

STEREO / HI-FI 1963

DIRECTORY

\$1.00

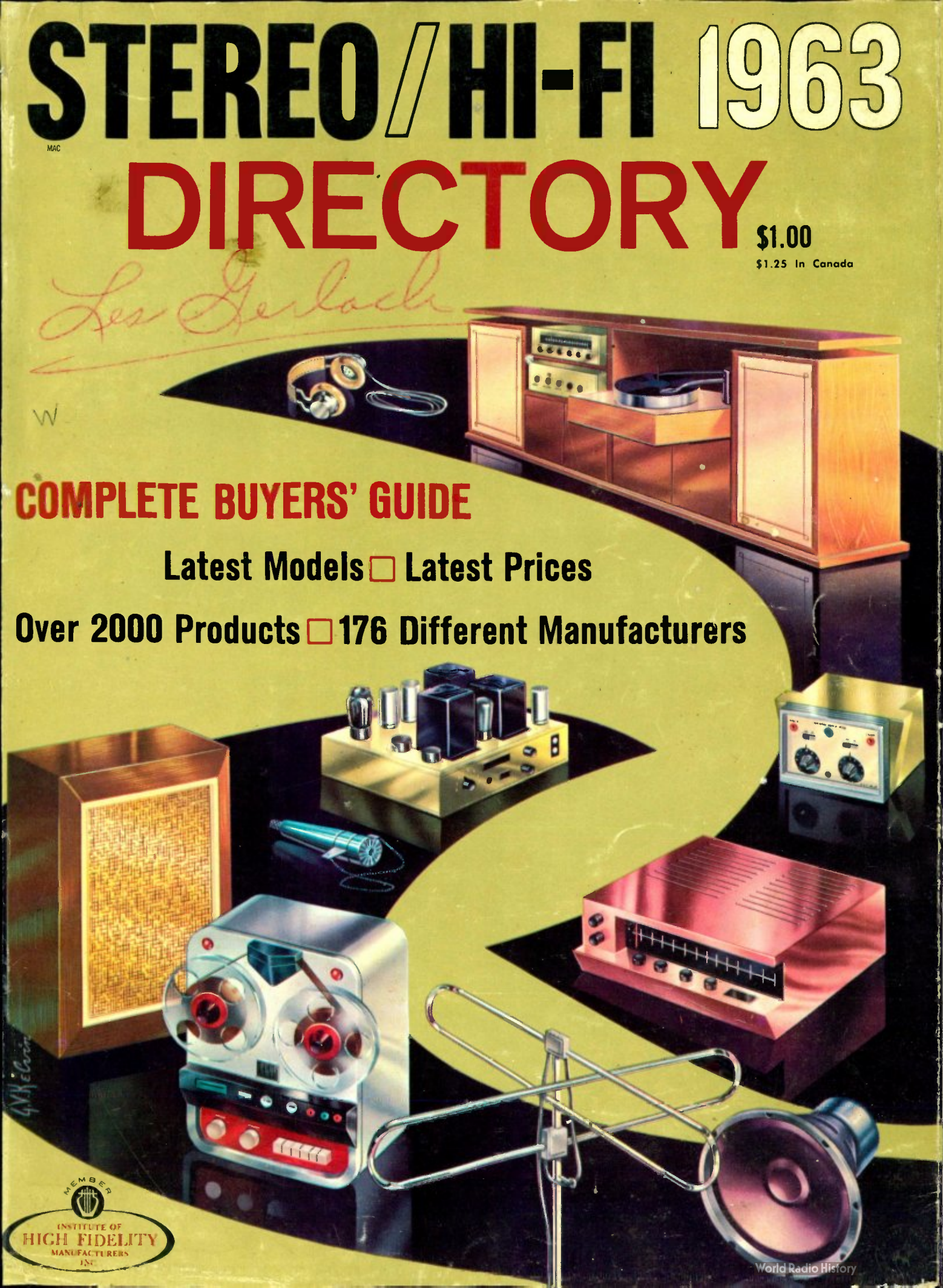
\$1.25 In Canada

Les Gerlach

COMPLETE BUYERS' GUIDE

Latest Models Latest Prices

Over 2000 Products 176 Different Manufacturers

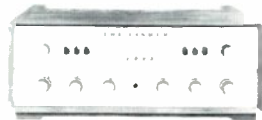


When you use this directory to compare equipment, look for the one specification that means more than all the others:

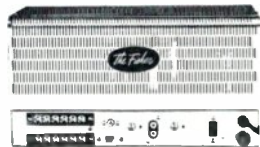


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Stereo Power Amplifiers



Stereo Control-Preamplifiers



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THE FISHER
HANDBOOK

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The new 1963 edition of the famous Fisher Handbook, a lavishly illustrated 40-page reference guide, idea book and component catalogue for custom stereo installations. Also free: The Kit Builder's Manual, a new guide to high-fidelity kit construction. Check your request on the reply card and mail it today. No postage needed.

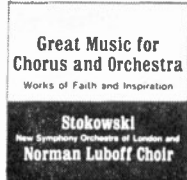
When you specify the Fisher name, you really don't have to worry about frequencies, decibels, watts, millivolts, microvolts, intermodulation percentages and all the rest. Not that Fisher considers electronic specifications secondary – this directory is in itself ample proof of Fisher supremacy as far as 'specs' go. But technical data and test measurements become genuinely significant only when interpreted and evaluated with considerable engineering sophistication. They are not an infallible guide for the typical high fidelity enthusiast. The Fisher name is. Its meaning is perfectly clear and simple: unconditional superiority – electronic, mechanical and musical – to all other equipment anywhere near the same price. A Fisher stereo component must rigorously satisfy this requirement before it is allowed to go into production. When you buy it, you have the automatic assurance that it has been tested in the Fisher laboratories against comparable units of all other makes and found to be in every way superior. Fisher engineers and technicians take particular pride in their refusal to produce second-best – and we stake a quarter century's reputation on keeping them that way.

Reader's Digest music, inc., Invites YOU to Accept

ANY 5 OF THESE GREAT RCA VICTOR RECORDS for only \$1

if you join the new RCA Victor Record Club now and agree to purchase only 6 records during the next 12 months.

IN YOUR CHOICE OF STEREO OR REGULAR LONG-PLAY



394. Includes *Deep River*, *Jesu! Joy of Man's D-siring*, *Evening Prayer*, etc.



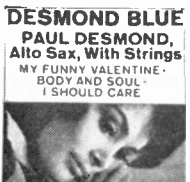
396. One of the Titan's greatest, most stirring works, searchingly played.



1. Also 10 more soothing instrumentals—*While We're Young*, *Estre ita*.



409. Melodious ballads, rollicking comedy, lively dances from Broadway smash!



378. Brubeck alto sax star plays lush ballads with strings, harp, woodwinds.



370. Rubinstein says, "This is the most perfect recording I have made."



393. Slide whistles, washboard, auto horns—dixieland ad infinitum!



401. Trumpet king in 12 sizzling performances! *Jazz Me Blues*, others.

THROUGH THIS Special Offer you will be sent—at once—ANY 5 of the superb records shown here for only \$1 (plus a small handling and postage charge). Then, if you wish, the new RCA Victor Record Club will help you build an impressive library of great recordings by world famous artists—with continuing benefits and at special terms available to members only!

BELOVED MUSIC—THRILLINGLY REPRODUCED

From the moment your stylus settles into the first groove you know that here is true high fidelity. You hear the music you love reproduced with a brilliance, vitality and realism that only RCA Victor's long years of experience can capture. For these are records created to bring you all that your equipment can deliver!

MORE ADVANTAGES OF MEMBERSHIP

In addition to your 5 records for only \$1...

You Receive FREE the exciting new monthly magazine, Reader's Digest Music Guide, which brings you fascinating stories about music and its outstanding personalities—plus descriptions of the hundreds of records offered.

You Receive FREE Expert Guidance in your choice of records from the Music Guide editors—saving you both time and money as you build a library of great music.

You Enjoy "Arm-Chair" Shopping Comfort as you select only the records you want from the Music Guide in the comfort of your own home. And you pay for your records only after receiving them and while you are enjoying them. Prices paid by members are always shown in the Music Guide (usually \$3.98—\$4.98—Stereo: \$1.00 extra) plus handling and postage.

You Receive 1 FREE DIVIDEND RECORD of your choice for every two records you take after purchasing the six records you agree to take when you join on this Special Offer. Free records are exactly the same quality and value as those you purchase, and you have a wide choice from many hundreds that will be offered.

SEND NO MONEY NOW

You will be sent the 5 records of your choice at once—and you may later remit only \$1.00 plus a few cents handling and postage charge for all 5 records. But you should act at once, while this Special Offer remains open. Fill in the postage-free card accompanying this advertisement and mail it today. If card has been removed, write to:

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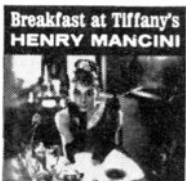
TMKS¹ RADIO CORPORATION OF AMERICA



366. "Decisively the best."—*HiFi/Stereo Review*. Stunning sound!



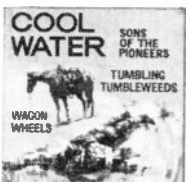
356. First solo recording! Includes C-Sharp Minor Waltz, Polonaise, others.



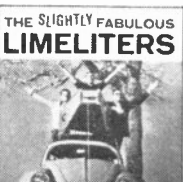
348. Won 2 Academy Awards—for Best Score, Best Song, (*Moon River*)



395. Thundering Toccatas, thrilling Prelude and Fugue, by master organist.



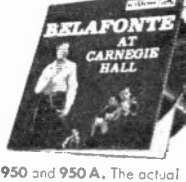
292. Also *Red River Valley*, *The Last Round-Up*, 18 Western gems.



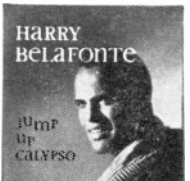
347. Hilarious, intimate, "in person" concert by top folk-song/comedy trio.



215. Definitive versions of Gershwin's most popular classics.



950 and 950 A. The actual Carnegie Hall Concert—recorded LIVE! Two-Record set. Write both numbers on card.



341. New calypso album Belafonte fans have waited 6 years for!



324. The divine Schubert masterpieces in glowing performances.



145. Also *Kalamazoo*, *String of Pearls*, *Tuxedo Junction*, 6 more.



5. The first classical L.P. of all time to sell over 1 million copies!



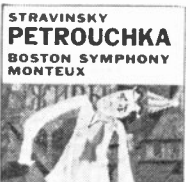
390. Side by Side, Pick Yourself Up, Oh What a Beautiful Morning, etc.



363. Amusing, amazing showpiece—various artists. STEREO ONLY.



365. Pulsating mandolins play *Santa Lucia*, *O Sole Mio*, *Finculi Fincula*, etc.



325. Monteux pioneered this work and made it immediately famous.



4. Younger Than Springtime, Some Enchanted Evening, 13 more hits.



305. The most vibrant choruses in the world of grand opera.



302. Maestro's glowing souvenirs: of the Eternal City—in new sound!



299. Two of the most brilliant piano concertos ever recorded.



342. Piano, full orchestra. Over *The Rainbow*, *Night and Day*, many more.



313. Definitive recording of a superbly romantic masterpiece.

*Throughout the entire world... more people listen to stereo records reproduced by the STANTON Stereo Fluxvalve than any other magnetic pickup!

*More stereo records are quality controlled and reviewed by professionals using STANTON Stereo Fluxvalves.

*More high quality phonograph consoles use STANTON Stereo Fluxvalves than any other magnetic pickup.

*More commercial background music systems use STANTON Stereo Fluxvalves than any other magnetic pickup.

*More automatic phonograph systems use STANTON Stereo Fluxvalves than any other magnetic pickup.



And now... new dimensions for stereo from the world's most experienced manufacturer of magnetic pickups—

STANTON 481

Calibration Standard Stereo Fluxvalve*

Model 481AA STANTON Stereo Fluxvalve—an ultra-linear professional pickup for use with ultra-light-weight tone arms capable of tracking within the range from 1/4 to 3 grams. Supplied with the D4005AA V-GUARD diamond stylus assembly.

AUDIOPHILE NET PRICE \$49.50

Model 481A STANTON Stereo Fluxvalve—an ultra-linear professional pickup for use with manual tone arms. Recommended tracking force is from 2 to 5 grams. Supplied with the D4007A V-GUARD diamond stylus assembly.

AUDIOPHILE NET PRICE \$48.00

Model 481E STANTON Stereo Fluxvalve Set—same as the Model 481A but includes two additional V-GUARD styli: the D4010A 1 mil for LP's and the D4027 2.7 mil for 78's.

AUDIOPHILE NET PRICE \$60.00

STANTON 400

Professional Stereo Fluxvalve*

Model 400AA STANTON Stereo Fluxvalve—an ultra-linear professional pickup for use with ultra-light-weight tone arms capable of tracking within the range from 1/4 to 3 grams. Supplied with D4005AA V-GUARD diamond stylus assembly.

AUDIOPHILE NET PRICE \$40.50

Model 400A STANTON Stereo Fluxvalve—an ultra-linear professional pickup for use with manual tone arms. Recommended tracking force is from 2 to 5 grams. Supplied with D4007A V-GUARD diamond stylus assembly.

AUDIOPHILE NET PRICE \$39.00

Model 400C STANTON Stereo Fluxvalve—an ultra-linear professional pickup for use in automatic record changers. Recommended tracking force is from 4 to 7 grams. Supplied with D4007C V-GUARD diamond stylus assembly.

AUDIOPHILE NET PRICE \$33.00



Pickering "Fine audio components from the Professional Products Division of"
PICKERING & COMPANY, INC., Plainview, N. Y.

*The hermetically sealed STANTON Stereo Fluxvalve is warranted for a lifetime and is covered under the following patents: U.S. Patent No. 2,917,590; Great Britain No. 783,372; Commonwealth of Canada No. 605,673; Japan No. 261,203; and other patents are pending throughout the world.

CIRCLE NO. 45 ON READER SERVICE PAGE

STEREO/HI-FI DIRECTORY

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1963

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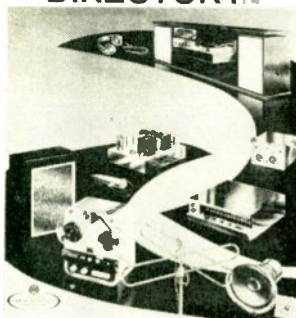
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1963 EDITION

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The new Weathers "66" weighs 96 ounces ...and every ounce is pure performance!

The Weathers "66" is the finest achievement in uncompromising design and performance. The low mass of the Weathers "66" makes it the proper turntable for today's high compliance stereo cartridges and tonearms. In appearance alone, the "66" is radically different. It is 16" long, 14" deep, but only 2" high, including the integrated base. It is the closest approach to rotating a record on air. It achieves this ideal through unique engineering design and precision manufacturing.

The Weathers "66" uses two precision hysteresis synchronous motors mounted on opposite sides of the deck. Virtually vibration-free, they directly drive two soft rubber lathe-turned wheels which in turn drive against the inside rim of the platter. This is the quietest, most accurate and dependable drive system yet designed. Its -60 db. rumble is the lowest of all turntables.

Eliminates Feedback Problem—Because the new high compliance cartridges and tonearms track at extremely light pressures, they can pick up floor vibrations which are transmitted into the music as audible distortion. The "battleship" type of turntable more easily picks up room vibrations and transmits them with greater amplitude. When a high compliance pickup system is used with the heavier turntable, acoustic feedback is apt to occur. And there is no practical, effective way to acoustically isolate these heavier units.

The Weathers "66" is suspended on 5 neoprene mounts which produce an isolation from floor vibrations of more than 500 to 1. Paul Weathers calls this system a "seismic platform" (implying that only a violent earthquake could cause any vibrations or feedback).

On Pitch—The speed constancy of the Weathers "66" is so accurate that a special test record had to be made to measure its 0.04% wow and flutter content. It reaches 33 $\frac{1}{3}$ rpm immediately, and will be accurate within one revolution in 60 minutes. Most heavy turntables will usually deviate 4 or more revolutions in 60 minutes—a painfully obvious inaccuracy to anyone with perfect pitch. You hear only the music—no rumble, no wow, no flutter, no feedback, no noise of any kind.

The "66" is a strikingly beautiful turntable that you can use anywhere, without installation. And you need not buy a base—it's an integral part of the turntable! ■ Turntable—\$75.00 net. With viscous-damped arm—\$99.50 net. Turntable and Arm with new Weathers LDM Pick-up—\$129.50 net. At your high fidelity dealer, or write: Desk D-63

WEATHERS

Division of TelePrompTer Corp.
50 W. 44th St., N.Y. 36, N.Y.



CIRCLE NO. 62 ON READER SERVICE PAGE

The INSTITUTE OF HIGH FIDELITY

The General Membership of the Institute of High Fidelity is made up of companies here and abroad who design, engineer, and manufacture component high-fidelity music-reproducing equipment for both professional and home use. Included as Associate Members of the Institute are those publications which deal with the technical aspects of sound reproduction, as well as the products themselves.

Since its inception seven years ago, the Institute has had as one of its principal objectives the dissemination of information to the general public regarding the high-fidelity component industry as a whole and its products in particular. The Institute shows how its members' products can insure music as you like it, when you want it.

With the cooperation of engineers representing various high-fidelity component makers, the Standards Committee of the Institute has established and published measurement criteria for tuners and amplifiers. (You'll find reference to "IHFEM sensitivity" and "IHFEM music power" ratings in the directory listings that follow.) In the near future, the Institute expects to be able to release standards of measurement for the other components that make up a high-fidelity music system. These standards, unique in the history of music reproduction, have been invaluable as measuring sticks, enabling the industry as well as the public to compare equipment in meaningful terms.

The Institute puts on annually two popular public exhibits of high-fidelity products—New York in the Fall and Los Angeles in the Spring. These "Hi-Fi Shows" have become models of non-commercial informational events where the public can see, test, and discuss the latest in high-fidelity components with the well-known persons responsible for designing and engineering such world-renowned products.

In the Fall of 1961, the Institute inaugurated its public information program in a number of national consumer publications. In editorial fashion, the Institute explains component high-fidelity and points out its advantages to the serious music lover. Since this program was started, we have received thousands of requests—some from such far away places as Johannesburg, South Africa; Karachi, West Pakistan; Soviet Russia; Thailand; and Hong Kong, among others—demonstrating that the thirst for such information is universal.

We have also compiled and made available to the public without charge the names of Registered Audio Specialists (pages 162-174) in each community. These men are experts in all matters pertaining to music systems and can be consulted with confidence. Audio Specialists are the men who staff the component high-fidelity establishments in your community. Their skill and experience with all types of equipment involved in the reproduction of music is your best guarantee of continuing enjoyment of fine music in your home.

To acknowledge outstanding contributions to the field of music, the Institute several years ago established its "Annual Award for Achievement". Among those who have been thus honored are such noted personages as Leonard Bernstein, Bruno Walter, Andre Kostelanetz, Harry Belafonte, and General David Sarnoff.

Fundamentally, the men of our industry are engaged in a constant search for better methods and means of creating products which will more faithfully reproduce the music you want to hear. As in few other industries, this goal has given rise to fierce competition which benefits the listener by fostering new equipment which makes your music listening life-like and exciting.



RAYMOND V. PEPE
President

Executive Vice-President, James B. Lansing Sound, Inc.; Member Academy of Motion Picture Arts and Sciences, Academy of Television Arts and Sciences, Audio Engineering Society, and American Management Association.



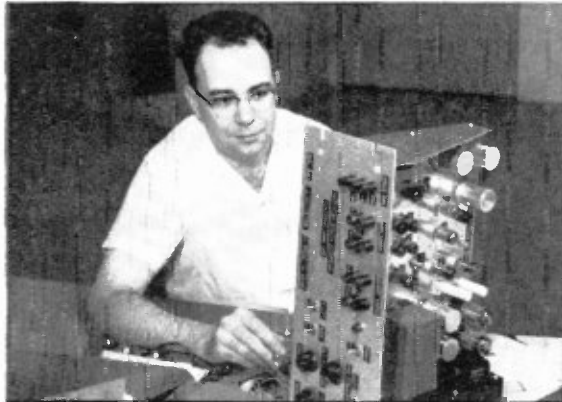
Directory of HI-FI MANUFACTURERS

Complete listing of manufacturers covered in this directory, along with identifying page numbers on which their products are described.

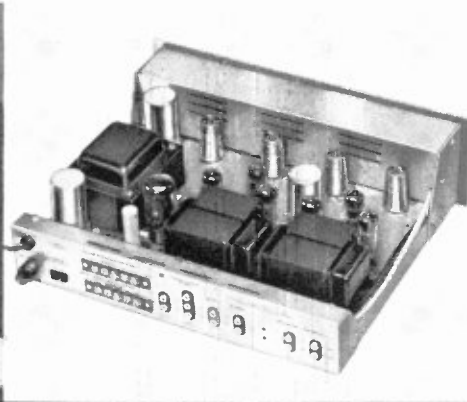
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	ELECTRO-VOICE, INC. 103, 136, 154 <i>Buchanan, Mich.</i>
	EMI —Scope Electronics Corp. 53, 106 <i>10 Columbus Circle, New York 19, N. Y.</i>
	EMPIRE SCIENTIFIC CORP. 43, 49, 53 <i>1075 Stewart Ave., Garden City, Long Island, N. Y.</i>

Confused About Brands?

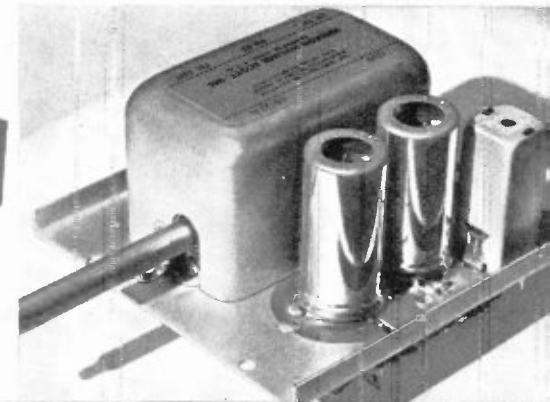
Here's Why the Experts Recommend Scott[®] Tuners • Amplifiers • Speakers



Advanced Engineering. Scott quality begins in the laboratory where the Advanced Development Team pioneered Wide-Band Design and "Time-Switching" multiplex circuitry. Chief Engineer Daniel Von Recklinghausen is shown here with the original model of the world's first commercial FM Stereo signal generator, which is used by manufacturers throughout the world.



Design Leadership. All Scott amplifiers use massive output transformers to assure full bass response to below 20 cps. Important engineering extras such as solid aluminum chassis and DC heated preamplifier tubes assure performance that is totally free from hum and noise.



Uncompromising Quality Standards. The heavily silver-plated RF section and the Wide-Band circuitry common to all Scott tuners is shown here. These exclusive design features result in high sensitivity without distortion, complete freedom from drift, and outstanding reception even from weak multiplex stations.



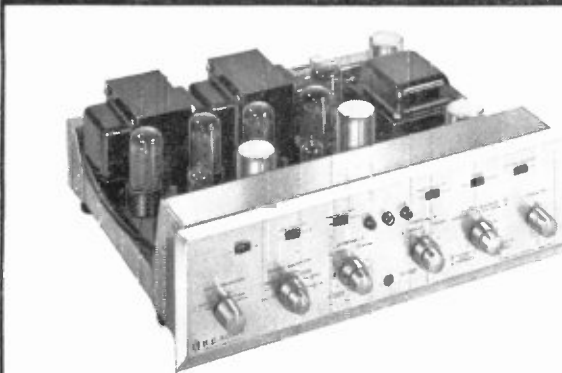
Conservative Claims. Every Scott component is guaranteed to meet or exceed claimed specifications. Each component undergoes more than fifty separate tests. Scott uses IHFM test procedures to guarantee that you receive meaningful specifications. Shown here is the elaborate "screen room" used for precision alignment of tuners.



Technical Recognition. WCRB, Boston's leading good music station, uses Scott multiplex equipment for monitoring and for long-distance relay of their FM stereo broadcasts. The reliability, high sensitivity, and rugged construction of Scott tuners and amplifiers make them the choice of more than 100 leading FM stations.



Musical Recognition. Professional musicians, like these members of Boston's leading symphony orchestra, choose Scott components for their own music systems. The expert editors of America's most respected high fidelity magazines consistently give Scott components top ratings, and highly recommend them to their readers.



Scott components, like the 80-Watt 299C shown here, are designed with useful, years-ahead features including separate bass and treble controls; derived center channel output with front panel control; complete tape monitoring facilities and Scott's exclusive stereo-balancing circuitry. Your franchised Scott dealer will be proud to demonstrate Scott tuners, amplifiers and speakers for you without obligation.



FREE! New Stereo Record "The Sounds of FM Stereo"

Scott has just produced a new 7" stereo record demonstrating FM Stereo and explaining the meaning of the technical specifications used to describe this wonderful new kind of broadcasting. For a free copy, and Scott's new 20 page "Guide to Custom Stereo" mail this coupon today.



H. H. Scott, Inc., Dept. 590-63, 111 Powdermill Rd., Maynard, Mass.

Please send me, without obligation, your free demonstration record of FM multiplex stereo and your 20 page Guide to Custom Stereo.

Name.....
Address.....
City..... Zone..... State.....

If you would like Scott literature sent to any of your friends, include their names and addresses.
Export: Morham Exporting Corp., 458 Broadway, NYC. • Canada: Atlas Radio Corp., 50 Wingold Ave., Toronto

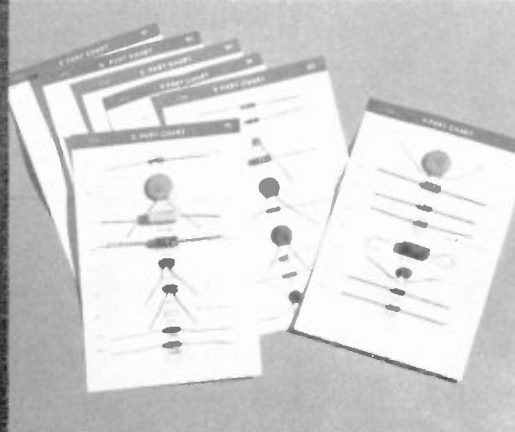
ERIC ELECTRONICS CORP.	24, 60, 148	LANSING, JAMES B., SOUND, INC.	118
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433 Hempstead Ave., West Hempstead, Long Island, N. Y.		4101 San Fernando Rd., Glendale 4, Calif.	
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KOSS ELECTRONICS, INC.	159	R & A—Ercona Corp.	124
2227 North 31st St., Milwaukee 8, Wisconsin		16 W. 46th St., New York 36, N. Y.	
LAFAYETTE RADIO ELECTRONICS CORP.	29, 45, 64, 82, 116, 137, 139, 144, 149, 155, 160		
111 Jericho Turnpike, Syosset, L. I., N. Y.			

(Continued on page 133)

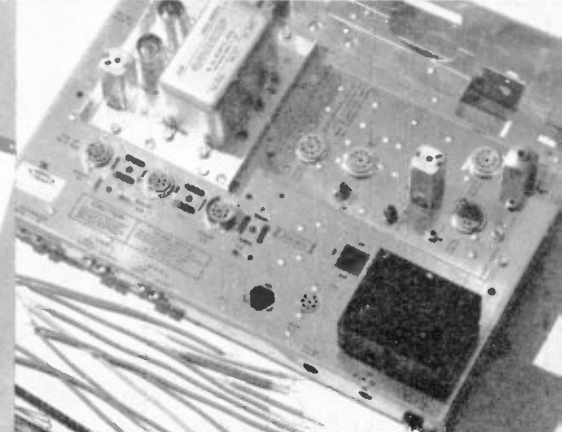
Here's why Audio Magazine says Scott® Kits are
"Simplest to build..." and have
"Engineering of the highest calibre"*



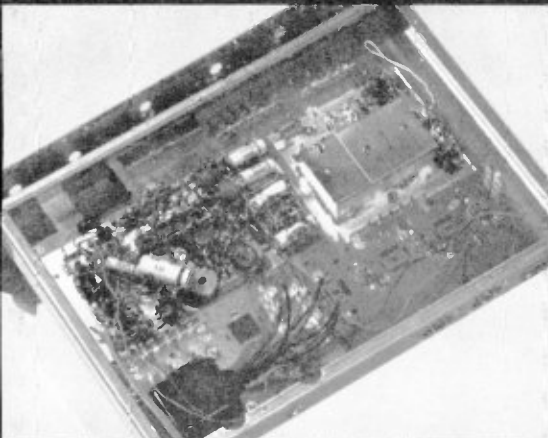
The exclusive Scott full color instruction book shows every part and every wire in natural color and in proper position. To make the instruction book even clearer, each of the full color illustrations shows only a few assembly steps. There are no oversized sheets to confuse you.



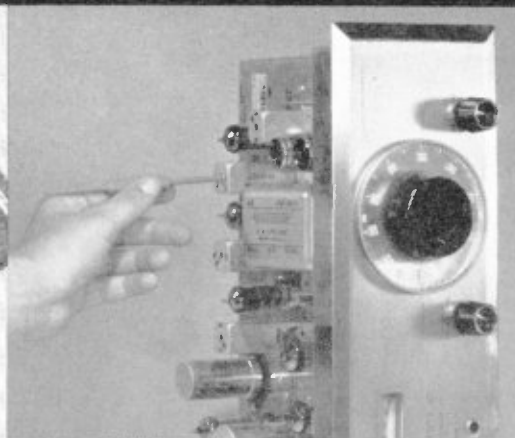
Each full color illustration is accompanied by its own Part Chart . . . another Scott exclusive. The actual parts described in the illustration are placed in the exact sequence in which they are used. You can't possibly make a mistake.



Much of the uninteresting mechanical assembly is completed when you open your Scott Kit-Pak. All the terminal strips and tube sockets are already permanently riveted to the chassis. To insure accuracy all wires are pre-cut and pre-stripped to proper length.



There are certain areas in every professional high fidelity component where wiring is critical and difficult. FM front ends and multiplex sections are an example. In Scott Kits these sections are wired at the factory, and thoroughly tested by Scott experts, assuring you a completed kit meeting stringent factory standards.



Tuners are aligned with the unique Scott Ez-A-Line method using the meter on the tuner itself. This assures perfect alignment without expensive signal generators. Amplifier kits require no laboratory instruments for perfect balancing.



The new Scott Warrantee Performance Plan guarantees that your kit will work perfectly when completed. If you have followed all recommended procedures and your kit fails to work Scott guarantees to put your kit in working order at the factory at minimum cost.

*Audio — February 1961, Pages 54-56



H. H. Scott Inc Dept 590-63
 111 Powdermill Rd., Maynard, Mass.

Please rush me without charge your full color brochure on the complete line of Scott FM stereo tuner, stereo amplifier and speaker kits. A sample 36 page full-color Scott Kit instruction book will be included if you enclose 50¢ in coin or stamps.

Name.....

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City.....State.....

If any of your friends would like a copy of the new Scott Kit brochure send us their names and addresses.

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When you finish your kit you'll be delighted by its handsome good looks. And when you turn your Scott Kit system on you'll know for yourself why the expert editors of leading high fidelity magazines like Audio say . . . "only the most sophisticated engineering thinking could design a kit as simple and foolproof as this . . ."

World Radio History



MEMBER
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“COMPONENT” HI-FI SOUND REPRODUCTION

A review of the basic concepts of “component” high-fidelity systems—definitions, terminology, and advantages over past conventional methods.

One of the most interesting and exciting developments of our time became a reality when the FCC approved FM stereo multiplexing, permitting FM broadcasters to transmit stereo programs direct to the homes of millions of hi-fi enthusiasts.

But FM stereo is only the latest in a twelve-year history of scientific developments in the art of sound reproduction for the home. These years—the years of “high-fidelity”—have brought one advance after another, each a distinct step forward in listening and musical enjoyment.

In fact, high-fidelity has progressed so far in convenience, flexibility, and naturalness of sound that in the change-over from an ordinary phonograph or radio the improvement is breathtaking—whether the new music system be stereophonic or monophonic. The concept of high-fidelity is news—and the enthusiasm of those who enjoy it has spread so widely that today many products from lipstick to housepaint come labeled “Hi-Fi”.

Listening to High-Fidelity

Music lovers through the years have searched for better means of reproducing natural music in their own homes and at their own convenience. The voice of a Caruso, the magic of a major symphony, or the thrill of a Broadway musical all hold a lifetime of interest. But the conventional radio or phonograph cannot be expected to re-create these moments.

The reason is simple. All the sounds we hear are vibrations, measured in cycles-per-second, and the range of a normal orchestra is far beyond the capacity of ordinary radio equipment. People hear low notes (bass) down to 20 cycles-per-second and highs (treble) up to 15,000. Tones above and below this range are also important since they give realism to the sound and help to establish the quality which makes it possible to distinguish the kind of instrument (or voice) being heard. For example, ordinary AM broadcast reception may be limited to a range of 100 to 5000 cycles; but FM broadcasts reach from 20 to 20,000 cps. This increased range adds two whole octaves to each end of the sound spectrum, thereby vastly improving musical quality.

However, genuine high-fidelity systems using the specially developed equipment which we call “components” not only master this full range but with an ease that brings the illusion of “live” sound into your living room. Anyone with normal hearing will notice the dramatic improvement made by good high-fidelity equipment when compared to ordinary radios and phonographs.

The difference is so great and the results so surprising that an entirely new vocabulary has grown up to describe

it—but you don’t need to know a “tweeter” from a “tuner” to hear and enjoy high-fidelity components playing the music you love.

Component High-Fidelity

If you were to take it apart, you’d find that every radio-phonograph is made up of the same basic types (but not quality) of working sections. These sections, broken down according to their general areas of function, are called “components”. To reproduce the high-fidelity tonal range mentioned above, the components used must meet high standards of performance. For many years professionals in the audio field have been able to select equipment of this quality by choosing precisely the components which filled their needs. During the past twelve years, these same professional components, redesigned to incorporate the newest electronic developments and restyled to meet the most rigorous decorating standards, have been made available.

Components are of various types, according to function. For example, simply stated, in home reception of broadcasts, the radio waves must be selected and picked up from the air. This is the function of the component called a “tuner”. The radio signals must then be strengthened to a point where they can be used. This is the function of the components called “preamplifiers” and “amplifiers”. And, finally, the amplified waves must be translated into sound. This is the work of the “loudspeaker” and the “baffle” or speaker cabinet. For playing records, a “record player” with a “tonearm” and pickup “cartridge” replace the tuner as the source of the sound. For playing tape, a “tape deck” component is used.

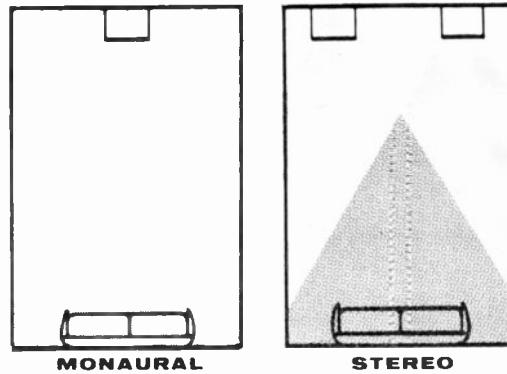
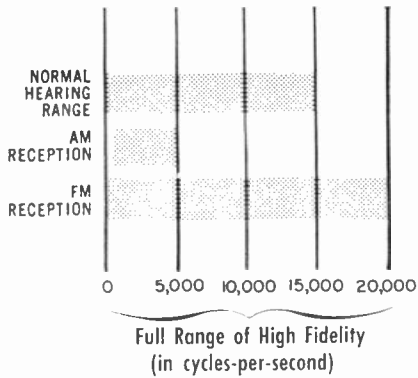
In an ordinary radio-phonograph, these components are always incorporated in a single console. Component music systems may also be set up in single cabinets, but offer many additional possibilities. Actually, by separating the components physically as well as by function, certain advantages begin to appear. The loudspeakers can be placed anywhere that the architecture and decor of the room, or its acoustic needs, dictate. They will look better and sound better when isolated this way. The amplifier, which rarely needs attention, may be placed out of sight in a wall enclosure. The tuner and record player may be put conveniently on bookshelves—or cleverly mounted in a cabinet that is the decorative *pièce de résistance* of a lovely room.

Best of all, individual components, by their very nature, work much better and last much longer.

The “How” of Stereo

Until recently, it was customary to reproduce sound as a single channel (“mono”), and generally through a single speaker system. Now we have “stereophonic” music reproduction through two or more channels, played through two or more loudspeaker systems.

Reprinted from “Component High Fidelity,” a publication of the Institute of High Fidelity Manufacturers Inc. Additional copies are available. Simply circle No. 100 on the Reader Service Card.



Every sound is heard a little differently in each ear, just as each of our eyes sees a slightly different picture because of the slightly different angle of vision. Sounds that originate on the left will be heard somewhat sooner and somewhat louder in the left ear than in the right. By the same token, sounds emanating from the right will be heard sooner and seem louder in the right ear.

All of us are familiar with stereo pictures formed by looking at two slightly different views simultaneously. We know they impart uncanny dimension—not only from side to side, but from front to back. For stereophonic listening, two channels of hearing must be established, just as two lenses are used in stereo photography. Two (or more) microphones are placed at some distance apart so they “hear” differently.

Just as these two sound images are recorded separately, they are reproduced separately on two or more channels. When combined, their almost imperceptible differences are re-formed into a single sound image just as both eyes form a single visual image, and produce an effect that helps us locate the source of each instrument. Even more, it creates a feeling of dimensional reality.

Obviously, for stereo, a two-channel music system is a basic requirement. Two slightly different sounds, two distinct amplifier channels, and two separated loudspeakers must present a paired image to the listener. But stereo is only the latest step in high-fidelity and all the *quality* requirements of conventional monophonic high-fidelity must still be met. Stereo offers no short cut to quality. Stereo is a method of playback—high-fidelity on the other hand, is a condition of quality.

Stereo FM is accomplished by the new multiplex system which allows the radio station to broadcast both parts of the stereo message on a single wavelength. The multiplex tuner then unscrambles these two signals and feeds them into the two amplifier channels to re-create the illusion of a spacious concert hall and, sometimes, the location of a performer.

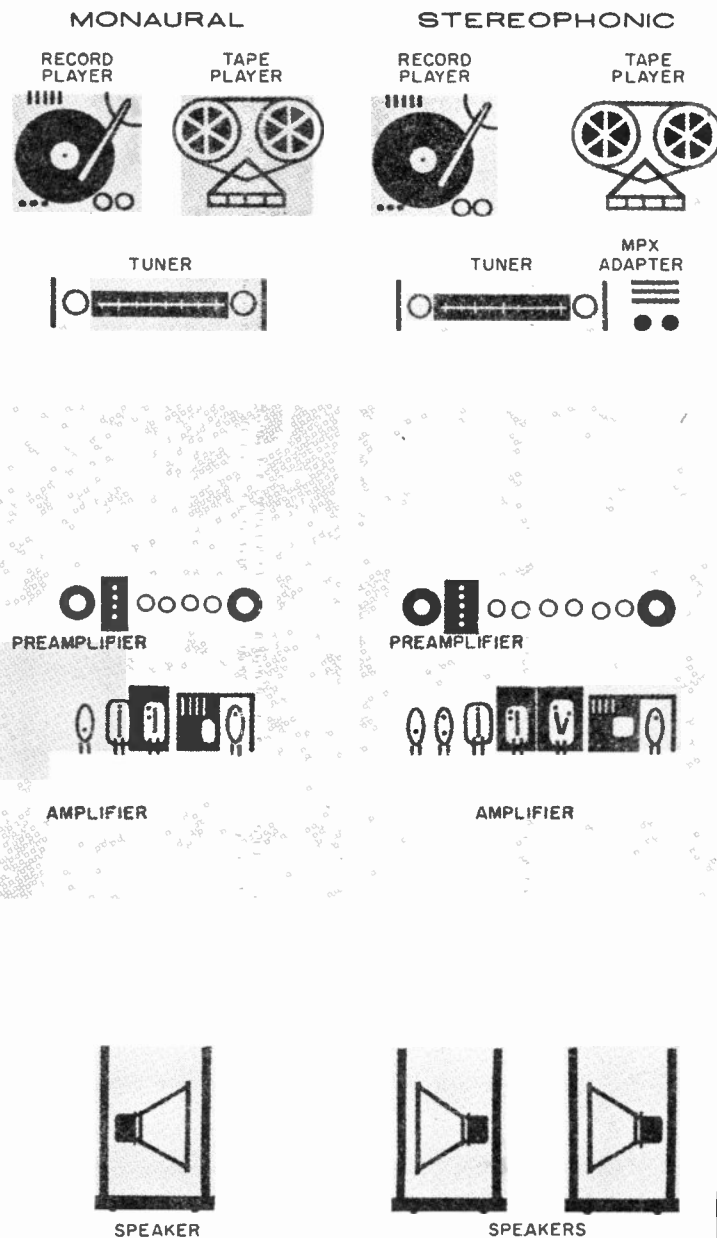
Stereo records call for a special phono cartridge and stylus (needle) which is able to read two different messages from the two opposite sides of a record groove. As in stereo FM, a two-channel amplifier and two speakers are needed to play back the two parts.

The third source of stereo is magnetic tape. Special recording heads are used to register the two parallel channels of sound on the one tape and matching pickup heads act just as the phono cartridge does.

The Components of High-Fidelity

To sum up our discussion thus far, it is easy to see that any high-fidelity system, whether stereo or mono, must have:

1. *Program Source:* This is where the sound originates—an FM tuner, a record player, or tape machine, according



to which of these media is used. In the record player tone-arm there is a pickup cartridge which holds the stylus and is a full-fledged component in its own right.

2. *Amplifier:* This is where the minute electrical impulses from the program source are enlarged to a useful, working dimension. Note: Many fine amplifiers are subdivided into two stages—preamplifier and basic power amplifier. Usually this is done to provide more latitude in the controls available, to reduce the physical size of the components, or to permit the installation of the basic amplifier at some separate location.

3. *Loudspeaker System:* All the amplified signals, however simple or elaborate, must be changed to sound and the loudspeaker does just this. The speaker or speakers, matched to properly designed cabinet (s) or baffle (s), make up the loudspeaker system (s).

Arranging the Components

Today's high-fidelity components simply plug together to make a music system. Their arrangement, in terms of decoration as well as function, is legion. Many diagrams of high-fidelity systems show the components in a straight line—record player, tuner, amplifier, and speaker. And often just such a "bench style" arrangement is exactly right. But high-fidelity has many faces and can be used in many ways to enhance any room in the house.

Ordinarily, since the controls are found on the tuner or preamplifier, these components are placed on a suitable shelf or table, set into the wall, or mounted in a cabinet of some kind. Connections are then made to the amplifier (if a separate one is used) which may be hidden away in the bottom of a breakfront, for example, or simply left standing on a closet shelf.

The record player and/or tape deck may be mounted on smooth-working drawer slides and come into view only when in use.

The speakers can be bought as systems (already in cabinets) or the basic units can be incorporated into the construction of walls or closets.

Generally, this completes the installation of the music system.

Actually, the use of components provides for a flexibility you can obtain in no other way. You might easily fit a superb component system into a room that could never accommodate a console set. And you can change your room and your mood by re-mounting your components from an open shelf to a beautifully coordinated set of cabinets whenever you wish. This is one compelling reason why no other path to high-fidelity enjoyment is so flexible or so sensible as that of a music system made up of component equipment.

Choosing High-Fidelity Components

Selecting the components for a music system is a great deal of fun and should be done with some thought. Many factors enter into the choice of high-fidelity components. Do you enjoy records in particular or do you prefer radio? Would you like both? Are you fond of intimate jazz groups or do you favor the sound of a full symphony? Will you be listening quietly in an apartment-sized room or will your

system be called on to fill a small auditorium? These are just some of the questions. You should also consider the acoustic features, such as the shape of your room, and the kind of furnishings and wall and ceiling materials.

But none of these details need make the choosing of components confusing. Start by listening carefully to the music systems you hear in your friends' homes. Note what equipment they have and how it sounds. Compare their rooms and their tastes with yours.

Next make a careful plan which includes details of your own room and the equipment you want to install. Such a plan can be laid out on sheets of squared paper readily available at all stationery stores. Sketch your room to scale, indicating doors, windows, alcoves, fireplaces, and other architectural variations. Next indicate the locations of furniture, especially large pieces such as sofas, tables, armchairs, and large areas covered by heavy draperies. Note the locations of electrical outlets on your floor plan.

Now consider the following questions:

1. Where is the equipment to be installed: Home? Apartment? Office? School? Church? Community Center? Store?

2. Is the room heavily carpeted? Are there drapes in the room?

3. Are you primarily interested in: Records? Radio? Tape? All Three?

4. Will you have auxiliary speakers in rooms other than the primary listening area? Out of doors?

5. Which components are on your "shopping list"?

Now take your list and floor plan to the nearest dealer who handles high-fidelity components and talk the whole matter over with him. He can show you some of the actual equipment and offer some useful suggestions. Then, of course, you should read the literature of the various manufacturers whose products interest you—and you'll find a wealth of information and ideas in the specialized publications that deal with high-fidelity.

There is no mystery to component high-fidelity. You have the assurance of an ever-improving listening experience—the start of a system that will provide musical pleasure and genuine satisfaction for many years to come.

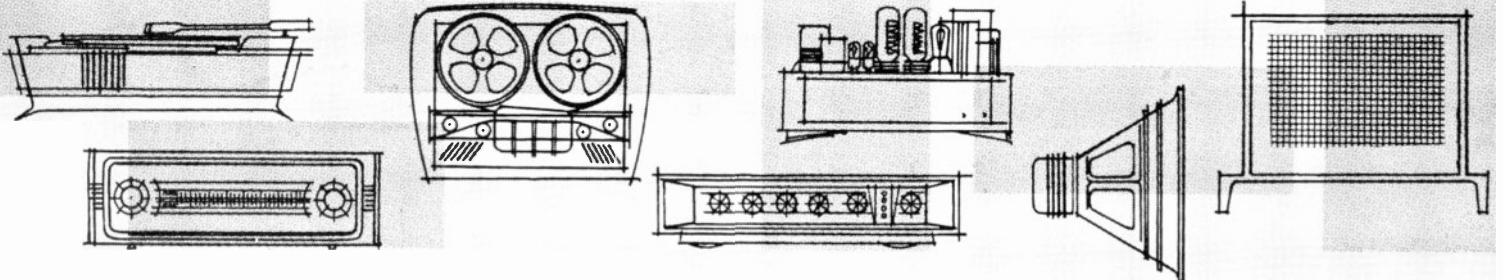
Choosing a Dealer

You will find competent high-fidelity component dealers in all kinds of neighborhoods—many of whom are listed on pages 162 through 174.

All component dealers recognized as audio specialists have one thing in common: they know and stock a wide choice of nationally recognized quality components. They can show you many combinations of equipment, and they know how to install them for you. They are reliable people to deal with and it will be interesting to speculate whether your hi-fi salesman is a music lover bitten by electronics or an expert in the intricacies of radio who has fallen in love with music.

They all have a large selection of components—enough to let you hear for yourself the various possible groupings and to decide on a system that sounds most pleasing to you.

cr





buzz

When a very small boy has his hair cut, the clippers make a harsh buzz—a nervous, exciting sound. Yet the same machine gives off only a dull hum when it's used on a man.

The unfortunate part is that once you've heard the dull hum, you never get to hear that exciting buzz again. No matter what. Even Audiotape can't record it.

Audiotape can (and does) take care of everything else that adds to listening enjoyment. It gives you clarity and range, freedom from noise and distortion and unequalled uniformity, reel after reel. All you have to supply is the point of view. Audiotape does the rest, and does it superbly.

Whether you're taping a barbershop quartet or a hundred-voice choir, there's an Audiotape exactly suited to your needs. From Audio Devices, for 25 years a leader in the manufacture of sound recording media—Audiodiscs*, Audiofilm* and . . .



audiotape
"it speaks for itself" TRADE MARK

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CIRCLE NO. 6 ON READER SERVICE PAGE
World Radio History

*TRADE MARK

1

ONE GOOD THING



LEADS



TO ANOTHER



FM stereo multiplex came first. Next came our "Astro." Good things were getting even better. The 708A "Astro" is an all-in-one stereo center with *five* integrated components in a compact 6" x 15" x 13½" package: FM, FM multiplex, AM, stereo preamp, stereo amp.

It's so advanced in concept, circuitry, features and facilities that we suspect it will remain current for the next ten years. For example, consider its circuitry. Transistors in the power stage *completely eliminate heat problems*. As a result, the "Astro" plays cool—more than 30% cooler than conventional units. In this respect, the "Astro" is the first truly practical stereo center because excessive heat generated by ordinary all-in-one units shortens life and effectiveness of the sub-components, causes drift, sets up noise and distortion.

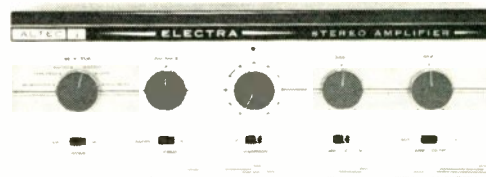
As another example, consider its unique *binaural* headphone facilities that offer the privacy of *silent listening* at anytime, without disturbing others. For convenience, the headphones may be plugged in permanently; a separate switch on the front panel activates the headphones.

Or, consider the fully professional tape recording monitor. With it, you may monitor the source two ways *during* recording: the instant signal enters the record head or directly from tape, the moment it is recorded.

An automatic switching circuit electronically distributes mono and multiplex signals to their respective channels while a stereo light provides visual indication on type of reception. These examples are only a sampling of what the "Astro" has to offer. In this case, seeing *and hearing* is believing. Price: \$597.00 including cabinet and excise tax.

One good thing leads to another. For the listener who prefers a separate tuner or needs only stereo FM to complete an existing system, there's the new 314A "Electra Emperor" Stereo Tuner. It is identical in quality and features to the FM and multiplex sections of the "Astro" and is styled to match perfectly with our newly improved "Electra" Stereo Amplifier. Among its distinctive features, it provides a "full-time" monophonic output for feeding an additional single-channel system on the patio or anywhere in the house. The "Emperor" is priced at \$359.00 including cabinet and excise tax.

The new 315A "Electra Empress" Stereo Tuner is the moderately priced version of the "Emperor." An outstanding performer at \$256.00 including cabinet and excise tax.



The 353B "Electra" Stereo Amplifier is recommended for use with either of these new stereo tuners. The resulting system will reward you with a quality of sound possible to achieve only with such perfectly matched and balanced components. The 353 is a dual channel power and control amplifier with 14 stereo or mono inputs, 6 outputs for all known sources, even microphones and tv. A matricing network is provided for center stereo speaker and for driving auxiliary speakers anywhere in the home. Price: \$225.00.

For complete information and specifications, see your Altec Distributor or write Dept. SR-10A



ALTEC LANSING CORPORATION

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Ling-Temco-Vought, Inc.
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CIRCLE NO. 3 ON READER SERVICE PAGE

AMPLIFIERS

Special Feature

FM STEREO STATION DIRECTORY.....40

**POWER AMPLIFIERS)
PREAMPLIFIERS)17
INTEGRATED AMPLIFIERS)**



ALTEC LANSING

Model 351A Transistorized Amplifier



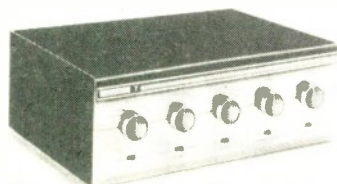
50 watt music power mono design; 4-8-16 ohm & 70 volt line outputs; sensitivity .45 v.; response 20-20,000 cps \pm 1 db; noise 90 db below full output; single level control; transistors: 1-2W381, 1-2377, 1-2854, 6-213; 4" x 9" x 9" w. x 8 1/4" d.S234.00

Model 356A Music Distribution Amp



For p.a., paging, music distribution inside or outside the home; one high-level for "line" or ceramic-crystal cartridge; one low-level for microphone with mixing type gain controls; sensitivity 370 mv, high level, 3 mv, low level for rated 18 watt output; less than 2% total harmonic distortion from 70-15,000 cps; 26 watt music power rating; response 50-20,000 cps; 8-16-250 ohm outputs; 5 1/4" h. x 14 1/4" w. x 9" d.S117.00

Model 353B "Electra" Stereo Amp



Integrated design combining dual-channel preamps & power amplifiers; separate windings on output transformer & matrixing network to drive center-channel speaker; 25 watts/channel continuous sine-wave; response 20-20,000 cps \pm 1 db; sensitivity 2.5 mv, low level, 290 mv, high level, 3.1

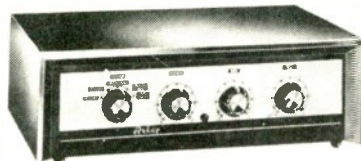
mv, microphone; 8-16 ohm output impedance; total harmonic distortion less than 1% @ 25 watts; 7 input circuits channel; mag. & ceramic phono, tape head, recorder, radio, microphone, and multiplex; tubes: 5-12AX7, 4-6L6GC; 5 1/4" h. x 15" w. x 11 1/4" d.S225.00

ARKAY

Model A-12 Amplifier Kit

Power output 12 watts; integrated monaural amplifier; controls for loudness, bass, treble, function; distortion less than 2% at 2 watts; frequency response \pm 1.5 db, 20-20,000 cps; tubes are 68C7, 2-6SL7, 6V6, 5Y3.S23.95
Factory wired.....S31.45

FL-10 Integrated Amplifier Kit



Rated at 12 watts; 20 to 20,000 cps \pm 1 db below 10 watts; hum on phono input 55 db below full output; tone controls \pm 16 db at 50 and 10,000 cps; bass, treble, and loudness controls; three position record equalization switch; phono and two low gain inputs; output impedances of 15 and 16 ohms; tape output; rose gold panel with black cabinet; 12 1/2" x 4" x 8 1/2".
KitS29.95

FL-30 Integrated Amplifier Kit



Rated at 30 watts; \pm 5 db 20 to 20,000 cps; IM 1.5% at 30 watts; hum 120 db below rated output; transistor preamp; three position record equalization; controls are function, loudness, bass, treble, level, and balance; tone controls provide \pm 16 db at 50 and 10,000 cps; tape output jack; two switched a.c. outlets; output impedances of 4,8,16 ohms; rose

pink panel, black cabinet; 16" x 5" x 9"; 26 lbs.S49.95
Factory wired.....S74.95

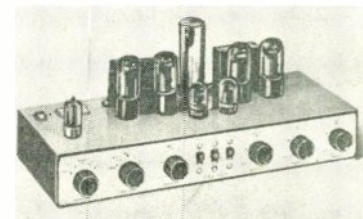
CS28 Integrated Stereo Amplifier Kit

Dual 14 watt amplifiers convert to 28 watts monaural operation; full 28 watts can be combined with existing amp for extended stereo operation with stereo preamp; frequency response 20-20,000 cps; IM distortion 2%; harmonic distortion less than 1%, 30-20,000 cps; preamp output 2 volts; tape recorder output 1.0 volt. KitS64.95

SPA-35 Stereo-Monaural Amplifier Kit

Dual 20-watt amplifiers, IM distortion 0.9%, harmonic distortion 0.8%; bias level adjustment controls; frequency response \pm 1/2 db, 20-20,000 cps; tubes are 4-6BQ5A/7189, 2 6AN8, 5U4GB; 15 1/4" x 8" x 6".
KitS49.95
Factory wired.....S62.95

Model CS-12 Integrated Stereo Amplifier Kit



Integrated amp for both stereo and mono; 12 watts output up to 20 watts peak; frequency response \pm 1 db, 20-20,000 cps; IM distortion, 4 to 1 60-7000 cps 1.2%; input .5 volt for full output; controls are bass, treble, function, balance, selector; selenium rectifiers; 15" x 6 1/4" x 5 1/2". KitS36.95

Model SPA-55 Stereo Power Amplifier Kit

Two 30-watt amplifiers with combined output of 60 watts; includes phantom channel for resultant information from both channels (ctr. channel); tubes are four 6L6GB, two 6AN8, 5U4GB; IM distortion 1.5% at 25 watts; harmonic distortion .9% at 25 watts; controls for input level, balance, bias level.
KitS64.95

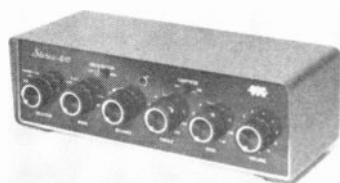
1 Amplifiers

BIGG OF CALIFORNIA

Model S-40-C Stereo Power Amp

20 watts continuous sine-wave power per channel; response 15-65,000 cps ± 1 db, sensitivity .3 volt for max. output; hum & noise -90 db; 4, 8, 16 ohm output....\$69.95

Model 410 Stereo Preamp



Circuit design of each channel similar to that used in Model AP12-SM tuner/amplifier; controls are bass, treble, volume, balance, mode, selector; two slide switches for loudness and equalization (flat-RIAA).....\$59.95

Model B-40-SC Integrated Amplifier



Stereo design; 40 watts music power/channel; response 20-25,000 cps; sensitivity 4 mv.; 6-12AX7, 4-EL84, 1-EZ81; features 8-function mode switch; balance control, phase switch, ten inputs, 4 outputs, bass and treble tone controls, record equalization, scratch filter, loudness and volume control, stereo/mono switch.....\$119.95

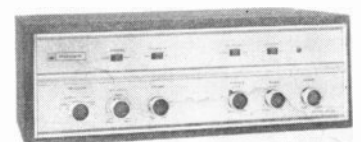
Model BP-KA 40-Watt Mono Amp



Printed circuits throughout; response 5-20,000 cps ± 1 db; IM distortion less than 1% at rated output; hum and noise 92 db below rated output; sensitivity .3 v. r.m.s. for 40 watts; tubes: 2-EL34, 12AX7, 12AU7, 5U4; 12 1/2" x 8" x 6" including cover\$69.95

BOGEN

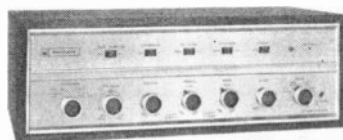
Model AP30 Integrated Stereo Amp



15 watts per channel (IHF-M music rating); response 20-20,000 cps ± 1 db; distortion .6% at rated output; hum & noise -55 db magnetic phono and tape, -70 db aux. and tuner; sensitivity 4.5 mv.

magnetic phono and tape, .5 v. tuner and aux.; 8-16 ohm output impedance; controls: 4-position selector, volume, balance, bass, treble, blend, loudness, rumble filter, stereo reverse, power; inputs: magnetic phono, tape, aux., tuner, tape amplifier; 9 tubes; 15" w. x 4 1/4" h. x 11 1/8" d.\$99.95
Metal enclosure\$11.95
Walnut cabinet\$26.95

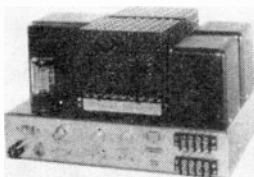
Model AP250 Integrated Stereo Amp



25 watt per channel (IHF-M rating); response 20-20,000 cps ± 1 db; distortion .6% at 25 watts; hum & noise -60 db magnetic phono and tape, -75 db aux. and tuner; stereo headphone output; sensitivity low-level inputs 4.5 mv., high-level .5 v.; 4-8-16 ohm outputs; center-channel output; magnetic phono, tape, aux., tuner, tape monitor inputs; controls: 4-position selector, 4-position mode, volume, balance, bass, treble, rumble filter, scratch filter, loudness, tape monitor, blend, power; 10 tubes, 2 silicon and 1 selenium rectifiers; 15" w. x 4 1/4" x 11 1/8" d.\$154.95
Metal enclosure\$ 11.95
Walnut cabinet\$ 26.95

BROWNE-NOBLES

Model NS-130 Stereo Power Amp



15 watts continuous sine-wave per channel; response 20-20,000 cps $\pm .5$ db at rated output; harmonic distortion less than .2% at 1000 cps; IM distortion 1% at 15 watts; hum and noise -95 db; sensitivity 300 mv.; outputs 4-8-16 ohms; all level controls, input and output jacks, and terminals are mounted on front of chassis; additional supply voltage available to power preamp and tuner (6.3 v. @ 2 amps, 300 v. d.c. @ 50 ma. and 0-18 v. d.c. @ 200 ma.); tubes: 4-EL84, 2-12AX7, 5AR4; 12 1/2" w. x 8 1/4" d. x 7 1/2" h.\$99.95

Model NS-170 Stereo Amplifier

Similar in design and performance to Model NS-130 but power output is 35 watts continuous sine-wave per channel; has center speaker output; tubes: 8-EL84, 2-12AX7, 2-5AR4; 14" w. x 10" d. x 7 1/2" h.\$139.95

Model NT-108 Stereo Preamp



Similar to Model NT-103 except designed for dual-channel (stereo) operation; completely transistorized using 8-2N190 units; has two vu meters; 6 input circuits per channel: 3 low-level—tape, mag. phono & mic. (2 mv. sensitivity); 2 high-level inputs for tuner, aux., etc. (800 mv. sensitivity); and crystal or ceramic phono (300

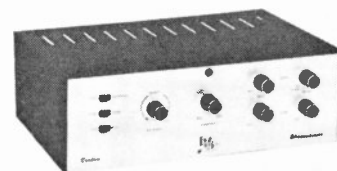
mv. sensitivity); power drain approx. 10 ma.; controls: volume, bass, treble, master volume; 5-position selector switch; 5-dual channel slide switches for bass boost in 5 db steps and 5 dual-channel slide switches for high-frequency attenuation in 5 db steps; expander switch for expanding both low and high frequencies; rumble filter switch; 14 1/2" w. x 10" d. x 4 1/2" h.\$149.95

Model NT-103 Mono Preamp

Completely transistorized using 3-2N190; can operate from 13.5 volt battery with approx. drain of 3 ma.; edge light for vu meter must be from 6.3 v. source; power amplifiers Models NS-130 and NS-170 can supply operating voltages; response 20-20,000 cps; harmonic distortion below .2% at 1000 cps; sensitivity 4 mv. low-level circuits, 800 mv. (for 1.65 v. output) high-level circuits; vu meter is across output (5000 ohms); three controls: volume, bass, treble; two input circuits: low-level for mike, mag. phono or tape head, high-level for tuner.....\$49.95

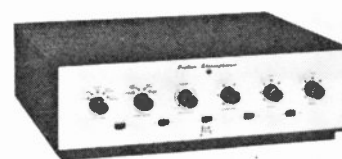
BURSTEIN-APPLEBEE

Model BA-24S Integrated Stereo Amp



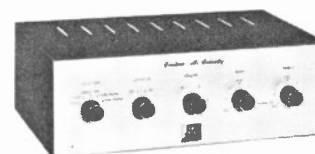
12 watts per channel; 20-20,000 cps ± 1 db at 1 watt; harmonic distortion .5% @ 1000 cps & 10 watts; IM distortion 2% @ 10 watts; sensitivity .7 v. tuner, 5.5 mv. mag. phono, .35 v. crystal phono; 4-8-16 ohms and high-impedance tape outputs per channel; hum & noise -72 db tuner, -52 db phono; 4-6EU7, 4-6BQ5, 1-EZ81; 9 front-panel operating controls; 14" w. x 4 1/2" h. x 9" d.\$49.95
Metal cabinet extra\$ 4.95

Model BA-40S Integrated Stereo Amp



20 watts per channel; response 20-20,000 cps $\pm .5$ db @ 1 watt; harmonic distortion .6% @ 1000 cps & 15 watts; IM distortion 2% @ 15 watts; sensitivity .4 v. tuner, 4 mv. mag. phono, .25 v. crystal phono; 4-8-16 ohms and high-impedance tape output per channel; hum & noise -75 db tuner, -50 db phono; 5-12AX7, 4-6BQ5, 1-6CA4; has conventional input circuits and 11 front-panel operating controls; 13 1/4" w. x 4 1/4" h. x 9 1/4" d.\$74.95
Metal cabinet extra\$ 4.95

Model BA-20 Mono Amplifier



20 watts peak output; response 20-20,000 cps @ 1 w.; harmonic distortion 1% @ 1000 cps & 10 watts; IM distortion 3% @ 10 watts; sensitivity: .55 v. tuner, 4.5 mv. mag. phono, 5.5 mv. tape head, .25 v. (Continued on page 22)

don't miss
a word
of this

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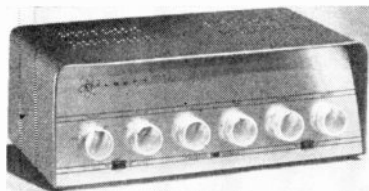
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Amplifiers

crystal phono; 4-8-16 ohms and high-impedance tape output; hum & noise -72 db tuner, -52 db phono; 2-12AX7, 2-6BQ5, 1-6BW4; conventional inputs; 5 front-panel controls\$29.95
Metal cabinet extra\$ 4.95

CALBEST ELECTRONICS

Model 7615 Monaural Amplifier



Power output 15 watts, 30 watts peak; frequency response 15 to 20,000 cps \pm 1 db at rated output; distortion less than 3% at rated output; hum 60-80 db below rated output; inputs: 1 low level, 4 high level; input sensitivity: low level, 6 millivolts; high level, 0.3 volt; bass control allows 16 db boost and 18 db cut at 50 cps; treble control allows 18 db boost and 20 db cut at 15,000 cps; separate bass and treble phono equalization: 5-position contour control; rumble filter; output impedances are 4, 8, and 16 ohms; tape output; tubes are: 3-ECC83/12AX7, 2-EL84, 5Y3GT; 13 $\frac{1}{8}$ " w. x 6 $\frac{1}{16}$ " x 4 $\frac{1}{2}$ " h.

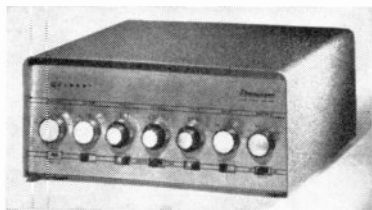
Model 7615 (Metal cabinet).....\$79.95
Model 7615M (Mahogany cabinet).....\$99.95

Model 7615B (Blonde cabinet).....\$99.95

Model 7615SM (Salem maple cabinet; Early American style).....\$109.95

Model 7615W (Walnut cabinet).....\$109.95

Model 8211 Stereo Amplifier



Dual amplifier produces 15 watts per channel, 30 watts peak power per channel; integrated amplifier; frequency response 15-40,000 cps; IM distortion less than 1% at 1 watt output; 2 $\frac{1}{2}$ % at rated output; controls for turnover, roll-off, rumble filter, treble, bass, loudness; sensitivity 0.3 v. for high-level inputs, 7 mv. for low-level inputs for rated output; tubes are 6-ECC83/12AX7, 4-EL84/6BQ5, 5U4GB.

With metal case.....\$159.95

Salem maple case.....\$199.95

Lined oak case.....\$189.95

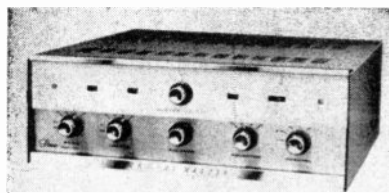
Walnut case.....\$199.95

Mahogany case.....\$189.95

CHANNEL MASTER

Model 6601 Integrated Stereo Amp

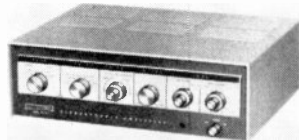
20 watts per channel (music power); 5 mv. for 10 watts on phono input and 250 mv. for high-level inputs; hum level 46 db below full output; response 20-20,000 cps \pm 1 db; harmonic distortion less than 1%; inputs: tuner, aux., tape, ceramic & mag. cartridge; outputs: 4-8-16 ohms; has



output for center-channel: bass, treble, loudness controls; rumble, noise, center-channel switches\$101.95

DAYSTROM

Model DA-281 Integrated Amplifier

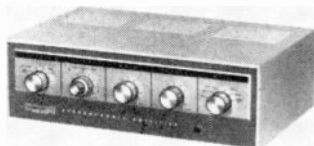


Music power rating 35 watts per channel; stereo amplifier; 2% harmonic distortion @ 1000 cps for 35 watts/channel, both channels operating; response 30-15,000 cps \pm 1 db; IM distortion less than 1% @ 64 watts; channel separation 42 db @ 1000 cps; 4-8-16 ohms output; has five inputs: magnetic phono, tape head, tuner, two auxiliary; has conventional controls plus center speaker output; 15 $\frac{1}{4}$ " w. x 5" h. x 13 $\frac{1}{2}$ " d.; cover in beige leather-grain vinyl-clad steel.

Kit\$104.95

Factory assembled.....\$199.95

Model DA-282-Integrated Amplifier

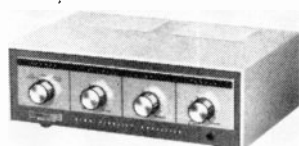


Similar to Model DA-281 except 18 watts music power rating per channel; has four inputs: magnetic phono, tuner, crystal phono, and auxiliary; 15 $\frac{3}{8}$ " w. x 5 $\frac{1}{16}$ " h. x 9 $\frac{1}{4}$ " d.

Kit\$79.95

Factory assembled.....\$185.95

Model DA-283 Integrated Amplifier



Similar to Model DA-281 except 8 watts music power rating per channel; IM distortion 2% at maximum output; has three inputs: magnetic phono, crystal phono, and tuner; 13 $\frac{3}{8}$ " w. x 5" h. x 10 $\frac{1}{8}$ " d.

Kit\$47.95

Factory assembled.....\$89.95

DE WALD

Model N-5000B "Troubador"



Monophonic preamp-equalizer, with its own built-in power amplifier, 15 watts output; harmonic distortion 1% at 12 watts; -75 db hum level; output imped-

ances are 8 and 16 ohms; equalization for LP, tape, and pop; input jacks for magnetic, aux., crystal phono and tuner, tape and tape monitor; controls are selector, loudness, treble and bass.....\$52.95

Model P-1400 "Concerto"

Stereo Amp

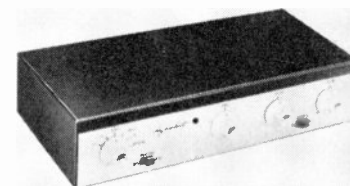
17.5 watts per channel; response 20-20,000 cps \pm 1 db; HM distortion under 2% full output; IM under 1%; sensitivity full output .5 v. high-level inputs, 4 mv.



at 1000 cps for magnetic input; inputs—magnetic, tuner, ceramic, tape, tape output, aux.\$99.95

DYNACO

Dynakit PAM-1 Mono Preamp



Six inputs: high and low level magnetic phono, tuner, TV, tape, plus option of tape head, mike or extra phono position; two outputs, low impedance (1000 ohms), and tape output; equalization for RIAA, LP, 78 rpm records; tape A-B monitor switch; separate bass and treble controls with up to 15 db of boost or cut at 30 cps and 15 kc; loudness control with switch; IM distortion under .05% at 1.5 volts output; noise level less than 3 microvolts equivalent input noise on RIAA position; frequency response 10 cps to 100 kc, \pm 1 db; d.c. filaments, 2-12AX7 or ECC83, selenium rectifier; 4 a.c. outlets, 2 switched; scuff-proof and washable; 12" x 6" x 2 $\frac{3}{4}$ "; 7 lbs.; preassembled printed circuit board.

Kit\$34.95

Factory wired\$59.95

PM-1 Panel mounting kit\$ 2.95

Dynakit Mark III Power Amplifier

Power output 60 watts continuous up to 140 watts peak; frequency response 6-60,000 cps within $\frac{1}{2}$ db at 60 watts; sensitivity 1.6 volts r.m.s. input for 60 watts out; IM distortion less than 1% at rated output; damping factor 15; includes pat-



ented Biaset for non-critical balancing control; matched set of KT88 power output tubes; other tubes are 6AN8, GZ34, selenium rectifier; power socket for preamp; printed circuit boards; 9" x 9" x 6 $\frac{3}{4}$ ".
Mark III Kit\$ 79.95
Mark III Factory wired\$ 99.95
Mark III-70 4-8-16 ohm & 70.7 volt out-

put\$104.95
 Mark III-500 500 or 125 ohm output
\$109.95

Dynakit PAS-2 Stereo Preamp



Inputs for 3 low level stereo and 4 high level stereo; controls for bass, treble, volume, balance, blend, tape monitor switch, loudness compensation, feedback scratch filter to eliminate high frequency distortion; RIAA equalization; gain: 60 db at 1000 cps on RIAA, 20 db 20-20,000 cps at high level inputs; d.c. filament supply; tubes are 4-ECC83, 12X4 rectifier; 1 3/4" x 8" x 4".
 PAS-2 Kit\$59.95
 PAS-2 Factory wired\$99.95
 PM-3 Panel mounting kit.....\$ 4.95

Dynakit Mark IV Amplifier Kit



40 watts power, up to 80 watts peak; less than 1% IM distortion at 40 watts; frequency response ± 0.5 db. from 10 cps to 40 kc.; sensitivity 1.3 volts r.m.s. input for 40 watts output; output impedances are 4, 8, and 16 ohms; tubes, 2-EL34, 7199 GZ34 selenium rectifier; 5" x 14" x 6 1/2".
 Mark IV Kit\$59.95
 Mark IV Factory wired\$79.95

Stereo 70 Amplifier

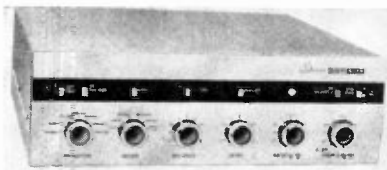
Two power amplifiers 35 watts each; full



70 watts on mono operation; printed circuit board; 7199 driver; push-pull EL34's; frequency response $\pm .5$ db. 15-40,000 cps; IM distortion less than 1% at 35 watts; sensitivity 1.3 volts r.m.s. input for 35 watts output; estimated time of assembly 4-6 hours.
 Model 70 Kit\$ 99.95
 Model 70 Factory wired\$129.95

EICO

Model ST-70 Integrated Stereo Amp



Complete stereo control center and amplifier; two 35-watt amplifiers; inputs for tape head, two mag. phono, FM-AM

tuners, multiplex; input selection and mode switches; ganged level and separate balance controls; concentric bass and concentric treble controls; tape monitor, tape speed, hi-filter, lo-filter, loudness compensation, phase reversal, and balance-check slide switches; center-channel speaker output; 1M distortion 1% @ 70 watts; response 9-60,000 cps ± 1 db. Kit...\$99.95
 Factory wired.....\$149.95

Model ST-40 Integrated Stereo Amp



Similar to Model ST-70 except unit has two 20-watt amplifiers; all controls and features as in ST-70 but no phase-reversal or choice of tape-speed equalization; IM distortion 1% @ 40 watts; response 12-25,000 cps ± 1 db.
 Kit\$79.95
 Factory wired.....\$129.95

Model HF-89 Stereo Power Amplifier



Each channel rated at 50 watts; cathode-coupled-phase inverter; less than 0.1% IM distortion at normal listening level; less than 0.5% IM distortion at 100 watts continuous; rise time 2.5 μ sec; frequency response $\pm 1/2$ db 5-100,000 cps; sensitivity 0.55 volt for full output; level controls both channels; tubes are ECC83, 2-6SN7GTB, 4-EL34, power and bias rectifiers; inverse feedback, 18 db; 6"x15"x11".
 Kit\$99.50
 Factory wired.....\$139.50

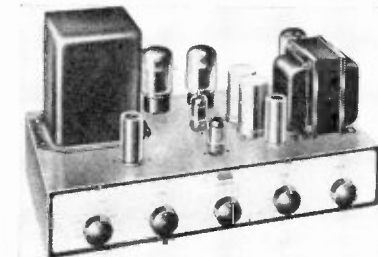
Model HS-12 Preamp-Amplifier

Power output 12 watts (25 watts peak); Williamson type; 25 to 20,000 cps at 12 watts, ± 0.5 db; harmonic distortion 2% at 30 cps, 1% at 10,000 cps.
 Kit\$34.95
 Factory wired.....\$57.95

Model HF-14 14-Watt Amplifier

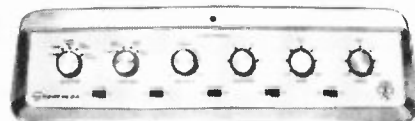
Power output 14 watts, 28 watts peak; frequency response 30-15,000 cps ± 0.1 db at 14 watts, 15-100,000 cps ± 0.5 db at 1 watt; harmonic distortion less than 1% at 14 watts.
 Kit\$23.50
 Factory wired.....\$41.50

Model HF-20 Preamp-Amplifier



Power output 20 watts (34 watts peak); ultra-linear Williamson type; 13 to 35,000 cps, ± 0.5 db; harmonic distortion 1% (20 to 20,000 cps at 1 db under 20 watts); intermodulation distortion 1.3% at rated power; hum and noise on mag-

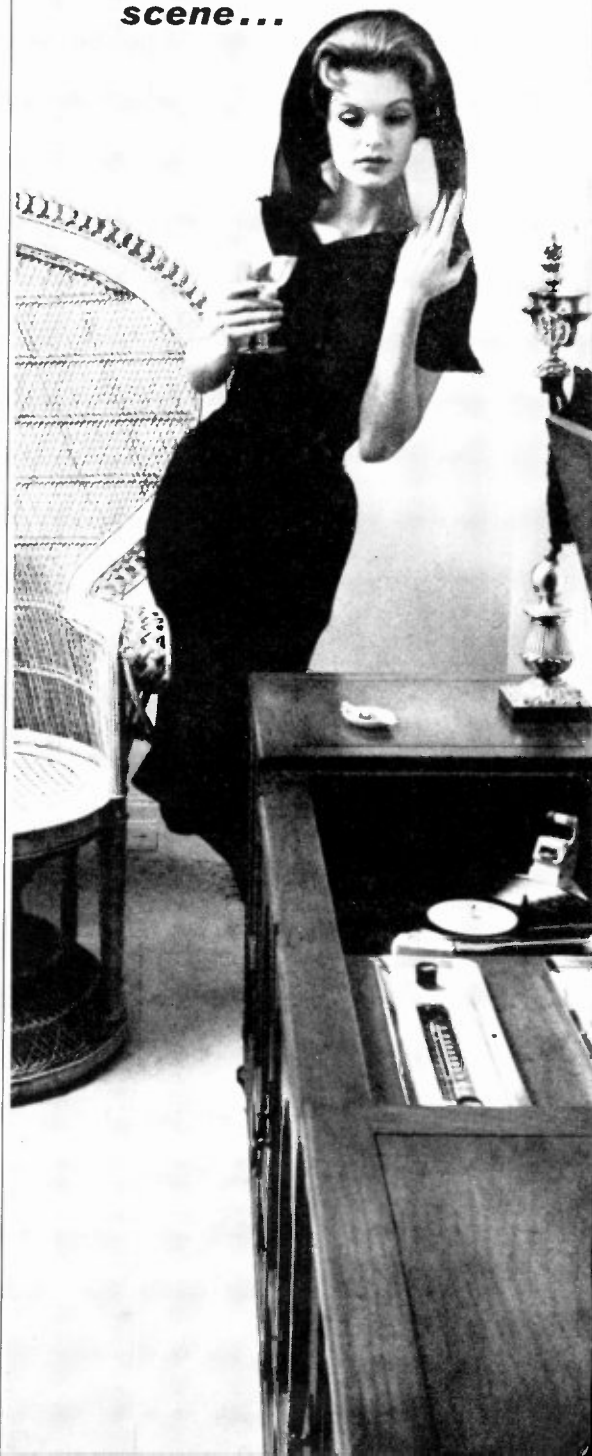
The sweep and magnificence of a full orchestra . . . the intimacy of a lovely voice. The pure sound of Grommes faithfully reproduces the mood and expression —with the elusive quality of "presence" You are there!



Model 24PG 24 watt stereo amplifier . . . \$ 89.95
 Model 36PG 40 watt stereo amplifier . . . \$129.95
 Model 70PG 70 watt stereo amplifier . . . \$199.95

Write GROMMES
 Division of Precision Electronics, Inc.,
 9101 King St., Franklin Park, Ill.

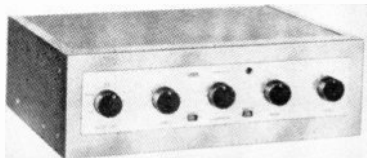
Grommes
sets the
scene...



1 Amplifiers

netic phono —60 db, tuner —75 db; sensitivity: magnetic phono 4 millivolts for 20 watts output, tuner, TV, tape, auxiliary 0.4 volt for 20 watts output.
 Kit\$49.95
 Factory wired.....\$79.95
 E-I (matching cover).....\$4.50

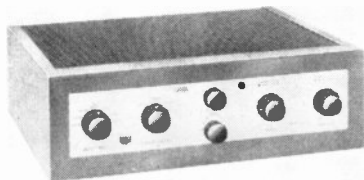
Model HF-32 Preamp-Amplifier



Integrated amplifier; power output 30 watts continuous, 47 watts peak; frequency response 15-50,000 cps \pm 0.5 db; harmonic distortion less than 1% 20-20,000 cps, within 1 db of 30 watts; IM distortion 2% at 30 watts (60 and 7000 cps mixed 4:1); hum 80 db below rated output; feedback 20 db; damping factor is 10; tone controls allow 13 db boost and 15 db cut at 10,000 cps, 14 db boost and 15 db cut at 50 cps; four-position record equalization; tape head input is NAB; sensitivity: phono, 5 μ v.; tape head 2 μ v.; microphone 4 μ v.; high level (3) 0.4 volt; hum and noise 60 db down on phono input; rumble and scratch filters operate at 12 db/octave slope at 5000 and 70 cps; level and loudness controls; tape recorder output; tubes are 2—ECC83/12AX7, 2—EC90/6C4, 4—EL84, 2—EZ81, hum balance control; size 15" w. x 4 $\frac{3}{4}$ " h. x 10 $\frac{1}{2}$ " d.

Kit\$57.95
 Factory wired.....\$89.95

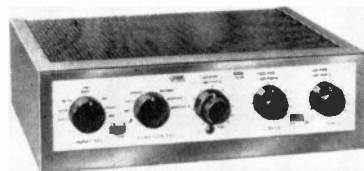
Model HF-85 Stereo Preamplifier



Frequency response 5-400,000 cps \pm 0.3 db @ 3 v. output; sensitivity for 2 v. output: phono, 1 mv.; microphone 1 mv.; tape head 0.5 mv.; three low-level stereo inputs; three high-level stereo inputs; tone controls for each channel may be operated separately or simultaneously; stereo outputs to amplifier and tape recorder; self-powered; tubes: five 12AX7/ECC83, 6X4; 3 $\frac{3}{8}$ " h. x 12" w. x 8 $\frac{1}{4}$ " d.

Kit\$39.95
 Factory wired.....\$64.95

Model HF-81 Integrated Stereo Amp

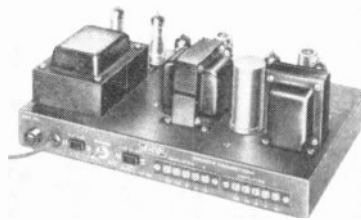


Combines two 14-watt integrated amplifiers on one chassis; 28-watt output on mono sources (56 watts peak); frequency response 10 to 100,000 cps \pm 0.5 db at 1 watt output per channel; IM distortion 2% at 14 watts per channel; hum and noise: phono, —60 db; tape head, —51 db; microphone, —57 db; tuner and aux., —75 db;

input sensitivity for full output: phono, 4 millivolts; tape head, 2 millivolts; microphone, 6 millivolts; tuner and aux. 0.5 volt (all are twin inputs); bass and treble controls allow 15 db boost or cut at 50 cps and 10,000 cps; twin speaker outputs for 4, 8, and 16 ohms; tubes are 4—ECC83/12AX7, 2—ECC82/12AU7, 4—EL84, 2—EZ81; 15" w. x 4 $\frac{3}{4}$ " h. x 10 $\frac{1}{2}$ " d.; 24 lbs.

