 4 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 113 / 4 \mathrm{D}$ |
| Weight | 26 lbs . |
| Type | Dynamic |
| Drivers | $10^{\prime \prime}$ woofer; $5^{n}$ midrange; ${ }^{13 / 4^{n}}$ tweeter |
| Response | 40 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Crossover | $1.2 \mathrm{kHz} ; 5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 20 watts (13 dBW) |
| Max. power | 40 watts (16 dBW) |
| Controls | Midrange |
| SW-7 |  |
| Price | \$160/pr |
| Dimensions | $83 / 4 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 51 / 2 \mathrm{D}$ |
| Weight | $11 \mathrm{lbs} . / \mathrm{pr}$. |
| Drivers | $5^{\prime \prime}$ woofer; 2" horn tweeter |
| Response | 55 Hz to 22 kHz |
| Crossover | 10 kHz |
| Impedance | 4 ohms |
| Max. power | 40 watts (16 dBW) |

## Models also available

SW-157 II, \$295; SW-127 \$125; S-82, \$90/pr.

## ALLISON <br> Allison Acoustics, Inc. <br> 7 Tech Circle <br> Natick, Mass. 01760

Allison: One

| Price | $\$ 420$ |
| :--- | :--- |
| Dimensions | $40 \mathrm{H} \times 19 \mathrm{~W} \times 103 / 4 \mathrm{D}$ |
| Weight | 67 lbs. |
| Type | Dynamic, acoustic suspension. |
| Drivers | Two $10^{\prime \prime}$ woofers; two $31 / 2^{\prime \prime} \mathrm{mi}$ |
|  | drange units; two $1^{\prime \prime}$ tweeters |
| Response | Complete specifications available |
|  | on request |
| Crossover | $350 \mathrm{~Hz} ; 3.75 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 30 watts $(14.75 \mathrm{dBW})$ per channel |
|  | for 100 dB SPL |

Max. power Depends on program material; 400 watts (26 dBW)/channel amps may be used with music input
Controls Combined mid/high frequency balance switch
Features Stabilized Radiation Loading* enclosure design; Convex Diaphragm mid and iweeter units; full warranty for five years ("covered by U.S. and foreign patents)

## Electronic Subwoofer <br> Price $\$ 290$

Dimensions $2 \mathrm{H} \times 141 / 4 \mathrm{~W} \times 43 / 6 \mathrm{D}$
Features Three low-frequency boost curves with turnover ( +3 dB ) points at $35.5 \mathrm{~Hz}, 41 \mathrm{~Hz}$, and 48 Hz ; Infrasonlc and ultrasonic filters slope at 18 dB/octave below 20 Hz and above $20 \mathrm{kHz} ; \mathrm{A}$. weighted $\mathrm{S} / \mathrm{N}$ is better than 100 dB

## Allison: Four <br> Price $\$ 195$

Dimensions $11 \mathrm{H} \times 193 / 6 \mathrm{~W} \times 10 \mathrm{D}$
Weight $23 \mathrm{ibs}, 8 \mathrm{oz}$
Type Dynamic, acoustic suspension
Drivers $\quad 8^{n \prime}$ woofer; two $1^{1 "}$ tweeters
Response Complete specifications available on request
Crossover 2 kHz
impedance 8 ohms
Min. power 30 watts ( 14.75 dBW ) per channel for 100 dB SPL
Max. power Depends on program material; 200 watts ( 23 dBW )/ channel amps may be used with music input
Controls Combined mid/hlgh frequency bal ance switch
Features Stabilized Radiation Loading* enclosure design; Convex Diaphragm tweeters; fuil warranty for five years (" covered by U.S. and foreign patents)

Allison: Five
Price $\$ 160$
Dimensions $11 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 10 \mathrm{D}$
Weight 21 lbs
Type Dynamic, acoustic suspension
Drivers $\quad 8$ " wooter; 1 " tweeter
Response Complete specifications available on request
Crossover 2 kHz
Impedance 4 ohms
Min. power 15 watts ( 11.75 dBW ) per channel for 97 dB SPL
Max. power 100 watts ( 20 dBW )
Controls High-frequency balance switch
Features Stabilized Radiation Loading* enclosure design; Convex Diaphragm mid and tweeter units; full warranty for five years ("covered by U.S. and foreign patents)

Allison: Six
Price $\$ 125$
Dimensions $111 / 4 H \times 111 / 4 W \times 111 / 4 \mathrm{D}$
Weight $\quad 17 \mathrm{lbs}$
Type Dynamic, acoustic suspension
Drivers $\quad 8^{\prime \prime}$ woofer, 1 " tweeter
Response Complete specifications available on request
Crossover 2 kHz
Impedance 4 ohms
Min. power 15 watts ( 11.75 dBW ) per channel for 97 dB SPL
Max. power 100 watts ( 20 dBW )
Controls High-frequencybalance switch
Features Stabilized Radiation Loading* en-
closure design; Convex Diaphragm mid and iweeter units:" full warranty for five years ("covered by U.S. and foreign patents)

## Models also available <br> Allison: Two, $\$ 350$; Allison: Three, $\$ 290$

ALTEC LANSING
Altec Corp.
1515 S. Manchester Ave.
Anaheim, Calif. 92803

## Nineteen

Price $\$ 799.95$
Dimensions $\quad 39 \mathrm{H} \times 30 \mathrm{~W} \times 21 \mathrm{D}$
Weight 143 lbs .
Type Bass reflex; vented
Drivers $15^{\prime \prime}$ bass; compression driver mounted to sectoral horn with the new Tangerine ${ }^{\text {(i) }}$ Radial phase plug
Response $\quad 30 \mathrm{~Hz}$ to 20 kHz
Crossover $\quad 1.2$ kHz
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 65 watts ( 18 dBW )
Controls High mid-frequency attenuator
Features Hand-rubbed oiled walnut or oak

## Fourteen

Price $\quad \$ 499.95$
Dimensions $30 \mathrm{H} \times 21 \mathrm{~W} \times 161 / 2 \mathrm{D}$
Weight
Type 77 lbs.

Drivers $\quad 12^{\prime \prime}$ bass driver; Tangerine Radial phase plug; compression driver mounted to Mantaray constant directivity horn
Response $\quad 35 \mathrm{~Hz}$ to $20 \mathrm{kHz}, 95 \mathrm{~dB}$ SPL at 1 meter at 1 watt
Crossover $\quad 1.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 75 watts ( 18.75 dBW )
Controls High/mid-frequency attenuator
Features Automatic power control to 200
watts; hand-rubbed, oiled walnut cabinet

## Nine Series II

## Price

Dimensions $261 / 2 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 15 \mathrm{D}$
Weight 56 lbs
Type Bass reflex; vented
Drivers $\quad 12^{\prime \prime}$ bass; $5^{\prime \prime}$ cone tweeter; $61 / 2^{\prime \prime}$ mid-frequency
Response $\quad 40 \mathrm{~Hz}$ to 20 kHz ( 93 dB SPL )
Crossover $800 \mathrm{~Hz} ; 7 \mathrm{kHz}$
Impedance 8 ohms
Min. power 12 watts ( 10.75 dBW )
Max. power 60 watts ( 17.75 dBW ) continuous
Controls
Features
High/mid-frequency attenuator
Hand-rubbed oiled oak

## Santana II

| Price | \$299.95 |
| :---: | :---: |
| Dimensions | $19 \mathrm{~W} \times 255 / 8 \mathrm{H} \times 16 \mathrm{D}$ |
| Weight | 57 lbs. |
| Type | Bass reflex; vented |
| Drivers | 12" bass; $5^{\prime \prime}$ frame cone iweeter |
| Response | 40 Hz to 20 kHz |
| Crossover | 2.5 kHz |
| Impedance | 8 ohms |
| Min. power | 12 watts (10 dBW) |
| Max. power | 45 watts ( 16.5 dBW ) |
| Controls | High-frequency attenuator |
| Features composition | Hand-rubbed oiled walnut ate top |
| One Series II |  |
| Price | \$129.95 |
| Dimensions | $211 / 2 \mathrm{H} 12 \mathrm{~W} \times 110$ |
| Weight | 26 lbs. |
| Type | Acoustic suspension; sealed |
| Drivers | $8^{\prime \prime}$ bass; $4^{\prime \prime}$ cone tweeter |
| Response | 50 Hz to $20 \mathrm{kHz}, 89 \mathrm{~dB} \mathrm{SPL}$ at meter at 1 watt |
| Crossover | 3.5 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |

Max. power 30 watts ( 14.75 dBW )
Controls High-frequency attenuator
Features Hand-rubbed oiled walnut

## Models also available

Eighteen, \$749.95; Seven Series II, \$269.95; Five Series II, \$199.95;
Three Series II, \$169.95

## AMERICAN ACOUSTICS LAB AAL Speaker Systems 629 W. Cermak Road Chicago, III. 60616

## APOLLO SERIES

Apollo 8853
Price
$\$ 159$
$\begin{array}{ll}\text { Price } & \$ 159 \\ \text { Dimensions } & 37 \mathrm{H} \times 13 \mathrm{~W} \times 110\end{array}$
Weight 39 lbs .
$\begin{array}{ll}\text { Type } & \text { Ported } \\ \text { Drivers } & \text { Two } 8^{n} \text { foam surround woofers; } 2^{\prime \prime}\end{array}$ cone phenolic ring
Response $\quad 25 \mathrm{~Hz}$ to 22 kHz
Crossover $1 \mathrm{kHz} ; 5 \mathrm{kHz}$
Impedance 16 ohms
Min. power 5 watts ( 7 dBW )
Max. power 55 watts ( 17.5 dBW )
Apollo 2712
Price $\$ 119$
Dimensions $\quad 27 \mathrm{H} \times 16 \mathrm{~W} \times 11 \mathrm{D}$
Weight $\quad 36 \mathrm{lbs}$.
$\begin{array}{ll}\text { Type } & \text { Vented } \\ \text { Drivers } & 12^{\prime \prime} \text { foam surround woofer; } 51 / 4^{\prime \prime}\end{array}$ cone midrange; $2^{\prime \prime}$ cone phenolic ring tweeter
Response 25 Hz to 22 kHz
Crossover 1 kHz; 5 kHz
Impedance 8 ohms
Min. power 5 watts ( 7 dBW )
Max. power 40 watts (16 dBW)
Features Acoustiload Porting System
CLASSIC SERIES
Classic 120
Price $\$ 349$
Dimensions $35 \mathrm{H} \times 14 \mathrm{~W} \times 11 \mathrm{D}$
Weight 58 lbs .
Type Acoustic suspension
Drivers Two 10" foam surround woofers; 5

| Response | 25 Hz to 20 kHz |
| :--- | :--- |
| Crossover | $1 \mathrm{kHz} ; 7 \mathrm{kHz}$ |
| Impedance | 16 ohms |
| Min. power | 10 watts (10 dBW) |
| Max. power | 120 watts $(20.75 \mathrm{dBW})$ |
| Controls | Front-mounted midrange and |
|  | iweeter controls for infinite tona |
|  | balance |
| Features | Walnut veneer cabinet; see- |
| through grilles; white cones with molded frames |  |

Classic 110
Price $\quad \$ 199$
Dimensions $23 \mathrm{H} \times 14 \mathrm{~W} \times 11 \mathrm{D}$
Weight 34 lbs
Type Acoustic suspension
Drivers $\quad 10^{\circ}$ foam surround woofer; $5^{\prime \prime}$ cone midrange; $3^{n}$ cone tweeter
Response $\quad 30 \mathrm{~Hz}$ to 20 kHz
Crossover $1 \mathrm{kHz} ; 7 \mathrm{kHz}$
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 55 watts ( 17.5 dBW )
Controls Front-mounted midrange and tweeter controls for infinite tonal balance
Features Walnut veneer cabinet; see through grilles; white cones with molded frames

## DISCO SERIES

## Super Jock <br> Price $\$ 625$

Dimensions $57 \mathrm{H} \times 24 \mathrm{~W} \times 28 \mathrm{D}$
Weight 205 lbs
Type Horn labyrinth
Drivers $\quad 15^{\prime \prime}$ accordion surround woofer; $8 \times$ 18 radial horn w/60 wt. compression driver; four 3 -inch solid-state piezoelectric tweeters
Response 30 Hz to 25 kHz
Crossover $\quad 1.2 \mathrm{kHz} ; 7 \mathrm{kHz}$
Impedance 8 ohms
Min. power 20 watts ( 13 dBW )
Max. power 300 watts ( 24.75 dBW )
Features Vinyl-covered cabinet with front
latched cover
Disco Tower, Series II
Price $\$ 450$
Dimensions $463 / 4 \mathrm{H} \times 21 \mathrm{~W} \times 16 \mathrm{D}$
Welght $\quad 135 \mathrm{lbs}$
Type Ported
Drivers 15"/12" foam surround wooters; four $3^{\text {" }}$ solid-state piezoelectric tweeters
Response 30 Hz to 25 kHz
Crossover $\quad 1.5$ kHz; 7 kHz
Features Vinyl-covered cabinet and remova-
ble shipping cover

## PRO SERIES

Pro RH-9040
Price $\$ 900$
Dimensions $41 \mathrm{H} \times 19 \mathrm{~W} \times 32 \mathrm{D}$
Welght 83 lbs .
Type Direct radiating
Response $\quad 400 \mathrm{~Hz}$ to 10 kHz
Impedance 8 ohms
Max. power 100 watts ( 20 dBW )
Pro MT-70
Price $\$ 450$
Dimensions $111 / 4 \mathrm{H} \times 30 \mathrm{~W} \times 113 / 4 \mathrm{D}$
Welght 45 lbs .
Type Direct radiating
Response $\quad 1.2 \mathrm{kHz}$ to 25 kHz
Impedance 8 ohms
Max. power 60 watts (17.75 dBW)
Pro MA-14
Price $\$ 325$
Dimensions $111 / 4 \mathrm{H} \times 30 \mathrm{~W} \times 113 / 4 \mathrm{D}$
Weight $\quad 38 \mathrm{lbs}$
Type Direct radiating
Drivers Fourteen solid-state tweeters
Response 7 kHz to 25 kHz
Max. power 250 watts ( 24 dBW )

Pro MS-12
Price $\$ 210$
Dimensions $23 \mathrm{H} \times 16 \mathrm{~W} \times 16 \mathrm{D}$
Weight $\quad 35 \mathrm{lbs}$.
Type Direct radiating
Drivers 12" accordion surround woofer; 3"
Response $\quad 100 \mathrm{~Hz}$ to 20 kHz
Crossover 5 kHz
Impedence 8 ohms
Min. power 25 watts ( 14 dBW )
Max. power 100 watts ( 20 dBW )

## STUDIO SERIES

## Studio 400

Price $\$ 239$
Dimensions $35 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 111 / 2 \mathrm{D}$
Weight 48 lbs
Type Acoustic suspension
Drivers Two 10" foam surround woofers:

51/4" cone midrange; $3^{\prime \prime}$ solid-state piezoelectric supertweeter

Response Crossover Impedance Min. power Max. power Controls

25 Hz to 25 kHz
$1 \mathrm{kHz} ; 5 \mathrm{kHz}$
4 ohms
10 watts ( 10 dBW )
75 watts ( 18.75 dBW )
Front-mounted midrange and tweeter controls for infinite tonal balance

## Studio 100

Price $\quad \$ 129$
Dimensions $22^{1 / 2} \mathrm{H} \times 121 / 2 \mathrm{~W} \times 9 \mathrm{D}$
Weight 23 lbs .
Type Acoustic suspension
Drivers $\quad 8^{\circ}$ foam surround woofer; $3^{\prime \prime}$ solid-
state piezoelectric supertweeter
Crossover
Impedance
Min. power 5 watts ( 7 dBW )
Max. power 35 watts ( 15.5 dBW )
Controls Front-mounted tweeter control for infinite tonal balance

## Models also available

Apollo 2915, \$169; Apollo 830, \$49; Classic 112, \$299; CLASSIC 108, \$149; PRO W-215, \$875: PRO W-212, \$640; PRO BH-15, \$510; Pro MS-212, \$370; Pro SC410, \$320; Studio 500, \$259; Studio $300, \$ 199$; Studio 50, $\$ 99$

## AR

## Acoustic Research

10 American Drive
Norwood, Mass. 02062

| AR-14 |  |
| :---: | :---: |
| Price | \$180 |
| Dimensions | $25 \mathrm{H} \times 14 \mathrm{~W} \times 103 / 4 \mathrm{D}$ |
| Weight | 35 lbs . |
| Type | Acoustic suspension |
| Drivers | $10^{\prime \prime}$ wooter; $1^{1 \prime}$ soft-dome tweeter |
| Response | 44 Hz to $22 \mathrm{kHz}, \pm^{2} \mathrm{~dB}$ re 86 dB SPL at 1 meter at 1 watt |
| Crossover | 1.3 kHz |
| Impedance | 8 ohms |
| Min. power | 15 watts ( 11.75 dBW ) for 100 dB SPL in average $1,500-\mathrm{cu}$ - ft . room |
| Max. power | Safe on normal speech and music with amplifiers of up to 100 watts (20 dBW) continuous power per channel |
| Controls | 3-position tweeter |
| Features ance | Full 5-year warranty on perform- |
| AR-25 |  |
| Price | \$220/pr. |
| Dimensions | $113 / 4 \mathrm{H} \times 211 / 2 \mathrm{~W} \times 721 / 32 \mathrm{D}$ |
| Weight | 24 lbs . |
| Type | Acoustic suspension |
| Drivers | $8^{\prime \prime}$ wooter; $1^{1 / 4}{ }^{\text {" }}$ tweeter |
| Response | 48 Hz to $22 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 86 dB SPL at 1 meter at 1 watt |
| Crossover | 2 kHz |
| Impedance | 8 ohms |
| Min. power | 15 watts ( 11.75 dBW ) ior 100 dB SPL in average $1,500-\mathrm{cu}-\mathrm{ft}$. room |
| Max. power | Sate on normal speech and music with amplifiers of up to 100 watts (20 dBW) continuous power per channel |
| Controls | One 2-position switch for highrange control |
| Features | Full 5 -year warranty on perform- |

## VERTICAL SERIES



AR-9
$\begin{array}{ll}\text { Price } & \$ 750 \\ \text { Dimensions } & 53 \mathrm{H} \times 15 \mathrm{~W} \times 16 \mathrm{D}\end{array}$
$\begin{array}{ll}\text { Weight } & 130 \mathrm{lbs} \text {. } \\ \text { Type } & \text { Acoustic suspension }\end{array}$
$\begin{array}{ll}\text { Type } & \text { Acoustic suspension } \\ \text { Drivers } & \text { Two 12" woofers, facing sideways; }\end{array}$ $8^{\prime \prime}$ lower midrange; $11 / 2^{n}$ dome up per midrange; $3 / 4^{\prime \prime}$ dome tweeter
Response $\quad 28 \mathrm{~Hz}$ to $25 \mathrm{kHz},+2 \mathrm{~dB}$ re 87 dB SPL at 1 meter at 1 watt 200 Hz ; $1.2 \mathrm{kHz} ; 7 \mathrm{kHz}$
Crossov
Impedance
Min. power
4 ohms
50 watts ( 17 dBW ) for 104 dB SPL in average $3,000-\mathrm{cu} .-\mathrm{ft}$. room; 15 watts ( 11.75 dBW ) for 101 dB in 1,500-cu.-ft. room
Max. power Safe on normal speech and music on amplifiers of up to 400 watts $\{26$ dBW) continuous power per channel
Controls Lower midrange; upper midrange; tweeter (3-position controls)
Features Full 5-year warranty; designed with AR Acoustic Blanket to prevent sound interference caused by cabinet reflectons, and with special woofer placement to minimize adverse room effects

AR-91
Price
Dimensions $311 / 2 \mathrm{H} \times 14 \mathrm{~W} \times 117 / 16 \mathrm{D}$
Weight
Type
Drivers $\quad 12^{\prime \prime}$ woofer; $11 / 2^{\prime \prime}$ midrange; $3 / 4^{\prime \prime}$ tweeter
Response $\quad 35 \mathrm{~Hz}$ to $25 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 87 dB SPL. at 1 meter at 1 watt
Crossover $700 \mathrm{~Hz} ; 7.5 \mathrm{kHz}$
Impedance 4 ohms
Min. power Safe on normal speech and music on amplifiers of up to 400 watts (26 dBW) continuous power per channel
Max. power Safe on normal speech and music on amplifiers of up to 200 watts ( 23 dBW) continuous power per channel
Controls Two 3-position switches for midrange and high-range control
Features Full 5-year warranty on performance; designed with an AR Acoustic Blanket ${ }^{\text {mix }}$ to prevent sound interference caused by cabinet reflections

AR-92
Price $\$ 300$
Dimensions $313 / 8 \mathrm{H} \times 14 \mathrm{~W} \times 117 / 16 \mathrm{D}$
Weight
Type Acoustic suspension
Drivers $\quad 10^{\prime \prime}$ wooter; $11 / 2^{\prime \prime}$ midrange; $3 / 4^{n}$ tweeter
Response $\quad 44 \mathrm{~Hz}$ to $25 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 87 dB SPL at 1 meter at 1 watt
Crossover $700 \mathrm{~Hz} ; 7.5 \mathrm{kHz}$
Impedance 4 ohms
Min. power Safe on normal music and speech on amplifiers of up to 400 watts (26 dBW) continuous power per channel
Max. power Safe on normal music and speech on amplifiers of up to 200 watts (23 dBW) continuous power per channel
Controls Two 3-position switches for midrange and high-range level control
Features Full 5-year warranty on pertormance; designed with an AR Acoustic Blanket to prevent sound interference caused by cabinet reflections

## Models also available

AR-18, $\$ 78$ ea. (sold only in pairs); AR-90, $\$ 550$

ARMSTRONG
Armstrong Audio (U.S.A.) Inc. Sindell Organization
11046 Santa Monica Blvd.
Los Angeles, Calif. 90025

| 602  <br> Price  | $\$ 300$ (walnut); $\$ 325$ (teak); $\$ 350$ <br> $($ rosewood) |
| :--- | :--- |
| Dimensions | $24 \mathrm{H} \times 10 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight | 25 lbs. |

AUDICO
Audico, Inc.
8900 Research Blvd.
Austin, Tex. 78758

| SW-B Monolith TL Subwoofer |  |
| :--- | :--- |
| Price | $\$ 1,100$ |
| Dimensions | $58 \mathrm{H} \times 25 \mathrm{~W} \times 20 \mathrm{D}$ |
| Weight | 250 lbs |
| Type | Transmission line |
| Drivers | Two $10^{\prime \prime}$ woofers |
| Response | 14 Hz to $200 \mathrm{~Hz}, \pm 2 \mathrm{~dB}$ re 93 dB |
|  | SPL at 1 meter at 1 watt |
| Crossover | 120 Hz |
| Impedance | 6 ohms |
| Min. power | $15 \mathrm{watts}(11.75 \mathrm{dBW})$ |
| Max. power | 400 watts ( 26 dBW ) |
| Features | Hand-tuned for optimum response |

TDC-210
Price $\$ 449$

Dimensions $41 \mathrm{H} \times 151 / 2 \mathrm{~W} \times 151 / 2 \mathrm{D}$
Weight 80 lbs .
Type Vented
Drivers Two $10^{\prime \prime}$ woofers; $11 / 2^{n}$ midrange; $1^{1 "}$ soft-dome tweeter
Response $\quad 40 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 93 dB SPL at 1 meter at 1 watt
Crossover $\quad 1.2 \mathrm{kHz} ; 6 \mathrm{kHz}$
Impedance 4 ohms
Min. power 15 watts ( 11.75 dBW )
Max. power 200 watts ( 23 dBW )
Controls Midrange
Features Time-delay correction; staggeredplane mounting; phase-compensated integrating network; Mylar capacitors

A-10W

| Price | $\$ 259$ |
| :--- | :--- |
| Dimensions | $28 \mathrm{H} \times 14 \mathrm{~W} \times 15 \mathrm{D}$ |
| Weight | 60 lbs. |
| Type | Vented |



AAL Apollo Series 8853

| Drivers | $10^{\prime \prime}$ woofer; $11 / 2^{\prime \prime}$ midrange dome; |
| :--- | :--- |
|  | $1^{\prime \prime}$ soft-dome tweeter |
| Response | 39 Hz to $20 \mathrm{kHz}, \pm 3.0 \mathrm{~dB}$ re 90 dB |
|  | SRL at 1 meter at 1 watt |
| Crossover | $1.2 \mathrm{kHz} ; 6 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 15 watts (11.75 dBW) |
| Max. power | 125 watts (21 dBW) |
| Controls | Midrange, tweeter |
| Features | Mirror-image pairs; Mylar capaci- |
| tors |  |

 quencies; designed to supplement or replace tweeter in existing speaker systems; can be added to speaker system in minutes; no soldering or special tools needed; furnished in solid walnut cabinet

## AUDIO LAB CONSORT Unitronex Corp. 1171 Landmeier Road Elk Grove Village, III. 60007

AL-60

Price
Dimensions
Weight
Type
Drivers

Response
Crossover
Impedance
Min. power
Max. power
Controls

Controls
Features
AL-40
Price
Dimensions
Weight
Type
Drivers

Response
Crossover Impedance Min. power Max. power Controls
\$359
$264 / 5 \mathrm{H} \times 173 / 10 \mathrm{~W} \times 123 / 5 \mathrm{D}$
61 lbs 11 oz .
Acoustic suspension
$12^{\prime \prime}$ cone woofer; $7^{\prime \prime}$ cone midrange: 1 " wide dispersion phenolic dome tweeter
32 Hz to 20 kHz
$300 \mathrm{~Hz} ; 7 \mathrm{kHz}$
8 ohms
10 watts ( 10 dBW )
140 watts (21.5) dBW
Treble; midrange (3-position switch
for normal or $\pm 3 \mathrm{~dB}$ )
Same as Model AL. 40

## $\$ 259$

$251 / 5 \mathrm{H} \times 163 / 5 \mathrm{~W} \times 111 / 5 \mathrm{D}$
48 lbs 10 oz
Passive radiator
$10^{\prime \prime}$ cone woofer, $10^{\prime \prime}$ passive radiator subwoofer; $5^{n}$ cone midrange; and $1^{1 "}$ wide dispersion phenolic dome tweeter
40 Hz to 20 kHz
$800 \mathrm{~Hz} ; 8 \mathrm{kHz}$
8 ohms (nominal)
10 watts ( 10 dBW ):
90 watts ( 19.5 dBW )
Treble (3-position switch for normal or $\pm 3 \mathrm{~dB}$ )
Features Cabinet finished in real mahogany veneer with snap-on black acoustic front panel; $3 / 4^{*}$ high density particle board; $1.5^{\prime \prime}$ thick polyurethane foam acoustic insulation throughout inside of cabinet; 10-year consumer warranty; completely sealed midrange providing total acoustic isolation from wooler

AL-20
Price
Plimen
Weight $213 / 10 \mathrm{H} \times 113 / 5 \mathrm{~W} \times 9$ 1/10D
Type Acoustic suspension
Drivers $\quad 8^{*}$ woofer; $1^{\prime \prime}$ wide dispersion phe-
nolic dome tweeter
Response $\quad 60 \mathrm{~Hz}$ to 20 kHz kHz
Impedance 8 ohms (nominal)
Min. power 10 watts ( 10 dBW )
Max. power 50 watts ( 17 dBW )
Controls Treble (3-position switch for normal $\pm 3 \mathrm{~dB}$ )

## Models also available

AL-30, \$159

## AUDIO PRO

Intersearch, Inc. 4720-Q Boston Way Lanham, Md. 20801

A4-14

| Price | \$1,600/pr. |
| :---: | :---: |
| Dimensions | $201 / 4 \mathrm{H} \times 121 / 8 \mathrm{~W} \times 101 / 2 \mathrm{D}$ |
| Weight | 35 lbs . |
| Type | Blamplified, with built-in subwoofer |
| Drivers | Two $5^{\prime \prime}$ bass drivers; $41 / 2^{\prime \prime} \mathrm{mi}$ drange; 1 " dome tweeter |
| Response | 30 Hz to $20 \mathrm{kHz}, \pm^{3} \mathrm{~dB}$ re 96 dB SPL at 1 meter at 1 watt |
| Crossover Impedance | $300 \mathrm{~Hz} ; 2.5 \mathrm{kHz}$ <br> 10K ohms |
| Min. power | 1 watts ( 60 dBW ) |
| Controls | Volume; bass; bass blend; treble |
| Features | Automatic on/off |

B2-50
Price ' $\$ 795$
Dimensions $21 \mathrm{~V} / \mathrm{H} \times 183 / 16 \mathrm{~W} \times 177 / 16 \mathrm{D}$
Weight 64 lbs .
Tyoe
Drivers
Response $\quad 20 \mathrm{~Hz}$ to $0.2 \mathrm{kHz},+0,-3 \mathrm{~dB}$ re 96
Impedance
Min. power
Controls
Features
subwooter and satellites

AUDIO PULSE
Audio Pulse Electronics, Inc. 4323 North Arden Drive El Monte, Calif. 91731

## Model 36 Add-on Tweeter <br> Price $\$ 200 /$ pr. <br> Dimensions $7 H \times 7 W \times 31 / 2 D$ <br> Weight <br> 4 lbs. 8 oz.

Barcus Berry, Inc.
15461 Springdale St.
Huntington Beach, Calif. 92649

1980 Edition

AP-102
Weight $\quad 29 \mathrm{lbs} 8 \mathrm{oz}$.
Type Ducted port
Drivers Two $6^{\prime \prime}$ high-excursion woofers;

Impedance 8 ohms
Max. power 100 watts ( 20 dBW )
Features One rear-facing tweeter
AP-52

| Price | $\$ 129 / \mathrm{pr}$. |
| :--- | :--- |
| Dimensions | $191 / 2 \mathrm{H} \times 11 \mathrm{~W} \times 7 \mathrm{D}$ |
| Weight | 15 lbs. |
| Type | Two-way ducted port |
| Drivers | $6^{\prime \prime}$ high-excursion woofer/mid- |
|  | range; $2^{\prime \prime}$ cone tweeter |
| Response | 80 Hz to 20 kHz |
| Impedance | 8 ohms |
| Max. power | 25 watts (14 dBW) |
| Features | Tilted components |

AUDIOANALYST
Audioanalyst, Inc.
South Main Street
P.O. Box 33

Terryville, Conn. 06786

Phase Matrix M-12
Price $\$ 800$
Dimensions $40 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 161 / 2 \mathrm{D}$
Weight $\quad 115 \mathrm{Jbs}$.
Type Acoustic suspension
Drivers Two $10^{\prime \prime}$ woofers; three $41 / 2^{\prime \prime} \mathrm{mi}$ drange drivers; three $1^{\prime \prime}$ soft-dome tweeters; two $1 / 2^{\prime \prime}$ phase-match ul-tra-high frequency drivers
Response $\quad 24 \mathrm{~Hz}$ to $25 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 91 dB SPL at 1 meter at 1 watt
Crossover $200 \mathrm{~Hz} ; 2 \mathrm{kHz} ; 15 \mathrm{kHz}$
Impedance 4 ohms
Min. power 15 watts ( 11.75 dBW )
Max. power 200 watts ( 23 dBW )
Controls Midrange; tweeter
Features Fused; incorporates Ambient Phase Recovery System, a totally passive image enhancer, adjustable for near and far field listening conditions and is also defeatable

| Anthem | Array |
| :---: | :---: |
| Price | \$599 |
| Dimensions | $44 \mathrm{H} \times 15 \mathrm{~W} \times 15 \mathrm{D}$ |
| Weight | 92 lbs . |
| Type | Staggered acoustic suspension |
| Drivers | $10^{\prime \prime}$ subwoofer; $10^{*}$ woofer; $41 / 2$ midrange; $1^{\prime \prime}$ dome tweeter; $3^{\prime \prime}$ piezoelectric tweeter |
| Response | 30 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 87 dB at 1 meter at 1 watt |
| Crossover | $120 \mathrm{~Hz} ; 450 \mathrm{~Hz} ; 3 \mathrm{kHz} ; 12 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 20 watts ( 13 dBW ) |
| Max. power | 250 watts ( 24 dBW ) |
| Controls | Midrange; tweeter |
| Features | Midrange fuse; tweeter fuse; | sponse at significant frequencies


| M-8 |  |
| :--- | :--- |
| Price | $\$ 399$ |
| Dimensions | $27^{1 / 2 \mathrm{H} \times 151 / 2 \mathrm{~W} \times 113 / 4 \mathrm{D}}$ |
| Welght | 56 Ibs. |
| Type | Acoustic suspension |
| Orivers | $12^{\prime \prime}$ woofer; $41 / 2^{\prime \prime}$ midrange driver; <br>  <br>  <br> $1^{\prime \prime}$ sott-dome tweeter; $1 / 2^{\prime \prime}$ phase- <br> match high frequency <br> Response <br>  <br>  <br>  <br>  <br>  <br> watt |

Crossover $\quad 600 \mathrm{~Hz} ; 2 \mathrm{kHz} ; 15 \mathrm{kHz}$
Impedance
Min. power
Max. power
Controls
Features
8 ohms
15 watts ( 11.75 dBW )
200 watts ( 23 dBW )
Midrange; tweeter
Fused
A-400XL
$\begin{array}{ll}\text { Price } & \$ 359.95 \\ \text { Dimensions } & 413 / 4 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 101 / 2 \mathrm{D}\end{array}$
Weight 60 lbs .
Type Vented
Drivers $\quad$ Four $8^{\prime \prime}$ woofers (two are subwoofers), two $2^{\prime \prime}$ midranges; two $11 / 2{ }^{\prime \prime}$ tweeters
Response $\quad 28 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 90 dB
SPL at 1 meter at 1 watt
Crossover $150 \mathrm{~Hz} ; 2 \mathrm{kHz} ; 10 \mathrm{kHz}$
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 200 watts ( 23 dBW)
Features Drivers are aligned utilizing bi-lateral symmetry technique for minimum interference and optimum dispersion for best imaging

Phase Matrix B-1 subwoofer
Price $\$ 279$
Dimensions $271 / 2 \mathrm{H} \times 151 / 2 \mathrm{~W} \times 113 / 4 \mathrm{D}$
Weight 50 lbs .
Type Vented
Drivers 12" woofer
Response $\quad 22 \mathrm{~Hz}$ to $120 \mathrm{~Hz},+3 \mathrm{~dB}$ re 89 dB
SPL at 1 meter at 1 watt
Crossover 120 Hz
Impedance 4 ohms
Min. power 10 watts ( 10 dBW )
Max. power 200 watts ( 23 dBW )
Features Built-in crossover with direct-coupled bass matrix and level-compensating highpass filter for upper speaker system

## M-2

Price $\quad \$ 149$
Dimensions $95 / 6 \mathrm{H} \times 6 \mathrm{~W} \times 7 \mathrm{D}$
Weight 8 lbs.
Type Acoustic suspension
Drivers $\quad 5^{n}$ wooter; $1^{n}$ sott-dome tweeter
Response $\quad 46 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 89 dB
at 1 meter at 1 watt
Crossover 2 kHz
Impedance 4 ohms
Min. power 10 watts ( 10 dBW )
Max. power 50 watts ( 17 dBW )
Features Fused; adaptable for mobile use

## Models also available

A-200X, \$339.95; M-6, \$299; A. 100XL, \$207; Phase Matrix M-5, \$189; M-4V-II, \$139; A-76XL, \$117.95

## AUDIOMARKETING

Audiomarketing, Ltd.
652 Glenbrook Road Stamford, Conn. 06906

Super Red Studio Monitor
Price
Dimensions $47 \mathrm{H} \times 30 \mathrm{~W} \times 173 / 4 \mathrm{D}$
Weight 170 lbs
Type Infinite baffle
Drivers

Response
Crossover
Impedance
Min. power
Max. power

160 watts ( 22 dBW )
2 kHz shelving; 8 kHz shelving
Mastering-lab frequency-dividing
$15^{n}$ woofer with coaxial horn tweeter; 15" subwoofer
40 Hz to $17 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 101 dB SPL at 1 meter at 1 watt
100 Hz ; 3 kHz
16 ohms
5 watts ( 7 dBW )

Little Red Studio Monitor
Price $\$ 220$
Dimensions $24 \mathrm{H} \times 16 \mathrm{~W} \times 12 \mathrm{D}$
Weight 45 los.
Type Acoustic suspension
Divers $12^{\prime \prime}$ woofer; $5 / \mathrm{m}^{\prime \prime}$ dome/cone tweeter
Response $\quad 40 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 92 dB SPL at 1 meter at 1 watt
Crossover 2 kHz
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 50 watts ( 17 dBW )
Controls $\quad 2 \mathrm{kHz}$ peak/dip; 8 kHz shelving
Features Frequency-dividing network

## Models also available

Big Red Studio Monitor, $\$ 816$

## AUDIONICS

Audionics, Inc.
10950 S.W. 5th Ave.
Beaverton, Ore. 97005

| LO-2 Foundation Bass <br> Price <br> $\$ 600$ |  |
| :---: | :---: |
| Dimensions | $25 \mathrm{H} \times 18 \mathrm{~W} \times 31 \mathrm{D}$ |
| Weight | 110 lbs . |
| Type | Vented |
| Drivers | Two 10" push-pull |
| Response | 32 Hz to $400 \mathrm{~Hz}, \pm 3 \mathrm{~dB}$ re 89 dB SPL at 1 meter at 1 watt |
| Crossover | 125 Hz |
| Impedance | 7 ohms |
| Min. power | 70 watts ( 18.5 dBW ) |
| Max. power | 400 watts (26 dBW) |
| Controls | Crossover bypass |
| Features | Push-pull woofers cancel dynamic |
| IM and harmonic distortion; interchangeable vents |  |
|  |  |
| for Bessel,Hz |  |

## LO-2 Vanishing Point

Price $\quad \$ 350$
Dimensions $14 \mathrm{H} \times 9 \mathrm{~W} \times 9 \mathrm{D}$
Weight 25 lbs.
Type Acoustic suspension
Drivers $\quad 61 / 2^{\prime \prime}$ polymer-saturated cone; $1^{\prime \prime}$ damped dome
Response $\quad 75 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ re 88 dB SPL at 1 meter at 1 watt
Crossover 3 kHz
Impedance 7 ohms
Min. power 35 watts ( 15.5 dBW )
Max. power 200 watts ( 23 dBW )
Controls Tweeter L-pad; midwoofer L-pad controls level and Q of bass (. 7 to 1.4)

Features Minimum time and space spread;
Mylar/air-core crossover; resistive load at ultra-
sonic frequencies for low amp TIM

## AUDIOTEX

GC Electronics
400 South Wyman St. Rockford, III. 61101

94-1400
Price $\$ 100$
Dimensions $24 \mathrm{H} \times 15 \mathrm{~W} \times 95 / 6 \mathrm{D}$
Weight 29 lbs
Type Acoustic suspension
Drivers $\quad 12^{\prime \prime}$ woofer; $134^{n}$ tweeter; $41 / 2^{n} \mathrm{mi}$ drange
Response $\quad 35 \mathrm{~Hz}$ to 20 kHz

Crossover
Impedance
Min. power
Max. power
Features
foam surround

94-1300

## Price

Dimensions
Weight
Type
Drivers
Response
Crossover Impedance Min. power
Max. power 35 watts ( 15.5 dBW )
Features Aluminum voice coil; multi-roll foam surround

## 94-1200

Price
Dimensions
Type Acoustic suspension
Drivers $\quad 8^{\prime \prime}$ woofer; $13 / 4^{"}$ tweeter
Response 45 Hz to 20 kHz
Crossover 5 kHz
Impedance 8 ohms
Min. power 2 watts ( 3 dBW )
Max. power 25 watts ( 14 dBW )
Features Aluminum volce coil; multi-roll
foam surround
Models also available
94-1350, \$90

## AVID

Avid Corp.
10 Tripps Lane
East Providence, R.I. 02914

## 330

$\begin{array}{ll}\text { Price } & \$ 400 \\ \text { Dimensions } & 301 / 4 \mathrm{H} \times 17 \mathrm{~W} \times 101 / 4 \mathrm{D} \\ \text { Weight } & 66 \mathrm{lbs} . \\ \text { Type } & \text { Acoustic suspension } \\ \text { Drivers } & 12^{\prime \prime} \text { woofer; } 2^{\prime \prime} \text { dome midrange; } 2^{\prime \prime} \\ & \text { dome tweeter } \\ \text { Response } & 35 \mathrm{~Hz} \text { to } 20 \mathrm{kHz}, \pm \mathrm{ad} \mathrm{re}^{3} 88 \mathrm{~dB} \\ & \mathrm{SPL} \text { at } 1 \mathrm{~meter} \text { at } 1 \mathrm{watt} \\ \text { Crossover } & 575 \mathrm{~Hz} ; 5 \mathrm{kHz} \\ \text { lmpedance } & 8 \text { ohms } \\ \text { Min. power } & 15 \mathrm{watts}(11.75 \mathrm{dBW}) \\ \text { Max. power } & 250 \text { watts (24 dBW) } \\ \text { Controls } & \text { Midrange; tweeter } \\ \text { Features } & \text { Auto-reset overload protective cir- }\end{array}$ cuit; full 5 -year warranty; Minimum Diffraction Loudspeaker design; magnetic fluids for midrange and tweeter

## 102a

$\begin{array}{ll}\text { Price } & \$ 165 \\ \text { Dimensions } & 25 \mathrm{H} \times 15 \mathrm{~W} \times 95 / 6 \mathrm{D}\end{array}$
Weight
Type
Drivers $\quad 10^{\prime \prime}$ woofer; $1^{\prime \prime}$ dome tweeter
Response 44 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover 2.2 kHz
Impedance 8 ohms
Min. power 15 watts ( 11.75 dBW )
Max. power 100 watts ( 20 dBW )
Controls Tweeter control
Features Fused tweeter; full 5-year warranty; Minimum Diffraction Loudspeaker design

Type
Drivers $\quad 8^{\prime \prime}$ woofer; $13 / 4^{\text {" }}$ cone tweeter
Response $\quad 55 \mathrm{~Hz}$ to $17 \mathrm{kHz}, \pm 3.5 \mathrm{~dB}$ re 89 dB
SPL at 1 meter at 1 watt
Crossover 3 kHz
Impedance 8 ohms nominal; 7 ohms minimum
Min. power 8 watts ( 9 dBW )
Max. power 60 watts ( 17.75 dBW )
Controls None
Features Full 5 -year warranty; Minimum Dif-
fraction Loudspeaker design

## Models also available <br> 230, \$225; 110, \$135

BANG \& OLUFSEN
Bang \& Olufsen
515 Busse Road
Elk Grove Village, III. 60007

| Beovox | Phase-Link M100-2 |
| :---: | :---: |
| Price | \$1,400/pr. (including stands) |
| Dimensions | $295 / 8 \mathrm{HH} \times 155 / 8 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight | $60 \mathrm{lbs}$.8 oz . |
| Type | Vented |
| Drivers | $12^{\prime \prime}$ bass; 4" Phase-Link filler driver; $2^{1 / 22^{\prime \prime}}$ dome midrange; $11 / 2^{*}$ dome tweeter; $3 / 4^{\text {" }}$ dome supertweeter |
| Response | 35 Hz to $22 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ |
| Crossover | $500 \mathrm{~Hz} ; 2.5 \mathrm{kHzz}, 8 \mathrm{kHz}$ |
| Impedance | 4 ohms |
| Min. power | 20 watts ( 13 dBW ) |
| Max. power | 100 watts ( 20 dBW ) continuous |
| Controls | Tilt angle and height |
| Features | Electronic protection circuit; linear |

phase response; rosewood veneer finish

Beovox Phase-Link M-75
Price $\quad \$ 980 /$ pr. (including stands)
Dimensions $255 / 8 \mathrm{H} \times 133 / 4 \mathrm{~W} \times 105 / 8 \mathrm{D}$
Weight
Type
Drivers $\quad 10^{n}$ woofer; $41 / 2^{*}$ Phase-Link filler driver; $21 / z^{\prime \prime}$ dome midrange; $1^{\prime \prime}$ dome tweeter
Response 38 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$
Crossover $500 \mathrm{~Hz}, 4.5 \mathrm{kHz}$
Impedance 4 ohms
Min. power 20 watts ( 13 dBW )
Max. power 75 watts ( 18.75 dBW ) continuous
Controls Tilt angle and height
Features Electronic protection circuitry; linear phase response; rosewood finish standard, oak or teak optional

Phase-Link P-45

| Price | \$450/pr. |
| :---: | :---: |
| Dimensions | 255/6H $\times 135 / 1 \mathrm{~W} \times 51 / 2 \mathrm{D}$ |
| Weight | 17 lbs 10 oz |
| Type | Pressure chamber |
| Drivers | Two $5^{\prime \prime}$ bass; $31 / 2^{\text {n }}$ Phase-Link filler driver; $1^{n}$ dome tweeter |
| Response | 55 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ |
| Crossover | 2 kHz |
| Impedance | 4 ohms |
| Min. power | 20 watts ( 13 dBW ) continuous |
| Max. power | 45 watts ( 16.5 dBW ) continuous |
| Features | Wall-mounting panel speakers; linsponse; rosewood finish standard, |

## white optional

## Beovox C-75

## Price $\$ 395 / \mathrm{pr}$.

Dimensions $123 / 16 \mathrm{H} \times 43 / 16 \mathrm{~W} \times 713 / 16 \mathrm{D}$
Weight 11 lbs .
Type Log line loading
Drivers Two 4" woofers; 1 " dome tweeter

| Respense | 75 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ |
| :--- | :--- |
| Crossover | 2.5 kHz |
| Impecance | 6 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 70 watts (18.5 dBW) |
| Features | Log line loading to minimize envi- |
| ronmentally caused acoustic problems from smal |  |
| rooms; linear phase response; black or brushed |  |
| aluminum finish |  |

Phase-Link S-45/2
Price $\$ 338 /$ pr.
Dimensions $183 / 4 / \mathrm{H} \times 101 / 4 \mathrm{~W} \times 8 \mathrm{D}$
Weight $\quad 15 \mathrm{lbs} .6 \mathrm{oz}$.
Type Pressure chamber
Drivers $8^{*}$ bass; $3^{11 / 2^{\prime \prime}}$ Phase-Llnk filler driver; $1^{\prime \prime}$ dome tweeter
Response $\quad 38 \mathrm{~Hz}$ to $20 \mathrm{kHz},+4,-8 \mathrm{~dB} \mathrm{~dB}$
Crossover 2 kHz
Impedance 4 ohms
Min. power 20 watts ( 13 dBW ) continuous
Max. power 45 watts ( 16.5 dBW ) continuous
Features Optional floor stands and wall-
mount brackets; linear phase response; rosewood
finish standard; oak, teak, or white optional
Beovox Phase-Link S-35
Price $\$ 200 / \mathrm{pr}$.
Dimensions $183 / 4 \mathrm{H} \times 101 / 4 \mathrm{~W} \times 73 / 4 \mathrm{D}$
Weight $\quad 13 \mathrm{lbs} 3 \mathrm{oz}$
Type Pressure chamber
Drivers $8^{\text {n }}$ woofer; $1^{\text {" dome iweeter }}$
Response $\quad 49 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$
Crossover 3 kHz
Impedance 4 ohms
MIn. power 10 watts ( 10 dBW )
Max. power 40 watts ( 16 dBW ) continuous
Features Bookshelf or wall mount; linear
phase response; rosewood veneer finish

## Models also available

Beovox Phase-Link S-75, \$570/pr.: Phase-Link P-30 \$330/pr.; Beovox C-40, \$295/pr.

## B.E.S. GEOSTATIC <br> Bertagni Electroacoustic Systems, Inc. <br> 345 Fischer St. <br> Costa Mesa, Calif. 92626

| D-280W |  |
| :---: | :---: |
| Price | $\$ 997$ |
| Dimensions | $76 \mathrm{H} \times 26 \mathrm{~W} \times 33 / 4 \mathrm{D}$ |
| Weight | 110 lbs . |
| Type | Four low-mass, polymer diaphragms activated by drivers containing acoustic hammers |
| Drivers | Seven (two with ferrous oil) |
| Response | 30 Hz to 20 kHz |
| Crossover | $1 \mathrm{kHz} ; 4 \mathrm{kHz} ; 10 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 30 watts (14.75 dBW) |
| Max. power | 500 watts ( 27 dBW ) |
| Controls | Mid- and high-frequency |
| Featares | Total radiating surface of 3,400 sa. |
| in.; four mod housing | les framed in aluminum and wood |
| D-190W |  |
| Price | \$649 |
| Dimensions | $401 / 2 \mathrm{H} \times 26 \mathrm{~W} \times 33 / 4 \mathrm{D}$ |
| Weight | 60 lbs . |
| Type | Two low-mass, polymer diaphragms activated by drivers containing acoustic hammers |
| Drivers | Five (two with ferrous oil) |
| Response | 35 Hz to 20 kHz |
| Crossover | $1 \mathrm{kHz} ; 4 \mathrm{kHz}: 10 \mathrm{kHz}$ |

Min. power
Max. power
Controls
Features

4 ohms
30 watts ( 14.75 dBW )
250 watts ( 24 dBW )
Mid- and high-frequency
Total radiating surface of $1,700 \mathrm{sq}$. in.; dual modules framed in aluminum and wood housing

SM-260
Price Dimensions
Weight $\quad 35 \mathrm{lbs} \times 207 / 32 \times 50$
Type $\quad$ Single pulsating plane diaphragm
Orivers Two permanent magnet/voice coil
Response drivers; tweeter
38 Hz to $22 \mathrm{kHz}, 88 \mathrm{~dB}$ SPL at 1
Crossover $800 \mathrm{~Hz} ; 10 \mathrm{kHz}$
Impedance 8 ohms
Min. power 5 watts ( 7 dBW )
Max. power 150 watts ( 21.75 dBW )
Controls Midrange; tweeter
Features $\quad 360$-degree omnipolar dispersion; 850 -sq. in. radiating surface; resettable circuit protector

SM-250

| Price | \$169 |
| :---: | :---: |
| Dimensions | $2513 / 16 \mathrm{H} \times 193 / 16 \mathrm{~W} \times 43 / 4 \mathrm{D}$ |
| Weight | 26 lbs . |
| Type | Single pulsating plane diaphragm |
| Drivers | Two permanent magnet/voice coil drivers |
| Response | 40 Hz to $19 \mathrm{kHz}, 88 \mathrm{~dB}$ SPL at 1 meter at 1 watt |
| Crossover | 800 Hz |
| Impedance | 8 ohms |
| Min. power | 5 watts (7 dBW) |
| Max. power | 125 watts (21 dBW) |
| Features | 360-degree omnipolar dispersion; | $850-\mathrm{sq}$. in. radiating surface; resettabie circuit pro-tector

## Models also available

D-120W, \$599; SM-270, \$339

## BEVERIDGE ELECTROSTATIC SPEAKER SYSTEMS <br> Harold Beveridge, Inc. <br> 505 E. Montecito St. <br> Santa Barbara, Calif. 93103

System 2SW-2

| Pric | $\$ 7,000 / \mathrm{pr}$. (including direct-drive tube amplifiers for electrostatics, electronic crossovers, and solidstate amplifiers for subwoofers) |
| :---: | :---: |
| Dimensions | $78 \mathrm{H} \times 24 \mathrm{~W} \times 16 \mathrm{D}$ (electrostatic loudspeakers); $26 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 22 \mathrm{D}$ (subwoofers) |
| Weight | 360 lbs . |
| Type | Electrostatic and dynamic subwoofer |
| Drivers | Electrostatic above 100 Hz ; dynamic below 100 Hz |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Crossover | 100 Hz |
| Controls | Beveridge control module; spectrum slope; bass environmental and lateral controls |
| Features single line sou one with each below 100 Hz | Cylindrical sound emission from a ce, 100 Hz to 18 kHz ; subwoofers, electrostatic loudspeaker, operating |

System 3 (Junior)
Price $\quad \$ 3,000 / \mathrm{pr}$
Dimensions $78^{\prime \prime} \times 21^{\prime \prime}$ diameter
Weight $\quad 140 \mathrm{lbs}$

Type
Drivers Electrostatic above 250 Hz ; dy-
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 90 dB SPL at 1 meter at 1 watt
Crossover
Impedance
50 watts (17 dBW)
Max. power 500 watts ( 27 dBW )
Features Cylindrical sound emission from a single line source, 200 Hz to 18 kHz ; system may be biamped or used with one amp
B.I.C.
B.I.C./Avnet

South Service Road
Westbury, N.Y. 11590

TPR-600

| Price | $\$ 369.95$ |
| :--- | :--- |
| Dimensions | $411 / 2 \mathrm{H} \times 151 / 4 \mathrm{~W} \times 151 / 4 \mathrm{D}$ |
| Weight | 67 lbs. |
| Type | Venturi loaded |
| Drivers | $12^{\prime \prime}$ subwoofer; $11 / \mathrm{m}^{\prime \prime}$ compression |
|  | midrange; piezoelectric tweeter |
| Response | 93 dB SPL at 1 meter at 1 watt |
| Impedance | $6 / 8$ ohms |
| Min. power | 3 watts (4.75 dBW) |
| Max. power | 130 watts (21 dBW) |
| Features | Total Power Radiation; non-critical |
| speaker placement; finished on all four sides; see- |  | through black grille supplied

B66
Price $\$ 269$
Dimensions $261 / 4 \mathrm{H} \times 153 / 4 \mathrm{~W} \times 131 / 2 \mathrm{D}$
Weight $\quad 53 \mathrm{lbs} 8 \mathrm{oz}$.
Drivers $\quad 12^{n}$ woofer; $5^{n \prime}$ cone midrange; two $12^{\prime \prime}$ wooter; $5^{\prime \prime}$ cone m
$112^{\prime \prime}$ dome tweeters
Response $\quad 93 \mathrm{~dB}$ SPL at 1 meter at 1 watt
Crossover $400 \mathrm{~Hz} ; 10 \mathrm{kHz}$
Impedance 6 ohms
Min. power 3 watts ( 4.75 dBW )
Max. power 100 watts ( 20 dBW )
Controls Tonal balance
Features Each driver individually fused; nonreflective, totally sound-transparent grille; furni ture-grade walnut finish

TPR-200
Price
Dimensions
Weight
Type
Drivers

Impedance 8 ohms
Min. power 5 watts ( 7 dBW )
Max. power 75 watts ( 18.75 dBW )
Features Total Power Radiation; non-critical
speaker placement; finished on all four sides; see-
through black grille supplied

## B22

Price $\$ 135$
Dimensions $22 H \times 13 W \times 10 \mathrm{D}$
Weight 25 lbs.
Type Venturi loaded
Drivers $\quad 8^{n}$ woofer: $5^{n}$ cone midrange; $1^{1 / 22^{*}}$ dome tweeter
Response 89 dB SPL at 1 meter at 1 watt
Crossover $800 \mathrm{~Hz} ; 10 \mathrm{kHz}$
Impedance 6 ohms
Min. power 7 watts ( 8.5 dBW )
Max. power 60 watts ( 17.75 dBW )
Controls Balance control
Features Each driver individually fused; nonreflective, totally sound transparent grille; scuff resistant walnut-grain finish

Models also available
TPR-400, \$269.95; B44, \$179.95 B11, $\$ 85$

BML<br>BML Electronics, Inc.<br>5305 N. Ravenswood Ave.<br>Chicago, III. 60640

## Sound Odyssey/Tracer 2001

## Dimensions $64 \mathrm{H} \times 26 \mathrm{~W} \times 8 \mathrm{D}$

Weight 140 lbs .
Type Combination dual-phase coupling/7th order Butterworth cou
Orivers $\quad 81 / 2^{n}$ woofer with two $51 / 2^{\prime \prime}$ bass radiators; two solid-state tweeters
Response $\quad 35 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 93 dB
SPL at 1 meter at 1 watt
Crossover $\quad 450 \mathrm{~Hz} ; 1.5 \mathrm{kHz} ; 4.5 \mathrm{kHz}$
Impedance $5 / 4$ ohms
Min. power 40 watts ( 16 dBW )
Max. power 350 watts ( 25.5 dBW )
Features Planar column design; fuseprotected; $9^{\prime}$ terminated transmission line; 7 tuned chambers

## Sound Window/Tracer 1001

## Price $\$ 349$

Dimensions $32 \mathrm{H} \times 22 \mathrm{~W} \times 5 \mathrm{D}$
Weight 40 lbs
Type Active radiator (acoustic suspen-
sion transmission line)
Drivers $\quad 8^{\prime \prime}$ woofer with $8^{\circ}$ active radiator; $3^{\prime \prime}$ VHF horn tweeter
Response $\quad 35 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 94 dB
SPL at 1 meter at 1 watt
Crossover $\quad 1.5 \mathrm{kHz}$
Impedance 6/4 ohms
Min. power 20 watts ( 13 dBW )
Max. power 150 watts ( 21.75 dBW )
Features Planar column design; 4 tuned
chambers

| Model Ten |  |
| :---: | :---: |
| Price | \$120 |
| Dimensions | $22 \mathrm{H} \times 11 \mathrm{~W} \times 8 \mathrm{D}$ |
| Weight | 24 lbs . |
| Type | Tuned port |
| Drivers | $8^{\prime \prime}$ woofer; $2^{1 / 22^{\prime \prime}}$ VHF tweeter |
| Response | 53 Hz to $20 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 94 dB SPL at 1 meter at 1 watt |
| Crossover | 3.5 kHz |
| Impedance | 5 or 6 ohms |
| Min. power | 5 watts (7 dBW) |
| Max. power | 100 watts ( 20 dBW ) |
| Models also available |  |
|  | Model Eleven, \$199 |

BOSE
Bose Corp.
100 The Mountain Road
Framingham, Mass. 01701

901 Series IV
Price $\$ 429.50$
Dimensions $123 / 3 \mathrm{H} \times 21 \mathrm{~W} \times 13 \mathrm{D}$
Weight $\quad 45 \mathrm{lbs} .8 \mathrm{oz}$
Type Acoustic Matrix
Drivers $\quad 9$ full-range drivers with helical voice coils
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power No limitation for non-commercial applications


Active equalizer: below 40 Hz attenuator; tape monitor switch; low frequency compensation control; high frequency compensation control
Features Direct/Reflecting loudspeaker system; Acoustic Matrix enclosure; sold only in stereo pairs with equalizer

501
Price $\quad \$ 21$
$\begin{array}{ll}\text { Dimensions } & 24 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 141 / 2 \mathrm{D} \\ \text { Weight } & 42 \mathrm{lbs} .\end{array}$
Type Acoustic suspension
Drivers Two $31 / 2^{\circ}$ cone iweeters; $10^{\prime \prime}$ wooter
Crossover $\quad 1.5 \mathrm{kHz}$
Impedance 4 ohms
Min. power 15 watts ( 11.75 dBW ) continuous Max. power 100 watts ( 20 dBW ) continuous
Controls
Direct energy control allows adjustment of high-frequency dispersion
Features Direct/Reflecting loudspeaker system; tweeters are directed outside of cabinet at wall behind speaker to provide reflected sound at high frequencies; sold only in stereo pairs

301 Bookshelf Speaker
Price \$121
Dimensions $101 / 2 \mathrm{H} \times 17 \mathrm{~W} \times 91 / 2 \mathrm{D}$
Weight $\quad 18 \mathrm{lbs}$.
Type Vented
Orivers $\quad 8^{*}$ woofer; $3^{*}$ tweeter
Crossover $1.2 \mathrm{kHz} ; 3 \mathrm{kHz}$
Min. power 10 watts ( 10 dBW ) continuous
Max. power 60 watts ( 17.75 dBW ) continuous Controls Direct-Energy Control for adjustment of high frequency dispersion Features Direct/Reflecting loudspeaker system; tweeter mounted on angled panel to reflect off side wall to provide predominantly reflected sound at high frequencies; sold only in stereo pairs

Interaudio Model 1
Price $\$ 84$
Weight 14 lbs 8 oz .
Type Dynamic
Orivers $\quad 6^{\prime \prime}$ woofer; $2^{\prime \prime}$ cone tweeter
Crossover 2.2 kHz
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 60 watts ( 17.75 dBW )
Features Balanced complement of drivers makes this speaker an outstanding performer for its size and price; sold only in stereo pairs
BOZAK
Bozak, Inc.
587 Connecticut Ave.
Norwalk, Conn. 06854

CS-310B Concert Grand
Price $\$ 1,260$ Contemporary cabinet; $\$ 1,350$ Classic cabinet (CS. 410CL); \$1.375 Moorish cabinet (CS-410M)
Dimensions $52 \mathrm{H} \times 36 \mathrm{~W} \times 19 \mathrm{D}$
Welght 225 lbs .
Type Infinite baffle
Drivers Four $12^{\prime \prime}$ wooters; two $61 / 2^{\prime \prime} \mathrm{mi}-$ drange; eight $2^{\prime \prime}$ tweeters
28 Hz to 20 kHz
$400 \mathrm{~Hz} ; 2.5 \mathrm{kHz}$
8 ohms
Crossover
Impedance
Min. power
Max. power
Features
60 watts ( 17.75 dBW )
or biamp operation
CS-4005A Symphony No. 2
Price Century cabinet, $\$ 750$
Dimensions $27 \% / 6 \mathrm{H} \times 36 \mathrm{~W} \times 20 \mathrm{D}$
Weight 150 lbs .
Type Dynalnic
Drivers Two $12^{n}$ woofers; $6 \frac{1}{2} 2^{\prime \prime}$ midrange;
eight $2^{\prime \prime}$ tweeters
Response 35 Hz to 20 kHz
Crossover $400 \mathrm{~Hz} ; 2.5 \mathrm{kHz}$
Impedance 8 ohms.
Min. power 50 watts ( 17 dBW )
Max. power 100 watts ( 20 dBW )
Features Factory-equipped for conventional
or biamp operation
CS-501A Concerto 7
Price $\$ 450$
Dimensions $32 \mathrm{H} \times 193 / 4 \mathrm{~W} \times 16 \mathrm{D}$
Weight 95 lbs
Type
Drivers

Response
Crossover
Min. power
Max. power
Controls
LS-400
Price $\$ 300$
Dimensions $25 \mathrm{H} \times 18 \mathrm{~W} \times 130$
Weight
Type
Drivers

Models also available
601. \$299.50

Response
Crossover
Impedance
Min. power
20 watts ( 13 dBW )
Max. power 80 watts ( 19 dBW )
LS-250
Price
\$195
Dimensions $20 \mathrm{H} \times 15 \mathrm{~W} \times 12 \mathrm{D}$
Weight
Type
Drivers $12^{\prime \prime}$ variable-density woofer; 4 aluminum-cone midrange; $2^{\text {" }}$ widedispersion soft-dome tweeter
Response 45 Hz to 20 kHz
Crossover $\quad 800 \mathrm{~Hz} ; 2.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 20 watts ( 13 dBW )
Max. power 80 watts ( 19 dBW )
B-1002 Bard
Price $\$ 159$
Dimensions $21 \mathrm{H} \times 12 \mathrm{~W} \times 18^{\prime \prime}$ diameter
Weight 25 lbs .
Type Infinite baffle
Drivers $\quad 8^{\prime \prime}$ aluminum-cone bass/midrange;
$2^{2 "}$ aluminum-cone tweeter
Response 50 Hz to 20 kHz
Crossover 1.8 kHz
Impedance 8 ohms
Min. power 12 watts ( 10.75 dBW )
Max. power 60 watts ( 17.75 dBW )
Features Completely weatherproofed; also
suitable for indoor use
LS-400A
Price $\$ 300$
Dimenslons $25 \mathrm{H} \times 18 \mathrm{~W} \times 13 \mathrm{D}$
Weight 65 lbs .
Type Infinite baffle
Drivers $12^{\prime \prime}$ treated variable-density woofer; $6^{\circ \prime}$ aluminum-cone midrange; $1^{n}$ soft-dome tweeter
Response $\quad 40 \mathrm{~Hz}$ to $20 \mathrm{kHz} \pm 3 \mathrm{~dB}$ re 87 dB SPL at 1 meter at 1 watt
Crosscver $500 \mathrm{~Hz} ; 2.5 \mathrm{kHz}$
Impedance 8 ohms (nominal)
Min. power 20 watts ( 13 dBW )
Max. power 80 watts ( 19 dBW )
Cortrols 3-position contour switch
Features Crossover incorporates $6 \mathrm{~dB} / 0 \mathrm{c}$ -
tave slope; driver impedance compensation

## LS-70A

Price $\$ 195$
Dimensions $12 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 7 \mathrm{D}$
Weight $\quad 25 \mathrm{lbs}$.
Type Acoustic suspension
Drivers $\quad 61 / 2^{\prime \prime}$ aluminum-cone woofer; $1^{\prime \prime}$ fabric soft-dome tweeter
Response $\quad 80 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 2.5 \mathrm{~dB}$ re 82 dB SPL at 1 meter at 1 watt
Crossover $\quad 1.5$ kHz
ohms (nominal)
15 watts ( 11.75 dBW )
100 watts ( 20 dBW )
None
Features Drivers in same acoustic plane; crossover incorporates $6 \mathrm{~dB} /$ octave slope; drive impedance compensation

## Models also available

CS-4000A Symphony No. 1, Modern cablnet, $\$ 750$ Classic cabinet, $\$ 860$ Moorish cabinet, $\$ 890$; LS 300. \$260; LS-200, \$117; LS250A, \$195

BRAUN
Adcom Co.
11A Jules Lane
New Brunswick, N.J. 08901

L- 1030
Price $\$ 958 /$ pr
Dimensions $121 / 4 \mathrm{H} \times 271 / 2 \mathrm{~W} \times 101 / 4 \mathrm{D}$
Weight
Type
Drivers

## Response

Crossover Impedance Min. power
Max. power $100 / 140$ watts ( $20 / 21.5 \mathrm{dBW}$ )
Features Genulne walnut veneer with black aluminum grille curved corners on cabinet; highly sophisticated, computer-designed crossover; winner of 1978 CES Design and Engineering Award

## L-300

| Price | \$429/pr |
| :---: | :---: |
| Dimensions | $10 \mathrm{H} \times 61 / 4 \mathrm{~W} \times 63 / 4 \mathrm{D}$ |
| Weight | 31 lbs total |
| Type | Acoustic suspension minispeaker |
| Drivers | 5 $1 / 6^{\prime \prime}$ high-compliance long-throw woofer; $2^{\prime \prime}$ hemispherical dome midrange; $3 / 4^{n}$ hemispherical wide dispersion dome |
| Response | 35 Hz to $\mathrm{kHz}, 86 \mathrm{~dB} \mathrm{SPL}$ at 1 meter at 1 watt |
| Crossover | $600 \mathrm{~Hz} ; 3 \mathrm{kHz}$ |
| Impedance | 8 orms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | $40 / 50$ watts (16/17 dBW) |
| Features | Computer-designed crossover |

## Output C

## Dimensions

Weight
Type
Drivers

Response $\quad 50 \mathrm{~Hz}$ to $25 \mathrm{kHz}, 90 \mathrm{~dB} \mathrm{SPL}$ at 1 meter at 1 watt
Crossover $\quad 1.5 \mathrm{kHz}$


Min. power
8 ohms
Max. power $35 / 50$ watts ( $15.5 / 17$ dBW) Features Aluminum cabinet; computerdesigned filter network

## Models also available <br> L-200, \$289/pr

$B \& W$
Anglo-American Audio
Box 653
Buffalo, N.Y. 14240

## 801

Price $\$ 1,275$
Dimensions $37 \mathrm{H} \times 17 \mathrm{~W} \times 22 \mathrm{D}$
Weight
Type
Drivers
Response
Acoustic suspension 1 woofer; 1 midrange; 1 tweeter 45 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 85 dB SPL at 1 meter at 1 watt
Min. power 50 watts ( 17 dBW )
Max. power None
Controls Mid for 1 to 3 kHz ; high for over 3 kHz
Features Electron overload protect circuit
DM-6
Price $\$ 695$
Dimensions $365 / 3 H \times 161 / 3 W \times 15 \mathrm{D}$
Weight
Type
Drivers Woofer; midrange; dome tweeter
Response $\quad 50 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover $500 \mathrm{~Hz} ; 5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 25 watts ( 14 dBW )
Max. power 350 watts ( 25.5 dBW )
Controls Bass; midrange; tweeter
Features Midrange and tweeter controls; lin-
ear-phase design
DM2/II
Price
Dimensions 4
Dimensions $28 \mathrm{H} \times 105 / 6 \mathrm{~W} \times 13 \mathrm{D}$
Type Woofer (vented port); midrange
Drivers 1 wooter; 1 midrange; 1 tweeter
Response $\quad 50 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover $400 \mathrm{~Hz} ; 3 \mathrm{kHz}$
Impedance 8 ohms
Min. power 25 watts ( 14 dBW )
Max. power 100 watts ( 20 dBW )
Features Fuse protection
DM-5
Price $\$ 169$
Dimensions $18 \mathrm{H} \times 9 \mathrm{~W} \times 9 \mathrm{D}$
Weight 21 lbs .
Type Acoustic suspension
Drivers Woofer/midrange; tweeter
Response $\quad 100 \mathrm{~Hz}$ to $20 \mathrm{kHz},+5 \mathrm{~dB}$
Crossover 4.5 kHz
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 50 watts ( 17 dBW )
Features Fuse protection
Models also available
DM-7, \$595; DM-4, \$275
CAMBRIDGE/CYBERVOX
Hammond Industries, Inc.
155 Michael Drive
Syosset, N.Y. 11791

TL-200
Price

Dimensions $411 / 2 \mathrm{H} \times 13 \mathrm{~W} \times 175 / 8 \mathrm{D}$

## Weight 82 lbs

Type Transmission line
Drivers 4 KEF bass; midrange; treble
Crossover $400 \mathrm{~Hz} ; 3 \mathrm{kHz} ; 10 \mathrm{kHz}$
Impedance 8 olms
Min. power 15 watts ( 11.75 dBW )
Max. power 90 watts ( 19.5 dBW )
Features Each pair matched electrically and visually

## CANTON

Adcom Co.
11A Jules Lane
New Brunswick, N.J. 08901

GLE-50
Price
Dimensions $84 / 5 \mathrm{H} \times 12 \times 2 / 5 \mathrm{~W} \times 71 / 5 \mathrm{D}$
Weight $\quad 17 \mathrm{lbs}$.
Type Acoustic suspension
Drivers $\quad 8^{\prime \prime}$ long-throw woofer on die cast light metal basket; 1 1/5" softdome midrange on die-cast alloy plate; 8/10" wide dispersion tweeter on cast alloy plate
36 Hz to 30 kHz
$800 \mathrm{~Hz}, 22 \mathrm{kHz}$
$4 / 8$ olms
20 watts ( 13 dbw )
20 watts (13 dbW)
$50 / 80$ watts (17/19 dBW)
Finished in genuine walnut veneer

| GLE-40 |  |
| :---: | :---: |
| Price | \$250/pr. |
| Dimensions | $71 / 5 \mathrm{H} \times 103 / 5 \mathrm{~W} \times 6 \mathrm{D}$ |
| Weight | 9 lbs . |
| Type | Acoustic suspension |
| Drivers | $63 / 10^{\prime \prime}$ long-throw wooter in light metal die-cast basket; $3 / 4^{\text {m }}$ dome tweeter |
| Response | 42 Hz to 30 kHz |
| Crossover | 1.4 kHz |
| Impedance | $4 / 8 \mathrm{ohms}$ |
| Min. power | 10 watts (10 dBW) |
| Max. power | 45/60 watts ( $16.5 / 17.75 \mathrm{dBW}$ ) |
| C.C.L. |  |
| C.C.L. Enterprises, Inc. |  |
| 30682 San Antonio St. |  |
| Haywood | Calif. 94544 |

3800

| Price | \$499.50 |
| :---: | :---: |
| Dimensions | $42^{1 / 2 H} \times 231 / 4 W \times 121 / 4 \mathrm{D}$ |
| Weight | 60 lbs . |
| Type | Infinite baffle |
| Drivers | Two $10^{\prime \prime}$ woofers; $8^{\prime \prime}$ mid bass; $2^{\prime \prime}$ soft-dome midrange; $1^{\prime \prime}$ textile dome tweeter |
| Response | 22 Hz to $20 \mathrm{kHz}, 91 \mathrm{~dB}$ SPL at 1 meter at 1 watt |
| Crossover | $125 \mathrm{~Hz} ; 700 \mathrm{~Hz} ; 5 \mathrm{kHz}$ |
| Impedance | 4 ohms |
| Min. power | 30 watts ( 14.75 dBW ) |
| Max. power | 300 watts ( 24.75 dBW ) |
| Controls | Midrange; tweeter |
| Features | Roll-away casters |
| 3200 |  |
| Price | \$294.50 |
| Dimensions | $381 / 4 \mathrm{H} \times 16 \mathrm{~W} \times 16 \mathrm{D}$ |
| Weight | 30 lbs . |
| Type | Air Suspension |
| Drivers | $10^{\prime \prime}$ wooter; 2" textile dome midrange; 1 " textiie dome |


| Response | 35 Hz to $20 \mathrm{kHz}, 89 \mathrm{~dB} \mathrm{SPL}$ at 1 |
| :--- | :--- |
|  | meter at 1 watt |
| Crossover | $700 \mathrm{~Hz} ; 5 \mathrm{kHz}$ |
| Impedance | 80 hms |
| Min. power | 20 watts $(13 \mathrm{dBW})$ |
| Max. power | 100 watts $(20 \mathrm{dBW})$ |
| Controls | Midrange; tweeter |


| 2000 Subwoofer |  |
| :--- | :--- |
| Price | $\$ 289.50$ |
| Dimensions | $221 / 4 \mathrm{H} \times 251 / 2 \mathrm{~W} \times 151 / 4 \mathrm{D}$ |
| Weight | 45 lbs |
| Type | Infinite baffle |
| Drivers | Two $10^{\prime \prime}$ woofers |
| Response | 22 Hz to $150 \mathrm{kHz}, 90 \mathrm{~dB} \mathrm{SPL}$ at 1 |
|  | meter at 1 watt |
| Crossover | 150 Hz |
| Impedance | $80 h m s$ |
| Min. power | 25 watts $(14 \mathrm{dBW})$ |
| Max. power | 300 watts $(24.75 \mathrm{dBW})$ |


| 2200 Satellite |  |
| :--- | :--- |
| Price | $\$ 104.50$ |
| Dimenslons | $13 \mathrm{H} \times 8 \mathrm{~W} \times 6 \mathrm{D}$ |
| Weight | 10 lbs |
| Type | Air suspension |
| Drivers | $5^{\circ}$ woofer; $1^{\prime \prime}$ textile dome |
| Response | 65 Hz to $20 \mathrm{kHz}, 90 \mathrm{~dB} \mathrm{SPL}$ at 1 |
|  | meter at 1 watt |
| Crossover | 2.2 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts $(10 \mathrm{dBW})$ |
| Max. power | 50 watts $(17 \mathrm{dBW})$ |

Models also available
$3400, \$ 349.50 ; 2800, \$ 124.50$

CELESTION
Celestion Industries, Inc.
Kuniholm Drive, Box 521
Holliston, Mass. 01746

Ditton 662

| Price | \$749.50 |
| :---: | :---: |
| Dimensions | $41 \mathrm{~s} / \mathrm{BH} \times 15 \frac{1}{4} \mathrm{~W} \times 1113 / 16 \mathrm{D}$ |
| Weight | 74 lbs 13 oz . |
| Type | Passive radiator |
| Drivers | 12 " woofer; 2" dome midrange, $1^{\prime \prime}$ dome tweeter |
| Response | 38 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 90 dB SPL at 1 meter at 2.9 watts |
| Crossover | $700 \mathrm{~Hz}: 4.5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 20 watts ( 13 dBW ) |
| Max. power | 160 watts (22 dBW) |
| Features | Fused tweeter |


| CENTREX |  |
| :--- | :--- |
| Pioneer Electronics of America |  |
| 1925 East Dominguez St. |  |
| Long Beach, Calif. 90810 |  |
|  |  |
|  |  |
|  |  |
| CL-100 |  |

Ditton 551

| Pric | \$499.50 |
| :---: | :---: |
| Dimensions | $281 / 2 \mathrm{H} \times 151 / 2 \mathrm{~W} \times 13 \mathrm{D}$ |
| Weight | 55 lbs . |
| Type | Vented |
| Drivers | $10^{\prime \prime}$ woofer; $2^{\prime \prime}$ dome dome tweeter |
| Response | 38 Hz to $20 \mathrm{kHz}, \pm 3$ SPL at 1 meter at 3.25 |
| Crossover | $600 \mathrm{~Hz} ; 4.5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 20 watts (13 dBW) |
| Max. power | 140 watts ( 21.5 dBW ) |
| Controls | Midrange and treble dependently adjustable lift to 6 dB cut |
| Features signal overioad | Fused tweeter; front-p |
| UL-6 |  |
| Price | \$234.50 |
| Dimensions | $111 / 2 \mathrm{H} \times 16 \mathrm{~W} \times 83 / 4 \mathrm{D}$ |
| Weight | 17 lbs 4 oz . |
| Type | Passive radiator |


| Century | 470 |
| :---: | :---: |
| Price | \$229.95 |
| Dimensions | $27 \mathrm{H} \times 151 / 2 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | 37 lbs. |
| Type | Ducted tuned port, bass reflex 12 bass driver; $41 / 2^{\prime \prime}$ frame cone driver; $31 / 2^{n}$ phenolic ring tweeter |
| Response | 22 Hz to 20 kHz |
| Crossover | $1.5 \mathrm{kHz}, 5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 65 watts (18 dBW) |

## Models also available

CL-70, \$209.95; Century 370. \$199.95

## CERWIN-VEGA <br> Cerwin-Vega <br> 12250 Montague St. Arleta, Calif. 91331

| 18SW |  |
| :---: | :---: |
| Price | \$600 |
| Type | Vented |
| Drivers | $18^{\prime \prime}$ stroker woofer |
| Response | 25 Hz to $250 \mathrm{~Hz}, 100 \mathrm{~dB} \mathrm{SPL}$ at 1 meter at 1 watt |
| Impedance | 4 ohms |
| Min. power | 5 watts (7 dBW) |
| Max. power | 300 watts ( 24.75 dBW ) |
| Features | Subwoofer |
| 316R |  |
| Price | \$499 |
| Dimensians | $291 / 4 \mathrm{H} \times 181 / 4 \mathrm{~W} \times 173 / 4 \mathrm{D}$ |
| Weight | 82 lbs |
| Type | Vented |
| Drlvers | $15^{\prime \prime}$ woofer, $61 / 2{ }^{\prime \prime}$ cone midrange; $1^{\prime \prime}$ voice coil horn; 1 " voice coil rear reflecting horn |
| Response | 30 Hz to $17 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 103 dB SPL at 1 meter at 1 watt |
| Crossover | $500 \mathrm{~Hz} ; 3.5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 5 watts (7 dBW) |
| Max. power | 150 watts ( 21.75 dBW ) |
| Controls | Midrange; tweeter; rear horn |
| Features pedestal | Walnut veneer on all sides; integral |
| S-1 |  |
| Price | \$435 |
| Dimensions | $25 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 55 tbs . |
| Type | Vented |
| Drivers | $12^{\prime \prime}$ woofer; $6^{\text {" }}$ cone midrange; su-per-Dhorm tweeter |
| Response | 28 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 98 dB at 1 meter at 1 watt |
| Crossover | $300 \mathrm{~Hz} ; 4 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 3 watts (4.75 dBW) |
| Max. power | 200 watts (23 dBW) continuous |
| Controls | Midrange; tweeter |
| Features | Thermo Vapor suspension |
| 12TR |  |
| Price | \$470 |
| Dimensions | $131 / 2 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 40 \mathrm{D}$ |
| Weight | 75 lbs . |
| Type | Vented |
| Drivers | $12^{\prime \prime}$ woofer; $6^{\prime \prime}$ cone midrange; rear reflecting horn-tweeter; superDhorm tweeter |
| Response | 28 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 102 dB at 1 meter at 1 watt |
| Crossover | $250 \mathrm{~Hz} ; 4 \mathrm{kHz}$ |


| Impedance | 8 ohms |
| :---: | :---: |
| Min. power | 5 watts (7 dBW) |
| Max. power | 100 watts ( 20 dBW ) continuous |
| Controls | Midrange; tweeter; rear horn |
| Features flecting horn | Tower-style speaker with rear re- |
| A-10 |  |
| Price | N/A |
| Dimensions | $24 \mathrm{H} \times 13 \mathrm{~W} \times 111 / 2 \mathrm{D}$ |
| Weight | 39 lbs . |
| Type | Vented |
| Drivers | $10^{\prime \prime}$ woofer; $1.1^{\prime \prime}$ voice coil Dhorm |
| Response | 38 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 92 dB SPL at 1 meter at 1 watt |
| Crossover | 2 kHz |
| Impedance | 8 ohms |
| Min. power | 5 watts (7 dBW) |
| Max. power | 40 watts (16 dBW) |
| Controls | Tweeter level |
| Features | Walnut veneer finish on all sides |

## Models also available

15 SW, \$380; 313, \$330; A-123. N/A

CIZEK
Cizek Audio Systems, Inc. 15 Stevens St.
Andover, Mass. 01810
KA-1 Classic
Price $\$ 295$
Dimensions $131 / 16 \mathrm{H} \times 9 \mathrm{~W} \times 83 / 4 \mathrm{D}$
Weight
19 lbs
Type Acoustic suspension
Drivers $\quad 61 / 2^{\prime \prime}$ woofer; $1^{\prime \prime}$ hemispherical dome tweeter
Response $\quad 70 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ re 88 dB SPL at 1 meter at 1 watt
Crossover $\quad 1.5 \mathrm{kHz}$
Impedance 4 ohms
Min. power 15 watts ( 11.75 dBW )
Max. power 150 watts ( 21.75 dBW )
Features Solid Hawiian koa wood; rounded dovetail corners; Acuthane ${ }^{\text {e }}$ baffle

## MG-27

Price $\$ 295$
Dimensions $29 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 121 / 2 \mathrm{D}$
Weight 80 lbs
Type Acoustic suspension
Drivers Two 10" acoustic suspension, bass drivers
Response $\quad 27 \mathrm{~Hz}$ to $200 \mathrm{~Hz}, \pm 3 \mathrm{~dB}$ re $8 \hat{\mathrm{~dB}}$ SPL at i meter at 1 watt
Crossover 200 Hz
Impedance 4 ohms
Min. power 25 watts ( 14 dBW )
Max. power 600 watts ( 27.75 dBW )
Features Direct connection to Cizek Models 1, 2, or 3, or provision for biamping

1
Price $\quad \$ 219$
Dimensions $25 \mathrm{H} \times 151 / 2 \mathrm{~W} \times 91 / 2 \mathrm{D}$
Weight 45 lbs 14 oz
Type Dynamic
Drivers $\quad 10^{\prime \prime}$ acoustic suspension woofer; 1 " hemispherical dome tweeter
Response $\quad 35 \mathrm{~Hz}$ to $17 \mathrm{kHz},+1.5,2 \mathrm{~dB}$ re 88 dB SPL at 1 meter
Crossover $\quad 1.5$ kHz
impedance 4.25 ohms, $\pm 0.20$ ohms from 100 Hz to 15 kHz with controls in "flat" position; with Q adjustment in 0.6 position; with 0 in the 1 position, impedance is 7.25 ohms
Min. power 15 watts ( 11.75 dBW ) continuous
Max. power 150 watts ( 21.75 dBW )
Controls Level; contour; Q adjustment

## 3

Price $\$ 99$
Dimensions $19 \mathrm{H} \times 113 / 4 \mathrm{~W} \times 71 / 2 \mathrm{D}$
Weight 22 lbs .
Type Acoustic suspension
Drivers $\quad 8^{\prime \prime}$ woofer; $1^{i n}$ hemispherical dome tweeter
Response $\quad 42 \mathrm{~Hz}$ to $17 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 88 dB SPL at 1 meter at 1 watt
Crossover $\quad 1.5$ kHz
Impedance $4.25 \mathrm{ohms}, \pm .5 \mathrm{ohms}$, from 100 Hz to 15 kHz with Q adjustment in .5 position; with Q in the 8 position. impedance is 7.25 ohms .
Min. power 15 watts ( 11.75 dBW )
Max. power 150 watts ( 21.75 dBW )
Controis Tweeter level; $Q$ adjustment
Models also available
2. \$149

## A Note on Prices

Prices shown in these pages are manufacturers' or importers' nationally advertised values, updated as is feásible by press time

CONCEPT
Concept
1601 W. Glenlake Ave.
Chicago, III. 60143

CEM
Price
Dimensions $45 \mathrm{H} \times 18 \mathrm{~W} \times 151 / 2 \mathrm{D}$
Weight 102 lbs
Type Passive radiator
Drivers Heil air-motion transformer, midrange/tweeter
Response $\quad 25 \mathrm{~Hz}$ to $23 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover 1.3 kHz at 18 dB
Impedance 6 ohms
Min. power 25 watts ( 14 dBW )
Controls Midrange; tweeter
Features Room-resonance compensation
control

## CE-2

Price
Dimensions $\quad 251 / 2 \mathrm{H} \quad 1 / 2 \mathrm{H} 14 \mathrm{~W} \times 141 / 4 \mathrm{D}$
Weight $\quad 54 \mathrm{lbs}$.
Type Passive radiator
Drivers $\quad 10^{\prime \prime}$ cast woofer; Heil air-motion transformer
Response $\quad 35 \mathrm{~Hz}$ to $23 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover 1.5 kHz at 18 dB
Impedance 6 ohms
Min. power 20 watts ( 13 dBW )
Controls Midrange; tweeter
Features LED power indicator

## Models also available

CE-1, \$445

## CRITERION

Lafayette Radio Electronics
111 Jericho Turnpike
Syosset, N.Y. 11791

| Criterion | 2003A |
| :---: | :---: |
| Price | \$199.99 |
| Dimensions | $291 / 2 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 111 / 2 \mathrm{D}$ |
| Weight | 48 lbs . |
| Type | Vented bass reflex |
| Drivers | $15^{\prime \prime}$ wooter; horn midrange; two phenolic-ring tweeters |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 10 \mathrm{~dB}$ |
| Crossover | $2 \mathrm{kHz} ; 4 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 15 watts ( 11.75 dBW ) |
| Max. power | 120 watts ( 20.75 dBW ) peak |
| Controls | Midrange; treble |
| Features | Circuit breaker |
| Criterion | 2001A |
| Price | \$119.99 |
| Dimensions | $25 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 121 / 4 \mathrm{D}$ |
| Weight | 36 lbs . |
| Type | Vented bass reflex |
| Drivers | $10^{*}$ woofer; $2^{*} \times 6^{*}$ exponentia horn; $2^{\prime \prime}$ phenolic ring tweeter |
| Response | $30 \mathrm{~Hz} \text { to } 20 \mathrm{kHz}, \pm 6 \mathrm{~dB} \text { re } 93 \mathrm{~dB}$ SPL |
| Crossover | $2 \mathrm{kHz} ; 4 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 70 watts ( 18.5 dBW ) |
| Controls | Tweeter; midrange |
| Features | Fused overload protection |
| DS-1 |  |
| Price | \$159.98/pr. |
| Dimensions | $113 / 4 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 631 / 4 \mathrm{D}$ |



| Weight | 12 lbs . |
| :---: | :---: |
| Type | Acoustlc suspension mini speaker system |
| Drivers | $61 / 2^{\prime \prime}$ woofer; $1^{\prime \prime}$ sot-dome tweeter |
| Response | 55 Hz to $20 \mathrm{kHz}, \pm 10 \mathrm{~dB}$ |
| Impedance | 3 kHz |
| Min. power | 8 ohms |
| Max. power | 5 watts (7 dBW) |
| Controls | 70 watts ( 18.5 dBW ) peak |
| Features | Genuine walnut veneer |
| Models also available |  |
|  | Criterion 2002A, \$149.99 |

DAHLQUIST
Dahlquist, Inc.
27 Hanse Ave.
Freeport, N.Y. 11520

| DQ-10 |  |
| :--- | :--- |
| Price | $\$ 435$ |
| Dimensions | $311 / 2 \mathrm{H} \times 301 / 2 \mathrm{~W} \times 9 \mathrm{D}$ |
| Weight | 50 lbs. |
| Type | Phased array |
| Drivers | $10^{\prime \prime}$ woofer; $5^{\prime \prime}$ midwoofer; dome |
|  | midrange; dome tweeter; plezoe- |
|  | lectric supertweeter |
| Response | 37 Hz to 27 kHz |
| Crossover | $400 \mathrm{~Hz}, 1 \mathrm{kHz} ; 6 \mathrm{kHz} ; 12.5 \mathrm{kHz}$ |
| Impedance | $80 h m s$ |
| Min. power | 60 watts $(18 \mathrm{dBW})$ |
| Max. power | 200 watts $(23 \mathrm{dBW})$ with protective |
| Controis | fuses |
| Features | Tweeter |
| pensated. |  |


| DQ-1W Low Bass Module |  |
| :--- | :--- |
| Price | $\$ 275$ |
| Dimensions | $26 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 144 / 5 \mathrm{D}$ |
| Weight | 60 lbs. |
| Type | Acoustic suspension |
| Drivers | $13^{\prime \prime}$ woofer |
| Response | 20 to 100 Hz |
| Crossover | Depends upon main system to <br> which it is crossed over (external <br> crossover required) |
|  | 8 ohms |
| Impedance 8 <br> Min. power 60 watts (18 dBW) <br> Max. power 200 watts ( 23 dBW ) with protective <br> fuse  |  |
| Controls | None |

DAYTON WRIGHT

Dayton Wright Associates, Ltd.<br>350 Weber St., N.<br>Waterloo, Ontario N2J 4E3, Canada

| XG-10 |  |
| :---: | :---: |
| Price | \$2,997/pr. (includes $\mathrm{M}-10$ matching energizer) |
| Dimensions | $415 / 3 \mathrm{H} \times 39 \mathrm{~W} \times 91 / 2 \mathrm{D}$ |
| Weight | 325 lbs . (speakers plus energizer) |
| Type | Electrostatic |
| Drivers | 10 electrostatic cells; 1 piezoelectric iweeter |
| Response | 40 Hz to $35 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 82 dB SPL at 1 meter at 1 watt |
| Crossover | 10 kHz |
| Impedance | 2.5 to 200 ohms |
| Min. power | 75 watts ( 18.75 dBW ) |
| Max. power | 100 to 600 watts ( 20 to 27.75 dBW ) (continous; varies with frequency) |
| Controls | Tweeter level; bias; cell upper cutoff |
| Features | Three modes of use: normal, plus |
| two external iweeter crossover points ( 3 kHz or 10 kHz ) |  |

## DECCA

Rocelco, Inc. 1669 Flint Road Downsview, Ont. M3J 2J7

| London | Ribbon Tweeter |
| :--- | :--- |
| Price | $\$ 199.50$ |
| Type | Hom-coupled tweeter |
| Drivers | Ribbon iweeter only (add-on to ex- |
|  | Isting systems). |
| Response | 1 kHz to 25 kHz |
| Crossover | 1 kHz |
| Impedance | $80 h m s$ |
| Max. power | 30 watts ( 14.75 dBW ) |
| Controls | None |
| Features $\quad$ Driven element is ultra-light ribbon |  |
| for fast transient response |  |

## Supertweeter

## Price $\$ 199.50$

Type Ribbon tweeter in enclosure without horn
Drivers Ribbon tweeter only (add-on to existing systems)
Response 7 kHz to 30 kHz
Crossover 7 kHz
Impedance 8 ohms
Max. power 30 watts ( 14.75 dBW )
Controls None
Features Driven element is ultra-light ribbon
for fast transient response

| ESL-203 |  |
| :---: | :---: |
| Price | \$875 |
| Dimensions | $391 / 2 \mathrm{H} \times 10^{1 / 2} \mathrm{~W} \times 9 \mathrm{D}$ |
| Weight | 60 lbs . |
| Type | Dynamic/electrostatic |
| Drivers | $8^{\prime \prime}$ Bextrene woofer, $\mathbf{2 "}^{\prime \prime}$ dome midrange; 5 electrostatic elements in a vertical line source |
| Response | 22 Hz to $35 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 88 dB SPL at 1 meter at 1 watt |
| Crossover | $800 \mathrm{~Hz} ; 2 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 20 watts (13 dBW) |
| Max. power | 200 watts ( 23 dBW ) |
| ESL-110 |  |
| Price | \$250 |
| Dimensions | $211 / 2 \mathrm{H} \times 8 \mathrm{~W} \times 71 / 2 \mathrm{D}$ |
| Weight | 20 lbs . |
| Type | Electrostatic/dynamic acoustic suspension hybrid |
| Drivers | Four electrostatic tweeters in vertical line source; $5^{\prime \prime}$ Bextrene woofer |
| Response | 40 Hz to $35 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 89 dB SPL at 1 meter at 1 watt |
| Crossover | 1.8 kHz |
| Impedance | 8 ohms |
| Min. power | 15 watts ( 11.75 dBW ) |
| Max. power | 100 watts ( 20 dBW ) |

## ST

Price $\quad \$ 140$
Dimensions $10 \mathrm{H} \times 15 \mathrm{~W} \times 4 \mathrm{D}$
Weight 20 lbs
Type Tweeter array
Drivers 8 electrostatic tweeters
Response $\quad 3.5 \mathrm{kHz}$ to $35 \mathrm{kHz}, \pm 1 / 2 \mathrm{~dB}$
Crossover $3.5 \mathrm{kHz} ; 4.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 15 watts ( 11.75 dBW )
Max. power Unlimited
Controls Selection roll-in of 3.5 or 4.5 kHz
Features Open-air baffle; dlpole

## Models also available

ESL-202, \$350; 180, \$220

## DESIGN ACOUSTICS <br> Design Acoustics, Inc. <br> 2426 Amsler St. <br> Torrance, Calif. 90505

DENNESEN
Dennesen Electrostatic, Inc.
Box 51
Beverly, Mass. 01915

D-12A
Price
$\begin{array}{ll}\text { Price } & \$ 750 \text { (walnut) } \\ \text { Dimensions } & 26 \mathrm{H} \times 22 \mathrm{~W} \times 22 \mathrm{D} \text { (spherical) }\end{array}$
Weight 70 lbs .
Type

Vented; acoustic suspension

| Drivers | Two $8^{n}$ woofers; $1^{11 / 2^{n}}$ dome midrange; two $5^{\prime \prime}$ cone midrange; two 1 " dome tweeters; three $11 / 2^{\prime \prime}$ cone iweeters |
| :---: | :---: |
| Response | 30 Hz to $18 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Crossover | $650 \mathrm{~Hz} ; 2 \mathrm{kHz}$ |
| Impedance | 4 ohms |
| Min. power | 25 watts (14 dBW) |
| Max. power | 200 watts ( 23 dBW ) |
| Controls | Woofer, midrange, tweeter; dispersion control for 180 degrees or 360 degrees |
| Features | Omnidirectional speaker with |

D-8
Price $\quad \$ 590$
Dimensions $44 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 123 / 4 \mathrm{D}$

## Weigh

## Drivers

|  | drivers (1 dome, 3 cones, 1 piezoe- <br> lectric tweeter); passive radiator <br> driven electrically as well as <br> acoustically |
| :--- | :--- |
|  |  |
| Response | 30 Hz to $17 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Crossover | $600 \mathrm{~Hz}, 1.5 \mathrm{kHz}$ |
| Impedance | 4 ohms |
| Min. power | 15 watts ( 11.75 dBW ) |
| Max. power | 150 watts (21.75 dBW) |
| Controls | Woofers; midrange, tweeter |
| Features $\quad$ Wide dispersion; novel woofer |  |
| level control; goes from acoustic suspension to |  |
| passive radiator |  |

passive radiator

## D-4 A

| Price | \$345 |
| :---: | :---: |
| Dimensions | $38 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 11 \mathrm{D}$ |
| Weight | 55 lbs . |
| Type | Acoustic suspension; vented |
| Drivers | Two $8^{\prime \prime}$ long-throw woofers; $5^{7}$ midrange driver; two $1 \frac{1}{2}{ }^{\prime \prime}$ cone tweeters; $1^{\text {" }}$ dome tweeter |
| Response | 40 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Crossover | $700 \mathrm{Hz;} 2 \mathrm{kHz}$ |
| Impedance | 4 ohms |
| Mln. power | 20 watts (13 dBW) |
| Max. power | 125 watts (21 dBW) |
| Controls | Woofer; tweeter |
| Features | Drivers arranged on trapezoid for |


| D-2 |  |
| :---: | :---: |
| Price | \$220 |
| Dimensions | $34 \mathrm{H} \times 1{ }^{1 / 2} \mathrm{~W} \times 121 / 4 \mathrm{D}$ |
| Weight | 35 lbs |
| Type | Vented; acoustic suspension |
| Drivers | 10" long-throw woofer; 1" dame tweeter |
| Response | 40 Hz to $18 \mathrm{kHz}, \pm 3.5 \mathrm{~dB}$ |
| Crossover | 1.5 kHz |
| Impedance | 8 ohms |
| Min. power | 20 watts (13 dBW) |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | Tweeter |
| Features at high freque | Tilted tweeter to avold "beaming' ncies |
| D-1W |  |
| Price | \$135 |
| Dimensions | $211 / 4 H \times 12 \mathrm{~W} \times 8 \mathrm{D}$ |
| Weight | 19 lbs . |
| Type | Vented; acoustic suspension |
| Drivers | $8^{\prime \prime}$ long-throw woofer; $1^{1 / 2^{\prime \prime}}$ cone tweeter |
| Response | 50 Hz to $15 \mathrm{kHz}, \pm 3.5 \mathrm{~dB}$ |
| Crossover | 1.5 kHz |
| Impedance | 6 ohms |
| Min. power | 15 watts ( 11.75 dBW) |
| Max. power | 30 watts ( 14.75 dBW ) |
| Features | Double reflection by "plug" and |
| flared dish produces wide dispersion of high fre- |  |


| Models a | also available D-6. \$390 (base Included); D-3, \$240; D-1A, \$125 |
| :---: | :---: |
| DFS |  |
| DFS, Inc. |  |
| 10255 S.W. Parkway |  |
| Portland, Ore. 97204 |  |
| T-5 |  |
| Price | \$325 |
| Dimensions | $371 / 4 \mathrm{H} \times 143 / 8 \mathrm{~W} \times 121 / 4 \mathrm{D}$ |
| Weight | 60 lbs . |
| Drivers | $10^{n}$ woofer; $8^{n}$ woofer; $5^{n}$ midrange: two $21 / 2^{\prime \prime}$ tweeters |
| Response | 40 Hz to $18 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 98 dB SPL at 1 meter at 1 watt |
| J-3 |  |
| Price | \$215 |
| Dimensions | $273 / 4 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 121 / 4 \mathrm{D}$ |
| Weight | 45 lbs . |
| Drivers | Two $8^{*}$ woofers; three $21 / 2^{\prime \prime}$ tweeters |
| Response | 45 Hz to $18 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 98 dB SPL at 1 meter at 1 watt |
| Max. power | 100 watts ( 20 dBW ) |
| Features tweeter | One rear-firing, one forward-firing |
| J-1 |  |
| Price | \$125 |
| Dimensions | 203/8H $\times 123 / 4 \mathrm{~W} \times 105 / 6 \mathrm{D}$ |
| Weight | 35 lbs . |
| Drivers | $8^{\prime \prime}$ woofer; $21 / 2^{\prime \prime}$ tweeter |
| Response | 55 Hz to $18 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 96 dB SPL at 1 meter at 1 watt |
| Min. power | 15 watts ( 11.75 dBW ) |
| Max. power | 40 watts ( 16 dBW ) |
| Features cle board and | Constructed of high density partiand walnut veneer |
| Models also available |  |
| T-4, \$280; J-2, \$145 |  |
| DICK WAGNER |  |
| Dick Wagner |  |
| 5930 Penfield Ave. |  |
| Woodland Hills, Calif. 91367 |  |
| DW-1 |  |
| Price | \$5,700/pr. |
| Dimensions | s $63 \mathrm{H} \times 48 \mathrm{~W} \times 20 \mathrm{D}$ |
| Type | Sealed woofer; dipolar midrange |
| Drivers | Eight 12" woofers; sixteen 4" midrange drivers; four dome tweeters; one omni |
| Response | 27 Hz to $19 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Crossover | $450 \mathrm{~Hz}^{*}, 6.5 \mathrm{kHz}$ (electronically variable triamp) |
| Impedance | 8 ohms |
| Min. power | 100 watts ( 20 dBW ) |
| Max. power | r 1000 watts ( 30 dBW ) |
| Features No pin-point listener positioning: dynamic range without distortion equal to live music; hand bullt and tested individually |  |
| DWD |  |
| DWD Audio Systems |  |
| 3206 N. Marks St. |  |
| Fresno, | Calif. 93705 |

ETR 12" Tower
Price $\$ 429$
Dimensions $42 \mathrm{H} \times 14 \mathrm{~W} \times 117 / 8 \mathrm{D}$
Type Passive radiator
Drivers $\quad 12^{\prime \prime}$ woofer; $5^{\prime \prime}$ midrange; $3^{\prime \prime}$ tweeter
Response $\quad 36 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 96 dB SPL at 1 meter at 1 watt
Crossover $\quad 1.5 \mathrm{kHz} ; 7 \mathrm{kHz}$
Impedance 8 ohms
Min. power 20 watts ( 13 dBW )
Max. power 225 watts ( 23.5 dBW)
Controls Tweeter
Features Front-mounted passive radiator;
ferrofluid-damped

## ETR-412

Price $\$ 279$
Dimensions $26 \mathrm{H} \times 14 \frac{1}{2} \mathrm{~W} \times 113 / 8 \mathrm{D}$
Weight 40 lbs
Type Passive radiator
Drivers $\quad 12^{\prime \prime}$ woofer; $5^{\prime \prime}$ midrange; $3^{\prime \prime}$ tweeter
Response $\quad 45 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 94 dB
Crossover $\quad 1.5 \mathrm{kHz} ; 7 \mathrm{kHz}$
Impedance 8 ohms
Min. power 15 watts ( 11.75 dBW )
Max. power 190 watts ( 22.75 dBW )
Controls Tweeter
Features Rear-mounted passive radiator;
ferro fluid-damped
ETR-280

| Price | $\$ 129$ |
| :--- | :--- |
| Dimensions | $20 \mathrm{H} \times 111 / 2 \mathrm{~W} \times 91 / \mathrm{BD}$ |
| Weight | 21 lbs. |
| Type | Vented |
| Drivers | $8^{\prime \prime}$ long-excursion woofer; $3^{\prime \prime}$ high- |
|  | dispersion tweeter |
| Response | 55 Hz to $20 \mathrm{kHz}, \pm^{4} \mathrm{~dB}$ re 92 dB |
|  | SPL at 1 meter at 1 watt |
| Crossover | 4.5 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts (10 dBW) |
| Max, power | 90 watts (19.5 dBW) |
| Features | Self-resetting circuit breaker |

Power Panel Series
Power Panel Ten
Price $\quad \$ 650$
Dimensions $38 \mathrm{H} \times 22 \mathrm{~W} \times 9 \mathrm{D}$
Weight 85 lbs .
Type Passive radiator
Drivers Two 10" woofers; $5^{n}$ lower midrange; $2^{\prime \prime}$ dome midrange; $1^{\prime \prime}$ dome tweeter; $1^{1 "}$ supertweeter
Response $\quad 32 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 96 dB SPL at 1 meter at 1 watt
Crossover $750 \mathrm{~Hz} ; 5 \mathrm{kHz}$
Impedance 8 ohms (nominal)
Min. power 25 watts ( 14 dBW )
Max. power 200 watts ( 23 dBW )
Controls Separate controls for three upper Separate control
frequency drives
Features All ferrofluid components; 15" pas-
sive radiator (rear mounted); LED power input in-
dicators

## Models also available

ETR-410, \$249; ETR-310, \$169; Power Panel Eight, \$550

DYNACO
Dynaco, Inc.
P.O. Box 612

Needham, Mass. 02195
$\begin{array}{ll}\begin{array}{ll}\text { A-450 } \\ \text { Price }\end{array} & \$ 350 \\ \text { Dimensions } & 39 H \times 13 W \times 13 D\end{array}$

| Weight | 65 lbs . |
| :---: | :---: |
| Type | 4th order (passive radiator) |
| Drivers | $10^{\prime \prime}$ woofer; $3^{\prime \prime}$ midrange; $1^{n}$ dome tweeter |
| Response | 35 Hz to $25 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 88 dB SPL at 1 meter at 1 watt |
| Crossover | $500 \mathrm{~Hz} ; 3.5 \mathrm{kHz} 11.3 \mathrm{kHz}$ |
| Min. power | 15 watts ( 11.75 dBW ) |
| Max. power | 250 watts ( 24 dBW ) |
| Features | Time-aligned drivers |
| A-250 |  |
| Price | \$150 |
| Dimensions | $12 \mathrm{H} \times 12 \mathrm{~W} \times 22 \mathrm{D}$ |
| Weight | 36 lbs . |
| Type | Acoustic suspension |
| Drivers | $10^{*}$ rubber edge woofer; $1^{\prime \prime}$ softdome tweeter |
| Response | 50 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 89 dB SPL at 1 meter at 1 watt |
| Crossover | 2 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts (10 dBW) |
| Max. power | 65 watts ( 18.25 dBW ) |
| Controis | Tweeter level |
| Features | Wide high Hz dispersion |

## Models also available A-350, \$250

## ELECTRO-VOICE

Electro-Voice, Inc.
656 Cecil St.
Buchanan, Mich. 49107

| Sentry III, Series II |  |
| :---: | :---: |
| Price | $\$ 900$ (optional SEQ equalizer, $\$ 95.50$ ) |
| Dimensions | $281 / 2 \mathrm{H} \times 341 / 2 \mathrm{~W} \times 201 / 2 \mathrm{D}$ |
| Weight | 156 lbs . |
| Type | Vented |
| Drivers | $15^{\prime \prime}$ cone low-frequency driver; 32" sectoral horn midrange; $8^{\prime \prime}$ sectoral horn tweeter |
| Response | 40 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 99 dB SPL at 1 watt at 1 meter |
| Crossover | $600 \mathrm{~Hz} ; 3.5 \mathrm{kHz}$ |
| Min. power | 1.4 watts ( 0 dBW) |
| Max. power | 50 watts (17 dBW) |
| Controls | Tweeter |
| Features | Tweeter protection |

Interface: D, Series II
Price $\$ 1,750 /$ pr. (includes equalizer)
Dimensions $32 \mathrm{H} \times 213 / 2 \mathrm{~W} \times 151 / 2 \mathrm{D}$
Weight 114 lbs .
Type Vented; equalized
Drivers $\quad 12^{\prime \prime}$ downward-firing woofer; $61 / 2^{\prime \prime}$ vented midrange; radial horn tweeter
Response 23 Hz to $20 \mathrm{kHz} ; 28 \mathrm{~Hz}$ to 18 kHz , $\pm 2.5 \mathrm{~dB}$
Crossover $\quad 350 \mathrm{~Hz} ; 3 \mathrm{kHz}$
Impedance 8 ohms
Min. power 1.5 watts ( 1.75 dBW ) ( 90 dB SPL )
Max. power 500 watts ( 27 dBW ) ( 115 dB SPL )
Controls High-frequency slope (four posltlon) and environment (quarter space/half space)
Features Biamplification terminals; integral TS-1 time-variable turn-off clrcuit tweeter protection with indicator light; walnut veneer cabinet

Interface: B Series III
Price \$735/pr. (includes equalizer)
Dimensions $291 / 4 \mathrm{H} \times 16 \mathrm{~W} \times 101 / 2 \mathrm{D}$
Weight 42 los.
Type Vent substitute; equalized
Drivers $\quad 12^{n}$ low-frequency radiator; $8^{\prime \prime} \mathrm{mi}$ drange/woofer; $11 / 2^{\prime \prime}$ Super-Dome
© iweeter with acoustic lens