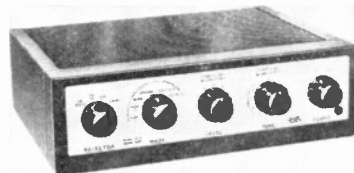
Kit\$69.95
 Factory wired.....\$109.95

Model HF-86 Stereo Power Amplifier



Dual power amplifier. Williamson type circuit; level control for each input; output power, 28 watts (two 14-watt amplifiers) continuous, 56 watts peak; IM distortion, 1.5% at 28 watts; harmonic distortion, less than 1% from 30 cps to 15 kc. at 16 watts; frequency response, \pm 0.5 db 10 cps to 100 kc.; sensitivity, 1.15 v. for 14 w. output; hum, 90 db below rated output; controls, level Ch. 1, level Ch. 2, selector switch, on-off switch; speaker connections, 4, 8, 16, and 32 ohms; tubes, 2—12DW7, 4—EL84, 2—EZ81; power consumption, 115 watts; size 5" x 13 $\frac{1}{2}$ " x 9"; shipping weight, 16 lbs.
 Kit\$43.95
 Factory wired.....\$74.95

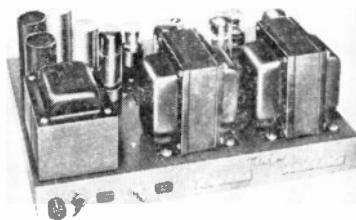
Model AF-4 Integrated Stereo Amp



Two single-ended amplifiers preceded by input selection, mode of operation, tone and level controls; harmonic distortion 4 watts: 1% 100-10,000 cps; IM distortion 2.2% at 4 watts; frequency response \pm 0.5 db, 30-20,000 cps; sensitivity (input for 4 watts output per channel), for ceramic phono input—0.26 volt; hum & noise—74 db; tubes: 2—12DW7, 2—EL84 and EZ81.

Kit\$38.95
 Factory wired.....\$64.95

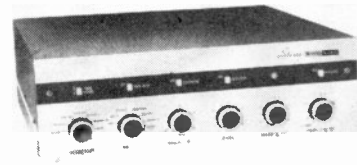
Model HF-87 Stereo Power Amp



Output power: 70 watts (35 watts per channel) continuous, 140 watts peak; IM distortion: 1% at 70 watts; harmonic distortion less than 1% from 20 to 20,000 cps within 1 db at 70 watts; frequency response: \pm 0.5 db from 5 cps to 100 kc.; square-wave response is essentially undistorted to 20,000 cps; inverse feedback: 17 db; damping factor above 11, 20 cps to 20 kc.; 55 db channel separation; sensitivity: 0.38 v. for full output; hum level

is better than 90 db below full output; controls: level Ch. 1, level Ch. 2, service selector switch, on-off switch; 4, 8, 16, and 32 ohm outputs; tubes: 1—ECC83/12AX7, 2—6SN7GTB, 4—EL34, 2 silicon diode rectifiers, surgistor; 15" x 11" x 6".
 Kit\$74.95
 Factory wired.....\$114.95

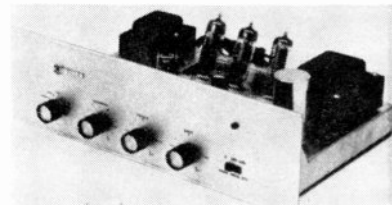
Model ST-84 Stereo Preamp



Frequency response 5-25,000 cps \pm .3 db; harmonic distortion from 20-20,000 cps is .06% @ 2 v. output; IM distortion .04% @ 2 v. output; incorporates all basic functional controls including 7-position input and mode selector switches for any combination of stereo & mono speakers and signal sources; 6-tube design; 5 $\frac{1}{2}$ " h. x 15 $\frac{7}{8}$ " w. x 8 $\frac{3}{4}$ " d.; metal cover included.
 Kit\$59.95
 Factory wired.....\$89.95

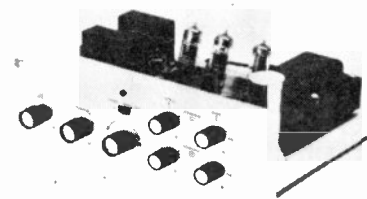
ERIC

Model 3459T Integrated Amp



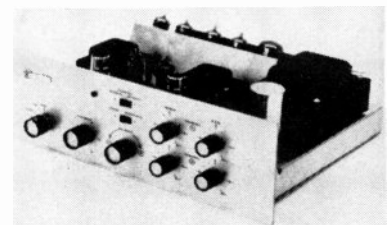
Monophonic design; 17 watts at 1% HD; 20-20,000 cps \pm 1 db at normal listening level; transistorized preamp; inputs: magnetic & ceramic phono, tuner & aux.; bass & treble controls; scratch filter; IM distortion .9%; hum level 70 db below 10 watts; tubes—6CA4, 2—6BQ5's, 12AX7, 7247, N469 transistor; 4, 8, 16 ohm output; metal or walnut cabinets available..\$69.95

Model 3460P Integrated Stereo Amp



8 watts @ 1% harmonic distortion per channel; bass, treble, loudness, balance & reverse controls; response 20-20,000 cps \pm 1 db; IM distortion .9%; hum 65 db below 8 watts; output impedances 8, 16 ohms; tubes—3—12AX7's, 2—6BQ5's, 6CA4; metal or walnut cabinets available; 13 $\frac{3}{4}$ " x 4 $\frac{3}{16}$ " x 8 $\frac{1}{4}$ " deep....\$79.95

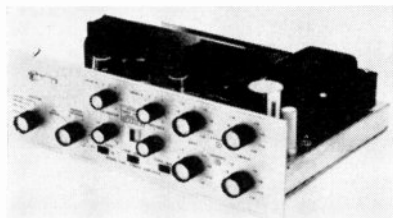
Model 3160T Integrated Stereo Amp



20 watts @ 1% harmonic distortion per channel; transistorized preamp; bass, treble, loudness, balance & reverse controls;

inputs for 20 watts output, mag. phono 2 mv., ceramic phono .5 v., tuner-aux.-tape .5 v.; IM distortion .4% at 17 watts; response 20-20,000 cps \pm 1 db at normal listening level; hum 70 db below 20 watts; output impedance 4, 8, 16 ohms; tubes—2-12AX7's, 2-7247's, 4-6BQ5's, GZ34, 2-N469 transistors; metal and walnut cabinets available\$106.20

Model 3560T Integrated Stereo Amp



30 watts @ less than 1% harmonic distortion per channel; transistorized preamp; features 13 individual panel controls; center-channel output; balance & power visual output indicators and "Presence" compensation; response 20-20,000 cps \pm 1 db at rated output; IM distortion .8%; hum & noise 80 db below 30 watts; output impedance 4, 8, 16 ohms; tubes—2-12AX7's, 2-7247's, 4-EL86's, GZ34, 2-N469 transistors; metal and walnut cabinets available\$149.95

Model 5761MX Integrated System

Combines dual 30-watt/channel power amplifier, dual preamp, AM & FM tuner with multiplex circuit; 19 tubes, 2 transistors for preamp, 4 diodes; 15 front-panel controls; response 20-25,000 cps \pm 1 db; harmonic distortion 1% @ 25 watts; FM sensitivity 1.5 μ v. for 20 db of quieting; inputs: magnetic phono, tape, two aux.; front panel 5 1/8" x 16", depth 14 1/2"\$319.95

FISHER

Model X-100-B Integrated Amplifier



Power output 25 watts per channel; 18 controls with bias adjust; bass and treble boost each channel 15 db; scratch filter, rumble filter; provisions for up to 3 tape heads and monitor operation; channel separation better than 50 db; low-level and high-level inputs; 5 1/8" w. x 12 1/2" d. x 4 1/16" h.; less cabinet.....\$169.50

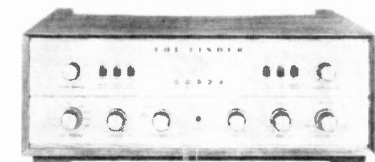
Model X-101-C Integrated Amplifier

30 watts music power per channel at .5% harmonic distortion @ 1000 cps with both channels operating (27 w. r.m.s.); frequently used controls are in full view; occasionally used controls concealed behind hinged cover; push-button input selection;



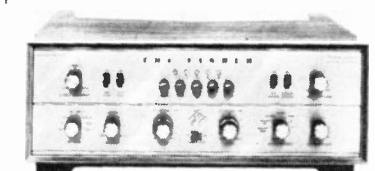
headphone jack; 15 1/8" w. x 12 1/2" d. x 4 1/16" h.; less cabinet.....\$199.50

Model X-202-B Integrated Amplifier



Stereo design 40 watts per channel music power; 20 front-panel controls plus 2 rear-panel controls; center-channel output; 16 inputs; harmonic distortion .5% at 40 watts; IM distortion 1% at 40 watts; response 20-20,000 cps \pm 1 db; sensitivity—mic. 1.5 mv., RIAA 3.5 mv., Columbia LP 3 mv., tape head (3.75 ips) 1.8 mv., tape head (7.5 ips) 2.1 mv., high-level inputs 280 mv.; 4-8-16 ohm output impedance; tubes—4-7591, 6-ECC83, 2-7247; less cabinet.....\$249.50

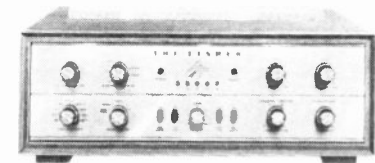
Model 400-CX Stereo Master Audio Control Center



Push-button control selectors; record-monitor facilities; controls for bass, treble, phase, scratch and rumble filters; 10 tubes; 15 1/8" x 11 1/2" x 4 1/16".....\$199.50

Model X-1000 Integrated Amplifier

Stereo design 55 watts per channel music power; 22 controls and switches; 18 inputs; 11 outputs; center-channel output; built-in "Spacepander" control; response 18-20,000 cps \pm .5 db @ 55 watts; harmonic distortion .5% @ 55 watts; IM distortion .8% @ 55 watts; sensitivity for 55 watts—mic. 1.3 mv. RIAA 3.3 mv., Columbia LP 3 mv., tape head (3.75 ips)



REMINDER:

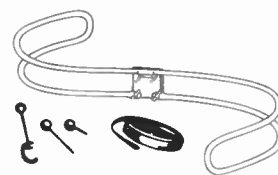


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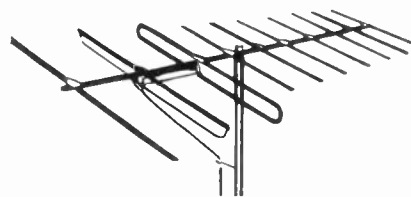
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Please Note

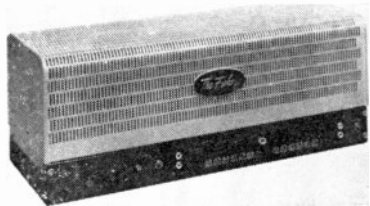
All prices quoted are those submitted by the manufacturer and unless otherwise noted are audiophile net and subject to change without notice. Because of shipping costs, prices do vary across the country. Prices listed are those prevailing in the company's immediate manufacturing area.

1

Amplifiers

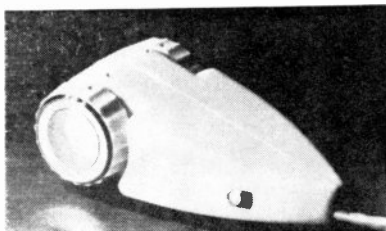
1.5 mv., tape head (7.5 ips) 1.8 mv., high-level inputs 230 mv.; 4-8-16 ohms output impedance; tubes—4—6E134, 5—ECC83, 2—7247, 12AU7, 2—EF86, plus 7 diodes; less cabinet.....\$339.50

Model SA-300-B Power Amplifier



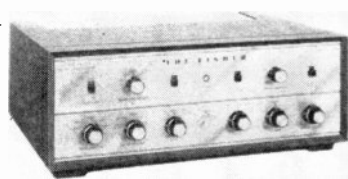
Dual-channel, 45 watts per channel music power; two inputs per channel (normal & with special filter for use with electrostatic speakers); has center-channel output; response 20-20,000 cps ± 5 db; controlled response is -3 db @ 20 kc.; sensitivity .8 v. for full output; harmonic distortion less than .5% at rated output ± 1 db; IM distortion less than .4%; 4-8-16 ohm output; tubes—2—12AX7, 2—12AU7, 4—6CA7, 2—5AR4; 16 $\frac{3}{8}$ " x 7 $\frac{1}{4}$ " x 6 $\frac{1}{8}$ ". \$199.50

Model RK-1



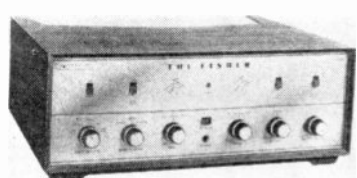
Stereo remote control unit; two volume control dials; 30 foot cable; adapter plug; for use with 400-CX, X-202-B, and X-1000.....\$17.95

Model KX-200 "Stratakit" Integrated Amp



Combination amp-preamp; dual-channel design; 40 watts per channel music power at .4% harmonic distortion @ 1000 cps with both channels operating; response 20-20,000 cps ± 1 db; sensitivity 350 mv. high-level, 3.5 mv. low-level; high-frequency and subsonic frequency filters; 14 front-panel controls; 10 tubes; full-wave silicon rectifiers; 15 $\frac{1}{8}$ " w. x 12 $\frac{1}{2}$ " d. x 4 $\frac{1}{16}$ " h.; less cabinet; kit.....\$169.50

Model KX-100 "Stratakit" Integrated Amp

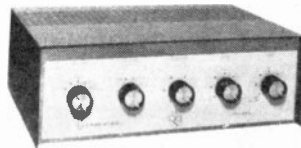


Similar to Model X-100-B; combination amplifier and preamp, dual-channel design; 25 watts per channel music power at .5% harmonic distortion at 1000 cps with

both channels operating (24 w. r.m.s.: response 20-20,000 cps ± 1 db; sensitivity 16 mv. high level, 3.5 mv. low level; has high frequency and subsonic frequency filters; front-panel earphone jack; 14 front-panel controls; 10 tubes, 2 silicon rectifiers; 15 $\frac{1}{8}$ " w. x 12 $\frac{1}{2}$ " d. x 4 $\frac{1}{16}$ " h.; less cabinet; kit.....\$129.50

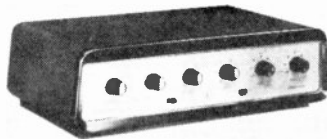
GROMMES

Model E-LJ8 Mono Amplifier



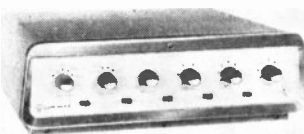
Power output 10 watts continuous sine-wave; controls for loudness, function, contour, bass, treble; frequency response 20-20,000 cps ± 1 db at 1 watt; harmonic distortion 1% at 10 watts; IM distortion 3% at 10 watts; power bandwidth 45-20,000 cps at half power & 3% harmonic distortion; sensitivity: tuner -55 volt, mag. phono -4.5 mv., tape -5.6 mv., crystal phono -25 volt; tubes: 2—12AX7, 2—6BQ5, EZ80; 11" x 4" x 7 $\frac{1}{2}$ "; with case.....\$49.95

Model 24PG Stereo Amp-Preamp



Power output 10 watts continuous sine-wave each channel; control for loudness, bass, treble, function, mode, channel balance; IM distortion 2% at 10 watts; sensitivity: tuner .25 v., mag. phono -6 mv., tape head -7 mv., crystal phono -35 volt; power bandwidth 45-20,000 cps at half power & 3% harmonic distortion; frequency response 20-20,000 cps ± 1 db at 1 watt; tubes: 4—6EU7, 4—6BQ5, EZ81; 14" x 4 $\frac{1}{2}$ " x 9".....\$89.95 Enclosure.....\$7.50

Model 36PG Stereo Amp-Preamp



Power output 15 watts continuous sine-wave each channel; power bandwidth 30-20,000 cps at half power & 2% harmonic distortion; controls: loudness, rumble, scratch filters, function, mode, bass, treble, balance, contour #1, contour #2; harmonic distortion 2% at 15 watts; frequency response 20-20,000 cps $\pm .5$ db @ 1 watt; tubes: 5—12AX7, 4—6BQ5, plus 4 silicon rectifiers; 14" x 4 $\frac{1}{2}$ " x 11".....\$129.95 Enclosure.....\$7.50

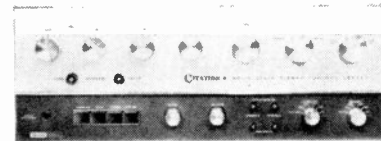
Model 70PG Stereo Amp-Preamp

Similar in appearance and performance to Model 36PG except 35 watts/channel; harmonic distortion .6% at 1000 cps; IM distortion .1% at 30 watts; tubes: 6—6EU7, 5—7868, plus 5 silicon rectifiers.....\$199.95 Enclosure.....\$7.50

HARMAN-KARDON

Citation "A" Transistorized Preamp

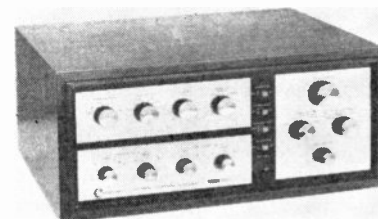
Response flat from 1 to 1 million cps ± 0 - $\frac{1}{4}$ db; square-wave response better than 1 μ sec. in all functions, less than 5% tilt



at 5 cps; harmonic distortion unmeasurable at 2 volts output from 20-20,000 cps; IM distortion less than .05% from 40 to 140° F.; noise -85 db below rated output; sensitivity: high-level input .25 v., low-level input 1.5 mv.; controls—on-off, function selector, mode, blend, equalization, tone, balance contour channel reverse low-cut filter, high-frequency filter, tape monitor; 33 transistors; 14 $\frac{3}{8}$ " w x 5 $\frac{1}{8}$ " h x 7" d.

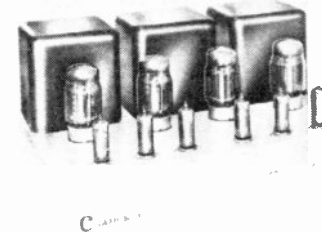
Kit.....\$249.95
Factory wired.....\$349.95
Walnut cabinet.....\$ 19.95

Citation I Stereo Preamp-Control Center



Frequency response 5-80,000 cps, ± 0 -0.5 db; distortion less than 0.05% at 2 volts output; main output, 1.75 volts; tape output, 0.7 volt; input sensitivity for rated output: high level 0.5 volt; low level 2.5 mv; tape head 2 mv; ceramic phono 0.1 volt; 5-position mode selector switch: stereo, blend, A/B, chan A, chan B; blend control can also act as 3rd channel gain control; roll-off control: 0/78, 4/FFRR, 10.5/old Lon, 12/AES, 12/RIAA, 16/LP; turnover: tape, 800/RCA, RIAA, LP, AES, 78; step-type tone controls for each channel out of circuit in flat position; balance control; phase switch; contour switch; low and high frequency filters; tape monitor switch; 4—ECC83 5—ECC81; 6-silicon diodes; 14 $\frac{7}{8}$ " x 12 $\frac{1}{4}$ " x 6"; 32 lbs.....\$159.95
Factory wired.....\$249.95
WC-1 walnut enclosure.....\$29.95

Citation II Stereo Power Amp Kit



60 watts per channel; frequency response 18-40,000 cps ± 0 -1 db at rated power; sensitivity 1.5 volts for 60 watts; hum and noise better than 90 db below 60 w.; 4 d.c. bias adjustments, 1 for each tube plus 2 a.c. balance; bias meter; 4, 8, 16 ohms; tubes: 6—12BY7A, 4—6550, 4—silicon diodes, 1—selenium rectifier; 16 $\frac{3}{8}$ " x 9" x 11 $\frac{1}{2}$ "; 71 lbs.....\$159.95
Factory wired.....\$229.95
AC-2 metal enclosure.....\$7.95

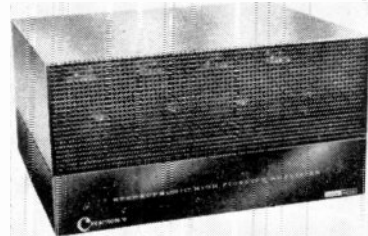
Citation IV Stereo Preamplifier Kit

Specifications similar to Citation I; continuously variable blend control; variable type tone controls; balance control; tubes: 6—ECC83; 4 semiconductor rectifiers;



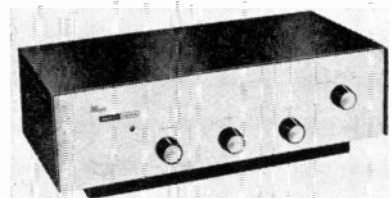
14 7/8" x 11" x 5 1/2"; wt. 25 lbs....\$119.95
Factory wired.....\$189.95
WC-1 walnut enclosure.....\$29.95

Citation V Stereo Power Amplifier Kit



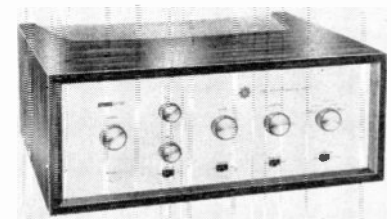
Similar to Citation II except as noted; 40 watts per channel; tubes: 2-12BY7A, 2-6XG7, 4-7581; 4-silicon diodes, 1-selenium rectifier; 13 7/8" x 5 1/2" x 11 1/4"; 45 lbs.....\$119.95
Factory wired.....\$179.95
AC-2 metal enclosure.....\$7.95

A-10 "Allegro" Amplifier



Output: 10 watts at less than 1% harmonic and 2% IM distortion; frequency response 45 to 20,000 cps \pm 1 db at 10 watts; hum on phono input 60 db below 10 watts; bass and treble controls allow 12 db boost or cut at 50 and 10,000 cps; RIAA equalization for phono; NAB tape equalization (7 1/2 ips); phono input sensitivity 4 millivolts; tape output; output impedances 8 and 16 ohms; inputs are phono, tape head, and tuner/aux.; one convenience a.c. outlet; tubes are 2-12AX7, 2-EL84, EZ80; 12 1/16" x 4" x 6 1/4"; 11 pounds.....\$54.50

Model A300 Integrated Stereo Amp



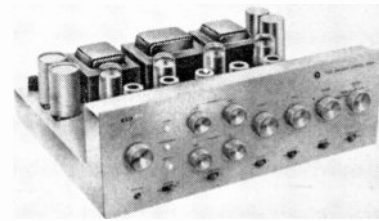
Combination preamp & power amplifier; 12 watts per channel continuous sine-wave power; 15-70,000 cps \pm 1 db at normal listening levels; 8 and 16 ohms output; sensitivity—phono (magnetic) 3 mv., phono (ceramic or crystal) 125 mv., tape head 2 mv., tuner 125 mv.; has function selector switch, volume control, blend control, bass & treble controls, balance controls, rumble filter, stereo reverse/normal, contour, phono RIAA, and NAB tape equalization; features continuously variable blend control (0 to maximum);

STEREO/HI-FI DIRECTORY

tubes—4-7408, 4-12AX7, 12AU7; less cabinet\$99.95

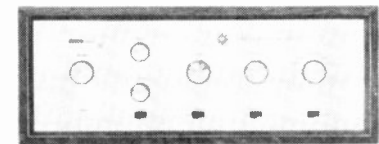
A-500 Integrated Stereo Amp

25 watts per channel music power output; .5% distortion, at 5 watts .2% distortion; response 12-35,000 cps \pm 1/2 db at normal listening level; hum 85 db below rated output; sensitivity @ 20 watts—high-level, 200 mv., low-level 3 mv.,



tape 2.5 mv.; includes all necessary controls for stereo & tape operations; gain control for center channel; blend control with indicating lamps; stereo headphone jack; high- and low-frequency filters; tubes 4-7355, 1-12AU7, 4-12AX7.....\$159.95

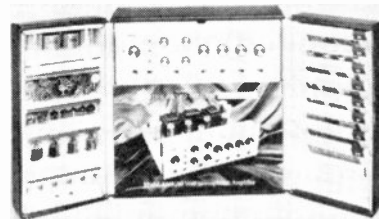
Model A30K Integrated Stereo Amplifier Kit



15 watts per channel music power rating; 12 watts per channel continuous sine-wave power; less than 1% distortion at rated output; response 15-70,000 cps \pm 1 db at normal listening level; hum -80 db below rated output; has conventional inputs and controls with ganged bass and treble tone controls on each channel; 9 tubes plus 2 silicon rectifiers; 7408 output tubes; 15 1/4" w. x 5 1/16" h. x 11 1/2" d.

Kit\$79.95
Metal enclosure.....\$12.95
Walnut enclosure.....\$29.95

Model A50K Integrated Stereo Amplifier Kit



25 watts per channel music power rating; 20 watts per channel continuous sine-wave power; .5% distortion at rated output; response 12-70,000 cps \pm 1 db at normal listening level; hum -85 db at rated output; has conventional controls and inputs with individual bass and treble tone controls for each channel; gain control for center-channel output; blend control with lamps indicating degree of blend; headphone jack on front panel disengages speakers; 9 tubes plus silicon rectifiers; 7355 tubes in output stages; 15 1/4" w. x 5 1/16" h. x 12" d.

Kit\$119.95
Metal enclosure.....\$12.95
Walnut enclosure.....\$29.95

HEATH

Model AA-21 Transistorized Amplifier

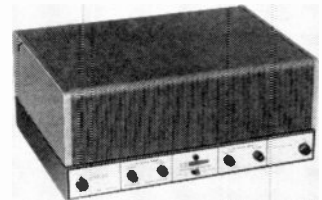
Integrated preamp and power amplifier; dual channel; 35 watts (8-ohm load) per channel continuous sine-wave or 50 watts



per channel music-power rating; response 13-25,000 cps \pm 1 db at max. power; 26 watts (16-ohm load) sine wave; 18 watts (4-ohm load) sine wave; harmonic distortion less than 1% @ 20 cps, .5% at 1000 cps, 2% @ 20,000 cps; IM distortion less than 1% at rated output; channel separation 40 db; has all conventional operating controls many of which are mounted behind hinged front panel; 28 transistors and 10 diodes; 15" w. x 5" h. x 14" d.

Kit\$134.95
Factory wired\$219.95

Model AA-121 Stereo Power Amplifier



Power output 40 watts per channel; frequency response 20-20,000 cps \pm 0.5 db for rated output; 20.5 db negative feedback; damping factor, 17; phase reversal switch; center speaker terminals; tubes: 2-6AN8, 4-1L34; 4 silicon diodes; 1 selenium diode for bias supply; 15" w. x 7 1/4" h. x 11" d. (kit).....\$79.95

Model AA-111 Stereo Power Amplifier



Power output 14 watts per channel; frequency response 30-15,000 cps \pm 1 db at rated output; total harmonic distortion 2%; channel separation 65 db; hum and noise 76 db below 14 watts; input sensitivity 0.74 volt for rated power; octal sockets for preamplifier power; phase reversal switch; level control for each channel; output impedances 4, 8, 16 ohms; tubes: 2-7199, 4-EL84, 1-GZ34; 13" w. x 8 1/2" d. x 6" h.; shpg. wt. 21 lbs. (kit)\$44.95

Model AA 141 Stereo Preamplifier



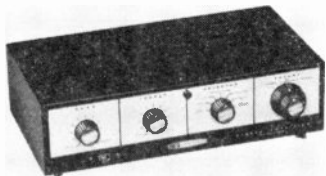
Frequency response 20-20,000 cps \pm 1 db; input sensitivity for 2.5 volts output; mag phono, 4 mv.; crystal phono, 0.15 volt; aux 1 and 2, 0.2 volt; channel separation 45 db or better; dual concentric bass and treble controls for each channel; separate volume controls for each channel; 2-section, 4-position input selector switch chooses mag phono, crystal phono, aux 1,

1

Amplifiers

aux 2; 6-position selector switch: chan A, chan B, mono A, mono B, stereo, stereo reverse; filament balance control for each channel; fused tubes: 5-12AX7; 2 selenium diode rectifiers; 13 1/8" w. x 3 7/8" h. x 6 3/8" d. (kit).....\$34.95

Model AA-201 Integrated Stereo Amp



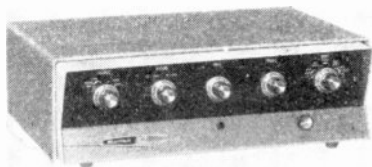
Power output 3 watts per channel; frequency response 50-20,000 cps \pm 1 db for rated power; input sensitivity 150 mv, total harmonic, IM distortion less than 3%; 7-position selector switch: mono phono, chan A tuner, chan B tuner, stereo phono, stereo phono reverse, stereo tuner, stereo tuner reverse; phase switch; output impedances: 4, 8, 16 ohms; tubes: 2-EL84, 2-7199, 1-EZ81; shpg. wt. 12 lbs. (kit)\$31.95

Model AA-100 Integrated Stereo Amp



Rated output: 25 watts per channel; frequency response 30-15,000 cps \pm 1 db for rated output; IM distortion less than 1%, harmonic distortion less than 0.5% at rated power; channel separation 42 db minimum at 1000 cps; input sensitivity: mag phono, 1.5 mv.; tape head, 1.0 mv.; tuner, aux, aux 2, 0.2 volt; 4-position function switch: stereo, stereo reverse, chan A, chan B; balance control; separation control; dual tandem type level control; dual concentric bass and treble controls for each channel; input level controls for each channel except tape head; power amplifier input level control, one per channel; hum balance controls; phase switch; low impedance tape outputs; output impedances: 4, 8, 16 ohms each channel; tubes 2-EF86, 4-12AX7, 2-7199; 4-7591, 1-GZ34; 15 1/2" w. x 4 3/8" h. x 12 1/2" d. Model AA-100 (kit).....\$ 84.95
Model AAW-100 (wired).....\$144.95

Model AA-151 Integrated Stereo Amp



Power output 14 watts per channel; frequency response 20-20,000 cps \pm 1 db; channel separation better than 45 db; input sensitivity for rated output: mag phono, 4 mv.; crystal phono, 0.25 volt; tuner and aux, 0.2 volt; 4 position selector switch: mag phono, crystal phono, tuner, aux; dual concentric (clutch) volume control; dual tandem bass and treble controls;

phase switch; 1 filament balance per channel; output impedances: 4, 8, 16 ohms; tubes are: 2-6EU7, 2-6AU6, 2-6AN8, 4-EL84, 6BQ5, 1-GZ34/5AR4

Kit\$ 59.95
Wired\$119.95

Model AA-161 14-Watt Amplifier

Frequency response 20 to 20,000 cps \pm 1 db; harmonic distortion less than 1% at 12 watts; IM distortion less than 1.5% at 12 watts; three inputs: magnetic phono (RIAA), crystal phono, and tuner; separate bass and treble controls; hum balance control; screen-tapped output circuit uses EL84 output tubes; output impedances: 4, 8, and 16 ohms; complete with cabinet; over-all dimensions 12 1/2" w. x 8 1/16" d. x 4 1/2" h.; 15 lbs.

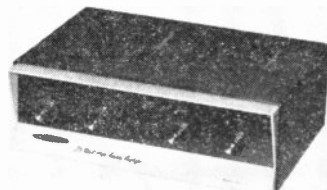
Mono design (kit).....\$33.54
Model AA-161A assembled.....\$62.95

Model AA-11 Deluxe Stereo Preamp Kit



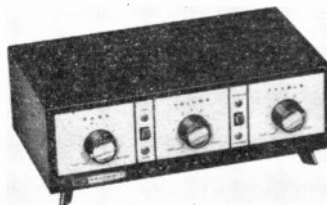
Push-button design; all primary operating controls are on front panel; all secondary controls behind hinged lower panel; frequency response 20-20,000 cps \pm 0.5 db; harmonic distortion .05% maximum; IM distortion .09% max.; five stereo inputs and three mono inputs. Has center-channel output and all necessary controls—blend, stereo balance controls, scratch and rumble filters, stereo/mono switch, channel reversal switch, phase reversal switch, volume/loudness switch; 10 tubes; over-all dimensions 5 1/2" h. x 11 1/2" d. x 15 1/4" w.\$84.95

Model AA-181 Integrated Amplifier



Mono design; 25 watts sine-wave power; frequency response 30-15,000 cps \pm 1 db at 25 watts output; harmonic distortion less than 2% at 30-15,000 cps, 25 watts; IM distortion less than 2% at 25 watts; inputs for microphone, magnetic phono, crystal or ceramic phono, auxiliary; bass and treble tone controls; 4-8-16 ohm outputs; over-all dimensions 13 1/2" w. x 4 1/16" h. x 9 1/2" d.\$42.95

Model AA-191 Integrated Amplifier



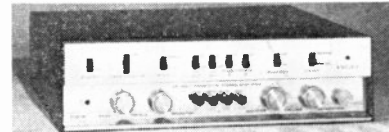
Mono version; 3 watts output; response 50-20,000 cps \pm 1 db; harmonic distortion less than 3% 60-20,000 cps @ 3 watts; IM distortion less than 3% @ 3 watts; sensitivity (crystal phono & tuner) .15 v. for 3 watts; 4-8-16 ohm outputs; tubes—EF86, EL84, 6X4. Kit.....\$16.88

KNIGHT

Model KN-400B Transistor Stereo Amp

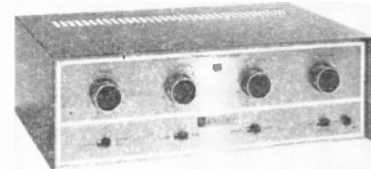
Has 16 transistors, two thermistors, four diodes; five pairs stereo inputs including tape head; stereo/mono switch; stereo/normal/reverse switch; rumble & scratch filters; output for stereo tape recording; IHFM music power output 20 watts per channel; response 20-20,000 cps \pm 1 db; harmonic distortion less than 1% at rated output; hum and noise inaudible at all playing levels; matches any speakers; dark brown textured case and polished brass panel\$99.50

Model KN-450A Stereo Amplifier



100-watt (IHFM rating) all-transistor stereo design; tape monitor, scratch filter, and rumble filter switches; bass, treble, and stereo balance controls; stereo separation control; response 20-30,000 cps \pm .5 db at rated power; harmonic distortion .5% at rated power; 5 pairs of inputs: magnetic phono, tape preamp, tuner, auxiliary, tape monitor\$189.95

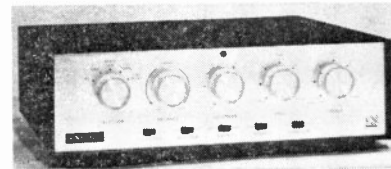
Model KN-724A Stereo Amplifier



12 watts IHFM music power per channel; built-in preamp with stereo inputs for mag. phono, crystal or ceramic phono, tuner, and tape deck; switch for stereo/mono operation; individual bass & treble controls; power output 24 watts; response 40-15,000 cps \pm 1 db; harmonic distortion 1%; hum & noise -72 db; 4, 8, 16 ohm speaker outputs; output for stereo tape recording; 4 1/2" x 13" x 9".....\$54.95

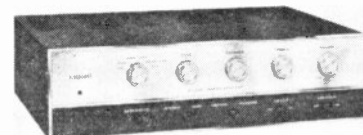
Model KN-735 40-Watt Stereo Amp

Dual preamps; loudness contour switch; inputs for tape, tuner, 3-phonos; controls for selector, balance, bass, treble, rumble



and scratch, stereo-reverse stereo; frequency response \pm 1 db, 20-20,000 cps.; harmonic distortion 1% at 20 watts measured at 1000 cps.; IM distortion 3% max.; 20 watts per channel IHFM music power output; tubes are 4-6V6GT, 4-12AX7, 12AU7, EZ81 rectifier; 4 3/4" x 13 1/4" x 9 1/4"\$79.95

Model KN-755 55-watt Stereo Amp

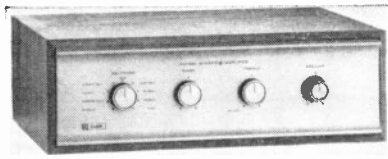


All necessary controls including loudness compensation, stereo separation switch; IHFM music power rating 27.5 watts each channel; frequency response \pm 1 db, 30-20,000 cps. at 27.5 watts; d.c. for preamp

filaments; inputs for ceramic phono, tuner, mag. phono, tape, aux.; tubes are 5-ECC83, 4-6L6GC, 5A54A rectifier; 4 1/4" x 15 3/4" x 12"\$99.95

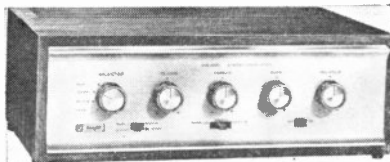
KNIGHT-KIT

Model KG-250 20-Watt Stereo Amp



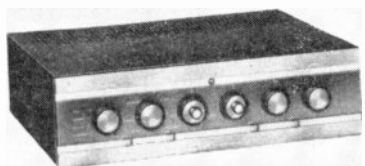
10 watts per channel; response 30-18,000 cps \pm 1 db at full rated power; harmonic distortion less than 1.5% at rated power; inputs: 4 pair—mag. phono, ceramic or crystal phono, tuner, aux.; selector switch positions are: stereo phono, phono reverse, tuner, tuner reverse, aux., aux. reverse; mono — phono, tuner, aux.; bass and treble on-off controls; concentric volume control; output impedances 4-8-16 ohms; tubes: 4-ECC82, 2-ECC83/12AX7, 1-EZ81; 4 1/4" x 13 1/4" x 8 1/2"; wt. 17 lbs.
83YX317—KG-250.....Kit \$39.95
83YX030 Wood case.....\$ 9.95
83YX031 Metal case.....\$ 4.95

Model KG-400 32-Watt Stereo Amp



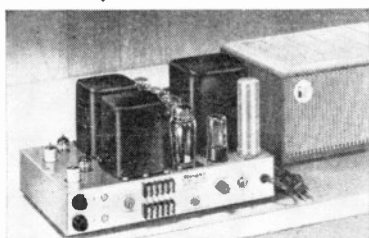
Preamps have d.c.-heated filaments; 5 pairs stereo inputs, including tape head input; center-channel output; outputs for stereo tape recording; response 30-16,000 cps \pm 1 db; harmonic distortion less than 1% at 16 watts; tubes 7025, 5-12AX7, 4-7189, GZ34/5AR4.
83YU413—KG-400.....Kit \$59.95
83YX023 Wood case.....\$ 9.95
83YX024 Metal case.....\$ 4.95

Model KA-55 40-Watt Stereo Amp



20 watts per channel; response 25-28,000 cps \pm 1 db at 10 watts; inputs: 2 each, tape head (NAB), mag. phono, ceramic phono, tuner, aux.; 4 position selector switch; 6 position channel selector has stereo, stereo reverse, left channel, right channel, left or right channel through both outputs; impedances are 4, 8, 16 ohms; 8 and 16 ohms for center channel; tubes are 4-12AX7, 2-6CM8, 4-6973, GZ34; printed circuit construction.
83YU774—KA-55.....Kit \$79.95

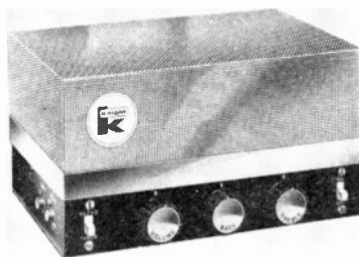
Model KB-85 70-Watt Basic Stereo Amp



Response 15-31,000 cps \pm .5 db at 35 watts per channel; harmonic distortion

.25% at 35 watts per channel; IM distortion 0.15% per channel at 35 watts; hum and noise 90 db below 35 watts; individual level controls; printed-circuit boards; output impedances each channel 4-8-16-32 ohms; tubes: 2-EF86, 2-ECC83, 4-EL37, 2-GZ34.
83YU618—KB-85.....Kit \$69.96
Metal cover\$ 6.50

Model KM-15 12-Watt Amplifier



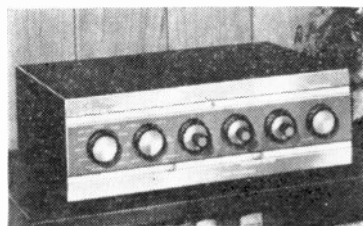
Response 30-15,000 cps \pm 1 db at 12 watts; harmonic distortion 1% at 1000 cps for rated output; hum and noise level 65 db down at rated output through high-level input; two inputs; bass control 9 db boost or cut at 40 cps; treble control 9 db boost or cut at 10,000 cps; tubes: 2-ECC83/12AX7, 2-EL84, EZ80; output impedances 4-8-16 ohms.
83Y784—KM-15.....Kit \$19.95
83Y783 Metal cover\$ 3.95

Model KM-20 18-Watt Amplifier



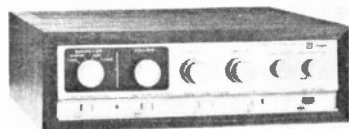
Response 30-16,000 cps \pm 1 db at 18 watts; distortion 0.5% at 18 watts; hum and noise 70 db below 18 watts; bass and treble controls; 7-position phono equalization; inputs: magnetic phono, ceramic phono, tape head, tape, aux., tuner; output impedances 4-8-16 ohms; tubes EF86/Z729, 2-ECC83/12AX7, 2-6973, EZ81; printed-circuit construction; complete with cabinet, wire, solder.
83YX930—KM-20.....Kit \$39.95

Model KP-50 Deluxe Stereo Preamp



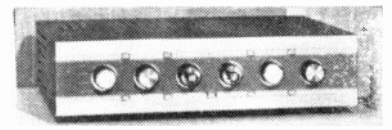
Inputs for 5 stereo pair and mono; d.c.-heated filaments; separate tape outputs; clutch-type controls; frequency response \pm 0.5 db 7-120,000 cps; harmonic distortion less than 0.25%; IM distortion less than 0.7% at 1 volt output; bass and treble cut or boost 15 db; scratch and rumble filters.
83YX768—KP-50.....Kit \$59.95

Model KG-60 40-Watt Integrated Amp



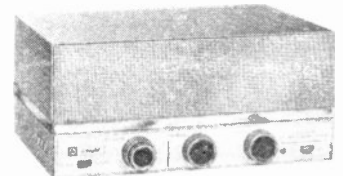
Transistorized unit; built-in preamp has five pairs of stereo inputs including tape head; control for adjusting channel separation; concentric bass & treble controls for individual channel adjustment; rumble & scratch filters; transformerless direct coupling between output stage and speakers; HiFi music power output 20 watts per channel; response 20-20,000 cps \pm 1 db at full output; harmonic distortion 1% at full output; hum and noise 90 db below full output; 20-transistor circuit; less case.
83YU659—KG-60.....Kit \$89.59
83YX614 Metal case.....\$ 4.95
83YX615 Wood case.....\$ 9.95

Model KA-95 70-Watt Stereo Amp



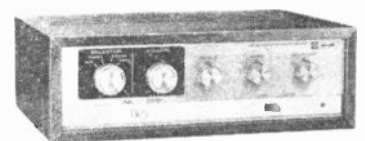
Built-in preamps with d.c.-heated filaments; 6 pairs stereo inputs; dual loudness control, balance control, blend control; rumble and scratch filters; response 20-30,000 cps \pm 0.5 db at rated output; harmonic distortion 0.5% at 35 watts; hum and noise better than 85 db below 35 watts; tubes: 2-12AY7, 2-7025, 2-1186, 2-ECC83, 4-1L34, 2-GZ34, 83YU934—KA-95.....Kit \$119.95

Model KG-240 20-Watt Stereo Amp



Two pairs of inputs (tuner, ceramic phono) selectable by front-panel slide switch; complete stereo control facilities; all controls front panel mounted and include ganged bass and treble controls, concentric volume control; hum and noise 60 db below rated output; power output 10 watts per channel (HiFi music power); response 35-15,000 cps; harmonic distortion 1.5% at 1000 cps; separation 35 db.....Kit \$29.95

Model KG-320 32-Watt Transistor Amp



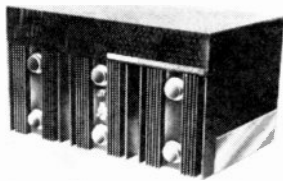
32 watts (HiFi) 14-transistor, 4-diode circuit; direct coupled output, no transformers or capacitors in output stage; better than 35 db separation; mag. phono, tuner, and aux. inputs; separate ganged bass and treble controls; output impedance 8-16 ohms; continuous sine-wave power output 20 watts at 8 ohms, 16 watts at 16 ohms; HiFi music power output 32 watts at 8 ohms, 30 watts at 16 ohms; response at rated power 25-18,000 cps \pm 1 db; harmonic distortion at rated power 1%; hum and noise -68 db.....Kit \$59.95

LAFAYETTE

Model "Criterion" Transistorized Power Amp

80 watts continuous sine-wave per channel for 4 ohms, 50 watts/channel for 8 ohms, 27 watts/channel for 16 ohms output; response 15-20,000 cps \pm .1 db (-3 db at

1 Amplifiers



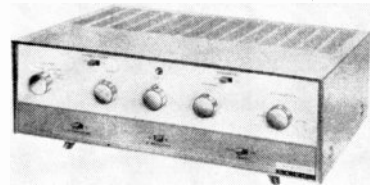
80,000 cps); harmonic distortion less than .03% for 8 ohms, 45 watts, 100 cps; IM distortion less than .2% into 4 ohms, 60 watts; overload recovery time 50 μ sec. max.; 16 power transistors, 14 silicon rectifiers; level controls for each channel; 18"l. x 8"w. x 8"h.\$299.50

Model LA-55 Mono Amp-Preamp

Mono amp-preamplifier; power output (speech and music rating) 15 watts; frequency response at normal listening levels, 15-30,000 cps \pm 1 db; hum and noise, high level inputs, 65 db below rated output; 5 inputs; aux, tuner, mag phono, crystal phono, tape head; tape output; bass and treble controls; rumble filter; hum balance; output impedances: 4, 8, 16 ohms; tubes: 2-EL84, 1 each 6BL8, 6AU6, 12AX7, 6CA4.....\$44.50

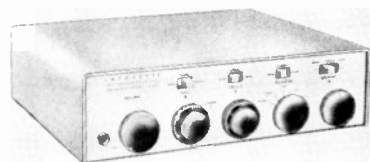
Model LA-240 40-Watt Stereo Amp

Integrated 40-watt stereo amp-preamp; 20 watts each channel; 8- or 16-ohm speakers; concentric bass, treble controls; continuously variable separation control; individual volume-balance; loudness switch;



rumble filter; mode switch; selector switch (aux., tuner, phono, tape head); hum balance controls; 5 inputs; dual tape output, dual 8- and 16-ohm terminals. Response 12-100,000 cps \pm 1 db @ 1 watt; 50-70,000 cps \pm 1 db @ full output. 4-6BQ5/EL84, 2-6BL8/ECC80, 3-12AX7/ECC83, 1-GZ34/5AR4. Enclosure and legs included\$79.95

Model LA-440 Transistorized Integrated Stereo Amp



20 watts/channel music power based on 4-ohm load; response 20-20,000 cps \pm .5 db; harmonic distortion .5% at 1 db below clipping; output impedance 4-8-16 ohms; controls: bass, treble, volume, selector, balance, plus four slide switches for rumble, scratch, loudness, stereo/mono; inputs: aux. 1, aux. 2, phono, tuner and tape; 20 transistors, 7 diodes, 2 thermistors; power requirement 105-120 volts, 50-60 cycles; 12 to 28 volts d.c. for battery operation; 3" x 10 1/4" x 8 1/2".....\$99.50

Model KT-236A Stereo Amp Kit

18 watts per channel; frequency response 15-30,000 cps \pm 1 db; sensitivity high level input: 0.5 volt, low level input 3



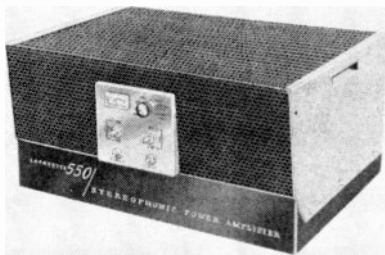
millivolts for full output; hum and noise: high level 70 db below full output; phono 53 db below full output; channel separation better than 50 db; inputs (2 each) aux, tuner, crystal phono, magnetic phono; outputs (2 each) speaker, tape out; output impedance 8 and 16 ohms; tubes are 4-EL84, 2-7199, 3-12AX7; 2 silicon diodes; 14 1/2"w. x 11 1/2"d. x 5 1/2"h. \$59.50

Model KT-250A Stereo Amp-Preamp Kit

25 watts per channel; frequency response 20-50,000 cps \pm 1 db at rated power; hum mag phono inputs, 50 db below rated output; sensitivity: mag phono, 3.5 mv; high level inputs, 0.5 volt; channel separation better than 55 db at 1000 cps; 4-position selector switch; aux, tuner, phono, tape head; dual concentric bass control \pm 14 db at 50 cps; dual concentric treble control \pm 14 db at 10,000 cps; dual concentric volume control; on/off loudness switch; phase switch; separation control; phono input RIAA equalization; tape head input NAB equalization; third channel output; output impedances 4, 8, 16 ohms; tubes: 4-EL86, 2-7199, 3-12AX7; 3 silicon diodes; 14 1/2"x12 3/4"x5 1/2"; shpg. wt. 28 lbs.\$74.50

Model KT-550 Basic Stereo Amp Kit

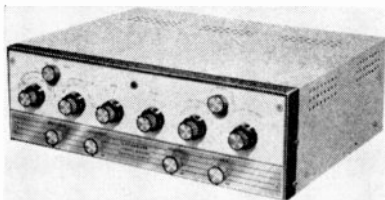
50 watts per channel; frequency response 17-45,000 cps \pm 1 db at rated power; harmonic distortion less than 0.5% at rated power; IM distortion less than 0.5% at



rated power; hum and noise better than 90 db below 50 watts; printed circuit board; bias adjustment, a.c., d.c. balance controls with self contained meter; tubes: 4-7027A, 4-6CL6, 2-6BR8A; 5 silicon diodes.

KT-550 (Kit)\$134.50
LA-550 (Assembled)\$184.50

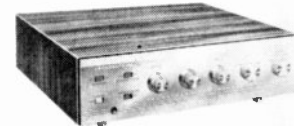
Model KT-600A Stereo Preamp Kit



For all stereo or mono program sources; frequency response 10 to 25,000 cps \pm .05 db; distortion; IM less than 0.03% at 2.5 volts output, harmonic less than 0.1% at 5 volts output; hum and noise 88 db below 2.5 volts on high level channels, 62 db below 2.5 volts on low level channels; individual tone controls for each channel provide 15 db boost or cut at 30 cps and 13 db boost and 18 db cut at 10,000 cps; sensitivity: phono, 4.4 millivolts for 2.5

volts output; high level inputs, 0.22 volt for 2.5 volts output; presence control; rumble and scratch filters; 24 positions of phono equalization; 2-position tape equalization; balance control; phase reverse, channel reverse; "third channel" output for use with third amplifier-speaker or for blending stereo channels; output impedance 1500 ohms; a.c. outlets: 3 switched, 1 unswitched; tubes are 7-7025 plus 2 selenium rectifiers; 14" x 4 1/2" x 10 1/2".
.....\$79.50
Wired\$134.50

Model KT-900 Transistorized Integrated Stereo Amp Kit



Music power rating 60 watts/channel for 8 ohms, 38 watts/channel for 16 and 4 ohms; response 10-25,000 cps \pm 1 db at rated output; harmonic distortion .5% at rated power; hum & noise -68 db on magnetic phono, -75 db on tuner; inputs: mag. phono, ceramic phono, tape head, tuner, aux.; conventional operating controls; 22 transistors, 14 diodes; walnut vinyl-covered metal case; 13 3/8"w. x 3 1/2" h. (with legs) x 11 1/8"d.
Kit\$134.50

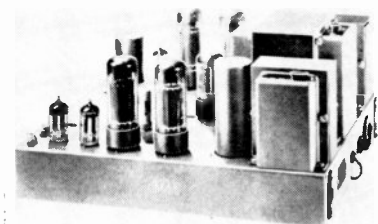
LEAK

"Point One Stereo" Preamplifier



Features 5 dual inputs; sensitivity tape head (NAB) 4.5 millivolts; tuner 50 millivolts; phono (RIAA) 5.5 millivolts; microphone 3 millivolts; aux, 50 millivolts; harmonic distortion less than 0.01% for 125 millivolts output; ganged bass and treble controls allow 16 db boost or cut at 30 and 15,000 cps; rumble filter; 5-position function switch; stereo, stereo reverse, left input to both channels, right input to both channels, stereo pickup converted to mono; balance control (allows for difference of 6 db sensitivity between speakers); outputs for tape recording (stereo or mono); tubes are 2-7Z79 and ECC83; supplied with four color inserts to fit room color scheme.....\$119.50

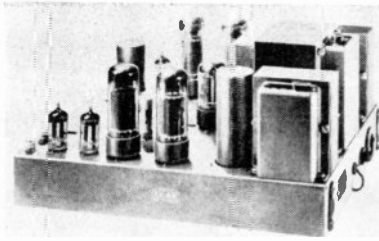
Stereo 60 Basic Amplifier



Power output 30 watts per channel; harmonic distortion 0.1% at 1000 cps for 30 watts output; hum and noise 80 db below 30 watts; sensitivity 125 millivolts for 30 watts output; frequency response 20 to 20,000 cps \pm .5 db; damping factor 25 at 1000 cps; output impedance 3 to 20 ohms; tubes are 3-ECC83, 4-EL34, 1-GZ34; 100-120 volts; 50-100 cycles.....\$219.00

Stereo 20 Basic Amplifier

Frequency response 20 to 20,000 cps ± 0.5 db; power output 12 watts per channel; harmonic distortion 0.1% at 10 watts output



(1000 cps); hum and noise 80 db below 10 watts; sensitivity 125 millivolts for 10 watts output; damping factor 25 at 1000 cps; output impedance 3 to 20 ohms; 100-125 volts; 50 to 100 cycles; tubes are 1—ECC83, 2—

MARANTZ

Model 9A 70-Watt Mono Amp

70 watts r.m.s., 140 watts peak; switch for 40-watt triode operation; response 20-20,000 cps $\pm .1$ db at full rated power; subsonic filter switch -25 db @ 20 cps, -20 db @ 3 cps; harmonic distortion less than 0.3% at 20 kc. full rated power; IM distortion less than .5%; hum and noise better than 90 db below 70 watts; damping factor 17, can be changed internally; output impedances 4, 8, 16 ohms, plus 1 ohm tap for center speaker connection; front panel controls: gain (isolated by cathode-follower phase circuit), phase switch, low filter, test switch (bias readings each tube, built-in test signal for dynamic balance adj.); five bias and balance adjustments plus input and output connections under snap-out access panel; 2—6DJ8/ECC88, 1—6CG7, 4—6CA7/EL34, 1 zener diode, 5 silicon rectifiers; over-all size 15 3/8" x 8 1/4" x 10 1/2".

Model 9A.....\$324.00
 Model 9R (rack mounted).....\$354.00
 Also available:
 Model 970 (70 v. output, plus 8, 16 ohms)
 Model 970R (same as Model 970, rack mounted)

Model 7 Stereo Console Preamp

Pre-amplifier; can select 8 positions: mic., phono 1 and 2, tape, FM-AM, multiplex, TV, aux.; controls for stereo, stereo reverse, channel A, channel B, channel A/B; all monophonic positions can be heard in both speakers; total volume range 90 db; high filter at 9 kc. and 5 kc.; rumble filter at 50 and 100 cps; 0.1% IM distortion at 10 volts r.m.s., 0.01% at 2 volts r.m.s.; frequency response 20-20,000 cps; tubes are 6—ECC83/12AX7; over-all size 14 3/8" x 5 3/8" x 8 1/2"; total noise level is 80 db below 10 mv. phono input; weight 15 lb.

Model 7R—identical to 7 but mounted on 19" rack panel.....\$288.00

Model 8B Stereo Power Amplifier

Two 35-watt amps on single chassis; each amp: 70 watts peak; output in triode operation (with minor circuit changes) 18 watts; response 20-20,000 cps ± 1 db at 35 watts; harmonic distortion less than .1% at mid-frequencies at 35 watts; IM distortion less than .5% at 35 watts; damping factor 20 (can be adjusted for 2, 1, and 1/2); hum better than 90 db below 35 watts; metered bias adjust; tubes are

6BH6, 6CG7; 2—EL34/6CA7 plus silicon rectifier (each channel); 13 1/2" x 7 1/4" x 10 1/2".....\$264.00
 Accessory grille.....\$9.00

Second to None*

*(With the exception, of course, of the remarkable Marantz 70 watt model 9 amplifiers)



Here is today's top-ranking stereo combination. The Marantz model 8B amplifier and model 7 preamplifier offer a quality of performance which can only be approached—not equalled. Use these well-proven Marantz components if you want the comforting assurance of the finest results obtainable. Marantz warrants its products for two full years.

Points of superiority include:

Model 7 Stereo Console Its magnificent performance and precision have won world-wide respect • IM distortion @ 10V ea. pk. RMS, within 0.15%, 0.1% typical • Hum and noise, 80 db below 10 mv phono input • Sensitivity, 400 microvolts (0.4 millivolts) for 1 volt output • Equalizer and tone curves matched to better than 0.5 db • Volume tracking within 2 db, 1 db typical • Beautiful precision construction • Price \$264 (Cabinet extra)

Model 8B Stereo Amplifier In the typical Marantz tradition. Very fine, clean performance and workmanship • 35 watts per channel (70 watts peak) • Harmonic distortion, less than 0.1% in most of range, less than 0.5% at 20 cps and 20 kc • Hum and noise, better than 90 db below 35 watts • Exceptionally stable under all conditions • Built-in metered tests and adjustments

Write for literature No. 56V

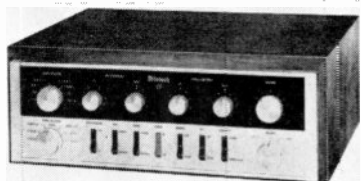
marantz
 25-14 BROADWAY, LONG ISLAND CITY 6, N. Y.

CIRCLE NO. 39 ON READER SERVICE PAGE

1 Amplifiers

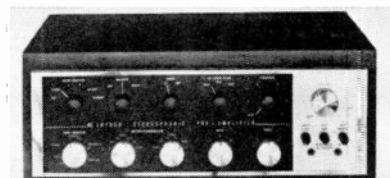
McINTOSH

Model C-11 Stereo Preamp



Less than .05% distortion at 3 v. output, 20-20,000 cps \pm .5 db; less than 1.5 μ v. input noise level; mode selector switch same as on Model MX100 tuner/preamp; may be used to compare left input to right input through both speakers, left amp and speaker to right amp and speaker from mono input; input sensitivity: aux, tape, tuner 1, tuner 2, .25 v.; phono 1 phono 2 2 mv.; tape head 2 mv.; tape monitor .25 v.; microphone 2.5 mv.; main output (2 jacks per channel) 2.5 v. with rated input; tape output .25 v. with rated input; operating controls are: input selector, individual bass and treble tone controls for each channel, volume, mode selector, RIAA-LP compensator, normal/monitor tape, phase, power, rumble filter, high-frequency filter, loudness, and balance; chassis size 14 $\frac{1}{2}$ " w. x 4 $\frac{3}{4}$ " h. x 12" d.; front panel 15 $\frac{3}{4}$ " w. x 5 $\frac{3}{8}$ " h.\$229.50
Wood cabinet extra.....\$ 25.00

Model C-20 Stereo Preamp



Flexible amplifier for stereo; mode selector for stereo, reverse, Channel A, Channel B and mono from either channel; treble boost 13 db at 20,000 cps and cut 18 db at 20,000 cps, bass boost 16 db at 20,000 cps and cut 20 db at 20,000 cps, input level adjustment; equalization for tape, rumble filter, high-frequency filter; input sensitivity: tuner 0.25 v., phono 2.5 mv.; frequency response \pm 0.5 db 20 to 20,000 cps; distortion less than 0.2% at rated output; 17 lb.\$264.00
Walnut or mahogany cabinet for Model C-20\$ 25.00

Model MC-30 Power Amplifier



Power output 30 watts continuous; response 20-30,000 cps \pm .1 db at 30 watts; 10-100,000 cps \pm 1 db at 15 watts; harmonic distortion less than .33% at 30 watts, 20-20,000 cps; IM distortion less than .5% at 30 watts, 20-20,000 cps; impulse distortion negligible; hum and noise -90 db; damping factor 12 or better

for 4-8-16 ohm outputs; 16 for 600 ohm output; 600 ohm output balanced to ground; phase shift at 20 cps 3°, at 20,000 cps 9°; .5 volt input for 30 watts output; tubes: 12AU7, 2-12AX7, 12BH7, 2-1614, 5U4GA; 13 $\frac{1}{8}$ " x 8" x 8"; 30 $\frac{1}{2}$ lbs.; chrome and black finish.\$153.00

Model MC-40 Stereo Amplifier



20 watts/channel continuous sine-wave; harmonic distortion less than .5% at rated output each channel and 20-20,000 cps; IM distortion less than .5% (20-20,000 cps); phase shift \pm 8° (20-20,000 cps); response 20-20,000 cps \pm 0 -1 db at 20 watts total output (10-100,000 cps \pm 0 -1 db); output impedances 4-8-16-125-150-600 ohms; tubes: 2-12AX7, 12AU7, 12BH7, 2-6L6GC or 2-7027A; 13 $\frac{3}{4}$ " l. x 8 $\frac{1}{8}$ " w. x 7 $\frac{7}{8}$ " h.\$159.00

Model MC-75 Mono Power Amp



Guaranteed continuous sine-wave output 75 watts with harmonic distortion less than .5%, 20-20,000 cps; capable (but not guaranteed) of 91 watts continuous sine wave at same distortion; IM distortion less than .5% for any combination of frequencies 20-20,000 cps; phase shift less than \pm 8°; response 16-60,000 cps \pm 0 - .5 db; sensitivity .5 v. for rated output; hum and noise 90 db below rated output; output impedance 4-8-16 ohms; 16 $\frac{3}{4}$ " l. x 8 $\frac{1}{4}$ " w. x 8 $\frac{1}{4}$ " d.\$229.50

Model MC-225 Stereo Power Amp



Guaranteed 25 watts (capable of 34 watts) per channel continuous sine-wave power with less than .5% harmonic distortion, 20-20,000 cps at rated output; IM distortion less than .5% for any combination of frequencies from 20 to 20,000 cps; phase shift less than \pm 15° from 20 to 20,000 cps; response 18-60,000 cps \pm 0 - .5 db; sensitivity .5 v. for rated output; hum and noise 90 db below rated output; output impedance 4-8-16-150-200 ohms; 14 $\frac{1}{2}$ " l. x 9 $\frac{1}{8}$ " w. x 7" h.\$198.00

Model MC-240 Stereo Power Amp



Guaranteed 40 watts (capable of 58 watts) continuous sine-wave power per channel; harmonic distortion less than .5% from 20-20,000 cps at rated output; IM distortion less than .5% for any combination of frequencies from 20-20,000 cps; phase shift less than \pm 6° from 20 to 20,000 cps; response 16-60,000 cps \pm 0 - .5 db; sensitivity .5 v. at rated output; hum and noise 90 db below rated output; output impedance 4-8-16 ohms; 17 $\frac{1}{4}$ " l. x 10 $\frac{3}{4}$ " w. x 8" h.\$288.00

Model MC-275 Stereo Power Amp



75 watts per channel with each channel identical in performance to Model MC-75 power amplifier; 17 $\frac{1}{4}$ " l. x 12 $\frac{3}{4}$ " w. x 8" h.\$444.00

MONARCH

Model MS-620 Integrated Mono Amplifier

Music-power output 15 watts; response 20-20,000 cps \pm 1 db; bass and treble controls plus equalizer and loudness controls; inputs: phono magnetic and crystal, microphone, tuner, and auxiliary; 5 $\frac{7}{8}$ " d. x 4 $\frac{3}{8}$ " h. x 11 $\frac{1}{2}$ " w.\$49.95

NATIONAL

Model 2000 Integrated Amplifier

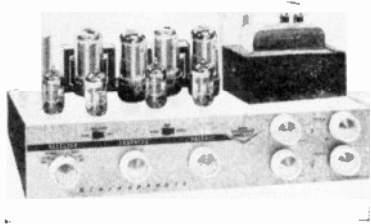


Rated output: 15 watts; built-in preamp; 3-position record equalization; separate bass and treble controls with 16 db boost or cut at 50 and 10,000 cps; frequency response: 20 to 20,000 cps \pm 0.5 db; hum 60 db below 15 watts on high level input, 50 db on phono input; inputs: magnetic (6 millivolts sensitivity), crystal phono, tape, tuner; output impedances: 4, 8, 16 ohms; one a.c. convenience outlet; tubes: 12AX7, 12AT7, 12AU7, 2-7408, 5Y3; 12 $\frac{1}{2}$ " w. x 3 $\frac{1}{2}$ " h. x 7 $\frac{1}{8}$ " d.
Kit form.....\$28.50
Metal enclosure.....\$ 5.95

Model STA-24 Stereo Amplifier

Williamson circuit preamp-amp; power output 15 watts per channel; separate bass

STEREO/HI-FI DIRECTORY



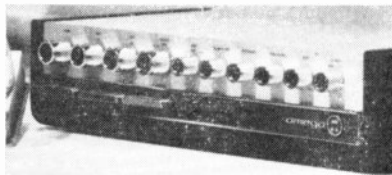
and treble controls; selector switch for tape high and low, phono high or low, tuner and aux.; four dual inputs for channel A and B, tape and mag, phono, ceramic and xtal phono, tuner and aux.; distortion less than 1%; frequency response ± 1 db 20-20,000 cps; tubes are 2-12AX7/ECC83/7025, 2-12AT7/ECC81, 4-7408, 5U4 rectifier; 14" x 8" x 6". Kit...\$39.95

Model 2200 Integrated Amplifier

12-watt design; response 20-20,000 cps ± 1 db; distortion 1% at 12 watts; four inputs—mag, phono/tape, crystal phono, tuner, mike/aux.; sensitivity phono 3 mv., others .5 v. for max. output; controls—function, loudness, bass, treble; tubes—12AX7, 12AT7, 2-6V6's, 5Y3; kit...\$22.75 Metal enclosure.....\$ 3.95

OMEGA

Model 1600 Integrated Amplifier



All-transistorized stereo design; 30 watts (IHFM music rating) per channel; response 18-20,000 cps $\pm .3$ db at full output; harmonic distortion less than 1%; hum and noise 75 db below full output at 10 mv. sensitivity; has 31 transistors, 5 diodes, 2 silicon rectifiers; sensitivity 4 mv. for mag. phono, .25 v. for ceramic phono, 3.5 mv. for tape, .3 v. for TV-aux.-tuner; controls: "on-off volume", bass, treble, input selector, mode, volume balance, bass balance, treble balance, blend, loudness, tape monitor, rumble, scratch, phase; bass and treble balance controls balance bass and high-frequency response of amplifier and speaker separately; 3" h. x 15 1/2" w. x 9" d.....\$249.00 Cradle cabinet (ebony or oiled-walnut).....\$ 16.00 Panel mounting ring (chrome)....\$ 9.95 Cabinet (oiled-walnut or mahogany).....\$ 24.75

PACO

Model SA-40 Integrated Stereo Amp



20-watts per channel steady-state power; response 30 to 90,000 cps ± 1 db; harmonic distortion less than .5% @ 20 watts; 14 panel controls including dual bass and treble controls and switches for additional speakers; 14 inputs including three dual high-level and four dual low-level; 4, 8, 16, and 32-ohm output; black and gold case (kit)\$ 79.95 Model SA-40W (factory-wired)....\$129.95

1963 EDITION

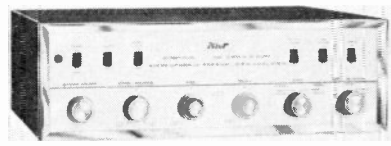
PILOT

Model 248B Integrated Amplifier



37 watts per channel (IHFM); response 5-50,000 cps ± 1 db; harmonic distortion .1% (IHFM); hum level -80 db; 4-8-16 ohms, center-channel, tape recorder, and headphone outputs; sensitivity; two mag. phono—3 mv. each (one can be used for tape head) and tape recorder (high-level) 110 mv.; has 13 operating controls; 6 1/4" x 15 1/4" x 12 3/4"; less cover.....\$269.50

Model 246 Integrated Amplifier

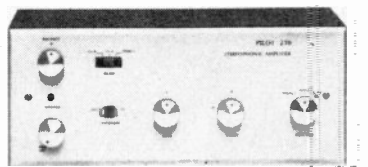


30 watts per channel (IHFM); response 10-40,000 cps ± 1 db; harmonic distortion .1% (IHFM); hum level -80 db; 4-8-16 ohms, center-channel, tape recorder outputs; sensitivity; two mag. phono 3 mv. each (one can be used for tape head) and tape recorder (high-level) 110 mv.; has 11 operating controls; 5 1/8" x 14 1/8" x 12 3/4"; with cover.....\$199.50

Model 240 Integrated Amplifier

15 watts per channel (IHFM); response 10-40,000 cps ± 1 db; harmonic distortion 1% (IHFM); hum level -80 db; 4-8-16 ohms, center-channel, tape outputs; sensitivity; two mag. phono (3 mv. & 12 mv.), one can be used for tape head, and tape recorder, 110 mv.; has 12 operating controls; 5 1/8" x 14 1/8" x 11"; with cover\$134.50

Model 230 Integrated Amplifier



12 watts per channel (IHFM); response 10-30,000 cps ± 1 db; harmonic distortion 1% (IHFM); hum level -80 db; sensitivity; mag. phono 3.5 mv., tape recorder 100 mv.; 8-16 ohm outputs; controls: separate bass and treble, volume, mode, selector, balance, loudness; 5" x 11 1/8" x 9 1/4"; with cover.....\$89.50

QUAD

Model 22 Stereo Control Unit



Frequency response 20 to 20,000 cps $\pm .5$ db on high level input, 20 to 18,000 cps ± 1 db on low level input; push-button record equalization with positions for COL-LP, AES, FRR 78, STD 78, other curves available through simultaneous use

**FOR FULL QUALITY
STEREO-MULTIPLEX
OR MONOPHONIC
FM RECEPTION**

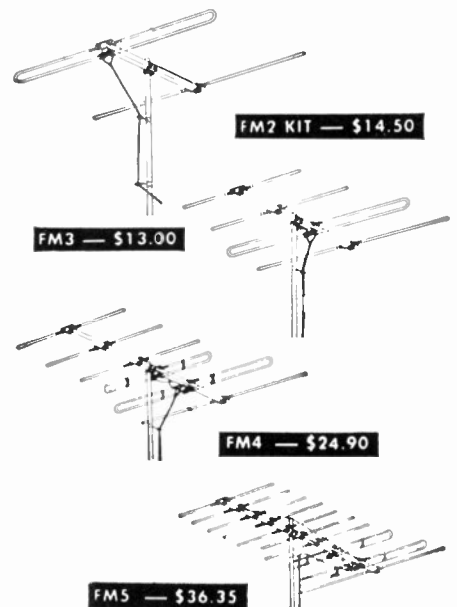
USE

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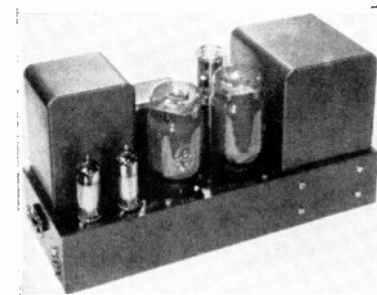
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33

1 Amplifiers

of two or more push-buttons; push-button selection of stereo or single channel operation; bass and treble controls employ 5 db/octave slope in maximum positions; scratch filter (11 kc, 8 kc, 6 kc positions) with auxiliary control for varying cut-off slope from 1 to 50 db per octave; distortion (with least favorable arrangement of plugs and controls) less than 0.1% at 1.4 volt output; noise level: -70 db; inputs: phono, microphone, radio; separate plug-in input receptacles provide proper load impedance and sensitivity for various cartridges; maximum phono sensitivity: 3-6 millivolts; powered by and designed primarily for use with Quad II power amplifier.\$150.00

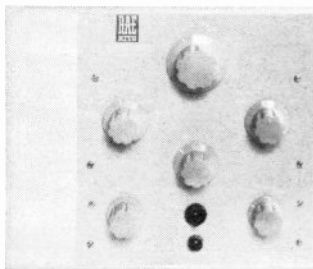
Model II Amplifier



Power output: 25 watts 20 to 20,000 cps; frequency response: 10 to 50,000 cps ± 0.5 db; harmonic distortion at 12 watts: 0.18% maximum (0.25% at 25 cps); IM distortion at 12 watts: 0.4%; noise level: 80 db below 15 watts; sensitivity: 1.4 volts; output impedance 8 and 16 ohm; damping factor: 16; tubes: 2-EF86, 2-KT66, GZ32; 13" x 4 3/4" x 6 1/2"; 18 1/4 lbs.\$125.00

R.A.E.

Model 400 Stereo Preamp Kit

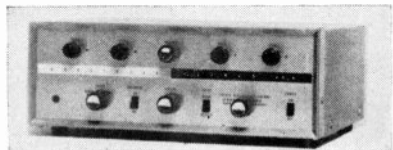


Six-position selector switch (mike, phono low, phono high, tape, FM, AM-TV); other controls are: bass, treble, balance, volume, and four-position speaker selector switch; output 2.5 volts per channel; tape output; distortion below .4%; hum & noise -70 db; six 12AX7 tubes; 8 3/4" h. x 8" w. x 11" d. Kit.....\$97.50

REALISTIC

Model SAF-40B Stereo Amplifier

Two 22.5 watt amplifiers, 45 watts mono-phonetic; controls for balance, phasing, bass and treble, volume, loudness; harmonic distortion less than 1% at 400 cps; fre-



quency response 20-20,000 cps; inputs for tuner, phono, tape; output impedances 4, 8, 16 ohms; 12"x4 1/8"x9 1/16"; includes cabinet.

Kit\$67.50
Wired\$89.95

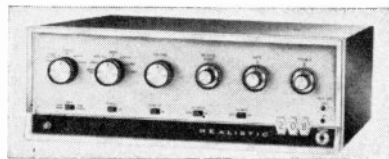
Model SAF-24 Stereo Amplifier



12 watts per channel (48 watt mono peaks); response 20-20,000 cps ± 1 db; distortion 1.8% total r.m.s.; hum -52 db phono, -72 db tuner; sensitivity 4 mv. mag. phono, .85 v. tuner; tone controls; output impedances 4, 8, 16 ohms; 12" x 4 1/4" x 7 3/4"\$64.95

Model TA-208 Stereo Amplifier

Fully transistorized—6 power transistors, 12 medium-gain transistors, 2 driver trans-

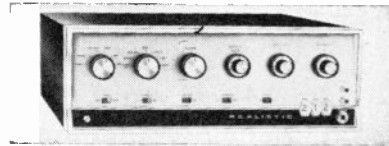


formers, 1 rectifier transformer, no output transformers; 40 watts to channel continuous (4-ohm load); response 20-15,000 cps ± 1 db (full power) 10-20,000 cps ± 1 db (10 watts); hum & noise -55 db below rated output for low level inputs, -70 db below rated output for high-level inputs, measurements made at 1000 cps; sensitivity (measured at 1000 cps, full power output) mag. phono 4 mv., tape head 3 mv., high-level 300 mv., output impedances 2 to 40 ohms; 15" x 5" x 10"\$189.95

Model SA-203 Stereo Amplifier

Two watts per channel (8 watt mono peaks); response 90-15,000 cps ± 2 db; crystal/ceramic cartridge, high-level aux. input; 4 tubes; output impedance 4 ohms; 6" x 5" x 5"\$14.95

Model SP-212 Stereo Preamp



Response 5-60,000 cps ± 1 db; IM distortion .9% @ 1/2 volt, less than .25% @ 2 volts output (uncompensated); hum & noise, high-level -78 db, low-level, -60 db; attenuation-rumble filter 10 db/octave below 70 cps, scratch filter 6 db/octave above 2000 cps; sensitivity—low-level 2 mv. @ 1.5 volt output; high-level 500 mv. @ 1.5 volt output; has loudness and tone controls; 14 front-panel controls plus tape output jacks and stereo headphone jacks on front panel; 15 1/2" x 5 3/8" x 6 3/4"\$99.95
Kit\$69.95

Model BA-210 140-Watt Stereo Amp

70 watts per channel continuous; response 5-80,000 cps $\pm .5$ db; harmonic & IM distortion less than 2% at full power (20-20,000 cps); sensitivity 1.8 volts r.m.s.; separation 60 db; output impedances 4, 8, 16 ohms; power supply—silicon diode full-wave voltage doubler with filter choke and thermal time delay for protection of filters and tube filaments; 10 1/4" x 14" x 7"

.....\$179.95
Kit\$139.95

Model HK-208 Stereo Amplifier Kit

Fully transistorized 40 watts per channel (4-ohm load); response 10-15,000 cps ± 1 db at full power, 10-20,000 cps ± 1 db at 10 watts per channel; hum & noise unmeasurable at full power; inherent impedance-matching device requires no output transformers yet matches all loads 2-40 ohms; 15" x 5" x 10"\$139.95

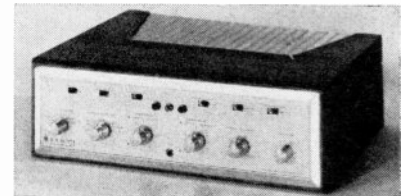
H. H. SCOTT

Model 99-D Mono Preamp-Amp



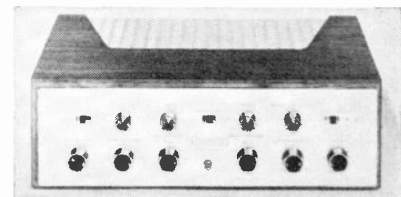
Power output: 25 watts (IHFM music power); 5 position record equalization; NAB tape playback equalization; separate bass and treble controls; rumble filter; scratch filter; loudness compensation switch; frequency response: 20 to 30,000 cps; harmonic distortion less than 0.8% on 44 watt peaks; first-order difference tone intermodulation less than 0.3%; pre-amp noise input; 10 millivolts hum 80 db below maximum output; inputs: two magnetic phono, tuner, tape, TV, tape-monitor; output jack for tape recorder; speaker output impedances: 4, 8, 16 ohms; d.c. on preamp tube filaments; self-balancing phase inverter; speaker-selector switch on front panel; a.c. convenience outlet; Type "C" case extra.....\$124.95

Model 299-C Stereo Preamp-Amp



Two complete amplifiers on one chassis; power output per channel 40 watts (IHFM music power standard); both channels in operation when used with monaural program sources; harmonic distortion less than 0.8%; IM distortion less than 0.5%; individual bass and treble controls for each channel; 2 low level and 3 high level inputs per channel; dual outputs to tape recorder and 4, 8, and 16 ohms to speaker; low level input sensitivity; 3 millivolts; 4-position record equalizer; NAB tape equalization; loudness-volume control; stereo balance control; scratch and rumble filters; phase reverse; stereo reverse; front panel center-channel level control; microphone equalization and carphone outlet for binaural listening; tubes are: 4-12AX7, 2-6GH8, 5U4GB, 2-7591; Type "C" case extra.....\$229.95

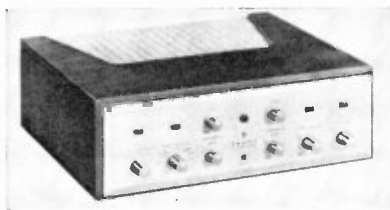
LK-72 Integrated Stereo Amp Kit



40 watts output each channel (IHFM music power); IHFM power band extending down to 20 cps; total harmonic distortion less than 0.8% at 1 kc. full power; hum

level better than 75 db below full power output; stereo controls include center-channel level control, scratch filter, tape recorder monitor, separate bass and treble each channel; tube heaters d.c.-operated; Type "C" case extra.
 Kit\$159.95

Model 222-C Integrated Amplifier



Power output 24 watts per channel (IHF50 music power); hum and noise better than 75 db below full power output; harmonic distortion less than .8% at full power; response 20-20,000 cps; IM distortion less than .5%; IHF50 power band from below 19 cps to above 20,000 cps; inputs are either 3 mv. or 9 mv. for magnetic phono (RIAA) or tape head (NAB) equalization; tape monitoring provisions; tuner and extra high-level inputs provided; seven position stereo selector switch same as on 299-C and 296; scratch filter; loudness compensation; stereo tape recorder and derived center-channel outputs; front-panel stereo headphone output; tubes—4-12AX7, 2-7199, 4-7189, 1-5AR4; Type "C" case extra.....\$169.95

Model LC-21 Preamp Kit



Features five pairs of stereo inputs; derived center-channel output; stereo tape recorder outputs; front-panel controls include equalization provisions for microphone, tape head, or RIAA; scratch and rumble filters; magnetic pickup-selector; phase reverse; tape monitor; derived center-channel level control; distortion less than .1% at 2.5 volts output; response 8-50,000 cps \pm 1 db; all wires pre-cut to correct length; tube sockets, terminals, etc. are pre-riveted at factory; Type "C" case extra.
 Kit\$99.95

LK-150 Stereo Power Amp Kit



65 watts (IHF50 music power) per channel (60 watts steady-state); 6550 matched-pair output tubes; IHF50 power band from below 19 cps to more than 25,000 cps; total harmonic distortion less than .5% at full power; IM distortion less than .5% at full output; damping factor adjustable to either 16:1 or 8:1; switchable subsonic noise filter.
 Kit\$169.95

SHERWOOD

only for those who want the ultimate

S-8000 FM/MX 64-watt Stereo Receiver \$299.50. 16 1/4" x 4 1/2" x 14" deep. Combines Sherwood's brilliant FM stereo tuner design, two 32-watt amplifiers, two phono/tape pre-amplifiers, and all circuitry necessary to receive FM stereocasts.



S-8000 FM/MX 64-watt Stereo Receiver

RAVINIA Model SR3 3-way speaker system \$139.50. Walnut Cabinet 26 1/4" x 15" x 13 1/4" deep. 12" high-compliance woofer, 8" midrange, and 2 1/2" ring-radiator tweeter. Features low intermodulation distortion, flat frequency response (\pm 2 1/2 DB) to 17 KC.

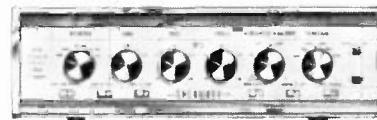
S3000 IV FM/MX Stereo Tuner \$160.00. 14" x 4 1/2" x 10 1/2" deep. Identical tuner design to S-8000. Other tuners: S-2100 FM Stereo/AM Tuner \$199.50. S-2000 II FM/AM Tuner \$150.50. (Same but without FM stereo feature)



S3000 IV FM/MX Stereo Tuner

FM Stereo Multiplex Adapters may be used to convert Sherwood and other FM tuners for stereo-cast reception. \$49.50 to \$69.50.

S-5500 II 64-watt Stereo Preamp/Amplifier \$164.50. 14" x 4 1/2" x 12 1/4" deep. Identical to amplifier used in S-8000. Other amplifiers: S-5000 II 80-watt Stereo Amplifier-Preamp \$199.50.



S-5500 II 64-watt Stereo Preamp/Amplifier

This typical room setting includes Sherwood's "Superb Stereo Starters,"—one S-8000 Receiver and two SR3 Loudspeakers. Sherwood Electronic Laboratories, Inc., 4300 N. California Ave., Chicago 18, Illinois.

Write for complete technical details.



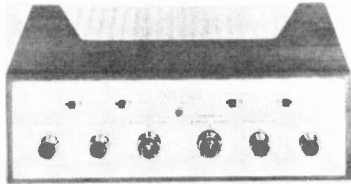
Write Dept. Y10

CIRCLE NO. 52 ON READER SERVICE PAGE

1 Amplifiers

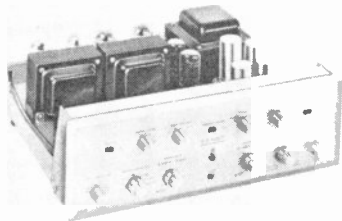
LK-48 Integrated Stereo Amp Kit

Power output 24 watts per channel (IIFM music power); hum and noise better than 75 db below full power output; harmonic distortion less than .8% at full power; response 20-20,000 cps; IM distortion less than .5%; IIFM power band from below 19 cps to above 20,000 cps; inputs are either 3 mv. or 9 mv. for magnetic phono



(RIAA) or tape head (NAB) equalization; tape monitoring provisions; tuner and extra high-level inputs provided; seven-position stereo selector switch same as on 299C and 296; scratch-filter; loudness compensation; stereo tape recorder and derived center-channel outputs; all wires pre-cut to correct length; tube sockets, terminals, etc., are pre-riveted at factory; tubes—4-12AX7, 2-7199, 4-7189, 5AR4; Type "C" case extra. Kit.....\$124.95

Model 296 Integrated Stereo Amp



Power output 50 watts per channel (IIFM music power); hum and noise better than 75 db below full power output; harmonic distortion less than .8% at full output; IM distortion less than .5%; dynamic rumble suppressor removes low-frequency noise without fixed reduction of low-frequency response; IIFM power bandwidth from below 19 cps to above 20,000 cps; input selector includes mic. equalization; RIAA and NAB tape head equalization, tuner and extra high-level input; switching provided for selecting between two magnetic inputs; phase reverse; loudness compensation; and derived center-channel level control; tubes—6-12AX7, 2-7199, 4-7581, 2-5AR4, 6BL8/ECF80; Type "G" case extra\$299.95

Model 208 Stereo Power Amp

40 watts per channel (IIFM music power); power bandwidth 19-25,000 cps \pm 1 db; response 20-20,000 cps \pm 1 db; harmonic distortion .8% IM distortion .5% hum level -80 db; has subsonic (below 20 cps cut-off filter); center-channel output; no case\$134.95

Enclosures

Type "C" metal enclosure.....\$13.95
Type "C" wood enclosure, walnut or mahogany\$24.50
Type "G" metal enclosure.....\$17.95
Type "G" wood enclosure, walnut or mahogany\$29.95

SHERWOOD

Model S-1000 II Amplifier

Rated output 36 watts, 40 watts music

power; 4-position record equalization, NAB tape playback equalization; separate bass and treble controls; rumble and scratch filters; presence switch; loudness compensation switch; tape monitor switch; response 20-20,000 cps \pm 0.5 db; harmonic distortion 0.5% at 36 watts; IM distortion 1.5% at 36 watts; magnetic



phono sensitivity 1.8 mv.; output impedances 4-8-16 ohms; variable damping-factor control; cathode-follower tape output; tubes: 3-12AX7, 2-7868 plus 6AR4 rectifier; 14" x 10 1/2" x 4" high; 23 lbs.\$109.50
With walnut leatherette case.....\$117.00

Model S-360 36-Watt Power Amp

Basic amplifier for use with any pre-amplifier; 40 watts music power; 4-8-16 ohm outputs; 13 1/2" x 4 1/4" x 6".
S-360S (less cage).....\$59.50
S-360C (with cage).....\$65.50

Model S-5000 II Integrated Stereo Amp



Similar in appearance to Model S-5500; 36 watts per channel (80 watts total IIFM music power); response 20-20,000 cps \pm 1/2 db @ 36 watts; IM distortion 1 1/2% at rated output; hum & noise, phono input 60 db below rated output; d.c. filament supply; sensitivity: radio .25 volt, phono 1.2 mv.; inputs: phono, tape head, six high-level; two anode-follower recording outputs; controls: two db/octave scratch and rumble filters, presence rise switch, four stereo/mono indicator lights; tubes: 4-7868, 6-12AX7/ECC83, 4-silicon rectifiers; 14" x 13 1/2" x 4" high\$199.50
With walnut leatherette case\$207.00

Model S-5500 II Integrated Stereo Amp



Has friction-locked dual knobs on bass and treble controls; 32 watts per channel (64 watts total IIFM music power); response 20-20,000 cps \pm 1/2 db at 24 watts with 1 1/2% IM distortion; hum & noise, phono input 60 db below 24 watts; d.c. filament supply; inputs: tape head, phono, six high-level; two anode-follower recording outputs, two stereo/mono indicator lights; phono sensitivity 1.4 mv.; tubes: 5-12AX7, 4-7868, plus 4 silicon rectifiers; 14" x 13 1/2" x 4" high.
S-5500 II (less case).....\$164.50
With walnut leatherette case.....\$172.00

TEC

Model S-15 Integrated Stereo Amp

All-transistor; 20 watts music power per channel; response 20-20,000 cps \pm .5 db; 6-95,000 cps \pm 0 -3 db; harmonic distortion .5% at 1 db below clipping; sensitivity for 20 watts—phono 3 mv., high-level .14 v.; inputs—magnetic phono, tuner,



tape, two aux.....\$139.50

TECH-MASTER

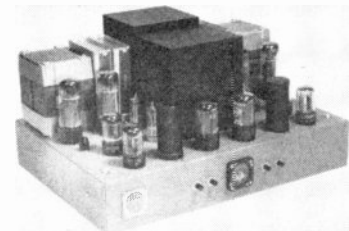
Model PA-39 Integrated Stereo Amp

7 watts per channel; crystal or ceramic phono and tuner inputs; balance control; separate tone controls; mono/stereo switch; speaker reversing switch; tubes—2-EL84, 12AX7, EZ80; 10 3/8" w. x 5 3/8" d. x 4 1/2" h.\$49.50
For magnetic cartridge input (uses 2-transistor amplifier).....\$69.50

ULTRA ELECTRONICS

Model "Stereo 50-50" Power Amp

Dual 50-watt per channel continuous sine-wave power; sensitivity .65 volt for 50

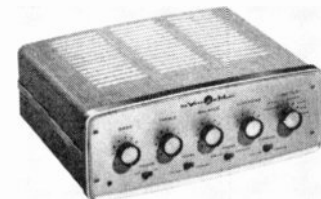


watt output; response 15-50,000 cps \pm .1 db; harmonic distortion approx. 0.1% at rated output; IM distortion .64% at 50 watts; noise and hum 90 db or more below rated output; damping factor 14 for 16-ohm output; input impedance .5 meg-ohm; output impedance 4-8-16 ohms for each channel\$350.00

V-M CORP.

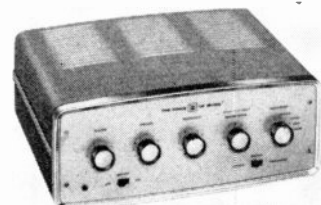
Model 1428 Integrated Amplifier

Thirty watts (peak) output per channel (stereo design); 4-8-16 ohm outputs; 1% harmonic distortion and 2% IM distortion



at rated output; response 20-30,000 cps \pm 2 db; has conventional inputs: magnetic and crystal or ceramic phono, tuner, aux, and tape recorder; 5 3/8" h. x 13 1/2" w. x 10 1/2" d.....\$103.95

Model 1448 Stereo Amplifier



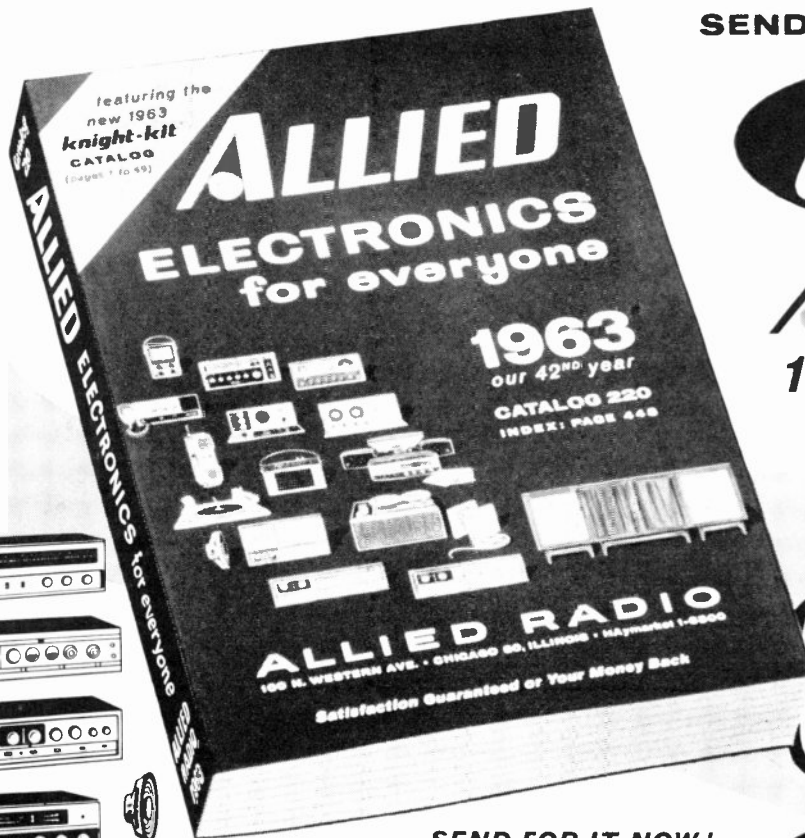
Dual-channel, 20 watts/channel integrated design; inputs for ceramic or crystal cartridge, radio, aux, or tape recorder; harmonic distortion less than 5% at rated output; response 40-25,000 cps; sensitivity: tuner .8 v., all others .25 v.; controls: bass, treble, balance, loudness, function, stereo/mono; 4-8-16 ohm outputs; 5 3/8" h. x 13 1/2" w. x 10 1/2" d.\$71.95

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FM

STEREO STATION DIRECTORY

Compiled by DAVID LACHENBRUCH

A complete listing of all FM stations in the United States and Canada which are now broadcasting FM stereo multiplex programs.

Location	Call Letters	Freq. (mc.)	Location	Call Letters	Freq. (mc.)	Location	Call Letters	Freq. (mc.)
ALABAMA			COLORADO			IOWA		
Birmingham	WCRT-FM	96.5	Colorado Springs	KLST	94.3	Des Moines	KDMI	97.3
	WSFM	93.7	Denver	*KFML-FM	98.5	KANSAS		
Huntsville	*WAHR	99.1	Manitou Springs	*KCMS-FM	102.7	Lawrence	KANU	91.5
	*WNDA	92.9	CONNECTICUT			Wichita	*KCMB-FM	107.3
ALASKA			Brookfield	WGHF	95.1	KENTUCKY		
Anchorage	KBYR-FM	102.1	Meriden	WBMI	95.7	Lexington	WVLK-FM	92.9
ARIZONA			DELAWARE			Louisville	*WLVL	97.5
Phoenix	KEPI	96.9	Wilmington	WJBR	99.5	LOUISIANA		
	KNIX	102.5	DISTRICT OF COLUMBIA			Monroe	*KMLB-FM	104.1
Sun City	KTPM	106.3	Washington	WASH	97.1	MAINE		
Tucson	*KSOM	92.1	(see also Bethesda, Md.)			Caribou	*WFST-FM	97.7
CALIFORNIA			FLORIDA			MARYLAND		
Beverly Hills	KCBH	98.7	Cocoa Beach	WKRT-FM	104.3	Bethesda (Wash., D.C.)	WHFS	102.3
Coachella	*KCHV-FM	93.7		*WXBR	101.1		*WJMD	94.7
Fresno	KCIB	94.5	Coral Gables	WVGC-FM	105.1	Towson (Baltimore)	WAQE-FM	101.9
	KXQR	102.7	Fort Lauderdale	WFLM	105.9	MASSACHUSETTS		
Garden Grove	KGGK	94.3	Gainesville	*WRUF-FM	104.1	Boston	WBCN	104.1
Los Angeles	KFMJ	97.1	Miami	WAEZ	102.1	Lynn	WUPY	105.3
	KMLA	100.3	Orlando	WHOO-FM	96.5	Waltham	WCRB-FM	102.5
	KRHM	94.7	Pensacola	WPEX-FM	94.1	Worcester	*WTAG-FM	96.1
	*KBMS	105.9	St. Petersburg	WTCX	99.5	MICHIGAN		
	*KPOL-FM	93.9	Sarasota	WYAK	102.5	Detroit	WDTM	106.7
Monterey	KHFR	96.9	GEORGIA				WGPR-FM	98.7
Oceanside	*KUDE-FM	102.1	Athens	WGAU-FM	95.5		WLDM	95.5
Palm Springs	*KDES-FM	104.7	Atlanta	WKLS	96.1		WOMC	104.3
Riverside	KDUO	97.5	Columbus	*WR3L-FM	93.3		*WABX	99.5
Sacramento	KSFM	96.9	HAWAII			East Lansing	WSWM	99.1
San Diego	KG3-FM	101.5	Honolulu	KA1M-FM	95.5	Grand Rapids	WJEF-FM	93.7
	KLRO	94.9	IDAHO			Midland	WOOD-FM	105.7
	KPRI	106.5	Boise	*K301-FM	97.9		WQDC	99.7
San Francisco	KBAY-FM	104.5	ILLINOIS			MINNESOTA		
	KPEN	101.3	Chicago	WEFM	99.5	Minneapolis	KWFM	97.1
	KSFR	94.9		WFMQ	107.5		WAYL	96.1
	*KAFF	98.1		WFMT	98.7	MISSOURI		
	*KBCO	105.3		WKFM	103.5	Joplin	KSYN	92.5
San Jose	KSJO-FM	92.3		WSBC-FM	93.1	Kansas City	KCMO-FM	94.9
San Luis Obispo	KVEC-FM	93.3		*WMAQ-FM	101.1		*KMBC-FM	99.7
Santa Barbara	KMUZ	103.3		WGEM-FM	105.1	St. Joseph	*KUSN-FM	105.1
Santa Maria	KEYM	99.1	Quincy	WGEM-FM	105.1	St. Louis	KCMF	93.7
Turlock	*KHOM	92.9	Rock Island	WH3F-FM	98.9		KSHE	94.7
Ventura	KUDU-FM	95.1	INDIANA				*KWIX	102.5
Visalia	KONG-FM	92.9	Columbus	WCSI-FM	98.3	Springfield	KTXR	101.5
Walnut Creek	KWME	92.1	Evansville	*WIKY-FM	104.1			
Woodland	*KATT	102.5	Indianapolis	WISH-FM	107.9			

Indicates stations expected to begin stereocasting before winter of 1962.

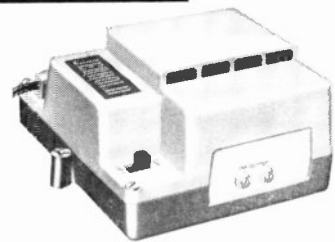
Location	Call Letters	Freq. (mc.)	Location	Call Letters	Freq. (mc.)
NEBRASKA			RHODE ISLAND		
Omaha.....	KQAL-FM	94.1	Providence.....	WPFM	95.5
				WXCN	101.5
NEVADA			SOUTH CAROLINA		
Las Vegas.....	*KORK-FM	97.1	Beaufort.....	*WBEU-FM	98.7
NEW JERSEY			North Charleston....	WKTM	102.5
Atlantic City.....	*WFPG-FM	96.9	Seneca.....	*WSNW-FM	98.1
Dover.....	WDHA-FM	105.5	Spartansburg.....	WSPA-FM	98.9
Long Branch.....	WRLB	107.1	TENNESSEE		
Paterson (N.Y.C.)....	*WPAT-FM	93.1	Lebanon.....	*WCOR-FM	107.3
Trenton.....	*WBUD-FM	101.5	Nashville.....	WNFO-FM	103.3
NEW YORK			Tullahoma.....	WJIG-FM	93.3
Babylon, L.I.....	WQMF	94.3	TEXAS		
Buffalo.....	*WYSL-FM	103.3	Austin.....	KTBC-FM	93.7
Fresh Meadows, L.I. (N.Y.C.).....	WTFM	103.5	Amarillo.....	*KCHO	103.5
New York.....	WQXR-FM	96.3	Beaumont.....	KHGM	95.1
	*WNYC-FM	93.9	Corpus Christi.....	KTOD-FM	103.1
Pachogue, L.I.....	*WPAC-FM	106.1	Dallas.....	KIXL-FM	104.5
Riverhead, L.I.....	*WAPC-FM	103.9		*KRLD-FM	92.3
Rochester.....	WCMF	96.5		*KSFM	105.3
Schenectady.....	WGFM	99.5		*KVIL-FM	103.7
Syracuse.....	WSYR-FM	94.5	Fort Worth.....	*WBAP-FM	96.3
Utica.....	*WUFM	107.3	Houston.....	KFMK	97.9
NORTH CAROLINA				KODA-FM	99.1
Burlington.....	WBBB-FM	101.1		KRBE	104.1
Greensboro.....	WMDE	98.7		*KQUE	102.9
Hickory.....	*WIRC-FM	95.7		*KXYZ-FM	96.5
OHIO			Midland.....	*KNFM	92.3
Barberton (Akron)...	WDBM	94.9	Port Arthur.....	KFMP	93.3
Canton.....	WCNO	106.9	Wichita Falls.....	KNTD	95.1
Cincinnati.....	*WAEF-FM	104.3	VIRGINIA		
Cleveland.....	WDGO	95.5	Martinsville.....	WMVA-FM	96.3
	WNOB	107.9	Norfolk.....	WTAR-FM	95.7
	*WDOK-FM	102.1		WYFI	99.7
Cleveland Heights..	*WCUY	95.3	Richmond.....	WFMV	103.7
Columbus.....	WBNS-FM	97.1		*WCOD	98.1
	*WMNI-FM	99.7	Roanoke.....	WLSL-FM	99.1
Dover.....	*WJER-FM	95.7	WASHINGTON		
Findlay.....	WF'N-FM	100.5	Seattle.....	KETO-FM	101.5
Kettering.....	WKET-FM	99.9		KGMJ	95.7
Middletown.....	WPFB	105.9		KISW	99.9
Port Clinton.....	*WRWR-FM	94.5		KLSN	96.5
Portsmouth.....	WPAY-FM	104.1		KZAM	92.5
Springfield.....	*WBLV-FM	103.9		*KGFM	105.3
Toledo.....	*WTOL-FM	104.7	Tacoma.....	*KLAY-FM	106.1
OKLAHOMA			WEST VIRGINIA		
Oklahoma City.....	*KFNB	101.9	Charleston.....	WKNA	98.5
Stillwater.....	*KOSU-FM	91.7	WISCONSIN		
Tulsa.....	KOCW	97.5	Eau Claire.....	*WIAL	94.1
OREGON			Green Bay.....	*WBAY-FM	101.1
Eugene.....	KFMY	97.9	Madison.....	*WISM-FM	98.1
	KWFS-FM	96.1		*WMFM	104.1
Portland.....	KGMG	95.5	Milwaukee.....	WFMR	96.5
	KPFM	97.1		WMKE	102.1
Springfield.....	KEED-FM	93.1	West Bend.....	WTMJ-FM	94.5
				WBKV-FM	92.5
PENNSYLVANIA			PUERTO RICO		
Braddock (Pittsburgh).....	WLOA-FM	96.9	Rio Piedras (San Juan).....	*WFID	95.7
Chambersburg.....	*WCHA-FM	95.1	CANADA		
Johnstown.....	WJAC-FM	95.5	Kamloops, B.C.....	*CFFM	93.9
Philadelphia.....	WFLN-FM	96.7	Ottawa, Ont.....	*CFRA-FM	98.1
	WHAT-FM	96.5	Toronto, Ont.....	CFRB-FM	98.1
	WIFI	92.5		CHFI-FM	99.5
	*WDVR	101.1	Montreal, Que.....	*CFCF-FM	106.4
	*WQAL	106.1	Quebec, Que.....	*CHRC-FM	98.1
Pittsburgh.....	WKJF	93.7			
	*WWSW-FM	94.5			
Warren.....	*WRRN	92.3			
Wilkes-Barre.....	*WYZZ	103.3			

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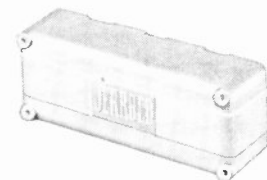
FMX



FM RANGE EXTENDER

A must for multiplex, this high-gain (20 db) preamp really beefs up weak antenna signals. Brings in distant stations... eliminates unwanted noise... makes even low-cost tuners and radios sound great! Latest 6DJ8 frame-grid tube, "no-strip" twin-lead terminals. **\$29.95 list**

TX-FM



FM/TV ANTENNA SPLITTER

Gives full FM reception from a broadband TV antenna. Compact, triple-tuned band-pass filter splits FM and TV signals without loss to either. Complete isolation between FM and TV sets. Positive matching. Universal mounting, indoors or out. **\$5.95 list**

MK-1



MAGIC CARPET ANTENNA

Hides under the rug, in the attic or closet. Exceptionally good for FM reception in apartment houses and suburban homes. **\$9.95 list**

Ask your hi-fi dealer for full information.

JERROLD® ELECTRONICS CORPORATION

A subsidiary of
The Jerrold Corporation
Philadelphia 32, Pa.

CIRCLE NO. 29 ON READER SERVICE PAGE

**This is where your investment
in a Garrard
Automatic Turntable
pays off**

Chances are that sooner or later you will spend more on your records than you do on any record player. More, it may be, than the cost of your entire music system. Your listening enjoyment is dependent upon records and the unit that reproduces them. This is exactly why more GARRARD Type A's, for example, have been sold—and are being sold—than any other high fidelity record playing equipment, without regard to cost. Just consider this...

Most people today want to use one of the ultra sensitive cartridges developed originally for separately-sold tone arms because of high compliance. Garrard has integrated precisely such an arm in the Type A Automatic Turntable—dynamically-balanced, counterweight adjusted, designed and built with the same precision, the same balance, the same freedom from friction, the same playback characteristics and low resonance. This arm, operating in conjunction with the Type A's heavy, full-size, non-magnetic turntable—a laboratory-balanced, double-shielded motor; and (when you want it) the gentlest automatic record-handling mechanism ever designed; rewards you with the full measure of the magnificent reproduction you expect from the best recordings.

Garrard's Type A Automatic Turntable is proudly owned by a growing legion of highly critical people who, originally amazed at the \$79.50 price, have come to realize this completely integrated precision instrument could have been developed only by the Garrard Laboratories.

*For illustrated literature, write Dept. GR-1502,
Garrard Sales Corp., Port Washington, N. Y.*



PHONOGRAPH EQUIPMENT

RECORD CHANGERS)	}..... 43
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2 Record Changers & Turntables

ACOUSTIC RESEARCH

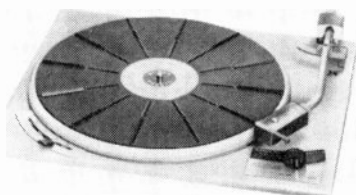
AR Turntable



Turntable and arm combination; complete with oiled-walnut base, transparent dust cover, and accessories such as needle force gauge, overhang adjustment device, etc.; meets NAB specifications for broadcast equipment on wow, flutter, rumble, and speed accuracy; 3.3 lb. machined, individually balanced aluminum platter is belt-driven from synchronous motors; insensitive to external shock or to acoustic feedback because of internal suspension; arm damping, which operates if arm is dropped, is released during play; less cartridge\$58.00

BOGEN-PRESTO

Model B61 Turntable



Continuously variable speed from 29 to 86 rpm; click-in position for 16 2/3, 33 1/3, 45, 78 rpm; 4-pole heavy-duty constant speed motor; nonferrous 7 3/4 lb. turntable; plug-in cartridge head; weight adjustment gauge; automatic cueing-flip switch raises and lowers arm; 15" x 3 1/2" x 13"; less cartridge\$59.95
Walnut wood base\$ 5.25

Dust cover\$ 5.50

CHANNEL MASTER

Model 6652A Turntable



Four speeds (16 2/3, 33 1/3, 45, 78 rpm) with built-in four-speed strobe; shielded four-pole motor; heavy cast aluminum turntable; plug-in cartridge head; stylus pressure adjustment; without cartridge or base\$79.95
Spare plug-in head.....\$3.25
Walnut base\$8.99

"Pause-O-Matic" Record Changer

Will intermix 10" & 12" records; plays all size records; 4-speeds (16 2/3, 33 1/3, 45, 78 rpm); plug-in cartridge head; features



"Pause-O-Matic"—turntable stops automatically during change cycle; with cartridge but without base.....\$79.95
Walnut base\$7.99
45 rpm spindle.....\$3.25

COMPONENTS CORP.

Mark II Turntable

Two speed, lever shift belt-driven turntable with 4-pole induction motor; similar to Mark I in all respects except extra 45 rpm speed.....\$59.50

Mark I Turntable

Single speed 33 1/3 rpm belt-driven turntable; 4-pole induction motor; filter capacitor across a.c. switch to eliminate click; improved motor suspension isolates motor;



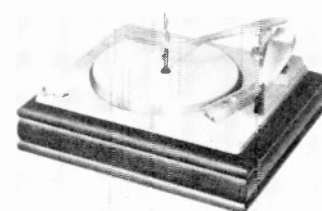
vibration from the pickup arm; rumble down 70 db from standard reference of 7 cm./sec. at 1000 cps.; base finished in black with chrome trim.....\$49.50

Model TT Turntable

Same as Model Mark I but in kit form\$29.50

DAYSTROM

Model DA-288 Record Changer



Four-speed stereo design; will intermix automatically any diameter records of same speed; comes complete with Shure M8D magnetic stereo cartridge, diamond stylus; stylus pressure gauge; 45 rpm spindle; pre-assembled walnut base.
Kit\$79.95
Factory assembled.....\$129.95

EMPIRE

Model 208 Turntable

Has three speeds; hysteresis synchronous motor; isolation-suspended motor and base plate; belt driven; 6 lb. aluminum turntable; pop-up 45 rpm adapter spindle; rumble better than -65 db; wow and flutter less than .05%; satin chrome or satin gold finish: 14 1/16" x 16 1/16" x 6 7/8"\$110.00
Base in walnut.....\$15.00

Model 408 Turntable

2 Record Changers & Turntables

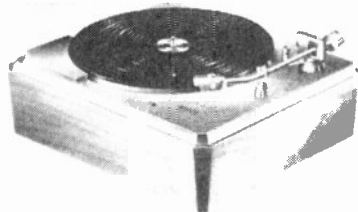
Available only as part of Models 488 and 498 transcription systems; compact size, 3-speed, belt-driven turntable; has 5 lb. aluminum turntable; pop-up 45 rpm adapter spindle; hysteresis motor; rumble better than -65 db; wow and flutter less than .07%.

Model 398 Transcription System



Includes Model 208 turntable, Model 980 tonearm, walnut base; size 17" w. x 15" d. x 8 1/4" h.\$175.00
Model 388 less base.....\$160.00

Model 498 Transcription System



Includes Model 408 3-speed turntable, Model 980 tonearm, walnut base; size 16" w. x 13 1/2" d. x 7 1/2" h.\$165.00
Model 488 less base.....\$150.00

FAIRCHILD

Series 412-1A Turntable



2-belt drive; rumble level at least 45 db down vertical and lateral; flutter and wow not more than $\pm 0.1\%$; speed accuracy at least $\pm 0.3\%$ 117 volt 60 cycles; hysteresis synchronous motor.

Model 412-1A (33 1/2 rpm).....\$95.00
Model 412BF Turntable base—shock mounted; 17 1/2" x 14 1/2" x 6 1/2"; oil finished walnut; white formica top.....\$23.95
Model 412-1K Kit version of Model 412-1A turntable.....\$74.95

Model 440 Turntable



Speeds 33 1/2 and 45 rpm; single belt drive; turntable speed variable $\pm 1.2\%$\$69.95
Model 440CBW Walnut mounting board and wraparound.....\$19.95
Model 440 MBU unfinished mounting board.....\$3.50
Model 440 MBW walnut mounting board.....\$6.00
Model 440 2K turntable (Model 440) available in kit form; pre-cut mounting board included.....\$58.00
Unfinished birch wraparound base for Model 440 2K; complete with shock mounts\$7.75

FISHER

Model 60 Turnover Turntable

Automatically plays one or both sides of 7", 10", and 12" records intermixed; holds up to 10 records (20 sides); more than 8 hours playing time; repeats one



or both sides of each record if desired; only record in motion is one being played, permitting ideal stylus angle and pressure (3 grams) at all times; center spindle revolves with record, eliminating center-hole wear; electric trip mechanism leaves tonearm free during play; studio-quality turntable; two precision motors; 26 1/2" x 14" x 19" high over-all\$249.50

GARRARD

Type "A" Automatic Turntable



Dynamically balanced tonearm; adjustable sliding counterweight and built-in calibrated scale for stylus pressure adjustment; 6 lb. turntable with inside-drive table and outside cast non-ferrous table, foam rubber separator used to damp out vibrations; shielded 4-pole shaded motor; can be used as automatic or manual turntable; 16 1/4" w. x 14 1/2" d., 6" above and 2 7/8" below top of motorboard; four speeds.....\$79.50

Model AT6 Automatic Turntable



Dynamically counterbalanced tubular tonearm; adjustable counterweight for stylus pressure adjustment; gram scale built-in;

oversize turntable; manual or automatic play; shielded 4-pole shaded motor; replaceable plug-in cartridge shell with 4-pin, 5-wire system; 15 1/8" w. x 13 1/8" d., 4 7/8" above and 2 7/8" below top of motorboard; four speeds.....\$54.50

Model RA-7 7" Record Adapter

Clips on pusher platform of Garrard Type A and Model 88 series to play 7" small-hole 33 1/2 rpm records.....\$1.50

"Autoslim/P" Intermix Record Changer



Four speeds; 4-pole shaded motor; separate controls for manual and automatic; intermixes all size records; has two-piece tonearm with plug-in head adaptable to most cartridges; stylus pressure control incorporated; 15 1/8" w. x 13 1/8" d., 4 7/8" above and 2 7/8" below top of motorboard\$39.50

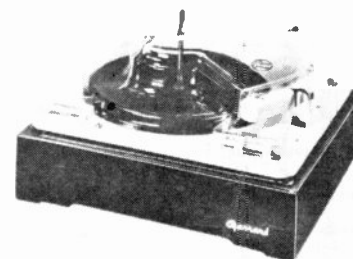
Tambour Table Model Cabinet



Built of stain and scuff resistant formica in walnut; records may be played with cover closed; over-all dimensions 15 1/2" d. x 10 1/4" h. x 18" w.

Model TM-1 For Garrard Type A and 88 series.....\$34.50
Model TM-2 For Garrard Model 210, "Autoslim," and AT6.....\$34.50
Model TM-3 Supplied with blank board to mount any model or make.....\$34.50

Dust Cover



Transparent formed-vinyl cover for all Garrard players.

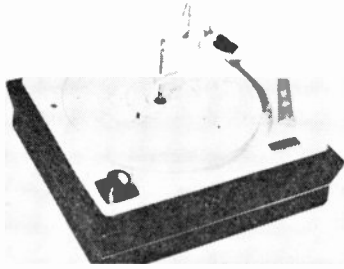
DC-1 For Model AT6.....\$4.95
DC-5 For Model "Autoslim".....\$4.95
DC-3 For Type A.....\$4.95
DC-4 For Model 210.....\$4.95
DC-2 For Models 88 and 88/MKII.....\$4.95

GLASER-STEERS

Model GS-77T Changer

Four-speed, size-intermix record changer; molded rubber mat; drop-type change mechanism with overhead stabilizing arm; 4-pole shielded motor; damped tonearm with vernier stylus pressure adjustment

STEREO/HI-FI DIRECTORY



Model AD-60 Stereo/Mono Changer

and stylus position guide; 11" professional-type turntable; automatic shut-off and idler disengagement; turntable pauses during 9-second change cycle; for use with all stereo or mono cartridges; stereo muting switch; supplied with two 4-foot audio cables; white and brushed gold finish; 13½" w. x 12" d., 3" below and 5½" above motorboard (without cartridge).....\$59.50
 Model GSB ebony base.....\$ 9.60
 Model GSBW walnut base.....\$13.20
 Model GSSBE straight-sided ebony base\$ 5.90
 Model GSSBW straight-sided walnut base\$ 5.25
 45 rpm spindle adapter.....\$ 2.95
 Cover for changer\$ 9.75

GRAY

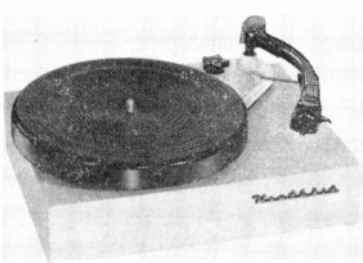
Model PK-33 Turntable



Hysteresis synchronous-drive motor with polyurethane drive belt; multiplane shock mounts; universal tonearm mounting allows almost all type tonearms to be used; flutter .08%; wow .2%; single 33½ rpm speed; rumble -32 db @ 1000 cps and 7 cm/sec.; 4¾" h. x 12¼" l. x 12¼" w. Kit\$49.50

HEATH

Model AD-10 Manual Record Player



4-speed manual record player; 4-pole induction motor; friction drive; flutter and wow less than 0.28% at 33½ rpm; record player mechanism Garrard model 4SPA; complete with base and Sonotone 8TA5-SD (.7 mil diamond and 3 mil sapphire) cartridge; over-all dimensions: 12¼" wide x 3" high x 9⅞" deep.....\$32.95
 With G-E VR-227 magnetic cartridge\$37.95
 With Shure M8D magnetic cartridge\$38.95
 Mechanism only, less cartridge, base, and cables\$22.95

1963 EDITION



Features "stereo-mono" switch for instant conversion from stereo to mono disc; has automatic "speed minder" for intermixing 33½ and 45 rpm records at random; turntable pause to protect records during change cycle; includes switch selection of 16, 33½, 45, 78 rpm; quick-change cartridge holders; automatic shut-off at end of record with idler wheels retracting to prevent flats; dual-channel muting switch; jam-proof mechanism; can be used as manual player if desired; flutter & wow .18% r.m.s. or less; speed accurate within ± 2%; change cycle 9 sec.; 4-pole, hum-shielded motor; friction drive; tracking force 2 grams; plays 10 records; 13½" x 12" x 5½" above, 3" below mounting board.
 Model AD-60 (kit).....\$59.95-\$62.95
 (Price based on type of cartridge)

Model ADP-21 Turntable Assembly

Includes Fairchild 440 turntable in kit form; assembled Fairchild 500 tonearm, Fairchild SM-2 stereo cartridge, Fairchild 440CBW walnut base; 33½ & 45 rpm; arm transport has anti-skate device and dynamic balancing; tracking force 2.5 grams; response 20-15,000 cps ± 2 db; output 5 mv. @ 3.8 cm./sec.; wow .08% peak-to-peak; 17⅞" w. x 15" d. x 3½" below motorboard\$124.95

Model AD-80 Record Changer

4-speed automatic or manual; plug-in cartridge head; tonearm has anti-skate device; has automatic shut-off; wow & flutter .2% r.m.s. or less; 4-pole hum-shielded motor; less than .9 gram tracking force; record capacity 10-12", 12-10"; 13¼" w. x 11⅞" d. x 5¼" above and 2⅞" below motorboard; kit design.
 With Sonotone 8TA4-SD ceramic diamond stylus cartridge\$37.95
 With G-E VR-227 magnetic cartridge\$41.95
 With Shure M8D magnetic cartridge\$42.95
 45 rpm adapter.....\$ 2.95
 Changer bases for AD-80 & AD-60 models: walnut assembled.....\$ 5.95
 Mahogany\$ 6.95
 Unfinished\$ 4.95

Model ADP-61A Turntable

Combination includes Garrard Type A automatic turntable with choice of G-E VR-100, Shure M7D, or Pickering 380-A magnetic cartridge; not a kit.....\$79.51
 45 rpm spindle.....\$ 3.80
 Base unfinished.....\$ 4.45
 Base walnut.....\$ 4.95

KLH

Model Eleven Phonograph Player 20-D-95



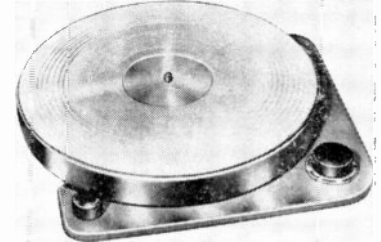
Garrard AT-6 record changer and Pickering 380C magnetic cartridge are combined

with dual-channel transistorized amplifiers; power rating 7½ watts music power per channel; controls: volume, bass, treble, balance, and mono/stereo switch; has separate tuner or aux. input; detachable KLH speakers have 40-foot cables; comes in portable carrying case; 24" l. x 14" d. x 7" h.; wt. 26 lbs.....\$199.00

LAFAYETTE

Model PK-240 Turntable

4-speed transcription turntable; 4-pole motor; 12" aluminum table; rim driven; noise and rumble 50 db below average recorded level; less than 0.2% wow and flutter; single ball bearing for spindle; free-floating shock-mounted motor; idler



automatically disengaged in "off" position; magnetic eddy-current brake; motor plate size 11" x 10" x 14½".....\$37.50

Model PK-160S

Four-speed manual record player; 4-pole shaded motor; 10" turntable; rubber mat; magnetic brake for fine speed adjustment; lightweight pickup arm with two plug-in heads and finger lift; stylus-pressure screw on underside of arm; built-in stroboscopic disc; mounting plate dimensions: 12½" left to right; 10⅞" front to rear; wired for stereo.

Model PK-160S\$26.95 Net
 Model PK-162 wood base, blonde or mahogany\$3.95 Net
 Model PK-163 unfinished mounting board\$.95 Net

Model PK-449 Turntable & Arm

4-speed transcription turntable with tonearm; heavy-duty 4-pole induction motor; rim-weighted 12" aluminum table; click-in shift lever with idler disengaged in "off" position; ±7% allowable speed variation; noise and rumble -50 db below



average recorded level; wow and flutter less than 0.2%; tonearm 12"; tracks at lowest stylus pressures recommended by cartridge makers; adjustable stylus; plug-in head; armrest "on-off" operation. Supplied with strobe disc; 45 rpm adapter. 16½" x 12¼" x 4" below motorboard. \$49.50

Model PK-750W Record Changer



2 Record Changers & Turntables

Produced by Glaser-Steers; designed to operate both as changer and manually; four speeds (16 $\frac{2}{3}$, 33 $\frac{1}{3}$, 45, 78 rpm); automatic shut-off; 11" turntable; anti-skate device; intermixes 7", 10", 12" records; adjustable stylus pressure; Astatic turnover ceramic stereo cartridge; response 50-15,000 cps; 11 $\frac{1}{2}$ " x 13 $\frac{1}{4}$ " x 4 $\frac{1}{16}$ " above and 2 $\frac{3}{8}$ " below mounting board.....\$24.50
 45 rpm spindle.....\$ 1.80
 Walnut base.....\$ 4.50
 Mahogany base.....\$ 3.95
 Unfinished mounting board.....\$ 1.10

Model PK-800W Record Changer



Produced by Admiral and is similar to their "Ensign" design; four speeds (16 $\frac{2}{3}$, 33 $\frac{1}{3}$, 45, 78 rpm); automatic three-way shut-off; intermixes records of same speed; Ronette ceramic turnover stereo cartridge; stylus pressure 5-7 grams; will play manually; 13 $\frac{1}{2}$ " x 12" x 7 $\frac{1}{2}$ ".....\$18.95
 45 rpm spindle.....\$1.49
 Walnut base.....\$4.50
 Mahogany base.....\$3.95
 Unfinished mounting board.....\$1.10

LESA

Model CD2/21 Automatic Changer



Fully automatic with auto intermix; can be used for manual operation; 4 speeds; 6-second change cycle; universal plug-in head; tonearm mechanism is jamproof; after last record is played, tonearm is short circuited to prevent hum; plug-in shell is prewired for mono or stereo; 4-pole motor\$44.50
 Extra universal plug-in head.....\$2.40
 45 rpm spindle.....\$3.75
 Base in mahogany, walnut.....\$4.75
 Base in blonde.....\$5.25
 Pre-cut mounting board.....\$2.00

Model CD3/31 Automatic Changer



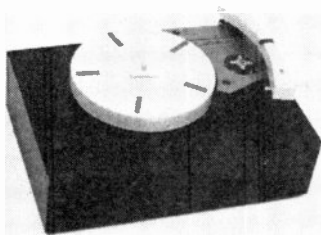
Designed by Italian craftsmen; can be used as changer or played manually; has stylus pressure gauge; counterbalance adjustment screw with marked gram measurements; plug-in head will accommodate most cartridges; heavy-duty 4-pole shaded

motor; 4 speeds (16, 33 $\frac{1}{3}$, 45, 78 rpm); 12 $\frac{1}{2}$ " x 11 $\frac{1}{2}$ " x 5 $\frac{1}{4}$ " above, 3" below top of motorboard; includes tonearm but less cartridge.....\$69.50
 45 rpm spindle.....\$3.75
 Base in walnut, mahogany, blonde.....\$4.75
 Recessed base in oiled walnut.....\$5.75

Model 4V3/11 Stereo/Mono Player

Plays all record sizes and speeds; speed held to within $\pm 1.5\%$; stops automatically at end of record; tonearm is short-circuited at end of record eliminating hum; universal plug-in head; 4-pole motor; speed can be changed during play. Stereo or mono (less cartridge & base).....\$23.25
 Accessories same as for Model CD2/21

Model SM5/11 Manual Player



Has 4-speeds; complete with stereo/mono cartridge with sapphire stylus; pre-wired for stereo or mono; stereo-mono switch\$29.95
 Bases same as for Model CD2/21

MIRACORD

Model 10H Automatic Turntable



Can be used as manual single-record player (lifting arm starts turntable and at end of play arm returns to rest and shuts off motor); automatic single-record player (where arm is operated automatically); continuous single-record player (record repeats automatically); 6 lb. non-ferrous 12" turntable; hysteresis motor; stylus pressure gauge (2-6 grams); rumble -55 db; wow and flutter better than .1%; 14 $\frac{1}{2}$ " w. x 12 $\frac{1}{2}$ " d. x 5 $\frac{1}{8}$ " above and 3 $\frac{3}{4}$ " below mounting plate\$99.50
 Lucite hinged cover\$14.95
 Walnut base\$9.95
 Mounting board\$3.00
 Interchangeable plug-in head\$3.50
 Automatic 45 rpm spindle\$5.00
 Carrying case\$29.50

Model 10 Automatic Turntable

Same as Model 10H except has shaded 4-pole motor; rumble -50 db\$89.50

MONARCH

Model P-68H Four-Speed Turntable

12" heavy aluminum turntable; balanced 4-pole hysteresis motor; detachable wood panel for mounting tonearm; wow and flutter .25% maximum.....\$89.95

Model P-58H Four-Speed Turntable

12" die-cast aluminum turntable with 4-pole capacitor-start motor; turntable is rim driven; wow and flutter .25% maximum\$77.00

Model TP-145 Record Player

Four-speed 10" turntable and tonearm as-

sembly; shaded induction motor; wow and flutter .3% maximum; has plug-in cartridge head.....\$36.50

NEUMANN

Model PA2a Integrated Turntable



Complete playback design including automatic tonearm and DST-62 cartridge; wow and flutter less than .1% r.m.s.; all unweighted components measured flat from 10 to 250 cps; turntable and tonearm are mounted on rigid subassembly; shock mounted from main base; pickup is gently lowered to the disc by air compression cylinder controlled by remote lever; arm disengages when stylus seats in groove; leadout groove activates automatic stop switch which raises arm and disengages driving motor; two-speed design (33 $\frac{1}{3}$ and 45 rpm) for 7", 10" or 12" records; stylus pressure .8 gram; stylus pressure will actuate stop switch; manufactured in West Berlin.....\$545.00

REALISTIC

Model "Mark 9" Turntable

1-speed operation with automatic start/stop; move pickup arm to start; arm automatically shuts off after each record; 14 $\frac{1}{4}$ " x 12 $\frac{1}{2}$ " x 3" above and 2 $\frac{1}{16}$ " below motor board.....\$22.95
 Mahogany or walnut base.....\$3.95

Model "Stereo Mixer 3" Record Changer

Produced by Glaser-Steers; four-speed (16 $\frac{2}{3}$, 33 $\frac{1}{3}$, 45, 78 rpm); intermixes 7", 10", 12" records in any order of size; has repeat play feature and is supplied with Astatic ceramic turnover cartridge; 11" x 13 $\frac{1}{8}$ " x 6 $\frac{3}{16}$ ".....\$29.95

Model "Mark 12" Professional Turntable

33 $\frac{1}{3}$ rpm speed accurate to within $\pm .05\%$; four rubber suspensions; two hysteresis synchronous motors; mercury-type on-off switch; supplied with ebony base\$49.95

REK-O-KUT

Model B-12H Stereotable

3-speed; hysteresis synchronous motor; 12" aluminum turntable; rubber mat; rim



driven by idler wheel; noise level; better than 55 db below average recording level; built-in 45 rpm adapter; pilot light; stroboscopic disc; dimensions for cabinet installation: left to right 16 $\frac{3}{4}$ ", front to back 16", height above deck 3", height below deck 6 $\frac{1}{2}$ "; finish: silvertone aluminum.....\$139.95 Net

STEREO/HI-FI DIRECTORY

Model B-12GH

All specifications identical to B-1211 with the following exceptions: noise level -55 db; new design hysteresis synchronous motor.....\$99.95 Net

Model K-33H Turntable Kit



Single speed (33 1/3 rpm); belt-driven; hysteresis synchronous motor; noise level 57 db below average recording level; adjustable belt tension; cast aluminum turntable; 15 1/4" x 15 1/4"; tonearm and base not included. Kit.....\$59.95 Walnut base.....\$16.95

Model N-34H Turntable



Similar in design to Model K-33H except two speeds (33 1/3 & 45 rpm); deck size 12 1/8" x 19"; tonearm and base extra; completely assembled.....\$89.95 Model K-34H Kit version of N-34H \$69.95 Walnut base.....\$14.95

Model B-16H Turntable

16" cast aluminum 3-speed turntable primarily for broadcasting and recording studio use; hysteresis synchronous motor; rubber mat; rim-driven by idler wheel;



noise level: 50 db below average recording level; wow, flutter, and speed regulation meet NAB standards; built-in retractable hub for 45 rpm records; built-in stroboscopic disc; size of deck: 18 3/4" x 20"; clearance required: above deck 1 1/2"; below deck 6 1/2"; finish: wrinkle gray; uses neoprene compound idlers; rotates on single-ball pivot.....\$250.00 Net

Model TR-43H 12" Turntable

Similar in all respects to Model B-16H except 12" turntable.....\$149.95

Model C-7B Cabinet

Console cabinet designed to accommodate B-16H turntable without use of screws or bolts; 2 storage compartments; hinged doors with flush ring-latches; built-in electrical outlet; adjustable levelling domes; size: 33" h x 22" w x 20 1/2" d; finish: metallic gray.....\$125.00 Net Model C-7BT (cut for any turntable).....\$140.00

Model CVS-12 Turntable

Variable speed turntable operates on either 50 or 60 cycle current; speed variable



from 25 to 100 rpm at 60 cycles and from 20 to 85 rpm at 50 cycles.\$89.95 Net

"Rondine 2" Series Turntables

Single speed (33 1/3 rpm); single "on-off-reject" push-button; hysteresis synchronous motor; belt driven; noise level -57 db below average recording level; wow and



flutter .15%; aluminum casting turntable; 14 7/8" x 14 1/2", requires 3 1/2" above deck and 4 1/4" below; finish: white and silver deck plate.

Model R Turntable only.....\$79.95

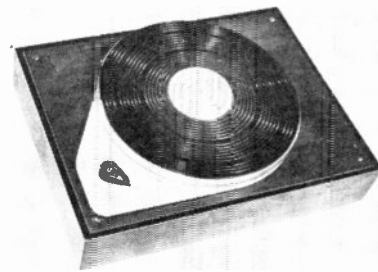
Model R Base walnut finish; 15 1/2" w. x 15 1/4" d. x 4 1/2" h.....\$14.95

Model R320 Turntable with Model S-320 tonearm.....\$129.95

Model R320A Turntable with Model AP-320 automatic tonearm.....\$169.95

THORENS

Model TD-111 Turntable



Single-speed turntable (33 1/3 rpm); precision Swiss assembly; 8-pound cast non-magnetic 12" turntable, with motor isolation through idler and belt-type drive; self-lubricating bushings on all main drive parts; adjustable speed control (±3%); metal strobe disc included.....\$60.00 WB-111 Base (walnut, mahogany, ebony).....\$10.00

Model TD-121 Turntable

Single-speed turntable (33 1/3 rpm); same precision Swiss assembly as Model TD-124; 8-pound cast non-magnetic 12" turntable with combination belt and idler drive for isolation of motor vibration; adjustable

AF AUDIO FIDELITY

NOW BRINGS YOU A NEW KIND OF STEREPHONIC SOUND EXPERIENCE UNEQUALLED ON RECORDS!!

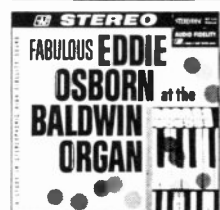
THE AWESOME, DRAMATIC SOUNDS OF THE SPACE AGE! A LISTENING EXPERIENCE WITH STUNNING IMPACT! Crackling, screaming, roaring, booming sounds of jets, rockets and missiles as they were heard at the Eglin Air Force Base demonstration for President John F. Kennedy and the Executive Party. U.S.A.F. weapons heard include: B-52's, F-104 Starfighter, Air-to-air rocket, F-102 Delta Dagger, F-106 Delta Dart, Falcon and Genie rockets, Hound Dog, Sidewinder and Bull Pup missiles, cannons, machine guns and NUCLEAR EXPLOSION!



Stereo—DFS 7012, Mono—DFM 3012



STEREO SPECTACULAR DEMONSTRATION & SOUND EFFECTS—An amazing production which will settle for all time the capabilities of STEREO. Narrated tests and experiments from Audio Fidelity's vast library! DFS 7013



Fabulous EDDIE OSBORN at the BALDWIN ORGAN—Hey Look Me Over, Down Home Rag, Moon River, Ferdinand the Bull, Some Day, Shine, others. AFLP 1968/AFSD 5968



THE SOUND OF MAGNIFICENT MANDOLINS, Dick Dia & Orch.—Nu Quarto e Luna, Pearl Fishers, Never On Sunday, Samba Brasilia, Summertime in Venice, others. AFLP 1963/AFSD 5963

ASK YOUR RECORD DEALER FOR THESE GREAT, NEW AUDIO FIDELITY RELEASES! STEREO (AFSD, DFS)—\$5.95 / MONO (AFLP, DFM)—\$4.98 SEND FOR FREE COMPLETE RECORD AND TAPE CATALOG! AUDIO FIDELITY INC. 770 Eleventh Avenue, New York 19, N.Y. CIRCLE NO. 8 ON READER SERVICE PAGE

2 Record Changers & Turntables



speed control ($\pm 3\%$); self-lubricating bronze bushings on main drive shaft; separate tonearm board; adjustable built-in leveling feet; metal strobe disc included; $15\frac{1}{2}'' \times 12\frac{3}{4}'' \times 2\frac{3}{4}''$ below base plate\$85.00
Base in walnut, ebony, mahogany....\$10.00

Model TD-124 Turntable



Four-speed transcription turntable; $11\frac{1}{2}$ pound cast-iron and aluminum turntable with built-in retractable hub for 45 rpm records and heavy rubber mat; extremely low wow, flutter, and rumble; induction-type roto-isolated drive motor; two-step speed reduction between motor and turntable—belt driven flywheel and stepped pulley-idler wheel speed shaft allows pulley to revolve at half the speed of conventional system—affording better contact with idler wheel; automatic disengagement of idler wheel; variable speed control ($\pm 3\%$) on all speeds with new eddy current brake design; self-contained 12" and 16" tonearm mounting boards; leveling knobs and built-in spirit level; base plate size $15\frac{1}{2}'' \times 12\frac{7}{8}''$, required depth $2\frac{3}{4}''$ \$110.00
Base in walnut, ebony, mah.....\$10.00

Model TD-135 Transcription Turntable



Four-speed transcription turntable with integral professional arm; 8 lb., 12" non-magnetic turntable (same as Model TD-121); variable speed control $\pm 3\%$; manual & stop switch; arm has instrument-type pivot bearings; calibrated stylus force adjustment; takes any standard stereo cartridge; $14\frac{1}{2}'' \times 11\frac{3}{4}''$ \$110.00
Base\$7.00

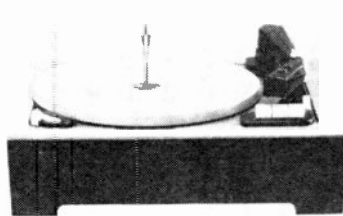
Model TDK-101 Turntable



Turntable kit can be assembled in 45 minutes; single speed $33\frac{1}{3}$ rpm; belt and idler wheel drive; built in strobe disc\$47.50
WBK base in walnut, ebony, mahogany\$10.00

UNITED AUDIO

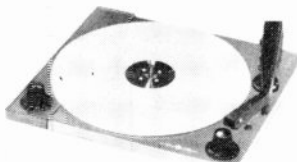
"Dual-1006" Automatic Turntable



Combination turntable and record changer; four speeds (16, 45, 33, 78 rpm); roller-feeler record indexing action allows intermixing; 4-pole induction motor; turntable is laminated and concentrically girded; one-piece professional tonearm tracks and trips at 2 grams; wide-range adjustment of stylus force; built-in stylus force measuring gauge; automatic drive wheel and idler disengagement after play; lock-in cartridge holder for use with all standard cartridges; stereo/mono switch; $10\frac{1}{2}'' \times 13''$ (3" below, 6" above deck); 110 v./220 v., 60 cycles a.c. (50 cycles available)\$79.95
Model WB-3 solid walnut base (oiled finish); level adjustable.....\$ 9.95
Model AS-6 45 rpm spindle.....\$ 4.80

V-M CORP.

Model 1580 Turntable

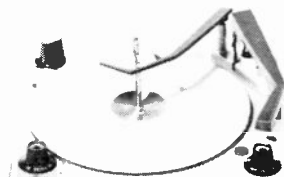


Plays all four speeds (16 $\frac{2}{3}$, 33 $\frac{1}{3}$, 45, 78 rpm); single-play design; furnished with diamond LP stylus assembly\$27.95

Model 1551 Record Changer

Standard version of deluxe Model 1571; has same functions but different styling.\$27.95

Model 1571 Automatic Record Changer



Four-speeds (78, 45, 33, 16 rpm); has automatic-manual feature; turnover ce-

ramic cartridge with diamond needle; wow .4% r.m.s. max.; flutter .21% r.m.s. max.; stylus pressure 3-4 $\frac{1}{2}$ grams; $13\frac{1}{4}''$ w. x $12''$ d. x $5\frac{3}{4}''$ above and $2\frac{5}{8}''$ below mounting board.....\$40.00

WEATHERS

Model ML-1-LB "Synchronatic" Turntable

Single-speed (33 $\frac{1}{3}$ rpm) manual turntable; wow & flutter below .1%; rumble -70 db; synchronous-drive motor; shock-mounted on 3-cps suspension system; $16\frac{1}{2}'' \times 15\frac{3}{8}'' \times 2\frac{1}{2}''$. (Less base)\$49.95
Mounting base in ebony or walnut..\$10.00

Model ML-234-LB "Synchronatic" Turntable

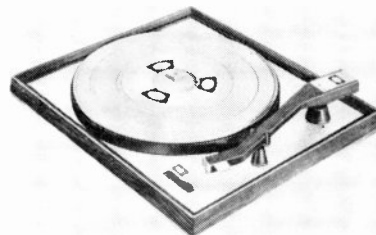
Same features as Model ML-1-LB but with separate drive motor and direct-drive coupling for 33 $\frac{1}{3}$ or 45 rpm operation; speed selector turns on and engages appropriate motor. (Less base).....\$64.50

Stereo Record Players



Model K-803—Combination of Model ML-1-LB turntable and Model PS-11 pickup (with base).....\$189.43
Model K-834—Combination of Model ML-234-LB dual-speed turntable and Model PS-11 pickup (with base)..\$204.00

Model "66" Turntable



Employs two synchronous motors mounted on opposite sides of deck; rumble -60 db with cut-off below 20 cps; platform tuned to 3 cps and suspended on five neoprene mounts providing isolation from floor vibrations 500:1; flutter .04%; wow .02%; 33 $\frac{1}{3}$ rpm; tonearm maximum tracking error 7°; brushed aluminum base supplied; $16''$ l. x $14''$ d. x $2''$ h.; including base\$66.00
With viscous damped tonearm.....\$89.50

WEBCOR

Model 1041 Record Changer



With ceramic cartridge (.7-mil for LP, 3-mil for 78's sapphire tips).....\$27.95
With ceramic cartridge (.7-mil diamond for LP, 3-mil sapphire for 78's).....\$31.47

STEREO/HI-FI DIRECTORY

2

Phono Cartridges

ASTATIC

Model 45D "Cantata" Cartridge

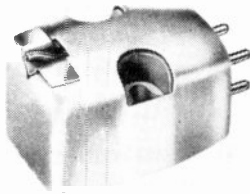


Ceramic stereo design featuring miniature alpha ray nuclear source which keeps grooves free from foreign particles by dissipating static charge from record surface; 20-20,000 cps; .010 volt output at magnetic input (1000 cps @ 5 cm./sec.); separation 30-35 db; tracking force 1 gram; diamond needle; supplied with two equalizing networks to convert ceramic to RIAA magnetic input\$44.50

AUDIO DYNAMICS

Model ADC-1 Stereo Cartridge

Sensitivity 7 mv. @ 5.5 cm./sec.; response 10-20,000 cps \pm 2 db; channel separation 30 db; 50-7000 cps; stylus tip radius .0006"; lateral and vertical compliance 20



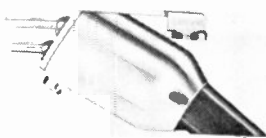
$\times 10^{-6}$ cm./dyne; min. load 47,000 ohms; tracking force .75 to 3 grams; magnetic type\$49.50

Model ADC-2

Similar to Model ADC-1 except sensitivity 8 mv.; stylus tip radius .0007" compliance 15×10^{-6} cm./dyne; tracking force 2 to 4 grams\$37.50
Replaceable stylus assembly.....\$15.00

DYNACO

Stereodyne II Cartridge



Moving-iron stereo cartridge imported from B & O of Denmark; four coils used in push-pull pairs; response \pm 2 db 30-15,000 cps; output 7 mv. per channel at 5 cm./sec.; tracking force 2-4 grams; recommended load 47,000 ohms; .7 mil diamond stylus\$29.95
Replacement diamond stylus .5, .7, or 3 mil available\$14.95

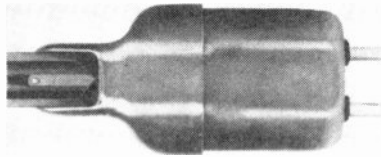
EMPIRE

Model 880 Stereo Cartridge

Response 10-28,000 cps \pm 1 1/2 db; output .01 volt per channel; .7 mil diamond stylus; 3/4 to 6 gram tracking pressure; load impedance 47,000 ohms; channel separa-

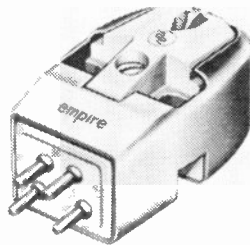
tion 30 db or more; dynamic mass .7 $\times 10^{-3}$ grams; stylus compliance (vertical and horizontal) 15×10^{-6} cm./dyne; inductance 500 mhy.; d.c. resistance 850 ohms; 4-terminal output; moving magnet design\$42.50

Model 880P Stereo Cartridge



Response 6-30,000 cps; channel separation more than 30 db; output 8 mv./channel; dynamic mass less than .5 $\times 10^{-3}$ grams; stylus compliance (vertical and horizontal) 30×10^{-6} cm./dyne; tracking force 1/4 to 3 grams; .6 mil diamond stylus; inductance 500 mhy.; d.c. resistance 850 ohms; 4-terminal output; load impedance 47,000 ohms\$47.50

Model 108 Stereo Cartridge



Moving-magnet design; frequency response 15-20,000 cps \pm 2db; usable output to 30,000 cps; output 7 mv. each channel within \pm 1/2 db; separation more than 25 db; d.c. resistance 1250 ohms; inductance 500 mhy.; weight 10 grams; vertical and horizontal compliance 6×10^{-6} cm./dyne; tracking force 1.5-5 grams; .7 mil diamond stylus; 4-terminal output; load impedance 47,000 ohms.....\$35.00

FAIRCHILD

Model SM-1 Stereo Cartridge

Rotating magnet type for stereo or mono records; output 11.5 mv. at 5 cm./sec and 1000 cps; hum level—65 db; tracking pressure 3-4 grams; optimum load 47,000 ohms; channel separation 25 db; frequency response 20-15,000 cps \pm 2 db; compliance 4×10^{-6} cm./dyne.....\$34.95
Model SM-1-SR stylus replacement for Model SM-1 .7 mil diamond.....\$15.00

Model 225A Mono Cartridge

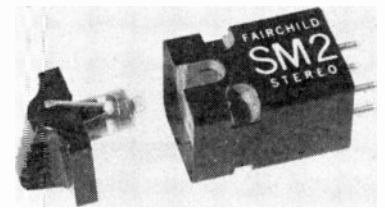
Moving coil pickup with "Micradjust" construction, allowing each cartridge to be hand adjusted; response \pm 2 db 20 to 20,000 cps; low moving mass; low impedance (nominally 200 ohms) causes insensitivity to hum pickup; output 4.5 millivolts for 2.5 inches per second recorded velocity; tracking pressure 4 to 8 grams; no attraction by iron or steel turntables; gold-plated wire, terminals, and clips for perfect electrical contacts; all cartridges have diamond styli, standard mountings. 225A (1 mil).....\$37.50
225B (2.5 mil).....\$37.50

Model 230 Micro-7 Mono Cartridge

Moving coil cartridge for mono use; 0.7-mil diamond styli; frequency response to beyond 20,000 cps; output 5 millivolts nominal impedance 600 ohms; high lateral and vertical compliance (can be used with 45/45 stereo records); 4 grams maximum pressure; low moving mass; special free-moving flexure pivot type construction;

low "Q" mechanical circuit practically eliminates low frequency arm resonances; standard mountings\$42.50

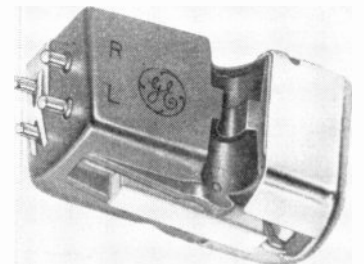
Model SM-2 Stereo Cartridge



Moving-magnet type; .0007" diamond stylus; output 5 mv. @ 3.8 cm./sec.; dynamic mass 2.0 grams; tracking force 2.5 grams; compliance 5×10^{-6} cm./dyne; response 20-15,000 cps \pm 2 db; separation 20 db. \pm 2 db from 20-15,000 cps.....\$37.50
Replacement stylus assembly.....\$15.00

GENERAL ELECTRIC

Model VR-225 Stereo Cartridge



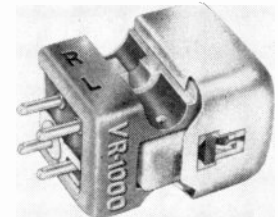
Magnetic variable reluctance design; response 20-20,000 cps \pm 3 db; output 5 mv. @ 3.8 cm./sec.; separation up to 25 db nominal; channel balance within 1 db 1000 cps; load impedance 47,000 ohms optimum; lateral compliance 4×10^{-6} cm./dyne; vertical compliance 3×10^{-6} cm./dyne; tracking force 2-4 grams; .5-mil replaceable diamond stylus.....\$18.95

Model VR-227 Stereo Cartridge

Same as VR-225 except response 20-17,000 cps; lateral compliance 2.5×10^{-6} cm./dyne; vertical compliance 2×10^{-6} cm./dyne; tracking force 5-7 grams; .7-mil replaceable diamond stylus.....\$16.95

Model VR1000-5 "Orthonetic" Stereo Cartridge

For use with professional-type turntables and arms and record changers that will track below 4 grams; response 20-20,000 cps \pm 3 db; tracking force 1-3 grams; vertical compliance 9×10^{-6} cm./dyne; lateral tracking force 6×10^{-6} cm./dyne;



47,000 ohm load impedance; output 1 mv./cm./sec.; separation 25 db at 1000 cps; channel balance within 2 db at 1000 cps; .5-mil replaceable diamond stylus\$29.95

Model VR1000-7 "Orthonetic" Stereo Cartridge

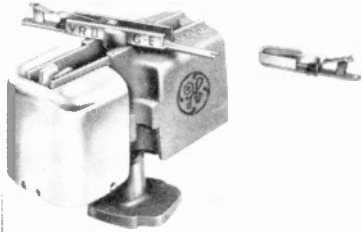
Similar to VR1000-5 except for use with any changer that will track from 3-7 grams; lateral compliance 4.5×10^{-6} cm./dyne; vertical compliance 4×10^{-6} cm./

2

Phono Cartridges

dyne; separation 20 db; has .7-mil replaceable diamond stylus.....\$24.95

Series VR-II Monophonic Cartridge

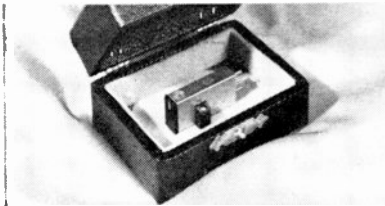


Variable reluctance magnetic design; single- and triple-play turnaround models; response 20-20,000 cps; output voltage 10 mv. at 5.5 cm./sec.; lateral compliance 1.7×10^{-9} cm./dyne; vertical compliance 5×10^{-6} cm./dyne; load impedance 100,000 ohms with 300 μ f. shunt capacity; 47,000 ohms with 400 μ f.; 6200 ohms with 1000 μ f.; tracking force 4 grams with 1-mil stylus and quality tonearm; 6 grams with 3-mil stylus and quality tonearm; 6-8 grams for dual 1- & 3-mil styli used with record changer; replaceable stylus.

- Model 4G-050 (1 and 3 mil sapphire styli)\$12.95
- Model 4G-052 (1-mil diamond; 3-mil sapphire styli).....\$17.95
- Model 4G-053 (1-mil and 3-mil diamond styli)\$24.95
- Model 4G-040 (3-mil sapphire).....\$9.95
- Model 4G-041 (1-mil sapphire).....\$9.95
- Model 4G-061 (1-mil diamond).....\$14.95
- Model 4G-063 (3-mil diamond).....\$14.95

GRADO

"Laboratory Series" Stereo Cartridge



Moving-coil design; response 10-30,000 cps \pm 1 db; output 9 mv. per channel @ 10 cmv.; input load any value above 5000 ohms; tracking force 3 grams; channel separation 30 db; diamond stylus; all parts specially selected and individually hand fitted\$49.50

"Classic" Cartridge

Similar in design to "Laboratory Series" except not custom assembled; response 15-28,000 cps \pm 1 db; channel separation 25 db\$37.50

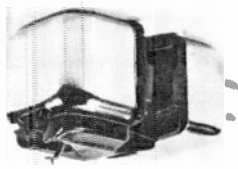
"Senator" Cartridge

Similar to "Laboratory Series" and "Classic" with bass frequencies somewhat fuller, mid-range somewhat softer, and more brilliant high end; response 18-24,000 cps \pm 1.5 db\$24.95

KNIGHT

Model KN-505X Professional Stereo Cartridge

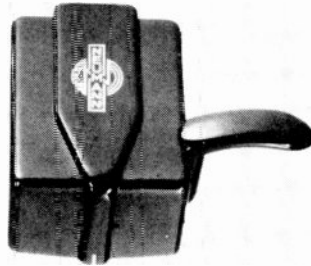
Four-coil moving-magnet type; channels balanced to within 1 db; user-replaceable .0006" diamond needle; front and back Mumetal shielding; tracking force $\frac{3}{4}$ -8 grams; response 15-30,000 cps \pm 2 db;



compliance 15×10^{-6} cm./dyne; fits all arms and heads with standard $\frac{1}{2}$ " mounting centers\$39.95

NEUMANN

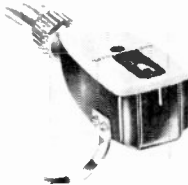
Model DST-62 Stereo Cartridge



Professional model originally designed for recording studios; has hand polished Swiss diamond stylus; to be used with PA2a turntable, TA-2 pickup arm, the SME arm, and the ESL tonearm; made in West Berlin\$79.50

ORTOFON

Model SPU/GT Stereo Cartridge



Response 20,20,000 cps; channel separation 20-25 db; load impedance 50,000 ohms; output at 1 kc. 7 mv. per channel; compliance 10×10^{-9} cm./dyne; stylus pressure 1 to 2 grams; 4-pin terminal; cartridge is supplied mounted and enclosed within plug-in head; will fit any Ortofon tonearm.....\$49.95

Model SPU/T Stereo Cartridge

Identical to Model SPU/GT but without plug-in head; can be mounted in almost any make of tonearm.....\$49.95

PICKERING

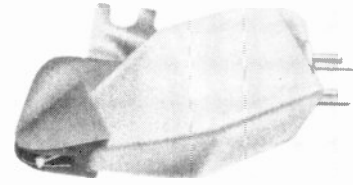
Model U38/AT Stereo Cartridge



Designed especially for use with automatic turntables; response 20-17,000 cps; output 2 mv./cm. of recorded level; channel separation 35 db; tracking force 2 to 5 grams; magnetic ("Fluxvalve") design. Diamond stylus.....\$46.50

Model 380 Series Stereo Cartridges

Frequency response 20-15,000 cps; output 2.5 mv./cm. of recorded level; channel separation 35 db; magnetic ("Fluxvalve")



design with removable "V-Guard" diamond stylus.

Model 380A for manual tonearms; 2-5 grams tracking force.....\$36.00
Model 380C for automatic record changers; 4-7 grams tracking force.....\$29.95

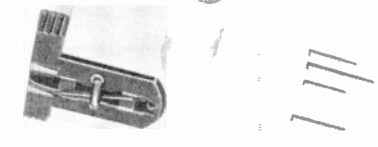
Model Mk 11 Cartridge



Frequency response 20-15,000 cps; output 1.3 mv./cm. of recorded level; channel separation 20/25 db; "T-Guard" stylus assembly.

Mk11A for manual arm; tracking force 2-5 grams\$26.40
Mk 11C for changer; tracking force 4-7 grams\$24.00

Stereo "90" Cartridge



Frequency response 20-12,000 cps; output 1.3 mv./cm. of recorded level; channel separation 20 db; push-pull circuit; hum-bucking coils, magnetic type; "T-Guard" stylus assembly; tracking force 4-7 grams\$16.50

Note: on "V-Guard" replacement stylus Type AA is for use with ultra-lightweight tonearms capable of tracking within the range $\frac{1}{4}$ to 3 grams; AT stylus is for use in automatic turntables, recommended tracking force is from 2-5 grams; Type A stylus is for use in manual tonearms; Type C stylus is recommended for automatic record changers.

REALISTIC

"V-Drive" Hi-Fi Cartridge

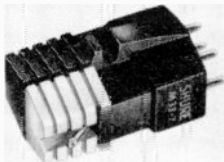
Response 20-20,000 cps \pm 2 db; compliance vertical and lateral 3.5×10^{-9} cm./dyne; isolation 28 db @ 1000 cps; stylus .7 mil diamond; output 8 mv.; four standard terminal connectors; tracking force 2 grams; ceramic generating elements....\$9.88

SHURE

Model M33 Stereo-Dynetic Cartridge

Top-of-the-line stereo unit; compliant stylus for minimum tracking force; instant stylus replacement; tracks at $\frac{1}{4}$ to 1.5 grams with .0005" diamond (compliance of 22×10^{-6} cm./dyne); 1.5 to 3 grams with .0007" diamond (compliance 20×10^{-6} cm./dyne); response 20-20,000 cps;

STEREO/HI-FI DIRECTORY



channel separation over 22.5 db; 6 mv. output per channel; load 47,000 ohms.

Model M33-7 (.0007" diamond stylus).....\$36.50

Model M33-5 (.0005" diamond stylus).....\$36.50

Diamond stylus (N33-7 or N33-5)...\$19.50

Model M77 Stereo-Dynetic Cartridge



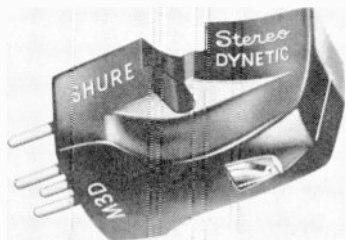
Particularly suited to use in quality record changers; features extra shielding against hum; instant stylus changing; tracks at 3 to 6 grams; compliance 6×10^{-6} cm./dyne; channel separation more than 20 db; response 20-17,000 cps; output 9 mv. per channel; load 47,000 ohms; .0007" diamond stylus\$27.50
N77 stylus\$10.50

Model N78 Mono Stylus

Instant stylus replacement feature of M33 and M77 cartridges permit conversion for playing 78 rpm records with .0027" diamond tip stylus; response 30-15,000 cps; output 11.5 mv.; compliance 6×10^{-6} cm./dyne; tracks at 4 to 6 grams....\$8.25

Model M3D Stereo Cartridge

May be used with mono or stereo records; frequency response 20 to 15,000 cps ± 3 db; compliance (vertical and lateral) 4×10^{-6} cm./dyne; output 5 millivolts;



tracking force 3-6 grams; recommended load impedance 50,000 ohms; 0.7-mil diamond stylus\$45.00

Model M7D Stereo Cartridge

Stereo cartridge with 0.7 mil diamond; frequency response 20-15,000 cps; channel separation more than 20 db at 1000 cps; 5 mv. per channel output; recom-



mended load impedance 47,000 ohms; vertical, lateral compliance 3.5×10^{-6} cm./dyne; 4 terminals; standard mounting\$24.00
N7D replacement stylus assembly.....\$12.00

Model M3/N21D Stereo Cartridge

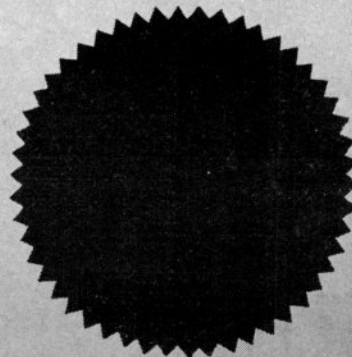
Includes N21D tubular stylus with .7 mil diamond; tracking force $2\frac{1}{2}$ grams max.;

1963 EDITION

Prima!

That's Italian for top-rated. And all over the world the Dual-1006 CUSTOM is not only top-rated but owned, used and loved by thousands of discerning audiophiles. Why? Most likely because it's the best combination automatic turntable and record changer available. Over 11 leading consumer and technical publications in this country alone have given it top-rated reviews (some even twice). But if you—like so many of us—don't just take anyone's word for things (even experts) you'll take a look at the CUSTOM for yourself. You'll watch it perform, hear it play, inspect all its features, read the fine print in the literature. Then you'll examine all other machines—regardless of brand name. Having done that, you'll never have to either blame yourself or go back to anybody to ask: "Why didn't you tell me about the top-rated Dual-1006 CUSTOM?"

UNITED AUDIO



FOR THE FACTS TO BE FAMILIAR WITH BEFORE CONSIDERING ANY PURCHASE OF RECORD PLAYING EQUIPMENT, WRITE: UNITED AUDIO PRODUCTS, 12-14 WEST 18 STREET, NEW YORK, N. Y.

CIRCLE NO. 59 ON READER SERVICE PAGE

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Phono Cartridges

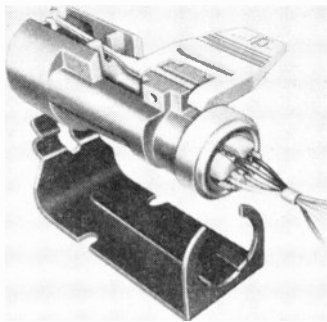
channel separation over 20 db @ 1000 cps; response 20-20,000 cps \pm 2½ db; output 4 mv.; load 47,000 ohms; compliance, vertical and lateral, 9×10^{-6} cm/dyne\$47.25

Model M7/N21D

M7D design with N21D tubular stylus; .7 mil diamond; performance similar to Model M3/N21D cartridge.....\$36.75

SONOTONE

Model 12 Stereo Crystal Cartridge



Made of plastic; has jack-in terminal plug to connect to tonearm wires; stylus is changed by snapping out turnover lever; Model 12T1R has output of 2.5 volts; Model 12TLA has output of 1.0 volt; standard sapphire stylus are 0.7 mil and 3 mil radius\$5.85

Model 10T Stereo Ceramic Cartridge

For stereo or mono records; "fuse clip" mounting bracket; frequency response 20-15,000 cps \pm 2.5 db; output 0.5 v.; compliance 1.5×10^{-6} cm/dyne; channel isolation 18 db; recommended load 1-5 megohm; tracking force 5-7 grams.

Model 10T2-S (.7-mil sapphire, 3-mil sapphire)\$ 9.70
 Model 10T2-SD (.7-mil diamond, 3-mil sapphire)\$13.00
 Model 10T2-S77 (.7-mil sapphire, .7-mil sapphire)\$ 9.70
 Model 10T2-SD77 (.7-mil diamond, .7-mil sapphire)\$13.00

Model 3T-SD Pickup

Ceramic turnover cartridge; frequency response: 20 to 15,000 cps with gradual roll-off to 20,000 cps; compliance: 2.0 microcentimeters per dyne; output: 0.5 volt on microgroove records (5.5 cm/sec. recording level); 4-6 gram stylus pressure required; standard ½" or ⅜" mounting centers; diamond LP and sapphire 78 styli\$12.40

Model 1P and 2TA Ceramic Cartridge

Model 1P is single-stylus cartridge, Model 2TA is two-stylus turnover-type; frequency response 30 to 15,000 cps \pm 3 db; compliance 2×10^{-6} cm/dyne; output: 1 v.; tracking force 6-8 grams; recommended load 1-5 megohms.

Model 1P-1S (1-mil sapphire).....\$ 4.85
 Model 1P-2S (2-mil sapphire).....\$ 4.85
 Model 1P-3S (3-mil sapphire).....\$ 4.85
 Model 1P-1D (1-mil diamond).....\$ 9.50
 Model 1P-3D (3 mil diamond).....\$ 9.50
 Model 2TA-S (2 sapphires).....\$ 5.65
 Model 2TA-SD (1-mil diamond, 3-mil sapphire)\$ 9.70

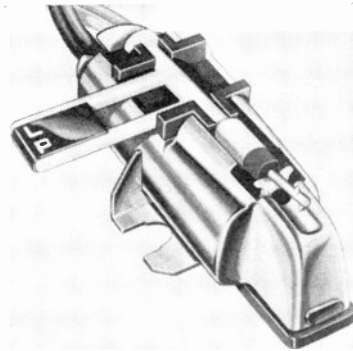
Model 8TA Stereo Ceramic Cartridge

For use with stereo or mono records;

turnover-type; frequency response 20 to 15,000 cps, roll-off beyond; compliance 3.0×10^{-6} cm/dyne; tracking force 3-5 grams for professional arms, 4-6 grams for changers; channel isolation 20 db; recommended load 1-5 megohms.

Model 8TA-4S (.7-mil and 3-mil sapphires)\$ 8.75
 Model 8TA-4SD (.7-mil diamond and 3-mil sapphire)\$13.00

Model 9TA Stereo Ceramic Cartridge

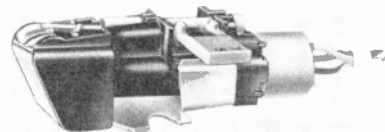


Turnover cartridge handles all speeds, stereo or mono; response 20-17,000 cps \pm 1 db, roll-off to 20,000 cps; separation 30 db; load 1-5 megohms for ceramic input; tracking force 2-4 grams for professional arms, 3-5 grams for changers.

Model 9TA-S (.7 mil and 3 mil sapphires)\$ 8.35
 Model 9TA-SD (.7 mil diamond, 3 mil sapphire)\$13.00
 Model 9TA-S77 (.7 mil and .7 mil sapphires)\$ 8.35
 Model 9TA-D77 (dual .7 mil diamond)\$16.00

Model 16TA Stereo Ceramic Cartridge

Turnover cartridge; response 20-10,000 cps \pm 1 db, roll-off to 12,000 cps; separation 25 db; load 2 megohms; tracking



force 4-6 grams for professional arms, 5-7 grams for changers; standard ½" mounting centers.

Model 16TA-S (.7 mil and 3 mil sapphires)\$ 6.00
 Model 16TA-SD (.7 mil diamond, 3 mil sapphire)\$ 9.75
 Model 16TA-S77 (.7 mil and .7 mil sapphires)\$ 6.00

Model 18TA Stereo Ceramic Cartridge

Specification same as for Model 16TA but with output of .10 volt; channel separation of 20 db; tracking force of 6-8 grams for professional arms, 7-9 grams for changers.

Model 18TA-S (.7 mil and 3 mil sapphires)\$ 6.00
 Model 18TA-SD (.7 mil diamond, 3 mil sapphire)\$ 9.75
 Model 18TA-S77 (.7 mil and .7 mil sapphires)\$ 6.00

"Velocitone Mark II"

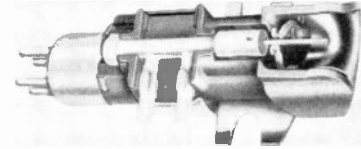
Ceramic Assembly

Permits use of Sonotone's stereo cartridge without modification of velocity or magnetic amplifier system of record player; assembly consists of Model 9TA stereo ceramic cartridge and two factory-matched equalizers; response 20-6000 cps \pm ½ db and to 17,000 cps \pm 1 db, roll-off to 20,000 cps; output voltage 11 mv.; compliance 5.5×10^{-6} cm/dyne; tracking force

2 grams for professional arms, 3 grams for changers.

9TA-SV (assembly with sapphire tips)\$14.75
 9TA-SIV (assembly with diamond/sapphire tips)\$19.25
 9TA-ID77V (assembly with dual .7 mil diamond tips)\$22.25

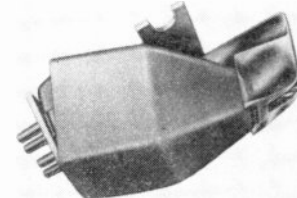
Model 916TA Ceramic Stereo Cartridge



Turnover cartridge for 78's & LP records; response 20-15,000 cps \pm 2 db; output .45 v.; compliance 4×10^{-6} cm/dyne; channel separation 28 db; load impedance 2 megohms; tracking force 3-5 grams for professional arms, 4-6 grams for changers. Dual sapphire styli.....\$ 7.15
 Combination sapphire & diamond.....\$11.25

STANTON

Model 481 "Calibration Standard" Cartridges

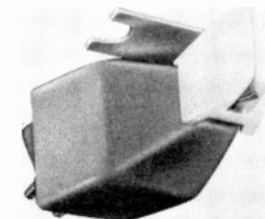


Frequency response 20-10,000 cps \pm 1 db, 10,000-20,000 cps \pm 2 db; channel separation 35 db; magnetic ("Fluxvalve") design.

Model 481AA for use with ultra-light-weight arms capable of tracking within ¼ to 3 grams; output .5 mv./cm. of recorded level; "V-Guard" diamond stylus\$49.50

Model 481A for use with mono tonearms; tracking force 2 to 5 grams; output .8 mv./cm. of recorded level.....\$48.00
 Model 481E same as Model 481A but includes two additional "V-Guard" styli, 1-mil diamond for LP's and 2.7-mil diamond for 78's.....\$60.00

Model 400 "Professional" Cartridges



Frequency response 20-20,000 cps; channel separation 35 db; magnetic ("Fluxvalve") design.

Model 400AA for use with ultra-light-weight tonearms capable of tracking ¼ to 3 grams; output .85 mv./cm. of recorded level; "V-Guard" diamond stylus...\$40.50

Model 400A for use with mono tonearms; tracking force 2 to 5 grams; output 1.4 mv./cm. of recorded level; "V-Guard" diamond stylus.....\$39.00

Model 400C for use in automatic record changers; tracking force 4 to 7 grams; output 2.6 mv./cm. of recorded level; "V-Guard" diamond stylus.....\$33.00

STEREO/HI-FI DIRECTORY

2 Tonearms

AUDIO DYNAMICS

"Pritchard" Tonearm



Has removable plug-in head; walnut wood arm; adjustable rear counterweight; side-thrust compensator; over-all arm length 10 5/8"; pivot to stylus tip 9"; tracking force 3/4 gram; will accommodate standard cartridges\$44.50

COMPONENTS CORP.

Model AS Auto-Set Tonearm Kit

Pivot bearing design and precise balance of cartridge eliminates vertical bounce;



spring adjustment of stylus force; continuous adjustment of tracking angle while record is playing; especially for stereo use\$9.50

DYNACO

Models TA-12 & TA-16 Tonearms

Both tonearms are manufactured by B & O and designed for use with a Stereodyne II plug-in cartridge having different mounting assembly; has dynamic balance ver-



tiably and horizontally enabling constant groove contact; stylus force adjustment to fractions of gram; single hole mounting; combination of low inertial mass and a gyro mount.