Response
Crossover
$\pm 2.5 \mathrm{~dB}$

Impedance
Min. power
Max. power
Controls
Features cal)
8 ohms

26 Hz to $20 \mathrm{kHz} ; 30 \mathrm{~Hz}$ to 18 kHz .
3.6 watts ( 5.5 dBW ) ( 90 dB SPL)

250 watts ( 24 dBW ) ( 108 dB SPL) High-frequency slope on equalizer Wainut veneer cabinet

## Interface: A Series III

Price $\$ 550 /$ pr.
Dimensions $241 / 2 \mathrm{H} \times 153 / \mathrm{GW} \times 81 / 4 \mathrm{D}$
Weight
Type
Drivers

## Response

## Crossover

Impedance
Min. power
Max. power
Controls
Features 30 lbs
Vent substitute; equalized 12" low-frequency radiator; $8^{\prime \prime} \mathrm{ml}$ drange/woofer; $11 / 2{ }^{\prime \prime}$ Super-Dome (1) tweeter with acoustic lens 29 Hz to $20 \mathrm{kHz} ; 35 \mathrm{~Hz}$ to 18 kHz , $\pm 2.5 \mathrm{~dB}$
49 Hz (acoustic); 1.5 kHz (electrlcal)

Musicaster IIA
Price $\$ 185.50$
Dimensions $21 \mathrm{H} \times 211 / 2 \mathrm{~W} \times 81 / 2 \mathrm{D}$
Weight 31 lbs
Type Vented
Drivers 1-2" dual-cone bass driver; horn tweeter
Response $\quad 80 \mathrm{~Hz}$ to $16 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 108 dB
SPL at 1 watt at 1 meter
Crossover $\quad 4 \mathrm{kHz}, 5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 1 watt ( 0 dBW )
Max. power 20 watts (13 dBW)
Features Weatherproof outdoor speaker
Interface: 1, Series II
Price $\$ 120$
Dimensions $211 / 4 \mathrm{H} \times 113 / 0 \mathrm{~W} \times 911 / 16 \mathrm{D}$
Weight 23 lbs
Type Vented
Drivers $\quad a^{\prime \prime}$ midrange/woofers; $11 / 2^{\prime \prime}$ SuperDome tweeter with acoustic lens Response $\quad 47 \mathrm{~Hz}$ to $20 \mathrm{kHz} ; 56 \mathrm{~Hz}$ to 18 kHz , $\pm 3 \mathrm{~dB}$
Crossover $\quad 76 \mathrm{~Hz}$ (acoustic); 1.5 kHz (electrical)
Impedance 8 ohms
Min. power 3.6 watts ( 5.5 dBW ) ( 90 dB SPL)
Max. power 250 watts ( 24 dBW ) (108 dB SPL)
Controls High-frequency slope control
Features Walnut-grained cabinet
Models also available
Interface: C. Series II, \$995/pr. (includes equalizer): Sentry V, \$325 (optional SEQ equalizer, $\$ 95.50$ ); Interface: 3, Series II, \$199; Interface: 2, Series II, \$160

## EPICURE

Epicure Products, Inc.
1 Charles St.
Newburyport, Mass. 01950

| 1000 | Tower) Speaker |
| :---: | :---: |
| Price | \$1,000 |
| Dimensions | $75 \mathrm{H} \times 18 \mathrm{~W} \times 180$ |
| Weight | 180 lbs . |
| Type | Acoustic suspension |
| Drivers | Four 1 " iweeters; four 8 " wooters |
| Response | 22 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Crossover | 1.8 kHz |
| Impedance | 8 ohms |
| Min. power | 60 watts (17.75 dBW) |

Max. power 250 watts ( 24 dBW ) Controls 3-position tweeter attenuator Features System is fully omnidirectional; walnut-veneer cabinet

## 3.0 (Trilogy)

Price $\$ 575$
Dimensions $413 / 8 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 161 / 2 \mathrm{D}$
Weight 61 lbs .
Type Acoustic suspension
Drivers One $10^{\prime \prime}$ bass driver; one $6^{\prime \prime} \mathrm{mi}$ drange; one 1 " tweeter
Response 32 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover 475 Hz; 2.6 kHz
Impedance 4 ohms
Min. power 30 watts ( 14.75 dBW )
Max. power 100 watts ( 20 dBW )
Controls Three-position L-pad iweeter attenuator
Features Truncated pyramid cabinet for minimal diffraction; low inductance amplifier load; total system resonance control

M-500
Price $\quad \$ 399$
Dimensions $36 \mathrm{H} \times 12 \mathrm{~W} \times 14 \mathrm{D}$
Weight 50 lbs .
Type Passive radiator
Drivers One $10^{\prime \prime}$ bass driver; one $4^{\prime \prime}$ midrange; one 1 " tweeter
Respense $\quad 45 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover 750 Hz; 3 kHz
Impedance 4 ohms
Min. power 15 watts ( 11.75 dBW )
Max. power 125 watts ( 21 dBW )
Features Twin "Passive Piston" bass radiators: "Focused Field" magnetic clrcuit in bass driver

| Twenty + | Speaker |
| :---: | :---: |
| Dimensions | $29 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight: | 64 lbs . |
| Type | Acoustic suspension |
| Drivers | Two $8^{\prime \prime}$ woofers; two $1^{\prime \prime}$ tweeters |
| Response | 35 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Crossover | 1.8 kHz |
| Impedance | 8 ohms |
| Min. power | 20 watts ( 13 dBW ) |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | Three-position tweeter attenuator switch |
| Features veneer cabinet | Hemispherical dispersion; walnut |

veneer cabinet

## Fourteen

Price $\$ 159$
Dimensions $24 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 9 \mathrm{D}$
Weight 40 lbs.
Type Passive radiator
Drivers One 6" woofer; one 1 " tweeter
Response $\quad 28 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover $\quad 1.8$ kHz
impedance 8 ohms
Min. power 15 watts ( 11.75 dBW )
Max. power 80 watts ( 19 dBW )
Controls Three-position iweeter control on front panel
Features $\quad 8$ " "Passive Piston" bass radiator
with 4 th order alignment; walnut veneer cabinet
Ten: W
Price
Dimensions $22 \mathrm{H} \times 12 \mathrm{~W} \times 95 / 8 \mathrm{D}$
Weight
Type Acoustic suspension
Drivers $\quad 1^{\prime \prime}$ tweeter; $8^{\prime \prime}$ woofer
Response $\quad 42 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{db}$
Crossover $\quad 1.8 \mathrm{kHz}$
Impedance 8 ohms
Min. power 12 watts ( 10.75 dBW )
Max. power 75 watts ( 18.75 dBW )
Controls Tweeter
Festures Individual frequency-response
graph provided with each speaker; walnut finish
(availabie in vinyl at $\$ 125$ as Model Ten-V)



Electro-Volce Interface: D Series II


EPI 500

## ST-441

Price
Weight
Type
Drivers
Response
Crossover
Impedance
Min. power
Max. power
Controls
Features
ST-440
Price
Dimensions
Weight
Type
Response

## Crossover

 ImpedanceMin. power
Max. power
Controls
Features
XP-335

## Price

Dimensions
Type
Drivers
Response
impedance
Max. power
MS-145

## Price

Dimensions
Weight
Type Drivers Response Crossover Impedance
Min. power
Max. power
ST-420
Price
Dimensions
Weight
Type
Drivers Response

Crossover
Impedance
Min. power
Max. power
$\$ 280$
$251 / 2 \mathrm{H} \times 16 \mathrm{~W} \times 123 / 4 \mathrm{D}$
36 lbs.
Ported bass reflex
$12^{\prime \prime}$ woofer; $5^{\prime \prime}$ midrange; $3^{\prime \prime}$ tweeter 45 Hz to $18 \mathrm{kHz}, \pm 10 \mathrm{~dB}$ re 90 dB SPL at 1 meter at 1 watt
$1 \mathrm{kHz} ; 5 \mathrm{kHz}$
8 ohms
12 watts ( 10.75 dBW )
75 watts ( 18.75 dBW )
Treble
Circuit breaker
$\$ 260$
$251 / 2 H \times 16 \mathrm{~W} \times 123 / 4 \mathrm{D}$
36 lbs.
Ported bass reflex
$12^{\prime \prime}$ woofer; $5^{n}$ midrange; $3^{n}$ tweeter 45 Hz to $18 \mathrm{kHz}, \pm 10 \mathrm{~dB}$ re 90 dB SPL at 1 meter at 1 watt $1 \mathrm{kHz}, 5 \mathrm{kHz}$
8 ohms
12 watts ( 10.75 dBW )
75 watts ( 18.75 dBW )
Treble
Circuit breaker
$\$ 180$
$251 / 4 \mathrm{H} \times 16 \mathrm{~W} \times 115 / 6 \mathrm{D}$
Vented
12" woofer; $5^{\prime \prime}$ midrange; $3^{\prime \prime}$ tweeter
58 Hz to 20 kHz
8 ohms
70 watts ( 18.5 dBW )
$\$ 140$
$241 / 2 \mathrm{H} \times 145 / 6 \mathrm{~W} \times 11 \mathrm{D}$
20 lbs
Passive radiator
$10^{\prime \prime}$ woofer; $5^{\prime \prime}$ midrange; $3^{\prime \prime}$ tweeter
55 Hz to 17 kHz
$1 \mathrm{kHz} ; 5 \mathrm{kHz}$
8 ohms
6.5 watts ( 8.25 dBW )

45 watts ( 16.5 dBW )

1980 Edition

MS-125A
Price $\$ 90$
Dimensions $21 \% \mathrm{H} \times 13 \% \mathrm{~W} \times 9 \mathrm{D}$
Weight 15 lbs .
Type Passive radiator
Drivers $\quad 8^{\prime \prime}$ woofer; 2" tweeter
Response 70 Hz to $14 \mathrm{kHz}, \pm 10 \mathrm{~dB}$
Crossover 6 kHz
Impedance 8 ohms
Min. power 4 watts ( 6 dBW )
Max. power 30 watts ( 14.75 dBW )

## Models also available

ST-460, \$390; ST-451, \$350; ST430, \$220; XP-330, \$160; XP-325, \$140; MS-135A, \$100; MS-115A, $\$ 80$

## FMI

## Fulton Electronics

 4204 Brunswick Ave. N. Minneapolis, Minn. 55422100
Price $\$ 27$

## Weight $\quad 31 \mathrm{lbs}$

Type

Response
Cr
Im
M
M
C
F
F
Impedanc
Max. power
Controls
Features

## 80

Price $\$ 199$
Dimensions $173 / 4 \mathrm{H} \times 97 / 6 \mathrm{~W} \times 81 / 2 \mathrm{D}$
Weight 20 lbs .
Type
Drivers
Response
Crossover
Impedance
Min. power 10 wats
60 watts ( 17.75 dBW )
Features American walnut veneer

FRAZIER
Frazier, Inc.
1930 Valley View Lane
Dallas, Texas 75234

## Eleven

Price
$\$ 1,440$

Dimensions $55 \mathrm{H} \times 30 \mathrm{~W} \times 18 \mathrm{D}$
Weight 250 lbs .
Type Modified Helmholtz tuned slot
Drivers $\quad 15^{\prime \prime}$ woofer; $12^{\prime \prime}$ woofer; four $4^{\prime \prime} \mathrm{mi}$ dranges; 2 piezoelectric tweeters 16 Hz to $25 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 107 dB SPL at 1 meter at 1 watt
Crossover $\quad \begin{aligned} & \text { SPL at } 10 \mathrm{meHz} \\ & 400 \mathrm{~Hz} ; 4 \mathrm{~Hz}\end{aligned}$
Impedance 4 ohms
Min. power 1 watt ( 0 dBW ) continuous
Max. power 100 watts ( 20 dBW ) continuous
Control:3 Tweeter; midrange
Features Reproduces the lowest organ
notes

## Frazier's "Thing"

| Price | $\$ 1,074$ |
| :--- | :--- |
| Dimensions | $50 \mathrm{H} \times 24 \mathrm{~W} \times 16 \mathrm{D}$ |

Weight $\quad 175 \mathrm{lbs}$.
Type Modified Helmholtz tuned slot
Drivers $12^{\prime \prime}$ woofer; $10^{\prime \prime}$ woofer; $13 \frac{13 /^{\prime \prime}}{} \times$ $41 / 2^{\prime \prime}$ exponential midrange horn; 2 jiezoelectric tweeters
Response $\quad 20 \mathrm{~Hz}$ to $25 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 99 dB SPL at 1 meter at 1 watt
Crossover $800 \mathrm{~Hz} ; 4 \mathrm{kHz}$
Impedance 4 ohms
Min. power 1 watt ( 0 dBW )
Max. power 80 watts (19 dBW)
Controls Midrange; tweeter
Features Migh-frequency piezoelectrics
stacked for column effect; large tower

## Mark V-A

Price $\$ 400$
Dimensions $253 / 4 / \mathrm{H} \times 14 \mathrm{~W} \times 12 \mathrm{D}$
Weight $\quad 55 \mathrm{ibs}$.
Type Modified Helmholtz tuned slot
Drivers $12^{\prime \prime}$ woofer; two $4^{\circ}$ midranges; plezoelectric tweeters
Response
$\mathrm{Hz}^{2} 4 \mathrm{kHz}$
in. power 1 watt ( 0 dBW ) continuous
Max. power 50 watts ( 17 dBW ) continuous
Controls Midrange; tweeter
Features Super bookshelf or floor-standing
system

Concerto
Price $\$ 315$
Dimensions $211 / 2 \mathrm{H} \times 16 \mathrm{~W} \times 16 \mathrm{D}$
Welght $\quad 56 \mathrm{lbs}$.
Type
Drivers
Response
Crossover
Impedance
MIn. power
Max, power 30 watts ( 15 dBW ) continuous

| Controls | Tweeter | Weight | 175 lbs . | Crossover | 2.5 kHz |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Features | Also available in black utility finish | Type | Dual transmission lines | Impedance | 8 ohms |
| as "Capsule | Monitor;' end-table height | Drivers | Two $10^{*}$ high-flux plastic woofers | Min. power | 25 watts (14 dBW) |
|  |  | Response | 10 Hz to $300 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ | Max. power | 200 watts ( 23 dBW ) |
|  |  | Crossover | Variable | Controls | Impulse perspective control |
| Super Mo | nte Carlo | Impedance | 8 ohms | Features | Tilt-back stand recommended; |
| Price | \$132 | Min. power | 15 watts ( 12 dBW ) | available as a | option |
| Dimensions | $19 \mathrm{H} \times 101 / 2 \mathrm{~W} \times 12 \mathrm{D}$ | Max. power | 100 watts ( 20 dBW ) |  |  |
| Weight | 31 lbs. | Features | Three separate inputs: one for use | Models | lso available |
| Type | Modified Helmholtz tuned slot | with B/2 (first- | order crossover); one for biamplifi- |  | O Sabwoter \$600 |
| Drivers | $8^{\prime \prime}$ woofer; direct-coupled piezoelectric tweeter | cation; one for speaker (seco | passive crossover from any other nd-order crossover) |  | $\$ 500$ (kit); C, $\$ 475$ (assembled); |
| Response | 50 Hz to $25 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 93 dB SPL at 1 meter at 1 watt |  |  |  | $\$ 300$ (kit); R/II Speaker, $\$ 400$; Model A, \$190 |
| Crossover | 4 kHz | M/2 |  |  |  |
| Impedance | 8 ohms | Price | \$950 |  |  |
| Min. power | 1 watt (0 dBW) continuous | Dimensions | $43 \mathrm{H} \times 22 \mathrm{~W} \times 12 \mathrm{D}$ | FULTON |  |
| Max. power | 30 watts ( 15 dBW ) continuous | Weight | 95 lbs . | Fult |  |
| Controls | None | Type | Transmission line | Fult | CS |
| Features | Two-way system with no crossover | Drivers | High-flux $8^{\prime \prime}$ plastic woofer; high flux $5^{\prime \prime}$ plastic midrange; $1^{\prime \prime}$ ultra-high-power dome tweeter | 4204 Bru Minneap | nswick Ave. N. lis, Minn. 55422 |
| Super Mid | get | Response | 10 Hz to 60 kHz |  |  |
| Price | \$60 | Crossover | $110 \mathrm{~Hz} ; 3.2 \mathrm{kHz}$ |  |  |
| Dimensions | $153 / 4 \mathrm{H} \times 63 / 4 \mathrm{~W} \times 91 / 2 \mathrm{D}$ | Impedance | 8 ohms | Premiere |  |
| Weight | 13 lbs . | Min. power | 25 watts (14 dBW) | Price | \$4,495 |
| Type | Modified Helmholtz tuned slot | Max. pow | 200 watts (23 dBW) | Dimensions | $60 \mathrm{H} \times 25 \mathrm{~W} \times 22 \mathrm{D}$ |
| Drivers | One 4" driver | Controls | None | Weight | 300 lbs . |
| Response | 50 Hz to $12 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 89 dB |  |  | Type | Special dynamic |
|  | SPL at 1 meter at 1 watt | R/III |  | Drivers | $12^{\prime \prime}$ subwoofer; $12^{\prime \prime}$ midwoofer; 10" |
| Crossover | None | Price | \$500 |  | upper woofer; $8^{\prime \prime}$ midrange; 3 spe- |
| Impedance | 8 ohms | Dimensions | $28 \mathrm{H} \times 16 \mathrm{~W} \times 15 \mathrm{D}$ |  | cial tweeters |
| Min. power | 1 watt (0 dBW) continuous | Weight | 68 lbs . | Response | 13 Hz to $80 \mathrm{kHzz} \pm 1 \mathrm{~dB}$ re 82 dB |
| Max. power | 10 watts ( 10 dBW ) continuous | Type | Dynamic; line-tunnel enclosure |  | SPL at 1 meter at 1 watt |
| Controls | None | Drivers | $10^{\prime \prime}$ high-force plasticized woofer; | Crossover | 39 Hz ; $122 \mathrm{~Hz} ; 425 \mathrm{~Hz}, 2.4 \mathrm{kHz}$; 8 |
| Features | May be used with car tape players |  | $5^{"}$ high-force midrange; $3 / 4^{n}$ highforce dome tweeter | Impedance | kHz; 26 kHz 8 ohms |
|  |  | Response | 19 Hz to $30 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 90 dB | Min. power | 50 watts (17 dBW) |
| Models a | Iso available |  | SPL at 1 meter at 11 watt | Max. power | 400 watts ( 26 dBW ) |
|  | Seven-A, \$515; Mark IV-A, \$250; | Crossover Impedance | $125 \mathrm{~Hz} ; 3.5 \mathrm{kHz}$ 8 ohms | Controls | Woofer 1; woofer 2; midrange 1; tweeter 1; tweeter 2; supertweeter |
|  | CAD-1, \$101 | Min. power | 15 watts ( 11.75 dBW ) |  |  |
|  |  | Max. power | 100 watts ( 20 dBW ) |  |  |
| FRIED |  | Controls | Impulse-perspective control | Nuanc |  |
|  |  | Features | Stand recommended; available as | Price | \$495 |
|  |  |  |  | Dimensions | $34 H \times 14 W \times 13 D$ |
| 616 City | Line Ave. |  |  | Weight | 80 lbs . |
| Philadelp | ia, Pa. 19151 | Model W |  | Type | Infinite baffle |
|  |  | Price | \$320 | Drivers | 10" woofer; $5^{\prime \prime}$ midrange; 2 special |
|  | onitor | Dimensions | $25 \mathrm{H} \times 14 \mathrm{~W} \times 13 \mathrm{D}$ |  | tweeters |
| Supe |  | Weight | 49 lbs . | Response | 34 Hz to $42 \mathrm{kHz}, \pm^{11 / 2} \mathrm{~dB}$ re 85 dB |
|  | \$5,000 (assembled); \$1,200 (kit) | Type | $8{ }^{\prime \prime}$ high-force plasticized woofer; $5^{\prime \prime}$ |  | SPL at 1 meter at 1 watt |
| Weimht | $56 \mathrm{H} \times 35 \mathrm{~W} \times 12 \mathrm{D}$ 164 lbs . |  | high-force plasticized midrange; | Crossover | $760 \mathrm{~Hz} ; 65 \mathrm{kHz} ; 15 \mathrm{kHz}$ |
| Weight | 164 lbs . $\times$ din |  | $3 / 4^{\prime \prime}$ high-force plasticized tweeter | Impedance | 8 ohms |
| Type | Dynamic, transmission line | Drivers | Dynamic; line-tunnel enclosure | Min. power | 35 watts ( 15.5 dBW ) |
| Drivers | $12^{\prime \prime}$ high-flux plastic; $6^{\prime \prime}$ high-flux midrange; 1 $^{n}$ high-flux Melinex | Response | 30 Hz to $21 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 90 dB | Max. power | 200 watts ( 23 dBW ) |
|  |  |  | SPL at 1 meter at 1 watt | Controls | Tweeter; midrange; woofer |
| Response | 8 Hz to $27 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |  | $175 \mathrm{~Hz}, 3.5 \mathrm{kHz}$ | Features | Solid wainut veneer; smoked |
| Crossover | $125 \mathrm{~Hz} ; 3 \mathrm{kHz}$ | Min. power | 25 watts ( 14 dBW ) | Op: |  |
| Impedance | 8 ohms | Max. power | 200 watts ( 23 dBW ) |  |  |
| Min. power | 25 watts (14 dBW) | Controls | Impulse-perspective control |  |  |
| Max. power | 400 watts ( 27 dBW ) | Features | Tilt-back stand recommended; | NNA | NTAL RESEAR |
| Features | C satellite or woofer (specify | available as | option | Fundam | ntal Research |
| SMW) availab | le separately |  |  | Success |  |
| H/2 |  | B/2 |  | Pittsburg | h, Penn. 15212 |
| Price | \$2,100 (assembled); \$900 (kit) | Price | \$300 |  |  |
| Dimenslons | Woofer: $21 \mathrm{H} \times 44 \mathrm{~W} \times 24 \mathrm{D}$; Satel- | Dimensions | $12 \mathrm{H} \times 8 \mathrm{~W} \times 7 \mathrm{D}$ |  |  |
|  | lite: $11 \mathrm{H} \times 8 \mathrm{~W} \times 6 \mathrm{D}$ | Weight | 15 lbs . |  | ch" Woofer |
| Weight | Woofer: 175 lbs ; Satellite: 14 lbs . | Type | Dynamic ${ }^{\text {" }}$ wor ${ }^{\text {a }}$ |  | \$750 Woofer |
| Type | Transmission line | Drivers | 5" woofer; 3/4" tweeter | Price | \$750 |
| Drivers | $10^{\prime \prime}$ high-flux plastic bass driver; $5^{n}$ | Response | 60 Hz to $30 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ | Wimensions |  |
|  | high-flux plastic midbass; ${ }^{\prime \prime}$ Meli- | Impedance | 8 ohms | Type | Bass reflex |
|  | nex dome treble unit | Min. power | 25 watts (14 dBW) | Drivers | Four 12" woofers |
| Response Crossover | $100 \mathrm{~Hz} ; 3.5 \mathrm{kHz}$ | Max power | 100 watts ( 20 dBW ) | Response | 25 Hz to 150 Hz |
| impedance | 8 ohms | Features | Tilt-back stand recommended; | Impedance | 4 or 8 ohms 60 watts ( 17.75 dBW) |
| Min. power | 25 watts ( 14 dBW ) | available as | an option | Min. power | 60 watts ( 17.75 dBW ) |
| Max. power | 200 watts ( 23 dBW ) |  |  | Max. power | Fuse: system design |
| Controls | Impulse perspective control | Q Speak |  | Features | purely by |
| Features | Tilt-back stand recommended; | Price | \$140 |  |  |
| available as | an option | Dimensions | $193 / 4 \mathrm{H} \times 113 / 8 \mathrm{~W} \times 91 / 4 \mathrm{D}$ |  |  |
|  |  | Weight | 23 lbs . | The Inf | sonix Woofer |
| Model T | subwoofer | Type | Dynamic | Price | \$450 |
| Price | \$1,400 (assembled); \$500 (kit) | Drivers | 8" woofer; 3/4" tweeter | Dimensions | $38 \mathrm{H} \times 15 \mathrm{~W} \times 16 \mathrm{D}$ |
| Dimensions | $21 \mathrm{H} \times 44 \mathrm{~W} \times 24 \mathrm{D}$ | Response | 40 Hz to $20 \mathrm{kHz}, \pm 2.5 \mathrm{~dB}$ | Weight | 85 lbs . |


| Type | Acoustic suspension |
| :--- | :--- |
| Drivers | Two 10" woofers |
| Response | 20 Hz to 200 Hz |
| Impedance | 4 ohms |
| Min. power | 60 watts $(17.75 \mathrm{dBW})$ |
| Max. power | 400 watts (26 dBW) |
| Features | Fuse; system designed purely by |
| ear |  |


| Impedance | 8 ohms |
| :--- | :--- |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 75 watts ( 18.75 dBW ) |
| Features | Magnetic fluid in tweeter |

## Models also available

Genesls Model 1+, \$133 (wainut); $\$ 147$ (oak)

## GLI <br> GLI Divison of VSC Corp. 29-50 Northern Blvd. Long Island City, N.Y. 11101

## 4+

$\begin{array}{ll}\text { Price } & \$ 1,900 \\ \text { Dimensions } & 50 \mathrm{H} \times 36 \mathrm{~W} \times 29 \mathrm{D} \\ \text { Welght } & 385 \text { tbs. } \\ \text { Type } & \text { Horn bass cabinet with separate } \\ & \text { mid/high array } \\ \text { Drivers } & \text { Two } 15^{\prime \prime} \text { woofers with two } 15^{\prime \prime} \text { pas- } \\ & \text { sive radiators; two } 12^{\prime \prime} \times 22^{\prime \prime} \text { mi- } \\ & \text { drange horns; } 6^{\prime \prime} \times 18^{\prime \prime} \text { horn tweeter } \\ \text { Response } & 35 \mathrm{~Hz} \text { to } 20 \mathrm{kHz} \\ \text { Crossover } & 750 \mathrm{~Hz} ; 5 \mathrm{kHz} \\ \text { Impedance } & 8 \text { ohms } \\ \text { Min. power } & 10 \text { watts (10 dBW) } \\ \text { Max. power } & 500 \text { watts (27 dBW) } \\ \text { Features } & \text { Coil Guard speaker-protection cir- }\end{array}$
cuit; heavy-duty professional construction
3+
Price $\quad \$ 995$
Dimensions $491 / 2 \mathrm{H} \times 36 \mathrm{~W} \times 283 / 4 \mathrm{D}$
Weight 240 lbs
Type Exponential horn
Drivers Two $15^{\prime \prime}$ woofers; $12^{\circ} \times 22^{\prime \prime} \mathrm{mi}$ drange horn; seven $31 / 2^{\prime \prime}$ sold-state tweeters
Response $\quad 35 \mathrm{~Hz}$ to 20 kHz
Crossover $850 \mathrm{~Hz} ; 7 \mathrm{kHz}$
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 250 watts ( 24 dBW )
Features Coil Guard protection circuit; heavy-duty professional construction

1+
Price $\quad \$ 625$
Dimensions $371 / 2 H \times 211 / 2 W \times 221 / 2 D$
Weight 110 lbs .
Type Bass reflex
Drivers Two $15^{\prime \prime}$ woolers; $41 / 2^{\prime \prime} \times 15^{\prime \prime} \mathrm{mi}$ drange horn; three $31 / 2^{\prime \prime}$ solid-state tweeters
Response $\quad 40 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$
Crossover $975 \mathrm{~Hz} ; 7 \mathrm{kHz}$
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 150 watts ( 21.75 dBW )
Features Coil Guard speaker protector circuit; heavy-duty professional construction

The Dwarf

| Price | \$775/pr. |
| :---: | :---: |
| Dimensions | 203/4 H $\times 19 \mathrm{~W} \times 91 / 2 \mathrm{D}$ |
| Type | Bass reflex/passive radiator |
| Drivers | Eight $51 / 2^{\prime \prime}$ mid/low drivers with $15^{\prime \prime}$ passive radiator; four $31 / 2^{\prime \prime}$ solldstate tweeters |
| Response | 48 Hz to $20 \mathrm{kHz}, \pm 3.5 \mathrm{~dB}$ |
| Impedance | 4/16 ohms |
| Min. power | 1 watt (0 dBW) |
| Max. power | 250 watts ( 24 dBW ) |
| Features | Coil Guard protection circuit; |

## Models also available

2+, \$725; The Dwarf FRA-2, \$250

GOODMANS
Goodmans Loudspeakers, Ltd. Plessey Consumer Products (Distributor)
100 Commercial St.
New York, N.Y. 11802

Achromat Sigma

| Price | $\$ 480$ |
| :--- | :--- |
| Dimenslons | $27 \mathrm{H} \times 13 \mathrm{~W} \times 11 \mathrm{D}$ |
| Weight | 44 lbs. |

HE-1

| Price | $\$ 480$ |
| :--- | :--- |
| Dimensions | $341 / 2 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 66 lbs. |
| Type | Vented |
| Drivers | $10^{\prime \prime}$ bass unit; two $5^{\circ}$ midrange driv- |
|  | ers; $1^{\prime \prime}$ ferrofluid soft-dome tweeter |
| Response | 50 Hz to $20 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 93.5 dB |
|  | SPL at 1 meter at 1 watt |
| Crossover | $1 \mathrm{kHz} ; 5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | $3.5 \mathrm{watts}(5.5 \mathrm{dBW})$ |
| Max. pover | 85 watts ( 19.25 dBW ) |
| Features | High-power voice coils; 9-element |
| ferrite-cored crossovers; high-flux magnet sys- |  |

ferrite-cored crossovers; high-flux magnet systems; fused for protection

## Achromat Kappa

| Price | \$335 |
| :---: | :---: |
| Dimensions | $211 / 4 \mathrm{H} \times 103 / 4 \mathrm{~W} \times 101 / 2 \mathrm{D}$ |
| Weight | 30 lbs . |
| Type | Acoustic suspension |
| Drivers | 8 " long-throw, pleated surround woofer: $1^{\prime \prime}$ soft-dome iweeter |
| Response | 45 Hz to $23 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 85 dB SPL at 1 meter at 1 watt |
| Crossover | 2.4 kHz |
| Impedance | 8 ohms |
| Min. power | 20 watts (13 dBW) |
| Max. power | 95 watts (19.75 dBW) |
| Features | Twelve-element crossover usi |

## Models also available

HE-2, \$420; Achromat Beta, \$250

GRAFYX-SP
Grafyx Audio Products, Inc.
310 Kirk Road
St. Charles, III. 60174

## SP-Ten

| Price | $\$ 169$ |
| :--- | :--- |
| Dimensions | $261 / 2 \mathrm{H} \times 15 \mathrm{~W} \times 131 / 2 \mathrm{D}$ |
| Weight | 48 lbs. |
| Type | Tuned port |
| Drivers | $10^{\prime \prime}$ rubber surround woofer; $1^{\prime \prime}$ |
|  | modified hard-dome tweeter |
| Response | 35 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB} \mathrm{re87} \mathrm{~dB}$ |
|  | SPL |

$\begin{array}{ll}\text { Crossover } & 2 \mathrm{kHz} \\ \text { Impedance } & 8 \text { ohms } \\ \text { Min. power } & 10 \text { watts (10 dBW) } \\ \text { Max. power } & 75 \text { watts }(183 / 4 \mathrm{dBW}) \\ \text { Features } & \text { Impedance remains between } 6.5\end{array}$ ohms and 8.5 ohms from 100 Hz to 100 kHz ; tweeter gap filled with ferrofluid

## SP-Eight

## Price Dimensions

Weight
Type
Drivers
Response 40 Hz to $20 \mathrm{kHz}, \pm^{3} \mathrm{~dB}$ re 86 dB
Crossover 2 kHz
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 75 watts ( 18.75 dBW )
Features Impedance remains between 6.5 ohms and 8.5 ohms from 100 Hz to 100 kHz ; tweeter gap filled with ferrofluid

## SP-Six-Cone

## Price $\$ 75$

Dimensions $16 \mathrm{H} \times 10 \mathrm{~W} \times 71 / 2 \mathrm{D}$
Weight $\quad 15 \mathrm{lbs}$.
Type Tuned port
Drivers $\quad 6^{\prime \prime}$ rubber surround woofer: $2^{\prime \prime}$ cone
tweeter
Response $\quad 50 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 85 dB SPL
Crossover 2 kHz
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 35 watts ( 15.5 dBW )
Features Impedance remains between 6.5
ohms and 12 ohms from 100 Hz to 20 kHz

## Models also available

SP-Six, \$109

## GREAT WHITE WHALE <br> Great White Whale Dist., Inc. 348 E. 84th St.

New York, N.Y. 10028

Point 4

| Price | \$900/pr. |
| :---: | :---: |
| Dimensions | $42 \mathrm{H} \times 19 \mathrm{~W} \times 11 \mathrm{D}$ |
| Weight | 90 lbs . |
| Type | Acoustlc suspension and open air |
| Drivers | Two $10^{\prime}$ wooters; two $8^{\prime \prime}$ midbass; two $5^{\prime \prime}$ midranges; two $11 / 2^{\prime \prime}$ dome tweeters; two $1^{1 "}$ open-baffled supertweeters |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 2.5 \mathrm{~dB}$ re 89 dB SPL at 1 meter at 1 watt |
| Crossover | $80 \mathrm{~Hz} ; 300 \mathrm{~Hz} ; 2.5 \mathrm{kHz} ; 8 \mathrm{kHz}$ |
| Impedance | 4 ohms |
| Min. power | 50 watts (17 d8W) |
| Max. power | 200 watts ( 23 dBW ) |
| Controls | Midrange; tweeter (continuously variable from -3 to +3 dB ) |
| Point 3 |  |
| Price | \$395 |
| Dimensions | $\begin{aligned} & 15 \mathrm{H} \times 24 \mathrm{~W} \times 12 \mathrm{D} ; 113 / 4 \mathrm{H} \times 63 / 4 \mathrm{~W} \times \\ & 63 / 4 \mathrm{D} \end{aligned}$ |
| Weight | 80 lbs . |
| Type | Acoustic suspension |
| Drivers |  dome tweeter |
| Response | $20 \mathrm{~Hz} \text { to } 20 \mathrm{kHz}, \pm 3 \mathrm{~dB} \text { re } 90 \mathrm{~dB}$ <br> SPL at 1 meter at 1 watt |
| Crossover | $125 \mathrm{~Hz} ; 4 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 20 watts ( 13 dBW ) |
| Max. power | 200 watts ( 23 dBW |

Features System fusing; 2 satellites with wooter commode

HARTLEY
Hartley Products Corp.
620 Island Road
Ramsey, N.J. 07446

## Reference

Price $\$ 1,725$
Dimensions $501 / 4 \mathrm{H} \times 36 \mathrm{~W} \times 24 \mathrm{D}$
Weight $\quad 300 \mathrm{lbs}$.
Type Magnetic suspension
Drivers
Response
Crossover
Impedance
Min. power
Max. power 25 watts ( 14 dBW )
Controls Non
Features Matched pairs

| Holton Tower |  |
| :--- | :--- |
| Price | $\$ 495$ |
| Dimensions | $491 / 2 \mathrm{H} \times 20 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 105 lbs |
| Type | Magnetic suspension |
| Drivers | Two $10^{\prime \prime}$ wooters; $1^{\prime \prime}$ tweeter |
| Response | 20 Hz to 25 kHz |
| Crossover | 3 kHz |
| Impedance | 4 ohms |
| Min. power | 15 watts $(11.75 \mathrm{dBW})$ |
| Max. power | 150 watts $(21.75 \mathrm{dBW})$ |
| Controls | None |
| Features | Matched pairs |

## Concert Jr.

| Price | $\$ 375$ |
| :--- | :--- |
| Dimensions | $381 / 2 \mathrm{H} \times 15 \mathrm{~W} \times 113 / \mathrm{D}$ |
| Weight | 65 lbs. |
| Type | Magnetic suspension |
| Drivers | $10^{\prime \prime}$ wooter; $1^{\prime \prime}$ tweeter |
| Response | 25 Hz to 25 kHz |
| Crossover | 5 kHz |
| Impedance | 5 to 8 ohms |
| Min. power | 15 watts $(11.75 \mathrm{dBW})$ |
| Max. power | 100 watts $(20 \mathrm{dBW})$ |
| Cohtrols | None |
| Features | Matched pairs |

## Zodiac '78

Price $\$ 180$
Dimensions $30 \mathrm{H} \times 15 \mathrm{~W} \times 113 / 8 \mathrm{D}$
Weight 50 lbs .
Type Mechanical suspension
Drivers $\quad 10^{\prime \prime}$ woofer; $1^{\prime \prime}$ tweeter
Response $\quad 35 \mathrm{~Hz}$ to 25 kHz
Crossover $\quad 2 \mathrm{kHz}$
Impedance 8 ohms
Min. power 5 watts (7 dBW)
Max. power 100 watts ( 20 dBW )
Controls None
Features Matched pairs
Zodiac Jr.

| Price | $\$ 96$ |
| :--- | :--- |
| Dimensions | $19 \mathrm{H} \times 11 \mathrm{MW} \times 71 / 2 \mathrm{D}$ |
| Weight | $45 \mathrm{lbs} . / \mathrm{pr}$. |
| Type | Mechanical suspenslon |
| Drivers | $8^{\prime \prime}$ wooter; $2^{\prime \prime}$ tweeter |
| Response | 50 Hz to 18 kHz |
| Crossover | 2.5 kHz |
| Impedance | 8 ohms |
| Min. power | $5 \mathrm{watts}(7 \mathrm{dBW})$ |
| Max. power | 50 watts $(17 \mathrm{dBW})$ |
| Controls | None |
| Features | Matched pairs |

## Models also available

Concertmaster, $\$ 1,380$; Zodiac
300B, $\$ 275$; Zodiac 1B, $\$ 135$

HEATHKIT
Heath Co.
Benton Harbor, Mich. 49022

AS-1348
Price $\quad \$ 300$ (kit)
Dimensions $38 \mathrm{H} \times 24 \mathrm{~W} \times 15 \mathrm{D}$
Weight $\quad 100 \mathrm{lbs}$
Type Acoustic suspension
Drivers $\quad 15^{\prime \prime}$ rear-tacing wooter; two $4 \frac{1}{2 \prime \prime}$
front-facing midranges; three 1 " dome tweeters angle right, left, and ahead
Response 22 Hz to $22 \mathrm{kHz},-10 \mathrm{~dB}$
Crossover $500 \mathrm{~Hz} ; 3 \mathrm{kHz}$
Impedance 8 ohms
Min. power 8 watts ( 9 dBW )
Max. power 250 watts ( 24 dBW )
Controls "Room" switch to compensate for acoustic variances of listening areas and relationship of speaker to wall: two attenuation controls adjust for acoustics and source material

AS-1373
Price $\quad \$ 170$ (kit

Dimensions $26 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 117 / 8 \mathrm{D}$
Weight $\quad 47 \mathrm{tbs}$.
Type Acoustic suspension
Drivers $\quad 10^{*}$ woofer; $41 / 2^{n}$ midrange; $1^{n}$ dome tweeter
Response $\quad 30 \mathrm{~Hz}$ to $22 \mathrm{kHz},+0,-10 \mathrm{~dB} ; 40 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover 3 kHz
Min. power 10 watts ( 10 dBW )
Max. power 400 watts ( 26 dBW )
Controls Midrange; tweeter
Features Tweeter can be installed for optimum imaging with system positioned vertically or horizontally; separate midrange subenclosure; individually fused drivers

AS-1363
Price $\quad \$ 130$ (kit)
Dimensions $233 / 4 \mathrm{H} \times 141 / 4 \mathrm{~W} \times 111 / 2 \mathrm{D}$
Weight 40 lbs .
Type Acoustic suspension
Drivers $\quad 10^{\prime \prime}$ wooter; $41 / 2^{\prime \prime}$ midrange; $1^{\prime \prime}$ dome tweeter
Response 30 Hz to $20 \mathrm{kHz},-10 \mathrm{~dB}$
Crossover $750 \mathrm{~Hz} ; 4 \mathrm{kHz}$
Impedance 8 ohms
Min. power 5 watts ( 7 dBW )
Max. power 130 watts ( 21.25 dBW )
Controls Midrange; tweeter

AS-1332

| Price | $\$ 58$ (kit) |
| :--- | :--- |
| Dimensions | $191 / 2 \mathrm{H} \times 101 / 2 \mathrm{~W} \times 8 \mathrm{D}$ |
| Weight | 15 lbs. |
| Type | Infinite baffle |
| Drivers | $8^{\prime \prime}$ woofer; $13 / /^{" \prime}$ tweeter |
| Response | $40 \mathrm{~Hz} \mathrm{to} 20 \mathrm{kHz},+0,-10 \mathrm{~dB} ; 50 \mathrm{~Hz}$ |
|  | to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Crossover | 3.4 kHz |
| Min. power | $10 \mathrm{watts}(10 \mathrm{dBW})$ |
| Max. power | 400 watts $(26 \mathrm{dBW})$ |
| Controls | Tweeter |
| Features | Individually fused drivers |

## Models also available <br> AS-1344, \$150 (kit); AS-1342, \$75 <br> (kit)

## HECO

Hammond Industries, Inc.
155 Michael Drive

## Syosset, N.Y. 11791



Fundamental Research
Large Infrasonix Woofer


Martley Concert Jr.



Hitachi MS-430


Heath AS-1348

| D-100 |  |
| :---: | :---: |
| Price | \$499 |
| Dimensions | $311 / 2 \mathrm{H} \times 153 / 4 \mathrm{~W} \times 101 / 4 \mathrm{D}$ |
| Weight | 75 lbs |
| Type | Dynamic |
| Drivers | $14^{n}$ woofer; four $41 / 2^{n}$ midrange; $2^{1 / 22^{n}} \times 13 /^{\prime \prime}$ tweeter |
| Crossover | $800 \mathrm{~Hz} ; 2 \mathrm{kHz}$ |
| Impedance | 4 ohms |
| Max. power | 200 watts (23 dBW) |
| Controls | Biamplification |
| HED |  |
| Cerwin Vega, Inc. |  |
| 12250 Montague St. |  |
| Arleta, | alif. 91331 |


| U-351 |  |
| :---: | :---: |
| Price | N/A |
| Type | Vented |
| Drivers | $15^{\prime \prime}$ woofer; $6^{\prime \prime}$ cone midrange; $1^{n}$ voice coil horn tweeter |
| Response | 32 Hz to $17 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 103 dB SPL at 1 meter at 1 watt |
| Crossover | $700 \mathrm{~Hz} ; 4 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 5 watts (7 dBW) |
| Max. power | 100 watts (20 dBW) |
| Controls | Midrange; tweeter |

## U-321

## Type

Drivers

| Response | 38 Hz to $17 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 98 dB |
| :--- | :--- |
|  | SPL at 1 meter at 1 watt |
| Crossover | $700 \mathrm{~Hz} ; 4 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| MIn. power | 5 watts $(7 \mathrm{dBW})$ |
| Max. power | 60 watts $(17.75 \mathrm{dBW})$ |
| Controls | Midrange; tweeter |


| UT-12R |  |
| :---: | :---: |
| Price | \$390 |
| Type | Vented |
| Drivers | $12^{\prime \prime}$ woofer; $6^{\prime \prime}$ cone midrange; $1^{\prime \prime}$ volce coil horn tweeter; $6^{\circ}$ rear reflecting cone midrange |
| Response | 32 Hz to $17 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 98 dB SPL at 1 meter at 1 watt |
| Crossover | $700 \mathrm{~Hz} ; 4 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 5 watts (7 dBW) |
| Max. power | 80 watts ( 19 dBW ) |
| Controls | Midrange; tweeter; rear midrange |
| Features | Tower style speaker |
| SW-12 |  |
| Price | \$280 |


| Type | Vented |
| :---: | :---: |
| Drivers | 12" wooter |
| Response | 38 Hz to $150 \mathrm{~Hz}, 90 \mathrm{~dB}$ SPL at 1 meter at. 1 watt |
| Impedance | 8 ohms |
| Min. power | 5 watts (7 dBW) |
| Max. power | 100 watts (20 dBW) |
| Features | Foor-facing subwoofer system |
| U-123 |  |
| Price | \$215 |
| Type | Vented |
| Drivers | $12^{\text {" }}$ woofer; $5^{n}$ cone midrange; $1^{1 "}$ voice coil horn |
| Response | 45 Hz to $17 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 96 dB SPL at 1 meter at 1 watt |
| Crossover | $700 \mathrm{~Hz} ; 4 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 5 watts (7 dBW) |
| Max. power | 60 watts ( 17.75 dBW ) |
| Controls | Tweeter; midrange |
| U-10 |  |
| Price | \$170 |
| Type | Vented |
| Drivers | 10" woofer; $1^{\prime \prime}$ voice coil Dhorn |
| Response | 42 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 94 dB SPL at 1 meter at 1 watt |
| Crossover | 2 kHz |
| Impedance | 8 ohms |
| Min. power | 5 watts (7 dBW) |
| Max. power | 40 watts ( 16 dBW ) |
| Controls | Tweeter |

## Models also available

U-15, \$325; U-12, \$195; U-6, \$85

## HITACHI

Hitachi Sales Corp. of America
401 W. Artesia Blvd.
Compton, Calif. 90220

HS-430
Price
Weight
Type
Response
Crossover
Impedance
Max. power
Controls
Features

HS-330
Price
Dimenslons
Weight
Type

Dimensions $261 / 4 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 1415 / 16 \mathrm{D}$

## $\$ 400$

46 lbs .3 oz.
Bass reflex
35 Hz to $20 \mathrm{kHz},-15 \mathrm{~dB}$
$700 \mathrm{~Hz} ; 4 \mathrm{kHz}$
8 ohms
120 watts ( 20.75 dBW )
Dual
Me:al cone; gathered edge
$\$ 250$
$221 / 2 \mathrm{H} \times 123 / 8 \mathrm{~W} \times 123 / 8 \mathrm{D}$
32 lbs.
Acoustic suspension

Drivers
3-way, $10^{\prime \prime}$ gathered-edge wooter; $21 / 2^{\prime \prime}$ metal-cone midrange; $11 / 2^{n}$ metal-cone tweeter
Response $\quad 40 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 92 dB
SPL at 1 meter at 1 watt
Crossover $\quad 900 \mathrm{~Hz} ; 4 \mathrm{kHz}$
Impedance
Min. power 10 watts ( 10 dBW )
Max. power 100 watts ( 20 dBW )
Controls Midrange; tweeter
IMPACT
Unitrcnex Corp.
1171 Landmeier Rd.
Elk Grove, III. 60007
Impact 8
Price $\$ 399$
Dimensions $264 / 5 \mathrm{H} \times 173 / 10 \mathrm{~W} \times 123 / 5 \mathrm{D}$
Weight 64 lbs .
Type Balanced; ducted-port speaker system with time-aligned transducers
Drivers 12" woofer; 7" midrange; 2" x 5" horn tweeter
Response $\quad 30 \mathrm{~Hz}$ to $23 \mathrm{kHz}, 105 \mathrm{~dB}$ SPL at 1 meter at 1 watt
Crossover $\quad 300 \mathrm{~Hz} ; 7 \mathrm{kHz}$
Impedance 8 ohms (nominal)
Min. power 10 watts ( 10 dBW )
Max. power 150 watts (21.75 dBW)
Controls Tweeter, midrange ( $\pm 3 \mathrm{~dB}$ )
Impact 2
Price $\quad \$ 149$
Dimensions $213 / 10 \mathrm{H} \times 113 / 5 \mathrm{~W} \times 91 / 10 \mathrm{D}$
Weight 21 lbs.
Type Balanced, ducted-port speaker system with time-aligned transducers
Drivers
Response $\quad 60 \mathrm{~Hz}$ to $20 \mathrm{kHz}, 98 \mathrm{~dB}$ SPL at 1
meter at 1 watt
Crossover $\quad 3.5 \mathrm{kHz}$
Impedance 80 hms (nominal)
Min. power 5 watts (7 dBW)
Max. power 50 watts (17 dBW)
Models also available
Impact 4, \$199

INFINITY
Infinity Systems, Inc.
7930 Deering Ave.
Canoga Park, Calif. 91304
Reference Standard 4.5
Price $\$ 3,300$
Dimensions $641 / 2 \mathrm{H} \times 261 / 2 \mathrm{~W} \times 141 / 2 \mathrm{D}$

Weight

Response Crossover Impedance Min. power Max. power Features Passive crossover controls ss and midrange crossover frequencie and levels; separate biamp switch on back of speaker

| Refere | Standard 1.5 |
| :---: | :---: |
| Price | \$470 |
| Dimensions | $261 / 2 \mathrm{H} \times 15 \mathrm{~W} \times 11 \mathrm{D}$ |
| Weight | 66 lbs. |
| Drivers | 12" Infinity/Watkins polypropylene woofer; $5^{\prime \prime}$ polypropylene midrange; EMIT tweeter |
| Response | 38 Hz to $32 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Crossover | $350 \mathrm{~Hz} ; 5 \mathrm{kHz}$ |
| Impedance | 4 ohms |
| Min. power | 66 watts ( 18.25 dBW ) |
| Max. power | 250 watts (24 dBW) |
| Features | Solid oak veneer |

## Column II

| Price | $\$ 384$ |
| :--- | :--- |
| Dimensions | $393 / 4 \mathrm{H} \times 14 \mathrm{~W} \times 121 / 2 \mathrm{D}$ |
| Weight | 85 lbs. |
| Type | Dynamic |
| Drivers | Two $10^{*}$ woofers; $41 / 2{ }^{\prime \prime}$ cone mi- <br> drange; 2 specially modified hand- <br>  <br>  <br> treated piezoelectric tweeters |
| Response | 35 Hz to $20 \mathrm{kHz}, \pm 3^{1 / 2 \mathrm{~dB}}$ |
| Crossover | $750 \mathrm{~Hz} ; 5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 15 watts $(11.75 \mathrm{dBW}$ ) continuous |
| Max. power | 250 watts (24 dBW) continuous |
| Controis | Midrange; tweeters |
| Features | Slot-loaded woofer; high-efficiency |
| design |  |

Quantum Jr.
Price $\$ 299$
Dimensions $25 \mathrm{H} \times 14 \frac{1}{2} \mathrm{~W} \times 12 \mathrm{D}$
Weight 50 lbs .
Type Dynamic
Drlvers $\quad 12^{\prime \prime}$ woofer; $1 / 2^{\prime \prime}$ dome midrange; In-
40 Hz to $32 \mathrm{kHz}_{4} \pm^{3} \mathrm{~dB}$
Impedance
Min. power 25 watts ( 14 dBW )
Max. power 200 watts ( 23 dBW )
Controls
Features
Midrange; tweeters Optional metal pedestals

| Qb |  |
| :--- | :--- |
| Price | $\$ 198$ |
| Dimensions | $25 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight | 43 lbs |
| Type | Dynamic |
| Drivers | $10^{\prime \prime}$ woofer; $4^{*}$ midrange; Infinity |
|  | EMIT tweeter |
| Response | 42 Hz to $32 \mathrm{kHz}, \pm^{3} \mathrm{~dB}$ |
| Crossover | $600 \mathrm{~Hz} ; 4 \mathrm{kHz}$ |
| Impedance | 4 ohms |
| Min. power | 15 watts $(11.75 \mathrm{dBW})$ |
| Max. power | 150 watts $(21.75 \mathrm{dBW})$ |
| Controis | Midrange |
| Features | Optional metal pedestals |

## Qe

Price $\quad \$ 119$
Dimensions $18 \mathrm{H} \times 12 \mathrm{~W} \times 10 \mathrm{D}$

| Weight | 22 lbs. |
| :--- | :--- |
| Type | Dynamic |
| Drivers | $8^{\prime \prime}$ Q woofer (butyl surround); EMIT |
|  | tweeter |
| Response | 47 Hz to $32 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Crossover | 2.5 kHz |
| Impedance | 4 to 8 ohms |
| Min. power | 10 watts $(10 \mathrm{dBW})$ |
| Max. power | 100 watts $(20 \mathrm{dBW})$ |
| Features | Rotatable tweeter; automatic mir- |
| ror-imaging |  |

## Models also available

Reference Standard 2.5, \$784; 3000B, \$235; Qa, \$165

## INNOTECH

Innotech Audio Systems
182 Henry St.
Brooklyn, N.Y. 11201

## D-24

Price $\$ 427$
Dimensions $361 / 2 \mathrm{H} \times 101 / 2 \mathrm{~W} \times 153 / 8 \mathrm{D}$
Weight $\quad 55$ lbs.
Type Asymmetric transmission line
Drivers Two 5" Bextrene woofers; one $11 / 2^{\prime \prime}$ Mylar dome midrange; 1" Mylar dome tweeter
Response $\quad 35 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover $\quad 3.5$ kHz; 7.5 kHz
impedance 5 ohms
Min. power 35 watts ( 15.5 dBW )
Max. power 200 watts ( 23 dBW )
Controls Fuse protection
Features Asymmetrical geometry to eliminate creation of standing waves inside and outside of enclosure; narrow enclosure to allow full radiation of sound waves resulting in wide dispersion

| D-14 Speaker |  |
| :--- | :--- |
| Price | $\$ 250$ |
| Dimensions | $261 / 2 \mathrm{H} \times 91 / 2 \mathrm{~W} \times 15 \mathrm{D}$ |
| Weight | $\mathrm{N} / \mathrm{A}$ |
| Type | Asymmetric transmission line |

JANIS
Janis Audio Associates, Inc.
2889 Roebling Ave.
Bronx, N.Y. 10461

## W-1 Subwoofer <br> Price $\$ 695$

Dimensions $171 / 2 \mathrm{H} \times 22 \mathrm{~W} \times 22 \mathrm{D}$ (floor stancing)
Weight 90 lbs .
Type Slot-loaded
Drivers $\quad 15^{n}$ dynamic
Response $\quad 30$ to $100 \mathrm{~Hz}, \pm 1 \mathrm{~dB}$ re 85 dB SPL into hemlspherical space
Crossover External electronic crossover: 18 dB/octave at 100 Hz
Impedance 8 ohms
Min. power 60 watts ( 18 dBW ) continuous
Max. power 200 watts ( 23 dBW ) contincous; system is fused to protect against amplifier instability
Controls Level (When used with Interphase crossover amp)
Features Designed to extend bass response of high-quality wide-range speakers; harmonic distortion components of $1 \%$ or less; individual calibration report supplied with each speaker; to be used in blamplified mode (crossovers available from Janis Audio Associates, Inc.)

## W-2 Subwoofer

## Pric

Dimensions 495
$171 / 2 \mathrm{H} \times 22 \mathrm{~W} \times 22 \mathrm{D}$ (floor-standing)

Weight 92
Type Slot-loaded
Orivers $\quad 15^{\prime \prime}$ dynamic
Response $\quad 33$ to $100 \mathrm{~Hz}, \pm 2 \mathrm{~dB}$ re 85 dB SPL into hemispherical space
Crossover External electronic crossover; 18 dB/octave at 100 Hz
Impedance
Min. power
Max. power
60 watts ( 18 dBW ) continuous 200 watts ( 23 dBW ) continuous; system is fused to protect against amplifier instability
Controls Level (when used with interphase crossover amp)
Features Designed to extend bass response of high-quality wide-range speakers; harmonic distortion components of $1.5 \%$ or less; to be used in biamplified mode (crossovers available from Janis Audio Associates, Inc.)

JANSZEN
Janszen Electrostatic by Soundmates
796 29th Ave., S.E.
Minneapolis, Minn. 55414

| Z-40 |  |
| :---: | :---: |
| Price | \$530 |
| Dimensions | $491 / 2 \mathrm{H} \times 131 / 4 \mathrm{~W} \times 131 / 4 \mathrm{D}$ |
| Weight | 64 lbs . |
| Type | Dynamic/electrostatic |
| Drivers | $10^{\prime \prime}$ woofer; passive radiator; 2 mid frequency electrostatic tweeters; 2 high-frequency electrostatic tweet |
| Response | 33 Hz to $2 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 86 dB SPL at 2 volts at 1 meter; 26 Hz to $30 \mathrm{kHz}, \pm 6 \mathrm{~dB}$ |
| Crossover | $800 \mathrm{~Hz} ; 4 \mathrm{kHz}$ |
| Impedance | 4 ohms |
| Min. power | 20 watts ( 13 dBW ) |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | Tweeter; midrange |
| Features pole passive mids and hig | Low frequencies extended by 4adiator system; bipolar radiation of |


| Z-20 |  |
| :---: | :---: |
| Price | \$375 |
| Dimenslons | $271 / 8 \mathrm{H} \times 141 / 4 \mathrm{~W} \times 113 / 4 \mathrm{D}$ |
| Welght | 48 lbs . |
| Type | Dynamic/electrostatic |
| Drivers | $12^{\prime \prime}$ woofer; 2 electrostatic tweeters |
| Response | 30 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 82 dB SPL at 2 volts at 1 meter; 23 Hz to $30 \mathrm{kHz}, \pm 6 \mathrm{~dB}$ |
| Crossover | 800 Hz |
| Impedance | 4 ohms |
| Min. power | 20 watts ( 13 dBW ) |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | Tweeter |
| Z-10 |  |
| Price | \$315 |
| Dimensions | $24 \mathrm{H} \times 131 / 4 \mathrm{~W} \times 11 \mathrm{D}$ |
| Welght | 41 lbs . |
| Type | Dynamic/electrostatic |
| Drivers | $10^{*}$ woofer; 2 electrostatic tweeters |
| Response | 28 Hz to $30 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 82 dB SPL at 2 volts at 1 meter; 28 Hz to $30 \mathrm{kHz}, \pm 6 \mathrm{~dB}$ |
| Crossover | 800 Hz |
| Impedance | 4 ohms |
| Min. power | 20 watts ( 13 dBW ) |
| Max. power | 75 watts ( 18.75 dBW ) |
| Controls | Tweeter |

## Models also available

Z-30, \$430

James B. Lansing Sound, Inc. 8500 Balboa Blvd.
Northridge, Calif. 91329

## L-2 12

| Price | \$2,000 |
| :---: | :---: |
| Dimensions | $383 / 4 \mathrm{H} \times 17 \mathrm{~W} \times 13 \mathrm{D}$ |
| Weight | 225 lbs . |
| Type | Dynamic |
| Drivers | 12" cone woofer; $8^{\prime \prime}$ cone midrange; $5^{\prime \prime}$ cone midrange; $1^{1 "}$ dome tweeter |
| Crossover | $70 \mathrm{~Hz} ; 800 \mathrm{~Hz} ; 3 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 300 watts ( 24.75 dBW ) |
| Controls | Continously variable tweeter and midrange; ultra-bass and phase controls |
| Features | $12^{\prime \prime}$ self-powered common bass |
| loudspeaker in a third enclosure (dim.: 191/4 H x $181 / 2 \mathrm{~W} \times 181 / 4 \mathrm{D}$ ); system sensitivity: 91 dB SPL at 1 meter at 1 watt |  |
|  |  |
|  |  |

## L-220

Price
Weight
Type
Drivers

| Crossover | quency ring radiator |
| :---: | :---: |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 400 watts ( 26 dBW ) |
| Controls | Tweeter; midrange |
| Features 1 watt | Sensitivity: 90 dB SPL at 1 meter at |
| L-65 |  |
| Price | \$625 |
| Dimensions | $241 / 2 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 131 / 8 \mathrm{D}$ |
| Weight | 67 lbs . |
| Type | Ducted port |
| Drivers | $12^{\prime \prime}$ direct bass radiator; $5^{\prime \prime}$ direct midrange radiator; ultra-high-frequency ring radiator |
| Crossover | $1 \mathrm{kHz} ; 6.5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min, power | 10 watts ( 10 dBW ) |
| Max. power | 250 watts ( 24 dBW ) continuous |
| Controls | Tweeter; midrange |
| Features 1 watt | Sensitivity: 89 dB SPL at 1 meter at |
| L-150 |  |
| Price | \$595 |
| Dimensions | $411 / 2 \mathrm{H} \times 17 \mathrm{~W} \times 13 \mathrm{D}$ |
| Weight | 80 lbs . |
| Type | Passive radiator |
| Drivers | $12^{\prime \prime}$ direct bass radiator with $12^{\text {" }}$ passive radiator; $5^{n}$ direct midrange radiator; $1^{\prime \prime}$ dome tweeter |
| Crossover | $1 \mathrm{kHz} ; 4 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 300 watts ( 24.75 dBW ) |
| Controls | Continuously variable tweeter and midrange |
| Features | Sensitivity: 88 dB SPL at 1 meter a |
| 1 watt |  |
| L-50 |  |
| Price | \$325 |
| Dimensions | $241 / 2 \mathrm{H} \times 141 / 4 \mathrm{~W} \times 123 / 8 \mathrm{D}$ |
| Weight | 47 lbs . |
| Type | Bass reflex |
| Drivers | 10 " direct radiator woofer; 5 " direct radiator midrange; $11 / 2^{\prime \prime}$ direct |


|  | radiator tweeter |
| :---: | :---: |
| Crossover | $800 \mathrm{~Hz} ; 3 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 200 watts ( 23 dBW ) |
| Controls | Tweeter; midrange |
| Features | Sensitivity: 88 dB SPL at 1 meter at |
| 1 watt |  |
| L-19 |  |
| Price | \$175 |
| Dimensions | $21 \mathrm{H} \times 13 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | 29 lbs |
| Type | Bass reflex |
| Drivers | 8" direct radiator woofer; $11 / 2^{n}$ direct radiator tweeter |
| Crossover | 2.5 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts (10 dBW) |
| Max. power | 100 watts (20 dBW) |
| Controls | Tweeter |
| Features | Sensitivity: 87 dB SPL at 1 meter at |

## RADIANCE SERIES

Radiance 902
Price $\$ 219.95$
Dimensions $271 / 2 \mathrm{H} \times 171 / 8 \mathrm{~W} \times 121 / 0 \mathrm{D}$
Weight 44 lbs 8 oz
Type Bass reflex
Drivers $\quad 12^{n}$ cone woofer; $5^{n}$ midrange; $3^{n}$ tweeter
Crossover $\quad 600 \mathrm{~Hz}, 3 \mathrm{kHz}$
Impedance 80 hms
Min. power 10 watts ( 10 dBW )
Max. power 200 watts ( 23 dBW )
Controls Three-position high frequency
Radiance 502

| Price | $\$ 139.95$ |
| :--- | :--- |
| Dimensions | $211 / 2 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 113 / 16 \mathrm{D}$ |
| Weight | $271 / 2 \mathrm{lbs}$. |
| Type | Bass reflex |
| Drivers | $8^{\prime \prime}$ cone woofer; $3^{\prime \prime}$ tweeter |
| Crossover | 2 kHz |
| Impedance | 4 ohms |
| Min. power | 10 watts $(10 \mathrm{dBW})$ |
| Max. power | 80 watts $(19 \mathrm{dBW})$ |

## Models also available

L-300, \$1.250; L-222, \$895; L-166, $\$ 510$; L-110, $\$ 410 ;$ L-40, \$250; Radiance 702, \$179.95

JENNINGS RESEARCH Contrara Research, Inc. 5719 South Avalon Blvd. Los Angeles, Calif. 90011

| Contrara-Triangle |  |
| :---: | :---: |
| Price | \$330 |
| Dimensions | $291 / 2 \mathrm{H} \times 18 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 60 lbs |
| Type | Ported-enclosure |
| Drivers | $12^{\text {" }}$ wooter; $11 / 2^{" \prime}$ dome midrange; 1 " dome tweeter |
| Crossover | $1.2 \mathrm{kHz} ; 5 \mathrm{kHz}$ |
| Impedance | 6 ohms |
| Min. power | 15 watts ( 11.75 dBW ) |
| Max. power | 150 watts (21.75 dBW) |
| Controls | 2 (variable) |
| Features angled siders | Solid wainut hand finished cabinet; |


| Dimensions | $211 / 2 \mathrm{H} \times 18 \mathrm{~W} \times 18 \mathrm{D}$ |
| :--- | :--- |
| Weight | 40 lbs. |
| Type | Sealed box |
| Drivers | $12^{\prime \prime}$ woofer |
| Response | 92 dB SPL at 1 meter at 1 watt |
| Crossover | 80 Hz |
| Impedance | 8 ohms |
| Min. pcwer | 30 watts (14.75 dBW) |
| Max. power | 200 watts (23 dBW) |
| Features | Common bass subwoofer |

Vector Two
Price - $\$ 270$
Dimensions $243 / 4 \mathrm{H} \times 143 / 4 \mathrm{~W} \times 113 / 4 \mathrm{D}$
$\begin{array}{ll}\text { Weight } & 40 \mathrm{lbs} \\ \text { Type } & \text { Passive radiator }\end{array}$
Drivers " 10 " woofer with $10^{\prime \prime}$ passive radia-
tor; $11 / 2^{\prime \prime}$ midrange; $1^{17}$ tweeter
Response 18 dB SPL at 1 meter at 1 watt
Crossover 1.2 kHz; 5 kHz
Impedance 8 ohms
Min. power 15 watts ( 11.75 dBW )
Max. power 150 watts ( 21.75 dBW )
Controls Midrange; tweeter
Features Linear phase coherency

## Contrara Tower

## Price $\$ 210$

Dimensions $281 / 2 \mathrm{H} \times 111 / 2 \mathrm{~W} \times 111 / 2 \mathrm{D}$
$\begin{array}{ll}\text { Weight } & 35 \text { lbs. } \\ \text { Type } & \text { Acoustic suspension }\end{array}$
Drivers $\quad 10^{\prime \prime}$ wooter; $1^{\prime \prime}$ tweeter
Response $\quad 89 \mathrm{~dB} \mathrm{SPL}$ at 1 meter at 1 watt
Crossover 2.5 kHz
Impedance 8 ohms
Min. power 15 watts ( 11.75 dBW )
Max. power 100 watts ( 20 dBW )
Controls Tweeter

## Piccola Two

| Price | $\$ 110$ |
| :--- | :--- |
| Dimensions | $143 / \mathrm{H} \times 9 \mathrm{~W} \times 63 / 4 \mathrm{D}$ |
| Weight | 12 lbs. |
| Type | Vented |
| Drivers | $61 / 2^{2}$ woofer; 1 l tweeter |
| Crossover | 2.5 kHz |
| Impedance | 8 ohms |
| Min. power | $15 \mathrm{watts}(11.75 \mathrm{dBW})$ |
| Max. power | 75 watts (18.75 dBW) |

## Models also available

Contrara Pedestal, \$280; Vector One, $\$ 190$; Contrara Rectangle, \$145

JENSEN
Jensen Sound Labs
4136 N. United Parkway
Schiller Park, III. 60176

| System B |  |
| :---: | :---: |
| Price | \$550 |
| Dimensions | $33^{3 / 4} \mathrm{H} \times 16^{1 / 2 \mathrm{~W}} \times 113 / 4 \mathrm{D}$ (including base) |
| Weight | 78 lbs . |
| Type | Vented |
| Drivers | $12^{\prime \prime}$ wooter; $6^{n}$ lower midrange; $11 / 4^{"}$ upper midrange dome; $1^{\prime \prime}$ high-frequency dome; 2" rear-firing direct-radiating tweeter |
| Response | 37 Hz to $21 \mathrm{kHz},+2,-4 \mathrm{~dB}$ re 90 dB SPL at 1 meter at 1 watt |
| Crossover | 300 Hz , $2 \mathrm{kHz} ; 8 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 9 watts ( 9.5 dBW ) |
| Max. power | 150 watts ( 21.75 dBW ) |
| Controls | Upper midrange; high frequency (continuously variable) |
| Features transferable | Power protection circuit; full 5-year varranty; variable tilt base; imped- |

LS-66

## Price $\quad \$ 370$

| Dimensions | $303 / 4 \mathrm{H}$ (including base) $\times 183 / 4 \mathrm{~W} \times$ $161 / 4 \mathrm{D}$ |
| :---: | :---: |
| Weight | 70 lbs . |
| Type | Acoustic suspension |
| Drivers | $15^{\prime \prime}$ wooter; two $31 / 2^{\prime \prime}$ cone midrange drivers; $11 / 2^{\prime \prime}$ Mylar dome tweeter |
| Response | $45 \mathrm{~Hz} \text { to } 20 \mathrm{kHz}, \pm 3 \mathrm{~dB} \text { re } 90 \mathrm{~dB}$ $\text { SPL at } 1 \text { meter at } 1 \text { watt }$ |
| Crossover | $1 \mathrm{kHz} ; 4 \mathrm{kHz}$ |
| Impedance | 8 ohms nominal |
| Min. power | 10 watts ( 10 dBW ) continuous |
| Max. power | 100 watts ( 20 dBW ) continuous |
| Controls | Tweeter; midrange |
| Features | Full 5 -year transferable warranty |

## LS-46

Price
Dimensions
Weight
Type
Drivers $\quad 10^{\prime \prime}$ woofer; $3^{1 / 2^{\prime \prime}}$ cone midrange; $2^{\prime \prime}$ cone tweeter
Response $\quad 55 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 89 dB
Crossover $1 \mathrm{kHz} ; 4 \mathrm{kHz}$
Impedance
Min. power
Max. powe
Controls
Features Full 5 -year transferable warranty
30
Price $\$ 170$
Dimensions $241 / 2 \mathrm{H} \times 15 \mathrm{~W} \times 100$
Weight
Type
Drivers Acoustic suspension
Response $\quad 60 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 89 dB
Crossover SPL at 1 meter at 1 watt
Impedance $1.5 \mathrm{kHz}, 4 \mathrm{kHz}$
Min. power 10 watts ( 10 dBW )
Max. power 50 watts ( 17 dBW )
Features Full 5 -year transferable warranty
LS-26
Price $\$ 100$

Dimensions $183 / 4 \mathrm{H} \times 11 \mathrm{~W} \times 97 / 6 \mathrm{D}$
Weight
Type
Drivers
Response
Crossover
Impedance
Min. power
Max. power
Features
18 lbs.
Acoustic suspension
$8^{\prime \prime}$ woofer; $2^{\prime \prime}$ cone tweeter 65 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 88 dB SPL at 1 meter at 1 watt 4 kHz
8 ohms nominal
10 watts ( 10 dBW ) continuous 50 watts ( 17 dBW ) continuous Full 5-year transferable warranty

## Models also available

LS-56, \$280; LS-36, \$155; 20, \$190

## JONSON SPEAKERS

Speakers and Associated
Sound, Inc.
420 Austin Place
Bronx, N.Y. 10455

3-DM-2000/WDR-2H, "The
President"

| Price | $\$ 799$ |
| :--- | :--- |
| Dimensions | $423 / 4 \mathrm{H} \times 217 / \mathrm{WW} \times 20 \mathrm{D}$ |
| Weight | 120 lbs. |
| Type | Acoustic suspension |
| Drivers | Top unit, "Pentagon": 5 midrange <br> domes, 3 dome tweeters; bass <br>  <br>  <br>  <br>  <br> unit: two 10 " woofers |
|  |  |

Weight $120 \mathrm{lbs} \times 21 / 6 \times 200$
Type Acoustic suspension
Top unit, "Pentagon": 5 midrange unit: two $10^{\prime \prime}$ woofers

Response
Crossover Impedance Min. power Max. power Controls Features Pentagon: 540 degree radiation

3-DM-2/WDR-4M, "The Statesman"
Price $\$ 640$
Dimensions $423 / 4 \mathrm{H} \times 193 / 4 \mathrm{~W} \times 20 \mathrm{D}$

## Weight $\quad 100 \mathrm{lbs}$

Type Vented
Drivers Top unit, "Pentagon": 5 midrange drivers; 5 tweeters; bass unit; four $8^{\prime \prime}$ woofers
Response $\quad 30 \mathrm{~Hz}$ to 20 kHz
Crossover 2.4 kHz
Impedance 4 ohms
Max. power 100 watts ( 20 dBW )
Features Pentagon: 540-degree radiation pattern (360 horizontal, 180 vertical)

| 3CM-1/WHS-2, "The Diplomat" |  |
| :--- | :--- |
| Price | $\$ 450$ |


| Dimensions | $27 \mathrm{H} \times 24 \mathrm{~W} \times 180$ |
| :--- | :--- |
| Weight | 80 lbs. |
| Type | Acoustic suspension |
| Drivers | Top unit, "Pentagon Junior": 4 full- |
|  | range drivers, 1 tweeter; bass unit: |
|  | two 100 woofers facing downwards |
| Response | 30 Hz to 20 kHz |
| Crossover | $350 \mathrm{~Hz} ; 5 \mathrm{kHz}$ |
| Impedance | 40 hms |
| Max. power | 70 watts (18.5 dBW) |

Models also available
3-DM-2000/WDR-1M, "The Ambassador", \$605
JR LOUDSPEAKERS
H \& H International
3047 W. Henrietta Rd.
Rochester, N.Y. 14623

JR-150
Price
Cimensions
Weight
Type
Drivers Two Bextrene cone wooters; 1 doped soft-dome tweeter

| Response | 40 Hz to $40 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 87 dB |
| :--- | :--- |
|  | SPL at t meter at 1 watt |
| Crossover | 2.2 kHz |
| lmpedance | 8 ohms |
| Min. power | 15 watts ( 11.75 dBW ) |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | Tweeter |
| Features | Aluminum cylinder; 24 dB /octave |

slope

| JR Super | Woofer |
| :--- | :--- |
| Price | $\$ 395$ |
| Dimensions | $20 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 131 / 2 \mathrm{D}$ |
| Weight | 50 lbs. |
| Drivers | Special $8^{n}$ driver |
| Response | 30 Hz to 150 kHz |
| Impedance | 8 ohms |
| Max. power | 60 watts $(17.75 \mathrm{dBW})$ |
| Controls | None |
| Features | Highly damped reflex electromag- |
| netic damping |  |

JVC
U.S. JVC Corp.

Hi Fi Division
58-75 Queens Midtown
Expressway
Maspeth, N.Y. 11378

## Zero 9

Price Dimensions

## Weight $\quad 92$ lbs. 6.4 oz .

Type Bass reflex
Drivers Two 12" cone woofers; 3 15/16"
dome cone midrange; $2 \quad 1 / 16^{n} \times$ 5/16" ribbon tweeter

| Response | 25 Hz to $50 \mathrm{kHz}, 92 \mathrm{~dB} \mathrm{SPL}$ at 1 |
| :--- | :--- |
| Crossover | $450 \mathrm{~Hz} ; 5.5 \mathrm{kHz}$ |
| Impedance | 6 ohms |
| Max. power | 150 watts ( 21.75 dBW ) |
| Controls | Midrange; tweeter |

## Zero 5

Price
Dimensions
Weight
Type
Drivers

Response $\quad 35 \mathrm{~Hz}$ to $50 \mathrm{kHz}, 91.5 \mathrm{~dB} \mathrm{SPI}$ at 1
meter at 1 watt
Crossover $500 \mathrm{~Hz} ; 5 \mathrm{kHz}$
Impedance 6 ohms
Max. power 100 watts ( 20 dBW )
Controls Midrange; tweeter

| SK-1000 \|| |  |
| :---: | :---: |
| Price | \$280 |
| Dimensions | $253 / 6 \mathrm{H} \times 155 / 8 \mathrm{~W} \times 133 / 8 \mathrm{D}$ |
| Welght | 48 lbs .8 oz . |
| Type | Bass reflex |
| Drivers | $12^{n}$ cone woofer; $5^{n}$ cone midrange; $1^{\text {" }}$ dome tweeter |
| Response | 30 Hz to $40 \mathrm{kHz}, 94 \mathrm{~dB} \mathrm{SPL}$ at one meter at one watt |
| Crossover | 900 Hz ; 9 kHz |
| Impedance | 8 ohms |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | Midrange; tweeter |
| SK-500 II |  |
| Price | \$200/pr. |
| Dimensions | $195 / 8 \mathrm{H} \times 12^{1 / 2} \mathrm{~W} \times 12^{1 / 6 \mathrm{D}}$ |
| Weight | 23 lbs 3.2 oz . |
| Type | Bass reflex |
| Drivers | $10^{\prime \prime}$ cone woofer; 23/8"cone tweeter |
| Response | 40 Hz to $20 \mathrm{kHz}, 92 \mathrm{~dB}$ SPL at 1 meter at 1 watt |
| Crossover | 2 kHz |
| Impedance | 8 ohms |
| Max. power | 50 watts ( 17 dBW ) |

SK-400 II

| Price | \$150/pr. |
| :---: | :---: |
| Dimensions | 173/6H $\times 105 / 8 \mathrm{~W} \times 101 / 4 \mathrm{D}$ |
| Weight | 17 los. 9 oz . |
| Type | Bass reflex |
| Drivers | $8^{\prime \prime}$ cone woofer; $23 / \mathrm{s}^{\prime \prime}$ cone tweeter |
| Response | 45 Hz to $20 \mathrm{kHz}, 91 \mathrm{~dB}$ SPL at 1 meter at 1 watt |
| Crossover | 2 kHz |
| Impedance | 8 ohms |
| Max. power | 40 watts ( 16 dBW ) |
| S-M5 |  |
| Price | \$299/pr. |
| Dimensions | $93 / 16 \mathrm{H} \times 513 / 16 \mathrm{~W} \times 5$ 29/32D |
| Weight | 9 lbs 3 oz . |
| Type | Acoustic suspension |
| Drivers | $51 / 2^{\prime \prime}$ cone woofer; $1^{\prime \prime}$ dome tweeter |



| Response | 45 Hz to $20 \mathrm{kHz}, 88 \mathrm{~dB} \mathrm{SPL}$ at 1 |
| :--- | :--- |
|  | meter at 1 watt |
| Crossover | 2.5 kHz |
| Impedance | 8 ohms |
| Max. power | 80 watts (19 dBW) |

## Models also available

Zero 3, \$320; SK-700 II, \$180; SK600 II, \$240/pr.; S-M3, \$170/pr

## KA/KINETIC AUDIO

 KA/Kinetic Audio International, Ltd.
## 6624 W. Irving Park Road

 Chicago, III. 60634
## Titan Labyrinth <br> Price

## Dimensions $48 \mathrm{H} \times 31 \mathrm{~W} \times 18 \mathrm{D}$

Weight 375 lbs
Type Dual, 8' trapezoidal double helical transmission lines and tapered acoustical line
Drivers Two $12^{\prime \prime}$ rubber composition cone woofers; two $5^{\prime \prime}$ Bextrene cone midranges; two $1 \frac{1}{4}{ }^{\prime \prime}$ magnet-liquid tweeters; two 1 " dome supertweeters
Response $\quad 14 \mathrm{~Hz}$ to $22 \mathrm{kHz}, \pm 21 / 2 \mathrm{~dB}$
Crossover $90 \mathrm{~Hz} ; 2 \mathrm{kHz} ; 7.5 \mathrm{kHz}$
Impedance 4 ohms ( 3.2 ohms min; 9 ohms max)
Min. power 15 watts ( 11.75 dBW ) per channel into 4 ohms
Max. power 300 watts ( 24.75 dBW ) per channel into 4 ohms

## Controls 4 level controls

Features Complete with base and casters; may be bi- or triamped; fuse protection; phasecorrected

## Amp Eater One <br> Price $\quad \$ 1,499$

Dimensions $48 \mathrm{H} \times 31 \mathrm{~W} \times 18 \mathrm{D}$
$\begin{array}{llll}\text { Weight } & 315 \mathrm{lbs} \\ \text { Type } & \text { Four } 4^{*} \text { tapered trapezoidal } 1 / 8\end{array}$ Four 4* tapered trapezoidal $1 / 8$
wavelength transmission lines and tapered acoustical line
Drivers Four $12^{\prime \prime}$ cone wooters; two 5" Bextrene cone midranges; two $1 \frac{1 / 4}{}{ }^{\text {n }}$ dome midtweeters; two $1^{1 "}$ dome supertweeters
Resporise 12 Hz to $22 \mathrm{kHz}, \pm 2.5 \mathrm{~dB}$
Crossover
Impedance
Min. power $300 \mathrm{~Hz} ; 2.5 \mathrm{kHz} ; 7.5 \mathrm{kHz}$ 2 to 8 ohms ( 2 recommended) 15 watts ( 11.75 dBW ) per channel into 8 ohms
Max. power 600 watts ( 27.75 dBW ) per channel into 2 ohms

Controls $\quad 4$ level controls
Features KA Var-l-Vent (adjusts system resonance); may be bi- or triamped; fuse protection; phase-corrected; liquid-cooled midtweeters and supertweeters

The Labyrinth
Price
$\$ 1,169$

| Price | \$1,169 |
| :---: | :---: |
| Dimensions | $52 \mathrm{H} \times 16 \mathrm{~W} \times 16 \mathrm{D}$ (with base) |
| Weight | 165 lbs . |
| Type | Tapered acoustical trapezoidal/labyrinth line |
| Drivers | $12^{\prime \prime}$ cone woofer; $5^{\prime \prime}$ Bextrene cone midrange; $11 / 4^{n}$ dome midtweeter; 1 " dome supertweeter |
| Response | 16 Hz to $22 \mathrm{kHz}, \pm 2.5 \mathrm{~dB}$ |
| Crossover | $90 \mathrm{~Hz} ; 2 \mathrm{kHz} ; 7.5 \mathrm{kHz}$ |
| Impedance | 8 ohms ( 5 ohms min; 11 ohms max) |
| Min. power | 15 watts ( 11.75 dBW ) per channel into 8 ohms |
| Max. power | 200 watts ( 23 dBW ) per channel into 8 ohms |
| Controls | 3 level controls |
| Features | May be bi- or triamped; fuse pro- |


| Labyrinth Subwoofer |  |
| :--- | :--- |
| Lrice | $\$ 699$ |
| Pimensions | $48 \mathrm{H} \times 16 \mathrm{~W} \times 18 \mathrm{D}$ |
| Weight | 125 lbs. |
| Type | Tapered acoustical trapezoidal <br>  <br>  <br>  <br> line/labyrinth |
| Drivers | $12^{\prime \prime}$ long excursion woofer with syn- |
|  | thetic composition deep cone |
| Response | 20 Hz to $2 \mathrm{kHz}, \pm 21 / 2 \mathrm{~dB}$ |
| Crossover | $40 \mathrm{~Hz} ; 90 \mathrm{~Hz} ; 175 \mathrm{~Hz}$ or no internal |
|  | crossover |
| Impedance | 8 ohms |
| Features | Four built-In sets of terminals in |
| back; biamp with or without electronic crossover |  |


| Impulse |  |
| :---: | :---: |
| Price | \$469 |
| Dimensions | $26 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 85 lbs . |
| Type | Tapered acoustical line and semilabyrinth time-patterned and phase-corrected |
| Drivers | $12^{\prime \prime}$ cone woofer; 5" Bextrene cone midrange; $11 / 4^{n}$ magnet-liquidcooled dome tweeter |
| Response | 20 Hz to $22 \mathrm{kHz}, \pm 2.5 \mathrm{~dB}$ |
| Crossover | $175 \mathrm{~Hz} ; 2 \mathrm{kHz}$ |
| Impedance | 8 ohms ( 5 ohms min; 14 ohms max) |
| Min. power | 15 watts ( 11.75 dBW ) per channel into 8 ohms |
| Max. power | 200 watts ( 23 dBW ) per channel into 8 ohms |
| Controls | 2 level controls |
| Features | KA Var-I-Vent (adjusts system |
| resonance); may be biamped; fuse protection; phase-corrected |  |


| Impulse | Subwoofer |
| :--- | :--- |
| Price | $\$ 299$ |


| IMP |  |
| :---: | :---: |
| Price | \$269 |
| Dimensions | $24 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 9 \mathrm{D}$ |
| Weight | 48 lbs . |
| Type | Tapered acoustical line |
| Drivers | $12^{\prime \prime}$ woofer, $5^{\prime \prime}$ Bextrene cone midrange; $11 / 2^{\text {" }}$ dome tweeter |
| Response | 34 Hz to $22 \mathrm{kHz}, \pm 2.5 \mathrm{~dB}$ re 93 dB SPL at 1 meter at 1 watt |
| Crossiover | $300 \mathrm{~Hz} ; 2 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 200 watts ( 23 dBW ) |
| Controls | 2 leval controls |
| Features for phase con | Stacked series, parallel crossover tinuity; fused |
| Models also available |  |

TAS Challenger, \$999; Trapezoid, \$669; Trapezoid subwoofer, \$399; STAT, \$369; Zoid, \$189

## KEF

Intratec
P.O. Box 17414

Dulles International Airport Washington, D.C. 20041

105

| Price | \$950 |
| :---: | :---: |
| Dimensions | $38 \mathrm{H} \times 179 / 10 \mathrm{~W} \times 163 / 10 \mathrm{D}$ |
| Weight | 80 lbs . |
| Type | Coherent phase |
| Drivers | $12^{\prime \prime}$ woofer; $5^{\prime \prime}$ cone midrange; $11 / 2^{n}$ dome tweeter |
| Response | 30 Hz to $25 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Impedance | 8 ohms |
| Min. power | 40 watts ( 16 dBW) |
| Max. power | 200 watts ( 23 dBW ) |
| Controls | Midrange; tweeter level |
| Features | LED "Listening Window" power in- |
| dicator; midrange/tweeter assembly can be rotated for best stereo placement |  |
|  |  |

 Corp.
145 University Ave.
Westwood, Mass. 02090

KLH-1
Price
Dimensions
Weight
Type
Drivers

Crossover Impedance
Min. power
Max. power Controls
Features (on computer) Utililizes Analog Bass Computer for extended bass response in conjunction with hi-flux motor system; proprietary drivers with natural polypropylene cones; includes speaker stand

## KLH-3

Price
$\begin{array}{ll}\text { Dimensions } & 121 / 2 \mathrm{H} \times 81 / 2 \mathrm{~W} \times 6 \mathrm{D} \\ \text { Weight } & 25 \mathrm{lbs} . \\ \text { Type } & \text { Computer controlled vented sixth- }\end{array}$ order Butterworth alignment
Drivers $\quad 6^{\prime \prime}$ die-cast frame dynamic bass unit with natural polypropylene cone; one $1^{1 "}$ dome tweeter with butyl loaded synthetic soft dome
Response $\quad 40 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 84 dB SPL at 1 meter at 1 watt
Crossover
Impedance 2.75 kHz

Min. power 4 ohms

Max. power
Controls
40 watts ( 16 dBW ) 200 watts ( 23 dBW ) Utilizes Analog Bass Computer ${ }^{\text {m }}$ for extended bass response in conjunction with hiflux motor system; proprietary drivers with natural polypropylene cones

## KLH-4

Price
Dimensions
Weight
Type Vented sixth-order Butterworth
Drivers
tyl loaded synthetic soft dome
SPL at 1 meter at 1 watt
Crossover 2.75 kHz
Impedance 4 ohms
Min. power 20 watts ( 13 dBW )
Max power 60 watts ( 17.75 dBW )
Features Proprietary drivers with natural
polypropylene cones

## KLH DEDICATED SERIES

319B
Price $\$ 230$
Dimensions $241 / 2 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 111 / 4 \mathrm{D}$

| Weight | 40 lbs . |
| :---: | :---: |
| Type | Tuned phase inverter |
| Drivers | $12^{\prime \prime}$ woofer; $51 / 4^{*}$ cone midrange; $1^{\prime \prime}$ |
|  | soft-dome tweeter; 21/2" cone tweeter on rear |
| Response | 52.5 Hz to 22 kHz |
| Crossover | $1.1 \mathrm{kHz} ; 3 \mathrm{kHz}$ |
| Impedance | 4 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | Midrange; tweeter |
| 331 B |  |
| Price | \$100 |
| Dimensions | $21 \mathrm{H} \times 12 \mathrm{~W} \times 83 / 4 \mathrm{D}$ |
| Weight | $20 \mathrm{lbs}$.8 oz . |
| Type | Acoustic suspenslon |
| Drivers | $8^{\prime \prime}$ woofer; $21 / 2^{\prime \prime}$ cone tweeter |
| Response | 64 Hz to 18 kHz |
| Crossover | 3 kHz |
| impedance | 8 ohms |
| Min. power | 8 watts ( 9 dBW ) |
| Max. power | 50 watts (17 dBW) |
| Models also available |  |
|  | KLH-2, \$660/pr. (including Analog Bass Computer (9); 337 \$199; 327. |
|  | \$179; 317B, \$130 |
| KLIPSCH |  |
| Klipsch \& Associates |  |
| P.O. Box 688 |  |
| Hope, Ark. 71801 |  |
| Klipschorn |  |
| Price | \$1,192 (walnut on, walnut lacquer); |
|  | $\$ 1,651$ (rosewood, teak, oak, cherry); $\$ 872$ (birch, raw, black); |
|  | $\$ 774$ (decorator model in birch. raw, black) |
| Dimensions | $52 \mathrm{H} \times 311 / 4 \mathrm{~W} \times 281 / 2 \mathrm{D}$ (walnut. rosewood, teak, oak, cherry); $50 \frac{1}{2} \mathrm{H}$ (birch, raw, black); $493 / 4 \mathrm{H}$ (decorator model) |
| Weight | 180 to 240 lbs . , depending on style |
| Type | Dynamic |
| Drivers | $15^{\prime \prime}$ bass; compression midrange; compression high frequency |
| Response | 35 Hz to $17 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Crossover | $400 \mathrm{~Hz} ; 6 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 1 watt (0 dBW) |
| Max. power | 105 watts ( 20.25 dBW) |
| Belle Klipsch |  |
| Price | \$959 (walnut oil, walnut lacquer); |
|  | \$1,374 (rosewood, teak, oak, cherry) |
| Dimensions | $355 / 6 \mathrm{H} \times 301 / 6 \mathrm{~W} \times 183 / 4 \mathrm{D}$ |
| Weight | 125 lbs . |
| Type | Dynamic |
| Drivers | $15^{\prime \prime}$ bass; compression midrange; compression high frequency |
| Response | 45 Hz to $17 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Crossover | $400 \mathrm{~Hz} ; 6 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 1 watt (0 dBW) |
| Max. power | 105 watts ( 20.25 dBW) |
| La Scala |  |
| Price | $\$ 618$ (birch, raw, black); \$646 (birch lacquer); $\$ 671$ (birch lac quer-stained) |
| Dimensions | $351 / 4 \mathrm{H} \times 233 / 4 \mathrm{~W} \times 241 / 2 \mathrm{D}$ |
| Weight | 110 lbs . |
| Type | Dynamic |
| Drivers | $15^{\circ}$ bass; compression midrange compression high frequency |
| Response | 45 Hz to $17 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Crossover | $400 \mathrm{~Hz} ; 6 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 1 watt (0 dBW) |
| Max. power | 105 watts (20.25 dBW) |

Heresy
Price $\quad \$ 339$ (walnut oll, walnut lacquer); $\$ 332$ (walnut without base); $\$ 436$ (rosewood, teak, oak, cherry); \$285 (birch, raw, black)
Dimensions $213 / 8 \mathrm{H} \times 151 / 2 \mathrm{~W} \times 131 / 8 \mathrm{D}$
Weight 55 lbs .
Type Dynamic
Drivers $12^{\prime \prime}$ bass; compression midrange; compression high frequency
Response 50 Hz to $17 \mathrm{kHz}, \pm 5 \mathrm{~dB}$
Crossover $700 \mathrm{~Hz} ; 6 \mathrm{kHz}$
Min. power 1 watt ( 0 dBW )
Max. power 105 watts ( 20.25 dBW )

## Models also available

Cornwall, $\$ 597$ (walnut oil, walnut lacquer); \$585 (walnut without base); \$746 (rosewood, teak, oak, cherry); \$459 (birch, raw, black)

KOSS
Koss Corp.
4129 North Port Washington Ave.
Milwaukee, Wis. 53212

CM/1030
$\begin{array}{ll}\text { Price } & \$ 549.95 \\ \text { Dimensions } & 39 H \times 16\end{array}$
Dimensions $39 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 141 / 2 \mathrm{D}$
Weight 74 lbs .
Type Vented
Drivers

Response
Crossover
Impedance
Min power 7 ohms (1175 dBW)
Max. power 200 watts ( 23 dBW )
Controls Midrange; tweeter; supertweeter
CM/ 1020
Price $\quad \$ 449.95$
Dimensions $33 \mathrm{H} \times 151 / 2 \mathrm{~W} \times 14 \mathrm{D}$
Weight $\quad 60 \mathrm{lbs}$.
Type Vented
Drivers $\quad 10^{\prime \prime}$ woofer; $4 \frac{1}{2 \prime \prime} 2^{\prime \prime}$ midrange driver; 1 " tweeter
Response $\quad 31 \mathrm{~Hz}$ to $18.5 \mathrm{kHz},-3 \mathrm{~dB}$
Crossover $450 \mathrm{~Hz} ; 3 \mathrm{kHz}$
Impedance 7 ohms
Min. power 15 watts ( 11.75 dBW )
Max. power 150 watts ( 21.75 dBW )
Controls Midrange; tweeter
CM/530
Price $\$ 229.95$
Dimensions $24 \mathrm{H} \times 133 / 4 \mathrm{~W} \times 113 / 4 \mathrm{D}$
Weight 35 lbs .
Type
Drivers

Min. power 15 watts ( 11.75 dBW )
Max. power 75 watts ( 18.75 dBW )
Controls Tweeter
Features Mirror-imaged pairs

## Models also available

CM/1010, \$349.95
LAFAYETTE
Lafayette Radio Electronics
111 Jericho Turnpike
Syosset, N.Y. 11791

LAFAYETTE
Lafayette Radio Electronics
Syosset, N.Y. 11791

1009
Price
Weight
Type Drivers
Response
Impedance
Min. power
Max. power
Controls
Features
1005
Price
Dimensions
Weight
Type Impedance
Min. power
Max. power Features
$\$ 99.99$
$24 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 101 / 2 \mathrm{D}$
40 lbs.
Acoustic suspension
$12^{\prime \prime}$ wooter; $5^{\prime \prime}$ midrange; $3^{\prime \prime}$ twe日ter
40 Hz to 18 kHz
8 ohms
5 watts (7 dBW)
55 watts ( 17.25 dBW ) peak
Midrange; tweeter
Simulated birch finish
'\$59.99
$20 \mathrm{H} \times 121 / 2 \mathrm{~W} \times 81 / 2 \mathrm{D}$
21 lbs.
Acoustic suspension
$10^{\prime \prime}$ woofer; $21 / 2^{\prime \prime}$ tweeter
8 ohms
5 watts ( 7 dBW )
50 watts (17 dBW) peak
Simulated birch finish

## Pip Speak

| Price | $\$ 99.98 / \mathrm{pr}$. |
| :--- | :--- |
| Dimensions | $71 / 2 \mathrm{H} \times 41 / 2 \mathrm{~W} \times 4 \mathrm{D}$ |
| Weight | 6 lbs. |
| Type | Acoustic suspension mini speaker |
|  | system |
| Drivers | $4^{\prime \prime}$ woofer; $1^{\prime \prime}$ sott-dome tweeter |
| Response | 80 Hz to 20 kHz |
| Crossover | 2.5 kHz |
| Impedance | 80 hms |
| Min. power | 12 watts (10.75 dBW) |
| Max. power | 50 watts (17 dBW) |
| Features | Die-cast aluminum cabinet; per- |
| forated metal grille; includes adjustable mounting |  |

## brackets

## 1001

Price $\$ 29.99$
Dimensions $16 \mathrm{H} \times 10 \mathrm{~W} \times 61 / 2 \mathrm{D}$
Weight $\quad 10 \mathrm{lbs}$.
Type Acoustic suspension
Drivers $\quad 6^{n}$ woofer; $3^{n}$ tweeter
Response 75 Hz to 16 kHz
Impedance 8 ohms
Min. power 5 watts ( 7 dBW )
Max. power 20 watts ( 13 dBW ) peak
Features Simulated birch finish

## Models also available

1007, \$79.99; 1003, \$44.99

## LANCER

Lancer Electronics
10530 Lawson River Ave.
Fountain Valley, Calif. 92708
SC-8

| Price | $\$ 359.50$ |
| :--- | :--- |
| Dimensions | $28 \mathrm{H} \times 18 \mathrm{~W} \times 131 / 4 \mathrm{D}$ |
| Weight | 65 lbs. |
| Type | Vented |
| Drivers | Two $12^{\prime \prime}$ wooters; $51 /{ }^{n}{ }^{n}$ dome mi- |
|  | drange; $31 / 2^{\prime \prime}$ dome tweeter |
| Response | 20 Hz to $22 \mathrm{kHz}, 92 \mathrm{~dB} \mathrm{SPL}$ at 1 |
|  | meter at 1 watt |
| Crossover | $500 \mathrm{~Hz} ; 4.5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 8 watts (9 dBW) |
| Max. power | 120 watts (20.75 dBW) |
| Controls | Midrange; tweeter |
| Features | Genuine walnut solid and veneer |
| cabinets; black double-knit grilles; 5 -year warranty |  |

SC-9T

| Price | $\$ 249.50$ |
| :--- | :--- |
| Dimensions | $38 \mathrm{H} \times 12 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight | 57 lbs. |

Drivers

Response
Crossover Impedance
Min. power
Max. power
Controls
Features Tower design; front and rear tadiating; genuine watnut solid and veneer cabinets; black double-knit grilles; 5-year warranty

## SC-4A

|  |  |
| :--- | :--- | :--- |
| Price | $\$ 229.50$ |
| Dimensions | $231 / 2 \mathrm{H} \times 15 \mathrm{~W} \times 121 / 4 \mathrm{D}$ |
| Weight | 53 lbs . |
| Type | Acoustic suspension |
| Drivers | $12^{\prime \prime}$ woofer; $5^{\prime \prime}$ midrange; $21 / 4^{\prime \prime}$ |
|  | tweeter |
| Response | 20 Hz to $20 \mathrm{kHz}, 91 \mathrm{~dB} \mathrm{SPL}$ at 1 |
|  | meter at 1 watt |
| Crossover | $750 \mathrm{~Hz} ; 6 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 10 watts (10 dBW) |
| Max. power | 100 watts (20 dBW) |
| Controls | Midrange; tweeter |
| Features | Genuine oak veneer and solid; |
| brown double-knit grille; 5 -year warranty |  |

SC-10A

| Price | \$139.50 |
| :---: | :---: |
| Dimensions | $201 / 4 \mathrm{H} \times 121 / 2 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | 33 lbs . |
| Type | Acoustic suspension |
| Drivers | $10^{\prime \prime}$ wooter; $21 / /^{\prime \prime}$ tweeter |
| Response | 20 Hz to $20 \mathrm{kHz}, 90 \mathrm{~dB}$ SPL at 1 meter at 1 watt |
| Crossover | 2.5 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | Tweeter |
| Features | Genuine walnut solid and veneer |
| brown double | nit grille; 5 -year warranty |

9335-2
Price $\$ 99.50$
Dimensions $25 \mathrm{H} \times 141 / 4 \mathrm{~W} \times 113 / 4 \mathrm{D}$
Weight $\quad 33 \mathrm{lbs}$.
Type Tubular; vented
Drivers $\quad 12^{\prime \prime}$ woofer; $21 / 4^{"}$ tweeter
Response
30 Hz to $20 \mathrm{kHz}, 93 \mathrm{~dB}$ SPL at 1 meter at 1 watt
Crossover 3 kHz
Impedance 8 ohms
Min. power 5 watts ( 7 dBW )
Max. power 50 watts ( 17 dBW )
Features Genuine walnut Solid and veneer cabinets; white, gold, or brown grilles; 5-year warranty

SC-1
Price $\$ 34.50$
Dimensions $11 / 1 / 2 \mathrm{H} \times 8 \mathrm{~W} \times 71 / 8 \mathrm{D}$
Weight $\quad 17 \mathrm{lbs}$.
Type Acoustic suspension
Drivers 6" woofer; tweeter
Response $\quad 40 \mathrm{~Hz}$ to $18 \mathrm{kHz}, 88 \mathrm{~dB} \mathrm{SPL}$ at 1 meter at 1 watt
Crossover
Impedance
Min. power
Max. power
Features Minispeaker; genuine wainut solid and veneer cabinets; white, gold or brown grilles; 5-year warranty

## Models also available

SC-7A, \$269.50; SC-11, \$199.50;
9534X, \$69.50; 9711, \$54.50

LINN PRODUCTS LTD.
Audiophile Systems
5750 Rymark Court
Indianapolis, Ind. 46250

## DMS Isobarik

## Price $\quad \$ 3,100 / \mathrm{pr}$.

Dimensions $30 \mathrm{H} \times 15 \mathrm{~W} \times 161 / 2 \mathrm{D}$
Weight 100 lbs .
Type Isobarik loading
Drivers Two 5" midrange drivers; two 1"
dome tweeters
Response $\quad 16 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$
Crossover $375 \mathrm{~Hz} ; 3 \mathrm{kHz}$
Impedance 4 ohms
MIn. power 50 watts ( 17 dBW )
Max. power 500 watts ( 27 dBW )

## S.A.R.A. Isobarik

Price $\quad \$ 1,470 / \mathrm{pr}$
Dimensions $17 \mathrm{H} \times 13 \mathrm{~W} \times 10 \mathrm{D}$
Weight $\quad 33 \mathrm{lbs}$.
Type Isobarik loading
Drivers $\quad$ Two $8^{\prime \prime}$ woofers; $1^{1 "}$ dome tweeter
Response $\quad 40 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$
Impedance 4 ohms
Features Laminated PVC enclosúre

MAGNEPLANAR
Magnepan, Inc.
1645 9th St.
White Bear Lake, Minn. 55110

MG-IIA
Price $\$ 825 / \mathrm{pr}$
Dimensions $72 \mathrm{H} \times 22 \mathrm{~W} \times 13 / 4 \mathrm{D}$
Weight 45 lbs
Type Magneplanar
Drivers Woofer; tweeter
Response $\quad 45 \mathrm{~Hz}$ to $16 \mathrm{kHz}, \pm 4 \mathrm{~dB}$
Crossover 2.1 kHz
Impedance 6 ohms
Min. power 30 watts ( 14.75 dBW )
Max. power 200 watts ( 23 dBW ) continuous
Features Mirror-imaged matched pair;
purely resistive load
MG-I
Price $\$ 495 /$ pr.
Dimensions $59 \mathrm{H} \times 22 \mathrm{~W} \times 13 / 4 \mathrm{D}$
Weight 30 lbs .
Type Magneplanar
Drivers Woofer; tweeter
Response $\quad 50 \mathrm{~Hz}$ to $16 \mathrm{kHz}, \pm 4 \mathrm{~dB}$
Crossover 2.4 kHz
Impedance 5 ohms
Min. power 30 watts ( 14.75 dBW )
Max. power 200 watts ( 23 dBW )
Features Mirror-imaged matched pair;
purely resistive load

MARANTZ
Superscope, Inc.
20525 Nordhoff St.
Chatsworth, Calif. 91311

HD-880

| Price | \$420/pr. |
| :---: | :---: |
| Dimensions | $261 / 2 \mathrm{H} \times 15 \mathrm{~W} \times 113 / 4 \mathrm{D}$ |
| Weight | 56 lbs 10 oz . |
| Type | VARI ${ }^{\text {® }}$ ( (nfinite baffe/ported) |
| Drivers | 12 woofer; 5 midrange; $11 / 2^{7}$ LPF dome tweeter; $1^{n}$ LPF dome supertweeter |
| Response | 30 Hz to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 90 dB |
|  | SPL at 1 meter at 1 watt |




Kllpsch Lascala


Lafayette Criterion 2003A

| Impedance | 8 ohms |
| :--- | :--- |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 250 watts ( 24 dBW ) |
| Controls | Midrange, tweeter, and supert- |
|  | weeter L-pad controls |
| Features | Low stored energy loudspeakers |

HD-770
Price
Dimensions
Weight
Type VARI $Q^{60}$ (Infinite baffle/ported)
Drivers $\quad 12^{\prime \prime}$ woofer; $5^{\prime \prime}$ midrange; $1^{1 / 2 "}$ LPF dome tweeter; ${ }^{1 "}$ LPF dome supertweeter
Response $\quad 33 \mathrm{~Hz}$ to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 90 dB
SPL at 1 meter at 1 watt
Crossover $750 \mathrm{~Hz} ; 2.3 \mathrm{kHz} ; 5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 200 watts ( 23 dBW )
Controls Midrange, tweeter, and supert-
Features Low stored energy loudspeakers
HD-440
Price
Dimensions
Weight
Type
Drivers
Response
Crossover
Impedance
Min. power
Max. power
\$110/pr.
$191 / 6 \mathrm{H} \times 111 / 4 \mathrm{~W} \times 81 / 2 \mathrm{D}$
25 lbs 5 oz.
Acoustic suspension
$8^{\prime \prime}$ woofer; $3^{1 / 2^{\prime \prime}}$ midrange; $31 / 2^{n}$
tweeter
45 Hz to $18 \mathrm{kHz}, \pm^{3} \mathrm{~dB}$
$2 \mathrm{~Hz} ; 8 \mathrm{kHz}$
8 ohms
10 watts ( 10 dBW )

## Mk II SERIES

## 8-MkII

Price
Dimensions

## Weight

Type
Drivers
Response
Crossover Impedance
Min. power
Max. power
Controls
\$260/pr
$34 \mathrm{H} \times 18 \mathrm{~W} \times 13 \mathrm{D}$
70 lbs .
Acoustic suspension
$15^{n}$ woofer; $5^{n}$ midrange; $13 / 4^{n}$ tweeter
30 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 91 dB
SPL at 1 meter at 1 watt
$800 \mathrm{~Hz}, 3 \mathrm{kHz}$
8 ohms
10 watts ( 10 dBW )
250 watts ( 24 dBW )
Midrange and tweeter L-pads

## 7 Mk II

Price
Dimensions
Weight
Type
Drivers
\$180/pr.
$25^{1 / 2} \mathrm{H} \times 143 / 4 \mathrm{~W} \times 11^{1 / 2} \mathrm{D}$
49 1bs. 5 oz.

Response $\quad 35 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 88 dB


KLH-1

## Crossover Impedance <br> Min. power <br> Max. power Controls

Features
4 Mk II
Price
Dimensions
Weight
Type
Drlvers

Crossover 3.5 kHz
impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 50 watts ( 17 dBW )

## DESIGN SERIES

940
Price
Price
Weight
Type
Drivers

930
Price
Dimensions
Weight
Type
Drivers

Response
Crossover
Impedance
MIn. power
Max. power
Controls
Features
900
Price

Response $\quad 60 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 88 dB
SPL at 1 meter at 1 watt
\(\left.\begin{array}{ll}Response \& 30 \mathrm{~Hz} to 22 \mathrm{kHz}, \pm 3 \mathrm{~dB} re 90 \mathrm{~dB} <br>

\& \mathrm{SPL} at 1 meter at 1 \mathrm{watt}\end{array}\right]\)\begin{tabular}{ll}
Crossover \& $750 \mathrm{~Hz} ; 2.3 \mathrm{kHz} 5 \mathrm{kHz}$ <br>
Impedance \& 8 ohms <br>
Min. power \& $10 \mathrm{watts}(10 \mathrm{dBW})$ <br>
Max. power \& 250 watts ( 24 dBW ) <br>
Controls \& Midrange; tweeter, and supert- <br>

\& | weeter; L-pad controls |
| :--- | <br>

Features \& Low stored energy loudspeakers
\end{tabular}

SPL at 1 meter at 1 watt $800 \mathrm{~Hz} ; 2.5 \mathrm{kHz}$ 8 ohms
10 watts (10 dBW)
200 watts ( 23 dBW )
Midrange and tweeter L-pad controls
Low stored energy loudspeakers
\$80/pr
$191 / 8 \mathrm{H} \times 11 \mathrm{~kW} \times 81 / 4 \mathrm{D}$
21 lbs. 10 oz.
Acoustic suspension
$8^{\prime \prime}$ woofer; $13 / 4^{n}$ tweeter
\$440/pr.
$453 / 4 \mathrm{H} \times 15 \mathrm{~W} \times 12 \mathrm{D}$
82 lbs. 2 oz
VARI O (Infinite baffle/ported)
$12^{\prime \prime}$ woofer; $5^{\prime \prime}$ midrange; $1^{1 / 2}$ LPF dome tweeter; $1^{\prime \prime}$ LPF dome sujertweeter
30 Hz to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 90 dB
at meter at 1 wat
8 ohms
1050 watts ( 24 dBW )
Midrange; tweeter, and supertLow stored energy toudspeakers
\$380/pr
$281 / 4 \mathrm{H} \times 15 \mathrm{~W} \times 12 \mathrm{D}$
58 lbs. 6 oz
VARI $0^{(1 n}$ (Infinite baffle/ported) $12^{n}$ woofer; $5^{n}$ midrange; $11 / 2^{\prime \prime}$ LPF dome tweeter; $1^{\text {" }}$ LPF dome supertweeter
33 Hz to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 90 dB
SPL at 1 meter at 1 watt
$750 \mathrm{~Hz} ; 2.3 \mathrm{kHz} ; 5 \mathrm{kHz}$
8 ohms
10 watts ( 10 dBW )
200 watts ( 23 dBW )
Midrange, tweeter, and supertweeter; L-pad controls
Low stored energy loudspeakers

Dimensions $281 / 4 \mathrm{H} \times 15 \mathrm{~W} \times 12 \mathrm{D}$
Weight
Type VARI-Q (Infinite baffle/ported)
Drivers $\quad 10^{\prime \prime}$ woofer; $5^{n}$ midrange; $1 \frac{112 "}{}{ }^{\prime \prime}$ LPF dome tweeter
Response $\quad 35 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 88 dB SPL at 1 meter at 1 watt
Crossover $750 \mathrm{~Hz} ; 2.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 125 watts ( 21 dBW )
Controts
Features Low stored energy loudspeakers

## Models also available

HD-660, \$270/pr.; HD-550, \$200/pr.; 6 Mkll, \$140/pr; 5 Mkll, \$115/pr; 920, \$380/pr.