TA-12 (12 inch)\$49.95
 TA-16 (16 inch professional)\$59.95
 TSD-30 3.0 mil diamond cartridge for 78's (separate)\$29.95
 TSD-05 (.5 mil diamond cartridge)\$29.95
 TSD-07 (.7 mil diamond cartridge)\$29.95

EMI

Model EPU-100 Integrated Pickup



Combination arm and cartridge assembly; balanced laterally and longitudinally; factory preset for 2.5 gram tracking force; has viscous damping system with lever arm for raising and lowering arm on record; cartridge is a variable reluctance type; substantially flat from 30 to 20,000 cps; output 7.5 mv. per channel; crosstalk

better than 20 db at 1000-5000 cps; for 12" records; 68,000 ohms recommended load impedance; vertical compliance 3.5 x 10⁻⁶ cm./dyne; lateral compliance 7 x 10⁻⁶ cm./dyne.....\$99.75

EMPIRE

Model 980 Stereo Balance Arm



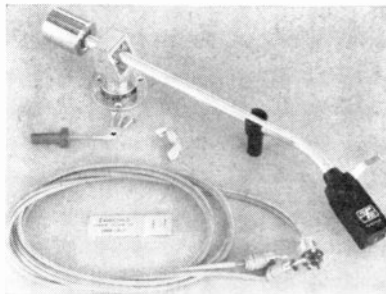
Counterbalanced arm allows adjustment for any cartridge from 2-25 grams; stylus force adjustment 0-8 grams; arm offset at 23.8°; resonant frequency 6 cps; over-all length 12 3/8"; maximum tracking error ± .65°; includes "Dyna-Lift" device which automatically lifts arm from record at end of play; satin gold or satin chrome finish.\$50.00

Model 98DL "Dyna-Lift"

Separate attachment for previous Model 98 tonearms; mechanical device automatically lifts arm from groove at end of record play; action is triggered magnetically.....\$10.00

FAIRCHILD

Model 500 Tonearm



Professional tonearm incorporating anti-skating feature; will track 30 cm./sec., 1000-cycle tone sinusoidally; plug-in 3-foot cables; vertical and lateral hysteresis less than 1 gram at stylus tip; tracking force 2 1/2 grams to 9 grams; 11 1/2" long; 2" to 3" counterweight overhang; arm-transport only.....\$28.00
 With SM-2 cartridge.....\$55.00
 Model 501 16" arm-transport with removable head.....\$37.50

GRADO

"Laboratory Series" Tonearm



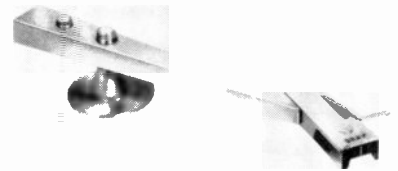
Gun-stock walnut wood construction; for 12" records; tracking error ± .5°; low-frequency resonance 11 cps; minimum tracking force 1/2 gram; has interchangeable cartridge slides and both vertical and lateral balance adjustments.....\$39.50
 With "Laboratory" cartridge.....\$85.00
 With "Classic" cartridge.....\$75.00
 With "Senator" cartridge.....\$63.00

GRAY

Model 212-TN Tonearm

Viscous damped with slide-in type cartridge assembly for 12" stereo or mono

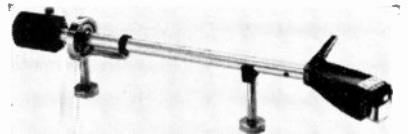
records; vertical resonance 20 cps; horizontal resonance 10 cps at 4 grams; tracking force per 5 x 10⁻⁶ cm./dyne; compliance tracking error 1 deg., 20 min. @



3.75" and 2 deg. 0 min. @ 5.5" radius. Model 212-TN aluminum finish with black trim.....\$35.50
 Model 212-TG same as Model 212-TN but with grey finish.....\$32.50
 Model SAK-12N same as Model 212-TN but kit version.....\$28.60
 Model SAK-12G same as Model 212-TG but kit version.....\$24.95

KNIGHT

Model KN-1020 Stereo Tonearm



Adjustable from 1 to 4 grams; gimbal suspension; tracks properly at up to 45 degree tilt; plug-in head; lateral compensation feature; installs in single 3/8" hole; over-all length 11".....\$19.95

ORTOFON

Model RMG-212 Stereo Arm

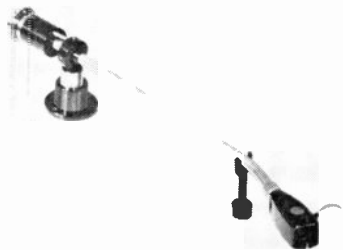


Counterweight is separated from tube by rubber damper to eliminate resonances; attached to counterweight is adjustable stylus pressure gauge adjustable for 0-7 grams; arm resonance 8 cps; maximum tracking error 1.19°; arm length 12" over-all; plug-in head designed for use with any cartridge; employs ball-bearing gimbal suspension; includes plug-in shielded cables\$54.95

Model RMG-212T Stereo Arm

Same as Model RMG-212 except includes pre-drilled tonearm mounting board for Thorens Model TD-124 or TD-121 turntables\$59.95

Model RMG-309 Stereo Arm



Professional 16" stereo arm; tracks at 2 grams with plug-in Ortofon stereo cartridge; plug-in shells available to fit standard U. S. stereo cartridges; statically balanced by counterweight with spring-controlled stylus force (no table leveling

2

Tonearms

required): micrometer stylus force adjustment reads directly in grams; adjustable height over mounting plate; rubber damping between arm and counterweight; approx. dimensions 12³/₁₆" pivot to record center 3" radius rear clearance.....\$59.95

Model SMG-212 Stereo Arm

12" stereo arm; takes Ortofon or any standard stereo cartridge; tracks at 2 grams; special arm shape makes turntable leveling unnecessary; turntable may be up to 30 degrees out of level before tracking difficulties arise; ball bearings on both horizontal and vertical pivots; adjustable height above mounting plate; unique counterweight adjustment can be calibrated by user for any cartridge to read stylus force directly in grams; approx. dimensions 8³/₈" pivot to record center, 3¹/₄" rear clearance radius (max. for heaviest cartridges)\$29.95

Model SKG-212 Stereo Arm

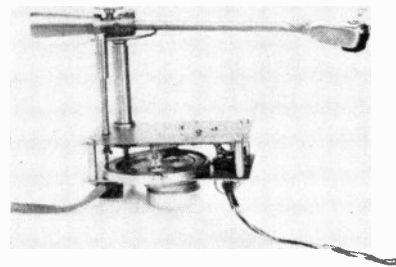
12" stereo arm; takes Ortofon or standard stereo cartridges; adjustable user-calibrated counterweight shows stylus force directly in grams; dimensions same as for Model SMG-212\$19.95

REK-O-KUT

Model APK "Auto-Poise" Converter

Synchronous motor-driven mechanical device to be used with Rek-O-Kut Model S-320 tonearm; combination provides automatic operation of turntable and tonearm; at the touch of button arm is lifted and placed on record as motor starts; converter is completely disengaged during play cycle; at end of record arm is lifted automatically and placed on rest, stopping turntable; easily installed under mounting board; converter only.....\$49.95

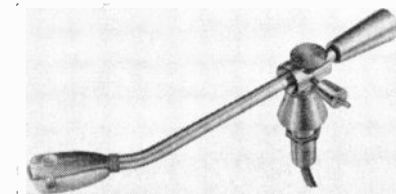
Model AP-320 Automatic Tonearm



Combination of Model S-320 tonearm and APK converter.....\$74.95

Model S-320 Tonearm

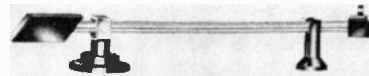
Plugs into amp with permanently attached cable; has "Micropoise" dynamic balance, spring-cushioned; calibrated from 0-6 grams; isolated counterweight; includes aluminum 4-wire plug-in shell with cartridge adjustment slide; collar locks shell



into arm; single hole mounting; features "Omni-Balance" for optimum bearing loads and lateral balance.....\$34.95

H. H. SCOTT

Model 1000 "London-Scott" Stereo Pickup and Arm



Stereo arm and cartridge designed as integrated unit; frequency response 20 to 20,000 cps \pm 2 db; tip mass less than 1 milligram; compliance 3.5x10⁻⁶ cm/dyne; output (45/45) 7 mv., 5cm/sec., lateral connection (both sides in parallel) 3 db lower; 0.5 mil diamond stylus; impedance 4000 ohms per channel at 400 cps; recommended load 47,000 ohms; crosstalk better than -20 db; recommended tracking force 3.5 grams; magnetic design pickup; arm length 12.5"; height adjustable 1³/₈"-2¹/₂" above mounting board; supplied with arm rest, connecting cables, hardware, and templates\$89.95
Model 1000-338 cartridge for 33¹/₃ rpm.....\$59.95
Model 1000-78 cartridge for 78 rpm.....\$59.95

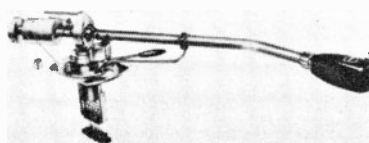
SHURE

Models M232 & M236 Tonearm



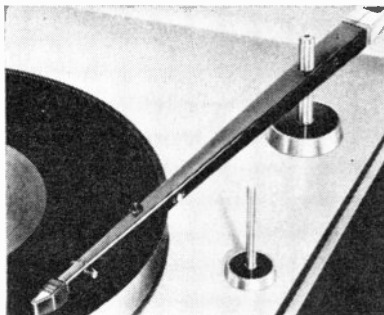
Accepts all cartridges (mono or stereo); micrometer counterweight; direct-reading stylus force gauge; slide adjustment for stylus overhang; arm height adjustable; stylus tracking force adjustable 1-8 grams; for 12" records.....\$29.95
Model M236 for 16" records.....\$31.95

Model M22 "Studio Dynetic" Arm & Stereo Cartridge



Response 20-20,000 cps \pm 2¹/₂ db; channel separation better than 20 db at 1000 cps; output voltage 4.5 mv. per channel at 1000 cps; tracking force ³/₄ to 1¹/₂ grams; vertical and lateral compliance 22 x 10⁻⁶ cm./dyne; includes M22 stereo cartridge and user-replaceable .0005" diamond stylus\$89.50
Model M226 with 16" arm.....\$89.50

Model Shure SME 3009/Tonearm

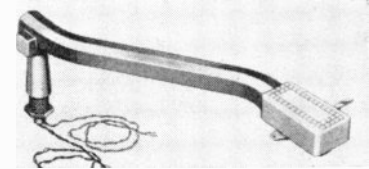


Made in England; tracking force ³/₄ to 6 grams; anti-skating control; precision ball races and knife edge bearings; accurate longitudinal and lateral balance control; minimal tracking error; subaudible resonance; convenient overhang adjustment; lever-operated cueing device; accepts all standard cartridges; 12" version; less cartridge\$89.50

Model Shure-SME 3012 for 16" records.....\$99.50

SONOTONE

Model T1 Tonearm & Crystal Stereo Cartridge



Economy unit; all plastic manual tonearm; available with compression rear mounting post; tracking force 9-11 grams; includes Model 12 crystal cartridge..\$7.45

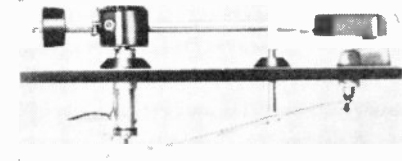
Model 200 "Unipoise" Tonearm



Ultra-lightweight design for tracking pressure of ¹/₄ gram; simple adjustments balance arm in all planes; has calibrated (0-3 gram) stylus force adjustment; over-all weight with base and pivot assembly 6 oz.; for 12" records.....\$36.00

THORENS

Model BTD-12S Tonearm

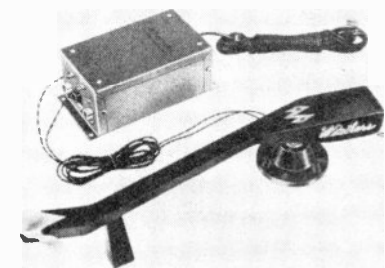


For 12" records; has exclusive cueing control for lowering and raising arm from turntable; maximum tracking error .5°/inch; offset angle of arm 25°-15'; adjustable counterweight plus built-in calibrated stylus force adjustment (0-8 grams); separate cartridge shell and slide assembly for proper spacing of stylus; supplied with mounting board for Thorens TD-124 & TD-121 turntables.....\$50.00

WEATHERS

"Professional" Stereo Tonearm & Cartridge

Wood-type, viscous-damped arm with ceramic cartridge operating as bridge; amplified bridge-polarizing supply provides both magnetic and high-level outputs; re-



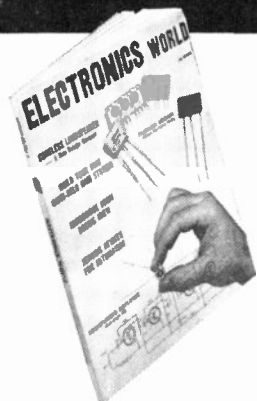
sponse 20-20,000 cps \pm 1 db; channel separation 40 db @ 1 kc., 35 db @ 15,000 cps; output 1 volt (RIAA equalized), 8 mv. @ 1 kc. for magnetic input; moving mass .6 mg.; compliance 20 x 10⁻⁶ cm./dyne; diamond stylus; tracking force ³/₄-1 gram; for use with 12" turntable\$129.50
Model PS-11K Conversion kit for all Weathers viscous-damped tonearms..\$91.00

STEREO/HI-FI DIRECTORY

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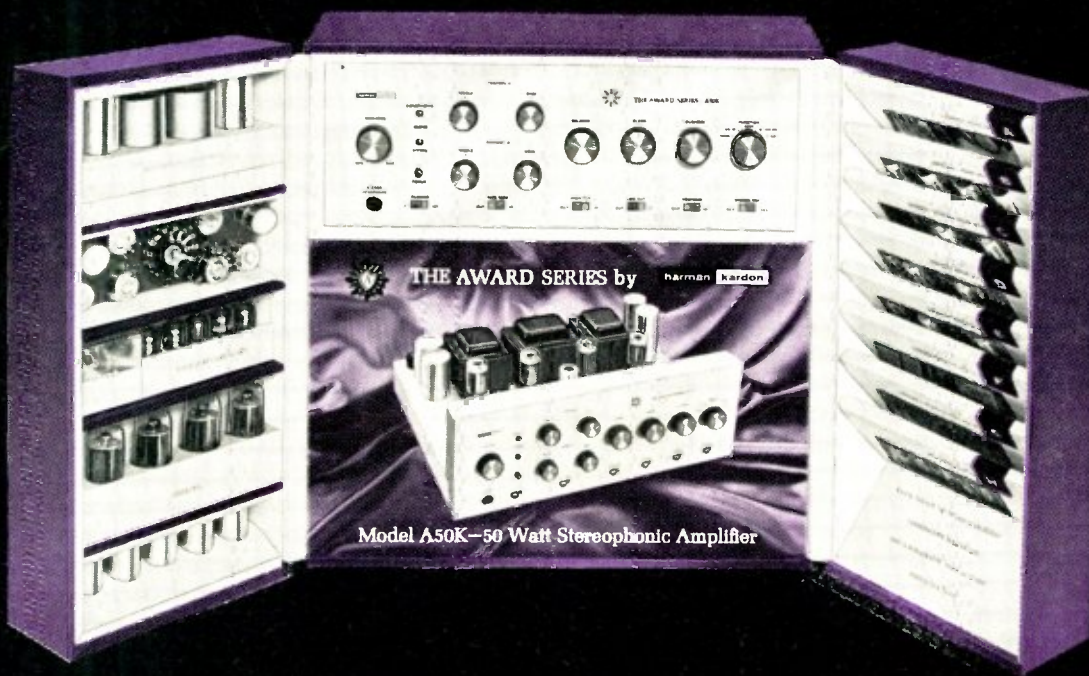
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ble performance of the famed Award Series; the total integration of the most advanced instruction material, packaging and construction techniques. From the moment you open the kit, until the final moment when the completed instrument is turned on, yours will be a totally gratifying experience.

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harman kardon

TUNERS



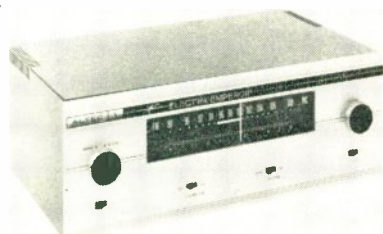
Special Features

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SELECTING AN FM TUNER	73
FM, AM-FM INTEGRATED DESIGNS }	57
FM-MULTIPLEX DESIGNS }	

ALTEC LANSING

"Astro" AM-FM Multiplex Tuner/Amp

Combines an AM & FM tuner with FM multiplex circuitry and dual-channel amplifier system; power output 27.5 watts/channel; response 20-20,000 cps \pm 1 db; FM sensitivity 2.9 μ v.; automatic indicator light for stereo; combines tubes and transistors for total of 34; controls: input



selector switch for tape head, phono, tape, FM or AM, mode switch for mono or stereo plus selector for speaker or headphones, volume/on-off, balance, loudness, tape monitor, channel reverse, phase reverse, rumble filter, a.f.c., AM bandwidth, bass & treble tone; 6" x 15" x 13 1/2"; supplied with cabinet.....\$597.00

Model 315A FM Multiplex Tuner

Sensitivity 2.9 μ v. for 20 db of quieting; separation 25 db from 50 to 15,000 cps; time-division type multiplex circuitry; supplied with metal cabinet; excise tax included in price.....\$256.00

Model 314A "Electra Emperor" FM Multiplex Tuner

Sensitivity 1.2 μ v. for 20 db of quieting;



channel separation 30 db from 50 to 15,000 cps; time-division type multiplex circuitry; supplied with metal cabinet; excise tax included in price.....\$359.00

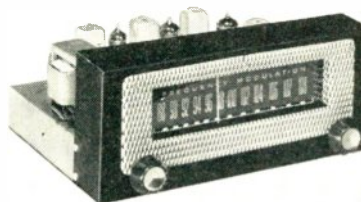
ARKAY

AM-5 AM Tuner Kit



Sensitivity: 2 microvolts for 20 db signal-to-noise; frequency response 20 to 8500 cps in wide-band position; 20 to 3500 cps in narrow-band position; 1 volt cathode follower output; 10 kc. whistle filter; tubes are 2-6BA6, 6BE6, 6AL5, 6AV6; self powered\$29.45
Factory wired.....\$44.95

FM-6-A FM Tuner Kit



Sensitivity: 4 microvolts for 20 db quieting; selectivity: 200 kc. bandwidth 6 db down; 30 db minimum image rejection; hum level-65 db; temperature compensated oscillator; 3 i.f. stages; Foster-Seeley discriminator; a.f.c. with defeat switch; 5 1/4" x 9 1/2" x 8".
Kit\$25.75

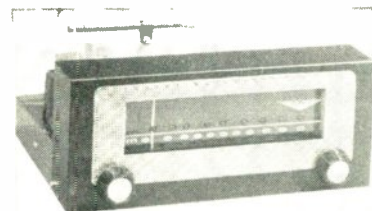
Model FM 7 FM Tuner Kit

Pre-wired and pre-aligned front end; electronic tuning indicator; 4 i.f. stages; sensitivity 1.9 μ v. for 20 db quieting; i.f. bandwidth 260 kc. at 6 db down; image rejection 40 db; includes a.f.c. and a.g.c.; outputs: multiplex, high level cathode follower FM; tubes are 6AQ8, 3-6AU6, 6AL5, 6C4, EL84, tuning eye; 12 lbs.....\$39.95
Factory wired.....\$64.95

FM-8 FM Tuner Kit

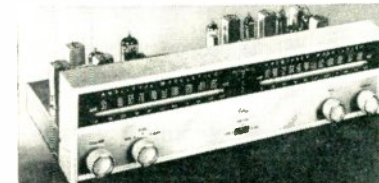
Three tuned stages, all-triode front end, five double-tuned i.f. stages, dual limiters; Foster-Seeley discriminator, variable a.f.c.; a.g.c. front-panel sound muting control for silent meter tuning; standby switch; low-filter switch; sensitivity 1.9 microvolts for 20 db quieting; tuning meter, frequency response 20 to 20,000 cps; outputs: cathode follower, high level, and binaural FM (multiplex); tubes: 2-12AT7, 2-6BA6, 2-6AU6, 6AL5, 12AU7; edge lighted slide rule dial\$39.95
Factory wired.....\$59.95

HFT-7 AM-FM Tuner Kit



FM specifications identical to FM-6 tuner kit; AM sensitivity is 20 microvolts; selectivity of 8 kc. bandwidth 5 db down; 5 1/4" x 9 1/2" x 8"\$32.00
Factory wired.....\$49.95

ST-11 AM-FM Stereo Tuner Kit



AM and FM completely separate and independent; FM specifications: sensitivity 4 microvolts for 20 db quieting, bandwidth 200 kc. at 6 db down, image rejection 30 db minimum, frequency response \pm 5 db 20 to 20,000 cps, hum level -65 db, a.f.c., cathode follower output; AM specifications: sensitivity 3 microvolts for 20 db signal-to-noise, frequency response 20 to 8500 cps, two bands-narrow and wide, whistle filter, cathode follower output; self powered; weight 12 lbs.; tubes are 3-12AT7, 4-6BA6, 6AU6, 6BE6, 6AL5, plus selenium rectifier. Kit\$49.95
Factory wired.....\$74.50

3

Tuners

BIGG OF CALIFORNIA

Model AF12-SM FM-AM Tuner/Amplifier



Basic control center with ten inputs and 4 outputs; variable phono load impedance; FM and AM circuits are separate; FM sensitivity 1.5 μ v. for 25 db of quieting; response 10-75,000 cps \pm 1 db; distortion less than 1% for 75 kc. deviation; has a.f.c. and multiplex output jack for use with multiplex adapter; 7 1/2" d. x 13" w. x 5 1/2" h.\$159.95

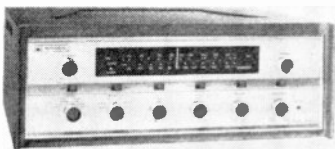
Model FB-2M FM Tuner



Same circuit design and performance as FM section of Model AF12-SM.....\$69.95

BOGEN

Model RP60 AM-FM Multiplex Tuner



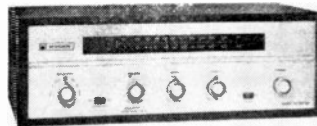
Integrated design including dual-channel amplifiers; 30 watts per channel (IHFM music rating); response 20-20,000 cps \pm 1 db; .6% distortion; hum & noise low-level inputs -60 db, high-level -75 db; FM sensitivity .85 μ v. for 20 db of quieting (2.5 μ v. IHFM); electronic-eye tuning indicator; stereo headphone output; audio sensitivity low-level inputs 4.5 mv., high-level inputs .5 v.; controls: 6-position selector, 4-position mode, volume, balance, bass, treble, rumble filter, scratch filter, loudness, tape monitor, power, tuning, a.f.c., stereo filter; inputs: magnetic phono, tape aux., tape monitor; multiplex circuit is time-division type with "stereo-minder" indicator, tape recording filter; 20 tubes, 8 crystal diodes, 7 rectifiers; output 4-8-16 ohms with impedance selector; tape output; center-channel; 15 1/16" w. x 5 3/4" h. x 15" d.\$299.95
Metal enclosure\$ 12.95
Walnut cabinet\$ 27.95

Model RPF60 FM-Multiplex Tuner

Identical in almost all respects to RP60 but does not include AM tuner circuitry\$279.95
Metal enclosure\$ 12.95
Walnut cabinet\$ 27.95

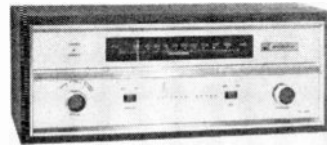
Model RP100-BM AM-FM Mono Tuner

Integrated design including amplifier; output power 15 watts continuous sine-wave;



harmonic distortion 2% at rated output response FM & phono 20-20,000 cps \pm 1 db; AM 20-4500 cps \pm 1 db; output impedances 8-16 ohms with tap for line-matching transformers; noise & hum -55 db; FM sensitivity 1.25 μ v. for 20 db of quieting (3 μ v. IHFM), AM 5 μ v. for 20 db signal-to-noise ratio; controls: selector with equalization positions, volume, bass, treble, tuning, power, microphone; 13 tubes plus 3 crystal diodes; 15" x 4 3/4" x 12 1/2"\$186.60
Metal enclosure\$ 11.95
Walnut cabinet\$ 26.95

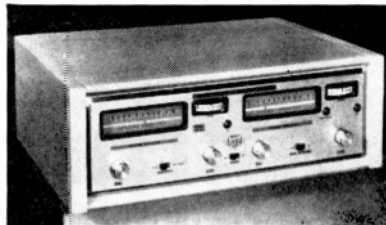
Model TP250 FM Multiplex Tuner



Response 30-15,000 cps \pm .5 db; distortion .5% at rated output; hum & noise 60 db below 100% modulation; sensitivity .85 μ v. for 20 db of quieting (2.5 μ v. IHFM); tuning indicator; low-impedance output; controls: tuning, a.f.c., mode, power; multiplex circuitry is matrixing-type with "stereo-minder" indicator; tape recording filter; 10 tubes plus 3 crystal diodes & 1 rectifier; 12 3/4" w. x 4 3/4" h. x 10" d.\$159.95
Metal enclosure\$ 11.95
Walnut cabinet\$ 26.95

BROWNE-NOBLES

Model NVX-100 AM-FM Multiplex Tuner



Completely transistorized design with separate AM and FM tuners; individual level controls and tuning indicators; local/distance switch for AM; interchannel noise suppression switch for FM; 15 transistors, 6 diodes; 14 1/2" w. x 10" d. x 4 1/2" h.\$199.95
Model NV-100 Same as NVX-100 but without multiplex circuitry.....\$169.95

BURSTEIN-APPLEBEE

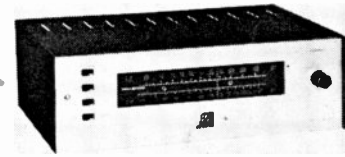
Model BA-240SR FM-AM Multiplex Tuner



Integrated design including dual-channel preamps & power amplifiers; 12 watts per channel; response 20-20,000 cps \pm 1 db; harmonic distortion .5% @ 100 cps & 10 watts; 1M distortion 2% @ 10 watts; sensitivity 2 μ v.; 4-8-16 ohm and high-impedance tape output for each channel;

conventional input circuits and operating controls; multiplex channel separation 35 db min. 13 1/4" w. x 4 5/16" h. x 13" d.\$179.95
Metal cabinet extra\$ 8.95

Model BA-400ST FM-AM Multiplex Tuner



FM response 20-20,000 cps \pm .5 db; .5% harmonic distortion; 2 μ v. sensitivity; multiplex separation 30 db or better; hum & noise 60 db below 100% modulation; AM sensitivity 10 μ v.; response 20-6000 cps \pm 3 db; controls: on-off, a.f.c. on-off, AM or FM, mono/multiplex, tuning; 9 tubes, 8 diodes, 1 silicon rectifier; 13" w. x 9" d. x 4 1/2" h.\$79.95
Metal cabinet extra\$ 4.95

CALBEST ELECTRONICS

Model 7110 AM-FM Tuner

Sensitivity: FM, 2 microvolts for 20 db quieting; AM, 5 microvolts for 0.5 volt at detector; bandwidth at 6 db down: FM, 200 kc; AM, 8 kc.; frequency response: FM, 20 to 20,000 cps \pm 0.5 db; AM, 20 to 6000 cps \pm 2 db; hum and noise: FM, 65 db below 100% modulation; AM, 55 db below 100% modulation; FM has a.f.c. with defeat and noise gate; tuning indicator; 11 tubes; 13 1/4" x 6 1/4" x 4 1/2" h.

Model 7110 (Metal cabinet).....\$114.95
Model 7110M (Mahogany cabinet).....\$139.95

Model 7110SM (Salem maple cabinet; Early American style).....\$149.95
Model 7110W (Walnut cabinet).....\$149.95

Model 8150 Stereo AM-FM Multiplex Tuner

Includes AM ferrite loop antennas and built-in FM line antenna; sensitivity is 4 μ v. for 0.5 v. at detector on AM, 2 μ v. for 20 db of quieting on FM; FM drift 5 kc. max with a.f.c. off; 3 v. out-



put; AM noise level 55 db below 100% modulation; FM noise level 65 db below 100% modulation; controls for AM, FM, multiplex, and stereo; tubes are 5-6BA6, 2-6AU6, 2-ECC85, 2-6AL5, 6C4, 2-1DM70 4-1N48 crystal diodes, silicon rectifier.

Metal case.....\$159.95
Walnut case.....\$199.95

CORSAIR

Model 289 FM Tuner



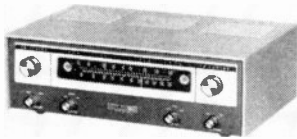
Mono design with multiplex output jack; response 20-20,000 cps \pm 1 db; sensitiv-

STEREO/HI-FI DIRECTORY

ity 2 μ v. for 30 db of quieting; hum 55 db below 100% modulation; has a.f.c. defeat switch; tubes: 2-12A7, 6CB6, 6H8, 6AL5 plus selenium rectifier; 9 1/4" x 6 1/2" x 4 1/16".....\$55.00

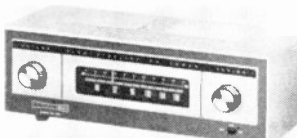
DAYSTROM

Model DA-286 AM-FM Tuner



Styled to match DA-281 amplifier; has 12 tubes and separate AM & FM circuitry; cathode-follower output; FM multiplex adapter output jack; separate tuning eyes; adjustable a.f.c.; AM usable sensitivity 15 μ v. @ 1000 kc. for 20 db of S/N ratio FM sensitivity 1 μ v. for 20 db of quieting; harmonic distortion less than 1%; has AM & FM rear-mounted level controls; front-end factory assembled and aligned on all kits; 15 1/4" w. x 5" h. x 10" d. Kit\$84.95
Factory assembled.....\$169.95

Model DA-287 FM Tuner



Has a.f.c. and FM multiplex adapter output jack; sensitivity 2.2 μ v. for 20 db of quieting; response 20-20,000 cps \pm 2 db; harmonic distortion less than 1.5%; IM distortion less than 1%; design similar to DA-281 amplifier; all kits have factory assembled and aligned front ends; 13 1/2" w. x 4 1/4" h. x 7" d.
Kit\$49.95
Factory assembled.....\$99.95

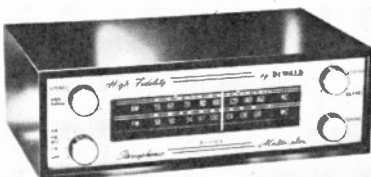
DE WALD

Model N-803-B "Imperial"



AM-FM mono-type tuner; FM sensitivity 3 μ v. for 20 db quieting; frequency response 20-20,000 cps \pm 1 db; a.f.c.; hum 70 db below 1 volt; output 1 volt for 30% modulation; AM sensitivity 75 μ v. loop sensitivity; bandwidth 7000 cps; 7 tubes plus selenium rectifier; black and gold cabinet; 13" w. x 4 1/2" h. x 9" d.....\$89.95

Model R1103 AM-FM Multiplex Tuner



Has FM multiplex circuitry; FM sensitivity 3 μ v. for 20 db of quieting; response 20-20,000 cps \pm 1 db; hum 70 db below 1 v.; cathode-follower (2 1/2 v.) outputs for operating dual-channel power amplifier; built-in AM ferrite and FM line-cord

1963 EDITION



DEWALD

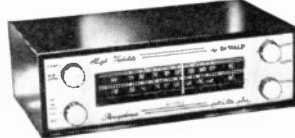


MFD. BY



Over 40 years of electronic research and development by DeWald, pioneer in high fidelity tuner and amplifier and electronic production, has resulted in components of the highest quality at the lowest possible cost!

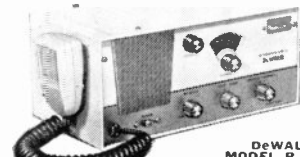
HI-FI STEREO MULTIPLEX AM-FM TUNER R1103



Sensitivity: FM: 3 Microvolts for DB Quieting.
AM: 75 Microvolts Loop Sensitivity. Response:
FB: 1DB 20-20,000 C.P.S.
A.M.: 2 DB 20-5,000
C.P.S. Hum Level: 70 DB below 1 volt.

119.95 List Case incl.

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DeWald MODEL R 1050 RADIOPHONE

CITIZEN BAND TRANSCEIVER (ILLUS.)
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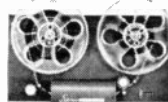
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CIRCLE NO. 16 ON READER SERVICE PAGE

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Model RP 100K Semi-Kit includes transport completely assembled and tested with 3 heads; and control electronics, stereo record, and stereo playback pre-amplifiers in easy-to-assemble kit form.

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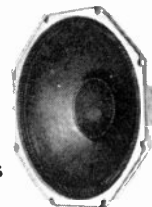
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ROCK BOTTOM PRICES

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3

Tuners

antennas; controls are mono, FM stereo, function, stereo blend; cabinet black with brass escutcheon; 13½" l. x 4¼" h. x 11½" d.\$119.95

DYNACO

Model FM-1 FM Tuner Kit



Low-distortion, drift-free FM tuner; etched-circuit construction; high usable sensitivity; EM-84 tuning eye permits precision alignment without test instruments; slug-tuned pre-aligned coils; four i.f. stages; balanced-bridge wide-band discriminator; feedback audio stage for 2-volt, low-impedance output; front-panel volume control; cover included.

FM-1 Kit\$ 79.95
FM-1/SK Semi-kit with factory assembled and aligned etched-circuit boards..\$ 99.95
FM-1/A Factory assembled.....\$119.95

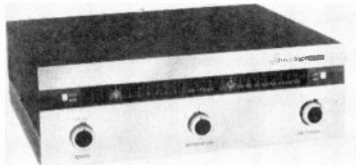
Model FMA-2 Insert Amplifier

Designed to fit inside the Dynatuner; semi-self-powered amplifier utilizes tuner's volume-control; delivers 10 watts at low distortion to any speaker.

FMA-2 Kit\$ 29.95
FM-2/A Factory assembled receiver.....\$169.95

EICO

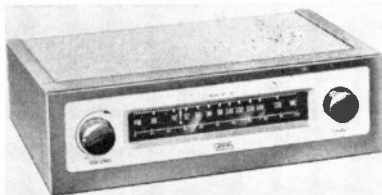
Model ST-97 FM Multiplex Tuner



Prewired, pre-aligned front end and i.f. strips; employs wide-band ratio detector; stereo indicating pilot lamp; controls: tuning, separation, a.f.c.-on-off, stereo/mono, and power; IHFM sensitivity 3 µv. (1.5 µv. for 20 db quieting); signal-to-noise ratio -55 db; harmonic distortion .6%; FM distortion .2%; response 20-15,000 cps; channel separation 30 db; output .7 to 1 volt; 5½" h. x 15¾" w. x 11¾" d.

Kit\$99.95
Factory wired.....\$149.95

Model HFT-90 FM Tuner



Sensitivity 1.5 microvolts for 20 db quieting; frequency response 20 to 20,000 cps ± 1 db; i.f. bandwidth 260 kc. at 6 db points; detector bandwidth 400 kc.; maximum drift 20 kc. from cold start; hum 60 db below 1 volt; pre-wired front end; pre-aligned front end, i.f., and ratio detector; DM-70 tuning eye that travels along dial; flywheel tuning; a.g.c.; 300 ohms input; outputs are cathode follower to amplifier and multiplex; tubes are ECC85/6AQ8, 3-6AU6, 6AL5, 6C4, 6X4, DM70.

Kit\$39.95
Factory wired.....\$65.95
Cover\$3.95

Model HFT-92 AM-FM Tuner

Combination HFT-90 FM tuner with AM facilities; "eye-tronic" tuning on both AM and FM; stabilized low-limiting threshold for weaker stations reception; pre-wired, pre-aligned front end; FM sensitivity 1.5 µv. for 20 db quieting; AM sensitivity 20 µv. for 0.8 volt output with 20 db signal-to-noise ratio; frequency response AM section 20-5000 cps; hum 60 db below 1 volt; AM output 0.8 volt with 20 µv. in-



put 30% modulation AM total harmonic distortion AM section below 2% for 70% modulation.

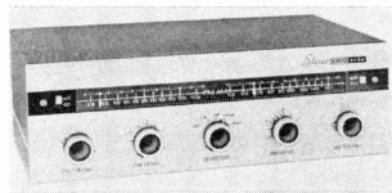
Kit\$59.95
Wired\$94.95

Model HFT-94 AM Tuner

Matches Model HFT-90 FM tuner; narrow or wide bandwidth selector; sensitivity 3µv. at 30% modulation for 1 volt output; frequency response 20-9000 cps; less than 1% harmonic distortion at 100% modulation; 8000 ohms output impedance; tubes are 2-6BA6, 6BE6, 12AU7, DM70 exclamation bar tuning eye; 3¾" x 12" x 8¾" cabinet & panel style similar to model HFT-92.....\$39.95
Factory wired.....\$65.95
Cabinets (wood) for Models HFT-90; HFT-92; and HFT-94.

Unfinished birch cabinet.....\$8.95
Walnut or mahogany cabinet.....\$12.50

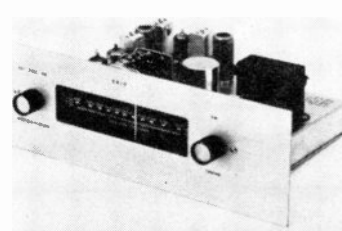
Model ST-96 FM-AM Tuner



Pre-wired, pre-aligned front end shielded in die-cast housing; includes a.f.c., a.g.c., tuning eye indicator, narrow and wide AM bandwidth, 10 kc. AM whistle filter; FM section sensitivity, 1.5 µv. for 20 db quieting; FM frequency response 20-15,000 cps; FM output level 1 v. for 5 µv. input, 30% mod.; AM output 1 v. for 3 µv. input, 30% mod.; 15¾" x 5" x 14". Has separate AM & FM tuners (kit).....\$89.95
Factory wired and tested.....\$129.95

ERIC

Model 3357 FM Tuner



Uses wide-band ratio detector; sensitivity 3 µv. for 20 db quieting; variable a.f.c.; output for multiplex adapter; response 20-20,000 cps; tubes: 2-12AV7, 6BZ6, 6AU6, 6AL5; 13¾" x 4¾" x 7¾".....\$56.75

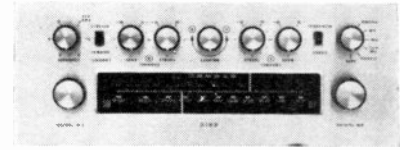
Model 3357AF FM-AM Tuner

FM wide-band ratio detector; a.f.c., FM sensitivity 3 µv. for 20 db quieting; AM sensitivity less than 40 µv.; FM response 20-20,000 cps; tubes-2-ECC85's, 6BZ6; 6AU6, 6AL5, 6BE6; 3-position function switch AM-FM-off; panel design similar to Model 3357.....\$72.95

Cabinets

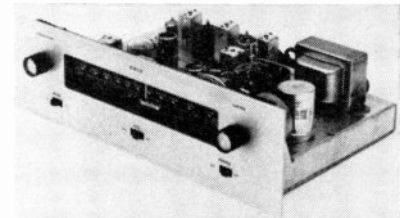
Metal enclosure for Models 3357, 3357AF\$ 9.90
Walnut enclosure for same models..\$16.00

Model 5760G FM-AM Tuner-Amp.



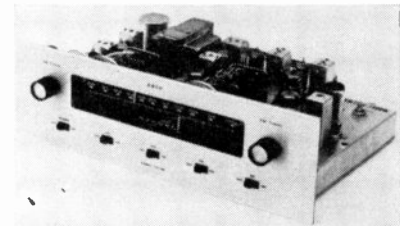
Separate FM-AM tuners with preamps, and dual 10-watt (per channel) power amplifier; FM sensitivity 2 µv. for 20 db of quieting; hum 65 db below 10 watts; wide-band ratio detector; controls-function selection, volume, bass, treble, balance, channel reversing; inputs provided for stereo tape recorder and phono (mag. or ceramic); 11 tubes plus 3 germanium diodes; has provision for multiplex adapter\$169.95
Cabinet\$ 12.00

Model 3457 MX FM Multiplex Tuner



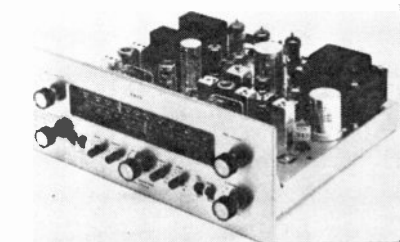
Foster-Seeley discriminator; a.f.c.; FM sensitivity 1 µv. for 20 db of quieting; output voltage .5 v.; response 20-20,000 cps ± 1 db. Has multiplex circuitry...\$119.95

3157MX AM-FM Multiplex Tuner



Has built-in multiplex circuitry; separate AM & FM sections; FM sensitivity 3.5 µv. (IHFM); response 20-20,000 cps ± 1 db; distortion below 1% THD; hum and noise 65 db below 100% modulation; output 1 v.; a.f.c. with defeat switch; AM sensitivity 3 µv. for 20 db of quieting; 13¾" x 4¾" x 8¾" deep.....\$149.95

Model 5760MX AM-FM Multiplex Tuner/Amp



Integrated design with dual 10-watt power amps; included are separate AM & FM tuners & multiplex circuitry; indicator

light for multiplex reception: FM sensitivity 2 μ v. for 20 db of quieting; response of FM & amplifier 20-20,000 cps \pm 1 db; total harmonic distortion 1% @ 8 watts; hum 65 db below full output; output 8.16 ohms; separate jacks for taping stereo broadcasts; magnetic cartridge sensitivity 4 mv.; 13 $\frac{3}{4}$ " x 4 $\frac{1}{16}$ " x 12" deep..\$199.95 Without multiplex circuit.....\$174.95

FISHER

Model FM-50-B FM Multiplex Tuner



Features wide-band ratio detector; .65 μ v. for 20 db of quieting; less than .7% harmonic distortion at 100% modulation; has micro-ray tuning/recording level indicators; four controls: tuning, recording level, selector, sensitivity; has multiplex circuitry; less cabinet.....\$199.50

Model FM-100-B FM Multiplex Tuner



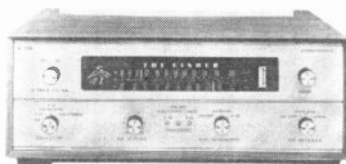
Features built-in multiplex circuitry; five i.f. stages; four limiters; .6 μ v. sensitivity for 20 db of quieting; response 30-15,000 cps \pm 1 db; rated output 2 volts; harmonic distortion .5%; 10 tubes total plus diodes and bridge-type selenium rectifiers\$249.50

Model FM-200-B FM Multiplex Tuner



Has multiplex circuitry; features six i.f. stages; five limiters; sensitivity 5 μ v.; six controls: volume, tuning, on-off, muting, a.f.c., antenna selector (sensitivity); less cabinet\$299.50

Model R-200 AM-FM Multiplex Tuner



Multiplex design based on time-division system with automatic stereo/mono switching; FM usable sensitivity 1.6 μ v. (IHFM) 500 ohm line with 100% modulation; response 20-15,000 cps \pm 1 db; harmonic distortion less than .15% at rated output of 2 volts; AM tuner sensitivity 5 μ v.; 15 tubes, 15 diodes, one bridge-type selenium rectifier; controls: tuning, stereo filter, selector, muting, AM bandwidth, FM-antenna; has "Stereo Beacon" indicator and tuning meter; 15 $\frac{1}{8}$ " w. x 13" d. x 4 $\frac{1}{16}$ " h.; less cabinet.....\$299.50

Model 800-B AM-FM Multiplex Tuner-Amp

Sensitivity .9 μ v.; three i.f. stages; stereo multiplex broadcasting indicator; com-

bines separate AM-FM tuners, dual pre-



amps, 32.5 watts-per-channel power amplifiers, and multiplex circuitry; 24 controls and switches; less cabinet.

.....\$429.50

Model 500-B FM Multiplex Tuner-Amp



Essentially same as 800-B except FM only; sensitivity 0.7 μ v.; 18 controls and switches; less cabinet; 17 $\frac{1}{2}$ " w. x 13 $\frac{1}{4}$ " d. x 5 $\frac{3}{4}$ " h.....\$389.50

Model FM-1000 FM Multiplex Tuner



Studio Standard Series; features built-in multiplex circuitry; 1.5 μ v. sensitivity; four tuned circuits; seven i.f. stages; 5 limiters; 1.3 db capture ratio; a.f.c.; drift .004% (with a.f.c.) & .02% (without a.f.c.)\$429.50

Model KM-61 FM Tuner



Usable sensitivity (IHFM) 1.8 μ v. (1.2 μ v. for 20 db of quieting); harmonic distortion less than .5% at 400 cps and 100% modulation; 11 tubes, 12 diodes, and bridge-type selenium rectifier; multiplex circuit incorporated; controls: tuning, on-off, mono/stereo selector; stereo filter; 15 $\frac{1}{8}$ " w. x 4 $\frac{1}{16}$ " h. x 13" d.; less cabinet\$219.50

Model KM-60 "Stratakit" FM Tuner



Design is kit version of Model KM-61 FM multiplex tuner; multiplex adapter is pre-wired; less cabinet; kit.....\$169.50

GROMMES

Model 101 BM FM Multiplex Tuner

Has multiplex circuitry and "Stereo Sentry," a stereo bar tuning indicator; sensitivity 1 μ v. (2 μ v. IHFM); response 20-

20,000 cps \pm .5 db; IM and harmonic distortion .5% at 100% modulation; hum & noise 60 db below 100% modulation; multiplex design is balanced diode bridge switching circuit; separation 30 db or better; controls: tuning, mono, stereo; tubes:



2-6DT8, 3-6HS6, 6EU7, 12AU7, 6AB4, 6FG6 plus 7 diodes and silicon rectifier; 14" w. x 4 $\frac{1}{2}$ " h. x 11" d.....\$139.95 Enclosure\$ 7.50

Model 102DM AM-FM Multiplex Tuner

Same as Model 101BM except has added AM tuner; response 20-6500 cps \pm 3 db; sensitivity 3 μ v.....\$159.95 Enclosure\$7.50

Model 500M AM-FM Multiplex Tuner-Amp



Combines AM, FM, FM multiplex circuit with preamps and dual power amplifiers (35 watts/channel continuous sine-wave); power bandwidth 30-20,000 cps at half power and 2% harmonic distortion; response 20-20,000 cps \pm .5 db @ 1 watt; .6% harmonic & 1% IM distortion at rated output; sensitivity FM 2 μ v. (IHFM), AM 3 μ v., high-level inputs .25 v., low-level inputs 3 mv.; has 22 tubes and 14 diodes; conventional operating controls, tuning indicator, and automatic stereo indicator light ("Stereo Sentry"); 16 $\frac{1}{2}$ " x 6" x 15"\$209.95 Enclosure\$15.00

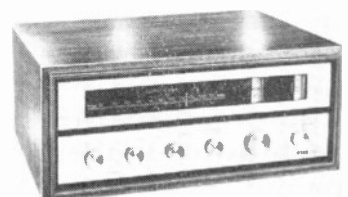
Model 502M AM-FM Multiplex Tuner-Amp



Combines AM, FM, FM multiplex circuit with preamps and dual power amplifiers (10 watts/channel continuous sine-wave); power bandwidth 30-20,000 cps at half power and 3% harmonic distortion; response 20-20,000 cps \pm 1 db @ 1 watt; .5% harmonic & 2% IM distortion @ 1000 cps and 10 watts; sensitivity FM 4 μ v. (IHFM), AM 10 μ v., high-level inputs .25 v., low-level inputs 1 mv.; has 18 tubes, 9 diodes; conventional operating controls; 14" w. x 5" h. x 13" d.....\$239.95 Enclosure\$10.00

HARMAN-KARDON

Citation III X FM Multiplex Tuner



3

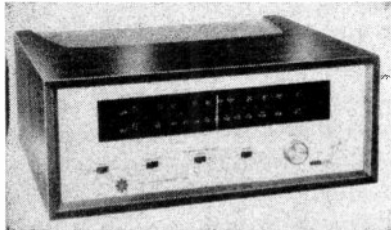
Tuners

Includes FM multiplex circuitry; sensitivity .65 μv . for 20 db of quieting, -1.65 μv . (HIFM); response 1-52,000 cps \pm .5 db; distortion less than .1% at 100% modulation; wide-band Foster-Seeley type discriminator; controls—on-off, loudness, a.f.c. on-off, interchannel muting, tuning, local/distance switch; includes balance and level tuning meters; response of multiplex circuit 10-15,000 cps \pm 1/2 db; channel separation -30 db from 10 to 15,000 cps; 14 1/2" w. x 6" h. x 12 1/4" d.

Kit\$219.95
 Factory wired.....\$299.95
 Walnut enclosure.....\$ 29.95

Model T300X AM/FM Multiplex Tuner

Integrated design including AM, FM, and



multiplex circuits; for FM—.95 μv . for 20 db of quieting or 3.2 μv . usable sensitivity, 10-35,000 cps \pm 1 db, less than .1% distortion at 100% modulation; a.f.c.; for AM—10 mv. terminal sensitivity, 1% harmonic distortion, 20-5000 cps \pm 2.5 db; five controls—tuning knob, on-off switch, a.f.c. defeat, mode, & selector; tubes—EZ81, 6AJ8, 6AQ8, 2-6BL8, 6EQ7, 6BN6, 12AU7, 6C4; supplied less cabinet

.....\$149.95
 Metal cabinet\$12.95
 Walnut cabinet\$29.95

Model TA3000X "Recital II"



Complete combination AM/FM tuner with FM multiplex, stereo amplifier and preamplifier; 15 watts music power per channel; response 15-70,000 cps \pm 1 db at normal listening level; hum 80 db below rated power; less than 1% distortion at 12 watts/channel output; 7408 output tubes; FM sensitivity 3.2 μv . (HIFM); .95 μv . for 20 db of quieting; response 10-35,000 cps \pm 1 db; distortion less than .1% at 100% modulation; has wide-band Foster-Seeley solid-state detector and defeatable a.f.c.; response of multiplex adapter 15-15,000 cps \pm 1 db; AM tuner response 20-5000 cps \pm 2.5 db; sensitivity 80 μv . per meter; preamplifier provides all conventional controls and input circuits; 17 tubes plus 8 diodes; 15 1/2" w. x 5 3/16" h. x 11 1/2" d.\$249.95
 Metal cabinet.....\$ 12.95
 Walnut cabinet.....\$ 29.95

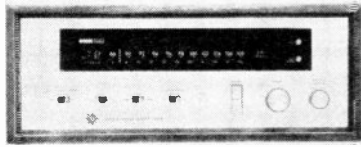
Model TA5000X "Festival III"

Similar in most respects to Model TA3000X except for additional features and greater power output; music power rating 25 watts per channel or 20 watts per channel continuous sine-wave; indi-



vidual bass and treble tone controls for each channel; tuning indicator meter; output tubes are 7355; 8 diodes, 17 tubes; 16" w. x 6 1/4" h. x 13 1/2" d.....\$299.95
 Metal cabinet.....\$ 12.95
 Walnut cabinet.....\$ 29.95

Model F50XK FM Multiplex Tuner



Built-in multiplex adapter; sensitivity 2.8 μv . (HIFM) or .85 μv . for 20 db of quieting; response 10-52,000 cps \pm 1 db; distortion less than .1% at 100% modulation; on-off switch; FM/FM stereo switch; local/distance switch; a.f.c. defeat switch; tuning control; incorporates balance tuning meter and stereo indicator light; 15 1/4" w. x 5 3/16" h. w 12" d.

Kit\$129.95
 Metal cabinet.....\$ 12.95
 Walnut cabinet.....\$ 29.95

Model F500X FM Multiplex Tuner

Similar in design and appearance to Model F50XK except has interchannel muting defeat switch instead of local/distance switch.

Factory wired\$179.90
 Metal cabinet.....\$ 12.95
 Walnut cabinet.....\$ 29.95

Model F-10 "Tempo" FM Tuner

Sensitivity: 2.5 μv . for 20 db quieting; frequency response: 20 to 20,000 cps \pm 1 db including de-emphasis selectivity: 200 kc. bandwidth, 6 db down; drift: \pm 5 kc. maximum; image rejection: 40 db; i.f. rejection: 70 db; distortion less than 1% harmonic and IM at 30% modulation; hum 60 db below 100% modulation; radiation within FCC requirements; output level 1.5 volts for 100% modulation, 0.5 volt for 30% modulation (high impedance); tubes are 2-ECC85, 3-6AU6, 6AL5, selenium rectifier.....\$69.95

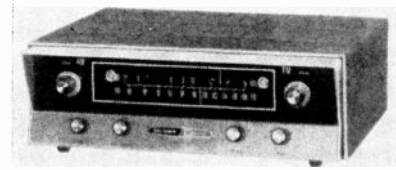
Model FA-10 "Sonata" Tuner-Amplifier

Combination FM tuner and 10 watt amplifier; tuner has Armstrong circuit with limiter and wide-band discriminator, a.f.c., cascade r.f. section; sensitivity: 2.5 μv . for 20 db quieting; selectivity: 200 kc. bandwidth, 6 db down; drift \pm 5 kc. maximum; image rejection: 40 db; i.f. rejection: 70 db; distortion less than 1% harmonic and IM standard 75 microsecond de-emphasis 60 db below 100% modulation; radiation within FCC requirements; amplifier frequency response 45 to 20,000 cps \pm 1 db at 10 watts; less than 1% harmonic and less than 2% IM distortion at 10 watts; hum on phono input 60 db below 10 watts; bass and treble controls allow 12 db boost or cut at 50 and 10,000 cps; damping factor: 5; phono input sensitivity 4 millivolts at 1 kc.; 3-position loudness contour; RIAA record equalization, NAB tape equalization for 7 1/2 ips; inputs are phono, tape head, and aux.; tape output; output impedances 8 and 16 ohms; one convenience a.c. receptacle; tubes are 2-ECC85, 3-6AU6, 6AL5, EZ81, 2-12AX7, 2-EL84.....\$114.95

HEATH

Model AJ-11 AM-FM Tuner

FM sensitivity 2.5 μv . for 20 db quieting; AM output 1 volt for 750 μv . input; harmonic distortion less than 1%; AM broad and narrow tuning; controls for stereo/mono tuning; AM and FM level control



on rear-chassis apron; a.f.c.; cathode-follower output; tubes 2-6BA6, 1-6BE6, 2-6BN8, 2-6ME5, 1-6CY5, 1-6EZ8, 3-6AU6; full-wave voltage-doubler power supply. Has separate AM & FM circuits. Kit\$ 69.95
 Wired\$129.95

Model AJ-12 FM Tuner

Controls for tuning, volume, a.f.c.; cathode-follower output impedance 600 ohms; voltage output 0.5 volt nominal; 2.5 μv . for 20 db quieting; image ratio 45 db; harmonic distortion less than 1.5%, IM distortion less than 1%; frequency response 20-20,000 cps \pm 2 db; tubes are 6DT8, 3-6AU6, 6BN8, silicon diode; 4 1/4" x 13 1/4" x 5 1/2". Kit.....\$39.95

Model AJ-21 AM Tuner

Features "fidelity" selector switch with choice of "normal" bandwidth and sensitivity or wide-band reception; easy-glide flywheel tuning with edge-lighted slide-rule dial; self-powered circuit with enough audio output for "private" earphone listening independent of hi-fi amplifier. (Kit)\$29.95

Model AJ-30 AM-FM Tuner

Replaces former Model PT-1 with new performance features and styling; features luggage-tan vinyl covering with polished anodized aluminum trim; similarly styled to AA-100 stereo amplifier; 16-tube circuit with AM and FM tuning meters; capable of separate or simultaneous AM and FM broadcast reception; has provision for multiplex adapter; includes flywheel tuning



on both AM and FM; a.f.c.; AM band-switch; designed around 3 printed-circuit boards; wired, pre-aligned 3-tube-cascade FM tuning unit; pre-aligned i.f. transformers and coils; balanced 300-ohm FM antenna input; built-in AM rod antenna; balanced push-pull diode detector, a.v.c. Model AJ-30 (kit).....\$ 99.95
 Model AJW-30 (factory wired).....\$159.95

Model AJ-41 Tuner Kit



Complete AM, FM, FM stereo; features stereo indicator light; separate AM and FM tuning meters; FM squelch circuit; FM response 20-20,000 cps \pm 2 db; 2 μv . sensitivity for 20 db of quieting; uses

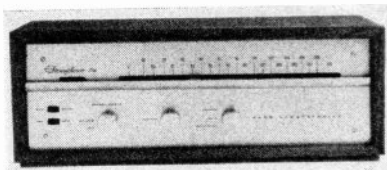
three printed-circuit boards and pre-assembled, pre-aligned FM tuning unit; 5 1/8" h. x 15 3/8" w. x 14" (kit) \$119.95
Model AJW-41 wired.....\$189.95

KARG

"Tunematic" XT-1A FM Tuner

Sensitivity 2 microvolts for 20 db quieting on 300 ohm input; frequency response 15 to 30,000 cps ± 0.5 db, including de-emphasis; i.f. bandwidth 180 kc. flat top, 240 kc. at 6 db points; IM distortion 0.5% maximum at 100% modulation; crystal-controlled oscillator with separate crystals for receiving each of up to 12 stations; tuning accuracy within .025% of correct carrier frequency at any combination of line voltage and temperature from 95 to 135 volts and -55° to 90° C; inputs: balanced 300 ohms, 75 ohm coaxial, internal antenna; outputs: 3-volt cathode follower, 0.3-volt (adjustable) 600 ohm line; 0.3-volt multiplex; tubes are ECC88, 6AU8A, 2-6BZ6, 6BN6, 6AU6, 12AU7, and 2-1N2092, 2-CK705 diodes; 16" w x 5 1/2" h x 5 1/2" d (in metal enclosure), 17" w x 7" h x 7 3/4" d (in wood cabinet); includes metal cabinet and mounting accessories. Ten-channel model.....\$229.95

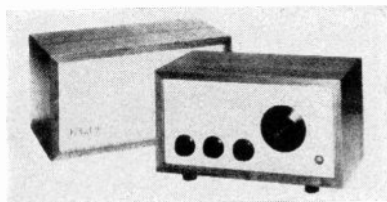
Model FMX-9 FM Multiplex Tuner



Has 9" slide-rule dial; tuning indicator; background signal filter; a.v.c. switch; stereo indicator light; stereo-mono-standby switch; sensitivity 2.2 μv. (IHFM) or .8 μv for 20 db of quieting; response 40-15,000 cps ± 1 db; harmonic distortion under 1.5%; multiplex channel separation 33 db; 5" h. x 15 3/8" w. x 5 1/2" d.....\$179.95

KLH

Model Eight FM System



Complete FM receiving system housed in two walnut cabinets, each measuring 10 3/8" w. x 5 3/8" h. x 6 3/8" d.; one section consists of tuner-amplifier, other contains wide-range speaker system; jacks are provided to permit use of tuner section with other equipment and for addition of multiplex adapter; walnut only\$159.00

Model Eight MX Multiplex Decoder/Amp

Completely transistorized; combines dual-channel preamps and power amps with FM multiplex decoder; can be used with Model Eight FM system to provide FM stereo reproduction; separate inputs for magnetic cartridges and tape recorder; operating controls: function, volume, treble, switch for audible tone which indicates stereo reception; two Model Eight AS speaker units must be used to complete system; walnut cabinet; 7 3/8" w. x 6 1/2" d. x 6 1/2" h.....\$95.00

Model Eight PR Preamp

Transistorized preamp measuring 4" x 2 1/2" x 2 1/2"; permits playing of tape recorder

1963 EDITION

or record changer with magnetic cartridge through KLH Model Eight FM-amplifier system.....\$19.00

Model Eight AS Speaker System

Extension speaker system identical to that supplied with Model Eight but with adapter plug and level control on rear of cabinet\$54.00

KNIGHT

Model KN-137M AM-FM Multiplex Tuner

Separate AM and FM tuners, plus FM multiplex; automatic stereo indicator light; stereo separation control; selector for AM, FM, or FM stereo; flywheel-weighted tuning knobs, a.f.c.; electronic bar-type tuning indicator; dual high-impedance outputs for mono or stereo tape recording



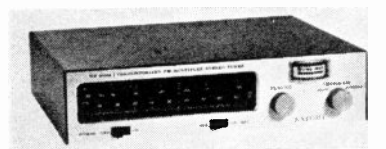
of broadcast material direct from tuner; usable FM sensitivity (IHFM) 3 μv. for 20 db quieting; AM sensitivity 10 μv. for 20 db signal-to-noise ratio; FM bandwidth 180 kc.; FM response 20-20,000 cps ± .5 db; high-impedance outputs—2 for FM and 2 for AM with level adjustment; tubes (less multiplex circuit) 2-12AT7, 2-6CB6, 6AU6, 6AL5, 6BE6, 6FG6 tuning eye, rectifier; includes two 36" audio cables, built-in ferrite core antenna; and FM folded dipole antenna; dark brown metal case with brass panel; 4 3/8" x 11 3/4" x 10 1/4"\$109.95

Model KN-141C FM Tuner



Tuning eye, a.f.c.; built-in line-cord antenna; two-stage grounded-grid r.f. amplifier; ratio detector; outputs for tape recording and multiplex adapter; sensitivity 4.5 μv. for 20 db quieting; .5 volt audio output; hum and noise -40 db; a.f.c. on-off\$49.95

Model KN-250A FM Multiplex Tuner



Styling matches KN-400B amplifier; built-in multiplex circuit for stereo FM reception; nuvistor front-end; automatic stereo indicator light; signal-strength meter; dark brown textured case; polished brass panel\$119.95

Model KN-260CA Same as Model KN-250A but includes built-in clock timer\$134.95

Model KN-310A FM Multiplex Tuner-Amp

Consists of stereo multiplex FM tuner and 20-watts-per-channel transistor amplifiers; tuner employs four nuvistors; built-in multiplex circuit; automatic stereo indicator light; signal-strength meter; a.f.c.; flywheel tuning; amplifier section has 16 transistors; two thermistors, and



four diodes; includes tape head input; output for stereo tape recording; stereo/mono switch; stereo normal/reverse switch; rumble and scratch filters; IHFM music power output 40 watts; response 20-20,000 cps ± 1 db; harmonic distortion less than 1% at full output; matches any speaker; dark brown textured case; polished brass panel\$199.95
Model KN-310CA Same as KN-310A but includes built-in clock timer.....\$214.95

Model KN-160 AM-FM Transistorized Multiplex Tuner

Has a.f.c.; stereo indicator light; muting control; wide-band ratio detector; built-in AM antenna; external FM antenna.\$189.95

KNIGHT-KIT

Model KG-35 FM Tuner

FM tuner kit with printed circuitry; sensitivity 4 μv. for 30 db of quieting (IHFM); output 2 volts at 1000 μv. input; i.f. bandwidth 200 kc.; distortion less than 0.6%; output jacks for amplifier and tape recorder; cathode-follower main output; output for stereo multiplex adapter; pre-aligned r.f. and i.f. coils; 3-position selector switch (on-off, FM, FM with a.f.c.).
83YX408—KG-35 (kit)\$35.95
83YX019 Metal case.....\$ 4.95
83YX018 Wood case.....\$ 9.95

Model KG-50 AM-FM Multiplex Tuner

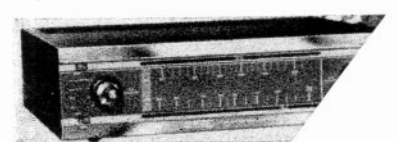


FM sensitivity 3 μv. (IHFM) for 30 db of quieting; ratio detector; separation 30 db; response 50-15,000 cps; hum and noise 40 db below 1 volt; ferrite loop antenna; cathode-follower outputs on AM and FM. Kit\$69.95

Model KG-65 AM-FM Tuner

Tuned r.f. stage on FM; a.f.c.; cathode-follower output plus output for stereo multiplex adapter; flywheel tuning; built-in ferrite antenna; time saving printed-circuit boards; neon-glow dial pointer; sensitivity 4 μv. for 30 db of quieting (IHFM); 3 μv. sensitivity for 10 db signal-to-noise ratio on AM; response 20-20,000 cps; tubes: 6AN8; 6BE6, 6BA7, 12AT7, 2-6AU6, ECC82/12AU7, 6AL5, 6X4 rectifier.
83YX315—KG-65 (kit)\$49.95
83YX019 Metal case.....\$ 4.95
83YX018 Wood case.....\$ 9.95

Model KF-90 AM-FM Multiplex Tuner



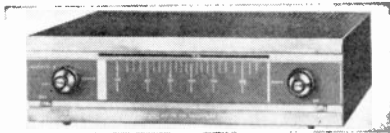
Built-in stereo multiplex circuit; separation control; dual nuvistor; a.f.c.; 10-ke. A¹ cathode-follower output

3

Tuners

indicators; separate AM and FM tuning controls; styling matches KA-55 amplifier; sensitivity 1.5 μ v. for 30 db of quieting (HIFM); 3 μ v. for 10 db signal-to-noise ratio on AM; hum and noise -60 db at 1 volt; tubes: 2-6BA6, 6BE6, 4-ECC82/12AU7, 2-EM84/6FG6, 2-ECC85/6AQ8, 2-6CB6, 2-6AU6, 6AL5, 6BN8, EZ81/6CA4.
83-YU-914 (kit)\$99.95

Model KF-75 FM Multiplex Tuner



Same as Model KF-90 but without AM tuner section.
83YU918-KF-74 (kit)\$84.95

Model KU-45 AM-FM Multiplex Tuner/Amp



All-in-one unit consisting of AM-FM multiplex tuner and 32-watt stereo amplifier; a.f.c.; pre-aligned front end; separate bass and treble controls; tape head input; two aux. inputs; magnetic phono input; stereo/mono switch; power output 16 watts per channel; output 4-8-16 ohms, plus 8-16 ohm center-channel output; satin gold and mocha panel; 4 $\frac{3}{4}$ " x 16 $\frac{1}{16}$ " x 13"; less case.
83YU993-KU-45 (kit)\$139.95
83YX021 Wood case.....\$12.95
83YX646 Metal case.....\$ 6.95

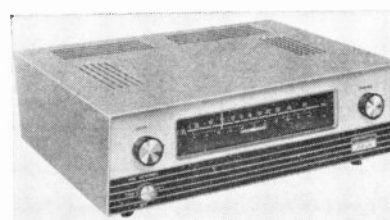
Model KG-70 Transistor AM-FM Multiplex Tuner



Matches Model KG-60 amplifier; factory aligned front end and i.f. strip; positive a.f.c., a.g.c., and multiplex indicator; 13 transistors, 14 diodes; t.r.f. FM front end; HIFM antenna sensitivity 2 μ v. for 30 db of quieting; response 20-20,000 cps; hum and noise 60 db below 1 volt (kit)..\$99.95

LAFAYETTE

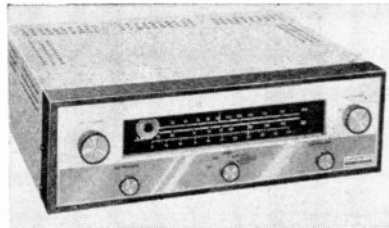
Model KT-650 FM Tuner



Sensitivity 1.25 μ v. for 20 db of quieting; response 15-35,000 cps \pm 0.5 db; output 1.75 volts \pm 75 kc. deviation (100% modulation); distortion and noise better than 57 db below 1.5 volts; variable a.f.c.; low impedance output; tuning bar;

tubes: 1-ECC85, 1-6BK7B, 2-6BA6, 2-7543, 1-6AL5, 1-6AV6, silicon-diode rectifier.
KT-650 (Kit).....\$54.50
LT-650 (Assembled).....\$79.95

Model KT-500 AM-FM Tuner Kit



AM-FM tuner kit with independent AM and FM sections for stereo use; Armstrong FM circuit; sensitivity: FM, 2 microvolts for 30 db quieting; AM, 5 microvolt terminal sensitivity; a.f.c. with defeat provision; tuning eye; frequency response: FM, 20 to 20,000 cps \pm 0.5 db; AM, 20 to 5000 cps \pm 3 db; harmonic distortion under 1% on FM, under 1% on AM for up to 80% modulation; hum 60 db below 100% modulation; bandwidth: FM, 200 kc, 6 db down; AM, 8 kc, 6 db down; i.f. rejection: FM, 70 db; AM, 50 db; image rejection: FM, 40 db; AM, 30 db; FM drift: \pm 5 kc max; AM whistle filter; two cathode-follower outputs; output level: FM, 2.5 volts for 100% modulation; AM, 1 volt average; tubes: 4-6BA6, 2-6AU6, 1-6BK7A, 1-ECC85, 1-6AL5, 6BE6, 1-12AU7, 1-6U5; selenium rectifier; 13 $\frac{3}{4}$ " w x 10 $\frac{1}{8}$ " d x 4 $\frac{1}{2}$ " h.

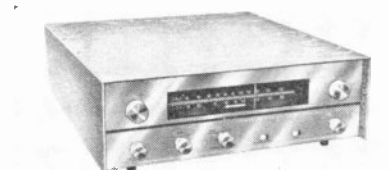
Model KT-500 (Kit form).....\$74.50
Model LT-500 (Assembled).....\$124.50

Model KT-660 FM Multiplex Tuner



Features "Pilot Monitor" which can be used to scan band for stereo multiplex programs; usable sensitivity (HIFM) 4 μ v.; frequency response 20-20,000 cps \pm 1 db; harmonic distortion .2% at 1 kc. with 100% modulation; hum and noise -60 db; output 1.6 v. at low impedance; controls: tuning, FM volume, a.f.c., noise limiter, mode switch (power, mono, stereo, tuning indicator); pilot monitor/FM; 14 $\frac{1}{16}$ " x 5 $\frac{1}{2}$ " x 15".....\$84.50

Model KT-770 AM-FM Multiplex Tuner



Identical to KT-660 except includes AM tuner and is 15 $\frac{1}{2}$ " d.....\$109.50

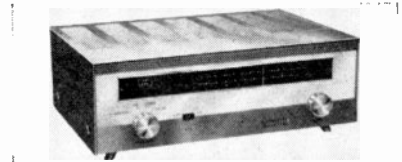
Model LA-226 AM-FM Multiplex Tuner-Amp

Combination AM-FM tuners, stereo multi-



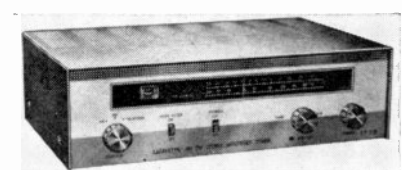
plex circuitry, dual preamps, 20-watts/channel power amplifiers; tuning meter & stereo multiplex indicator light; sensitivity 2 μ v. for 20 db of quieting; includes a.f.c. defeat switch and noise filter switch; amplifier response 20-20,000 cps \pm 2 db; less than 1.5% harmonic distortion; complete preamp facilities regarding input circuits and operating controls; comes complete with enclosure; 17 $\frac{1}{2}$ " x 5 $\frac{1}{4}$ " x 15"\$189.95

Model LT-81 FM Multiplex Tuner



Sensitivity 2 μ v. for 20 db of quieting; response 20-20,000 cps \pm .5 db; has mode selector switch (power, FM, stereo, filter) and a.f.c. on-off switch; tubes: 2-6AQ8, 2-6BA6, 2-6AU6, 6X4, and four diodes; 13 $\frac{1}{2}$ " x 9 $\frac{1}{8}$ " x 5 $\frac{3}{4}$ "; includes enclosure\$76.50

Model LT-78 AM-FM Multiplex Tuner



Economy version of KT-770; includes AM-FM tuner and multiplex circuitry; does not have "Pilot Monitor" feature; response 20-20,000 cps \pm 2 db; hum level -60 db; has rear-panel noise filter switch; tubes: 12AX7, 12AU7, 6BE6, 3-6AU6, 3-6BA6, 2-6AQ8, 6X4 plus five diodes; 15 $\frac{3}{4}$ " x 5" x 9 $\frac{1}{2}$ ".....\$89.50

LEAK

"Trough-Line II" FM Tuner

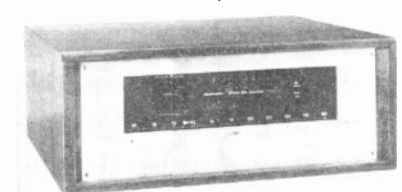
Matches "Point One" stereo preamplifier; includes tuning eye, a.f.c., cathode-follower



output; sensitivity 1.5 μ v. for 20 db quieting; multiplex output; 9 tubes.....\$149.00

MARANTZ

Model 10-FM Multiplex Tuner



Has multiplex feature, unique oscilloscope tuning indicator, and all i.f. alignment adjustments have been completely eliminated; tube changes and component aging will not detune i.f.; sensitivity 2 μ v. for 40 db of quieting; total system noise figure 7 db; harmonic distortion, input to output, less than .5%; front panel 15 $\frac{1}{8}$ " x 5 $\frac{3}{4}$ "; chassis 14 $\frac{3}{8}$ " w. x 5 $\frac{1}{4}$ " h. x 15" d.\$555.00
West Coast price.....\$565.00

STEREO/HI-FI DIRECTORY

McINTOSH

Model MR-65B FM Multiplex Tuner



Usable sensitivity 2.5 μ v. at 100% modulation (HIFM); response 20-20,000 cps \pm .5 db; distortion less than .5% at 100% modulation; output approx. 2.5 v. @ low impedance; multiplex circuit peak-detecting, self-matrixing detectors; includes front-panel light as stereo indicator; tuning and signal strength meters; controls: volume-mode selector, a.f.c. muting; front panel 15 $\frac{3}{8}$ " x 5 $\frac{1}{8}$ " with chassis depth of 12 $\frac{3}{16}$ ".\$329.00

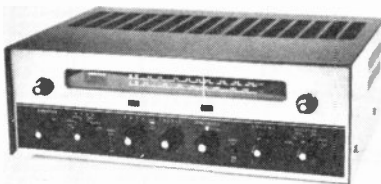
Model MX110 Multiplex FM Tuner/Preamp



Combines FM tuner with multiplex circuitry and stereo preamp; tuner sensitivity 2.5 μ v. @ 100% modulation; response 20-20,000 cps \pm 1 db; distortion less than .6% @ 100% modulation; input sensitivity for preamp aux. .3 v., phono 1 & phono 2 3 mv., tape head 2.5 mv., and tape monitor .3 v.; preamp response 20-20,000 cps; preamp distortion less than .2% at rated output; hum and noise 80 db below rated output for high-level inputs; operating controls are: input selector, bass & treble tone controls, muting, low- and high-frequency filters, loudness, tape monitor, phasing, tuning, volume, and mode selector; mode selector is 8-position: power off, L to L & R, R to L & R, stereo reverse, stereo, mono, L + R to L, and L + R to R.....\$374.50 Cabinet extra.....\$ 25.00

MONARCH

Model 200MX AM-FM Multiplex Tuner

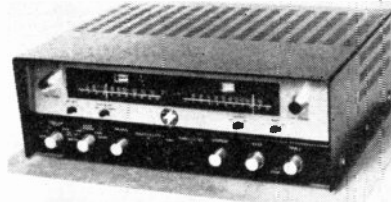


Includes tuners, preamps, power amplifiers; 16 watts per channel; 4-transistor preamp; 16 tubes, 5 diodes; built-in multiplex circuit plus center-channel output; FM sensitivity 2 μ v. for 20 db of quieting; channel separation 40 db; 4, 8, 16 ohm outputs; response 20-50,000 cps \pm 1 db; has conventional controls; 16 $\frac{3}{4}$ " w. x 13 $\frac{1}{4}$ " d. x 5 $\frac{3}{4}$ " w.....\$199.95

Model STA-260 AM-FM Tuner

Includes separate AM and FM tuners, stereo preamps, power amplifiers; FM sensitivity 1.9 μ v. for 20 db of quieting; 30 watts per channel music-power output; response 20-30,000 cps; 4-8-16 ohm and center-channel outputs; conventional input circuits and operating controls; in-

1963 EDITION



put jacks provided for multiplex adapter; 5 $\frac{1}{2}$ " h. x 17" w. x 13 $\frac{1}{2}$ " d.....\$249.95

Model MAT-120 Mono AM-FM Tuner



Includes preamp and power amplifier; a.f.c.; bass and treble tone controls; scratch filters; tuning indicators; microphone circuit; 12 watts music-power rating; response 20-20,000 cps \pm .5 db; 10 $\frac{1}{4}$ " d. x 4 $\frac{1}{16}$ " h. x 14 $\frac{1}{16}$ " w.....\$109.95

Model FM-100 FM Tuner



Does not include amplifiers; sensitivity 2.5 μ v. for 20 db of quieting; has a.f.c. on-off switch; 5 $\frac{3}{8}$ " d. x 3 $\frac{1}{16}$ " h. x 11 $\frac{3}{8}$ " w.\$39.95

Model FM-100X FM-Multiplex Tuner

Has a.f.c. and multiplex circuitry; sensitivity 2.5 μ v. for 20 db of quieting; does not have amplifiers; 5 $\frac{3}{8}$ " d. x 3 $\frac{1}{16}$ " h. x 11 $\frac{3}{8}$ " w.....\$74.95

NATIONAL

Model 1000 AM-FM Tuner Kit

Armstrong FM circuit with Foster-Seecley discriminator; sensitivity: FM, 5 microvolts for 30 db quieting; AM 25 microvolts; a.f.c. with defeat provision; frequency response: FM, 20 to 20,000 cps \pm 0.5 db; AM, 20 to 8000 cps \pm 3 db; distortion: less than 1% on FM; band-



width: FM, 200 kc.; AM 8 kc.; hum level: -60 db; output voltage: FM 2 volts for 100% modulation, AM 1 volt; tubes: 2-12AT7, 6BE6, 6BA6, 2-6AU6, 6AL5; one selenium rectifier; 10 $\frac{3}{4}$ " w. x 4" h. x 8" d.; kit.....\$31.85 Metal enclosure.....\$ 5.95

Model 1100 FM Tuner Kit

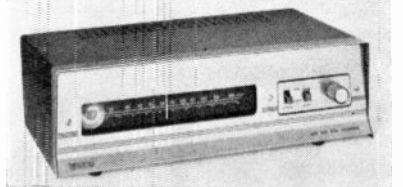
Specifications similar to FM section of Model 1000 AM-FM tuner.....\$25.50 Metal enclosure.....\$ 5.95

PACO

Model ST-25MX FM/Multiplex Tuner

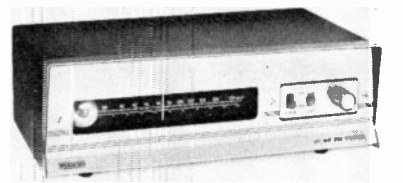
IHFH sensitivity 4 μ v.; quieting sensitivity 1.5 μ v. for 20 db of quieting; employs

wide-band ratio detector; minimum distortion less than 1% at 100 μ v. input; response 30-15,000 cps \pm 2 db; controls: power switch and a.f.c. defeat switch; has



eye-type tuning indicator (kit).....\$69.95 Factory wired.....\$99.95

Model TS-25 FM Tuner



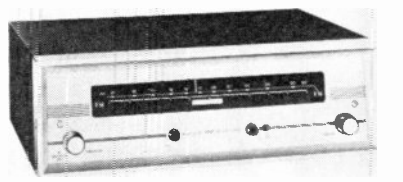
Sensitivity 1.5 μ v. for 20 db quieting; built-in a.f.c. with defeat switch; has multiplex jack (kit).....\$42.95 Factory wired.....\$59.95

Model ST-26 FM Tuner-Preamp

FM tuner section same as Model ST-25; built-in phono preamp; black and gold case or walnut enclosure extra.

Model ST-26 (kit).....\$54.95 Model ST-26W (factory-wired).....\$69.95

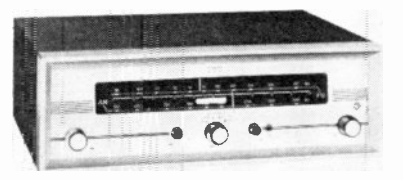
Model ST-35 FM Tuner



Sensitivity 2 μ v. for 30 db quieting; harmonic distortion less than 1%; bandwidth over 200 kc.; Foster-Seecley discriminator; a.f.c.; cathode-follower output.

Model ST-35 pre-aligned transformers, housing cabinet (kit).....\$59.95 Model ST-35PA with tuner section factory-wired and pre-aligned, housing cabinet (semi-kit).....\$69.95 Model ST-35W completely assembled with housing case\$89.95

Model ST-45 AM-FM Tuner



Independent AM and FM tuners; FM tuner section same as Model ST-35; cathode-follower output for both AM and FM; has provision for FM multiplex; black and gold case.

Model ST-45 factory-aligned transformers (kit)\$ 84.95 Model T-45PA with both AM and FM tuner sections factory-wired and aligned (semi-kit)\$ 99.95 Model ST-45W factory-wired.....\$134.95

PILOT

Model 285 AM-FM Multiplex Tuner

Similar in performance to Model 280B FM tuner except AM circuitry has been added;



Questions & Answers on FM STEREO

By MILTON S. SNITZER
Technical Editor, ELECTRONICS WORLD

On-the-air stereo broadcasts are increasing every week. Here is what the listener should know about the newest way to have stereo.

At the end of Spring last year, the FCC permitted single FM broadcast stations to transmit, for the first time, a complete 2-channel stereo program. This allowed listeners with suitable equipment to pick up stereo signals on the air with a quality comparable to the finest stereo phono records. Manufacturers of hi-fi components, who had been awaiting the decision for some time, were ready with equipment to pick up the new broadcasts. As time went on, more and more stations went on the air with FM stereo and more stereo receiving equipment was made available to listeners. Today, FM stereo is growing steadily.

Many questions have been asked about the new stereo system and what it will mean to the listener. We have selected a dozen of the most common ones and have answered them here.

QUESTION: *How does this new method of broadcasting stereo differ from older stereo broadcasts?*

ANSWER: Before June, 1961 there were some stereo broadcasts, but these all required the use of two stations. Frequently, an FM station would transmit one channel of a stereo broadcast and its AM affiliate or a neighboring FM station would transmit the other. The listener would have to have an AM/FM receiver or two FM sets to pick up both channels of the stereo signal. If he listened on either FM or AM, he would be getting only part of the signal. Now, a single FM station is able to transmit both stereo channels at the same time. What is more, the mono listener will not be listening to only a part of the broadcast but will hear both sides of the orchestra, for example. Of course, the mono listener will not hear stereo, but at least his mono program will not be degraded in any way. To permit a single station to send both channels of a stereo program, a technique called "multiplexing" is used.

QUESTION: *What will I need to be able to hear FM stereo?*

ANSWER: First, you will need a suitable FM tuner plus

an adapter that will decode the stereo broadcasts and separate out the left and right channels. The decoding circuits of the adapter can also be built into an FM tuner. Most new hi-fi FM tuners have these circuits included, but if you have a good FM tuner, it is not difficult to add an adapter that will do the job. Remember, too, that you will still need a stereo amplifier, unless you want to buy a complete FM stereo tuner-amplifier, and two separate loud-speaker systems.

QUESTION: *How much does an adapter for an FM tuner cost?*

ANSWER: Just about every maker of FM tuners has one or more adapters for sale. Most of these use several tubes or transistors. Some of them supply their own power, others draw their operating power from the FM tuner. Some are simple, inexpensive, and have a minimum of features, frills, and operating controls; others are complex, more expensive, and offer many features. Most of them are factory-wired, although there are quite a few kits available for the user who wants to save the labor cost that must go into the ready-assembled adapters. You can buy an adapter for as little as \$20 or you can pay a little over \$100 for one, depending on what you want in the unit. When it comes to FM receivers that have built-in FM stereo circuits, you can expect to pay perhaps \$15 to \$60 more for the unit because of these added circuits.

QUESTION: *Should I buy an adapter made by the same company that made my FM tuner?*

ANSWER: The tuner maker knows his own product pretty well. He is also in a position to know what kind of adapter circuits will best complement his own tuner. For these reasons it is usually a good idea to stick to the same manufacturer, at least as a first choice. However, what if a particular maker's adapter is too large or too small, what if you don't like its appearance, or what if it doesn't have the features you want, or if the price is too high? There are a good many adapter manufacturers that make "universal" adapters that can be used with a number of companies' tuners. Although some of these may be compromises, others have adjustments or simple changes that can be made to allow them to match a wide variety of FM tuners and do a good job with these.

QUESTION: *Can I use my present FM tuner for stereo? What about converting an older mono FM tuner to stereo?*

ANSWER: The answer to the first part of the question depends on what kind of tuner you have. Many tuners built

within the past few years were built with stereo in mind. These tuners have special output connections (usually called "multiplex output") to which an adapter can be connected. Many of these tuners, particularly if they are identified as "wide-band" types, will work well on FM stereo. On the other hand, older tuners, especially very narrow-band types without special output connections for "multiplex" will not be suitable. Even though a service technician can easily wire up a suitable output connection on such a tuner, the poor stereo performance would make this not too worthwhile.

QUESTION: *Is it difficult to hook up an FM stereo adapter?*

ANSWER: No. Complete hook-up instructions are usually supplied with the adapter. Fig. 1 shows how an adapter

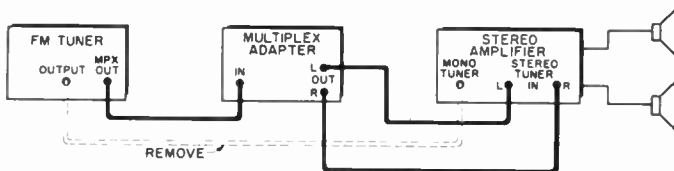


Fig. 1. It is simple to insert an adapter in a stereo system.

is inserted between the output of an FM tuner and the input of a stereo amplifier.

QUESTION: *Will there be more controls to operate on the adapter?*

ANSWER: Some FM stereo adapters have no operating controls at all. On the other hand, some models have several additional controls. These may include some of the following: a power switch for turning the adapter on; a switch for selecting either stereo or mono mode of operation; a separation control for either maximizing the amount of separation heard between the two channels or for blending the two channels together if your speakers are very far apart; and a noise-filter control for inserting such a filter to cut down noise that may be picked up while the unit is operating on stereo.

QUESTION: *How do I know when stereo is being broadcast?*

ANSWER: The most obvious way is to simply listen carefully to the program. If exactly the same sounds are produced by both speakers and the sound image appears to come from midway between the speakers, then you don't have stereo. On the other hand, if the sound appears to spread out before you and different instruments are heard in different locations, if the sound appears more alive and reverberant, then chances are you are hearing good stereo. Since this effect may not be recognized instantly as you are tuning across the FM dial, many adapters and FM stereo tuner-amplifiers use an indicator light that goes on when you tune to a station that is transmitting stereo. Another way to signal the presence of such a station is by the use of an audible tone that comes on when a push-button is depressed and you tune to a station that is on stereo.

QUESTION: *Can I use my present FM antenna for receiving stereo broadcasts?*

ANSWER: When a station goes to stereo, its signal gets a little weaker and it is more susceptible to noise and interference. This means that while you may have used an indoor antenna or a non-directional outdoor FM antenna in the past, these may not be suitable for stereo use. Most users have found that they must employ directional outdoor FM antennas, even in fairly strong signal areas. Where FM broadcasts originate from several different directions,

an antenna rotator may be required to point the antenna toward the station that is transmitting stereo. You probably have all seen "ghosts" or multiple images on a TV screen. Such ghosting, which is caused by the received signals being picked up over two or more paths of differing lengths, is also a problem on FM stereo. Its effect is to produce distortion and cut down on the separation between the two received stereo channels, especially at high treble frequencies. As a matter of fact, there may even be complete interchange of channels with the signals for the right-hand channel coming out of the left-hand speaker. A directional antenna will minimize such ghosting as well as increase the signal strength of the FM stereo broadcasts that are received.

QUESTION: *Can I tape record a stereo broadcast?*

ANSWER: Outside of legal requirements that prevent you from selling or using commercially any such recording, there is no reason why you cannot make a tape recording of a stereo broadcast for your own personal use. You must, of course, use a stereo recorder. There is one problem that may occur with poorly designed adapter circuits, though. The overtones or harmonics of certain frequencies used to transmit FM stereo are not too far away from the bias oscillator frequencies used in certain tape recorders. As a result, audible interfering tones, called "beat notes", may be recorded. With well-designed adapters, such interference-producing signals are completely removed from the output.

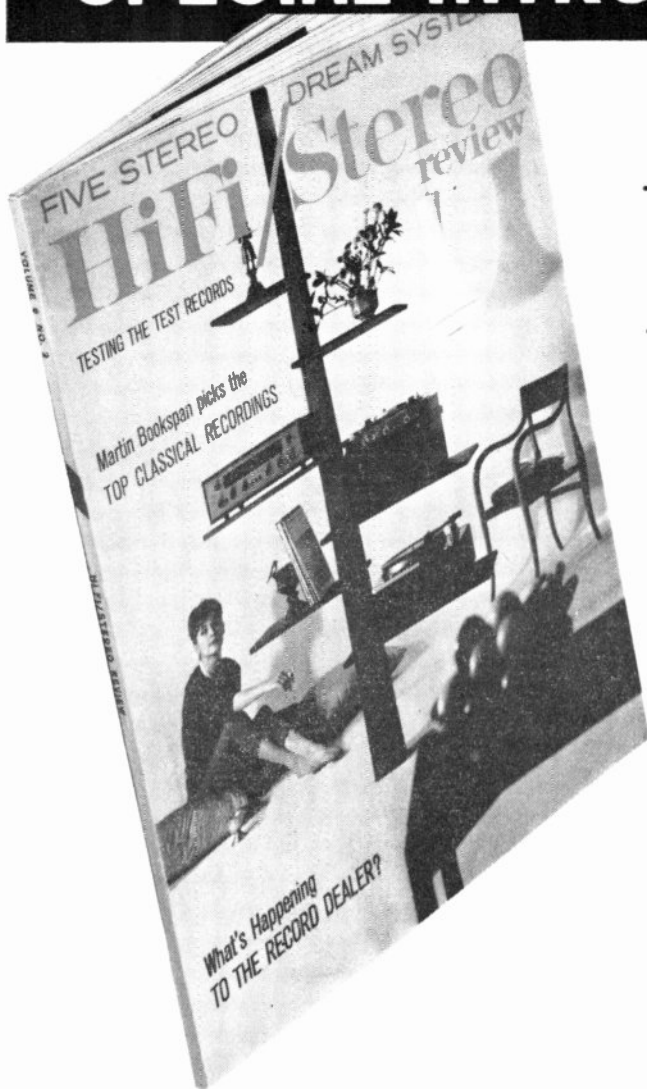
QUESTION: *How much FM stereo is actually on the air now?*

ANSWER: In less than a year after the new FM stereo system was authorized, there were over 80 FM stereo stations that had converted to stereo and these were averaging 66½ hours of stereo programming a week. A survey conducted by the Electronic Industries Association showed a likelihood of some 300 stations broadcasting some FM stereo by the end of the year. The EIA study showed that 40 per-cent of the nation's population, or about 70 million persons, were within the range of one of these FM stereo broadcasters. Admittedly, most of the stations are clustered in the large-market areas, such as those in California and New York. For example, around New York City, there are no less than four FM stations broadcasting stereo and one of these is on the air with stereo for 24 hours a day. As time goes on, though, there is no doubt that more and more listeners will have their choice of several FM stereo stations in their own locality. (See page 40 for a complete listing of all FM stations that are now transmitting stereo. This list indicates that, as of the time it was prepared, there were approximately 140 stations actually on the air with FM stereo broadcasts.)

QUESTION: *Should I buy now or later?*

ANSWER: There are always a number of people who refuse to buy any new product until "it has been perfected." These people are the ones who never buy but simply have a good excuse for themselves. Chances are that the present FM stereo system will be with us for some time. There is no reason to expect that the standards will change for the broadcaster since the present system was chosen over a number of others and after much study and field testing. Most manufacturers of tuners, especially those in the hi-fi component field have had over a year's experience with their circuits and some of them have been building similar circuits for a much longer period. The listener has a wide variety of FM stereo equipment from which to choose—with a wide range of prices, styles, and features. Therefore, if you are interested in stereo and want a good source of stereo programs, the FM stereo equipment is ready for you now.

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(Continued from page 66)

ness control; 20 tubes; 17½" x 5½" x 13¼"\$189.95

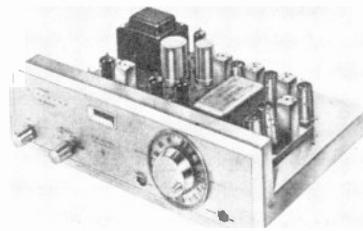
Model FM-3 Tuner

Armstrong circuit with tuned r.f., double-tuned limiter, triode mixer; sensitivity 2 microvolts for 30 db quieting; frequency response: 20 to 20,000 cps; bandwidth: 180 kc.; a.f.c.: outputs for amplifier and



pass; 80 db rejection of spurious response; a.g.c.; max. audio output 1.2 volts; level control; 3 outputs: channel A (tuner), channel B (tape), multiplex; tubes: 1-6BS8, 2-6U8, 2-6AU6, 1-6X4, 1-6FG6, 2-1N294; Type "C" case extra\$124.95

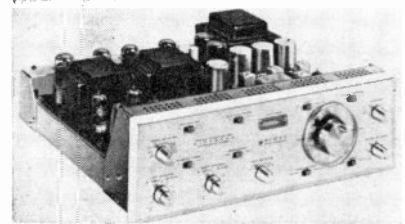
Model 350B FM Multiplex Tuner



usable sensitivity 2.2 μv.; includes built-in multiplex section; 80 db rejection spurious response; 6 db capture ratio; switchable a.g.c. for maximum quieting in multiplex reception; special circuitry to eliminate whistles when making tape recordings; sub-channel noise filter reduces noise on sub-channel without affecting system's frequency response; stereo noise filter reduces noise without affecting stereo separation; has meter-type tuning indicator and "Sonic Monitor" stereo indicator; Type "C" case extra\$219.95

Combines AM-FM tuner with dual-channel preamp with all conventional input circuit and operating controls; as photo shows, a Model 208 dual 40/40 watt power amplifier can be plugged into rear or remotely located; FM usable sensitivity 2.5 μv., 1 μv. sensitivity for 20 db of quieting; capture ratio 6 db; response 30-15,000 cps ± 1 db; signal-to-noise ratio 60 db; harmonic distortion .8%; tuning meter; subchannel noise filter for multiplex; switchable a.g.c.; noise filter; "Stereo Guide" indicator; preamp has 4 stereo inputs, scratch filter, separate bass and treble; tape monitor; front-panel stereo headphone jack; subsonic cut-off; 3 mv. sensitivity phono or tape head; 17½" x 6¼" x 16¼" d.; Type "G" case extra.....\$334.95

Model 340 FM Multiplex Tuner/Amp



Combines FM tuner, multiplex circuitry, dual-channel amplifier system; FM tuner section same as that used in Model 350B; usable sensitivity 2.5 μv., 1 μv. for 20 db of quieting; capture ratio 6 db; response 30-15,000 cps ± 1 db; signal-to-noise ratio 60 db; harmonic distortion .8% meter-type tuning indicator; subchannel noise filter for multiplex; switchable a.g.c.; noise filter. "Sonic Monitor" stereo program indicator; power amplifier 30 watts per channel (HIFM music power); response 20-20,000 cps ± 1 db; harmonic distortion .8%; preamplifier section has 4 stereo inputs, scratch filter, separate bass and treble, tape monitor, subsonic cut-off; loudness control; sensitivity for phono or tape head 3 μv.; center-channel output available; 17½" x 6¼" x 16¼"; Type "G" case extra.....\$379.95

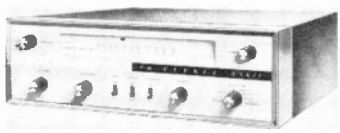
Model T-4 AM-FM Tuner

Can be used for both mono and stereo systems; FM sensitivity 2 μv. for 30 db quieting at 100% modulation; response 20-20,000 cps; harmonic distortion .5% at full output; Armstrong-type circuitry with double-tuned limiter and triode mixer; AM section has ultra-quiet r.f. stage, broadband tuned i.f. stage, germanium diode detector, sensitive ferrite core antenna, has provisions for multiplex adapter; 11½" x 4¼" x 8½"\$57.50

Model HK-200 FM Tuner Kit

Response 20-20,000 cps; harmonic distortion .5% maximum; 3-gang tuning capacitor; pre-wired, pre-aligned cascade front-end; all major parts pre-soldered to chassis; 9½" x 4¼" x 6½"; kit.....\$39.95

Model STA-7 FM Multiplex Tuner/Amp



Features built-in multiplex circuitry for stereo reception; tuner section—sensitivity 2.5 μv. for 30 db quieting, grounded-grid r.f. stage; ratio detector; amplifier section—12 watts per channel, response 20-20,000 cps ± 1 db, distortion (at full rated output) less than 1% at 400 cps, hum -52 db mag. phono, -72 db aux., sensitivity 850 mv. aux., 4 mv. mag. phono; 14 tubes (11 dual-purpose); output impedances 4, 8, 16 ohms.....\$139.95

Model TM-214 FM Multiplex Tuner

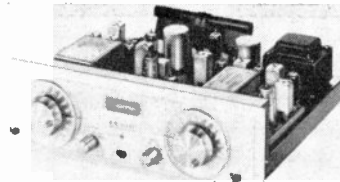
Features built-in multiplex circuitry for stereo reception; sensitivity 2.2 μv. (HIFM standard), 1.3 μv. for 20 db of quieting; three i.f. stages; three limiting stages; a.g.c.; harmonic distortion less than .5% at 100% modulation; signal-to-noise ratio 70 db mono, 50 db stereo; AM suppression 30 db with 2.8 μv. into 300-ohm antenna; drift .02% from cold start; anode-follower outputs, two for tape, two for audio; 11 tubes plus rectifier and matched germanium diode detectors; designed for maximum attenuation of subcarrier and pilot carrier in the output to eliminate distortion when tape recording; 300-ohm balanced antenna input; 15½" x 5½" x 11½"; 20 lbs.; wired.....\$189.95
Kit\$139.95

H. H. SCOTT

Model 314 Wideband FM Tuner

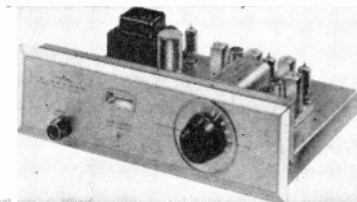
Usable sensitivity 2.5 μv.; 150-ke. band-

Model 333 AM-FM Multiplex Tuner



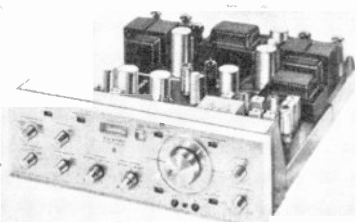
Separate FM and AM tuners; could be used for FM-AM simulcasts; FM usable sensitivity 2.5 μv.; capture ratio 6 db; response 30-15,000 cps ± 1 db; signal-to-noise ratio 60 db; harmonic distortion .8%; sensitivity 1 μv. for 20 db of quieting; tuning meter, subchannel noise filter for multiplex; switchable a.g.c.; "Sonic Monitor" stereo program indicator; 15½" w. x 5¼" h. x 13¼" d.; Type "C" case extra\$259.95

Model 370 FM Multiplex Tuner



Usable sensitivity 3.5 μv.; tuning indicator; "Sonic Monitor" stereo program indicator; this is new model and complete details are not yet available; estimated selling price\$169.95

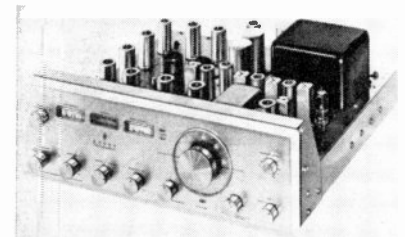
Model 355 AM-FM Multiplex Tuner/Amp



Enclosures

Type "C" metal enclosure.....\$13.95
Type "C" wood enclosure, walnut or mahogany\$24.50
Type "G" metal enclosure.....\$17.95
Type "G" enclosure, walnut or mahogany\$29.95

Model 4310 FM Multiplex Tuner



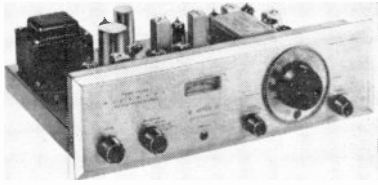
Usable sensitivity 1.9 μv.; signal-to-noise ratio 60 db; harmonic distortion .5%; response 30-15,000 cps (limit of HIFM standard of measurement) ± 1 db; capture ratio 2.2 db; sensitivity .75 μv. for 20 db of quieting; subchannel noise filter for multiplex; switchable a.g.c.; relay-activated squelch; noise filter; automatic program indicator. Features 3 separate meters, tuning meter, right & left channel level indicators\$475.00

Model LT-110 FM Multiplex Tuner

Usable sensitivity 2.2 μv.; capture ratio 6 db; special circuitry to permit flawless tape

3

Tuners

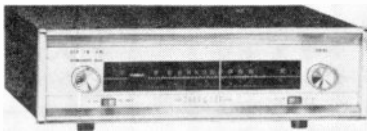


recording; multiplex section pre-assembled and pre-aligned; stereo noise filter and subchannel noise filter same as Model 350B; all wires pre-cut to correct length; tube sockets, terminals, etc. are pre-riveted at factory; 15½" x 5¼" x 13¼"; Type "C" case extra.
Kit\$159.95

SHERWOOD

Model S-2000 II AM-FM Tuner

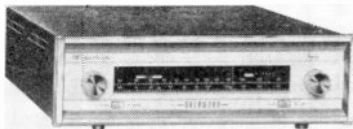
FM specifications identical to S-3000 III tuner; AM sensitivity 2 microvolts at 60% modulation for .5 volt output, 6 db signal-to-noise; selectivity "narrow" 5 kc. at -6 db, selectivity "wide" 15 kc. at -6 db;



frequency response "wide" 20 to 7500 cps at -6 db; hum and noise 55 db below 100% modulation; built-in antenna; low-distortion diode detector; 12 tubes plus rectifier; 14" x 10½" x 4".

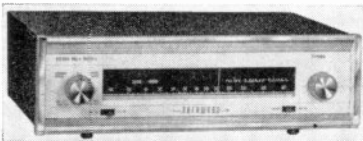
S-2000 II (less case).....\$150.00
With walnut leatherette case.....\$158.00

Model S-2100 AM-FM Multiplex Tuner



Similar to Model S-2000 II except contains FM multiplex circuitry; features FM stereo indicator; 14 tubes plus rectifier; 14" x 4" x 12½"; less case.....\$199.50
With walnut leatherette case.....\$207.00

Model S-3000 III FM Tuner



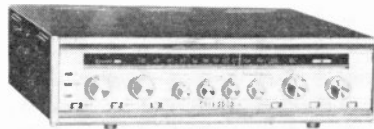
Sensitivity .95 v. for 20 db quieting; selectivity 220 kc. at -3 db; response 20-20,000 cps ± .5 db (to 15,000 cps on stereo); IM distortion less than 1.5% at 100% modulation (60 & 7000 @ 4:1 with standard pre-emphasis); less than 1% harmonic distortion at 100% modulation, 400 cps; FM drift ± 2 kc. with a.f.c., ± 25 without a.f.c.; a.f.c. correction 15 db, 80%; hum & noise 60 db below 100% modulation; anode-follower and FM multiplex outputs; tuning eye; antenna input transformer feeds cascode r.f. amplifier; two i.f. amps, cascaded limiters; wide-band detector; nine tubes plus rectifier; 14" x 4" x 10½"; less case.....\$110.50

With walnut leatherette case.....\$118.00

Model S-3000 IV FM Multiplex Tuner

Similar in design to Model S-3000 III FM tuner but includes wide-band multiplex circuit with phase-locked synchronous oscillator to re-insert multiplex subcarrier; has sharp filter circuit to remove 19 kc. pilot carrier and 67 kc. secondary sub-channel transmission; has controlled frequency and phase response of the FM i.f. amplifiers, limiters, and discriminator (flat to 75 kc.) for minimum distortion and maximum separation of multiplexed stereo signal through tuner circuits; FM IHFM sensitivity is 1.8 μv. for -30 db noise and distortion below 100% modulation; less case\$160.00
With leatherette case.....\$167.50

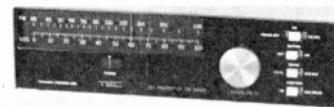
Model S-8000 FM Multiplex Tuner/Amplifier



Features highly sensitive FM tuner (1.8 microvolt IHFM standard); complete wired-in circuitry for receiving FM multiplex stereocasts; two 32-watt amplifiers; complete with dual preamplifiers for phono and tape and stereo controls; inputs provided for tape playback, tape monitor, phono, AM tuner, and two auxiliary sources; outputs for recording and 4, 8, or 16 ohm speakers; stereo power output 32 watts per channel music power (30 + 30 watts continuous duty) @ 1½% IM distortion; response 20-20,000 cps ± 1 db @ 30 watts; hum and noise (phono input) 60 db below 30 watts; d.c. filament supply; less case.....\$299.50 Net
S-8000D (with walnut tone leatherette case).....\$307.00 Net

TEC

Model FM-15 FM Tuner



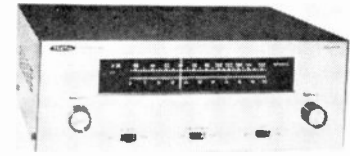
Twenty-transistor, 9-diode circuit; tuning meter; illuminated slide-rule dial; local-distant sensitivity control; a.f.c.; interstation muting; sensitivity 1.8 μv. for 20 db quieting, 2.5 μv. for 30 db; usable sensitivity (IHFM) 3.5 μv.; response 20-20,000 cps ± 1 db, section feeding multiplex circuit contains controlled roll-off after 75,000 cps; noise level 66 db below 100% modulation; output level 1 volt at 100% modulation; 88-108 mc.; input impedance 300 ohms; power requirements 105-120 volts a.c., 50-60 cps or 12 to 28 volts d.c. for battery operation; power consumption 4 watts; matches company's S-15 amplifier; 3" x 10½" x 8½".....\$179.50

Model FM-15 MPX FM/Multiplex Tuner

Same as Model FM-15 except includes multiplex section occupying space 2½" x 6" x 1" inside case; 8 transistors; completely automatic operation; requires no controls; completely aligned and preset circuits; current drain 20 ma.; synchronous gate separation of channels from composite signal provides wide-band reproduction of all audio information in original signal, recovered with low distortion.
.....\$199.50

TEECO

Model MXT286 FM Multiplex Tuner



Has stereo indicator light and automatic stereo/mono reception if desired; controls are: separation, balance, stereo/mono, a.f.c. & tuning; response 15-15,000 cps ± 1 db; sensitivity 2 μv. for 20 db of quieting; separation 30 db.\$119.50

TRANSWAVE

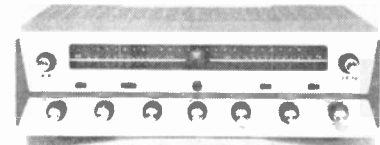
Model TW-2 AM-FM-Multiplex Tuner

Complete input-output facilities for centralized control of off-the-air tape recording; multiplex design same as Model FMX-2 adapter; response 20-15,000 cps ± 1 db (after de-emphasis); FM sensitivity 1.25 μv. for 20 db of quieting (3 μv. IHFM); distortion less than 1%; separation 40 db @ 1 kc.; hum and noise -80 db; audio output .6 v.; AM sensitivity 5 μv.; has switchable noise filter and AM bandwidth switch; automatic twin-beam stereo indicator; cathode-follower outputs; individual level controls; ten tubes plus six diodes; 15½" w. x 9½" d. x 4½" h.\$199.95

Model TW-30 AM-FM-Multiplex Tuner/Amp

Similar to Model TW-2 except has dual-channel preamps and power amps; power output 10 watts music power per channel; sensitivity: crystal cartridge 70 mv., magnetic cartridge (with optional preamp) 4 mv., tape/aux. 100 mv.; output impedance 4-8-16 ohms; stereo headphones, low impedance; center-channel output of 2 v. r.m.s. and front-panel control of facilities for tape playback or recording; 16 tubes plus 6 diodes; 16" w. x 11¾" d. x 5½" h.\$299.95

Model TW-50 AM-FM-Multiplex Tuner/Amp



Similar to Model TW-30 except 16 watts music power per channel plus additional features; sensitivity: magnetic cartridge 3.4 mv., crystal cartridge 38 mv., tape/aux. 160 mv., microphone 4 mv.; scratch, rumble, whistk filters; 19 tubes plus 8 diodes; 18¾" x 5¾" x 13½"\$399.95

V-M CORP.

Model 1465 Tuner



FM stereo and FM-AM tuner; response FM 20-20,000 cps ± ½ db; sensitivity FM 10 μv. for 20 db of quieting; distortion less than 1% harmonic on FM; 5½" h. x 13½" w. x 11½" d.; styling same as Model 1428 amplifier.....\$103.95

STEREO/HI-FI DIRECTORY

HOW TO SELECT AN FM TUNER

By JEROME M. GILISON

Basic coverage of the specifications and features that are important to the user in picking either a stereo or mono FM tuner for high-fidelity.

One of the more complex electronic instruments in the high-fidelity field is the FM tuner. It's no wonder then, that the average music enthusiast who feels competent enough to rely on his own judgment in choosing speakers, amplifier, and record player, often falls back on the advice of the audio salesman or an "initiated" friend when faced with the awesome task of choosing a tuner for his hi-fi system. This is especially unfortunate because even the best of expert advice can not anticipate the particular likes and dislikes of the prospective user, nor can it take into account his personality and the specific receiving conditions prevailing in his locality—all important factors in tuner selection. By far the best solution is for the buyer himself, no matter how non-technical he may be originally, to equip himself with some of the basic facts of life concerning tuner specifications and design before entering the hi-fi emporium.

Specifications

The technical specifications have very practical "common sense" meanings—expressed in technical shorthand—that indicate the type of performance you might expect under different operating conditions. Sensitivity ratings, for example, are often used to compare different tuners. These ratings indicate the ability of a tuner to receive weaker stations without bringing in, at the same time, an annoying background of noise. Thus the number you see in print is the *minimum* received signal strength which will permit a given degree of *quieting*, or freedom from background noise. If Tuner "A" is rated at 1.5 microvolts for 30 db of quieting (the most meaningful quieting level) with a standard 300-ohm antenna, this means that Tuner "A" will provide an enjoyable music signal with only 1.5 microvolts received at the antenna. Generally speaking, the sensitivity rating for 30 db of quieting with a 300-ohm antenna is the most useful basis of comparison and the prospective buyer should be alert to spot 72-ohm antenna ratings for specialized applications (which are exactly *half* the 300-ohm rating), and ratings for 20 db of quieting, which are lower but also include more noise. Of course, the lower the sensitivity figure, the more sensitive is the tuner.

The Institute of High Fidelity Manufacturers Inc. (IHFM), an industry-wide group, has established two sensitivity ratings which are used by practically all tuner manufacturers. These are *usable sensitivity* and *volume sensitivity*. The usable sensitivity test is designed to measure the internal noise (including hum and distortion) generated by the receiver itself, while the volume sensitivity is a measurement of a tuner's ability to provide a listenable signal from weak stations. Due to the tremendous advances which

have been made in tuner sensitivity over the past decade, however, the usable sensitivity test is the more stringent requirement for most tuners on the market today. What this means, in effect, is that today's tuner is so sensitive to radio signals that it will perform satisfactorily as long as the input signal is higher than the internal noise generated in the receiver tubes and components.

The important factor, however, is the amount of sensitivity that you will actually need in your own area. There is simply no sense in parting with extra cash for a highly sensitive tuner when all the stations you will care to receive can be picked up with ease on a less expensive model. Probably the best way of deciding how much sensitivity you need is to determine the number and location of stations you would like to receive. If your list includes some "must" stations at a distance of over 100 miles, you will probably need a highly sensitive tuner and, in most cases, a specialized outdoor antenna. If your most distant "must" station is located between 50 and 100 miles from your home, a tuner in the more moderate sensitivity range with an outdoor antenna will probably suffice. Local stations should present no problems—at least in regard to sensitivity—to just about any tuner of hi-fi standing now on the market. Of course, *these distances are very approximate*, for the peculiarities of FM transmission could place your domicile squarely in the midst of a "dead" zone while your neighbor is enjoying booming reception from distant places on his "low-fidelity" table model. If you are particularly interested in distance reception, the most sensible procedure would be to test the tuner of your choice in your home before making a final purchase.

The advent of FM stereo, or multiplex, has made tuner sensitivity even more important. The reason for this is simply the fact that the additional stereo channel brings with it an additional 20 db of noise, an amount hardly noticeable when the signal is strong and the tuner has adequate sensitivity. The past year of experience with multiplex broadcasting has shown, however, that in some cases a station may be received with a background of perfect quiet when broadcasting monophonically, yet be almost unlistenable in stereo because of background hiss and hash. Under such marginal listening conditions, the extra 20 db of noise can make all the difference in the world. There are two possible solutions to this problem short of selling the house and moving next door to the FM transmitter—either trade in the tuner for a more sensitive unit or install a highly directional roof-type yagi antenna that can be rotated to the precise azimuth of the wanted station. The extra sensitivity requirements of FM stereo should be taken into account, therefore, when the time for a final decision arrives.

The AM noise-rejection figure is an indication of the tuner's ability to suppress atmospheric static and car ignition noises. If a tuner has good limiting action and thus a high degree of freedom from such interference, this will be indicated by a higher AM noise-rejection figure. You should keep in mind that high tuner sensitivity is usable only if it is accompanied by sufficient limiting action.

Another important specification when judging the reception provided by FM tuners is the capture ratio. This ratio indicates the degree to which a tuner can suppress a weaker station *on the same frequency* as the station you desire. A low capture ratio is particularly important in metropolitan areas where the FM band is crowded. With a sufficiently low capture ratio, you should rarely be troubled with even the faintest whisper of an advertising jingle in the background of a soul-satisfying program of Beethoven or Brubeck. Other indicators of a tuner's ability to eliminate unwanted FM signals are: image rejection, alternate-channel rejection, and adjacent-channel rejection. All of these numbers, expressed in db, have one thing in common—the higher they are, the more selective the tuner is.

All tuners worthy of the name "high-fidelity" should provide an audio response that is essentially flat ± 1 db from below 50 to 15,000 cps and should be capable of passing the multiplex signal (which extends to 53,000 cps) without distortion. Over-all harmonic distortion should be held to less than 3%.

These few performance specifications are more than adequate as a basis of comparison in selecting an FM tuner.

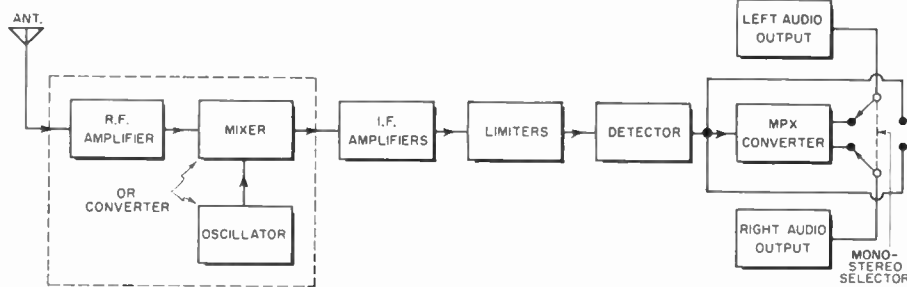


Fig. 1. Block diagram of a typical multiplex FM tuner, as discussed in text.

For a more complete assessment of an FM tuner's performance, however, you should be acquainted with some of the more common design features of the sets most often found on the seemingly endless shelves of the average hi-fi sales-room. The FM signal, after being picked up by the antenna, first encounters the tuner "front-end" (see dashed box in Fig. 1) where it is amplified and separated from other signals close to it in frequency. Since the signal from the antenna is typically measured in *millionths* of a volt, the most important requirement for a front-end is that it not introduce any internal noise of its own which would then be amplified along with the weak signal and appear as a rushing noise or hiss in the tuner output. From the standpoint of both high amplification and low noise, one of the best types of front-end design is the cascode type, which is generally found in the more expensive models. This design uses two triodes (which are the least noisy type of tube) usually within a single tube envelope. Another design which offers some of the same advantages is the neutrode, built around a specially developed tetrode. Some less expensive tuners, designed for applications where high sensitivity is not needed, use a single triode amplifier.

As shown in Fig. 1, the FM signal is next fed to the mixer or converter stage (also part of the front-end) where it is changed to a lower intermediate frequency (i.f.), standardized at 10.7 megacycles. This can be accomplished by two low-noise triodes, one a mixer and the other an oscillator, or by a pentode-triode converter combining the two functions. This stage should be covered

with metal shields to prevent the unavoidable radiation from interfering with the operation of the tuner or other equipment nearby.

The signal is next sent to the i.f. amplifier for a further increase in strength and for elimination of any remaining interfering signals. Generally, the greater the number of i.f. amplifying stages, the better the performance of the tuner. This is due not only to the increased gain (amplification) afforded by the extra stages but by the decrease in gain needed from each individual stage to achieve a usable output. The additional i.f. stages make it possible to increase stability and thus lower over-all distortion.

An increasing number of FM tuners these days feature wide-band design. The advantages of wide-band design of the i.f. amplifier are shown in Fig. 2. By providing constant amplification for a broad range of frequencies, the wide-band tuner greatly reduces distortion, especially on loud transients. The steep slope of the "skirts" of the i.f. response curve aids in eliminating unwanted signals. The narrow-band peak-tuned tuner (dotted line) does not provide the same freedom from distortion because the amplification is non-linear over a portion of the response curve.

After passing through the i.f. amplifier stages, the signal is then fed to the limiters, which remove the peaks of the transmission, thus removing AM interference (Fig. 3) such as static and car ignition noise. Here, again, the number of stages can serve as a general indication of the tuner's performance. A well-designed tuner will include several different types of limiters so that the amount of limiting

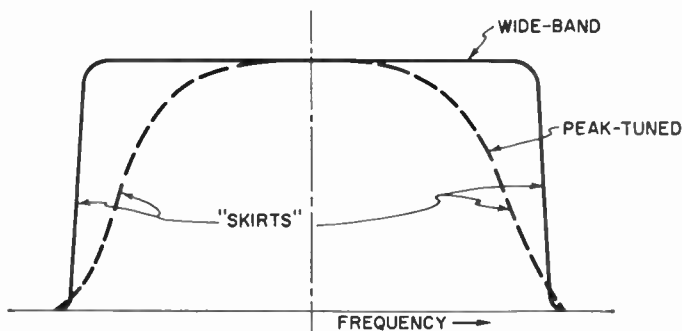
action will depend on the strength of the received signal. This variable limiting action permits each stage to operate in its own best limiting range. Some limiters double as i.f. amplifiers on weak signals.

At this point, the signal is ready for conversion to an audio output. This is done either by a ratio detector or a discriminator. The ratio detector has come into increasing use because of its distortion-free operation over an extremely wide band. It also provides additional limiting action for strong signals. The only disadvantage of the ratio detector is that the strength of the audio output varies with the strength of the radio transmission, but this defect is normally compensated for by the addition of limiters and automatic volume control (a.v.c.) in the i.f. section.

During monophonic broadcasts, the detected audio signal then passes through one or more audio amplifiers and a volume control is usually provided. The final stage is the cathode- or plate-follower, which permits long lengths of cable to be used between tuner and amplifier without loss of fidelity.

During FM stereo transmissions, however, the signal from the detector must be switched, either automatically or manually, to a multiplex converter. There are several types now on the market, distinguished by the method

Fig. 2. Typical i.f. response curves of an FM tuner.



used to recover the original left (L) and right (R) channels from the more complex signal transmitted by the station. As shown in Fig. 4, the multiplex signal consists of two separate bands, one between 50 and 15,000 cps (within the normal hearing range) and the other centered around the supersonic frequency of 38,000 cps. The main carrier provides a balanced blend (L + R) of the two stereo channels for the old-fashioned listener with his monophonic set, while the supersonic carrier contains the "difference" signal (L - R) for the stereo listener. The job of extracting the original L and R channels is accomplished by the multiplex converter using either a matrix, envelope detection, or time-division circuit, or some combination of these

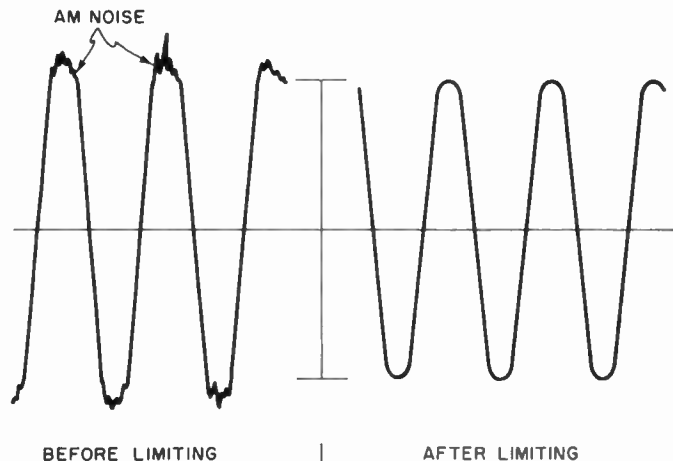


Fig. 3. Action of a typical FM tuner limiter circuit.

methods. Satisfactory results can be obtained with all three designs when properly executed. It seems that the matrix design can be produced at less cost than the other two systems, and might be recommended on that count for installations built on a restricted budget. The other two types have a slight edge in noise cancellation and require somewhat less critical tuning. In general, however, the final result depends more on the particular circuit than the type of design.

Additional Features

Although we've covered the main points in a typical FM tuner design, there are several additional features which should definitely be considered when purchasing a tuner. The first and one of the most important is automatic frequency control (a.f.c.). There is a difference of opinion among tuner designers concerning the relative merits and demerits of including a.f.c.—a controversy which is reflected in the fact that some of the better tuners on the market today do not include it. The argument against a.f.c. is that it is just an added complication which is not needed if the tuning sections are temperature-compensated to prevent drift. The argument for a.f.c. is to the effect that although a.f.c. should not be needed to prevent drifting in a well-designed tuner, it is still indispensable for convenient and accurate tuning to the exact center-channel and minimum-distortion position.

The need for a.f.c. is actually augmented in a wide-band tuner because with such a tuner the peak indication on even the most accurate tuning meter is so broad that it is literally impossible to find the center-channel position. Thus a.f.c. is used, *after* bringing in the station, to correct manual tuning errors. You will probably find a.f.c. an added convenience in most cases, although it is not an absolute necessity—and a switch is provided to turn it off if you should have any problems in receiving a particular station.

Several new features have been added to recently introduced multiplex tuners to make stereo listening more con-

venient. One such device is a stereo indicator which automatically signals when a multiplex program comes on the air. Such an indicator is just about an absolute necessity if you wish to tune across the dial to find a stereo program. A further refinement, and perhaps even more useful, is an automatic switching system which detects the 19-kc. pilot tone transmitted by the station during a multiplex broadcast (see Fig. 4), and switches into the stereo mode while the listener remains comfortably ensconced in his armchair. Most multiplex tuners of current vintage also include a special stereo noise filter, designed to roll-off the higher portion of the difference (L - R) signal. Although these filters diminish channel separation in the highest octave of the audio range, they don't reduce the frequency range of the music and are quite effective in suppressing noise on weak multiplex signals.

Another important feature is an accurate tuning meter or indicator. Generally, a meter is preferable because of its added convenience and increased visibility. However, several of the newer indicator tubes have improved characteristics, such as expanded-scale indication for weaker stations, and can be used without any significant loss in convenience.

Suppression of inter-station noise is another feature well worth having in an FM tuner. This noise can easily become a tranquility-shattering roar if the volume level is not turned down while tuning. A "Local-Distant" switch may also be helpful, especially in areas close to FM transmitters where the danger of overloading is the greatest. Flipping the switch to the "Local" position cuts down the signal level and thus prevents overload distortion, or imaging. This feature is more important on highly sensitive tuners because the possibility of overload is greater.

There are a few other convenience features which may prove quite handy, although they are overlooked by many tuner buyers. These include such items as separate outputs for a tape recorder, heavy flywheel action on the tuning knob, a front-panel volume control and "on-off" switch, auxiliary power outlets, and a logging scale on the tuning indicator (for quicker location of a desired station). None of these will affect the performance of the tuner but they may make it a bit more comfortable to "live with." Along these lines, it goes without saying that the tuner must be attractively styled and fit the room decor.

In selecting an FM tuner the most important consideration is to match the features of each model with the particular application you have in mind. Looked at in this way, there is no "best" tuner and no "worst" — there are simply a variety of models and features. Probably the best procedure is to decide on the essentials — price range, performance specifications, and features—before you shop.

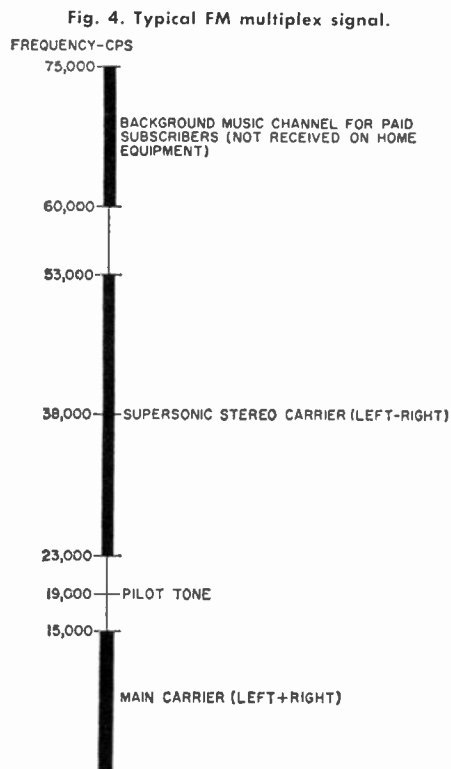


Fig. 4. Typical FM multiplex signal.

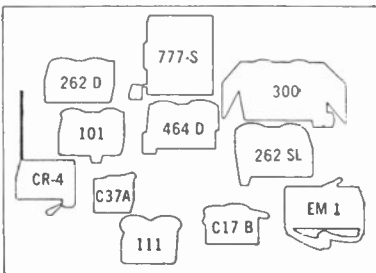


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—Pocket size mike and transmitter providing complete freedom from entangling microphone cables. \$250. ■ **SONY Condenser Microphone C-37 A**—For purity of sound reproduction, the unqualified choice of professional studios throughout the world. \$295. ■ **SONY Sound on Sound Recorder 262 SL**—The perfect recorder for language, music and drama students. With 4 track stereo playback. \$199.50. ■ **SONY Tape recorder 111**—A popularly priced, high quality bantam recorder for everyday family fun. \$79.50. ■ **SONY Condenser Microphone C-17 B**—Miniature size (3/4" x 5/8" diameter) and exceptional background isolation unidirectional cardioid pattern. \$350. ■ **SONY Newscaster Portable EM-1**—A professional on-the-spot battery powered portable recorder with precision spring wind constant speed motor. \$495. *All Sony Stereorecorders are Multiplex ready!*



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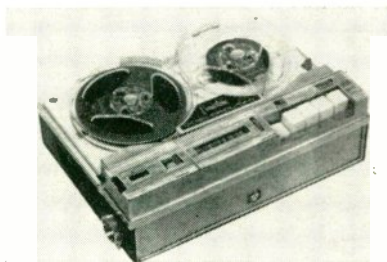
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RECORDERS
PLAYERS
TRANSPORTS }77



AMERICAN CONCERTONE

Model 400 "Cosmopolitan"
Portable Recorder



All-transistor, battery-operated 2-speed (1 7/8 & 3.75 ips), 2-track mono design with AM radio built-in; operates on four 1.5-volt flashlight batteries and external a.c.; has built-in automatic battery recharger; meter indicator for battery life and recording level; counter; 3 1/2" x 2 3/4" speaker; stop/start dynamic microphone with remote control switch; 12 transistors plus diodes and rectifier; response 150-3500 cps @ 1 7/8 ips, 150-7000 cps @ 3.75 ips; wow and flutter .6%; output 300 mw. max.; takes up to 5" reels; battery life approx. 15 hours; radio can be played by itself; wt. 10 lbs.; 11 1/4" x 7 1/2" x 3 1/2"; complete with microphone, stand, earphone.\$197.50
Footswitch for remote operation.....\$ 9.95
Telephone pickup.....\$ 2.95

Model 505 Series Tape Recorder

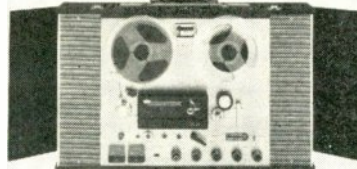


Available as 2- or 4-track recorder; plays 2- and 4-track tapes; features sound-on-sound record; two speeds (3.75 & 7.5 ips) 50-15,000 cps ± 2 db @ 7.5 ips; 50-10,000 cps ± 2 db @ 3.75 ips; flutter and wow less than .2% r.m.s. @ 7.5 ips; four heads: stereo erase, stereo record, 2-track playback, 4-track playback; rewind

time 45 sec. for 1200 ft.; high-impedance mike and line inputs; mechanical flutter filter; stereo record & playback preamps. Model S505-2 Two-track stereo....\$549.50
Model S505-4 Four-track stereo....\$549.50
Model S505-4R Four-track stereo with "Reverse-O-Matic" feature; plays tape from end-to-end and back again without interruption\$599.50
Portable case additional.....\$ 50.00
For 7.5 & 15 ips operation add.....\$ 42.50
Surround-type metal enclosure add.....\$ 20.00

Model S510 Tape Recorder

Same as Model S505 but with dual-channel, two-stage amplifiers with 6 1/2" speakers; peak power 5 watts/channel\$699.50



Model 5510-R Same as Model S510 but with "Reverse-O-Matic" feature....\$749.50

Model 507 Tape Recorder

Similar to Model 508 (below) but supplied as a two-track stereo recorder with four heads; three half-track (stereo) for erase, record, and playback; fourth head is quarter-track playback.....\$655.00
Model 507-4 Same as Model 507 but is supplied as a four-track stereo recorder with four heads—three quarter-track (stereo) for erase, record, and playback; fourth head is half-track playback.....\$655.00
Portable case for Models 507 and 507-4\$60.00

Model 508 Tape Recorder

Available as a portable recorder or for rack installation; features high- or low-impedance inputs and outputs; vu meters; separate line and mike inputs; three shielded heads with space for fourth for special-effects work; three hysteresis motors; two speeds 3.75 and 7.5 ips; response 40-12,000 cps ± 2 db @ 7.5 ips, 40-7500 cps ± 2 db @ 3.75 ips; signal-to-noise 55 db full-track, 50 db half-track @ 2% distortion; separate record/play amplifier.
Model 508-1 Full-track recorder.



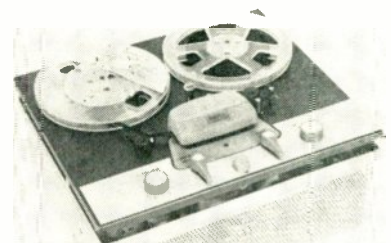
.....\$520.00
Model 508-2 Half-track recorder.
.....\$520.00
Portable case\$50.00
Extra playback head.....\$60.00
7.5 and 15 ips operation factory installed\$42.50
As above but in kit form.....\$42.50

AMPEX

Model 934 Stereo Tape Deck

Two-speed (3.75 & 7.5 ips) for mono or stereo, 2- or 4-track playback; tape head output for use with external preamplifiers; flutter & wow under .25% r.m.s. at 7.5 ips\$199.50

Model 936 Stereo Tape Player



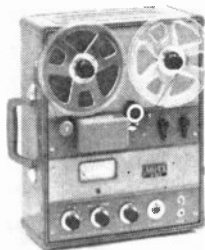
Same basic tape deck as Model 934 but includes built-in stereo preamp; preamp output approx. .75 v.; response 50-15,000 cps ± 2 db @ 7.5 ips, 50-8000 cps ± 2

4 Tape Machines

db @ 3.75 ips.....\$249.50

Model 601 Monophonic Recorder

Full-track or half-track recorder; 3 heads; erase, record, playback; frequency response: 40 to 15,000 cps, 40 to 10,000 cps ± 2 db, no more than 4 db down at 15,000 cps; wow and flutter under 0.17% rms; signal-to-noise ratio: full track, over 55 db below peak recording level at 3% total harmonic distortion; half track, over 50 db; vu meter; separate record and playback preamplifiers; reel size: 7"; timing accuracy: ± 3.6 seconds in 30 minute recording; microphone and high level inputs with full mixing provisions; vertical or horizontal operation; separate playback preamp permits instantaneous comparison between incoming program material and



actual recording; headphones jack; output: 1.23 volts into 600 ohm load from tapes recorded at program level.

Model 652 Half-track, 7.5 ips, portable case\$595.00

Model 656 Half-track, 3.75 ips, portable case\$625.00

Model 662 Half-track, 7.5 ips, unmounted\$545.00

Model 666 Half-track, 3.75 ips, unmounted\$575.00

Model 654 Full-track, 7.5 ips, portable case\$595.00

Model 658 Full-track, 3.75 ips, portable case\$625.00

Model 664 Full-track, 7.5 ips, unmounted\$545.00

Model 668 Full-track, 3.75 ips, unmounted\$575.00

Model 620 Portable Amplifier-Speaker



Designed for use with Model 601 tape recorder; 10-watt amplifier with frequency response of 20 to 20,000 cps ± 0.5 db; hum and noise 70 db below 10 watts; harmonic distortion less than 1%; speaker frequency response: 65 to 10,000 cps; level and tone controls; a.c. convenience outlet; external speaker jack bypasses internal speaker; input impedance 20,000

ohms; output impedance 12 ohms; 13" x 16" x 8".....\$189.50

Model 601-2 Stereo Recorder

Stereophonic tape recorder using Model 601 tape transport and two Model 601 electronic chassis for stereo record/playback; full-track erase head; stacked record and playback heads; all performance specifications identical to Model 601.

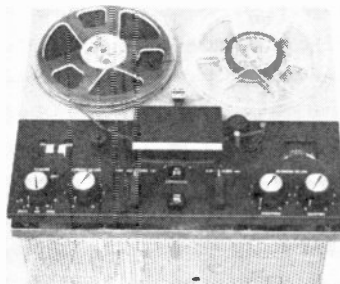
Model 672 7.5 ips, portable case\$795.00

Model 674 3.75 ips, portable case\$845.00

Model 676 7.5 ips, unmounted.....\$750.00

Model 678 3.75 ips, unmounted.....\$795.00

"Fine Line" 1200 Series Tape Recorder

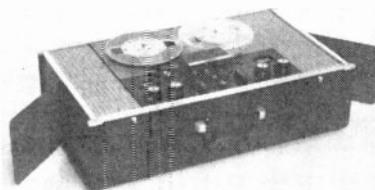


Four-track stereo and mono recorder/player; record, 4-track stereo & mono; plays 4-track stereo and 4-track half-track or full-track mono tapes; has three separate heads, erase, record, playback; automatic set shut-off actuated by end of tape; dual speed 7.5 & 3.75 ips; response 50-15,000 cps ± 2 db @ 7.5 ips; signal-to-noise ratio -55 db @ 7.5 ips; flutter .2% @ 7.5 ips; wow 3% @ 3.75 ips; outputs .75 v. from cathode-follower; perfection of pitch within $\frac{1}{3}$ of a half-tone.

Model 1250 unmounted deck with record/playback preamplifiers.....\$499.50

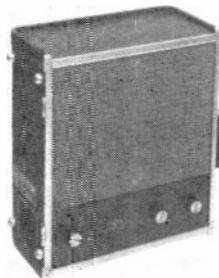
Model 1260 tape deck mounted in portable grey luggage case; includes record/playback preamplifiers.....\$545.00

Model 1270 tape deck with pair of low-



level amplifiers & speakers mounted in portable grey luggage case.....\$645.00

Model 2012 Amplifier/Speaker



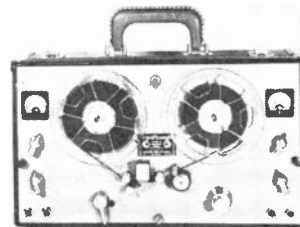
For use with Models 1260 & 1270 tape units; includes 10-watt power amplifier with speaker in a grey portable luggage case; response 65-10,000 cps essentially flat; sensitivity .18 v. for full output\$199.50

AMPLIFIER CORP.

Model 312-ST "Transflyweight"

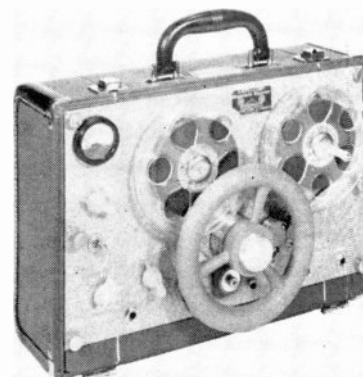
Recorder

Portable design; battery operated; will record and play back stereo or mono; $\frac{1}{4}$ track; 5" reel size; single play/record



head; response 50-10,000 cps ± 2 db @ 7.5 ips; signal-to-noise ratio 55 db; wow and flutter .1% @ 7.5 ips; microphone (50/200 ohm) only input per channel with 4 millivolts sensitivity; (15,000 ohm) 2.5 v. output per channel; has 30 transistors; built-in vu meters for each channel; rechargeable batteries; single-speed (15, 17, 3.75, 7.5, or 15 ips) design; prices range from \$624.00 to \$684.00, 110 volt a.c. power pack.....\$30.00

Model 610 Series VU "Magnemite"



Portable tape recorder; spring-wound motor; battery operated amplifier; single or dual track; single head for recording and playback; balanced flyball governor; 5" reel size; rewind indicator; multi-purpose vu meter.

Model 610-AV

Dual track; $\frac{1}{2}$ ips; 300-2500 cps; flutter 0.25%; 16 lbs.....\$365.00

Model 610-BV

Dual track; 1" ips; 100-3000 cps; flutter 0.2%; 16 lbs.....\$315.00

Model 610-CV

Dual track; 3.75 ips; 50-5000 cps; flutter 0.15%; 19 lbs.....\$345.00

Model 610-TV

Dual track; 7.5 ips; 50-7500 cps; flutter 0.1%; 19 lbs.....\$365.00

Model 610-DV

Single track; 7.5 ips; 50-7500 cps; flutter 0.1%; 19 lbs.....\$385.00

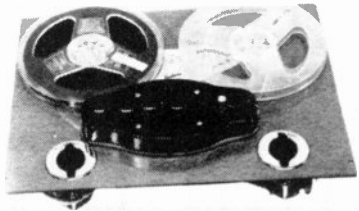
Model 610-EV

Single track; 15 ips; 50-15,000 cps; flutter 0.1%; 19 lbs.....\$425.00

BRENELL

Mark IV & IVB Tape Decks

Tape deck chassis; dual track; takes up to 4 heads for record, playback, and erase; 3 speeds; 3 motors; frequency response; 3.75 ips, 50 to 6000 cps; 7.5 ips, 50 to 12,000 cps; 15 ips, 30 to 15,000 cps (all ± 3 db); flutter and wow less than 0.2%; tuning eye level indicator; dual track operation for up to 7" reel; requires preamp and amplifier; speed change by screw-on 2:1 ratio capstan sleeve and slow-fast stepped flywheel and motor pulley assembly; Mumetal heads; mechanical brakes;



2 knob control, interlocked; digital counter; fast rewind; size 15"x11 1/2"x3 3/4" d.; mounting: from horizontal up to 85° slant. Mark IV. 1 upper track erase head; 1 upper track record/playback head;\$144.50
 Mark IVB. 1 upper, 1 lower track erase head; 1 upper, 1 lower track record/playback head; (staggered stereo).....\$182.87

Mark 5 Series Tape Deck

Four speed (1 7/8, 3.75, 7.5 & 15 ips); two switches control record, playback, wind & rewind; has revolution counter; normally deck is supplied fitted with one erase and one record/playback head (upper track in operation); provision is made for extra heads to be mounted easily when required for special purposes.

Mark 5 Mono record/playback.....\$169.50
 Mark 5B Stereo record/playback....\$199.50

Mark 5 Record/Playback Amplifier

Primarily designed for use with Brenell tape decks; frequency compensation is to CCIR standards at 7.5 & 15 ips; 7 watts output; two amplifiers required for stereo operation; has high-frequency tone control; microphone input 2-5 mv, into 2 megohms; tuner-phon 250 mv, into 700-1000 ohms; tubes—EF86, ECC83, EL84, EZ80, 6AM81; size 15" w. x 4 1/2" h. x 5" d.; supplied without power supply.\$ 84.60
 With power supply.....\$109.50

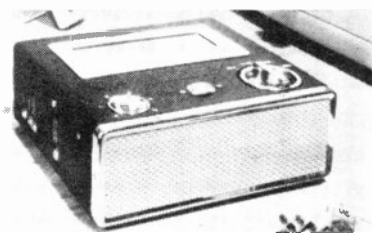
BUTOBA

Model MT-5 Portable Tape Recorder

Completely transistorized; two-speed (3.75 & 1 7/8 ips); two-track mono design; made in Germany; has tone controls, volume level indicator; speaker output 1.2 w.; 7 transistors plus 2 diodes; operates from 8 flashlight batteries, accessories available for other power sources; response 50-13,000 cps @ 3.75 ips, 60-5000 cps @ 1 7/8 ips; signal-to-noise ratio 40 db; handles 5" reels; 9" x 12" x 6"; wt. 12 lbs. with batteries; supplied complete with dynamic microphone and carrying strap.\$249.95

CITROEN

Model 660 Tape Recorder



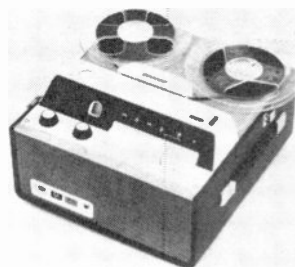
Portable, two-speed (1 7/8 & 3.75 ips) design; provides 2 hours playing time on 3" reel using 1-mil tape @ 1 7/8 ips; six penlite batteries for portable use; will operate on 117 volt a.c. or auto battery with optional adapters; double-play (record & playback) heads; push-pull audio output; record level & battery condition meter; all-transistorized circuitry; complete with leather case, remote control, dynamic microphone, earphone, batteries, telephone pickup. \$149.50
 Optional accessories include a.c. adapter, foot control, automobile cigarette-lighter

1963 EDITION

adapter; available individually or as a kit\$39.50

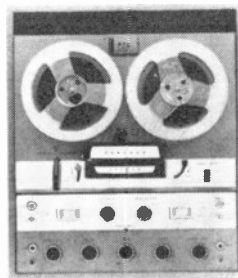
CONCORD

Model 220 Mono Tape Recorder



Three speeds (7.5, 3.75, 1 7/8 ips); permits playing time of 2 hours at 7.5 ips with 2400 foot, 7" tape; response 40-15,000 cps @ 7.5 ips; 40-5000 @ 1 7/8 ips; built-in 4" x 6" speaker; electronic-eye level indicator; digital tape counter; includes dynamic microphone and earphones; adapter available for synchronizing sound to film; over-all size 12" x 13" x 7 1/2"\$149.95

Model 401 Stereo Tape Recorder



Four-track stereo design including record and playback preamps; records 4-track, 2-track stereo and mono; features "Electromatic" remote control permitting record level settings without tape moving; two speeds (7.5 and 3.75 ips); wow and flutter .18% @ 7.5 ips; response 30-16,000 cps ± 2 db @ 7.5 ips; 40-12,500 cps @ 3.75 ips; 7" max. reel size; signal-to-noise ratio of amplifiers more than 55 db; vu meters for record level indicators; carrying case not included; 15 1/4" x 11" x 6"\$249.95
 Tape deck and preamp available as separate units.

Model 880 Stereo Tape Recorder

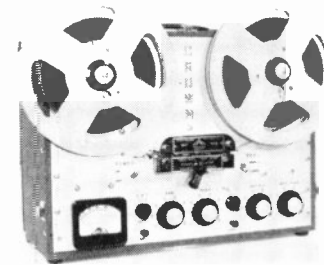


Four-track, three-speed (7.5, 3.75, 1 7/8 ips) stereo design with 3 separate heads (erase, record, playback) permitting sound-on-sound recording; includes all amplifiers and two separate speakers; response 40-16,000 cps ± 2 db @ 7.5 ips; 40-12,000 cps @ 3.75 ips; 50-8000 cps @ 1 7/8 ips; signal-to-noise ratio better than 60 db; harmonic distortion less than 1.8% at 3 db below rated output (5 watts per channel); wow and flutter less than .15% @ 7.5 ips; vu meters are used for record level meters; has automatic end-of-reel stop; two dynamic microphones included; 15 1/2" x 11" x 17"\$399.95

CROWN

Record and play response for all "700" Series models 30-30,000 cps ± 2 db @ 15 ips; 30-20,000 cps ± 2 db @ 7.5 ips; and 30-11,000 cps ± 3 db @ 3.75 ips.

Model "702" Tape Recorder

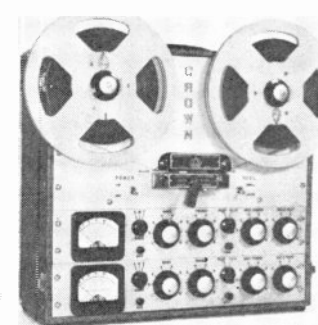


Records and plays half-track mono; three-motor transport; differential magnetic braking; automatic stop; separate bass & treble boost on record and playback; d.c. filaments; three-speed record/play equalization. 15, 7.5, & 3.75 ips (1 7/8 ips available); fast forward and rewind, 1200' in 38 sec.; handles up to 10 1/2" reels; maximum wow & flutter: .06% @ 15 ips, .09% @ 7.5 ips, .18% @ 3.75 ips; timing accuracy 99.8% for synchronous motor; signal-to-noise ratio 57 db @ 15 ips, 54 db @ 7.5 ips, 51 db @ 3.75 ips; over-all distortion less than 1.5%; inputs—two high-impedance input channels, mic. or phono and mic or play; cathode-follower-type output; controls—forward, stop, play/record, thread/idle, stop, rewind switch, bias lock, mic. 1 play, mic. 2 phono, treble, bass, play/record, equalization (three speeds), reel size switch, power on-off\$525.00
 Model 701 Full-track mono.....\$635.00

Model "712" Tape Recorder

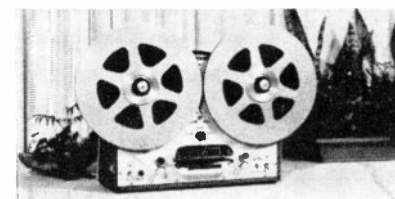
Records and plays two-track stereo and mono; features & performance standards same as Model "702"; second record/play amplifier offers twice the facility; 19" w. x 7 1/2" d. x 17 1/2" h.....\$775.00

Model "714C" Tape Recorder



Records and plays quarter-track stereo and mono; plays two-track stereo; record and play response (for quarter-track stereo) 50-28,000 cps ± 2 db @ 15 ips, 30-17,000 cps ± 2 db @ 7.5 ips, 30-9000 cps @ 3.75 ips; other features and performance standards same as Model "702"; 19" w. x 7 1/2" d. x 17 1/2" h.....\$795.00

Automatic Series



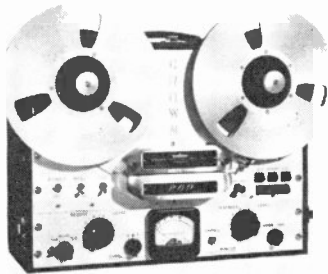
4 Tape Machines

Player only; playback frequency 30-15,000 cps ± 2 db @ 7.5 ips, 30-11,000 cps ± 3 db @ 3.75 ips; three-motor mechanism with synchronous capstan motor and ball-bearing reel motors; foolproof automatic photoelectric self-reversing system; differential magnetic braking; plug-in preamp; standard rack mounting; remote control available; 7.5 & 3.75 ips (1 1/8 ips available); handles up to 14" reels; maximum wow & flutter .1% @ 7.5 ips, .2% @ 3.75 ips; signal-to-noise ratio 50 db @ 7.5 ips; controls—play/stop/wind switch, reel-size switch, operate switch (L, A, R positions); 19" w. x 7" d. x 14" h.
 Model "A51" "Crown-O-Matic" half-track mono with preamp.....\$895.00
 Model "A54" "Stereo-Matic" quarter-track stereo with preamps.....\$995.00

Model TM3 "Transfer-Matic"

Separate panel unit which automatically switches in second or third player according to planned programming functions desired; 19" w. x 5 1/4" d. x 8 1/4" h.
\$195.00

Model "BX800" "Broadcaster" Series



Record and playback frequency response 30-28,000 cps ± 2 db @ 15 ips; 30-16,000 cps ± 2 db @ 7.5 ips; 30-8000 cps ± 3 db @ 3.75 ips; records and plays full-track; direct off-the-tape third head monitor; A-B switch; sound-on-sound with stereo models; "Touch" control with all-electric relay and solenoid operation; remote-control facilities; photocell automatic stop in all functions; standard rack mount; tape speeds 15, 7.5 & 3.75 ips (1 1/8 ips available); handles up to 10 1/2" reels; maximum wow & flutter .06% @ 15 ips, .09% @ 7.5 ips, .18% @ 3.75 ips; timing accuracy 99.8%; signal-to-noise ratio (NAB) 60 db @ 15 ips and 7.5 ips, 55 db @ 3.75 ips; distortion (over-all off tape) less than 1.5%; inputs: two input channels, either low impedance microphone or balanced bridge; output 600-ohm balanced line output and cathode-follower output; controls: push-button—stop, rewind, play, & forward; rotary—mic., phono, record (P and R position), play, A-B, equalization (three speeds); switches—cue, reel size, power on-off; 19" w. x 7 1/2" d. x 14" h.

Model "BX801".....\$1035.00
 Model "BX802" Half-track mono record/playback\$ 945.00
 Model "BX822" Two-track stereo record/playback\$1395.00
 Model "BX824" Four-track stereo record/playback\$1340.00

Model "824" Tape Recorder

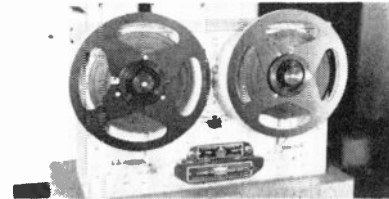
Record and play response 30-30,000 cps ± 2 db @ 15 ips, 30-20,000 cps ± 2 db @ 7.5 ips, 30-11,000 cps ± 3 db @ 3.75 ips; records and plays quarter-track stereo and mono; 15, 7.5 & 3.75 ips (1 1/8 ips available); maximum wow & flutter .06%

@ 15 ips, .09% @ 7.5 ips, .18% @ 3.75 ips; signal-to-noise ratio 57 db @ 15 ips, 55 db @ 7.5 ips, 51 db @ 3.75 ips; two input channels—either two high-impedance mic. or two phono; cathode-follower output; controls—push-button stop, rewind, play, forward, rotary mic., 1, phono 1, mic. 2, phono 2, record (P, R, E positions), meter (out, bias A, B), A-B, treble,



bass, bias, equalization (three speeds); switches—cue, reel size; 19" w. x 7 1/2" d. x 14" h.....\$1160.00
 Model "822" Two-track stereo record/playback\$1215.00
 Model "802" Half-track mono record/playback\$ 855.00
 Model "801" Full-track mono record/playback\$ 945.00

"Mus-O-Matic" Series



Automatic, self-reversing transport; player only; playback response 30-15,000 cps ± 2 db @ 7.5 ips, 30-11,000 cps & 3.75 ips; three-motor mechanism with hysteresis synchronous capstan motor; foolproof automatic self-reversing system; standard rack mounting 7.5 & 3.75 ips; maximum wow & flutter .01% @ 7.5 ips, .02% @ 3.75 ips; signal-to-noise ratio with transistor preamp —52 db @ 7.5 ips; controls—rewind, stop, operation, stop, forward switch, operate switch on-off; transistor preamp, cathode-follower output; 19" w. x 7" d. x 12 1/2" h.
 Model "A314" Half-track mono.....\$495.00
 Model "A324" Four-track stereo.....\$520.00
 Model "324C" Two- and four-track stereo\$595.00

Accessories for "700" & "800" Series

Model A15 15-watt power amplifier; 4-8-16 ohms; 19" x 3 1/2" x 7 1/2"; not self-powered\$ 75.00
 Model A30 30-watt power amplifier; 4-8-16 ohms; 19" x 3 1/2" x 7 1/2"; self-powered\$107.00
 Model A30-30 Dual 30-watt power amplifier; on single chassis with separate master gain controls; 4-8-16 ohms; 19" x 7 1/2" x 8 1/4"; self-powered.....\$190.00
 Model SR speed reducer; for 17 1/2 ips\$ 25.00

Series "1000" Tape Recorders

Record and playback frequency response 30-30,000 cps ± 2 db @ 15 ips; 30-16,000 cps ± 2 db @ 7.5 ips; 30-8000 cps ± 3 db @ 3.75 ips; records and plays full-track; direct off-the-tape third head monitor; A-B switch; sound-on-sound with stereo models; "Micro-Touch" control with all-electric relay and solenoid operation; remote-control facilities; photocell automatic stop in all functions; tape speeds 15, 7.5, and 3.75 ips with 1 1/8 ips



available; handles up to 10 1/2" reels; maximum wow and flutter .05% @ 15 ips, .09% @ 7.5 ips, .18% @ 3.75 ips; timing accuracy 99.8%; signal-to-noise ratio (NAB) 62 db @ 15 ips, 62 db @ 7.5 ips, 55 db @ 3.75 ips; distortion (over-all off tape) less than 1.5%; inputs: two input channels, either low impedance microphone or balanced bridge; output 600-ohm balanced line output and cathode-follower output; controls: push-button—stop, rewind, play, forward; rotary—mic., phono, record (P and R positions), play, A-B, equalization (three speeds); switches—cue, reel size, power on-off; 19" w. x 7 1/2" d. x 17 1/2" h.
 Model "1001".....\$1525.00
 Model "1002" Half-track mono record/playback\$1435.00
 Model "1022" Two-track stereo record/playback\$1989.00
 Model "1024" Four-track stereo record/playback\$1934.00

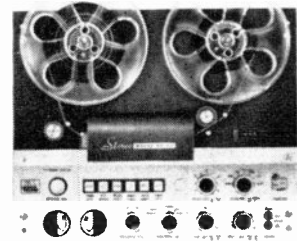
Series "1400" Tape Recorders

Record and playback frequency response 30-28,000 cps ± 2 db @ 15 ips; 30-16,000 cps ± 2 db @ 7.5 ips, 30-8000 cps ± 3 db @ 3.75 ips; records and plays full-track; direct off-the-tape third head monitor; A-B switch; sound-on-sound with stereo models; "Micro-Touch" control with all-electric relay and solenoid operation; remote-control facilities; photocell automatic stop in all functions; design similar in appearance to Model "BX801"; standard rack mount; tape speeds 15, 7.5 & 3.75 ips, 1 1/8 ips available; handles up to 14" reels; maximum wow and flutter .06% @ 15 ips, .09% @ 7.5 ips, .18% @ 3.75 ips; timing accuracy 99.8%; signal-to-noise (NAB) 60 db @ 15 ips, 60 db @ 7.5 ips, 55 db @ 3.75 ips; distortion (over-all off tape) less than 1.5%; inputs: two input channels either low impedance mic. or balanced bridge; output: 600-ohm balanced line output and cathode-follower output; controls: push-button—stop, rewind, play, forward, rotary—mic., phono, record (P and R positions), play, A-B, equalization (three speeds); switches—cue, reel size, power on-off; 19" w. x 7 1/2" d. x 19 1/4" h.

Model "1401".....\$1335.00
 Model "1402" Half-track mono record/playback\$1245.00
 Model "1422" Two-track stereo record/playback\$1695.00
 Model "1424" Four-track stereo record/playback\$1640.00

EICO

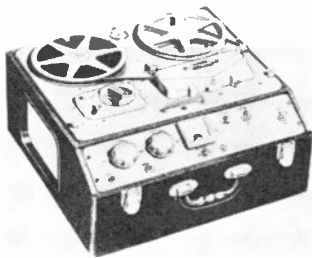
Model RP-100 Tape Deck



Provides stereo/mono 1/4-track record, playback, erase; also 1/2-track stereo/mono playback; speeds 7 1/2" and 3 3/4" ips; takes 7" reels; separate record/playback heads; separate record and playback transistor electronics to monitor while recording; permits sound-on-sound recording; dual meters; push-button controls; rewind and fast forward 1200' per minute; frequency response 30-15,000 cps \pm 2 db at 7 1/2 ips, 30-10,000 cps \pm 2 db at 3 3/4 ips; timing accuracy 0.3%; has automatic end-of-tape switch; wow and flutter under .15% r.m.s. at 7 1/2 ips, under .2% r.m.s. at 3 3/4 ips.....\$399.95
 Model RP-100K (semi-kit includes transport assembled, control electronics and stereo playback amplifiers in kit form) \$299.95

FERROGRAPH

Model 4 Series Tape Recorder



Basically a mono record/playback, two-speed tape machine; wow & flutter 2% @ 7.5 ips; response 50-6000 cps \pm 3 db @ 3.75 ips, 40-12,000 cps \pm 3 db @ 7.5 ips, and 40-15,000 cps \pm 3 db @ 15 ips; dual inputs (.003 v. & 1 v. peak); output speaker or 2 1/2 watts @ 15 ohm; includes amplifiers & speaker. Model 4A/N (3.75 & 7.5 ips).....\$399.50
 Model 4A/H (7.5 & 15 ips).....\$425.00
 Series 4S same as Model 4 except with additional stacked stereo head for playback only; external amplifier and speaker must be used for second channel reproduction.

Model 4S/N (3.75 & 7.5 ips).....\$495.00
 Model 4S/H (7.5 & 15 ips).....\$595.00

Model 424 Tape Recorder

Features two speeds (7.5 & 3.75 ips); 3 motors; automatic stop; 2 recording amplifiers and 2 separate playback preamps; each channel may be used separately (recording or playback without affecting the other); wow & flutter less than .2% at 7.5 ips; response 40-15,000 cps \pm 3 db @ 7.5 ips and 40-10,000 cps \pm 3 db @ 3.75 ips; signal-to-noise ratio unweighted including hum 62 db; has dual inputs (2 mv. & 400 mv. r.m.s.); records, mono or stereo; plays back quarter-, half- or full-track mono and twin-track stereo or quarter-track stereo; output from preamps 1.5 v. r.m.s. each track\$595.00

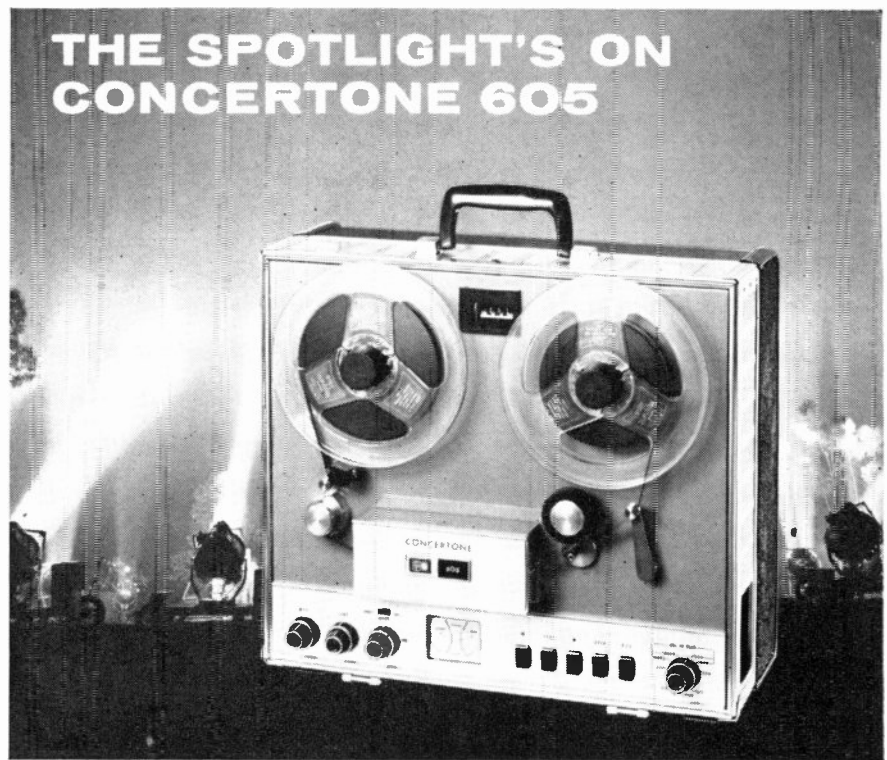
Model 808 Tape Recorder

Features full mono & stereo recording/playback; dual preamps provide 1.5 v. across 5000 ohms; external amplifiers & speakers must be used; two-speeds (7.5 & 3.75 ips); wow & flutter 2% @ 7.5 ips; response 60-8000 cps \pm 3 db @ 3.75 ips; and 60-14,000 cps \pm 3 db at 7.5 ips; dual input (.003 v. & .3 v. peak)\$595.00

GRAETZ

Model M50K Tape Recorder

Four-track, two-speed (7.5 & 3.75 ips) record/play stereo design; has mono or stereo inputs for microphone, radio, phono;



A new standard of perfection from Concertone

Concertone introduces a new standard of perfection in professional quality tape recorders. The 605 brings you the ultimate in advances of the state of the art in tape recorder engineering. ■ Never before have so many features and so much professional quality been packed into one recording instrument...and for such a low price! See it at the New York Hi Fi show.

IN THE SPOTLIGHT:

- Precision plug-in head assembly: Includes four precision heads.
- Separate microphone and line controls: Input can be mixed!
- Delay memory control circuit: Never spill or break tape!
- Automatic glass tape lifters: Including electric cue feature!
- Sound on sound and add sound: With convenient front panel switch!
- Solenoid operated brakes: For fast, sure action!
- Three motors: Includes 2-speed hysteresis synchronous drive.
- Automatic rewind: Fast rewinds at end of tape.
- All electric push button operation: Remote control optional.
- Reverse-O-Matic®: Play tape from end to end and back *automatically!*
- New magnetic heads: Ferrite erase, laminated and lapped. 4-track has no reverse channel cross-talk.
- Frequency response: 7.5 ips 50-15 KC \pm 2 db.
- Wow and flutter: Less than .2% R.M.S. at 7.5 ips.

(Model 605 availability, October, 1962.)

(Broadcast Version Model 607: 19" x 14" in size; special plug-in transformers! Availability, January, 1963.)

For complete details of the versatile performer, write to:

AMERICAN CONCERTONE, INC.
 A DIVISION OF ASTRO-SCIENCE CORPORATION
 9449 WEST JEFFERSON BOULEVARD • CULVER CITY, CALIFORNIA

AMERICAN CONCERTONE, INC.
 9449 West Jefferson Boulevard • Culver City, California
 ATT: Dept. EW 1062
 Please send me complete information on the new Concertone 605:

name _____
 firm name _____
 address _____
 city _____ zone _____ state _____

CIRCLE NO. 4 ON READER SERVICE PAGE

GO

Today, in the HI-FI and Stereo fields, all systems are "GO" — for tape recording systems, that is. During 1963 you will probably be one of the multiple thousands who will make this important buying decision.

Magnecord has an important message for you — whether in 1963 you buy your first tape recorder or "step up" to quality that is above and beyond the capabilities of your present tape equipment.

In two short words, the message from Magnecord is: "GO PRO." The soundness of this message is already reflected across the nation by the expressed opinions of hi-fi-stereo authorities and by the ground swell of buyers who are demanding professional quality equipment. You can add the professional touch to sound with a Magnecord . . . for many years the choice of professionals.

Write for complete details.

Magnecord
SALES DEPARTMENT

MIDWESTERN INSTRUMENTS
P. O. BOX 7509 / TULSA, OKLAHOMA

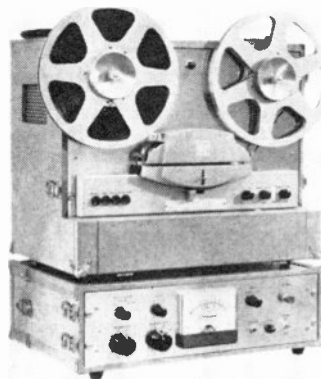
CIRCLE NO. 38 ON READER SERVICE PAGE

4 Tape Machines

combination in case.....	\$930.00
Model P75-ACX Recorder/amplifier combination less case.....	\$850.00
Model P75-A Recorder, full-track with case	\$625.00
Model P75-A-1 Recorder, half-track with case	\$625.00
Model P75-AX Recorder, full-track less case	\$585.00
Model P75-AX-1 Recorder, half-track less case	\$585.00
91C1919 Case for recorder.....	\$40.00
Model P75-C Amplifier with case.....	\$305.00
Model P75-CX Amplifier less case.....	\$265.00
81D50 Case for amplifier.....	\$40.00
81E49 Console cabinet.....	\$200.00

Series M90

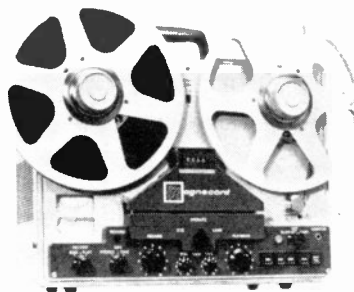
Portable rack-mounted, or console unit; full track or half track; three heads; erase, record, and playback; tape speeds: 7.5 and 15 ips; direct-tape drive; frequency response: 30 to 15,000 cps ± 2 db at 7.5 ips; flutter and wow: less than 0.1% r.m.s. max at 15 ips, less than 0.15% r.m.s. at 7.5 ips; signal-to-noise ratio: 58 db (55



db with half track heads); timing accuracy ± 3 seconds in 30 minutes; 10 1/2" reels; uses M90C record/playback amplifier with 4" vu meter and separate record and playback amplifiers for simultaneous monitoring from tape; push-button controls; slot loading; automatic tape lifter; record interlock; high speed cueing control; direct-coupled cascade input stages for maximum signal-to-noise ratio; panel size: standard 19" rack; amplifier size: 19"x5 1/4"; tape transport size: 19"x12 1/4".

Model M90-A Recorder, full-track, 7.5 and 15 ips in case.....	\$1060.00
Model M90-A-1 Recorder, half-track, 7.5 and 15 ips in case.....	\$1060.00
Model M90-A-2 Recorder, full-track, 3.75 and 7.5 ips in case.....	\$1060.00
Model M90-A-3 Recorder, half-track, 3.75 and 7.5 ips in case.....	\$1060.00
All above, without cases.....	\$990.00

Models 728 & 748 Professional



Can record sound-on-sound, stereophonic, or monophonic; up to 10 1/2" reels; frequency response, 30-18,000 cps ± 2 db at 15 ips; 40-15,000 cps ± 2 db at 7.5 ips; signal to noise ratio better than 50 db per channel; additional head for 4-track stereo available separately; over-all depth 12"; size in portable case 17 3/8" x 14 1/8" x 13 9/16".