## MARTIN

Eastman Sound Mfg. Co., Inc.
Rt. \#295 \& Harmony Road
Mickleton, N.J. 08056

## TL-4050

Price $\quad \$ 650$
Dimensions $521 / 2 \mathrm{H} \times 121 / 2 \mathrm{~W} \times 111 / 4 \mathrm{D}$
Weight 84 lbs.
Type Dual transmission line
Drivers $\quad$ Two $11^{\prime \prime}$ woofers: $5^{n}$ cloth curvilinear midrange; 1" dome tweeter
Response $\quad 28 \mathrm{~Hz}$ to $22 \mathrm{kHz}, \pm^{4} \mathrm{~dB}$ re 92 dB
$100 \mathrm{~Hz}: 900 \mathrm{kHz} 4 \mathrm{kz}$
Impedance 8 ohms
Min. power 100 watts ( 20 dBW )
Max. power 300 watts ( 24.75 dBW )
Contrcls Midrange; tweeter
Features Newly designed enclosures, using direct-coupled highly-computed line of constant width, trimmed with port tube to better maintain basic relationship between mass of woofer cone and trimming tube

## Magnificat

| Price | $\$ 449$ |
| :--- | :--- |
| Dimensions | $371 / 2 \mathrm{H} \times 18 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 86 lbs. |
| Type | Acoustic suspension |
| Drivers | Two 12" woofers; $5^{\prime \prime}$ convex mi- |
|  | drange; two $2^{\prime \prime}$ polyaxial tweeters |
| Response | 28 Hz to 20 kHz re 92 dB SPL at 1 |
|  | meter at 1 watt |
| Crossover | $500 \mathrm{Hz;} \mathrm{4} \mathrm{kHz}$ |
| Impedance | 4 ohms |
| Min. power | 35 watts (15.5 dBW) |
| Max. power | 100 watts (20 dBW) |
| Controis | Midrange; tweeter |
| Features | Drivers of varied design and band- |

width cover entire audible range and beyond; each includes a large and efficient voice coil and magnet structure

## TL-2050

| Price | $\$ 350$ |
| :--- | :--- |
| Dimensions | $291 / 2 \mathrm{H} \times 91 / 2 \mathrm{~W} \times 10 \mathrm{D}$ |
| Welght | 45 lbs. |
| Type | Transmission line |
| Drivers | $8^{\prime \prime}$ woofer; $1^{\prime \prime}$ dome tweeter |
| Response | 36 Hz to $22 \mathrm{kHz} \pm 3 \mathrm{~dB}$ re 90 dB |
|  | SPL at 1 meter at 1 watt |
| Crossover | 1.2 kHz |
| Impedance | 8 ohms |
| Min. power | $35 \mathrm{watts}(15.5 \mathrm{dBW})$ |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | None |
| Features | Same as model TL-4050 |


| Gamma | Gold 3000M |
| :---: | :---: |
| Price | \$329 |
| Dimensions | $251 / 4 \mathrm{H} \times 14 \mathrm{~W} \times 113 / 4 \mathrm{D}$ |
| Weight | 55 lbs . |
| Type | Bias port |
| Drivers | $10^{\circ}$ heavy-duty butyl woofer; soft dome midrange; soft-dome tweeter |
| Response | 34 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 90 dB SPL at 1 meter at 1 watt |
| Crossover | $900 \mathrm{~Hz} ; 4.4 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 35 watts ( 15.5 dBW ) |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | Midrange/tweeter |


| Gamma | 315X |
| :---: | :---: |
| Price | \$289 |
| Dimensions | $27 \mathrm{H} \times 157 / 3 \mathrm{~W} \times 113 / 4 \mathrm{D}$ |
| Weight | 50 lbs . |
| Type | Acoustic suspension |
| Drivers | 15" woofer; 5" midrange; 2" polyaxial tweeter |
| Response | 30 Hz to 20 kHz re 90 dB SPL at 1 meter at 1 watt |
| Crossover | 600 Hz |
| Impedance | 8 ohms |
| Min power | 25 watts (14 dBW) |
| Max. power | 75 watts ( 18.75 dBW ) |
| Controls | Midrange/tweeter |
| Gamma | 310X |
| Price | \$219 |
| Dimensions | $213 / 4 H \times 121 / 4 W \times 10 \mathrm{D}$ |
| Weight | 37 lbs. |
| Type | Acoustic suspension |
| Drivers | $10^{\text {" }}$ woofer; $5^{\prime \prime}$ convex midrange; $2^{\prime \prime}$ polyaxial tweeter |
| Response | 36 Hz to 18 kHz re 91 dB SPL at 1 meter at 1 watt |
| Crossover | $900 \mathrm{~Hz} ; 4.5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 15 watts ( 11.75 dBW ) |
| Max. power | 60 watts ( 11.75 dBW ) |
| Controls | Midrange/tweeter |
| Features | Handcrafted |
| Gamma | Gold 2006M |
| Price | \$129 |
| Dimensions | $13 \mathrm{H} \times 18 \mathrm{~V} / 2 \mathrm{~W} \times 9 \mathrm{D}$ |
| Weight | $17 \mathrm{lbs}$.8 oz . |
| Type | Bias port |
| Drivers | $61 / 2^{\prime \prime}$ woofer; dome tweeter |
| Response | 40 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 91 dB SPL at 1 meter at 1 watt |
| Crossover | 1.5 kHz |
| Impedance | 8 ohms |
| Min. power | 25 watts (14 dBW) |
| Max. power | 75 watts (18.75 dBW) |
| Controls | Tweoter |

Gamma 204X
Price $\$ 99$

| Dimensions | $11 \mathrm{H} \times 61 / 2 \mathrm{~W} \times 7 \mathrm{D}$ |
| :--- | :--- |
| Weight | 9 lbs |
| Type | Acoustic suspension |
| Drivers | $5^{\prime \prime}$ long-throw woofer; $3^{\prime \prime}$ phenolic |
|  | tweeter |
| Response | 50 Hz to 18 kHz re 87 dB SPL at 1 |
|  | meter at 1 watt |
| Crossover | 1.5 kHz |
| Impedance | 8 ohms |
| Min. power | $15 \mathrm{watts}(11.75 \mathrm{dBW})$ |
| Max. power | 40 watts (16 dBW) |
| Controls | Tweeter |

## Models also available

TL-3050, \$550; Gamma 412X \$269; TL-1650, \$250; Gamma Gold 2008M, \$159; Gamma 308X \$139, Gamma 208X, \$1.19

## MATRECS

Matrecs Industries
805 Woodman Ave.
Winslow, III. 61089

MA-130

| Price | $\$ 179.50$ |
| :--- | :--- |
| Dimensions | $24 \mathrm{H} \times 15 \mathrm{~W} \times 95 / \mathrm{BD}$ |
| Weight | 37 lbs. |
| Type | Acoustic suspension |
| Drivers | $12^{\prime \prime}$ woofer; $1^{\prime \prime}$ tweeter; $6^{n}$ midrange |
| Response | 35 Hz to 22 kHz |
| Crossover | $1 \mathrm{kHz} ; 5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 8 watts $(9 \mathrm{dBW})$ |
| Max. power | 75 watts (18.75 dBW) |
| Controls | $6^{\prime \prime}$ isolated midrange/tweeter level |
|  | control |

MA-211
Price $\$ 173.50$
Dimensions $323 / 4 H \times 141 / 4 W \times 101 / 8 \mathrm{D}$

## Welght 40 lbs

Type Acoustic suspension
Orivers $\quad 10^{\prime \prime}$ woofer; $13 / 4^{n}$ tweeter; $4^{1 / 2^{\prime \prime}}$ midrange
Response $\quad 40 \mathrm{~Hz}$ to 22 kHz
Crossover $\quad 2.5 \mathrm{kHz} ; 5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 8 watts ( 9 dBW )
Max. power 50 watts ( 17 dBW )
Controls Midrange; tweeter
Features Passive radiator; ferrofluid in voice
coll gap dissipates heat
MA-103

| Price | $\$ 65.50$ |
| :--- | :--- |
| Dimensions | $20 \mathrm{H} \times 12 \mathrm{~W} \times 95 / \mathrm{sD}$ |
| Weight | 18 lbs .8 oz. |
| Type | Acoustic suspension |
| Drivers | $10^{\prime \prime}$ woofer; $3^{\prime \prime}$ tweeter |
| Response | 35 Hz to 22 kHz |
| Crossover | 5 kHz |
| Impedance | 8 ohms |
| Min. power | 5 watts $(7 \mathrm{dBW})$ |
| Max. power | 35 watts $(15.5 \mathrm{dBW})$ |

MA-83
Price
Weight 14
Type Acoustic suspension
Drivers $\quad 8^{\prime \prime}$ woofer, $3^{\prime \prime}$ tweeter
Response 35 Hz to 20 kHz
Crossover 5 kHz
Impedance 8 ohms
Min. power 2 watts ( 3 dBW )
Max. power 25 watts ( 14 dBW )

## Models also available

MA-105, \$165.50; MA-124,

McINTOSH
McIntosh Loudspeaker Division 2 Chambers St.
Binghamton, N.Y. 13903

XR-7

| Price | \$1,099 |
| :---: | :---: |
| Dimensions | 401/4H $\times 191 / 2 \mathrm{~W} \times 141 / 8 \mathrm{D}$ |
| Weight | 118 lbs . |
| Type | Acoustic suspension |
| Drivers | Two 12" wooters; $8^{\prime \prime}$ lower midrange; two $11 / 2^{\prime \prime}$ dome upper midranges; four 25/8" coaxial supertweeters |
| Response | 20 Hz to 20 kHz |
| Crossover | 250 Hz ; $1.4 \mathrm{kHz} ; 7 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 30 watts ( 14.75 dBW ) |
| Max. power | 300 watts ( $243 / 4 \mathrm{dBW}$ ) peak |
| Features may be used | McIntosh environmental equalizer |

may be used
XR-6
Price $\quad \$ 749$
Dimensions $3513 / 16 \mathrm{H} \times 171 / 2 \mathrm{~W} \times 13 \mathrm{D}$
Weight 81 lbs .
Type Acoustic suspension
Drivers $\quad 12^{\prime \prime}$ woofer; $8^{n}$ lower midrange; $11 / 2^{\prime \prime}$ dome upper midrange; $1^{\prime \prime}$ dome tweeter
Response $\quad 20 \mathrm{~Hz}$ to 20 kHz
Crossover $250 \mathrm{~Hz} ; 1.4 \mathrm{kHz} ; 7 \mathrm{kHz}$
Impedance 8 ohms
Min. power 30 watts ( 14.75 dBW )
Max. power 200 watts ( 23 dBW ) Peak
Features
McIntosh environmental equalizer
may be used
ML-10C
Price $\$ 319$
Dimensions $25 \mathrm{H} \times 1213 / 16 \mathrm{~W} \times 125 / 6 \mathrm{D}$
Weight 47 lbs .
Type Acoustic suspension
Drivers $\quad 10^{n}$ woofer; $112^{n}$ dome midrange; coaxial super tweeter
Response 20 Hz to $20 \mathrm{kHz}, 89 \mathrm{~dB} \mathrm{SPL}$ at 1 meter at 1 watt
Crossover $1 \mathrm{kHz} ; 7 \mathrm{kHz}$
Impedance 8 ohms
Min. power 20 watts ( 13 dBW )
Max. power 100 watts ( 20 dBW )
Features
M
may be used

## Models also available

XR-5, \$599; XR-3, \$425
MCS ${ }^{\star}$ SERIES
J.C. Penney

1301 Ave. of the Americas
New York, N.Y. 10019
8228
Price $\$ 400$
Dimensions $361 / 2 \mathrm{H} \times 16 \mathrm{~W} \times 101 / 2 \mathrm{D}$
Weight $\quad 100 \mathrm{lbs}$.
Type $\quad 12^{\prime \prime}$ woofer; two $2^{\prime \prime}$ soft-dome mi-
dranges; $1^{\text {² }}$ soft-dome tweeter
Drivers Air suspension
Crossover $600 \mathrm{~Hz} ; 2 \mathrm{kHz}$
impedance 8 ohms
Min. power 50 watts ( 17 dBW )
Max. power 150 watts ( 21.75 dBW )
Controls Mid/tweeter controls
Features Ferrofluid cooled elements; built-in stand; removable grille

8226
Price $\$ 200$

| Dimensions | $26 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 101 / 2 \mathrm{D}$ |
| :---: | :---: |
| Weight | 46 lbs . |
| Type | Bass reflex |
| Drivers | $12^{\prime \prime}$ bass woofer; $11 / 2^{\prime \prime}$ sott-dome midrange; $2^{n}$ cone tweeter |
| Crossover | 600 Hz ; 6 kHz (-12 dB/octave) |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 60 watts ( 17.75 dBW ) |
| Controls | Tweeter; midrange |
| Features | Removable grille |

## Models also available

 8227. \$300
## MICRO-ACOUSTICS

Micro-Acoustics Corp.
8 Westchester Plaza
Elmsford, N.Y. 10523

FRM-1AX

| Price | \$225 |
| :---: | :---: |
| Dimensions | $253 / 4 \mathrm{H} \times 153 / 8 \mathrm{~W} \times 123 / 4 \mathrm{D}$ |
| Weight | 40 lbs . |
| Type | Acoustic suspension |
| Drivers | Five $11 / 4$ " drivers mounted in a Pen-ta-Axis array; one $10^{\prime \prime}$ woofer with heavy-duty dynamic assembly |
| Response | 32 Hz to $18 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ |
| Crossover | 1.7 kHz |
| Impedance | 8 ohms |
| Min. power | 18 watts ( 12.5 dBW ) (at 8 ohms ) continuous |
| Max. power | 70 watts ( 18.5 dBW ) (at 8 ohms) continuous |
| Controls | Tweeter (adjusts center on-axis iweeters); dispersion control (adjusts four surrounding off-axis tweeters simultaneously) |
| Features tection circuit | Full 10-year warranty; tweeter pro- |

FRM-3AX
Price $\$ 139.50$
$\begin{array}{ll}\text { Dimensions } & 22 \mathrm{~W} \times 125 / 8 \mathrm{H} \times 91 / 2 \mathrm{D} \\ \text { Weight } & 241 / 4 \mathrm{lbs} .\end{array}$
Type Vented
Drivers One 2" tweeter pivoted on vari-axis dispersion assembly; one $8^{\prime \prime}$ woofer operating into a twin-ducted port
Response $\quad 45 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 4 \mathrm{~dB}$
Crossover 2.5 kHz
Impedance $\quad 8$ ohms
Min. power
7 watts ( 8.5 dBW ) (at 8 ohms ) continuous
Max. power 50 watts ( 17 dBW ) (at 8 ohms ) continuous
Controls High-frequency driver rotates for
Features Full 10-year warranty; tweeter pro-
tection circuit

MS-1

| Price | $\$ 135 / \mathrm{pr}$. |
| :--- | :--- |
| Dimensions | $4 \mathrm{H} \times 91 / \mathrm{W} \times 51 / 4 \mathrm{D}$ |
| Weight | 21 los .5 oz |
| Drivers | Four $11 / \mathrm{m}^{\prime \prime}$ drivers |
| Crossover | $3.5 \mathrm{kHz;} 7 \mathrm{kHz}$ |
| Impedance | 16 ohms |
| Min. power | 5 watts $(7 \mathrm{dBW})$ |
| Max. power | 60 watts $(17.75 \mathrm{dBW})$ |
| Features | Full 5 -year warranty |

## Models also available <br> FRM-2AX, \$180

## MITSUBISHI <br> Melco Sales, Inc. 3030 E. Victoria St. Compton, Calif. 90221



MS-30
Price $\$ 395$
Dimensions $265 / 8 \mathrm{H} \times 153 / \mathrm{BW} \times 131 / 2 \mathrm{D}$
Weight 55 lbs .
Type Acoustic suspension
Drivers 12" honeycomb-cone wooter; $4^{\circ}$
cone midrange; $11 / 4^{\text {" }}$ tweeter
Response 30 Hz to 20 kHz
Crossover $800 \mathrm{~Hz} ; 5 \mathrm{kHz}$
Impedance 6 ohms
Min. power 30 watts ( 14.75 dBW )
Max. power 150 watts ( 21.75 dBW )
Controls Midrange; tweeter
Features Overload-protection circuit, edge-
less cabinet and grille
MS-10

| Price | $\$ 165$ |
| :--- | :--- |
| Dimensions | $221 / 2 \mathrm{H} \times 125 / 6 \mathrm{~W} \times 111 / 2 \mathrm{D}$ |
| Weight | 32 lbs. |
| Type | Acoustic suspension |
| Drivers | $10^{\prime \prime}$ honeycomb-cone woofer; $2^{\prime \prime}$ |
|  | cone tweeter |
| Response | 35 Hz to 20 kHz |
| Crossover | 1.5 kHz |
| Impedance | 6 ohms |
| Min. power | 20 watts (13 dBW) |
| Max. power | 100 watts (20 dBW) |
| Controls | Tweeter |
| Features | Overload-protection circuit; edge- |
| less cabinet and grill |  |

Models also available
MS-20, \$275

## MONITOR

General Audio Corp.
3504 Hillcroft
Houston, Tex, 77027

| Monitor | M-1000 |
| :---: | :---: |
| Price | \$500 |
| Dimensions | $5731 / 4 \mathrm{H} \times 16 \mathrm{~W} \times 131 / 8 \mathrm{D}$ |
| Weight | 65 lbs . |
| Type | Vented |
| Drivers | Two 10" bass drivers; two 4" frame cone drivers; four $31 / 2^{2 \prime}$ phenolic ring tweeters |
| Response | 20 Hz to 20 kHz |
| Crossover | $900 \mathrm{~Hz} ; 1.5 \mathrm{kHz} ; 5 \mathrm{kHz} ; 6 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| MIn. power | 10 watts (10 dBW) |
| Max. power | 80 watts (19 dBW) |


| Monitor | Mark IV |
| :---: | :---: |
| Price | \$279.95 |
| Dimensions | $26 \mathrm{H} \times 151 / 2 \mathrm{~W} \times 123 / 4 \mathrm{D}$ |
| Weight | 40 lbs . |
| Type | Vented |
| Drivers | $12^{\prime \prime}$ bass driver; two $4 \frac{1}{2} 2^{\prime \prime}$ frame cone drivers; $31 / 2^{\prime \prime}$ phenolic ring tweeter |
| Response | 20 Hz to 20 kHz |
| Crossover | $850 \mathrm{~Hz} ; 3 \mathrm{kHz} ; 6 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 10 watts (10 dBW) |
| Max. power | 65 watts (18 dBW) |
| Monitor | Mark \|I |
| Price | \$209.95 |
| Dimensions | $23 \mathrm{H} \times 14 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | 29 lbs . |
| Type | Vented |
| Drivers | $10^{\prime \prime}$ bass driver; $41 / 2^{\prime \prime}$ frame cone driver; $31 / 2^{\prime \prime}$ phenolic ring tweeter |
| Response | 26 Hz to 20 kHz |
| Crossover | 1 kHz ; 3.5 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 35 watts (15.5 dBW) |

## Models also available

Monitor Mark III, \$239.95

## MORDAUNT-SHORT

Mordaunt-Short, Inc.
1919 Middle Country Rd.
Centereach, N.Y. 11720

| Signifer <br> Price | $\$ 1,480 / \mathrm{pr}$. including matching stand |
| :---: | :---: |
| Dimensions | $317 / 8 \mathrm{H} \times 151 / 4 \mathrm{~W} \times 133 / 4 \mathrm{D}$ |
| Weight | 64 lbs . |
| Type | Three-way reflex |
| Drivers | $20^{*}$ wooter; $52 / 5^{\prime \prime}$ midrange; $1^{\prime \prime}$ wide-dispersion synthetic-dome tweeter |
| Response | 38 Hz to $25 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Crosscuer | $500 \mathrm{~Hz} ; 4 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 25 watts (14 dBW) |
| Max. power | 250 watts ( 24 dBW ) |
| Contrals | Bass: treble |
| Pageant | Series 2 |
| Price | \$495/pr. |
| Dimensions | $21 \mathrm{H} \times 13 \mathrm{~W} \times 9 \mathrm{D}$ |
| Weight | 21 lbs . |
| Type | Bass reflex |
| Drivers | Woofer-midrange; synthetic-dome tweeter |
| Response | 25 Hz ; 25 kHz |
| Crossover | 3.5 kHz |
| Impedsnce | 8 ohms |
| Min. power | 15 watts ( 11.75 dBW ) |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | Midrange; tweeter |
| Features | Walnut or teak wood finish; availaing stands |

Carnival Series 2
Price $\$ 275 /$ pr
Dimensions $153 / 4 \mathrm{H} \times 91 / 2 \mathrm{~W} \times 53 / 4 \mathrm{D}$
Weight $\quad 11 \mathrm{lbs} 9 \mathrm{oz}$.
Type Dynamic
Drivers $8^{\prime \prime}$ midrange; 25/8" paper-cone tweeter
Response $\quad 85 \mathrm{~Hz}$ to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover $\quad 3.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 80 watts (19 dBW)
Features Walnut or teak wood finish

## NAGRA <br> Nagra Magnetic Recorders, Inc. <br> 19 W. 44th St. <br> New York, N.Y. 10036

## DSM

Price $\$ 1.297$
Dimensions $93 / 8 \mathrm{H} \times 103 / 4 \mathrm{~W} \times 51 / 4 \mathrm{D}$
Weight $\quad 13$ lbs. 14 oz .
Type Acoustic suspension
Drivers Two cone
Response $\quad 60 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover $\quad 2.2 \mathrm{kHz}$
Impedance 8 ohms
Features Built-in amp

NEAL-FERROGRAPH
Neal-Ferrograph
652 Glenbrook Road
Glenbrook, Conn. 06906

| S-23 |  |
| :---: | :---: |
| Price | \$416 |
| Dimensions | $1731 / 6 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 11 \mathrm{D}$ |
| Weight | 19 lbs. 8 oz. |
| Type | Acoustic suspension with internal labyrinth |
| Drivers | Two 4" long-throw roll surround; $1^{1 "}$ soft dome |
| Response | 65 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 90 dB SPL at 1 meter at 1 watt |
| Impedance | 6 ohms (nominal) |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 35 watts ( 15.5 dBW) |
| Features | Walnut or teak veneer; crossover |
| allows one wooter to switch over to midrange |  |

## NORDMENDE

Sterling Hi-Fidelity, Inc.
22-20 40th Ave.
Long Island City, N.Y. 11101
LB-26

| Price | $\$ 100 / \mathrm{pr}$ |
| :--- | :--- |
| Dimensions | $9 \mathrm{H} \times 6 \mathrm{~W} \times 5 \mathrm{D}$ |
| Weight | 4 lbs. |
| Type | Dynamic |
| Drivers | $5^{n} ; 13 / 4^{"}$ |
| Response | 50 Hz to 20 kHz |
| Impedance | $4 / 8 \mathrm{ohms}$ |
| Min. power | 3 watts $(4.75 \mathrm{dBW})$ |
| Max. power | 15 watts $(11.75 \mathrm{dBW})$ |
|  |  |
| LB-25 |  |
| Price | $\$ 80 / \mathrm{pr}$. |
| Dimensions | $9 \mathrm{H} \times 6 \mathrm{~W} \times 5 \mathrm{D}$ |
| Weight | 3 lbs .12 oz. |
| Type | Dynamic |
| Drivers | One 5 |
| Response | 50 Hz to 15 kHz |
| Crossover | 7.5 kHz |
| Impedance | $4 / 8$ ohms |
| Min. power | 3 watts $(4.75 \mathrm{dBW})$ |
| Max. power | 15 watt $(11.75 \mathrm{dBW})$ |

NORMAN LABORATORIES
Norman Laboratories, Inc.
2278 Industrial Blvd.
Norman, Okla. 73069

| Nine |  |
| :--- | :--- |
| Price | $\$ 470$ |
| Dimensions | $451 / 2 \mathrm{H} \times 151 / 2 \mathrm{~W} \times 15 \mathrm{D}$ |
| Weight | 75 lbs. |
| Type | Acoustic suspension |
| Orivers | Three $10^{\prime \prime}$ wooters; three $1^{n}$ tweet- |
|  | ers |
| Response | 35 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}(1.5 \mathrm{kHz}$ |
|  | to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB})$ |
| Crossover | 1.5 kHz |
| Impedance | 4 ohms |
| Min. power | $30 \mathrm{watts}(14.75 \mathrm{dBW})$ |
| Max. power | 70 watts (18.5 dBW) continuous |
| Controls | Tweeter; woofer |
| Features $\quad$ Rear-firing third woofer operates in |  |
| either acoustic or passive radiator mode for differ- |  |
| ing bass outputs; tweeter-protection circuit |  |
| breaker; magnetic damping fluld in tweeters |  |

## Ten

$\begin{array}{ll}\text { Price } & \$ 310 \\ \text { Dimensions } & 371 / 2 \mathrm{H} \times 15 \mathrm{~W} \times 13 \mathrm{D} \\ \text { Weight } & 60 \mathrm{lbs} .\end{array}$
$\begin{array}{ll}\text { Weight } & 60 \mathrm{lbs} \\ \text { Type } & \text { Acoustic suspension }\end{array}$
Drivers Two 10" woofers; two 1 "tweeters
Response $\quad 40 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}(1.5 \mathrm{kHZ}$ to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ )
Crossover $\quad 1.5 \mathrm{kHz}$
Impedance
4 ohms
Min. power 30 watts ( 14.75 dBW )
Max. power 70 watts ( 18.5 dBW ) continuous
Controls
Features Tweeter-protection circuit breaker; magnetic damping fluid in tweeters

Eight

| Price | $\$ 140$ |
| :--- | :--- |
| Dimensions | $23 \mathrm{H} \times 12 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | 28 lbs. |


| Weight | 28 lbs. |
| :--- | :--- |
| Type | Acoustic suspension |

Orivers $\quad 10^{\prime \prime}$ wooter; $9^{\prime \prime}$ tweeter
Response $\quad 45 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}(1.5 \mathrm{kHz}$ to $20 \mathrm{kHz},+2 \mathrm{~dB}$ )

| Crossover | 1.5 kHz |
| :--- | :--- |
| Impedance | 8 ohms |
| Min. power | 15 watts (11.75 dBW) |
| Max. power | 35 watts (15.5 dBW) continuous |
| Controls | Tweeter 3-position |
| Features | Magnetic damping fluid in tweeter |

## Models also available

Seven, \$220
OHM ACOUSTICS
OHM Acoustics Corp.
241 Taaffe Place
Brooklyn, N.Y. 11205

## F

Price $\quad \$ 950$
Dimensions $44 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 173 / 4 \mathrm{D}$ (bottom); $13 \mathrm{~W} \times 13 \mathrm{D}$ (top)
Weight 80 lbs .
Type Walsh; sealed system
Drivers $\quad 12^{\prime \prime}$ Walsh driver
Response $\quad 35 \mathrm{~Hz}$ to $19 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 90 dB SPL
Impedance 4 ohms
Min. power 56 watts ( 17.5 dBW )
Max. power 150 watts ( 21.75 dBW ) conitinuous above 1 kHz
Features Protective fused; 10 lbs .4 oz magnetic structures; $3^{n}$ voice coil

1
Price $\quad \$ 675$
Dimensions $31 \mathrm{H} \times 151 / 2 \mathrm{~W} \times 16 \mathrm{D}$
Weight 76 lbs .
Type Vented with subwoofer
Drivers $\quad 12^{\prime \prime}$ subwoofer; $8^{\prime \prime}$ woofer; $2^{\prime \prime}$ low tweeter; two 1" dome tweeters

Response $\quad 35 \mathrm{~Hz}$ to $19 \mathrm{kHz}, \pm 31 / 2 \mathrm{~dB}$
Crossover $100 \mathrm{~Hz} ; 2 \mathrm{kHz} ; 10 \mathrm{kHz}$
Impedance 8 or 4 ohms
Min. power 10 watts ( 10 dBW )
Max. power 1,000 watts ( 30 dBW )
Controls
Four (1 for each tweeter and for $8^{*}$ woofer)
Features Walnut, oak, teak, and black cabinets; omnidirectional response

## N Subwoofer

Price $\$ 340$
Dimensions $15 \mathrm{H} \times 16 \mathrm{~W} \times 15 \mathrm{D}$
Type Dual subwoofer with passive radiators
Drivers Two $8^{n}$ woofers; two $12^{n}$ passive radiators
Response $\quad 32 \mathrm{~Hz}$ to $140 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 89 dB SPL at 1 meter at 1 watt
Crossover 140 Hz
Impedance $8 / 4$ ohms
Min. power 10 watts ( 10 dBW )
Max. power 100 watts ( 20 dBW )
Controls Level-matching
Features Built-in passive crossover for both channels in one walnut veneer enclosure

|  |  |
| :---: | :---: |
| Price | \$185 |
| Dimensions | $20 \mathrm{H} \times 12 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | $33 \mathrm{lbs}$.8 oz . |
| Type | Vented |
| Drivers' | $8^{\prime \prime}$ woofer; $2^{n \prime}$ low tweeter; $2^{\prime \prime}$ high tweeter |
| Response | 42 Hz to $20 \mathrm{~Hz}, \pm 4 \mathrm{~dB}$ |
| Crossover | $1.7 \mathrm{kHz} ; 10 \mathrm{kHz}$ |
| Impedance | 8 or 4 ohms |
| Min. power | 8 watts ( 9 dBW ) for approx. 100 dB SPL at $3^{3}$ |
| Max. power | 100 watts (10 dBW) |
| Controls | Two (one for each tweeter) |
| Features optimally ven | Quasi third-order Butterworth filter; ed enclosures oiled walnut veneer |


| M |  |
| :---: | :---: |
| Price | \$140 |
| Dimensions | $71 / 0^{\prime \prime} \mathrm{H} \times 41 / 2^{\prime \prime} \mathrm{W} \times 41 / 2^{\prime \prime} \mathrm{D}$ |
| Type | Vented |
| Drivers | $4^{\prime \prime}$ woofer; $1^{\prime \prime}$ dome tweeter |
| Response | 120 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 90 dB SPL at 1 meter at 1 watt |
| Crossover | $3.5, \mathrm{kHz}$ |
| Impedance | 4 ohms |
| Min. power | 5 watts (7 dBW) |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | None |
| Features | Black metal cabinet with bracket |
| Models also available |  |
|  | H. \$360; C-2, \$275; E, \$120 |

R.W. OLIVER
R.W. Oliver Electronics, Ltd. 580 E. Dobbie Ave. Winnipeg, Manitoba R3K 1G4

## Thor-II Center-Channel

## Subwoofer

| Price | $\$ 895$ (dependent on finish) |
| :--- | :--- |
| Dimensions | $18 \mathrm{H} \times 24 \mathrm{~W} \times 24 \mathrm{D}$ |
| Weight | 112 lbs. |
| Type | Self-powered motional feedback <br>  <br>  <br> Subwoofer |
| Drivers | Two $12^{\prime \prime}$ high-power long-throw |
| Response | 15 Hz to $100 \mathrm{~Hz}, \pm 3 \mathrm{~dB}$ |
| Crossover | 50 to $100 \mathrm{~Hz} \mathrm{(variable)}$ |
| Impedance | 10 K ohms |
| Max. power | 120 dB SPL (acoustic power) |
| Controls | Continuously variable bandwidth <br>  <br>  <br>  <br>  <br>  <br> (low frequency, 15 to 50 Hz ; high <br> frequency, 50 to 100 Hz ) sensitivity <br> control: Ilmiter on/off |



Unn DMS Isobarik


Mordaunt-Short Signiffer


Mitsubleht MS-40



Phase Research R

Features Integral amplification with motional feedback and limiting; summing amplifier combines left and right channels; selection of inlaid stone tops

## Model 3

Price
Weight
Type
Tuned ducted port
$2^{\prime \prime} \times 6^{\prime \prime}$ horn tweeter
Crossover $\quad 3.5 \mathrm{kHz}$
Impedance 4 ohms
Min. power 10 watts ( 10 dBW )
Max. power 150 watts ( 22 dBW )
Features Tailored response for disco and PA application; protective metal mesh under foam grille; compact

## Models also available

Model 7 Speaker, \$280
OLSON
Olson Electronics
260 S. Forge
Akron, Ohio 44327

## FR-3

Price

| Dimensions | $27 \mathrm{H} \times 18 \mathrm{~W} \times 12 \mathrm{D}$ |
| :--- | :--- |
| Weight | 55 lbs . |
| Type | Vented |
| Drivers | $12^{\prime \prime}$ woofer; $3^{\prime \prime}$ upper midrange; 5" |
|  | midrange; $1^{\prime \prime}$ extended tweeter |
| Response | 32 Hz to $22.5 \mathrm{kHz}, \pm^{21 / 2} \mathrm{~dB}$ |
| Crossover | $600 \mathrm{Hz;} 4 \mathrm{kHz} 7.8 \mathrm{kHz}$ |
| Impedance | 6.1 ohms |
| Min. power | 20 watts ( 13 dBW ) |
| Max. power | 80 watts ( 19 dBW ) |
| Controls | Midrange; high range; direct/re- |
|  | flecting adjusts |
| Features | Velocity labrinth |

SP-580 Pedestal Tower II
Price $\$ 349.98$
Dimensions $38 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 131 / 2 \mathrm{D}$
Weight $\quad 60 \mathrm{lbs}$.
Type Acoustic suspension
Drivers Two 8" woofers; two 5" midranges;
two 211/4" tweeters
Response 50 Hz to 22 kHz
Crossover 1.5 kHz; 5 kHz
Impedance 8 ohms
Min. power 6 watts ( 7.75 dBW )
Max. power 50 watts ( 17 dBW )
Controls L-pad midrange and tweeter
Features Both tweeters have silicone-cooled

| SP-579 "Acoust Aire IV". |  |
| :--- | :--- |
| Price $\$ 169.98$ <br> Dimensions $221 / 2 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 101 / 2 \mathrm{D}$ <br> Weight 38 lbs. <br> Type Acoustic suspension <br> Drivers 100 woofer; $5 "$ midrange; $21 / 4 "$ <br>  tweeter <br> Response 40 Hz to 22 kHz <br> Crossover $2.2 \mathrm{kHz} ; 6 \mathrm{kHz}$ <br> Impedance 8 ohms <br> Min. power 4 watts <br> Max. power 25 watts <br> Controls L-pad midrange and tweeter <br> Features LC crossover |  |
|  |  |

## Models also available

SP-585 "Acoust Aire IV", \$219.98

## ONKYO

Onkyo U.S.A. Corp. 42-07 20th Ave.
Long Island City, N.Y. 11105

| 240 |  |
| :---: | :---: |
| Price | \$250 |
| Dimensions | $27 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 13 \mathrm{D}$ |
| Weight | 45 lbs . |
| Type | Acoustic suspension |
| Drivers | $15^{n}$ woofer; 4" carbon-fiber midrange driver; $1^{1 "}$ titanium dome tweeter |
| Response | 45 Hz to $20 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 93 dB SPL at 1 meter at 1 watt |
| Crossover | $700 \mathrm{~Hz} ; 4.5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 20 watts (13 dBW) |
| Max. power | 100 watts ( 20 dBW ) continuous |
| Controls | Midrange; tweeter |
| 160 |  |
| Price | \$165 |
| Dimensions | $22 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 1234 \mathrm{D}$ |
| Weight | 30 lbs . |
| Type | Acoustic suspension |
| Drivers | 12 " wooter; $23 / 4^{n}$ cone tweeter with duralumin center cap |
| Response | 50 Hz to $20 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 91 dB SPL at 1 meter at 1 watt |
| Crossover | 2 kHz |
| Impedance | 8 ohms |
| Min. power | 15 watts (11.75 dBW) |
| Max. power | 80 watts (19 dBW) continuous |
| Controls | Tweeter |
| OPTONICA |  |
| Sharp Electronics Corp. |  |
| 10 Keystone Place |  |
| Paramus | N.J. 07652 |

CP-5151
Price $\$ 400$
Dimensions $28 \mathrm{H} \times 16 \mathrm{~W} \times 135 / 8 \mathrm{D}$
Weight 61 lbs 8 oz .
Type Acoustic suspension
Drivers
Response
Crossover
Impedance
Mirr. power
Max. power
Controls
Features Crossover has switchable 30 kHz
filter; speaker may be triamplified
CP-2121
Price $\$ 210$
Dimensions $283 / 4 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 121 / 6 \mathrm{D}$
Weight 33 lbs .
Type Passive radiator
Drivers $\quad 10^{\text {" woofer; }} 3^{\prime \prime}$ cone tweeter
Response 40 Hz to 20 kHz
Crossover 1.2 kHz
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 50 watts (17 dBW)

## PEDERSON ACOUSTICS

Pederson Acoustics
Box 47
Chestnut Hill, Mass. 02167

HF-2

| Price | $\$ 7,500 / \mathrm{pr}$ |
| :--- | :--- |
| Dimensions | $48 \mathrm{H} \times 32 \mathrm{~W} \times 26 \mathrm{D}$ |
| Weight | 400 lbs. |
| Type | Direct radiator/folded hom |
| Drivers | Three dynamic (optional ribbon |
|  | tweeter) |
| Response | 20 Hz to 20 kHz |
| Crossover | $200 \mathrm{~Hz} ; 3 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 25 watts ( 14 dBW ) |
| Max. pcwer | 250 watts (24 dBW) |

## PETROFF LABS

Petroff Labs
11436 Victoria Ave.
Los Angeles, Calif. 90066

| PL-6D Dipole Panel |  |
| :--- | :--- |
| Price | $\$ 500 /$ pr. |
| Dimensions | $42 \mathrm{H} \times 12 \mathrm{~W} \times 41 / 2 \mathrm{D}$ |
| Weight | 30 lbs. |
| Type | Dipole radiating line-source in box- <br> less configuration |
|  |  |


| vers | Four $41 / 2^{\prime \prime}$ midranges; one tweeter |
| :---: | :---: |
| Response | 100 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 90 SPL at 1 meter at 1 watt |
| Crossover | $100 \mathrm{~Hz} ; 5 \mathrm{kHz}$ |
| Impedance | 8 oh |
| Min. power | 40 watts ( 16 dBW ) |
| Max. power | 200 watts ( 23 dBW ) |
| Controls | High-frequency contour |
|  |  |
| atures ofer; | Must be used with PL-GW overs included; Biamping no |

quired; total system price $\$ 598$ with subwooter
PL-6W Subwoofer

| Price | $\$ 198$ |
| :--- | :--- |
| Dimensions | $14 \mathrm{H} \times 251 / 2 \mathrm{~W} \times 151 / 2 \mathrm{D}$ |
| Weight | 50 lss. |
| Type | Acoustic suspension |
| Drivers | $\mathrm{Two} 10^{n}$ mass-loaded wooters |
| Response | 30 Hz to $100 \mathrm{~Hz}, \pm 4 \mathrm{~dB}$ re 90 dB |
|  | SPL at 1 meter at 1 watt |
| Crossover | 100 Hz |
| Impedance | 8 ohms |
| Min. power | 50 watts $(16 \mathrm{dBW})$ |
| Max. power | 200 watts $(23 \mathrm{dBW})$ |
| Features | Includes two internal 100 Hz pas- |
| sive crossovers; smoked glass top inlay |  |

PHASE RESEARCH
Phase Research Corp.
3207 Oradell
Dallas, Tex. 75220
"R"
Price N/A
Dimenslons $26 \mathrm{H} \times 13 \mathrm{~W} \times 14 \mathrm{D}$
Weight 48 lbs .
Type Modified transmission line
Drivers $\quad 8^{\prime \prime}$ wooter; ${ }^{13 / 8^{\prime \prime}}$ dome midrange tweeter
Response $\quad 38 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3.5 \mathrm{~dB}$ re 88 dB SPL at 1 meter at 1 watt
Crossover $\quad 1.8$ kHz
Impedance 8 ohms
Min. power 15 watts ( 11.75 dBW )
Max. power 250 watts ( 24 dBW )
Features Time-phased; mirror imaged; low diffraction; fiberwood construction; multiple internal bracing; high power resistors; hickory vinyl finish, $21 / 2 \%$ tolerance level crossovers
"RT"
Price N/A
Dimensions $\quad 42 \mathrm{H} \times 13 \mathrm{~W} \times 12 \mathrm{D}$
Weight $\quad 70 \mathrm{lbs}$.
Type Modified transmission line
Drivers $\quad 8^{\prime \prime}$ woofer; $13 / 8^{n}$ dome midrangetweeter
Response $\quad 32 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3.5 \mathrm{~dB}$ re 88 dB SPL at 1 meter at 1 watt
Crossover $\quad 1.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 20 watts ( 13 dBW )
Max. power 250 watts ( 24 dBW )
Features Time-phased; mirror-imaged; Tow diffraction; fiberwood construction; multiple internal bracing; high power resistors $2 \%$ tolerance level crossovers; walnut veneer finish

## PHILIPS

Philips High Fidelity
Laboratories, Ltd.
P.O. Box 2208
Fort Wayne, Ind. 46801

RH-545
Price $\quad \$ 1.500$
Dimensions $251 / 2 \mathrm{H} \times 17 \mathrm{~W} \times 12^{1 / 2 \mathrm{D}}$

| Weight | 67 lbs |
| :---: | :---: |
| Type | Acoustic suspension with triamplification |
| Drivers | $12^{\prime \prime}$ high compliance woofer; $2^{*}$ |
| Response | 20 Hz to 20 kHz |
| Crossover | $500 \mathrm{~Hz} ; 3 \mathrm{kHz}$ |
| Min. power | Can be driven from preamp |
| Max. power | Internal amplifiers |
| Controls | Bass cut/boost; treble rolloff; tre-ble-frequency-selection switch; 3 room-correction filter switches; channel-selector swith; automatic on/off switch; input-sensitivity control |
| Features | Motional feedback system |
| RH-544 |  |
| Price | \$400 |
| Dimensions | $153 / 6 \mathrm{H} \times 111 / 4 \mathrm{~W} \times 81 / 2 \mathrm{D}$ |
| Weight | 26 lbs . |
| Type | Acoustic suspension with biamplification |
| Drivers | $8^{\prime \prime}$ high-compliance woofer; $2^{\prime \prime}$ dome midrange; $1^{\text {" }}$ dome tweeter |
| Response | 35 Hz to 20 kHz |
| Crossover | $500 \mathrm{~Hz} ; 400 \mathrm{~Hz}$ |
| Min. power | Can be driven from preamp |
| Max. power | Internal amplifiers |
| Controls | High-irequency rolloff; input sensitivity; automatic on/off switch; channel-selector switch |
| Features | Motional feedback system |
| AH-476 |  |
| Price | \$240 |
| Dimensions | $26 \mathrm{H} \times 13 \% \mathrm{~W} \times 11 \% \mathrm{D}$ |
| Weight | 42 lbs . |
| Type | Acoustic suspension |
| Drivers | $10^{\prime \prime}$ high-compliance woofer; $2^{\prime \prime}$ dome midrange; $1^{n \prime}$ dome tweeter |
| Response | 35 Hz to 20 kHz |
| Crossover | $1.5 \mathrm{kHz}{ }^{\text {c }} 5.5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 20 watts (13 dBW) |
| Max. power | 60 watts ( 17.75 dBW ) |
| Controls | Midrange |
| SJ-2932 |  |
| Price | \$130 |
| Dimensions | $27 \mathrm{H} \times 14 \frac{1}{2} \mathrm{~W} \times 121 / 2 \mathrm{D}$ |
| Weight | 42 lbs . |
| Type | Tuned port |
| Drivers | $10^{\text {" }}$ high-compliance woofer; two $5^{\prime \prime}$ cone midrange drivers; 1 " dome tweeter |
| Response | 46 Hz to 20 kHz |
| Crossover | $2 \mathrm{kHz} ; 6 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Max. power | 60 watts ( 17.75 dBW ) |
| SJ-2931 |  |
| Price | \$100 |
| Dimensions | $24 \mathrm{H} \times 1314 \mathrm{~W} \times 111 / 2 \mathrm{D}$ |
| Weight | 31 lbs 8 oz . |
| Type | Tuned port |
| Drivers | $10^{*}$ high-compliance woofer; $1^{*}$ dome tweater |
| Response | 47 Hz to 20 kHz |
| Crossover | 4 kHz |
| Impedance | 8 ohms |
| Max. power | 45 watts ( 16.5 dBW ) |

## Models also available

RH-567, $\$ 450$; AH-477, $\$ 300$; PH 541, \$250; AH-475, \$150; SJ2930, \$150/pr

## PIONEER

U.S. Pioneer Electronics Corp. 85 Oxford Drive Moonachie, N.J. 07074

HPM-150
Price $\$ 550$
Dimensions $3825 / 32 \mathrm{H} \times 173 / 4 \mathrm{~W} \times 173 / 4 \mathrm{D}$
Weight $\quad 74 \mathrm{lbs} 14 \mathrm{oz}$
Type Bass reflex
Drivers $\quad 153 / 4^{\prime \prime}$ carbon fiber cone woofer; $4^{n}$ cone-type midrange; 13/4" cone tweeter; omnidirectional, hornloaded, high polymer film supertweeter
Response 25 Hz to 25 kHz
Crossover $75 \mathrm{~Hz} ; 2.6 \mathrm{kHz} ; 8.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 50 watts ( 17 dBW )
Max. power 300 watts ( 24.75 dBW )
Controls Midrange; tweeter
CS-99A
Price
Dimensions
Weight
Type
Drivers

Response
$\quad 25 \mathrm{~Hz}$ to 22 kHz
Crossover $800 \mathrm{~Hz} ; 2 \mathrm{kHz} ; 5 \mathrm{kHz} ; 10 \mathrm{kHz}$
Impedance 8 ohms
Max. power 100 watts ( 20 dBW )
Controls Midrange; tweeter
HPM-60
Price $\$ 260$
Dimenslons $\quad 24 \mathrm{H} \times 137 / 6 \mathrm{~W} \times 125 / 8 \mathrm{D}$
Weight 38 lbs 8 oz
Type Bass reflex
Drivers

Response
Crossover
Impedance
MIn. power
Max. power
Controls
$\$ 350$
$241 / 4 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 113 / 8 \mathrm{D}$
51 lbs 11 oz
Infinite baffle
$15^{\prime \prime}$ cone woofer; $5^{\prime \prime}$ cone midrange; $4^{n}$ cone midrange; multicellular horn tweeter; 2 dome supertweeters

Project 120
Price $\$ 145$
Dimensions $23 \mathrm{H} \times 13 \mathrm{~W} \times 93 / 4 \mathrm{D}$
Weight 26 lbs
Type Bass reflex/ducted port
Drivers $10^{\prime \prime}$ cone woofer; $5^{\prime \prime}$ cone midrange; $17 / \mathbf{s}^{"}$ cone tweeter
Response 30 Hz to 20 kHz
Crossover $1 \mathrm{kHz} ; 4 \mathrm{kHz}$
impedance 8 ohms
Max. power 60 watts ( 17.75 dBW )
Project 60A
Price $\$ 80$
Dimensions $181 / 2 \mathrm{H} \times 105 / \mathrm{mW} \times 81 / 2 \mathrm{D}$
Weight 12 lbs
Type Bass reflex
Drivers $\quad 8^{\prime \prime}$ cone woofer; cone tweeter
Response 50 Hz to 20 kHz
Crossover 5 kHz
Impedance 8 ohms
Max. power 20 watts ( 13 dBW )

## Models also available

 HPM-100, \$350; HPM-40, \$180; Project 80, $\$ 99$PLASMATRONIC
Plasmatronic, Inc.
2460 Alamo, S.E., Suite 101
Albuquerque, N.M. 87106

## $\underset{\text { Price }}{\text { Hill Type }} 1$ Plasma System

| Dimensions | $571 / 2 \mathrm{H} \times 241 / 2 \mathrm{~W} \times 20 \mathrm{D}$ |
| :--- | :--- |
| Weight | $580 \mathrm{lbs} . / \mathrm{pr}$. |
| Type | Plasma |
| Drivers | Plasma; cone midrange; cone bass |
| Response | 18 Hz to $30 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 107 dB |
|  | SPL at 1 meter from one plasma |
|  | driver |
| Crossover | $120 \mathrm{~Hz} ; 700 \mathrm{~Hz}$ |
| Impedance | 8 ohms |
| Controls | Plasma level; crossover point |
| Features | Biamped with high amp crossover: |
| VU meters; hi-lo balancing network |  |

POLK
Polk Audio
1205 South Carey St.
Baltimore, Md. 21230

| Real Time Array Model 12 |  |
| :---: | :---: |
| Price | \$359.95 |
| Dimensions | $46 \mathrm{H} \times 15 \mathrm{~W} \times 12 \mathrm{D}$ (stand, 12 H ) |
| Weight | 75 lbs . |
| Type | Passive radiator |
| Drivers | Two 612" bass/midranges; $12^{\prime \prime}$ molded foam passive radiator; $1^{\prime \prime}$ vented HF radiator |
| Response | 28 Hz to $21 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 96 dB SPL at 1 meter at 1 watt |
| Crossover | $45 \mathrm{~Hz} ; 3 \mathrm{kHz}$ |
| Impedance | 6 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 300 watts ( 24.75 dBW ) |
| Controls | Factory calibrated |
| Features | Phase coherent design; open |
| mounted HF radiator; plasticized drivers; optional |  |

Impedance
Min. power
6 ohms
501s (7BW)
Features Optional mounting

## Models also available

7B Monitor System, \$169.95

## PRECEDENT

Precedent Audio Products, Inc. 306 E. Oliver St.
Baltimore, Md. 21202

## PRECEDENT SERIES

| MZ-Mod | 111 |
| :---: | :---: |
| Price | \$1,495/pr. (teak laminate); \$1,695/pr. (walnut veneer) |
| Dimensions | $39 \mathrm{H} \times 29 \mathrm{~W} \times 16 \mathrm{D}$ |
| Weight | 125 lbs. өa. |
| Type | Transmission line |
| Drivers | $8^{\text {n }}$ woofer; $5^{\text {" }}$ midrange; $3 / 44^{\text {n }}$ tweeter |
| Response | 40 Hz to $20 \mathrm{kHz}, \pm{ }^{21 / 2} \mathrm{~dB}$ re 88 dB SPL at one 1 meler at 1 |
| Crossover | $600 \mathrm{~Hz} ; 3.5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 25 watts (14 dBW) |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | Tweeter |
| Features | Phase and time aligned; minimized |
| diffraction ar |  |

## CYLINDER SERIES

## Panorama

Price $\quad \$ 795 / \mathrm{pr}$
Dimensions $50 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 13^{1 / 2 \mathrm{D}}$
Weight $\quad 40 \mathrm{lbs}$ ea
Type Dynamic
Drivers One $8^{n \prime}$ woofer; one $21 / 2^{* \prime}$ midrange: one 1 " tweeter
Response $\quad 40 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm^{21 / 2} \mathrm{~dB}$ re 92 dB SPL at 1 meter at 1 watt
Crossover $800 \mathrm{~Hz}, 2.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 200 watts ( 23 dBW )
Features Extremely efficlent and superb polar response due to unique cylinder design; highpower handling

| Vista |  |
| :---: | :---: |
| Price | \$380/pr. |
| Dimensions | $26 \mathrm{H} \times 151 / 4 \mathrm{~W} \times 15 \mathrm{y}$ D |
| Weight | 30 lbs . өa. |
| Type | Dynamic |
| Drivers | One $8^{\prime \prime}$ wooter; one $1^{\prime \prime}$ tweeter |
| Response | 50 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{cB}$ re 90 dB SPL at 1 meter at 1 watt |
| Crossover | 2.5 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 150 watts ( 21.75 dBW ) |
| Features | High-power handling; extremely of- |
| ficient; superb der design; o | zolar response due to unique cylin tional floor stands |

## Models also available

MZ-Mod II, \$747.50/pr.

## PRESAGE

Presage Corp.
Dumaine Ave.
Nashua, N.H. 03060

## Presage 4

Price $\$ 600$
Dimensions $42 \mathrm{H} \times 15 \mathrm{~W} \times 151 / 2 \mathrm{D}$

Welght 65 lbs
Type Passive radiator
Drivers $\quad 10^{\prime \prime}$ woofer; $41 / 4$ cone midrange; $1^{\prime \prime}$ dome tweeter
Response 25 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover $\quad 470 \mathrm{~Hz} ; 3.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 25 watts ( 14 dBW )
Max. power 200 watts ( 23 dBW ) continuous
Controls
Tweeter; midrange

| S-9 |  |
| :--- | :--- |
| Price | $\$ 200$ |
| Dimensions | $25 \mathrm{H} \times 14 \mathrm{~W} \times 11 \mathrm{D}$ |
| Weight | 38 lbs. |
| Type | Bass reflex |
| Drivers | $10^{n}$ wooter; 1 " dome tweeter |
| Response | 35 Hz to $20 \mathrm{kHz}, \pm^{3} \mathrm{~dB}$ |
| Crossover | 1.45 kHz |
| Impedance | 80 hms |
| Min. power | 25 watts (14 dBW) |
| Max. power | 75 watts (18.75 dBW) continuous |
| Controls | Tweeter; "bass-boost" switch 'to |
|  | increase upper bass-midrange out- |
|  | put by 4.5 dB |

Presage 17
Price $\$ 100$
Dimensions $251 / 4 \mathrm{H} \times 121 / 2 \mathrm{~W} \times 121 / 2 \mathrm{D}$
Weight 23 lbs .
Type Bass reflex
Drivers $\quad 8^{\prime \prime}$ foam-edegewoofer; $2^{\prime \prime}$ phenolic cone tweeter
Response $\quad 65 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 92 dB SPL at 1 meter at 1 watt
Crossaver $\quad 1.3 \mathrm{kHz}$
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 60 watts ( 17.75 dBW )

## Models also available

Presage 5, \$350; Presage 15, \$120 (walnut grained vinyl); $\$ 130$ (oak or walnut veneer)

## PSB

PSB Speakers
Box 144
St. Jacobs, Ont. NOB/2NO

## BETA Ila

Price $\$ 595$
Dimensions $\quad 23 \mathrm{H} \times 12 \mathrm{~W} \times 101 / 2 \mathrm{D}$
Weight $\quad 35 \mathrm{lbs}$.
Type Acoustic suspension
Drivers $\quad 1$ " soft cloth dome tweeter; 8" mo-
Response 25 Hz to $20 \mathrm{kHz} . \pm 2 \mathrm{~dB}$
Impedance 4 ohms
Min. power 80 watts ( 19 dBW )
Controls Listening level (5-position); amp-
Features Motional feedback system using
existing system amplifier; built-in infrasonic filter;
fused

| Passif lla |  |
| :--- | :--- |
| Price | $\$ 295$ |
| Pimensions | $293 / \mathrm{H} \times 131 / 2 \mathrm{~W} \times 121 / 4 \mathrm{D}$ |
| Weight | 35 lbs |
| Type | Passive radiator |
| Drivers | $1^{\prime \prime}$ lextile dome tweeter; $8^{n}$ wooter; |
|  | $10^{\prime \prime}$ passive radiator |
| Response | 42 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Crossover | 2 kHz |
| Impecance | 8 ohms |
| Min. power | $40 \mathrm{watts}(16 \mathrm{dBW}$ ) |
| Max. power | $75 \mathrm{watts}(18.75 \mathrm{dBW}$ ) |
| Features | Real walnut veneer |


| Avanté Ila Walnut |  |
| :---: | :---: |
| Price | \$170 (walnut); \$145 (vinyl) |
| Dimensions | $191 / 2 \mathrm{H} \times 11 \mathrm{~W} \times 10 \mathrm{D}$ |
| Weight | 25 lbs . |
| Type | Bass reflex |
| Drivers | $1^{\prime \prime}$ textile dome tweeter; 8 " woofer |
| Response | 60 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Crossover | 1.5 kHz |
| Impedance | 8 ohms |
| Min. power | 25 watts (14 dBW) |
| Max. power | 50 watts ( 17 dBW ) |
| Features | Real walnut veneer |

## Models also available

Passif I, \$230 (walnut); \$195 (vinyl); Avantinl II, \$100

## PYRAMID

## Pyramid Loudspeaker Corp. <br> 131-15 Fowler Ave. <br> Flushíng, N.Y. 11355

| Metronome 3 |  |
| :---: | :---: |
| Price | \$1,700 |
| Dimensions | $34 \mathrm{H} \times 213 / 4 \mathrm{~W} \times 153 / 4 \mathrm{D}$ |
| Weight | 100 lbs . |
| Type | Acoustic suspension |
| Drivers | Two $8^{\prime \prime}$ woofers; $4^{1 / 2} 2^{" m i d r a n g e ; ~} 3^{\prime \prime}$ by $0.5^{\prime \prime}$ ribbon tweeter |
| Response | 35 Hz to $35 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 90 dB SPL at 1 meter at 1 watt |
| Impedance | 6 ohms |
| Min. power | 75 watts ( 18.75 dBW ) |
| Max. power | 300 watts ( 24.75 dBW ) |
| Controls | Switched high-range contour: +2 dB, flat, and "Far Field Curve" |
| Features | Biampable with switch; requires no |


| Metronom | ne 2W Subwooter |
| :---: | :---: |
| Dimensions | $25 \mathrm{H} \times 271 / 2 \mathrm{~W} \times 161 / 2 \mathrm{D}$ (truncated) |
| Weight | 115 lbs . |
| Type | Acoustic suspension |
| Drivers | $14^{\prime \prime}$ |
| Response | 29 Hz to $90 \mathrm{~Hz}, \pm 3 \mathrm{~dB}$ re 87 dB SPL at 1 meter at $\uparrow$ watt |
| Crossover mpedance | 90 Hz <br> 8 ohms |
| Min. power | 200 watts (23 dBW) |
| Max. power | 800 watts (29 dBW) |
| Controls | None |
| Features | 2W available only with Metronome |

T-1 Ribbon Tweeter

| Price | $\$ 1,175 / \mathrm{pr}$. |
| :--- | :--- |
| Dimensions | $43 / 4 \mathrm{H} \times 45 / \mathrm{sW} \times 73 / 4 \mathrm{D}$ |
| Weight | $81 / 2 \mathrm{lbs}$. |
| Type | Ribbon |
| Drivers | $33 / 4^{\prime \prime} \times 3 / /^{n}$ ribbon |
| Response | 3 kHz to $40 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 93 dB |
|  | SPL at 1 meter at 1 watt |
| Crossover | 3 kHz |
| Impedance | 12 ohms at 20 kHz |
| Min. power | $10 \mathrm{watts} \mathrm{(10} \mathrm{dBW)}$ |
| Max. power | 200 watts $(23 \mathrm{dBW})$ |
| Controls | Five-position step attenuator, 2 |
|  | dB/step, 8 dB total |

## Models also available

Metronome 2 Speaker, $\$ 1,400 /$ pr

## QYSONIC

Qysonic Research Corp.
920 S. Placentia Ave.
Placentia, Calif. 92670

| Array |  |
| :---: | :---: |
| Price | \$479 |
| Dimensions | $471 / 2 \mathrm{H} \times 12^{1 / 2} \mathrm{~W} \times 8^{1 / 2 \mathrm{D}}$ |
| Weight | 55 lbs . |
| Type | Critical Alignment; Laminar flow vent |
| Drivers | Two $8^{n}$ woofers; $41 / 2^{" 1}$ midrange; $2^{n}$ tweeter; 1" (polar) dome supertweeter |
| Response | $28 \mathrm{~Hz} \text { to } 22 \mathrm{kHz}, \pm 3 \mathrm{~dB} \text { re } 92 \mathrm{~dB}$ <br> SPL at 1 meter at 1 watt |
| Crossover | $800 \mathrm{~Hz} ; 3 \mathrm{kHz} ; 8 \mathrm{kHz}$ |
| Impedance | 6 ohms |
| Min. power | 30 watts ( 14.75 dBW ) |
| Max. power | 500 watts ( 27 dBW ) |
| Controls | Midrange; tweeter; polar supertweeter |
| Fealures | Hardwood stand included |
| TAD II |  |
| Price | \$225 |
| Dimensions | $29 \mathrm{H} \times 9 \mathrm{~W} \times 61 / 2 \mathrm{D}$ |
| Weight | 25 lbs . |
| Type | Critical Alignment Laminar flow vent |
| Drivers | Two 6" woofers; 2" tweeter; 2" polar tweeter |
| Response | 40 Hz to $25 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 90 dB SPL at 1 meter at 1 watt |
| Crossover | $2 \mathrm{~Hz} ; 8 \mathrm{kHz}$ |
| Impedance | 6 ohms |
| Min. power | 15 watts ( 11.75 dBW ) |
| Max. power | 120 watts ( 20.75 dBW ) |
| Conirols | Tweeter |
| Micro |  |
| Price | \$99 |
| Dimensions | $11 \mathrm{H} \times 41 / 2 \mathrm{~W} \times 31 / 2 \mathrm{D}$ |
| Weight | 6 lbs |
| Type | Critical Alignment; terminated line |
| Drivers | Two 3" woofers; $2^{\prime \prime}$ tweeter |
| Response | 80 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 79 dB SPL at 1 meter at 1 watt |
| Crossover | 3 kHz |
| Impedance | 6 ohms |
| Min. power | 8 watts (9 dBW) |
| Max. power | 60 watts (17.75 dBW) |
| Models also available |  |
|  | Laug, \$229; Spree, \$140 |
| REALISTIC |  |
| Racio Shack |  |
| 2617 W. 7th St. |  |
| Ft. Worth, Texas 76107 |  |
| Optimus | T-200 |
| Price | \$259.95 |
| Dimensions | $34 \mathrm{H} \times 121 / 2 \mathrm{~W} \times 121 / 2 \mathrm{D}$ |
| Drivers | Two $10^{\prime \prime}$ woofers; $61 / 2^{\prime \prime}$ midrange; two cone tweeters with horn assembly |
| Response | 50 Hz to 20 kHz |
| Impedance | 8 ohms |
| Max. power | 150 watts |
| Controls | 2 L -pads for treble and midrange |
| Features | Tower design |
| Mach One |  |
| Price | \$239.95 |
| Dimensions | $283 / 8 \mathrm{H} \times 175 / 8 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight | 65 lbs . |
| Type | Acoustic suspension |
| Drivers | $15^{\prime \prime}$ woofer; midrange; horn tweeter |
| Response | 20 Hz to 25 kHz |
| Crossover | $1 \mathrm{kHz} ; 5 \mathrm{kHz}$ |
| Min. power | 25 watts (14 dBW) |
| Max. power | 100 watts ( 20 dBW ) peak |
| Controls | Midrange; tweeter |

Optimus 23
Price $\quad \$ 99.95$
Dimensions $\quad 221 / 4 \mathrm{H} \times 123 / 6 \mathrm{~W} \times 1 / 2 \mathrm{D}$
Weight $\quad 30 \mathrm{lbs} 3$ oz.
Type Ported suspension
Drivers $\quad 10^{\prime \prime}$ woofer; one $3^{\prime \prime}$ tweeter
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 4.5 \mathrm{~dB}$
Crossover $\quad 1.2 \mathrm{kHz}$
Impedance 8 ohms
Min. power 7 watts ( 8.5 dBW )
Max. power 70 watts ( 18.5 dBW )
Controls Tweeter
Minimus 7
Price $\$ 50$
Dimensions $7 \mathrm{H} \times 41 / 2 \mathrm{~W} \times 41 / 4 \mathrm{D}$
Weight $\quad 4 \mathrm{lbs} 8 \mathrm{oz}$.
Type Acoustic suspension
Drivers $4^{\text {" }}$ high-compliance woofer; $1^{\text {" }}$ extended range high-compliance dome tweeter
Response 50 Hz to $20 \mathrm{kHz}, \pm 5 \mathrm{~dB}$
Crossover 2.5 kHz
Impedance 8 ohms
Min. power 7 watts ( 8.5 dBW )
Max. power 40 watts ( 16 dBW ) continuous

## Models also available

Optimus T-100, \$179.95; Optimus
27, \$149.95; Optimus 10, \$140

## REFERENCE

CBS Retail Stores
1301 65th St.
Emeryville, Calif. 94608

| 312L |  |
| :---: | :---: |
| Price | \$269.95 |
| Dimensions | $315 / 6 \mathrm{H} \times 18 \mathrm{~W} \times 13 \mathrm{D}$ |
| Weight | 48 lbs . |
| Type | Acoustic suspension |
| Drivers | $12^{\text {" }}$ woofer; $61 / 2^{\text {" }}$ cone midrange; $1^{\text {" }}$ soft-dome tweeter |
| Response | 32 Hz to $221 / 2 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ |
| Crossover | $600 \mathrm{~Hz} ; 4 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Features | Same as Model 208L |
| 3101 |  |
| Price | \$179.95 |
| Dimensions | $283 / 4 \mathrm{H} \times 16 \mathrm{~W} \times 115 / 8 \mathrm{D}$ |
| Weight | 42 lbs . |
| Type | Acoustic suspension |
| Drivers | $10^{\text {" }}$ woofer; $61 / 2^{n}$ cone midrange; $1^{n}$ <br> Mylar dome tweeter |
| Response | 38 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ |
| Crossover | $600 \mathrm{~Hz} ; 4 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 10 watts (10 dBW) |
| Features | Same as Model 208L |
| 208L |  |
| Price | \$89.95 |
| Dimensions | 195/8H $\times 14 \mathrm{~W} \times 9 \mathrm{D}$ |
| Weight | 17 lbs . |
| Type | Acoustic suspension |
| Drivers | $8^{\prime \prime}$ wooter; $2^{1 / 2} 2^{\prime \prime}$ cone tweeter |
| Response | 55 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ at 1 meter at 1 watt |
| Crossover | 3 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Controls | Preset |
| Features | Fused tweeters |
| Models a | so available <br> 228L. \$129.95 |



PSB Beta Ile

ROGERS
Reference Monitor
International, Inc.
2380 C Camino Vida Roble
Carlsbad, Calif. 92008

XA-100/L-35B Reference
Monitor System
Price $\$ 2,300$
Dimensions $\quad 321 / 2 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 18 \mathrm{D}$
Weight 78 lbs
Type Acoustic suspension
Drivers $\quad 12^{n}$ wooter in each cabinet
Response $\quad 20 \mathrm{~Hz}$ to $150 \mathrm{~Hz}, \pm 3 \mathrm{~dB}$ re 96 dB SPL at 1 meter at 1 watt (subwoofer); 45 Hz to $20 \mathrm{kHz}, \pm^{2} \mathrm{~dB}$ for L-35B

| Impedance | 80 ohms |
| :--- | :--- |
| Min. power | 50 watts $(17 \mathrm{dBW})$ |
| Max. power | 100 watts $(20 \mathrm{dBW})$ |

Compact Monitor

| Price | \$630/pr. |
| :---: | :---: |
| Dimensions | $20 \mathrm{H} \times 11 \mathrm{~W} \times 103 / 4 \mathrm{D}$ |
| Weight | 25 lbs . |
| Type | Acoustic suspension |
| Drivers | 8" Bextrene woofer; 1 "fabric dome tweeter |
| Response | 50 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 96 dB SPL at 1 watt |
| Crossover | 2.5 kHz |
| Impedance | 8 ohms |
| Min. power | 20 watts (13 dBW) |
| Max. power | 80 watts (19 dBW) |
| LS 3/5a | 88C Monitor |
| Price | \$540/pr. |
| Dimensions | $12 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 63 / 8 \mathrm{D}$ |
| Weight | 11 lbs. 8 oz . |
| Type | Acoustic suspension |
| Drivers | $41 / 2^{\prime \prime}$ Bextrene bass/midrange; 1 dome tweeter |
| Response | 70 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 96 dB SPL at 1 meter at 1 watt |
| Crossover | 3 kHz |
| Impedance | 15 ohms |
| Min. power | 25 watts (14 dBW) |
| Max. power | 25 watts (14 dBW) |
| Features | Designed by BBC |

Models also available
Monitor 2, $\$ 840$

## RTR

RTR Industries, Inc.
8116 Deering Ave.
Canoga Park, Calif. 91304

| DR-1 |  |
| :---: | :---: |
| Price | \$1.495 |
| Dimensions | $49 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 161 / 2 \mathrm{D}$ |
| Weight | 165 lbs . |
| Type | Electrostatic/dynamic |
| Drivers | One 12"; two $10^{\prime \prime}$ wooters; $14^{\prime \prime}$ diameter cylindrical electrostatic radiator |
| Response | 30 Hz to $30 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Crossover | 325 Hz |
| Impedance | 8 ohms |
| Min. power | 75 watts ( 18.75 dBW ) for woofer section |
| Max. power | 150 watts ( 21.75 dBW ) for woofer section |
| Controls | Electrostatic volume; treble |
| Features and electroni trostatic radia | Internally contained power amp crossover control; direct-drive elecor ( 325 Hz to 30 kHz range) |
| DAC/1 |  |
| Price | \$600 |
| Dimensions | $211 / 4 \mathrm{H} \times 291 / 2 \mathrm{~W} \times 28 \mathrm{D}$ |
| Weight | 135 lbs. |
| Type | Differential area coupler subwoofer |
| Drivers | $12^{\prime \prime}$ active woofer; two $15^{\prime \prime}$ passive couplers |
| Response | 16 Hz to $150 \mathrm{~Hz} . \pm 1.5 \mathrm{~dB}$ |
| Crossover | 120 Hz when used with PS/1; defeatable |
| Impedance | 6 ohms |
| Min. power | 40 watts ( 16 dBW ) |
| Max. power | 125 watts ( 21 dBW ) |
| Controls | Low-pass defeat switch |
| 6000 |  |
| Price | \$600 |
| Dimensions | $48 \mathrm{H}=161 / 2 \mathrm{~W} \times 161 / 2 \mathrm{D}$ |
| Weight | 112 lbs . |
| Type | Acoustic suspension |
| Drivers | Two $12^{\prime \prime}$ wooters; two $11 / 2^{\prime \prime}$ softdome midranges; two $1^{\prime}$ soft-dome tweeters |
| Response | 32 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 91.5 dB SPL at 1 meter at 1 watt |
| Crossover | $950 \mathrm{~Hz} ; 10 \mathrm{kHz}$ |
| Impedance | 4 ohms |
| Min. power | 25 watts (14 dBW) |
| Max. power | 200 watts (23 dBW) |
| Controls | Midrange; tweeter |
| Features | Circuit breaker |
| ESR-15 |  |
| Price | \$400 |
| Dimensions | $191 / 2 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 161 / 2 \mathrm{D}$ |
| Weight | 48 lbs . |
| Type | Electrostatic tweeter array |
| Drivers | Fifteen $3^{\prime \prime} \times 6^{\prime \prime}$ HF-50 electrostatic panels |
| Response | 1.25 kHz to $20 \mathrm{kHz}, \pm^{2} \mathrm{~dB}$ |
| Crossover | 1.25 kHz |
| Impedance | 8 ohms |
| Min. power | 15 watts (11.75 dBW) |



Reailstic Optimus T-200


RTR DR- 1

Max. power 100 watts ( 20 dBW )
Controls Tweeter; wooter
Features Circuit breaker

PS/1
$\begin{array}{ll}\text { Price } & \$ 325 \\ \text { Dimensions } & 217 / 8 \mathrm{H} \times 5 \mathrm{~W} \text { (top) } \times 123 / 4 \mathrm{~W} \text { (bot- }\end{array}$ tom) $\times 8 \mathrm{D}$
Weight 35 lbs
Type Acoustic suspension
Orivers $8^{\prime \prime}$ woofer; $11 / 2^{\prime \prime}$ soft-dome midrange; $1^{\prime \prime}$ soft-dome tweeter
Response $\quad 65 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 90.5 dB SPL at 1 meter at 1 watt
Crossover $\quad 1.5 \mathrm{kHz} ; 9 \mathrm{kHz}$
Impedance 6 ohms
Min. power 25 watts ( 14 dBW )
Max. power 100 watts ( 20 dBW )
Controls Tweeter; high-pass filter defeat Features Satellite speaker system; use independently or with DAC/1 subwooter; pyramid shape

| ESR-6 |  |
| :---: | :---: |
| Price | \$250 |
| Dimensions | $141 / 2 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight | 23 lbs . |
| Type | Electrostatic iweeter array |
| Drivers | Six $3^{\prime \prime} \times 6^{n}$ HF-50 electrostatic panels |
| Response | 1.5 kHz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Crossover | 1.5 kHz |
| Impedance | 8 ohms |
| Min. power | 15 watts ( 11.75 dBW ) |
| Max. power | 60 watts ( 17.75 dBW ) |
| Controls | Tweeter; woofer |
| Features | Circuit breaker |
| $G-10$ |  |
| Price | \$190 |
| Dimersions | $251 / 2 H \times 141 / 4 W \times 11 D$ |
| Weight | 44 lbs. |
| Type | Vented |
| Drivers | 10" wooter; 1 " dome tweeter |
| Response | 48 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 91 dB SPL at 1 meter at 1 watt |
| Crossover | 2 kHz |
| Impedance | 6 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 80 watts ( 19 dBW ) |
| Controls | Tweeter level (continuously variable) |
| Features | Same as G-200 |
| Models also available |  |
|  | 800D, \$600; 300D. \$400; G-200, \$270; 75D, \$250; EXP 8-V, $\$ 100$ |

SANSUI
Sansui Electronics Corp. 1250 Valley Brook Ave.
Lyndhurst, N.J. 07071
SP-L800

| Price | \$950 |
| :---: | :---: |
| Dimensions | 37 15/16H with caster rollers $x$ $181 / \mathrm{sW} \times 157 / 16 \mathrm{D}$ |
| Weight | 94 lbs .6 oz . |
| Type | Bass reflex |
| Drivers | Two $12^{\prime \prime}$ cone woofers; $2 y_{4}$ " horn tweeter |
| Response | 30 Hz to 20 kHz |
| Crossover | 1.5 kHz |
| Impedance | 8 ohms |
| Max. power | 300 watts ( 24.75 dBW) |
| Controls | Tweeter |
| Features | Sensitivity: 95 dB at 1 meter at 1 |
| watt; biamp | nections; genuine valnut veneer |
| finish; dua | linear-response system |

finish; dual-wooter linear-response system

## SP-X9700

| Price | \$390 |
| :---: | :---: |
| Dimensions | $271 / 16 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 105 / 8 \mathrm{D}$ |
| Weight | 44 lbs .13 oz . |
| Type | Bass reflex |
| Drivers | $17^{\prime \prime}$ cone woofer; $83 / 16^{\prime \prime}$ cone midrange; two $611 / 16^{\prime \prime} \times 25 / 16^{\prime \prime}$ horn tweeters; three 1 15/16" cone supertweeter |
| Response | 22 Hz to 23 kHz , re 100 dB SPL at 1 meter at 1 watt |
| Crossover | $1 \mathrm{kHz} ; 7 \mathrm{kHz} ; 15 \mathrm{kHz}$ |
| impedance | 8 ohms |
| Max. power | 280 watts (24.5) dBW) |
| Controls | Midrange; tweeter; supertweeter (three-step level controller) |
| Features grain vinyl finis | Genuine carved wood grille; walnut h; particle board enclosure |
| SP-X7700 |  |
| Price | \$290 |
| Dimensions | $261 / 4 \mathrm{H} \times 1711 / 16 \mathrm{~W} \times 115 / 6 \mathrm{D}$ |
| Weight | 37 lbs 10 oz . |
| Type | Bass reflex |
| Drivers | $16^{\prime \prime}$ woofer; $4^{n \prime}$ cone midrange; 6 $1 / 16 \times 2^{\prime \prime}$ horn tweeter; two 2" cone supertweeters |
| Response | 35 Hz to 22 kHz , re 97 dB SPL at 1 meter at 1 watt |
| Impedance | 8 ohms |
| Max. power | 160 watts ( 22 dBW ) |
| Controls | Tweeter |
| Features | Genuine carved wood grille; walnut |

grain vinyl finish
SPA-3100

## Price $\$ 200$

Dimensions $2413 / 16 \mathrm{H} \times 1513 / 16 \mathrm{~W} \times 12 \mathrm{D}$
Welght , 38 lbs 8 oz .
$\begin{array}{ll}\text { Type } & \text { Acoustic suspension } \\ \text { Drivers } & 12^{\prime \prime} \text { cone woofer; } 51 / 2^{\prime \prime} \text { cone mi- }\end{array}$ drange; $2^{\prime \prime} \times 5^{\prime \prime}$ oval plezoelectric tweeter
Response 35 Hz to 22 kHz
Crossover $800 \mathrm{~Hz} ; 2.5 \mathrm{kHz}$
Impedance 8 ohms
Max. power 85 watts ( 19.25 dBW )
Controls Midrange; tweeter
Features Circuit breaker; walnut grain vinyl finish; acoustically transparent black double knit grille

## SPA-1100

| Price | $\$ 100$ |
| :--- | :--- |
| Dimensions | $2213 / 16 \mathrm{H} \times 133 / 16 \mathrm{~W} \times 11 \mathrm{y} / \mathrm{D}$ |
| Weight | 24 lbs .12 oz. |
| Type | Acoustic suspension |
| Drivers | $10^{n}$ cone woofer; $2^{n \prime} \times 5^{\prime \prime}$ oval |
|  | piezoelectric tweeter |
| Response | 45 Hz to 22 kHz |
| Crossover | 2.5 kHz |


| Impedance | 8 ohms |
| :--- | :--- |
| Max. power | 30 watts (14.75 dBW) |
| Features | Same as SPA-3100 |
|  |  |
| J-11 |  |
| Price | $\$ 290 / \mathrm{pr}$. |
| Dimensions | $1113 / 16 \mathrm{H} \times 413 / 16 \mathrm{~W} \times 5 \mathrm{3} / 16 \mathrm{D}$ |
| Weight | 6 lbs .6 oz. |
| Type | Bass reflex |
| Drivers | $4^{4 \prime}$ cone woofer; 1" dome tweeter; |
|  | $4^{\prime \prime}$ concave passive radiator |
| Response | 45 Hz to $20 \mathrm{kHz}, 85 \mathrm{~dB} \mathrm{SPL}$ at one |
|  | meter at one watt |
| Crossover | 2.5 kHz |
| Impedance | 5 ohms |
| Max. power | 60 watts (17.75 dBW) |
| Features | Brushed aluminum finish |

## Models also available

SP-L700, \$680; Sp-X8700, \$335; SP-X6700, \$235; SPA-2100, \$150: J-33, \$450/pr

## SARAS

Saras of America
4150 Glencoe Ave.
Venice, Calif. 90291

ST-200

| Price | $\$ 550$ |
| :--- | :--- |
| Dimensions | $421 / 2 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 13 \mathrm{D}$ |
| Weight | 90 lbs. |
| Type | Acoustic suspension |
| Drivers | Two $10^{\prime \prime}$ woofers; $5^{\prime \prime}$ midrange; $1^{\prime \prime}$ |
|  | convex iweeter |
| Response | 30 Hz to $18 \mathrm{kHz}, \pm 2.5 \mathrm{~dB}$ |
| Crossover | $500 \mathrm{~Hz} ; 5 \mathrm{kHz}$ |
| lmpedance | 8 ohms |
| Max. power | 150 watts (21.75 dBW) |
| Controls | None |
| Features | Time alignment enclosure; third or- |
| der Butterworth filters; LED power indicator; sus- |  |
| pended grille-cloth panel |  |

11

| Price | $\$ 210$ |
| :--- | :--- |
| Dimensions | $24 \mathrm{H} \times 133 / 4 \mathrm{~W} \times 111 / 4 \mathrm{D}$ |
| Weight | 48 lbs. |
| Type | Acoustic suspension |
| Drivers | $10^{\prime \prime}$ woofer; $1^{\prime \prime}$ convex tweeter |
| Response | 35 Hz to $18 \mathrm{kHz}, \pm 3.5 \mathrm{~dB}$ re 90 dB |
|  | SPL at 1 meter at 1 watt |
| Crossover | 18 ohms |
| Controils | None |

## Models also available

30A , \$350; 22, \$250

SCOTT
H. H. Scott, Inc.

20 Commerce Way
Woburn, Mass. 01801

Pro 100B

| Price | $\$ 550$ |
| :--- | :--- |
| Dimensions | $291 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 141 / 2 \mathrm{D}$ |
| Weight | 67 lbs. |
| Type | Air suspension |
| Drivers | $15^{\prime \prime}$ woofer; two $41 /{ }^{\prime \prime}$ cone mi- |
|  | dranges; two $1^{\prime \prime}$ dome tweeters |
| Response | 36 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 94 dB |
|  | SPL at 1 meter at 1 watt |
| Crossover | $700 \mathrm{Hz;} \mathrm{3.5} \mathrm{kHz}$ |
| Impedance | 40 ohms |
| Min. power | 20 watts ( 13 dBW ) |
| Max. power | 300 watts (24.75 dBW) |
| Controls | Midrange; tweeter; dispersion |
| Features | Bidirectional radlation |

S196W
Price $\$ 280$
Dimensions $251 / 2 \mathrm{H} \times 15 \mathrm{~W} \times 103 / 4 \mathrm{D}$
Weight 42 lbs.
Type Air suspension
Drivers 12" woofer; 4½" midrange; 1" dome tweeter
Response $\quad 38 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 96 dB
SPL at 1 meter at 1 watt
Crossover $800 \mathrm{~Hz} ; 3.5 \mathrm{kHz}$
Impedance 6 to 8 ohms
Min. power 15 watts ( 11.75 dBW )
Max. power 120 watts ( 20.75 dBW )
Controls Midrange; tweeter
Features Walnut veneer with flat lacquer; al-
cohol resistant finish; extra long voice coil

S188T

| Price | \$230 |
| :---: | :---: |
| Dimensions | $331 / 2 \mathrm{H} \times 13 \mathrm{~W} \times 101 / 2 \mathrm{D}$ |
| Weight | 57 lbs . |
| Type | Air suspension |
| Drivers | $10^{n}$ woofer; $41 / 2^{\prime \prime}$ midrange; $1^{\prime \prime}$ dome tweeter |
| Response | 38 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 95.4 dB SPL at 1 meter at 1 watt |
| Crossover | $900 \mathrm{~Hz} ; 3.5 \mathrm{kHz}$ |
| Impedance | 6 to 8 ohms |
| Min. power | 10 watts (10 dBW) |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | Midrange; tweeter |
| Features | Tower design; extra |

## S177B

Price $\$ 120$
Dimensions $19 \mathrm{H} \times 11 \mathrm{~W} \times 9 \mathrm{D}$
Weight 45 lbs .
Type Air suspension
Drivers $8^{\prime \prime}$ woofer; $5^{\prime \prime}$ midrange; $13 / 4^{n}$ tweeter
Response $\quad 50 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 94 dB
SPL at 1 meter at 1 watt
Crossover $1200 \mathrm{~Hz} ; 3.5 \mathrm{kHz}$
Impedance 6 to 8 ohms
Min. power 7 watts ( 8.5 dBW )
Max. power 70 watts ( 18.5 dBW)
Features High compliance woofer with butyl
rubber anulus; phenolic ring tweeter
S176B
Price $\$ 90$
Dimensions $18 \mathrm{H} \times 101 / 2 \mathrm{~W} \times 81 / 2 \mathrm{D}$
Weight 41 lbs .
Type Bass reflex with tuned port
Drivers $\quad 8^{n}$ woofer; $13 / 4^{n}$ tweeter
Response $\quad 60 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 93.5 dB SPL at one meter at one watt
Crossover $\quad 3.5 \mathrm{kHz}$
Impedance 6 to 8 ohms
Min. power 5 watts ( 7 dBW )
Max. power 60 watts ( 17.75 dBW )
Features High compliance woofer
rubber annulus; phenolic ring tweeter

## Models also available

S197B, \$280; S196B, \$250;
S186B, \$200; 166B, \$120

## SHAHINIAN

Shahinian Acoustics, Ltd.
4 Selden Court
Selden, N.Y. 11784

## Obelisk

Price
Dimensions $263 / 4 \mathrm{H} \times 14 \mathrm{~W} \times 12 \mathrm{D}$
Weight 50 lbs .
Type Hybrid transmission line with passive radiator

| Drivers | $8^{\text {n }}$ woofer; $4^{n} \times 1^{\prime \prime}$ Mylar dome |
| :--- | :--- |
| Response | 35 Hz to $18.5 \mathrm{kHz}+2,-3 \mathrm{~dB}$ re 90 |
|  | dB SPL at 1 meter at 1 watt |
| Crossover | 2 kHz |
| Impedance | 60 ohms |
| Min. power | 25 watts ( 14 dBW ) |
| Max. power | 350 watts ( 25.5 dBW ) |
| Controls | None |
| Features | Forty-eight-in. hybrid transmission |
| line with $10^{\prime \prime}$ passive radiator |  |

## SHOWCO

## Showco Manufacturing Corp. 1225 Round Table Drive Dallas, Texas 75247

## 1718-S

| Price | $\$ 1,005$ |
| :--- | :--- |
| Dimensions | $88 \mathrm{H} \times 491 / 2 \mathrm{~W} \times 221 / 4 \mathrm{D}$ |
| Weight | 300 lbs |
| Type | Pyramid loaded bass horn |
| Drivers | One $18^{\prime \prime}$ woofer |
| Response | 20 Hz to $100 \mathrm{~Hz}, \pm 4 \mathrm{~dB}$ re 101.5 |
|  | dB SPL at 1 meter at 1 watt |
| Crossover | 100 Hz (biamplified) |
| Impedance | 8 ohms |
| Min. power | 50 watts (17 dBW) |
| Max. power | 500 watts ( 27 dBW ) |
| Features | Tower subwoofer |

Pyramid S-200

| Price | $\$ 399$ |
| :--- | :--- |
| Dimensions | $421 / 2 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 14 \mathrm{D}$ |
| Weight | 95 lbs. |
| Type | Four-sided folded-horn midbass; |
|  | acoustic suspension low bass |
| Drivers | $8^{\prime \prime}$ and $12^{\prime \prime}$ woofers; $5^{\prime \prime}$ midrange; 2 |
|  | dome tweeters |
| Response | 28 Hz to $18 \mathrm{kHz} \pm 3 \mathrm{~dB}$ re 91.5 dB |
|  | SPL at 1 meter at 1 watt |
| Crossover | $200 \mathrm{~Hz} ; 800 \mathrm{~Hz} ; 5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 10 watts $(10 \mathrm{dBW})$ |
| Max. power | 100 watts $(20 \mathrm{dBW})$ |
| Controls | Tweeter |
| Features | Tower design |

## Models also available

Pyramid 1800, \$780; Pyramid 1500, \$630

## SNELL ACOUSTICS

Snell Acoustics
10 Prince Place
Newburyport, Mass. 01950
Type A

| Type A |  |
| :--- | :--- |
| Price | $\$ 840$ |
| Dimensions | $461 / 2 \mathrm{H} \times 23^{3} / 4 \mathrm{~W} \times 13 \mathrm{D}$ |
| Weight | 97 lbs. |
| Type | Acoustic suspension |
| Drivers | $10^{\prime \prime}$ woofer; $4^{\prime \prime}$ midrange; $1^{\prime \prime}$ dome |
|  | tweeter |
| Response | 36 Hz to $18 \mathrm{kHz}, \pm 1^{1 / 2 \mathrm{~dB}}$ |
| Crossover | $300 \mathrm{~Hz} ; 2.5 \mathrm{kHz}$ |
| Impedance | 40 ohms |
| Min. power | 80 watts (19 dBW) |
| Features | Mirror-lmaged pairs; biamplifica- |
| tion possible |  |

tion possible

## SONIC SYSTEMS

Sonic Systems
6165 N. Rosemead Blvd.
Temple City, Calif. 91780

## Tower <br> Price

| Dimensions | $391 / 4 \mathrm{H} \times 211 / 2 \mathrm{~W} \times 19 \mathrm{D}$ |
| :---: | :---: |
| Weight | 135 lbs . |
| Type | Radial-slot port bass reflex |
| Drivers | $12^{\prime \prime}$ woofer; two compression driv ers |
| Response | 30 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 94 dB SPL at 1 meter at 1 watt |
| Crossover | 1.2 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 350 watts ( 25.5 dBW) |
| Controls | High-frequency section |
| Features for biamping | Blplanar dispersion system; set up |

Studio B-1
Price $\quad \$ 150$
Dimensions $231 / 2 \mathrm{H} \times 121 / 2 \mathrm{~W} \times 111 / 4 \mathrm{D}$
Weight $\quad 30 \mathrm{lbs}$.
Type Acoustic suspension
Drivers $\quad 8^{\prime \prime}$ cone woofer; $4^{\prime \prime}$ conte midrange
1" soft-dome tweeter
Response 45 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Impedance 80 hms
Min. power 10 watts ( 10 dBW )
Max. power 100 watts ( 20 dBW )
Controls Midrange (variable)
Features Walnut veneer finish

## Models also available

Studio B-3, \$225; Studio B-2, \$185
SONIKIT
1173 65th St.
Oakland, Calif. 94608

## DALESFORD EXPORT SERIES

312
Price $\quad \$ 575$ (assembled); $\$ 350$ (kit)
Dimensions $36 \mathrm{H} \times 153 / 4 \mathrm{~W} \times 151 / 4 \mathrm{D}$
$\begin{array}{ll}\text { Weight } & 90 \mathrm{lbs} \\ \text { Type } & \text { Acoustic suspension }\end{array}$
Drivers $\quad 12^{\prime \prime}$ Bextrene woofer; $6^{\prime \prime}$ Bextrene
midrange; $1^{n}$ low-mass soft-dome
Audax tweeter
Response $\quad 30 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover $\quad 250 \mathrm{~Hz} ; 3.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 25 watts (14 dBW)
Max. power 100 watts ( 20 dBW )
Features Bituminous felt and long fiber wool damping; diffraction-free enclosure

208

| Price | $\$ 195$ (assembled); \$125 (kit) |
| :--- | :--- |
| Dimensions | $19 \mathrm{H} \times 12 \mathrm{~W} \times 91 / 2 \mathrm{D}$ |
| Weight | 24 lbs. |
| Type | Acoustic suspension |
| Drivers | $8^{\prime}$ Bextrene woofer/midrange; $1^{\prime \prime}$ |
|  | low-mass Audax tweeter |
| Response | 55 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Crossover | 3.5 kHz |
| Impedance | 8 ohms |
| Min. power | 15 watts (11.75) dBW)' |
| Max. power | 50 watts (17 dBW) |
| Features | Bituminous felt and long fiber wool |
| damping; diffraction-free enclosure |  |

## FRIED SERIES

Fried Super Monitor System
Price $\$ 2,000$ (assembled); $\$ 800$ (kit)
Dimensions $50 \mathrm{H} \times 30 \mathrm{~W} \times 15 \mathrm{D}$
Weight
Type
140 lbs .
Transmission line and pressure release
Drivers $\quad 12^{\prime \prime}$ Bextrene woofer; $6^{\prime \prime}$ Bextrene midrange; $1^{\prime \prime}$ low-mass soft dome
Response $\quad 15 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 92 dB SPL at 1 meter at 1 watt

Crossover $\quad 75 \mathrm{~Hz} ; 3.5 \mathrm{kHz}$
mpedance 8 ohms
Min. power 50 watts ( 17 dBW )
Max. power 200 watts ( 23 dBW )
Features Truncated pyramid satellite with pressure release; transmission-line subwoofers; passive crossover; biamp inputs provided

Fried T Subwoofer
Price $\quad \$ 700$ (assembled); $\$ 360$ (kit)
Dimensions $211 / 4 \mathrm{H} \times 121 / 4 \mathrm{~W} \times 441 / 4 \mathrm{D}$
Weight 88 lbs
Type Transmission line
Drivers $\quad 10^{\prime \prime}$ high power Bextrene
Response $\quad 20 \mathrm{~Hz}$ to $200 \mathrm{~Hz}, \pm 0 \mathrm{~dB}$ re 87 dB
SPL at one meter at one watt
Crossover 100 Hz
Impedance 8 ohms
Min. power 25 watts ( 14 dBW )
Max. power 100 watts ( 20 dBW )
Features Separate transmission lines for each channel; may be used with B/2, C, or other full-range speakers; passive crossover; biamp inputs provided

Fried "C" Mini Monitors
Price $\quad \$ 475$ (assembled); $\$ 275$ (kit)
Dimessions $131 / 2 \mathrm{H} \times 101 / 2 \mathrm{~W} \times 9 \mathrm{D}$
Weight 20 lbs .
Type Pressure release
Drivers $6^{6 \prime}$ Bextrene bass/midrange; 1" low-mass soft dome tweeter
Response $\quad 50 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 92 dB SPL at one meter at one watt
Crossover 3.5 kHz
Impeclance 8 ohms
Min. power 25 watts ( 14 dBW )
Max. power 100 watts ( 20 dBW )
Features Truncated pyramid with pressure release; may be used alone or with T, D, or Super subwcofers

## S.E.A.S. SERIES

Disco 47 Monster
Price $\quad \$ 354$ (kit)
Dimensions $391 / 2 \mathrm{H} \times 191 / 2 \mathrm{~W} \times 131 / 2 \mathrm{D}$
Type Dual ducted port
Drivers Two 12" wooters; two $6^{*} \mathrm{mi}$ dranges; two $4^{\prime \prime}$ cone tweeters; horn supertweeter
Response
40 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 100 dB
SPL at 1 meter at 1 watt
Crossover $1 \mathrm{kHz} ; 3 \mathrm{kHz} ; 8 \mathrm{kHz}$
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. Fower 200 watts ( 23 dBW )
Features Overload protection warning; lac
querec ash enclosure; preassembled
603
Price $\quad \$ 220$ (kit)
Dimensions $26 \mathrm{H} \times 153 / 4 \mathrm{~W} \times 121 / 2 \mathrm{D}$
Weight 46 lbs .
Type Ducted port
Drivers $\quad 13^{\prime \prime}$ plastic doped woofer, $41 / 2^{\prime \prime}$ plastic doped midrange; $1^{\prime \prime}$ sof plastic dome iweeter
Response $\quad 30 \mathrm{~Hz}$ to $25 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 91 dB
SPL at 1 meter at 1 watt
Crossover $600 \mathrm{~Hz} ; 3 \mathrm{kHz}$
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 80 watts ( 19 dBW )

## 223

Price $\quad \$ 85$ (kit)
Dimensions $191 / 0 \mathrm{H} \times 111 / 8 \mathrm{~W} \times 103 / 8 \mathrm{D}$
Weight $\quad 18 \mathrm{fbs}$.
Type Acoustic suspension
 tweeter
Response $\quad 50 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 92 dB SPL at 1 meter at 1 watt

Crossover
Impedance
Min. power
Max. power
Features quered ash enclosure

## Models also available

310, \$475 (assembled); $\$ 300$ (kit); 210, \$275 (assembled); \$185 (kit); BSC-3 Mini (Rogers), \$175 (as sembled); \$115 (kit); Fried Super Subwopfer, $\$ 1.550$ (assembled); $\$ 550$ (kit); Fried H/2 Monitor Sys tem, \$950 (assembled); \$550 (kit) Fried D Subwoofer, $\$ 500$ (assembled); $\$ 338$ (kit); Fried B/2 Mini Monitors, $\$ 275$ (assembled); \$180 (kit); 403, \$150 (kit); 253, \$120 (kit)

SONY
Sony Corp. of America
9 West 57th St.
New York, N.Y. 10019

## SS-G7X

Price $\$ 1,000$
Dimensions $\quad 37 \mathrm{H} \times 20 \mathrm{~W} \times 171 / 2 \mathrm{D}$
Weight $\quad 106 \mathrm{lbs}$.
Type Bass reflex
Drivers $\quad 15^{\prime \prime}$ woofer; $4^{\prime \prime}$ midrange; $13 / \mathrm{s}^{\prime \prime}$ tweeter
Response $\quad 30 \mathrm{~Hz}$ to $20 \mathrm{kHz}, 94 \mathrm{~dB} \mathrm{SPL}$ at 1 meter at 1 watt
Crossover $550 \mathrm{~Hz} ; 4.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 25 watts ( 14 dBW )
Max. power 200 watts ( 23 dBW )
Features Plumb-IM line drivers; " $A G^{\prime \prime}$ baffle board; balanced driver design

SSU-4000

## Price $\$ 400$

Dimensions $4615 / 16 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 143 / 16 \mathrm{D}$
Weight $\quad 70 \mathrm{lbs} 9 \mathrm{oz}$.
Type Passive radiator bass reflex
Drivers $\quad 10^{\prime \prime}$ cone woofer; $31 / 4^{\prime \prime}$ radiator; 3 midrange; $1^{\text {" }}$ dome tweeter
Response $\quad 30 \mathrm{~Hz}$ to 20 kHz
Crossover $500 \mathrm{~Hz} ; 5.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 20 watts ( 13 dBW )
Max. power 150 watts ( 21.75 dBW )
Controls Midrange; tweeter ( +3 dB to -3 dB +4 dB to -40 dB )

SSU-2070

| Price | $\$ 150$ |
| :--- | :--- |
| Weight | 38 lbs. |
| Type | Acoustic suspension |
| Drivers | $10^{\prime \prime}$ wooter; $31 / 4^{n}$ midrange; 23/8" |
|  | tweeter |
| Response | 30 Hz to 20 kHz |
| Impedance | 8 ohms |
| Min. power | 20 watts $(13 \mathrm{dBW})$ |
| Max. power | 100 watts $(20 \mathrm{dBW})$ |

## SSU-1070

Price $\$ 85$
Dimensions $255 / 8 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 103 / 4 \mathrm{D}$
Weight
Type
$\begin{array}{llll}\text { Type } & \text { Acoustic suspension } & & \\ \text { Drivers } & 10^{\prime \prime} & \text { cone wooter; } & 21 / 2^{\prime \prime} \\ & \text { cone }\end{array}$
Response
Crossover
Impedance
Min power
15 watts ( 11.75 dBW )
Max. power 70 watts ( 18.5 dBW )

## Models also available

SS-5GX, \$300; SSU-3000, \$300; SSU-2000, \$150; SSU-1270, \$100

## SOUND DYNAMICS <br> Sound Dynamics Corp. <br> 161 Don Park Road Markham, Ontario L3R/1C2

120 S
Price 359
Dimensions $33 \mathrm{H} \times 17 \mathrm{~W} \times 12 \mathrm{D}$
Weight
Type
Drivers $\quad 12^{\prime \prime}$ heavy duty woofer with long throw $11 / 2^{\prime \prime}$ voice coil; felted cone;
$1^{\prime \prime}$ horn loaded $52 / 5^{\prime \prime}$ cast alumi-
num lens
Response
Crossover $750 \mathrm{~Hz} ; 3.25 \mathrm{kHz}$
Impedance 8 ohms (nominal)
Min. power 12 watts ( 10.75 dBW )
Max. power 150 watts ( 21.75 dBW )
Controls L-pad variable through full range
Features "Floating bass port"; phase corrected, precisely angled, floor-standing cabinet; hanabuilt component drivers; walnut vinyl finish

## 12 S

## Price

Dimensions
Weight
Type Computer-tuned low-resonance bass reflex

| Drivers | $12^{\prime \prime}$ long-throw woofer; $1 "$ phenolic <br> dome horn-loaded with $53 / 8^{\circ}$ |
| :--- | :--- |
|  | aluminum |
| Response | 28 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 101.5 |
|  | dB SPL at 1 meter at 1 watt |

Features Bookshelf design; handbult com-
ponent drivers; walnut vinyl finish
$10 S$
Price $\$ 19$
Dimensions
Weight
Type
Drivers

Response $\quad 32 \mathrm{~Hz}$ to $20 \mathrm{kHz}_{1} \pm 3.2 \mathrm{~dB}$ re 100 dB SPL at 1 meter at 1 watt
Crossover $\quad 2.2 \mathrm{kHz}$
Impedance 8 ohms (nominal)
Min. power 8 watts ( 9 dBW )
Max. power 60 watts ( 17.75 dBW )
Controls L-pad variable through full range
Features Same as Model 12 S

## Models also available

6S, \$149; 15S, \$449

## SOURCE

Sound Source
1435 Jacqueline Dr.
Columbus, Ga. 31907

1240
Price
Dimensions
Weight
Type
Drivers
Response $\quad 35 \mathrm{~Hz}$ to $40 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 250 watts ( 24 dBW )

Controls None
Features External fusing (AGC-4); genuine walnut veneer enclosure

1020
Price N/A
Dimensions $223 / 4 / 4 \mathrm{H} \times 131 / 4 \mathrm{~W} \times 101 / 4 \mathrm{D}$
Weight 34 lbs .
Type Tube vented reflex
Drlvers 10" wooter; 5" (sealed environment) midrange; $2^{\prime \prime}$ phenalic ring tweeter
Response 40 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Impedance 8 ohms
Min. power 5 watts ( 7 dBW )
Max. power 100 watts ( 20 dBW )
Controls Tweeter
Features External fusing (AGC-3); genuine walnut veneer enclosure

## SIGNATURE SERIES

## 4a

Price $\quad \$ 499$
Dimensions $42 \mathrm{H} \times 16 \mathrm{~W} \times 13 \mathrm{D}$
Weight 95 lbs
Type Rear-frequency time line, acousticaliy damped
Drivers $\quad 12^{\prime \prime}$ woofer; $5^{n}$ isolated midrange; $1^{1 "}$ soft-dome tweeter
Response $\quad 20 \mathrm{~Hz}$ to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover $900 \mathrm{~Hz} ; 6 \mathrm{kHz}$
impedance 8 ohms
Min. power 20 watts (13 dBW)
Max. power 200 watts ( 23 dBW )
Controls Tweeter; midrange

## 2a

Price $\$ 279$
Dimensions $\quad 26 \mathrm{H} \times 131 / 2 \mathrm{~W} \times 101 / 2 \mathrm{D}$
Weight 30 lbs ,
Type Vented, acoustically damped
Drivers $\quad 10^{\prime \prime}$ woofer; $5^{n}$ isolated midrange; 1 " soft-dome tweeter
Response $\quad 38 \mathrm{~Hz}$ to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover $1.8 \mathrm{~Hz} ; 6 \mathrm{kHz}$
Impedance 8 ohms
Min. power 10 watts ( 10 dBW )
Max. power 100 watts $(20 \mathrm{dBW})$
Controls Tweeter

## Models also available

1220, N/A; D-12, N/A; 3a, \$350;
1a, \$199

## SPEAKERCRAFT

Speakercraft of Oregon
P.O. Box 13460

Portland, Ore, 97213
$\underset{\text { Price }}{\text { Sylvan }}$ Monitor
Price $\$ 489$
Dimensions $46 \mathrm{H} \times 16 \mathrm{~W} \times 14 \mathrm{D}$
Weight 82 jbs
Type
Loaded transmission line
Drivers
Four 12" passive elements; two $61 / 2^{"}$ high compliance bass drivers, push/pull configuration; $61 / 2$ " plasticized midrange; $1^{\prime \prime}$ soft damp tweeter
Response $\quad 20 \mathrm{~Hz}$ to $28 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 86 dB SPL at 1 meter at 1 watt
Crossover $200 \mathrm{~Hz} ; 3 \mathrm{kHz}$
Impedance 4 ohms
Min. power 35 watts ( 15.5 dBW )
Max. power 250 watts ( 24 dBW )
Controls Tweeter (3-position)
Features Push/pull; phase corrected; walnut
veneer enclosure; floorstanding

## Sylvan Standard <br> Price $\$ 179$



Speckman S-310


Sinell Type A

| Dimensions | $24 \mathrm{H} \times 13 \mathrm{~W} \times 11 \mathrm{D}$ |
| :--- | :--- |
| Weight | 32 lbs. |
| Type | Acoustic suspension |
| Drivers | Three $8^{\prime \prime}$ plasticized woofers; two |
|  | $21 / 2^{\prime \prime}$ spiderless cone tweeters |
| Response | 37 Hz to $21 \mathrm{kHz} \pm^{3 \mathrm{~dB}}$ |
| Crossover | 3 kHz |
| Impedance | 4 ohms |
| Min. power | 15 watts (11.75 dBW) |
| Max. power | 100 watts ( 20 dBW ) |
| Controls | Tweeter (3-position) |
| Features | Phase corrected; walnut veneered |
| enclosure; bookshelf standing |  |

## Models also available

Sylvan Premier, \$329

## SPEAKERLAB

Speakerlab, Inc.
735 N. Northlake Way
Seattle, Wash. 98103

## SK <br> Price $\quad \$ 650$ (SKFW kit, \$445) <br> Dimensions $501 / 2 \mathrm{H} \times 321 / 4 \mathrm{~W} \times 28 \mathrm{D}$ <br> Weight 220 lbs . <br> Type Folded horn <br> Drivers $\quad 15^{n}$ woofer; $17^{\prime \prime} \times 6^{\prime \prime}$ horn midrange; <br> $4^{\text {n }} \times 834^{m}$ horn wave Aperture ${ }^{\text {(iio }}$ driver <br> Response 101 dB SPL at one meter at one watt <br> Crossover $\quad 400 \mathrm{~Hz} ; 5 \mathrm{kHz}$ <br> $\begin{array}{ll}\text { Impedance } & 80 \mathrm{hms} \\ \text { Min. power } & 10 \text { watts ( } 10 \mathrm{dBW} \text { ) }\end{array}$ <br> Max. power 250 watts ( 24 dBW ) <br> Controls Midrange; tweeter



Impedance 8 ohms
Min. power 25 watts (14 dBW)
Max. power 350 watts (25 5 dBW
Controls Woofer damping; midrange;
Features Newly patented woofer design
S-2.5
Price
Dimensions
Weight
Type
Drivers
Response
Crossover
Impedance
Min. power
Max. power
Controls



Features Midnight black flat smooth finish with interchangeable pecan legs; chain package available for hanging

## S-15 Titus Subwoofer

Price $\$ 650$
Dimensions $36 \mathrm{H} \times 15^{1 / 4}$ dia.; $48 \mathrm{H} \times 18$ dia., with legs
Weigint $\quad 75 \mathrm{lbs}$ ( approx., depending on leg styles)
Type $\quad$ Cylindrical Column Of Air Effect ${ }^{\text {® }}$ subchamber
Drivers $\quad 15^{\prime \prime}$ extended-range subwoofer
Response 19 Hz to $100 \mathrm{~Hz}, \pm 2 \mathrm{~dB}$
Crossover Passive at 100 Hz
Impetance 8 ohms
Min. power 25 watts ( 14 dBW )
Max. power 250 watts ( 24 dBW )
Features Midnight black flat smooth finish with interchangeable pecan legs; chain package available for hanging