Model 728-4 7.5 and 15 ips with case	\$909.00
Model 748-4 3.75 and 7.5 ips with case	\$924.00
Model 728-4X 7.5 and 15 ips without case	\$859.00
Model 748-4X 3.75 and 7.5 ips without case	\$874.00
Model 728-44 7.5 and 15 ips and fourth head (1/4-track) with case.....	\$950.00
Model 748-44 3.75 and 7.5 ips and fourth head (1/2-track) with case.....	\$965.00
Model 728-44X 7.5 and 15 ips and fourth head (1/4-track) without case.....	\$900.00
Model 948-44X 3.75 and 7.5 ips and fourth head (1/4-track) without case	\$915.00

NEWCOMB

Model SA-80 Stereo Tape Amplifier

For use with Model SM-310B recorder; power output 40 watts each channel; integrated preamp; controls for bass, treble, balance, volume; input for each tape channel; portable; cover carries tape reels; sensitivity .47 volt for full output; frequency response ± 1 db 20-20,000 cps; 8 1/2" x 16 3/4" x 16 3/8"\$199.50

Model J-200 Tape Speaker System

Portable; 2-way system for use with Model SA-80; 14 1/2" x 20" x 10 1/4"; 19 pounds

Model C-100 Tape Speaker System

Similar to Model J-200; has larger audience coverage.....\$79.50

Model L-300 Tape Speaker System

Portable; 2-way 3-speaker reproducer for use with Model SA-80; consists of 2-12" woofers and tweeter.....\$119.50

Model K-400 Tape Speaker System

Portable; consists of 3 speakers; frequency response 25-15,000 cps; 16 7/8" x 23 1/2" x 10 1/4"\$129.50

Model SA-80-J2 Tape System

Consists of Model SA-80, and two Model J-200 speakers; 71 pounds.....\$368.40

Model SA-80-C2 Tape System

Consists of Model SA-80 and two Model C-100 speakers; 71 pounds.....\$368.40

Model SA-80-L2 Tape System

Consists of Model SA-80 and two Model L-300 speakers; 90 pounds.....\$448.40

Model SA-80-K2 Tape System

Consists of Model SA-80 and two Model K-400 speakers; 102 pounds.....\$468.40

Model N-36-C Microphone

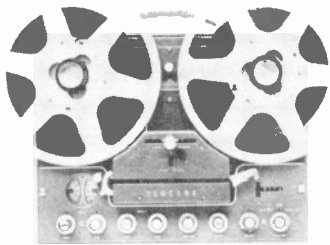
Dynamic omnidirectional; supplied with shielded cord and plug to fit Model SA-80

Model N-64-C Microphone

Dynamic directional; fits Model SA-80 input

Model SM-310B Professional Recorder

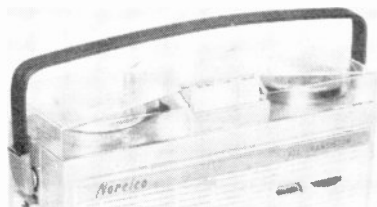
Records and plays stereophonic or monophonic tape; Model SM-310B is 1/2-track record/play, Model SM-310B-4 is 1/4-track record/play; speeds 3.75 and 7.5



ips; operates either vertically or horizontally; single lever transport control; record function switch requires two hands to prevent accidental erasures; separate mixing controls each channel; two v.t.v.m.'s to indicate recording levels; flutter less than 0.2% at 7.5 ips, less than 0.25% at 3.75 ips; frequency response: ± 2 db 30-15,000 cps at 7.5 ips, ± 3 db 40-10,000 cps at 3.75 ips; output 1.3 volts each channel on cathode follower; 2—high level inputs, 2—mic. inputs; 12 $\frac{3}{4}$ " x 16 $\frac{1}{4}$ " x 9 $\frac{1}{2}$ "; 34 lbs.; includes case.....\$499.50

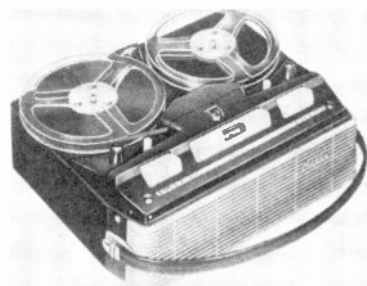
NORELCO

"Continental 100" Portable Recorder



Fully transistorized; 8 lbs.; uses six "D" type flashlight batteries; 1 $\frac{1}{4}$ ips; 2-track head; response 120-6000 cps ± 3 db; comes complete with power amp, loudspeaker, dynamic mike; 4" reel with lid off, 3" reel with lid on; wow & flutter less than .5%; signal-to-noise ratio better than 40 db.....\$129.50

"Continental 200" Tape Recorder



Four-track record/playback head; 7.5 ips; response 50-14,000 cps; wow & flutter less than $\pm .3\%$; self-contained recording/playback preamp, power amp, speaker; head output for stereo playback; monophonic record on individual tracks; sound-on-sound, for recording over previously taped material (background effects); 2 inputs, mike & radio/phono; tubes EF86, ECC83, ECL82, EM84, EZ80; may be used as self-contained phono/p.a. amplifier & speaker system.....\$179.50

"Continental 300" Tape Recorder

Four-track; mono record and playback; stereo playback (head output only); 7 $\frac{1}{2}$,

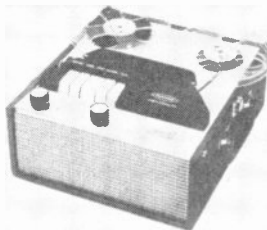
3 $\frac{3}{4}$, and 1 $\frac{1}{8}$ ips; frequency response, 60-16,000 cps ± 3 db at 7 $\frac{1}{2}$ ips, 60-13,000 cps ± 3 db at 3 $\frac{3}{4}$ ips, 60-6500 cps ± 3 db at 1 $\frac{1}{8}$ ips; wow and flutter, better than 0.3% peak to peak; automatic stop; interlocking pause button; sound-on-sound recording; full mixing facilities; monitoring with headphones; modulation indicator type EM81 magic eye; record and playback preamplifier, power amplifier and Norelco loudspeaker; inputs, microphone and radio/phono; outputs, external loudspeaker, external amplifier, headphone, stereo outputs; supplied with high impedance microphone.....\$269.50

"Continental 400" Tape Recorder

Completely transistorized; four-speed (7.5, 3.75, 1 $\frac{1}{8}$, 1 $\frac{1}{16}$ ips); four-track record/playback system; includes complete stereo preamps, power amplifiers, and speakers (1 speaker in cover); recording level indicators and four-digit counter; features recording level adjustment with tape stationary; mixing of two sounds simultaneously or in sequence; headphone monitoring; balance, tone, volume controls; response ± 3 db: 1 $\frac{1}{16}$, 60-4500 cps; 1 $\frac{1}{8}$ ips, 60-10,000 cps; 3.75 ips, 60-14,000 cps; 7.5 ips, 60-16,000 cps; sensitivity: microphone less than 1 mv.; radio-phono less than 150 mv.; signal-to-noise ratio better than -40 db; wow & flutter (peak-to-peak) less than .4% @ 7.5 ips; 16.8" w. x 15.2" d. x 8.4" h.....\$399.50

PENTRON

"Astra-Sonic II" Tape Recorder



Mono two-track, two-speed (3.75 & 7.5 ips) design including amplifier and speaker system; response 40-15,000 cps @ 7.5 ips ± 3 db; 40-12,500 cps @ 3.75 ips; signal-to-noise ratio -52 db; wow & flutter under 3% @ 7.5 ips; four-pole shaded-pole motor; two inputs (microphone or mag. cartridge and radio, TV, or crystal cartridge); two output jacks (external speaker, external amplifier); level indicator; automatic shut off; counter; 4" x 6" extended range and 4" mid-range speaker system; two heads are used, half-track erase and combination record/playback; supplied with high-impedance crystal microphone and case; 6" h. x 12 $\frac{1}{4}$ " w. x 13 $\frac{3}{4}$ " l.....\$169.95

Model AR-62S Stereo Tape Recorder

Same as "Astra-Sonic II" except designed for stereo applications; has compatible in-line stereo head (4-track or 2-track); second channel has tape head output.....\$189.95

Model MA-9 Amplifier/Speaker System

For use with second-channel operation of Model AR-62S.....\$39.95

Model TC-1 Portable Tape Recorder

All-transistor, two-track, two-speed (1 $\frac{1}{8}$ & 3.75 ips) mono design; battery level indicator; 4" speaker; recording level indicator; separate erase head; output jack for earphones or external speaker; response 15-7500 cps; wow & flutter .5% @ 3.75 ips; uses standard 3" reel and 8 mercury penlite batteries (100 hr. playing time); has provisions for remote-control hand or

PRO

"GO PRO" with a Magnecord in 1963. To do this means you will be making one of your most important investments of the year; and, if you do invest in sound during 1963, we believe Magnecord is your soundest investment!

The purchase of a Magnecord now means you will probably never buy another tape recorder. Why? Because Magnecord gives you the ultimate in audio recording and reproduction. As a long-term investment, Magnecord is in fact your most economical buy.

To build your own FM Stereo tape library by "taping-it-off-the-air," you need the one recorder best suited for the job . . . Magnecord . . . choice of the professional sound industry.

Make 1963 a year to remember. Acquire a "Lifelong Friend" — your Magnecord for lifetime professional sound — at home!

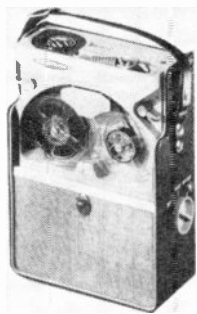
Write for Magnecord's "Tips for Taping Off the Air."

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CIRCLE NO. 38 ON READER SERVICE PAGE

4 Tape Machines



foot switch, a.c. auxiliary power source or 12-volt d.c. car battery attachment; 6½" w. x 9¼" h. x 2½" d.; wt 6¼ lbs. less battery; supplied with crystal lapel microphone, carrying case, shoulder strap; less batteries\$129.95

REALISTIC

4-Track Tape Recorder

Push-button operation; two speeds (7.5 & 3.75 ips); record & erase heads; quarter-track stereo; instant tape start, stop, pause; 3-position selector switch; fast forward/rewind; individual gain controls; output 6 watts undistorted; 11¼" x 14½" x 7½"\$169.95

"Dauphine" Stereo Tape Player

One-knob control; two speeds (7.5 & 3.75 ips); playback response with proper preamp equalization, flat from 40-15,000 cps ±2 db @ 7.5 ips, 40-7500 cps ±2 db @ 3.75 ips; 14½" x 10¼" x 3¼" below and 1¼" above mounting board; supplied with base\$69.95

Model T555 4-Track Tape Deck

Two-speed (3.75 & 7.5 ips) design; plays all 4- and 2-track stereo and mono tapes; wow & flutter less than .25% r.m.s.; separation 50 db; hum & noise -48 db; four-pole induction motor; automatic shut-off; pause control; 7" reel capacity\$39.95

Model TR-170 Tape Recorder

Two-speed (3.75 & 7.5 ips), two-track mono design; level indicators; inputs for microphone and radio; separate erase and record heads; built-in amplifier and speaker; response 40-12,000 cps; microphone and case included\$54.95

Stereo Equalizing Preamp

Designed to convert tape head output of Model T555 or any tape deck for use with amplifier without tape head inputs; 6¼" x 2" x 4"\$29.95

REVERE

Model T-2200 Portable Recorder



Thinline portable 2- and 4-track stereo recorder; can play and record mono; allows sound-with-sound and recording from stereo records; speeds 3.75 and 7.5 ips; preamp has inputs for phono, TV, radio; loudness compensation; record level indicators; fast-forward and rewind; frequency response 40-15,000 cps ±3 db @ 7.5 ips, 40-8000 cps ±3 db @ 3.75 ips; wow and flutter less than 0.3%; input sensitivity: mike input—2 mv., phono-radio -1 volt; 7½" x 14" x 14½"; 25 pounds

.....Under \$250.00
Model T-2000 (Mono 2-track only)Under \$190.00

Model T-11-4 Recorder

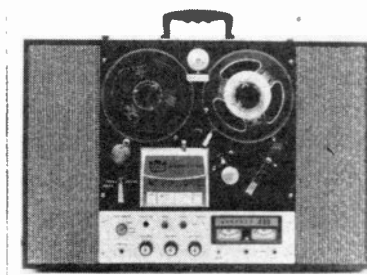
Mono and stereo; for vertical or horizontal mounting; rack or custom; full-track 7.5 ips; one motor; frequency response 40-16,000 cps ±3 db at 1-volt preamp cathode-follower output; 50-15,000 cps ±3 db at 2½-watt monitor amplifier output; flutter and wow less than 0.2%; signal-to-noise ratio 50 db; harmonic distortion 0.9%; IM distortion less than 2.5%; two glow-lamp level indicators; 10½" NAB reel hubs with patented fast reel lock, also accepts 7" reels; keyboard controls solenoid operated, permitting remote control operation; two hum-balancing controls; equalization compatible with commercial pre-recorded tapes; high frequency end-point adjustable for compensating for long-term head wear; zero-set 3-digit tape counter; input and output jacks located on rear panel use standard phone plug; automatic head demagnetization; self-adjusting disc brakes; all functions interlocked; for use with separate amplifier and speaker; top panel 19" x 14", depth 9"; weight 34 lbs. with mike plug; two connecting cables; attachment cord; power cord; accessory adapter cord; remote control cable; two NAB hub adapters; spare fuse and pressure pads; with built-in lower channel preampUnder \$285.00

Model T-202 Portable Recorder

Dual-track, dual-speed (3.75 and 7.5 ips) portable recorder; frequency response 40-15,000 cps ±3 db @ 7.5 ips and 40-8000 cps ±3 db at 3.75 ips; wow and flutter less than 0.3%; signal-to-noise ratio 48 db; neon record indicators; index counter; jacks for external speakers; complete with microphone, tape, reels; 13½" x 14" x 8"; 32 lbs.Under \$208.00
Model T-204-4 Similar to Model T-202 but with stereo playback; built-in second-channel preamplifierUnder \$285.00

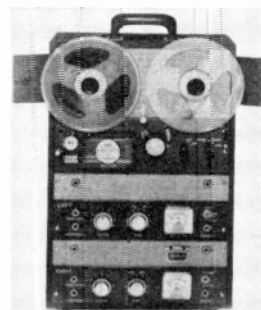
ROBERTS

Model 440 Stereo Tape Recorder



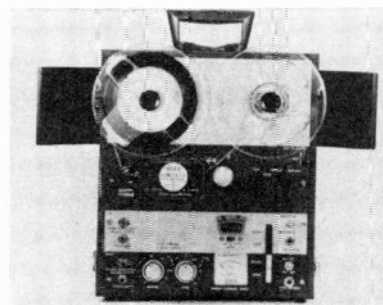
Four-track, two-speed (7.5 & 3.75 ips) stereo record and playback; complete with record, playback, monitor preamps; power amplifiers and speakers for both channels; response 40-15,000 cps ±2 db at 7.5 ips; signal-to-noise 55 db below recorded 0 level; wow & flutter .12% r.m.s.; 2 mic. high-impedance inputs; 2 line inputs; features "Magic Memory" continuous repeat of all or any portion of tape; automatic shut-off\$699.50

Model 144 Stereo Tape Recorder



Same as Model 440 but does not include power amplifiers and self-contained speakers\$649.00

Model 990 Stereo Tape Recorder



Four-track, two-speed stereo record and playback; complete with power amplifiers; output 6 watts per channel; response 40-15,000 cps at 7.5 ips ±2 db; 40-12,000 cps at 3.75 ips ±3 db; signal-to-noise ratio 50 db below recorded 0 level; wow & flutter .12% r.m.s.; reel size 7" max.; two high-impedance inputs, two high-level line inputs; bias freq. 65 kc.; 20" x 14" x 9"; 46½ lbs.\$399.50

Accessories

Crystal microphone\$17.90
Matching portable speakers for Models 990 & 440\$119.50

Model 1040 Stereo Tape Recorder

Four-track stereo and mono record/play; two-track stereo and mono play; sound-with-sound using either track as basic track; self-contained stereo amplifiers with speakers; microphone inputs; phono/radio inputs; automatic shut-off; edit lever; vu meter; index counter; 5 watts per channel output; response 40-15,000 cps ±2 db @ 7.5 ips; 35-11,000 cps ±3 db @ 3.75 ips; signal-to-noise ratio -42 db below recording zero level; less than 2% distortion at listening level; bias oscillator 95 kc.; horizontal or vertical operation; wow and flutter less than .18%; two high-impedance mic. inputs and two high-impedance outputs independent of volume control for connection to external amplifiers; two 8-ohm outputs for external speakers; two speeds (3.75 and 7.5 ips)\$299.50
S-903 Stereo speaker set (two)\$119.50
90-01 High-impedance microphone (50-15,000 cps)\$17.90
53-06 Desk stand for microphone\$2.45
54-01 Stereo master distribution panel (plugs into tape machine to provide 8 stereo output-services of 8 sets of stereo speakers, or 8 sets of stereo headphones)\$29.45
54-04 Dynamic stereo headset (with stereo master control, response 25-25,000 cps)\$24.95
52-94 15 ips conversion kit\$10.00

SONY

Model CS-300 "Sterecorder"

STEREO/HI-FI DIRECTORY



Two-speed tape recorder; 4- and 2-track stereo record/play; 4- and 2-track mono record/play; response 50-15,000 cps ± 2 db @ 7.5 ips; 50-10,000 cps ± 2 db @ 3.75 ips; signal-to-noise ratio 50 db; wow & flutter less than .15% at 7.5 ips; tape counter; two vu meters; 2 inputs per channel; 2 level controls; tone controls; editing and cueing facilities; built-in stereo mixer; automatic shut-off; output 3 watts/channel; provision for external speakers; 42 lbs.; includes carrying case, built-in speakers; two F-7 dynamic mikes\$399.50

Model DK-300 Tape Recorder



Same as Model CS-300 but without carrying case, speakers, and microphones.\$349.50

Model 777-S2 Tape Recorder



All-transistorized 2-track record and 2- and 4-track playback; 2-speed (7.5 & 3.75 ips) design; features special "Electro-Bilateral" head construction; three motors; complete remote control; sound-on-sound; tape and source monitoring; 3" vu meters; response 40-15,000 cps ± 2 db @ 7.5 ips; 40-10,000 cps ± 2 db @ 3.75 ips; signal-to-noise ratio 58 db; flutter & wow less than .15% @ 7.5 ips; has built-in stereo preamp and output jacks for connection to external power amps; 16" w. x 17 3/4" h. x 9" d.; weight 43 lbs.....\$595.00

Model 777-S4 Tape Recorder

Same as Model 777-S2 except 4-track stereo record and 2- and 4-track playback \$595.00

Model AS-777 Amplifier/Speaker System

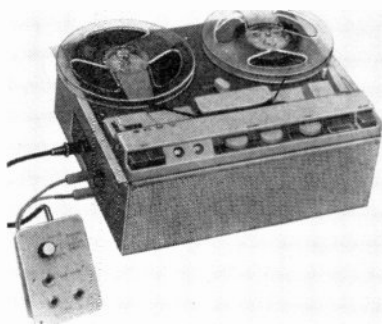
Designed for use with Models 777-S2 and 777-S4 tape recorders; all-transistorized OTL power amplifier with 8" speaker and infinite baffle; features bass, treble, level controls, plus high-level input and pro-

vision for external speaker; supplied with portable case\$175.00

Model MX-777 Mixer

Accessory for Models 777-S2 and 777-S4 tape recorders; six-channel all-transistor stereo/mono design; contains six matching transformers for balanced microphone inputs and recorder outputs plus individual level controls; channel selector switch for each input; switch for mixing one microphone into both channels; complete with case\$175.00

Model 464-D Tape Recorder



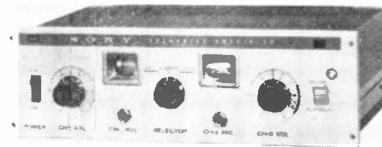
Four-track stereo and mono, 2-speed (7.5 & 3.75 ips) design with built-in record/playback stereo preamps; features sound-on-sound, individual channel selection (channel 1 or 2 or both for stereo); dual recording level indicators; digital counter; pause control; response 10-15,000 cps @ 7.5 ips, 40-10,000 cps @ 3.75 ips; signal-to-noise ratio 50 db; wow & flutter less than .2% @ 7.5 ips; distortion less than 2% at max. recording level; input 10,000 ohm microphone, 250,000 ohm high-level; output: high-impedance line and headphones; 13 1/4" w. x 11 1/4" d. x 6" h.; wt. 20 lbs.; less case\$199.50 Portable carrying case\$25.00

Model 262-D Tape Deck



Transport mechanism of Model 262-SL tape recorder; four-track stereo erase and record/playback heads are wired to six input and output jacks\$89.50

Model SRA-2 Stereo Recording Amp



For use with Model 262-D tape deck; amplifier will provide all facilities for 4-track stereo or mono record and playback; has stereo or individual channel selector switch; dual record level indicators; inputs for microphone and radio; response 50-12,000 cps ± 2 db @ 7.5 ips; 12 1/2" w. x 8 1/2" d. x 3 3/8" h.\$89.50

Model 464-CS Tape Recorder

Same as Model 464-D except includes built-in stereo power amplifiers and speak-

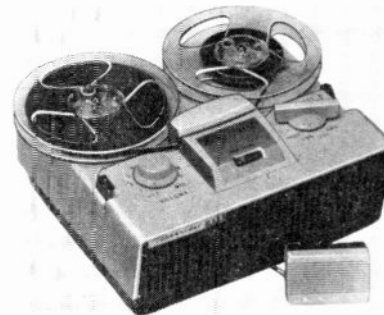
ers; has jacks for external speakers if desired; complete with two F-7 microphones.\$299.50

Model 262-SL Tape Recorder



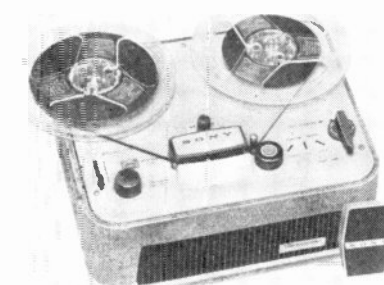
Four-track mono recorder and 4- and 2-track stereo playback; 2-speed (7.5 & 3.75 ips) design featuring sound-on-sound; self-contained stereo preamps; response 50-12,000 cps ± 2 db @ 7.5 ips; 50-9000 cps ± 2 db @ 3.75 ips; wow & flutter less than .2% @ 7.5 ips; has 1/4-track in-line erase and record/playback heads; level meter; pause control; microphone and radio inputs; complete with portable case, carbonic monitor speaker, and F-7 microphone\$199.50

Model 111 Tape Recorder



Mono 2-speed (3.75 & 1 7/8 ips) design featuring record level indicators; 5" reel capacity; pause control; built-in amplifier and speaker; response 70-8000 cps @ 3.75 ips, 70-6000 cps @ 1 7/8 ips; signal-to-noise ratio 45 db; wow & flutter less than .3% @ 3.75 ips; high-impedance microphone and radio inputs and output for external, 8-ohm, 2-watt speaker; 8 3/4" w. x 7 3/4" x 1 1/4" d.; wt. 10 lbs.; complete with microphone and carrying bag\$79.50

Model 101 Tape Recorder



Dual-track, 2-speed (7.5 & 3.75 ips) mono design featuring 7" reel capacity; vu meter; built-in amplifier and speaker; response 50-12,000 cps @ 7.5 ips; 50-8000 cps @ 3.75 ips; wow & flutter less than .25% @ 7.5 ips; separate half-track erase and record/playback heads; output for 2-watt external speaker; inputs for microphone and radio; two tubes and five transistors; 13" w. x 10" d. x 6 1/2" h.; wt. 18 lbs; complete with microphone.....\$99.50

STANCIL-HOFFMAN

Series M9 "Minitape" Recorder

4

Tape Machines



Self-contained battery-operated portable tape recorder-reproducer; automatic gain control amplifier; 50-ohm mike input; NAB equalization; response 50-12,000 cps; 5" reels; rechargeable nickel-cadmium battery; separate record and reproduce heads; electronics for monitoring off tape while recording; 13 pounds total weight in watertight and dustproof aluminum case; 9" x 12" x 5"; completely transistorized; batteries provide over 4 hours recording before requiring recharging; less than 2% r.m.s. harmonic distortion.

Mono—7.5 or 3.75 ips half- or full-track\$499.00
 Mono—1 7/8 ips half- or full-track.....\$535.00
 Mono—1 5/16 ips half- or full-track.....\$555.00
 Stereo—Two track 7.5 or 3.75 ips.....\$925.00
 Stereo—Two track 1 7/8 ips.....\$975.00
 Stereo—Two track 1 5/16 ips.....\$995.00
 Synchronous versions for motion picture applications and many accessories also available.

TANDBERG

Series 8 Tape Recorders

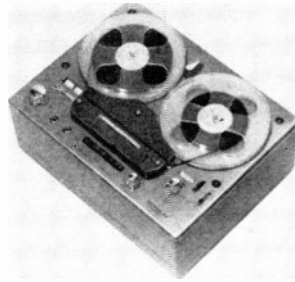


Two-speed (3.75 & 1 7/8 ips) mono design; response 40-10,000 cps \pm 2 db @ 3.75 ips, 40-5500 cps \pm 2 db @ 1 7/8 ips; wow & flutter better than .2% @ 3.75 ips; built-in 7" x 4" speaker; 3 watt output; signal-to-noise ratio 50 db below max. recording level; has recording level indicator; crystal microphone, four-digit counter; 15" l. x 11 3/8" w. x 6 3/4" h.

Model 821 Two-track.....\$219.50
 Model 821F Two-track with built-in solenoids; foot pedal for remote control\$269.50
 Model 841 Four-track.....\$237.50
 Model 841F Four-track with built-in solenoids; foot pedal for remote control\$287.50
 TC-58 Luggage-type carrying case.....\$24.50

Series 6 Tape Recorders

Record/playback machine; three speeds (7.5, 3.75 & 1 7/8 ips); four-track stereo/mono record & 2 - and 4-track stereo/mono playback; has separate record, playback, erase heads; built-in facilities for sound-on-sound, echo effects, track adding, direct monitor, and remote control; features FM-MX filter input for direct recording of FM multiplex stereo programs; dual-channel record & playback preamps; response 30-16,000 cps \pm 2 db @ 7.5 ips;



40-11,000 cps \pm 2 db @ 3.75 ips; 50-5500 cps \pm 2 db @ 1 7/8 ips; output 1.5 v. cathode-followers; flutter & wow .1% r.m.s. @ 7.5 ips; signal-to-noise ratio at least 55 db; has two each microphone, hi-level, & hi-level with filter.

Model 64\$498.00
 Model 64F Same as Model 64 except for extra built-in solenoids for rewind operation and foot-pedal control.....\$548.00
 Model 62 Same as Model 64 but with half-track heads\$498.00
 Model 62F Same as Model 62 but with extra built-in solenoids for rewind operation and foot-pedal control.....\$548.00

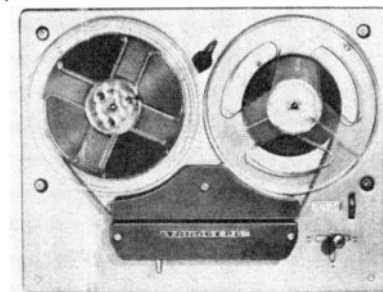
Series 4 Tape Recorder

Similar to Series 8 except three-speed operation; includes 7.5 ips; allows 4-track mono record as well as 4-track mono/stereo playback; includes second-channel preamp and first-channel preamp plus 4-watt power amp; wow & flutter .1% @ 7.5 ips; response 30-16,000 cps \pm 2 db @ 7.5 ips.....\$349.50
 Model 4F With remote foot control\$399.50

Series 3 Mono Tape Recorder

Similar to Series 8 except three-speed mono record/playback; includes 7.5 ips; wow & flutter .1% @ 7.5 ips; response (all \pm 2 db) 40-16,000 cps @ 7.5 ips, 50-9000 cps @ 3.75 ips; 70-4500 cps @ 1 7/8 ips.....\$299.50
 Model 3F With remote foot control\$349.50
 Model STK-4529 (consists of 4-track head and playback preamplifier for converting Model 3 to 4-track stereo playback).....\$62.50
 Model 241 Stereo Record preamp (converts Tandberg stereo units to stereo record)\$69.50

Model 65 Stereo Playback Deck



Three-speed (7.5, 3.75, 1 7/8 ips), 4-track stereo playback tape deck; response 30-20,000 cps @ 7.5 ips, 30-15,000 cps @ 3.75 ips, 50-7000 cps @ 1 7/8 ips; hysteresis-synchronous motor; lever knob for playback, fast forward, fast reverse; 4-digit revolving counter; complete mechanical drive; 16" x 12" x 6" with mounting brackets,\$199.50

TECH-MASTER

Model TC-5 Tape Recorder

Transistor design; battery-operated; built-in speaker; 3.75 ips; dual-track record and playback; fast rewind; built-in remote con-

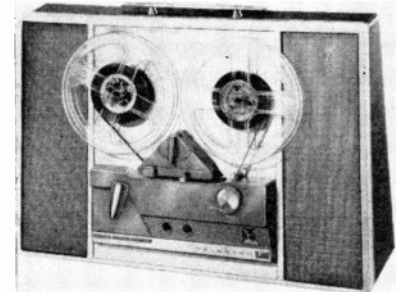
rol operation for recording and playback; 5 transistors, push-pull output; supplied with complete set of batteries, roll of tape, take-up reel, and earphone adapter; all-metal case; 7 1/4" x 4 1/2" x 2 3/4"; weight 2 1/2 lbs.\$99.50

TELECTRO

Model MM113 Tape Recorder

Two-speed (7.5 & 3.75 ips), dual-track mono design; built-in 3-watt amplifier & speaker system; response 100-10,000 cps; signal-to-noise ratio 42 db; single-control on-off-volume; separate erase and record/playback heads; one input for microphone, radio, etc.; output for external speaker; 5" speaker; neon-type level indicator; 3-tube amplifier; 13 1/2" x 8" x 12 1/2"; with crystal microphone.....\$79.95

Model MM115 Tape Recorder

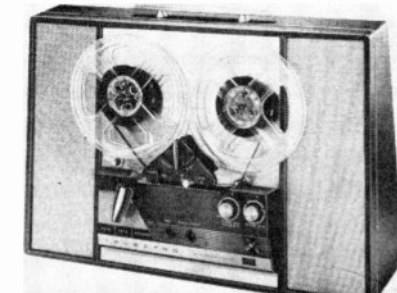


Similar to Model MM113 except has two 4" x 8" speakers; 21 1/4" x 7 3/4" x 13 3/4"\$119.95

Model SR122 Tape Recorder

Plays half- and quarter-track stereo; records 4-track mono; dual 3-watt playback amplifiers & 5" speaker; features sound-with-sound; individual erase on any of the four tracks; two speeds (7.5 & 3.75 ips); record level indicator; two inputs (microphone & hi-level); response 100-10,000 cps @ 7.5 ips; signal-to-noise ratio 45 db; tapered construction 17 1/4" at widest point x 13 1/2" wide in front x 8" x 14 1/4"; with crystal microphone.....\$159.95

Model MS123 Tape Recorder



Similar to Model SR122 except differently designed case; 4" x 8" speakers are mounted in side panels.....\$179.95

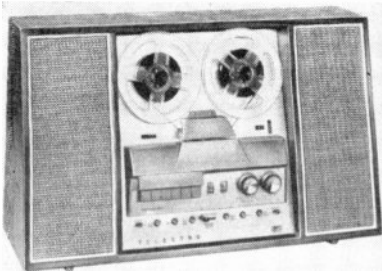
Model SS132 Tape Recorder

Records 4-track mono and quarter-track stereo; plays half- and quarter-track stereo; features two speeds (7.5 & 3.75 ips); digital-type counter; two record level indicators; built-in 3-watt/channel stereo amplifiers, two 5" speakers; sound-with-sound recording; performance similar to Model MM113; tapered case same as on Model SR122; supplied with two crystal microphones\$119.95

Model SS133 Tape Recorder

Similar to Model SS132 except differently designed case; 4" x 8" speakers are mounted in side panels as in Model MS123\$229.95

Model SS500 Tape Recorder



Two & four-track stereo and mono play and record; three speed (7.5, 3.75, 1.75 ips); features sound-with-sound; dual 12.5-watt/channel amplifiers and speakers; illuminated vu meter; p.a. facilities; contemporary styled cabinet with oil-cedar finish\$399.95

Model MR511 Portable Tape Recorder

Two-speed (3.75 & 1.75 ips), two-track mono design; all-transistorized circuitry; up to 1 1/2 hours recording time on reel; external headphone-speaker jack; dual half-track heads, record/play & erase; microphone input; 6 1/4" x 2 1/4" oval speaker; response 100-6500 cps; 1/2-watt output; has seven 1 1/2 volt penlite batteries, 4 transistors; 10 1/4" x 6 1/8" x 3"; wt. 7 lbs.; comes complete with dynamic microphone; accessories are available for powering from auto cigarette lighter; a.c. power source; recharger if nickel-cadmium batteries are used; leather case with shoulder strap\$99.95

UHER

"Universal S" Tape Recorder

Standard half-track mono recording; 3 speeds 1 1/2, 1.75, 3 1/4 ips; basically designed for voice recording but has 40-16,000 cps response at 3 1/4 ips; digital counter; automatic tape stop; low-impedance microphone input; high-impedance inputs for mic., telephone pickup, radio/phono; outputs for earphones; external amplifier and speaker; connections for voice-operated control and slide-projector synchronizer; response 100-4000 at 1 1/2 ips; 60-8000 cps at 1.75 ips; signal-to-noise ratio 45 db; wow & flutter .3% @ 3 1/4 ips; output (speaker) 3 watts; sensitivity .1 mv./200 ohms for mic.; 1 mv./22,000 ohms for radio, 100 mv./2 megohms for phono; features include relay/solenoid control system permitting remote control of record, play, and tape motion; 24 lbs.; includes remote control, dynamic microphone, dust cover, trick key, and carrying case\$339.00

Model 4000 Portable Tape Recorder



All-transistor 2-track, 4-speed (7.5, 3.75, 1.75, 1 1/2 ips) mono design; powered by four flashlight cells or rechargeable battery (6-24 v.); separate 115-volt power supply available; electromagnetic start stop remote

control by means of microphone or remote switch; vu meter and power supply indicator; acoustic switch available for sound control for start and stop of tape; response 50-22,000 cps \pm 3 db @ 7.5 ips; 50-18,000 cps @ 3.75 ips; 50-11,000 cps @ 1 1/2 ips; 70-5000 cps @ 1 1/4 ips; wow & flutter .15% @ 7.5 ips; output; speaker 1 watt; inputs: microphone .1 mv. @ 1000 ohms; radio 1 mv. @ 20,000 ohms; phono 50 mv. @ 1 megohm; 3 hours playing time with flashlight cells; 11" x 8" x 3"; weight without batteries 6 lbs.; complete with remote control dynamic microphone, leather case, shoulder strap, a.c. power unit, battery charger, and "Dryfit" storage battery\$379.00

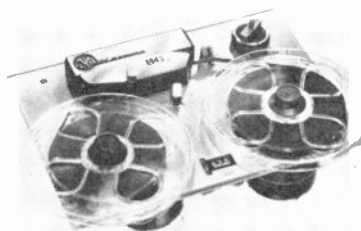
Model "Stereo Record I" Tape Recorder



Four-track mono or stereo; 3-speed (1 1/2, 3.75, 7.5 ips); features sound-on-sound; digital counter; record level indicator; has built-in amplifiers for both channels; speaker for one channel with provision for external speakers or earphones; response 40-20,000 cps @ 7.5 ips; 40-16,000 cps @ 3.75 ips; 40-8000 cps @ 1 1/2 ips; signal-to-noise ratio 45 db; wow & flutter .1% @ 7.5 ips; output 3 watts/channel; sensitivity: microphone and radio 1.5 mv.; phono 100 mv.; 16 1/4" x 15 1/4" x 7 3/4"; weight 35 lbs.; supplied with high-impedance dynamic microphone and carrying case\$299.95

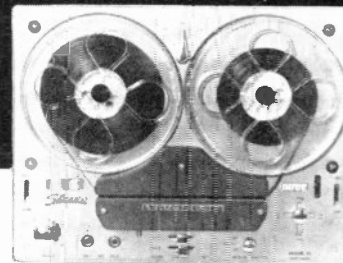
VIKING

Model 86 Series Tape Decks



Two-speed (7.5 & 3.75 ips); 4-pole motor (hysteresis synchronous motor available at extra cost); flutter & wow .2% r.m.s.; long-term speed regulation .5%; digital counter and tape run-out switch; handles up to 7" reels; wt. 12 1/2 lbs.; panel size 13" x 9 1/2".

- Model 86P Playback only, half-track mono head\$123.00
- Model 86R Record/playback, half-track mono, 2 heads.....\$130.00
- Model 86Q Playback only 1/2- & 1/4-track mono & stereo, 1 head.....\$132.00
- Model 86RQ Record 1/2-track mono, playback 1/4- & 1/2-track mono & stereo; 3 heads\$158.50
- Model 86ES Record/playback 1/2-track mono & stereo, 2 heads.....\$152.00
- Model 86RMQ Record 1/4-track, playback 1/4- & 1/2-track mono & stereo, 3 heads



MODEL 74

3 SPEED — 4 TRACK

Complete STEREO Music System

Designed particularly for those who demand renowned Tandberg quality performance and versatility in a self-contained, complete stereo music system! Incorporates power amplifiers, preamplifiers, matched speakers, microswitch operated tape stop, free position tape load, start/stop/pause control, precision laminated combination record/playback head, erase head and many other features consistent with Tandberg's undeniable excellence in craftsmanship and design. This new addition to the Tandberg family is available in four track with Sound-on-Sound, Track Adding and Source Monitor. Frequency response is unsurpassed, wow and flutter virtually non-existent. Yes, this is another fine example of Tandberg leadership in "Better, Clearer, More Natural Sound"! List \$399.50

MODEL 64*

3 SPEED — 4 TRACK

Stereo Record/Playback Deck

America's highest rated record/playback deck for incorporation into new or existing high fidelity systems. Features 3 separate heads; direct monitor facilities; built-in filter for FM multiplex stereocasts. List \$498.00

IMPORTANT; Tandberg's Free Offer of two CM-6 microphones and one TC-56 carrying case with the purchase of a Model 64* only, remains effective for a limited time. Ask your dealer for details.

* (Same as Model 644)

Tandberg OF AMERICA, INC.

P.O. Box 171, 8 Third Avenue, Pelham, N. Y.

CIRCLE NO. 55 ON READER SERVICE PAGE

4

Tape Machines

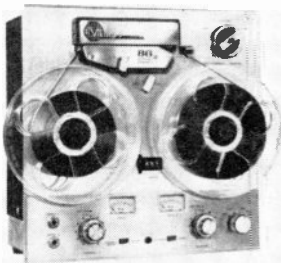
Model 86 ERQ Record $\frac{1}{2}$ -track, playback $\frac{1}{4}$ - & $\frac{1}{2}$ -track mono & stereo, 3 heads\$179.50
 Model 86ESM Record/playback $\frac{1}{2}$ -track mono & stereo, 3 heads.....\$179.50
 Prices quoted are for tape decks only; for recording with Model 86RQ, ERQ, RMQ, & ESM, use RP83-3 record/playback amplifier; for other models use RP83. For stereo design, use two amplifiers.

Model 86 "Super-Pro" Tape Recorders



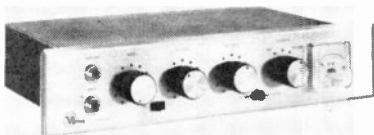
All models supplied with carrying case; additional bottom chassis permits input and output connections to be made from front; center storage compartment; all models record and play mono and stereo; all three-head models permit sound-with-sound and sound-on-sound recording. Model 86ES tape deck with two RP83 amplifiers\$364.50
 Model 86ERQ tape deck with two RP83-3 amplifiers\$394.50
 Model 86RMQ tape deck with two RP83-3 amplifiers\$394.50
 Model 86ESM tape deck with two RP83-3 amplifiers\$394.50

Model 86 "Stereo Compact" Tape Recorders



Same as "Super-Pro" series except single dual-channel amplifier system is used; controls: record/playback, gain control, function selector, stereo microphone inputs, stereo/mono switch, record warning light, normal-duplicate switch (can record directly from heads of another deck); two vu meters; sound-on-sound, sound-with-sound; Series 86 tape decks have head-shift control. Three models available (86RMQ, 86ERQ, 86ESM) each.....\$297.50

Model RP83 Record/Playback Preamp



Response: recording, 30-16,000 cps \pm 3 db @ 7.5 ips; 30-12,000 cps @ 3.75 ips; playback, 25-20,000 cps @ 7.5 ips, 25-

14,000 cps @ 3.75 ips; output 1 v. to power amplifier; monitor output 1 v. to headphones; high- and low-level inputs with individual level controls; vu meter; 3-position selector switch; playback output level controls; signal-to-noise ratio 50 db @ 7.5 ips with signal recorded 6 db below saturation; harmonic distortion 1%; tubes: 2-12AX7, 12AU7, with full-wave dry rectifiers for high voltage and doubler rectifiers for d.c. to preamp filament; 11 $\frac{1}{16}$ " x 2 $\frac{3}{16}$ " x 5 $\frac{1}{2}$ " d. behind panel; two required for stereo operation; for use with 2-head designs.....\$89.50

Model RP83-3 Record/Playback Preamp
 Same as Model RP83 except for 3-head designs\$89.50

Model 76 Tape Deck
 Can be used for playing $\frac{1}{2}$ - or $\frac{1}{4}$ -track tapes and when used with Viking RP-73 amplifier will record 2- and 4-track tape. 2-speed (7.5 & 3.75 ips) design; Flutter & wow less than .2% r.m.s.
 Model 76Q—playback only of $\frac{1}{4}$ - & $\frac{1}{2}$ -track tapes stereo & monaural.....\$99.00
 Model 76R—erase and record/playback heads for $\frac{1}{2}$ -track monaural record & play\$78.50
 Model 76HQ—erase and record/playback heads for stereo & monaural $\frac{1}{4}$ -track record & $\frac{1}{4}$ - & $\frac{1}{2}$ -track playback.....\$114.00
 Model 76RQ—separate $\frac{1}{2}$ -track erase & record heads, mono only; separate $\frac{1}{4}$ -track playback head for $\frac{1}{2}$ - & $\frac{1}{4}$ -track stereo & mono playback\$106.00

Model RP73 Amplifier
 Single channel record/playback amplifier. Use two for stereo operation. Design is equivalent to Model RP-83 except for color scheme of brown and beige which matches Model 76 tape deck.....\$87.50

V-M CORP.

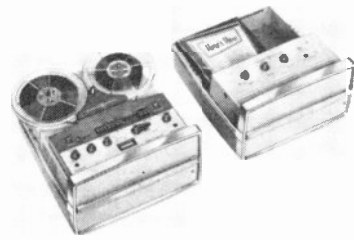
Model 720 Stereo Tape Recorder
 4 track record; stereophonic playback; signal-to-noise -45 db; wow and flutter .4%; 6"x9" woofer and 3.5" tweeter; push button controls; "Normal" and "Distort" lights for indication of proper recording level; tape index counter; automatic shutoff at end of reel; dual speed—3 $\frac{1}{4}$ ips and 7 $\frac{1}{2}$ ips; 10-watt amplifier; tone control; pause button permits stops while recording or playing; external amplifier and speaker jacks; records from any sound source; 9 $\frac{1}{2}$ " x 14 $\frac{1}{2}$ " x 16".....\$180.00

Model 722 Tape Recorder
 Portable; records stereo 4-track; plays back 2- or 4-track; "add-a-track" system allows recording on other track while listening to previous recording; tuning eye level indicator; speeds 7 $\frac{1}{2}$ or 3 $\frac{3}{4}$ ips; controls for tone, volume; power output 14 watts peak; includes 6" x 9" and 3 $\frac{1}{2}$ " speakers; automatic shutoff; frequency response record/playback \pm 5 db 40-15,000 cps; record bias and erase 75 kc.; tubes are 4-7025, 6L6, 5Y3, 2-12AU7, 6AF6; 9 $\frac{1}{2}$ " x 16 $\frac{3}{8}$ " x 14 $\frac{3}{4}$ ".....\$207.95

Model 166 Amplifier-Speaker
 Amplifier-speaker to match Model 720 recorders for stereo operation; speaker section has 6" x 9" woofer and 3 $\frac{1}{2}$ " tweeter; response 40-15,000 cps \pm 5 db; 5-watt amplifier, less than 2% distortion; 30-20,000 cps \pm 2 db at 5 watts; volume, bass, and treble controls; 9 $\frac{1}{2}$ " x 14 $\frac{1}{2}$ " x 16"\$60.00

Model 168 Amplifier-Speaker
 For use with Model 722 as a stereo (second channel) speaker-amplifier unit; 10 watts (peak) power; same speakers, size, and appearance as Model 722.....\$60.00

Model 735 Tape Recorder



Three-speed (7.5, 3.75, 1 $\frac{7}{8}$ ips); 4-track; will playback stereo but has only single-channel amplifier and speaker; separate (Model 136) amplifier-speaker system needed for stereo playback; has level indicator, digital counter, pause button, automatic shutoff, monitor switch; 5" x 7" speaker; "Add-A-Track" record on one channel then add sound to second channel; has provision for slide-projector synchronizer; power output 10 watts peak; response 40-18,000 cps @ 7.5 ips; 7 $\frac{1}{2}$ " h. x 13" w. x 14 $\frac{1}{4}$ " d.....\$159.95

Model 136 Amplifier-Speaker
 For use with Model 735 tape recorder as second-channel playback amplifier-speaker\$55.95

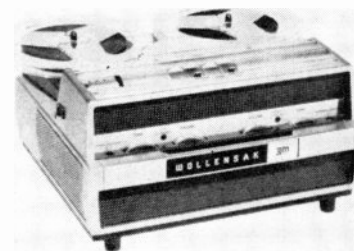
Model 730 Mono Tape Recorder
 Similar in design and performance to Model 735 tape recorder but records and plays back mono only.....\$136.00

WEBCOR

Model 2250 Tape Recorder
 2- or 4-track stereo record and playback; three-speed (1 $\frac{7}{8}$, 3.75, 7.5 ips) design; features "Synchro-Track" (sound-with-sound) and "Slide-Synchronizer"; response 40-14,000 cps \pm 3 db @ 7.5 ips; 50-7000 cps \pm 2 db @ 3.75 ips; wow & flutter .2% @ 7.5 ips; signal-to-noise ratio better than 50 db; has two built-in preamps; 2 volts output @ low cathode impedance; automatic shut-off including amplifier; vu meter; tape counter; mic. & high-level inputs; six tubes and selenium rectifier; 7 $\frac{1}{2}$ " h. x 15" w. x 15" d.; 26 lbs.\$189.95

WOLLENSAK

Model 1580 Tape Recorder

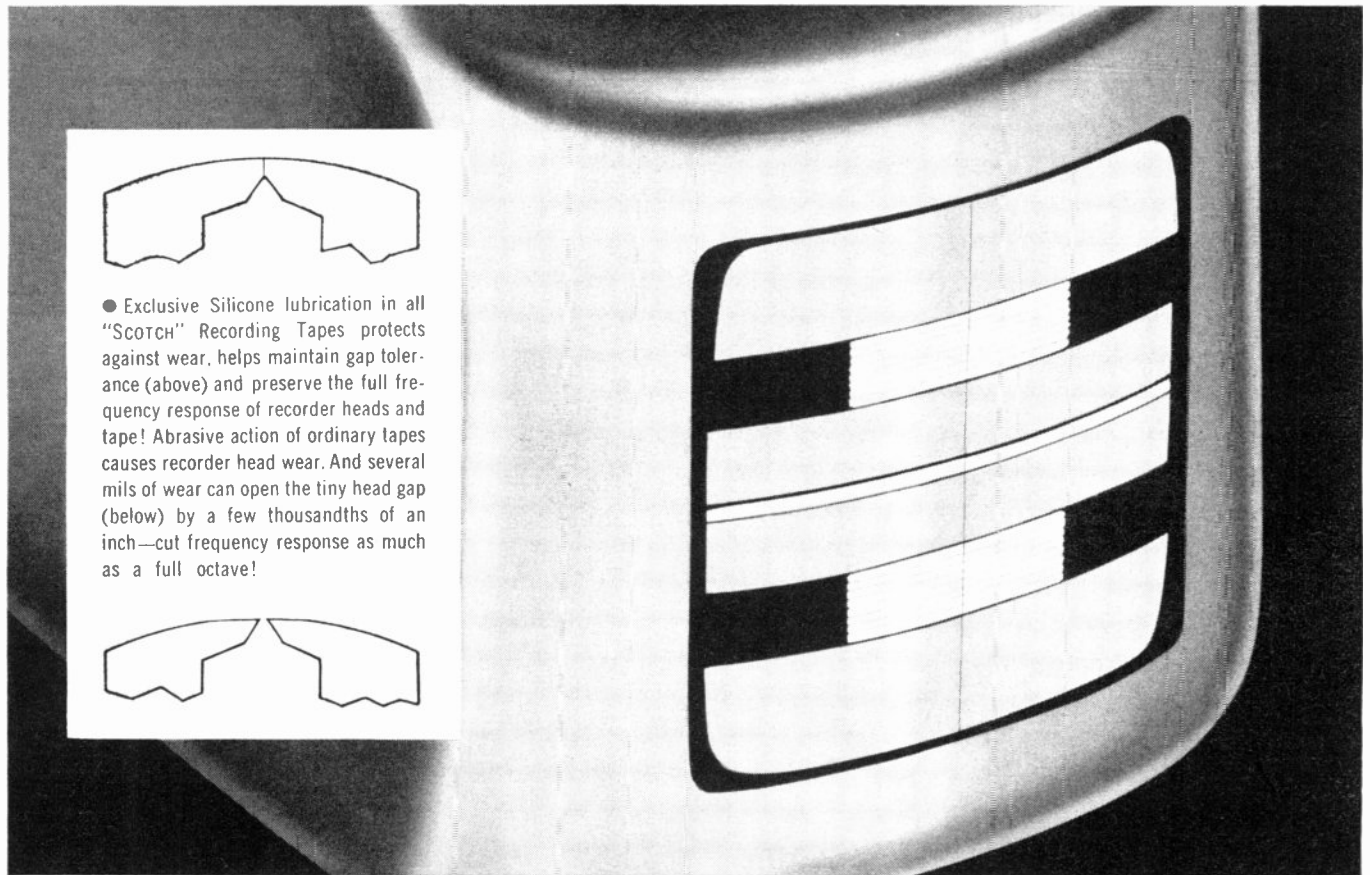


Records and plays back 2- and 4-track mono and stereo tapes; includes complete system—preamps, power amplifiers, speakers; will record sound-with-sound (play one channel, record other channel); can be used as p.a. system; output jacks for extension speakers and from preamps; automatic shut-off; counter; independent tone and volume controls; two speeds (3.75 & 7.5 ips); response 40-18,000 cps \pm 3 db @ 7.5 ips, 40-13,000 cps @ 3.75 ips; crosstalk -50 db; signal-to-noise ratio greater than 48 db; wow & flutter less than .3%; power output 5 watts continuous sine wave @ 5% harmonic distortion per channel; 6 $\frac{1}{2}$ " x 10 $\frac{1}{4}$ " x 11 $\frac{3}{4}$ "; wt. 26 lbs.; complete with two microphones, slipover vinyl cover, accessory cords; suggested list price.....\$379.00

STEREO/HI-FI DIRECTORY

SOUND TALK

...from the world's most experienced manufacturer of recording tapes



● Exclusive Silicone lubrication in all "SCOTCH" Recording Tapes protects against wear, helps maintain gap tolerance (above) and preserve the full frequency response of recorder heads and tape! Abrasive action of ordinary tapes causes recorder head wear. And several mils of wear can open the tiny head gap (below) by a few thousandths of an inch—cut frequency response as much as a full octave!



How to keep your head in 4-track stereo!

**EXCLUSIVE SILICONE LUBRICATION
IN SCOTCH® BRAND RECORDING TAPES
PROTECTS HEADS, EXTENDS TAPE LIFE!**

When abrasion can actually wear away frequency response, as shown above, today's delicate 4-track recorder heads deserve tender care. They deserve the *exclusive* protection of Silicone lubrication that's available *only* in "SCOTCH" BRAND Recording Tapes and lasts the lifetime of the tape.

Silicone lubrication not only protects against wear—it extends tape life, eliminates chance of squeal by assuring smooth tape travel! Silicone lubrication is impregnated throughout the oxide coating of all "SCOTCH" Recording Tapes. It's completely clean and dry—nothing gummy to attract rust or clog head gap.

This built-in lubrication is one of many reasons why professionals and discriminating home

recordists alike insist on "SCOTCH" Recording Tapes. High-potency oxides make possible thinner, more flexible coatings that ensure intimate head-to-tape contact for maximum frequency response, wide dynamic range, sharp resolution. Precise backing and coating thicknesses assure identical recording properties inch after inch, reel after reel. So to help ensure the lasting fine sound of your equipment (1, 2 or full track) we suggest you *play the favorite* . . . "SCOTCH" BRAND!



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Magnetic Products Division **3M** COMPANY

SELECTING A TAPE MACHINE

By HERMAN BURSTEIN*

Important features to look for, along with some helpful suggestions on choosing a tape recorder or tape player.

THE prospective purchaser of a tape machine is confronted with numerous, and perhaps perplexing, choices. To begin with, home tape machines cover a price range from roughly \$100 to \$1000. What amount *should* one spend to get what is really wanted, without over-spending on what isn't needed? That is just one question. The purchaser must come to grips with a number of other choices, such as: stereo or mono? If stereo, shall it be half-track or quarter-track? Should it have a single record-playback head or separate record and playback heads? Should it be a transport with or without electronics? If *with* electronics—then with record and playback electronics, with record electronics only, or with playback electronics only? Buy a machine with or without a self-contained power amplifier and speaker? How many speeds? Should it have a magic-eye indicator or vu-type meter?

These alternatives suggest that home tape machines come in many variations, but the purchaser need not be confused by this profusion of choices. The various kinds of tape machines do fall into certain basic categories and it is the purpose of this article to describe these basic types and discuss their relative merits.

As a further guide to the would-be purchaser, this article deals with the performance characteristics and tape machine features that must be considered before making a purchase. The relative importance of each characteristic or feature depends upon the use to be made of the machine and the user's requirements as to quality of performance—high fidelity or some other grade of "fidelity." For these reasons, this article cannot presume to say which is more important and which is less important. This the purchaser must decide for himself. What this article can do, however, is provide the purchaser with a list of things to keep in mind when he goes out looking and listening.

Basic Tape Machine Elements

Before trying to distinguish among basic categories of tape machines, let us first consider the fundamental elements which may be combined in a variety of ways. These are illustrated in Fig. 1. The elements are five: (1) a transport mechanism that moves the tape past the heads or shuttles it rapidly between the reels in the course of winding or rewinding; (2) a record amplifier to build up the incoming signal, provide equalization (mostly or entirely

treble boost) before the signal goes to the record head, and supply high-frequency current to the record and erase heads; (3) a playback amplifier to build up the signal generated by the playback head and to provide the necessary equalization (mostly or entirely bass boost); (4) a power amplifier, which is frequently single-ended; and (5) a speaker.

In the majority of home tape machines, namely those employing a single record-playback head, the record and playback amplifiers are fundamentally one unit, with suitable switching to change equalization and connections when alternating between record and playback. In a minority of machines—but, oddly enough, the ones that as a rule run highest in price—the power amplifier and speaker are omitted.

(Many home machines include a microphone in the purchase price. However, this is an accessory rather than a fundamental element. Seldom are the accompanying microphones of high-fidelity caliber.)

Basic Variations

The elements of a tape recorder are put together by their manufacturers in five basic ways. This does not include the distinction between mono and stereo machines, nor between those with a single record-playback head and those with separate heads. The latter distinctions will be discussed separately.

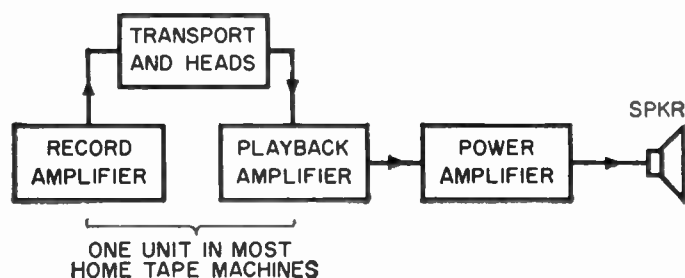
1. *Tape Player*: The simplest and least expensive purchase is that of a tape player which consists only of the transport mechanism, incorporating a playback head. This is analogous to the record player; it is used only with pre-recorded tapes (commercial or made by your friends) and does not permit recording. The output of the head goes to a conventional audio preamplifier, provided that the latter has an input intended for a tape head. Virtually every pre-amplifier made during the last few years will accommodate a tape head.

2. *Tape Player with Electronics*: This is the same as No. 1, except that it includes a playback amplifier. At somewhat greater cost, this means you need not rely on your preamplifier for the necessary equalization and amplification of the signal from the tape head. There are several possible advantages here. A cable from the tape player to your preamplifier may pick up appreciable hum due to its length or routing. Such a cable, if longer than a foot or two, may cause appreciable treble loss due to cable capacitance.

Audio preamplifiers generally provide equalization for only one tape speed, whereas most transports operate at two or three speeds. The tape player with its own electronics will usually provide different, and appropriate, equalization for each speed. Moreover, change in speed will automatically be linked with change in equalization.

More accurate equalization will possibly be obtained from

Fig. 1. The basic elements of a tape machine discussed in text.



*Author of "Getting the Most Out of Your Tape Recorder," co-author of "Elements of Tape Recorder Circuits."

the tape player that includes electronics because a playback amplifier designed to go with a specific kind of head can take into account the characteristics of this head with respect to frequency response. Ideally, all playback heads should have the same frequency response, but in fact there are deviations from ideal performance at the low- and high-frequency extremes. Finally, a playback amplifier should have extremely low noise and hum, because the output of the playback head is just a few millivolts. Manufacturers of quality tape machines can usually equal or better the noise characteristics of all but a very few preamplifiers.

It is possible to purchase a tape playback amplifier separately. This may be advantageous to the person who owns a mono tape player with electronics and wishes to convert it to stereo by replacing the head and adding playback electronics for the second channel.

3. *Transport with Record-Playback Electronics:* This, in essence, is a tape recorder. Not only can you play pre-recorded tapes, but you can also make tapes of broadcasts, phonograph discs, and (through a microphone) live performances.

As with playback amplifiers, it is possible to buy record-playback electronics separately. However, integrated record electronics are advantageous for several reasons: (a) For optimum performance in terms of low distortion and good treble response, the value of bias current fed to the record head is quite critical; the integrated electronics can take into account the specific requirements of the head on the accompanying transport. (b) Different erase heads require different amounts of current and the integrated record electronics can take this into account. (c) The integrated electronics can assure that the record-level indicator provides proper indication of the amount of signal being impressed on the tape, taking into account the characteristics of the record head on the accompanying transport. All this is not to say that the separate amplifier cannot do a proper job. However, a considerable amount of adjusting and trial may be required before the separate electronics can do as good a job as the integrated unit.

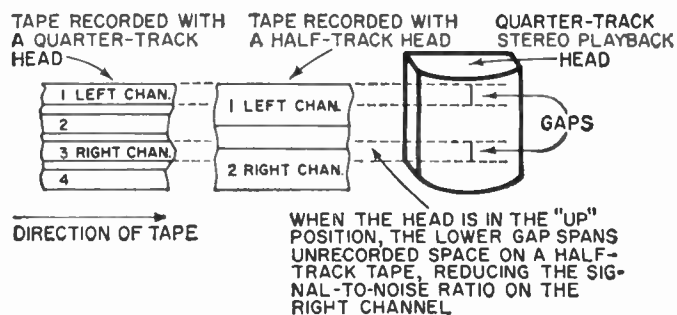
4. *Transport with Record Electronics Only:* This is rather a "new breed." Since most preamplifiers provide inputs for tape playback heads, a fair saving in cost can be effected by omitting the playback electronics, leaving only the record electronics. This is done in at least one brand of tape machine on the market.

5. *Self-Contained Tape Recorder:* This is the type of unit we ordinarily associate with home use—namely one that includes a power amplifier and speaker so that one need not rely on an external audio system for playback. Admittedly, the power amplifier and speaker that can be squeezed into a tape machine case are of limited quality but their usefulness is considerable. For example, if you have made a recording at a friend's home, at a club, at school, etc., you need not wait until you get home to check on whether your recording was successful.

At the same time, every self-contained home tape recorder should provide an output jack so that you can feed the signal into a high-fidelity system. In addition, the output should be located at a point prior to the power output stage so that the signal is free from the distortion and frequency losses that are usually encountered in the power output stage of a tape recorder.

Some tape recorders make available, as an accessory, a combination power amplifier and speaker in a single case. This is apt to be of substantially better quality than the amplifier and speaker in a self-contained unit.

Many stereo tape machines of the self-contained variety have only one speaker, although they may have two power output stages—one of them for an external speaker. If the machine does have two speakers, one is often incorporated in the lid which can be removed and placed at any reasonable distance from the machine. Sometimes there are two



THE HEAD IS SHOWN IN THE "UP" POSITION FOR PLAYING QUARTER-TRACK TAPES. IT SHOULD BE MOVED DOWN TO PLAY HALF-TRACK TAPES WITHOUT LOSS IN SIGNAL-TO-NOISE RATIO

Fig. 2. Playing stereo tapes with quarter-track playback head.

speakers in foldout "wings" of the machine's carrying case.

Stereo versus Mono

Although stereo is now well entrenched, mono machines are still available. Most home stereo machines made today incorporate quarter-track heads because half-track stereo has become virtually obsolete. The advantage of quarter-track stereo is that a tape can be recorded in both directions, with resulting economy of tape and convenience of use. However, a quarter-track head can play half-track stereo tapes; for maximum signal-to-noise ratio on both tracks, some machines permit the quarter-track playback head to be raised or lowered so that its two gaps are properly located with respect to each track. This is illustrated in Fig. 2 for a tape moving from left to right. The head is shifted up for quarter-track and down for half-track stereo tape.

Although the potential purchaser of a tape recorder owns a mono audio system, it may nevertheless be advantageous for him to buy a stereo tape machine. In the first instance, if he converts his audio system to stereo, he need not be concerned about replacing or modifying the tape portion of his set-up. Second, a quarter-track stereo machine enables him to record four mono channels on a reel of tape, whereas a mono machine will record but two. Third, stereo machines, as a rule, are more flexible than mono units.

Separate Record & Playback Heads

Separate record and playback heads involve separate record and playback amplifiers and thus the cost of such a machine is decidedly greater than that of a comparable unit with a single record-playback head and a combination record-playback amplifier. The advantages of separate heads are: (1) While recording with one head, the tape can be played back with the other head so that one can immediately check whether the recording is satisfactory in terms of frequency response, distortion, signal-to-noise ratio, etc. (2) Simultaneous recording and playback greatly facilitates the various tests of performance and the various adjustments that may be required, such as those of bias current, equalization, and recording level indication. (3) The best results are achieved by using separate heads, each constructed in a somewhat different manner for its specific function. Thus a playback head designed solely for this purpose will yield a somewhat greater output, resulting in a better signal-to-noise ratio. By the same token, the record head will be less demanding in its signal voltage requirements, lessening the chances of distortion. (4) Maximum flexibility is obtained, including the ability to achieve echo effects and sound-on-sound recording.

Specifications & Features

In shopping for a tape machine, you should be alert to the performance specifications and features of the various units.

If you are interested in high-fidelity performance, the following are minimum specifications (assuming that the machine lives up to them):

1. Frequency response flat within 2 db, or at most 3 db, between 40 and 15,000 cycles at $7\frac{1}{2}$ ips.
2. Signal-to-noise ratio of at least 50 db and preferably 55 db, based on a recording level producing 3% harmonic distortion at 400 cycles (or similar frequency).
3. Wow and flutter not over .2%. (Some home machines get below .1%.)
4. Speed accurate within 1%. (Studio type professional machines are accurate within .2%.)
5. NAB equalization at $7\frac{1}{2}$ ips, for accurate frequency response in playing pre-recorded tapes.

Features to consider include the following:

1. *Type of record level indicator:* The magic-eye type, particularly if it incorporates a "floating action" circuit so that the human eye can follow its maximum indication, is perfectly acceptable. In fact, it is superior to the vu meter in that it indicates peak recording level, where one has to worry about distortion. On the other hand, the vu meter permits one to make finer and more definite graduations of recording level. Be wary of the meter that looks like a vu meter but doesn't have its dynamic characteristics.
2. *Tape speeds:* The $7\frac{1}{2}$ ips speed is still the minimum for high-fidelity. Quite good results can be obtained at 3%

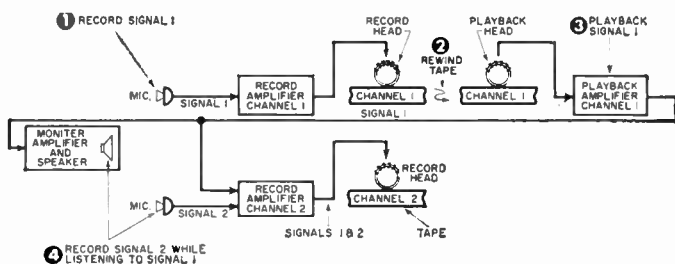


Fig. 3. Basic principles of sound-on-sound recording, which may be done with the aid of a stereophonic tape recorder.

ips. For long recording sessions where high fidelity is not imperative, $1\frac{1}{8}$ ips can be very useful—for example in recording a long program of dance or background music for an evening of entertainment. With a 7" reel of double-play tape, 8 hours of material can be recorded on two mono tracks; or 16 hours on four mono tracks.

3. *Mixing facilities for the low-level (microphone) and high-level inputs:* Some machines allow you to use only one or the other input because inserting a plug into the high-level input disconnects the mike input. Of those that permit you to use both inputs simultaneously, the most flexible ones are those with individual gain controls for each type of input. However, these tape recorders also tend to be the most expensive.

4. *Tape lift device* to space the tape away from the heads when winding or rewinding, thereby minimizing head abrasion.

5. *Tape counter*, which can be helpful in locating desired passages on a recorded tape, indicating how much of the tape has been used up, and showing how much tape remains.

6. *Means employed for tape-to-head contact.* Most home tape machines employ pressure pads to assure good contact between the tape and the heads. Sometimes pressure pads are used against both the erase head and the record-playback head; sometimes against the erase head only; and sometimes against neither head but against the tape guide. Wow and flutter are apt to be lowest when fewest pressure pads are used and when none is used against the record-playback head. Professional machines avoid pressure pads and, instead, use a combination of tape guides and tape tension to maintain good contact.

7. *Automatic shut-off:* Some machines permit automatic shut-off at the end of a reel, provided that you attach a metallic leader to the tape. A few are designed to shut off at any interruption in the tape.

8. *Adjustment facilities (for the audio service technician):* When the time comes, it will be easier for the audio service technician to obtain maximum operating potential from your machine if it incorporates alignment controls instead of fixed circuit components with respect to bias current, record-level indication, and equalization.

9. *Bias frequency:* The bias frequency should be upward of 60,000 cycles to minimize the change of audible beats between the bias frequency and harmonics of the audio signal.

10. *A-B switching:* If the machine has separate record and playback heads, it should incorporate a switch permitting you, when recording, to compare the playback signal with the incoming signal.

11. *Push-button controls:* Push-button controls can simplify operation and are particularly valuable if you plan to do much editing. On the other hand, they mean greater mechanical complexity inside the tape machine and that much more to go wrong.

12. *Rapid start and stop:* If you start or stop a recorded tape somewhere in the middle of the reel, it can be most annoying if the machine produces a sort of growl because it comes up to full speed gradually or slows down gradually. A number of machines avoid this disconcerting effect by providing almost instantaneous start and stop.

13. *Smooth winding of the tape in rapid forward and reverse modes:* Ideally, the machine should wind a tape rapidly and smoothly, but it is better to have a machine that winds slowly and smoothly rather than one that winds rapidly and roughly.

Sound-on-Sound Recording

Sound-on-sound recording permits a number of signals to be recorded successively on the same track and also synchronized with each other. Thus a person can transform himself into a duo, trio, quartet, etc. by playing various singing or instrumental roles successively on the same stretch of tape.

In the case of the mono machine, sound-on-sound requires separate record and playback heads and that the playback head precede the record head—contrary to conventional practice. This is not so for stereo machines, hence sound-on-sound has gained popularity as stereo units have come to the fore.

A stereo recorder permits sound-on-sound recording if (1) one channel can be put in the record mode while the other is in the playback mode (with the record head in the second channel disabled if there are separate heads) and if (2) the high-level and low-level inputs can be used simultaneously. As yet, these requirements, particularly the first, are satisfied mainly in high-priced machines. But, since the problem is essentially one of additional switching flexibility, it can be expected that a substantial number of moderate-priced machines will follow suit.

If the requirements are met, the technique, illustrated in Fig. 3, is as follows. The first signal (usually, but not necessarily, picked up by the microphone) is recorded on channel 1. The tape is rewound. Channel 1 is played back through a Y-connection for recording on channel 2 and for monitoring by the performer *via* an internal or external audio system. At the same time the performer uses the microphone to record the second signal on channel 2 through the mixing facility. The microphone level is controlled by the recording gain control for channel 2. The level of the playback signal from channel 1 can be controlled by the playback gain control. The procedure is repeated to record additional signals.

This article has covered the many variations in equipment available for use with tape. It is now up to the reader to decide what features he wants, how much quality he requires, and how much money he is prepared to pay to get the tape machine features of his choice.



**IT
TAKES
COMPONENT
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ON
THE
INSIDE...**

to provide the biggest sound in slim-lines!



New
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**REGINA
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Now! Enjoy a slim-line system that sounds as good as it looks! The new E-V Regina 200 with component-quality speakers expressly designed to meet the challenge of ultra-thin cabinetry!

In the woofer, for example, where some thin-speaker systems use light-weight "radio set" speakers, the new E-V Regina 200 employs a true 10-inch high fidelity speaker... with powerful 1 lb. 6 oz. ceramic magnet, precision edgewise-wound voice coil and specially-tailored low-resonance suspension. This combination guarantees solid response to 50 cps, plus minimum distortion and optimum efficiency — with even the lowest-powered stereo amplifiers!

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response to 15,000 cps! Note the handy level control on the back of the Regina 200 for exact personal control of tonal balance.

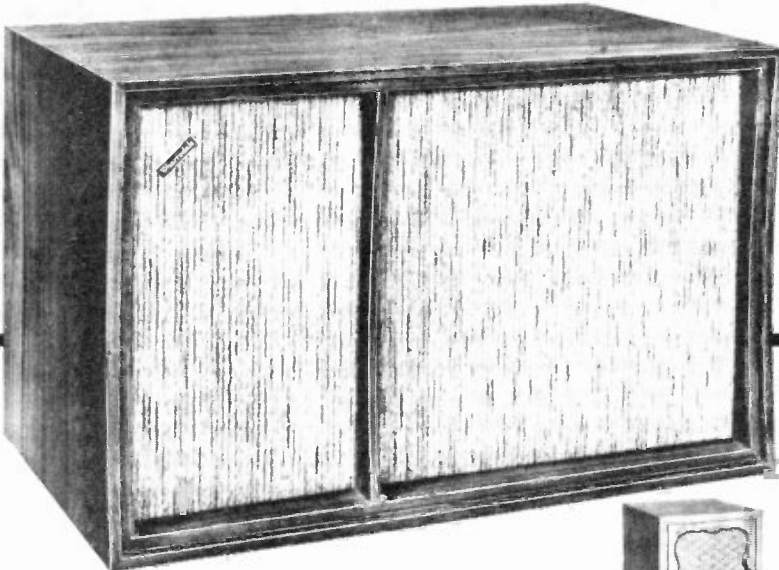
Measuring only 5-5/8 inches deep, 24-3/8 inches high, 16-3/8 inches wide, the new E-V Regina is a beautifully easy answer to your stereo speaker placement problems. And it's easy on the pocketbook, too... just \$89.50 net with oiled walnut finish.

Hear the biggest sound in slim-lines... the new Electro-Voice Regina 200 at your E-V dealer's today!

ELECTRO-VOICE, INC.
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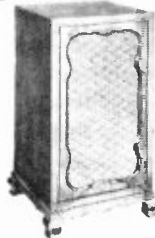
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Wharfedale



W60

In the streamlined look of fine modern furniture or handsomely crafted provincial, this full-range two speaker system continues to provide superlative performance—making it the automatic choice when the finest reproduction is desired. True Wood \$116.50. Unfinished, in sanded birch hardwood, without curved molding or dividers \$101.50.

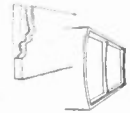


W60 PR Provincial in genuine Fruitwood \$134.50

Superb...because Wharfedale Achromatic Speaker Systems are crafted to reproduce music—as music really is. No spurious resonances, no artificial colorations mar the fidelity of reproduction. Listen to your favorite musical work on a Wharfedale—hear, perhaps for the first time, the clear transparent highs, the rich mid-tones, the fullness of a superb low-range.

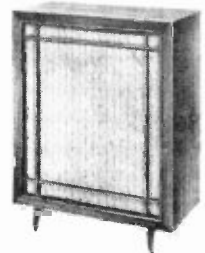
Sand Filled Baffle

Chief characteristic of the Achromatic construction is the sand-filled technique, which consists of packing white sand densely between layers of hardwood. The resulting inert mass is incapable of resonating, no matter how deep or strong the bass backwave projected against it. This exclusive Wharfedale technique yields a full range of sound, a perfectly pure "Achromatic" musical image, without acoustical coloration.



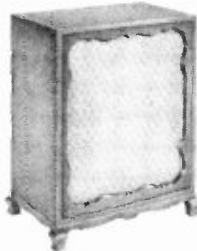
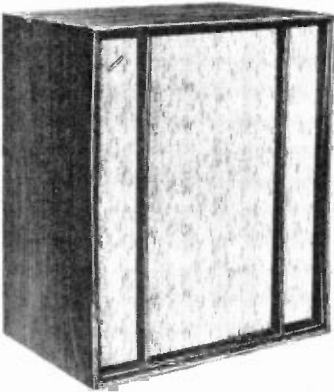
W90

A magnificent new 6 speaker dual 3-way system, destined to restore the legendary sound of the great Wharfedale systems used by G. A. Briggs in his famed Carnegie Hall Concert demonstrations. The meticulously crafted cabinet is proportioned specifically to accommodate the speakers and construction required to accomplish this ambitious purpose; yet the size (32 1/4" x 27 3/4" x 13 1/2") is sufficiently compact to fit into the modern living room. Oiled or Polished Walnut \$259.50. Utility model in sanded birch hardwood without curved molding or dividers \$244.50.



W70

A three-speaker system—handsome by itself, yet still sufficiently compact for shelf or wall integration. The beauty and excellence of performance of this remarkable system makes it unusually attractive to experts and laymen alike. True Wood \$164.50. Unfinished in sanded birch hardwood, without curved molding or dividers \$146.50.

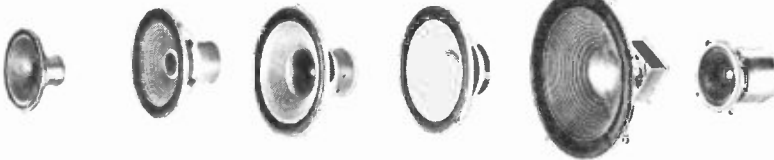
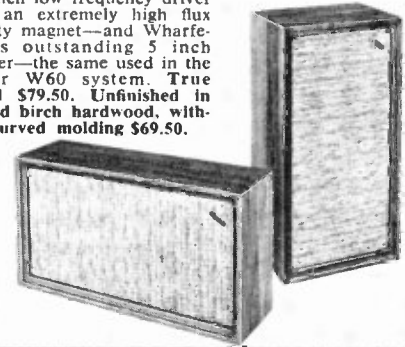


W70 PR

Provincial in genuine Fruitwood \$189.50

W40

Ultra-compact (24" x 12" x 10") full-range system at a most attractive price. Two superior speakers: A newly developed 8 1/2 inch low frequency driver with an extremely high flux density magnet—and Wharfedale's outstanding 5 inch tweeter—the same used in the larger W60 system. True Wood \$79.50. Unfinished in sanded birch hardwood, without curved molding \$69.50.



Full Range 8" Super 8 FS/AL \$26.50

Full Range 10" Super 10 RS/DD \$47.50

Full Range 12" Super 12 RS/DD \$89.50

Woofer W 12/RS \$52.50

Woofer W 15/RS \$89.50

Tweeter Super 3 \$26.50



Universal Mounting base for W60, W70 and W90 systems in matching woods. Easily installed to enhance the beauty of the enclosures.

True Woods \$9.95. Utility model in sanded birch hardwood \$8.95.



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SPEAKERS & CABINETS

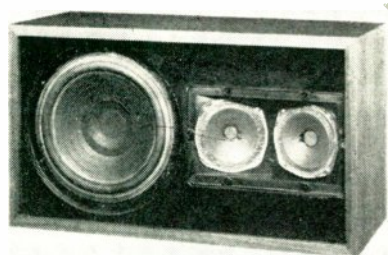
LOUDSPEAKERS
ENCLOSURES
SPEAKER SYSTEMS
CROSSOVER NETWORKS

.....97



ACOUSTIC RESEARCH

Model AR-2



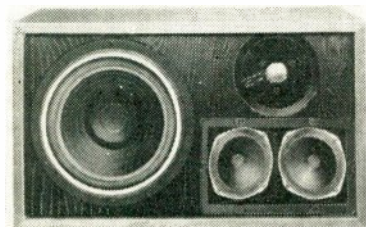
Acoustic suspension two-way system; 42-14,000 cps \pm 5 db; down 10 db at 30 and 16,000 cps; 10-inch woofer and special tweeter; built-in crossover; 8 ohms impedance; harmonic distortion at 10 watts under 2% to 60 cps, under 3% to 50 cps; recommended amplifier power: at least 25 watts per stereo channel; bookshelf type; 13 $\frac{1}{2}$ " x 24" x 11 $\frac{1}{8}$ "; 33 lbs; hardwood veneer.

- AR-2 (bottom side unfinished)
 - (mahogany or birch).....\$ 96.00
 - (walnut or cherry).....\$102.00
 - (korina)\$102.00
 - (unfinished pine).....\$ 89.00
- AR-2 (four sides finished)
 - (mahogany or birch).....\$102.00
 - (walnut or cherry).....\$108.00

Model AR-2a

Consists of speakers in AR-2 and the Model AR-3 super-tweeter.

- AR-2a (unfinished pine).....\$109.00
- AR-2a (4 sides finished)
 - (oiled walnut, walnut,



- cherry or korina).....\$128.00
- (mahogany or birch).....\$122.00

Model AR-3st

Separate Model AR-3 super-tweeter with enclosure and crossover network; 5 $\frac{1}{8}$ " x 6 $\frac{1}{16}$ " x 11 $\frac{1}{16}$ ".

- AR-3st (mahogany, birch).....\$55.00
- (oiled walnut, walnut, cherry, korina).....\$38.00
- (unfinished pine).....\$32.00

Model AR-3t

Separate tweeter and super-tweeters of the AR-3 with enclosure and crossover network; 6 $\frac{3}{4}$ " x 7 $\frac{1}{2}$ " x 14".

- AR-3t (mahogany, birch).....\$92.00
- (oiled walnut, walnut, cherry, korina).....\$96.00
- (unfinished pine).....\$87.00

Model AR-3

Acoustic suspension three-way system; 38 to 1000 cps, \pm 1 $\frac{1}{2}$ db; 1000 to 20,000 cps, \pm 2 db; usable range down to 30 cps; one 12" woofer, one 2" and one 1" dome radiator for mid and high frequencies; built-in three-way crossover with level controls for mid and high ranges; 4 ohms impedance; less than 2% harmonic distortion from 60 to 20,000 cps at 20 watts input, less than 3% to 42 cps; recommended am-



plifier power, at least 25 watts per stereo channel; 11" by 11 $\frac{1}{2}$ " by 25"; 60 lbs.; $\frac{3}{4}$ " hardwood veneer.