## S-310 Galatian Edition

## Price $\$ 345$

Dimensions $30 \mathrm{H} \times 12^{1 / 2}$ dia.; $25^{1 / 2} \mathrm{H} \times 3 / 4$ dia. with legs
Weight $\quad 34$ lbs. (approx. dependling on unit type)
Type Cylindrical Column Of Air Effect subchamber
Drivers $\quad 10^{\prime \prime}$ subwoofer; $41 / 2^{* *}$ midrange; $1^{\prime \prime}$ dome tweeter
Response $\quad 29 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 2.5 \mathrm{~dB}$ re 91 dB SPL at one meter at one watt
Crossover $\quad 650 \mathrm{~Hz} ; 6.5 \mathrm{kHz}$
Impesance 8 ohms
Min. power 15 watts ( $113 / 4 \mathrm{dBW}$ )
Max. power 125 watts (21 dBW)
Features Avallable in midnight Black (a flat smooth finish, pecan legs standard); Palamino (combination brass, light tan fabric with interchangeable pecan legs); mocha (same as Palomino except with dark brown pile fabric); chrome (combination chrome or blacktone, trim rings, light silver blue fabric, interchangeable solid clear acrylic legs standard); chain package available for hanging

## Models also available

S-412 Galatian Editor, \$559; S. 103, \$195; S-82, \$129

## STRELIOFF

Strelioff System Designs
5305 Teudilla Ave.
Woodland Hills, Calif. 91364

## TS-1 Transducer System

Price $\quad \$ 5,500 / 1 \mathrm{pr}$ pr
Dimensions $66 \mathrm{H} \times 36 \mathrm{~W} \times 18 \mathrm{D}$
Weight 210 lbs .
Type Acoustic suspension

Drivers

## Response

Crossover Impedance Min. power Max. power Controls

Two $10^{\prime \prime}$ cast aluminum frame woofers; six $11 / 2^{\prime \prime}$ dome midranges; six $1^{\prime \prime}$ dome tweeters
38 Hz to $18 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 87 dB SPL at 1 meter at 1 watt $800 \mathrm{~Hz} ; 5 \mathrm{kHz}$ 5 ohms at 500 Hz 100 watts ( 20 dBW
500 watts ( 27 dBW ) Blamp; triamp, low frequency rolloff (mode switches); 10 dB attenuation for each frequency range (rotary controls)
Features Custom finishes available
TE-1 Transducer Bass Extender
Price $\quad \$ 3,000 / \mathrm{pr}$
Dimensions $32 \mathrm{H} \times 28 \mathrm{~W} \times 39 \mathrm{D}$
Weight
Type
180 lbs.
Drivers Multichamber infinite baffle
Response $\quad 1^{\prime \prime}$ cast aluminum frame wooter re 84 d SPL at one meter at one watt
Crossover $10 \mathrm{~Hz} ; 150 \mathrm{~Hz}$ (filter network)
Impedance 8 ohms at 70 Hz
Min. power 50 watts ( 17 dBW )
Max. power 250 watts ( 24 dBW )
Controls None
Features Cabinet construction includes high density $11 / 2^{\prime \prime}$ thick walls and internal bracing; custom finishes available

## MS-1 Monitor System

$\begin{array}{ll}\text { Price } & \$ 1,250 / \mathrm{pr} \\ \text { Dimensions } & 18 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 71 / 2 \mathrm{D}\end{array}$
$\begin{array}{ll}\text { Dimensions } & 18 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 71 / 2 \mathrm{D} \\ \text { Weight } & 32 \mathrm{lbs} .\end{array}$
Type Exponentially loaded acoustic suspenslon
Drivers Two 5" cast aluminum frame woofers; two $11 /{ }^{\prime \prime}$ dome midranges; two 1 " dome tweeters
Response $\quad 70 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 4 \mathrm{~dB} \mathrm{SPL}$ at 1 meter at 1 watt
Crossover $800 \mathrm{~Hz} ; 5 \mathrm{kHz}$
Impedance 5 ohms at 500 Hz
Min. power 20 watts ( 13 dBW )
Max. power 200 watts ( 23 dBW )
Contrals None
Features Minimum $180^{\circ}$ horizontal dispersion at specified response; custom finishes available

## Models also available

ME-1 Monitor Bass Extender, \$950

## SUPEREX

Superex Electronics Corp.
151 Ludlow St.
Yonkers, N.Y. 10705

## Satellite/1

| Price | \$89.95 |
| :---: | :---: |
| Dimensions | $101 / 4 \mathrm{H} \times 81 / 2 \mathrm{~W} \times 6 \mathrm{D}$ |
| Weight | 5 lbs .3 oz . |
| Type | Dynamic high frequency augmentation |
| Drivers | Two $1^{\prime \prime}$ textile dome tweeters |
| Response | 4 Hz to 4 kHz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 96 dB SPL at 1 meter at 1 watt |
| Crossover | 4 kHz |
| impedance | 4 ohms |
| Max. power | 100 watts (20 dBW) |
| Controls | High-frequency attenuator |
| Features | Slotted dispersion plate eliminates |
| beaming; high nant smoked | resolution driver design in non-reso plexiglass enclosure |

SYNERGISTICS
Maybern Co.
9565 Midwest Ave.
Cleveland, Ohio 44125

S-92 Panels and Commode

Price $\$ 2000$
Dimensions Commode: $193 / 4 \mathrm{H} \times 38 \mathrm{~W} \times 18 \mathrm{D}$; panels: $61 \mathrm{H} \times 23 \mathrm{~W} \times 4 \mathrm{D}$
Weight Commode: 130 lbs .; panels: 70 lbs .
Type Acoustic suspension
Drivers $\quad$ Six $41 / 2^{\prime \prime}$ open-backed midrange drivers; 12" woofers; two bipolar iweeters
Response $\quad 24 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ re 91 dB
SPL at 1 meter at 1 watt
Crossover $140 \mathrm{~Hz}, 2.0 \mathrm{kHz}$
Impedance 8 ohms
Min. power 35 watts ( 15.5 dBW )
Max. power 600 watts ( 27.75 dBW )
Controls Midrange and tweeter levels
Features Circuit breakers; $3 / 4^{\prime \prime}$ high density particle board finished with genuine hand-rubbed walnut veneer; 3-piece bipolar with stereo subwoofer

## S-73 Tower

Price $\$ 575$
Dimensions $461 / 2 \mathrm{H} \times 213 / 4 \mathrm{~W} \times 15 \mathrm{D}$
Weight 79 lbs .
Type Vented
Drivers $\quad 12^{\prime \prime}$ passive radiator; two $8^{\prime \prime}$ high compliance woofers; bipolar samarium cobalt tweeter midrange
Response 30 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Crossover $45 \mathrm{~Hz} ; 2.0 \mathrm{kHz}$
Impedance 8 ohms
Min. power 15 watts ( 11.75 dBW )
Max. power 150 watts ( 21.75 dBW)
Controls Woofer and tweeter levels
Features $\quad 3 / 4^{n}$ high derisity particle board finished with genuine hand-rubbed walnut veneer, bipolar design; circuit breaker

## S-53 Tower

Price $\$ 325$
Dimensions $30 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 121 / 2 \mathrm{D}$
Weight 46 lbs .
Type Vented
Drivers $\quad 10^{\prime \prime}$ passive radiator; $8^{n}$ woofer; four $21 / 2^{\prime \prime}$ tweeters
Response $\quad 40 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 4 \mathrm{~dB}$
Crossover $50 \mathrm{~Hz} ; 2.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 6 watts ( 7.75 dBW )
Max. power 60 watts ( 17.75 dBW )
Controls Tweeter level
Features $3 / 4^{*}$ high density particle board finished with genuine hand-rubbed walnut veneer; circuit breaker

S-51C
Price $\$ 325$
Dimensions $251 / 2 \mathrm{H} \times 141 / 4 \mathrm{~W} \times 11 \mathrm{1} / 2 \mathrm{D}$
Weight 41 lbs .
Type Vented
Drivers $\quad 12^{\prime \prime}$ passive radiator; $8^{\prime \prime}$ high compliance woofer; piezoelectric supertweeter; $21 / 2^{\prime \prime}$ tweeter
Response $\quad 35 \mathrm{~Hz}$ to $24 \mathrm{kHz}, \pm 4 \mathrm{~dB}$
Crossover $45 \mathrm{~Hz} ; 2.5 \mathrm{kHz} ; 12.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 6 watts ( 7.75 dBW )
Max. power 80 watts ( 19 dBW )
Controls Tweeter level
Features $\quad 3 / 4^{"}$ hig̣h density particle board finished with genuine hand-rubbed walnut veneer; circuit breaker

S-22B

| Price | $\$ 130$ |
| :--- | :--- |
| Dimensions | $23 \mathrm{H} \times 12 \mathrm{~W} \times 91 / 2 \mathrm{D}$ |
| Weight | 29 lbs |
| Type | Acoustic suspension |
| Drivers | $8^{\prime \prime}$ woofer; $2^{1 / 2 \pi}$ tweeter |
| Response | 50 Hz to $18 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ |
| Crossover | 3.2 kHz |
| Impedance | 8 ohms |
| Min. power | 6 watts $(7.75 \mathrm{dBW})$ |
| Max. power | 40 watts $(16 \mathrm{dBW})$ |

Features $\quad 3 / 4^{n}$ high density particle board finished in walnut grain vinyl

## Models also available

S-63 Tower, \$400; S-46, \$250;
S-33, $\$ 175$; S-23, $\$ 150 ;$ S-12B, $\$ 100$

## TAMON

Tamon Audio Corp. of
America
P.O. Box 322

Concord, Calif. 94522
TS-707
Price
Dimensions
Weight
Type
Drivers

## Response

Crossover
Impedance
Max. power
$\$ 380$
$311 / 8 \mathrm{H} \times 16 \% \mathrm{~W} \times 11 \% \mathrm{D}$
55 lbs.
Infinite baffle
$15^{\prime \prime}$ cone wooter; two $5^{\prime \prime}$ sealedback cone midrange drivers; $3^{\prime \prime}$ ring-radiating tweeter; $21 / 2^{\prime \prime}$ metal-
lic supertweeter
30 Hz to 35 kHz
$600 \mathrm{~Hz} ; 6 \mathrm{kHz} ; 15 \mathrm{kHz}$
8 ohms
110 watts ( 20.5 dBW ), 200 watts (23 dBW) peak

| CRO-50L |  |
| :---: | :---: |
| Price | \$360 |
| Dimensions | $243 / 8 \mathrm{H} \times 141 / 2 \mathrm{~W} \times 113 / 8 \mathrm{D}$ |
| Weight | 39 lbs . |
| Type | Infinite baffle |
| Drivers | $12^{\prime \prime}$ cone woofer; $5^{\prime \prime}$ sealed-back cone midrange; two $3^{\prime \prime}$ cone tweeters |
| Response | 32 Hz to 22 kHz |
| Crossover | $800 \mathrm{~Hz} ; 3 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Max. power | 45 watts ( 16.5 dBW ); 80 watts ( 19 dBW) peak |
| Features cuit | Electronic overload-protection cir- |
| TS-404 |  |
| Price | \$249.95 |
| Dimensions | $221 / 2 \mathrm{H} \times 121 / 4 \mathrm{~W} \times 113 / 6 \mathrm{D}$ |
| Weight | 27 lbs .8 oz . |
| Type | Infinite baffle |
| Drivers | $10^{\prime \prime}$ cone woofer; $5^{\prime \prime}$ sealed-back cone-midrange; $3^{\prime \prime}$ ring-radiating tweeter |
| Response | 38 Hz to 35 kHz |
| Crossover | $800 \mathrm{~Hz} ; 2.5 \mathrm{kHz}$ |
| impedance | 8 ohms |
| Max. power | 60 watts ( 17.75 dBW ); 100 watts (20 dBW) peak |
| LB-1030 |  |
| Price | \$229.95 (with mounting brackets) |
| Dimensions | $71 / 6 \mathrm{H} \times 41 / 2 \mathrm{~W} \times 41 / 8 \mathrm{D}$ |
| Type | Dynamic |
| Drivers | $4^{\text {" }}$ long-throw woofer; $1^{\text {n }}$ soft-dome tweeter |
| Response | 60 Hz to 20 kHz |
| Min. power | 15 watts ( 11.75 dBW ) |
| Features | Suitable for home or auto use |

TS-303
Price
Dimensions
Weight
Type
Drivers
Response
Crossover
Impedance
Max. power 40 watts ( 16 dBW ); 70 watts ( 18.5 dBW) peak

CRO-30L
Price $\$ 140$

| Dimensions | $19 \mathrm{H} \times 101 / 2 \mathrm{~W} \times 85 / 6 \mathrm{D}$ |
| :--- | :--- |
| Weight | 16 lbs. |
| Type | Infinlte batfle |
| Drivers | $8^{\prime \prime}$ cone woofer; $3^{\prime \prime}$ cone tweeter |
| Response | 45 Hz to 22 kHz |
| Crossover | 3 kHz |
| Impedance | 8 ohms |
| Max. power | 25 watts $(14 \mathrm{dBW}) ; 40$ watts (16 |
|  | dBW) peak |


| Dimensions | $33 \mathrm{H} \times 21 \mathrm{~W} \times 12 \mathrm{D}$ |
| :---: | :---: |
| Weight | 90 lbs . |
| Type | Ducted port |
| Drivers | $15^{*}$ woofer with compression highfrequency tweeter mounted on common axis |
| Response | 45 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ |
| Crossover | 1 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 150 watts (21.75 dBW) continuous |
| Controls | Treble energy; treble rolloff |
| Features | Phase-coherent integrated design |
| 225 |  |
| Price | \$495 |
| Dimensions | $28 \mathrm{H} \times 15 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight | 66 lbs . |
| Type | Passive radiator |
| Drivers | $10^{\circ}$ wooter with compression highfrequency tweeter mounted on common axis |
| Response | 45 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Crossover | 3.5 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts ( 10 dBW ) |
| Max. power | 150 watts ( 21.75 dBW ) continuous |
| Controls | Treble rolloff; treble energy |
| Features utilizing phase | Glass-top floor-standing speaker coherence integrated design |
| Models also available |  |
|  | Windsor, $\$ 1,250$; 185, $\$ 425$; 125, $\$ 228$ |

## Fasetts

| Price | $\$ 200 / \mathrm{pr}$ |
| :--- | :--- |
| Dimensions | $101 / 2 \mathrm{H} \times 11 \mathrm{~W} \times 83 / \mathrm{D}$ |
| Type | Acoustic suspension |
| Drivers | $5^{\prime \prime}$ woofer; $21 / /^{\prime \prime}$ tweeter |
| Response | 50 Hz to 20 kHz |
| Crossover | 3.5 kHz |
| Impedance | $8 / 4$ ohms |
| Min. power | 8 watts $(9 \mathrm{dBW})$ |
| Max. power | 25 watts $(14 \mathrm{dBW})$ |

## TANNOY

Tannoy-Ortofon, Inc.
122 Dupont St.
Plainview, N.Y. 11803

## Buckingham

| Price | $\$ 2,250$ |
| :--- | :--- |
| Dimensions | $46 \mathrm{H} \times 24 \mathrm{~W} \times 18 \mathrm{D}$ |
| Weight | 212 lbs. |
| Type | Ducted port |
| Drivers | Integrated phase-coherent $8^{\prime \prime}$ mi- <br> drange/tweeter with two $12^{\prime \prime}$ bass <br>  <br>  <br> drivers |
| Response | 40 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Crossover | $350 \mathrm{~Hz} ; 3.5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 10 watts (10 dBW) |
| Max. power | 150 watts ( 21.75 dBW ) continuous |
| Controls | Treble rolioff; treble energy |
|  |  |
|  |  |
| Arden |  |
| Price | $\$ 777$ |
| Dimensions | $39 \mathrm{H} \times 26 \mathrm{~W} \times 141 / 2 \mathrm{D}$ |
| Weight | 124 lbs. |
| Type | Ducted port |
| Drivers | $15^{\prime \prime}$ woofer with compression high- |
|  | frequency driver mounted on com- |
|  | mon axis |
| Response | 45 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ |
| Crossover | 1 kHz |
| Impedance | 8 ohms |
| Min. power | 10 watts (10 dBW) |
| Max. power | 150 watts ( 21.75 dBW ) continuous |
| Controls | Treble roliff; trebie energy |
| Features | Phase-coherent integrated design |

## Berkeley

Price



## Thiel Model 04

Synergistics S. 53


RL-X3
Price

## VERMONT WOOD CRAFTS Vermont Wood Crafts, Inc. P.O. Box 206 <br> Depot Street <br> Proctorsville, Vt. 05153

SL-5

| Price | \$199.95 |
| :---: | :---: |
| Dimensions | $341 / 2 \mathrm{H} \times 181 / 2 \mathrm{~W} \times 1212 \mathrm{~L}$ |
| Weight | 45 lbs . |
| Type | Bass reflex |
| Drivers | 15" wooter; $31 / 2^{n}$ midrange; two $21 / 2$ " direct radiating tweoters |
|  | 32 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Crossover | $1 \mathrm{kHz} ; 6 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 10 watts (10 dBW) |
| Max. power | 70 watts (18.5 dBW) |
| Controls | Tweeter; midrange |
| Features | Circuit breaker; attached |

stands
SL-2

| Price | \$99.95 |
| :---: | :---: |
| Dimensions | $25 \mathrm{H} \times 15 \mathrm{~W} \times 10 \% \mathrm{C}$ |
| Weight | 32 lds . |
| Type | Bass reflex |
| Drivers | $12^{\text {" }}$ woofer; $3^{\text {" }}$ phenolic radiato tweeter |
| Response | 38 Hz to $18 \mathrm{kHz}, \pm 4 \mathrm{~dB}$ |
| Crossover | 1.5 kHz |
| Impedance | 8 ohms |
| Min. power | 5 watts (7 dBW) |
| Max. power | 45 watts (16.5 dB |
| Features | Circuit breaker |

## SL- 1

$\begin{array}{ll}\text { Price } & \$ 79.95 \\ \text { Dimensions } & 20 H \times 12 \mathrm{~W} \times 8 \mathrm{D}\end{array}$
Weight
Type Bass reflex
Drivers $8^{\prime \prime}$ woofer; $3^{3 "}$ phenolic radiator tweeter
Response 40 Hz to $18 \mathrm{kHz}, \pm 4 \mathrm{~dB}$
Crossover $\quad 2.5 \mathrm{kHz}$
Impedance 8 ohms
Min. power 5 watts (7 dBW)
Max. power 30 watts (14.75 dBW)

## Models also available

SL-4, \$179.95; SL-3, \$119.95

## VISONIK HIFI

Visonik of America, Inc.
701 Heinz St.
Berkeley, Calif. 94710


Wharfedale E-90
Tracer Sound WIndow 10014

Max. power 40 watts 16 dBW ) continuous Features Recommended for auto installation with Visonik A-301 automotive amplifier

## SUBWOOFER SERIES

## SUB 1

Price

Type
Drivers
Response
Crossover Impedance
Min. power
Max. power Features ing crossover

## SUB 2

Price
Dimensions
Weight
Type
Drivers
Response
Crossover Impedance Min. power Max. power Features crossover

Dimensions $\quad 390$ ( $\$ 630$ with David 502 )
$233 / \mathrm{H} \times 17 \mathrm{~W} \times 133 / 4 \mathrm{D}$ 64 lbs.
$\$ 390$ ( $\$ 630$ with David 502)

Acoustic suspension $12^{\prime \prime}$ wooter
16 Hz to $30 \mathrm{kHz},+4 \mathrm{~dB},-8 \mathrm{~dB}$
(w/David 502)
$160 \mathrm{~Hz} ; 1.4 \mathrm{kHz}$
6 ohms
50 watts ( 17 dBW )
300 watts ( 25.75 dBW ) Subwoofer unit with built-in matrix-


## EURO SERIES

EURO 10
-5000
Price $\quad \$ 115$ (optional bracket, $\$ 10$ )
Dimensions 63 3ih $\times 41 / 6 \mathrm{~W} \times 41 / 4 \mathrm{D}$
Weight
Type
Drivers
Response
Crossover
Impedance
Min. power
Max. power
Features
Visonik automotive amplifier

## D-302 MO Speaker

Price $\$ 100$ (with mounting bracket)
Weight
Type
Drivers
Response
Crossover
Impedance
Min. power

Dimensions $63 / 4 \mathrm{H} \times 41 / 8 \mathrm{~W} \times 41 / 4 \mathrm{D}$
5 los.
Acoustic suspension
$4^{\text {n }}$ woofer; $2^{\prime \prime}$ cone tweeter 50 Hz to $22 \mathrm{kHz},+4 \mathrm{~dB},-8 \mathrm{~dB}$ 2 kHz
4 ohms
10 watts ( 10 dBW )
$\$ 300$
$\begin{array}{ll}\text { Dimensions } & 143 / \mathrm{HH} \times 91 / 4 \mathrm{~W} \times 93 / 4 \mathrm{D} \\ \text { Weight } & 19 \mathrm{lbs} 12 \mathrm{oz}\end{array}$
19 los. 12 oz.
Type Alr suspension

0
Dimenslons $9 \% / 6 \mathrm{H} \times 61 / 4 \mathrm{~W} \times 65 / 8 \mathrm{D}$
Weight
Drivers
5" woofer; $1^{\prime \prime}$ tweeter

Crossover
Impedance
Min. power 15 watts ( 11.75 dBW )

D-702
Price
Weight
Drivers
Crossover
Impedance
Min. power
Max. power
$\$ 210$ (black); $\$ 235$ (walnut)
$123 / 3 \mathrm{H} \times 73 / 4 \mathrm{~W} \times 8 \mathrm{D}$
17 lbs .
$7^{7 \prime}$ woofer; $1^{\prime \prime}$ sott-dome tweeter
30 Hz to $25 \mathrm{kHz},+4,-8 \mathrm{~dB}$
2.1 kHz

4 ohms
10 watts ( 10 dBW )
90 watts ( 19.5 dBW )
$63 \mathrm{3H} \times 41 / 6 \mathrm{~W} \times 41 / 4 \mathrm{D}$
$5 \mathrm{lbs}$.8 oz
Acoustic suspension
$4^{\prime \prime}$ woofer; $1^{\prime \prime}$ soft-dome tweeter
50 Hz to $25 \mathrm{kHz},+4 \mathrm{~dB},-8 \mathrm{~dB}$
2.5 kHz

4 ohms
10 watts ( 10 dBW )
50 watts ( 17 dBW )

Models also available
6000, \$150; 4000, \$100; Euro 7. $\$ 300$
WATSON
Watson Laboratories
2711 Rena Road
Mississauga, Ont. L4T 3K1,
Canada

| 25W |  |
| :--- | :--- |
| Price | $\$ 1,650$ |
| Dimensions | $17 \mathrm{H} \times 52 \mathrm{~W} \times 34 \mathrm{D}$ |
| Weight | 130 lbs. |
| Type | Subwoofer; inert gas suspension |
| Response | 17 Hz to $150 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 93 dB |
|  | SPL at 1 meter at 1 watt |
| Impedance | 4 to 8 ohms |
| Min. power | 100 watts $(20 \mathrm{dBW})$ |
| Max. power | 500 watts $(27 \mathrm{dBW})$ |
| Features | Coffee-table styling |


| Model Five |  |
| :---: | :---: |
| Price | \$875/pr. |
| Dimensions | $32 \mathrm{H} \times 15 \mathrm{~W} \times 14 \% \mathrm{D}$ |
| Weight | 38 lbs |
| Type | Inert gas suspension |
| Drivers | $10^{\prime \prime}$ woofer; $6^{7}$ midrange; 1 dome tweeter |
| Response | 30 Hz to $20 \mathrm{kHz}, \pm^{3} \mathrm{~dB}$ re SPL at 1 meter at 1 watt |
| Crossover | $510 \mathrm{~Hz} ; 3 \mathrm{kHz}$ |
| Impedance | 5 ohms |
| Min. power | 50 watts ( 17 dBW ) |
| Max. power | 150 watts ( 21.75 dBW ) |
| Controls | Square-wave reponse from 150 Hz to 5 kHz |
| Models also available |  |
|  | Model Ten ; Model Seven |
| WHARFEDALE |  |
| Rank Hi Fi Inc. |  |
| 20 Bushes Lane |  |
| Elmwood | Park, N.J. 07407 |

E-90

| Price | \$850 |
| :---: | :---: |
| Dimensions | $453 / 8 \mathrm{H} \times 153 / 16 \mathrm{~W} \times 143 / 4 \mathrm{D}$ |
| Weight | 112 lbs |
| Type | Bass reflex |
| Drivers | Two low-mass $10^{\prime \prime}$ woofers; two $4^{n}$ high-flux cone midrange drivers; $1^{\text {" }}$ compression-drive horn tweeter |
| Response | 43 Hz to $18 \mathrm{kHz}, \pm^{3} \mathrm{~dB}$ re 95 dB SPL at 1 meter at 1 watt |
| Crossover | $1 \mathrm{kHz} ; 5 \mathrm{kHz}$ |
| Impedance | 8 ohms |
| Min. power | 15 watts (11.75 dBW) |
| Max. power | 280 watts ( 24.5 dBW ) |
| Features | Matched-grain walnut finish; |




# Equalizers 

## ADC

BSR (USA) Ltd.
Route 303
Blauvelt, N.Y. 10913

| Sound S Price | haper 3 Equalize $\$ 500$ |
| :---: | :---: |
| Dimensions | $65 / 16 \mathrm{H} \times 19 \mathrm{~W} \times 12 \mathrm{D}$ |
| Bands | 12 per channel |
| Range | $\pm^{12} \mathrm{~dB}$ in each band |
| Input imp. | 75 ohms |
| Output imp. | 10 ohms at 1 kHz |
| Max. output | 10 V |
| Features | Paragra |

Sound Shaper 2 Mk 2
Equalizer
Price $\$ 330$
Dimensions $61 / 4 \mathrm{H} \times 163 / 8 \mathrm{~W} \times 63 / 4 \mathrm{D}$
Weight $\quad 13 \mathrm{lbs}$.
Bands $\quad 12$ per channel
Range $\quad \pm 12 \mathrm{~dB}$ in each band
Input imp. 75 K ohms
Output imp. 10 ohms at 1 kHz
Max. output 9 V
Features Includes line/record, monitor, EG-
bypass, meter switches, and input jack for sound level meter

## Sound Shaper 110 Equalizer

Price $\$ 230$
Dimensions $61 / 4 \mathrm{H} \times 143 / 4 \mathrm{~W} \times 63 / 4 \mathrm{D}$
Weight $\quad 11 \mathrm{lbs}$
Bands $\quad 10$ per channel
Range $\pm 12 \mathrm{~dB}$ in each band
Input imp. 75 K ohms
Output imp. 10 ohms at 1 kHz
Max. output

## Models also available

Sound Shaper-1 Equalizer, \$120
AUDIO CONTROL
Audio Control, Inc.
6520 212th St., S.W., B-1
Lynwood, Wash. 98036
C-101 Octave Equalizer
Price $\quad \$ 549$
Dimensions $\quad 31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 61 / 2 \mathrm{D}$
Weight 8 lbs
Bands 10 per channel
Range $\pm 15 \mathrm{~dB}$ in each band
Input imp. 100 K ohms
Max. Input 7V
Output imp. 680 ohms
Max. output 7V
Features LED display real-time analyzer pink-noise generator; mic input; switchable infra-
sonic filter; rack-mount

## C-50A Equalizer <br> Price $\$ 399$ <br> Dimensions $31 / 2 \mathrm{H} \times 91 / 2 \mathrm{~W} \times 61 / 2 \mathrm{D}$ <br> Weight 4 lbs.

Bands
Input imp.
Max. input Output imp.
Max. output
100K ohms
680 ohms
Features Includes pink-noise generator and measurement microphone; real-time analyzer

520B Equalizer
price $\quad \$ 119$
Dimenslons $23 / 5 \mathrm{H} \times 123 / 10 \mathrm{~W} \times 5 \mathrm{D}$
Weight $\quad 2 \mathrm{lbs} .6 \mathrm{az}$.
Bands 5 per channel
Range $\quad \pm 12 \mathrm{~dB}$ to $\pm 15 \mathrm{~dB}$ in each band
Input imp. 470K ohms
Max. input 7.5 V
Output imp. 600 ohms
Max. output 7
Features Switchable infrasonic filter; EQ points at $36 \mathrm{~Hz}, 60 \mathrm{~Hz}, 120 \mathrm{~Hz}, 1 \mathrm{kHz}$, and 15.5 kHz ; narrow-bandwidth filters

## Models also available

C-25 Equalizer, \$299; C-22 Equalizer, \$229

## AUDIO DEVELOPMENTS <br> INTERNATIONAL <br> Audio Developments <br> International <br> 644 Emerson St. <br> Palo Alto, Calif. 94301

1500 Automatic Equalizer
Price $\$ 850$
Dimensions $5 \mathrm{H} \times 19 \mathrm{~W} \times 10 \mathrm{D}$
Weight 12 lbs .
Bands 10 per channel
Range $\quad \pm 12 \mathrm{~dB} h$ each band
Input imp. $\quad 10 \mathrm{~K}$ ohms
Max. input $\quad \pm 3 \mathrm{~dB}$
Output imp. 600 ohms
Max. output $\pm 18 \mathrm{~dB}$
Level contr. $\pm 12 \mathrm{~dB} ;-12 \mathrm{~dB}$ (insertion gain)
Features Patented LED indicators; no external test equipment needed

## 1503 Equalizer

Price $\$ 730$
Dimensions $3 H \times 19 \mathrm{~W} \times 10 \mathrm{D}$
Weight 10 lbs .
Bands 31
Range $\quad \pm 12 \mathrm{~dB}$ in each band
Input imp. 10 K ohms
Max. input +30 dBV
Output imp. 600 ohms (balanced)
Max. output +27 dBV
Level contr. $+12 \mathrm{~dB} ;-12 \mathrm{~dB}$ (insertion gain)
Features Low noise, distortion; full range graphic $1 / 3$ octave equallzer; 20 Hz to 20 kHz bands; optimum range indicator included; -115 dBV noise

## Models also available

1501 Equalizer, \$375

BIAMP
Biamp Systems, Inc.
10950 S.W. 5th Ave., \# 110
Beaverton, Ore. 97005
EQ/270A Equalizer
Price $\quad \$ 459$
Dimensions $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 10 \mathrm{D}$
Weight $\quad 3 \mathrm{lbs} 4 \mathrm{oz}$.
Bands 27
Range $\quad \pm 12 \mathrm{~dB}$ in each band
Input imp. 600/50K ohms
Max input 14 V
Output imp. 600 ohms
Max. output 21.25 V
Levet contr. +12 dB ; -12 dB (insertion gain)
Features High slew rate; twenty-seven bands on standard 1/3-octave ISO centers; low noise and distortion; EQ bypass switching; LED overload indicator; XLR-type connectors and phone jacks on inputs and outputs; transformerless balanced lines in and out; all metal, olldamped slide controls with center detent; combining filters; low-phase shiff; magnetic field immunity; outputs short-circuit and reverse-surge protected; switchable input impedance; rugged interconnect construction; rack-mount design

## EQ/210 Equalizer

$\begin{array}{ll}\text { Price } & \$ 269 \\ \text { Dimensions } & 31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 51 / 4 \mathrm{D}\end{array}$
Weight $\quad 2 \mathrm{lbs} 8 \mathrm{oz}$
Bands 10 per channel
Range $\pm 15 \mathrm{~dB}$ in each band
Input imp. 50 K ohms
Max. Input 14 V
Output Imp. 600 ohms
Max. output 17 V
Level contr. $+15 \mathrm{~dB} ;-15 \mathrm{~dB}$ (insertion gain)
Features Transformerless balanced line inputs and outputs or conventional single-ended; two completely independent channels; EQ bypass switching; LED overload indicators; magnetic field immunity; output short-circuit and reverse-surge protected; rack-mount deslgn

## CERWIN-VEGA

Cerwin-Vega, Inc.
12250 Montague St.
Arleta, Calif. 91331

## GE-2 Equalizer

Price $\$ 600$
Dimensions $51 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 71 / 4 \mathrm{D}$
Weight 12 lbs.
Bands $\quad 13$
Range $\quad \pm 12 \mathrm{~dB}$ in each band
Input imp. 50 K ohms (nominal)
Max. input $4 V$
Output imp. 50 ohms (nominal output imp.; 2 K ohms min. rated load imp.)
Max. output 8 V
Level contr. $+6 \mathrm{~dB} ;-\infty \mathrm{dB}$ (insertion gain)
Features Half-octave control below 250 Hz , sull octave control above 250 Hz

## CROWN

Crown International, Inc.
1718 W. Mishawaka Road
Elkhart, Ind. 46514
EQ/2 Distinction Series
Equalizer
Price $\$ 1,095$
Dimensions $7 \mathrm{H} \times 19 \mathrm{~W} \times 141 / 2 \mathrm{D}$
Weight 16 lbs .
Bands 11 per channel
Range $\quad \pm 15 \mathrm{~dB}$ in each band
Input imp. $\quad 75 \mathrm{~K}$ unbalanced; 20 K balanced (transformless)
Max. input 10V (WRMS)
Output imp. 300 ohms, normal; 600 ohms, balanced
Max. output 10 V (WRMS)
Level contr. +10 dB (nominal unity gains with input attenuator)
Features Tunable center frequencies; hingepoint shelving tone controls; clip-level indicator; automatic turn-on muting; equalization and control cancel switches; test record and graph paper provided

DRACO
Draco Labs, Inc.
1005 Washington St.
Grafton, Wisc. 53024
Parametric Equalizer
Price $\$ 550$
Dimensions $51 / 5 \mathrm{H} \times 19 \mathrm{~W} \times 12 \mathrm{D}$
Weight 22 lbs.
Bands 20
Range $\pm 10 \mathrm{~dB}$ in each band
Input imp. 50 K ohms
Max. input 10 V (rms)
Output imp. 600 ohms
Max. output 8 V
Level contr. +10 dB (insertion gain)
Features Variable $Q$; variable center frequency per band; pre-post record selection; bypass; output gain adjustment

## DYNACO

Dynaco Inc.
P.O. Box 612

Needham, Mass. 02195
SE-101 Equalizer

| Price | $\$ 375$ (assembled) |
| :--- | :--- |
| Dimenslons | $41 / \mathrm{H} \times 131 / 2 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight | 12 lbs |
| Bands | 10 per channel |
| Range | $\pm 12 \mathrm{~dB}$ In each band |
| Input imp. | 50 K ohms |
| Max. input | 5 V |
| Output imp. | 600 ohms |
| Max. output | 8 V |
| Level contr. | $+6 \mathrm{~dB} ;-12 \mathrm{~dB}$ (insertion gain) |

FURMAN SOUND
Furman Sound
616 Canal St., Suite 29
San Rafael, Calif. 94901

| PQ-6 Parametric Equalizer |  |
| :--- | :--- |
| Price | $\$ 495$ |
| Dimensions | $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 8 \mathrm{D}$ |
| Weight | 7 lbs |
| Bands | 3 per channel |
| Range | $+20 \mathrm{~dB},-\infty \mathrm{dB}$ in each band |
| Input imp. | 100 K ohms |
| Max. input | 4.9 V |
| Output imp. | 10 ohms |
| Max. output 8.3 V |  |

Level contr. $+6 d B ;-\infty d B$ (insertion gain) Features Tunable frequency and bandwidth (latter variable from approximately 0.1 to 4 octaves); bypass switches; tape monitor switch; lowlevel inputs allow use as an instrument preamp; notches can go infinitely deep (i.e., total cancellation at selected frequency): S/N 99 dB with EQ in and set flat

## PQ-3 Mono Parametic

## Equalizer/Instrument Preamp

| Price | $\$ 275$ |
| :--- | :--- |
| Dimensions | $13 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 8 \mathrm{D}$ |
| Weight | 5 lbs |

Weight 5 lbs .
Bands 3
Range $\quad+20 \mathrm{~dB},-\infty \mathrm{dB}$ in each band
Input imp. 100K ohms
Max. input $\quad 4.9 \mathrm{~V}$
Output imp. 10 ohms
Max. output 8.3 V
Level contr. $+6 \mathrm{~dB} ;-\infty \mathrm{dB}$ (insertion gain)
Features Tunable frequency and bandwidth (latter variable from approximately 0.1 to 4 actaves); bypass switch; low-level input alfows use as an instrument preamp; notches can go infinitely deep (i.e., total cancellation or zero amplitude at the sefected frequency); S/N 99 dB with EQ in and set flat

## TX-2 Tunable

Crossover/Bandpass Filter
Price $\$ 225$
Dimensions $13 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 8 \mathrm{D}$
Weight 5 lbs .
Bands 2 turn-around points
Input imp. 100K ohms
Max. input 8.3 V
Output imp. 47 ohms
Max. output 8.3 V
Level contr. $+8 \mathrm{~dB} ;-\infty \mathrm{dB}$ (insertion gain)
Features May be used as a crossover in bi-
or tri-amp systems, as a bandpass filter, or as two independent high- or low-pass filters; both turnaround trequencies completely tunable anywhere from 20 Hz to 20 kHz ; input gain ádjustable from unity to +8 dB ; Butterworth response, $12 \mathrm{~dB} / \mathrm{oc}$ tave rollofts

JVC
JVC America, Inc.
58-75 Queens Midtown
Expressway
Maspeth, N.Y. 11378
SEA-7070 Equalizer
Price $\$ 780$
Dimensions $63 / 8 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 131 / 2 \mathrm{D}$
Weight 19 lbs .
Bands $\quad 11$ per channel
Range $\quad \pm 12 \mathrm{~dB}$ (or $\pm 6 \mathrm{~dB}$ ) in each band (selectable)
Input imp. 50 K ohms
Output imp. 330 ohms
Features One-third octave ISO center fre-
quency

## SEA-50 Equalizer

Price $\$ 290$
Dimensions $63 / 8 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 131 / 2 \mathrm{D}$
Weight $\quad 15 \mathrm{lbs}$.
Bands 10 per channel
Range $\quad \pm 12 \mathrm{~dB}$ in each band
Input imp. 50 K ohms
Output imp. 5 K ohms
Max. output 4 V
Features Resonant circuits with semicon-ductor-L inductors

SEA-20G Equalizer
Price $\quad \$ 190$
Dimensions $4 \mathrm{H} \times 153 / 6 \mathrm{~W} \times 101 / 2 \mathrm{D}$
Weight $\quad 7 \mathrm{lbs} 8 \mathrm{oz}$.

Bands 7 per channel
Range $\quad \pm 12 \mathrm{~dB}$ in each band
Input imp. 100 K ohms
Output imp. 5 K ohms
Max. output 3 V
Features Resonant circuits with semicon-ductor-L inductors

## Modèls also available <br> SEA-80, \$600

KLARK-TEKNIK
Hammond Industries
155 Michael Drive
Syosset, N.Y. 11791
DN-22 Octave Equalizer
Price $\$ 830$

Dimensions $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 81 / 2 \mathrm{D}$
Weight 16 lbs .
Bands 11
Range $\quad \pm 12 \mathrm{~dB}$ in each band
Input imp. 10 K ohms
Max. input 60 V
Output imp. 10 ohms
Max. output 22 dBm into 600 ohms
Level contr. +6 dB ; infinite reduction
Features High- and low-pass fitters; 0.01\%
THD
DN-27 One-Third Octave
Equalizer

| Price | $\$ 780$ |
| :--- | :--- |
| Dimensions | $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 81 / 2 \mathrm{D}$ |
| Weight | 16 lbs. |
| Bands | 27 |
| Range | $\pm 12 \mathrm{~dB}$ in each band |
| Input imp. | 10 K ohms |
| Max. input | 60 V |
| Output imp. | 10 ohms |
| Max. output | 22 dBm into 600 ohms |
| Level contr. | +6 dB ; infinite reduction |
| Features | $001 \% \mathrm{THD}$ |

LUXMAN
Lux Audio of America, Ltd.
160 Dupont St.
Plainview, N.Y. 11791
5G-12 Equalizer
Price $\$ 695$
Dimensions $4 H \times 1711 / 16 \mathrm{~W} \times 16 \mathrm{D}$
Weight $\quad 16 \mathrm{lbs} 8 \mathrm{oz}$
Bands 12
Range $\quad \pm 10 \mathrm{~dB}$ or 2 dB in each band
input imp. $\quad 100 \mathrm{~K}$ ohms
Output imp. 500 ohms
Max. output 5 V
Level contr. $\pm 12 \mathrm{~dB} ; \pm 2 \mathrm{~dB}$ (insertion gain) (selectable)
Features Range selector; bypass switch
G-11 Equalizer
Price $\$ 495$
Dimensions $1415 / 16 \mathrm{H} \times 171 / 4 \mathrm{~W} \times 123 / 8 \mathrm{D}$
Weight $\quad 12 \mathrm{lbs} .14 \mathrm{oz}$.
Bands 10
Range $\quad \pm 12 \mathrm{~dB}(\mathrm{or} \pm 6 \mathrm{~dB}$ ) in each band (selectable)
input imp. 100K ohms
Output imp. 500 ohms
Max. output 6 V
Level contr. $+12 \mathrm{~dB} ; \pm 6 \mathrm{~dB}$ (selectable)
Features $\bar{R} a n g e$-selector switch; bypass
switch; input sensitivity 1 V

## MXR

MXR Innovations, Inc.
247 N. Goodman St.
Rochester, N.Y. 14607


AOC Sound Shaper Three


Phase LInear 1100 Series Two


Sansul SE-7

MOD 128 One-Third Octave
Equalizer

| Price | $\$ 350$ |
| :--- | :--- |
| Dimensions | $31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 6 \mathrm{D}$ |
| Weight | 5 lbs. |
| Bands | 31 |
| Range | $\pm 12 \mathrm{~dB}$ in each band |
| Input imp. | 20 K ohms |
| Max. input | 8 V |
| Output imp. | 100 ohms |
| Max. output | 8 V |
| Level contr. | $+12 \mathrm{~dB} ;-12 \mathrm{~dB}$ (insertion gain) |
| Features | EO bypass switch; one-third oc- |
| tave frequency centers; furnished with walnut side |  |
| panels: rack-mounting ears optional |  |

MOD 114 Graphic Equalizer
Price $\quad \$ 219.95$
Dimensions $2 \mathrm{H} \times 9 \mathrm{~W} \times 7 \mathrm{D}$
Weight $\quad 4 \mathrm{lbs} .8 \mathrm{oz}$.
Bands 10
Range $\quad \pm 12 \mathrm{~dB}$ in each band
input imp. 20K ohms
Max. input 8 V
Output imp. 100 ohms
Max. output 8 V
Level contr. $+12 \mathrm{~dB} ;-12 \mathrm{~dB}$
Features EO bypass switch; tape-monitor switch; compact horizontal format

Models also available
MOD 127 Equalizer, \$325

## NIKKO

Nikko Audio
16270 Raymer St.
Van Nuys, Calif. 91406
EQ-1 Graphic Equalizer
Price $\$ 300$
Dimensions $32 / 5 \mathrm{H} \times 19 \mathrm{~W} \times 9 \mathrm{D}$
Bands 10 per channel
Range $\quad \pm 12 \mathrm{~dB}$ in each band
Imput imp. 100 K ohms
Max. input 7 V
Output imp. 560 ohms
Max. output 7V
Level contr. $\pm 6 \mathrm{~dB} ;-6 \mathrm{~dB}$ (insertion gain)
Features EO bypass switch; uses gyrator
circuitry to eliminate inductors; S/N 100 dB (A-
weighted); $0.007 \%$ THD ( 20 Hz to 20 kHz )
Models also available
EQ-2 Graphic Equalizer, $\$ 200$


Crown EO/2


Shure SR-107

## NUMARK

Numark Electronics Corp.
503 Raritan Center
Edison, N.J. 08817
EQ-2300 Equalizer
Price $\$ 270$
Dimensions $91 / 2 H \times 123 / 4 \mathrm{~W} \times 31 / 2 \mathrm{D}$
Weight $\quad 6 \mathrm{lbs} 8 \mathrm{oz}$.
Bands $\quad 10$ per channel
Range $\quad \pm 12 \mathrm{~dB}$ in each band
Input imp. 50K ohms
Output imp. 500 ohms
Max. output 10 V
Level contr. +0 dB ; -0 dB (insertion gain)
Features Headphone level control with
impedance matcning switch; EQ defeat; two over-
load indicators; linear controls

## Models also available

EQ-2000 Equalizer, \$120
OLSON
Olson Electronics
260 S. Forge St.
Akron, Ohio 44327
RA-739 Equalizer
Price $\$ 124.95$
Dimensions $3 H \times 15 W \times 8 D$
Weight 5 lbs.
Bands 10
Range $\quad \pm 12 \mathrm{~dB}$ in each band
Input Imp. 8 ohms
Output imp. 8 ohms
Level contr. $+12 d 8$; (insertion gain)
Features Rack-mounting front panel

## ONKYO

Onkyo U.S.A. Corp.
42-07 20th Ave.
Long Island City, N.Y. 11105

## E-30 Equalizer <br> Price $\$ 530$

Dimensions $31 / 4 H \times 173 / 4 \mathrm{~W} \times 149 / 16 \mathrm{D}$
Weight $\quad 14 \mathrm{lbs} .5 \mathrm{oz}$.
Bands 9
Range $\quad \pm 5 / \pm 10 \mathrm{~dB}$ in each band
Input imp. 100 K ohms at 1.5 V
Max. input 15 V
Output imp. 600 ohms

mXR Mod 114


Sounderaftemen TG.3044-h

Max. output 15 V
Level contr. $+10 \mathrm{~dB} ;-10 \mathrm{~dB}$ (insertion gain)
Features Low-cut filter at 15 Hz and 30 Hz ; 100 dB S/N (IHF A-weighted)

## PHASE LINEAR

Phase Linear Corp.
20121 48th Ave. W.
Lynnwood, Wash. 98036

## 1100 Series Two Parametric

Equalizer
Price $\quad \$ 599.95$
Dimensions $51 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 8 \mathrm{D}$
Weight $\quad 9 \mathrm{lbs} .8 \mathrm{oz}$.
Bands $\quad 5$ per channel
Range $\quad \pm 12 \mathrm{~dB}$ in each band
Input imp. 50 K ohms
Max. input 8 V
Output imp. 1 ohm
Max. output 8 V
Level contr. $+6 \mathrm{~dB} ;-80 \mathrm{~dB}$ (insertion gain)
Features Bandwidth range: 0.18 octaves to
1.8 octaves; frequency range: 9.1; overload LED;
bypass switch; tape monitor

## PIONEER

U.S. Pioneer Electronics Corp. 85 Oxford Drive
Moonachie, N.J. 07074

## SG-9800 Equalizer <br> Price $\$ 395$

Dimensions $57 / 6 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 14 \mathrm{D}$
Weight $\quad 15 \mathrm{bbs} 8 \mathrm{oz}$
Bands 12 per channel
Range $\quad \pm 10 \mathrm{~dB}$ in each band
Input imp. 50 K
Output imp. 600 ohms
Mex. output 7.5 V
Features Tape monitor provision

## Models also available

SG-9500 equalizer, \$345

## PYRAMID

Pyramid Industries
12970-7N Branford St.
Arleta, Calif. 91331

| X-SPEC-5 | Equalizer |
| :---: | :---: |
| Price | \$199.95 |
| Dimensions | $11 / 2 \mathrm{H} \times 7 \mathrm{~W} \times 41 / 4 \mathrm{D}$ |
| Weight | 1 lb .8 oz . |
| Bands | 5 per channel |
| Range | $\pm 12 \mathrm{~dB}$ in each band |
| Input imp. | 28 ohms (low): 50 K . (high) |
| Max. input | 2.5 V |
| Output imp. | 10K |
| Max. output | 2.5 V |
| Level contr. | +12 dB; -12 dB (insertion gain) |
| Features | Tape; radio; ten output LEDs; in- |
| dividual front | and rear speaker EQ: bi-amp or |
| stereo applica | ation |

## PME-100 Equalizer

| Price | $\$ 59.95$ |
| :--- | :--- |
| Dimensions | $13 / 2 \mathrm{H} \times 53 / 4 \mathrm{~W} \times 41 / 2 \mathrm{D}$ |
| Weight | 2 lbs. |
| Bands | 3 per channel |
| Range | $\pm 12 \mathrm{~dB}$ in each band |
| Input imp. | 28 ohms (low); 50 K (high) |
| Max. input | 2.5 volts |
| Output imp. | 10 K |
| Max. output | 2.5 volts |
| Level contr. | $+12 \mathrm{~dB} ;-12 \mathrm{~dB}$ (insertion gain) |
| Features | volume control; bypass switch |

Models also available
X-7P, \$84.95

## REALISTIC <br> Radio Shack <br> 1400 One Tandy Center <br> Ft. Worth, Tex. 76102

| Frequenc | y Equalizer |
| :---: | :---: |
| Price | \$69.95 |
| Dimensions | $43 / 8 \mathrm{H} \times 101 / 4 \mathrm{~W} \times 6 \mathrm{D}$ |
| Bands | 5 |
| Range | $\pm 12 \mathrm{~dB}$ in each band |
| Features | Individual left and right channel |


| REFERENCE |  |
| :---: | :---: |
| CBS Retail Stores |  |
| 1301 65th St. |  |
| Emeryville | ille, Calif. 94608 |
| 210 EQ Eq | Equalizer |
| Price | \$199.95 |
| Dimensions | s $7 \mathrm{H} \times 151 / 2 \mathrm{~W} \times 63 / \mathrm{D}$ |
| Weight | 8 lbs .8 oz . |
| Bands | 12 |
| Range | $\pm 12 \mathrm{~dB}$ in each ba |

ROLAND
Roland Corp.
2401 Saybrook Ave.
Los Angeles, Calif. 90040
GE-820 Equalizer

| Pri | \$795 |
| :---: | :---: |
| Dimensions | $7 \mathrm{H} \times 19 \mathrm{~W} \times 12 \mathrm{D}$ |
| Weight | 19 lbs. |
| Bands | 11 per channel |
| Range | $\pm 3, \pm 6, \pm 12 \mathrm{~dB}$ (3 ranges) in each band (1 octave) |
| Input imp. | 50 K ohms |
| Max. input | +20 dB, $0 \mathrm{~dB},-20 \mathrm{~dB}$ |
| Output imp. | 600 ohms (unbalanced) |
| Max. output | $0 \mathrm{~dB},-20 \mathrm{~dB}$ |
| Level contr. | +3, $\pm 6 . \pm 12$ (to/within 1 dB ) |
| Features signed for h | Professional studio model deme application; foot switch selecting |
| left or right or devices that dB S/N ratio | both; hard-wired in back to external an be patched over; greater than 100 |

GE-6 Equalizer

## Price $\$ 115$

Dimensions $21 / 4 \mathrm{H} \times 21 / 4 \mathrm{~W} \times 43 / 4 \mathrm{D}$
Weight $\quad 1 \mathrm{lb}$.
Bands 6
Range $\quad \pm 12 \mathrm{~dB}$ in each band (1 octave)
Input imp. 220 K ohms
Max. input 15 V
Output imp. 600 ohms
Max. output 15 V
Level contr. $+12 \mathrm{~dB} ;-0 \mathrm{~dB}$ (insertion gain)
Features Foot-pedal operated
Models also available
GE-810 Equalizer, \$695; GE-10
Equalizer, \$195

## ROTEL

Rotel of America, Inc.
1055 Saw Mill River Road
Ardsley, N.Y. 10502

RE-2000 Graphic Octave
Equalizer
Price $\$ 370$
Dimensions $55 / 8 \mathrm{H} \times 19 \mathrm{~W} \times 1313 / 32 \mathrm{D}$
Weight $\quad 16 \mathrm{lbs}$.
Bands 10 per channel
Range $\quad+12 \mathrm{~dB}$ in each band
Input imp. 56 K ohms
Output imp. 600 ohms
Max, output 7 V
Features Inductorless active discrete resonant circuitry; rack-mount; two tape monitor, full dubbing facility, switches for record/play and com-
plete bypass

## Models also available

RE-700 Graphic Octave Equalizer, \$180

ROYAL SOUND
Royal Sound Co.
248 Buffalo Ave.
Freeport, N.Y. 11520

## EA-600 Equalizer

Price $\$ 160$
Dimensions $21 / 3 \mathrm{H} \times 71 / 12 \mathrm{~W} \times 63 / 3 \mathrm{D}$
Weight 3 lbs 2 oz.
Input imp. 47 ohms
Features Darlington circuitry; automatic
power control with power indicator light; threshold saturation level indicators for left and right chan-
nels; front-to-rear fader control; detachable wiring
harness for easy installation and removal

## SAE

Scientific Audio Electronics, Inc.
701 E. Macy St.
Los Angeles, Calif. 90012

2800 Parametric Equalizer
Price $\$ 600$
Dimensions $83 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 31 / 2 \mathrm{D}$
Welght $\quad 18 \mathrm{lbs}$.
Bands 4 per channel
Range $\quad \pm 16 \mathrm{~dB}$ in each band
Input imp. 50K ohms
Max. input 9 V
Output imp. 500 ohms
Max. output 9V

Level contr. $+0 \mathrm{~dB} ;-\infty \mathrm{dB}$
Features Parametric control for each band (adjustable bandwidth and center frequency); peak indicators; relay muting; tape EO

180 Parametric Equalizer

| Price | $\$ 250$ |
| :--- | :--- |
| Dimensions | $41 / 2 \mathrm{H} \times 18 \mathrm{~W} \times 31 / 2 \mathrm{D}$ |
| Weight | 9 lbs. |
| Bands | 2 |
| Range | $\pm 16 \mathrm{~dB}$ in each band |
| Input imp. | 50 K ohms |
| Max. input | 9 V |
| Output imp. | 500 ohms |
| Max. output | 9 V |
| Level contr. | $+0 \mathrm{~dB} ;-\infty \mathrm{dB}$ |

## Models also available

1800 Parametric Equalizer, \$350

SANSUI
Sansui Electronics Corp. 1250 Valley Brook Ave. Lyndhurst, N.J. 07071

## SE-7 Graphic Equalizer <br> \section*{Price $\$ 300$}

Dimensions $65 / 16 \mathrm{H} \times 19 \mathrm{~W} \times 113 / 4 \mathrm{D}$
Weight $\quad 10 \mathrm{lbs} .6 \mathrm{oz}$.
Bands 10 per channel
Range $\quad \pm 12 \mathrm{~dB}$ in each band
Input imp. 30K
Output imp. 47K (rated load)
Max. output 5 V
Level contr. +0 dB; -0 dB (insertion gain)
Features Graphic equalizer with two-way
tape copy switching and monitoring; output level control; detachable rack-mounting handles

## Models also available

SE-5, \$230

## SHURE

Shure Bros., Inc.
222 Hartrey Ave.
Evanston, III. 60204

SR107 Equalizer

| Price | $\$ 275$ |
| :--- | :--- |
| Dimensions | $13 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 8 \mathrm{~g} / 16 \mathrm{D}$ |
| Weight | 7 lbs .12 oz. |
| Bands | 10 |
| Range | $\pm 15 \mathrm{~dB}$ in each band |
| Input imp. | 70 K ohms |
| Max. input | 6.2 V |
| Output Imp. | 115 ohms (line); 1 ohm (mic); 630 |
|  | ohms (aux) |
|  | Max. output <br> Level contr. |
| Features | $+15 \mathrm{~dB} ;-15 \mathrm{~dB}$ |
| Rack-mount; additional 20 dB gain |  |
| available |  |

## Models also available

M610 Equalizer.

## SONTEC

Sontec Electronics
10120 Marble Court
Cockeysville, Md. 21030

HF-230 Equalizer
Price $\$ 990$

| Dimensions | $13 / \mathrm{HH} \times 19 \mathrm{~W} \times 6 \mathrm{D}$ |
| :--- | :--- |
| Weight | 6 lbs. |
| Bands | 3 |
| Range | $\pm 12 \mathrm{~dB}$ in each band |
| Input imp. | 50 K ohms |
| Max. Input | $14 \mathrm{~V}(\mathrm{rms})$ |
| Output imp. | 100 ohms |
| Max. output | $14 \mathrm{~V}(\mathrm{rms})$ |
| Level contr. | Factory set for unity gain |
| Features $\quad \mathrm{Slew}$ rate of 200 V per mi- |  |
| crosecond; 110 dB usable dynamic range; all |  |
| forms of distortion under $0.002 \%$; response flat DC |  |
| to 200 kHz ; high-and low-frequency shelving fea- |  |
| ture |  |

## SOUNDCRAFTSMEN

Soundcraftsmen
2200 S. Ritchey
Santa Ana, Calif. 92705

## SP-4002 Signal

Processor/Preamp/Equalizer
Price
Dimensions $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 11 \mathrm{D}$
Weight $\quad 38$ lbs.
Bands 10 per channel
Range $\quad \pm 22 \mathrm{~dB}$ in each band
Input imp. $\quad 47 \mathrm{~K}$
Max. input 10 V
Output imp. 8 ohms
Max. output 10 V
Level contr. $+6 \mathrm{~dB} ;-12 \mathrm{~dB}$
Features Includes signal processor/preamp: dual 10-band, $\pm 22$ dB equalizatlon; zerogain/LED level balancing; infrasonic filtering - $\mathbf{3} \mathrm{dB}$ at $15 \mathrm{~Hz}, 12 \mathrm{~dB}$ per octave rolloff; variable cartridge loading; variable $47 \mathrm{~K} / 100$ ohm phono impedance; $\pm 20 \mathrm{~dB}$ phono level adjustment; inputs for moving coil cartridge over 0.28 mV output; two external processing loops; 19" rack-mount brushed aluminum black and silver overlay panels; includes Environmental EQ Test Record and Computone Charts for EQ referencing

## TG-3044R Equalizer

$\begin{array}{ll}\text { Price } & \$ 550 \\ \text { Dimensions } & 51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 11 \mathrm{D}\end{array}$
Weight 28 lbs .
Bands 44 per channel
Range $\quad \pm 22 \mathrm{~dB}$ in each band
Input imp. 47 K
Max. input 10 V
Output imp. 600 ohms (balanced), 300 ohms (unbalanced)
Max. output 10 V
Level contr. +6.dB; -24 dB
Features Fifteen bands of third-octave equalization to $1 \mathrm{kHz}, 6$ bands of alternate thirds to 20 kHz ; infrasonic rolloff at 15 Hz ; two separate channels with two separate sets of controls; tape and line EQ and tape monitor; zero-gain LED monitoring; employs passive wire-wound precision coils to eliminate electronic noise or hiss

AE-2420R Analyzer-Equalizer
Price $\$ 499$

Dimensions $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 11 \mathrm{D}$
Weight $\quad 30 \mathrm{lbs}$
Bands 10 per channe
Range $\quad \pm 22 \mathrm{~dB}$ in each band
Input imp. 47 K ohms
Max. input 10 V
Output Imp. 180 ohms
Max. output 10 V
Level contr. $+6 \mathrm{~dB} ;-12 \mathrm{~dB}$ (insertion gain)
Features Complete line \& tape equalizer plus differential-comparator analyzer; accurate to 0.1 dB with pink-noise generator, mlc preamplifier, test record, and computone charts

## Models also available

PE-2217R Equalizer, $\$ 549$; RP-

2215R Eiualizer, \$370 RP 2201-R Equalizer, \$299; SE-450 equalizer, $\$ 249$

## SPECTRA SOUND/CEI Consolidated Electronics, Inc. 2245 South West Temple Salt Lake City, Utah 84115

1000-B Equalizer
Dimensions $\quad 31 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 8 \mathrm{D}$
Weight $\quad 10 \mathrm{lbs}$.
Bands 10
Pange $\quad+16 \mathrm{~dB}$ in each band
Input imp. $\quad 100 \mathrm{~K}$ ohms
Max. input 18 dBm
Output imp. 100 ohms
Max. output 18 dBm
Level contr. $+15 \mathrm{~dB} ;-15 \mathrm{~dB}$ (insertion gain)
Features LED indicators for each channel: infrasonic filter; rack-mountable; $13 \mathrm{~V} / \mathrm{ml}-$ crosecond slew rate; IM and THD less than 0.008\%

SPECTRO
Spectro Acoustics 3200 George Washington Way Richland, Wash. 99352

## 210R Equalizer

Price $\$ 295$
Dimensions $6 \mathrm{H} \times 19 \mathrm{~W} \times 7 \mathrm{D}$
Weight 12 lbs
Bands
10
Range $\quad \pm 15 \mathrm{~dB}$ in each band
Input imp. 30 K min.; 50 K nominal
Max. input 10 V (controls set flat)
Output imp. 600 ohms
Max. output 10 V
Level contr. +15 dB; -15 dB
Features Employs gyrators or synthesized inductors which, although their function is electronically identical to wound coils, are almost totally immune to pickup from magnetic fields and totally immune to current saturation; full tape monitor capabilities; wooden end panels optional; standard EIA rack-mount

## Models also available

2102R Equalizer, \$225

## SUPEREX

Superex Electronics Corp.
151 Ludiow St.
Yonkers, N.Y. 10705

GEM-1 Micro Equalizer
Price $\quad \$ 89.95$
Dimensions $233 / 4 \mathrm{H} \times 61 / 4 \mathrm{~W} \times 43 / 4 \mathrm{D}$
Weight $\quad 5 \mathrm{lbs}$
Bands 5 per channel
Range $\pm 12 \mathrm{~dB}$ in each band
Input imp. 50 K ohms
Max. Input 8.5 V
Output imp. 600 ohms
Max. output 8.5 V
Level contr. +12 dB ; -12 dB (insertion gain)
Features Center ( 0 dB ) detented controts; separate EO switches for record and playback; EO CARD automatic frequency programming system; isolated power module; 92 dB S/N; active op amp IC design; frequency response, 10 Hz to 150 $\mathrm{kHz}, \pm 0.5 \mathrm{~dB} ; 0.02 \%$ distortion at 0 dB gain

## Models also available

1300 Equalizer, \$239

TAMON
Tamon of America, Inc. 2751 Monument Blvd. Suite 277
Concord, Calif. 94520

EB-1000 Equalizer
Price $\$ 199.95$
Dimensions $51 / 2 \mathrm{H} \times 161 / 2 \mathrm{~W} \times 8 \mathrm{D}$
Weight 11 lbs
Bands 10
Range $\quad \pm 12 \mathrm{~dB}$ in each band
Input imp. 8 ohms
Features Monitor switch; defeat switch;
front-mounted LEDs

## TECHNICS

Panasonic Co.
One Panasonic Way
Secaucus, N.J. 07094

SH-9010 Equalizer
Price $\$ 540$
Dimensions $3 \mathrm{H} \times 19 \mathrm{~W} \times 143 / 8 \mathrm{D}$
Weight $\quad 13 \mathrm{lbs}$.
Bands 5
Range $\quad \pm 12 \mathrm{~dB}$ in each band
Input imp. $\quad 47 \mathrm{~K}$
Max. input $\uparrow \mathrm{V}$ input
Output imp. 300 ohms
Max. output 5 V
Level contr. to dB; -0 dB (insertion gain)
Features "Universal" (graphic/parametric) equalizer; each band is center-frequency adjustable $\pm 1.6$ actaves (with overlap from band to band) and also bandwidth ("Q") adjustable from 0.7 to 7 (complete range of center-frequency selection is from 20 Hz to 48 kHz ); each stereo channel may be equalized independently; mounts on $19^{n}$ rack

## Models also available

SH-8010 Equalizer, \$180

## WHITE

White instruments, Inc.
P.O. Bcx 698

Austin, Tex. 78767

4002 One-Third Octave Active Equalizer
Price $\$ 780$
Dimensions $31 / 2 \mathrm{H} \times 18 \mathrm{~W} \times 91 / 2 \mathrm{D}$
Weight 11 lbs
Bands 27
Range $\quad \pm 10 \mathrm{~dB}$ in each band
Input imp. 40 K ohms
Max. Input 6 V
Output imp. 2 ohms
Max output 6 V
Features Wood end błocks; rack-mount available; -90 dBm noise; security cover included; accessory socket to insert optional crossover networks for blamped systems; adjustable high-pass filter

## Models also available

4100 Stereo Octave Band Active Equalizer, \$700; 4220 Octave Band Passive Equalizer, $\$ 220$

# Headphones 

AKG
AKG Acoustics
91 McKee Drive
Mahwah, N.J. 07430

## K-340

Price
Response $\quad 16 \mathrm{~Hz}$ to $25 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
Impedance
Design
Weight
Features Dynamic moving-coil low-frequency transducers; condenser high-frequency transducers; 5 passive diaphragms in each earcup; auto-adjust headband with Cardan gimbal pivot

K-140S
Price $\$ 5$
Response
Sensitivity
Impedance
THD
Max. power
Design
Weight
Features $\quad 9 \mathrm{oz}$. (with cable and plug)
Auto-adjust headband with Car-

## K-40

Price
Response
Sensitivity
Impedance
THD
Max. power 200 mW (117 dB SPL)
Design Dynamic moving coil
Weight $\quad 6 \mathrm{oz}$. (with cable and plug)

## Models also available

K-240, \$85; K-141, \$69

## AUDIO-TECHNICA

Audio-Technica
33 Shiawassee Ave.
Fairlawn, Ohio 44313
ATH-7
Price $\quad \$ 150$
Response $\quad 20 \mathrm{~Hz}$ to $22 \mathrm{kHz}, \pm 2 \mathrm{~dB}$
Sensitivity 98 dB SPL
Impedance 4 to 16 ohms
THD
$0.25 \%$ at 110 dB SPL ( 1 kHz )
Max. power 114 dB SPL
Design Open-back: Electrat Condenser
Weight $\quad 7.4 \mathrm{oz}$.
Features Moderate noise rejection; fabriccovered earcups; $81 / 4{ }^{\prime \prime}$ straight cable; external impedance adapter with speaker/headphone switch; LED program level indicators

ATH-3
Price $\$ 60$
Response Sensitivity Impedance THD 25 Hz to 20 kHz 94 dB SPL
4 to 16 ohms
$0.5 \%$ at $110 \mathrm{~dB} \mathrm{SPL}(1 \mathrm{kHz})$

Design
Weight
Features Moderate noise rejection; fabrlccovered earcups; $111 / 2^{\prime}$ straight cable

## ATH-1

Price $\$ 30$
Response 30 Hz to 20 kHz
Sensitivity 93 dB SPL
Impedance 4 to 16 ohms
THD
Design
Weight
Features Moderate noise rejection; ex tremely low mass; $81 / 4^{\prime}$ straight cable

## Models also available

ATH-6, \$100; ATH-5, \$80

## AUDIOTEX

Audiotex Laboratories
Division of GC Electronics
400 S. Wyman
Rockford, III. 61101
30-5207
Price $\$ 41$
Response $\quad 30 \mathrm{~Hz}$ to 20 kHz
Impedance 8 to 16 hms
Features 10' coiled cord; black vinyl carrying
case

## 30-8300

Price $\$ 25$
Response 20 Hz to 20 kHz
Sensitivity 102 dB SPL
Impedance 8 ohms
Max. power 100 mW
Weight 90 oz
Features Adjustable headband; foam earcushions; color-coded and marked right and left; $6^{\prime \prime}$ straight cord

## Models also available

30-5203, \$37; 30-5201, \$34

## BANG \& OLUFSEN

Bang \& Olufsen of America, Inc.
515 Busse Road
Elk Grove Village, III. 60007

## U-70

Price $\$ 8$
16 Hz to 20 kHz
Sensitivity 94 dB SPL with 8 mW input Impedance

140 ohms
THD
Max. power
Design
Semi open-back
Features Orthodynamic design; "ear control" allows vertical and horizontal adjustment of each earcup

## BEYER

Burns Audiotronics, Inc.
5-05 Burns Ave.
Hicksville, N.Y. 11801

ET-1000
Price $\quad \$ 159.95$; $\$ 279$ with power supply (ET-1000S)
Response $\quad 10 \mathrm{~Hz}$ to 25 kHz
Sensitivity 100 dB SPL with 2 V input
Impedance 4 to 8 ohms
THD
Max. power
Circumaural sea
Weight 13 oz .
Features Electrostatic when used with $N$ 1000 power supply; sintered-bronze cover plates; broad-padded headband; soft ear cushions; comes with an 8 -foot cord

DT-220

| Price | $\$ 64.95$ |
| :--- | :--- |
| Response | 20 Hz to 20 kHz |
| Sensitivity | 103 dB SPL with 1 mV input |
| Impedance | 400 ohms |
| THD | $1 \% \mathrm{at} \mathrm{120} \mathrm{dB} \mathrm{SPL}$ at 1 kHz |
| Max. power | 102 mV |
| Design | Circumaural seal |
| Weight | 9 oz. |
| Features | Broad, padded headband |
|  |  |
|  |  |
| DT-302 |  |
| Price | $\$ 29.95$ |
| Response | 20 Hz to 20 kHz |
| Sensitivity | 100 dB SPL with 1 mV input |
| Impedance | 600 ohms |
| THD | $1.5 \%$ at 120 dB SPL at 1 kHz |
| Max. power | 240 mV |
| Design | Open-back |
| Weight | 2.5 oz. |
| Features | Lightweight; soft foam earpads; un |
| breakable headband; open-air design principle |  |

## Models also available

DT-441, \$74.95; DT-440, \$64.95

## CONCEPT

Concept
160 W. Glenlake
Itasca, III. 60743

## CE-H

Price
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$
Sensitivity 96 dB SPL with 1 mV input
Impedance 150 ohms
THO
$0.25 \%$ at $95 \mathrm{~dB} \mathrm{SPL}(1 \mathrm{kHz})$
Max. power $3 V(120 \mathrm{~dB}$ SPL)
Design Orthodynamic constant energy
Weight $\quad 10.5 \mathrm{oz}$
Features Extra-long leather cord


Audio-Technica ATH-7


Beyer Dynamic ET-1000


Sennheleer HD-430

## HERVIC

Hervic Electronics 14225 Ventura Blvd. Sherman Oaks, Calif. 91423

## HP-1 <br> JVC

Price $\quad \$ 55$
Weight $\quad 6.7 \mathrm{oz}$
Features Low-mass diaphragm; fully-adjustable simulated leather headband

JVC America
58-75 Queens Midtown
Expressway
Maspeth, N.Y. 11378
HM-200E
Price $\quad \$ 100$
Response 20 Hz to 20 kHz
Sensitivity 94 dB SPL with 1 mW input
impedance 8 ohms
Weight 24 oz .
Features Adjustable headband; built-in binaural microphones

## KOSS

Koss Corp.
4129 North Port Washington Ave.
Milwaukee, Wis. 53212
ESP/10
Price $\$ 350$
Response 20 Hz to 22 kHz
Sensitivity 100 dB SPL
Impedance
THD
Design
Weight
180 ohms
180 ohms
$0.38 \%$ at 100 dB SPL at 1 kHz
Electrostatic
Features Patented E/10 energizer with dual headset jacks; automatic overload indicators

## PRO/4 Triple A

| Price | $\$ 85$ |
| :--- | :--- |
| Response | 10 Hz to 22 kHz |
| Sensitivity | 100 dB SPL |
| Impedance | 220 ohms |
| THD | $0.5 \%$ at $100 \mathrm{~dB} \mathrm{SPL}(1 \mathrm{kHz})$ |
| Design | Dynamic |
| Weight | 15.5 oz. |

## Technician/VFR ${ }^{\text {® }}$

Price $\quad \$ 80$
Response 10 Hz to 22 kHz
Sensitivity 100 dB SPL

| Impedance | 245 ohms |
| :--- | :--- |
| THD | $0.3 \%$ at $100 \mathrm{~dB} \mathrm{SPL}(1 \mathrm{kHz})$ |
| Design | Dynamic |
| Weight | 16.8 oz. |
| Features | VFR controls |
|  |  |
| HV/1LC |  |
| Price | $\$ 60$ |
| Response | 15 Hz to 30 kHz |
| Sensitivity | 100 dB SPL |
| Impedance | 132.5 ohms |
| THD | $0.5 \%$ at $100 \mathrm{~dB} \mathrm{SPL}(1 \mathrm{kHz})$ |
| Design | High-velocity |
| Weight | 10.8 oz. |
| Features | Volume-balance controls on each |
| earcup |  |

earcup
HV/1
Price $\quad \$ 49.95$
Response 20 Hz to 20 kHz
Sensitivity 100 dB SPL
Impedance 168 ohms
THD
Weight High-velocity

K/135
Price $\$ 40$
Response $\quad 10 \mathrm{~Hz}$ to 18 kHz
Sensitivity 100 dB SPL
Impedance 98 ohms
THD $\quad 1 \%$ at $100 \mathrm{~dB} \mathrm{SPL}(1 \mathrm{kHz})$
Design Slimline
Weight $\quad 13.4 \mathrm{oz}$
K/6A
Price $\quad \$ 29.95$
Response 10 Hz to 16 kHz
Sensitivity 100 dB SPL
Impedance 100 ohms
THD
$1 \%$ at 100 dB SPL (1 kHz)
Design Dynamic
Weight $\quad 13 \mathrm{oz}$.

## Models also available

TECH/2, \$59.95; HV/1A, \$55; K/145, \$54.95; KO/727B, \$40; K/6ALC, \$39.95

## LAFAYETTE <br> Lafayette Radio Electronics <br> Corp.

111 Jericho Turnpike
Syosset, N.Y. 11791
F-780 Professional

## Price

Response
Design 105 dB SPL with'1 mW
Open-air dynamic
Features Separate base and treble speak-
ers in each өarpiece

| F-700 "Lighthead" |
| :---: |
| Price $\$ 34.99$ |
| Resp.onse 18 Hz to 22 kHz |
| Design Open-air dynamic |
| Features Ulitra-thin 25 micron diaphragm; |
| eliminates need for conventional ear cushions |
| Mociels also available |
|  |  |
|  |
|  |
| Mura Corp. |
| 177 Cantiague Rock Road |
| Westbury, N.Y. 11590 |
|  |  |

## SP-205

| Price | $\$ 60$ |
| :--- | :--- |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Sensitivity | 100 dB SPL with 20 mV input |
| Impedance | 80 mms |
| THD | $1 \% \mathrm{at} 20 \mathrm{mV}$ input |
| Max. power | $400 \mathrm{~mW}(109 \mathrm{~dB} \mathrm{SPL})$ |
| Weight | 21 oz. |
| Features | Slide-type volume and tone con- |
| trol; Mylar speakers; adjustable headband; ste- |  |
| reo/mono switch; 15 'coil cord; vinyl case included |  |

HB-1500
Price $\$ 30$
Response 20 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Sensitivity 103 dB SPL with $\frac{10}{30} \mathrm{mV}$ input
Impedãnce 50 ohms
THD $\quad 1 \%$ at 30 mV input
Max. power 200 mW (114 dB SPL)
Weight 6 oz
Features Adjustable headband; 10' coil cord; super-thin diaphragms

HV-180
Price $\$ 30$
Response $\quad 20 \mathrm{~Hz}$ to $16 \mathrm{kHz}, \pm 4 \mathrm{~dB}$
Sensitivity $\quad 100 \mathrm{~dB}$ SPL with 20 mV input
Impedance 16 ohms
THD
Max. power
Weight
$0.5 \%$ at 20 mV input
Weight 12 oz
Features High-velocity; polymer-film diaphragm

HV-100
Price
Response
Sensitivity
Impedance
THD
power 500 mW (114 oB SPL)
Weight 12 oz .

Features Adjustable headband; highvelocity; stereo/mono switch; separate volume controls; 10 coil cord

## SP-500

## Price

## Response

 Sensitivity Impedance THD Max. poweWeight $\begin{array}{ll}\text { Features } & 14 \mathrm{oz} \\ 8\end{array}$

## SP-94

Price
Response $\quad 40 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 6 \mathrm{~dB}$ Sensitivity 102 dB SPL with 20 mV input Impedance
THD
\$13
35 Hz to $15 \mathrm{kHz}, \pm 6 \mathrm{~dB}$
98 dB SPL with 30 mV input
8 ohms
$2 \%$ at 30 mV input
500 mW ( 105 dB SPL )
14 oz .
$2 \%$ at 25 mV input
Max. power 600 mV (113 dB SPL)
Weight 10 oz .
Features $\quad 8^{\prime}$ cord; matches 150 -ohm Impedance in each channel

## Models also available

$\mathrm{HV}-230,20 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$; SP-504, \$25; SP-503, \$20; SP502, \$15

| NAKAMICHI |  |
| :---: | :---: |
| Nakamichi USA Corp. |  |
| 1101 Colorado Ave. |  |
| Santa Mo | onica, Calif. 90401 |
| HF-100 |  |
| Price | \$55 |
| Response | 20 Hz to 20 kHz |
| Sensitivity | 90 dB SPL with 1 mW input ( 1 kHz ) |
| Impedance | 8 ohms |
| THD | 0.8\% at 110 dB SPL ( 100 Hz ) |
| Max. power | 500 mW |
| Design | Circumaural |
| Weight | 14 oz |
| Features justable head | Straight-cord; monitoring type; ad- |

## NEAL-FERROGRAPH

Neal-Ferrograph U.S.A., Inc.
652 Glenbrook Road Stamford, Conn. 06906
MB

## Price

Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz},+3 \mathrm{~dB}$
Sensitivity 95 dB SPL with 100 V rms input
Impedance 130 K ohms ( 10 kHz ); connects via adapter box to 4 to 16 ohm outputs Max. power 95 dB SPL ( 100 V rms )
Design Electrostatic; foam-filled earcups
Weight $\quad 13 \mathrm{oz}$. (including 3 -meter cable)
Features Permanently polarized capsule; padded, simulated leather carrying case included; adapter for connecting headphones through speaker/headphone switching unit

## DYNA-X

Price $\$ 64$
Impedance 120 ohms
Design
Weight $\quad 13 \mathrm{oz}$. (including 3 -meter cable)
Features Padded, simulated leather carrying
case included

## NORDMENDE

Sterling Hi-Fidelity, Inc.
22-20 40th Ave.
Long Island City, N.Y. 11101

| HD-800 <br> Price <br> Impedance | $\$ 60$ |
| :--- | :--- |
|  | 8 ohms |

HV-3000

| Price | $\$ 54$ |  |
| :--- | :--- | :---: |
| Response | 8 Hz to 28 kHz |  |
| Design | Lightweight |  |
| Weight | 6.5 oz |  |
| Features | Samarium cobalt magnet; Neglex |  |
| no-loss cable included |  |  |
|  |  |  |
|  |  |  |
| HV-235R |  |  |
| Price | $\$ 44$ |  |
| Response | 9 Hz to 26 kHz |  |
| Design | Lightweight |  |
| Weight | 6.5 oz. |  |
| Features | Samarium cobalt magnet; ported |  |
| earcups; foam-filled ear cushions |  |  | earcups; foam-filled ear cushions

HV-215VA
Price $\$ 44$
Response $\quad 9 \mathrm{~Hz}$ to 25 kHz
Design Lightweight
Features Curved Mylar diaphragm; ported earcups; individual volume controls for each side

HV-115A
Price $\$ 32$
Response 15 Hz to 22 kHz
Design Lightweight
Weight 7 oz .
Features Curved Mylar dlaphragms; ported earcups; 10' cord
Models also available
HV-2000R, \$48

OLSON
Olson Electronics
260 S. Forge St.
Akron, Ohio 44327
PH-500

| Price | $\$ 59.98$ |
| :--- | :--- |
| Response | 35 Hz to 18 kHz |
| Impedance | 80 ohms |
| Design | Ultra-thin |
| Weight | 10 oz. |
| Features | Separate wooter and iweeter on |
| each side |  |

## PICKERING

Pickering \& Co., Inc.
101 Sunnyside Blvd.
Plainview, N.Y. 11803

| OA-7 Dynaphase |  |
| :--- | :--- |
| Price | $\$ 70$ |
| Response | 20 Hz to $22 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Sensitivity | 110 dB SPL with 200 mV input |
| Impedance | 100 ohms |
| THD | $0.5 \%$ at $110 \mathrm{~dB} \mathrm{SPL}(1 \mathrm{kHz})$ |
| Max. power | 300 mV |
| Design | Dynamic high-velocity elements |
| Weight | 5.50 oz. |
| Features | Uses rare earth elements; $10^{\prime}$ cord |


| OA-3A | Dynaphase |
| :--- | :--- |
| Price | $\$ 45$ |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Senslivity | 100 dB SPL with 100 mV input |
| Impedance | 15 ohms |
| THD | $0.5 \%$ at $110 \mathrm{~dB} \mathrm{SPL}(1 \mathrm{kHz})$ |
| Max, power | 200 mV |
| Design | Dynamic high-velocity elements |
| Weight | 7.5 oz . (without cord) |
| Features | Special adapter for use with porta- |
| ble radios, TV sets and tape recorders |  |

## PIONEER

U.S. Pioneer Electronics Corp.

85 Oxford Drive
Moonachie, N.J. 07074

| SE-700 |  |
| :---: | :---: |
| Price | \$100 |
| Response | 20 Hz to 20 kHz |
| Sensitivity | 100 dB SPL with 5.6 mW input ( 1 kHz ) |
| Impedance | 80 ohms (min.) |
| Max. power | 11 mW |
| Design | Open-back |
| Weight | 12 oz . |
| Features | High polymer molecular film driver |
| $93 / 4^{\prime}$ ' connection cord |  |
| Monitor | 10 |
| Price | \$80 |
| Response | 20 Hz to 20 kHz |
| Sensitivity | 100 dB SPL with 1 mW input |
| Impedance | 8 ohms |
| Max. power | 700 mW |
| Design | Circumaural |
| Weight | 23 oz . |
| Features | $16^{1 / 2}{ }^{\prime}$ cord |
| SE-505 |  |
| Price | \$75 |
| Response | 20 Hz to 20 kHz |
| Sensitivity | 108 dB SPL with 11 mW input |
| Impedance | 8 ohms |
| Max. power | 500 mW |
| Design | Circumaural |
| Weight | 24 oz . |
| Features channel; 161/2 | Volume and tone controls for each connection cord |
| SE-6 |  |
| Price | \$70 |
| Response | 20 Hz to 20 kHz |
| Sensitivity | 102 dB SPL with 1 mV input |
| Impedance | 150 ohms |
| Max. power | 200 mV |
| Design | Open-back |
| Weight | 8.8 oz (with cord) |
| Features | Lightweight; $91 / 2^{\prime}$ connection cord |
| SE-405 <br> Price | \$55 |


| Response | 20 Hz to 20 kHz |
| :--- | :--- |
| Sensitivity | 113 dB SPL with 11 mW input |
| Impedance | 80 hms |
| Max. power | 500 mW |
| Design | Circumaural |
| Weight | 17 oz. |
| Features | Volume control for each channel; |
| $161 / z^{\prime}$ connection cord |  |


| SE-305 |  |
| :---: | :---: |
| Price | \$45 |
| Response | 20 Hz to 20 kHz |
| Sensitivity | 108 dB SPL with 11 mW input |
| Impedance | 8 ohms |
| Max. power | 500 mW |
| Design | Circumaural seal |
| Weight | 15 oz . |
| Features | $161 / 2^{\prime}$ connection cord |
| SE-2 |  |
| Price | \$30 |
| Response | 20 Hz to 20 kHz |
| Sensitivity | 99 dB SPL with 1 mV input |
| Impedance | 150 ohms |
| Max. power | 200 mV |
| Design | Open-back |
| Weight | 9 oz ( (with cord) |
| Features | 81/4' connection cord |


| ST-16 |  |
| :---: | :---: |
|  | \$19.99 |
| Response | 20 Hz to 18 kHz |
| Sensitivity | $110 \mathrm{~dB} \mathrm{SPL}(1 \mathrm{kHz})$ |
| Impedance | 8 ohms |
| Features | Individual level controls; stereo/ |
|  |  |
| Models also available ST-33. $\$ 36.99$ |  |

## QUADRAFLEX

Quadraflex
1301 65th St.
Emeryville, Calif. 94608
Q-45

| Price | \$54.95 |
| :---: | :---: |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Sensitivity | 95 dB SPL with 1 mV input |
| Impedance | 80 ohms |
| THD | $1 \%$ at 95 dB SPL |
| Max. power | 1.8 V |
| Design | Dynamic |
| Weight | 10 oz |
| Features | Mylar diaphragms |
| Q-35 |  |
| Price | \$44.95 |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 3.5 \mathrm{~dB}$ |
| Sensitivity | 93 dB SPL with 1 mV input |
| Impedance | 122 ohms |
| THD | $1.5 \%$ at 95 dB SPL |
| Max. power | 1.5 V |
| Design | Dynamic |
| Weight | 13 oz |
| Features | Mylar diaphragm; level controls |

## Q-12


with 6 passive diaphragms

## PRO-II

Price $\$ 50$
Response $\quad 10 \mathrm{~Hz}$ to 22 kHz
Impedance 4 to 16 ohms
Features Mylar diaphragm speakers; $11 / 2^{\prime \prime}$
voice coils; air-filled ear cushions
LV-10
Price $\$ 40$
Response $\quad 20 \mathrm{~Hz}$ to 20 kHz
Impedance 4 to 16 ohms
Design Vented-back
Weight $\quad 10 \mathrm{oz}$.
Features Soft sponge earpieces; 10' coiled cord; less than 0.5\% distortion

Nova ${ }^{\text {- PR }}$ PR
Price $\$ 36.95$
Response $\quad 20 \mathrm{~Hz}$ to 20 kHz
Impedance 8 ohms
Features Independent volume controls on each earcup; 10' coiled cord; durable vinyl-cone speakers

PRD-20
Price $\$ 29.95$
Response $\quad 10 \mathrm{~Hz}$ to 16 kHz
Impedance 8 ohms
Features Snap-fit headband; 10' coiled cord;
foam-filled vinyl ear cushions
NOVA-10
Price $\$ 16$
Impedance 4 to 16 ohms
Features Adjustable headband; padded ear-
cups

## Models also available

PRO-10, \$40; NOVA-30, \$25

## SANSUI

Sansui Electronics Corp. 1250 Valley Brook Ave. Lyndhurst, N.J. 07071

SS-100

diaphragm, iight, comiortable earpads/band

## Models also available

SS-60, \$54; SS-40, \$42

## SENNHEISER

## Sennheiser Electronics Corp.

10 West 37th St.
New York, N.Y. 10018
Unipolar 2000
Price $\$ 384$
Response $\quad 16 \mathrm{~Hz}$ to 22 kHz
Sensitivity $\quad 103 \mathrm{~dB}$ SPL with $5,000 \mathrm{mV}$ input
Impedance 8 ohms
THD $0.1 \%$ at 110 dB SPL ( 1 kHz )
Max. power $11.2 \mathrm{~V}(110 \mathrm{~dB}$ SPL)
Design Electret condenser, electrostatic
Weight $\quad 1.1 \mathrm{oz}$

Features Electrostatic phones with no need
for 110 V AC line connection; polarizing voltage permanently frozen into electret diaphragms

HD-224

| Price | $\$ 136$ |
| :--- | :--- |
| Response | 16 Hz to 20 kHz |
| Sensitivity | 94 dB SPL with 1 mW input |
| Impedance | 200 ohms per channel |
| THD | $0.9 \%$ at $95 \mathrm{~dB} \mathrm{SPL}(1 \mathrm{kHz})$ |
| Max. power | 500 mW |
| Design | Circumaural |
| Weight | 80 oz . |
| Features | Designed for good isolation |

## HD-424

## Price $\quad \$ 109$

Response 15 Hz to 20 kHz
Sensitivity 102 dB SPL with 1 mW input
Impedance 2 K ohms per channel
THD
$\begin{array}{ll}\text { Max. power } & 100 \mathrm{~mW} \\ \text { Design } & \text { Open-back }\end{array}$
Weight $\quad 7 \mathrm{oz}$.

HD-414
$\begin{array}{ll}\text { Price } & \$ 75 \\ \text { Response } & 20 \mathrm{~Hz}\end{array}$
Sensitivity 102 dB SPL with 1 mW input
$\begin{array}{ll}\text { Impedance } & 2 \mathrm{~K} \text { ohms per channel } \\ \text { THD } & \text { Under } 1 \% \text { at } 126 \mathrm{~dB} \text { SPL }(1 \mathrm{kHz})\end{array}$
$\begin{array}{ll}\text { Max. power } & 100 \mathrm{~mW} \\ \text { Design } & \text { Open-back }\end{array}$
Weight 502

HD-400
Price $\$ 44$
Response $\quad 20 \mathrm{~Hz}$ to 18 kHz
Sensltivity 90 dB SPL with 1 mW input
Impedance 600 ohms per channel
THD $\quad 1 \%$ at 118 dB SPL
Max. power 100 mW
Design Open-back
Weight 302.

## Models also available

HD-430, \$119; HD-420, \$85

## SIGNET

Signet Co.
33 Shiawassee Avè.
Fairlawn, Ohio 44313
Signet TK-33

| Price | $\$ 250$ |
| :--- | :--- |
| Response | 10 Hz to $22.5 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| Sensitivity | 100 dB SPL with mW input |
| Impedance | 4 to 16 ohms |
| THD | $0.1 \%$ at $110 \mathrm{~dB} \mathrm{SPL}(1 \mathrm{kHz})$ |
| Max. power | $20 \mathrm{mV}(117 \mathrm{~dB} \mathrm{SPL})$ |
| Design | Electret condenser |
| Weight | 10 oz . (with cord); 7 oz . (without |
|  | cord) |
| Features TK-33 adapter contains a passive- <br> impedance matching transformer; stereo or speak-  <br> er-operation selector switch; high or low sensitivity  <br> switch; two arrays of light-emitting diodes display  <br> relative voltage to each channel; adapter will ac-  <br> commodate two stereo headsets if desired  |  |

Signet TK-22

| Price | $\$ 80$ |
| :--- | :--- |
| Response | 20 Hz to 20 kHz |
| Sensitivity | 96 dB SPL with $\ddagger \mathrm{mV}$ input |
| Impedance | 4 to 16 ohms |
| THD | $0.4 \%$ at $110 \mathrm{~dB} \mathrm{SPL}(1 \mathrm{kHz})$ |
| Max. power | $4.5 \mathrm{~V}(114 \mathrm{~dB} \mathrm{SPL})$ |
| Design | Moving-coil dynamic |
| Weight | 9 oz. (with cord); 7 oz . (without |
|  | cord) |
| Features | Blpolar design; high-compliance |
| dome diaphragm; powerful FSD magnet |  |

## SONY <br> Sony Industries <br> 9 West 57th St. <br> New York, N.Y. 10019

ECR-500

| Price | $\$ 120$ |
| :--- | :--- |
| Response | 20 Hz to 20 kHz |
| Sensitivity | 91 dB SPL with 1 V input |
| Impedance | 30 ohms |
| THD | $0.03 \%$ at 4 V input |
| Max. power | 114 dB SPL |
| Design | Unl-electret open-back electro- |
|  | static |
| Welght | 12 oz |
| Features | Supplied with adaptor for connec- |

tion to amplifier loudspeaker terminals
DR-Z7
Price $\$ 100$
Response $\quad 20 \mathrm{~Hz}$ to 25 kHz
Sensitivity $104 \mathrm{~dB} / \mathrm{mW}$ SPL
Impedance 110 ohms
THD
$0.03 \%$ at 90 dB SPL at 1 kHz
Max. power 30 mV
Design Open-alr dynamic
Weight $\quad 14.8 \mathrm{oz}$.
Features Acoustic dimple diaphragm with palladium coating; Litz wire cable; metal and leather construction

## DR-Z6

| Price | $\$ 85$ |
| :--- | :--- |
| Response | 20 Hz to 25 kHz |
| Sensitivity | $104 \mathrm{~dB} / \mathrm{mW} \mathrm{SPL}$ |
| Impedance | 110 ohms |
| THD | $0.03 \%$ at 90 dB SPL at 1 kHz |
| Design | Open-alr dynamic |
| Weight | 14.1 oz. |
| Features <br> construction | Similar to DR-Z7; metal and vinyl |

construction

| DR-6M | Monitor |
| :--- | :--- |
| Price | $\$ 58$ |
| Response | 20 Hz to 20 kHz |
| Sensitivity | $110 \mathrm{~dB} / \mathrm{mW}$ |
| Impedance | 28 ohms |
| Design | Closed-type dynamic |
| Weight | 13 oz |
| Features Fold-up design for field monitoring <br> applications  |  |

## DR-S5

Price $\quad \$ 50$
Response $\quad 20 \mathrm{~Hz}$ to 20 kHz
Sensitivity $102 \mathrm{~dB} / \mathrm{mW}$ SPL
$\begin{array}{ll}\text { Impedance } & 14 \text { ohms } \\ \text { Design } & \text { Closed-type dynamic }\end{array}$
Weight $\quad 13.6 \mathrm{oz}$.
Features Volume and tone controls
DR-S3
Price $\$ 30$
Response $\quad 20 \mathrm{~Hz}$ to 20 kHz
Sensitivity $102 \mathrm{~dB} / \mathrm{mW}$
Impedance 10 ohms
Design Closed-type dynamic
Weight $\quad 12.3 \mathrm{oz}$

## Models also available

DR-Z5, \$70; DR-S4, \$40; DR-2, \$22

## STANTON

Stanton Magnetics, Inc.
200 Terminal Drive
Plainview, N.Y. 11803
XXI Stereo/Wafers
Price $\$ 70$
Response $\quad 20 \mathrm{~Hz}$ to 22 kHz

Sensitivity Impedance
THD
Max. power
Design
Open-back
Features Rare-earth elements; soft foamcushioned headband; specially designed earpiece pivots

Dynaphase 35
Price $\$ 45$
Response $\quad 20 \mathrm{~Hz}$ to 20 kHz
Sensitivity 100 dB SPL with 0.10 mV input (1 kHz , for each channel)
Impedance $150 \mathrm{hms}, \pm 10 \%(1 \mathrm{kHz})$
THD $\quad 0.5 \%$ at 110 dB SPL
Max. power 0.2 watts rms/channel
Design Open-back
Weight $\quad 7 \mathrm{oz}$. without cord
Features Special adapter plug to connect to
portable radio, record players and TV sets

## STAX

American Audioport, Inc. 1407 North Providence Road Columbia, Mo. 65201

## SR Sigma Earspeaker System

Price $\$ 450$
Response $\quad 30 \mathrm{~Hz}$ to $35 \mathrm{kHz},+2 \mathrm{~dB}$
Sensitivity 95 dB SPL with 4.5 V rms input to adapter
Impedance 35 ohms (adapter box)
THD $\quad 0.02 \%$ at 1 kHz at 1 W
Max. power Protected against overload
Design Electrostatic
Weight 1602
Features Front-facing elements
SR-X Mk 3 Earspeaker System
Price $\$ 300$
Response $\quad 20 \mathrm{~Hz}$ to $25 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$
Sensitivity 95 dB SPL with 9.6 V rms input
Impedance 35 ohms (adapter box)
THD
Max. power Protected against overload
Design Electrostatic
Weight 14 oz .

## SR-44 Earspeaker System

Price $\quad \$ 120$
Response 25 Hz to $20 \mathrm{kHz},+1.5 \mathrm{~dB}$
Sensitivity 95 dB SPL with $1 . \frac{1}{2} \mathrm{~V} \mathrm{rms}$ input to adapter
Impedance 35 ohms (adapter box)
THD $\quad 0.02 \%$ at 1 kHz at 1 W
Max. power Protected against overload
Design Electret
Weight 8 oz .

## Models also available

SR-5 Earspeaker System, \$175

## SUPEREX

Superex Electronics Corp.
151 Ludlow St.
Yonkers, N.Y. 10705
Studio Master/SM-700
Price $\quad \$ 69.95$
Response $\quad 10 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Sensitivity 110 dB SPL with 0.6 V input Impedance 35 ohms
THD
Design
Weight On-the-ear isolated
Features Vented magnet design for incroased transient response; self-supporting voicecoil assembly


Signet TK-33

## PRO-B-VI Monitor

Price $\$ 60$
Response $\quad 15 \mathrm{~Hz}$ to $22 \mathrm{kHz}, \pm 5 \mathrm{~dB}$
Impedance 4 to 16 ohms
THD $\quad 0.9 \%$ at $110 \mathrm{~dB} \mathrm{SPL}(400 \mathrm{~Hz})$
Design Around-ear isolation
Weight 1502
Features Two-way woofer/tweeter LC crossover design; twin acoustic wooter chambers

## TRL-99

Price
Response
Sensitivity
Impedance
THD
Design
Weight
Features
$\$ 54.95$
15 Hz to $20 \mathrm{kHz}, \pm 4 \mathrm{~dB}$
110 dB SPL with 0.6 V input
35 ohms
$0.4 \%$ at 110 dB SPL $(400 \mathrm{~Hz})$
On-ear fabric-faced open design 10 oz .

TRL-3

| Price | $\$ 44.95$ |
| :--- | :--- |
| Response | 40 Hz to $20 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Sensitlvity | 100 dB SPL with 6 mW input |
| Impedance | 80 ohms |
| THD | $0.6 \%$ at $110 \mathrm{~dB} \mathrm{SPL}(400 \mathrm{~Hz})$ |
| Design | Open-alr with low-frequency |
|  | acoustic compensation |
| Weight | 8.5 oz. |
| Features Acoustically equalized Mylar driv- |  |
| ers to regain low end usually lost in open designs; |  |

ers to regain low end usually lost in open designs; replaceable foam cushions

## Models also available

TRL-88, \$49.95

TECHNICS
Panasonic Co.
One Panasonic Way
Secaucus, N.J. 07094

EAH-830
Price $\$ 80$
Response $\quad 15 \mathrm{~Hz}$ to 35 kHz
Sensitivity $\quad 100 \mathrm{~dB}$ SPL with 0.5 V input ( 1 kHz )
THD $\quad 0.3 \%$ at 100 dB SPL ( 1 kHz )
Max. power $3 V$ (131 dB SPL)
Design Dynamic
Weight 16 oz . (less cord)
Features Linear-drive design; double-cavity
acoustic circuit; high power-handling capacity

## EAH-820

Price $\$ 60$
Response 15 Hz to 30 kHz
Sensitivity $\quad 100 \mathrm{~dB} \mathrm{SPL}$ with 0.6 V input (1 kHz)
THD
$0.3 \%$ at 100 dB SPL ( 1 kHz )
Max. power $3 V(128 \mathrm{~dB} \mathrm{SPL})$



Yamaha YH-1000

| THD | $0.3 \%$ at 90 dB SPL |
| :--- | :--- |
| Max. power | 120 dB SPL |
| Design | Reflex |
| Weight | $120 z$, excluding straight cord sup- |
|  | plied |
| Features | Isodynamic driver: printed circuit |
| coil etched on polyester diaphragm; damped hear- |  |
| through design |  |

## YAMAHA <br> Yamaha International Corp. <br> 6600 Orangethorpe Buena Park, Calif. 90620

## YH-1000

Price $\$ 220$
Response 20 Hz to 20 kHz
Impedance 100 ohms
THD $\quad 0.1 \%$ at 90 dB SPL
Max. power 103 dB mV
Design Orthodynamic, supra-aural
Weight 19 oz .
Features $\quad 2$-inch rare earth cobalt magnet; 2 inch polyester diaphragm; lockable high-adjustment sliders

| YH-1 |  |
| :---: | :---: |
| Price | \$65 |
| Response | 20 Hz to 20 kHz |
| Impedamce | 150 ohms |
| THD | 0.3\% at 90 dB SPL |
| Max. power | 94 mW |
| Design | Orthodynamic, supra-aural |
| Weight | 9 oz . (without cord) |
| YH-2 |  |
| Price | \$50 |
| Response | 20 Hz to 20 kHz |
| Impedance | 150 ohms |
| THD | . $0.3 \%$ at 90 dB SPL |
| Max. power | 93 mW |
| Design | Orthodynamic, supra-aural |
| Weight | 7 oz . |
| Y H-3 |  |
| Price | \$35 |
| Response | 20 Hz to 20 kHz |
| Sensitivity | 93 dB SPL with 1 mV input |
| Impedance | 150 ohms |
| THD | 0.3\% at 95 dB SPL |
| Design | Orthodynamic |
| Weight | 8 oz . |

## WHARFEDALE <br> Rank Hi Fi <br> 20 Bushes Lane <br> Elmwood Park, N.J. 07407

## ID-2

Price $\$ 120$
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Sensitivity 90 dB SPL with 1 mW Input
Impedance 60 ohms

| Design | Dynamic |
| :---: | :---: |
| Weight | 16 oz . (less cord) |
| Features | Linear-drive design |
| tic |  |
| EAH-810 |  |
| Price | \$40 |
| Response | 20 Hz to 25 kHz |
| Sensitivity | 100 dB SPL with 0.6 V input ( 1 kHz |
| THD | $0.5 \%$ at $100 \mathrm{~dB} \mathrm{SPL}(1 \mathrm{kHz})$ |
| Max. power | 1 V (121 dB SPL) |
| Design | Dynamic |
| Weight | $9 \mathrm{oz}$. (less cord) |
|  |  |
| Features acoustic circui | Linear-drive design; double-c it; high power-handling capacity |

## TOSHIBA

Toshiba America, Inc.
280 Park Ave.
New York, N.Y. 10017

HR-811
Price
Response
Sensitivity
$\begin{array}{ll}\text { Impedance } & 80 \mathrm{hms} \\ \text { THD } & 0.5 \% \text { at } 101 \mathrm{~dB} \mathrm{SPL}(400 \mathrm{~Hz})\end{array}$
Design "Complimentary Back" electret
Weight 8.5 oz
Features "Complimentary Back" electret full-face drive system with ultra-thin 2.5 micron diaphragm

## HR-X1

Price $\$ 65$
Response 20 Hz to 20 kHz
Sensitivity 101 dB SPL with 3 V input
Impedance 8 ohms
THD $\quad 0.5 \%$ at 101 dB SPL ( 400 Hz )
Design "Complementary Back" electret
Weight $\quad 5.3 \mathrm{oz}$
Features "Complementary back" (exclu-
sive)

## A Nole on Prices

Prices shown in these pages are manufacturers' or importers' nationally advertised values, updated as is feasible by press time.