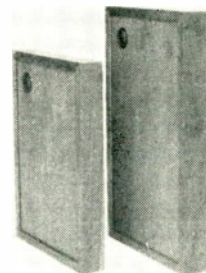
- AR-3 (mahogany or birch).....\$216.00
- (walnut or cherry).....\$225.00
- (korina)\$225.00
- (unfinished pine).....\$203.00

ADVANCED ACOUSTICS

"Minnie" Bi-Phonic Coupler

Employs rigid radiating panel driven by ring magnet assembly coupled to voice-coil magnetic structure; compression-type tweeter; response 35 cps to beyond audibility; unrestricted radiation on both sides

of unit provides figure-8 sound pattern; peak audio power 20 watts but requires 10-watt amplifier for driving; 8 ohms; 13 $\frac{1}{2}$ " x 17 $\frac{3}{4}$ " x 2"; ideal for hanging



on wall, between studs of wall, etc; available in mahogany, oiled or lacquered walnut, and oiled teak.....\$42.50 Available as matched pair.....\$79.50

"Wafaire" Bi-Phonic Coupler

Similar in design to "Minnie" model with response 30 cps to beyond audibility; 25 watts power capability; 13 $\frac{1}{2}$ " x 21 $\frac{1}{4}$ " x 3 $\frac{1}{2}$ "; available in mahogany, oiled or lacquered walnut.....\$69.50 Matched pair.....\$124.50

Ebony base for free-standing application\$5.50

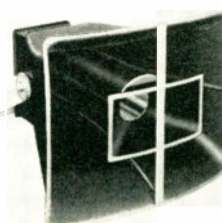
"Modulaire" Bi-Phonic Coupler

Similar in size and design to "Wafaire" model except has 40 watts program power capabilities; 35 cps low-end response; available in mahogany, oiled or lacquered walnut\$120.40

Completely sanded ready for finishing\$116.40 "Build-in" wall model.....\$99.00

ALTEC LANSING

Model 50A "Bi-Acoustic" Horn



Dust-, water-, and weather-proof for outdoor applications; provides coaxial type

5 Speakers & Cabinets

sound distribution; 30 watts; 175-12,000 cps; Fibreglas housing; 12 $\frac{1}{2}$ " x 15 $\frac{1}{2}$ " x 17 $\frac{1}{4}$ "\$66.00

Model 412C



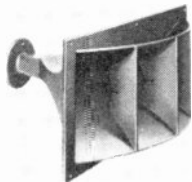
12-inch Biflex cone-type speaker with second compliance ring in the center of the cone to give mechanical crossover at 1000 cycles and permit 2-way performance with a single voice coil; 20 watts; 40 to 15,000 cycles; 8-ohms impedance; 3-inch edge-wound ribbon voice coil; cast aluminum frame.\$54.00

Model 415C "Biflex" Speaker



15-inch Biflex cone-type speaker with second compliance ring in the center of the cone to give mechanical crossover at 1000 cycles and permit 2-way performance with a single voice coil; 25 watts; 30 to 14,000 cycles; 8-ohms impedance; 3-inch edge-wound ribbon voice coil; cast aluminum frame; free-air resonance 25 cps.....\$67.00

Model 511B "Sectoral" Horn

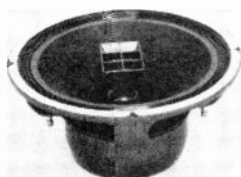


Designed to load 804A driver down to 500 cps with upper limit at 22,000 cps; cast of heavy resonant-free aluminum; dispersion 90° horizontal and 40° vertical\$39.00

Model 811B "Sectoral" Horn

Similar to Model 511B except cut-off is at 800 cps; used with 804A driver and 800 cps crossover to complement either one 803B or one or two 414A bass speakers\$24.00

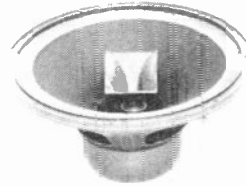
Model 601C "Duplex"



12-inch two-way speaker; 12-inch woofer with a high frequency driver and horn in a single heavy cast frame; complete with 3000 cycle crossover network, frequency response from 40 to 22,000 cycles; 20

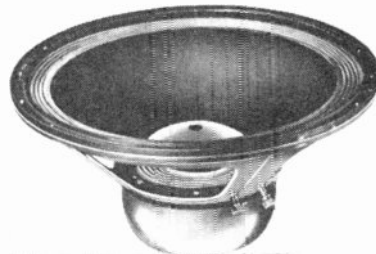
watts continuous sine wave power; 8 ohms; cone resonance 32 cps.....\$120.00

Model 602C "Duplex"



Coaxial 15-inch speaker, range from 30 to 22,000 cps; 15-inch woofer and a newly designed exponential sectoral horn coupled to a high frequency driver through a 3000 cps dividing network; 25 watts continuous sine-wave power; 8 ohms; cone resonance 25 cps.....\$113.00

Model 803B Woofer



15-inch woofer; power rating 30 watts; 16-ohms impedance; response 30-1600 cps; special rim compliance prevents cone breakup; 3-inch diameter copper cone ribbon voice coil; edge-wound; cast aluminum frame; free-air resonance 25 cps\$60.00

Model 414A Bass Speaker

A 12" equivalent of Model 803B; response 30-3000 cps depending on crossover used\$54.00

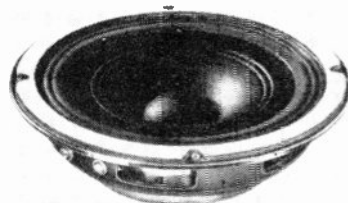
Model 605A Duplex



15" coaxial speaker; 35 watts continuous sine-wave and up to 50 watts peak power; 16 ohm impedance; magnet weight 2 $\frac{1}{2}$ lbs. low frequency, $\frac{1}{2}$ lb. high frequency; depth 10"; response: 20-20,000 cps; free-air resonance 25 cps.....\$177.00

Model 755C 8" "Pancake" Speaker

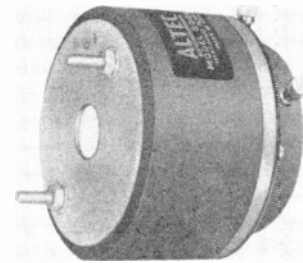
Wide-angle sound dispersion; 15 watts;



response 40-15,000 cps; 8 ohms; 2" voice coil; cone resonance 52 cps; depth 2 $\frac{1}{4}$ "\$29.95

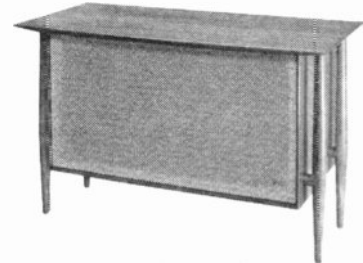
Model 804A Driver Systems

Extends to 22,000 cps; features ribbon voice coil & aluminum alloy diaphragm; 16 ohms; 30 watts; can be used with 811B horn & N-800E (800 cps) crossover;



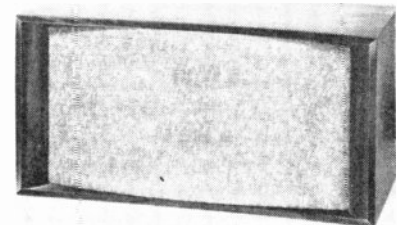
for woofer use 803B or 115C Biflex speaker; the 804A driver can also combine with 511B sectoral horn & N-500D (500 cps) crossover; use either one or two 803B bass speakers.....\$63.00

Model 831A "Capistrano" System



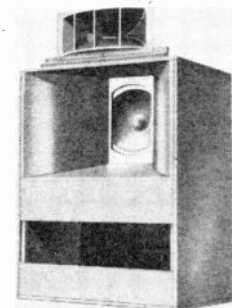
Incorporates the 15" 803B woofer in bass reflex enclosure, an 800 cps network, and the 804A high frequency driver with 811B sectoral horn; frequency range from 35 to 22,000 cps; 30 watts; 16 ohms; 30" h. x 47" w. x 23 $\frac{1}{2}$ " d.; in blond, walnut or mahogany\$399.00

Model 836A "Lido" Speaker System



Bookshelf design; speakers have radiating area of over 76 sq. inches; extended frequency response; high efficiency; 127% x 26" x 12 $\frac{1}{2}$ "; 15 watt power rating; available in walnut or mahogany.....\$125.00

Model A-7 "Voice of the Theatre" System



Utility model of the Altec 2-way theatre system; employs a direct radiating exponential horn enclosure combined with a modified bass reflex principle; 15" 803B woofer, N-800E 800 cps crossover network, and 804A driver with 811B horn; frequency range from 35 to 22,000 cps; 30 watts power rating; 16 ohms impedance; horizontal dispersion 90°; vertical dispersion 40°; 6 db adjustable high-frequency attenuation; 30" w x 24" d x 51" h; gray finish.....\$299.40

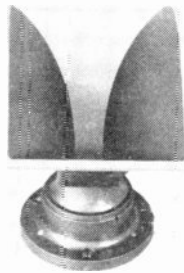
STEREO/HI-FI DIRECTORY

Model 2000B Tweeter



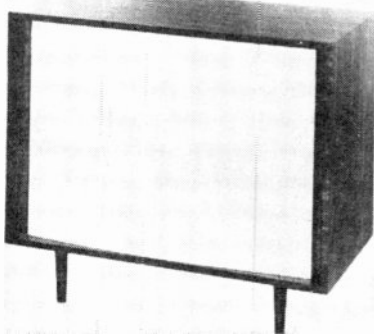
Direct radiating; aluminum dome and paper cone; built-in capacitor crossover; power capacity 14 watts; frequency range 1500-18,000 cps; 8 ohms; 1" voice-coil; depth 3 1/8".....\$18.00

Model 3000B Tweeter



Aluminum diaphragm; multi-cell-type horn; 20 watts when used with N-3000E network; response 3000-22,000 cps; 8-ohms impedance; edge-wise wound voice coil; requires 3000 cycle crossover network; dispersion 90° horizontal, 40° vertical; 3 1/8" h. x 4 1/4" w. x 4 1/8" d.....\$42.00

Model 838A "Carmel" Speaker System



Two-way system; infinite baffle design; combining two 414 bass speakers and one 804A driver mounted on 811B horn; response 30-22,000 cps; 30 watts power rating; N-800E crossover is used; available in walnut or mahogany; decorator's base available in place of legs at extra cost; 29 1/4" h. x 35" l. x 17 1/4" d.....\$324.00

Model 837A "Avalon" Speaker System

Identical to Model 838A except only one 414A speaker is used.....\$261.00

Model 854A/B Speaker Cabinet

Same as Model 838A except cabinet only; will house any Altec Biflex or Duplex 12" or 15" speaker.....\$99.00

N-500D Dividing Network

Designed for use with 804A h.f. driver & 511B horn; 12 db/octave slope; externally mounted h.f. shelving control has four steps of 1 1/2 db for adjustment to room acoustics; 15 ohms; 500 cps crossover; 5 1/4" h. x 8" w. x 2 3/8" d.....\$48.00

N-800E Dividing Network

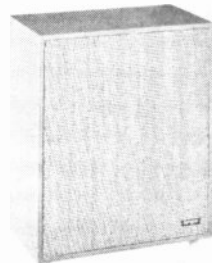
Same as 500D except 800 cps crossover for use with 804A driver & 811B horn; 3 1/4" h. x 6" w. x 2 3/8" d.....\$46.50

N-3000E Dividing Network

Designed especially for 3000B h.f. speaker; 8 ohms; attenuation 10 db continuously variable; 3000 cps crossover; 2 5/16" h. x 4 3/4" w. x 2 5/16" d.....\$18.00

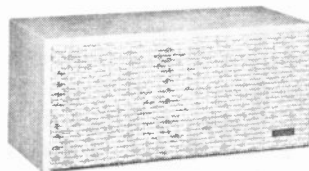
ARGOS

Model AD-1AS "Slimline" Speaker System



Tube vented (ducted-port) design with wood-grain pyroxylin covering; has Jensen 12" woofer, 3 1/2" tweeter, crossover network; 8 ohms; air volume 3630 cu. in.; 19 1/4" x 22 1/2" x 10 1/4" deep; cane grille & brass legs; blonde or walnut.....\$39.95
Model 1A Cabinet only including tuning tube to match any speaker to cabinet..\$24.95

Model TSE-1S "Catalina" Speaker System

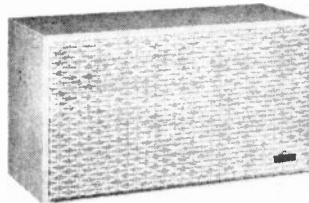


Bookshelf-type ducted-port enclosure; with Jensen 8" woofer, 3 1/2" tweeter, crossover network; wood-grained pyroxylin finish; response 50-17,000 cps; internal air volume 2150 cu. in.; 8 ohms; 24" x 11" x 10 1/4" deep\$24.95
Model TSE-1 Cabinet only, including tuning tube to match any speaker to cabinet \$16.95

Model TSE-2AS "Deluxe Catalina" Speaker System

Ducted-port enclosure for bookshelf or floor; built of 3/4" walnut veneer; has attachable legs; Jensen 8" woofer, 3 1/2" tweeter, crossover network; response 50-17,000 cps; internal air volume 1950 cu. in.; 8 ohms; 24" x 11" x 10" deep; oiled walnut\$39.95
Model TSE-2A Cabinet only, including tuning tube to match any speaker to cabinet\$26.95

Model TSE-3AS "Eldorado" Speaker System

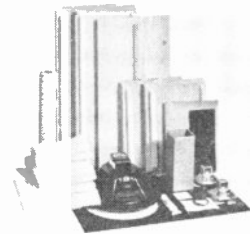


Ducted-port design with Jensen 12" woofer, two 3 1/2" tweeters, crossover network; response 40-17,000 cps; internal air volume 2900 cu. in.; 8 ohms; wood-grained pyroxylin covering; 25" x 14" x 10 1/4" deep; walnut or blonde\$39.95
Model TSE-3A Cabinet only, including tubing tube to match any speaker to cabinet\$22.95

Model TSE-4S "Deluxe Eldorado" Speaker System

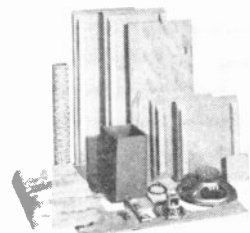
Similar to Model TSE-3AS except internal air volume 2650 cu. in.; 3/4" walnut veneer; 25" x 14" x 10" deep; oil-finished walnut\$59.95
Model TSE-4 Cabinet only with tuning tube to match any speaker to cabinet.....\$37.50

Model TSE-12KS "Deluxe Eldorado" 12" Kit



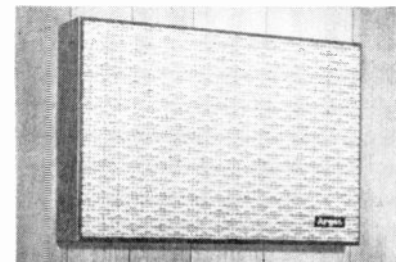
Similar to Model 4S except in kit form; includes speakers and crossover network; white birch with cane grille\$39.95
Model TSE-12K Cabinet only with tuning tube to match any speaker to cabinet \$24.95

Model TSE-8KS Enclosure Kit



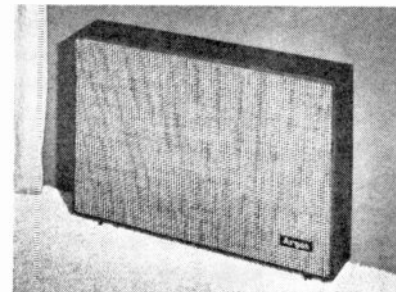
Similar to TSE-2AS except in kit form; 3/4" birch wood; response 50-17,000 cps; internal air volume 1680 cu. in.; 8 ohms; includes Jensen 8" woofer, 3 1/2" tweeter, crossover network; 23" x 11" x 9 1/4" deep\$27.95

HFWB-8S "Space Saver" Speaker System



Ducted-port design; 8" Jensen "Profile" woofer, 3 1/2" tweeter, crossover network; 8 ohms; 18" x 12" x 3 3/4"; available in light American walnut or whitened birch \$17.95

Model PHF-1S "Petite" Speaker System



Response 50-17,000 cps; 2-way system using Jensen-designed woofer and tweeter

5

Speakers & Cabinets

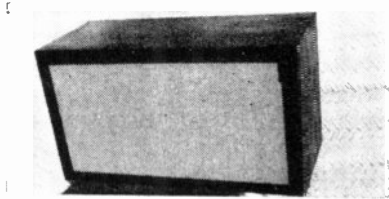
with matching network; walnut veneer with recessed volume control; 8 ohms; 18" x 12" x 3 1/4"\$24.95

ARGUS-X

Model X-1B Speaker System

Has 8" speaker with multiple suspension and 2 lb., 13 oz. triconal steel magnet structure; response 35-20,000 cps; system may be driven by amplifiers of 10 to 40 watts; 8 ohms; 12 1/8" x 14" x 11"; oiled walnut\$80.00

Model X-3 Speaker System



Two 8" speakers with multiple suspensions and 2 lb., 13 oz. triconal steel magnet structure; response 20-20,000 cps; system may be driven by amplifiers of 10 to 60 watts; 4 to 8 ohms; 25" x 14" x 11"; oiled walnut\$160.00

Model X-5 Speaker System

Three 8" speakers with multiple suspensions and 2 lb., 13 oz. triconal steel magnet structure; response 10-20,000 cps; system may be driven by amplifiers of 10 to 100 watts; 4 to 8 ohms; 27" x 18" x 16", including removable 3" pedestal; oiled walnut\$240.00

ATLAS SOUND

Model DC-5

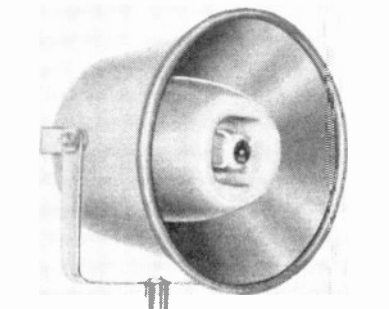
Six-watt weather-resistant cone-type projector; response 120-7000 cps; 8 ohm



impedance; 14" long, 7" diameter, 5" cone\$14.25

Model WT-6 "Coax-Projector"

Two-way system with two drivers, two horns; built-in electronic crossover filter; 15 watts; response 100-15,000 cps; 8

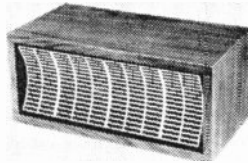


ohms; 120 degree dispersion; crossover 1000 cps; bell opening 15"; over-all depth 12"; enamel finish\$36.00

Model SS-4 Speaker stand for WT-6 (extends to over 6' in height)\$12.60

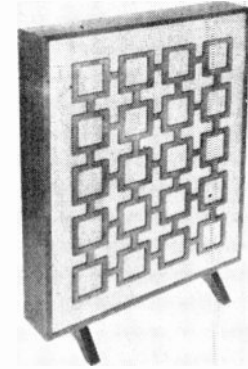
AUDAX

Model CA-60 Speaker System



Bookshelf unit; ducted-port; concave grille; high pass filter built-in; consists of 2-6" woofers and tweeter; frequency response 70-17,000 cps; in walnut; 9 3/4" x 10" x 18"\$59.95

Model CA-70 Speaker System

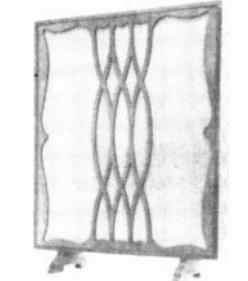


Features front and back sound radiation; two woofers, two midrange, and one tweeter; response 40-18,000 cps; 8 ohms impedance; 45 watts integrated program material; size 4" x 21" x 25"; oil-rubbed walnut\$79.95

Model CA-70E "Mandarin"

Same as Model CA-70 but satin ebony finish\$89.95

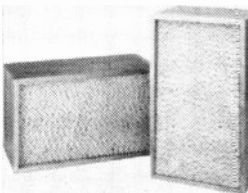
Model CA-70P "Provincial"



Similar to Model CA-70 but fruitwood finish\$89.95

AUDIO-TECH

Model ME-12 Speaker System



For floor or bookshelf use; has 12" woofer and 3" cone-type tweeter; balance control for tweeter supplied; frequency response 40-20,000 cps; capacity 30 watts; woofer magnet strength 12,500 gauss;

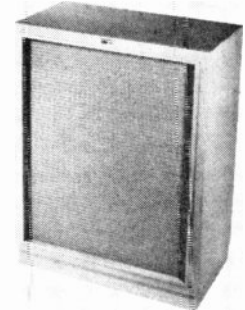
24" x 12" x 14"; available in oiled walnut; fused to protect against speaker overload\$129.50

Model JA-15 Speaker System

Floor use; has 15" cone woofer and tweeter; tweeter balance control, I.C. crossover network; impedance 8 ohms; frequency response 32-20,000 cps; power capacity 30 watts; 29" x 26" x 16"; fused to protect against overload\$250.00

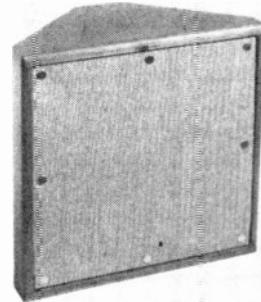
BIGG OF CALIFORNIA

Model BR-12-HST



Three-way system has 12" woofer, mid-range, tweeter, crossover network; bass-reflex cabinet\$109.95

Model CH-16



Corner compression speaker system; employs air compression principle; 17 1/2" x 9" x 17"\$34.96

Model FH-15-MHT Impresario

Three-way system has 15" woofer, mid-range, tweeter, crossover network; frequency response 25-18,500 cps; 33" x 20 1/2" x 29 1/2"\$199.95

Model FH-12 MHT Impresario Junior

Similar to Impresario except with 12" woofer; 26" x 30" x 16 1/4"\$129.95

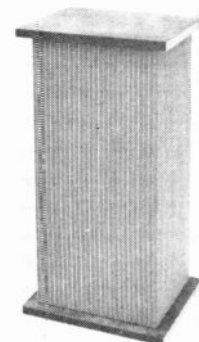
Model BR-1528T Profundo

Bass-reflex cabinet system; same speakers as FH-12-MHT; 30" x 16 1/2" x 33"\$159.95

Model BR-12T "Crescendo"

Same as BR-12-ST except 2-way system; includes 12" woofer, tweeter and crossover network; 24" x 12 1/2" x 32 1/4"\$79.95

Model 14-P Enclosure

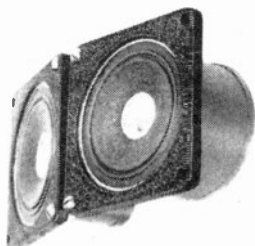


STEREO/HI-FI DIRECTORY

Infinite baffle; frequency response 30-18,000 cps; power rating 50 watts program material; has compression woofer, mid-range and tweeter with triple crossover network and brilliance control; mounts horizontally or vertically; 13" w. x 12" d. x 2 1/2" h.\$79.95

BOZAK

B-200Y Tweeter



Twin-cone tweeters for use with amplifiers 20 watts or more; 2000-20,000 cps; 8-ohm impedance (two 16-ohm sections in parallel); two 8-oz. Alnico V magnets; direct-radiating dual cones; 120° radiation; rubber damping prevents peaking and metallic harshness.\$32.00

B-199A Woofer

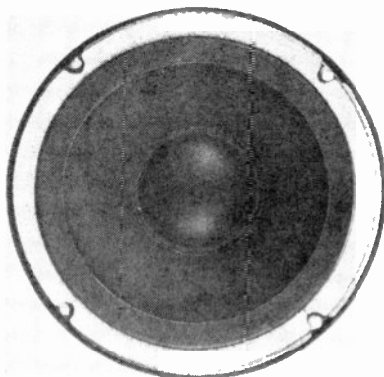
12" woofer; 5 3/8" deep; variable-density cone; for use with amplifiers 20 watts or more; 40-4500 cps; 8-ohm impedance, 16 ohms on special order; 1 1/2-lb. Alnico V magnet; unique voice-coil construction; cast aluminum frame.\$52.50

B-207A Two-Way Coaxial Speaker

Coaxial speaker; 15" mounting frame; depth 7"; for use with amplifiers 20 watts or more; 40-20,000 cps; 8-ohm impedance; composed of B-199A woofer and B-200Y twin-tweeter; crossover at 2500 cps; fits standard cut-outs for 12" and 15" speakers; infinite baffle enclosure recommended, minimum 5 cu. feet, optimum 9 cu. feet.\$89.50

B-209A Mid-Range Speaker

Mid-range speaker; 6 1/2" diameter, 3 1/2" deep; unique "sandwich" cone; for 20- to 40-watt systems with Bozak crossover network; 200 to 3500 cps; 8- and 16-ohm models available; 1 1/2-lb. Alnico V magnet; rubberized cloth-edge suspension;



foam-rubber damping gives superb transient response.\$51.00

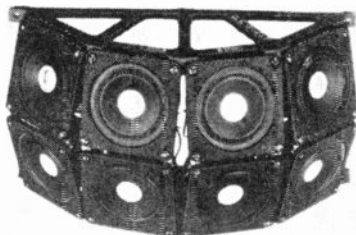
B-300 Speaker System

Infinite baffle enclosure; 3/4" plywood; one B-207A 15" coaxial speaker; 10-20,000 cps; can convert to model B-302A. B-300 Urban—24" w x 20" d x 30" h; oiled walnut, mahogany, or ebony.\$175.00 B-300 Urban (Enclosure only)\$85.50 B-300 Provincial—28" w. x 19" d. x 31" h.; walnut, mahogany, or cherry.\$217.00 B-300 Provincial (Enclosure only)\$121.00

B-302A Speaker System

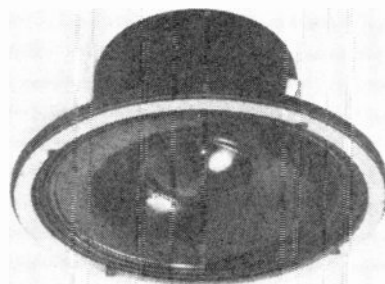
Similar to B-300 with addition of B-209A mid-range speaker and N-10102 crossover network. B302A Urban\$254.50 B303A Provincial\$290.00

B-200YA Tweeter Array



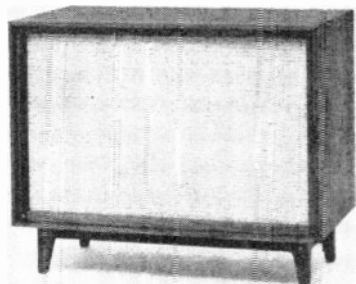
Eight cone-type tweeters; power rating 60-watts; 1500 to 20,000 cps; 8-ohm impedance; eight 8-oz. Alnico V magnets; cast aluminum frame; 180° horizontal dispersion at 16 kc.\$149.00

B-800 Full-Range Speaker



8" speaker; 8-ohm impedance 50-15,000 cps; 8 1/2" dia. x 3 1/4" deep; for use with amplifiers 15 watts or more.\$45.00

B-305 Speaker System



Mahogany, walnut, or birch veneer infinite-baffle enclosure; 35-20,000 cps; 3-way speaker system; 800 cps and 2500 cps crossover frequencies; two B-207A coaxial speakers, one B-209A mid-range speaker; wide-angle listening area of 120°; 16-ohm impedance; 40" w. x 20" d. 31" h.

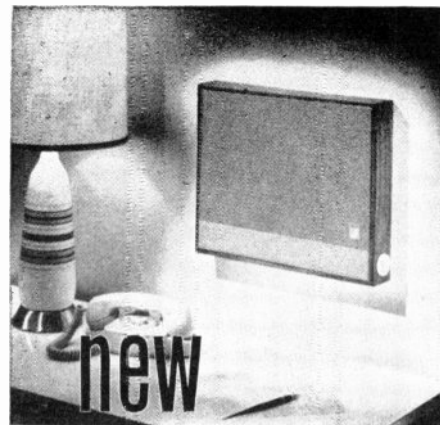
B-305 Urban—walnut, mahogany, or ebony\$297.50 B-305 Provincial—walnut, mahogany, or cherry.\$440.00 B-305 Urban (Enclosure only)\$140.00 B-305 Provincial (Enclosure only)\$181.50

Model 310A Speaker System

Four B-199A's, two B-209A's, one B-200YA, one N-104; response 28-20,000 cps; crossover 6 db/octave @ 400 and 2500 cps; 8 ohms; 60 watts; 36" w. x 19" d. x 53" h.; mahogany, walnut, or ebony\$770.00 Model 310A Enclosure only\$275.00

N-1012 Crossover Network

Universal dividing network; convertible for B-302A or B-305 system; 800 and 2500 cps crossover; 8 or 16 ohms; can be converted to 400 and 2500 cps crossover for B-310A system by addition of



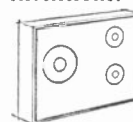
and most versatile

... slim-compact

X-20

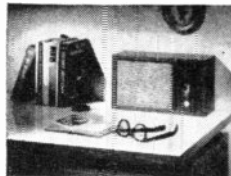
Here is unbelievably excellent sound quality combined with the ultimate in placement flexibility. Compact size (12 7/8" H, 15 3/8" W, 2 5/8" D) takes little space on desk, table or shelf. The slim-compact X-20 is ideal for wall mounting with built-in brackets. Finish is oiled walnut. Convenient volume control on the side. There's a refreshing decorator touch in the two-tone harmonizing custom fabric on the front. 3 speakers—a woofer and 2 tweeters—provide smooth wide range sound. Perfect for FM Multiplex, very low cost stereo, other-room extensions.

X-20 3-speaker 2-way system. Impedance, 8 ohms. Power rating, 6 watts. Adequate room sound with 1 watt to speaker. In Oiled Walnut.\$39.95



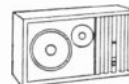
... ultra compact

X-10



Most popular ultra-compact hi fi speaker system. 2-way system in oiled walnut measuring 7 1/4" H, 13" W, 4 3/4" D.

X-10 2-speaker 2-way system. Impedance, 8 ohms. Power rating, 6 watts. Adequate room sound with 1 watt to speaker. In Oiled Walnut ...\$29.75



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Speakers & Cabinets

N-25\$27.50

N-103 Crossover Network

Crossover 400 and 2500 cps; 16 ohms; used on B-305 system.....\$37.50

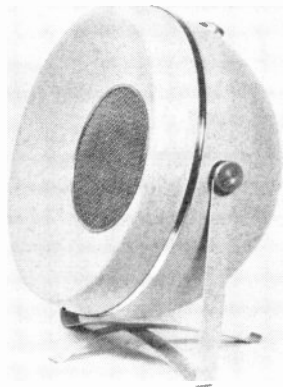
N-104 Crossover Network

Crossover 400 and 2500 cps; 8 ohms; used on B-310A system.....\$37.50

N-25 Crossover Network

Capacitor bank for use with N-10102 when 400-2500 cps crossover and 8 ohms is desired.....\$11.60

B-1000 "Bard" Outdoor Portable Speaker



Rigid 18" dia. hemispheric housing; 21" high, 12" front-to-back; 22 lbs.; input by phone jack (plug supplied); 8 ohms; power input 40 watts max; response 80-15,000 cps; B-800 driver; adjustable friction-type trunion; weatherproof cone; sandalwood beige or white eggshell with gold trim.....\$79.50

Bozak Panel Systems

P-302AP

Contains one B-207A, one B-209A, and crossover networks mounted on a 3/4" panel; 5 cu. foot cavity required; panel 27 1/2" h. x 23" w.....\$175.00

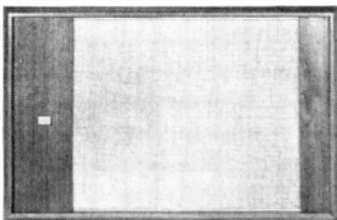
P-305P

Contains two B-207A, one B-209A and crossover network mounted on a 3/4" panel; 8 cu. foot cavity required; panel 24" h. x 34 1/2" w.....\$265.00

P-310AP

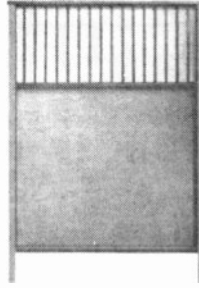
Contains four B-199A, two B-209A, one B-200YA and crossover network mounted on a 3/4" panel; 16 cu. foot cavity required; panel 47" h. x 31" w.....\$550.00

Model 2000 "Sonata No. 1" Speaker System



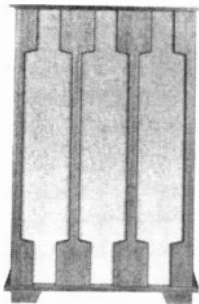
Bookshelf type with B-800 8" full-range speaker, B-200Y dual-tweeter, and type N-1 crossover network; useful frequency 50-20,000 cps; 8 ohms; to be used with amplifiers 15 watts or more; 14" h. x 23 1/8" w. x 11 3/8" d.; available in walnut or mahogany.....\$134.50

Model B-3001 "Concerto No. 1" Speaker System



Console style with B-199A woofer, three B-200 tweeters, and type N-1 crossover network; useful frequency 45-20,000 cps; 1800 cps crossover; 8 ohms; for use with amplifiers 20 watts or more; 30" h. x 20" w. x 16 1/4" d.; available in walnut or mahogany\$174.50

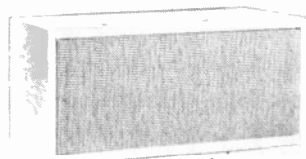
Model 4000 "Symphony No. 1" Speaker System



Has two B-199A woofers, one B-800 full-range 8" speaker; eight B-200 tweeters; and N-105 crossover network; useful frequency 35-20,000 cps; crossovers at 200 and 1500 cps; 8 ohms; for use with amplifiers 30 watts or more; 44" h. x 37 3/4" w. x 16" d.; available in walnut, mahogany, or ebony.....\$495.00

CABINART

Mark 3 Speaker System

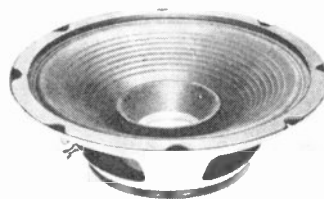


Bass-reflex horn-loaded bookshelf design; dual-cone 8" extended-range speaker plus 3" whizzer cone; 15 watts power rating; response 70-19,000 cps \pm 7 db; free-air resonance 65 cps; 9 1/2" d. x 11" h. x 23" l.

Oiled walnut.....\$30.00
Unfinished\$18.00

CATHEDRAL

Model C-12NR Dual-Cone Speaker



Dual-cone 12" speaker; frequency response 45-16,000 cps; resonance 30 cps; 2" alumi-

num voice coil; power rating 25 watts; depth 6 3/16" ; impedance 8 ohms.....\$43.50

Model C-69JW 6" x 9" Speaker

Full range (60-18,000 cps) dual-cone design; peak audio watts 12; 1" dia. voice coil; free-air resonance 70 cps; 4 1/16" deep\$13.50

Model C-8EC 8" Coaxial Speaker

Includes 3" tweeter and crossover network; peak audio watts 10; 3/4" voice coil; response 60-15,000 cps; free-air resonance 80 cps; 4 3/8" deep.....\$14.75

Model C-8JW 8" Speaker

Full-range (60-15,000 cps) dual-cone design; 12 watts peak audio; 1" dia. voice coil; free-air resonance 60 cps; 4 1/16" deep\$14.50

Model C-12JR 12" Speaker

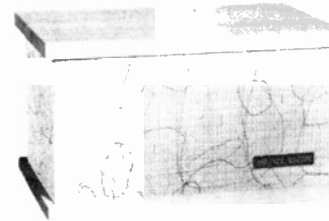
Full-range (40-15,000 cps) dual-cone design; 12 watts peak audio; 1" dia. voice coil; free-air resonance 45 cps; 6 3/16" deep\$20.00

Model C-12JC 12" Coaxial Speaker

Includes 4" tweeter and crossover network; 12 watts audio peak; 1" voice coil; response 35-15,000 cps; free-air resonance 50 cps; 6 3/16" deep.....\$29.00

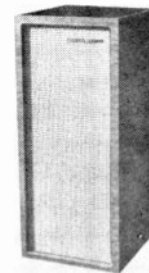
CHANNEL MASTER

Model 6630 "Minstrel" Speaker System



Dynamic air coupling produces large cabinet sound in small enclosure; 50-15,000 cps; 9"x9"x16"; available in walnut, mahogany, blonde\$29.95

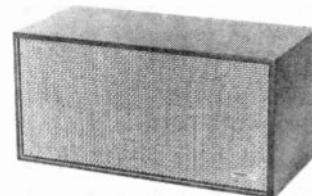
Model CM-10 Coaxial Speaker System



Ducted-port enclosure; 8" speaker with 2" coax tweeter; electrical crossover 3000 cps; 10 watts; 8 ohms; 23 1/2"x10"x11" deep; available in walnut, mahogany, blonde\$44.95

DAYSTROM

Model DA-289 Speaker System



Bookshelf ducted-port bass reflex design with 8" low-frequency speaker plus compression driver with exponential horn tweeter; response 50-12,000 cps \pm 5 db; crossover 1600 cps; rated at 25 watts program material or 15 watts sine wave; 16-ohm impedance; has balance control for tweeter; 11 $\frac{1}{2}$ " h. x 23" w. x 11 $\frac{3}{4}$ " d.; walnut finish, cabinet factory assembled and finished.

Kit\$54.95
 Factory assembled\$69.95

DELCO

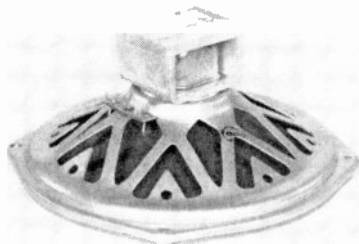
Model 6869 Speaker

12" woofer; response 20-4500 cps; 20 watts; 1 $\frac{1}{2}$ " voice-coil diam.....\$29.50

Model 6871 Crossover Network

Input impedance 16 ohms; output impedance 16 ohms; crossover 6 db per octave attenuation, 2000 cps.....\$14.50

Model 8007 Speaker



Wide-range 8" design covering 30-12,500 cps; 4-ohm voice coil, 20 watts.....\$15.00

Model 6868 Two-Way System

Covers 20-20,000 cps; includes Model 6869 woofer, Model 6870 horn tweeter, Model 6871 crossover network and treble control\$68.50

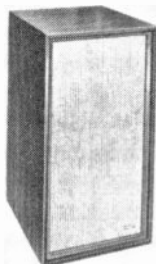
EICO

Model HFS-1 Speaker System



Two-way speaker system; response 70 to 12,000 cps, \pm 6 db; tuned bass reflex; Jensen 8" woofer, 6.8 oz. magnet, and matching Jensen compression-driver exponential horn tweeter with level control; crossover at 1800 cps; power handling capacity 25 watts; unfinished birch hardwood with neutral grille cloth 23"x11"x9".
 Kit\$39.95
 Factory wired.....\$47.95

Model HFS-3 3-Way Speaker System



Three-way system; 12" woofer, 1 $\frac{3}{4}$ lb. Alnico magnet; 8" closed back mid-range

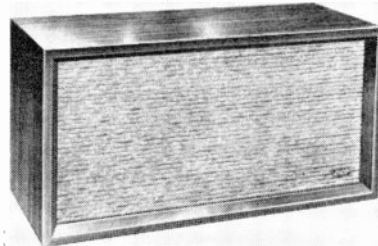
speaker and 3 $\frac{1}{2}$ " closed back cone tweeter; frequency division by quarter-section LC network at 600 cps and high-pass filter at 4000 cps; level control for tweeter; enclosure is $\frac{3}{4}$ " stock and is tuned to 25 cycles by a tubular ducted port; frequency response essentially uniform from 45 to 14,000 cps; 30 watts continuous power handling capacity; rated impedance 16 ohms; 26 $\frac{3}{8}$ " x 13 $\frac{3}{8}$ " x 14 $\frac{3}{8}$ "; unfinished, smooth sanded birch (Kit).....\$72.50
 Oiled walnut (Kit).....\$87.50
 Factory wired unfinished birch.....\$84.50
 Walnut\$99.50

Model HSF-4 Speaker System

Identical to HFS-3 except compression driver horn tweeter supplied instead of cone tweeter. Unfinished, smooth sanded birch (Kit).....\$83.50
 Oiled walnut (Kit).....\$98.50
 Factory wired unfinished birch.....\$96.50
 Walnut\$112.50

Model HFS-5 Speaker System

Two-way system; 8" woofer, 10.7 oz. Alnico magnet; and 3 $\frac{1}{2}$ " closed back tweeter; frequency division by high pass capacitor filter at 2000 cps; level control for tweeter; enclosure is of $\frac{1}{4}$ " stock and is



tuned to 45 cycles by a tubular ducted port; frequency response essentially uniform from 52 to 14,000 cps; 25 watts continuous rated power handling capacity; 24" x 12 $\frac{1}{2}$ " x 10". Unfinished, smooth sanded birch (Kit)\$47.50
 Oiled walnut (Kit).....\$59.50
 Factory wired unfinished birch.....\$56.50
 Walnut\$69.50

ELECTRO-VOICE

Model SP12B "Radax Twelve"



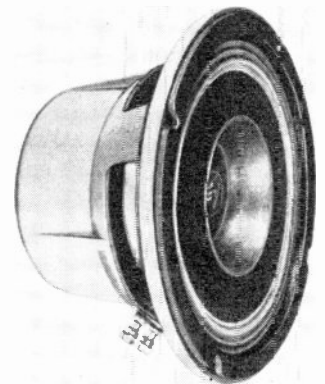
12" dual-cone; capacity 20 watts; response 40-13,000 cps; resonance 40-50 cps; 16 ohms impedance; sensitivity 49 db; 1 lb., 6 oz. ceramic magnet; crossover 4500 cps; baffle opening 11"; depth 6 $\frac{1}{4}$ ".....\$37.50

Model SP-12 "Radax Super-Twelve"



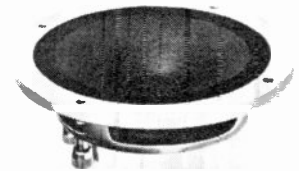
12" dual-cone; capacity 25 watts; response 35-13,000 cps; resonance 35-45 cps; 16 ohms impedance; sensitivity 50 db; crossover 4000 cps; baffle opening 11"; depth 7 $\frac{1}{2}$ "\$70.00

Model SP8B "Radax Super-Eight"



8" dual-cone; capacity 20 watts; response 45-13,000 cps; resonance 50-65 cps; 16 ohms impedance; sensitivity 45 db; 1 lb., 6 oz. ceramic magnet; crossover 6000 cps; required baffle opening 7"; depth 4 $\frac{1}{2}$ "\$32.00

TC8 Dynamic Cone Midrange

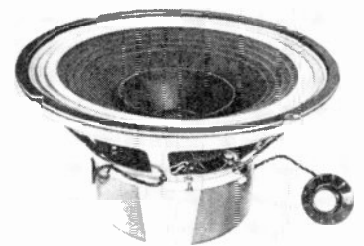


5" dia.; 2 $\frac{3}{4}$ " deep; EIA sensitivity rating 45 db; power handling capacity 20 watts program, 40 watts peak; response 700-15,000 cps.....\$25.00

Model SP15B "Radax Fifteen"

15" dual-cone; capacity 15-20 watts; response 35-13,000 cps; resonance 35-45 cps; 16 ohms impedance; sensitivity 48 db; 1 $\frac{1}{2}$ lb. ceramic magnet; crossover 3500 cps; baffle opening 13 $\frac{1}{2}$ "; depth 7 $\frac{3}{8}$ "\$46.00

Model SP15 "Radax Super-Fifteen"

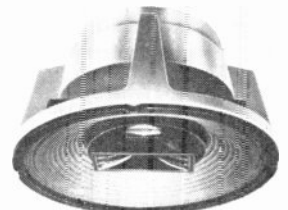


15" dual-cone; capacity 30 watts; response 30-13,000 cps; resonance 25-35 cps; 16 ohms impedance; sensitivity 52 db; 4 $\frac{1}{8}$ lb. ceramic magnet; crossover 3000 cps; baffle opening 13 $\frac{1}{2}$ "; depth 9".....\$95.00

Model 15TRXB

Combines an SP15B with 2000 cps mechanical crossover and integral T35B high-frequency driver; 6 db/octave high-pass filter; level control built-in.....\$85.00

Model 12TRXB 3-Way Speaker

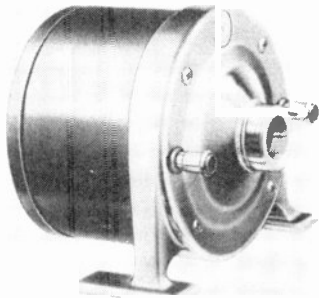


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Speakers & Cabinets

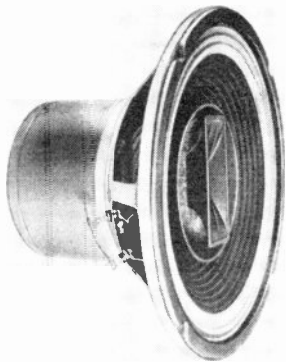
Combines SP12B, T35B high-frequency driver, and integral 6 db/octave crossover with level control; response 40-18,000 cps; 20 watt capacity; 16 ohms; resonance 40-50 cps; sensitivity 49 db; crossovers: 2000 cps mechanical and 3500 cps electrical; woofer magnet 1 lb., 6 oz. ceramic; tweeter 3.16 oz. Alnico V.....\$70.00

Model T250 Treble Driver



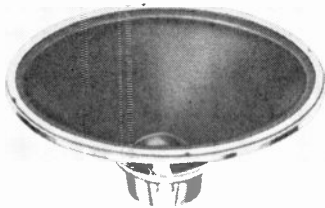
Response 600-3800 cps \pm 2 db; 3 lb. Alnico V magnet; crossover at 800 cps; capacity 50 watts; sensitivity 58 db; 5¹/₁₆" h. x 6¹/₄" w. x 5¹/₂" d.....\$85.00

Model 12TRX



12" three-way combines SP12, T35 high-frequency driver, and integral X36 crossover with level control; 25 watts; response 35-19,000 cps; resonance 35-45 cps; 16 ohms impedance; sensitivity 50 db; mechanical crossover at 2000 cps; electrical crossover 3500 cps.....\$130.00

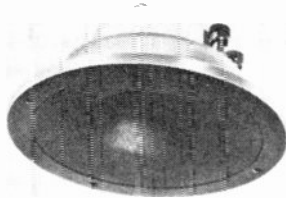
Model 30W Woofer



30" woofer; 9 lb., 4 oz. ceramic magnet; power capacity up to 100 watts program material; frequency response 20-300 cps; 16 ohms impedance; free-air resonance 15-25 cps; recommended crossover 100-300 cps.....\$225.00

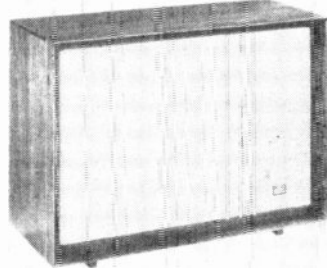
TC35 Dynamic Cone-Tweeter

5" dia. 2³/₂" max. depth; FIA sensitivity rating 42 db; power handling capacity 20 watts program, 40 watts peak; 8 ohms



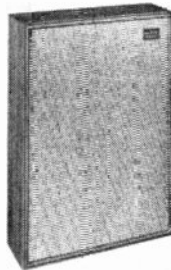
impedance\$25.00

"Royal 440" Speaker System



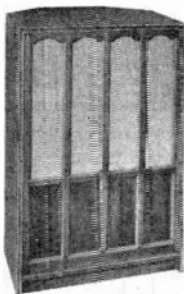
System consists of 18" woofer, 8" cone mid-range, v.h.f. driver with integral diffraction horn; frequency response 30-19,000 cps; 23¹/₂" x 32" x 14³/₄".
Walnut, mahogany, limited oak.....\$249.50
Unfinished birch.....\$199.00

"Regina 200" Speaker System



This system comparable in performance to the "Leyton"; 5¹/₈" deep; has 10" woofer; 800 cps crossover to TC8 5" cone which is mounted in isolated chamber to prevent interaction with rear wave pressure of woofer; response 50-15,000 cps; impedance 8 ohms; power handling capacity 40 watts peak; 24 s" h x 16¹/₂" w. x 5¹/₈" d.; oiled-walnut finish.....\$89.50

"Patrician 800" Speaker System



Uses Model 30W woofer to achieve highest efficiency in the 40 cps region, responds down to 20 cps and lower; mid-bass is achieved by use of 100-cps first crossover frequency with 12 db/octave attenuation on either side; 12" mid-bass speaker in padded, separate enclosure provides uniform response from 100-800 cps; T250 treble driver using 8HD diffraction horn, covers frequency above 800 cps; T350 tweeter extends response to an upper limit of 35,000 cps; although designed for corner operation, can be used in almost any room location; bass enclosure consists of an air-tight 15 cu. ft. chamber behind woofer; 10¹/₂" straight-axis horn with 300 sq. in. throat area and mouth

area of 464 sq. in.; occupies 5.3 sq. ft. of floor space; 51" h. x 33" w. x 27¹/₄" d.; shipping weight 315 lbs.; available in walnut, mahogany, cherry.....\$875.00

"Stereon 850" Speaker System

Three-way speaker system designed to complement "Patrician 800" or "Georgian 400" to expand to stereo; uses mid-bass, treble, and very-high-frequency components of the "Patrician 800" (SP12, T250 with 8HD and T350) with crossover and level controls; response 100-35,000 cps; 17" w. x 16³/₄" x 30" h.; mahogany, walnut, unfinished birch.....\$375.00

Model X1835 Crossover

Full half-section throughout; crossover points 100, 700, 3500 cps; impedances 16 ohms in and out; 17" h. x 9¹/₂" w. x 3³/₄" d.\$80.00

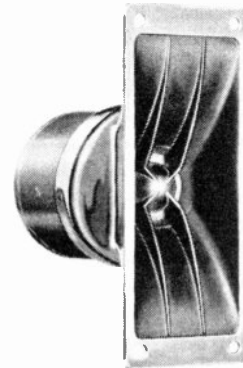
Model X1735 Crossover

Half-section; crossovers at 100, 700, 3500 cps; 17" x 9" x 3³/₄".....\$75.00

Model 15TRX

15" three way; capacity 30 watts; frequency response 30 to 15,000 cps (in E-V Regency enclosure); resonance 35-45 cps; 16 ohms impedance; sensitivity 51 db; magnet 5³/₄ lbs.; mechanical crossover 2000 cps; electrical crossover 3500 cps; AT37 level control and X36 crossover included; depth 6¹/₈"; shipping weight 48 lbs.\$155.00

Model T35

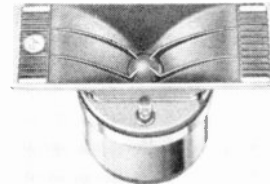


Compression type driver with horn; frequency response to 19 kc; 16 ohms impedance; sensitivity 54 db; 6.8 oz. magnet; crossover 3500 cps; size 2" h. x 5¹/₄" w. x 3¹/₄" d.; driver diameter 2¹/₄".....\$30.00
Model T35B frequency response to 18 kc; for lower efficiency systems.....\$22.00

Model T25A

High-frequency driver; capacity 20-30 watts; response 700-3800 cps \pm 2.5 db; 16 ohms impedance; sensitivity 56 db; 1 lb. Alnico V magnet; 3³/₄" dia.; depth 4¹/₁₆", throat dia. 1¹/₈".....\$58.00

Model T350



Compression-type driver with horn; response to 35,000 cps; 16 ohms impedance; sensitivity 57 db; 1 lb. magnet; crossover 3500 cps; 27¹/₂" h. x 7¹/₂" w. x 4¹/₂" d.; driver diameter 3¹/₂".....\$65.00

Model AT37 Level Control

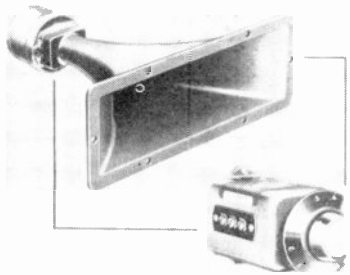
16-ohm "L" pad; sets output levels in multi-speaker systems to individual taste.\$3.90

Model LS12 12" Speaker



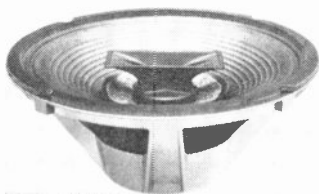
Response 40-13,000 cps; EIA sensitivity rating 43 db; free-air resonance 65 cps; power handling capacity 20 watts program, 40 watts peak; impedance 8 ohms; mechanical crossover 6000 cps; 8 3/8" dia., 3 1/2" deep; 7 1/8" baffle opening.....\$21.00

Model MF1 Mid-Range Step-Up Kit



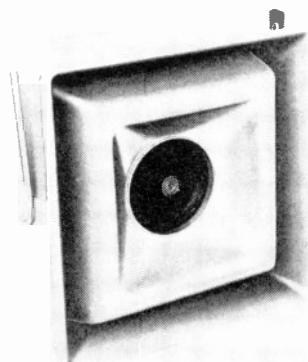
Provides increased output in presence range; consists of MR10 driver and CR10 crossover-level control; requires baffle opening 9 1/2" x 3".....\$29.00

Model LT12 12" Speaker



Three-way speaker; combines design features of Wolverine full-range speakers plus "deep-dish" cone and HF1 tweeter; response 40-18,000 cps; power handling capacity 20 watts program; free-air resonance 65 cps; EIA sensitivity 45 db; impedance 8 ohms; mechanical crossover 2000 cps; electrical crossover 3500 cps; built-in crossover and three-position tonal balance switch; 12 1/4" dia., 5 1/2" deep.....\$32.00

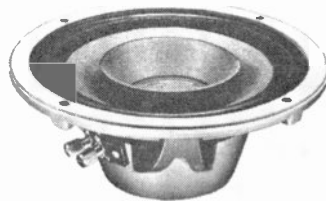
"Musicaster" Outdoor Speaker



Weatherproof speaker for outdoor use; frequency response 60 to 13,000 cps; impedance 8 ohms; dispersion 120°; uses back loaded folded horn design; diecast aluminum horn; 21 1/2" h. x 21 1/2" w. x 8 1/2" d.; shipping weight 25 lbs.....\$54.00

Wolverine LS8 8" Speaker

Dual-cone 8" wide-range speaker; response



40-13,000 cps; power rating 20 watts; resonance 65 cps; impedance 8 ohms; 3 1/2" deep.....\$19.50

Model 8HD Diffraction Horn

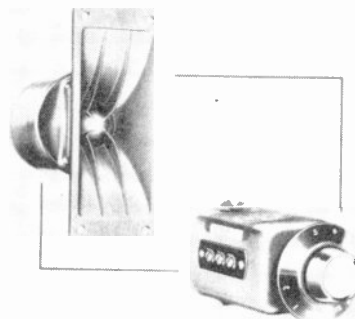
Diffraction principle effects 120° dispersion; crossover 700-800 cps; cut-off 600 cps; mounting hardware included for T10A & T25A drivers; 15" h. x 4 1/2" w. x 8 1/4" d.....\$19.00

Model BB1-BB8 Building Block Kits

Additive kits to expand mid- and high-frequencies of existing system; each package is complete with matched crossover unit, AT37 level control, wiring harness, and full instructions.

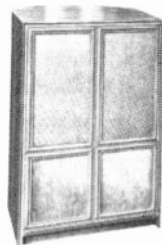
- BB1 Tweeter (T35, X36).....\$45.00
- BB4 Mid-Range (T25A, 8HD, X8).....\$107.00
- BB5 Tweeter (T350, X36).....\$79.00
- BB6 Mid-Range (T250, 8HD, X8).....\$142.00
- BB7 Tweeter (T35, X36).....\$39.50
- BB8 Mid-Range (T35, X8).....\$63.00

Model HF1 High-Frequency Step-Up Kit



Extends range beyond audible limit; consists of TW35 tweeter and CR35 crossover-level control; requires opening 1 3/4" x 4 1/4".....\$25.00

"Georgian 400" Speaker System



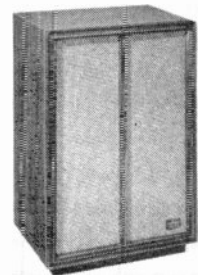
Completely compression-operated four-way system; uses 18W 18" low-frequency driver which crosses over at 250 cps to 8" speaker which reproduces mid-bass range; 800 cps crossover feeds frequencies from 800-3500 cps into T25A driver with 8HD diffraction horn; above 3500 cps the T350 "Super Sonax" v.h.f. driver takes over to provide extended high frequencies out to and beyond the range of audibility; system includes crossover network using full half-sections throughout and three AT37 L-pad attenuators for adjustment of presence and brilliance to balance room acoustics; impedance 16 ohms; power handling capacity 35 watts program, 70 watts peak; available in walnut, mahogany, cherry;

42" h. x 28" w. x 21" d.....\$495.00

"Marquis 300" Speaker System

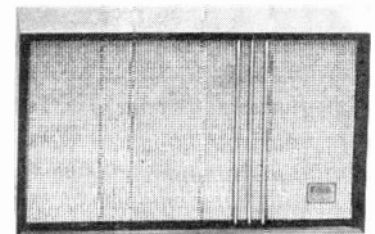
Combines features of compact low-resonance units with full-sized high-efficiency systems; direct radiator acoustical phase inverter forming three-way system; components include Model AP12B "Radax" coax crossing over at 800 cps through X8 network to TCS dynamic cone mid-range; crossing over again at 3500 cps through the X36 to the dynamic high-frequency compression-type T35 tweeter; two separate AT37 pads provide level adjustments; oiled-walnut or mahogany; 29 1/2" h. x 19" w. x 15 1/4" d.....\$190.00

"Marquis 63" Enclosure



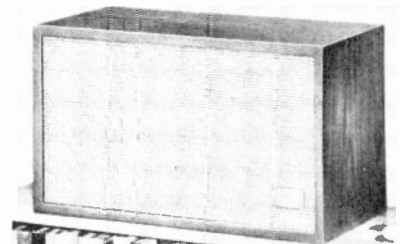
Designed to produce optimum results with separate 12" driver, full-range coaxial, and extended range three-way speaker system; enclosure only; 29 1/2" h. x 19" w. x 15 1/4" d.; mahogany or oiled-walnut.....\$70.00

"Regal 300" Speaker System



Bookshelf design with 12" foam-cone woofer; electrical crossover 200 cps; 8" cone-type mid-range mounted in isolated chamber; compression-type diffraction horn-loaded high-frequency driver takes over at 3500 cps; 70 watts program material; response 35-19,000 cps; 8 ohms; 14" h. x 25" w. x 13 1/2" d.; available in walnut or mahogany.....\$179.00
Unfinished birch 14" h. x 23 1/2" w. x 12" d.\$149.00
Kit version including all speakers & components; 14" h. x 23 1/2" w. x 12" d.....\$125.00

"Leyton 100" Speaker System

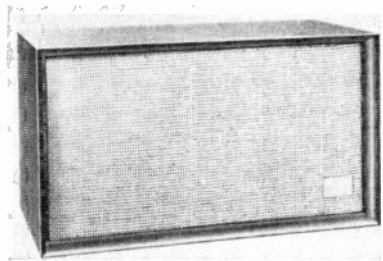


Bookshelf, two-way design using 10" woofer, electrical 800 cps crossover; 5" mid-range speaker mounted in isolated chamber to prevent interaction; response 50-15,000 cps; 8 ohms; power capacity 25 watts program material; 14" h. x 25" w. x 12" d.; walnut or mahogany.....\$89.50
Unfinished birch.....\$84.00

"Esquire 200A" Speaker System

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Speakers & Cabinets



Bookshelf design using 10" woofer; electrical 800 cps crossover; 5" cone-type mid-range mounted in isolated chamber to prevent interaction; compression-type diffraction horn-loaded high-frequency driver that takes over at 5000 cps; response 40-19,000 cps; 8 ohms; power capacity 30 watts program material; 14"h. x 25"w. x 13½"d.; available in walnut or mahogany\$136.00
Unfinished birch 14"h. x 23½"w. x 12"d.\$110.00
Kit version with all speakers & components; 14"h. x 23½"w. x 12"d.\$93.00

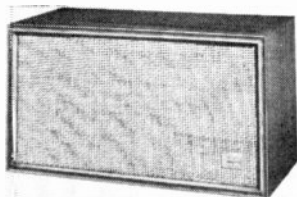
KD Enclosure Kits

Kits of pre-cut clear-grain birch for building standard EV enclosures; complete with glue, screws, and detailed instruction book. KD6 "Aristocrat"; takes 12" full range speakers or 2- and 3-way systems using 12" woofers; 36 lbs.\$39.00
KD9 "Marquis"; takes all 12" speakers plus EV Models BB1, BB4, BB5, BB6, BB7, and BB8 building-block kits; 29½" h. x 19"w. x 14½"d.\$36.00

System Component Packages

Model 103G Deluxe 4-way components as used in "Patrician 800" including 30W, T250, special SP12, T350, three AT37, 811D, X1835, plus wiring harness \$552.00
Model 104 Deluxe 4-way components as used in "Georgian" including 18W, special SP8, T25, T350, three AT37, 811D, X1835, plus wiring harness.....\$355.00
Model 105 Three-way components as used in "Regency 400" including special 15" woofer, two TC8, T35, X8, X36, two AT37, plus wiring harness.....\$225.00
Model 106 Three-way components as used in "Marquis 300" including AP12B, TC8, T35, X8, X36, two AT37, plus wiring harness\$145.00

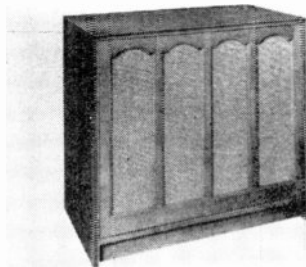
"The Princess" Two-Way Speaker System



Features 8" x 12" bass speaker with 5" cone high-frequency speaker; response 60-15,000 cps; crossover 2000 cps; power capacity 20 watts program; impedance 8 ohms; 10½"h. x 19½"w. x 8½"d.; walnut\$53.00

"Regency 400" Speaker System

Features a 15" woofer with 800 cps crossover into two 5" dynamic cone-type TC8 mid-range speakers which cross over at 3500 cps to a T35 diffraction-type tweeter; attenuation 12 db per octave; two AT37



level controls; impedance 8 ohms; power handling capacity 35 watts program, 70 watts peak; 30"h. x 32"w. x 17½"d.; classic or traditional styling; walnut or mahogany\$265.00

"Regency" Enclosure

Designed for 15" series Radax coaxial and three-way units; either B series or deluxe series may be used; can be used later with appropriate Building Block Kits to expand into multi-way system; enclosure only; 32"w. x 17½"d. x 30"h.; walnut or mahogany.\$140.00

Enclosure Construction Plans

Model 1B6 "Aristocrat".....\$1.00
Model 1B9 "Marquis".....\$1.00
"Regency" plans\$1.00
"Patrician" plans\$1.00

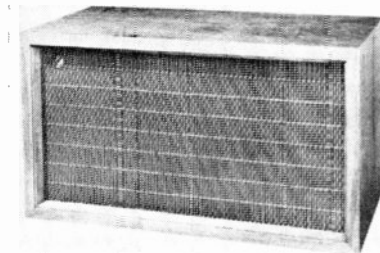
EMI

Stereoscope Model DLS-1

Monitor loudspeakers with built-in amplifiers; EMI 25-watt amplifier (0.1% distortion) is installed in the base of each column enclosure; requires use of 4 adjustable frequency correcting networks to attain uniform frequency response 30-15,000 cps (adjusted at factory); woofer cone resonance 25 cps; 2 tweeters; by arranging the 3 speakers vertically one above the other, the horizontal polar characteristic is maintained uniformly over a wide range of frequencies; column is mounted on 4 casters so it can be moved easily; 50"x 13¼"x17"; wt 110 lbs.....\$594.00

Model DLS 529 Speaker System

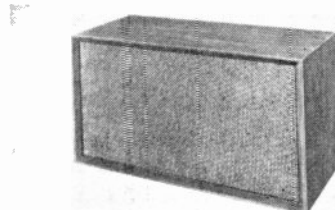
Bookshelf type; walnut veneer with metal grille; 24"x13"x12¼" d; combines one woofer (13 1/2"x8 1/8" elliptical driver with aluminum cone, plastic suspension) and



two 3½" tweeters; crossover operates from 4500 cps upward; response 40-15,000 cps; high-efficiency-type system; made by EMI of England.....\$159.00

FISHER

Model XP-1A Speaker System



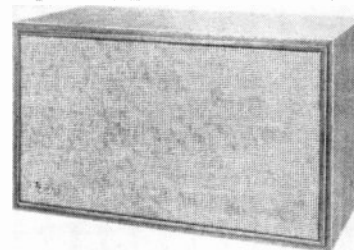
Consists of 12" woofer, 5" mid-range,

3½" cone tweeter; crossover has air coils and oil-filled capacitors; woofer can be used independently; power capacity 60 watts; frequency response 30 cps—inaudibility; brilliance control rear of cabinet; 13½" x 24" x 11¼"; 40 pounds.
Walnut, mahogany, cherry.....\$129.50
Unfinished birch\$124.50

Model XP-2A Speaker System

Three-way system with 10" bass speaker, 5" mid-range, and 3½" tweeter; three-way crossover; 22" x 12" x 11¼" deep; similar in appearance to Model XP-1A; available in mahogany, walnut, cherry.....\$84.50
Unfinished birch\$79.50

Model XP-4A 3-way Speaker System



Four speakers, 12" woofer with 2" voice coil, 2-5" mid-range, 2" hemispherical high-frequency unit covering angle of 120 degrees; balance controls for middle and high frequencies; 3-way crossover; 8 ohms; response 30 cps to beyond audibility; 12½" x 24½" x 14".
Mahogany, walnut or cherry.....\$199.50
Unfinished birch.....\$189.50

Model KS-1 "StrataKit" Speaker System



Three speakers, 10" woofer with 4½ lb. magnet structure, 5" mid-range, 3" super-tweeter; three-way crossover; response 40-18,000 cps; "Slim-Line" design; 18" x 24" x 5¼" deep; kit.
Unfinished birch\$59.50
Unfinished walnut\$64.50
Assembled finished birch\$84.50
Assembled finished walnut\$89.50

GOODMANS

"Triaxiom" Series

Complete range of three-way speakers for every preference and budget; response 20-20,000 cps (unless noted otherwise); "Rigidflex" woofer cones; axially mounted compression tweeter.
Triaxiom 8 (8", 40-20,000 cps, 15 watts)\$ 29.50
Triaxiom 208 (8" cone resonance 35 cps, 20 watts)\$ 54.50
Triaxiom 100C (12", 20 watts)....\$ 34.50
Triaxiom 175C (12", 25-50 watts)\$ 49.50
Triaxiom 212 (12", cone resonance 35 cps, 25 watts).....\$ 69.50
Triaxiom 215 (15", cone resonance 25 cps, 30 watts).....\$ 79.00
Triaxiom 412 (12", cone resonance 35 cps, 35 watts).....\$ 92.50

STEREO/HI-FI DIRECTORY

Triaxiom 612 (12", cone resonance 35 cps, 45 watts).....\$126.00
 Triaxiom 615 (15", cone resonance 25 cps, 50 watts).....\$147.00
 Twinaxiette 8 (8" twin-conc, 40-18,000 cps, 15 watts).....\$ 18.95

Axiette II 8 Speaker

8" speaker; frequency response 40 to 15,000 cps; hyperbolic cone; power rating 15 watts\$27.00

Axiom 450

Twin cone wide-range 12" speaker; plastic-impregnated cone suspension; free air resonance 35 cps; power rating 45 watts\$89.00
 Twinaxiom 200C (12" twin-conc, 30-18,000 cps, 40 watts, 16 ohms).....\$24.50
 Twinaxiom 175C (12" twin-conc, 30-18,000 cps, 60 watts, 16 ohms).....\$34.50
 Axiom 350 (same as 450 except power rating 35 watts).....\$68.50

Model 1DM-30 Mixer/Dividing Network

Designed to work with one or two "Stereospheres"\$39.50

Axiom 80

9½" speaker, 20 to 20,000 cps; 15 watts peak power handling; fundamental resonance 20 cps; flux density 17,000 gauss; utilizes 3 pairs of double action cantilevers to provide a custom built, hand assembled, true free-edge cone speaker to handle lowest bass tones with minimum distortion\$68.50

Audiom 652

12" woofer; cone resonance 30-35 cps; total flux 240,000 maxwells; 3" voice coil diameter; power rating 35 watts\$69.50

Audiom 755

15" woofer; total flux 240,000 maxwells; cone resonance 25 cps; 3" voice coil; power rating 40 watts.....\$78.00

Trebax 50XL Tweeter

High-frequency pressure driver supplied with built-in Hypelliptical horn (and 12 db twin half-section professional crossover network with constant impedance L pad); driver is custom assembled, employing 1" aluminum voice coil; diaphragm is a self-aligning assembly with air chamber and phase equalizer; range 2500-25,000 cps; 50 watts capacity; 16 ohms.....\$46.50

Trebax 35XL Tweeter

Same as 50XL, but designed to handle 35 watts in two- or three-way systems.....\$39.50

DL-1 Tweeter

Compression design; 2500 cps to beyond audibility; built-in crossover at 5000 cps; 25 watts; 16 ohms.....\$12.95

Model S10-30 "Stereosphere" Speaker



Omnidirectional speaker for reproduction

of frequencies from 300-20,000 cps; can handle 30 continuous watts; largest dimension is 10".....\$79.50

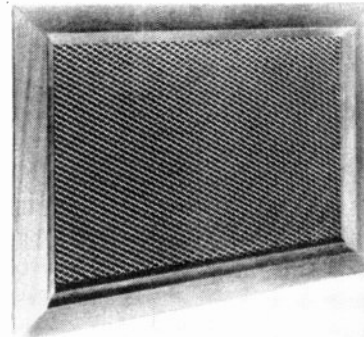
Midax H-750 Mid-Range

Mid-frequency pressure-driven horn-loaded speaker; recommended crossover frequencies at 750 and 5000 cps; casthorn; replaceable self-centering diaphragm; power rating 50 watts.....\$58.50
 Midax H-950 (same as above except smaller horn; recommended crossover frequencies at 950 and 5000 cps).....\$48.50

Alpha Cabinet

Enclosure can be placed horizontally or vertically; ideal in pairs for stereo; houses Goodmans full-range 8" driver and 3½" cone tweeter; response 40-17,000 cps; capacity 15 watts; genuine walnut or mahogany finish\$49.95

Acoustical Resistance Units



Special design acoustical resistance unit for speaker enclosure; reduces the enclosure space required for bass reflex by 1/3; extends bass response down to 20 cps with speakers having cone resonance of 40 cycles or less; effectively loads speaker to zero cps.

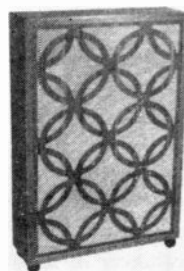
Model 172 (10½" x 10").....\$10.90 Net
 Model 180 (12" x 7").....\$11.75 Net
 Model 280 (14" x 10").....\$14.35 Net
 Model 480 (17½" x 13½").....\$17.40 Net

Crossover Networks

Crossover units designed for use in Goodmans 2- and 3-way speaker systems; model numbers indicate the crossover points; half section L/C networks; 12 db per octave roll-off beyond crossover frequency; all terminals 16 ohms.

Model 5KVL-5000 (with harness, escutcheon, control).....\$5.95
 Model XO-5000\$ 8.50 Net
 Model XO-750\$25.00 Net
 Model XO-750/5000\$30.00 Net
 Model 950/5000\$28.00
 Model 5000V (with L pad).....\$13.50
 Model 950V (with L pad).....\$27.50
 Model C527VL-300, 600, 1250/2500 3750/7500 (6 db per octave, with variable h.f. control)\$17.95

Model G Series Speaker Systems



All systems acoustically lined and supplied with crossover networks; tuned-port design; supplied in walnut; ¾" stock.

G-1 8" driver, 6" closed-back mid-range, 3½" tweeter; response 40-17,000 cps; 20 watts; 16 ohms; 25" x 17" x 5"¼\$56.50

G-2 10" driver, 6" closed-back mid-range, 3½" tweeter; response 40-17,000 cps; 20 watts; 16 ohms; 25" x 17" x 6¼"\$59.50

G-3 Three 8" driver woofers, 6" closed-back mid-range, 3½" tweeter; response 40-17,000 cps; 45 watts; 16 ohms; 25" x 17" x 5¼"\$79.50

G-4 Three 10" woofers, 6" closed-back mid-range, 3½" tweeter; 40-17,000 cps; 60 watts; 16 ohms; 28" x 20" x 6¼"\$89.50

Model 6120 Speaker Enclosure

Bookshelf design; finished all four sides; will accommodate all Goodmans 12" Triaxial speakers; walnut finish; 25" x 17" x 12".....\$39.50

Model 6150 Speaker Enclosure

Same as Model 6120 but larger; will accept Goodmans 12" or 15" Triaxial speakers; 28" x 20" x 12".....\$49.95

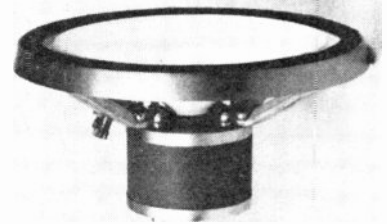
HARTLEY

Model XP 10" Speaker

Full range speaker with polymerized cone; built-in high-frequency propagator; 20 watts; frequency response 35-20,000 cps; 8 ohms impedance; 5 lb. Alcomax II permanent magnet; flux density 13,000 gauss; diaphragm displacement ½" \$75.00

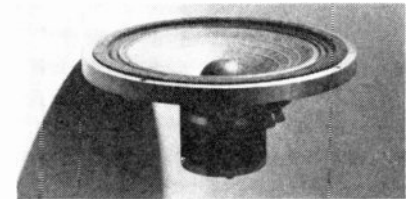
Model 220 MS 10" Speaker

Full-range speaker; heavy cast-aluminum basket; 5¼ lb. Alcomax II magnet;



16,000 lines/sq. in. flux density; tripolymer cone with magnetic suspension; 8-ohm voice coil; response at low end to 16 cps.....\$135.00

Model 312 12" Speaker

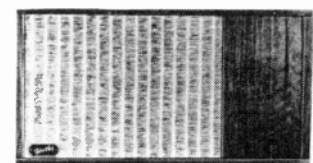


Cast aluminum frame; polymerized cone; double-U cloth suspension; 5¼ lb. magnet; full-range 25-20,000 cps; 8 ohms\$99.95

Model 310 Speaker

Chemically treated polymerized paper-cone version of Model 220MS speaker less "Magnetic Suspension".....\$85.00

Capri Shelf Model Enclosure



Totally enclosed cabinet containing 35"

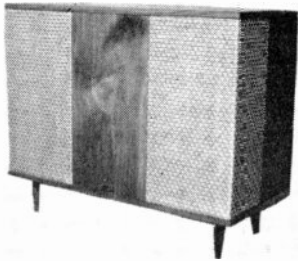
5

Speakers & Cabinets

absorbent material: 24" x 13½" x 12"; in oiled natural walnut with bamboo grille, finished on all sides.

With Model 310 speaker.....\$120.00
With Model 220MS speaker.....\$180.00

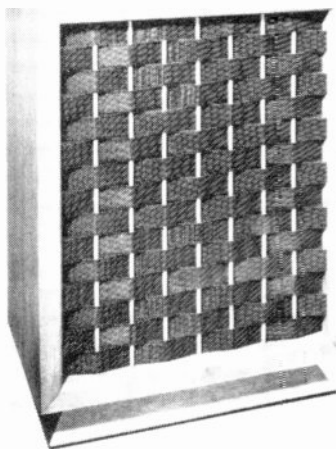
Duo Enclosure



Speaker mounting boards are angled out to allow direct radiation and wall reflection for stereo diffusion: 36"x30"x15".

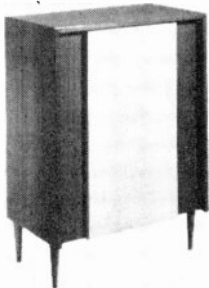
Finished cabinet.....\$125.00
Unfinished birch.....\$ 99.00

"Grand" Enclosure



Interior is designed with a built-in two-stage acoustic filter approximating an infinite baffle; accommodates up to four wide-range speakers; modern or traditional styling: 38" h. x 28" w. x 18" d.; mahogany, walnut or blonde.....\$250.00

Holton "A" Enclosure



For use with 220MS speaker; heavily braced, damped cabinet in natural woods: 24"x13"x34" over-all dimensions including legs.

Cabinet with 220MS speaker.....\$245.00
Cabinet with 310 speaker.....\$195.00
Cabinet with 312 speaker.....\$215.00

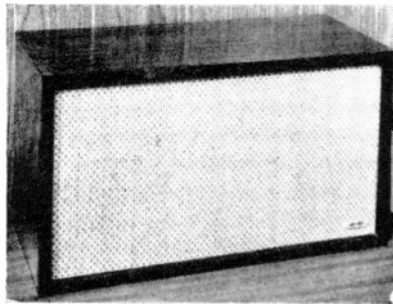
Holton, Jr. Speaker System

Uses Model 220MS speaker: oiled, rubbed walnut finish with cane front grille; also available with new 310 speaker which is chemically-treated version of Model 220-MS; frequency response 25-25,000 cps.; power capacity 25 watts; Model 310 speaker has dome-shaped center high frequency radiator; 10" diameter; 30"x15" x12" over-all dimensions.

With Model 220MS speaker.....\$195.00
With Model 310 speaker.....\$135.00
With Model 312 speaker.....\$155.00

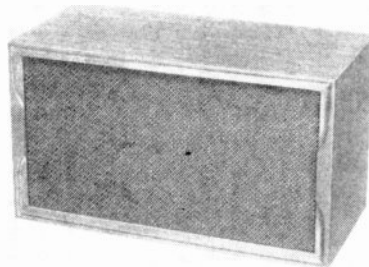
HEATH

Model AS-2U Acoustic Suspension System



Frequency response 40-15,000 cps 5 db; crossover frequency 1000 cps; recommended amplifier power 20-40 watts; 2-5" cone tweeters mounted in array; 10" acoustic suspension woofer has 1.1 lb. Alnico V magnet; resonant frequency mounted 58 cps; horizontal dispersion 90 degrees; shpg. wt. 44 lbs.
Model AS-2U (kit unfinished).....\$72.95

Model AS-10 Acoustic Suspension System



Utilizes acoustic suspension principle licensed by Acoustic Research, Inc.; 10" acoustic suspension bass speaker and two 3½" cone-type high-frequency speakers, housed in infinite baffle enclosure, covering 30-15,000 cps; "dispersal-array" of tweeter permits either upright or horizontal operation; high-frequency control allows adjustment of highs; cabinets are factory-assembled and finished on four sides; kit assembly involves wiring simple crossover network and installing speakers; 39 lbs.

Model AS-10U (unfinished).....\$59.95
Model AS-10W (walnut).....\$64.95

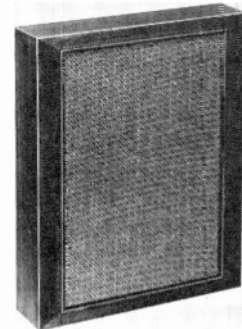
Model AS-21 "Legato-Compact" System

New speaker system retains performance characteristics of the earlier model while adding contemporary styling and compact size; two 12" Altec Lansing low-frequency speakers cover 30-800 cps; Altec Lansing exponential horn and high-frequency driver cover 800-22,000 cps; high-efficiency speakers permit use of 3-watt amplifiers to drive system; factory-assembled cabinets in pre-finished walnut or unfinished birch; cabinets of ¾" furniture-grade plywood; crossover network factory wired; 32" x 19" x 32½"; 132 lbs.
Model AS-21U (unfinished).....\$189.95



Model AS-21W (walnut).....\$239.95
All components except cabinet for custom installation\$184.95

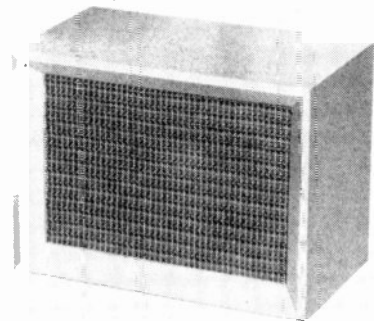
Model AS-22 "Profile" System



Slim design; 5" deep; will stand on floor, set vertically or horizontally on table or bookshelf, or hang on wall; 3-way system; 10" woofer, 6" mid-range, 3½" tweeter; closed back; factory assembled; weight 31 lbs.

Model AS-22U (unfinished white-wood)\$49.95
Model AS-22W (walnut).....\$54.95

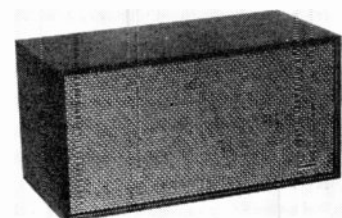
Model ASW-41 Speaker System



Measures 11"w. x 8"h. x 6½"d.; completely factory-built in finished or unfinished cabinets; features 6" x 9" extended-range dual-cone speaker, 6.8 oz. magnet; response 60-16,000 cps; handles 12 watts peak; impedance 8 ohms; for use as extension speaker or for converting mono system to stereo; 8 lbs.

Model ASW-41U (unfinished).....\$10.95
Model ASW-41W (walnut).....\$12.95

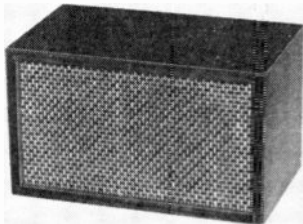
Model AS-51 Speaker System



Ducted-port bass reflex bookshelf style enclosure; frequency response: 50 to 12,000 cps ± 5 db; power rating: 25 watts of program material; impedance: 16 ohms; 8" Jensen low-frequency speaker with 6.8 oz. Alnico V magnet, Jensen high-frequency horn-loaded compression driver with 4.7 oz. Alnico V magnet; built-in high pass filter and L-pad; $\frac{1}{2}$ " plywood; assembled cabinet 11 $\frac{1}{2}$ " h. x 23" w. x 11 $\frac{1}{4}$ " d.

Model AS-51U (unfinished kit).....\$39.95
Model AS-51W (walnut kit).....\$46.95

Model AS-81 Miniature Speaker System

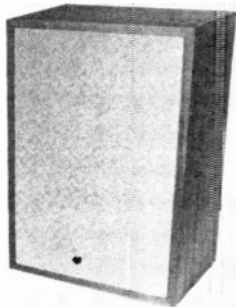


Frequency response 65-14,500 cps ± 6 db; dual system; 6" woofer with 10 oz. Syn-ox magnet, 3" tweeter; 6 watts peak-power capacity; 8 ohms impedance; 10 $\frac{1}{4}$ " x 6 $\frac{1}{2}$ " x 6 $\frac{1}{8}$ "; cabinet is furnished assembled; speakers separate.

Model AS-81U (unfinished).....\$17.50
Model AS-81W (walnut finish).....\$19.95
Model AS-81M (mahogany finish).....\$19.95

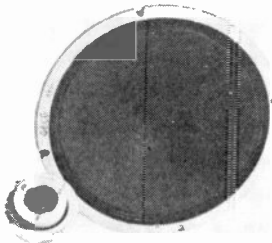
IMF

"Styrene Pressure" Speaker System



Freely suspended 12" molded plastic cone woofer; expanded from the rear to convex front surface; three highly compliant suspensions; impregnated fabric tweeter; pressure diffusion slits insure freedom from breakup, extend frequency response, and provide smooth dispersion pattern; system response from below 25 cps to over 18,000 cps; impedance 16 ohms; oiled-walnut cabinet; 25 $\frac{1}{2}$ " x 11 $\frac{1}{2}$ " x 16 $\frac{1}{2}$ "......\$200.00

"Standard Pressure" Speaker



Uses quality felted paper woofer with new plasticized edge termination; phase-loaded pressure driver for treble; response 40-16,000 cps; drivers only with plans for cabinet\$55.00
System in oiled-walnut cabinet; 25 $\frac{1}{2}$ " x 11 $\frac{1}{2}$ " x 16 $\frac{1}{2}$ "......\$90.00

Styrene Woofer

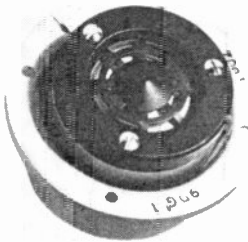
Uses polystyrene mass cone; diaphragm

1963 EDITION



outwardly bowed, 3 $\frac{1}{2}$ " thick at apex; designed for cabinets 1.5 to 2.5 cubic feet; power handling 30 watts; free-air resonance 20 cycles; 16 ohms.....\$120.00

Pressure Tweeter

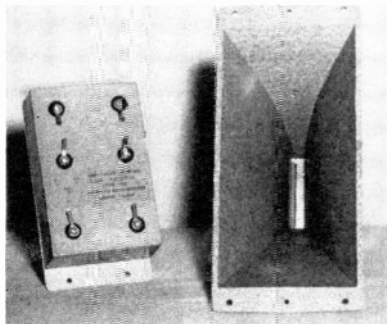


Impregnated fabric diaphragm; pressure loaded; 1500-15,000 cps ± 2 db; very wide dispersion angle; designed to be used with IMF Styrene and Standard woofers\$25.00

"Mark III" Woofer

12" direct-radiator woofer designed to match Ribbon High-Frequency driver; impregnated, curvilinear cone with varying density to give smooth response 30-5000 cps; slug-type magnet of semi-columnar material; woofer designed for use in 4 cubic foot cabinet\$60.00

Ribbon High-Frequency Speaker

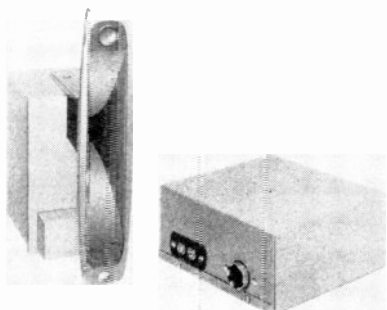


Horn-loaded ribbon design; range 2000-20,000 cps ± 2 db; matches to any woofer; for best results recommended for use with Mark III woofer; with crossover will handle 30 watts; with crossover\$70.00

IONOVAC

Model DuK-5

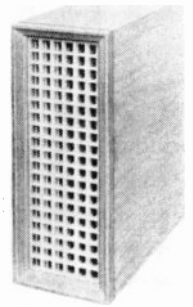
High-frequency tweeter & power supply; response 3500-20,000 cps; employs no



moving parts; produces sound by electrically charging air by means of sound-generating cell; horn is 9" high; power supply 2 $\frac{3}{8}$ " x 2 $\frac{3}{8}$ " x 5 $\frac{1}{8}$ "\$69.00

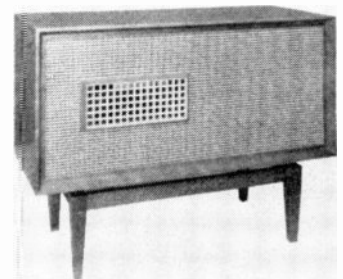
Model DuK-10

"Add-On" speaker baffle unit consisting of Model DuK-5 high-frequency speaker and power supply; modulator and horn built into baffle with acoustic lens; 13 $\frac{1}{2}$ " x 11".....\$79.50



Model DuK-20

Compact, full-range speaker system; can be used as bookshelf unit, upright for floor mounting; horizontally on thin-line legs (end-table height); speakers include



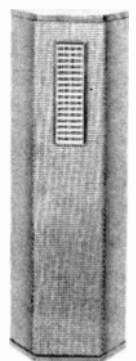
Model DuK-5 high-frequency tweeter, two mid-range speakers covering 800-3500 cps; one 12" high-compliance woofer; 30"x14"x13"\$187.50
Stand for Model DuK-20.....\$ 15.00

Model DuK-30

Wide-range columnar for corner mounting; includes Model DuK-5 tweeter, two mid-range speakers, one 12" high-compliance woofer; speaker baffle designed specifically for corner mounting; similar in shape to Model DuK-40; 48"x15 $\frac{1}{2}$ " x 11".....\$199.50

Model DuK-40

"Stereo-Vac" small, columnar-type baffle housing the Model DuK-5 tweeter in addition to a specially engineered 8" high-compliance loudspeaker for all frequencies below 3500 cps. Unit measures 37" high x 12 $\frac{1}{2}$ " wide x 9 $\frac{1}{2}$ " deep; similar to Model DuK-30 above\$149.50



Model DuK-50

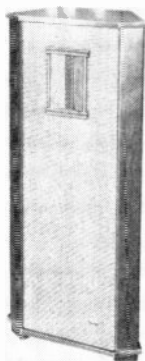
Wide-range bookshelf speaker system; includes Model DuK-5 tweeter plus specially engineered 8" high-compliance speaker for all frequencies below 3500 cps.....\$139.50
Models 10 through 50 available in variety of fine woods with decorator tones.

Model DuK-60

Full-range 3-way system; impedance 8 ohms; crossovers 800 & 3500 cps; 40 watts; tweeter is an Ionovac (ionized air) type design; mid-range 8" direct radiator; woofers, two 12" high-compliance, 2" voice-coil designs; system incorporates two

5 Speakers & Cabinets

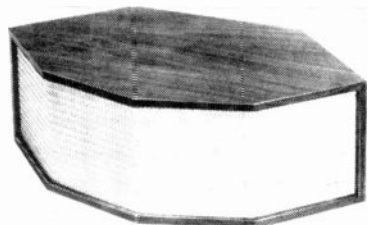
variable controls for level adjustment of "mids" and "highs"; available in walnut,



cherry, mahogany, blonde finishes: 51" h. x 21" w. x 13" d.; wt. 68 lbs.....\$246.00

JANSEN

Model 130 Tweeter

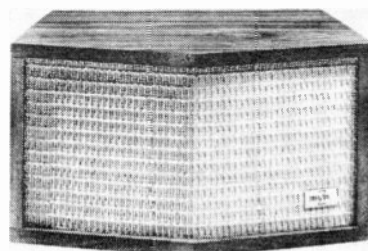


Push-pull, constant charge electrostatic tweeter; capacity 50 watts; frequency response 500 to 30,000 cps; harmonic distortion less than 0.5% at 50 watts input below 10,000 cps; dispersion 120°; a.c.-operated bias supply, LRC high-pass filter; power supply draws 2 watts, 117 volt 60 cycle a.c.; size 7¼" x 22" x 13"; shpg wt 16 lbs.

- Model 130B (Birch).....\$179.00
- Model 130M (Mahogany).....\$184.00
- Model 130W (Walnut).....\$188.00
- Model 130UA (Flat Black).....\$169.00
- Model 130U (Flat Black in rectangular cabinet 7¼" x 23½" x 10").....\$161.00

Model 65 Tweeter

Lower priced version of Model 130; 2 push-pull radiating elements; frequency response 700 to 30,000 cps; maximum input 50 watts; LRC high-pass filter crossover; distortion less than 0.5% harmonic

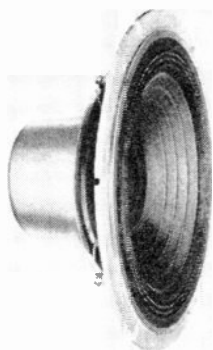


at 50 watts below 10,000 cps; high frequency dispersion 60°; impedance 8 ohms; power consumption 2 watts; 12¼" w x 6¼" h x 8½" d.