# Microphones 

| AKG |  |
| :---: | :---: |
| AKG Acoustics |  |
| 91 McKee Drive |  |
| Mahwah, | N.J. 07430 |
| C-424 |  |
| Price | \$2,000 |
| Pattern | Cardioid Four |
| Transducer | Condenser; two dual diaphragms |
| Response | 20 Hz to 20 kHz |
| Output | -43.5 dBm re 94 dB SPL |
| Impedance | 200 ohms |
| Features | Large-diaphragm quadriphonic mic |


\section*{C-422 <br> | Price | $\$ 1,900$ |
| :--- | :--- |
| Pattern | Nine variable patterns |
| Transducer | Double-diaphragm condenser |
| Response | 20 Hz to 20 kHz |
| Output | -45 dBm re 94 dB SPL |
| Impedance | 200 ohms |
| Features | Large-diaphragm stereo mic with |
| FET preamplifier; remote pattern selector; aiming |  |
| LEDs: 3 -position pre-attenuator |  |}

## C-33

Price $\quad \$ 775$
Pattern Double cardioid
Transducer Condenser (2)
Response $\quad 20 \mathrm{~Hz}$ to 20 kHz
Output $\quad-43.5 \mathrm{dBm}$ re 94 dB SPL
Impedance 200 ohms
Features Small-diaphragm; FET preampllfier

## C-414EB

| Price | $\$ 675$ |
| :--- | :--- |
| Pattern | Four variable patterns |
| Transducer | Condenser; dual diaphragm |
| Response | 20 Hz to 20 kHz |
| Output | -43.5 dBm re 94 dB SPL |
| Impedance | 200 ohms |
| Features | Large-diaphragm: FET pream- |
| plifier; 3-position attenuator; 3-position bass rolloff |  |

## C-451E Combo Design

Price $\quad \$ 295$
Pattern Cardioid capsule
Transducer Condenser
Response 20 Hz to 20 kHz
Output $\quad-39.5 \mathrm{dBm}$ re 94 dB SPL
Impedance 200 ohms
Features Modular mic system; 8 interchangeable capsules and 3 different preamps; available in black or nickel finish

## D-900E

## Price

$\$ 240$
Pattern
Transducer
Response
Output
Impedanc
Features
Shotgun-hypercardioid
Dynamic
at $\$ 455$


D-222EB
Price $\$ 195$
Pattern Cardioid
Transducer Two-way dynamic
Response $\quad 20 \mathrm{~Hz}$ to 18 kHz
Output $\quad-55.5 \mathrm{dBm}$ re 94 dB SPL
Impedance 200 ohms
Features Dual-transducer design; bass rolloff; complete with stand adapter and case

## D-190SPL

Price $\$ 188$
Pattern Cardioid
Transducer Dynamic
Response $\quad 30 \mathrm{~Hz}$ to 15 kHz
Output $\quad-52 \mathrm{dBm}$ re 94 dB SPL
Impedance 200 ohms
Features Kit; includes two D-190E mics, two stand adapters, two table stands, two cables, and cases; available in high impedance as D-190SPH at \$206

## D-140E

## Price

Pattern
Dynamic
$\quad 30 \mathrm{~Hz}$ to 15 kHz
Output $\quad-52 \mathrm{dBm}$ re 94 dB SPL
Impedance 200 ohms
Features Includes stan
integral bass rolloff switch
integral bass rolloff switch

## C-510E

## Price

Pattern
Response
Output
Impedance
$\$ 180$

Features
Omni capsule

Lavalier-type modular mic system: includes power-line module, windscreen, battery. and case

## C-505E

## Price \$155

Pattern
Cardioid capsule
Electret condenser
Response $\quad 40 \mathrm{~Hz}$ to 20 kHz
Output $\quad-48 \mathrm{dBm}$ re 94 dB SPL
Impedance 200 ohms
Features Modular mic system; 4 optional capsules available; built-in windscreen; includes power-line module, battery, stand adapter, and case

## C-501E

Price
Pattern
Transducer
Response
Output $\quad-48 \mathrm{dBm}$ re 94 dB SPL
Impedance 200 ohms
Features Includes SE-5E power module. battery, windscreen, stand adapter, and case; modular mic system; four optional capsules available

## D-2000E

| Price | $\$ 150$ |
| :--- | :--- |
| Pattern | Supercardiold |

Transducer Dynamic
Response $\quad 35 \mathrm{~Hz}$ to 17 kHz
Output $\quad-52 \mathrm{dBm}$ re 94 dB SPL Impedance 200 ohms
Features Integral ball-head wire-mesh windscreen; two-position equalization and off switch; includes stand adapter and case

## D-320B

Price

Price
Cardioid
Response 80 Hz to 18 kHz
Output $\quad 128 \mathrm{~dB}$ SPL
Impedance 200 ohms
Features Plug-in transducer system; 3-position bass rolloff switch; rugged die-cast housing; shock-mounted transducer; dual windscreen/pop filter

D-170E

## Price

Pattern
Supercardioid
Response $\quad 50 \mathrm{~Hz}$ to 15 kHz
Output $\quad-53.5 \mathrm{dBm}$ re 94 dB SPL
Impedance 200 ohms
Features Ball-head wire-mesh windscreen; antifeedback mic; includes stand adapter and case

D-200E1
Price $\quad \$ 125$
Pattern Cardioid
Transducer Two-way dynamic
Response $\quad 30 \mathrm{~Hz}$ to 15 kHz
Output $\quad-56 \mathrm{dBm}$ re 94 dB SPL
impedance 200 ohms
Features Dual-tran
stand adapter and case
D-310
Price $\quad \$ 110$
Pattern Cardiold
Transducer Dynamic
Response $\quad 80 \mathrm{~Hz}$ to 18 kHz
Output $\quad 128 \mathrm{~dB}$ SPL
Impedance 200 ohms
Features Rugged die-cast housing; shock-
mounted transducer; dual windscreen/pop filter
D-1000E
Price $\$ 100$
Pattern Cardioid
Transducer Dynamic
Response 40 Hz to 17 kHz
Output $\quad-52 \mathrm{dBm}$ re 94 dB SPL
Impedance 200 ohms
Features Rugged construction with 3 -position equalization switch; includes stand adapter and case

D-160E1
Price $\$ 88$
Pattern Omnidirectional
Transducer Dynamic
Response 40 Hz to 20 kHz
Output $\quad-58 \mathrm{dBm}$ re 94 dB SPL
Impedance 250 ohms
Features For recording and broadcast; includes windscreen, stand adapter, and case

D-130E

## Price

Pattern $\$ 80$
$\begin{array}{ll}\text { Transducer } & \text { Dynamic } \\ \text { Response } & 40 \mathrm{~Hz} \text { to } 20 \mathrm{kHz}\end{array}$
Output $\quad-58 \mathrm{dBm}$ re 94 dB SPL
Impedance 200 ohms
Features
Rugged enough for field use; in-
cludes stand adapter and case
D-109


Pattern Omnidirectional
$\begin{array}{ll}\text { Transducer } & \text { Dynamic } \\ \text { Response } & 70 \mathrm{~Hz} \text { to } 12 \mathrm{kHz}\end{array}$
Output $\quad-58 \mathrm{dBm}$ re 94 dB SPL Impedanc
Features
200 ohms
tie clasp, and case

## D-120E

| Price |  |
| :--- | :--- |
| Pattern | Ca |

Transducer Dynamic
Response 80 Hz to 17 kHz
Output $\quad-54 \mathrm{dBm}$ re 94 dB SPL
Impedance 200 ohms
Features Ball-head type; includes stand adapter and case; available as D-120ES with on/off switch at $\$ 80$

## Models also available

C-34, $\$ 1,300$; D-224E, $\$ 360$; D12E, \$205; D-330 BT, \$185; D120SPL, \$168; C-502E, \$150; D-110, \$125; D-310S, \$115; D190E, \$90; D-58E, \$82

AUDIO TECHNICA
Audio Technica Co.
33 Shiawassee Ave.
Fairlawn, Ohio 44313

## AT-814

| Price | $\$ 115$ |
| :--- | :--- |
| Pattern | Cardioid |
| Transducer | Moving-coil dynamic |
| Response | 50 Hz to 16 kHz |
| Output | -56 dBM |
| Impedance | 600 ohms |
| Features <br> phone plug or | No switch; $161 / 2^{\circ}$ cable with $1 / 4^{n}$ |

## AT-812

| Price | $\$ 95$ |
| :--- | :--- |
| Pattern | Cardioid |
| Transducer | Moving-coil dynamic |
| Response | 50 Hz to 18 kHz |
| Output | -60 dBM |
| Impedance | 600 ohms |
| Features | Recessed on/off switch; $161 / 2^{\prime \prime} \mathrm{ca}$ - |
| ble with $1 / 4^{"}$ phone plug or XLR |  |

AT-811
Price
Pattern
$\begin{array}{ll}\text { Transducer } & \text { Electret condenser } \\ \text { Response } & 50 \mathrm{~Hz} \text { to } 20 \mathrm{kHz}\end{array}$
Outpui $\quad-56 \mathrm{dBM}$
Impedance 600 ohms
Features
Recessed on/off switch; $161 / 2^{\prime}$ ca-
ble with $y^{\prime \prime}$ phone plug or XLR
AT-803S

| Price | $\$ 85$ |
| :--- | :--- |
| Pattern | Omnidirectional |
| Transducer | Subminiature electret condenser |
| Response | 50 Hz to 15 kHz |
| Output | -57 dBM |
| Impedance | 600 ohms |
| Features | Battery and recessed on/off switch |
| on belt clip; | $25^{\prime}$ smail diameter cable with $4 /^{*}$ |
| phone plug or XLR |  |

AT-816/2 Recording
Microphone Pair
Price $\$ 60 /$ pr.
Pattern Cardioid
Transducer Dynamic
Response 50 Hz to 15 kHz
Output $\quad-60 \mathrm{dBM}(0 \mathrm{~dB}=1 \mathrm{~mW} / 10 \mathrm{dy}$ nes/cm ${ }^{2}$ )
Impedance 600 ohms
Features Stereo pair with desk stands; integrated $13^{\prime}$ cable with $1 / 4^{\prime \prime}$ phone plugs; on/off switch

| AT-805S |  |
| :--- | :--- |
| Price | $\$ 50$ |
| Pattern | Omnidirectional |
| Transducer | Miniature electret condenser |
| Response | 50 Hz to 15 kHz |
| Output | -57 dBM |
| Impedance | 600 ohms |
| Features | Bullt in switch; belt cifo |

## Models also available <br> AT-813, $\$ 100$; AT-802, $\$ 70$; AT-

 801, $\$ 70$
## AUDIOTEX

G. C. Electronics
Div. of Hydrometals, Inc.

400 South Wyman St.
Rockford, III. 61101
30-2316
$\begin{array}{ll}\text { Price } & \$ 57 \\ \text { Pattern } & \text { Unid }\end{array}$
Pattern Unidirectional
Response $\quad 50 \mathrm{~Hz}$ to 13 kHz
Output $\quad-69 \mathrm{dBm}$
Impedance 600 ohms
Features $\quad 20^{\circ}$ cable; 10.5 oz.; table stand; snap-out stand clamp; and black vinyl storage case

30-2314
Price
Pattern
Response
$-58 \mathrm{dBm}$
Features $20^{\prime}$ cable; 13.5 oz.; slip-out stand clamp; lavalier holder

30-2310
Price $\$ 32$
Pattern Cardioid
Response 80 Hz to 13 kHz
Output $\quad-73 /-54 \mathrm{dBm}$ (switchable)
Impedance $600 / 50 \mathrm{ohms}$ (switchable)
Features $\quad 10^{\prime}$ cord; 2.5 oz .; desk stand; slip-
out stand clamp
30-2318

## Price

Pattern
40 Hz to 16 kHz
mpedance -65 dBm
Impedance 1 Kohms
Features 13' cable; 2.5 oz.; tie-tack holder; mercury battery

## Models also available

30-2312, \$35

## BEYER

Burns Audiotronics, Inc.
5-05 Burns Ave.
Hicksville, N.Y. 11801
M-818
Price $\$ 149.95$
Pattern Cardiold
Transducer Dynamic
Response 50 Hz to 16 kHz

Impedance 500 ohms
Features Matched stereo pair with atached
cables; two table stands; mic clips

CERWIN-VEGA
Cerwin-Vega, Inc.
12250 Montague St.
Arleta, Calif. 91331

| OE-1 |  |
| :--- | :--- |
| Price | $\$ 125$ |
| Pattern | Omnidirectional |
| Transducer | Electret |
| Response | 50 Hz to 20 kHz |
| Output | -70 dBM re 94 dB SPL |
| Impedance | $600 / 10 \mathrm{~K}$ ohms |
| Features | Impedance switch |
|  |  |
| UE-1 |  |
| Price | $\$ 115$ |
| Pattern | Cardioid |
| Transducer | Electret |
| Response | 80 Hz to 20 kHz |
| Output | -70 dBM re 94 dB SPL |
| Impedance | $600 / 10 \mathrm{~K}$ ohms |
| Features | Impedance swltch; tone switch |
|  |  |
| UD-1 |  |
| UPice | $\$ 100$ |
| Pattern | Cardioid |
| Pransducer | Dynamic |
| Response | 70 Hz to 15 kHz |
| Output | -73 dBM re 94 dB SPL |
| Impedance | 200 ohms |
| Features | Built-in pop filter |

## ELECTRO-VOICE <br> Electro-Voice, Inc. <br> 600 Cecil St. <br> Buchanan, Mich. 49107

RE-20
Price $\quad \$ 349$
Pattern Cardioid
Transducer Dynamic Variable-D*
Response $\quad 40 \mathrm{~Hz}$ to 18 kHz
Output $\quad 57 \mathrm{dBm}$ re 94 dB SPL
impedance $50 / 150 / 250$ ohms (switchable)
Features Wide-range response; Variable-D*
design eliminates proximity effect; built-in blast fil-
ter; 2-year unconditional warranty
CO-15P
Price $\$ 255$
Pattern Omnidirectional
Transducer Condenser
Response 20 Hz to 20 kHz
Output
condifional warranty requir a 50 VDC via fom power method

RE-55
Price $\$ 232$
Pattem Omnidirectional
Transducer Dynamic
Response $\quad 40 \mathrm{~Hz}$ to 20 kHz
Output $\quad 57 \mathrm{dBm}$ re 94 dB SPL
Impedance 150 ohms
Features Wide-range response; may be
used as secondary lab standard; 2-year uncondi-
tional warranty
RE-18
Price
$\$ 225$

Pattern
Transducer
Response
Output Impedance
Features
Shock-mounted; Variable-D* de sign eliminates proximity effect; built-in blast filter; 2 -year unconditional wartanty

RE-10
Price
Pattern
Transducer
Response
56 dBm re 94 dB SPL
mpedance 150 ohms
Features Variable-D design eliminates proximity effect; no off-axis coloration; bass rolloff switch; 2-year unconditional warranty; RE-11 similar with built-in blast filter (\$132)

## CO-90

| Price | $\$ 112.50$ |
| :--- | :--- |
| Pattern | Omnidirectional |
| Transducer | Condenser |
| Response | 40 Hz to 15 kHz |
| Output | 57 dBm re 94 dB SPL |
| Impedance | 150 ohms |
| Features | Miniature lavalier; wide-range re- |
| sponse; tie clip; belt clip; windscreen; storage |  | pouch; 2-year unconditional warranty

## DO-54

Price $\quad \$ 112.50$
Pattern Omnidirectional
Transducer Dynamic
Response $\quad 50 \mathrm{~Hz}$ to 18 kHz
Output $\quad 58 \mathrm{dBm}$ re 94 dB SPL
Impedance 150 ohms
Features Wide-range response; also avail-
able in white finish as D0-54W, 2-year uncondi-
tional warranty
1776
Price $\quad \$ 111.50$
Pattern Cardioid
Transducer Condenser Single-D
Response $\quad 60 \mathrm{~Hz}$ to 18 kHz
Output $\quad 50 \mathrm{dBm}$ re 94 dB SPL
Impedance 150 ohms
Features Uses 4.5 -volt battery; on/off switch; built-in blast filter; 1777 is phantom-powerable (\$126)

| DO-56 |  |
| :--- | :--- |
| Price | $\$ 100$ |
| Pattern | Omnidirectional |
| Transducer | Dynamic |
| Response | 80 Hz to 18 kHz |
| Output | 61 dBm re 94 dB SPL |
| Impedance | 150 ohms |
| Features | Shock-mounted; bullt-in blast filter; |
| 2-year unconditional warranty |  |

## 671A

Price
Pattern
Transducer Dynamic Single-D
Response
Output
Impedance 57 dBm re 94 dB SPL
Features
tion; built-in blast filte

## 647AL

Price
Pattern
Transducer
Response
Output
Impedance
Features
available in high assembly

635A

## Price

Pattern
Transducer
Response
Output $\quad 80 \mathrm{~Hz}$ to 13 kHz
Impedance 55 dBm re 94 dB SPL
Features
conditional warrant

## Models also available

CS-15P, \$237; RE-15, \$202; DS-
35, \$115.50; RE-85, \$106.50; 660, $\$ 82.75$; 631B, $\$ 60.75$

## JVC

U.S. JVC Corp.

58-75 Queens Midtown
Expressway
Maspeth, N.Y. 11378
M-510
Price
Pattern
Transducer
Response
Output
Impedance
Features
HM-200E

| Price | $\$ 100$ |
| :--- | :--- |
| Pattern | Binaural |
| Transducer | Electret |
| Response | 40 Hz to 18 kHz |
| Impedance | 600 ohms |

M-201

| Price | $\$ 60$ |
| :--- | :--- |
| Pattern | Unldirectional |
| Transducer | Electret |
| Response | 40 Hz to 18 kHz |
| Output | -71 dBm |
| Impedance | 600 ohms |
| Features | Stereo microphone |

LAFAYETTE
Lafayette Electronics
111 Jericho Turnpike
Syosset, N.Y. 11791
MO-102

| Price | $\$ 39.99$ |
| :--- | :--- |
| Pattern | Omnidirectional |
| Transducer | Dynamic |
| Response | 50 Hz to 13 kHz |
| Output | -58 dBm |
| Impedance | 600 to 50 K ohms |
| Features | Windscreen; 15' cable |


| MU-101 |  |
| :--- | :--- |
| Price | $\$ 37.99$ |
| Pattern | Unidirectional |
| Transducer | Dynamlc |
| Response | 200 Hz to 10 kHz |
| Output | -56 dBm |
| Impedance | 600 to 50 K ohms |
| Features | On/off switch; Switchcratt connec- |
| tor; 15' cable |  |
|  |  |
| 99-46427 |  |
| Price $\$ 37.99$ <br> Pattern Unidirectional cardioid <br> Transducer Electret condenser <br> Response 30 Hz to 16 kHz <br> Output -70 dBm <br> Impedance High/low <br> Features Windscreen; tripod desk stand; <br> floor-stand adapter; $1 / 2^{*}$ phone plug; 20' cable  |  |

MARLBORO
Marlboro Sound Works
Div. of M.I.C.A.

170 Eileen Way
Syosset, N.Y. 11791

## M-900

Price $\$ 89$
Pattern Cardioid
Transducer Magnetic
Response $\quad 50 \mathrm{~Hz}$ to 17 kHz
Output $\quad-74 \mathrm{dBm}$ (low); -58 dBm (high)
Impedance 200 ohms (low); 20 K ohms (high)
Features Impedance selectable inside mike
with simple connector; 16' heavy-duty cable, XLR connector

M-500
Price
Pattern Cardioid
Transducer Magnetic
Response 50 Hz to 16 kHz
Output $\quad-76 \mathrm{dBm}$ (low); -56 dBm (high)
Impedance 200 ohms (low); 20K ohms (high)
Features impedance selectable inside mike with simple connector; 16 -foot heavy duty cable, XLR connector

## M-200

Price $\$ 31$
Pattern Cardioid
Transducer Magnetic
Response $\quad 60 \mathrm{~Hz}$ to 13 kHz
Output $\quad-80 \mathrm{dBm}$ (low); -61 dBm (high)
Impedance 300 ohms (low); 50 K ohms (high)
Features Dual impedance; $10^{\prime}$ detachable
cable with phone plug attached

| M-50 |  |  |  |
| :--- | :--- | :--- | :--- |
| Price | $\$ 21$ |  |  |
| Pattern | Cardloid |  |  |
| Transducer | Magnetic |  |  |
| Response | 60 Hz to 13 kHz |  |  |
| Output | -61 dBm |  |  |
| Impedance | 50 K ohms |  |  |
| Features | Ten-foot heavy-duty cable with |  |  |
| phone plug attached |  |  |  |

## M-30

Price $\$ 14$
Pattern Cardioid
Transducer Magnetic
Response 70 Hz to 12 kHz
Output $\quad-56 \mathrm{dBm}$
Impedance 50 K ohms
Features Ten-foot cable with phone plug

## Models also available

M-400, \$49; M-300, \$42

## NAKAMICHI

Nakamichi USA Corp.
1101 Colorado Ave.
Santa Monica, Calif. 90401
CM-1000
Price $\$ 355$
Pattern Cardioid
Transducer Condenser
Response 20 Hz to $20 \mathrm{kHz}, \pm 2.5 \mathrm{~dB}$
Output $\quad-45 \mathrm{dBm}$ re 94 dB SPL ( 10 micro-
bars)
Features Gold-metalized polyester-film diaphragm; optional CP-102 super-omnidirectional capsulè, $\$ 125$; power supply in separate housing with $-10 \mathrm{~dB} /-20 \mathrm{~dB}$ attenuator switch and proximi-ty-effect switch


Audio-Technice AT-812


Shure SM-81

| DM-1000 |  |
| :---: | :---: |
| Price | \$245 |
| Pattern | Cardioid |
| Transducer | Moving-coil dynamic |
| Response | 30 Hz to $18 \mathrm{kHz}, \pm 2.5 \mathrm{~dB}$ |
| Output | -54 dBm re 94 dB SPL ( 10 microbars) |
| Impedance | 250 ohms |
| Features construction pickup for ha | Triple-layer windscreen, doublecasing reduces mechanical noise nd-held use; hum-canceling coils |
| CM-50 |  |
| Price | \$135 |
| Pattern | Super-omni |
| Transducer | Electret condenser |
| Response | 20 Hz to 18 kHz , 土 3.5 dB |
| Output | -53 dBm re 94 dB . SPL ( 10 micro- |
| Impedance | 250 ohms |
| Features ble foam wind | Miniature mic with tie clip; detachascreen for outdoor use |
| DM-500 |  |
| Price | \$85 |
| Pattern | Cardioid |
| Transducer | Moving-coil dynamic |
| Response | 50 Hz to 15 kHz |
| Output | -51 dBm re 94 dB SPL (110 microbars) |
| Impedance | 250 ohms |
| Features ing case; high | Integral windscreen; shock-mount-front-to-rear ratio |
| CM-100 |  |
| Price | \$85 |
| Pattern | Cardioid |
| Transducer | Electret condenser |
| Response | 30 Hz to $18 \mathrm{kHz}, \pm 3.5 \mathrm{~dB}$ |
| Output | -54 dBm re 94 dB SPL ( 10 microbars) |
| Impedance | 200 ohms |
| Features | Accepts same capsules as CM- |
| 300, including the CP-2 omni capsule (\$15) included with the CM-300 |  |

## Models also available

CM-700, \$185; CM-300, \$135

## NEUMANN

Gotham Audio Corp.
741 Washington St.
New York, N.Y. 10014
KM-84

| Price | $\$ 340$ |
| :--- | :--- |
| Pattern | Cardioid |
| Transducer | Condenser |
| Response | 20 Hz to 20 kHz |
| Output | -38 dBM re $10 \mathrm{dyne} / \mathrm{cm}^{2}$ |
| Impedance | 200 ohms |

Features Flat off-axis response; phantompowered

## NUMARK

Numark Electronics Corp. 503 Raritan Center
Edison, N.J. 08817
UD-985
Price $\$ 110$
Pattern Unidirectional
Transducer Dynamic
Response 50 Hz to 16 kHz
Impedance 600 ohms
Features Balanced line cable; XLR connec-
tors to phone plug; -73 dB sensitivity at 1 kHz
UD-975
Price
Pattern
Transducer
Response Dynamic cardioid
Impedance 600 ohms
Features Balanced line cable; XLR connectors to phone plug; -73 dB sensitivity at 1 kHz ; voice and music selection switch

UC-935
Price
Pattern
Transducer
Response
Impedance
$\$ 59.95$
Unidirectional
Electret condenser
30 Hz to 16 kHz

TC-995
Price $\$ 39.95$
Transducer Electret condenser
Response 50 Hz to 16 kHz
Impedance 800 ohms
Features Tie-pin mic; unbalanced line cable; XLR connectors to phone plug; 66 dB sensitivity

## Models also available

UC-965, \$85; UC-945, \$79.95

## OLSON

Olson Electronics
260 S. Forge St.
Akron, Ohio 44327
MK-105
Price
Pattern
Transduce
Response
Output
ce 600 ohms
Features Ultra-miniature lavalier FET
preamp; $16^{\prime}$ cable with $1 / 4^{\prime \prime}$ phone plug

PML
Ercona Corp.
2492 Merrick Road
Bellmore, N.Y. 11710
ST-8
Price $\quad \$ 1,495$
Pattern Variable from omni, through cardioid, to figure-eight
Transducer Condenser
Response $\quad 30 \mathrm{~Hz}$ to 20 kHz
Imfedance 200 ohms
Features Stereo
DC-63
Price $\$ 740$
Pattern Variable: 44 distinct directional patterns
Transducer Condenser
Response 30 Hz to 20 kHz
Impedance 200 ohms balanced
Features Symsi-(phantom) powered with
easy operating switches
DC-20
Price
Pattern
Transducer
Response
Impedance
Features Symsi-(phantom) powered
$\$ 220$
Omnidirectional
Condenser
Condenser
30 Hz to 20 kHz

## Models also available

DC-73, \$299; DC-21, \$230

REALISTIC
Radio Shack
1400 Ohe Tandy Center
Ft. Worth, Tex. 76102

33-922
Price
$\$ 59.95$
Transducer Cardioid
Transducer Dynamic
Response 80 Hz to 15 kHz
Output $\quad-76 \mathrm{~dB}$ re 74 dB SPL (1V)
Impedance 200 ohms
Features Selectable for flat response from
clo:se or distant source

## 33-1059

Price
Pattern
Trensducer
Response
Output
Impedance
Features Selectable directivity pattern

| 33-919 Stereo |  |
| :---: | :---: |
| Price | \$34.95 |
| Pattern | Dual-pattern cardioid |
| Transducer | Electret |
| Response | 30 Hz to 15 kHz |
| Output | -72 dBm re 74 dB SPL (1V) |
| Impedance | 600 ohms |
| Features | Narrow/wide stereo selector |
| 33-992 |  |
| Price | \$29.95 |
| Pattern | Super cardioid |
| Transducer | Dynamic |
| Response | 80 Hz to 12 kHz |
| Output | -72 dBm (low 2), -53 dBm (high 2) re 74 dB SPL (1V) |
| Impedance | 600/50K ohms |
| Features | Dual impedance selection |

## Models also available

33-983, \$55.95; 33-1045, \$29.95; 33-985 Highball-2, \$19.95

| SANSUI |  |
| :---: | :---: |
| Sansui Electronics Corp. |  |
| 1250 Valley Brook Ave. |  |
| Lyndhurst, N.J. 07071 |  |
| DM-11 |  |
| Price | \$110 |
| Pattern | Cardioid |
| Transducer | Dynamic |
| Response | 100 Hz to 15 kHz |
| Output | -76 dBM |
| Impedance | 600 ohms |
| Features | Windscreen; balanced output with |
| 6 -meter cord |  |

## EM-1

Price
Pattern
Transducer Electret condenser
Response $\quad 50 \mathrm{~Hz}$ to 15 kHz
Output $\quad-71.5 \mathrm{dBM}$
Impedance 600 ohms
Features Balanced output with 6-meter cord and phone plug

SHURE
Shure Brothers, Inc.
222 Hartrey Ave.
Evanston, III. 60204
SM81

| Price | $\$ 225$ |
| :--- | :--- |
| Pattern | Cardioid |

Transducer Condenser
Response 20 Hz to 20 kHz
Output $\quad-40 \mathrm{dBm}$ re 94 dB SPL Impedance 150 ohms
Features Simplex-(phantom) powered over $12-48 \mathrm{~V}, 10$-dB attenuator; low-frequency response switch; studio recording mic; requires external power supply

SM53

| Price | $\$ 223.80$ |
| :--- | :--- |
| Pattern | Cardioid |
| Transducer | Dynamic |
| Response | 70 Hz to 16 kHz |
| Output | -60 dBm re 94 dB SPL |
| Impedance | 150 ohms |
| Features | Low-end rolloff switch; highly ef- |
| fective shock-mount; hum rejection system; mini- |  | fective shock-mount, hum rejection system; minimal proximity effect

## SM59

| Price | $\$ 144$ |
| :--- | :--- |
| Pattern | Cardioid |
| Transducer | Dynamic |
| Response | 50 Hz to 15 kHz |

Output $\quad-61 \mathrm{dBm}$ re 94 dB SPL Impedance 150 ohms
Features Mechano-pneumatic shock-mount; wide-range smooth frequency response; professional broadcast and recording mic

## SM58

Price $\quad \$ 138$

Pattern Cardioid
Transducer Dynamic
Response 50 Hz to 15 kHz
Output $\quad-57 \mathrm{dBm}$ re 94 dB SPL
Impedance $\quad 38 / 150$ ohms
Features Built-in spherical windscreen; hand-held vocal mic; optimized presence peak and proximity effect

## SM61

Price $\quad \$ 96.6$
Pattern Onmidirectional
Transducer Dynamic
Response $\quad 50 \mathrm{~Hz}$ to 14 kHz
Output $\quad-61 \mathrm{dBm}$ re 94 dB SPL
Impedance 150 ohms
Features Built-in shock-mount; built-in pop/-
wind filter; popular hand-held broadcast mic

## 516EQ

Price $\quad \$ 91.80$
Pattern Cardioid
Transducer Dynamic
Response $\quad 50 \mathrm{~Hz}$ to 15 kHz
Output $\quad-59 \mathrm{dBm}$ re 94 dB SPL
Impedance 150 ohms
Features Taping mic with switchable equalizers at $190 \mathrm{~Hz}, 560 \mathrm{~Hz}, 1.65 \mathrm{kHz}$ and 4.9 kHz ; available matched pair for stereo (516EQ-PR) $\$ 165$

## Models also available

SM76, \$175.80; SM57, \$108;
SM17, $\$ 69.60$

## SONY <br> Sony Industries <br> 9 West 57th St. <br> New York, N.Y. 10016

## PROFESSIONAL SERIES

## C-76

$\begin{array}{ll}\text { Price } & \$ 750 \\ \text { Pattern } & \text { Super-unidirectional }\end{array}$
Transducer Electret condenser
Response $\quad 40 \mathrm{~Hz}$ to 16 kHz
Output $\quad 38 \mathrm{~dB}(12.6 \mathrm{mV})$ re 94 dB SPL
Impedance 250 ohms
Features Gun type; windscreen; low-cut switch; AE/DC operation; LED low-power indicator (for DC battery operation)

C-38B
Price
Pattern
Transducer
Response
Output
Impedance
$\$ 505$
Switchable unidirectional/ omnidirectional

Features Uses internal battery or phantom power; өqualizer (M, M1, V1, V2) switch; high-cut switch; pad switch; FET circuit; windscreen; shockmounting; carrying case

## ECM-53FP

Price $\$ 285$
Pattern Cardioid
Transducer Back electret condenser
Response $\quad 40 \mathrm{~Hz}$ to 15 kHz
Output $\quad 50 \mathrm{~dB}(2 \mathrm{mV})$ re 94 dB SPL
Impedance 250 ohms

Features Flexible mount for desk or podium; windscreen; carrying case; stand adapter; up to 4,600 hours continuous battery life

ECM-56F
Price $\$ 245$
Pattern Cardioid
Transducer Back electret condenser
Response 20 Hz to 16 kHz
Output $\quad-54 \mathrm{dBm}$ re 94 dB SPL
Impedance 250 ohms
Features Use 3 phantom power ( 48 V DC) or batteries (9V); studio quality vocal and instrumental mic; stand or room mounting; 8 dB pad and bass rolloff switch; XLR connector; balanced output

ECM-64P
Price \$235
Pattern Omnidirectional
Transducer Electret condenser
Response 40 Hz to 20 kHz
Output $\quad 54 \mathrm{~dB}(1.6 \mathrm{mV})$ re 94 dB SPL
Impedance 250 ohms
Features Rubber grommet eliminates touch noises; double windscreen; phantom power or battery operation; battery-saver switch shuts mic off when connector is unplugged; carrying case; mic holder; mic cable

## ECM-33F

## Price \$185

Transducer Back electret condenser
Response 20 Hz to 20 kHz
Output $\quad-54 \mathrm{dBm}$ re 94 dB SPL
Impedance 250 ohms
Features Battery (9V) or phantom power ( 48 V DC ) operation; bass rolloff switch; 18 dB pad switch; studio quality instrumental and free-field mic; XLR connector; balanced output

ECM-30
Price
Pattern
Transducer
Response
Output
Features Uitra-miniature design is inconspicuous in use; up to 3,100 hours continuous use on one battery; balanced output; carrying case; windscreen; tie clip

## SEMI PRO/CONSUMER SERIES

ECM-990F
Price $\quad \$ 150$
Pattern Two unidirectional elements (sin-gle-point stereo)
Transducer Back electret condenser
Response $\quad 40 \mathrm{~Hz}$ to 16 kHz
Output $\quad-57 \mathrm{dBm}$ re 94 dB SPL
Impedance 200 ohms
Features Stereo performance with one mic; directivity adjustable from 90 to 180 degrees; 1.5 V AA battery operation; bass rolloff switch; $1 / 4^{\text {" }}$ phone plug; unbalanced output

## F-560

Price $\$ 90$
Pattern Unidirectional
Transducer Dynamic
Response 80 Hz to 13 kHz
Output $\quad-58 \mathrm{~dB}(1.2 \mathrm{mV})$ re 94 dB SPL
Impedance 200 ohms
Features Low-cut switch; vibration-free
structure; mic holder

## ECM-150M

| Price | $\$ 65$ |
| :--- | :--- |
| Pattern | Omnidirectional |
| Transducer | Electret condenser |
| Response | 40 Hz to 13 kHz |

 screen


## ECM-210S

Pattern Unidirectional
Transducer Electret condenser
Response 50 Hz to 12 kHz
Output $\quad 56 \mathrm{~dB}(1.6 \mathrm{mV})$ re 94 dB SPL Impedance 200 ohms
Features Dual-pin plug for tape recorders that have remote start/stop capability; start/stop switch on mic body; up to 10,000 hours of continuous operation on AA power supply; mic desk stand

## ECM-210M <br> 

$\begin{array}{ll}\text { Pattern } & \text { Unidirectional } \\ \text { Transducer } & \text { Electret condenser }\end{array}$
Response 50 Hz to 12 kHz
Output $\quad 56 \mathrm{~dB}(1.6 \mathrm{mV})$ re 94 SPL Impedance 200 ohms
Features Mini-plug to fit most portable tape recorders; up to 10,000 hours of contlnuous operation on AA power supply; mic desk stand

## F-99M

| Price | $\$ 30$ |
| :--- | :--- |
| Pattern | Two unidirectional elements (sin- |
|  | gle-point stereo) |
| Transducer | Dynamic |
| Response | 80 Hz to 12 kHz |
| Output | $61 \mathrm{~dB}(0.9 \mathrm{mV}$ ) re 94 dB SPL |
| Impedance | 200 ohms |
| Features | Stereo recording with a single mic, |
| mini-plug connector; mic stand |  |

## F-500S

## Price <br> Pattern

$\$ 24$

Response 80 Hz to 12 kHz
Output $\quad 58 \mathrm{~dB}(1.2 \mathrm{mV})$ re 94 dB SPL
Impedance 320 ohms
Features Dual plugs for connection to recorder with start/stop capability; start/stop switch on mic body; mic holder

## F-500

| Price | $\$ 22$ |
| :--- | :--- |
| Pattern | Unidirectional |
| Transducer | Dynamic |

Response
Output
Impedance
Features Mini-plug connections; mic holder

## Models also available

C-74, \$635; C-37P, \$455; F-660, \$250; ECM-65F, \$235; ECM-50PS
\$225; F-115, \$160; ECM-41, \$95; ECM-23F, \$100; ECN-170AM, \$75; ECM-260F, \$63; ECM-99A, \$60; ECM-16, \$38; F-510, \$28

## SUPERSCOPE BY MARANTZ

Superscope, Inc.
20525 Nordhoff St.
Chatsworth, Calif. 91311

EC-9P
Price $\$ 100$
Pattern Cardioid
Transducer Electret condenser
Response $\quad 30 \mathrm{~Hz}$ to 17 kHz
Output $\quad-62 \mathrm{dBM}$ re 94 dB SPL
Impedance 250 ohms
Features Professional mic; standard cannon
output; low-cut filter; 10 dB pad; optional power operation

## EC-33S

## Price $\$ 60$

Pattern Uni- and bidirectional
Transducer Electret condenser
Response 50 Hz to 15 kHz
Output $\quad-52 \mathrm{dBM}$ 厚 94 dB SPL
Impedance 1 K ohms
Features Patented pull-apart design allows
use as a one-point stereo mic or 2 separate monaural mics; remote stop/start switch

EC-7

| Price | $\$ 56$ |
| :--- | :--- |
| Pattern | Cardioid |
| Transducer | Electret condenser |
| Response | 40 Hz to 16 kHz |
| Output | -58 dBm re 94 dB SPL |
| Impedance | 250 ohms |
| Features | Low-cut filter; on/off, switch; floor- |
| stand adapter |  |
|  |  |
| EC-12B |  |
| Price $\$ 50$ <br> Pattern Omnidirectional <br> Transducer Electret condenser <br> Response 100 Hz to 15 kHz <br> Output -58 dBM re 94 dB SPL <br> Impedance 250 ohms <br> Features Miniature mic; telescopic rod; tie <br> cllp; floor-stand adapter  |  |

EC-3S

| Price | $\$ 28$ |
| :--- | :--- |
| Pattern | Cardioid |
| Transducer | Eleciret condenser |
| Response | 50 Hz to 15 kHz |
| Output | -58 dBM re 94 dB SPL |
| Impedance | 1.5 K ohms |
| Features | Remote stop/start switch; desk |

EC-1
Price $\quad \$ 16$
Pattern Omnidirectional
Transducer Electret condenser
Features Desk stand

## Models also available

EC-15P, \$80; EC-5, \$38; EC-3, \$24

## TECHNICS

Panasonic Co.
One Panasonic Way
Secaucus, N.J. 07094

RP-3540E
Frice $\$ 70$
Pattern Cardiold
Transducer Electret-condenser
Response $\quad 40 \mathrm{~Hz}$ to 14 kHz
Impedance 600 ohms
Features Stand; mic holder; $3 / 8^{" 7}$ adapter;
windscreen; good in vocal appllcations

RP-3500E
Price $\$ 60$
Pattern Cardioid
Transducer Electret-condenser
Response 50 Hz to 12 kHz
Impedance 600 ohms
Features Stand; mic holder; $3 / 8^{\prime \prime}$ adapter;
windscreen; good in close-up miking

RP-3210E
Price $\quad \$ 60$
Pattern Stereo cardiold
Transducer Electret-condenser
Response 50 Hz to 12 kHz
Impedance 600 ohms
Features Stand; mic holder; 3/8" adapter; 160
degrees stereo separation

RP-3330
Price $\$ 30$
Pattern Cardioid
Transducer Dynamic
Response 50 Hz to 12 kHz
Impedance 400 ohms
Features Stand; mic holder; $3 / 8^{n}$ adapter;
windscreers; instrumental, general-purpose use

TURNER
Turner Div.
Conrac Corp.
716 Oakland Rd., N.E..
Cedar Rapids, Iowa 52402

SE-13

| SE-13 |  |
| :--- | :--- |
| Price | $\$ 90$ |
| Pattern | Cardioid |
| Transducer | Dynamic |
| Response | 50 Hz to 15 kHz |
| Output | -77 dBm |
| Impedance | 150 ohms |
| Feadures | Ball screen |

SE-11

| Price | $\$ 90$ |
| :--- | :--- |
| Patiern | Cardioid |
| Transducell | Dynamic |
| Response | 50 Hz to 15 kHz |
| Output | -77 dBm |
| Impedance | 150 ohms |

2760
Price $\$ 47$
Pattern Omnidirectional
Transducer Dynamic
Response $\quad 50 \mathrm{~Hz}$ to 15 kHz
Output $\quad-56 \mathrm{dBm}$
Impedance 150 ohms

# Car Stereo Systems 

|  |
| :---: |
| Radio/Tape Players |
| \& Tape Players |

ALTUS
Altus Corp.
6 Main St.
Melrose, Mass. 02176

CLA-3740 Radio/Tape Player
$\begin{array}{ll}\text { Price } & \$ 410.95 \\ \text { Dimensions } & 24 / 5 \mathrm{H} \times 7 \text { 1/10W } \times 6 \mathrm{D}\end{array}$
Mounting in dash
Format Cassette
Auto reverse $Y$ es
Fast-forward Yes
Rewind Yes
Controls Bass; Treble
R/P resp. $\quad 30 \mathrm{~Hz}$ to $12 \mathrm{kHz}, 45 \mathrm{~dB}$ (w/o NR)
Output $\quad 15$ watts ( 11.75 dBW ) per channel continuous into 8 ohms from 30 Hz to 20 kHz
RADIO
Format Stereo
Loc/Dst sw. Yes
AFC No
St/Mono sw. Yes
Dig. readout Yes
Pushbuttons 5 AM or 5 FM
Features FM muting; digital clock; front-

PBH-2385 Radio/Tape Player
Price $\$ 258.95$
Dimensions $23 / 4 \mathrm{H} \times 71 / 5 \mathrm{~W} \times 61 / 2 \mathrm{D}$
Mounting In dash
Format 8-Track
Fast-forward Yes
Controls Bass; treble

| R/P resp. | 30 Hz to 12 kHz |
| :--- | :--- |
| S/N | $50 \mathrm{~dB}($ w/o NR) |
| Output | 15 watts (11.75 dBW) per channel |
|  | continuous into 8 ohms from 30 Hz |

RADIO to 20 kHz
Format Stereo
Loc/Dst sw. Yes
AFC No
St/Mono sw. No
Dig. readout No
Pushbuttons 5 AM or 5 FM
Features Bass boost; repeat; front/back fader; tape eject switch

CXR-2376 Radio/Tape Player
Price $\$ 249.95$
Dimensions $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 53 / 20 \mathrm{D}$

| Mounting | In dash |
| :--- | :--- |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes |
| Rewind | Yes |
| R/P resp. | 30 Hz to 10 kHz |
| S/N | $55 \mathrm{~dB}(w / 0 \mathrm{NR})$ |
| Output | 5 watts $(7 \mathrm{dBW})$ per channel con- |
|  | tinuous into4 ohms from 30 Hz to |
|  | 15 kHz |
| RADIO |  |
| Format | Stereo |
| Loc/Dst sw. | Yes |
| AFC | No |
| St/Mono sw. | No |
| Dig. readout | No |
| Features | DIN standard nosepiece |

## Models also available

ELR-3742 Radio/Tape Player, \$383.95; CTH-2392 Radio/Tape Player, $\$ 312.95$
B.I.C.
B.I.C./Avnet

South Service Road
Westbury, N.Y. 11590


| Dimensions | $25 / 8 \mathrm{H} \times 61 / 2 \mathrm{~W} \times 8 \mathrm{D}$ |
| :--- | :--- |
| Mounting | Under dash |
| Format | Cassette |

Auto reverse No
Fast-forward Yes
Rewind Yes
Controls Bass; treble
Noise red. Dolby
R/P resp. $\quad 35 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ at $17 / \mathrm{m} ; 20$ Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ at $33 / 4$ (playback only)
$\mathrm{S} / \mathrm{N} \quad 58 \mathrm{~dB}(w / N R) / 58 \mathrm{~dB}$ (w/o NR)
THD $\quad 1.1 \%$ (1 watt at 1 kHz )
Output $\quad 12$ watts ( 10.75 dBW ) per channel continuous into 4 ohms from 50 Hz to 16 kHz with no more than $1 \%$ THD
RADIO
Features $\quad$ Two speeds ( $17 / 8 \mathrm{ips}, 33 / 4 \mathrm{ips}$ )

## BLAUPUNKT

Robert Bosch Corp.
2800 S. 25th Ave.
Broadview, Ill. 60153
Berlin Electronic Radio/Tape Player
$\begin{array}{ll}\text { Price } & \$ 1,239.60 \\ \text { Dimensions } \\ 17, \mathrm{H} \times 6^{3}\end{array}$
Dimensions $11 / 8 \mathrm{H} \times 63 / 4 \mathrm{~W} \times 63 / 6 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind Yes
THD $\quad 1.1 \%$
THD ref. IvI. IW

| Output | 5 watts ( 7 dBW ) per channel continuous into 4 ohms |
| :---: | :---: |
| RADIO |  |
| Format | Stereo |
| Loc/Dst sw. | No |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | No |
| Pushbuttons | 2 AM or 3 FM |
| Features | AM/FM/LW/SW radio |
| CR-2001 | Radio/Tape Player |
| Price | \$350.90 |
| Dimensions | $2 \mathrm{H} \times 71 / 16 \mathrm{~W} \times 51 / 8 \mathrm{D}$ |
| Mounting | in dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes |
| Rewind | Yes |
| Nolse red. | Doiby |
| S/N | . 53 dB (w/o NR) |
| S/N ref. lvi. | $1 \mathrm{kHz}, 0 \mathrm{~dB}$ |
| THD | 1\% |
| THD ref. IvI. | $1 \mathrm{kHz}, 10 \mathrm{~dB}$ |
| Output | 7.5 watts ( 8.75 dBW ) per channel continuous into 4 ohms from 35 Hz to 14 kHz with no more than $1 \%$ THD |
| RADIO |  |
| Format | Stereo |
| FM sens. | 0.09 microvolts for 50 dB quieting |
| Selectivity | 6 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | No |
| Pushbuttons | 5 AM or 5 FM |
| Essen-CRUS Radio/Tape |  |
| Player |  |
| Price | \$277 |
| Dimensions | $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 51 / 4 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | No |
| Fast-forward | Yes |
| Rewind | Yes |
| S/N | 30 dB (w/o NR) |
| S/N ref. Ivi. | $1 \mu \mathrm{~V}$ |
| THD | 2\% |
| THD ref. Ivi. | 1W |
| Output | 9 Watts ( 9.5 dBW ) per channel continuous into 4 ohms with no more than $2 \%$ THD |
| RADIO |  |
| Format | Stereo |
| Loc/Dst sw. | No |
| AFC | Yes |
| St/Mono sw. | Yes |
|  | No |
| CR-8000 | Radio/Tape Player |
| Price | \$192.40 |
| Dimensions | $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 53 / 16 \mathrm{D}$ |
| Mounting | In dash |
| Format | 8-track |
| Auto reverse | No |
| Fast-forward | No |
| Rewind | No |
| S/N | 50 dB (w/o NR) |
| S/N ref. Ivi. | $1 \mathrm{kHz}, 0 \mathrm{~dB}$ |



Altus CLA-3740


Concord MP-350

## $1 \%$

THD 1
THD ref. ivi. $1 \mathrm{kHz}, 10 \mathrm{~dB}$
Output $\quad 7.5$ watts ( 8.75 dBW ) per channel continuous into 4 ohms from 35 Hz to 14 kHz with no more than $1 \%$ THD
RADIO
$\begin{array}{ll}\text { Format } & \text { Stereo } \\ \text { FM sens. } & 0.09 \text { microvolts for } 50 \mathrm{~dB} \text { quieting }\end{array}$
Selectivity 6 dB
Loc/Dst sw. Yes
AFC Yes
St/Mono sw. No
Dig. readout No
Features Adjustable shafts; program select

## Models also available

CR-2000D Radio/Tape Player, $\$ 303.40$; CR-4095 Radio/Tape Player, $\$ 293.60$; CR-2000 Radio/Tape Player, \$275.10

## BOMAN

Boman Industries
9300 Hall Road
Downey, Calif. 90241

| Mach 90 | Radio/Tape Player |
| :--- | :--- |
| Price | $\$ 499.95$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse Yes |  |
| Fast-forward | Yes |
| Rewind | Yes |
| RADIO |  |
| Format | FM Stereo |
| Loc/Dst sw. Yes |  |
| Features | Includes graphic equalizer and digi- |

tal clock; frequency scan/seek control

| Mach 50 | Radio/Tape Player |
| :--- | :--- |
| Price | $\$ 319.95$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse Yes |  |
| Fast-forward | Yes |
| Rewind | Yes |
| Noise red. | Dolby |
| Output | 30 watts (14.75 dBW) per channel |
| RADIO |  |
| Loc/Dst sw. Yes |  |
| AFC | Yes |
| Features | FM electronic interference noise |
| suppressor; front-to-rear fader |  |

SS-1490 Radio/Tape Player

## Price

Mounting
In dash
Fast-forward Yes
RADIO
Format Stereo
Loc/Dst sw. Yes


Features Same as Model SS-1280


| SS-1457 | Radio/Tape Player |
| :--- | :--- |
| Price | $\$ 199.95$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse |  |
| Fast-forward | Yes |
| RADDO |  |
| Format | Stereo |
| Loc/Dst sw. | Yes |
| Features | Front-to-rear fader |


| SS-1260 | Radio/Tape Player |
| :--- | :--- |
| Price | $\$ 199.95$ |
| Mounting | In dash |
| Format | 8 -track |
| RADIO |  |
| Format | Stereo |
| Loc/Dst sw. | Yes |
| St/Mono sw. | Yes |
| Features | Front-to-rear fader |


| SS-1450 | Radio/Tape Player <br> Price |
| :--- | :--- |
| \$139.95 |  |

## AP-16 Tape Player

Price
$\$ 39.95$
$\begin{array}{ll}\text { Mounting } & \text { Under dash } \\ \text { Format } & 8 \text {-track } \\ \text { Features } & \text { High/low tone control; separate }\end{array}$ slide volume controls for left/right speakers


Fultron 16.6800

## Models also available

Mach 80 Radio/Tape Player, \$469.95; Mach 40 Radio/Tape Player, \$259.95; SS-1470 Radio/Tape Player, \$199.95; SS-1240 Radio/Tape Player, \$139.95; SS1430 Radio/Tape Player, \$99.95; SS-1220 Radio/Tape Player, $\$ 99.95$

## CLARION

Clarion Corp. of America
5500 Rosecrans Ave.
Lawndale, Calif. 90260
PE-956B Radio/ Tape Player

## Price $\$ 460$

Dimensions $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 53 / 4 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse Yes
Fastforward Yes
Rewind Yes
Noise red. No
R/P resp. $\quad 60 \mathrm{~Hz}$ to $10 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 40 \mathrm{~dB}$ (w/o NR)
Output 4 watts ( 6 dBW ) per channel continuous into 4 ohms from 60 Hz to 10 kHz with no more than $10 \%$ THD; 6 watts per channel peak
RADIO
Format Stereo
FM sens. $\quad 1.5$ microvolts for 50 dB quieting
Selectivity $\quad-70 \mathrm{~dB}$
Loc/Dst sw. Yes
AFC Yes
St/Mono sw. Yes
Dig. readout Yes
Pushbuttons $2 \mathrm{AM} / 4 \mathrm{FM}$
Features DIN nosepiece; digital clock; seek tuning; loudness switch; memory switch; voltage synthesizer tuning; remote amp

PE-751B Radio/Tape Player
Price $\quad \$ 376.95$
Dimensions $2 \mathrm{H} \times 7 \mathrm{~W} \times 61 / 4 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse $Y$ es
Fast-iorward Yes
Rewind Yes
Controls Bass; treble
Noise red. Dolby
R/P resp. $\quad 40 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (w/o NR)
$\mathrm{S} / \mathrm{N} \quad 50 \mathrm{~dB} / 58 \mathrm{~dB}(\mathrm{w} / \mathrm{NR})$
Output $\quad 12$ watts ( 10.75 dBW ) per channel continuous into 4 or 8 ohms from 40 Hz to 15 kHz with no more than $1 \%$ THD; 20 watts per channel peak
RADIO
Format Stereo
FM sens. $\quad 1.5$ microvolts for 50 dB quieting

| Selectivity | 80 dB | S/N | 40 dB ( $\mathrm{w} / \mathrm{NR}$ ) | Dimensions | $2 \mathrm{H} \times 7 \mathrm{~W} \times 61 / 4 \mathrm{D}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Loc/Dst sw. | Yes | THD | 10\% | Mounting | In dash |
| AFC | Yes | Output | 12 watts ( 10.75 dBW ) per channel | Format | 8-track |
| St/Mono sw. | No |  | continuous into 4 ohms | Auto reverse | Yes |
| Dig. readout | No | RADIO |  | Fast-forward | Yes |
| Pushbutions | Yes | Format | Stereo | Rewind | No |
| Features | Wow and flutter $0.13 \%$ (WRMS); | FM sens. | 1.9 microvolts for 50 dB quieting | R/P resp. | $100 \mathrm{~Hz} \text { to } 6 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
|  |  | Loc/Dst sw. | Yes | THD | $10 \%$ |
| PE-684A | Radio/Tape Player | AFC | Yes | Output | 11 watts ( 10.5 dBW ) per channel continuous into 4 ohms |
| Price |  | St/Mono sw. | Yes |  |  |
| Dimensions | $2 \mathrm{H} \times 73 / 8 \mathrm{~W} \times 7 \mathrm{D}$ | Dig. readout | Yes | RADIO |  |
| Mounting | Under dash | Pushbuttons | 5 AM or 5 FM | Format | Stereo |
| Format | Cassette |  |  | FM sens. | 1.9 microvolts for 50 dB quieting |
| Auto reverse | Yes |  |  | Selectivity | 40 dB |
| Fast-forward | Yes | 107 GTL | Radio/Tape Player | Loc/Dst sw. | Yes |
| Rewind | Yes | Price | \$260 | AFC | No |
| Controls | Bass; treble | Dimensions | $235 / 64 \mathrm{H} \times 75 / 64 \mathrm{~W} \times 55 / 160$ | St/Mono sw. | No |
| Noise red. | Dolby | Mounting | in dash | Dig. readout | No |
| R/P resp. | 40 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ | Format | Cassette | Pushbuttons | None |
| S/N | 50 dB (w/o NR)/58 dB (w/NR) | Auto reverse | Yes | Features | Wow and flutter 1.0\% |
| Output | 10 watts ( 10 dBW ) per channel | Fast-forward | Yes | 94 GTL Radio/Tape Player |  |
|  | continuous into 4 or 8 ohms from | Rewind | Yes |  |  |  |
|  | 40 Hz to 15 kHz with on more than | Controls | Bass; treble | Price | \$99.95 |
|  | 8\% THD | THD | 10\% | Dimensions | $123 / 32 \mathrm{H} \times 6$ 19/64W $\times 4$ 19/32D |
| RADIO |  | Output | 14 watts ( 11.5 dBW ) per channel continuous into 4 ohms | Mounting | In dash |
| Format | Stereo |  |  | Format | 8 -track |
| FM sens. | 1.5 Microvolts for 50 dB quieting | RADIO | Stereo | Auto reverse | No |
| Selectivity | 80 dB | Format |  | Fast-forward | No |
| Loc/Dst sw. | Yes | FM sens. | 1.9 microvolts for 50 dB quieting | Rewind | No |
| AFC | Yes | Selectivity | 60 dB | S/N | 40 dB ( $\mathrm{w} / \mathrm{NR}$ ) |
| Features | Wow and flutter 0.12\% (WRMS) | Loc/Dst sw. | Yes | THD | 10\% |
|  |  | AFC | Yes | Output | continuous into 4 ohms |
| PE-838A Tape Player |  | St/Mono sw. Dig. readout | Yes | Out |  |
| Price | \$244 |  | 5 AM or 5 FM | RADIO |  |
| Dimensions | $2 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 61 / 2 \mathrm{D}$ | Pushbuttons |  | Format | Stereo |
| Mounting | Under dash |  |  | FM sens. | 1.9 microvolts for 50 dB quieting |
| Format | Cassette | 99 GTL Radio/Tape Player |  | Loc/Dst sw. | Yes |
| Auto reverse | Yes | Price | \$189.95 | AFC | No |
| Fast-forward | Yes | Price ${ }^{\text {Dimensions }}$ | $\$ 189.95$ $21 / 2 \mathrm{H} \times 1 / 8 \mathrm{~W} \times 61 / 4 \mathrm{D}$ | St/Mono sw. |  |
| Rewind | Yes | Mounting | In dash | Dig. readout | No |
| Controls | Bass; treble | Format | Cassette | Pushbuttons | None |
| R/P resp. | Doiby | Auto reverse | No | Models a | so available |
| R/P resp. S/N | 40 Hz to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ <br> 50 dB (without noise reduction)/58 | Fast-forward | Yes | Models a | 222 GTL Radio/Tape Player |
|  | dB (with noise reduction) | Rewind | No $100 \mathrm{~Hz}+106 \mathrm{kHz},+3 \mathrm{~dB}$ |  | \$279.95; 103 GTL Radio/Tape |
| Output | 10 watts ( 10 dBW ) per channel continuous into 4 or 8 ohms from | R/P resp. $S / N$ | 100 Hz to $6 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ 40 dB (w/o NR) |  | Player, \$219.95; 97 GTL Radio/- |
|  | continuous into 4 or 8 ohms from | S/N ref. Ivi. | 333 Hz |  |  |
|  | $\begin{aligned} & 40 \mathrm{~Hz} \text { to } 15 \mathrm{kHz} \text { with no more than } \\ & 8 \% \mathrm{TH} \end{aligned}$ | THD |  | CONCORD |  |
| Features | Wow and flutter 0.12\% (WRMS) | Output | 12 watts ( 10.75 dBw ) per channel continuous into 4 ohms | Westland | International |
| PE-453A | Tape Player | RADIO |  | 20121 Ve | ntura Blvd. |
| Price | \$160 | FM sens. | 1.9 microvolts for 50 dB quieting | Woodland | d Hills, Calif. 91364 |
| Dimensions | $2 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 61 / 2 \mathrm{D}$ | Selectivity | $40 \mathrm{~dB}$ |  |  |
| Mounting | Under dash | Loc/Dst sw. | Yes | HP-350 | adio/Tape Player |
| Format | 8-track | Pushbuttons | Yes | Price | \$349.95 |
| Controls | Bass; treble | Features | Wow and flutter 1.0\% | Dimensions | $25 / 6 \mathrm{H} \times 7 \mathrm{~W} \times 43 / 4 \mathrm{D}$ |
| R/P resp. | 40 Hz to $12 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ 50 dB (w/o NR) | Features | Wow and luter 1.0\% | Mounting | In dash |
|  | 50 dB (w/o NR) |  |  | Format | Cassette |
| Output | 10 watts ( 10 dBW ) per channel continuous into 4 or 8 ohms from | 98 GTL R | Radio/Tape Player | Auto reverse | No |
|  | 40 Hz to 12 kHz with no more than | Price | \$179.95 | Fast-forward | Yes (locking) |
|  | 40 Hz to 12 kHz with no more than 8\% THD | Dimensions | $21 / 2 \mathrm{H} \times 7 \mathrm{~W} \times 61 / 4 \mathrm{D}$ | Rewind | Yes (locking) |
| Features | Wow and flutter 0.1\% (WRMS) | Mounting | In dash | Controls | Bass; treble |
| Features | Wow and | Format | 8 -track | Noise red. | Dolby |
| Models also available |  | Auto reverse | e No | R/P resp. | 40 Hz to $15 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ (with stan- |
|  | PE-958 A Radio/Preamp/Tape | Rewlnd | No | S/N | 48 dB (w/o NR)/54 dB (w/NR) |
|  | Player, \$308; PE-550A Radio/- | R/P resp. | 100 Hz to $8 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ | THD | 0.3\% |
|  | Tape Player, \$280; PE-554A Ra- | S/N | 40 dB ( $\mathrm{w} / 0 \mathrm{NR}$ ) ${ }^{\text {d }}$ | THD ref. Ivi. | 20W per channel |
|  | dio Tape Player, \$160 | THD | 10\% | Output | 20 watts ( 13 dBW ) per channel |
| COBRA |  | Output | 11 watts ( 10.5 dBw ) per channel continuous into 4 ohms |  | continuous into 4 ohms from 20 Hz to 20 kHz with no more than $0.3 \%$ |
| Dynascan Corp. |  | RADIO |  | RADIO | THD |
| 6460 West |  | Format | Stereo |  |  |
|  |  | 1.9 microvolts for 50 dB quieting | Format | Stereo |  |
| Chicago, III. 60635 |  |  | FM sens.SelectivityLoc/Dst sw. | 40 dB | FM sens. | 1 microvolt for 30 dB quieting |
|  |  | Yes |  | Selectivity | 55 dB |
| 221 GTL Radio/Tape Player |  | Loc/Dst sw. | No | Loc/Dst sw. | Yes |
| Price | \$289.95 | St/Mono sw. | No | AFC | Yes |
| Dimensions | $23 / 4 \mathrm{H} \times 71 / 4 \mathrm{~W} \times 51 / 4 \mathrm{D}$ | Dig. readout | No | St/Mono sw. | No |
| Mounting | In dash | Pushbuttons | Yes | Features | Wow and flutter 0.08\% |
| Format | Cassette | Features | Wow and flutter 1.0\% | HPL-110 Radio/Tape Player <br> Dimensions $25 / 8 \mathrm{H} \times 6 \mathrm{~W} 7 \mathrm{~W} 43 / 4 \mathrm{D}$ <br> Mounting <br> In dash |  |
| Auto reverse | e Yes |  |  |  |  |  |
| Fast-forward |  |  |  |  |  |  |
| Rewind | Yes | 95 GTL P | Radio/Tape Player |  |  |  |
| Controls | Bass; treble | Price | \$139.95 |  |  |  |


| Format | Cassette |
| :--- | :--- |
| Auto reverse | No |
| Fast-forward | Yes (locking) |
| Rewind | Yes (locking) |
| Controls | Bass; treble |
| Nolse red. | Dolby |
| R/P resp. | 40 Hz to $15 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ (with stan- |
|  | dard tape) |
| S/N | $48 \mathrm{~dB} \mathrm{(w/o} \mathrm{NR)/54} \mathrm{~dB} \mathrm{(w/NR)}$ |
| S/N ref. IvI. | 0 dB |
| THD | $0.8 \%$ |
| THD ref. Ivl. | 5 W |
| Output | 5 watts (7 dBW) per channel con- |
|  | tinuous into 4 ohms from 40 Hz to |
|  | 20 kHz with no more than $0.8 \%$ |
|  | THD |

Radio
$\begin{array}{ll}\text { Format } & \text { Stereo } \\ \text { FM sens. } & 1.35 \text { microvolts for } 50 \mathrm{~dB} \text { quieting }\end{array}$
Selectivity $\quad 35$ microvolts for 55 dB quieting
Loc/Dst sw. Yes
AFC Yes
St/Mono sw. No
Features Wow and flutter $0.08 \%$; separate bass and treble boost/cut tone controls; line output jacks; Sendust alloy tape head; FET front end; phase-locked loop multiplex circuitry; auto reject and shutoff

## Models also available

HPL-505 Radio/Tape Player, \$329.95; HPL-200 Radio/Tape Player, \$279.95

## ELF ENTERPRISES

ELF Enterprises, Inc.
8300 N.E. Underground Drive
Kansas City, Mo. 64161

| FB-1190 | Custom G.M. |
| :--- | :--- |
| Radio/Tape Player |  |
| Price | $\$ 250$ |
| Dimensions | $23 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$ |
| Mounting | In dash |
| Format | 8 -track |
| Controls | Bass; treble; midrange |
| Output | 12 watts (10.75 dBW) per channel |
| RADIO |  |
| Format | Stereo |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| Pushbuttons | Yes |
| Features | Four-way speaker fade controls |


| 750A | Radio/Tape Player |
| :--- | :--- |
| Price | $\$ 250$ |
| Dimensions | $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Bass; treble; midrange |
| Output 10 <br> RADIO  <br> Formats (10 dBW) per channel  <br> Pushbuttons Stereo <br> Features Adjustable shafts |  |
|  |  |


| EL-1000 | Radio/Tape Player |
| :--- | :--- |
| Price | $\$ 100$ |
| Dimensions | $13 / 4 \mathrm{H} \times 61 / 2 \mathrm{~W} \times 43 / 4 \mathrm{D}$ |
| Mounting | In dash |
| Format | 8 -track |
| Controls | Bass; treble; midrange |
| Output | 6 watts $(7.75$ dBW) per channel |
| RADIO |  |
| Format | Stereo |
| Loc/Dst sw. | Yes |
| AFC | Yes |

## Models also available

FB-1 180 Custóm Ford Radio/Tape Player, \$250; CUS-35 G\&F Custom G.M. \& Ford Radio/Tape Player, \$250

## FULTRON

Arthur Fulmer
260 Monroe
Memphis, Tenn. 38101

| 16-6800 | Radio/Tape Player <br> Price |
| :--- | :--- |
| $\$ 500$ |  |
| Dimensions | $23 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 57 / 8 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Bass |
| Noise red. | Yes |
| Output | 14 watts ( 11.5 dBW ) per channel |
|  | continuous into 4 ohms with no |
|  | more than $10 \%$ THD |
| RadIO |  |
| Format | Stereo |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | Yes |
| Pushbuttons | 7 AM/7 FM |
| Features | Wow and flutter $1.0 \%$ (at watts or |
| watts-10. dBW-per channel) no control knobs; |  |
| touch-sensitive electronic controls |  |


| 16-6500 P | Radio/Tape Player |
| :---: | :---: |
| Price | \$229.95 |
| Dimensions | $23 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$ |
| Mounting | In dash |
| Format | 8-track |
| Controls | Balance; fader |
| Output | 5 watts (7 dBW) per channel with no more than $10 \%$ THD |
| RADIO |  |
| Format | Stereo |
| Pushbuttons | 5 AM/5 FM |
| 16-5100 Radio/Tape Player |  |
| Price | \$180 |
| Dimensions | $11 / 8 \mathrm{H} \times 63 / 4 \mathrm{~W} \times 43 / 4 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | Yes (locking) |
| Fast-forward | Yes (locking) |
| Controls | Bass; treble; midrange; balance; fader |
| Output | 5 watts ( 7 dBW ) per channel with no more than $10 \%$ THD |
| RADIO |  |
| FM sens. | 1.5 microvolts for 50 dB quieting |
| Selectivity | 60 dB |
| Features | FM mute |

Models also available
16-6600 Radio/Tape Player, \$270; 16-5400 Radio/Tape Player, \$140 16-5000 Radio/Tape Player. \$109.95; 16-5300 Radio/Tape Player, \$99.95

## GRUNDIG

LAS Electronics East, Inc.
85C Saratoga Blvd.
Island Park, N.Y. 11558
GCV-2700 A/B Radio/Tape
Player
Price 399
Format Cassette
Auto reverse Yes
Fast-forward Yes
Controls Tone; balance; fader
Output 20 watts (13 dBW) per channel

Format Stereo
Loc/Dst sw. Yes
St/Mono sw. Yes
Pushbuttons Optional
Features Electronic search/scan; multiplex

## GCM-8200 Radio/Tape <br> Player/Equalizer <br> Price <br> \$279

Dimensions $2 \mathrm{H} \times 7 \mathrm{~W} \times 53 / 10 \mathrm{D}$
Format Cassette
Auta reverse $Y$ es
R/P resp. $\quad 40 \mathrm{~Hz}$ to $13 \mathrm{kHz},-6 \mathrm{~dB}$
S/N $\quad 50 \mathrm{~dB}$
Output $\quad 7$ watts ( 8.5 dBW ) per channel
RADIO
Loc/Dst sw. Yes
Features Motorglide cassette injection system; 3-band EQ, $\pm 10 \mathrm{~dB}$; fader control; auto eject: LED tuning indicator; MPX

## GCM-8100 Radio/Tape Player

Price $\$ 239$
Dimensions $17 / 10 \mathrm{H} \times 7 \mathrm{~W} \times 5 \mathrm{D}$
Format Cassette
Auto reverse Yes
Controls Fader
R/P resp. $\quad 40 \mathrm{~Hz}$ to $13 \mathrm{kHz},-6 \mathrm{~dB}$
S/N 50 dB
Output $\quad 7$ watts ( 8.5 dBW ) per channel
RADIO
Loc/Dst sw. Yes
Features Motorglide cassette injection system; high/low boost; MPX; FM muting; adjustable srafts; auto eject

## Models also available

WKC-2035US Radio/Tape Player, \$316; GCM-4700A/B Radio/Tape Player, \$219; GCM-4600 Radio/Tape Player, \$179; GEM-5000 Radio/Tape Player, \$139

## HANDIC

Handic U.S.A., Inc.
15945 N.W. 57th Ave.
Hialeah, Fla. 33014
Monte Carlo Radio/Tape
Player
Price $\$ 550$
Dimensions $\quad 23 / 4 \mathrm{H} \times 6 \mathrm{~W} \times 71 / 6 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse Yes
Fast-forward Yes
Rewind Yes
Controls Bass; treble
Noise red. Yes
Output $\quad 12$ watts ( 10.75 dBW ) per channel continuous into 4 ohms from 70 Hz to 20 kHz with no more than $10 \%$ THD
RADIO
Format Stereo
FM sens. $\quad 3$ microvolts for 50 dB quieting
Selectivity 70 dB
Loc/Dst sw. Yes
AFC Yes
St/Mono sw. Yes
Dig. readout Yes
Pushbuttons Yes
Features Digital LED frequency readout: preset stations with memory recall; last-station sensory for all levels of volume, balance, and tone control; independent 4-channel audio stages for balance and fader controls; 2-4 speaker system switch; pre/main amp; amp bypass; dimmer switch for frequency readout; "fingertip-pressure" button control

## Napali Radio/Tape Player <br> Price $\$ 379$ <br> Dimensions $15 / 6 \mathrm{H} \times 67 / 8 \mathrm{~W} \times 51 / 2 \mathrm{D}$ <br> Mounting In dash

| rmat | Casse |
| :---: | :---: |
| Auto revers | No |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Bass; treble |
| Noise red. | Built-in |
| R/P resp. | 50 Hz to $10 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 48 dB ( $\mathrm{w} / 0 \mathrm{NR}$ ) |
| Output | 6 watts ( 7.8 dBW ) per channel continuous into 4 ohms from 50 Hz to 10 kHz with no more than $10 \%$ THD |
| RADIO |  |
| Format | Stereo |
| FM sens. | 2 microvolts for 50 dB quieting |
| Selectivity | 35 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | No |
| memory function for automatic and manual tuned stations |  |
| El Paso R | Radio/Tape Player |
| Price | \$197 |
| Dimensions | $13 / 4 \mathrm{H} \times 6 / 8 \mathrm{~W} \times 51 / 8 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | No |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Bass; treble |
| R/P resp. | 40 Hz to $12 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 55 dB (w/o NR) |
| S/N ref. Ivi. | 1 mV |
| THD | 2.0\% |
| Output | 8 watts ( 9.5 dBW ) per channel continuous into 4 ohms from 50 Hz to 12 kHz with no more than $10 \%$ |
|  | THD |
| Radio |  |
| Format | Stereo |
| FM sens. | 1.8 microvolts for 50 dB quieting |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | No |
| Features | FM muting; preamp out-jacks |
| Models also available |  |
|  | Las Vegas Radio/Tape Player, |
|  | \$400; Paris Radio/Tape Player, |
|  | \$230; Joplin Radio/Tape Player, |
|  | \$112.95; La Scala Tape Player, |
| JENSEN |  |
| Jensen Sound Laboratories |  |
| 4136 North United Parkway |  |
| Schiller Park, III. 60176 |  |
| R-430 Radio/Tape Player |  |
| Price | \$470 |
| Dimensions | $23 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | No |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Bass; treble |
| Noise red. | Dalby |
| R/P resp. | 4 OHz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (with $\mathrm{CrO}_{2}$ tape) |
| S/N | 50 dB (w/o NR)/60 dB (w/NR) |
| S/N ref. Ivi. | 1 kHz at 0.5 W |
| THD ref. Ivi. | 0.5 W |
| Output | 30 watts ( 14.8 dBW ) per channel continuous into 4 ohms from 30 Hz |
|  | to 12 kHz with no more than $10 \%$ |
|  | THD |
| RADIO |  |
| Format | Stereo |
| FM sens. $\quad 2.5$ microvolts for 50 dB quieting |  |
| Selectivity | 60 dB |
| Loc/Dst sw. Yes |  |


| AFC | Yes |
| :---: | :---: |
| Features | Wow and flutter $1 \%$; feather-touch |
| controls; memory; loudnes̊s; FM muting; auto mono/stereo switch; end-of-tape alarm |  |
| R-420 Radio/Tape Player |  |
| Price | \$370 |
| Dimensions | $23 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | No |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Bass; treble |
| Noise red. | Dolby |
| R/P resp. | 40 Hz to $14 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (with $\mathrm{CrO}_{2}$ tape) |
| S/N | 50 dB (w/o NR)/60 dB (w/NR) |
| S/N ref. lvi. | 1 kHz at 0.5 W |
| THD ref. IvI. | 1 kHz at 0.5 W |
| Output | 18 watts ( 12.6 dBW ) per channel continuous into 4 ohms from 30 Hz to 12 kHz with no more than $10 \%$ THD |


|  | continuous into 4 ohms from 20 Hz to 10 kHz with no more than $10 \%$ THD |
| :---: | :---: |
| RADIO |  |
| Format | Stereo |
| FM sens. | 5 microvolts for 50 dB quieting ( $\mathrm{S} / \mathrm{N}: 30 \mathrm{~dB}, \pm 400 \mathrm{kHz}$ detune) |
| Selectivity | 35 dB |
| Loc/Dst sw. | No |
| AFC | No |
| St/Mono sw. | No |
| Dig. readout | Yes |
| Pushbuttons | 6 AM/6 FM |
| Features gram memory | Automatic scanning; computer pro- |
| LED-501 | Radio/Tape Player |
| Price | \$249.95 |
| Dimensions | $21 / 16 \mathrm{H} \times 71 / 8 \mathrm{~W} \times 6 \mathrm{D}$ |
| Mounting | In dash; under dash |
| Format | Cassette |
| Auto reverse | No |
| Fast-forward | Yes |
| Rewind | No |
| Controls | Bass; loudness |
| Noise red. | No |
| R/P resp. | 100 Hz to $10 \mathrm{kHz}, \pm 10 \mathrm{~dB}$ |
| S/N | 50 dB (w/o NR) |
| S/N ref. Ivi. | $0 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Output | 3.6 watts ( 5.5 dBW ) per channel continuous into 4 ohms from 20 Hz to 10 kHz with no more than $10 \%$ THD |
| RADIO |  |
| Format | Stereo |
| FM sens. | 2.5 microvolts for 50 dB quieting ( $30 \mathrm{~dB} \mathrm{~S} / \mathrm{N}$ ) |
| Selectivity | 45 dB |
| Loc/Dst sw. | No |
| AFC | No |
| St/Mono sw. | Yes |
| Dig. readout | Yes |
| Features | Weather band |


| KID-588 | Radio/Tape Player |
| :---: | :---: |
| Price | \$208 |
| Dimensions | $2 \mathrm{H} \times 71 / 4 \mathrm{~W} \times 51 / 2 \mathrm{D}$ |
| Mounting | In dash/under dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | continuous tone control; balance |
| Noise red. | No |
| R/P resp. | 50 Hz to $8 \mathrm{kHz}, \pm 10 \mathrm{~dB}$ |
| S/N | 45 dB (w/o NR) |
| S/N ref. Ivi. | $0 \mathrm{~dB}(1 \mathrm{kHz})$ |
| Output | 4 watts ( 6 dBW ) per channel continuous into 8 ohms from 20 Hz to 10 kHz with no more than $10 \%$ THD |
| RADIO |  |
| Format | Stereo |
| FM sens. | 3 microvolts for 50 dB quieting ( $\mathrm{S} / \mathrm{N}: 30 \mathrm{~dB}$ ) |
| Selectivity | 45 dB |
| Loc/Dst sw. | Yes |
| AFC | No |
| St/Mono sw. | No |
| Dig. readout | No |
| Features trimmer | Stereo indicator lamp; antenna |

KID-575 Radio/Tape Player

| Price | $\$ 166$ |
| :--- | :--- |
| Dimensions | $23 / 4 \mathrm{H} \times 71 / 4 \mathrm{~W} \times 61 / 4 \mathrm{D}$ |
| Mounting | In dash |
| Format | $\beta$-track |
| Auto reverse | No |
| Fast-forward | No |
| Rewind | No |
| Controls | Continuous tone control; balance; |
|  | fader |
| Noise red. | No |
| R/P resp. | 20 Hz to $10 \mathrm{kHz}, \pm 8 \mathrm{~dB}$ |
| $\mathrm{~S} / \mathrm{N}$ | $55 \mathrm{~dB}(\mathrm{w} / \mathrm{o} \mathrm{NR)}$ |
| $\mathrm{S} / \mathrm{N}$ ref. Ivi. | 0 dB at 1 kHz SRL |



Grundig GCM-8100



Mandic Monte Carlo
Marantz CAR-302

| Output | 4 watts ( 6 dBW ) per channel continuous into 8 ohms from 20 Hz to 10 kHz with no more than $10 \%$ THD |
| :---: | :---: |
| RADIO |  |
| Format | Stereo |
| FM sens. | 15 dBf for 50 dB quieting ( 350 kHz detune) |
| Selectivity | 45 dB |
| Loc/Dst sw. | Yes |
| AFC | No |
| St/Mono sw. | No |
| Dig. readout | No |
| Pushbuttons | 5 AM/5 FM |
| Features | Stereo indicator LED |

## Models also available

LED-508 Radio/Tape Player, \$400; LED-500 Radio/Tape Player, \$249.95; KID-589 Radic/Tape Player, \$207.95; KID-566 Radio/Tape Player, \$145

LAFAYETTE
Lafayette Electronics
111 Jericho Turnpike
Syosset, N.Y. 11791

| CP-2300 | Radio/Tape Player |
| :--- | :--- |
| Price | $\$ 99.99$ |
| Dimensions | $2 H \times 71 / 9 \mathrm{~W} \times 51 / 2 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | No |
| Fast-forward Yes |  |
| Rewind | No |
| Controls | Tone; balance |
| RADIO |  |
| Format | Stereo |
| Loc/Dst sw. Yes |  |
| AFC | No |
| St/Mono sw. Yes |  |
| Dig. readout No | No |
| Features | Itluminated dial |


| RK-300 | Tape Player |
| :--- | :---: |
| Price | $\$ 79.99$ |
| Mounting | Under dash |
| Format | Cassette |
| Auto reverse Yes |  |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Balance; tone |
| CP-200 Tape Player |  |
| Price | $\$ 39.95$ |
| Mounting | Under dash |
| Format | 8 -track |
| Controls | Balance; tone |
| RADIO |  |
| Features | Program indicator lights |

\$89.99; CP-250 Tape Player, \$44.99; CP-100 Tape Player, \$29.99

MARANTZ
Marantz Co., Inc.
20525 Nordhoff St.
Chatsworth, Calif. 91311
CAR-427 Radio/Preamp/Tape
Player
Price
Dimensions
Mounting

Auto reverse Yos
Fast-forward Yes
Rewind Yes
Controls Bass; treble; midrange
Noise red. Dolby for FM and Tape
R/P resp. $\quad 40 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
$\mathrm{S} / \mathrm{N} \quad 58 \mathrm{~dB}(w / \mathrm{NR}) / 50 \mathrm{~dB}$ (w/o NR) (unweighted)
S/N ref. IvI. $\quad 250 \mathrm{nWb} / \mathrm{m}$
THD 0.5\%
THD ref. Ivt. -20 VU
Output $\quad 775 \mathrm{mV}$ (preamp)
RADIO
Format Stereo
FM sens. 15 microvolts ( 35 dBf ) for 50 dB quieting (stereo)
Selectivity $\quad 65 \mathrm{~dB} \pm 400 \mathrm{kHz}$
Loc/Dst sw. Yes
St/Mono sw. Yes
Pushbuttons 5 AM/5 FM
Features Vacuum fluorescent LED display presets Sendust tape head; metal-tape capability; FM impulse noise blanker; Atmospheric Interference Rejection for noise attenuation; stations may be preset

## CAR-400 Radio/Tape Player

Price $\quad \$ 500$
Dimensions $29 / 16 \mathrm{H} \times 71 / 8 \mathrm{~W} \times 51 / \mathrm{BD}$
Mounting In dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind Yes
Controls Bass; treble
Noise red. Dolby for tape
R/P resp. $\quad 40 \mathrm{~Hz}$ to $13 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
$\mathrm{S} / \mathrm{N} \quad 58 \mathrm{~dB}(\mathrm{w} / \mathrm{NR}) / 50 \mathrm{~dB}$ (w/oNR) (unweighted)
S/N ref. Ivl. $\quad 250 \mathrm{nWb} / \mathrm{m}$
THD $\quad 0.9 \%$
THD ref. Ivt. $250 \mathrm{nWb} / \mathrm{m}$
Output $\quad 2.5$ watts ( 4 dBW ) per channel continuous into 4 ohms from 50 Hz to 20 kHz with no more than $0.9 \%$ THD (supply voltage 13.8 VDC )

## Models also available

CP-1200 Radio/Tape Player

| FM sens. | 20 microvolts ( 37 dBf ) for 50 dB |
| :--- | :--- |
|  | quieting (sterec) |
| Selectivity | $70 \mathrm{~dB}( \pm 400 \mathrm{kHz})$ |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. Yes |  |
| Dig. readout | No |
| Pushbuttons 5 AM or 5 FM (presets) |  |
| Features | Adjustable FM muting; Atmo- |
| spheric Interference Rejection for noise attenua- |  | tion

## Models also available

CAR-420 Radio/Tape Player \$500; CAR-410 Radio/Tape Player, $\$ 390$; CAR- 350 Radio/Tape Player, \$240; CAR-300 Radio/Tape Player, \$220

## MITSUBISHI

Melco Sales, Inc.
3030 E. Victoria
Compton, Calif. 90221
RX-2 Radio/Tape Player
Price $\$ 399.95$
Dimensions $23 / 6 \mathrm{H} \times 71 / 6 \mathrm{~W} \times 63 / 4 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse Yes
Fast-forward Yes
Rewind Yes
R/P resp. $\quad 50 \mathrm{~Hz}$ to $12 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $50 \mathrm{~dB}(w / 0 \mathrm{NR})$
S/N ref. IvI. 1 W
THD 0.5\%
THD ref. IvI. IW
$\begin{array}{ll}\text { Output } & 4.5 \text { watts ( } 6.5 \mathrm{dBW} \text { ) per channel } \\ & \text { continuous into } 4 \text { ohms with no }\end{array}$ more than $1 \%$ THD
RADIO
$\begin{array}{ll}\text { Format } & \text { Stereo } \\ \text { FM sens. } & 2 \text { microvolts for } 50 \mathrm{~dB} \text { quieting }\end{array}$
Selectivity 70 dB
Loc/Dst sw. Yes
AFC Yes
St/Mono sw. Yes
Dig. readout Yes
Pushbuttons 6 AM/6 FM
Features Electronic tuner with digital display for frequency and time

| CJ-22 Radio |  |
| :--- | :--- |
| Price | $\$ 269.95$ |
| Dlmensions | $14 / 5 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 6 \mathrm{1} / 5 \mathrm{D}$ |
| Format | Stereo |
| FM sens. | 3 microvolts for 50 dB quieting |
| Selectivity | 65 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. Yes |  |
| Dig. readout | Yes |
| Pushbuttons | $5 \mathrm{AM} / 5 \mathrm{FM}$ |
| Features | Component tuner |


| RX-69 II Radio/Tape Player |  |
| :--- | :--- |
| Price | $\$ 239.95$ |
| Dimenslons | $27 / \mathrm{H} \times 7 \% \mathrm{~W} \times 61 / 8 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Midrange |
| S/N | 50 dB (w/o NR) |
| J/N ref. Ivl. | 1 W |
| THD | $0.7 \%$ |
| THD ref. IvI. | 1 W |
| Output | 3.5 watts $(5.5 \mathrm{dBW}$ ) per channel |
|  | continuous into 4 ohms with no |
|  | more than $1 \% \mathrm{THD}$ |
| RADIO |  |
| Format | Stereo |
| FM sens. | 3 microvolts for 50 dB quieting |
| Selectivity | 40 dB |
| Loc/Dst sw. | Yes |

St/Mono sw. Yes
Dig. readout No
Pushbuttons 4 AM/4 FM

## RX-73 Radio/Tape Player

## $\begin{array}{ll}\text { Price } & \$ 179.95 \\ \text { Dimensions } & 23 / 4 \mathrm{H} \times\end{array}$

Dimensions $23 / 4 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 43 / 4 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind No
S/N $\quad 50 \mathrm{~dB}$ (w/NR)
S/N ref. Ivi. 1W
THD 0.5\%
THD ref. Ivi. 1W
Output $\quad 4.5$ watts ( 6.5 dBW ) per channel continuous into 4 ohms with no more than $1 \%$ THD

| RADIO |  |
| :---: | :---: |
| Format | Stereo |
| FM sens. | 4 microvolts for 50 dB quieting |
| Selectivity | 55 dB |
| Loc/Dst sw. | Yes |
| St/Mono sw. | No |
| Dig. readout | No |
| Pushbuttons | 5 AM/5 FM |
| Features plugs | Low-level outputs utilizing phono |
| GX-102 T | ape Player |
| Price | \$149.95 |
| Dimensions | $14 / 5 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 6 \mathrm{~V} / 8 \mathrm{D}$ |
| Mounting | Under dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Bass; treble |
| S/N | 45 dB (w/o NR) |
| S/N ref. Ivi. | 1W |
| THD | 1\% |
| THD ref. Ivi. | 1W |
| Output | 4 watts ( 6 dBW) per channel continuous into 4 ohms with no more than 1\% THD |
| Features <br> tape; low-lev | Hard permalloy head for $\mathrm{CrO}_{2}$ |


| CJ-20 Radio |  |
| :--- | :--- |
| Price | $\$ 139.95$ |
| Dimensions | $14 / 5 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 61 / 50$ |
| Format | Stereo |
| Selectivity | 70 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono $\mathbf{s w}$. Yes |  |
| Dig. readout | No |
| Features | Component tuner |

CX-20 Tape Player
Price $\$ 99.95$
Dimensions $14 / 5 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 67 / 8 \mathrm{D}$
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind Yes
S/N $\quad 55 \mathrm{~dB}$ (w/o NR)
S/N ref. Ivi. 1W
Features Component deck

## Models also available

RX-79 Radio/Tape Player \$259.95; RX-7 II Radio/Tape Player, $\$ 249.95$ : RS-67 Radio/ Tape Player, \$229.95; RX-103 Radio/Tape Player, \$159.95: CX 21 Tape Player, $\$ 139.95$

MOTOROLA
Motorola, Inc.
Automotive Products Div.
1299 E. Algonquin Rd.
Schaumburg, III. 60196

TC-894AX Radio/Tape Player
Price $\$ 389.95$
Dimensions $211 / 16 \mathrm{H} \times 71 / \mathrm{sW} \times 71 / 8 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse Yes
Fast-forward Yes (locking)
Rewind Yes (locking)
Controls Bass; treble
Noise red. Dolby
R/P resp. $\quad 100 \mathrm{~Hz}$ to $6 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 40 \mathrm{~dB}$ (w/o NR)
S/N ref. Ivt. SRL ( 400 Hz )
THD 10\%
THD ref. Ivi. 12W
Output $\quad 12$ watts ( 10.75 dBW ) per channel continuous into 4 ohms from 150 Hz to 8 kHz with no more than $10 \%$ THD
RADIO
Format Stereo
FM sens. $\quad 7.5$ microvolts (IHF) for 50 dB qui-
eting
Loc/Dst sw. Yes
AFC Yes
St/Mono sw. Yes
Dig. readout No
Pushbuttons Yes
Features Loudness button; tape equalization switch (ferrite/oxide/CrO2); high filters; front-torear fader; hard permalloy tape head; dual ceramic filters

| TC-890AX | Radio/Tape Player |
| :---: | :---: |
| Price | \$329.95 |
| Dimensions | $211 / 16 \mathrm{H} \times 71 / 8 \mathrm{~W} \times 57 / 8 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes (locking) |
| Rewind | Yes (locking) |
| Controls | Bass; treble |
| Noise red. | Dolby |
| R/P resp. | 100 Hz to $6 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 40 dB (w/o NR) |
| S/N ref. Ivi. | SRL ( 400 Hz ) |
| THD | 10\% |
| THD ref. IvI. | 3.5 W |
| Output | 3.5 watts ( 5.5 dBW ) per channel continuous into 4 ohms from 150 Hz to 8 kHz with no more than $10 \%$ THD |
| RADIO |  |
| Format | Stereo |
| FM sens. | 7.5 microvolts (IHF) for 50 dB quieting |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | No |
| Pushbuttons | Yes |
| Features (WRMS) | Wow and flutter better than 0.25\% |


| TC-888AX | Radio/Tape Player |
| :---: | :---: |
| Price | \$239.95 |
| Dimensions | $27 / 6 \mathrm{H} \times 71 / 16 \mathrm{~W} \times 5$ 5/16D |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | No |
| Fast-forward | Yes (locking) |
| Rewind | Yes (locking) |
| Controls | Tone/balance |
| Noise red. | No |
| R/P resp. | 100 Hz to $6 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 40 dB (w/o NR) |
| THD | 10\% |
| THD ref. Ivi. | 3.5 W |
| Output | 3.5 watts ( 5.5 dBW ) per channel continuous into 4 ohms from 150 Hz to 8 kHz with no more than $10 \%$ THD |
| RADIO |  |
| Format | Stereo |
| FM sens. | 7.5 microvolts (IHF) for 50 dB quieting |
| Loc/Dst sw. | Yes |
| AFC | Yes |

St/Mono sw. Yes
Dig. readout No
Pushbuttons 5 AM/5 FM
Features Wow and flutter $0.25 \%$; AutoCue for tape selection positioning; dual ceramic filters

| TF-882AX | Radio/Tape Player |
| :---: | :---: |
| Price | \$209.95 |
| Dimensions | $21 / 4 \mathrm{H} \times 71 / 16 \mathrm{~W} \times 55 / 16 \mathrm{D}$ |
| Mounting | In dash |
| Format | 8-track |
| Auto reverse | No |
| Fast-forward | No |
| Rewind | No |
| Controls | Bass; treble; balance |
| R/P resp. | 100 Hz to $6 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 40 dB ( $\mathrm{w} / \mathrm{o} \mathrm{NR}$ ) |
| S/N ref. Ivi. | SRL ( 400 Hz ) |
| THD | 10\% |
| THD ref. IvI. | 12W |
| Output | 12 watts ( 10.75 dBW ) per channel continuous into 4 ohms from 150 Hz to 8 kHz with no more than $10 \%$ THD |
| RADIO |  |
| Format | Stereo |
| FM sens. | 7.5 microvolts (IHF) for 50 dB quieting |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | No |
| Pushbuttons | Yes |
| Features rear fader; loud | Wow and flutter $0.25 \%$; front-todness button; adjustable shafts; dual | rear fader; loudness button; adjustable shafts; dual ceramic filters


| TC-883AX | Radio/Tape Player |
| :---: | :---: |
| Price | \$184.95 |
| Dimensions | $27 / 6 \mathrm{H} \times 71 / 16 \mathrm{~W} \times 55 / 16 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | No |
| Fast-forward | Yes (locking) |
| Rewind | Yes (locking) |
| Controls | Tone/balance |
| Noise red. | No |
| R/P resp. | 100 Hz to $6 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 40 dB (w/o NR) |
| S/N ref. IvI. | SAL ( 400 Hz ) |
| THD | 10\% |
| THD ref. IvI. | 3.5 W |
| Output | 3.5 watts ( 5.5 dBW ) per channel continuous into 4 ohms from 150 Hz to 8 kHz with no more than $10 \%$ THD |
| RADIO |  |
| Format | Stereo |
| FM sens. | 7.5 microvolts (IHF) for 50 dB quieting |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | No |
| Pushbuttons | Yes |
| Features | Wow and flutter 0.25\%; dual |
| ceramic filters; hard permalloy tape head; tape |  | eject


| TC-344S | Tape Player |
| :--- | :--- |
| Price | $\$ 150$ |
| Dimensions | $61 / 2 \mathrm{H} \times 23 / 4 \mathrm{~W} \times 83 / 4 \mathrm{D}$ |
| Mounting | Under dash |
| Format | Cassette |
| Auto reverse | No |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Bass; treble |
| Noise red. | No |
| S/N | 40 dB (w/o NR) |
| THD ref. Ivl. | 12 W |
| Output | 12 watts (10.8 dBW) per channel |
|  | continuous into 4 ohms with no |
|  | more than $10 \%$ THD |
| RADIO |  |
| Format | Stereo |
| Features | Wow and Flutter $1.0 \%$; power- |
| level meter; toudness; high filter |  |

TC-881AX Radio/Tape Player
Price $\$ 140$
$\begin{array}{ll}\text { Dimensions } & 13 / 4 \mathrm{H} \times 71 / 16 \mathrm{~W} \times 43 / 4 \mathrm{D} \\ \text { Mounting } & \text { In dash }\end{array}$
Format Cassette
Auto reverse No
Fast-forward Yes (locking)
Rewind Yes (locking)
Controls Tone/balance
Noise red. No
R/P resp. $\quad 100 \mathrm{~Hz}$ to $6 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 40 \mathrm{~dB}$ (without noise reduction)
S/N ref. IvI. $\quad$ SFL ( 400 Hz )
THD 10\%
THD ref. IvI. 3.5 W
Output $\quad 3.5$ watts ( 5.5 dBW ) per channel continuous into 4 ohms from 150 Hz to 8 kHz with no more than $10 \%$ THD
RADIO
Format Stereo
FM sens. $\quad 7.5$ Microvolts for 50 dB quieting
Loc/Dst sw. Yes
AFC Yes
St/Mono sw. Yes
Dig. readout No
Features Wow and flutter $0.25 \%$; auto eject;
dual ceramic filters; auto eject

## Models also available

TC-887AX Radio/Tape Player, \$230; TC-885AX Radio/Tape Player, \$199.95; TF-880AX Radio/Tape Player, \$164.95

## PIONEER

Pioneer Electronics of America 1925 E. Dominquez St. Long Beach, Calif. 90810

## KE-5000 Radio/Tape Player <br> Price $\$ 419.95$ <br> Dimensions $3 \mathrm{H} \times 71 / 0 \mathrm{~W} \times 5 \% \mathrm{DD}$ <br> Mounting In dash <br> Format Cassette <br> Auto reverse No <br> Fast-forward Yes <br> Rewind Yes <br> Noise red. Dolby on FM and cassette <br> Output a watts ( 6 dBW ) per channel from

 30 Hz to 12 kHz
## RADIO

Loc/Dst sw. Yes
St/Mono sw. Yes
Pushbuttons 5 AM/5 FM
Features Supertuner; electronic PLL synthesizer tuning; digital readout for frequency and time; built-in clock with clock button; scan tuning; seek tuning; tape selector; fader control; auto replay after rewind

KE-3000 Radio/Tape Player
Price $\$ 359.95$
Dimensions $2 \mathrm{H} \times 71 / 8 \mathrm{~W} \times 57 / 8 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind Yes
Noise red. PNS noise suppression
Output $\quad 4$ watts ( 6 dBW ) per channel from 30 Hz to 12 kHz
RADIO
Format Stereo
Loc/Dst sw. Yes
St/Mono sw. Yes
Pushbuttons 5 AM/5 FM
Features Supertuner; electronic PLL synthesizer tuning; digital readout; scan tuning: muting switch; fader control; tape play indicator; auto replay after rewind

KE-2002 Radio/Tape Player
Price $\$ 319.95$
Dimensions $2 \mathrm{H} \times 71 / 6 \mathrm{~W} \times 5 \frac{1}{4} \mathrm{D}$
Mounting In dash
Format Cassette
Fast-forward Yes
Rewind Yes
Controls Center-click balance control
Noise red. PNS noise suppression for tape and FM
Output $\quad 5$ watts ( 7 dBW ) per channel from 30 Hz to 12 kHz
RADIO
Format Stereo
Loc/Dst sw. Yes
St/Mono sw. Yes
Pushbuttions 5 AM/5 FM
Features Supertuner; phase-locked loop multiplex demodulator; dual-gate FET front end; AM/FM LED indicator: electronic LED station indicator; muting switch;auto replay after rewind; designed for European cars

## KPX-9000 Radio/Tape Player

Price $\$ 299.95$
Dimensions $2 \mathrm{H} \times 71 / 8 \mathrm{~W} \times 6 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind Yes
Controls Bass; treble; balance
R/P resp $\quad 30 \mathrm{~Hz}$ to 15 kHz
RADIO
Format Stereo
St/Mono sw. Yes
Features Supertuner; auto replay after rewind; electronically governed motor; requires separate power amp; wow and flutter less than $0.13 \%$

## KP-8500 Radio/Tape Player

Price $\$ 279.95$
Dimensions $3 \mathrm{H} \times 71 / 6 \mathrm{~W} \times 53 / 4 \mathrm{D}$
Mounting in dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind Yes
Controls Tone; balance
Noise red. Dolby for tape and FM
Output $\quad 5$ watts ( 7 dBW ) per channel from 30 Hz to 12 kHz
RADIO
Format Stereo
Loc/Dst sw. Yes
St/Mono sw. Yes
Pushbuttons 5 AM/5 FM
Features Supertuner; auto muting on FM
stereo; auto replay after rewind; AM/FM

## KP-8005 Radio/Tape Player

Price $\$ 249.95$
Dimensions $2 \mathrm{H} \times 71 / 8 \mathrm{~W} \times 53 / 4 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind Yés
Controls Tone; balance
Output $\quad 4$ watts ( 6 dBW ) per channel from 30 Hz to 12 kHz
RADIO
Format Stereo
St/Mono sw. Yes
Pushbuttons 5 AM $/ 5$ FM
Features Supertuner; muting switch; auto replay

KP-707G Tape Player
Price $\$ 249.95$
Dimensians $2 \mathrm{H} \times 6 \mathrm{~W} \times 65 / 6 \mathrm{D}$
Mounting Under dash
Format Cassette
Auto reverse Yes
Fast-forward Yes
Rewind Yes
Controls Bass; treble; batance (with de-
Noise red. Dents)

Features Requires separate power amp; feather-touch tape controls: ATSC (auto tape slack canceller); ferrite head; tape selector $\left(\mathrm{CrO}_{2}\right)$; electronically governed motor

TP-9006 Radio/Tape Player
$\begin{array}{ll}\text { Dimensions } & 31 / 4 \mathrm{H} \times 71 / 6 \mathrm{~W} \times 63 / 8 \mathrm{D}\end{array}$
Mounting In dash
Format 8-track
Auto reverse No
Fast-forward No
Rewind No
Controls Bass; treble
Output $\quad 4$ watts ( 6 dBW ) per channel
RADIO
Format Stereo
Loc/Dst sw. Yes
Pushbuttons 5 AM/5 FM
Features Supertuner; for GM cars; adjustable shafts; muting; phase-locked loop multiplex demodulator; FET front end; radio dial in 8-track door

## TP-9004 Radio/Tape Player <br> Price $\$ 239.95$

| Dimensions | $31 / 4 \mathrm{H} \times 71 / \mathrm{QW} \times 63 / 8 \mathrm{D}$ |
| :--- | :--- |
| Mounting | In dash |
| Format | 8 -track |
| Auto reverse | No |
| Fast-forward | No |
| Rewlnd | No |
| Controls | Bass; treble |
| Output | 4 watts $(6 \mathrm{dBW})$ per channel |
| RADIO |  |
| Format | Stereo |
| Loc/Dst sw. | Yes |

Pushbuttons 5 AM/5 FM
Features Supertuner; for Chrysler products; adjustable shafts; muting; phase-locked multiplex demodulator; FET front end; radio dial in 8 -track door

| KP-5005 | Radio/Tape Player |
| :---: | :---: |
| Price | \$229.95 |
| Dimensions | $2 \mathrm{H} \times 71 / 6 \mathrm{~W} \times 53 / 4 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Fast-forward | Yes |
| Rewlnd | Yes |
| Controls | Tone; balance |
| Output | 4 watts ( 6 dBW ) per channel from 30 Hz to 12 kHz |
| RADIO |  |
| Format | Stereo |
| St/Mono sw. | Yes |
| Features | Supertuner; manual tuning; muting |
| switch; auto rep | eplay |


| KP-500 R | adio/Tape Player |
| :---: | :---: |
| Price | \$219.95 |
| Dimensions | $3 \mathrm{H} \times 75 / 0 \mathrm{~W} \times 71 / 2 \mathrm{D}$ |
| Mounting | Under dash |
| Format | Cassette |
| Controls | Bass; treble |
| Output | 4 watts ( 6 dBW ) per channel from 40 Hz to 10 kHz |
| RADIO |  |
| Format | Stereo |
| St/Mono sw. | Yes |
| Features | Supertuner; phase-locked multi- |
| plex demodul muting | ator; auto eject; loudness switch; |

KPX-600 Radio/Tape Player
Price
$\$ 219.95$
Dimensions $23 / 8 \mathrm{H} \times 71 / 6 \mathrm{~W} \times 67 / 8 \mathrm{D}$
Mounting Under dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind Yes
Controls Bass; treble; balance

R/P resp. $\quad 30 \mathrm{~Hz}$ to 15 kHz
RADIO
Format Stereo
St/Mono sw. Yes
Features Requires separate power amp; supertuner; phase-locked loop multiplex demodulator; FET front end; loudness control; auto replay after rewind; electronically governed monitor

## TP-900 Radio/Tape Player <br> Pric

Dimensions $3 \mathrm{H} \times 75 / 6 \mathrm{~W} \times 71 / 2 \mathrm{D}$
Mounting Under dash
Format 8-track
Auto reverse No
Fast-forward Yes
Rewind No
Controls Bass; treble; balance
Output $\quad 4$ watts ( 6 dBW ) per channel
Format Siereo
St/Mono sw. Yes
Features Supertuner; phase lock multiplex demodulator; FET front end; loudness switch; muting

## K-77G Tape Player

Price
$\$ 179.95$
Dimensions $2 \mathrm{H} \times 6 \mathrm{~W} \times 65 / 8 \mathrm{D}$
Mounting Under dash
Format Cassette
Auto reverse $Y$ es
Fast-forward Yes
Rewind Yes
Controls Bass; treble (with detents); balance and volume control with center click
R/P resp. $\quad 30 \mathrm{~Hz}$ to 15 kHz
Features Requires separate power amp;
ATSC (auto tape slack canceller); tape selector
$\left(\mathrm{CrO}_{2}\right) ;$ ATT (audio attenuator); tape direction in-
dicator; electronically governed motor
TP-7007 Radio/Tape Player
Price $\$ 179.95$
Dimensions $2 \mathrm{H} \times 71 / 8 \mathrm{~W} \times 61 / 4 \mathrm{D}$
Mounting In dash
Format 8-track
Auto reverse No
Fast-forward No
Rewind No
Controls Balance; tone
Output $\quad 4$ watts ( 6 dBW ) per channet from 40 Hz to 10 kHz
RADIO
Format Stereo
St/Mono sw. Yes
Pushbuttons 5 AM/5 FM (preset)
Features AM/FM stereo track indicators; adjustable shafts; auto and manual program changers; FM mono/stereo switch; IC amp; ceramic IF filter

| $\underset{\text { Price }}{\text { KP-250 }}$ Ra | Radio/Tape Player |
| :---: | :---: |
| Dimensions | s $2 \mathrm{H} \times 61 / 8 \mathrm{~W} \times 63 / 4 \mathrm{D}$ |
| Mounting | Under dash |
| Format | Cassette |
| Auto reverse | se No |
| Fast-forward | rd Yes |
| Rewind | Yes |
| Controls | Balance; tone; volume |
| Output | 4 watts ( 6 dBW ) per channel from 40 Hz to 10 kHz |
| RADIQ |  |
| Format | Stereo |
| St/Mono sw. | w. Yes |
| Features | Auto eject |
| KP-575 Tape Player |  |
| Price | \$159.95 |
| Dimensions | s $2 \mathrm{H} \times 61 / 8 \mathrm{~W} \times 413 / 16 \mathrm{D}$ |
| Mounting | Under dash |

Format Cassette
Auto reverse Yes
Fast-forward Yes
Rewind Yes
Controls Tone; balance
Output $\quad 5$ watts ( 7 dBW ) per channel from 30 Hz to 14 kHz
Features ATSC (automatic tape slack can-
celler); loudness control; tape direction; indlcator

GX-4040 Radio
Price $\$ 149.95$
Dimensions $2 \mathrm{H} \times 71 / 1 / \mathrm{W} \times 51 / 6 \mathrm{D}$
Mounting In dash
Format Stereo
Loc/Dst sw. Yes
Pushbuttons 2 AM/3 FM
Features Supertuner; phase-locked looped multiplex demodulator; muting switch

TP-6006 Radio/Tape Player
Price $\quad \$ 149.95$
Dimensions $2 \mathrm{H} \times 71 / 6 \mathrm{~W} \times 61 / 4 \mathrm{D}$
Mounting in dash
Format 8-track
Controls Balance; tone
RADIO
Format Stereo
Loc/Dst sw. Yes
St/Mono sw. Yes
Features Auto and manual program change; one-switch-mode control; integrated circuits for audio and IF; adjustable shafts

## KP-373 Tape Player

Dimensions $2 \mathrm{H} \times 43 / 4 \mathrm{~W} \times 61 / 8 \mathrm{D}$
Mounting Under dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind Yes
Controts Tone; balance
Output $\quad 5$ watts ( 7 dBW ) per channel from 30 Hz to 12 kHz
Features Slide and volume control; auto re-
play; auto and manual eject; loudness switch; slid-
ing volume control; tape play indicator

## TP-727 Tape Player <br> Price $\quad \$ 119.95$

Dimensions $25 / 6 \mathrm{H} \times 61 / 2 \mathrm{~W} \times 61 / 2 \mathrm{D}$
Mounting Under dash
Format 8-track
Auto reverse No
Fast-forward Yes
Rewind No
Controls Bass; treble
Output $\quad 4$ watts ( 6 dBW) per channel
Features Loudness switch; auto and manual;
program change; repeat
TP-200 Radio/Tape Player

| Price | $\$ 119.95$ |
| :--- | :--- |
| Dimensions | $21 / 8 \mathrm{H} \times 7 \mathrm{~V} \mathrm{WW} \times 7 / 3 \mathrm{BD}$ |
| Mounting | Under dash |
| Format | 8 -track |
| Auto reverse | No |
| Fast-forward | No |
| Rewlind | No |
| Output | 4 watts ( 6 dBW ) per channel |
| RADIO |  |
| Format | Stereo |
| Loc/Dst sw. | No |
| AFC | No |
| St/Mono sw. Yes |  |
| Dig. readout | No |
| Features | Illuminated track indicator; |
| and IC front end; IF amplifier |  |


| TP-252 | Tape Player |
| :--- | :---: |
| Price | $\$ 69.95$ |
| Mounting | Under dash |


| Format | 8 -track |
| :--- | :--- |
| Auto reverse | No |
| Fast-forward | No |
| Rewind | No |
| rontrols | Tone; balance |
| Features | Automatic and manual track |
| change; all IC amplifier; slide controls |  |

## Models also available

KPX-9500 Radio/Tape Player, $\$ 329.95$; KE-2000 Radio/Tape Player, \$289.95; KP-8000 Radio/Tape Player, \$249.95; TP-9005 Radio/Tape Player, \$239.95; KP3500 Radio/Tape Player, \$229.95; KP-4000 Radio/Tape Player, \$199.95; KP-88G Tape Player, \$179.95; GX-5050-Radio, \$159.95; KP-66G Tape Player, \$149.95; KP292 Tape Player, \$129.95; KP-272 Tape Player, \$109.95

## REALISTIC

Radio Shack
1400 One Tandy Center
Ft. Worth, Tex. 76102

| 12-1887 | Hi Power Radio/Tape |
| :--- | :--- |
| Player |  |
| Price | $\$ 179.95$ |
| Dimensions | $23 / 8 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$ |
| Mounting | In dash; under dash |
| Format | 8 -track |
| Auto reverse | No |
| Fast-forward | No |
| Rewind | No |
| Controls | Bass; treble |
| R/P resp. | 75 Hz to $10 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $54 \mathrm{~dB}(\mathrm{w} / 0 \mathrm{NR})$ |
| S/N ref. Ivl. | 1 W |
| THD | $10 \%$ |
| THD ref. IvI. | 15 W |
| RADIO |  |
| Format | Stereo |
| FM sens. | 3.5 microvolts for 50 dB quieting |
| Selectivity | 57 dB |
| Loc/Dst sw. | No |
| AFC | Yes |
| St/Mono sw. Yes |  |


| 12-1885 Radio/Tape Player |  |
| :--- | :--- |
| Price | $\$ 99.95$ |
| Dimensions | $2 \mathrm{H} \times 7 \mathrm{~W} \times 43 / 4 \mathrm{D}$ |
| Mounting | In dash; under dash |
| Format | 8 -track |
| Auto reverse | No |
| Fast-forward | No |
| Rewind | No |
| Controls | Tone |
| R/P resp. | 60 Hz to $10 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| S/N | $55 \mathrm{~dB}(\mathrm{w} / \mathrm{NR})$ |
| S/N ref. Ivi. | 1 W |
| THD | $10 \%$ |
| THD ref. Ivl. | 5 W |
| RADIO |  |
| Format | Stereo |
| FM sens. | 3.5 mic molts for 50 dB quieting |
| Selectivity | 60 dB |
| Loc/Dst sw. | No |
| AFC | Yes |
| St/Mono sw. Yes |  |
| Dig. readout | No |


| $12-1884$ | Radio/Tape Player |
| :--- | :--- |
| Price | $\$ 99.95$ |
| Dimensions | $17 / 8 \mathrm{H} \times 73 / 16 \mathrm{~W} \times 51 / 6 \mathrm{D}$ |
| Mounting | In dash; under dash |
| Format | Cassette |
| Auto reverse No |  |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Tone |
| R/P resp. | 60 Hz to $10 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | $55 \mathrm{~dB}(\mathrm{w} / \mathrm{o} \mathrm{NR})$ |
| S/N ref. Ivl. | 1 W |
| THD | $10 \%$ |


| THD ref. Ivl. | 5 W |
| :--- | :--- |
| RADIO |  |
| Format | Stereo |
| FM sens. | 3.5 microvolts for 50 dB quieting |
| Selectivity | 47 dB |
| Loc/Dst sw. | No |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | No |
| Features | Auto stop |
|  |  |
| 12-1809 | Hi Power Tape Player |
| Price | $\$ 99.95$ |
| Dimensions | $17 / 4 \times 7 W \times 67 / 8 \mathrm{H}$ |
| Mounting | Under dash |
| Format | Cassette |
| Auto reverse | No |
| Rewind | Yes |
| Controls | Bass; treble |
| R/P resp. | 50 Hz to $14 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ |
| S/N | 55 dB (w/o NR ) |
| THD | $10 \%$ |
| THD ref. Ivl. | 12 W |
| RADIO |  |
| Features | Loudness compensation; auto |
| eject, headphone jack |  |

## Models also available

12-1886 Hi Power Radio/Tape Player, \$179.95; 12-1810 Hi Power Tape Player, $\$ 99.95$

ROADSTAR
Roadstar Corp. of America 5312 Production Dr.
Huntington Beach, Calif.
RS-3300 Radio/Tape Player
Price $\$ 349.95$
Dimensions $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 51 / 2 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse Yes
Fast-forward Yes
Rewind Yes
Controls Continuous tone contro
S/N $\quad 50 \mathrm{~dB}$ (w/o NR)
Output $\quad 5$ watts ( 7 dBW ) per channe
RADIO
Format Stereo
FM sens. $\quad 1.5$ microvolts ( $30 \mathrm{~dB} \mathrm{~S} / \mathrm{N}$ )
Selectivity $\quad 30$ microvolts ( $20 \mathrm{~dB} \mathrm{S/N}$ )
Loc/Dst sw. Yes
Features Wow and flutter 1.5\%; auto-
reverse; IF ceramic filter; muting; digital readout;
Sendust head
RS-3000DV Radio/Tape Player
Price $\quad \$ 329.95$
Dimensions $2 \mathrm{H} \times 7 \mathrm{~W} \times 43 / 4 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind No
Output $\quad 7$ watts $(8.5 \mathrm{dBW})$ per channel
RADIO
Format Stereo
FM sens. $\quad 1.5$ microvolts selectivity ( 30 dB
$S / N)$
Loc/Dst sw. Yes
AFC Yes
Pushbuttons Yes
Features Wow and flutter 3\%
RS-1500 Radio/Tape Player
Price $\$ 139.95$
Dimensions $2 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 5 \mathrm{D}$
Mounting Under dash
Auto reverse Yes
Fast-forward Yes (locking)
Rewind Yes (locking)
R/P resp. $\quad 50 \mathrm{~Hz}$ to 12 kHz
S/N $\quad 45 \mathrm{~dB}$ (w/o NR)
Output $\quad 4$ watts ( 6 dBW ) per channel con-
tinuous into 4 or 8 ohms

RADIO
Format Stereo
Features Wow and flutter $1 \%$; auto-reverse; jam-proof mechanism; mounts and plays in any position

## ROYAL SOUND

Royal Sound Co., Inc.
248 Buffalo Ave.
Freeport, N.Y. 11520
RS-2510 Radio/Tape Player

## Price $\$ 400$

Dinensions $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 523 / 32 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse Yes
Fast-forward Yes (locking)
Rewind Yes (locking)
Controls Bass; treble
Noise red. dbx
$R / P$ resp. $\quad 30 \mathrm{~Hz}$ to $12.5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 65 \mathrm{~dB}$ (w/o NR)
THD $1 \%$
THD ref. IvI. 9 W (rms)
Ou*put 8 watts ( 9 dBW ) per channel continuous into 4 ohms with no more than $1 \%$ THD
RADIO
Format Stereo
FM sens. 1.4 microvolts for 30 dB quieting
Selectivity 60 dB
Loc/Dstsw. Yes
AF Yes (defeatable)
St/Mono sw. Yes
Dig. readout Yes
Features High and low impedance; preamp
out; FM muting; loudness; AFC defeat

| RS-2010N Radio/Tape Player |  |
| :--- | :--- |
| Price | $\$ 200$ |
| Dimensions | $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 411 / 12 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | No |
| Fast-forward | Yes |
| Rewind | No |
| Controls | Bass |
| Noise red. | dbx |
| R/P resp. | 35 Hz to 10.5 kHz |
| S// | $50 \mathrm{~dB}(w / 0 \mathrm{NR})$ |
| THD | $1 \%$ |
| THD ref. Ivi. | 4 W (rms) |
| Output | 5 watts (7 dBW) per channel con- |
|  | tinuous into 4 ohms from 35 Hz to |
|  | 10.5 kHz with no more than $3 \%$ |
|  | THD |

RADIO
Format Stereo
FM sens. $\quad 1.9$ microvolts for 50 dB quieting
Serectivity 60 dB
Loc/Dst sw. Yes
AFE Yes
St/Mono sw. Yes
Dig. readout Yes
Pushbuttons No
Features Outputs for 3 speakers; high and
love impedance; preamp out

## SANYO

Sanyo Electric, Inc.
1200 West Artesia Blvd.
Compton, Calif. 90220

| FT-1498 | Radio/Tape Player |
| :---: | :---: |
| Price | \$349.95 |
| Dimensions | $3 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$ |
| Mcunting | In dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes |
| Rewind | Yes |
| Noise red. | Dolby |
| S/W | 62 dB (w/o NR) |
| THD ref. Ivi. | 11 W (10.5 dBW) wooter; |


|  | dBW) tweeter |
| :--- | :--- |
| Output | 17 watts (12.3 dBW) per channel |
| RADIO |  |
| Format | Stereo |
| FM sens. | 1.5 microvolts for 14.8 dB quieting |
| Selectivity | 60 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| Pushbuttons | 10 (with memory) |
| Features | Wow and flutter 1\%; Sendust alloy |
| heads; digital tuning; biamplified power section; |  |
| quartz dlgital display clock/calendar (works with |  |
| ignition off); automatic FM muting; "Head" switch |  |
| for all tapes |  |

## FT-2400 Radio/Tape Player

Dimensions $2 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse Yes
Fast-forward Yes
$\begin{array}{ll}\text { Rewind } & \text { Yes } \\ \text { Controls } & \text { Bass; treble }\end{array}$
Noise red. Dolby
R/P resp. $\quad 40 \mathrm{~Hz}$ to $12 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 62 \mathrm{~dB}$ (w/o NR)
RADIO
Format Stereo
FM sens. $\quad 1.5$ microvolts for 14.8 dB quieting Selectivity 65 dB
Loc/Dst sw. Yes
AFC Yes
St/Mono sw. Yes
Dig. readout Yes
Pushbuttons Yes
Features Includes preamp; designed for use with outboard power amplifier; less than $0.07 \%$ wow and flutter; dlgital clock/calendar; Sendust alloy heads; full auto reverse at either end of tape

## FT-1670 Radio/Tape Player

Price $\$ 299.95$
Dimensions $3 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$
$\begin{array}{ll}\text { Mounting } & \text { In dash } \\ \text { Format } & \text { Cassette }\end{array}$
Auto reverse No
Fast-forward Yes
Rewind Yes
R/P resp. $\quad 30 \mathrm{~Hz}$ to $16 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
S/N $\quad 45 \mathrm{~dB}$ (w/o NR)
Output $\quad 14$ watts ( 11.5 dBW ) per channel continous into 4 or 8 ohms from 30 Hz to 16 kHz with no more than $3 \%$ THD
RADIO
Format Stereo

| FM sens. | 1 microvolt for 50 dB quieting |
| :--- | :--- |
| Selectivity | 60 dB |
| Loc/Dst Sw. | Yes |
| AFC | Yes |
| Pushbuttons | Yes (electronic touch-tune) |
| Features | Remote scanner; LED digital dis- |
| play; woofer and tweeter level controls |  |

FT-690 Radio/Tape Player
Price $\$ 249.95$
Dimensions $3 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse No
Fast-forward Yes

| S/N | 45 dB (w/o NR) |
| :--- | :--- |
| Output | 4 watts ( 6 dBW ) per channel conti- |
|  | nous into 4 or 8 ohms from 50 Hz <br> to 12 kHz with no more than $3 \%$ |
|  | THD |
| RADIO |  |
| Format | Stereo |
| FM sens. | 1 microvolt for 50 dB quieting |
| Selectivity | 60 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| Pushbuttons | Yes (electronic soft-touch with |
|  | memory) |

Features Auto eject; separate woofer and tweeter controls; LED digital display; remote scanner

| FT-1490-2 | Radio/Tape Player |
| :---: | :---: |
| Price | \$239.95 |
| Dimensions | $3 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Bass; treble |
| Noise red. | Dolby |
| R/P resp. | 40 Hz to $19 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (with metal tape) |
| S/N | $62 \mathrm{~dB}(\mathrm{w} / \mathrm{NR})$ |
| THD | 1\% |
| Output | 11 watts ( 10.5 dBW ) per channel continuous into 4 or 8 ohms from 40 Hz to 19 kHz with no more than $1 \%$ THD (woofer) |
| RADIO |  |
| Format | Stereo |
| FM sens. | 2 microvolts for 17.3 dB quieting |
| Selectivity | 60 dB |
| Loc/Dst sw. | Yes |
| Features | Biamp capability; PLL MPX de- |
| coder; line level output jack for external amp; head |  |
| switch for CrO | 2, FeCr , or metal tape |


| FT-646 Radio/Tape Player |  |
| :--- | :--- |
| Price | $\$ 219.95$ |
| Dimensions | $2 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes |
| Rewind | Yes |
| Noise red. | Dolby |
| S/N | 62 dB (w/o NR) |
| Output | 4 watts $(6 \mathrm{dBW})$ per channel con- |
|  | tinuous into 4 ohms from 40 Hz to |
|  | 19 kHz with no more than $0.08 \%$ |
|  | THD |

RADIO
$\begin{array}{ll}\text { Format } & \text { Stereo } \\ \text { FM sens. } & 1.5 \text { microvolts for } 14.8 \mathrm{~dB} \text { quieting }\end{array}$ Selectivity 60 dB
Loc/Dst sw. Yes
AFC Yes
Features Sendust alloy heads; RCA line output jacks for plugging in outboard power amplifier; FM tuner with dual gate MOSFET FET front-end and FET mixer stages; ceramic IF filters

FT-489 Radio/Tape Player
Price $\$ 189.95$
Dimensions $2 H \times 7 W \times 6 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse Yes
Fast-forward Yes
Rewind Yes
S/N $\quad 45 \mathrm{~dB}$ (w/o NR)
Output $\quad 4$ watts $(6 \mathrm{dBW})$ per channel continuous into 4 or 8 ohms from 50 Hz to 12 kHz with no more than $3 \%$ THD

## RADIO

Format Stereo
FM sens. 1 microvolt for 50 dB quieting
Selectivity 60 dB
Loc/Dstsw. Yes
AFC Yes
Pushbuttons Yes
Features Wow and flutter 3\%
FT-645 Radio/Tape Player
Price $\$ 179.95$
Dimensions $2 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse Yes

| Fast-fórward | Yes |
| :---: | :---: |
| Rewind | Yes |
| Controls | Tone; balance; fader |
| S/N | 50 dB (w/NR) |
| THD | 5\% |
| Output | 4.5 watts ( 6.5 dBW ) per channel continuous into 4 ohms from 80 Hz to 22 kHz with no more than $5 \%$ THD |
| RADIO |  |
| Selectivity | 50 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | Yes, with clock |
| Features dicator; AM/F | Tape play and FM stereo LED in M pushbutton selector |
| FT-874 Radio/Tape Player |  |
| Price | \$160 |
| Dimensions | $3 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$ |
| Mounting | In dash |
| Format | 8-track |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Bass; treble |
| R/P resp. | 50 Hz to $10 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| S/N | 45 dB (w/o NR) |
| Output | 8 watts ( 9 dBW) per channel |
| RADIO |  |
| Format | Stereo |
| FM sens. | 1.5 microvolts for 50 dB quieting |
| Selectivity | 55 dB |
| Loc/Dst sw. | No |
| AFC | Yes |
| Pushbuttons | Yes |
| Features | Wow and flutter 3\% |


| FT-1405 R | Radio/Tape Player |
| :---: | :---: |
| Price | \$160 |
| Dimensions | $21 / 4 \mathrm{H} \times 631 / \mathrm{W} \times 67 / 8 \mathrm{D}$ |
| Mounting | Under dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Bass; treble |
| R/P resp. | 30 Hz to $16 \mathrm{khz}, \pm 3 \mathrm{~dB}$ |
| S/N | 45 dB (w/o NR) |
| Output | 12 watts ( 10.75 dBW ) per channel (woofer); 2 watts ( 3 dBW ) per channel (tweeter) |
| RADIO |  |
| Format | Stereo FM only |
| FM sens. | 1.5 microvolts for 50 dB quieting |
| Selectivity | 55 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| Features | Separate controls for woofer and |
| iweeter for use | ee in biamp connection |

## FT-1400 Radio/Tape Player

$\begin{array}{ll}\text { Price } & \$ 139.95 \\ \text { Dimensions } & 21 / 2 \mathrm{H} \times 7 \mathrm{~W} \times 7 \mathrm{D}\end{array}$
Mounting Under dash
Format Cassette
Auto reverse $Y$ Yes
Fast-forward Yes
Rewind Yes
THD ref. IvI. Woofer, 14W per channel; tweeter 2.7W per channel

Output $\quad 33$ watts ( 15.25 dBW ) per channel continuous into 4 or 8 ohms from 30 Hz to 16 kHz with no more than 5\% THD
RADIO
Format Stereo
Loc/Dst sw. No
St/Mono sw. Yes
Dig. readout No
Features Built-in biamp; auto reverse; slide
in/slide out bracket; master volume control

## FT-644 Radio/Tape Player <br> Price $\quad \$ 139.95$


Motorola TC-890AX

Remetic 12-1887
Phoneer KP.8500


Senyo FT-9500


Ten GL-7851

| Dimensions | $2 \mathrm{H} \times 7 \mathrm{~W} \times 6 \mathrm{D}$ |
| :--- | :--- |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes (locking) |
| Rewind | Yes (locking) |
| Controls | Balance; tone |
| R/P resp. | 50 Hz to 12 kHz |
| S/N | $55 \mathrm{~dB}(\mathrm{w} / \mathrm{NR})$ |
| Output | $4.5 \mathrm{watts}(6.5 \mathrm{dBW}$ ) per channel |
|  | continuous into 4 ohms from 80 Hz |
|  | to 22 kHz |
| RADIO |  |
| Format | Stereo |
| Selectivity | 50 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | No |
| Pushbuttons | FM |
| Features | Full auto program repeat |

FT-9500 Radio/Tape Player
Dimensions $21 / 4 \mathrm{H} \times 8 \mathrm{~W} \times 7 \mathrm{D}$
Mounting Under dash
Format 8-track
Auto reverse Yes
Fast-forward Yes
Rewind Yes
Controls Bass (slide)
R/P resp. $\quad 30 \mathrm{~Hz}$ to 12 kHz
Sut
11 watts ( 10.5 dBW ) per channel continuous into 4 ohms from 80 Hz to 25 kHz
RADIO
Format Stereo
FM sens. $\quad 2.5$ microvolts for 19.2 dB quieting
Selectivity 50 dB
Loc/Dst sw. Yes
AFC Yes
Features Wow and flutter 5\%
FT-940 Radio/Tape Player
Price $\$ 120$
Dimensions $2 \mathrm{H} \times 7 \mathrm{~W} \times 5 \mathrm{D}$
Mounting In dash
Format 8 -track
Auto reverse No
S/N $\quad 50 \mathrm{~dB}$ (w/o NR)
$\begin{array}{ll}\text { Output } & 5 \text { watts ( } 7 \mathrm{dBW} \text { ) per channel con- } \\ \text { tinuous into } 4 \mathrm{ohms} \text { from } 70 \mathrm{~Hz} \text { to }\end{array}$ 20 kHz with no more than $5 \%$ THD
RADIO
Format Stereo
FM sens. $\quad 3$ microvolts for 20.8 dB quieting
Selectivity 45 dB
Loc/Dst sw. Yes
AFC Yes
Features Wow and flutter 1.0\%

## Models also available <br> FT-2200 Radio/Tape Player.

\$329.95; FT-1495 Radio/Tape Player, \$239.95; FT-1877 Radio/Tape Player, \$199.95; FT-418 Radio/Tape Player, \$169.95; FT. 482 Radio/Tape Player, \$159.95; FT-642 Radio/Tape Player, \$129.95; FT-407 Radio/Tape Player, $\$ 79.95$

## SHARP

Sharp Electronics Corp.
10 Keystone Place
Paramus, N.J. 07652
RG-3550 Radio/Tape Player
Price $\$ 219$
Dimensions $2 H \times 91 / 5 W \times 51 / 2 D$
Mounting in dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind Yes
R/P resp. $\quad 50 \mathrm{~Hz}$ to $10 \mathrm{kHz},-6 \mathrm{~dB}$
S/N $\quad 50 \mathrm{~dB}$ (w/o NR)
S/N ref. Ivl. $250 \mathrm{nWb} / \mathrm{m}$
Output $\quad 5$ watts ( 7 dBW ) per channel continuous into 4 ohms with no more than 10\% THD
RADIO
Format Stereo
FM sens. $\quad 3$ microvolts for 30 dB quieting
Loc/Dst sw. Yes
AFC No
St/Mono sw. No
Dig. readout No
Features APSS (auto program search system); fader control

RG-3400 Radio/Tape Player
$\begin{array}{ll}\text { Price } & \$ 189 \\ \text { Dimensions } & 2 H \times 91 / 5 \mathrm{~W} \times 51 / 2 \mathrm{D}\end{array}$
Mounting In dash
Format Cassette
Auto reverse Yes
Fast-forward Yes
Rewind No
R/P resp. $\quad 50 \mathrm{~Hz}$ to $10 \mathrm{kHz},-6 \mathrm{~dB}$
S/N $\quad 50 \mathrm{~dB}$ (w/o NR)
S/N ref. Ivi. $250 \mathrm{nWb} / \mathrm{m}$
Output $\quad 5$ watts ( 7 dBW ) per channel continuous into 4 ohms with no more than $10 \%$ THD
RADIO
Format Stereo
FM sens. $\quad 3$ microvolts for 30 dB quieting
Loc/Dst sw. Yes
AFC No
St/Mono sw. No
Dig. readout No
Features Fader control
RG-3200 Radio/Tape Player

Dimensions $2 \mathrm{H} \times 91 / 5 \mathrm{~W} \times 51 / 2 \mathrm{D}$
Mounting In dash

Format Cassette
Auto reverse No
Fast-forward Yes
Rewind Yes
Controls Fader
R/P resp. $\quad 50 \mathrm{~Hz}$ to $10 \mathrm{kHz},-6 \mathrm{~dB}$
Output $\quad 5$ watts ( 7 dBW ) per channel continuous into 4 ohms with no more than $10 \%$ THD
RADIO
Formet Stereo
FM sens. $\quad 3$ microvolts for 30 dB quieting
Loc/Dst sw. Yes
AFC No
St/Mono sw. No
Dig. readout No
Features Auto eject

## SPARKOMATIC

Sparkomatic
Rte. 6 and 209
Mulford, Pa. 18337
SR-3400 Radio/Tape Player
Price $\$ 299.95$
Dimensions $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 51 / 2 \mathrm{D}$
Mounling In dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind Yes
Controls Bass; treble
S/N $\quad 40 \mathrm{~dB}$ (w/o NR)
Output

RADIO
Format Stereo
FM sens. 1 microvolt for 50 dB quieting
Selecilivity 60 dB
Loc/Dst sw. Yes
AFC Yes
St/Mono sw. Yes
Dig. readout Yes
Features Separate balance and fader; electronic controls for loudness, FM muting, high-filter cut; clock with elapsed time and date; digital display

| SR-2400 Radio/Tape Player |  |
| :--- | :--- |
| Price | $\$ 269.95$ |
| Dimensions | $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 51 / 3 \mathrm{D}$ |
| Mounting | In dash |
| Format | 8 -track |
| Auto reverse | No |
| Fast-forward | No |
| Rewind | No |
| Controls | Bass; treble |
| S/N | $40 \mathrm{~dB}(\mathrm{~W} / 0 \mathrm{NR})$ |
| Output | 20 watts (13 dBW) per channel |

continuous into 4 ohms from 40 Hz to 15 kHz with no more than $1 \%$ THD

## RADIO

Format
Stereo
FM sens. 1 microvolt for 50 dB quieting
Selectivity 60 dB
Loc/Dst.sw. Yes
AFC Yos
St/Mono sw. Yes
Dig. readout Yes
Features Separate balance and fader; electronic controls for loudness, FM muting, high-filter cut; clock with elapsed time and date; digital display

## SR-340 Radio/Tape Player

Dimensions $\quad 13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 51 / 2 \mathrm{D}$
Mounting In dash
Format Casssette
Auto reverse No
Fast-forward Yes
Rewind Yes
Controls Bass; treble
$\mathrm{S} / \mathrm{N} \quad 40 \mathrm{~dB}$ ( $w / 0 \mathrm{NR}$ )
Output $\quad 5$ watts ( 7 dBW ) per channet continuous into 4 ohms from 40 Hz to 15 kHz with no more than $1 \%$ THD
RADIO
Format Stereo
FM sens. $\quad 1$ microvolt for 50 dB quieting
Selectivity 60 dB
Loc/Dst sw. Yes
AFC Yes
St/Mono sw. Yes
Dig. readout Yes
Features Separate balance and fader; electronic controls for loudness, FM muting, high-filter cut; clock with elapsed time and date; digital display

| SR-240 R <br> Price | Radio/Tape Player $\$ 239.95$ |
| :---: | :---: |
| Dimenslons | $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 51 / 8 \mathrm{D}$ |
| Mounting | In dash |
| Format | 8 -track |
| Auto reverse | No |
| Fast-forward | No |
| Rewind | No |
| Controls | Bass; treble |
| S/N | 40 dB (w/o NR) |
| Output | 5 watts ( 7 dBW ) per channel continuous into 4 ohms from 40 Hz to 15 kHz with no more than $1 \%$ THD |
| Radio |  |
| Format | Stereo |
| FM sens. | 1 microvolt for 50 dB quieting |
| Selectivity | 60 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | Yes |
| Features tronic controls cut; clock with play | Separate balance and fader; elecfor loudness, FM muting, high-filter elapsed time and date; digital dis- |

SR-330 Auto Reverse
Radio/Tape Player
Price $\$ 229.95$
Dimensions $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 5 \frac{1}{2} \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse Yes
Fast-forward Yes
Rewind Yes
Controls Bass; treble
S/N 40 dB (w/o NR)
Output $\quad 5$ watts ( 7 dBW ) per channel continuous into 4 ohms from 40 Hz to
15 kHz with no more than $1 \%$ THD
RADIO
Format Stereo
FM sens. 1 microvolt for 50 dB quieting
Selectivity 60 dB
Loc/Dst sw. Yes

St/Mono sw.
Dig. readout No
Features Separate balance and fader; electronic controls for loudness, FM muting, high-filter cut

| SR-2100 | Radio/Tape Player |
| :---: | :---: |
| Price | \$219.95 |
| Dimensions | $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 51 / 8 \mathrm{D}$ |
| Mounting | In dash |
| Format | 8 -track |
| Auto reverse | No |
| Fast-forward | No |
| Rewind | No |
| Controls | Bass; treble |
| S/N | 40 dB ( $\mathrm{w} / \mathrm{o}$ NR) |
| Output | 20 watts ( 13 dBW ) per channel continuous into 4 ohms from 20 Hz to 20 kHz with no more than $1 \%$ THD |
| Radio |  |
| Format | Stereo |
| FM sens. | 1 microvolt for 50 dB quieting |
| Selectivity | 60 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | No |
| tronic controls for loudness, FM muting, high-filter |  |
|  |  |


\section*{SR-310 Radio/Tape Player <br> Price $\$ 189.95$ <br> Dimensions $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 51 / 2 \mathrm{D}$ <br> Mounting In dash <br> Format Cassette <br> Auto reverse No <br> Fast-forward Yes <br> | Rewind | Yes |
| :--- | :--- |
| Controls | Bass; treble | <br> S/N $\quad 40 \mathrm{~dB}$ (w/o NR) <br> Output $\quad 5$ watts ( 7 dBW ) per channel continuous into 4 ohms from 40 Hz to 15 kHz with no more than $1 \%$ THD <br> RADIO <br> Format Stero <br> FM sens. $\quad 1$ microvolt for 50 dB quieting <br> Selectivity 60 dB <br> Loc/Dst sw. Yes <br> AFC Yes <br> St/Mono sw. Yes <br> Dig. readout No <br> Features Separate balance and fader; elec-} tronic controls for loudness, FM muting, high-filter cut


| SR-302 Radio/Tape Player |  |
| :---: | :---: |
| Price | \$125 |
| Dimensions | $13 / 4 \mathrm{H} \times 611 / 16 \mathrm{~W} \times 413 / 16 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | No |
| Fast-forward | Yes |
| Rewind | No |
| Controls | Tone |
| S/N | 38 dB (w/o NR) |
| Output | 4 watts ( 6 dBW ) per channel continuous into 4 ohms from 60 Hz to 12 kHz with no more than $1 \%$ THD |
| RADIO |  |
| Format | Stereo |
| FM sens. | 7 microvolts for 50 dB quieting |
| Selectivity | 55 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | No |
| Pushbuttons | 5 AM or 5 FM |
| Features | Separate balance and fader |
| SR-202 Radio/Tape Player |  |
| Price | \$125 |
| Dimensions | $13 / 4 \mathrm{H} \times 611 / 16 \mathrm{~W} \times 413 / 16 \mathrm{D}$ |
| Mounting | In dash |
| Format | 8-track |

Auto reverse No
Fast-forward No
$\begin{array}{ll}\text { Rewind } & \text { No } \\ \text { Controls } & \text { Tone }\end{array}$
$\mathrm{S} / \mathrm{N} \quad 38 \mathrm{~dB}$ (w/o NR)
Output $\quad 4$ watts ( 6 dBW ) per channel continuous into 4 ohms from 60 Hz to 12 kHz with no more than $1 \%$ THD
RADIO
Format Stereo
FM sens. $\quad 7$ microvolts for 50 dB quieting
Selectivity 55 dB
Loc/Dst sw. Yes
AFC Yes
St/Mono sw. Yes
Dig. readout No
Pushbuttons 5 AM/5 FM
Features Separate balance and fader
SR-201 Radio/Tape Player
$\begin{array}{ll}\text { Price } & \$ 119.95 \\ \text { Dimensions } & 13 / 4 \mathrm{H} \times 611 / 16 \mathrm{~W} \times 413 / 16 \mathrm{D}\end{array}$
Mounting In dash
Format 8-track
Auto reverse No
Fast-forward No
Rewind No
Controls Tone
S/N $\quad 38 \mathrm{~dB}$ (w/o NR)
Output $\quad 4$ watts ( 6 dBW ) per channel continuous into 4 ohms from 60 Hz to 12 kHz with no more than $1 \%$ THD
RADIO
Format Stereo
FM sens. $\quad 7$ microvolts for 50 dB quieting
Selectivity 55 dB
Loc/Dst sw. Yes
AFC Yes
St/Mono sw. Yes
Dig. readout No
Features Separate balance and fader; FM
muting switch

## SR-300 Radio/Tape Player

Price $\$ 89.95$
Dimensions $13 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 411 / 16 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind No
Controls Tone
S/N $\quad 35 \mathrm{~dB}$ (w/o NR)
Output $\quad 45$ watts ( 6.5 dBW ) per channel continuous into 8 ohms from 75 Hz to 10 kHz with no more than $10 \%$ THD
RADIO
Format Stereo
FM sens. $\quad 8$ microvolts for 50 dB quieting
Selectivity 50 dB
Loc/Dst sw. Yes
AFC Yes
St/Mono sw. No
Dig. readout No

## SR-120 Radio

| Price | $\$ 79.95$ |
| :--- | :--- |
| Dimensions | $13 / \mathrm{H} \times 7 \mathrm{~W} \times 4 \mathrm{H} / 1 / 16 \mathrm{D}$ |
| Mounting | In dash |
| Controls | Tone |
| Output | 45 watts ( 6.5 dBW ) per channel |
|  | continuous into 8 ohms from 75 Hz |
|  | to 10 kHz with no more than $10 \%$ |
|  | THD |
| Format | Stereo |
| FM sens. | 8 microvolts for 50 dB quieting |
| Selectivity | 50 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | No |
| Pushbuttons | 5 AM or 5 FM (number of each) |

## SS-100 Radio/Tape Player <br> Price $\$ 29.95$ <br> Dimenslons $\quad 21 / 4 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 73 / 4 \mathrm{D}$

| Mounting | Under dash |
| :--- | :--- |
| Format | 8 -track |
| Auto reverse | No |
| Fast-forward | No |
| Rewind | No |
| Controls | Tone |
| S/N | $30 \mathrm{~dB}(w / 0 \mathrm{NR})$ |
| Output | 3 watts (4.75 dBW) per channel |
|  | continuous into 8 ohms from 100 |
|  | Hz to 8 kHz with no more than $10 \%$ |
|  | THD |
|  |  |
| RADIO | Slide controls for volume, balance, |
| Features |  |

## Models also available

SR-3300 Auto Reverse Radio/Tape Player, \$259.95; SR-3100 Radio/Tape Player, \$229.95; SR210 Radio/Tape Player, \$179.95; SR-301 Radio/Tape Player, \$119.95; SR-200 Radio/Tape Player, \$89.95; SS-200 Radio/Tape Player, \$29.95

TEN
Fujitsu Ten Corp. of America 19281 Pacific Gateway Drive Torrance, Calif. 90502

| GP-7881 | Radio/Tape Player |
| :--- | :--- |
| Price | $\$ 299.95$ |
| Dimensions | $225 / 32 \mathrm{H} \times 71 / 16 \mathrm{~W} \times 55 / 16 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes |
| Rewind | Yes |
| Controls | Bass; treble |
| Noise red. | Dolby |
| R/P resp. | 40 Hz to $14 \mathrm{kHz}, \pm 6 \mathrm{~dB}$ |
| S/N | 65 dB (w/NR)/55 dB (w/o NR) |
| S/N ref. IvI. | 1 W |
| THD | $0.4 \%$ |
| THD ref. Ivl. | 0.5 W |
| Output | 4 watts ( 6 dBW ) per channel con- |
|  | tinuous into 4 ohms from 40 Hz to |
|  | 14 kHz with no more than $10 \%$ |
|  | THD |
| RADIO |  |
| Format | Stereo |
| FM sens. | 8 microvolts for 50 dB quieting |
| Selectivity | 30 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes (auto) |
| St/Mono Sw . | Yes (auto) |
| Dig. readout | No |
| Pushbuttons | 5 AM; 5 FM (number of each) |
| Features | Built-in noise blanker |


| GL-7851 | Radio/Tape Player |
| :--- | :--- |
| Price | $\$ 249.95$ |
| Dimensions | $55 / 16 \mathrm{H} \times 71 / 16 \mathrm{~W} \times 23 / 4 \mathrm{D}$ |
| Mounting | In dash |
| Format | 8 -track |
| Auto reverse | No |
| Fast-forward | No |
| Rewind | No |
| Controls | Bass; treble |
| R/P resp. | 40 Hz to $12 \mathrm{kHz}, \pm 6 \mathrm{~dB}$ |
| S/N | 55 dB (w/o NR) |
| S/N ref. Ivi. | 0.5 W |
| THD | $0.7 \%$ |
| THD ref. IvI. | 0.5 W |
| Output | 4 watts ( 6 dBW ) per channel con- |
|  | tinuous into 4 ohms from 80 Hz to |
|  | 12 kHz with no more than $10 \%$ |
|  | THO |

RADIO

| Format | Quad |
| :--- | :--- |
| FM sens. | 8 microvolts for 50 dB quieting |
| Selectivity | 40 dB |


| Loc/Dst sw. | Yes |
| :--- | :--- |
| AFC | Yes (auto) |
| St/Mono sw. | Yes (auto) |
| Dig. readout | No |
| Pushbuttons | 5 AM/5 FM |


| DP-7872 | Radio/Tape Player |
| :---: | :---: |
| Price | \$199.95 |
| Dimensions | $123 / 32 \mathrm{H} \times 71 / 6 \mathrm{~W} \times 511 / 32 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes |
| Rewind | Yes |
| R/P resp. | 40 Hz to $12 \mathrm{kHz}, \pm 6 \mathrm{~dB}$ |
| S/N | 52 dB (w/o NR) |
| S/N ref. Ivi. | 0.5W |
| THD | 1.4\% |
| THD ref. Ivt. | 0.5W |
| Output | 4 watts ( 6 dBW ) per channel continuous into 4 ohms from 80 Hz to 12 kHz with no more than $10 \%$ THD |
| RADIO |  |
| Format | Stereo |
| FM sens. | 10 mlcrovolts for 50 dB quieting |
| Selectivity | 54 dB |
| Loc/Dst sw. | Yes (auto) |
| AFC | Yes (auto) |
| St/Mono sw. | Yes |
| Dig. readout | No |
| Features | Built-in noise blanker |


| DL-7841 | Radio/Tape Player |
| :--- | :--- |
| Price | $\$ 129.95$ |
| Dimensions | $131 / 32 \mathrm{H} \times 63 / 4 \mathrm{~W} \times 55 / 16 \mathrm{D}$ |
| Mounting | in dash |
| Format | 8 -track |
| Auto reverse | No |
| Fast-forward | No |
| Rewind | No |
| R/P resp. | 40 Hz to $12 \mathrm{kHz}, \pm 6 \mathrm{~dB}$ |
| S/N | $50 \mathrm{~dB}(w / 0 \mathrm{NR})$ |
| S/N ref. Ivi. | 0.5 W |
| THD | $0.7 \%$ |
| THD ref. Ivi. | 0.5 W |
| Output | $4 \mathrm{watts}(6 \mathrm{dBW})$ per channel con- |
|  | tinuous into 4 ohms from 80 Hz to |
|  | 12 kHz with no more than $10 \%$ |
|  | THD |
| RADIO |  |
| Format | Stereo |
| FM sens. | 10 microvolts for 50 dB quieting |
| Selectivity | 30 dB |
| Loc/Dst sw. | Yes (auto) |
| AFC | Yes (auto) |
| St/Mono sw. Yes (auto) |  |
| Dig. readout | No |
| Features | Built-in noise blanker |

## TENNA

Tenna Corp.

## 19201 Cranwood Parkway

 Cleveland, Ohio 44128C-3010DMX Radio/Tape Player

## Price $\$ 279.95$

Dimensions $23 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 5 \mathrm{D}$
Mounting In dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind Yes
R/P resp. $\quad 63 \mathrm{~Hz}$ to $12 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (with stan-
dard test tape)
S/N 50 dB (w/o NR)
S/N ref. Ivl. 1 W
THD $1 \%$
THD ref. IvI. iW
Output 4 watts ( 6 dBW ) per channel continuous into 4 ohms from 100 Hz to 12 kHz with no more than $5 \%$ THD

RADIO
Format Stereo

| FM sens. | 4 microvolfs for 50 dB quieting |
| :--- | :--- |
| Selectivity | 65 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | Yes |
| Features | Wow and flutter $0.15 \%$ (WRMS); |
| (low |  |

clock

## T-3009DMX Radio/Tape Player <br> \section*{Price $\$ 269.95$}

| Dimersions | $21 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 5 \mathrm{D}$ |
| :---: | :---: |
| Mounting | In dash |
| Format | 8 -track |
| R/P resp. | 63 Hz to $12 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (with stan dard test tape) |
| S/N | 50 dB (w/o NR) |
| S/N ref. IvI. | 1W |
| THD | 1\% |
| THD ref. Ivt. | 1W |
| Output | 4 watts ( 6 dBW ) per channel con tinuous into 4 ohms from 100 Hz to |
| RADICI | 12 kHz with no more than 5\% THD |
| Format | Stereo |
| FM sens. | 4 microvolts for 50 dB quieting |
| Selectivity | 65 dB |
| Loc/Dst sw. | Yes |
| AFC | Yes |
| St/Mono sw. | Yes |
| Dig. readout | Yes |
| Features | Wow and flutter 0.20\% (WRMS); |


| C-3039AR | Radio/Tape Player |
| :---: | :---: |
| Price | \$189.95 |
| Dimensions | $23 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 5 \mathrm{D}$ |
| Mounting | In dash |
| Format | Cassette |
| Auto reverse | Yes |
| Fast-forward | Yes |
| Rewind | Yes |
| R/P resp. | 40 Hz to $12 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (with standard test tape) |
| S/N | 50 dB (w/o NR) |
| S/N ref. Ivi. | 1W |
| THD | 1\% |
| THD ref. IvI. | 1W |
| Output | 4 watts ( 6 dBW ) per channel continuous into 4 ohms from 100 Hz to 12 kHz with no more than $5 \%$ THD |
| RADIO |  |
| Format | Stereo |
| FM sens. | 4 microvolts for 50 dB quieting |
| Selectivity | 65 dB |
| Loc/Dst Sw. | Yes |
| AFC | Yes |
| St/Mono Sw. | Yes |
| Features put | Wow and flutter 1\%; preamp out- |

## C-3006HP Tape Player

Price $\$ 109.95$
Dimensions $21 / 2 \mathrm{H} \times 61 / 2 \mathrm{~W} \times 7 \mathrm{D}$
Mounting Under dash
Format Cassette
Auto reverse No
Fast-forward Yes
Rewind No
Contrals Bass; treble
R/P resp. $\quad 70 \mathrm{~Hz}$ to $12 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ (with standard test tape)
S/N $\quad 50 \mathrm{~dB}(w / 0 \mathrm{NR})$
S/N ref. IvI. 1W
THD $0.5 \%$
THD ref. IvI. 1W
Output $\quad 12$ watts ( $10.75 \cdot \mathrm{dBW}$ ) per channel continuous into 4 ohms from 100 Hz to 12 kHz with no more than $1 \%$ THD
RADIO
Features Wow and flutter $0.25 \%$ (WRMS)
Models also available

# Amplifiers \& Power Boosters 

## ADS

Analog \& Digital Systems, Inc.
One Progress Way
Wilmington, Mass. 01887
Power Plate 100

| Price | $\$ 295$ |
| :--- | :--- |


| Dimensions | $115 / 16 \mathrm{H} \times 121 / 4 \mathrm{~W} \times 6 \% \mathrm{D}$ |
| :--- | :--- |
| Mounting | Under dash |
| Output | 50 watts (17 dBW) per channel |
|  | continuous into 4 ohms from 20 Hz |
|  | to 20 kHz with no more than $0.08 \%$ |
|  | THD |


| Features $\quad$ Built-in preamplifier, equalizer and |
| :--- | :--- |
| speaker and amplifier protection; remote power |
| "on"; slimline design for easy mounting |

AFCO
AFCO electronics
471 Roland Way
Oakland, Calif. 94621

PB-30E Graphic
Equalizer/Amplifier
Price $\$ 99.95$
Dimensions $13 / 4 \mathrm{H} \times 61 / 2 \mathrm{~W} \times 511 / 12 \mathrm{D}$
Mounting In dash/under dash
Output
25 watts ( 14 dBW ) per channel continuous into 4 ohms from 30 Hz to 30 kHz with no more than $1 \%$ THD
Features Fader control; power indicator light; equalizer adjustable at five frequencies

ALPINE
Alpine Electronics of America, Inc.
3102 Kashiwa St.
Torrance, Calif. 90505

| 3002 Power Amplifier |  |
| :--- | :--- |
| Price | $\$ 239.95$ |
| Dimenslons | $227 / 32 \mathrm{H} \times 8 \mathrm{~W} \times 73 / 4 \mathrm{D}$ |
| Mounting | Under dash |
| Output | 50 wats ( 17 dBW ) per channel |
|  | continuous into 4 ohms from 10 Hz |
|  | to 60 kHz with no more than $0.2 \%$ |
|  | THD |

## ALTUS

Altus Corp.
6 Main St.
Melrose, Mass. 02176

| Dimensions | $1 / 8 \mathrm{H} \times 61 / 2 \mathrm{~W} \times 5 \mathrm{D}$ |
| :--- | :--- |
| Mounting | Under dash |
| Output | 20 watts ( 13 dBW ) per channel |
|  | continuous into 4 ohms from 30 Hz <br>  <br>  <br>  <br> to 20 kHz with no more than $10 \%$ <br> FeaturesTHD <br> Five-band equalizer; 4-way fader | control

PSL-3732 Power Amplifier
Price $\$ 44.95$
Dimensions $\quad 13 / 4 \mathrm{H} \times 5 \mathrm{~W} \times 4 \mathrm{D}$
Mounting
Output

## Under dash

20 watts ( 13 dBW ) per channel continuous into 4 ohms from 30 Hz to 20 kHz with no more than $10 \%$ THD

## AUDIOMOBILE

Div. Advent Corp.

3221 W. MacArthur Blvd.
Santa Ana, Calif. 92704

SA-2000
Price $\$ 399.95$
Dimensions $41 / 4 \mathrm{H} \times 73 / 4 \mathrm{~W} \times 75 / 8 \mathrm{D}$
Output $\quad 100$ watts ( 20 dBW ) per channel continuous into 4 ohms from 20 Hz to 20 kHz with no more than $0.2 \%$ THD
Features Continuous, regulated power supply of 560 W ; 2 -second turn-on delay; shielded magnetics for low RFI; includes 24' 8 gauge power wire and circuit breaker; low and high impedance inputs

SA-1000

| Price | N/A |
| :--- | :--- |
| Dimensions | $41 / 4 \mathrm{H} \times 73 / \mathrm{WW} \times 75 / \mathrm{DD}$ |
| Output | 50 watts (17 dBW) per channel |
|  | continuous Into 4 ohms from 20 Hz |
|  | to 20 kHz with no more than $0.2 \%$ |
|  | THD |
|  |  |
| Features | Two-second turn-on delay; |
| shielded magnetics; 375 W fully regulated switch- |  |
| ing power supply; high and low impedance Inputs; |  |
| includes 12 gauge power wire and circult breaker |  |

SA-400
Price $\$ 99.95$
Dimensions $2 \mathrm{H} \times 43 / 4 \mathrm{~W} \times 51 / 2 \mathrm{D}$
Output 20 watts ( 16 dBW ) per channe continuous into 4 ohms from 20 Hz to 20 kHz with no more than $0.25 \%$ THD
Features THD and IM typically less than $0.05 \%$; balanced line, differential input for noise reduction; 28 transistor bridged, DC-coupled design

## AUDIOVOX

Audiovox Corp.
150 Marcus Blvd.
Hauppauge, N.Y. 11787

HI-COMP HCB-860

## Price $\$ 200$

Dimensions $31 / 2 \mathrm{H} \times 7 \mathrm{~W} \times 81 / 4 \mathrm{D}$
Mounting Under dash
Output 65 watts ( 18 dBW ) per channel continuous into 4 ohms from 15 Hz to 20 kHz with no more than $0.3 \%$ THD
Features Direct-coupled complementary OTL circuitry; high and low level Inputs; response 15 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$

| HI-COMP | HCB-830 |
| :--- | :--- |
| Price | $\$ 200$ |
| Dimensions | $31 / 2 \mathrm{H} \times 7 \mathrm{~W} \times 81 / 4 \mathrm{D}$ |
| Mounting | Under dash |
| Output | 30 watts $(14.75 \mathrm{dBW})$ per channel |
|  | continuous into 4 ohms from 15 Hz <br> to 20 kHz with no more than $0.3 \%$ |
|  | THD |
| Features | Direct-coupled complementary | OTL circuitry; 4 separate 30 W amps; high and low level inputs; response 15 Hz to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$

## HI-COMP HCE-750

## Semi-Parametric Equalizer

Price $\$ 150$

Dimensions $\quad 21 / 2 \mathrm{H} \times 61 / 4 \mathrm{~W} \times 41 / 4 \mathrm{D}$
Mounting Under dash
Features Five-band semi-parametric equalizer (center frequency of each slide variable by 50 percent); high and low level inputs; biamp capability: ( 500 Hz and 2.5 kHz crossover)

| AMP-600 | Equalizer |
| :--- | :--- |
| Price | $\$ 110$ |
| Dimensions | $17 / \mathrm{H} \times 61 / 2 \mathrm{~W} \times 6 \mathrm{D}$ |
| Mounting | Under dash |
| Output | 30 watts $(14.75 \mathrm{dBW})$ per channel |
|  | continuous into 4 or 8 ohms |
| Features | Front to rear fader; 5 -band equal- |
| izer |  |

AMP-550 Amplifier/Equalizer
Price $\$ 72$
Dimensions $11 / 2 \mathrm{H} \times 4 \mathrm{~W} \times 5 \mathrm{D}$
Mounting Under dash
Output
25 watts (14 dBW) per channel continuous into 4 ohms
Features Five-band equalizer; 4-speaker output with fader control; on/off switch with illuminated indicator

## AMP-500

Price $\quad \$ 37.50$
Dimensions $\quad 11 / 2 \mathrm{H} \times 4 \mathrm{~W} \times 61 / 2 \mathrm{D}$
Mounting Under dash
Output 20 watts ( 13 dBW ) per channel continuous into 4 or 8 ohms
Features On/off switch; Indicator light

## AUTOTEK

Autotek Corp.
1447 N. Carolan Ave.
Burlingame, Calif. 94010

EQL-200 Graphic
Equalizer/Amplifier
Price $\quad \$ 109.95$
Dimenslons $2 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 7 \mathrm{D}$
Mounting Under dash
Output 20 watts (13 dBW) per channel continuous into 4 ohms from 50 Hz to 15 kHz with no more than $5 \%$ THD
Features LED peak-level indlcators; 5-band equalizer; front/rear fader

## BLAUPUNKT

Blaupunkt Car Radio Div. Robert Bosch Corp.
2800 South 25th Ave.
Broadview, III. 60153

BEA-200 Graphic
Equalizer/Amplifier
Pricé
$\$ 232.70$

| Dimensions | $13 / 5 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 51 / 2 \mathrm{D}$ |
| :--- | :--- |
| Mounting | Under dash |
| Output | 15 watts $(11.75 \mathrm{dBW})$ per channel |
|  | continuous into 4 ohms from 30 Hz |
|  | to 40 kHz with no more than $1.0 \%$ |
|  | THD |
| Features | Five-band equalizer front/rear | fader; tone-defeat switch; reverb unit with delay and gain controls

## BEA-100 Graphic

Equalizer/Amplifier
Price $\quad \$ 143.90$
Dimensions $13 / 5 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 51 / 2 \mathrm{D}$
Mounting Under dash
Output

|  |   <br>  to 40 kHz with no more than $1 \%$ <br> Features THD <br> Five-band equalizer; front-to-rear  |
| :--- | :--- |

fader control; tone-defeat switch

## BOMAN

Boman Industries
9300 Hall Road
Downey, Calif. 90241
EQA-60 Graphic
Equalizer/Amplifier
Price N/A
Dimensions $2 H \times 71 / 4 W \times 5 \% \mathrm{D}$
Mounting Under dash
Output $\quad 30$ watts ( 14.75 dBW ) per channel continuous into 4 ohms from 27 Hz to 20 kHz
Features Electronic reverb; 4-way fader control; power-output meter; 5-band equalization

EQA-30 Grapric
Equalizer/Amplifier
$\begin{array}{ll}\text { Price } & \text { N/A } \\ \text { Dimensions } & 2 H \times 65 / 8 W \times 57 / 6 \mathrm{D}\end{array}$
Mounting $\quad$ Under dash
Output $\quad 15$ watts ( $11,75 \mathrm{dBW}$ ) per channel continuous into 4 ohms from 27 Hz to 20 kHz
Features Power output meter; 5 -band equal-
ization; 4-way fader control

## EQA-25 Graphic

Equalizer/Amplifier
$\begin{array}{ll}\text { Price } & \text { N/A } \\ \text { Dimensions } & 15 / 6 \mathrm{H} \times 4 \mathrm{~W} \times 47 / 6 \mathrm{D}\end{array}$
Mounting Under dash
Output $\quad 15$ watts ( 11.75 dBW ) per channel continuous into 4 ohms from 20 Hz to 20 kHz
Features Three-band equalization

## BOSE

Bose Corp.
100 The Mountain Road
Framingham, Mass. 01701

## 1401 System

Price $\quad \$ 299.90$ (includes 4 speakers and booster/equalizer)
Dimensions $11 / 2 \mathrm{H} \times 10 \mathrm{~W} \times 41 / 2 \mathrm{D}$
Output $\quad 50$ watts ( 17 dBW ) per channel continuous into 0.45 ohms from 40 Hz to 17 kHz with no more than 0.09\% THD

Features $\quad 1 \mathrm{M} \mathrm{0.04} \mathrm{\%}$ (20W); response, 40 Hz to $17 \mathrm{kHz}, \pm 1 \mathrm{~dB} ; \mathrm{S} / \mathrm{N} 70 \mathrm{~dB}$ (IHF A-weighted re 1W); unit must be used with Bose speakers; complete system includes 2 Direct/Reflecting ${ }^{\text {a }}$ grilles, 2 accessory grilles, 4 drivers, and 100 -watt booster/equalizer with active electronic equalization

CAR-FI
Car-Fi International
152 West Cypress Ave. Burbank, Calif. 91502

EPA-7200
Price $\quad \$ 359.95$
Dimensions $31 / 2 \mathrm{H} \times 6 \mathrm{~W} \times 15 \mathrm{D}$
Mounting Trunk
Output $\quad 100$ watts ( 20 dBW ) per channel continuous into $1,2,4$ or 8 ohms from 20 Hz to 20 kHz with no more than 0.5\% THD
Features Selectable impedance at output; reverse polarity; short circuit and overload protected

## EQL-5500

Preamplifier/Equalizer
Price $\$ 299.95$
Dimensions $2 \mathrm{H} \times 63 / 10 \mathrm{~W} \times 41 / 5 \mathrm{D}$
Mounting In dash/under dash
Features Includes 5-band equalizer; 50 LED power display; peak-level indicator; 4-way balanc-
ing; mute; 2 inputs; equalization defeat; electronic crossover

## EPX-3100 Amplifier/Crossover

Price $\quad \$ 219.95$
Dimensions $31 / 2 \mathrm{H} \times 49 / 10 \mathrm{~W} \times 13 \mathrm{D}$
Mounting Trunk
Output
13 watts ( 11.25 dBW ) per chaninel continuous into 4 ohms from 20 Hz to 20 kHz with no more than $1 \%$ THD
Features Includes electronic crossover with 6 selectable crossover points, or a "flat" setting; short circuit and overload protected

EPA-7000
Price $\quad \$ 199.95$
Dimensions $31 / 2 \mathrm{H} \times 6 \mathrm{~W} \times 9 \mathrm{D}$
Mounting Trunk
Output 50 watts ( 17 dBW ) per channel continuous into $1,2,4$ or 8 ohms from 20 Hz to 20 kHz with no more than 0.5\% THD
Features Selectable impedance at the output; short circuit, overload and reverse polarity protected

## EQA-311 Amplifier/Equalizer

Price $\$ 199.95$
Dimensions $13 / 5 \mathrm{H} \times 41 / 5 \mathrm{~W} \times 6 \mathrm{D}$
Mounting Under dash
Output 21 watts ( 13.25 dBW ) per channel continuous into 4 or 8 ohms from 50 Hz to 12 kHz with no more than $3 \%$ THD
Features Includes 5-band equalizer fader control; power LED indicator; selectable impedance at the output

## EPR-100 Preamplifier <br> Price $\quad \$ 59.95$

Dimensions $11 / 2 \mathrm{H} \times 21 / 10 \mathrm{~W} \times 4 \mathrm{D}$
Mounting In dash/under dash
Features Adjustable input sensitivity from 20 mV to $3.5 \mathrm{~V}, 50 \mathrm{~dB}$ isolation of input/output grounds; volume control

## EXV-100 Electronic Crossover <br> Price $\$ 49.95$ <br> Dimensions $12 / 5 \mathrm{H} \times 31 / 5 \mathrm{~W} \times 53 / 5 \mathrm{D}$ <br> Mounting Under dash/trunk <br> Features Six selectable crossover frequencies or "flat" setting; all DIN type connecting svstern

CLARION
Clarion Corp. of America
5500 Rosecrans Ave.
Lawndale, Calif. 90260

GA-302E

Price $\$ 100$
Dimensions $2 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 6 \mathrm{D}$
Mounting Remote (trunk)
Output $\quad 24$ watts ( 13.75 dBW ) per channel continuous into 4 ohms from 40 Hz to 20 kHz with no more than $1 \%$ THD
Features Designed for use with model PE958 A , response 40 Hz to $30 \mathrm{kHz}, \pm 3 \mathrm{~dB}$; S/N 80 dB

GA-301E
Price $\$ 55$
Dimensions $1 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 4 \mathrm{D}$
Mourting Remote (trunk)
Output $\quad 12$ watts ( 10.75 dBW ) per channel continuous into 4 ohms from 40 Hz to 20 kHz with no more than $1 \%$ THD
Features Designed for use with model PE$958 \mathrm{~A} ; \mathrm{S} / \mathrm{N}, 76 \mathrm{~dB}$; frequency response 20 Hz to 40 $\mathrm{kHz}, \pm^{3} \mathrm{~dB}$

## EE-115 Equalizer <br> Price $\$ 55$

Dimensions $2 H \times 51 / 2 W \times 1 D$
Output $\quad 0.89 \mathrm{~V}$ into 500 ohms
Features Five bands, $\pm 12 \mathrm{~dB} ;-1 \mathrm{~dB}$ insertion gain; for use with PE-95年A radio/tape player; 20K ohms input impedance

## COBRA

Dynascan Corp.
6460 West Cortland
Chicago, III. 60635

GEA 60-7 Graphic

## Equalizer/Amplifier

## Price $\quad \$ 149.95$

Dimensions $\quad 21 / 4 \mathrm{H} \times 71 / 2 \mathrm{~W} 71 / 2 \mathrm{~W} 7 / 1 / 8 \mathrm{D}$
Mounting Under dash
Output $\quad 30$ watts ( 14.75 dBW ) per channel
Features Fader control; 7-band equalizer;
LED power "on" indicator and power lever indica-
tor; onjoff power bypass switch
GEA 40-5 Graphic
Equalizer/Amplifier
Price $\$ 90$
Dimersions $2 \mathrm{H} \times 53 \mathrm{BW} \times 6 \mathrm{D}$
Mounting Under dash
Output 20 watts ( 13 dBW ) per channel
Features Fader contol; 5-band equalizer; LED power "on" indicator; on/off power bypass switch

## COMM

Comm Industries, Inc. Subsidiary of Kettering Industries
1505 Commonwealth Ave. Boston, Mass, 02135

## PB-600 Amplifier/Equalizer

Price $\quad \$ 139.95$

| Dimensions | $2 \mathrm{H} \times 51 / \mathrm{WW} \times 75 / 8 \mathrm{D}$ |
| :--- | :--- |
| Mounting | Under dash |
| Output | 15 watts ( 11.75 dBW ) per channel |
|  | continuous into 4 ohms from 20 Hz |
|  | to 15 kHz with no more than $1 \%$ |
|  | THD |
| Features | Buitl-in 6 -band equalizer; LED in- |
| dicators above each slide control to display fre- |  | dicators above each slide control to display frequency positions


| PB-580 Amplifier/Equalizer |  |
| :--- | :--- |
| Price | $\$ 119.95$ |
| Dimensions | $13 / 4 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 5 \% \mathrm{D}$ |
| Mounting | Under dash |
| Output | 15 watts $(11.75 \mathrm{dBW})$ per channel |
|  | continuous into 4 ohms from 20 Hz |
|  | to 15 kHz with no more than $1 \%$ |
|  | THD |

## CONCORD

## Westland International

 20121 Ventura Blvd.Suite 320
Woodland Hills, Calif. 91364

HPA-60 Amplifier/Equalizer

| Price | $\$ 179.95$ |
| :--- | :--- |
| Dimensions | $8 H \times 55 / 8 \mathrm{~W} \times 21 / 8 \mathrm{D}$ |
| Mounting | Under dash |
| Output | 25 watts (14 dBW) per channel |
|  | continuous into 2 ohms from 20 Hz |
|  | to 20 kHz with no more than $0.3 \%$ |
|  | THD |
|  |  |
| Features | Built-in 5 -band equalizer; LED out- |
| put indicator; equalizer; equalizer bypass switch |  | for "Hlat" amp

8 PA-40
$\begin{array}{ll}\text { Price } & \$ 139.95 \\ \text { Dimensions } & 21 / 2 \mathrm{H} \times 6 \mathrm{~W} \times 51 / 2 \mathrm{D}\end{array}$
Mounting In dash/under dash
Output 25 watts ( 14 dBW ) per channel continuous into 2 ohms from 20 Hz to 20 kHz with no more than $0.3 \%$ THD
Features Low-noise differential input; remote on/off; low power drain; does not contain DC-toDC converter supply

CRAIG
Craig Corp.
921 W. Artesia Blvd.
Compton, Calif. 90220

| V-503 Amplifier/Equalizer |  |
| :--- | :--- |
| Price | $\$ 199.95$ |
| Dimensions | $3 \mathrm{H} \times 9 \mathrm{~W} \times 51 / 2 \mathrm{D}$ |
| Mounting | Under dash |
| Output | 36 watts ( 15.5 dBW ) per channel |
|  | continuous into 4 ohms from 50 Hz |
|  | to 15 kHz with no more than $0.5 \%$ |
|  | THD |

Features Includes 4-band equalizer with reversible silde-out racket; electronic timer, delay for speaker protection; tone defeat; power range push button; OCL/OTL DC-coupled amplifier

| V-505 Amplifier/Equalizer |  |
| :---: | :---: |
| Price | \$144.95 |
| Dimensions | $21 / 4 H \times 61 / 2 W \times 51 / 2 D$ |
| Mounting | Under dash |
| Outpui | 24 watts ( 14 dBW ) per channel continuous into 4 ohms from 50 Hz to 15 kHz with no more than $1.0 \%$ THD |
| Features | Built-In 4-band equalizer; power- |
| range push-button OCL/OTL DC-coupled ampllifer |  |
|  |  |

V-502 Booster
Price $\$ 8495$
Dimensions $\quad 51 / 2 \mathrm{H} \times 81 / 2 \mathrm{~W} \times 21 / 2 \mathrm{D}$
Mounting Under dash
Output
24 watts ( 14 dBW ) per channel continuous into 4 ohms from 40 Hz to 20 kHz with no more than $1.0 \%$ THD
Features Plug-in installation; can be used with any Craig unlt; compatible with 4 -speaker matrix systems; auto power switching

## V-501 Booster

Price $\quad \$ 59.95$
Dlmensions $2 \mathrm{H} \times 71 / 4 \mathrm{~W} \times 51 / 4 \mathrm{D}$
Mounting Under dash
Output $\quad 12$ watts ( 10.75 dBW ) per channel continuous into 4 ohms from 50 Hz to 15 kHz with no more than $2.0 \%$ THD
Features Automatic power switching; compatible with 4 -speaker matrix systems, plug-in installation


| 110 Amplifier/Equalizer |  |
| :--- | :--- |
| Price | $\$ 69.95$ |
| Dimensions | $11 / 2 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 7 \mathrm{D}$ |
| Mounting | Under dash |
| Output | 18 watts (12.5 dBW) per channel |
|  | continuous into 4 ohms from 30 Hz |
|  | to 20 kHz with no more than $1 \%$ |
|  | THD |
|  |  |
| Features Power Indicator light; bass/treble <br> slide control  |  |

## ELITE

Elite Mobile Sound Devices
Pyramid Industries
12970 Branford St.
Arleta/Los Angeles, Calif.
91331
PMA-270 Power Amplifier
Price
Dimensions $\quad 21 / 2 \mathrm{H} \times 11 \mathrm{~W} \times 71 / 2 \mathrm{D}$
Mounting Under dash

Output
270 watts ( 24.25 dBW ) per channel continuous into 4 ohms from 15 Hz to 50 kHz with no more than $0.3 \%$ THD
Features Floating or common-ground input; fused outputs; inverting power supply; high or low impedance input

## X-SPEC-5 Preamplifier <br> Price $\$ 199.95$

Dimensions $19 / 16 \mathrm{H} \times 8 \mathrm{~W} \times 45 / 16 \mathrm{D}$
Mounting In dash/under dash
Features Individual front and rear speaker equallzation; 10 power output LEDs high or low impedance input; tape/radio selector switch; biamp or stereo operation; 40 Hz to 25 kHz response into 4 or 8 ohms

## X-420 Power Amplifier

Price $\$ 139.95$
Dimensions $15 / 16 \mathrm{H} \times 6 \mathrm{~W} \times 81 / 4 \mathrm{D}$
Mounting Under dash
Output 100 watts ( 20 dBW ) per channe continuous into 4 ohms from 40 Hz to 25 kHz with no more than $0.5 \%$ THD
Features Biamp or stereo operation; tweeter volume control; high or low impedance input

## EVADIN

TZL International Corp.
2020 West 16th St.
Broadview, III. 60153
EQB-61 Graphic
Equalizer/Power Booster

| Price | $\$ 99.95$ |
| :--- | :--- |
| Dimensions | $13 / 4 \mathrm{H} \times 53 / 4 \mathrm{~W} \times 61 / 2 \mathrm{D}$ |
| Mounting | Under dash |
| Output | 30 watts (14.75 dBW) per channel |
|  | continuous into 4 ohms from 10 Hz |
|  | to 20 kHz |
| Features | Fader control; 5-band equalizer |

EQB-260 Graphic
Equalizer/Power Booster

| Price | $\$ 69.95$ |
| :--- | :--- |
| Dimensions | $11 / 2 \mathrm{H} \times 4 \mathrm{~W} \times 33 / 4 \mathrm{D}$ |

Dimensions $11 / 2 H \times 4 W \times 33 / 4 D$
Mounting Under dash
Output $\quad 30$ watts ( 14.75 dBW ) per channel continuous̀ into 4 ohms from 50 Hz to 15 kHz
Features Miniature size; 5-band equalizer

| EQB-60 Power Booster |  |
| :--- | :--- |
| Price | $\$ 49.95$ |
| Dimensions | $11 / 2 \mathrm{H} \times 4 \mathrm{~W} \times 41 / 2 \mathrm{D}$ |
| Mounting | Under dash <br> Output |
|  | 30 watts $(14.75 \mathrm{dBW})$ per channel <br> continuous Into 4 ohms from 50 Hz |
|  | to 15 kHz |
| Features | Bass and treble controls; fader |
| control |  |

## E.Z.

E.Z. World of Sound

16125 Cantlay St.
Van Nuys, Calif. 91406


MR-78 Graphic
Equalizer/Amplifier

| Price | $\$ 74.95$ |
| :--- | :--- |
| Dimensions | $21 / 2 \mathrm{H} \times 61 / 2 \mathrm{~W} \times 51 / 4 \mathrm{D}$ |
| Mounting | Under dash |

Mounting Under dash
Output $\quad 15$ watts ( 11.75 dBW ) per channel continuous into 4 ohms from 10 Hz to 30 kHz with no more than $1 \%$ THD
Features Tone-defeat switch; power indicator; 5-band equalizer

FINCO
The Finney Company 34 W. Interstate St. Bedford, Ohio 44146
Stereo II Booster
Price
$\$ 39.95$
Dimensions
$2 \mathrm{H} \times 45 / 6 \mathrm{~W} \times 31 / 4 \mathrm{D}$


Bose 1401


Kraco Ke-7

## Mounting

Features - Increases signal up to 16 times; will not overload in strong signal areas; linear potentiameter gain control; solid state-dual MOSFET circultry

| Stereo I Booster |  |
| :--- | :--- |
| Price | $\$ 25.95$ |
| Dimensions | $11 / 4 \mathrm{H} \times 21 / 2 \mathrm{~W} \times 11 / 4 \mathrm{D}$ |
| Mounting | Under dash |
| Features | Increases signal up to 3 times; |
| "on" Indicator light |  |

## FOSGATE

## Fosgate Electronics

2935 West Fairmount Ave. Phoenix, Ariz. 85017
PR-2100
Price $\$ 420$
Dimensions Power amp, $21 / 2 \mathrm{H} \times 141 / \mathrm{sW} \times 7 / 1 \mathrm{D}$; preamp, $13 / 4 \mathrm{H} \times 73 / 4 \mathrm{~W} \times 31 / 4 \mathrm{D}$
Mounting
Under dash
Output 100 watts ( 20 dBW ) per channel continuous into 4 ohms fram 20 Hz to 20 kHz with no more than $0.05 \%$ THD
Features Biamplified system; speaker and thermal protection

## PR-250

Price
Dimensions Power amp, $15 / 8 \mathrm{H} \times 4 \mathrm{~W} \times 23 / 8 \mathrm{D}$;
preamp $21 / 2 \mathrm{H}$ preamp, $75 / 8 \mathrm{~W} \times$ 63/4D
Mounting
Output
50 watts ( 17 dBW ) per channel continuous into 4 ohms from 20 Hz to 20 kHz with no more than $0.05 \%$ THD
Speaker and thermal protection


LInear Model 300
Output
20 watts (13 dBW) per channel continuous into 8 ohms from 45 Hz to 15 kHz with no more than $10 \%$ THD
Features Fader; 7-band equalizer

## 15-0720 Amplifier

Price $\$ 49.95$
Dimensions $45 / 8 \mathrm{H} \times 15 / \mathrm{WW} \times 6 \mathrm{D}$
Mounting Under dash
Output
20 watts ( 13 dBW ) per channel continuous into 8 ohms from 50 Hz to 14 kHz with no more than $10 \%$ THD
Features Treble and bass controls; manual on/off or automatic bypass

## GRUNDIG

LAS Electronics East/West, Inc.
85C Saratoga Blvd. Island Park, N.Y. 11558
ESO EQPA Preamp/Equalizer Price $\quad \$ 376$
Dimensions $11 / 2 \mathrm{H} \times 41 / 2 \mathrm{~W} \times 31 / 2 \mathrm{D}$
Features Bass, midrange, and treble slides: 2 peak LED indicators; channel balance with cen ter detent

## ESO-70 Amplifier <br> Price $\$ 188$

Dimensions $\quad 21 / 2 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 8 \mathrm{D}$
Mounting In dash
Output $\quad 35$ watts ( 15.5 dBW ) per channel continuous into 4 ohms from 20 Hz to 20 kHz with no more than $0.2 \%$ THD
Features $\quad \mathrm{M}$ less than $0.2 \%$ at 35 W ; damping factor 300 ; frequency response 10 Hz to 50 kHz . to, -1 dB ; input sensitivity(line) $1.2 \mathrm{~V} ; \mathrm{S} / \mathrm{N} 95 \mathrm{~dB}$; crosstalk $80 \mathrm{~dB}(1 \mathrm{kHz})$; connectors for high- and low-level inputs

## GAA-7500 Amplifier/Equalizer Price $\quad \$ 109$

GAA-5500 Amplifier
Price $\quad \$ 79$
Output 20 watts ( 13 dBW ) per channel

## GAA-7000 Equalizer

Frice $\quad \$ 72$
Dimensions $17 / 6 \mathrm{H} \times 61 / 2 \mathrm{~W} \times 31 / 2 \mathrm{D}$
Features Five frequency ranges, $\pm 12 \mathrm{~dB}$;
LED power indicator

## GAA-6000 Equalizer

Frice $\$ 66$
Features Biamp

Dimensions $\quad 31 / 14 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 31 / 2 \mathrm{D}$

HANDIC
Handic U.S.A., Inc.
15945 N.W. 57th Ave.
Hialeah, Fla. 33014

EQ-20-7 Graphic
Equalizer/Power Booster
Price $\$ 119.95$
Dimensions $13 / 4 \mathrm{H} \times 53 / 4 \mathrm{~W} \times 61 / 8 \mathrm{D}$
Mounting Under dash
Output 30 watts ( 14.75 dBW ) per channel continuous into 4 ohms from 20 Hz to 20 kHz
Features Preamp out jacks; high/low switch;
fader control; 7 -band equalizer

KRACO
Kraco Enterprises, Inc.
505 E. Euclid Ave.
Compton, Calif. 90224

KE-7 Amplifier/Equalizer
Price $\$ 129.95$
Dimensions $\quad 21 / 2 \mathrm{H} \times 71 / 8 \mathrm{~W} \times 7 \% \mathrm{D}$
Mounting Under dash
Output $\quad 40$ watts ( 16 dBW ) continuous into 4 ohms from 20 Hz to 30 kHz with no more than $10 \%$ THD
Features Built-in equalizer with $\pm 12 \mathrm{~dB}$ boost/cut at 7 bands between 60 Hz and 15 kHz ; power meters; fader controls; heat sink; headphone jack; power on/off

## KE-5 Booster/Equalizer

Price $\quad \$ 99.95$
Dimensions $11 / 2 \mathrm{H} \times 51 / 4 \mathrm{~W} \times 67 / 6 \mathrm{D}$
Mounting Under dash
Output 20 watts ( 13 dBW ) per channel continuous into 4 ohms from 20 Hz to 30 kHz with no more than $10 \%$ THD
Features Built-in equalizer with $\pm 12 \mathrm{~dB}$ boost/cut at 5 bands between 60 Hz and 15 kHz ; includes hardware

## KE-3 Booster/Equalizer <br> $\begin{array}{ll}\text { Price } & \$ 79.95 \\ \text { Dimensions } & 11 / 2 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 63 / 8 \mathrm{D}\end{array}$ <br> Mounting Under dash <br> Output <br> 18 watts ( 12.5 dBW ) per channel continuous into 4 ohms from 20 Hz to 30 kHz with no more than $10 \%$ THD <br> Features Built-in equalizer with low/mid/high controls; "power on' LED

PB-131 Power Booster
Price $\$ 45$
Dimensions $2 \mathrm{H} \times 51 / 8 \mathrm{~W} \times 47 / 8 \mathrm{D}$
Mounting Under dash
Output 20 watts (13 dBW) per channel continuous into 4 ohms from 20 Hz to 20 kHz with no more than $10 \%$ THD
Features On/off switch; dial light; includes mounting hardware and installation instructions

Mounting
Output
Features tion

## LAFAYETTE

## Lafayette Radio Electronics

 Corp.111 Jericho Turnpike
Syosset, N.Y. 11791
EQ-60 Booster/Equalizer
Price $\quad \$ 89.99$
Output $\quad 30$ watts ( 14.75 dBW ) per channel continuous into 8 ohms from 50 Hz to 15 kHz
Features Built-in 5-band equalizer ( $\pm 12 \mathrm{~dB}$ at $60 \mathrm{~Hz}, 260 \mathrm{~Hz}, 1 \mathrm{kHz}, 3.5 \mathrm{kHz} ; 10 \mathrm{kHz})$; power output meter

## LASER ACOUSTICS

Laser Acoustics Co.
5667 Lankershim Blvd.
North Hollywood, Calif. 91601

| LA-5000 | Amplifier |
| :---: | :---: |
| Price | \$639 |
| Dimensions | $31 / 4 \mathrm{H} \times 9 \mathrm{~W} \times 111 / 2 \mathrm{D}$ |
| Mounting | Under dash or in trunk |
| Output | 250 watts ( 24 dBW ) per channel continuous into 4 ohms from 20 Hz to 20 kHz with no more than $0.09 \%$ THD |
| Features | Digital power supply; forced |

cooling; high and low level adjustable inputs

| LA-2250 | Amplifier |
| :--- | :--- |
| Price | $\$ 349$ |
| Dimensions | $23 / \mathrm{H} \times 81 / 2 \mathrm{~W} \times 103 / 4 \mathrm{D}$ |
| Mounting | Under dash or in trunk |
| Output | 125 watts $(21 \mathrm{dBW})$ per channel |
|  | continuous into 4 ohms from 20 Hz |
|  | to 20 kHz with no more than $0.90 \%$ |
|  | THD |
| Features | Same as Model LA-5000 |

LA-2150 Amplifier
Price $\quad \$ 239$
Dimensions $\quad 23 / 4 \mathrm{H} \times 81 / 2 \mathrm{~W} \times 103 / 4 \mathrm{D}$
Mounting Under dash
Output $\quad 75$ watts ( 18.75 dBW ) per channel continuous into 4 ohms from 20 Hz to 20 kHz with no more than $0.09 \%$ THD
Features Digital power supply; high level and low level adjustable inputs

## LA-250 Preamplifier/Equalizer <br> Price $\quad \$ 149$

Dimensions $11 / 8 \mathrm{H} \times 51 / 4 \mathrm{~W} \times 5 \mathrm{D}$
Mounting In dash/under dash
Output $\quad 20 \mathrm{~Hz}$ to 20 kHz with no more than 0.05\% THD

Features Bass/mid/treble equalization; balance control; volume control; source selection accepts up to 2 sources

## LINEAR POWER

Schmegg Electronics, Inc.
11545 D Ave., East
Auburn, Calif. 95603
300
902
Price $\quad \$ 59.95$

KUSTOM KREATIONS
Kustom Kreations, Inc.
19316 Londelius St.
Northridge, Calif. 91324

SA-247 Graphic Equalizer/Amplifier Price $\quad \$ 160$
Dimensions $21 / 8 \mathrm{H} \times 63 / 6 \mathrm{~W} \times 53 / 4 \mathrm{D}$
Mounting Under dash
Output $\quad 15$ watts ( 11.75 dBW ) per channel continuous into 4 ohms from 20 Hz to 20 kHz with no more than $0.5 \%$ THD

SA2040
Price
Dimensions $\quad \$ 15 \times 99 / 16 \mathrm{~W} \times 911 / 16 \mathrm{D}$
Mounting
Output
Under dash
10 watts ( 10 dBW ) per channel continuous into 4 ohms from 30 Hz to 20 kHz with no more than $0.5 \%$ THD
Features Dual input sensitivity/impedance; voltage sensing; auto turn-on

## SA-230 Integrated Power <br> Amplifier

| Price | $\$ 70$ |
| :--- | :--- |
| Dimenslons | $15 / 8 \mathrm{H} \times 43 / \mathrm{WW} \times 71 / 4 \mathrm{D}$ |
| Mounting | Under dash |

## Mounting Under dash

Output 10 watts ( 10 dBW ) per channel continuous into 4 ohms from 30 Hz to 20 kHz with no more than $0.5 \%$ THD

## MATRECS

Matrecs Industries 805 Woodmer Ave. Winslow, III. 61089

| MA-1050 | Equalizer/Booster |
| :--- | :--- |
| Price | $\$ 124.95$ |
| Dimensions | $2 H \times 51 / 2 \mathrm{~W} \times 71 / \mathrm{D}$ |
| Mounting | Under dash |
| Output | 25 watts (14 dBW) per channel |
|  | continuous into 4 to 8 ohms from 30 |
|  | Hz to 30 kHz with no more than |
|  | $0.4 \% \mathrm{THD}$ |
| Features | Booster bypass with power switch; | complete protection against short circuit, overheat ing, excess voltage, and reverse polarity; balanced transformerless power amplifier

## MA-1040 Equalizer/Booster <br> Price $\$ 1.16 .50$

Dimensions $23 / 8 \mathrm{H} \times 57 / 8 \mathrm{~W} \times 53 / 4 \mathrm{D}$
Mounting Under dash
Output
25 watts (14 dBW) per channed continuous into 4 to 8 ohms from 30 Hz to 30 kHz with no more than 0.4\% THD

Features Booster bypass with power switch; complete protection against short circuit, overheating, excess voltage, and reverse polarity; balanced transformerless power amplifier

MA-1000 Booster

| Price | $\$ 77.50$ |
| :--- | :--- |
| Dimensions | $23 / 3 \mathrm{H} \times 57 / \mathrm{WW} \times 53 / 4 \mathrm{D}$ |
| Mounting | Under dash |

Mounting Under dash
Output 25 watts (14 dBW) per channel continuous into 4 to 8 ohms from 30 Hz to 30 kHz with no more than $0.4 \%$ THD
Features Tone control or output variable control; booster bypass with power switch; complete protection against short circuit, overheating, excess voltage, and reverse polarity; balanced transformerless power amplifier
MEGA
Mega Electronics, Inc.
12737 Garvey Ave.
Baldwin Park, Calif. 91708

Mega 100
Price $\$ 115$
Dimensions $17 / 10 \mathrm{H} \times 6 \mathrm{~W} \times 61 / 2 \mathrm{D}$
Mounting Under dash
Output 50 watts ( 17 dBW ) per channel continuous into 4 ohms from 25 Hz to 17 kHz with no more than $0.07 \%$ THD
Features Balanced line input eliminates alternator noise; works with floating output radios; background noise, -110 dB

METRO SOUND
Metro Sound
10615 Vanowen St.
North Hollywood, Calif. 91605

MS-75
Price $\$ 159.95$
Dimensions $4 \mathrm{H} \times 61 / 6 \mathrm{~W} \times 61 / 6 \mathrm{D}$
Mounting Under dash
Output $\quad 36$ watts ( 15.5 dBW ) per channel continuous into 4 ohms from 30 Hz to 22 kHz with no more than $0.3 \%$ THD
Features Locking speaker input connector; locking output connector; noise suppressor filter choke

MS-55
Price
Dimensions $2 \mathrm{H} \times 6 \% \mathrm{~W} \times 5 \% / \mathrm{DD}$
Mounting Under dash
Output $\quad 25$ watts ( 14 dBW ) continuous into 4 ohms from 30 Hz to 30 kHz with no more than 0.8\% THD
Features Locking speaker input connector
locking output connector; noise suppressor filter choke

## MIDLAND

Midland International Corp.
1900 Johnson Drive
at State Line Road
Shawnee Mission, Kans. 66205

## 60-150 Amplifier/Equalizer

Price $\quad \$ 99.95$
Dimensions $27 / 16 \mathrm{H} \times 6 \mathrm{~W} \times 6 \mathrm{D}$
Mounting Under dash
Output 16 watts ( 12 dBW ) per channel continuous into 8 ohms from 60 Hz to 10 kHz with no more than $1 \%$ THD
Features Built-in equalizer; front-rear fader;
"power on" light, special slide mount (can mount from top or bottom without special adapters"

## MITSUBISHI

Mitsubishi Audio Systems
Melco Sales, Inc.
3030 E. Victoria St.
Compton, Calif. 90221
CV-23
Price

Dimensions Output
$14 / 5 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 61 / 5 \mathrm{D}$
14 watts ( 11.5 dBW ) per channel continuous into 4 ohms with no more than $1 \%$ THD

## CV-21

Price
Dimensions $14 / 5 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 61 / 5 \mathrm{D}$
Mounting Under dash
Output
10 watts ( 10 dBW ) per channel continuous into 4 ohms with no more than $1 \%$ THD

CV-22
Price
Dimensions
Mounting
Output

## $\$ 89.95$

$14 / 5 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 61 / 5 \mathrm{D}$
Under dash
10 watts ( 10 dBW ) per channel continuous into 4 ohms with no more than $1 \%$ THD

## MOTOROLA

Motorola, Inc.
Automotive Products Div.
1299 E. Algonquin Road Schaumburg, III. 60196

EQB-4001 Booster/Equalizer
Price $\quad \$ 139.95$
Dimensions $2 \mathrm{H} \times 55 / 6 \mathrm{~W} \times 71 / 2 \mathrm{D}$

## Output

40 watts ( 16 dBW ) per channel Features $\quad 5$ bands, 24 dB range in each band; 6 ohms per speaker in 4-speaker system; slide controls for five frequency bands; frequency response from 35 Hz to $20 \mathrm{kHz}(-3 \mathrm{~dB}$ ); 10 power output LED color-coded indicators; front-to-rear fader; THD: $1 \%$ typical at 15 watts output at 1 kHz

## EQB-4000 Booster Equalizer Price \$129.95 <br> Dimensions $2 \mathrm{H} \times 55 / 8 \mathrm{~W} \times 71 / 2 \mathrm{D}$ <br> Outpui $\quad 40$ watts ( 16 dBW ) per channel <br> Features $\quad 5$ bands, $24-\mathrm{dB}$ range In each band; 6 ohms per speaker in 4 -speaker system; slide control for 5 frequency bands; frequency response from 35 Hz to 20 kHz ( -3 dB ); front-to-rear fader: THD: $1 \%$ at 15 watts output at 1 kHz

## PA-5000 Amplifier/Equalizer

Price $\$ 89.95$
Dimensions $21 / 2 \mathrm{H} \times 51 / 4 \mathrm{~W} \times 8 \mathrm{D}$
Mounting Under dash
Output $\quad 25$ watts (14 dBW) per channel Features Audio bypass switch; compatible with 4,6 , or 8 -ohm speakers; THD less than $1 \%$ at 1 kHz at 50 watts rms ; switchable equalization; switches for bass boost/flat response

## PA-31000 Amplifier

Price $\$ 49.95$
Dimensions $13 / 4 \mathrm{H} \times 43 / 6 \mathrm{~W} \times 55 / 6 \mathrm{D}$
Mounting Under dash
Output $\quad 15$ watts ( 11.75 dBW ) per' 'channel Features Four audio power integrated circuits; input impedance of 27 ohms; compatible with 4, 6, or 8 -ohm speakers; equalized frequency shaping built-in

## MUNTZ

Muntz Hi Z, Inc.
180 Shipley St.
San Francisco, Calif. 94107
Z-50 Amplifier

| Dimensions | $15 / 6 \mathrm{H} \times 6 \mathrm{~W} \times 71 / 2 \mathrm{D}$ |
| :--- | :--- |
| Output | 50 watts (17 dBW) per channel |
|  | continuous into 4 ohms from 25 Hz |
|  | to 22 kHz with no more than $1 \%$ |
|  | THD |
| Features | Heavy-duty heat sink: DC-DC in |
| verted amp |  |

Z-60 Graphic Equalizer/Amplifier

| Price | $\$ 134.95$ |
| :--- | :--- |
| Dimensions | $13 / 4 \mathrm{H} \times 61 / 6 \mathrm{~W} \times 51 / 2 \mathrm{D}$ |
| Output | 60 watts $(17.75 \mathrm{dBW})$ per chamel |
|  | continuous into 4 ohms from 25 Hz |
|  | to 25 kHz with no more than $1 \%$ |
|  | THD |
|  | Features |
| ance inputs: | Fader control; high and low imped- |
|  | -band equalizer |

## NUMARK

Numark Electronics Corp.
503 Raritan Center
Edison, N.J. 08817

EB-600 Graphic Equalizer/Amplifier
Price $\$ 129.95$
Dimensions $21 / 6 \mathrm{H} \times 67 / \mathrm{W} \times 61 / 2 \mathrm{D}$
Mounting
Output
Under dash
30 watts ( 14.75 dBW ) per channel continuous into 8 ohms
Features Front/rear fader; equalization defeat switch; 5-band equalizer

## OLSON

Olson Electronics
260 S. Forge St.
Akron, Ohio 44324

| AU-753 A | mplifier |
| :---: | :---: |
| Price | \$24.98 |
| Dimensions | $13 / 4 H \times 51 / 4 W \times 4 D$ |
| Mounting | Under dash |
| Output | 40 watts ( 16 dBW ) per channel continuous into 4 ohms from 100 |
| Features | Tone control; power meter |

PANASONIC
Panasonic Car Audio
One Panasonic Way
Secaucus, N.J. 07094

## CJ-5000

| Price | $\$ 229.95$ |
| :--- | :--- |
| Dimensions | $25 / \mathrm{HH} \times 75 \% \mathrm{~W} \times 91 / 8 \mathrm{D}$ |
| Mounting | Under dash |
| Output | 100 watts (20 dBW) per channel |
|  | continuous into 4 ohms from 15 Hz |
|  | to 40 kHz with no more than $0.05 \%$ |
|  | THD |
| Features | Dual inouts for general car radio or |

Panasonic preamps
CJ-4000

Price
Dimensions
Mounting
Output
$\$ 189.95$
$21 / 4 H \times 51 / 4 W \times 10^{1 / 2} \mathrm{D}$
Under dash
40 watts ( 16 dBW ) per channel continuous into 4 ohms from 20 Hz to 40 kHz with no more than $0.08 \%$ THD
Features Designed for Panasonic preamps

| CJ-3600 | Amplifier/Equalizer |
| :--- | :--- |
| Price | $\$ 129.95$ |
| Dimensions | $17 / 1 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 71 / 4 \mathrm{D}$ |
| Mounting | Under dash |
| Output | 24 watts ( 13.75 dBW$)$ per channel |
|  | continuous into 4 ohms from 30 Hz |
|  | to 30 kHz with no more than $5 \%$ |
|  | THD |
|  |  |
| Features Built-in 5 -band equalizer; for 2 or 4 |  |
| speakers; fader control |  | speakers; fader control

CJ-3000

| Price | $\$ 109.95$ |
| :--- | :--- |
| Dimensions | $21 / 4 \mathrm{H} \times 51 / \mathrm{W} \times 81 / 2 \mathrm{D}$ |
| Mounting | Under dash |
| Output | 28 watts ( 14.5 dBW ) per channel |
|  | continuous into 4 ohms from 30 Hz |
|  | to 40 kHz with no more than $0.1 \%$ |
|  | THD |
| Features | Designed for Panasonic preamps |

CJ-2557
Price $\$ 79.95$
Dimensions $111 / 32 \mathrm{H} \times 1611 / 16 \mathrm{~W} \times 53 / 4 \mathrm{D}$ Mounting Under dash
Output

CJ-2600
Price
Mounting
Output
$\$ 59.95$
$21 / 4 \mathrm{H} \times 41 / 2 \mathrm{~W} \times 63 / 6 \mathrm{D}$
Under dash
20 watts ( 13 dBW ) per channel
continuous into 4 ohms from 80 Hz to 16 kHz with no more than $5 \%$ THD

CJ-156 Z
Price $\$ 54.95$
Dimensions $27 / 32 \mathrm{H} \times 43 / 32 \mathrm{~W} \times 6$ 5/32D
Mounting Under dash
Output

PIONEER
Pioneer Electronics of America
1925 E. Dominguez St.
Long Beach, Calif. 90810
AD-50 Graphic
Equalizer/Amplifier
Price $\quad \$ 249.95$
Dimensions $25 / 8 \mathrm{H} \times 57 / 8 \mathrm{~W} \times 7 \mathrm{D}$
Output $\quad 15$ watts ( 11.75 dBW ) per channel continuous into 4 ohms from 30 Hz to 30 kHz with no more than $1 \%$ THD
Features "Power on" LED; fits under dash or stacks with other Pioneer car stereos; for use with all non-component car stereos and tape decks; 10-LED power-level display; 5 -band equalizer

| AD-360 Power Booster |  |
| :--- | :--- |
| Price | $\$ 229.95$ |
| Dimensions | $21 / 2 \mathrm{H} \times 9 \mathrm{~W} \times 8 \mathrm{D}$ |
| Output | 50 watts $(17 \mathrm{dBW})$ per channel |
|  | continuous into 4 ohms from 20 Hz |
|  | to 30 kHz with no more than $0.8 \%$ |
|  | THD |
| Features | Built-in protection circuits; auto- | matic on/off power switch

## GM-120 Amplifier

## Price <br> \$199.95

30 watts ( 14.75 dBW ) per chanาel continuous into 4 ohms from 30 Hz to 20 kHz with no more than $0.2 \%$ THD

AD-30 Graphic

## Equalizer/Amplifier

Price
Dimensions $2 \mathrm{H} \times 5 \mathrm{~F} / \mathrm{WW} \times 61 / 2 \mathrm{D}$
Output
$2 \mathrm{H} \times 5 \% \mathrm{~W} \times 6 \% \mathrm{D}$
10 watts ( 10 dBW ) per channel continuous into 4 ohms from 30 Hz to 30 kHz with no more than $1 \%$ THD
Features Fits under dash or stacks with other Pioneer car steroes; 2 peak-power LEDs; "power on" LED; 5 -band equalizer

GM-40 Component Stereo Main Amplifier
Price $\quad \$ 84.95$
Dimensions $2 \mathrm{H} \times 413 / 16 \mathrm{~W} \times 6 \mathrm{D}$
Output $\quad 20$ watts ( 13 dBW ) per channel continuous into 4 ohms from 50 Hz to 20 kHz with no more than $0.8 \%$ THD
Features For use with Pioneer models KPX9500 , KPX-9000, KPX-600, KP-707G, KP-88G, KP77G, and KP-66G; balanced parallel transformerless IC for high power and low distortion

AD-320 Amplifier

| Price | $\$ 79.95$ |
| :--- | :--- |
| Dimensions | $21 / 6 \mathrm{H} \times 45 / 6 \mathrm{~W} \times 51 / 2 \mathrm{D}$ |

Output 16 watts ( 12 dBW ) per channel continuous into 4 ohms from 40 Hz to 20 kHz with no more than $0.8 \%$ THD
Features For use with all non-component car
stereos and tape decks

## AD-312 Amplifier

Price $\quad \$ 59.95$
Dimenslons $21 / 8 \mathrm{H} \times 45 / 8 \mathrm{~W} \times 51 / 2 \mathrm{D}$
Output $\quad 9$ watts ( 9.5 dBW ) per channel continuous into 4 ohms from 50 Hz to 18 kHz with no more than $1 \%$ THD
Features For use with all non-component car
stereos and tape decks
GM-12 Amplifier
Price $\quad \$ 54.95$
Output 22 watts ( 3.5 dBW ) per channel continuous into 4 ohms from 50 Hz to 20 kHz with no more than $0.8 \%$ THD

## POWER DRIVE

Recoton Corp.
46-23 Crane St.
Long Island City, N.Y. 11101

## SE-70 Graphic

Equalizer/Amplifier

## Price

Mounting
Output
$\$ 149.99$ continuous into 4 ohms from 20 Hz to 30 kHz with no more than $1 \%$ THD
Features Floating on common ground; 7-
band equalizer; illuminated power meter
SE-50 Graphic
Equalizer/Amplifier

## Price

\$129.95
Mounting Under dash
Output
48 watts ( 16.75 dBW ) per channel continuous into 4 ohms from 20 Hz to 30 kHz with no more than $1 \%$ THD
Features Front/rear/both speaker selector; 5-band equalizer ( $\pm 12 \mathrm{~dB}$ at $50 \mathrm{~Hz}, 250 \mathrm{~Hz}$, 1 $\mathrm{kHz}, 3.5 \mathrm{kHz}$, and 10 kHz )


Pyramid X-420

Realistic 12-2879


Royal Sound RC-2000


Sanyo EQz-8400


## PYRAMID

Pyramid Industries 12970-7N Branford St. Arleta, Calif. 91331

PMA-270 Amplifier

## Price $\$ 469.95$

Dimensions $\quad 21 / 4 \mathrm{H} \times 11^{1 / 8 W} \times 71 / 2 \mathrm{D}$
Mounting
Output
Under dash
$\begin{array}{ll}\text { Output } & 270 \text { watts ( } 24.25 \mathrm{dBW} \text { ) per channel } \\ \text { continuous into } 4 \mathrm{ohms} \text { from } 15 \mathrm{~Hz} \\ \text { to } 50 \mathrm{kHz} \text { with no more than } 0.3 \% \\ \text { THD }\end{array}$
Features Floating or/common ground input; high/low impedance input; fused outputs for speaker protoction; split power supply inverted

## X-420 Amplifier <br> Price $\$ 159.95$

Dimensions $15 / 16 \mathrm{H} \times 6 \mathrm{~W} \times 8 \mathrm{D}$
Mounting Under dash
Output
100 watts ( 20 dBW ) per channel continuous into 4 ohms from 40 Hz to 25 kHz with not more than $0.5 \%$ THD
Features High/low impedance input; volume control; can be blamped

## PMA-100 Amplifier <br> Price

Dimensions $21 / 4 \mathrm{H} \times 31 / 2 \mathrm{~W} \times 51 / 2$
Mounting
Under dash
$\begin{array}{ll}\text { Output } & 100 \text { watts (20 dBW) per channel } \\ & \text { continuous into } 4 \text { ohms from } 80 \mathrm{~Hz} \\ & \text { to } 20 \mathrm{kHz} \text { with no more than } 1.0 \%\end{array}$

REALISTIC
Radio Shack Corp.
1400 One Tandy Center
Ft. Worth, Texas 76102

| 12-1879 | Booster/Equalizer |
| :---: | :---: |
| Price | \$99.95 |
| Dimensions | $7 \mathrm{H} \times 73 / 6 \mathrm{~W} \times 51 / 2 \mathrm{D}$ |
| Mounting | Under dash |
| Output | 20 watts ( 13 dBW) per channel continous into 4 ohms with no more than 10\% THD |
| Features power meters | Built-in 5-band equalizer; lighted |

12-1878 Booster/Equalizer
Price $\$ 79.95$
Dimensions $2 \mathrm{H} \times 6 \mathrm{~W} \times 51 / 8 \mathrm{D}$
Mounting Under dash
Output
15 watts ( 11.75 dBW ) per channel continuous into 4 ohms from 30 Hz to 30 kHz with no more than $10 \%$ THD
Features Built-in 5-band equalizer; fader control; auto switching

## 12-1877 Booster

Price $\$ 49.95$
Dímensions $\quad 37 / 6 \mathrm{H} \times 57 / 6 \mathrm{~W} \times 3^{7 / 6 \mathrm{D}}$
Mounting Under dash
Output 20 watts ( 13 dBW ) per channel continuous into 4 ohms with no more than $10 \%$ THD

12-1876 Booster
Price $\$ 29.95$
Dimensions $11 / 2 \mathrm{H} \times 49 / 16 \mathrm{~W} \times 4 \mathrm{D}$
Mounting Under dash
Features Doubles power of driving device up to 8 watts at $10 \%$ THD

ROAD SOUNDS
Road Sounds
425 7th St., N.W.
Washington, D.C. 20004

## PB-7 Graphic <br> Equalizer/Amplifier <br> $\begin{array}{ll}\text { Price } & \$ 119.95 \\ \text { Mounting } & \text { Under dash }\end{array}$ <br> Output 20 watts ( 13 dBW ) per channel <br> continuous into 8 ohms from 20 Hz to 20 kHz with no more than $1 \%$ THD <br> Features Power amp defeat switch; 4-8 ohm impedance; illuminated power meter; 7-band equalizer with $\pm 12 \mathrm{~dB}$ control at center frequen-

 ciesPB-3 Graphic
Equalizer/Amplifier
Price $\$ 79.95$
Mounting Under dash
Output
20 watts ( 13 dBW ) per channel continuous into 8 ohms from 20 Hz to 20 kHz with no more than $1 \%$ THD
Features Front/rear fader; 4-8 ohm impedance; 3 -band equalizer with $\pm 12 \mathrm{~dB}$ control at center frequencies

PB-2 Graphic
$\underset{\text { Price }}{\text { Equalizer/Amplifier }}$
Price $\quad \$ 69.95$
Mounting Under dash
Output
15 watts ( 11.75 dBW ) per channel continuous into 8 ohms from 20 Hz to 20 kHz with no more than $1 \%$ THD
Features Bass and treble controls; 4-8 ohm

## ROYAL SOUND

Royal Sound Co. Inc.
248 Buffalo Ave.
Freeport, N.Y. 11520

## RA-6000

Price $\$ 500$
Dimensions $24 / 5 \mathrm{H} \times 715 / 16 \mathrm{~W} \times 93 / 4 \mathrm{D}$
Mounting In dash/under dash
Features Fused protection circuit; resettable speaker protection circuit breaker; automatic power control; gold-plated input terminals; heavyduty push-type positive-lock color-coded speaker output terminals

RC-2000 Preamplifier/Equalizer Price $\$ 500$
Dimensions $25 / 16 \mathrm{H} \times 72 / 5 \mathrm{~W} \times 67 / 10 \mathrm{D}$
Features Built-in 7 -band equalizer; LED threshold saturation level indicators; fader control; loudness contour; muting control; input sensitivity selector; ambience control; fused protection circuit; two stereo amplifier (front and rear) connections; headphone jack; gold-plated input and output terminals
|A-400
Price $\$ 90$
Dimensions $121 / 32 \mathrm{H} \times 423 / 32 \mathrm{~W} \times 61 / 2 \mathrm{D}$ Output 40 watts ( 16 dBW ) per channel continuous
Features Automatic power control; LED power indicator high-quality heat-sinks; bass and treble controls

## SANYO

Sanyo Electric, Inc. 1200 W. Artesia Blvd. Compton, Calif. 90220

## PA-6120

Price $\$ 249.95$
Dimensions $3 H \times 153 / 88 \mathrm{~W} \times 8 \mathrm{D}$
Mounting Trunk/under seat

60 watts ( 17.75 dBW ) per channe continuous into 4 ohms from 20 Hz to 20 kHz with no more than $0.05 \%$ THD
Features Operates in biamp mode using 4 separate amps or conventionally using woofer amps only; RCA jacks for line level preamp outpu from some Sanyo models; high-level input jacks for speaker butputs; motorized fader

## PA-6060

Dimensions $3 \mathrm{H} \times 153 / 8 \mathrm{~W} \times 8 \mathrm{D}$
Mounting Trunk/under seat
Output
30 watts ( 14.75 dBW ) per channel continuous into 4 ohms from 20 Hz to 20 kHz with no more than $0.05 \%$ THD
Features Operates in biamp mode using 4 separate amps or conventionaliy using wooter amps only; RCA input jacks for line level preamp output; high-level input jacks for speaker outputs motorized fader

EQZ-6400 Biamplified Equalizer Price $\$ 99.95$
Dimensions $2 \mathrm{H} \times 71 / 4 \mathrm{~W} \times 5 \mathrm{D}$
Mounting Under dash
Features Seven-band equalizer multi-pin connector for high level signals from conventional or biamped speaker outputs; 4 RCA input jacks for line level; conventional or biamped preamp outputs to power amplifiers; 7 center detent slide lever controls with LED "bar graph" meters

## EQZ-6200

## Preamplifier/Equalizer

Price $\$ 69.95$
Dimensions $2 \mathrm{H} \times 61 / 2 \mathrm{~W} \times 43 / 4 \mathrm{D}$
Mounting Under dash
Features Built-in 7-band equalizer, 7 frequency center detent slide levers; compatible low and high power speaker outputs; tone defea switch; -20 dB audio muting; $\mathrm{S} / \mathrm{N},-80 \mathrm{~dB} ; 0.1 \%$ THD

## Models also available PA-6100, \$149.95; PA-6050 \$119.95

SPARKOMATIC
Sparkomatic Corp.
Routes 6 \& 209
Milford, Pa. 18337

## GE-500 Graphic

## Equalizer/Power Booster

Price \$89.95
Dimensions $2 \mathrm{H} \times 63 / 16 \mathrm{~W} \times 61 / 2 \mathrm{D}$
Mounting Under dash
Output
20 watts ( 13 dBW ) per channe continuous into 4 ohms from 20 Hz to 20 kHz with no more than $1 \%$ THD
Features Visual response curve on an ill luminated screen; front/rear fader control

LC-100 Amplifier
Price $\quad \$ 89.95$
Dimensions $13 / 4 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 63 / 8 \mathrm{D}$
Mounting Under dash
Output 15 watts ( 11.75 dBW ) per channel continuous into 3 ohms from 20 Hz to 20 kHz with no more than $1 \%$ THD
Features Bass and treble boost and cut; sold with $10 \mathrm{oz} 6^{\prime \prime} \times 9^{\prime \prime}$ coaxial speakers

[^3]
## Models also available

LC-101 Amplifier, \$49.95

SPECO
SPECO Div. Components
Specialties, Inc.
1172 Route 109
Lindenhurst, N.Y. 11757

## EPB-40 Graphic

Equalizer/Power Booster
Price $\$ 124.95$
Dimensions $13 / 4 \mathrm{H} \times 43 / 6 \mathrm{~W} \times 6 \mathrm{D}$
Mounting Under dash
Output 20 watts ( 13 dBW ) per channel continuous into 4 to 8 ohms from 30 Hz to 15 kHz
Features Five-band equalizer ( $\pm 12 \mathrm{~dB}$ at 60 $\mathrm{Hz}, 250 \mathrm{~Hz}, 1 \mathrm{kHz}, 3.5 \mathrm{kHz}$, and 10 kHz ); fader control

## SPB-40 Power Booster <br> Price $\$ 63.75$ <br> Dimensions $15 / 8 \mathrm{D} \times 45 / 16 \mathrm{~W} \times 53 / 4 \mathrm{D}$ <br> Mounting Under dash <br> Output 20 watts (13 dBW) per channel continuous into 4 to 8 ohms from 100 Hz to 10 kHz <br> Features Automatic "power off" switch; cou-

 ples to any car stereo radio or tape player
## Models also available

SPB-20 Power Booster, \$49.95

TENNA
Tenna Corp.
19201 Cranwood Parkway Cleveland, Ohio 44128

PA-3021DF
Price $\$ 159.95$
Dimensions $115 / 16 \mathrm{H} \times 6 \% / 6 \mathrm{~W} \times 81 / 2 \mathrm{D}$
Mounting Under dash
Output 40 watts ( 16 dBW ) per channe continuous into 8 ohms from 30 Hz to 20 kHz with no more than $10 \%$ THD; 20 watts ( 13 dBW ) at less than 0.5\% THD
Features Dual fade (front to rear, left to right); floating ground input; on/off switch; twoyear warranty

PA-3020EF Amplifier/Equalizer
Price $\$ 10995$
Dimenslons $115 / 16 \mathrm{H} \times 6 \mathrm{~W} \times 61 / 2 \mathrm{D}$
Mounting Under dash
Output
20 watts ( 13 dBW) per channel rms continuous into 8 ohms from 30 Hz to 20 kHz with no more than $10 \%$ THD; 10 watts ( 10 dBW ) at no more than 0.5\% THD
Features Five-band equalizer; front-to-rear fader; floating ground input; on/off switch; twoyear warranty

VERTRONIX
Vertronix, Inc.
Box 907
Evergreen, Colo. 80439
V-1000 Amplifier
Price $\$ 199$
Dimensions $\quad 23 / 4 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 7^{1 / 2 \mathrm{D}}$
Mounting Under dash
Output 50 watts ( 17 dBW ) per channe continuous into 4 ohms from 20 Hz to 20 kHz with no more than $0.2 \%$ THD

Features "PWM" power supply; DC to 100 kHz power bandwith; thermal and current protected; high-speed design

## VQ-350 Graphic

Equalizer/Preamplifier
Price \$149
Dimensions $2 \mathrm{H} \times 5 \mathrm{~W} \times 3 \mathrm{D}$
Mounting Under dash
Features Electronic fader; 3-band equalizer with $\pm 19 \mathrm{~dB}$ control; 20 Hz to 20 kHz response with no more than $0.5 \%$ THD

## Models also available

 V-700 Amplifier, \$169
## VISONIK HI FI

Visonik of America, Inc.
701 Heinz Ave.
Berkeley, Calif. 94710

## AS-1000 Subwoofer Amplifier <br> System <br> Price <br> Mounting <br> Output <br> Features <br> subwoofer <br> 400 (with $W$-600 subwooter) $8 \mathrm{H} \times 10 \mathrm{~W} \times 27 / 8 \mathrm{D}$ Under dash 35 watts ( 15.5 dBW ) per channel continuous into 4 ohms from 20 Hz to 20 kHz with no more than $0.25 \%$ THD; subwoofer channel 70W ( 18.5 dBW ) Biamplified; sold only with W-600

A-301 Amplifier
Price $\$ 150$
Dimensions $61 / 2 \mathrm{H} \times 8 \mathrm{~W} \times 21 / 2 \mathrm{D}$
Output $\quad 30$ watts ( 14.75 dBW ) per channel continuous into 4 ohms from 20 Hz to 20 kHz with no more than $0.25 \%$ THD
Features High and low level inputs; OCL di-
rect-coupled output
PA-1 Preamplifier
Price $\quad \$ 125$
Dimensions $\quad 11 / 2 \mathrm{H} \times 67 / \mathrm{W} \times 41 / 2 \mathrm{D}$
Mounting $\quad$ Under dash
Features $\quad$ Two inputs; bass, midrange, and
treble controls

ZAPCO
Zeff Advanced Products Co.
5018 Paradise Road
Modesto, Calif. 95351

150LA Amplifier
Price $\$ 380$
Output $\quad 70$ watts (18.5 dBW) per channel continuous into 4 ohms from 40 Hz to 20 kHz with no more than $0.07 \%$ THD
Features Low-distortion circuitry

## PEQ Graphic

Equalizer/Preamplifier
Price $\$ 250$
Dimensions $1 \mathrm{H} \times 4 \mathrm{~W} \times 8 \mathrm{D}$
Mounting Under dash
Features Eighteen-band equalizer; 20 Hz to 20 kHz response with no more than $0.03 \%$ THD

## Models also available

150L Amplifier, \$320

## Speaker Systems \& Separate Speakers

ADS<br>Analog \& Digital Systems One Progress Way Wilmington, Mass. 01887

L-300i
Price
Dimensions $\quad 81 / 2 \mathrm{H} \times 57 / 10 \mathrm{~W} \times 3 \mathrm{D}\left(11 / 2^{2}\right.$ above surface; $\uparrow 1 / 2^{"}$ below surface)
Configuration 2-Way
$\begin{array}{ll}\text { Response } & 50 \mathrm{~Hz} \text { to } 20 \mathrm{kHz}, \pm 3 \mathrm{~dB} \text { re } 90 \mathrm{~dB} \\ & \mathrm{SPL} \text { at } 1 \text { meter at } 9 \text { watt } \\ \text { Min power } & 10 \text { watts }(10 \mathrm{dBW}) \\ \text { Max power } & 100 \text { watts }(20 \mathrm{dBW}) \\ \text { Impedance } & 40 \text { ohms } \\ \text { Oriver size } & 1 \text { " soft-dome tweeter; } 51 / 4^{\prime \prime} \text { wooter } \\ \text { Mounting } & \text { Flush }\end{array}$

AFS/KRIKET
Acoustic Fiber Sound
Systems, Inc.
8050 Castleway Drive
Indianapolis, Ind. 46250

6099

| Price | \$80 each |
| :---: | :---: |
| Dimensions | $53 / 4 \mathrm{H} \times 11 \mathrm{~W} \times 91 / 2 \mathrm{D}$ |
| Configuration | 2-way |
| Response | 50 Hz to $20 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 87 dB SPL at 1 meter at 1 watt |
| Min power | 2 watts |
| Max power | 40 watts |
| Impedance | 4 to 8 ohms |
| Oriver size | $51 / 4^{\prime \prime}$ |
| Magnet | 10 oz . |
| Mounting | Flush or surface |
| 6079 |  |
| Price | \$65 |
| Dimensions | $53 / 4 \mathrm{H} \times 11 \mathrm{~W} \times 93 / 4 \mathrm{D}$ |
| Configuration | Coaxial |
| Response | 50 Hz to $18 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 93 dB SPL at 1 meter at 1 watt |
| Min power | 2 watts ( 3 dBW ) |
| Max power | 36 watts ( 15.5 dBW ) |
| Impedance | 4 to 8 ohms |
| Driver size | $6^{\prime \prime} \times 9^{\prime \prime}$ |
| Magnet | 10 oz |
| Mounting | Flush or surface |
| Features | 1 "polycarbonate dome fweeter |
| 6059 |  |
| Price | \$55 |
| Dimensions | $53 / 4 \mathrm{H} \times 11 \mathrm{~W} \times 93 / 4 \mathrm{D}$ |
| Configuration | Coaxial |
| Response | 60 Hz to $20 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 91 dB SPL at 1 meter at 1 watt |
| Min power | 2 watts (3 dBW) |
| Max power | 25 watts ( 14 dBW ) |
| Impedance | 4 to 8 ohms |
| Oriver size | $51 / 4{ }^{\prime \prime}$ |
| Magnet | 10 oz . |
| Mounting | Flush or surface |


| 8231 |  |
| :---: | :---: |
| Price | \$50/kit |
| Dimensions | $51 / 4 W \times 21 / 2 D$ |
| Configuration | n Dual cone |
| Response | 55 Hz to $15 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 92 dB SPL at 1 meter at 1 watt |
| Min power | 2 watts (3 dBW) |
| Max power | 25 watts (14 dBW) |
| Impedance | 4 to 8 ohms |
| Driver size | $51 / 4{ }^{\text {" }}$ |
| Magnet | 10 oz . |
| Mounting | Flush |
| 6049 |  |
| Price | \$40 |
| Dimensions | $53 / 4 \mathrm{H} \times 11 \mathrm{~W} \times 91 / 4 \mathrm{D}$ |
| Configuration | Dual cone |
| Response | 60 Hz to $15 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 90 dB SPL at 1 meter at 1 watt |
| Min power | 2 watts (3 dBW) |
| Max power | 25 watts (14 dBW) |
| Impedance | 4 to 8 ohms |
| Driver size | $51 / 4^{\prime \prime}$ |
| Magnet | 10 oz . |
| Mounting | Flush or surface |
| 8972 |  |
| Price | \$85/kit |
| Dimensions | $63 / 6 \mathrm{H} \times 9 \mathrm{~W} \times 33 / 8 \mathrm{D}$ |
| Configuration | Coaxial |
| Response | 40 Hz to $18 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ |
| Min power | 2 watts (3 dBW) |
| Max power | 40 watts ( 16 dBW ) |
| Impedance | 4 to 8 ohms |
| Driver size | $6^{\prime \prime} \times 9^{\prime \prime}$ |
| Magnet | 20 oz . |
| Mounting | Flush |
| 8232 |  |
| Price | \$70/kit |
| Dimensions | $51 / 4 \mathrm{~W} \times 21 / 2 \mathrm{D}$ |
| Confliguration | Coaxial |
| Response | 55 Hz to $17.5 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 92 dB SPL at 1 meter at 9 watt |
| Min power | 2 watts (3 dBW) |
| Max power | 25 watts (14 dBW) |
| Impedance | 4 to 8 ohms |
| Driver size | $51 / 4^{\prime \prime}$ |
| Magnet | 10 oz . |
| Mounting | Flush |
| 8931 |  |
| Price | \$55/kit |
| Dimensions | $61 / 6 \mathrm{H} \times 91 / 6 \mathrm{~W} \times 31 / 4 \mathrm{D}$ |
| Configuration | Dual cone |
| Response | 45 Hz to 15 kHz |
| Min power | 2 watts ( 3 dBW ) |
| Max power | 35 watts ( 15.5 dBW ) |
| Impedance | 4 to 8 ohms |
| Oriver size | $6^{*} \times 9^{*}$ |
| Magnet | 10 oz . |
| Mounting | Flush |
| 2732 |  |
| Price | \$28 |
| Dimensions | $5 \mathrm{H} \times 71 / 4 \mathrm{~W} \times 21 / 2 \mathrm{D}$ |
| Configuration | Coaxial |
| Response | 60 Hz to $18 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 95 dB SPL at 1 meter at 1 watt |
| Min power | 2 watts (3 dBW) |
| Max power | 25 watts ( 14 dBW ) |
| Impedance | 8 ohms |
| Oriver size | $5^{\prime \prime} \times 7^{\text {² }}$ |
| Magnet | 10 oz . |
| Mounting | Flush |
| 7311 |  |
| Price | \$9 |
| Dimensions 3 | $31 / 2 \mathrm{H} \times 31 / 2 \mathrm{~W} \times 15 / 8 \mathrm{D}$ |
| Configuration Dual cone |  |
| Response 8 | 80 Hz to $15 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 89 dB SPL at 1 meter at 1 watt |
| Min power | 2 watts (3 dBW) |
| Max power | 15 watts ( 11.75 dBW) |

Impedance 8 ohms
Driver size $\quad 31 / 2^{\prime \prime} \times 31 / 2^{\prime \prime}$
Magnet 3 oz .
Mounting Flush

## Models also available

8974, \$110/kit; 6069, \$50; 8932 \$65/kit; 8531, \$50/kit

## ALTUS

Altus Corp.
6 Main St.
Melrose, Mass. 02176
SK-i5696 Powersonic
Price $\quad \$ 116.95$
Confguration 3-way
Response 50 Hz to 20 kHz
Max power 50 watts ( 17 dBW )
impedance 8 ohms
Driver size $6^{\prime \prime} \times 9^{\prime \prime}$
Magnet 20 oz
Mounting Flush
Features Foam-roll suspension; $11 / 2^{"}$ voice coil

| SK-6595 | Powersonic |
| :--- | :--- |
| Price | $\$ 86.95$ |
| Confliguration | $2-$ way coaxial |
| Response | 50 Hz to 20 kHz |
| Max power | 25 watts $(14 \mathrm{dBW})$ |
| Impedance | 8 ohms |
| Oriver size | $6^{n} \times 9^{n}$ |
| Magnet | 20 oz |
| Mouniing | Flush |
| Features | Foam roll suspension |

## SK-6292 Powersonic <br> Price $\$ 59.95$

Configuration 2-Way Coaxial
Response $\quad 100 \mathrm{~Hz}$ to 18 kHz
Max power 25 watts (14 dBW)
Impedance 8 ohms
Driver size 4"
Magnet $\quad 10 \mathrm{oz}$
Mounting Flush

## Models also available

SK-6393 Powersonic, \$66.95

## AMERICAN ACOUSTIC LABS

All Speaker Systems
629 W. Cermak Road
Chicago, III. 60616
Micro 100B
Price $\$ 110$
Dimensions $73 / 6 \mathrm{H} \times 45 / 6 \mathrm{~W} \times 49 / 16 \mathrm{D}$
Configuration 2-way
Response $\quad 50 \mathrm{~Hz}$ to 20 kHz , re 84 dB SPL at
1 meter at 1 watt
Min pawer 5 watts ( 7 dBW )
Max power 50 watts ( 17 dBW )
Impedance 4 ohms
Driver size 4" woofer; $1^{1 "}$ tweeter
Mounting Surface
Features $\quad 5$-year warranty
AUDIOTEX
GC Electronics
400 South Wyman
Rockford, III. 61101
30-5121
Price $\quad \$ 99.50 / \mathrm{pr}$.
Dimensions $71 / 2 \mathrm{H} \times 41 / 6 \mathrm{~W} \times 41 / 8 \mathrm{D}$
Configuration 2 -way
Response 55 Hz to 20 kHz
Max power 25 watts (14 dBW)

| Impedance | 4 to 8 ohms |
| :--- | :--- |
| Driver size | $4^{\prime \prime}$ woofer |
| Mounting | Surface |
| Features | Home and auto mini speaker sys- |
| tem; mounting bracket included |  |

## 30-2648

| Price | \$91.95 |
| :---: | :---: |
| Configuration | 3-way |
| Response | 70 Hz to 20 kHz |
| Max power | 25 watts (14 dBW) |
| Impedance | 4 to 8 ohms |
| Driver size | $4^{\prime \prime} \times 10^{\prime \prime}$ |
| Magnet | 20 oz . |
| Mounting | Flush |
| Features and hardware | Includes 2 speakers, grilles, wiring, |

## 30-5120

| Price | $\$ 61.50$ |
| :--- | :--- |
| Dimensions | $71 / \mathrm{H} \times 43 / 8 \mathrm{~W} \times 41 / 2 \mathrm{D}$ |
| Configuration 2 -way |  |
| Response | 70 Hz to 22 kHz |
| Max power | 30 watts $(14.75 \mathrm{dBW})$ |
| Impedance | 4 to 8 ohms |
| Driver size | $4 "$ woofer |
| Mounting | Surface |
| Features | Home and auto mini speaker sys. |
| tem |  |

## 30-2646

Configuratio
Response 70 Hz to 16 kHz
Max power 25 watts ( 14 dBW )
Impedance 4 to 8 ohms
Driver size $4^{\prime \prime} \times 10^{\prime \prime}$
Magnet 20 oz
Mounting Flush
Features includes 32 speakers, grilles, wiring, and hardware

## 30-3072

Price $\$ 38.70$
Configuration 2-way
Response $\quad 40 \mathrm{~Hz}$ to 18 kHz
Max power 35 watts ( 15.5 dBW )
impedance 4 to 8 ohms
Driver size $6^{\prime \prime} \times 9^{\prime \prime}$
Magnet 25.02
Mounting Flush
Features Also available as 30-2654, which includes 2 speakers, grilles, wiring, and hardware

## 30-3066

Price $\quad \$ 31.75$
Configuration 2-way
Response $\quad 50 \mathrm{~Hz}$ to 20 kHz
Max power 25 watts ( 14 dBW )
Impedance 4 to 8 ohms
Driver size $51 / 4^{n \prime}$ (round)
Magnet 2002
Mounting Flush
Features Also available as $30-2644$, which includes 2 speakers, grilles, wiring, and hardware

30-3070
Price $\$ 27.40$
Configuration 2-way
Response 50 Hz to 18 kHz
Max power 20 watts ( 13 dBW )
Impedance 4 to 80 hms
Driver size $6^{\prime \prime} \times 9^{\prime \prime}$
Magnet 10 oz .
Mounting Flush
Features Also available as 30-2652, which includes 2 speakers, grilles, wiring, and hardware

## 30-3065

Price $\$ 22.10$
Configuration Dual cone

Response 50 Hz to 16 kHz
Max power 25 watts ( 14 dBW )
Impedance 4 to 8 ohms
Driver size $51 / 4^{\prime \prime}$ (round)
Magnet 20 oz .
Mounting Flush
Features Also available as $30-2642$, whicn includes 2 speakers, grilles, wiring, and hardware

## 30-3053

Price $\$ 18.60$
Configuration Dual cone
Response $\quad 50 \mathrm{~Hz}$ to 10 kHz
Max power 20 watts ( 13 dBW )
Impedance 4 to 8 ohms
Driver size $6^{n \prime} \times 9^{\prime}$
Magnet 10 oz
Mounting Flush
Features Also available as 30-2650, which includes 2 speakers, grilles, wirling, and hardware

30-3047
Price $\$ 17.70$
Configuration Dual cone
Response $\quad 50 \mathrm{~Hz}$ to 14 kHz
Max power 15 watts ( 11.75 dBW )
Impedance 4 to 8 ohms
Driver size $5 \times 7$
Magnet 10 oz .
Mounting Flush

30-3056
Price $\$ 17.35$
Configuration Dual cone
Response $\quad 60 \mathrm{~Hz}$ to 14 kHz
Max power 15 watts ( 11.75 dBW )
Impedance 4 to 8 ohms
Driver size $4^{\prime \prime} \times 10^{\prime \prime}$
Magnet 10 oz.
Mounting Flush

## 30-3063

Price
\$16.15
Configuration Dual cone
$\begin{array}{ll}\text { Response } & 60 \mathrm{~Hz} \text { to } 15 \mathrm{kHz} \\ \text { Max power } & 16 \text { watts (12 dBW) }\end{array}$
Impedance 4 to 8 ohms
Driver size $51 / 4^{\prime \prime}$ (round)
Magnet
Mounting
5.5 oz

Features
Flush
includes 2 speakers, grilles, wiring, and hardware

## Models also available

30-2647, \$80.55; 30-3074, \$39.10
30-3071, \$31.20; 30-3054, \$22.10;
30-3064, \$17.70

AVID
Avid Corp.
10 Tripps Lane
East Providence, R.I
02914

## Ten

Price
Configuration 2-way ( 5 kHz crossover)
Response $\quad 60 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 5 \mathrm{~dB}$
Min power 5 watts ( 7 dBW )
Max power 100 watts ( 20 dBW )
impedance 4 ohms
Driver size $\quad 61 / 2^{\prime \prime}$ woofer; $1^{n}$ soft-dome tweeter
Magnet $\quad 20 \mathrm{oz}$. (woofer); 10 oz . (tweeter)
Mounting Surface
Features Two-way rear-deck design, limited 5 -year warranty; comes complete with wiring; also available as Avid Ten Plus System (RD-5) with $41 / 2^{\prime \prime}$ door units, \$250

BIG ROCK
Olson Electronics
260 S. Forge St.
Akron, Ohio 44327
SP-470
Price $\quad \$ 89.98$
Dimensions $9 \mathrm{H} \times 6 \mathrm{~W} \times 4 \mathrm{D}$
Configuration 3-Way
Response $\quad 25 \mathrm{~Hz}$ to 18 kHz
Min power 4 watts ( 6 dBW )
Max power 50 watts ( 17 dBW )
Impedance 8 ohms
Driver size $6^{\prime \prime} \times 9^{\prime \prime}$
Magnet $\quad 30 \mathrm{oz}$
Mounting Flush
Features Two $15 / 8^{"}$ tweeters; $21 / 2^{\prime \prime}$ midrange each speaker; matching ABS grilles; cloth roll air suspension speaker, all mounting hardware and wire included; 27 more models

## SP-389

Price - $\$ 35$
Dimensions $9 \mathrm{H} \times 6 \mathrm{~W} \times 4 \mathrm{D}$
Configuration 2-way
Response 25 Hz to 30 kHz
Min power 4 watts ( 6 dBW )
Max power 40 watts ( 16 dBW )
Impedance \& ohms
Driver size $6^{n} \times 9^{\text {" }}$
Magnet $\quad 30 \mathrm{oz}$
Mounting Flush
Features $\quad 3^{n}$ tweeter; $11 / 2^{n}$ copper voice coil
foam-roll suspension

## SP-513

Price $\quad \$ 24.98$
Dimensions $10 \mathrm{H} \times 4 \mathrm{~W} \times 23 / 4 \mathrm{D}$
Configuration 2-way
Response 50 Hz to 17 kHz
Min power 2 watts ( 3 dBW )
Max power 20 watts ( 13 dBW )
Impedance 8 ohms
Driver size $4^{\prime \prime} \times 10^{\prime \prime}$ ( $2^{n}$ tweeter)
Magnet 20 oz
Mounting Flush
Features $\quad 1$-inch voice coil

SP-387
Price $\$ 19.98$
Dimensions $21 / 2 \mathrm{H} \times 51 / 4 \mathrm{~W} \times 51 / 4 \mathrm{D}$
Configuration 2 -way
Response $\quad 50 \mathrm{~Hz}$ to 12 kHz
Min power 1.5 watts ( 0.25 dBW )
Max power 20 watts ( 13 dBW )
Impedance 80 hms
Driver size $51 /$ " $^{\prime \prime}$
Magnet 16 oz
Mounting Flush
Features $\quad 1$-inch high temperature voice coil;
foam suspension cone

## Models also available

SP-516, \$28.98; SP-388, \$26

BLAUPUNKT
Robert Bosch Corp.
2800 S. 25th Ave.
Broadview, III. 60153

687000
Price $\$ 120 / \mathrm{pr}$
Dimensions $51 / 2 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 27 / 6 \mathrm{D}$
Conflguration 2-Way
Response 80 Hz to 16 kHz
Min power 15 watts (11.75 dBW)
Max power 25 watts ( 14 dBW )
Impedance 4 ohms
Mounting Flush


639000
Price $\quad \$ 71.40$
Dimensions $73 / 6 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 51 / 8 \mathrm{D}$
Configuration 2-way
Response $\quad 70 \mathrm{~Hz}$ to 20 kHz
Min power 15 watts ( 11.75 dBW )
Max power 25 watts ( 14 dBW )
Impedance 4 ohms
Mounting Surface

## 676000

Price $\quad \$ 71.40$
Dimensions $5 \frac{1}{2} / \mathrm{H} \times 81 / 4 \mathrm{~W} \times 13 / \mathrm{DD}$
Configuration 2-way
Response $\quad 70 \mathrm{~Hz}$ to 20 kHz
Min power 15 watts ( 11.75 dBW )
Max power 25 watts ( 14 dBW )
Impedance 4 ohms
Features Flush unique under-deck acoustic
chamber
721000
Price $\$ 41.40$
Dimensions $61 / 4 \mathrm{H} \times 51 / 2 \mathrm{~W} \times 53 / 4 \mathrm{D}$
Configuration Air suspension
Response 70 Hz to 15 kHz
Max power 25 watts ( 14 dBW )
Impedance 4 ohms
Mounting Surface
728000
Price N/A
Dimensions $63 / 1 / \mathrm{H} \times 91 / 6 \mathrm{~W} \times 33 / 4 \mathrm{D}$
Configuration 3 -way
Response $\quad 40 \mathrm{~Hz}$ to 20 kHz
Min power $\quad 15$ watts ( 11.75 dBW )
Max power 40 watts ( 16 dBW )
Impedance 4 ohms
Mounting Flush

## 725060

Price N/A
Configuration Dual cone
Response 80 Hz to 15 kHz
Min power 15 watts ( 11.75 dBW )
Max power 25 watts ( 14 dBW )
Impedance 4 ohms
Driver size $63 / \mathbf{s}^{"}$
Mounting Flush

## Models also available

688 000. \$134.25/pr.: 724 060. $\$ 34.30$

## BOMAN

Boman Industries
9300 Hall Road
Downey, Calif. 90241
SK-4000GL
Price $\$ 159.95 / \mathrm{pr}$

| Min power | 35 watts (15.5 dBW) |
| :--- | :--- |
| Impedance | 4 ohms |
| Driver size | $6^{n}$ woofer; $3^{\prime \prime}$ midrange; $1^{\prime \prime}$ tweeter |
|  | horn; $1^{\prime \prime}$ dome tweeter |
| Magnet | 40 oz. |
| Features | Built-in audio spectrum diffuser; |
| built-in high- and mid-frequency equalizer attenua- |  | tion control


| SK-410TR40GL |  |
| :---: | :---: |
| Price | \$79.95/pr. |
| Configuration | 3-way Trisonic |
| Min power | 25 watts (14 dBW) |
| Impedance | 4 ohris |
| Driver size | $4^{\prime \prime} \times 10^{\text {" }}$ wooter; $2^{\prime \prime}$ midrange; $1^{n}$ tweeter horn |
| Magnet | 40 oz . |
| Mounting | Flush |
| SK-525TR40GL |  |
| Price | \$74.95/pr. |
| Configuration | 3-Way Trisonic |
| Min power | 25 watts (14 dBW) |
| Impedance | 4 ohms |
| Driver size | $6^{n}$ woofer, $3^{\prime \prime}$ midrange: $2^{\prime \prime}$ tweeter horn |
| Magnet | 40 oz . |
| Mounting | Flush |
| Features | Same as Model SK-69TR40GL |
| SK-1020CX20GL |  |
| Price | \$59,95/pr. |
| Configuration | Coaxial |
| Min power | 25 watts (14 dBW) |
| Impedance | 4 ohms |
| Driver size | $6^{\text {² }}$ woofer; $2^{\prime \prime}$ tweeter horn |
| Magnet | 40 oz . |

SK-69CX 20GL
Price $\quad \$ 59.95 / \mathrm{pr}$
Configuration 2-Way Coaxial
Min power 25 watts ( 14 dBW )
Impedance 4 ohms
Driver size $6^{\prime \prime} \times 9^{\prime \prime}$ wooter; $3^{\prime \prime}$ tweeter horn
Magnet 40 oz .
Mounting Flush
Features Same as Model SK-69TR40GL

## SK-525CX20GL

Price $\$ 49.95 / \mathrm{pr}$.
Configuration 2-way coaxial
Min power 25 watts ( 14 dBW )
Impedance 4 ohms
Driver size $6^{\circ}$ woofer; $2^{\prime \prime}$ tweeter horn
Magnet 40 oz .
Mounting Flush

SK-680N
Price $\quad \$ 34.95 / \mathrm{pr}$.

| Min power | 12 watts ( 10.75 dBW ) |
| :--- | :--- |
| Impedance | 4 ohms |
| Driver size | $6^{n}$ woofer; $2^{\text {n }}$ tweeter |
| Magnet | 24 oz. |
| Mounting | Flush |
| Features Audio reflective grille with built-In <br> spectrum diffuser  |  |

## SK-1010N

| Price | $\$ 32.95 / \mathrm{pr}$. |
| :--- | :--- |
| Min power | 10 watts (10 dBW) |
| Impedance | 4 ohms |
| Driver size | $5^{n}$ woofer |
| Magnet | 20 oz. |
| Features | Audio reflective grille |
|  |  |
| SK-450N |  |
| Price | $\$ 22.95 / \mathrm{pr}$. |
| Min power | 6 watts ( 7.75 dBW ) |
| Impedance | 4 ohms |
| Driver size | $4^{n}$ woofer |
| Magnet | 6 oz. |
| Mounting | Flush |
| Features | Same as Model SK-680N |

## SK-75N

$\begin{array}{ll}\text { Price } & \$ 22.95 / \mathrm{pr} \\ \text { Min power } & 8 \text { watts } \text { ( } 9\end{array}$
Min power 8 watts ( 9 dBW )
Impedance 4 ohms
Driver size $5^{*}$ woofer
Magnet $\quad 6 \mathrm{oz}$.
Features Same as Model SK-1010N
SK-550N

| Price | $\$ 14.95 / \mathrm{pr}$ |
| :--- | :--- |
| Min power | 8 watts (9 dBW) |
| Impedance | 4 ohms |
| Driver size | $5^{\prime \prime}$ woofer |
| Magnet | 5 Oz |
| Mounting | Flush |
| Features | Same as Modei SK-1010N |

## Models also available

SK-69TR40GL, $\$ 79.95 / \mathrm{pr}$; SK410CX20GL, \$59.95/pr.; SK690N, \$34.95/pr.; SK-660N, \$26.95/pr.; SK-650N, \$21.95/pr.

## BOSE

Bose Corp.
100 The Mountain Road
Framingham, Mass. 01701

| 1401 Car | Stereo System |
| :---: | :---: |
| Price | \$299.90 |
| Dimenslons | $11 / 2 \mathrm{H} \times 10 \mathrm{~W} \times 41 / 2 \mathrm{D}$ (equalizer) |
| Conliguration | Full-range with active electronic equalizer |
| Min power | 0.25 watts ( -6 dBW ) |
| Max power | 25 watts (14 dBW) |
| Impedance | 0.45 ohms |

## 1401 Car Stereo System

## Price $\$ 299.90$

Dimenslons $11 / 2 H \times 10 \mathrm{~W} \times 41 / 2 \mathrm{D}$ (equalizer)
Configuration Full-range with active electronic equalizer
ats (-6 dBW)
Impedance 0.45 ohms

Driver size

## Magnet

 Mounting41/2" system; equalizer mounted under dash; output of equalizer: 50 watts ( 17 dBW ) per channel continuous into 0.45 ohms from 40 Hz to 17 kHz with no more than $0.09 \%$ THD

## BRAUN

Adcom
11A Jules Lane
New Brunswick, N.J. 08901

## Output C

Price $\quad \$ 279 / \mathrm{pr}$. (with brackets)
Dimensions $63 / 4 \mathrm{H} \times 41 / 4 \mathrm{~W} \times 43 / 8 \mathrm{D}$
Conflguration 2-way
Response $\quad 50 \mathrm{~Hz}$ to 25 kHz
Min power 10 watts ( 10 dBW )
Max power $35 / 50$ watts ( $15.5 / 17$ dBW)
Impedance 4 ohms
Driver size $4^{\text {n }}$ wooter; $1^{\text {" dome }}$ (weeter
Magnet 18 oz . (woofer)
Mounting Surface
Features Original mini speaker from Braun; aluminum cabinet 5 mm . thick; crossover at 1,500 $\mathrm{Hz} ., 12 \mathrm{~dB}$ per octave; employs long-throw woofer and computer-calculated crossover network; bracket allows maxium flexibility in mounting; padded rubber edging acts as cushion

## CANTON

Adcom
11A Jules Lane
New Brunswick, N.J. 08901
AC-200
Price $\$ 300$
Dimensions $42 / 5 \mathrm{H} \times 73 / 5 \mathrm{~W} \times 53 / 4 \mathrm{D}$
Configuration Powered, biamplified two-way system

## Response $\quad 48 \mathrm{~Hz}$ to 25 kHz

Driver size $41 / 3^{\prime \prime}$ woofer; 9/10" dome iweeter Mounting Surface
Features Designed to run off car stereo speaker output; can also be operated with low level source such as a preamplifier; active crossover at $1.7 \mathrm{kHz}, 20$-watt amplifier for the woofer; 5 -watt amp for the tweeter; woofer amp is a bridge switching amp with direct coupling; $\mathrm{S} / \mathrm{N}: 78 \mathrm{~dB}$; THD: $0.03 \%$ at 20 watts, 40 Hz to 2 kHz ; high frequency amp is a single amp with $\mathrm{S} / \mathrm{N}, 74 \mathrm{~dB}$ THD $0.5 \%$ at 5 watts, 1.5 kHz to 12.5 kHz ; crossover at 12 dB per octave; input voltages: 3 V to 60 ohms or 300 mV to 50 ohms for full modulation; ground interference suppression: 45 dB ; enclosure made of die-cast aluminum, finished in black

HC-100
Price $\$ 190 / \mathrm{pr}$.
Dimensions $42 / 5 \mathrm{H} \times 73 / 5 \mathrm{~W} \times 53 / 4 \mathrm{D}$
Configuration 2-way
Response $\quad 48 \mathrm{~Hz}$ to 30 kHz
Min power 5 watts ( 7 dBW )
Max power 40/60 watts (16/17.75 dBW)
Impedance 4 ohms
Driver size $41 / 3^{n}$ woofer; $3 / 4^{n}$ " weeter Mounting Surface
Features Grille sloped at 28-degree angle enclosure made of die cast aluminum; available in black, bronze, and metallic sitver; crossover at 1.7 $\mathbf{k H z}$; angle of dispersion is greater than 125 degrees

## CAR-FI <br> Car-Fi International <br> 152 W. Cypress Ave. <br> Burbank, Calif. 91502

CS-4
Price
\$239.97
Dimensions $6 \mathrm{H} \times 9 \mathrm{~W} \times 4 \mathrm{D}$
Configuration 3 -way
Response $\quad 40 \mathrm{~Hz}$ to $30 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 93 dB
SPL at 1 meter at 1 watt
Min power
Max power
4 ohms
Driver size
Magnet
Features Samarlum cobalt tweeter; softdome midrange; biamp compatible

## CS-3

Price $\$ 149.95$
Dimensions $6 \mathrm{H} \times 9 \mathrm{~W} \times 4 \mathrm{D}$
Configuration 2-way
Response $\quad 40 \mathrm{~Hz}$ to $20 \mathrm{kHz},+2 \mathrm{~dB}$ re 94 dE SPL at 1 meter at 1 watt
Min power 4 watts ( 6 dBW )
Max power 50 watts ( 17 dBW )
Impedance 4 ohms
Driver size $6^{\prime \prime} \times 9^{\prime \prime}$
Magnet
Mounting
ible
CS- 1
Price $\$ 89.95$
Dimensions $6 \mathrm{H} \times 9 \mathrm{~W} \times 4 \mathrm{D}$
Configuration Woofer
Response 40 Hz to $2 \mathrm{kHz}, \pm 2 \mathrm{~dB}$ re 94 dB SPL at 1 meter at 1 watt
Min power 4 watts ( 6 dBW )
Max power 45 watts ( 16.5 dBW )
Impedance 4 ohms
Driver size $\quad 6^{\prime \prime} \times 9^{n}$
Magnet 30 oz .
Mounting Flush or surface

## Models also available

CS-2, \$129.95

## CLARION

Clarion Corp. of America
5500 Rosecrans Ave.
Laundale, Calif. 91260
SK-103
Price
\$175
Dimensions $5 \mathrm{H} \times 13 \mathrm{~W} \times 2 \mathrm{D}$
Configuration 3-way
Response $\quad 60 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Max power 30 watts ( 14.75 dBW )
Impedance 8 ohms
Driver size $6^{*} \times 9^{\prime \prime}$
Magnet 20 oz .
Mounting Flush
SK-102
Price $\$ 157$
Dimensions $7 \mathrm{H} \times 13 \mathrm{~W} \times 21 / 2 \mathrm{D}$
Configuration 3-way
Response 60 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Max power 25 watt (14 dBW)
Impedance 8 ohms
Driver size $4^{n} \times 10^{\prime \prime}$
Magnet 1002
Mounting Flush
Features Rear-deck mounting for "A" body cars (Cutlass Regal, Monte Carlo, etc.), door mounting for domestic and import cars, vans; and pick-up trucks

## SK-99B

Price $\$ 137$
Dimensions $63 / 8 \mathrm{H} \times 10 \mathrm{~W} \times 17 / 8 \mathrm{D}$
Configuration 3-way
Response 100 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$

Max power 25 watts (14 dBW)
Impedance 8 ohms
Driver slze $51 / 4^{\prime \prime}$
Magnet 20 oz
Mounting Flush

## SK-105

Price $\$ 70$
Dimensions $31 / 2 \mathrm{H} \times 5 \mathrm{~W} \times 1 \mathrm{D}$
Configuration 2-way tweeter/midrange
Response $\quad 100 \mathrm{~Hz}$ to $16 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 95 dB SPL at 1 meter at 1 watt (when used with SK-106 woofer)
Min power 25 watts ( 14 dBW )
Max power 50 watts ( 17 dBW )
Impedance 8 ohms
Driver size $\quad 3^{\prime \prime}$ midrange; $1^{n}$ tweeter
Mounting Surface
Features To be used with SK-106 woofer;
adjustable level control; Mylar capacitor crossover

## Models also available <br> SK-106, \$70

## EPI

Epicure Products, Inc.
One Charles St.
Newburyport, Mass. 01950
LS-70
Price $\$ 150 /$ pr
Dimensions $101 / 4 \mathrm{H} \times 7 \mathrm{~W} \times 31 / 2 \mathrm{D}$
Configuration 2 -way
Response $\quad 70 \mathrm{~Hz}$ to $20 \mathrm{kHz},+3 \mathrm{~dB}$ re 87 dB
SPL at 1 meter at 1 watt
Min power 12 watts ( 10.75 dBW )
Max power 60 watts ( 17.75 dBW )
Impedance 8 ohms
Driver size $6^{n}$ woofer, $1^{17}$ tweeter
Magnet 24 oz ( 18 oz . wooter; 6 oz. tweeter)
Mounting Flush or surface
Features Individually-run frequencyresponse graph supplied with each unit; can be mounted in $6^{\prime \prime} \times 9^{\prime \prime}$ cutout or in $5^{\prime \prime}$ or $4^{\prime \prime}$ cutout with optional adapters

## Companion Speaker System

(CSS) LS 35 Speaker and LCS Level Control System
Price $\quad \$ 75$
Dimensions $31 / 2 \mathrm{~W} \times 1 \frac{13}{4} \mathrm{D}$
Configuration Full range
Min power 12 watts ( 10.75 dBW )
Max power 60 watts ( 17.75 dBW )
Impedance 8 ohms
Driver.size $31 / 2^{\prime \prime}$
Mounting Flush
Features LCS controls balance of four speaker system; L-pad attenuators maintain constant system impedance; LS-35 requires $31 / 2^{\prime \prime}$ cut out and $13 / 4^{n}$ clearance behind mounting surface

## FOSGATE

Fosgate Electronics, Inc.
2935 West Fairmount Ave.
Phoenix, Ariz. 85017
PRS-690

| Price | $\$ 120$ |
| :--- | :--- |
| Dimensions | $6 \mathrm{H} \times$ |

Dimensions $6 \mathrm{H} \times 9 \mathrm{~W}$
Configuration 2 -way
Response $\quad 35 \mathrm{~Hz}$ to $16 \mathrm{kHz}, \pm 6 \mathrm{~dB}$
Min power 20 wats ( 13 dBW )
Max power 50 watts (17 dBW)
Impedance 4 ohms
Driver size $6^{\circ} \times 9^{\prime \prime}$
Magnet 20 oz .
Mounting Flush

| PRS-500 |  |
| :---: | :---: |
| Price | \$100 |
| Dimensions | 51/2" (round) |
| Configuration | 2-way |
| Response | 35 Hz to $20 \mathrm{kHz}, \mathrm{t}^{3 \mathrm{~dB}}$ at 1 meter at 1 watt |
| Min power | 20 watts (13 dBW) |
| Max power | 50 watts ( 17 dBW ) |
| Impedance | 4 ohms |
| Driver size | 51/4" |
| Magnet | 10 oz . |
| Mounting | Flush |

## FULTRON

## Arthur Fulmer

## 260 Monroe

Memphis, Tenn. 38101

| 15-9260 |  |
| :---: | :---: |
| Price | \$149.95 |
| Dimensions | $61 / 2 \mathrm{D}$ |
| Configuration | 2-way |
| Max power | 45 watts ( 16.5 dBW ) |
| Impedance | 4 or 8 ohms |
| Mounting | Surface |
| Features brilliance contro | Die-cast aluminium housing with ol |
| 15-9696 |  |
| Price | \$79.95 |
| Dimensions | $6 \mathrm{H} \times 9 \mathrm{~W} \times 334 \mathrm{D}$ |
| Configuration 4-way |  |
| Max power | 30 watts ( 14.75 dBW ) |
| Impedance | 4 or 8 ohms |
| Magnet | 30 oz . |
| Mounting | Fiush |
| Features mount mesh | Aluminium voice coil; deluxe quickgrille |

## 15-9690

Price $\$ 60$
Dimensions $6 \mathrm{H} \times 9 \mathrm{~W} \times 33 / 4 \mathrm{D}$
Configuration 3-way

| Response | 20 Hz to 16 kHz |
| :--- | :--- |
| Max power | 25 watts (14 dBW) |
| Impedance | 4 or 8 ohms |
| Driver size | $6^{\prime \prime} \times 9^{\prime \prime}$ |
| Magnet | 20 oz. |
| Mounting | Flush |
| Features | Aluminum voice coil; deluxe mesh |
| grille |  |

15-9670

| Price | $\$ 49.95$ |
| :--- | :--- |
| Dimensions | $31 / 2 \mathrm{D}$ |
| Max power | 25 watts (14 dBW) |
| Impedance | 4 or 8 ohms |
| Magnet | 20 oz. |
| Mounting | Flush |
| Features | Aluminium voice coil; deluxe quick- |
| mount mesh gille |  |

## 15-9470

Price
Dimensions
Max power 25 watts (14 dBW)
Impedance 4 or 8 ohms
Magnet 20 oz
Mounting Flush
Features Aluminum voice coil; deluxe quickmount mesh grille

## Models also available

15-9665, \$99.95; 15-9490, \$55

## GRUNDIG <br> LAS Electronics East, Inc. <br> 85C Saratoga Blvd. <br> Island Park, N.Y. 11558




Impedance Driver size Magnet Mounting

## MARANTZ

Marantz Co., Inc.
20525 Nordhoff St.
Chatsworth, Calif. 91311

## SS-5000

Price
Dimensions $79 / 32 \mathrm{H} \times 115 / 32 \mathrm{~W} \times 79 / 32 \mathrm{D}$
(less mounting bracket)
Configuration 2-way
Response $\quad 30 \mathrm{~Hz}$ to 20 kHz , (DIN) re 81 dB
SPL at 1 meter at 1 watt
Min power 15 watts ( 11.75 dBW )
Max power 250 watts ( 24 dBW )
Impedance 4 ohms
Driver size $\quad 61 / 2^{\prime \prime} \times 1^{\prime \prime}$
Magnet 13 oz .
Mounting Surface
SS-569
$\begin{array}{ll}\text { Price } & \$ 130 \\ \text { Dimensions } & 93 / 4 \mathrm{H}\end{array}$
Dimensions $93 / 4 \mathrm{H} \times 63 / 6 \mathrm{~W} \times 4 \mathrm{D}$
Configuration 5 -way

| Response | 40 Hz to 20 kHz |
| :--- | :--- |
| Max power | 30 watts |
| Impedance | 8 ohms |
| Driver size | $6^{n} \times 9^{\prime \prime}$ |
| Magnet | 20 oz. |
| Mounting | Flush |

## SS-3469

Price $\quad \$ 110$
Dimensions $93 / 8 \mathrm{H} \times 63 / 6 \mathrm{~W} \times 35 / 8 \mathrm{D}$
Configuration 4 -way
Response $\quad 40 \mathrm{~Hz}$ to 18 kHz
Max power 30 watts
Impedance 8 ohms
$\begin{array}{ll}\text { Driver size } & 6^{\prime \prime} \times 9^{\prime \prime} \\ \text { Magnet } & 20 \mathrm{oz} .\end{array}$
Mounting Flush
SS-3410
Price $\$ 80$
Dimensions $10 \mathrm{H} \times 41 / 4 \mathrm{~W} \times 25 / 8 \mathrm{D}$
Configuration 2-way
Response 50 Hz to 20 kHz
Max power 20 watts
impedance 40 hms
Driver size $4^{\prime \prime} \times 10^{\prime \prime}$
Magnet 10 oz .
Mounting Flush

Max power 30 watts ( 14.75 dBW ) continuous Flush/surface 4 ohms
51/4" woofer; 2" tweeter
13 oz.
Same as Model LS-80

| Impedance | 4 to 8 ohms |
| :--- | :--- |
| Drlver size | $6^{\prime \prime} \times 9^{\circ}$ |
| Magnet | 20 oz. |
| Mounting | Flush |
| Features | Also available as MA-0069-20CP, |
| which includes 2 speakers, grilles, wiring, and <br> hardware  |  |

MA-0525-020C

## Price $\$ 36.56$

Configuration 2-way
Response $\quad 50 \mathrm{~Hz}$ to 20 kHz
Max power 25 watts ( 14 dBW )
Impedance 4 to 8 ohms
Driver size $51 / 4^{\prime \prime}$ (round)
Magnet 20 oz
Mounting Flush
Features Also available as MA-0525-20CP which includes 2 speakers, grilles, wiring, and hardware

| MA-0069-0020 |  |
| :---: | :---: |
| Price | \$23.40 |
| Configuration | Dual cone |
| Response | 40 Hz to 16 kHz |
| Max power | 25 watts ( 14 dBW ) |
| Impedance | 4 to 8 ohms |
| Driver size | $6^{\prime \prime} \times 9^{\prime \prime}$ |
| Magnet | 20 oz. |
| Mounting | Flush |
| Features which includes hardware | Also available as MA-0069-020P, s 2 speakers, grilles, wiring, and |

## MA-0525-0020

Price \$22.30
Configuration Dual cone
Response $\quad 50 \mathrm{~Hz}$ to 16 kHz
Max power 25 watts (14 dBW)
Impedance 4 to 8 ohms
Driver slze $51 / 4^{\prime \prime}$ (round)
Magnet
20 oz
Mounting Flush
Features Also available as MA-0525-020P which includes 2 speakers, grilles, wiring, and hardware

MA-04 10-0010
Price
$\$ 20.3$
Configuration Dual cone
Response 60 Hz to 14 kHz
Max power 15 watts ( 11.75 dBW )
Impedance 4 to 8 ohms
Driver size $4 \times 10^{\prime \prime}$
Magnet 10 oz .
Mounting Flush
MA-0057-0010
Price $\$ 20.09$
Configuration Dual cone
Response 50 Hz to 14 kHz
Max power 15 watts ( 11.75 dBW )
Impedance 4 to 8 ohms
Driver size $5^{\prime \prime} \times 7^{\prime \prime}$
Magnet 10 oz
Mounting Flush
MA-0525-0005
Price $\quad \$ 16.80$
Configuration Dual cone
Response 60 Hz to 15 kHz
Max power 16 watts ( 12 dBW )
Impedance 4 to 8 ohms
Driver size $51 / 4^{\prime \prime}$ (round)
Magnet $\quad 5.5 \mathrm{oz}$.
Mounting Flush
Features Also available as MA-0525-005P which includes 2 speakers, grilles, wiring, and hardware

## Models also available

MA-0069-10CP, \$75.21; MA-0069020T, \$43.88; MA-0069-10DV \$23.79; MA-0069-0010, \$20.90 MA-0525-0010, \$19.18

## MITSUBISHI <br> Mitsubishi Audio Systems <br> Melco Sales, Inc. <br> 3030 E. Victoria St. <br> Compton, Calif. 90221

| SX-30SA |  |
| :---: | :---: |
| Price | \$149.95 |
| Configuration | 2-way |
| Response | 80 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| Max power | 50 watts (17 dBW) |
| Impedance | 4 ohms |
| Driver size | $4^{\prime \prime} \times 4^{\circ}$ |
| Magnet | 65 oz . |
| Mounting | Surface |
| Features | Aluminum die-casting enclosure |

## SG-69QA

Price \$119.95
Configuration 4-way
Response 50 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Max power 20 watts ( 13 dBW )
mpedance 4 ohms
Oriver size $6^{\prime \prime} \times 9^{\prime \prime}$
Magnet 21 oz.
Mounting Flush
SG-69CA
Price $\$ 79.95$
Configuration 2-way
Response 50 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Max power 20 watts ( 13 dBW )
Impedance 4 ohms
Oriver size $6^{\prime \prime} \times 9^{\prime \prime}$
Magnet $210 z$
Mounting Flush

## SG-16CA

Price \$69.95
Configuration 2-way

| Response | 60 Hz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ |
| :--- | :--- |
| Max power | $20 \mathrm{watts}(13 \mathrm{dBW})$ |
| Impedance | 40 ohms |
| Driver size | $6^{1 / 1^{n}} \times 6^{1 / 4^{\circ}}$ |
| Magnet | 6.5 oz. |
| Mounting | Flush |

SG-40WA
Price $\$ 54.95$
Configuration 1-way dual cone
Response $\quad 50 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Max power 20 watts ( 13 dBW )
Impedance 4 ohms
Driver size $4^{\prime \prime} \times 10^{\prime \prime}$
Magnet 10 oz .
Mounting Flush
SG-13WA
Price
Configuration 1-way dual cone
Response $\quad 75 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Max power 20 watts ( 13 dBW )
mpedance 4 ohms
Driver size $51 / 4^{"}$
Magnet $\quad 6.4 \mathrm{oz}$
Mounting Flush
SG-10WA
Price $\quad \$ 39.95$
Configuration 1-way dual cone
Response 100 Hz to $17 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Max power 20 watts ( 13 dBW )
mpedance 4 ohms
Driver size $4^{*}$
Magnet $\quad 5.3 \mathrm{oz}$
Mounting Flush
SB-2SA
Price \$34.95
Response 5 kHz to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Max power 20 watts ( 13 dBW )

Impedance 4 ohms
Mounting Surface
Features Supertweeter

## Models also available

SX-10BA, \$124.95; SG-69TA, \$99.95: SG-20CA, \$99.95; SG40CA, \$64.95; SG-69WA, \$49.95; SG-16EA, \$49.95

## MOTOROLA

Motorola, Inc.
Automotive Products Div.
1299 E. Algonquin Rd.
Schaumburg, III. 60196
M41-20T
Price $\$ 134.95$
Dimensions $10 \mathrm{H} \times 4 \mathrm{~W} \times 35 / 8 \mathrm{D}$
Configuration 3 -way
Response 55 Hz to 16 kHz
Max power 25 watts ( 14 dBW )
Impedance 6 ohms
Driver size $4^{\prime \prime} \times 10^{\prime \prime}$
Magnet 20 oz .
Mounting Flush
Features $1^{1 "}$ voice coil; one-piece ceramic
magnet
D69-20T
Price $\quad \$ 119.95 / \mathrm{pr}$
Dimensions $9 \mathrm{H} \times 6 \mathrm{~W} \times 31 / 8 \mathrm{D}$
Configuration 3-way
Response 45 Hz to 18 kHz
Max power 25 watts ( 14 dBW )
Impedance 6 ohms
Driver size $6^{n} \times 9^{n}$
Magnet 20 oz .
Mounting Flush
Features $2.5^{\prime \prime}$ midrange; $2^{n}$ tweeters; one-
piece ceramic magnet
M68-15C

| Price | \$99.95/pr. |
| :---: | :---: |
| Dimensions | $8 \mathrm{H} \times 6 \mathrm{~W} \times 31 / 2 \mathrm{D}$ |
| Configuration | 2 -way |
| Response | 55 Hz to 15 kHz |
| Max power | 25 watts ( 14 dBW ) |
| Impedance | 6 ohms |
| Driver size | $6^{n} \times 8^{\prime \prime}$ |
| Magnet | 13 oz . |
| Mounting | Flush |
| Features | 1 " voice coil; one-piece ceramic |

D69-20C
Price $\$ 89.95 / \mathrm{pr}$
Dimensions $9 \mathrm{H} \times 6 \mathrm{~W} \times 3 / 8 \mathrm{D}$
Configuration 2-way
Response 45 Hz to 15 kHz
Max power 25 watts ( 14 dBW )
Impedance 6 ohms
Driver size $6^{n} \times 9^{\prime \prime}$
Magnet 20 oz
Mounting Flush
Features $1^{1 "}$ voice coil; $2^{n}$ tweeters; one-
piece ceramic magnet

## D5-20C

Price $\$ 77.95 /$ pr
Dimensions $51 / 4 \mathrm{H} \times 21 / 2 \mathrm{D}$
Configuration 2-way
Response $\quad 65 \mathrm{~Hz}$ to 14 kHz
Max power 25 watts ( 14 dBW )
Impedance 6 ohms
Driver size $51 / 4^{\prime \prime}$
Magnet 20 oz
Mounting Flüsh

tweeters

## D5-10C

Price $\$ 66.95 /$ pr

| Dimensions | $51 / 4 \mathrm{H} \times 51 / 4 \mathrm{~W} \times 21 / 4 \mathrm{D}$ | TS-167 |  |
| :---: | :---: | :---: | :---: |
| Configuration | 2-way | Price | \$82.95 |
| Response | 65 Hz to 14 kHz | Configuration | 2-way coaxial |
| Max power | 20 watts ( 13 dBW ) | Response | 30 Hz to 20 kHz |
| Impedance | 6 ohms | Max power | 20 watts ( 13 dBW ) |
| Driver size | $5 \%^{\prime \prime}$ | Impedance | 4 ohms |
| Magnet | 10 oz . | Driver size | 2" Iweeter |
| Mounting | Flush | Magnet | 10 oz . |
| Features | 1 " voice coil; one-piece ceramic | Mounting | Door |
| magnet |  | Features compliance wo | Tweeter horn built into grille; highofer |
| M4-8C |  |  |  |
| Price | \$49.95/pr. | TS-165 |  |
| Dimensions | $4 \mathrm{H} \times 4 \mathrm{~W} \times 1 \% \mathrm{D}$ | Price | \$72.95 |
| Configuration | 2-way | Configuration | 2-way coaxial |
| Response | 80 Hz to 20 kHz | Response | 30 Hz to 16 kHz |
| Max power | 15 watts ( 11.75 dBW ) | Max power | 20 watts ( 13 dBW ) |
| Impedance | 6 ohms | Impedance | 4 ohms |
| Driver size | $4{ }^{\prime \prime}$ | Driver size | $2^{\prime \prime}$ tweeter |
| Magnet | 8 oz . | Magnet | 20 oz . |
| Mounting | Flush | Mounting | Door |
| Features magnet | 1 " voice coil; one-piece ceramic | Features | Same as Model TS-167 |
|  |  | TS-T3 |  |
| M4-5W |  | Price | \$69.95 |
| Price | \$24.95/pr. | Contiguration | Tweeter |
| Dimensions | $4 \mathrm{H} \times 4 \mathrm{~W} \times 13 / \mathrm{D}$ | Response | 250 Hz to 20 kHz |
| Configuration | Dual cone | Max power | 60 watts ( 17.75 dBW ) |
| Response | 85 Hz to 10 kHz | Driver size | $31 / 2^{*}$ |
| Max power | 8 watts (9 dBW) | Magnet | 6.5 oz |
| Impedance | 6 ohms | Mounting | Flush |
| Driver size | $4^{\prime \prime}$ | Features | Built-in crossover network |
| Magnet Mounting | ${ }_{5}^{50 \mathrm{oz}}$ Flush |  |  |
| Mounting | ( ${ }^{\text {Flus }}$ / voice coil; one-piece ceramic | TS-164 | \$59.95 |
|  |  | Configuration | 2-way coaxial |
|  |  | Response | 40 Hz to 16 kHz |
| Models als | so available | Max power | 20 watts ( 13 dBW ) |
|  | M68-15T, \$129.95/pr. M41-20C, | Impedance | 4 ohms |
|  | \$104.95/pr.; M5-20C, \$94.95/pr.; | Driver size | $2{ }^{\text {" }}$ tweeter |
|  | M5-1DC, \$89.95/pr; M4-10C, | Magnet | 10 oz . |
|  | \$74.95/pr.i: D3-5W, \$25.95; M5- | Mounting | Door |
|  | 5W, \$34.95/pr. | Features | Same as Model TS-167 |
| PIONEER |  | TS-M2 |  |
| Pioneer E | Electronics of America | Price | $\$ 54.95$ |
| 1925 E. D | Dominquez St. | Response | 450 Hz to 20 kHz |
| Long Bea | ach, Calif. 90810 | Max power | 20 watts ( 13 dBW ) |
|  |  | Mounting | Dash |
| TS-X9 |  | Features ble level contr | Adapts to any car system; adjustaols |
|  | \$239.95 |  |  |
| Configuration | 2-way |  |  |
| Response | 50 Hz to 22 kHz |  |  |
| Max power | 40 watts ( 16 dBW) | Price Response | 80 Hz to 13 kHz |
| Driver size | 35/" wooter; 1" dome tweeter | Response <br> Max power | 40 watts ( 16 dBW ) |
| Mounting | Surface | Max power Mounting | Flush or surface |
| TS-W203 |  | TS-120 |  |
| Price | \$189.95 | Price | \$40.95 |
| Configuration | Wooter | Response | 80 Hz to 16 kHz |
| Response | 28 Hz to 10 kHz | Max power | 8 watts (9 dBW) |
| Max power | 60 watts ( 16.5 dBW ) | Impedance | 4 ohms |
| Driver size | $8^{8 \prime}$ | Mounting | Door |
| Magnet Features | $20 \mathrm{oz}$ <br> Fits $6^{\prime \prime} \times 9^{\prime \prime}$ opening | Features | Thin design |
|  |  | Models a | Iso available |
| TS-696 |  | Models a | TS-202, \$219.00; TS-695, |
| Price | \$139.95 |  | \$159.95; TS-168, \$139.95; TS- |
| Configuration | 2-way |  | 694, \$95.95; TS-693, \$81.95; TS- |
| Response | 35 Hz to 18 kHz |  | 692, \$73.95; TS-691, \$59.95; |
| Max power | 40 watts ( 16 dBW ) |  | TS-162DX \$59.95; TS-121, |
| Oriver size | $6^{\prime \prime} \times 9^{\prime \prime}$ |  | \$51.95; TS-160, \$41.95; TS-5, |
| Magnet | 20 oz . (high efficiency) |  | \$29.95 |
| Features | Crossover frequency at 4 kHz ; |  |  |
| $25 /{ }^{\text {a }}$ midrange |  | POWER D | DRIVE |
|  |  | Recoton | Corp. |
| TS-X6 |  | 46-23 Cra | St. |
| Price | \$124.95 | Long Isla | and City, N.Y. 11101 |
| Configuration | 2-way 80 Hz to 20 kHz | Long Isla | ( ${ }^{\text {a }}$ |
| Max power | 20 watts ( 13 dBW ) | CS-265 |  |
| Driver size | $4^{\prime \prime}$ wooter; $4^{\prime \prime}$ passive radiator; | Price | \$64.95 |
|  | 25/9"'weoter | Configuration | 2-way |
| Mounting | Surface | Response | 40 Hz to 16 kHz |


| Max power | 30 watts (14.7 |  |
| :---: | :---: | :---: |
| Impedance | 8 ohms |  |
| Driver size | $61 / 2^{\prime \prime} \quad$ air-su aluminium dom | wooter |
| Magnet | 20 oz . |  |
| Mounting | Flush |  |
| Fealures speaker wire | Wire mesh included | hardware |
| PSB |  |  |
| PSB Spe | kers, Inc |  |
| P.O. Box |  |  |
| St. Jaco | s, Ontario |  |
| Canada, | NOB 2NO |  |

PSB Alpha
$\begin{array}{ll}\text { Price } & \$ 110 \\ \text { Dimenslons } & 4 H \times 8 W \times 5 D\end{array}$
Configuration 2-way
Response 80 Hz to $20 \mathrm{kHz}, \pm 2 \mathrm{~dB}$
Min power 20 watts ( 13 dBW )
Impedance 4 ohms
Driver size $39 / 10^{\prime \prime}$ woofer, $1^{n}$ tweeter
Mounting Surface
Features Mounting bracket and hardware in-
cludЭd; speaker shaped to fit into rear deck of car

## PYRAMID

Py ramid Industries
12970 Branford St.
Arleta, Calif. 91331
PMS-5A
Price $\$ 164.95$
Comfiguration 3-way
Response $\quad 25 \mathrm{~Hz}$ to $22 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 114 dB SPL at 1 meter at 1 watt
Max power 40 watts ( 16 dBW )
Impedance 4 ohms
Driver size $6^{+} \times 9^{\prime \prime}$
Magnet 20 oz.
Mounting Flush
Features Dual voice-coil subwoofer handles frequencies from 20 Hz to 300 Hz ; two sealed back midranges handle frequencies from 300 Hz to 4.5 kHz , multifaced iweeter for directional surface mount applications

PMS-2A
Price $\$ 109.95$
Configuration 2-way
Response $\quad 35 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ re 104 dB SPL at 1 meter at 1 watt
Max power 40 watts ( 16 dBW )
Impedance 4 ohms
Driver size $6^{\prime \prime} \times 9^{\prime \prime} ; 21 / 2^{\prime \prime}$ tweeter
Magnet 16 oz
Mounting Flush
Features Stereo or biamp connection avail-
able

## REALISTIC

Radio Shack
1400 One Tandy Center Ft. Worth, Texas 76102

12-1854
Price $\quad \$ 79.95 /$ pr
Dimensions $65 / 6 \mathrm{H} \times 10 \mathrm{~W} \times 23 / 6 \mathrm{D}$
Configuration 3 -way
Response $\quad 50 \mathrm{~Hz}$ to 15 kHz
Mas power 20 watts ( 13 dBW )
Impedance 8 ohms
Driver size $51 / 4^{\prime \prime}$ wooter; $2^{1 / 2^{\prime \prime}}$ midrange; $2^{\prime \prime}$
tweeter
Magnet $\quad 5.7 \mathrm{oz}$.
Mownting Surface
12-1848
Price \$29.95/pr.
Coafiguration Single

Response
Max powe
15 watts ( 11.75 dBW$)$
mpedance
Driver size
Magnet
Mounting
Features Instant mount retainer rings included

## Models also available

12-1853, \$59.95/pr.; 12-1855 \$27.95/pr.

## ROAD SOUNDS

Suntron
425 7th St. N.W.
Washington, D.C. 20004
RS 3000
Price $\$ 70$
Dimensions $6 \mathrm{H} \times 91 / 2 \mathrm{~W} \times 1 \mathrm{D}$
Configuration 3 -way
Response 80 Hz to 17 kHz
Min powet 15 watts
Max power 30 watts
Impedance 80 hms
Driver size $51 / 4^{\prime \prime} \times 51 / 4^{m}$
Magnet 20 oz .
Mounting Surface
RS-693
Price $\$ 40$
Dimensions $6 \mathrm{H} \times 9 \mathrm{~W} \times 31 / 2 \mathrm{D}$
Configuration 3-way
Min power 2 watts
Max power 25 watts
Impedance 8 ohms
Driver size $6^{\circ} \times 9^{\prime}$
Magnet 20 oz
Mounting Flush

## Models also available

RS-694, \$50; RS 543, \$40
ROYAL SOUND
Royal Sound Co., Inc.
248 Buffalo Ave.
Freeport, N.Y. 11520
RS-6100
Price $\$ 300 / \mathrm{pr}$
Dimensions $77 / 6 \mathrm{H} \times 43 / 4 \mathrm{~W} \times 51 / 8 \mathrm{D}$
Configuration 2-way
Features Basic housing and components chemically treated to inhibit corrosion; heavy duty mounting hardware to resist extremes of temperature, humidity, vibration, and jarring; heavy gauge wiring harness to insure full fidelity sound at full power output; screw-type speaker terminals for ease of mounting; low-frequency (automobile use), high frequency (home use) switchable crossover networks; LED green power light; LED red signal overload light

## RS-6030

Price $\quad \$ 150 / \mathrm{pr}$
Dimensions $6 \mathrm{H} \times 35 / 8 \mathrm{~W} \times 3 \mathrm{D}$
Configuration 2-way
Features Basic housing and components chemically treated to inhibit corrosion; heavy duty mounting hardware to resist extremes oftemperature, humidity, vibration, and jarring; heavy gauge wiring harness to insure full fidelity sound at full power output; screw-type speaker terminals for ease of mounting

## Models also available

RS-6045N, \$200/pr

## SANYO

Sanyo Electric Co.
1200 West Artesia Blvd.
Compton, Calif. 90220

SP-795
Price $\$ 100$
Configuration 2-way
Response 100 Hz to 20 kHz
Max power 33.5 watts
Impedance 4 or 8 ohms
Driver size $4^{n}$ woofer; $3^{n}$ hard-dome tweeter
Magnet $\quad 10 \mathrm{oz}$. (woofer); 4.9 oz . (weeter)
Mounting Surface
Features Separate L.C crossover for conventional use; swivel mounting brackets

## SP-780

Price $\quad \$ 89.95$
Configuration 2-way
Response 60 Hz to 20 kHz
Max power 33.5 watts
Impedance 4 or 8 ohms
Magnet 20 oz . (woofer); 3.2 oz . (Dome mid/tweeter)
Mounting Flush (tweeter); surface (woofer)
SP-770
Price $\$ 80$
Dimenslons $9 \mathrm{H} \times 6 \mathrm{~W} \times 2 \mathrm{D}$
Configuration 3-way
Response 45 Hz to 20 kHz
Max power 28 watts
Impedance 4 or 8 ohms
Driver size $31 / 4^{\prime \prime}$
Magnet $\quad 20 \mathrm{oz}$ (woofer); 0.8 oz . (midrange)
0.5 oz . (tweeter)

SP-768
Price $\$ 69.95$
Dimensions $6 \mathrm{H} \times 9 \mathrm{~W}$
Configuration 2-way
Response 60 Hz to 20 kHz
Max power 28 watts
Impedance 4 or 8 ohms
Magnet 20 Oz (woofer) 1 Oz (tweeter)
Mounting Flush
SP-737
Price $\$ 69.95 / \mathrm{pr}$
Dimensions $61 / 2 \mathrm{H} \times 61 / 2 \mathrm{~W} \times 2 \mathrm{D}$
Configuration 3-way
Response 45 Hz to 20 kHz
Max power 24 watts ( 14 dBW )
Impedance 4 or 8 ohms
Driver size $61 / 2^{"}$
Magnet 20 oz . woofer; 2.2 oz . midrange

Features Removable crossover for conven-
tional or blamp system

## Models also available

SP-777, \$100; SP-410, \$89.95 SP-759, \$79.95; SP-757, \$54.95 SP-731, \$44.95; SP-733 \$59.95/pr.

## SPARKOMATIC

Sparkomatic
Routes 6 and 209
Milford, Pa. 18337

## SK-6900

Price $\$ 89.95$
Dimensions $61 / 2 \mathrm{H} \times 101 / 0 \mathrm{~W} \times 3 \mathrm{D}$
Configuration 3 -way
Response $\quad 40 \mathrm{~Hz}$ to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Min power 25 watts
Max power 50 watts
Impedance 4 to 8 ohms
Driver size $4^{*} \times 4^{\text {" }}$
Magnet 20 oz .
Mounting Flush
SK-525
Price $\$ 89.95$
Dimensions $51 / 2 \mathrm{H} \times 101 / 4 \mathrm{~W} \times 5 \mathrm{D}$
Configuration 3-way
Response 80 Hz to $18 \mathrm{kHz}, \pm 3 \mathrm{~dB}$

Min power 25 watts (14 dBW)
Max power 50 watts ( 17 dBW )
impedance 4 to 8 ohms
Driver size $33 / 4^{n} \times 33 / 4^{n}$
Magnet 1002
Mounting Surface
Features Housed in vibration-free die-cast aluminum cabinet; high-frequency intensifier control to adjust speaker to specific environmental conditions

SK-522T
Price $\$ 59.95$
Dimensions $41 / 2 \mathrm{H} \times 41 / 2 \mathrm{~W} \times 21 / 2 \mathrm{D}$
Configuration 3-way
Response 70 Hz to $17 \mathrm{kHz}, \pm^{3} \mathrm{~dB}$
Min power 25 watts
Max power 50 watts
Impedance 4 to 8 ohms
Driver size $33 / \mathbf{R}^{3 / 8^{n}} 33 / \mathrm{s}^{n}$
Magnet 20 oz .
Mounting Surface
SK-6920C
Price $\$ 47.95$
Dimensions $\quad 61 / 4 \mathrm{H} \times 91 / 4 \mathrm{~W} \times 35 / 8 \mathrm{D}$
Configuration 2-way
Response $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Min power 25 watts
Max power 50 watts
mpedance 4 to 8 ohms
Drlver size $\quad 45 / 6^{\prime \prime} \times 71_{4}{ }^{\prime \prime}$
Magnet 20 oz.
Mounting Flush

## Models also available

SK-700V, \$89.95; SK-6922T
\$69.95: SK-622T, \$49.95: SK.
4120C. \$47.95

## TENNA

Tenna Corp.

## 19201 Cranwood Parkway

Cleveland, Ohio 44128
HE-481
Price $\$ 139.95$
Dimensions $71 / 8 \mathrm{H} \times 47 / 16 \mathrm{~W} \times 45 / 6 \mathrm{D}$
Configuration 2-way
Response $\quad 120 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 90 dB
SPL at 1 meter at 1 watt
Min power 60 watts
Max power 100 watts
Impedance 8 ohms
Driver size $4^{\prime \prime}$
Magnet $60 z$
Mounting Surface
Features Custom mounting brackets can be positioned vertically or horizontally; wire mesh grilles

## CO-620RM

Price $\quad \$ 59.95$
Configuration 2-way
Response $\quad 120 \mathrm{~Hz}$ to $17 \mathrm{kHz}, \pm 5 \mathrm{~dB}$ re 90 dB SPL at 1 meter at 1 watt
Min power 20 watts
Max power 50 watts
Impedance 4 or 8 ohms
Driver size $51 / 4^{\prime \prime}$
Magnet 20.7 oz
Mounting Flush
Features Wire mesh grilles
Models also available
HE-531, \$119.95; TR-6930EM,
\$84.95; CO-6930RM, $\$ 79.95$
TRIFLEX
Orovox Sound
11545 Tuxford Ave.
Sun Valley, Calif. 91352

## TR-2001

| Price | $\$ 63.80$ |
| :--- | :--- |
| Dimensions | $7 \mathrm{H} \times 9 \mathrm{~W} \times 6 \mathrm{D}$ |



# Home Video Equipment 

## AKAI

Akai America, Ltd. 2139 East Del Amo Blvd. Compton, Calif. 90224

VT-350
Price \$2,195
Dimensions $5 \mathrm{H} \times 101 / 4 \mathrm{~W} \times 111 / 2 \mathrm{D}$
Format
Tape width
Capability
Half-speed
Resolution 270 lines
Video S/N 41 dB
Audio resp. 100 Hz to $10 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Audio S/N 43 dB
Auto timer No
Off-air tuning No
Pause Yes
Monitor CRT Optional (\$215, Model VM 300
Viewfinder, CRT standard)
TV hookup Optional (\$85, Model VRU)
Bat. power Yes
Slow-motion Yes
Stop-motion Yes
B\&W camera Yes
Color camera No
Features Electronic editing; auto-repeat; still frame; modular camera; $141 / 2-1 \mathrm{~b}$. battery-operated video cassette recorder, $3^{\prime \prime}$ attachable monitor (optional)

VP-7300
Price $\$ 1,495$
Dimensions $44 / 5 \mathrm{H} \times 111 / 2 \mathrm{~W} \times 119 / 10 \mathrm{D}$
Format
Tape width
VHS
Tape width $1 / 2$
Capability Color
Half-speed No
Resolution 240 lines
Video S/N 45 dB
Audio resp. 50 Hz to 10 kHz
Audio S/N 40 dB
Auto timer Yes
Off-air tuning $Y$ es
Pause Yes
TV hookup Yes
Bat. power Yes
Slow-motion Yes
Stop-motion Yes
B\&W camera Yes
Color camera Yes
Features Noise-free still; $2 \mathrm{X}, 4 \mathrm{X}$, and variable speed; frame-by-frame advance; memory counter; 7 -day programmable tuner; timer-battery charger; soft-eject; remote pause; battery war-ning/tape-motion indicator

## VT-300

Price
Dimensions
Format
Tape width
Capability
Half-speed
Resolution
Video S/N
$\$ 1,095$ to $\$ 1,995$ (depending on model)
$5 \mathrm{H} \times 101 / 4 \mathrm{~W} \times 111 / 2 \mathrm{D}$
Akai
1/2"
B/W
No
270 lines
41 dB

Audio resp. 100 Hz to $10 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Audio S/N $\quad 43 \mathrm{~dB}$
Auto timer No
Off-air tuning No
Pause No
Monitor CRT Yes (incl. on $\$ 1,995$ model; optional, \$215 on other models)
TV hookup Optional (\$85, Model VRU)
Bat. power Yes
Slow-motion No
Stop-motion Yes
B\&W camera Yes
Color camera No
Features Pause; still frame; $3^{\prime \prime}$ monitor
(some models); camera adapter

## BETAVISION

Sears Roebuck Co.
Sears Tower
Chicago, III. 60684

| 5305 |  |
| :---: | :---: |
| Price | \$885 |
| Dimensions | $77 / 10 \mathrm{H} \times 194 / 5 \mathrm{~W} \times 154 / 5 \mathrm{D}$ |
| Format | Beta |
| Tape width | $1 / 2{ }^{\prime \prime}$ |
| Capability | B/W, color |
| Half-speed | No |
| Resolution | 250 lines B/W; 240 lines (color) |
| Video S/N | 43 dB (luminance); 35 dB (chrominance) |
| Audio resp. | 50 Hz to $7 \mathrm{kHz},+3 \mathrm{~dB},-4.5 \mathrm{~dB}$ |
| Audio S/N | 40 dB |
| Auto timer | Yes |
| Off-air tuning | No |
| Pause | Pause only |
| Monitor CRT | No |
| TV hookup | Yes |
| Bat. power | No |
| Slow-motion | No |
| Stop-motion | No |
| B\&W camera | Optional (\$297.50, Model 5390) |
| Color camera | Optional Model 5381, \$1145; \$800, Model 538 |
| Features | One-button recorder; front- |
| mounted controls and clock timer; works with any TV. remote pause control |  |
|  |  |

## CURTIS MATHES

Curtis Mathes Sales Co.
One Curtis Mathes Parkway
Athens, Tex. 75751

| C648R |  |
| :--- | :--- |
| Price | $\$ 4,000$ |
| Dimensions | $67 / 8 \mathrm{H} \times 191 / \mathrm{sW} \times 15 \mathrm{y} / 2 \mathrm{D}$ |
| Format | $\mathrm{VHS}(4$-hour) |
| Tape width | $1 / 2 / 2$ |
| Capability | $\mathrm{B} / \mathrm{W}$; color |
| Half-speed | Yes |
| Resolution | 240 lines (color); 270 lines (B/W) |
| Video $\mathrm{S} / \mathrm{N}$ | 40 dB |
| Pic. flutter | $0.003 \%$ |
| Audio resp. | 100 Hz to 8 kHz (SP); 100 Hz to 6 |
|  | $\mathrm{kHz}(\mathrm{LP}) ; \pm 3 \mathrm{~dB}$ |
| Audio $\mathrm{S} / \mathrm{N}$ | 42 dB |
| Audio flutter | $0.18 \%$ |

Auto timer Yes
Off-alr tuning Yes
Pause Yes
Monitor CRT No
TV hookup Yes
Bat. power No
Slow-motion No
Stop-motion No
B\&W camera No
Color camera No

JVC VIDSTAR
JVC America Co. 58-75 Queens Midtown Expressway
Maspeth, N.Y. 11378

HR-4100
Price $\$ 1,250$
Dimensions $51 / 2 \mathrm{H} \times 133 / 8 \mathrm{~W} \times 13 \mathrm{D}$
Format VHS
Tape width $1 / 2^{\prime \prime}$
Capability B/W; color
Half-speed No
Resolution 240 lines
Video S/N 45 dB
Audio resp. 70 Hz to $10 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Audio S/N $\quad 40 \mathrm{~dB}$
Audio flutter 0.5\%
Auto timer No
Off-air tuning No
Pause Pause only
Monltor CRT No
TV hookup Yes
Bat. power Yes
Slow-motion No
Stop-motion Yes
B\&W camera No
Color camera No
Features
Portable (21 lbs.); standard acces-
sories include battery, built-in switchable RF
adapter; AC/battery-charger adapter
HR-3600
Price $\$ 1,245$
Dimensions $53 / 4 \mathrm{H} \times 17 \% \mathrm{~W} \times 123 / 8 \mathrm{D}$
Format
Tape width $1 / 2$
Capability B/W; color
Half-speed No
Resolution 240 lines
Video S/N 45 dB
Audio resp. 50 Hz to $10 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Audio S/N 40 dB
Audio flutter 0.5\%
Auto timer Yes
Off-air tuning Yes
Pause Pause only
Monitor CRT No
TV hookup Yes
Bat. power No
Slow-motion Yes
Stop-motion Yes
B\&W camera No
Color camera No
Features Remote pause; still frame; double-
speed play

| HR-3300 |  | Format | VHS | Dimensions | $67 / 6 \mathrm{H} \times 191 / 6 \mathrm{~W} \times 151 / 2 \mathrm{D}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Price | \$1,050 | Tape width | 1/2n | Format | HS |
| Dimensions | $53 / 4 \mathrm{H} \times 17 \% \mathrm{~W} \times 123 / 8 \mathrm{D}$ | Capability | B/W: color | Tape width | $1 / 2$ in |
| Format | VHS | Half-speed | Yes | Capability | B/W; color |
| Tape width | $1 / 2^{\prime \prime}$ | Resolution | 270 lines (B/W); 230 (color) | Half-speed | (3 speeds: SP/LP/SLP) |
| Capability | B/W; color | Video S/N | 40 dB | Resolution | 230 lines |
| Half-speed | No | Audio resp. | 100 Hz to 6 kHz | Video S/N | 40 dB |
| Reesolution | 240 lines (color) | Audio S/N | 40 dB (short play) | Audio S/N | 40 dB |
| Video S/N | 45 dB | Auto timer | Yes | Auta timer | Yes |
| Audio resp. | 50 Hz to $10 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ | Off-air tuning | Yes | Off-eir tuning | Yes |
| Audio S/N | 40 dB | Pause | Yes | Pause CRT | Yes |
| Audio flutter | 0.5\% | Monitor CRT | No | Monitor CRT | No |
| Auto timer | Yes | TV hookup | Yes No | TV hookup | Yes No |
| Off-air tuning |  | Bat. power | No No | Bat. power Slow-motion | No |
| Pause | Pause only | Slow-motion | No | Slow-motion |  |
| Monitor CRT | No | Stop-motion | No | Stop-motion | No |
| TV hookup | Yes | B\&W camera | Yes | BriW camera | Optional (with AC/adapter) |
| Bat. power | No | Color camera |  | Colcr camera | Optional (with AC adapter) |
| Slow-motion | No |  |  | Features | Microcomputerized programmable |
| Stop-motion | No | Models al | lso available | timer for 4 pro | ograms within one week; electronic |
| B\&W camera |  |  | 8225, \$1,295 | tuner, up to 6 | hours recording capability |
| Color camera |  |  |  |  |  |
|  |  |  |  | PV-1200 |  |
|  |  | MITSUBIS |  | Price | \$1,095 |
| MAGNAVO |  | Melco Sa | les, Inc. | Dimensions | $67 / 6 \mathrm{H} \times 191 / 8 \mathrm{~W} \times 151 / 2 \mathrm{D}$ |
| Magnavox | $x$ Consumer | 3030 E. V | ictoria St. | Tape width | $1 / 2^{\prime \prime}$ |
| Electronic | cs Co. | Compton, | Calif. 90221 | Capability | B/W, color |
| 1700 Mag | navox Way |  |  | Half-speed Resolution | (3 speeds: SP/LP/SLP) 230 lines |
| Fort Wayn | ne, Ind. 46804 |  |  | Video S/N | 40 dB |
|  |  | HS-2000 |  | Audio S/N | 40 dB |
|  |  | Dimensions | $61 / 4 \mathrm{H} \times 193 / 6 \mathrm{~W} \times 131 / 2 \mathrm{D}$ | Autc timer | Yes (programmable) |
| 8252 Port | table | Format <br> Tape width | VHS | Off-air tuning | Yes |
| Price | \$1,495 (sold only with master con- | Capability | Color | Pause | Yes |
|  | trol unit) | Half-speed | 2 to 6 hr . | TV hookup | Yes |
| Dimensions | $51 / 2 \mathrm{H} \times 71 / 2 \mathrm{~W} \times 141 / 8 \mathrm{D}$ (record unit) | Resolution | 230 lines | Bat. power | No |
| Format | VHS | Video S/N | 45 dB (less because of $2 / 6 \mathrm{Hr}$.) | Slow-motion | No |
| Tape width | 1/2" | Off-air tuning |  | Stop-motion | No |
| Capability | B/W; color | Pause | Yes | B\&W camera | Optional (with AC adapter) |
| Half-speed | Yes | Monitor CRT | No | Color camera | Optional (with AC adapter) |
| Resolution | 270 lines (B/W); 230 (color) | Bat. power | No | Features | Up to 6 hours recording capability; |
| Video S/N | 40 dB | Slow-motion | No | time-limit timer | with TV tuner for off-the-air record- |
| Audio resp. | 100 Hz to 6 kHz | Stop-motion | No |  |  |
| Auto timer | Yes | B\%W camera | No |  |  |
| Off-air tuning | Yes | Color camera |  | PHILCO |  |
| Pause | Yes | Features | Programmable up to 6 programs in |  |  |
| Monitor CRT | No | a week; electro | Pric tape indexing; electronic touch | GTE Consu | sumer Electronics |
| TV hookup | Yes | tuning; 5 motor | s, direct drive | 700 Ellico | St. |
| Bat. power |  |  |  | Batavia | Y 14020 |
| Slow-motion | No |  |  | Batavia, | Y. 14020 |
| Stop-motion |  | OMNIVISIO | ON VHS |  |  |
| B\&W camera | Optional | Panasonic | Co. | V-1100 |  |
| Color camera | Optional | Panasonic | Co. Way | Price | N/A |
| Features | Electronic tuning-in master-control | One Pana | asonic Way | Dimenslons | $67 / 6 \mathrm{H} \times 191 / 8 \mathrm{~W} \times 151 / 2 \mathrm{D}$ |
| unit; battery-po battery Indicato | power switch; battery-charge jack; or tamp | Secaucus, | N.J. 07024 | Format | VHS |
|  |  |  |  | Capability | B/W; color |
| 8251 Port | table | PV-2200 |  | Resolution | 240 lines |
| Price | \$1,395 (sold only with master con- | Price | \$1,525 | Video S/N | 43 dB |
|  | trol center) | Dimensions | $55 / 8 \mathrm{H} \times 121 / 4 \mathrm{~W} \times 143 / 3 \mathrm{D}$ (VTR unit); | Audio resp. | 50 Hz to 10 kHz |
| Dimensions | $51 / 2 \mathrm{H} \times 121 / 8 \mathrm{~W} \times 141 / 4 \mathrm{D}$ |  | $55 / 8 \mathrm{H} \times 75 / 6 \mathrm{~W} \times 151 / 4 \mathrm{D}$ (tuner | Audio S/N | 40 dB |
| Format | VHS |  | adapter) | Auto timer | Yes |
| Tape width | $1 / 2{ }^{\text {²}}$ | Format | VHS | Bsiv camera | Optional |
| Capability | B/W; color | Tape width | $1 / 2^{\prime \prime}$ | Colcr camera | Optional |
| Half-speed | Yes | Capability | B/W; color |  |  |
| Resolution | 270 lines (B\&W): 230 (color) | Half-speed | Yes | QUASAR |  |
| Video S/N | 40 dB | Resolution | 230 lines | Quasar El | lectronics Co. |
| Audio resp. | 100 Hz to 6 kHz | Video S/N | 40 dB | Division | of Matsushita Electric |
| Audio S/N | 40 dB | Audio S/N | 40 dB | Division of | of Matsushita Electric |
| Auto timer | Yes | Auto timer | Yes | Corp. of | America |
| Oft-air tuning | Yes Yes | Off-alr tuning |  | 9401 Wes | A Grand Ave. |
| Pause ${ }^{\text {Monitor CRT }}$ | Yes No | Pause Monitor CRT | Yes No | Franklin | $\text { Park. III. } 60131$ |
| TV hookup | Yes | TV hookup | Yes |  |  |
| Bat. power | Yes | Bat. power | Yes | VH-5100 |  |
| Slow-motion | No | Slow-motion | No | Price | \$1,350 |
| Stop-motion |  | Stop-motion | No | Dimensions | $7 \mathrm{H} \times 191 / 4 \mathrm{~W} \times 151 / 2 \mathrm{D}$ |
| B\&W camera | Optional | B\&W camera | Optional (direct connectable). | Format | VHS |
| Color camera | Optional | Color camera | Optional (direct connectable) | Tape width | $1 / 2^{*}$ |
| Features | Battery-charge jack; battery- | Features | Three-way operation (AC, DC, car | Capability | B/W; color |
| charge lamp; m | mechanical turing | cord); tuner tim | mer included to be complete VTR | Half-speed | Yes |
|  |  | system; pushbu | utton operation | Resolution | 270 lines (B/W); 230 (color) |
| 8220 |  |  |  | Video S/N | 42 dB |
| Price ${ }^{\text {Dimensions }}$ | $\begin{aligned} & \$ 1,075 \\ & 71 / 4 \mathrm{H} \times 193 / 32 W \times 15 \mathrm{D} \end{aligned}$ | PV-1600 Price | \$1,295 | Audio resp. <br> Audo S/N | 100 Hz to 8 kHz 40 dB |

Yes; 4 memories allow separate programming of day of the week, time-on, length of program, channel number
Off-alr tuning Yes; 14 pushbutton varactor electronic tuning
Yes; remote (wired), includes channel-changing capability
Pause

Monitor CRT No
TV hookup Yes
Bat. power No
Slow-motion No
Stop-motion No
B\&W camera Optiona
Color camera Optional

## VH-5200 Portable

Price $\quad \$ 1.150$
Dimensions $51 / 2 \mathrm{H} \times 125 / 8 \mathrm{~W} \times 125 / 8 \mathrm{D}$
Format VHS
Capability B/W; color
Half-speed Yes
Resolution 270 lines (B/W); 230 (color)
Video S/N 42 dB
Audio resp. 100 Hz to 8 kHz
Audio S/N 40 dB
Off-air tuning Optional tuner/power supplies (VA-515) allow VHF/UMF taping; timer, pause control included
Monitor CRT No
TV hookup Built-in RF modulator allows use with standard TV on channel 3 or 4
Bat. power Yes; internal, rechargeable battery; AC with built-in adapter; DC (car cigarette lighter) with adapter
Slow-motion No
Stop-motion No
B\&W camera Optional
Color camera Optional
Features $\quad 19 \mathrm{lbs}$ ( 16 lbs without battery); 30 min . battery-power capability; audio input and out put; shoulder strap supplied; deluxe carrying case optional

## Models also available

VH-5010, \$1,150

SANYO
Sanyo Electric, Inc. 1200 West Artesia Blvd. Compton, Calif. 90220

VCR-5500
Price $\quad \$ 1,495$
Dimensions $63 / 10 \mathrm{H} \times 179 / 10 \mathrm{~W} \times 151 / 5 \mathrm{D}$
Format Beta
Tape width $1 / 2$
Capability B/W; color
Half-speed 2 speeds for recording; auto playback
Resolution 240 lines (color); 250 lines (monochrome)
Video S/N 45 dB (luminance); 35 dB (chrominance)
Audio resp. 50 Hz to $70 \mathrm{kHz},+3,-4.5 \mathrm{~dB}$
Audio S/N 40 dB ( 45 dB with Beta NR)
Audio flutter 0.15\%
Auto timer $Y$ es
Off-air tuning Yes
Pause Yes
Monitor CRT Yes
TV hookup Yes
Slow-motion Yes
Stop-motion Yes
B\&W camera Optiona
Color camera Optional
Features Seven-day clock/timer; remote control unit with "Betascan" advances or rewinds at 20 times normal playing speed with picture; variable speed slow motion; one-touch record; live picture and sound recording capability; video and audio outputs; automatic shut-off with "sleep"
timer; freeze frame with single frame advance; electronic touch controls

## VCR-5000 Betacord III

Price $\quad \$ 1,095$
Dimensions $63 / 10 \mathrm{H} \times 173 / 5 \mathrm{~W} \times 143 / 5 \mathrm{D}$
Format
Tape width Beta

Capability
Half-speed Yes (2-speed)
Resolution 240 lines (color); 250 lines (monochrome)
Video $\mathrm{S} / \mathrm{N} \quad 43 \mathrm{~dB}$ (luminance); 35 dB (chrominance)
Audio resp. 50 Hz to $70 \mathrm{kHz},+3,-4.5 \mathrm{~dB}$
Audio S/N $\quad 40 \mathrm{~dB}$
Audio flutter $0.15 \%$
Auto timer Yes
Off-air tuning Yes
Pause Yes
Monitor CRT Yes
TV hookup Yes
Slow-motion Yes
Stop-motion Yes
B\&W camera Optional
Color camera Optional
Features Remote pause control; built-in all channel tuners; micro-touch controls; digitron clock/timer; audio dubbing capability; automatic shut-off sleep switch; easy connect to any TV set

## VTC-9100A

Price $\quad \$ 995$
Dimensions $73 / 4 \mathrm{H} \times 191 / 2 \mathrm{~W} \times 141 / 2 \mathrm{D}$
Format Beta
Tape width $1 / 2^{\prime \prime}$
Capability B/W; color
Resolution 250 lines (B/W); 240 lines (color)
Video S/N 43 dB
Audio resp. 50 Hz to $7 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Audio S/N 40 dB
Auto tlmer Yes
Off-air tuning Yes
Pause Yes
Monitor CRT Optional
TV hookup Yes
Bat. power No
Slow-motion No
Stop-motion No
B\&W camera Optional (\$995, Model VC-1400) Color camera Optional
Features Instant stop/start with remote control for on-the-air editing; bullt-in all-channel tuner built-in connecter to any TV set; simple one-finger operation; video inputs and outputs; automatic shut-off with "sleep" switch; audio output jack for stereo play; instant replay capabilities; memory counter; LED clock/timer

## SELECTAVISION

RCA
600 North Sherman Drive Indianapolis, Ind. 46201

## VCT-400

Price N/A
Dimensions $7 \mathrm{H} \times 191 / 8 \mathrm{~W} \times 151 / 2 \mathrm{D}$
Format
Tape width
Capability Color
Half-speed Yes
Auto timer Yes
Off-air tuning Yes
Pause Pause only
Monitor CRT No
TV hookup Yes
Bat. power No
Slow-motion No
Stop-motion No
B\&W camera Optional (Model BW005; Model BW007)

Color camera Optional (Model CC003 or CC004) Features Remote pause switch with $20^{\prime}$ cable; digital channel display using electronic TV tuners with pushbutton channel selection; any four programs on any received TV channels can be selected for unattended recording during a oneweek period; in fast-forward mode, the unit will stop automatically át start of each recorded program; unit will automatically revert to TV mode when VCR power is off; backup circuit eliminates clock and memory failure during short-term power interruption

## VDT-600

Dimensions $7 \mathrm{H} \times 19 \mathrm{~W} \times 15 \mathrm{D}$
Format VHS
Tape width $1 / 2^{*}$
Capability Color
Half-speed Yes (2 to 6 hrs .)
Auto timer Yes
Off-air tuning Yes
Pause Pause only
Monitor CRT No
TV hookup Yes
Bat. power No
Slow-motion No
Stop-motion No
B\&W camera Optional
Color camera Optional
Features Remote pause/channel selection switch with 20-ft. cable; digital channel display using electronic TV tuners with pushbotton channel selection; any four programs on any received TV channel can be selected for unattended recording during a one-week period; reserve circuit prevents clock and memory failure during short term power interruptions; records up to 6 hours on one cassette; in fast forward will automatically stop at the beginning of each recorded program; automatically reverst to TV mode when VCR power is off

## VDT-201

Price $\quad \$ 1,150$
Dimensions $7 \mathrm{H} \times 19 \mathrm{~W} \times 151 / 2 \mathrm{D}$
Format VHS
Tape width $1 / 2^{\prime \prime}$
Capability Color
Half-speed Yes
Auto timer Yes
Off-air tuning Yes
Pause Pause only
Monitor CRT No
TV hookup Yes
Bat. power No
Slow-motion No
Stop-motion No
B\&W camera Optional (Model BW005; Model BW007)
Color camera Optional (Model CC003 or CC004)
Features Remote pause switch with $20^{\prime} \mathrm{ca}$ -
ble; unit can be timed to turn on and off automati-
cally for unattended recording

## SHARP <br> Sharp Electronics Corp. <br> 10 Keystone Place <br> Paramus, N.J. 07652

VC-6800

## Price

Dimensions
Format
Tape width
Capability
Half-speed 2 speed (2 to 6 hrs.)
Resolution 240 lines
Video S/N 45 dB
Pic. flutter 0.4\%
Audio resp. 70 Hz to $9 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Audio S/N $\quad 40+\mathrm{dB}$
Auto timer Yes


Sanyo VCR-5500
Off-air tuning $Y_{\text {es }}$
Pause Yes
Monitor CRT Yes
TV hookup Yes
Bat. power No
Slow-motion No
Stop-motion No
B\&W camera No
Color camera Optional
Features APLV (automatic program locating device); front-loading tape mechanism; program microprocessor; 7 days, 7 programs, 7 channels electronic four-digit tape counter with memory; digital quartz clock/timer with LCD readout; builh-in VHF/UHF electronic 12-button tuner; up to 6 hours recording capability

## SONY BETAMAX

Sony Corp. of America

## 9 West 57th St.

New York, N.Y. 10019

| SL-3000 Portable |  |
| :--- | :--- |
| Price | $\$ 1,299$ |
| Dimenslons | $5 \mathrm{H} \times 113 / 4 \mathrm{~W} \times 115 / \mathrm{BD}$ |
| Format | Betamax |
| Tape width | $1 / 2 \mathrm{in}$ |
| Capability | $\mathrm{B} / \mathrm{W}$; color |
| Half-speed | No |
| Resolutlon | 240 lines (color); 250 lines (B/W) |
| Video S/N | 45 dB |
| Audio resp. | 50 Hz to $8 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| Audio S/N | 40 dB |
| Auto timer | Yes |
| Off-air tuning Yes |  |
| Pause | Yes |
| Monitor CRT | No |
| TV hookup | Yes |
| Bat. power | Yes |
| Slow-motion | No |
| Stop-motion | No |
| B\&W camera Yes |  |
| Color camera Yes |  |
| Features | Portabla |

Features Portable (20 lbs.); maximum battery recording time, 1 hour; AC recording time is 3 hours; memory rewind; automatic shutoff; audio dubbing; off-air record option; optional tuner-timer; battery level indicator; auxiliary hookups for earphone and microphone jacks; dew warning light and bultt-in heater; hook-in to car/boat

## SL-5400

Price
Dimensions
Format
Tape width
Capability
Resolution
$\$ 1,250$
$61 / 2 \mathrm{H} \times 191 / 6 \mathrm{~W} \times 15 \mathrm{D}$
Betamax
$1 / 2^{\prime \prime}$
250 lines (monochrome); 240 lines (color)
Video S/N
45 dB
Audlo resp. $\quad 50 \mathrm{~Hz}$ tp 10 kHz

Audio S/N 40 dB
Auto timer Yes
Off-air tuning $Y$ es
Pause Yes
Monitor CRT No
TV hookup Yes
Bat. power No
Slow-motion No
Stop-motion Yes
B\&W camera Yes
Color camera Yes
Features Betascan (fast forward and fast rewind at ten times normal speed with visible picfure); three-cay multi-event programmer; built-in digital clock timer; preset timer shutoff; electronic pushbutton tuning; audio ver dubbing capability: remote control allows remote pause, remote betascan and remote fast forward

## SL-8600

Price $\$ 1,150$
Dimensions $183 / 8 \mathrm{H} \times 73 / 4 \mathrm{~W} \times 161 / 5 \mathrm{D}$
Format Betamax
Tape width $1 / 2$
Capability Color; B/W
Half-speed No
Resolution 240 lines
Video S/N 45 dB
Audio resp. 50 Hz to $8 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Audio S/N $\quad 40 \mathrm{~dB}$
Audio flutter 3\%
Auto timer Yes
Off-air tuning No
Pause Yes
Monitor CRT No
TV hookup Yes
Bat. power No
Slow-motion No
Stop-motion No
B\&W camera No
Color camera No

## SYLVANIA <br> GTE Consumer Electronics <br> 700 Ellicott St. <br> Batavia, N.Y. 14020

VC-2500
Price N/A
Dimensions $67 / 8 \mathrm{H} \times 191 / 6 \mathrm{~W} \times 151 / 2 \mathrm{D}$
Format
Capability
Resolution B/W; color
Video S/N 43 dB
Audio resp. 50 Hz to 10 kHz
Audio S/N 40 dB
Auto timer Yes
B\&W camera Optional
Color camera Optional

TOSHIBA
Toshiba America, Inc.
280 Park Ave.
New York, N.Y. 10017

V-5310
Price $\$ 1,095$
Dimensions $73 / 4 \mathrm{H} \times 193 / 4 \mathrm{~W} \times 153 / 6 \mathrm{D}$
Format
Beta
Tape width $1 / 2$
Capability B/W, color
Half-speed No
Resclution 240 lines (color)
Video S/N 42 dB
Audio resp. $\quad 50 \mathrm{~Hz} 108 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
Audio S/N 42 dB
Auto timer Built-in
Off-air tuning Yes
Pause Pause only
Monitor CRT No
TV hookup Yes
Bat. power No
Slow-motion No
Stop-motion No
B\&W camera Optional (Model TA-11)
Color camera Optional (Model 1610)
Features Audio dubbing (voice over pix);
built-ín remote pause

## ZENITH

Zenith Radio Corp.
1000 Milwaukee Ave.
Glenview, III. 60025

## VR-9000W

Price $\$ 1,195$
Dimensions $61 / 2 \mathrm{H} \times 191 / 6 \mathrm{~W} \times 15 \mathrm{D}$
Format Beta II and III
Tape width $1 / 2^{\prime \prime}$
Capability B/W; color
Half-speed No
Resolution 240 lines (color); 250 lines ( $B / W$ )
Video $\mathrm{S} / \mathrm{N} \quad 45 \mathrm{~dB}$
Audio resp. 50 Hz to 7 kHz
Audio S/N 40 dB
Auto timer Yes
Off-air tuning Yes
Pause Yes
Monitor CRT No
TV hookup Yes
Bat. power No
Slow-motion No
Stop-motion Yes
B\&W camera Optional
Color camera Optional
Features Remote control with speed search;
PCM switch; electronic touch-command channel selection; audio dub; AFC

# Signal Processors <br> (including Noise-Reduction units) 

## ADVENT

Advent Corp.
195 Albany St.
Cambridge, Mass. 02139

Model 500 SoundSpace
Control
Description Acoustic simulator
Price $\quad \$ 595$
Delay $\quad 1$ to 100 millisecond (continuously variable)
Decay Continuously variable
Response $\quad 20 \mathrm{~Hz}$ to $6 \mathrm{kHz} ; 6 \mathrm{kHz}$ to. 20 kHz (direct)
THD $\quad 0.1 \%$ (rear channels for 1.5 V input at 1 kHz ; front channels, unity gain)
Features 32,000 -bit RA memory

ADS
Analog \& Digital Systems
One Progress Way
Wilmington, Mass. 01887

ADS-10 Acoustic Dimension Synthesizer
Description Built-in amplification; matching speakers optimized for ambience reproduction
Price $\quad \$ 1,150$
Delay $\quad 10 \mathrm{~ms}$ to 100 (variable)
Decay $\quad 0$ to 1.6 sec (variable)
Response $\quad 30 \mathrm{~Hz}$ to $13 \mathrm{kHz},+1,-3 \mathrm{~dB}$
THD
Noise
Inputs
Outputs $0.03 \%$ (front); $0.3 \%$ (rear) at 1 kHz 83 dB reference 3 V
2 main, 2 tape, 2 power amp 2 front, 2 rear \#1, 2 rear \#2, 2 tape, 2 speaker

ADS 10-01 Acoustic Dimension Synthesizer

| Description | Similar to model ADS-10, but with- <br> out amp or speakers |
| :--- | :--- |
|  | $\$ 700$ |
| Price | 10 ms to 100 (variable) |
| Delay | 0101.6 sec . (variable) |
| Decay | 30 Hz to $13 \mathrm{kHz},+1,-3 \mathrm{~dB}$ |
| Response | $0.03 \%$ (front); $0.3 \%$ (rear) ai 1 kHz |
| THD | 83 dB reference 3 V rms |
| Noise | 2 main, 2 tape |
| Inputs | 2 front, 2 rear \#1,2 rear \#2,2 |
| Outputs |  |

## AUDIO PULSE

Audio Pulse Electronics, Inc.
4323 N. Arden Drive
El Monte, Calif. 91731
Model 1000 Time-Delay
Description Ambience simulator, with dynamic range expander, using multiple re-
cycling of signal and cross-cou pling through a digital delay line \$950
Inltial delay $7,12,19,33,42,53$ min continuously variable to 12 , $21,33,58,75,95 \mathrm{~m}$
Decay
Response

THD Direct (front) 80 dB (IHF); delayed (rear) 75 dB (IHF)
Direct (front) 0.09 max THD (IHF); delayed (rear) 0.5\% max THD (IHF)
Direct (front) 80 dB (THF) delayec
$\begin{array}{ll} & \text { (rear) } 75 \mathrm{~dB} \text { (THF) } \\ \text { Expansion } & 1.0 \text { to } 1.5 \text { ratio (continuously vari- }\end{array}$ able)
Attack
Release
Inputs
Outputs
2 ms

Outputs
Features 0.0 to 1.2 sec (variable)

Direct (front) 20 Hz to 20 kHz , $\pm$ 0.5 dB ; delayed (rear) 20 Hz to 10 $\mathrm{kHz}, \pm^{3} \mathrm{~dB}$

Digital display of delay and decay input level indicators; LED expanderlevel indicators; front-channel delay for stage depth; headphone amplifier with ambient mix, remote defeat jack; additional outputs for 6/8 channel operation; compatible with any preamp; tape monitor or speaker outputs; automatic defeat of between-song dialogue on radio broadcasts; tape monltor facilities; individual input/output level controls; balance control

## Model Two Digital Time-Delay

Description
Ambience simulator, with built-in 25/25W amplifier, using multiple recycling of signal through a digital delay line
Price
Delay
Decay
Response
THD

Noise

Outputs \$585
Short initial delay: $19,33,51 \mathrm{~ms}$; long initial delay: $39,66,103 \mathrm{~ms}$ 0.1 sec to 0.6 sec (variable) (echo density high) $0.5 \%$ ( 40 Hz to 8 kHz at 25 watts - 14 dBW-per channel into 8 ohms, direct mode) 72 dB below rated output (delayed) (unweighted); below rated output (direct) (unweighted)
Sensitivity for 0 dB 50 mV to 3.3 V (variable) (low level); sensitivity for 0 dB 1.2 V to 60 V (variable) (high level)
Features Any output 0-1.5V/16K ohm max nel integrated Built-in 25 watt ( 14 dBW ) per chan with tone control and ouput and output level controls with LED peak-level indicator; long/short delay and direct/defect function selector; input can be driven from preamp output, tape monitor or speaker terminals (with optional cable)

## AUDIONICS OF OREGON

Audionics, Inc.
10950 S.W. 5th, \# 160
Beaverton, Ore. 97005

Space and Image Composer
Description Four-channel SQ decoder with Tate Directional Enhancement System
Price
\$799
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
THD $\quad 0.2 \%(20 \mathrm{~Hz}$ to 20 kHz$)$
IM 0.2\%
Noise $\quad-70 \mathrm{~dB}$ reference 250 mV input
Compression None
Expansion None
Attack $\quad 3 \mathrm{~ms}$
Release $\quad 3 \mathrm{~ms}$
Features Retrieves natural directionality and ambience in SQ or Enhance mode in real-time with up to 40 dB separation; directional LED display; axial-till feature electrically corrects cartridge/stylus misalignment; Class A circuitry; remote control option

BOZAK
Bozak, Inc.
587 Connecticut Ave.
South Norwalk, Conn. 06854
902 S Time-Delay System
Description Analog control unit with integrated 35 watt-per-channel amplifier plus two DS-1800 indirect radiating loudspeakers
Price $\$ 975$
Delay $\quad 30 \mathrm{~ms}$ to 130 (continuously variable)
Decay
Response Up to 3 sec (continuously variable) 30 Hz to $7.7 \mathrm{kHz},+0,-3 \mathrm{~dB}$ (controt unit)

## THD

 $0.1 \%$ ( 1 kHz to 20 kHz )IM $\quad 0.01 \%(1 \mathrm{kHz})$
Features Ambience simulator circultry; phase coherent outputs; unique LED dual-range meter monitors delay output; also available without speakers, \$795

## 901 Time-Delay Unit

Description Analog control unit (same as 902 control unit, but has no amplifier or speakers)
Price $\quad \$ 625$
CONCERT MACHINE
Sound Concepts, Inc.
P.O. Box 135

Brookline, Mass. 02146
AD-1060
Description ambience restoration system; time delay with built-in amplifiers generates 2 ambience channels; designed especially for car stereo systems
$\$ 300$
10 milliseconds to 70 (variable)
Price
Delay
Response
THD
10 Hz to $6 \mathrm{kHz}, \pm 3 \mathrm{~dB}$
$1 \%$ ( kHz )
60 dB A reference below max. output
Inputs Stereo line (Hi-Z1V); stereo and
Outputs
mono speaker lever

Features Achieves spatial effect with no re verberation; single-shaft remote control available as Model 1060RC (\$40)

## CROWN

Crown International 1718 W. Mishawak Road Elkhart, Ind. 46514

## VFX-2A Crossover

Description Continuously variable
Price $\$ 389$
Features Max input, 10V; max output, 10 V continuously variable, active, solid-state filters which can be used to perform either crossover or bypass functions; two filters per channel, each continuously variable from 20 Hz to 20 kHz ; filter rolloff fixed at 18 dB per octave, which eliminates any noticeable dip in the frequency spectrum at crossover points when properly adjusted; sharp rolloff also quickly attenuates unwanted frequencies above and below crossover
dbx
dbx, Inc.
71 Chapel St.
Newton, Mass. 02195

## 3BX Expander

| Description | Three-frequency-band linear ex- <br> pander |
| :--- | :--- |
| Price | $\$ 650$ |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | $0.1 \%(20 \mathrm{~Hz}$ to 20 kHz$)$ at 1.0 ex - |
|  | pansion |
| IM | $0.15 \%$ |
| Noise | 85 dBV unweighted referenced to |
|  | 1 V |
| Expansion | $1: 1$ to $1: 1.5$ (0 to $50 \%$ increase) |
| Attack | Program dependent. |
| Release | Program dependent. |
| Inputs | Main and tape monitor |
| Outputs | Main and tape recording |
| Features | Thirty gain-change LEDs |

## 2BX Expander

| Description | Two-band linear expander |
| :--- | :--- |
| Price | $\$ 450$ |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | $0.1 \%$ at 1.0 expansion $(20 \mathrm{~Hz}$ to 20 |
|  | $\mathrm{kHz})$ |
| IM | $0.15 \%$ |
| Noise | -85 dBv reference 1 V |
| Expansion | $1: 1$ to $1: 1.5$ (up to $50 \%)$ |
| Attack | Program dependent |
| Release | Program dependent |
| Inputs | Signal; tape monitor |
| Outputs | Signal; recording |
| Features | Twenty gain-change LEDs (10 per |
| band) |  |

band)

## 1BX Expander

| Description | Single-band linear expander |
| :--- | :--- |
| Price | $\$ 245$ |
| Response | 20 Hz to $20 \mathrm{kHz} \pm 0.5 \mathrm{~dB}$ |
| THD | $0.1 \%(20 \mathrm{~Hz}$ to 20 kHz$)$ at $1.0 \mathrm{ex}-$ |
|  | pansion |
| IM | $0.15 \%$ |
| Noise | -85 dBv reference 1 V |
| Expansion | $1: 1$ to $1: 1.5$ (up to $50 \%$ ) |
| Release | Program dependent |
| Inputs | Signal; tape monltor |
| Outputs | Signal; recording; quad coupler tor |
|  | two units |
| Features | Ten gain-change LEDs |

## 128 dbx II System

Description Wideband linear compressor/expander or peak unlimiter/limiter

|  | dbx II noise-reduction |
| :---: | :---: |
| Price | \$450 |
| Response | 30 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | $0.5 \%$ ( 30 Hz to 20 kHz ) |
| IM | 0.15\% |
| Noise | -85 dBv reference 1V |
| Compression | Continuously variable to infinity |
| Expansion | Continuously variable to 2.0 (up to $100 \%$ ) |
| Inputs | Signal; tape monitor |
| Outputs | Signal; recording |
| Features decode switcn | Level match control; dbx disc |
| 124 dbx | II System |
| Description | Four-channel dbx II noise-reduction system |
| Price | \$399 |
| Response | 30 Hz to $20 \mathrm{kHz}, 0.5 \mathrm{~dB}$ |
| THD | 0.5\% ( 30 Hz to 15 kHz ) |
| IM | 0.15\% (max) |
| Noise | -85 dBV reference 1V |
| C/E Ratio | 2:1/1:2 (fixed) |
| Inputs | Four signal; four tape monitor |
| Outputs | Four signal; four recording |
| Features | dbx disc decode switch; simultane- |
| ous abx encud level control | de/decode function for monitoring; |


| 122 dbx | $\\|$ System |
| :---: | :---: |
| Description | Two-channel $a b x$ II noise-reduction system |
| Price | \$275 |
| Response | 30 Hz to $20 \mathrm{kHz}, \pm 0.5$ |
| THD | 0.5\% ( 30 Hz to 15 kHz ) |
| IM | 0.15\% (max) |
| Noise | -85 dBV reference 1V |
| C/E Ratio | 2:1/1:2 (fixed) |
| inputs | Two signal; two tape monitor |
| Outputs | Two signal; two recording |
| Features trol | dbx disc decode switch; level con- | trol

118 Compressor/Expander
Description Wideband linear compressor/ex-
Price $\$ 199$
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
THD $\quad 0.1 \%(20 \mathrm{~Hz}$ to 20 kHz$)$ at 1.0 ex pansion
M 0.15\%
Noise $\quad 85 \mathrm{dBV}$ unweighted referenced to 1 V
Compression 1:1 to infinity (variable)
Expansion $1: 1$ to 2:1 (variabie)
inputs Signal in
Outputs Signal out; tape or aux out
Features Level, 10 mV to 2 V
21 Tape/Disc Decoder
Description dbx type ll noise-reduction decoder for playback of dbx-encoded discs or tapes
Price $\quad \$ 109$
Response 15 Hz to $30 \mathrm{kHz}, \pm 0.5, \mathrm{~dB}$, NR out
THD $\quad 0.2 \%$ ( 1 kHz )
Noise $\quad-74 \mathrm{dBV}$ reference iv
Expansion 1:2 (fixed)
inputs
Outputs
Main signal and tape monitor Main signal and record

DRACO
Draco Labs, Inc.
1005 Washington St.
Graften, Wisc. 53024
Digital Expander

| Description | 3-band expander |
| :--- | :--- |
| Price | $\$ 550$ |
| Response | 20 Hz to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$ |
| THD | $0.05 \%(20 \mathrm{~Hz}$ to 20 kHz$)$ |
| IM | $0.005 \%$ |
| Noise | -100 dB reference 1 V |
| Expansion | Yes |

C/E Ratio
Attack
Release Inputs
Outputs
Features Digital gain sections; pre-post pro-
cess selection; bypass; 3-section LED display

FURMAN SOUND
Furman Sound, Inc.
616 Canal St.
San Rafael, Calif. 94901

## RV-1 Reverberation System

Description Mono spring-type reverb system with limiter and equalization
Price $\quad \$ 250$
Delay 35 milliseconds
Decey $\quad 1.8 \mathrm{sec}$
Resfonse $\quad 45 \mathrm{~Hz}$ to $7 \mathrm{kHz}, \pm 5 \mathrm{~dB}$
Noise $\quad 74 \mathrm{~dB}$ S/N; EQ set flat
Inputs 33 K ohms unbalanced; recommended level -10 to +4 dBm (reference 0.775 V )
Outputs 47 ohms unbalanced; max output level $8.3 \mathrm{Vms}(+21 \mathrm{dBm})$
Features $\quad$ Fast-attack limiter with limit threshold LED light; equalization includes treble-shelving control at 2.5 kHz , and quasi-parametric midrange control (frequency adjustable from 160 Hz to 1.4 kHz ); separate wet and dry mix controls allow use either with a mixing board with effects send and retum channels, or directly with a musical instrumenl; foot switch capability

## KLARK-TEKNIK

Hammond Industries
155 Michael Drive Syosset, N.Y. 11791

DN-70 Digital Time Processor
Description Singie-channel
Price $\quad \$ 4,900$
Delay $\quad 653 \mathrm{~ms}$ (max)
Response $\quad 30 \mathrm{~Hz}$ to $15 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
THD $\quad 0.1 \%(1 \mathrm{kHz})$
Outputs 4
Features Front-panel regeneration and direct/delayed mix controls; LED readout of time delay on channels A, B, And C; also available with 323 millisecond ( $\$ 4,750$ ) or 163 millisecond $(\$ 4,600)$ delay

## DN-36 Analogue Time

Precessor

| Description | Dual-channel, effects <br>  <br> phasing, flanging, reverb |
| :--- | :--- | :--- |
| Price | $\$ 1,600$ |
| Delay | 26 ms (per channel) |
| Response | 20 Hz to 15 kHz |
| THD | $0.2 \%(1 \mathrm{kHz})$ |

## DN-34 Analogue Time

## Processor

Description Single-channel, dual-delay with effects such as Doppler, vibrato phasing, and flanging
Price $\quad \$ 1,600$
Delay 52 ms (max)
Response $\quad 20 \mathrm{~Hz}$ to 16 kHz
THD $\quad 0.2 \%(1 \mathrm{kHz})$
Outputs Line, adjustable trom +4 dBm to $+18 \mathrm{dBm}$
Features Dynamic range, 90 dB ; bandwidth.
15 kHz at maximum delay

KLH
KLH Research and Development Corp. 145 University Ave. Westwood, Mass. 02090

DNF 1201A Dynamic Noise
Filter
Description Single-pass noise-reduction system using dynamically controlled variable-cutoff low-pass filter
Price
Response
THD
IM
Noise
Features Ref. level, 0.24 V to 0.77 V (variable); suppression, 5 to 14 dB tape-hiss reduction depending on program; up to 38 dB at 10 kHz

TNE 7000A Noise Suppressor
Description Impulse suppressor (eliminates subtle random clicks and pops)
Price $\$ 299$
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
THD $\quad 0.1 \%(20 \mathrm{~Hz}$ to 20 kHz$)$
IM 0.05\%

Noise $\quad 40 \mu \mathrm{~V}(88 \mathrm{dBV})$

## LOGICAL SYSTEMS

Logical Systems
3314 H St.
Vancouver, Wash. 98663
8800 Dynamic Noise Filter
Description Usable with tapes, records, AM, FM; connects to preamp or receiver with standard RCA phono plugs
Price $\quad \$ 249$
Response 20 Hz to 20 kHz
THD $\quad 0.1 \%(20 \mathrm{~Hz}$ to 20 kHz )
IM $\quad 0.01 \%(60 \mathrm{~Hz} / 7 \mathrm{kHz}$ mixed $4: 1)$; typically $0.005 \%$
Noise $\quad 85 \mathrm{~dB}$ reference 2 V
Attack Program dependent (very fast) Release Program dependent (very fast)
Inputs $\quad 47 \mathrm{~K}$ ohm single-ended stereo RCA pinono
Outputs $\quad 600 \mathrm{ohm}$ or greater; 10 V max into 10K ohms
Features Up to 15 dB hiss reduction; continu-
ously variable threshold control; low-noise FET control circuitry with gyrator-type variable low pass filter; tri-color LED display

## MXR

MXR Innovations, Inc.
247 N. Goodman St.
Rochester, N.Y. 14607
MOD 132 Dynamic Expander
Description Linear dynamic expander with ad justable expansion ratio and frontpanel control of release time
Price
THD
IM

Release

Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz},+0,-1 \mathrm{~dB}$
-94 dBV reference 1 V rms (full ex-
Expansion Variable from 1:1 to 1.6:1
Attack 5 milliseconds (program depen\$300 $0.05 \%$ ( 20 Hz to 20 kHz ) (1:1 ex pansion)
$0.1 \%(60 \mathrm{~Hz}$ to $7 \mathrm{kHz}, 4: 1)(1: 1$ expansion) 5 milliseconds (program depen dent)
50 to 500 milliseconds (user variable)

Features LED display; level control; bypass switch; tape monitor switch; pre/post switch; furnished with walnut side panels; rack-mounting ears available as an option

## MOD 119 Compander

| Description | Wideband linear compressor/ex- <br> pander |
| :--- | :--- |
| Price | $\$ 149.94$ |
| Response | 30 Hz to $20 \mathrm{kHz} \pm 1 \mathrm{~dB}$ |
| THD | $0.15 \%(200 \mathrm{~Hz} \mathrm{to} 20 \mathrm{kHz})$ |
| IM | $0.75 \%(60 \mathrm{~Hz}$ to $7 \mathrm{kHz}, 4: 1)$ |
| Noise | -88 dBV (unweighted) |
| C/E Ratio | $2: 1 / 1: 2$ (fixed) |
| Tracking | $\pm 1 \mathrm{~dB}$ per 20 dB |
| Features | Level match control; bypass switch |

## NAKAMICHI <br> Nakamichi USA Corp. 1101 Colorado Ave. Santa Monica, Calif. 90401

Hi-Com II
Description Two-band noise-reduction system with Telefunken High Com compander IC
Price $\$ 420$
Features $\quad 20-\mathrm{dB}$ noise reduction plus 3 to 7 dB headroom improvement; defeatable infrasonic and multiptex filters; recommended for high-quality cassetie decks

NIKKO
Nikko Audio
16270 Rayner St.
Van Nuys, Calif. 91406

ATD-1 Time Delay Synthesizer
Description Recreates ambience in live performances by adding reverberation and echo
Price
Delay $\quad 17 \mathrm{~ms}$ to 128 ms (variable)
Decay $\quad 100 \mathrm{~ms}$ to 2 sec (variable)
Response Main: 20 Hz to $20 \mathrm{kHz},-0.1 \mathrm{~dB}$; delay: 20 Hz to $5 \mathrm{kHz}, \pm 3 \mathrm{~dB}$ Main: $0.05 \%(20 \mathrm{~Hz}$ to 20 kHz ): delay: $0.6 \%(500 \mathrm{~Hz})$
THD Main: $0.05 \%(20 \mathrm{~Hz}$ to 20 kHz ): Main: 80 dB ; delay: 60 dB (Aweighted)
Features Three adjustable hall sizes; reverb, hall character, and stage distance control; input level adjustment with LED indicator; delay defeat switch; 2 or 4 -channel switch; $21 / 2 \mathrm{H} \times 19 \mathrm{~W} \times 13 \mathrm{D}$

## PACKBURN

Packburn Electronics
P.O. Box 335

Dewitt, N.Y. 13214
303 Audio Noise Supressor
Description Continuous nolse suppressor reduces both transient noises and hiss from a wide variety of recorded sound media, especially 78 rpm records
Price $\quad \$ 1,950$
Response $\quad \pm 1 / 2 \mathrm{~dB}, 10 \mathrm{~Hz}$ to beginning of cutoff frequency varies from 3 kHz to 15 kHz in accordance with dynamics of program material; alternatively, a fixed cutoff frequency may be selected; meter in front panel reads cutoff frequency $0.05 \%$

Inputs
Outputs
Features
600 ohms balanced line (transformerless) and single-ended Hi Z

Features Will process vertical-cut records as well as laralil records and steo records; tape, fitm, cylinders, etc. provides facilities for re producing from either groove wall with minimum of vertical modulation noise; $51 / 4 H \times 19 \mathrm{~W} \times 10 \mathrm{D}$

## 101 Transient Noise

## Suppressor

Description Reduces transient noises from wide variety of recorded sound media, especially 78 rpm records
Price \$1,500
Response $\quad 10 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
IM $\quad 0.03 \%(60 \mathrm{~Hz}$ and $7 \mathrm{kHz}, 4: 1$ at +4 VU 1.228 V out)
Noise $\quad 80 \mathrm{~dB}$ reference $+4 \mathrm{VU}(1.228 \mathrm{~V})$ out
Inputs 600 ohms balanced line (transformerless) and single-ended high impedance
600 ohms balanced line and singleended low impedance
Outputs Two separate processors for reFeatures Two sepas. prosesors for re duction of transient noises; records, lateral-cut records, stereo records; facilities for playing from either groove wall; rackmountable; $51 / 4 \mathrm{H} \times 19 \mathrm{~W} \times 10 \mathrm{D}$

## PHASE LINEAR

Phase Linear Corp.
20121 48th Ave. W.
Lynnwood, Wash. 98036

## 1000 Series Two

Description Single-pass noise reduction system plus dynamic range expander
Price $\$ 349.95$
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
THD $\quad 0.09 \%(20 \mathrm{~Hz}$ to 20 kHz$)$
IM $\quad 0.09 \%$
Noise $\quad 90 \mathrm{~dB}$ reference 2 V
Expansion 7.5 dB
Inputs Main and tape
Outputs Main and tape
Features Provides 10 dB of noise reduction;
compatible with Dolby and dbx

## PSB

PSB Speakers, Inc.
P.O. Box 144

St. Jacobs, Ontario
Canada NOB 2NO
PSB InfraSonic Barrier
Description Sophisticated low filter which sharply rolls off frequencies under 20 Hz ; virtually eliminates problems caused by warped records, turntable rumble, and tonearm/cartridges resonances
Price
Response $\quad 20 \mathrm{~Hz}$ to $100 \mathrm{kHz}, \pm 0.25 \mathrm{~dB}$
THD $0.008 \%$

## RG DYNAMICS

RG Dynamics, Inc.
4448 West Howard St.
Skokie, III. 60076
RG Pro-20W Dynamic Processor
Description Upward and downward expander with peak unlimiting

dbx 3BX


MXの MOD-132


RG Dynamice RG-PRO-20w

| Response | 20 Hz to $5 \mathrm{kHz}, \pm 1 \mathrm{~dB}$ |
| :--- | :--- |
| THD | $0.5 \%(20 \mathrm{~Hz}$ to 5 kHz$)$ |
| IM | $0.5 \%$ |
| Nolse | 60 dB reference 2.5 V |

SAE 5000
Description Impulse suppressor
Price $\quad \$ 225$
Response $\quad 20 \mathrm{~Hz}$ to $20 \mathrm{kHz}, \pm 1 \mathrm{~dB}$
THD
$0.1 \%$
IM $\quad 0.1 \%$
Noise $\quad 90 \mathrm{~dB}$

## SOUND CONCEPTS

Sound Concepts, Inc.
P.O. Box 135

Brookline, Mass. 02146

## SD-550 Ambience Restoration

System
Description Ambience simulator using "bucketbrigade" analogue delay line
Price $\quad \$ 700$ (also available in rack-mount design, SD-550R, at same price)
Delay $\quad 5$ to 50 ms or 10 to 100 ms (variable)
Response 20 Hz to $8 \mathrm{kHz}, \pm 3$ d (delayed)
THD
Noise
Inputs
Outputs
s 2 front channel; 2 rear channel
Features Works with mono, stereo, or quad sources; does not require tevel machine in use; ambience reproducer, not a simulator

## SOURCE ENGINEERING <br> Source Engineering <br> Box 506 <br> Wilmington, Mass. 01887

## Noise Suppressor

Description Single-pass noise-reduction system operating separately in four frequency bands, three of which open and close to pass signal and block noise
Price
$\$ 315$

## A Note on Prices

Prices shown in these pages are manufacturers' or importers' nationally advertised values, updated as is feasible by press time


Logical Syetema 8800


Sound Concepte SD. 550

| Response | 20 Hz to $20 \mathrm{kHz}, \pm 1.5 \mathrm{~dB}$ |
| :---: | :---: |
| THD | 0.1\% |
| IM | 0.1\% |
| Noise | 80 dB below ref. at -60 dB setting; at least 20 dB below higher settings |
| Inputs | $\mathrm{IN}_{\mathrm{N}}$ FROM TAPE $(316 / 100 \mathrm{mV}$ nominal |
| Outputs | TO TAPE; OUT |
| Features | Ref. level: $0.316 \mathrm{~V} / 0.1 \mathrm{~V}$ by internal |
| switching; sup frequency c | pression: 14 to 20 dB (depends on ent of signal); available also as part |
| of complet | amplifier, Model PNS; mono ver- |
| sion in Spe tivity in banc tape; select | st preamplifier; LEDs indicate acsuppression can precede or follow 7 kHz or 3 kHz fixed filtering ( 50 |
| dB/octave); vs. frequenc | vision for rising noise characteristic |

## VRE Expander

Description Volume-range expander for playback only, with provision for compensating for automatic or manual compression above an adjustable threshold ( 10 mV to 1 V )
Price $\$ 175$
Response $\quad 20 \mathrm{~Hz}$ to $50 \mathrm{kHz}, \pm 0.5 \mathrm{~dB}$
THD $\quad 0.1 \%(20 \mathrm{~Hz}$ to 15 kHz$)$
IM $\quad 0.1 \%$
Noise $\quad 80 \mathrm{~dB}$ reference 1 V input
Expansion $\quad-8$ to +6 dB at $1.6 \mathrm{~dB} ; 0$ to +8 dB at $1.35 \mathrm{~dB} / \mathrm{dB}$ input change

## Altack

Inputs IN; FROM TAPE ( 316 mV nominal)
Outputs TO TAPE (same as $\mathbb{N}$ ); OUT
Features Adjustable threshold with indicating LED; two attack times, two release times (separately switchable); upward and up/down expansion modes; tape-monitor provisions

## SYMMETRY

## Symmetry Audiophile Systems 101 Townsend St.

San Francisco, Calif. 94107

ACS-1 Electronic Crossover
Description An active crossover for stereo or mono use
Price $\quad \$ 650$

THD $\quad 0.01 \%(20 \mathrm{~Hz}$ to 20 kHz$)$
M $\quad 0.01 \%$
Noise $\quad 100 \mathrm{~dB} / \mathrm{min}$ reference below 3V at unity gain
inputs 100 K ohms
Outputs Low pass; hi pass
Features Low pass (transitional Butterworth) Thompson filter characteristics; 12 dB per octave slope/crossover point continuously varlable from 45 Hz to 4.5 kHz


Our reputation for making the world's best tape is due in part to making the world's best cassettes. In fact, we put more thought
and more work into our cassettes than most manufacturers put into their tape.

We do all this, because at Maxell
we believe in a simple philosophy. To get great sound out of a cassette takes a lot more than just putting great tape into it.

## Raw Tape

## Open-Reel

| AMPEX |  |
| :---: | :---: |
| Ampex Corp. |  |
| 401 Broadway |  |
| Redwood | City, Calif. 94063 |
| Grand Ma | aster |
| Coating(s) | Ferric |
| Base | Polyester |
| Backing | Carbon |
| Packaging | Cardboard box |
| Length/Price | Standard, 7", 1,200, \$8.69; extra, $7^{\prime \prime}, 1,800^{\prime}, \$ 9.99$; standard, $101 / 2^{\prime \prime}$, 2,500, \$22.99; extra, $10^{1 / 22^{\prime \prime}, ~ 3,600^{\circ}}$ \$26.49 |
| Features | Mastering quality; $10 \frac{1 / 2}{}{ }^{\prime \prime}$ metal reel |

20:20+

| Coating(s) | Ferric |
| :--- | :--- |
| Base | Polyester |
| Backing | Carbon |
| Packaging | Cardboard box |
| Length/Price | Standard, $7^{\prime \prime}, 1,200^{\prime}, \$ 7.39$; extra, |
|  | $7^{\prime \prime}, 1,800^{\prime}, \$ 8.99$ |

Plus

| Coating(s) | Ferric |
| :--- | :--- |
| Base | Polyester |
| Packaging | Cardboard box |
| Length/Price | Standard, $7^{\prime \prime}, 1,200^{\prime}, \$ 5.89 ;$ extra, |
|  | $7^{\prime \prime}, 1,800^{\prime}, \$ 7.39$ |
| Features | Balanced frequency response; |
| general music quality |  |


\section*{AUDIO MAGNETICS <br> Audio Ferric Corp. <br> 2602 Michelson Dr. <br> Irvine, Calif. 92716 <br> Tracs <br> | Coating(s) | Low-noise, Ferric |
| :--- | :--- |
| Base | Polyester |
| Packaging | Hinged cardboard box |
| Length/Price | $7^{\prime \prime}, 1,200^{\prime}, \$ 6.12 ; 7^{\prime \prime}, 1,800$ |
|  | $7^{\prime \prime}, \$ 2,400^{\prime}, \$ 6.69$ |}

BASF
BASF Systems, Inc.
Crosby Drive
Bedford, Mass. 01730

## Professional

Coating(s) Low-noise; high-output; low-print
Base Polyester
Backing Lubricated
Packaging Hinged plastic box; NAB
Length/Price Extra, 7", 1,800', \$14.99; extra, $10^{1 / 22^{\prime \prime}}, 3,600^{\prime}, \$ 29.99$

## Studio

Coating(s) Low-noise; high-output
Base
Polyester
Hinged plastic box; cardboard box: NAB
Length/Price Extra, 7", 1,800', \$ \$9.99; double, $7^{\prime \prime}, 2,400^{\prime}, \$ 14.99$; extra, $1012^{\prime \prime}$, 3,600', \$19.99

## Performance

Coating(s) Low-noise; high-output
Base Polyester
Packaging Hinged plastic box
Length/Price Extra, $7^{\prime \prime}, 1,800^{\prime}, \$ 7.49$; double, $7^{\prime \prime}$. $2.400^{\prime}$, $\$ 9.99$; triple, $7^{\prime \prime}, 3,600^{\prime}$, \$15.99

CAPITOL
Capitol Magnetic Products 1750 North Vine St.
Los Angeles, Calif. 90028
Music Tape
Coating(s) Low-noise; high-output
Backing "Cushion-Aire"
Length/Price Standard, $7^{\prime \prime}, 1,200^{\prime}$, 55.79; extra, $7^{\prime \prime}, 1,800^{\prime}, \$ 6.99 ;$ standard $101 / 2^{\prime \prime}$, $2,500^{\circ}, \$ 17.29$; extra, $10^{1 / 2 "}, 3,600^{\prime}$, \$19.98

## CRITERION

Lafayette Electronics
111 Jericho Tpke.
Syosset, N.Y. 11791

| Criterion | XHE |
| :--- | :--- |
| Coating(s) | Ferric |
| Base | Polyester |
| Packaging | Cardboard box |
| Length $/$ Price | 60 min, $7,1,200^{\prime}, \$ 5.99 ; 90$ min, $7^{\prime \prime}$, |
|  |  |
|  | $1,800^{\prime}, \$ 7,29$ |

EMI
Empire Scientific Corp. 1055 Stewart Ave.
Garden City, N.Y. 11530

## Super

Coating(s)
Base Polyester
Packaging Hinged plastic box; Styrene
Length/Price Exira, 5", $900^{\prime}, \$ 16.95$; extra, $7^{\prime \prime}$, 1,800', \$25.95; extra, 101/2", 3,600', \$59.95; standard, $7^{\prime \prime}$ 1.200, $\$ 24.95$; double, $7^{\prime \prime}, 2,400^{\prime}, \$ 27.95$ Features Tensilized for minimum stretching

FUJI
Fuji Photo Film, USA, Inc.
350 Fifth Ave.
New York, N.Y. 10001
FB-151
Coating(s) Low-noise; high-output; low-printthrough
Base Polyester
Packaging Cardboard box
Length/Price Extra, $7^{\prime \prime}, 1,200^{\prime}, \$ 10.20 ;$ extra, $7^{\prime \prime}$, $1,800^{\prime}, \$ 13.20$; extra, $10^{1 / 2 "} 2^{\prime \prime}, 3,600^{\prime}$, $\$ 36$

FG
Coating(s) Low-noise; high-output; low-printthrough
Base Polyester
Packaging Cardboard box
Length/Price Extra, $7^{\prime \prime}, 1,200$, $\$ 7.15$; extra, $7^{\prime \prime}$, $1,800^{\circ}, \$ 9.55$; extra, $101^{\prime \prime}, 3,600^{\prime}$, \$27

FM
Coating(s) Low-noise; high-output; low-printthrough
Base Polyester
Packaging Cardboard box
Length/Price Extra, $5^{\circ}, 900^{\prime}, \$ 5.80$; extra, $7^{\prime \prime}$, 1,200', \$6.95; extra, 7", 1,800', $\$ 7.90$

## IRISH

Irish Recording Tape 270-278 Newtown Road Plainview, N.Y. 11803

## 277

Coating(s) Low-noise; high-output; low-print
Base Polyester
Packaging Cardboard box
Lengih/Price Extra, $7^{\prime \prime}, 2,400^{\circ}, \$ 17.20$

## 276

Coatlng(s) Low-nolse; high-output
Base Polyester
Packaging Cardboard box
Length/Price Standard, $7^{\prime \prime}, 1,200^{\prime}, \$ 13.15$
251
Coating(s) Premium
Base Polyester
Packaging Cardboard box
Length/Price Double, $7^{\prime \prime}, 2,400^{\circ}, \$ 16.10$

## 241 Premium

Base Polyester
Packaging Cardboard box
Lengtn/Price $5^{\prime \prime}, 900^{\prime}, \$ 5.25 ; 77^{\prime \prime}, 1,800^{\prime}, \$ 9.25$

## 231

Coating(s) Premium
Base Polyester
Packaging Cardboard box
Length/Price Standard, 5", 600', \$4.25; standard, $7^{\prime \prime}, 1,200^{\circ}, \$ 7.35$

MAXELL
Maxell Corp. of America
60 Oxford Drive
Moonachie, N.J. 07074
UD-XL Professional
Coating(s) Low-noise; high-output; epitaxial
Base Polyester
Backing Ultrafine carbon
Packaging Cardboard box
Length/Price UD-XL50-60B, $7^{\prime \prime}, 1,200^{\prime}, \$ 12.45$; UD-XL35-90B, $7^{\prime \prime}, 1,800^{\prime}, \$ 14.00$ UD-XL50-120B, $101 / 2^{n}, 2,500^{\prime}$, $\$ 33.75$; UD-XL35-180B, $101 / 2^{n}$, 3,600', \$38.50
Features Back-coated tape

## Ultra-Dynamic

| Coating(s) | Low-noise; high-output |
| :--- | :--- |
| Base | Polyester |
| Packaging | Cardboard box |
| Length/Price | UD50-60, $7^{\prime \prime}, 1,200^{\prime}, \$ 9.95$; UD35- |
|  | $90,7^{\prime \prime}, 1,800^{\prime}, \$ 11.50 ;$ UD50-120, |
|  | $101 / 2^{\prime \prime}, 2,500^{\prime}, \$ 28.30 ;$ UD35-180, |
|  | $101 / 2^{\prime \prime}, 3,600^{\prime}, \$ 31.90$ |

## Low-Noise

| Coating(s) | Low-noise |
| :---: | :---: |
| Base | Polyester |
| Packaging | Cardboard box |
| Length/Price | LN50-60, 7", 1,200', \$8.70; LN35 90, 7", 1,800', \$10; LN25-120, $7^{\prime \prime}$ |
|  | 2,400', \$14.95; LN18-180, 7"' |
|  | 3,600', \$21.25; LN50-120, 101/2" |
|  | 2,500', \$24.70; LN35-180, 101/2" |
|  | 3,600', \$28 |

REALISTIC
Radio Shack
1400 One Tandy Center
Ft. Worth, Texas 76102
Supertape Gold
Coating(s) Ferric
Base Polyester
Backing Carbon
Packaging Hinged cardboard box
Length/Price $7^{\prime \prime}, 1,800^{\prime}$, $\$ 8.99$
Features Head-cleaning leader tape

## Supertape

Coating(s) Premium
Base Polyester
Packaging Hinged cardboard box
Length/Price Standard, 5", 900', \$2.99; standard, 7", 1,200', \$4.99; extra, 7", 1,800', \$5.99; double, $7^{\text {" }}, 3,600^{\circ}$, $\$ 9.99$
Realistic
Coating(s) Low-noise
Base Polyester
Length/Price Standard, $5^{\prime \prime}, 900^{\prime}, \$ 249 ; 5^{\prime \prime}, 1,200^{\prime}$ \$3.49; extra 7", 1,800', \$4.49; extra, $7^{\prime \prime}, 2,400^{\prime}$, \$5.49; double, $7^{\prime \prime}$, 3,600', \$7.29

## Concertape

Coating(s) Ferric
Base Polyester
Packaging Cardboard box
Length/Price Standard, $7^{\prime \prime}, 1,800$ ', $\$ 1.95$

## SCOTCH

3M
Magnetic Audio/Video
Products Div.
3M Center
St. Paul, Minn. 55101

Master
Coating(s) Low-noise; ferric; high-output
Base
Packaging Hinged cardboard box
Length/Price Standard $7^{\prime \prime}, 1,800^{\prime}, \$ 9.95$; extra $7^{\prime \prime}, 2,400^{\prime}, \$ 12.95$, extra, $101 / 2{ }^{\prime \prime}$. 3,600', \$25.99
Features Mastering quality tape for critical music applications

## Premium Quality

Coating(s) Low-nois $\theta$; high-output;
Base Polyester
Backing "Posl-track"
Length/Price No. 206, $7^{\prime \prime}, 1,200^{\prime}, \$ 6.99$; No. 207, $7^{\prime \prime}, 1,800^{\prime}, \$ 8.59$

## Dynarange

Coating(s) Low-noise
Packaging Hinged cardboard box; cardboard box
Length/Price $5^{\prime \prime}, 600^{\prime}, \$ 3.59 ; 5^{\prime \prime}, 900^{\prime}, \$ 4.19 ; 5^{\prime \prime}$ 1800', \$7.19; 7', 1,200', \$5.49; 7', $1,800^{\prime}, \$ 7.19 ; 7^{\prime \prime}, 2,400^{\prime}, \$ 10.89 ;$ $7^{\prime \prime}, 3.600^{\circ}, \$ 14.29$
Features Multi-purpose tape providing full dynamic range; $\mathrm{s} / \mathrm{n} 4$ to 6 dB better than standard tapes

## Highlander

$\begin{array}{ll}\text { Coating(s) } & \text { Low-noise } \\ \text { Base } & \text { Polyester }\end{array}$
Packaging Cardboard box
Length/Price $7^{\prime \prime}, 1,200^{\prime}, \$ 4.79 ; 7^{\prime \prime}, 1,800^{\prime}, \$ 6.59$
Features All-purpose economy tape

## SONY

Sony Industries
9 W. 57th St.
New York, N.Y. 10019

FeCr Series

| Coating(s) | Ferrichrome |
| :--- | :--- |
| Base | Polyester |
| Backing | Back coating |
| Packaging | Cardboard box |
| Length/Price | $90 \min , 7^{\prime \prime}, 1,800^{\prime}, \$ 14 ; 180 \mathrm{~min}$, |
|  | $10^{1 / 2^{\prime \prime}, 3,600^{\prime}, \$ 39}$ |

ULH Series

| Coating(s) | Low-noise; ferric; high-output |
| :---: | :---: |
| Base | Polyester |
| Backing | Back coating |
| Packaging | Cardboard box |
| Length/Price | $\begin{aligned} & 60 \mathrm{~min}, 7^{\prime \prime}, 1,200^{\prime}, \$ 9 ; 90 \mathrm{~min}, 7^{\prime \prime}, \\ & 1,800^{\prime}, \$ 11.50 ; 180 \mathrm{~min}, 10^{1 / 2} \mathbf{n}^{\prime \prime} \\ & 3,600^{\prime}, \$ 31 \end{aligned}$ |

## TDK <br> TDK Electronics Corp. 755 Eastgate Blvd. <br> Garden City, N.Y. 11530

| LB (Aud |  |
| :---: | :---: |
| Coating(s) | Low-noise; ferric; high-output |
| Base | Polyester |
| Backing | 1-micron thick back-treatment coating |
| Packaging | Cardboard box |
| Length/Price | Extra, 7", 1,800', \$11.49; standard, |

$L$ (Audua)
Coating(s) Low-noise; ferric; high-output
Base Polyester
Packaging Cardboard box

Length/Price Standard, $7^{\prime \prime}, 1,200^{\prime}, \$ 7.59 ;$ extra, $7^{\prime \prime}, 1,800^{\prime}, \$ 9.39$; standard $101 / 2^{\prime \prime}$, $3,600^{\prime} \quad \$ 21.99$; standard $101 / 2^{\prime \prime}$ metal, 3,600', \$26.59

## $S$ (Superior)

| Coating(s) | Low-noise; ferric |
| :--- | :--- |
| Base | Polyester |
| Packaging | Cardboard box |
| Length/Price | Extra, $7^{\prime \prime}, 1,800^{\prime}, \$ 7.69$; standard, |
|  | $101 / 2^{\prime \prime}, 3,600^{\prime}, 18.59$ |



| AMPEX |  |
| :---: | :---: |
| Ampex Corp. |  |
| 401 Broadway |  |
| Redwood City, Calif. 94603 |  |
| Grand Master II |  |
| Coating(s) | Ferricobalt |
| Base | Polyester |
| Packaging | Norelco box |
| Length/Price | C-60, \$4.19; C-90, \$5.29 |
| Features | High bias; 70 ms equalization |
| Grand Master I |  |
| Coating(s) | Ferric |
| Base | Polyester |
| Packaging | Norelco box |
| Length/Price | C-60, \$3.69; C-90, \$4.79 |
| Features creased sensitivit bias; 120 ms eq | Studio mastering formulation; invity; special cleaning leader; normal qualization |
| 20:20+ |  |
| Coating(s) | Mastering quality ferric oxide |
| Base | Polyester |
| Packaging | Norelco box |
| Length/Price | $\begin{aligned} & \text { C-45; } \$ 2.39 ; \text { C- } 60, \$ 2.69 ; \text { C-90, } \\ & \$ 3.79 ; \text { C-120, } \$ 5.29 \end{aligned}$ |
| Features high sensitivity | Normal bias; 120 ms equalization; |
| Plus |  |
| Coating(s) | Ferric, extra high output |
| Base | Polyester |
| Packaging | Norelco box |
| Length/Price | $\begin{aligned} & \text { C-45, } \$ 1.39 ; \text { C- } 60, \$ 1.69 ; \text { C-90, } \\ & \$ 2.79 ; \text { C-120, } \$ 4.19 \end{aligned}$ |
| Features | Screw-shell; wide dynamic range |

## Lo-Noise

| Coating(s) | Ferric; low-noise formulation <br> Base |
| :--- | :--- |
| Polyester |  |
| Packaging | Norelco box |
| Length/Price | $\mathrm{C}-45,99 ; \quad \mathrm{C}, 60, \$ 1.29 ; \mathrm{C}-90$ |
|  | $\$ 1.89 ; \mathrm{C}-120, \$ 3.39$ |
| Features | Screw-shell |

## AUDIO MAGNETICS <br> Audio Magnetics Corp. 2602 Michelson Dr. Irvine, Calif. 92716



Ampez 20:20 +


Maxell UD



Fujl FX-11


Memores MRX


Scotch Matster III
High Performance II
Coating(s) $\quad$ Ferric; , high bias
Base $\quad$ Polyester

| Packaging |
| :--- |
| Length/Price | C C-60, $\$ 2.99 ; \mathrm{C}-90, \$ 4.29$

High-Performance
Coating(s) Ferric; high-output
$\begin{array}{ll}\text { Base } & \text { Polyster } \\ \text { Packaging } & \text { Hinged plastic box }\end{array}$
Length/Price C-45, $\$ 2.19 ; \mathrm{C}-60, \$ 2.49$; C-90, \$3.49; C-120, \$4.49
Features Instant-start record/play with special jam-proof mechanics in see-through housing

## Tracs

| Coating(s) | Low-noise; ferric |  |
| :--- | :--- | :--- |
| Base | Polyester |  |
| Packaging | Hinged plastic box |  |
| Length/Price | $\mathrm{C}-45 ; \$ .99 ; \mathrm{C}-60, \$ 1.09 ;$ | $\mathrm{C}-90$, |
|  | $\$ 1.69 ; \mathrm{C}-120, \$ 1.99$ |  |

BASF
BASF Systems, Inc.
Crosby Drive
Bedford, Mass. 01730

## Professional III

Coating(s) Ferrichrome
Base Polyester
Packaging Hinged plastic box
Length/Price C-60, $\$ 3.89$; C-90, $\$ 5.29$
Professional II

| Coating(s) | Chromium dioxide |
| :--- | :--- |
| Base | Polyester |
| Packaging | Hinged plastic box |
| Length/Price | C-60, $\$ 3.89 ;$ C-90, $\$ 5.29$ |

Professional I
Coating(s) Ferricobalt
Base Polyester
Packaging Hinged plastic box
Length/Price C-60, $\$ 3.49$; C-90, $\$ 4.99$

## STUDIO II

Coating(s) Chromium dioxide
Base Polyester
Packaging Hinged plastic box
Length/Price C-60, $\$ 3.49$; C-90, $\$ 4.99$

## Studio I

Coating(s) High-output

## Base

Packaging Hinged plastic box or blister pack Length/Price C-60, $\$ 3.29$; C-90, $\$ 4.69$

Performance

| Coating(s) | Low-noise |
| :--- | :--- |
| Base | Polyester |
| Packaging | Hinged plastic box or blister pack |
| Length/Price | $\mathrm{C}-45, \$ 2.49 ;$ |
| C-60, $\$ 2.69 ; ~ C-90$, |  | \$3.79; C-120, \$4.99

CAPITOL
Capitol Magnetic Products 1750 North Vine St. Los Angeles, Calif. 90028

Music Tape
Coating(s) Low-noise; ferric
Packaging Hinged plastic box
Length/Price C-45, \$1.99; C-60, \$2.49; C-90, \$3.69; C-120, \$4.39

## CRITERION

Lafayette Electronics
111 Jericho Tpke.
Syosset, N.Y. 11791

## Criterion XHE

Coating(s) Ferric

| Base | Polyester |
| :--- | :--- |
| Packaging | Hinged plastic box |
| Length/Price | $\mathrm{C}-60, \$ 2.99 ;$ C-90, $\$ 3.99 ; \mathrm{C}-120$, |
|  | $\$ 4.99$ |

DAK
DAK Industries
10845 Van Owen
North Hollywood, Calif. 91605

ML

| Coating(s) | High-energy ferric oxide, normal bias |
| :---: | :---: |
| Base | Polyester |
| Backing | Polyester |
| Packaging | Norelco box |
| Length/Price | $\begin{aligned} & \text { ML-46, } \$ 1.49 ; \text { ML-60, } \$ 1.76 ; \text { ML- } \\ & 90, \$ 2.49 \end{aligned}$ |
| Features | Deluxe screw-etched precision |

## HEC

Coating(s) Low-noise; high-output; cobaltdoped
Packaging Hinged plastic box
Length/Price C-40, $\$ 1.27$; C-60, $\$ 1.57$ : C-90,
Features $\quad \$ 1.91, \mathrm{C}-120, \$ 2.96$
Features Ultra-high output

LNC
Coating(s) Low-noise; ferric
Length/Price $\mathrm{C}-30,77_{\text {d }}$, $\mathrm{C}-60,92_{\text {¢ }} \mathrm{C}-90, \$ 1.17$; C-120, \$1.89

DENON
American Audioport, Inc. 1407 North Providence Road Columbia, Miss. 65201

DX5
Coating(s) Dual-layer ferric oxide, cobaltdoped
Base Polyester
Backing Polyester
Packagning Hinged plastic box
Length/Price C-46, $\$ 4.50$; C-60, $\$ 5.00$; C-90, $\$ 7.00$

## DX3

Coating(s) Dual-layer ferric oxide
Base Polyester
Backing Polyester
Packaging Hinged plastic box
Length/Price C-46, $\$ 3.50$; C-60, $\$ 4.00$; C-90, $\$ 5.60$

## EMI <br> Empire Scientific Corp. <br> 1055 Stewart Ave. <br> Garden City, N.Y. 11530

Hi Fidelity (Gold)
Coating(s) Low-noise, ferric, high-output, lowprint

## Ease Polyester

Packaging Minged plastic box
Length/Price C-60, $\$ 5.75$; C-90, $\$ 7.75$; C-120, $\$ 9.95$
Features Very low distortion with excellent print-through characteristics; excellent frequency response

## Super (Silver)

Coating(s) Low-noise, ferric, high-output, lowprint
Base Polyester
Packaging Hinged plastic box
Length/Price C-60, $\$ 4.40$; $\mathrm{C}-90, \$ 6.50 ; \mathrm{C}-12 \mathrm{~d}$, $\$ 8.70$
Features Excellent print-through character-
istics; minimum dropouts
Standard (Bronze)
Coating(s) Low-noise, ferric, high-output, lowprint

| Base Polyester <br> Packaging <br> Hinged plastic box  |  |
| :--- | :--- |
| Length/Price |  |
| C-60, $\$ 2.95 ; C-90, \$ 4.50 ; ~ C-120$, |  |
|  | $\$ 5.85$ |

## FUJI

Fuji Photo Film, USA, Inc.
350 Fifth Ave.
New York, N.Y. 10001

## Metal

Coating(s)
辟

- Polyester

Hinged plastic box
Length/Price C-46, \$7.40; C-60, \$8.40

\section*{FX-II <br> | Coating(s) | Beridox (chrome-equivalent ferric) |
| :---: | :---: |
| Base | Polyester |
| Backing | Polyester |
| Packaging | Hinged plastic box |
| Length/Price | $\begin{aligned} & \text { C-46, } \$ 3.70 ; \text { C-60, } \$ 4.20 ; \text { C- } 90, \\ & \$ 5.80 \end{aligned}$ |
| Features | High bias |
| FX-I |  |
| Coating(s) | Ferric |
| Base | Polyester |
| Backing | Polyester |
| Packaging | Hinged piastic box |
| Length/Price | C-46, \$3.35: C-60, \$3.95; C-90, |
|  | Standard bias |

FL
Coating(s) Low-noise; ferric
Packaging Hinged plastic box
Length/Price C-46, \$2.50; C-60, \$2.85; C-90, \$3.95: C-120, \$5.45

IRISH
Irish Recording Tape 270-278 Newtown Road
Plainview, N.Y. 11803

262
Coating(s) Low-noise; ferric
Packaging Hinged plastic box
Length/Price C-60, $\$ 2.85$; C-90, $\$ 4.25$
261

| Coating(s) | Ferric |
| :--- | :--- |
| Packaging | Maller |
| Length/Price | $\mathrm{C}-45, \$ 1.95 ; \mathrm{C}-60, \$ 2.20 ; \mathrm{C}-90$ |
|  | $\$ 3.00 ; \mathrm{C}-120, \$ 5.30$ |
|  |  |
| 2000 |  |
| Coating(s) | Ferric |
| Base | Polyester |
| Packaging | Hinged plastic box |
| Length/Price $\mathrm{C}-30, \$ 1.40 ; \mathrm{C}-60, \$ 1.60 ; \mathrm{C}-90$, |  |
|  | $\$ 1.65$ |

## MAXELL

Maxell Corp. of America
60 Oxford Drive
Moonachie, N.J. 07074

| UD-XLII |  |
| :--- | :--- |
| Coating(s) | High-output; epitaxial |
| Base | Tensilized polyester |
| Packaging | Hinged plastic box |
| Length/Price | $C-60, \$ 5.25 ;$ C- $-9,0, \$ 7.25$ |
| Features | High-level bias and equalization |

UD-XLI
Coating(s) High-output; epitaxial
Base Tensllized polyester
Packaging Hinged plastic box
Length/Price C-60, $\$ 5.25$; C-90, $\$ 7.25$
Features Normal bias and equalization
Ultra-Dynamic (UD)
Coating(s) High-output
Base Tensilized polyester
Packaging Hinged plastic box
Length/Price UD-46, $\$ 3.70 ;$ U- $60, \$ 4.00$; UD-90, \$5.90; UD-120, $\$ 7.90$


High Bias
Coating(s) Ferricoba
Packaging Hinged plastic box; Philips-type; album design
Length/Price $\mathrm{C}-60, \$ 4.39$; $\mathrm{C}-90, \$ 5.99$
Features Memorex warranty
$\mathrm{MRX}_{3}$
$\begin{array}{ll}\text { Coating(s) } & \text { Ferric } \\ \text { Base } & \text { Polyester }\end{array}$
Packaging Hinged plastic box
Length/Price $\mathrm{C}-30, \$ 259$; $\mathrm{C}-45, \$ 2.79$; C-60, \$2.99; C-90, \$4.49; C-120, \$5.99
Features Memorex warranty

NAKAMICHI
Nakamichi Research (USA), Inc.
1101 Colorado Ave.
Santa Monica, Calif. 90401

ZX (Metal)
Coating(s) Metal particle
Base Polyester
Packaging Hinged plastic box
Length/Price C-60, $\$ 9.75$
Features Ultra-high coerclvity and reten-
tivity; micro-precision plastic housing

## sX

Coating(s) High-output; high-coercivity; ion ized cobalt on ferric oxide
Base Polyester
Packaging Hinged plastic box
Length/Price C-60, \$5.50; C-90, \$7.20
Features $\quad \mathrm{CrO}_{2}$ replacement; high bias, $70 \mu$
s EQ; micro-precision plastic housing
EX-II
Coating(s) Low-noise; extra high-output; complex crystal ferricobalt

Base Polyester
Packaging Hinged plastic box
Length/Price C-60, \$5.20; C-90, $\$ 7.00$
Features High-ferric bias: $120 \mu \mathrm{~s}$ EQ recom-
mended; micro-precision plastic housing
EX
Coating(s) Low-noise; high-output; high-bias; pure ferrocrystal formulation
Base Polyester
Packaging Hinged plastic box
Length/Price C-60, $\$ 4.50$; C-90, $\$ 5.80$
Features Special micro-precision cassette
housing; $120 \mu \mathrm{~s}$ EQ

REALISTIC
Radio Shack
1400 One Tandy Center
Ft. Worth, Texas 76102

Supertape Chrome
Coating(s) Chromium dioxide
Base Mylar ${ }^{\text {* }}$
Packaging Hinged plastic box
Length/Price C-60, \$3.49; C-90, \$4.49
Features Head-cleaning leader tape

## Supertape Gold

Coating(s) Low-noise; high-performance
Packaging Hinged plastic box
Length/Price C-45, \$2.59; C-60, \$2.99; C-90, \$3.99; C-120, \$4.79
Features Head-cleaning laader tape

## Supertape

Coating(s) Low-noise, ferric, high-output
Base Polyester
Backing None
Packaging Hinged plastic box
Length/Price C-45, $\$ 2.59$; C-60, $\$ 2.99$; C-90, \$3.49; C-120, \$3.99
Features Prices based on quantity-buying
(1-22 tapes); prices lower when quantity increases

## Concertape

Coating(s) Ferric
Packaging Package of 3
Length/Price C-30, $\$ 1.99$; C-60, $\$ 2.59$; C-90. $\$ 3.59 ;$ C-120, $\$ 4.99$

## Realistic

Coating(s) Low-noise
Base Mylar
Packaging Hinged plastic box
Length/Price C-30, $\$ 1.49$; C-60, $\$ 1,89$; C-90, \$2.59; C-120, \$3.19
Features New low-noise tape with hi-flux
density oxide

## RECOTON

Recoton Corp.
46-23 Crane St.
Long Island City, N.Y. 10011

| Rainbow | Pack |
| :--- | :--- |
| Coating(s) | Low-noise |
| Base | Polyester |
| Packaging | Five-pack storage container |
| Length/Price | RC5 $660, \$ 3.99 ;$ RC5 $\times 90, \$ 5.79$ |
|  |  |
| Ultra-Flow |  |
| Coating(s) | High-output |
| Base | Polyester |
| Packaging | Hinged plastic box; four-pack dis- |
|  | play box |

## RKO

RKO Tape
3 Fairfield Crescent
West Caldwell, N.J. 07006

| RKO Audition XD |  |
| :--- | :--- |
| Coating(s) | Ferric |
| Base | Polyester |
| Packaging | Hinged plastic box |
| Length/Price | $\mathrm{C}-90, \$ 4.40 ; \mathrm{C}-60, \$ 3.15 ; \mathrm{C}-45$, |
|  | $\$ 2.85$ |
| Features | Extended dynamic range |

## RKO Broadcast I

Coating(s) Low-noise, ferric, high-output
Base Polyester
Packaging Hinged plastic box
Length/Price C-90, $\$ 5.75, \mathrm{C}-60, \$ 3.79$

ROYAL SOUND
Royal Sound Co., Inc.
248 Buffalo Ave.
Freeport, N.Y. 11520

ULC
Coating(s) Ferflc; high-performance
Packaging Hinged plastic box
Length/Price C-60, $\$ 3.50 ;$ C- $90, \$ 5.00$
CDC
Coating(s) Chromium dioxide
Packaging Hinged piastic box
Length/Price C-60, $\$ 3.00, \mathrm{C}-90, \$ 4.50$
Low-Noise
Coating(s) Low-noise; ferric
Packaging Hinged plastic box
Length/Price C-45, $\$ 1.75 ; \mathrm{C}-60, \$ 2.00$, C-90. $\$ 3.00$; C-120, $\$ 4.00$

## SCOTCH

3M
Magnetic Audio/Video
Products Div.
3M Center
St. Paul, Minn. 55101

## Metafine

Coating(s) Metal particle
Base Polyester
Packaging Hinged plastic box
Length/Price C-46, $\$ 6.25$ (price); C-60, $\$ 6.95$; C-90, $\$ 8.95$
Features Metal particle formulation offers double maximum output of oxide tapes; 5 to 10 dB greater than "chrome" tapes

| Master III |  |
| :---: | :---: |
| Coating(s) | Ferrichrome |
| Base | Polyester |
| Packaging | Hinged plastic box (C-Box, 40, additional) |
| Length/Price | $\begin{aligned} & \mathrm{C}-45, \\ & \$ 5.69 \end{aligned}$ |
| Features ment in output at high frequen ric-oxide tapes | Coating provides 3 dB improveat low frequencies and 2 dB boost cies, compared to chrome and fer- |

Master II
Coating(s) Chrome equivalent ( 70 ms equalization)
Base Polyester
Packaging Hinged plastic box (C-Box, 40 additional)
Length/Price C-45, \$4.19; C-60, $\$ 4.49$; C-90 $\$ 5.69$
Features Coating offers 3 dB better $\mathrm{S} / \mathrm{N}, 2$ dB greater output sensitivity than standard chrome

Master 1
Coating(s) Ferric; high-performance (120 ms equalization)
Polyester
Base
Packaging Hinged plastic box (C-Box, 40 additional)
Length/Price C-45, $\$ 3.59 ; \mathrm{C}-60, \$ 3.89 ; \mathrm{C}-90$ $\$ 5.09$
Features Premium grade, low-noise ferric oxide

Dynarange

| Coating(s) | Low-noise, high-output ferric |
| :--- | :--- |
| Base | Polyester |
| Backing | "Posi-track" |
| Packaging | Hinged plastic box |
| Length/Price | $\mathrm{C}-45, \$ 2.59 ; \mathrm{C}-60, \$ 2.39 ; \mathrm{C}-90$ |
|  | $\$ 4.19 ; \mathrm{C}-120, \$ 5.79$ |

Highlander

| Coating(s) | Low-noise; ferric |
| :--- | :--- |
| Base | Polyester |
| Packaging | One-piece plastic box |
| Length/Price $\mathrm{C}-45, \$ 1.59 ; \mathrm{C}-60, \$ 1.79 ; \mathrm{C}-90$ |  |
|  | $\$ 2.69 ; \mathrm{C}-120, \$ 3.99$ |

## SONY

Sony Industries
9 West 57th St.
New York, N.Y. 10019

FeCr Series
Coating(s) Low-noise, high-outpuf, ferrichrome
Base Polyester
Backing Tensilized
Packaging Hinged plastic box; Blister pack
Length/Price FeCr-46, \$4.20; FeCr-60, \$4.60; FeCr-90 \$590
Features Normal or FeCr bias; FeCr or 70
microsecond EQ

## EHF Cassette

Coating(s) Low-noise, ferric, high-output
Base Polyester
Backing Tensilized
Packaging Hinged plastic box; blister pack
Length/Price EHF-46, $\$ 3.60$; EHF-60, $\$ 4.00$; EHF-90, $\$ 5.60$
Features High or $\mathrm{CrO}_{2}$ bias; $\mathrm{CrO}_{2}$ or 70 -
microsecond bias

## SHF Series

Coating(s) Low-noise, ferric, high-output
Base Polyester
Backing Tensilized
Packaging Hinged plastic box; blister pack
Length/Price SHF-46, $\$ 3.30$; SHF-60, $\$ 3.70$; SHF-90 $\$ 5.00$
Features Normal bias; normal or 120 mi-
crosecond EO
HFX Series
Coating(s) Low-noise, ferric, high-output Base Poyester

Backing Tensilized
Packaying Hinged plastic box; Blister pack
Length/Price HFX-46, \$2.90; HFX-60, \$3.10 HFX-90, \$4.40; HFX-120, \$6.00
Features
crosecond EQ

## LNX Series

Coating(s) Low-noise, ferric
Base Polyester
Backing Tensillzed
Packaging Hinged plastic box; blister pack
Length/Price LNX-46, \$1.95; LNX-60, \$2.15; LNX-90, \$3.10; LNX-120, \$4.00
Features Normal bias; normal or 120 mi
crosecond EQ

## TDK

TDK Electronics Corp.
755 Eastgate Blvd.
Garden City, N.Y. 11530

## MA-R (Metal)

Coating(s) Metal particle
Base Polyester
Jackaging Hinged plastic box
Length/Price C-60, \$12.99
Features Reference mechanism with diecast metal unibody shell

## SA (Super Avilyn)

Coating(s) Cobalt-adsorbed gamma ferric oxide
Base Polyester
Packaging Hinged plastic box
Length/Price SA-C-60, \$3.99; SA-C-90, $\$ 5.69$
Features High-bias tape formulation; super precision mechanism with bubble surface liner sheet and double hub clamp assembly

## AD (Audua)

Coating(s) Ferric
Base Polyester
Packaging Hinged plastic box or blister pack Length/Price AD-C-45, \$2.89; AD-C-60, \$3.09; AD-C-90, \$4.49; AD-C-120, \$6.19
Features Normal bias with "hot high end"; super precision mechanism incorporates bubble surface liner sheet and double hub clamp assembly

## D (Dynamic)

Coating(s) Low-noise; high-output; hi-grained ferric oxide
Base Polyester
Packaging Hinged plastic box or blister pack
Length/Price D-C-30, \$1.79; D-C-45, \$1.99; D-C-60, \$2.19; D-C-90, \$3.09; D-C-
120, \$3.79; D-C-180, \$5.39
Features Precision mechanism features
bubble surface liner sheet and double hub clamp assembly

## EC (Endless Cassette)

Coating(s) Low-noise; ferric
Packaging Hinged plastic box
Length/Frice EC-20, \$4.19; EC-30, \$4.29; EC-1, \$4.39; EC-3, \$4.49; EC-6, \$4.99; EC-12. \$5.99
Features Continuous play with or without special sensing foil for use in answering machines

## A Note on Prices

Prices shown in these pages are manufacturers' or importers' nationally advertised values, updated as is teasible by press time.


AKAI
Akai America, Ltd.
2139 E. Del Amo Blvd.
Compton, Calif. 90224

| Akai |  |
| :--- | :--- |
| Format |  |
|  | white); VTC-25C, $1 / 4$-in. reel (color) |
| Coating(s) | Ferric oxide |
| Length/Price | VK-30, 30 min., $\$ 18$; VTC-25C, 26 |
|  | min., $\$ 13$ |

AMPEX
Ampex Corp.
401 Broadway
Redwood City, Calif. 94063

## Ampex

Format Beta
Coating(s) Ferric oxide
Length/Price L-250, 60 min., $\$ 13.49$; L-500, 120 min., \$16.95

## BASF

BASF Systems, Inc.
Crosby Drive
Bedford, Mass. 01730

| BASF |  |
| :---: | :---: |
| Format | Beta |
| Coating(s) | Chrome |
| Length/Price | $\begin{aligned} & \text { L- } 500,60 \mathrm{~min}, \$ 16.95 ; \text { L- } 750,120 \\ & \text { min, } \$ 20.95 \end{aligned}$ |


| BASF |  |
| :---: | :---: |
| Format | VHS |
| Coating(s) | Chrome |
| Length/Price | $\mathrm{T}-60,120 \mathrm{~min}, \$ 17.95 ; \mathrm{T}-120,240$ |

## FUJI

Fuji Photo Film USA, Inc.
350 Fifth Ave.
New York, N.Y. 10001

## Beridox

Format Beta
Coating(s) Beridox
Length/Price L-125, $30 \mathrm{~min}, \$ 11.95$; L-250, 60 min, \$13.25; L-370, $90 \mathrm{~min}, \$ 14.90$; L-500, $120 \mathrm{~min}, \$ 17.50$

## Beridox

Format VHS
Coating(s) Beridox

Length/Price T-30, $30 \mathrm{~min}, \$ 15.50$; T-60, 60 min , \$18.35; T-90, $90 \mathrm{~min}, \$ 22.95$; T $120,120 \mathrm{~min}, \$ 25.50$

IRISH
Irish Recording Tape 270-278 Newtown Road
Plainview, N.Y. 11803

## 551

Format Beta
Length/Price $60 \mathrm{~min}, \$ 14.95 ; 120 \mathrm{~min}, \$ 19.95$ 180 min , $\$ 24.95$
Features Sleeve-shrink wrapped

## JVC

JVC America Co.
58-75 Queens Midtown
Expressway
Maspeth, N.Y. 11378

| JVC |  |
| :--- | :--- |
| Format | VHS |
| Coating(s) | Ferric oxide |
| Length/Price | $T-30,30 \mathrm{~min}, \$ 14.75 ; T-60,60 \mathrm{~min}$, |
|  | $\$ 16.95 ; T-120,120 \mathrm{~min}, \$ 23.95$ |

MAGNAVOX
Magnavox Consumer
Electronics Co.
1700 Magnavox Way
Fort Wayne, Ind. 46804
Magnavox
Format VHS
Coating(s) Ferric oxide
Length/Price AH-9202, 60 min , $\$ 18$; AH-9204 120 min, $\$ 25$

## MAXELL

Maxell Corp. of America
60 Oxford Dr.
Moonachie, N.J. 07074

| Maxell |  |
| :--- | :--- |
| Format | VHS |
| Coating(s) | Epitaxial |
| Length/Price | $T-60,60$ min, $\$ 19.95 ; T-120,120$ |
|  | min, $\$ 28.50$ |

## MEMOREX

Memorex Corp.
1600 Memorex Drive
Santa Clara, Calif. 95052
Memorex VHS
$\begin{array}{ll}\text { Format } & \text { VHS } \\ \text { Coating(s) } & \text { Ferric oxide }\end{array}$
Length/Price Memorex, $30 \mathrm{mln}, \mathrm{N} / \mathrm{A}$; Memorex, $60 \mathrm{~min}, \mathrm{~N} / \mathrm{A}$; Memorex, 120 min , N/A

[^4]VHS
Format Ferric oxide
Coating(s) SC-2100 (T-60), $60 \mathrm{~min} ., \$ 19.95$; SC-2101 (T-120), 120 min. , $\$ 28.95$

## QUASAR

Quasar Electronics Co.
Div. of Matsushita Electronics

Corp. of America
9401 West Grand Ave.
Franklin Park, III. 60131

Quasar
Format VHS
Coating(s) Ferric oxide
Length/Price VCT-60, 60 min., $\$ 18.95$; VCT-120
120 min., \$26.95

## Quasar

Format VHS
Coating(s) Ferric oxide
Length/Price VC-60, 60 min., $\$ 18.95$; VC-120, 120 min ., $\$ 26.95$

RCA
RCA Consumer Electronics
600 N. Sherman Drive
Indianapolis, Ind. 46201

RCA
Format VHS
Coating(s) Ferric oxide
Length/Price VK-125, 120 min, $\$ 18.95$; VK-250, $240 \mathrm{~min}, \$ 26.95$

SANYO
Sanyo Electric Co. 1200 W. Artesia Blvd.
Compton, Calif. 90220

## Sanyo

| Format | Beta |
| :---: | :---: |
| Coating(s) | Chrome |
| Length/Price | L-250, $60 \mathrm{~min}, \$ 12.45 ;$ L-500, 120 min. \$16.95; L-750, 180 min , $\$ 20.95$ |
| Sanyo |  |
| Format | V-Cord II |
| Coating(s) | Cobalt-doped terrous |
| Length/Price | $\text { V-60, } 60 \text { min, } \$ 14.95 ; \text { V-120, } 120$ |

## SCOTCH

3M
Magnetic Audio/Video
Products Div.
3M Center
St. Paul, Minn. 55101

| Scotch |  |
| :---: | :---: |
| Format | Beta |
| Coating(s) | Chrome-compatible ferric oxide |
| Length/Price | $\begin{aligned} & \text { L- } 250,30 \mathrm{~min}, \$ 12.75 ; \mathrm{L}-500,60 \\ & \text { min, } \$ 16.95 \end{aligned}$ |
| Scotch |  |
| Format | VHS |
| Coating(s) | Chrome-compatible ferric oxide |
| Length/Price | T-60, $60 \mathrm{~min}, \$ 18.95$ |




Fuli T-60 and T-120

## SEARS

Sears Roebuck Co.
Sears Tower
Chicago, III. 60684

## Sears

| Format | Beta |
| :---: | :---: |
| Coating(s) | Chromoxide |
| Length/Price | 5325, 60 min., \$10.95; 5350, 120 |
|  | $\mathrm{min}_{\$ 22.95} \$ 15.95 ; 5375,180 \mathrm{~min}$. | $\$ 22.95$

SONY BETAMAX
Sony Corp. of America
9 West 57th St.
New York, N.Y. 10019

## Betamax

Format Beta
Coating(s) Chrome
Length/Price L-125, $45 \mathrm{~min}, \$ 10.95$; L-250, 90 min, \$12.45; L-500, 180 min , \$16.95; L.750, $270 \mathrm{~min}, \$ 20.95$
Features Blister pack avallable; compatible with all Beta-format video tape recorders


JVC T-30, T-60 and T-120

Ampex L-250



SONY


Sony L-250

## SYLVANIA <br> GTE Consumer Electronics 700 Ellicott St. <br> Batavia, N.Y. 14020

## Sylvania

Format
VHS
Coating(s) Ferric oxide
Length/Price SC-2100 (T-60), 60 min ., $\$ 19.95$ SC-2101 (T-120), 120 min., \$28.95

## TDK

TDK Electronics Corp.
755 Eastgate Blvd.
Garden City, N.Y. 11530

## TDK

Format
Coating(s) Ferric (Super Avilyn)
Length/Price BAL-250, $60 \mathrm{~min}, \$ 14.95$; BAL-
$500,120 \mathrm{~min}, \$ 19.95$
TDK
Format VHS
Coating(s) Ferric (Super Avilyn) Length/Price VAT-30, $30 \mathrm{~min}, \$ 17.30$, VAT-60,

## TOSHIBA

Toshiba America, Inc.
280 Park Ave.
New York, N.Y. 10017

## Toshiba

Format Beta
Coating(s) Chrome
Length/Price L-250, $60 \mathrm{~min} ., \$ 12.45$; L-500, 120 min., \$16.95; L-750, 180 min . $\$ 20.95$

## ZENITH

Zenith Radio Corp. 1000 Milwaukee Ave.
Glenview, III. 60025

[^5]
# System Accessories <br> (including Tape \& Phono Care products) 

ACE AUDIO<br>Ace Audio Co.<br>532 Fifth St.<br>East Northport, N.Y. 11731

4000 Subsonic Filter

| Description | Sharp-cutoff filter (18 dB/octave <br> below 20 Hz ) eliminates effects of <br>  <br>  <br>  <br>  <br> record warps, tonearm/cartridge <br> drops, and infrasonic rumble; cir- |
| :--- | :--- |
|  | cuitry has unity-gain IC op amp with <br> full feedback, Class A operation, <br>  <br> and self-contained power supply; <br> high-input impedance, low output <br> impedance |
| Price | $\$ 89.50$ (wired) $\$ 59.25$ (kit) |

## 5050 Electronic Speaker

## Protector

Description Continually monitors amplifier output terminals and opens the speaker line when overload occurs Price $\quad \$ 89$ (wired)

## 5000 Electronic Crossover

| Description | Designed especially for operation <br> with any speaker system and a |
| :--- | :--- |
|  | subwoofer; crossover at 100 <br>  <br>  <br>  <br>  <br> cies available at additional charge |
|  | of $\$ 10$; subwoofer level control; <br> built-in bridging amplifier; distortion |
|  | less than $0.025 \%$; noise, -90 dB; |
|  | defeat switch; crossover frequen- |
| cies determined by accurate preci- |  |

## 6000 Electronic Crossover

Description Choice of 15 frequencies from 200 Hz to 10 kHz at 12 dB /octave; custom frequencies available for additional $\$ 10$; frequency components mounted on plug-in module; 2 tweeter-level controls; low distortion and noise; can be used with horn or dynamic speakers; adaptable to biamp or triamp operation Price $\quad \$ 64.75$ (kit) $/ \$ 90$ (wired)/ $\$ 27.50$ (plug-in module)/ 220 -valt models, $\$ 5$ more

## ADCOM

Adcom
11A Jules Lane
New Brunswick, N.J. 08901

Electronic Static Eliminator
Description Plezoelectric static eliminating instrument; dual-emission chambers for wider dispersion and damped trigger for consistent effectiveness
Price $\$ 19.95$

| Record C | Care System |
| :---: | :---: |
| Description | Self-contained record-cleaning system consisting of two unidirectional brushes; one brush damp cleans the record surface, the ther removes excess fluid; weighted to provide correct pressure |
| Pric | \$19.95 |
| Carbon-F <br> Description <br> Price | iber Record Sweep <br> Easy-to-use dust remover and static reducer; thousands of conductive fibers sweep accumulated dust from record surface softly $\$ 14.95$ |
| Carbon-Fi Desaription | iber Headshell <br> Low-resonance tow-mass carbonfiber headshell features non-tarnishing gold-plated terminal pins for low loss and exceptional reliablity |
| Carbon-F Description | Fiber Turntable Pad Felt-like material impregnated with electrically conductive carbon fibers dissipates accumulated static electricity on records; also acts as an anti-resonance filter between turntable and tonearm $\$ 9.95$ |

## ADD 'N STAC

Royal Sound Co., Inc.
248 Buffalo Ave.
Freeport, N.Y. 11520

## Record Add 'N Stac

Description Plastic storage unit holds up to 30 $12^{*}$ LP records in Philips-type boxes; interlocking feature permits units to be snapped together In any configuration as the need for additional storage space arises; available in decorator black; pre-drilled holes in the back of every module facilitate hanging

## Price \$8

## Beta Add 'N Stac

Description Plastic storage unit holds 6 Betaformat video cassettes in Philipstype boxes; interlocking feature permits units to be snapped together in any configuration as the need for additional storage space arises; available in a variety of colors; pre-drilled holes in the back of every module facilitate hanging
Price \$7

## VHS Add 'N Stac

Description Plastic storage unit holds 6 VHS format video cassettes in Philips-
type boxes; interlocking feature permits units to be snapped together in any configuration as the need for additional storage space arises; available in a variety of colors: pre-drilled holes in the back of every module facilitate hanging
Price $\$ 7$

## Cassette Add 'N Stac

Description Plastic storage unit holds 8 cassettes in Phillips-type boxes; interlocking feature permits units to be snapped together in any configuration as the need for additional storage space arises; available in a variety of colors; pre-drilled holes in the back of every module facilitate hanging
Price $\$ 2.50$

## 8-Track Add 'N Stac

Description Plastic storage unit holds 68 -track cartridges in Philips-type boxes; interlocking feature permits units to be snapped together in any configuration as the need for additional storage space arises; available in a variety of colors; pre-drilled holes in the back of every module facilitate hanging
Price $\$ 2.50$

AKAI
Akai America, Ltd.
2139 E. Del Amo Blvd. Compton, Calif. 90220

## AH-15 Tape Head

 Demagnetizer| Description | Designed especially for use with |
| :--- | :--- |
|  | $G X$ heads | Price $\quad \$ 29.95$

AS-3 Tape Splicer Price $\$ 5.00$

CHR-1 Head Cleaning Fluid Price $\quad \$ 2.10$

## AUDIO ACCESSORIES

A. Bee Sundicate, Inc.

230 Fifth Ave.
New York, N.Y. 10001

## C-25 Record Cleaner

Description insert record into envelope-like device, which cleans both sides at a time; no batteries required; removes dust and finger smudges; cleaning pads easily replaced $\$ 9.99$

AUDIO AIDS
Audio Works
840 Piner Road, Suite 14
Santa Rosa, Calif. 95401

| Speaker Description | Stands |
| :---: | :---: |
|  | Crafted from American Walnut |
|  | hardwood and veneers; speakers |
|  | are elevated 9" to improve bass |
|  | hidden from viewi speakers can be |
|  | almed by angling back or sititin |
|  | level |
| ce | \$36/pr. (\$23/pr. black finish, angle |
|  | only) |

## AW-400 Stylus Cleaner



## AW-200 Record Cleaner

| Description | Designed to be used dry for light <br> dust removal or with AW-100 |
| :--- | :--- |
|  | Cleaning Solution for best cleaning |
| and static reduction; after bristles |  |
| are treated, the fabric surface is |  |
| rolled against its direction of trave |  |
|  | along the record grooves |

AW-100 Individually Calibrated Cleaning Solution
Description Each bottle individually tested and guaranteed to be lower in residue than any solution on the market; antistatic and wetting agents to reduce viscosity; cleaning agents and germicides inhibit microscopic mold and bacteria growth; treated surfaces will reduce dust clinging static and thoroughly remove debris
Price N/A

## AUDIO DEVELOPMENTS <br> INTERNATIONAL <br> Audio Developments <br> International <br> 644 Emerson St. <br> Palo Alto, Calif. 94301

1000 Audio Spectrum Analyzer
Description Real-time spectrum analyzer with 10-band LED readnut, built-in precision noise generator, supplied condensor calibrated microphone, and two memories for "freeze frame" snapshots of display
Price \$985

AUDIO GROOME
Empire Scientific Corp. 1055 Stewart Ave. Garden City, N.Y. 11530

The Dry System Kit

| Description All components necessary for |  |
| :--- | :--- |
|  | complete day-to-day record and |
|  | stylus care; includes static elimina- |
| tor, dust elimininator, stylus clean- |  |
|  | ing fluid with brush, standard |
|  | headshell, screw driver; housed in |
|  | solid mahogany base with dust |
| Price | $\$ 79.95$ |

## Static Eliminator

Description Pistol-shaped device; no batteries needed; produces ion stream to neutrallize static charges on records
Price $\quad \$ 39.95$
Disco-Film

| Description | Gel-like non-toxic chemical is applied directly to the record surface; dry film is peeled oft, rerroving surface dirt; one container does 70 sides ( 35 lps ) |
| :---: | :---: |
| Price | \$29.95 |
| Dust Eliminator |  |
| Description | Carbon fiber bristles remove, trap, and lift off dust and debris from record grooves; neutralizes static hot spots |
| Price | \$19.95 |
| Gold Ended Cables |  |
| Description | Shielded low-capacitance cables with gold-plated RCA connectors; 1.5 meters ( $5^{\prime} 11^{\prime \prime}$ ) long; will replace most existing cables; separate ground wire minimizes ground loops |
| Pr | \$10.95 |

Anti-Static Mat
Description Carbon-fiber impregnated record mat discharges static charge from record surface; can replace existing turntable mat; stroboscopic markings on mat
Price $\quad \$ 8.95$
High-Definition Silver Cartridge Connectors
Description 30 strands of individually insulated silver wire with gold-plated push-on connectors on each end; improved "skin-effect" for improved transrission of high frequencies (set of four)
Price $\quad \$ 7.95$

## Stylus Cleaning Fluid and

 BrushDescription Fluid specifically designed to remove accumulation of dirt on styli; special cleaning brush included
Price $\$ 3.95$

## Anti-Static, Anti-Dust Record

 SleevesDescriptlon Replacement sleeves for records; lined with a special vinyl film to minimize static charges and collection of dust on record's surface Price $\quad \$ 2.50$ (package of 10 )

AUDIONICS OF OREGON
10950 S.W. 5th, \# 160
Beavertown, Ore. 97005

RVP-RUR Electronics

| Description Price | Replacement record and playback electronics for Revox A-77; im proves headroom, lowers distor tion, Improves user-replaceable \$375 |
| :---: | :---: |
| AVF |  |
| Osawa \& Co. (USA), Inc. 521 Fifth Ave. |  |
| New York | , N.Y. 11017 |
| Universal Vari-Tilt SpeakerStand |  |
|  |  |
| Description | Raises speaker 10 inches above floor to ellminate bass boominess tilts speaker to any angle for pre- cise dispersion; includes swive ludes swive |
| Price | \$74.95/pr. |

Mark IVAC Speaker Stand
Description Raises speaker 10 inches ábove floor; eliminates bass boominess; tilts speaker slightly backward to improve high-frequency dispersion; holds most home speakers; includes swivel casters; black nylon finish
Price $\quad \$ 49.95 /$ pr
Universal Speaker Wall Bracket
Description Holds up to 14 -inch-deep, $30-\mathrm{lb}$. speakers; adjustable padded clamp holds speaker, swivels horizontally and vertically; black nylon finish
Price $\quad \$ 39.95 / \mathrm{pr}$
BANG \& OLUFSEN
Bang \& Olufsen
515 Eusse Road
Elk Grove Village, III. 60007

## MC-40 Music Cabinet

Description Genuine rosewood, teak, or oak finish veneer; low profile cabinets for complete Beosystem; compartment for receiver, turntable, cassette deck, headphones and records; measures $243 / 4^{\prime \prime} \times 54^{\prime \prime} \times$ $16^{\prime \prime}$
Price $\quad \$ 595$
MC-30 Music Cabinet
Description Same as MC-40 except turntable goes on top; measures $2434^{\text {" }} \times$ $333 / 4^{n} \times 16^{\prime \prime}$
Price $\$ 495$
B.I.C.
B.I.C./Avnet

South Service Road
Westbury, N.Y. 11590
FM-10 Beam Box
Description Indoor electronically directable FM antenna
Price $\quad \$ 89.95$

FM-8 Beam Box

| Description | Indoor eléctronically directable FM <br> antenna <br>  <br> Price |
| :--- | :--- |
| $\$ 49.95$ |  |

CAR-FI
Car-Fi International, Inc.
152 W. Cypress Ave.
Burbank, Calif. 91502

EXV-100 Electronic Crossover
Description Designed for car stereo systems; six selectable crossover frequencies at $100,200,400$, and 800 Hz , 1.6 , and 3.2 kHz , as well as a flat setting; all BIFET circuitry for low noise and distortion; balance control between high/low outputs
Price $\$ 49.95$

## CERWIN-VEGA <br> Cerwin-Vega, Inc. <br> 12250 Montague Ave. <br> Arleta, Calif: 91331

## DB-10 Bass Turbocharger

Description Infrasonic filter/bass booster eliminates infrasonic distortion and noise below 20 Hz while boosting information in 30 to 45 Hz range by 5 or 10 dB ; allows, doubling of power handling capacity of CerwinVega speakers
Price $\quad \$ 90$

## CROWN

Crown International
1718 W. Mishawaka Road Elkhart, Ind. 46514

| RTA-2 Real Time Audio |  |
| :--- | :--- |
| Analyzer |  |
| Description | Spectrum analyzer with built-in <br> pink noise generator; 5 -inch CRT <br> display; 1 -octave and $1 / 3$-octave |
| display; system frequency range <br> checks; tape recorder equalization <br> analysis; 16 Hz to 20 kHz band- <br> width; 60 dB dynamic range; op- <br> tional shipping case |  |
| Price $\$ 2,195$ |  |

DB SYSTEMS
DB Systems
P.O. Box 187

Jaffrey Center, N.H. 03454
DB-7 Precision Phase Inverter
Description Bandpass filter and bridging

Price $\quad \$ 150$

## DBP-11 Capacitance Loading

## Switching Box

Description Switch-selectable loading for values from 100 to 400 pFd with bypass; independent loading for 2 cartridges
Price $\$ 80.20$

DBP-6 Phono Equalization Kit
Description Allows adding capacitance from 100 to 400 picoFarads on the phono input of any preamp or receiver in a few seconds; changes in capacitance can be make quickly; 1.00 -ohm load provided for experimentation with " $Y$ " adapters, a set of phono plugs with polystyrene capacitors wired-in to give added capacitance of $100,150,200,300$, and 400 picoFarads, metal film resistors for a 100 -ohm load, and a pair of spare plugs
Price $\quad \$ 24.95$

DBP-10 Phono Alignment

## Protractor

Description Measures lateral tracking error of cartridge mounted on an arm to one-quarter of one degree; instructions provided to optimize geometry for minimum distortion Price $\quad \$ 19.95$

## DBP-8 Speaker Wire

Description 12-gauge 2-conductor wire Price $\quad \$ 7.35,10^{\prime}, \$ 11.50,20^{\prime} ; \$ 15.36,30^{\prime}$

## dbx

dbx (a BSR Co.)
71 Chapel St.
Waltham, Mass. 02195

## 3BX-R Remote Control

Description Increases flexibility of the 3BX by providing remote control of transition level, release time, and expansion ratio, plus master volume and fade controls
Price $\$ 149$

DECCA
Rocelco, Inc.
1669 Flint Rd.
Downsview, Ontario M3J 2J7

## "Zero Control" Decca Record Brush <br> Description <br> Conductive disc on handle gives zero ohms resistance between handle and bristles for improved static drain; other features similar to Decca record brush $\$ 18.95$

## Decca Record Brush

Description Consists of one million conductive carbon fiber bristles, each 8 to 9 microns thick; bristles enter record grooves to remove dust and static; uses no fluids
Price \$16.95

## Decca Record Cleaner

Description Arm-type cleaner; 20,000 conductive carbon fiber bristles; ground wire to amplifier chassls for complete static drain; interchangeable cleaning bristles
Price

Decca Microbe
Description Three-way cleaning static-drainstylus protection device; mounts between cartridge and headshell; adds only $1 / 2$ gram to vertical tracking force; fits most cartridges
Price $\$ 9.95$

DENNESEN
Dennesen Electronics
P.O. Box 51

Beverly, Mass. 01915

## Soundtractor

Description Protractor for correctly aligning phono cartridges in tonearms within 0.001 inches; allows measurement of relative changes in vertical tracking angle
Price $\quad \$ 35$ (plastic); $\$ 100$ (metal)

## DISCWASHER

Discwasher Group
1407 N. Providence Road.
Columbia, Mo. 65201

## DiscKeeper

Description Record rack with calculated compression bar to prevent warpage; made of solid walnut and anodized aluminum; wall-mounting hardware included
Price $\quad \$ 65$
DiscKit
Description Disc organizer with discwasher pad, D3 fluid; SC-1 stylus cleaner, Zerostat, and DC-1 pad cleaner DC-1 also sold separately for 60
Price $\$ 46$

## DiscTraker

| Description | Tonearm/cartridge <br> taches to headshell |
| :--- | :--- |
| Price | $\$ 29$ |

## DiscFoot

Description Turntable isolation system consisting of four isolation pods, four furni-ture-protective pads, four platform caps for attachment to turntable feet, and four special damping sections to adapt units to certain turntables
Price $\$ 22$

## Zerostat

Description Antistatic gun
Price $\$ 20$
Discwasher System
Description Record-cleaning system consisting of soft-pile brush with D3 fluid in plastic bottle stored in handle
Price $\quad \$ 15$

## DiscOrganizer

Description Walnut storage tray with dustcover; holds Discwasher record accessories
Price $\quad \$ 12.50$

## D-Stat II

Description Soft, felt-like turntable mat reduces electrostatic charges on turntable
Price $\$ 8.50$


## Gold-Ens

Description Gold-plated connector cables
Price $\$ 8$
SC-1 Stylus cleaner
Description Special brush of calculated-density nylon; magnitying mirror for viewing stylus, cantilever, and cartridge alignment; brush and mirror retract into walnut case for storage
Price $\$ 7$

## Hi-fi Seer Audio Equipment Illuminator

Description Integral flashlight and mirror system to illuminate back panels of equipment; positive locking on/off switch; llluminates in three directions
Price $\$ 7$
Discleads
Description Cartridge/headshell cónnectors with gold surface
Price \$5.60
V.R.P. Record Sleeves

Description Smooth surface for scratch-free record removal; protects against "stabilizer drift"; antistatic compound reduces surface charge $80 \%$ over typical sleeves
Price $\quad \$ 2.75$ (package of 10)
D3 Fluid
Description Special fluld removes micro-dust, fingerprints, tobacco smoke; eliminates destructive blological growth; leaves no residue
Price $\$ 2.25$

DRACO
Draco Labs, Inc.
1005 Washington St.
Crafton, Wisc. 53024

Power meter

| Description | Variable peak-hold; wide dynamic <br> range; 2 power range; record moni- |
| :--- | :--- |
|  | tor |
| Price | $\$ 150$ |

## DUOTONE

Duotone Company, Inc.
6875 S.W. 81st St.
Miami, Fla. 33143


Audio Groome Static Ellminator

MRM 101 Music Recovery Module
Description Electronically identifies and suppresses pop, clicks and scratch sounds from records prior to connection to amplifier
Price $\$ 219.95$

## GOLDRING

Hervic Electronics, Inc.
18750 Oxnard St., \# 406
Tarzana, Calif. 91356

## Ex-Siatic Carbon Fiber Platter Pad

Description Dual-purpose pad impregnated with carbon fibers to short out static charges on disc and isolate disc from turntable noise; put side to be played on the pad; turn over prior to'play
Price $\$ 15$

| Ex-Static Carbon Fiber Record |  |
| :--- | :--- |
| Brush |  |
| Description | Over 1,00,000 fine carbon fiber <br> bristles (electrically conductive) <br> short out static bond between disc |
|  | and dust; bristles sweep away dirt <br> and static noise; detachable metal <br> bracket drilled for mounting; brush <br> cleaner on bracket |
| Price | $\$ 15$ |

## GROOVE TUBE

Groove Tube, Inc.
59 Remington Blvd.
Ronkonkoma, N.Y. 11779

Groove Tube II "The Ultimate Record Cleaner"

| Description | Walnut finish with velvet preener <br> on,top; cylinder shaped and com- <br> pletely replaceable with inexpen- <br> sive refill kit |
| :--- | :--- |
|  | $\$ 14.95$ |

[^6]GRT DESIGN
GRT Design (Div. of GRT
Corp.)
1286 Lawrence Station Rd.
Sunnyvale, Calif. 94086

## "Deluxe" Tape Maintenance

Kit
Description Includes demagnetizer (UL approved), 10 cotton swabs, untreated cleaning cloth, 2 oz head-cleaner fluid containing $20 \%$ isoprophyl alchohol, 0.05\% detergent, demineralized and deionized water, and "How to" booklet
Price $\$ 17.95$
"Deluxe" Record Care

## Maintenance Kit

Description Includes 4 oz . Sound Cleaner record cleaner, 2 oz. Stylus Cleaner, Stylus Mirror, 2 oz. record cleaning solution, and "How To" booklet
Price $\quad \$ 15.95$
Head Demagnetizer
Description All-purpose head demagnetizer; in-
terchangeable tips (UL approved)
Price $\$ 14.95$

## "Sound Cleaner" Record

## Cleaner

Description Smoked plastic bottle with handgrip; pump and spray action with brush pad, which is attached to bottle for wet cleaning but can be removed for dry cleaning purposes; refillable

## Price

 $\$ 12.95$Cassette Demagnetizer and Cleaner

| Description | Removes oxide deposits and <br> residual magnetism from heads |
| :--- | :--- |
| Price | $\$ 4.95$ |


| Cleaning Tonic <br> Description Contains isoprophyl alcohol, deter- <br>  gent, demineralized and deionized |  |
| :--- | :--- |
|  | water; 4 Oz. |
| Price | $\$ 3.95$ |

"Dustbuster" Record Cleaner Description White triangular bottle with pump and brush pad; single unit construction; 4 oz . bottle is refillable
Price $\$ 3.95$

Stylus Cleaning Kit

| Description | Contains 2 oz. bottle with brush ap- <br> plicator enclosed in cap of bottle <br> and "dental" mirror |
| :--- | :--- |
| Price | $\$ 3.95$ |

## GRUNDIG

LAS Electronics East, Inc. 85C Saratoga Blvd.
Island Park, N.Y. 11558

## GRA-3000 Presetter

Description 5-pushbutton option; AM or FM Price

GAA-1100 Impedance Matching

## Cable

| Description | For one-piece stereo; adapts $2 \times$ |
| :--- | :--- |
|  | 20 -watt amplifier |
| Price | $\$ 9.80$ |

GCA-7015 ESO accessory
cable
Price $\quad \$ 7.80$
GCA-4020 Speaker
Description 8' cable with plug
Price $\quad \$ 1.40$

HERVIC
Hervic Electronics, Inc. 18750 Oxnard St. \#406
Tarzana, Calif. 91356

Antistat
Description Piezoelectric record brush; piezoelectric generator produces ionized air to break dust's static bond with record, brush then removes dirt from disc; no batteries; nonnuclear \$14

## KA/KINETIC

KA/Kinetic Audio Intl., Ltd. 66244 W. Irving Park Road Chicago, III. 60634

Walnut-Finish Rack Mount
Description Rack mount made of non-warping, 1" thick genuine walnut veneer panels with tung oil finish; choice of two standard rack rails or three shelves (customer mounted); 13" space for record storage at bottom; 4 premounted castors; 125 lbs. ship. wt.; $48 \mathrm{H} \times 21 \mathrm{~W} \times 18 \mathrm{D}$

## Price

 \$249
## High Tilt Stands

Description Three models of stands; can be used for KA speakers or any others; "Small" for miniature and small speakers; "Medium" for bookshelf and moderate sized floor standing speakers; "Large" for most big speakers
Price \$39/pr. (small); \$49/pr. (medium); $\$ 59 / \mathrm{pr}$. (large)

## KEITH MONKS

Keith Monks Audio
652 Glenbrook Rd.
Glenbrook, Conn. 06906

## Record Cleaning Machine

Description
Quickly removes all dirt and static from the record surface by scrubbing surface, then completely drying the record through a precision vacuum; consumer version available soon
Price $\quad \$ 1,885.84$

## Record Sweeper

Description Grounded brush rests lightly on the record surface removing dust and static while the record plays; ad-
justable height and tracking weight; uses nonresonating animal hair in brush and copper wires to pick off static without touching record surface

## Price

$$
\$ 124.15
$$

## Pivot Sweeper

Description Same as Record Sweeper, except allows user to permanently attach base of unit to turntable and still remove brush arm
Price $\$ 20.75$
Damped Leveling Kit
Description Four adjustable, self-adhesive, damped feet deslgned to level turntable as well as prevent feedback
Price $\quad \$ 16.95$

## Record Weight

Description Round disc fits over spindle of single play turntables; weight (just under a pound) adds stabilization to turntable system while eliminating record warp and holding record firmly to the platter to eliminate record chatter while the record is playing; 60 -cycle strobe mounted on top surface $\$ 13.70$

## Record Care Kit

Description Contains plastic holder with velvet pad specially treated for removing dust from the record surface; few drops of antistatic solution are placed in the plastic handle to remove static without wetting the record surface; stylus brush also stored within the plastic handle
Price $\quad \$ 7.64$

LE-BO
LE-BO Products Co., Inc.
58-60 Grand Ave.
Maspeth, N.Y. 11378

VCM-1002 Video Tape Cabinet
Description Holds 12 VHS or Betacord cartridges; made of wood $\$ 44.95$

TA-153 Tape Storage Cabinet
Description Holds 328 -track cartridges or 34 cassette tapes; made of wood
Price $\$ 29.95$

## TA-266 Deluxe Attache Cassette Case

$\begin{array}{ll}\text { Description } & \begin{array}{l}\text { Holds } 60 \text { tapes; available in black, } \\ \text { brown, and ginger finishes }\end{array}\end{array}$ Price $\quad \$ 21.95$

## TA-145-Deluxe Padded Attache Case <br> Description Holds 45 tapes; available in brown, black, and ginger fininshes <br> Price $\quad \$ 19.95$

MAGNAVOX<br>Magnavox/Consumer<br>Electronics Co.<br>1700 Magnavox Way<br>Pt. Wayne, Ind. 46804

## 8241 Video Camera

Description Lens, $6 \mathrm{X}, 7 / 2$ zoom lens ( 17 mm to 102 mm ); electronic viewfinder (LED readouts for correct iris setting); AGC on/off switch; battery compartment; tripod mount; omnidirectional condensor microphone; VCR start/stop switch; equipment includes $20^{\prime}$ camera caPrice ble, daylight filter, power supply

MICHELL ENGINEERING Dick Wagner
5930 Penfield Ave.
Woodland Hills, Calif. 91367

| Record | Clamp |
| :--- | :--- |
| Description | Suede covered spindle clamp with <br> strobe markings; fits any standard <br> furnable spindle; holds record flat, <br> removes small warps |
| Price $\quad \$ 30$ |  |$\quad$| Carbon |
| :--- | :--- |

## MITSUBISHI <br> Melco Sales, Inc. <br> 3030 E. Victoria St. <br> Compten, Calif. 90221

## DR-720 Equipment Rack

Description Vertical equipment rack with 5 component shelves and record storage; two pairs of glass doors provide access to the upper and lower compartments; filnished in black with aluminum trim
Price $\$ 380$

| DR-707 Equipment Rack |  |
| :--- | :--- |
| Description | Eertical equipment rack with glass <br> doors and four component shelves; <br> finished in black with aluminum trim |
| Price | $\$ 280$ |

## DA-M10 Power Level Meters

Descrlption Designed for use with all Mitsubishi power amps; may be "docked" physically and electrically with each unit; peak-reading meter scales callbrated from 1 mW to 200 W ; front-panel range switch increases sensitivity by 10 (readings from 0.1 mW to 20W) frequency response $20 \mathrm{~Hz}-20 \mathrm{kHz}$, $\pm 0.2 \mathrm{~dB}$; THD $0.01 \%$; S/N 100 dB; gain 0 dB (variable); input/output impedance 50K ohms/600 ohms; response/recovery time 10 m sec/0.6sec. front panel controls include power on/off, right and left channel level and speaker selector switch
Price $\$ 170$

MK-30 Speaker Stand
Description Designed for use with the Mitsubishi Honeycomb Speaker Series; finished in flat black
Price \$55/pr

MONSTER CABLE<br>The Monster Cable Co.<br>101 Townsend St.<br>San Francisco, Calif. 94107<br>Monster Cable High Definition Speaker Wire

Description A heavy gauge dual parallel conductor speaker cable cesigned to optimize the interface between amplifier and speaker; over 500 individual strands of copper in a flexible clear vinyl jacket MC-15/15 stereo pair, 15 ft . өa. \$20; MC-15/25 stereo pair, one 15 ft. plus one 25 t., \$25; MC-20/20 stereo pair, 20 ft . ea., $\$ 25$; MC20/30 stereo pair, one 20 ft . plus one 30 ft ., $\$ 30$; MC-500 professional spool, custom cut and terminated by dealer or installer, 60/foot

NAKAMICHI<br>Nakamichi USA Corp.<br>1101 Colorado Ave.<br>Santa Monica, Calif. 90401

T-100 Audio Analyzer
Description Compact tape deck "test bench" includes oscillator with 21 frequencies from 20 to 20 kHz , pink-noise generator, distortion analyzer (400 Hz ), A-weighting noise filter, 3 kHz wow-and-flutter/speed-accuracy meter; dual plasma bar-graph displays with peak (10 msec.) or "VU" ( 0.3 sec .) ballistics; watt-scale graticule for power readings; carrying case and strap Included Price $\$ 800$

SF-100 Subsonic Filter
Description "BlackBox Series" Subsonic Filter connects to system at line level (in tape monitor loop, between pre and power amp, etc.); 30 Hz to 100 $\mathrm{kHz} \pm 0.5 \mathrm{~dB} ;-50 \mathrm{~dB}$ at 10 Hz with filter "in"; "low boost" position provides +5 dB at 30 Hz falling to -40 dB at 10 Hz ; THD under $0.005 \%$ from $50 . \mathrm{Hz}$ to $20 \mathrm{kHz}, \mathrm{S} / \mathrm{N}$ better than 110 dB (IHF-A); requires PS-100 Power Supply
Price $\quad \$ 75$

DM-10 Head Demagnetizer
Description Compact demagnetizer uses 117 VAC household power; on/off switch built into handle; specially designed, coated tip for easy use, especially with cassette decks
Price $\$ 20$

Diskmat
Description
High mass turntable mat reduces noise transfer from motor, minimizes feedback, lessens wow and flutter; makes slightly warped records playable; reduces rumble; elliminates platter ringing $\$ 25$

## PERMOSTAT by STANTON Stanton Magnetics, Inc. 200 Terminal Drive Plainview, N.Y. 11803

## Permostat by Stanton

Description Fluid; eliminates static electricity permanently; eack kit provides protection for 25 records (both sides)
Price $\quad \$ 19.95 /$ kit; $\$ 15.95 /$ refill kit
PHASE LINEAR
Phase Linear Corp.
20121 48th Ave. W.
Lynnwood, Wash. 98036

1200 Series Two Real-Time
Analyzer
Description Precision room-analyzing instrument consisting of 12-band display and filter bank satisfying ANSI standards, accurate pink noise generator, and calibrated microphone
Price $\quad \$ 799.95$

PIONEER
Pioneer Electronics of America 1925 East Dominquez St.
Long Beach, Calif. 90810

## AB-3D7 IC Noise Suppression <br> System <br> Description Reduces static and multipath distortion; plug-in installation; for use with new Pioneer car radio/tape players <br> Price $\quad \$ 34.95$

PIXOFF
Sonic Research, Inc.
27 Sugar Hollow Rd.
Danbury, Conn. 06810

## Pixoff Record Cleaner

Descriftion Dry cleaner for phono records; roll-er-type devke uses roll of speclal tape to clean discs; new tape surface exposed by cutting and peeling off dirty layer
Price $\quad \$ 17.50$

## PREMIER

Sumiko
P.O. Box 5046

Berkeley, Calif. 94705

FF-1 Head Amplifier

| Description | Provides pre-preamplification for |
| :--- | :--- |
|  | moving-coil cartridges; 2 phono in- |
|  | puts; DC powered; 3 gain settings; |
|  | 2 high-frequency EQ positions plus |
|  | EQ bypass; feөd-forward circuitry |

Price $\$ 200$

PSB
PSB Speakers, Inc.
P.O. Box 144

St. Jacobs, Ontario
Canada NOB 2NO

| The PSB |
| :--- |
| Description | | Speaker Stand |
| :--- |
| Finished in black vinyl; tilts back |
| speaker; 15 lbs. a pair |
| $\$ 50 / p r$. |


| Price |  |
| :--- | :--- |
| The Smaller PSB Speaker |  |


| Stand |
| :--- | :--- |
| Description |


| Finished in black vinyl; tilts back |
| :--- |
| speaker; 15 lbs. a pair |
| Price |

$\$ 50 / \mathrm{pr}$.

## PYRAMID

Pyramid Landspeaker Corp.
131-15 Fowler Ave.
Flushing, N.Y. 11355

RW-1 and RW-2 Record
Weights
Description 2 lbs 30 oz and 1 lb .2 oz., respectively; prevents B record from vibrating by weighting it down; stainless steel.
Price $\quad \$ 75(R W-1) ; \$ 60(R W-2)$

## QUASAR

Quasar Electric Co.
Div. Matsushita Electric Corp. of America
9401 West Grand Ave.
Franklin Park, III. 60131

VK-720 Color Video Camera
Description 6X power zoom
Price $\$ 960$

VK-715 Color Video Camera
Description 6Xzoom
Price $\$ 850$

VK-705 Color Video Camera
Price \$660

## QUIETONE

Hammond Industries, Inc.
155 Michael Drive
Syosset, N.Y. 11971


REALISTIC
Radio Shack Corp.
1400 One Tandy Center
Ft. Worth, Texas 76102
Pro Power Meter
Description Monitors output of stereo comp or receiver; large easy-to-read dual meters and LEDs; reads 0 to 200 watts rms at 8 or 4 ohms; vinyl veneer case
Price $\quad \$ 49.95$

## Audio Power Meter

Description Monitors output of stereo amp or receiver; large, easy to read dual meters respond to short sound peaks; reads 0 to 100 watts rms at 8 or 4 ohms; no power required; walnut vinyl veneer case
Price $\quad \$ 19.95$

Turntable Shock Mounts

| Description | Dampens external vibrations that may be transmitted to tonearm; reduces associated distortion $\$ 17.95$ |
| :---: | :---: |
| Electronic Static Eliminator |  |
| Description | Piezoelectric element and dual emission chambers disperse static charges on records; uses no batteries, liquids or external power |
| Price | \$14.95 |
| Illuminated Tape-Head |  |
| Demagnetizer |  |
| Description | For all tape equipment; lighted tip |
| Disc Sweeper |  |
|  |  |
| Description | Carbon-fiber brush penetrates groove for safe, dry cleaning; reduces static |

Hydro-Store ${ }^{*}$ Record Care
System
Description Protects records and stylus; composed of tiny glass beads, which retain cleaning fluid for weeks; cleaning fluid and stand included; solid rosewood handle
Price $\$ 9.95$

## Professional Stylus Brush

| Description | Brushed aluminum cap and hande; <br> easy-view mirror; fine-cleaning fi- <br> bers; liquid included |
| :--- | :--- |
| Price | $\$ 8.95$ |

Headphone Extension Cord

| Description | Coiled, 24' shielded cable; stan- <br> dard stereo plug on one end, stan- <br> dard stereo jack on other |
| :--- | :--- |
| Price | $\$ 7.99$ |

Disc Saver

| Description Preserves vinyl; virtually eliminates <br> record wear <br>  $\$ 7.95$ |  |
| :--- | :--- |
| Price |  |
|  |  |
| Universal |  |

Universal Tape Recorder Care
Kit
Description Includes brush, straight and angled holder, mirror attachment to see around corners; over 50 possible tool combinations
Price $\quad \$ 6.95$

Disc-O-Mat
Description Carbon-impregnated polytoam mat; highly conductive; reduces static "chatter"; anti-resonant
Price $\quad \$ 4.95$

## Tape-Head Demagnetizer

Description Pencll shaped; for use with cassette and open-reel recorders
Price $\$ 4.95$

## Stylus Microscope

Description Magnifies stylus tip for close inspection of diamond; detects dirt or wear, helps maintain life of stylus and promotes cleaner sound
Price $\quad \$ 1.99$

## RECOTON

Recoton Corp.
46-23 Crane St
Long Island City, N.Y. 11101

## AU-100 Audio Rack

Description 3 shelves; record section divider; chrome trim; walnut finish
Price $\quad \$ 79.99$

V-100 Video Tape Cabinet
Description Holds 18 tapes Betamax or VHS
Price $\$ 41.99$

## Clean Sound II Record

Cleaning System
Description includes wood handle applicator, Clean Sound Solution, special padcleaning brush; replaceable applicator pads; hinged, smoked plastic storage case
Price \$15

## REF́ERENCE

Reference Monitor
International Inc;
2380 C Camino Vida Roble
Carlsbad, Calif. 92008

AK-47B Quietone Record Care
Aerosol Spray
Price $\quad \$ 11.95$


## Spectra Disc Cushion

| Description | Triple layers of elastomers; sur- <br> face is flat with properties that hold <br> disc to cushion |
| :--- | :--- |
| Price | $\$ 49$ |

Staticleaner Carbon-Fiber Disc Sweep
Description Arm of anodized metal removes static and dust while record plays; comes complete with static drain lead and lower base for B\&O turntables
Price $\$ 39.90$

## Statibrush Carbon-Fiber Disc Cleaner

Description Micro-fine carbon fiber conductive anodized handle allows greater conductivity; static and dust removal
Price $\quad \$ 16.90$

ROBINS
Robins Industries
75 Austin Blvd.
Commack, N.Y. 11725

## Model 25-011 Universal Head Demagnetizer

Description Hand-held; AC-powered; designed for intermittent duty ( 2 min. on, 15 min. off); comes with two tips (both with plastic shields)
Price $\$ 9.95$

SANSUI
Sansui Electronics Corp. 1250 Valley Brook Ave. Lyndhurst, N.J. 07071

## MA-7 Rack Mountable Monitor Consolette

Description Two-piece dual peak-hold meters read watts or $d B$; adjustable input sensitivity; $400 \mathrm{~Hz} / 10 \mathrm{kHz}$ calibration oscillator; amplifier for headphones or monitor speakers; two full-range monitor speakers; matte black finish
Price $\$ 330$

[^7]dividual 20 dB pads, level controls, pan pots, and selectable feed to reverb (spring); switchangle hilevel sources may be post-mixed with primary mixer inputs; record mode switch for tuner, source, mixing busses, or tape dubbing (3 decks); separate monitor switching and master level controls; 2 additional switched output loops for outboard signal processors
Price $\$ 300$

MS-1 Microphone Boom Stand Description Arm for stereo pairing; mic-mount screws at both ends of adjustable boom; 35 1/16 inches long; rotatable over a full 360 degrees; supplementary bar included (8 11/16 inches) to extend boom length to 43 11/16 inches; separate arm for mounting stereo pair of mics; collapsible stand for maximum mobility; four mic-mounting screws to accept different mic holders; special support bar; matte-black finish Price $\$ 200$

RA-700 Reverberation
Amplifier
Description Adustable ( 1.9 to 3.2 sec .) with color visual indication; for use in preamp tape-loop circult; handies 2 tape recorders; S/N: 65 dB ; THD: $0.2 \%$; frequency response: 20 Hz to $30 \mathrm{kHz}, \pm 2 \mathrm{~dB}$
Price $\quad \$ 190$

## FA-7 Antenna System

Description FM/AM; omnidirectional AM antenna; picks up desired signals from 360 -degree horizontal circle; improves AM signal-to-noise-ratio as much as 20 dB
Price $\quad \$ 110$

## PS-112C Speaker Cable <br> Description Widerange, high efficiency speaker cable; low power loss; frequency response: $\pm 0.5 \mathrm{~dB}$ from DC to 400 kHz; flat phase response (less than 10 degrees from $D C$ to 300 kHz ); formed on triaxial meshes: 2 conductors, 1 shield to improve highfrequency response; low reactance; ultra-wide, ultra-low inductance; DC to $400 \mathrm{kHz}, \pm 0.5$ dB/14m; impedance: 12 ohms <br> Price $\quad \$ 100$ <br> PS-107C Speaker Cable <br> Description Similar to PS-112C <br> Price $\$ 70$



DB Systems DBP-10

PS-2P Extension Plug Adapter Description Same as PS-1P but has 4 outputs on other end Price $\$ 22$

PS-1P Extension Plug Adapter Description Low contact resistance; superb transfer characteristics; goldplated contact surfaces to prevent oxidation; accepts tow pin cords (one stereo pair) on either end Price $\quad \$ 18$

## PS-4C Stereo-Low Capacitance Pin Plug Cords <br> Description Same as PS-5C but pin plugs are Price $\quad \$ 14$

PS-6C Stereo Low-Capacitance
Phone Plug Cords
Description Ideal elasticity; Jow capacitance; low DC resistance; unplated, braided conductors; stereo phone plugs on one end, stereo pin plugs on the other
Price $\$ 11$

## PS-5C Stereo-Low Capacitance Pin Plug Cords

Description Low stray capacitance of $40 \mathrm{pF} / \mathrm{m}$ and ultra-low DC resistance of 170 milli-ohms $/ \mathrm{m}$; shielding of outer conductors is densely braided to prevent extemal noise and FM/AM signals from affecting the signals you want to record or reproduce; unplated strands are braided for improved sound eliminating the effect that impedes the flow of high frequencies; pin plugs are nickelplated to avoid oxidation and poor interface
Price $\$ 11$

## PS-7C Mono Low-Capacitance Phone Plug Cord <br> Description Same as PS-6C but in mono <br> Price $\$ 8$

## SANYO PLUS

Sanyo Electric, Inc.
Consumer Electronics Div.
1200 W. Artesia Blvd.
Compton, Calif. 90220
 rackmount series; four switched AC outlets; large fluorescent display for clock time and program display; 9 programmable intervals in a 24 hour period
Price \$249.95

## SCOTCH

3M
Magnetic Audio/Video
Products Div.
3M Center
St. Paul, Minn. 55101

Sanyo E-55
PLUS N-55 "Super D" Noise Reduction System
Description Optimizes level sensing for superior audio performance; fluorescent peak-reading signal level meters; source/tape switch/MPX filter; companding noise reduction system; rack-mount capability: 11$3 / 4 \mathrm{H} \times 173 / 8 \mathrm{~W} \times 113 / 4 \mathrm{D}$ with $2: 1 \mathrm{ex}$ pansion/compression ratio; 40 dB tape noise reduction; 0/08\% THD; load B dynamic range
Price $\$ 359.95$

Plus E-55 Computerized
Programmable Timer
Description Microprocessor; companion to



Falcon Duat-Of


Mitsublshi DR-720


Scott 8302
GRT Dustbuster

## Dustguard Turntable Mat

Description Antistatic mat of special conductive foam drains off static charges generated when record is pulled out cf its sleeve; strobe pattern Included
Price \$5.95

## Cassette Caddy

Description C-Box car saddle with 5 boxes
Price $\$ 9.95$

## SCOTT

H.H. Scott, Inc.

20 Commerce Way
Woburn, Mass. 01801

## 830A Audio Analyzer

Description Ten-octave; built-in multi-frequency signal generator; visually confirms frequency response or SPL; useful in verifying system performance, optimizing loudspeaker placement and tape recorder bias and equalization; includes external microphone and test record $\$ 599.95$

## SHURE

Shure Bros., Inc.
222 Hartrey Ave.
Evanston, III. 60204


Phase Linear Model 1200

## SFG-2 Stylus Force Gauge

Description Precision stylus force gauge detects excessive or insufficient tracking force; allows precise resetting of stylus force to maintain optimum trackability and sharply reduces wear on records and stylus tip
Price $\$ 6.30$

## SME

Shure Bros. Inc.
222 Hartrey Ave.
Evanston, III. 60204
LCL-4 Low-Capacitance Cable
Description Four-foot, low-capacitance cable designed for use with Shure/SME Series II or 3012 arms; capacitance including tone arm wiring is 75 pF
Price $\$ 22.50$

## SONTEC

Sontec Electronics
10120 Marble Court
Cockeysville, Md. 21020
NFM-6X2 Microphone Mixer
Description Transformerless Mixer; 6 inputs, 2 outputs; precision-ganged master



Permostat Record Preeervative


Superen TSB-3


Sansul AX-7


Shure SF-62

Reallstic APM-200
level control; pan pots; phase reversal switches; provision for 48 volt phantom power
Price $\$ 1,580$

## SONUS

Sonic Research, Inc. 27 Sugar Hollow Rd. Danbury, Conn. 06813

Blue Standard Styius Description Pathemax Price $\$ 68$

## Red Standard Stylus

Description Elliptical
Price $\$ 45$
Green Standard Stylus
Description Conica
Price $\$ 26.50$
$\underset{\text { Pricer }}{\text { Silver P }}$ P $\underset{\$ 39.50}{\text { Standard Stylus }}$

## Silver E Standard Stylus <br> Price $\$ 30$

## SOUND GUARD <br> Ball Corp.

345 South High St.
Muncie, Ind. 47302

Total Record-Care System
Description Contains Sound Guard preservative and Sound Guard record cleaner, along with pump sprayers. pads, and sponges necessary for application
Price \$16.99

## Record-Cleaner Kit

Description Contains Sound Guard recordcleaner fluid (2 oz bottle), pump sprayer, velvet cleaning pad, sponge, and foam grooming pad; removes particulate contaminants such as dust and lint as well as adherent film type contaminants such as fingerprints; cleaner retards static buildup
Price $\$ 9.99$

[^8]
## Stylus Care Kit

Description Contains all tools necessary for stylus maintenance; includes $10 z$. bottle of stylus cleaner, soft brush bulb air blower for removal of particulates from cartridge shell, and $3 x$ and $10 x$ magnifier for stylus inspection
Price $\quad \$ 9.99$

## Record-Care Pad

Description
Non-abrasive, lint-free pad which provides an ideal working surface on which to preserve and clean records; allows user to work on one side of a record while protecting the other side from harmful abuse; pad easily cleaned with soap and water
Price $\quad \$ 7.99$

## Record Buffer

Description High-density velvet pile brush can be used for dry cleaning (preening) or with Sound Guard Record Cleaner
Price $\quad \$ 3.99$

## Static Detector

Description A device which alerts the user to
the presence of static buildup on records even before its presence results in audible noise
Price $\$ 1.99$

STACK-RACK<br>Audio Works<br>840 Piner Road, Suite 14<br>Santa Rosa, Calif. 95401

| Stack-Rack |  |
| :---: | :---: |
| Description | American walnut audio/video furni- |
|  | ture; any equipment combination |
|  | can be accommodated by stacking |
|  | multiple units and adjusting she |
|  | and record divider heights; leather- |
|  | grain filler panels fit around equip- |
|  | ment to hide-wires and give custom |
|  | installation look; bronze tone fit- |
|  | tings and all assembly tools |
|  | cluded; measures $321 / 6 \mathrm{H} \times 251 / 4$ |
|  | $\times 161 / 2 \mathrm{D}$ (full size); $147 / 8 \mathrm{H} \times 251 / 1 \mathrm{~W}$ |
|  | $\times 161 / 2 \mathrm{D}$ (record size) |
| Price | \$190 (full size); \$90 (record size) |

## STRELIOFF

Strelioff Systems Designs 5305 Tendilla Ave.
Woodland Hills, Calif. 91364

| X-1 | ic Crossover |
| :---: | :---: |
| Description | Four-way stereo capabilities with standard crossover points at 125 |
|  | $\mathrm{Hz}, 800 \mathrm{~Hz}$, and 5 kHz ; independ- |
|  | ent level controls for each band |
|  | pass; modular design employs only |
|  | discrete devices on plug-in circuit |
|  | boards; $31 / 2 \mathrm{H} \times 19 \mathrm{~W}$ rack-mount |
|  | chassis for professional |
|  | recording studio installations; |
|  | quires Model RS-1 regulated |
|  | power supply |
| ice | \$700 |

SUPEREX

Superex Electronics Corp.

151 Ludiow St.

Yonkers, N.Y. 10705

VTS-4 Video Tape Switcher
Description $23 / 4 \mathrm{H} \times 61 / 4 \mathrm{~W} \times 43 / 4 \mathrm{D}$; switching center for video decks allows simultaneous dubbing of audlo and video onto 3 decks; RCA-type input and output jacks; linear to 50 MHz
Price $\$ 59.95$

TSB-3 Switching Module
$\left.\begin{array}{ll}\text { Description } & \begin{array}{l}\text { Simultaneous or independent dub- } \\ \\ \text { bing or recording of up to } 3 \text { decks; }\end{array} \\ & 2 \text { sources may be isolated and } \\ \text { recorded simultaneously; minimum }\end{array}\right\}$ bing or recording of up to 3 decks recorded simultaneously; minimum fine is 10,000 operations

266
SYMMETRY
Symmetry Audiophile Systems
101 Townsend St.
San Francisco, Calif. 94107

ACS-1 Electronic Crossover
Description Active crossover; stereo or mono crossover variable from 45 Hz to 450 Hz and 450 Hz to $4.5 \mathrm{kHz} ; 12$ dB/Octave slope low pass; high pass derived from low pass file output; 100 K ohms input impedance; less than $0.01 \%$ THD at 3 V Class A circuitry; FET input stage Price $\$ 650$

TDK
TDK Electronics Corp. 755 Eastgate Bivd. Garden City, N.Y. 11530

HD-01 Head Demagnetizer
Description Self-contained, portable, battery operated head demagnetizer in TDK precision shell; inserted like standard audio cassette; seconds after depressing the "play" button, a red LED will light, informing the user that his recorder heads have been demagnetized $\$ 21.89$
Price

HC-05 Head Maintenance Kit
Description For all types of recorders; includes brush, self-adhesive felt cleaning probes, applicator wand, cleaning fluid, and inspection mirror, all in a standard cassette box for easy storage and portability
Price $\quad \$ 5.99$

HC-01 Head Cleaner
Description Removes dirt, dust, and excessive oxide buildup on recorder heads capstans, and pinch rollers; in serted like standard audio cassette; recommended for use in conjunction with TDK HC-05 Head Maintenance Kit
Price $\quad \$ 1.69$

HD-11 Universal Head
Demagnetizer
Description Portable, battery-operated slimline design; plastic-coated pivoting tips; green LED shuts off when demagnetization is completed
Price $\quad \$ 34.99$

TEAC
Teac Corp. of America 7733 Telegraph Road Montebello, Calif. 90640

E-1 Universal Head Magnetizer Price $\$ 25$

RMK Recorder Maintenance
Kit
Price $\$ 9$

WATTS
Cecil E. Watts, Ltd.
Empire Scientific Corp.
(distributor)
1055 Stewart Ave.
Garden City, N.Y. 11530
X-Static
Description Designed to generate uniform field of charged particles to neutralize static charges on records; no power needed
Price $\quad \$ 29.95$

HiFi Parostat

| Description | Record-cleaning device designed <br> to maintain new records in like-new <br> condition; sold with stylus cleaner |
| :--- | :--- |
| Price | $\$ 19.95$ |

Parastat

| Oescription | Record cleaning and static control <br> device; moisture controls static <br> charges while two plush pads lift |
| :--- | :--- |
|  | and remove dust and debris from <br> record grooves; does not leave wet |
|  | residue behind |
| Price | $\$ 18.95$ |

Dust Bug
Description "Tonearm"-like device; uses brush of specially shaped nyton bristles to dislodge dust and debris from the record surface, plus mohair pad to trap the dirt and control static charges
Price $\$ 8.95$
Parostatic Preener
Description Cylinder of plush nylon controls

Price

static, lifts dirt and debris from

$\$ 6.95$

Humid Mop Kit

| Description | Designed to keep record care <br> equipment in top condition |
| :--- | :--- | equipment in top condition

Price $\quad \$ 5.95$

Wash Brush
Description Special brush composed of nylon bristles specially honed to fit LP grooves; designed to dislodge dust and debris from record grooves when used with a mild detergent
Price $\quad \$ 5.95$

Anti-Static Fluid
Description Special fluid designed to prevent static buildup on records without leaving a harmful residue
Price $\quad \$ 2.95$

## Stylus Cleaner

Description Special plush pad fitted to a convenient handle; designed to remove accumulation of dirt and debris from stylus tip
Price $\quad \$ 2.95$

# YOU CAN'T TAKE ANY MACHINE AT FACE VALUE. 

Every tape recorder is a machine by definition. Pretty faces, knobs and buttons are incidental to the recorder's fundamental responsibility. To move tape. And that is where a TEAC shines.

Twentyfive years of specialization has tought us that balance is the critical factor in determining how accurately and for how long a tape recorder will move tape.
Balance means no part stands alone. It also means delicate physical relationships. Good drive motors produce tremendous energies, magnified in fast modes. The slightest imbalance will cause vibration and audible deterioration.

Our hysteresis torque motors, one on each reel. maintain the delicate balance between start-up, back torque and running torque to prevent tape stretch and breaking. Precise tape-to-head contact is maintained to pre-

vent high frequeñ loss. That's why a TEAC sounds better initially and maintains its sonic integrity after years of use.

The most important part of any drive system is the capstan assembly, where balance, again, is crucial. For accurate tape speed, the size and roundness of the capstan shaft are of utmost importance. So we use automated lathes to form each shaft. Then microgrind each one to a
tolerance
of 0.2 micron (0.000008 inch) Our hysteresis synchronous capstan motor is specifically designed for speed accuracy. Deviations (wow \& flutter) are kept to the absolute minimum Our massive flywheel is dynamically-balanced and coupled to the drive mechanism with belts that are tested under the most severe temperature, humidity and
atmospheric conditions to assure dimensional stability for years to come.

For fast action and positive feel, we use highly responsive micro-switch transport controls. They activate solenoids almost twice as powerful as those in other machines. You can even hear the distinctive sound of a TEAC mechanism in action.

Our erase, record and playback heads are secured to a steel mounting plate - itself a product of over 20 years of design refinement - then aligned in the three critical planes.

Finally, we mount everything to $\alpha 1 / 4$-inch high density duralumin base plate. Physical relationships must remain constant. Especially in the tape world of micro-tolerances.

To us, it's a matter of craftsmanship. To you, a matter of decision. That's why we invite you to look beyond mere face value. Peel arway the cosmetics and you'll find the real measure of any tape recorder. Especially ours.

For more information, see your TEAC Audio Specialist dealer or write us at Dept. HF-10.
TEAC.


# Feedback Cure: 

# DISCWASHER ${ }^{\circledR}$ <br> Discfoot <br> <br> Hi-Technology <br> <br> Hi-Technology Turntable Isolation System 

 Turntable Isolation System}


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

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

## The "Material" Solution

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


## The Telling Test

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

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

## Findiscfoot

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


[^0]:    c1979 Sony Industries. a Div. of Sony Corp. of America. 9 West 57th St.. N.Y.. N.Y. 10019 Sony is a registered trademark of Sony Corporation.

[^1]:    YAMAHA
    Yamaha International Corp. 6600 Orangethorpe Buena Park, Calif. 90620

[^2]:    AH-903

    | Price | $\$ 749.95$ |
    | :--- | :--- |
    | Power | 125 watts $(21 \mathrm{dBW})$ continuous |

[^3]:    LC-50 Power Booster
    Price $\$ 29.95$
    Dimensions $13 / 4 \mathrm{H} \times 4 \mathrm{~W} \times 5 \mathrm{D}$
    Mounting Under dash
    Output $\quad 15$ watts ( 11.75 dBW ) per channel continuous into 4 ohms from 20 Hz to 20 kHz with no more than $1 \%$ THD

[^4]:    PHILCO
    GTE Consumer Electronics
    700 Ellicott St.
    Batavia, N.Y. 14020

[^5]:    1
    Format Beta
    Coating(s) Chrome
    Length/Price L-500, $180 \mathrm{~min}, \$ 16.95$; L-750, 270 min, \$20.95; L-830, 300 min , $\$ 22.95$

[^6]:    Groove Tube "Instant Record Cleaner"
    Description Dab fluid on disc while it is rotating; wipe with velvet buffing pad on side of applicator
    Price $\quad \$ 5.49$

[^7]:    AX-7 Mixer
    Description Four hi-2 mic inputs (2 switchable for guitar or line level) with in-

[^8]:    Record-Preservation Kit
    Description Contains 2 oz . bottle of Sound Guard preservative, a dry lubricant which reduces record wear without interfering with sound fidelity, along with a velvet buffer pad and non-aerosoi pump sprayer; one application recommended per 25 pláys; one 2 oz . bottle protects about 25 LPs
    Price $\$ 9.99$