- Model 65M (Mahogany).....\$89.50
- Model 65B (Birch).....\$89.50
- Model 65W (Walnut).....\$91.50
- Model 65UA (Flat Black).....\$86.00

Model 350 Dynamic Woofer

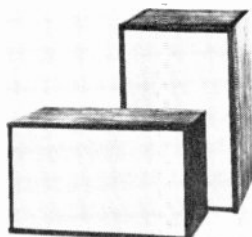
11" cone woofer designed for use with



2.2-cubic foot (or larger) fiberglass-filled enclosure; frequency range 30 to 2000 cps with mechanical roll-off above 2000 cps; fundamental woofer resonance 40 cps; magnet structure weighs 3¼ lbs.; flux density 10,800 gauss; power handling: up to 100 watts peak on complex music; impedance 8 ohms.....\$37.00

Model Z-400 Shelf Speaker

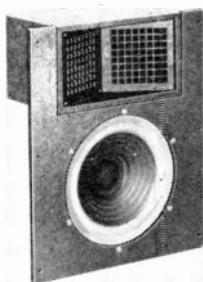
Combination high range electrostatic and 11" woofer; each electrostatic element has 176 push-pull sheathed conductors; woofer is sealed in enclosed fiberglass-filled baffle; power handling capacity up to 100 watts



on music; magnet weighs 3¼ lbs.; frequency response 30-30,000 cps; LRC high-pass filter for tweeter only; crossover region 1000-2000 cps; high frequency dispersion 60°; impedance 8 ohms; 15" x 26" x 13¼"; 54 lbs.

- Model Z-400M Mahogany.....\$159.50
- Model Z-400B Maple (birch finish)\$159.50
- Model Z-400OW Oil Walnut.....\$159.50
- Model Z-400W Lacquer'd Walnut \$159.50
- Model Z-400U Utility.....\$144.50

JanKit 41

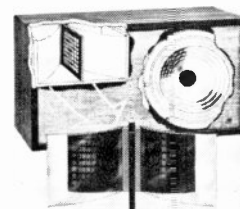


Consists of electrostatic two-element model mid/high frequency driver supplied in cabinet and Model 350 woofer both mounted on single panel mounting board; designed for custom installations; cabinet should be at least 2 cubic feet in volume; over-all dimensions 19½" h. x 16" w. x 7½" d.\$99.95

Model Z-500 Speaker System

Single push-pull radiator version of electrostatic mid/high-range tweeter combined with 11" dynamic woofer; response 30-30,000 cps; 72° sound dispersion of tweeters; sound from both sides of flat radiator deflects toward listener from para-

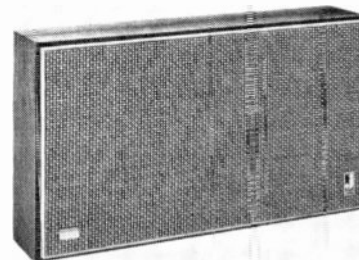
bolic curved walls that form tweeter housing; built-in power supply and high-pass filter drive electrostatic tweeter; 24¼" l.



x 13½" h. x 11⅝" d.; available in walnut, mahogany, maple, or birch; prices start at\$124.95

JENSEN

Model 3-P Series Speaker Systems



Super-slim designs for floor, shelf, or wall mounting; five speakers identical to Model 3-P/K speaker system kit. Model 3-P/1 oiled walnut, 13⅞" x 25" x 5½"\$119.50 Model 3-P/2 oiled-walnut, 28⅞" x 21¼" x 3⅞"\$139.50

Model 3-P/3 Speaker System

Special decorator styles available in Danish, Provincial, and Traditional; 16¼" x 25½" x 11⅝"; has five-speaker system identical to Model 3-P/K speaker kit\$159.50 Model 3-P/3U utility model, unfinished gum wood\$129.50

Model ST-979

Matching bases in same wood and styles\$9.95

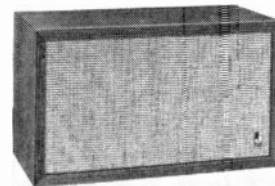
Model 3-P/K Speaker System Kit

For custom installation; complete kit of five speakers and crossover network; includes 3-P/W1 woofer, M-80 midrange, two TW-40 tweeters, E-10 ultra tweeter, and M-1473 crossover network; has H.F. control, vent tube for enclosure; range 20 cps to beyond audibility; crossover at 600, 4000, and 10,000 cps; 25 watts; 8 ohms\$97.50

Model TF-2 Speaker System

Bookshelf three-speaker, two-way system; P10-RIF woofer; two P35-VAM tweeters; range 25-14,000 cps; crossover 2000 cps; 20 watt rating; 8 ohms; H.F. balance control on rear; 13½" x 23¼" x 11⅝". Utility unfinished\$64.50

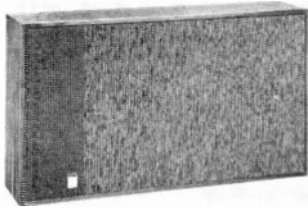
Model TF-3 3-Way Speaker System



Bookshelf system; has 10" woofer, 2-5½" midrange units, and spherical sector tweeter; crossovers at 2000 and 10,000 cps; power rating 25 watts; high frequency control on rear; impedance 8 ohms; 13½" x 23¼" x 11⅝"; 38 lbs.

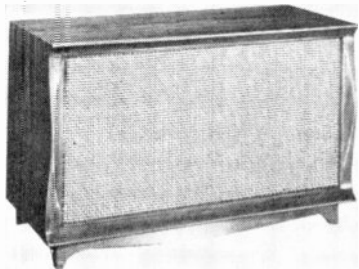
TF-3 (unfinished)\$79.50
 TF-3 (oiled-walnut)\$99.50

Model TR-9 "Slim" Shelf System



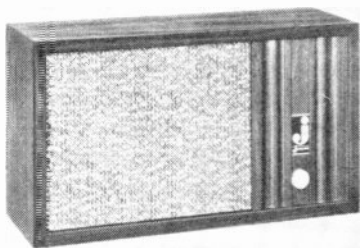
Ducted-port enclosure with 10" woofer, 8" midrange, and tweeter; response 30 cps to beyond audibility; 600 and 4000 cps crossovers; 25 watts; 8 ohms; high-frequency balance controls; 13 1/2" h. x 22 3/4" w. x 5 3/8" d.; 25 lbs.; oiled-walnut finish\$89.50

Model TR-10 TRi-ette Speaker System



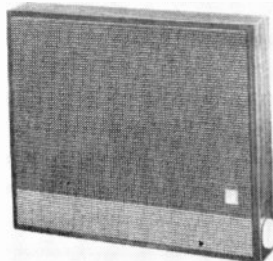
Three-way system; uses RP-103B tweeter, 8" mid-range, and 12" Flexair woofer; frequency response 25 to 15,000 cps; crossover frequencies at 600 and 4000 cps; impedance 16 ohms; power rating 30 watts; in walnut, tawny ash, and mahogany; finished on four sides; 13 3/8" h x 25" w x 11 1/8" d.\$119.50
 Model ST-944 stand (places cabinet 28" above floor)\$12.95
 Model ST-945 base (for floor or table use)\$5.45

Model X-10 Speaker System



Ultra-compact two-way system; 3" tweeter for frequencies to 14,000 cps; low-end response produced by a special miniature woofer, mass-loaded and 10 oz. "Syn-tox-6" magnet; volume control on front panel; 6 watts max.; 7 1/4" x 13" x 4 3/8"; oiled-walnut\$29.75

Model X-20 "Slim" Compact System



Includes one woofer and two tweeters; 6-watt rating; can be used with 4, 8, or 16 ohm outputs; 12 3/8" h. x 15 3/8" w. x 2 3/8" d.;

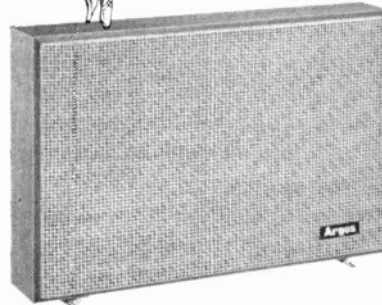
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 with 2 JENSEN speakers**

*Outperforms
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 close to
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Use it anywhere — shelf, table, wall or floor — only 18" x 12" x 3 3/4" thin • Ideal for stereo • New high-compliance Jensen woofer has up to 200% more cone travel; deep rich base • Two-way system • Tweeter with crossover network • 8-ohm input • Screw terminals polarized for stereo. Volume control recessed on side • Hand-rubbed, 3/4" oiled American walnut veneer • Modern cane grille • Solid brass legs • Wall hangers on back • At your hi-fi store or write direct for free catalog. **\$24.95**

Argos

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 Dept. K, Genoa, Illinois

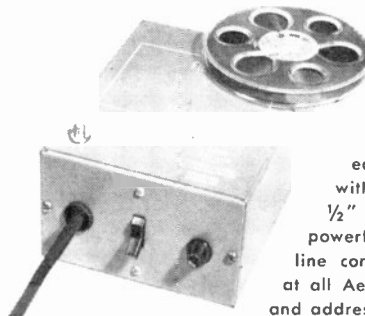
CIRCLE NO. 5 ON READER SERVICE PAGE

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CIRCLE NO. 1 ON READER SERVICE PAGE

5 Speakers & Cabinets

1½ lbs.; oiled-walnut finish\$39.95

Model TR-10U Tri-ette Unfinished
Same as the TR-10 except plain rectangular enclosure of ¼" gum hardwood plywood veneer with attractive grille cloth; may be wood finished or painted.
.....\$94.50

Model KT-33 Components Kit
Driver components for Models TR-10 and TR-10U speaker systems; complete with instructions for building enclosure and installing speakers; does not include Model DC-3 Stereo Director; includes C12-NF 12" woofer, P8-UM 8" midrange, RP-103B compression driver tweeter, hi-frequency control, crossover network; with cabinet-building directions.....\$80.00

Model KDF-1 2-Way Speaker System Kit
Includes P8-QF 8" Flexair woofer, enclosure vent tube, P35-VAH tweeter, coupling element, terminal panel, balance control; 7½ lbs.\$29.75

Model KTF-2 Speaker Kit
Includes P10-RJF woofer, ½ lb. Alnico V magnet; two P35-VAH tweeters; crossover network; H.F. control; enclosure vent tube; complete assembly instructions.
.....\$39.75

Model KTF-3 Speaker Kit
Includes P10-PF high-compliance woofer; two special midrange units; ultra tweeter; M.F./H.F. balance control; crossover network; enclosure vent tube; complete enclosure construction details.....\$57.75

Model KT-233 Stereo TwinKit
Consists of two Model KT-33 kits with mounting plates and hardware; matched for stereo applications\$160.00

Model KTX-1 Step-Up Kit
Kit includes RP-302A tweeter, ST-946 balance control, A-402 crossover network, interconnecting cable; 35 watts; extends range of system from 4000 cps to beyond audibility\$43.75 Net

Model KTX-2 Step-Up Kit
Kit includes RP-103B tweeter, A-204 network, ST-946 balance control; 16 ohms 6¼ lbs. shipping weight.....\$32.50 Net

Model C12-NF "Flexair" Woofer
12" cone woofer; power rating 30 watts; frequency response in Jensen Bass-Superflex cabinet 20 to 2000 cps; Flexair suspension system; resonance 20 cps; impedance 16 ohms\$37.50

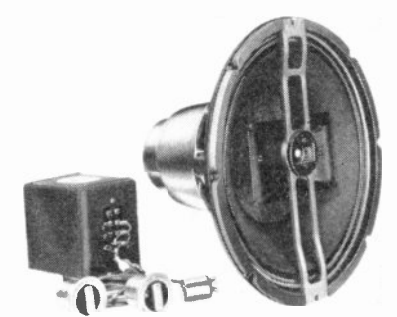
Model CX-120
12" three-element coaxial; 20 watts; response 30-15,000 cps; resonance 40-50 cps; 16 ohms impedance; 1 lb. DP-Al-

nico V magnet; compression-driver super-tweeter; two-cone radiator for 30 to 4000 cps range; includes high-frequency balance control\$52.50 Net

Model DXF-80
Woofer is capable of ¾" total motion bass response down to 36 cps; radiator driven by same voice coil responds up to 14,000 cps; ¾ lb. DP Alnico V magnet; power rating 20 watts, 40 watts peak; impedance 16 ohms; includes tube vent for cabinet; 5½ lbs.\$24.50

Model DX-120
12" full-range unit, 20 watts, response 40-15,000 cps; resonance 48-50 cps; 16 ohms impedance; 1 lb. DP-Alnico V magnet; dual cones; mechanical crossover at approximately 4000 cps; single voice coil\$27.50 Net

Model G-600
Triaxial 15" 3-way speaker; 35 watts; response 30 cps to upper hearing limit; 16-ohm impedance; 3½ lb. DP-Alnico-V magnet; 15" cone woofer; throbore compression-driver mid-channel unit with sep-



arate horn for 1000 to 4000 cps range; compression super-tweeter; tweeter and midrange controls; depth 11¼"; shipping weight 33 lbs.\$134.50 Net

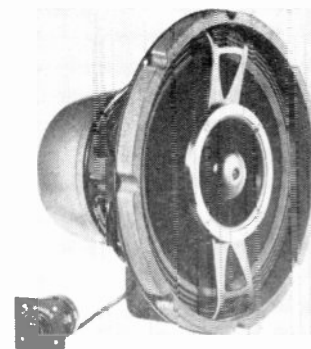
Model G-610B
Triaxial 15" 3-way speaker; 40 watts; 16-ohm impedance; crossovers at 600 and 4000 cps; heavy duty curvilinear diaphragm unit for lows, compression driver unit for mid-range and compression driver for high end; baffle opening 13¼"; depth 10¼"; crossover and control networks\$252.75 Net

Model H-222



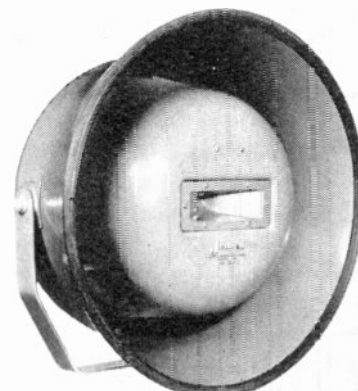
Coaxial two-way system; Model H-222 is 12"; response 30 to 15,000 cps; 16-ohm impedance; 1¼ lb. DP Alnico-V magnet; compression driver horn-loaded tweeter with crossover at 2000 cps; high-frequency balance control; requires baffle opening 10½"; has 8¼" depth.
H-222.....\$62.50 Net

Model H-223F Speaker
Coaxial 12" speaker with Flexair woofer;



frequency response 20 to 15,000 cps in Model BF-100 enclosure; tweeter balance control; impedance 16 ohms; power rating 30 watts\$72.50

Model HF-100A



Weatherproof coaxial speaker; low- and high-frequency units enclosed in projector made of glass fibre with aluminum outer horn; 25 watts; 60 to 15,000 cps; 16-ohm impedance; 8" woofer and horn-loaded compression driver high-frequency unit; 2000 cps crossover; 24⅝" diameter, 11⅝" deep\$77.70

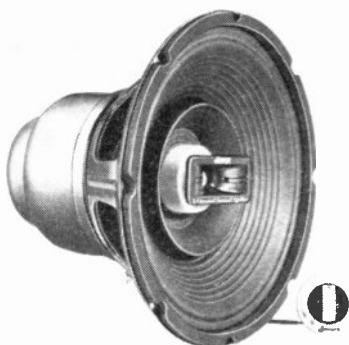
Models K-80A, K-210, K310A
Coaxial units; K-80 is 8", 12 watts, 16 ohms, response 50 to 14,000 cps; K-210 is 12", 14 watts, 8 ohms, response 45 to 14,000 cps; K-310A is 16 watts, 16 ohms, response 40 to 14,000 cps; Models K-80 and K-210 use ½ lb. DP Alnico-V magnet; K-310A uses ¾ lb. DP Alnico-V magnet; coaxially mounted direct radiation cone-type tweeters; K-310A has high frequency balance control as standard equipment.
K-80A\$17.75 Net
K-210\$27.50 Net
K-310A\$39.75 Net

Model P6-TX
Six inch extended range speaker; 6⅛" diameter, 3⅜" deep, 5¼" baffle opening; 7.5 watts; 3.2 ohms; 3.16 oz. Alnico V magnet; voice coil diameter ¾" \$5.05 Net

Model P8-QF "Flexair" Woofer
High-compliance 8" woofer; can be used with P35-VAH or RP-103B tweeter; crossover to 2000 cps; power rating 25 watts; same magnet as DXF-80; 16 ohm impedance\$22.50

Model P8-RL
8" woofer; 4" deep; 6¾" baffle cutout required; 20 watts; 50 to 3000 cps; 8 ohm impedance; 65 cps, viscous edge damped diaphragm\$8.75 Net

Model P8-RM Mid-Range
8" direct radiator mid-range; power rating 40 watts; uniform output from 200 to 4000 cps; cover provides acoustic isolation;



1/2 lb. DP-Alnico-V magnet; impedance 16 ohms; 5" deep\$12.50

Model P8-UM Mid-Range

8" direct radiator mid-range power rating 30 watts; for 600 to 4000 cps range; cover provides acoustic isolation; 2 1/2 oz. DP-Alnico-V magnet; impedance 16 ohms; over-all depth of speaker 4 1/2"\$7.50

Models P10SX, P12-SX

Extended range speakers; P10-SX is 10", 5 1/4" deep, 8 3/4" baffle opening required; Model P12-SX is 12", 6 1/6" deep, 10 1/2" baffle opening required; P10-SX is 12 watts, P12-SX is 13 watts; 8-ohms impedance; 4.64 oz. Alnico-V magnets in both models; 1" diameter voice coils.
P10-SX\$9.58 Net
P12-SX\$10.32 Net

Model P12-NL



12" woofer; 7" deep, 10 1/2" diameter baffle cutout required; single cone; 25 watts; 30 to 2000 cps; resonance 55 cps; 16-ohm impedance; 1 1/4 lb. DP Alnico-V magnet; viscous edge damped diaphragm; shipping weight 10 lbs.\$36.50 Net

Model P12-RL

12" woofer; 6 1/6" deep, 10 1/2" diameter baffle cutout required; 20 watts; 40 to 2500 cps; 16-ohm impedance; resonance 60 cps.\$12.90 Net

Model P15-LF "Flexair" Woofer

15" cone woofer; power rating 40 watts; frequency response in Jensen Bass-Superflex cabinet 16 to 2000 cps; Flexair suspension system; resonance 16 cps; impedance 16 ohms\$69.75

Model P35-VAH

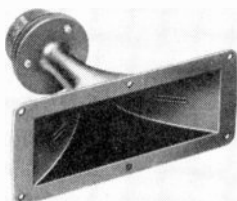


Direct radiating cone type tweeter; 3 1/2" square x 2 1/8" deep, 3 1/8" diameter baffle cutout required; 15 watts; response 2000 to 14,000 cps; 16-ohms.....\$4.00 Net

Model RP-41 Mid-Range

Compression-driver horn-loaded mid-range unit for 400 to 4000 cps range; power rating 40 watts with 400-600 cps crossover; impedance 16 ohms; 7 1/4" deep; baffle cutout 8 1/2" diameter\$42.50

Model RP-103B

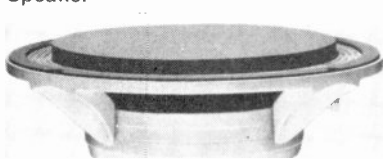


Compression type tweeter; cloth base plastic diaphragm; 30 watts; 2000 to 15,000 cps; 16-ohm impedance; shipping weight 3 lbs.; 3" x 7 1/4" x 6 3/16"; baffle cutout 6" x 2"\$16.50 Net

Model RP-302A

High frequency unit covering the range from 4000 cps to the highest audible frequencies; coverage angle 120°; impedance 16 ohms; for use with A-402 network; 40 watts power rating, 2 1/4 lbs.\$35.00 Net

Model 3-P/W1 Low-Frequency Speaker



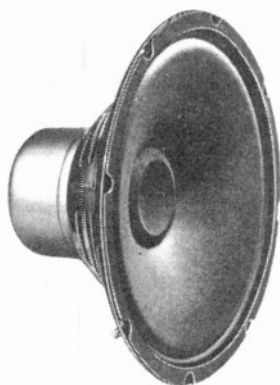
Molded "Polytec" plane piston radiator—a flat surface instead of conventional cone; response 20 to 600 cps; 16 ohms; 25 watts, 2 1/16" deep, 10 1/4" diam.; must be used with full dividing network, Jensen A640\$39.75

Model TW-22 Tweeter



Response 2000 to 14,000 cps; use crossover frequency of 2000 to 4000 cps; 16 ohms; 3 1/2" cutout; to be used with 25-watt systems\$9.75

Models UX-80, UX-120



Model UX-80 is 8", 6 1/4" depth; Model UX-120 is 12", 8 1/2" depth; UX-80 is 12 watts, UX-120 is 14 watts; frequency response 40 to 12,000 cps, resonance 55-60 cycles; 8-ohm impedance, 1/2 lb. DP-Alnico-V magnet; single cone wide range.
UX-80\$14.50 Net
UX-120\$17.95 Net

Model A-61 600 cps Crossover

Two channel, 180° constant-resistance type with 12 db/octave attenuation; crossover point at 600 cps; 5 1/4" h. x 7" w. x 4 1/8" d.; 5 1/4 lbs.\$19.75 Net

Model A-204 2000 cps Crossover

Two-channel type; high-pass section transmits everything over 2000 cps to tweeter, everything below to woofer; 180° constant-resistance type; 4 1/8" h. x 3 1/2" w. x 3 1/4" d.; 2 1/4 lbs.\$13.00 Net

Model A-402 4000 cps Crossover

Two-channel type; high-pass transmits everything above 4000 cps to tweeter, everything below to woofer; 180° constant-resistance type; 4 1/8" h. x 3 1/2" w. x 3 1/4" d.; 3 lbs.\$10.90 Net

Model A-640 Crossover

Crossover unit for 3-way systems with crossovers at 600 and 4000 cps; power rating 40 watts; 12 db/octave slope; impedance 16 ohms; 5 1/4" x 7" x 4 1/8"\$32.00

Model ST-946 Balance Control

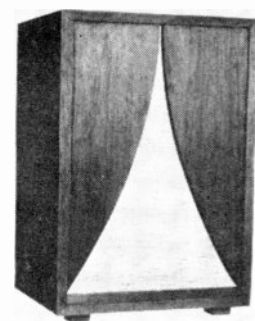
Provides attenuation of tweeter in systems with power ratings up to 30 watts; impedance 16 ohms\$3.95

Model ST-947 Balance Control

Provides attenuation of tweeter and mid-range in systems with power ratings up to 40 watts; output impedance 16 ohms\$4.50

KARLSON

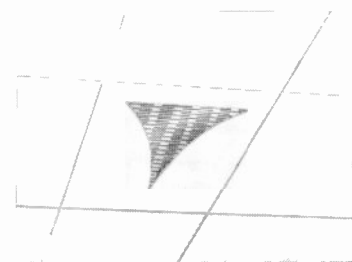
"Supreme 15" Speaker System



Complete system featuring 15" coaxial speaker in sealed enclosure; response smooth from 12-22,000 cps; uniform dispersion within 120°; dynamic range 120 db; 35 watts; 40% efficiency; tweeter-level control; minimum distortion through patented acoustic coupling with tapered opening; available in walnut only with hand-rubbed oil finish; 22 1/2" x 3 1/2" x 18"; 120 lbs.

S-15WT With tapered front.....\$339.00
S-15WG With full-grille front.....\$345.00

Asymmetric Sound Projectors



For stereo use in home, office, auditoriums, commercial applications; features broad fan-like projection in horizontal plane (over 120°); specially controlled dispersion in elevation for maximum coverage of large areas at uniform levels; response 60-15,000 cps; 10 watts; dynamic range 100 db; over 12 db feedback rejection in positions behind projectors.

Model AP-3-C Flush mounting ceiling projectors; face plate 12" x 12" x 7 1/4"; 7 lbs.; white.....\$29.50

Model AP-9W Wall mounting projector; extends 13 1/4" when mounted; base at wall 12" x 8 1/2"; 9 lbs.; pastel buff\$34.95

Model "15" Speaker Enclosures

Provides proper acoustic impedance matching without tuning; uniform and wider

5

Speakers & Cabinets

dispersion through diffraction for all 15" standard wide-range speakers; adapters required for 12" speakers. 22½" x 33" x 18"; 80 lbs.

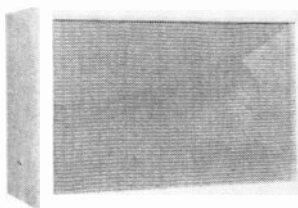
Model 15W Hand-rubbed oiled walnut finish with tapered front.....\$129.00
 Model 15WG Same as 15W but with full-front grille.....\$135.00
 Model 15U Unfinished birch.....\$99.50
 Model 15BSCU Unfinished particle board for built-in installations; without trim or feet\$69.50
 Model 15K Birch kit.....\$69.50
 Model 15BSCK Basic kit.....\$44.95

Model "12" Speaker Enclosures

Same coupling and dispersion features as Model "15" but dynamic range of bass slightly reduced; fundamental loading extends to ½ speaker resonance instead of ¼; response to 20 cps obtainable with high-compliance speakers; 24¾" x 16¼" x 13¾"; 44 lbs.; for 12" speakers; 10" with adapter.

Model 12W Hand-rubbed oiled walnut with tapered front.....\$99.60
 Model 12WG Same as Model 12W but with full-grille front.....\$105.00
 Model 12U Unfinished birch.....\$69.50
 Model 12BSCU Unfinished particle board for built-in installations; without trim or feet\$49.50
 Model 12K Birch kit.....\$49.50
 Model 12BSCK Basic kit.....\$31.95

Model "8" Speaker Enclosures



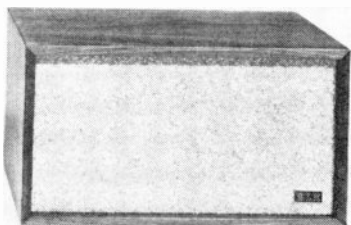
Similar to Models "15" and "12" but reduced dynamic range in bass; fundamental loading to ¾ speaker resonance; smooth response with quality speakers to 40 cps; mounts horizontally or vertically; 17¼" x 11¼" x 10".

Model 8W Hand-rubbed oiled walnut finish with full-grille front.....\$42.60
 Model 8U Unfinished birch with grille cloth\$29.95
 Model 8BSCU Unfinished particle board for built-in applications.....\$21.95
 Model 8K Birch kit.....\$21.95
 Model 8BSCK Basic kit.....\$14.95

KLH

Model Four Speaker System

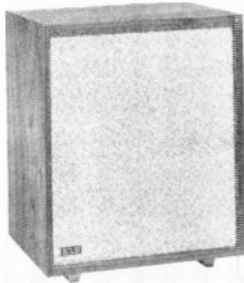
Full-range, two-way system housed in 13½"h. x 25"w. x 12"d. cabinet; low frequency speaker is 16-ohm 12" acoustic suspension type; two high-frequency speakers are small cone-type direct radiators;



LC crossover network has provision for independent adjustment of level above 1500 cps and above 6000 cps; provision is made to allow connection to high-and-low-frequency sections separately; 16 ohms impedance.

Utility\$209.00
 Mahogany, birch\$224.00
 Walnut, oiled walnut\$231.00

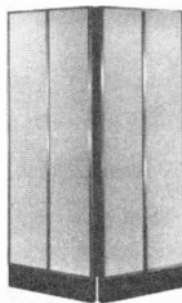
Model Seven Speaker System



Full-range, two-way system housed in 24¾"h. x 21½"w. x 11⅞"d. cabinet; low-frequency speaker is 12" acoustic suspension type; high-frequency section contains two small cone-type direct radiators; LC crossover network has provisions to increase or decrease high-frequency level 2½ db; impedance 8 ohms.

Unfinished birch.....\$189.00
 Mahogany, Korina.....\$196.00
 Unfinished walnut.....\$198.00
 Walnut, oiled walnut.....\$203.00

Model Nine Electrostatic Speaker System



Electrostatic speaker system that reproduces entire audio range; for adequate reproduction of very low frequencies total radiating area of 28 sq. ft. is used (14 sq. ft. in front and rear, radiation fore and aft is equal); consists of two complete full-range speakers with built-in power supplies and step-up transformers; two sections can be joined or separated completely for use in stereo systems; impedance nominal 16 ohms and is primarily resistive in audio range; maximum 30 ohms, minimum 16 ohms; recommended amplifier power per section 30 to 75 watts; 70" x 23½" x 27¼" each section; mahogany, walnut, oiled walnut.....\$1140.00

Model Ten Speaker System

Full-range, two-way system housed in a 23⅝"h. x 11⅝"w. x 8¾"d. ported cabinet; low-frequency speaker is 10" high-compliance type; high-frequency speaker is small cone-type direct radiator; impedance 8 ohms.

Unfinished birch\$96.00
 Mahogany, birch\$98.00
 Walnut, oiled walnut\$103.00

Model Six Speaker System

Full-range, two-way system housed in 23½"h. x 12⅞"w. x 11⅞"d. cabinet; low-frequency speaker is 12" acoustic suspension type; high-frequency section contains two small cone-type direct radiators; LC crossover network has provisions to

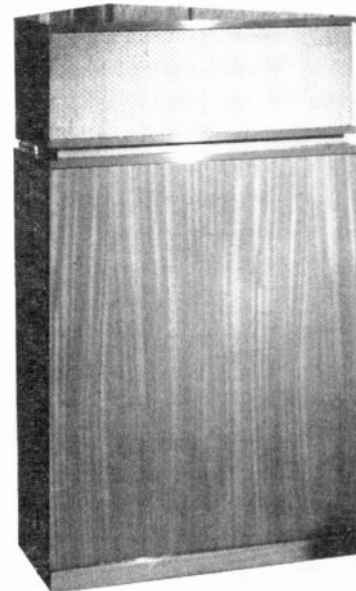
increase or decrease high-frequency level 2½ db; impedance 8 ohms; cabinet similar in appearance to Model Four speaker system.

Unfinished fir\$119.00
 Unfinished birch\$124.00
 Mahogany, Korina, unfinished walnut\$129.00
 Walnut, oiled walnut, cherry\$134.00

KLIPSCH

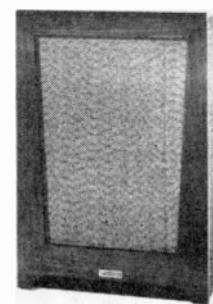
Klipschorn Corner Speaker System

Employs folded corner horn bass section, straight axis mid-range, and tweeter horns; response 32.7-21,000 cps; ideal for mono or stereo especially when used with com-



patible third speaker bridged for center speaker use; over 30 acoustic watts output can be delivered; priced from \$514 for "Decorator's Model" in unfinished fir to \$852 for hand-rubbed systems. All models are functionally identical.

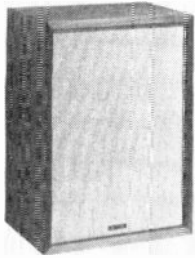
Shorthorn System



Corner horn back-loading bass system; uses same drive components as Klipschorn; priced from \$366 for full three-way 15" drive system in finished hardwoods through many variations of 12" and 15" drive systems and various states of finish to \$48 for kit less drivers.

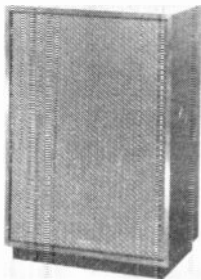
Cornwall 3-Way Speaker System

Exceptionally smooth response down to 30 cps; for use as primary speaker for stereo or as center speaker with Klipschorns in a 3-speaker array; enclosure-type bass with ported exhaust unloading at approximately 8 cps; diaphragm motion and distortion minimal above 16 cps; horn-type mid-range and tweeter afford accurate reproduction of transients; standard model uses same drive system as Klips-



shorn; also available with horizontal base for use as lowboy; finished on all four sides; priced from \$408 for finished fine furniture grade to \$311 for "Decorator's Model" in fir.

Model H System



Total enclosure bass system with same mid-range and tweeter horns as Cornwall and Shorthorn; response 45-21,000 cps; diaphragm motion and FM distortion held to minimum; finished on all four sides; compatible with all other Klipsch models for stereo; priced from \$221 for full three-way system with network to \$115 for single-driver building-block system in select hardwoods; same options in fir from \$188 to \$84.

KNIGHT

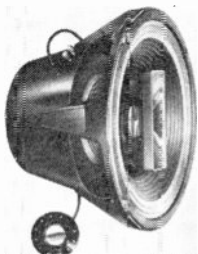
Model KN High-Frequency Package

Consists of tweeter, crossover, and level control; tweeter is flanged, exponential horn type; can be mounted in existing enclosure to add highs to woofer; response 3000-18,000 cps; crossover at 3500 cps.\$18.95

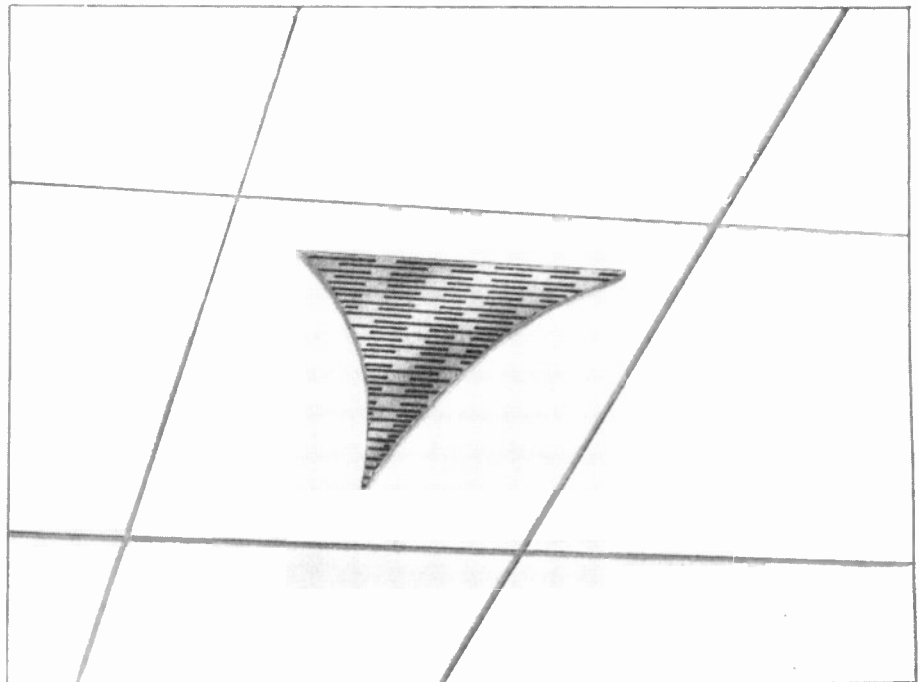
Model KN-281 Two-Way Speaker System

Tuned enclosure only 6½" thick; 10" high-compliance woofer with ½ lb. Alnico V magnet and ¾" cone excursion; two 3½" direct-radiator tweeters; built-in crossover with high-frequency level control; response 40-16,000 cps; power handling capacity up to 30 watts of program material; 8 ohm impedance; 2000 cps crossover; 13½" x 23¾" x 6½"; oiled walnut hardwood veneer.....\$49.95
Unfinished smooth-sanded Korina veneer\$44.95

Model KN-612HC 3-Way High-Compliance Speaker



Woofer is 12" cone type; compression type tweeter; "whizzer" mid-range; built-in electronic crossover; power capacity 50 watts; over-all response 25-18,000 cps;



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woofer magnet 4.6 pound ceramic; 8 ohms.\$59.95

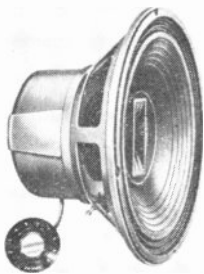
Model KN-800A 3-Way 12" Speaker
Includes axially-mounted mid-range cone; diffraction horn tweeter; mechanical and electronic crossovers; level control on tweeter; 16 ohms\$39.95

Model KN-809 8" Speaker
Wide-range 8" type; 10 oz. ceramic magnet; die-cast frame; response 50-12,000 cps; capacity 15 watts; 8 ohms...\$9.95

Model KN-819 Deluxe 8" Coax Speaker
8" woofer; 3" direct-radiator tweeter; built-in electrical crossover; 10 oz. ceramic magnet; response 50-14,000 cps; power handling capacity 15 watts; 16 ohms.\$16.95

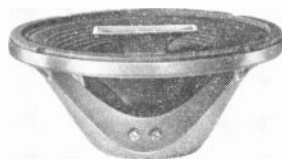
Model KN-820 12" Speaker
Ceramic ring magnet; woofer and mid range cones; response 40-13,000 cps; capacity 20 watts, 40 watt peak; 8 ohms; magnet weight 12 oz.\$16.95

Model KN-615HC 12" Speaker



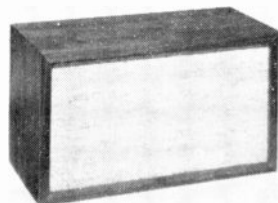
Mechanical and electrical crossovers at 2000 and 3500 cps respectively; free-air resonance 20 cps; response 20-19,000 cps; impedance 8 ohms; rated power capacity 50 watts\$84.95

Model KN-830 12" 3-Way Hi-Fi Speaker



Ceramic magnet, mid-range cone, v.h.f. tweeter; 42-18,000 cps; built-in crossovers; 3-position tonal balance switch; only 5 1/2" deep\$24.95

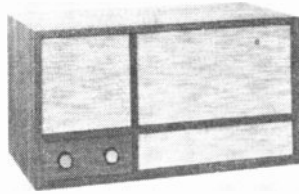
Model KN-2200 3-Way Speaker System



High-compliance system; 10" woofer with flexible-fold cone suspension and 1 lb. Alnico V magnet; two 3 1/2" radiators for treble and midrange; hemispherical u.h.f. tweeter; two crossover networks; response flat from 25 cps to beyond audibility; handles up to 40 watts of program material; 2000 and 10,000 cps crossover

points; impedance 8 ohms; 13 1/2" x 23 3/4" x 11 1/2"; oiled walnut veneer.....\$79.95
Unfinished smooth-sanded Korina veneer\$64.95

Model KN-2300 3-Way Speaker System



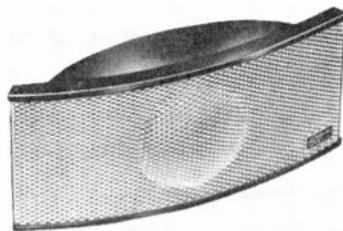
Bookshelf design; 12" woofer, 5" mid-range; high-frequency horn tweeter; 3/4" hardwood walnut cabinet; crossovers at 800 and 5000 cps; 13 1/2" x 24 3/4" x 12"\$99.95

LAFAYETTE

Model SK-58

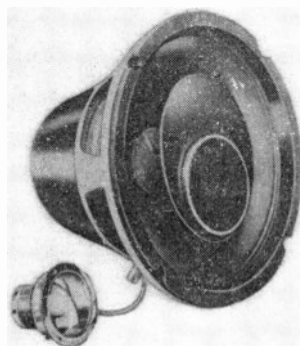
12" coaxial speaker; power rating: 20 watts; frequency response: 30 to 15,000 cps; impedance: 8 ohms.....\$29.50 Net

SK-146 "Sphericon"



Super tweeter; built-in crossover network 3000 cps; frequency response 3000 to 40,000 cps ±1 db; phenolic domed diaphragm radiates 120 degrees in all directions; power rating 30 watts; can be used with any 4 to 16 ohm speaker without an L-pad; black plastic case with gold anodized aluminum grille. Built-in attenuator permits matching with any low-efficiency speaker system.....\$22.50

SK-128



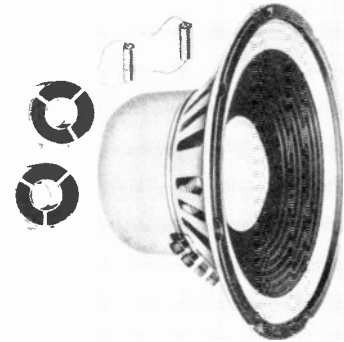
8" Duaxial full range speaker; power rating 20 watts integrated program material; over-all frequency response 40 to 16,000 cps ±3 db; resonance 45 to 65 cps; crossover 2500 cps; brilliance control; recommended enclosure bass reflex; impedance 8 ohms.....\$19.50

Model LN-5 Crossover Network

Crossover network for two-way and three-way systems; 8 or 16 ohms; crossover rate 6 db per octave; crossover frequencies for two-way systems are 2000, 3000, and 5000 cps; for three-way systems 350 and 2000-3000 cps; 350 and 5000 cps; 700

and 2000-3000 cps, 700 and 5000 cps; mid-frequency and treble level controls; metal cabinet; removable front panel for mounting level controls on front or side of speaker enclosure.....\$14.95

Model SK-133



12" dual voice coil woofer; 2" voice coil; 2 lb Alnico V magnet; to be used in conjunction with Model KT-161 crossover network and two mid-range tweeters for satellite stereo speaker systems.....\$25.50

Model SK-139

8" dual voice coil woofer; specifications same as Model SK-133.....\$20.95

Model KT-161

350 cps crossover network for use with dual voice coil woofers Model SK-133, Model SK-139.....\$7.26

Model CAB-20 Enclosure



Bass reflex design; accommodates 2- and 3-way speaker systems; cut outs for 15" and 8" speakers with adapter boards for 12" and 5" speakers; size: (less 7" legs) 28 7/8" w. x 23 1/2" h. x 16 3/4" d.; 3/4" birch; finishes: mahogany, blonde.

Net
Assembled, finished (CAB-20).....\$49.50
Assembled, unfinished (CAB-14).....\$39.50
Kit form (CK-11)\$29.50

Model MS-458 Speaker Switch

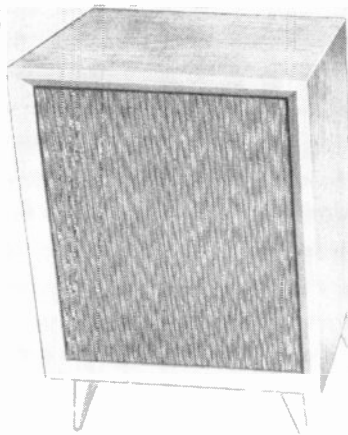
7-position speaker selector switch; can switch up to 3 speakers in 7 combinations (1, 2, 3, 1-2, 2-3, 1-3, all); compensates for changes in impedances without need for dummy load resistors; mounted on 2 3/4" x 4 1/2" electrical outlet plate; heavy duty silvered contacts and terminal board with screw terminals.....\$1.39

Model CAB-16 Enclosure

Bass reflex design; enclosed volume: 4.3 cubic feet; accommodates any 12" speaker; size: 20" w. x 23" h. x 16" d.; 3/4" stock lined with acoustic insulating material.

Net
Mahogany, walnut (CAB-16).....\$29.50
Blonde (CAB-17)\$31.50
Unfinished (CAB-18)\$26.50

Model CAB-19 Enclosure



Bass reflex design accommodates 2- and 3-way speaker systems; cut-outs for 15" and 8" speakers with adapter boards for 12" and 5" speakers; size: (less 7" legs) 23 1/2" w. x 28 7/8" h. x 16 3/4" d.; 3/4" birch; finishes: mahogany, blonde.

Net
Assembled, finished (CAB-19)\$49.50
Assembled, unfinished (CAB-13).....\$39.50
Kit form (CK-10)\$29.50

Model HK-3

Metal-cased 3" cone tweeter; power rating: 20 watts; frequency response: 2000 to 16,000 cps; impedance: 8-16 ohms; for use with crossover network like Lafayette LN-2, having crossover point of 2000 cps.\$5.95 Net

Model SK-97 Coaxial Speaker

6 1/2" woofer; 2" tweeter; response 50 to 16,000 cps; woofer resonance 70 cps; impedance 8 ohms; power rating 8-10 watts; screw-type terminals; requires 5 1/2" diameter cut-out\$6.95

Model SK-98 Two-Way Speaker

Dual-cone 8" speaker; response 40 to 16,000 cps; sensitivity 99.5 db/watt; resonance 55-70 cps; impedance 8 ohms; screw-type terminals; requires 6 3/4" diameter cut-out\$9.95

Model SK-102 Woofer

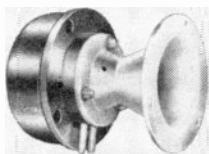
Lafayette-Goodmans 12" woofer; frequency response 30 to 7000 cps; recommended crossover 700-1000 cps; voice coil diameter 1 3/4"; power rating 30 watts in multiple speaker system with L/C crossover network; impedance 16 ohms....\$23.50

Model SK-103 Midrange

Lafayette-Goodmans 8 1/2" midrange speaker; frequency response 500 to 8000 cps; recommended crossovers at 700 to 1000 cps and 5000 cps; power rating 30 watts in multiple speaker system; impedance 16 ohms\$5.95

Model SK-104 Tweeter

Lafayette-Goodmans compression-type wide-angle radiator for high frequencies; frequency response 2500 to 16,000 cps; 8



db down at 20,000 cps; recommended crossover 5000 cps; power rating 30 watts in 3-way system; voice coil impedance 16 ohms\$10.95

Model SK-180 "Trihelix" Speaker

10", 3-way speaker with 3 mechanically and electronically independent speakers mounted within single 10" frame; 2"

1963 EDITION



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Now McGee offers the world famous Garrard "Type A" record changer designed for the most critical high fidelity enthusiasts. This \$79.50 net changer is now offered with Shure's model M7D broadcast stereo cartridge, regular net price \$45.00 for only \$79.51. Yes, the same cartridge used by FM-Multitex stereo broadcasters is now available with a Type A at a savings of \$44.99. This is only one of the many reasons why it pays to call or write McGee for your HI-FI needs. Stock No. Type A-M7D, McGee special price \$79.51.

SPECIFICATIONS
The Stromberg-Carlson ASR-880 is one of the most powerful stereo amplifiers available at any price. Designed with the flexibility of a recording studio control panel, each channel has individual tone controls and professional mixer-type separate volume controls which operate in conjunction with the master gain control. Specially engineered output transformers utilize grain-oriented steel cores for exceptionally good low frequency power handling with minimum distortion. In rating the ASR-880 a leading test laboratory reported "A pleasant surprise came in measuring the power output of the ASR-880. Each channel delivered 50 watts at 2% harmonic distortion, or 48 watts at 1% distortion. This is unusual in an amplifier rated at 32 watts per channel. Only 0.6 or 0.7 millivolts at the phono inputs will drive the amplifier to 10 watts output per channel. At normal gain settings of the unit the hum level is better than 70 db below 10 watts even on phono input. This is completely inaudible. The ASR-880 has a rare combination of very high gain and very low hum. The amplifier has a number of special features such as center channel output and a very effective channel-balancing system, as well as the usual stereo functions found in all good amplifiers." Sensitivity: Tuner, 0.2V; Magnetic Phono, 2.5MV; Ceramic Phono, 0.4V. Input Impedance: Tuner/Aux., 1 megohm; Magnetic Phono, 47K ohm; Ceramic Phono/Tape, 2.2 megohm. Output impedances of 4, 8 and 16 ohms on both channels and 8, 16 ohms across 4 ohm taps on center speaker. High impedance output for tape recorder. Tone control range: Bass (50 cps) plus or minus 17 db; Treble (20K) plus or minus 15 db. Two AC power outlets, one switched. Overall size, 13 1/2" x 4 1/2" high and 13 1/2" deep. Tubes: 4-7355, 2-7199, 4-ECC-83's. Gold finish metal front panel with gold color knobs.

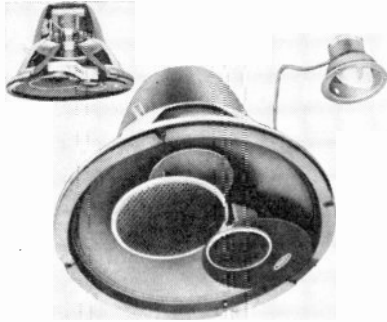
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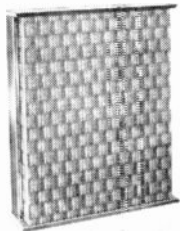
Speakers & Cabinets

tweeter; 5" mid range built-in electrical crossover at 1500 and 5000 cps; response 20-20,000 cps; 30-12,000 cps \pm 3 db; free



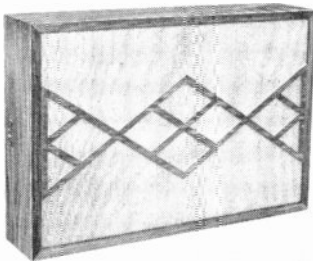
air resonance 35-55 cps; 8 ohms; 20 watts\$32.50

Model 235WX "Slenderette" Speaker System



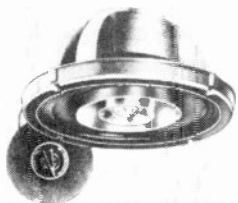
Hermetically sealed enclosure with 5-speaker, 3-way system; two 6" woofers, one 8" midrange, two 3 1/2" tweeters; response 50-15,000 cps; 20 watts; 8 ohms; comes equipped with lugs for wall mounting; walnut finish; 24" h. x 20" l. x 5" d.\$39.95

Model SK-240WX "Decorette" Speaker System



Styled for horizontal or vertical placement; has 5-speaker, 3-way system; two 8" woofers, one 6" midrange, one 3 1/2" cone-tweeter, plus dome-lens-type compression tweeter; over-all response 40-20,000 cps; 30 watts; 8 ohms; supplied with four legs; walnut finish; 25" h. x 17" l. x 4 1/4" w.\$59.95

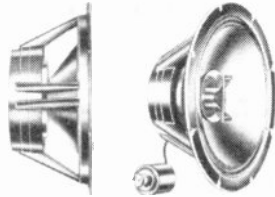
Model SK-213 8" 3-Way Speaker



Response 40-20,000 cps; aluminum voice-coil; 16 ohms; 20 watts; 3-concentric radi-

ators; wide-angle compression lens tweeter; built-in brilliance control; bass and midrange radiators cover 40-5000 cps, the tweeter 5000-20,000 cps; made in England; depth 3 3/4"\$24.50

Model SK-215 15" 3-Way Speaker



Built in England; has 6 lb. ceramic magnet; free-edge cone suspension; 3" main voice coil; 12 db/octave crossover network with high-frequency level control; horn-loaded tweeter; free-air resonance 25 cps; response 20-20,000 cps; crossover 200 & 5000 cps; 50 watt capacity; 16 ohms; depth 6 1/2"\$64.50

Model SK-216 12" 3-Way Speaker

Identical to SK-215 speaker except 12" dia.; free-air resonance 35 cps; depth 5 1/2"\$57.50

SK-130 8" Wide-Range Speaker

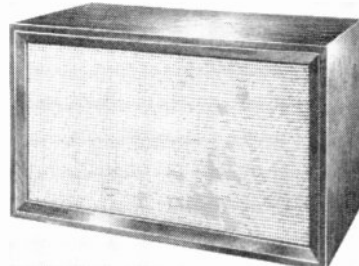
Response 40-18,000 cps; 15 watts; free-air resonance 55 cps; 1" voice-coil; 16 ohms; made in England; 4" deep\$12.95

Model SK-217W "Cavalier 12 Mark II" Speaker



12" 3-way design made in England; woofer, midrange radiator, and tweeter are axially mounted; 30-20,000 cps; 1 3/4 lb. ceramic magnet; 1 3/4" voice-coil; has 2000 cps mechanical crossover and 5000 cps electrical crossover; free air resonance 35 cps; 16 ohms; with brilliance control\$39.95

Model "Eliptoflex" Speaker System



Bookshelf design enclosure with Model SK-210W 3-way speaker; cabinet finished all four sides; 14" h. x 23 3/4" w. x 13 1/2" d.; available in mahogany, walnut, blonde\$82.50
Unfinished birch\$75.50
Same cabinet with Model SK-217W "Cavalier 12 Mark II" 12" 3-way speaker, \$74.50
Same cabinet (unfinished birch) with SK-217W speaker\$67.50
Same cabinet with Model SK-100 10" Tri-helix speaker\$66.50
Cabinet only\$36.50

"Mini-Duct" Speaker System

Ducted port bookshelf enclosure with Model SK-218 8" Biaxial speaker; cabinet finished on all four sides; 23" w. x 11 1/2"

h. x 11 1/2" d.; available in walnut, mahogany\$39.50
Unfinished birch\$37.50



Cabinet only; reducing boards are supplied so that cabinet will accept 8" woofer, a 6" midrange, and variety of tweeters\$34.25
Cabinet only (unfinished birch).....\$31.25
Cabinet supplied with 8" woofer, 6" midrange, 3" tweeter, crossover networks (750 & 5500 cps); 25 watts power rating; 8 1/6 ohms; response 35-18,000 cps\$52.40
Unfinished birch\$46.95
Cabinet supplied with SK-130 8" wide-range speaker\$36.95
Cabinet (unfinished birch) with SK-130,\$33.95

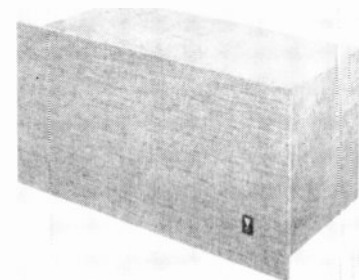
Model SK-210W "Sovereign 12" Speaker



12" 3-way system; made in England; 2 1/4" lb. ceramic magnet; compression-driver tweeter; free-air resonance 35 cps; response 30-20,000 cps; 30 watts; 3" aluminum voice-coil; 16 ohms; woofer, midrange radiator, tweeter axially mounted; has high-frequency L-pad level control,\$49.50

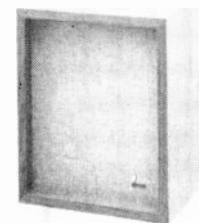
JAMES B. LANSING

"Wilton" Speaker System



Unfinished Linear-Efficiency system for built-in use; with overlapping or flush grille; 11 3/4" x 23 3/4" x 11 3/4".
Model D4785 (LE10, LE30, LX3 installed)\$177.00
Model D47LE8 (LE8T installed).....\$111.00

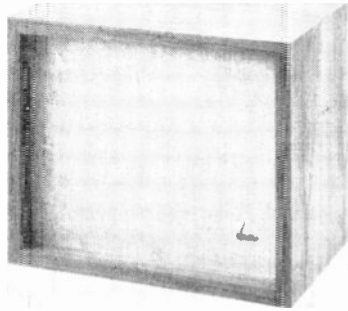
Model C-36 Speaker Enclosure



Bass-reflex design; will accept any 8", 12", or 15" speaker; available in mahog-

any, Korina, tawny walnut, oil-d-walnut, ebony; 28 3/4" x 19 1/2" x 15 1/2" deep, with 5" legs.....\$93.00
 Model D36002 (D123, 075, N2600 installed)\$261.00
 Model D36123 (D123 installed).....\$171.00
 Model D36LE8 (LE8T installed).....\$93.00

Model C-38 Speaker Enclosure

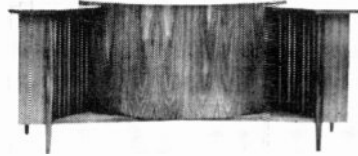


Lowboy version of Model C-36; 24 3/8" x 23 3/4" x 15 1/2".....\$93.00
 Prices and speaker combinations same as Model C-36.

Model D44000 "Paragon" Speaker System

Enclosure has convex refractor panel; contains 2 full-range speaker systems, each consisting of 150-4C, 375, 075; 35 1/4" x 10 3/8" x 24".....\$2250.00

Model D45202 "Metregon" System



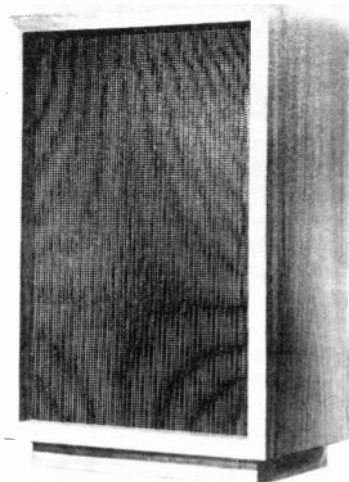
Stereo system consisting of D123's, 075's, N2400's; 30" x 74" x 22 1/2".....\$933.00
 Model D45203 (D130's).....\$804.00
 Model D45205 (130A's, 275's, N600's).....\$1248.00

Model D30085 "Hartsfield"

Horn-load system with acoustic lens; front-loaded folded corner horn driven by 150-4C bass driver; frequencies above 500 cps reproduced by 375 driver with cast exponential horn and serpentine acoustic lens.....\$993.00

Model C-35 Enclosure

Bass reflex enclosure; designed for 12" and



15" speakers and two-way systems; 38 1/2" h. x 16" d. x 23 3/4" w.....\$150.00
 Model D35001 (Model C-35 enclosure with 150A woofer, 175DLH horn-driver, N1200 crossover)\$417.00
 Model D35002 (Model C-35 enclosure with D123 12" speaker, 075 tweeter, N2600 crossover)\$318.00
 Model D35030 (Model C-35 enclosure with D130 15" speaker, 075 tweeter, N2600 crossover)\$348.00

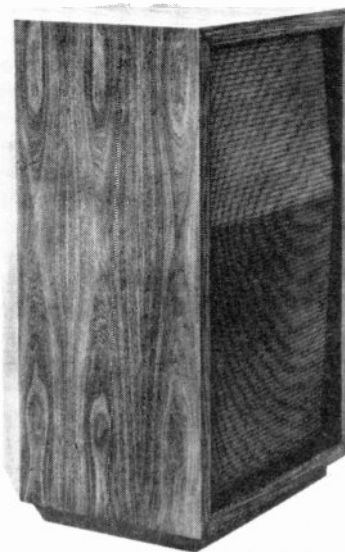
Model C-37 Enclosure

Lowboy version of Model C-35; 28 7/8" x 36" x 16".....\$156.00
 Model D37001 (130A, 175DLH, N1200 installed)\$423.00
 Model D37030 (D130, 075, N2600 installed)\$354.00
 Model D37002 (D123, 075, N2600 installed)\$324.00
 Model D37130 (D130 installed).....\$264.00

Model C-40 "Harkness"

Lowboy version of Model C-34.....\$201.00
 Model D40001 (120A, 175DLH, N1200 installed)\$468.00
 Model D40030 (D130, 075, N2600 installed)\$399.00

Model C-34 Enclosure

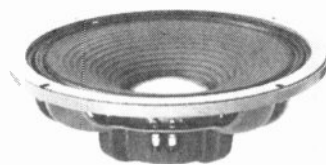


Rear-loaded corner console horn; accommodates 15" speaker or two-way system; size 30 3/4" h. x 22 1/4" d. x 23 3/4" w.; wide variety of woods and finishes; 6-foot exponential folded horn; corner placement not required; designed primarily for two-way speaker system use.....\$201.00

Model C-34 Speaker System

Rear-loaded exponential horn for use with extended-range 15" loudspeakers and 2-way systems.
 Model D34001 (130A, 175DLH, N1200 installed)\$468.00
 Model D34030 (D130, 075, N2600 installed)\$399.00

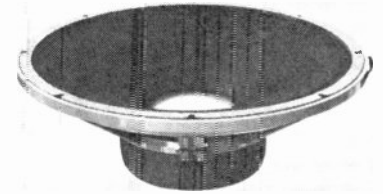
Model D-123 12" Speaker



Single cone wide-range 12" loudspeaker; power rating: 20 watts; free cone resonance: 35 cps; impedance: 16 ohms; features 3" aluminum voice coil and dural center dome to stiffen piston assembly;

shallow curvilinear cone aids dispersion of highs; depth 3 5/8".....\$72.00

Model D-130 15" Speaker



Single cone extended range 15" speaker; power rating: 25 watts; free cone resonance: 37 cps; impedance: 16 ohms; 4" aluminum voice coil and 4" dural center dome; shallow curvilinear cone for dispersion of highs; depth 5 1/2".....\$102.00

Model D-131 12" Speaker

Single cone wide-range 12" loudspeaker; 16 ohms; 4" aluminum voice coil and dural center dome; shallow curvilinear cone for dispersion of highs.....\$96.00

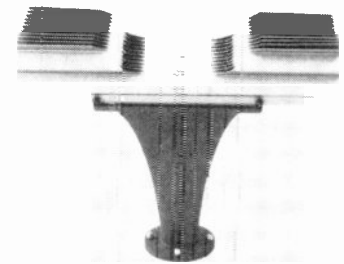
Model 130A 15" Woofer

15" low frequency driver; power rating: 25 watts; free cone resonance: 29 cps; response 20-20,000 cps; impedance: 16 ohms; designed as low frequency unit in conjunction with 175DLH driver and Model N1200 dividing network for systems crossing over at 1200 cps; depth 5 3/8"\$96.00

Model 150-4C 15" Woofer

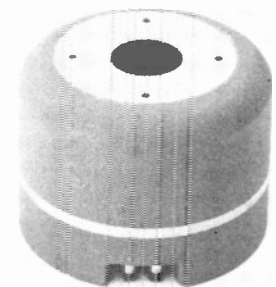
Response 30-1000 cps; 30 watts; 27 cps resonance; for use in folded-horn enclosures with a 500 cps network; features 4" edge wound voice coil; depth 6 1/16"; 16 ohm impedance\$138.00

Model 537-509 Horn-Lens Assembly



Horn-lens assembly for use with 375 high-frequency driver; provides wide horizontal and narrow vertical diffusion; over-all length 16 1/2".....\$99.00

Model 375 High-Frequency Driver

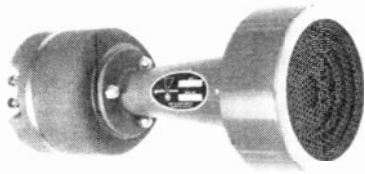


High-frequency driver; power rating 60 watts above 300 cps; impedance 16 ohms; diameter 7"; depth 5 3/8".....\$228.00

Model 175-DLH

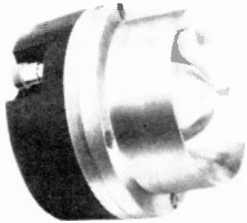
Driver-horn lens assembly; power rating: 25 watts above 1200 cps; impedance: 16 ohms; combination driver-horn incorporating an acoustic lens for distributing

5 Speakers & Cabinets



sound over a 90 degree solid angle; designed for use with N1200; baffle hole 5 3/8"; over-all length 11 1/2".....\$129.00

Model O75 Tweeter



High-frequency speaker; power rating: 20 watts above 2500 cps; impedance: 16 ohms; high-frequency driver of "Annular Ring" design for re-inforcing the performance of extended range speakers from 2500 cps; used in conjunction with Model N2400, N2600 dividing network; baffle hole 3 3/16"; over-all length 3 1/4".....\$63.00

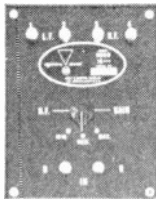
Model N-7000 Crossover Network

Dividing network; crossover 7000 cps; nominal impedance 16 ohms; 12 db octave; variable attenuation control; dimensions: 3 1/4" x 3 1/4" x 2 3/4".....\$27.00

Model N-2600 Crossover Network

Dual-impedance crossover providing 2500-cps crossover with input impedance of 16 ohms and output impedances to woofer and tweeter of 16 or 32 ohms; 12 db octave slope; tweeter level control; 4 1/4" x 6" x 3 1/2".....\$27.00
Model N2400 (same as N2600 but without dual impedance feature).....\$24.00

Models N400, N600, N1200 Crossover



A three position switch adjusts intensity of high-frequency transducer in 3 db steps; rate of attenuation around crossover, 12 db per octave; input and output impedance, 16 ohms; crossover frequency: N400, 500 cps; N600, 600 cps; N1200, 1200 cps.
N400\$84.00
N600\$60.00
N1200\$42.00

Model C46 "Minigon" Enclosure



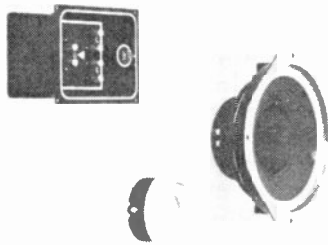
Miniaturized version of the JBL "Ranger-Paragon"; radial diffraction system; will accommodate LE8T or S5 system; 13" h. x 32" w. x 15 3/4" d.; single enclosure; all woods and finishes.....\$126.00

Model LE8T 8" Full-Range Speaker



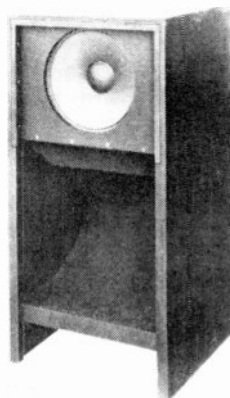
Full range 8" transducer; acoustically treated cone to extend high-frequency response; designed for use in small enclosures of minimum dimensions; frame is cast aluminum, non-resonant; front or rear mounting; "Lans-a-Loy" suspension permits long linear cone excursions for maximum low-frequency response; response 30-20,000 cps; power capacity 20 watts; resonance 37 cps; impedance 16 ohms; depth 4 3/8".....\$66.00

S5 System



Consists of LE10 10" low-frequency driver, the LE30 wide band high-frequency driver, and matching LX3 network; designed for use in small sealed enclosures or infinite baffle installations; free air cone resonance of LE10, 15 cps; upper frequency limit of LE30, beyond audibility.
LE10\$57.00
LE30\$57.00
LX3\$21.00

Model C43



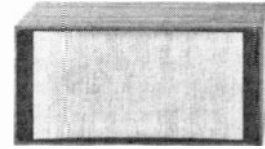
Rear-loading horn for professional and built-in use; will house 15-inch extended range loudspeakers and two-way systems; in rough theater black only; 48" h. x 24" w. x 24" d.\$102.00

Model 275 Driver

A more massive version of the 175 driver; reproduces all frequencies from 600-18,000 cps when used with matching exponential horn assembly; impedance 16 ohms

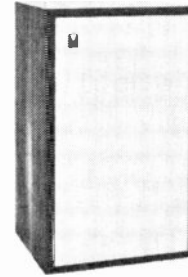
.....\$132.00

Model C48 "Madison" Enclosure



Danish design enclosure; finished on all four sides as well as the front, allowing horizontal or vertical placement; available in mahogany, tawny or oil-walnut, Danish teak, or ebony; 11 3/4" h. x 23 3/4" w. x 13 1/4" d. over-all.....\$63.00
With LE8T 8" speaker installed.....\$135.00

Model "Lancer 33" Speaker System

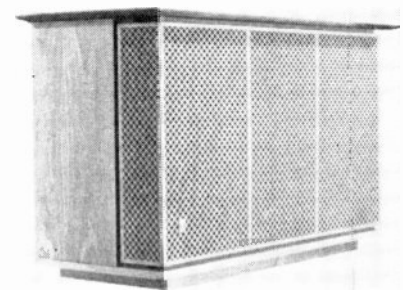


Bookshelf-type, ducted-port design; Type LE8T full-range speaker; response below 35 cps to over 15,000 cps; power handling capacity 6 watts minimum; 12 1/4" x 23 1/4" x 11 3/4"; available in oiled walnut, tawny walnut, dark mahogany, ebony\$93.00

Model "Lancer 66" Speaker System

Similar to "Lancer 33" except 2-way speaker system is used; 10" low-frequency driver plus high-frequency transducer; power handling capacity 6 watts minimum; 14" x 23 1/4" x 11 3/4" over-all.....\$147.00

Model "Olympus" Speaker System



Combines Model LE15 low-frequency driver, Model LX5 dividing network; 500 cps crossover; and Model LE8T high-frequency driver; enclosure alone weighs 100 lbs; available with any of five different grille fabrics or with wooden fretwork grille, hand-carved in Orient; wood finishes—dark mahogany, tawny walnut, oiled walnut, Danish teak, or ebony; size 19 3/4" x 40" x 27 1/4"; (cloth grille). Enclosure only\$198.00
System with Oriental hand-carved wooden grille\$258.00
Enclosure with wooden grille and S7 system\$645.00

Model D216 8" Speaker

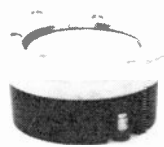
8" loudspeaker with 2" edgewound and dural center dome; cone resonance 50 cps; power rating 12 watts; 16 ohms; (8 ohms available; model D208); depth 2 7/8"\$36.00

Model LE10A L.F. Speaker

Generates powerful bass in enclosures as

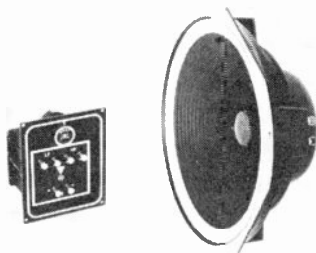
small as 1 cu. ft.; edge wound copper ribbon voice coil; resonance 15 cps; capacity 30 watts; impedance 16 ohms.....\$57.00

Model LE30 Tweeter



Assembly to complement LE10A; for use with LX3-1 network; impedance 16 ohms; capacity 30 watts\$57.00

Model LE14C Integrated System



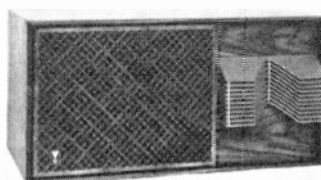
Covers entire audible spectrum; may be used in enclosures as small as 1.7 cu. ft.; system impedance 16 ohms; crossover frequency 1200 cps; power capacity 30 watts with network\$150.00

Model LE20 Tweeter



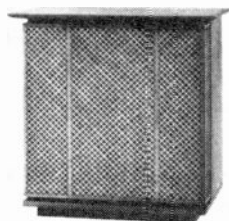
May be used with any JBL transducer; minimum crossover frequency when used with LX2 network 1500 cps; impedance 8-16 ohms; diameter 4 1/2".....\$33.00

Model C52 "Opus" Enclosure



May be placed in either vertical or horizontal position; available with S9, S10, or LE14C systems; 28" x 14" x 14 1/4"; available in tawny walnut, oiled walnut, mahogany, Danish teak, ebony; cabinet only\$126.00
With S9 system\$411.00

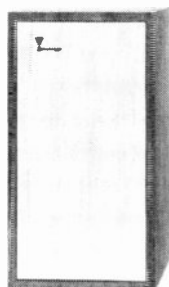
Model C51 "Apollo" Enclosure



Designed to accept variety of JBL extended-range speakers and two-way speaker systems; available in mahogany, tawny walnut, oiled walnut, Danish teak, ebony; 23 3/8" x 26 1/2" x 18"; with fretwork

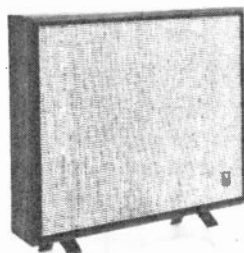
grille\$225.00
With cloth grille\$174.00

Model C53 Enclosure



Available with LE8T, LE14C, or S5 speaker systems installed; available in tawny walnut, oiled walnut, ebony; 14" x 23 1/4" x 11 1/4".....\$48.00
With LE14C installed.....\$198.00

Model C54 "Trimline" Enclosure



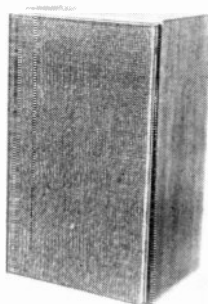
Combines an 8" extended-range cone speaker (LE8T) with an 8" passive low-frequency radiator; 25 watt capacity; 8 ohms impedance; finished all four sides; may be used free-standing, or hung on wall; 23 3/4" x 20" x 5 1/8" deep; less legs\$117.00

Model LX2 Crossover Network

For use with LE20; three-position switch allows choice of 1500, 3000, or 6000 cps crossover frequency; separate control allows adjustment of high-frequency level; impedance 8-16 ohms; with flange.....\$18.00

LEAK

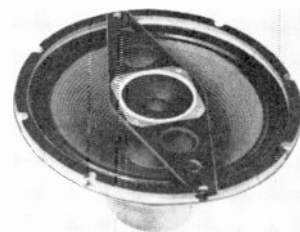
"Sandwich" Speaker System



Completely sealed, air-tight enclosure with dual high-efficiency speakers (1 lf. & 1 h.f.); response 30-18,500 cps ± 2.5 db; 50 watts continuous power capacity; 15 ohms impedance; free-air resonance 19 cps; crossover 800 cps; has special poly-foam cone with thin aluminum "sandwich" skins for added strength and reduced breakup distortion; 15" w. x 26" h. x 12" d.; choice of Scandinavian woods\$199.00

MINNEAPOLIS

Model K-12-HFC 12" Coax Speaker



Two-way design; 8 ohms impedance; 15 watt program material; response 30 cps to beyond audibility; 35 cps free-air resonance; 3" tweeter mounted on bracket\$38.80

Model K-12-HFD 12" Dual-Cone Speaker

8 ohms impedance; 15 watt program material; response 30-13,000 cps; free-air resonance 35 cps.....\$29.95

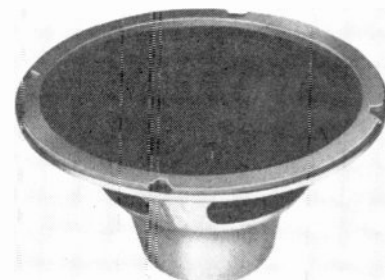
Model K-12-HFW 12" Woofer

Ideal for use with Model D-40HFT tweeter as two-way system or Model D-4-HFT tweeter and Model F-8-HF midrange as three-way system; 8 ohm impedance; 15 watt program material; response 30-4000 cps; free-air resonance 35 cps.....\$27.80

Model F-8-HFD 8" Dual-Cone Speaker

Inner cone has mechanical crossover at 800 cps; 8 ohms impedance; 10 watt program material; response 40-17,000 cps; free-air resonance 50 cps.....\$14.90

Model F-8-HF 8" Wide-Range Speaker



Impedance 8 ohms; 10 watt program material; response 40-13,000 cps; free-air resonance 50 cps.....\$13.60

Model D-40HFT 4" Tweeter

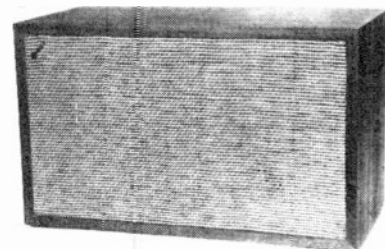
Impedance 8 ohms; 15 watt program material; response 2000 cps to beyond audibility\$6.35

MONARCH

Model SP-CR1 3-Way Speaker System

Response 20-18,000 cps; maximum power 20 watts; 16 ohms impedance; crossovers at 700 & 5500 cps; woofer resonant frequency 18 cps; corrugated woofer cone provides effective vibrating diameter of more than 12"; other speakers used are two 5" mid-range plus 2 1/2" cone tweeters incorporated with woofers; mid- and high-range controls; 25" x 14 1/8" x 11 1/4"; walnut finish.....\$84.95

Model SP-105 2-Way Speaker System

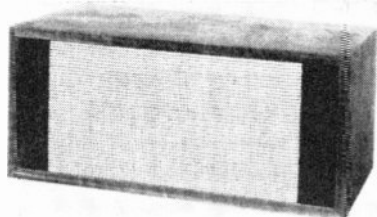


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Speakers & Cabinets

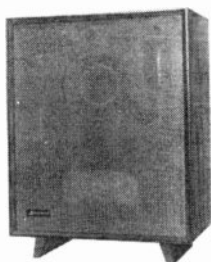
Response 25-18,000 cps; 30 watts peak power; 16 ohms impedance; foam-suspended woofer with 30 cps resonance plus two cone tweeters; ducted-port design; has tweeter control; finished in walnut; 23½" x 14" x 11¼".....\$69.95

Model SP-80C Speaker System



Response 30-18,000 cps; 20 watts peak power; 16 ohms impedance; 8" "Flex-i-foam" speaker with foam plastic suspension and tweeter; two-way crossover; high-frequency level control; ducted-port design; 10⅞" h. x 11⅞" d. x 23½" w.\$49.95

Model SP-100 Electrostatic Speaker System



Four electrostatic elements combined with low-resonance "Flex-i-foam" speaker with foam plastic cone suspension; tuned baffle design; response 35-25,000 cps; designed for 10 watts of power; 25" h. x 8" w. x 12" d.; walnut finish.....\$79.95

Model SP-116 Speaker System

Bookshelf design; uses 8" "Flex-i-foam" speaker with cone tweeter and crossover network; response 45-18,000 cps; 12 to 15 watts; 8 ohms impedance; walnut or mahogany finish; 17" x 8" x 10¼".....\$39.95 Per pair\$76.50

Model SP-114 Speaker System

Has 6½" "Flex-i-foam" speaker; response 45-16,000 cps; 7 to 10 watts power; 8 ohms impedance; walnut or mahogany finish; 12" w. x 7" d. x 10" h.....\$19.95 Per pair.....\$39.95

Model SP-1203 3-Way Speaker

12" design with horn tweeter; "non-press" cone and perforated metal plate in front of woofer to load cone properly; 30-16,000 cps; 16 ohms impedance; 20-watt capacity\$49.95

Model SP-400 8" "Bi-Plex" Speaker

Response 35-16,000 cps; 8 ohms impedance; 15-watt capacity; resonant frequency 45 cps.....\$19.95

Model SP-803A 8" "Tri-Plex" Speaker

Three-way design with built-in crossover and tweeter; response 35-18,000 cps; 16 ohms impedance; 20-watt capacity; resonant frequency 45 cps.....\$19.95

Model SP-212 12" "Bi-Plex" Speaker

Two-way speaker for use as 3-way system

by addition of tweeter; can be used as wide-range design; response 25-14,000 cps; 16 ohms impedance; 25-watt capacity; resonant frequency 35 cps.....\$24.95

Model SP-312 12" "Tri-Plex" Speaker

Three-way system incorporating SP-212 and bridge-type tweeter; response 30-18,000 cps; 16 ohms impedance; 25-watt capacity; resonant frequency 35 cps\$34.95

Model SP-412 12" Deluxe "Tri-Plex" Speaker

"Flex-i-foam" design combining heavy-duty woofer and bridge-mounted tweeter; response 25-18,000 cps; 16 ohms impedance; 30-watt capacity; resonant frequency 30 cps\$46.95

Model SP-800X 8" Coaxial Speaker

Combination 8" speaker and tweeter; response 45-16,000 cps; 8 ohms impedance; 8 watts continuous sine-wave power \$12.95

Model SP-300A 8" Full-Range Speaker

Response 45-16,000 cps; 8 ohms impedance; 8 watts continuous sine-wave power\$12.50

Model SP-120XX 12" Coaxial Speaker

Combination 12" speaker and dual tweeter; response 40-16,000 cps; 16 ohms impedance; 15 watts continuous sine-wave power\$24.95

Model T-2A Circular Horn Tweeter

Diaphragm-type driver; response 2200-16,000 cps with crossover at 4000 cps; sensitivity 110 db/w.; maximum power 20 watts\$13.00

Model T-3 Rectangular Horn Tweeter

Response 1700-16,000 cps; sensitivity 110 db/w.; maximum power 20 watts.....\$13.00

Model PT-1A Circular Tweeter

Response 3000-16,000 cps; 8 or 16 ohms impedance; 10-watt capacity.....\$3.85

Model PT-1C Tweeter

Response 3000-16,000 cps; 8 or 16 ohms impedance; 15-watt capacity; includes internal crossover network (3000 cps)\$7.85

NORDIC

"Nordic 1" Speaker System

Made in Sweden; features 8" speaker with multi-layer free-floating cone; distortion 1% 100-10,000 cps & 1.5% 10,000-15,000 cps; 5" dia. tweeter cut in @ 5000 cps with crossover @ 7500 cps; high-efficiency design; response 45-18,000 cps; power rating 20 watts music power; 7¼" d. x 10⅞" h. x 22¾" w.; available in walnut or teak.....\$59.50

NORELCO

Model AD-3877M 8" Speaker

Twin-cone; capacity 6 watts; response 75-19,000 cps; impedance 4-6 ohms; total magnetic flux 26,000 maxwells; flux density 11,000 gauss; efficiency 6% at 400 cps\$9.25

Model AD-5277M 12" Speaker

20 watts rated; response 35-18,000 cps; total flux 134,000 maxwells; efficiency 14% at 400 cps.....\$48.75

Model AD-4277M 12" Speaker

20 watts continuous, 30 watts peak; response 35-18,000 cps; impedance 8 ohms; efficiency 7% at 400 cps.....\$32.50

Model AD-4877M 8" Speaker

10 watts continuous, 15 watts peak; response 50-20,000 cps; efficiency 10% at 400 cps.....\$23.15

Model AD-3500M 5" Speaker

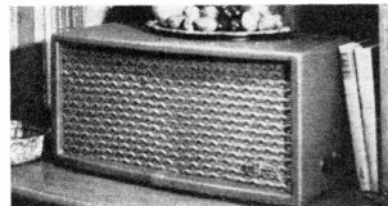
3 watts continuous, 5 watts peak; 4-6 ohms impedance; response 130-19,000 cps; efficiency 4% at 400 cps.....\$4.95

Model AD-4201/77M 12" Speaker

10 watts continuous power rating; response 40-15,000 cps; efficiency 7% at 400 cps\$21.25

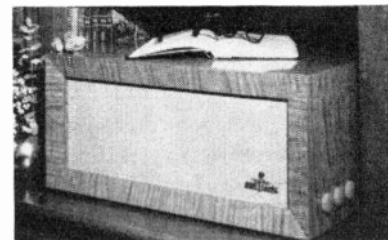
ORRTRONIC

Model S-2300 Speaker/Amplifier



Combines an 8" woofer and 3½" tweeter with built-in crossover and 8-watt power amplifier; response 20-15,000 cps; can be used directly from FM or AM tuner, phono with crystal or ceramic cartridge, or tape player having its own preamp; 18" x 9" x 8¼"; wt. 11 lbs.....\$59.95

Model S-500 Speaker/Amplifier



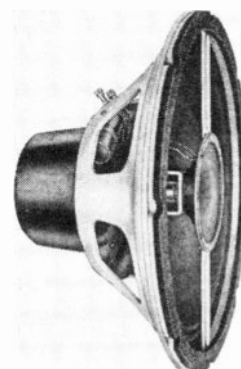
Similar in principle to Model S-2300 but combines 10-watt amplifier with 8" woofer and 3½" tweeter; has bass and treble controls\$99.95

OXFORD

Model 3W20 Driver Components

Consists of 12" woofer, 8" midrange and 3½" tweeter; frequency response 35 to 15,000 cps; power rating 20 watts peak program material; impedance 8 ohms; includes crossover network with crossovers at 600 and 5000 cps.....\$39.00

Model C15L608 15" Speaker



Coaxial 15" speaker; power rating 25 watts; frequency response 30 to 15,000 cps; resonance 50 cps.....\$43.50

Model F12L608 12" Speaker

12" full range speaker; power rating 25 watts; frequency response 40 to 10,000 cps; resonance 70 cps; 1½" voice coil; 14 oz. magnet.....\$29.55

Model C12J408 12" Speaker

Coaxial 12" speaker; power rating 15 watts; frequency response 40 to 15,000 cps; resonance 75 cps.....\$25.50

Model C8J408 8" Speaker

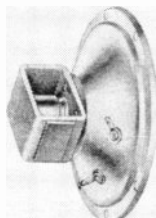
Coaxial 8" speaker; power rating 8 watts; frequency response 50 to 15,000 cps; resonance 75 cps.....\$18.81

Model T3C208 Tweeter

Cone-type 3" tweeter; power rating 4 watts; frequency response 1800 to 15,000 cps\$4.35

Model T5C208 Tweeter

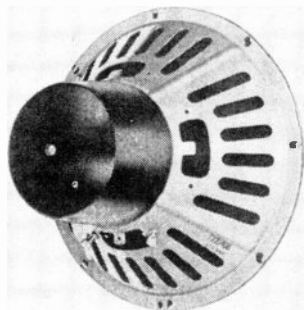
Cone-type 5" tweeter; power rating 4



watts; frequency response 1100 to 15,000 cps\$5.10

Model F12J408 12" Speaker

12" full range speaker; power rating 15 watts; frequency response 50 to 12,000



cps; resonance 75 cps; 1" voice coil; 6.8 oz. magnet.....\$19.50

Model F8J408 8" Speaker

8" full range speaker; power rating 15 watts; frequency response 50 to 13,000 cps; resonance 85 cps; 1" voice coil; 6.8 oz. magnet.....\$14.97

Model HM80H4 8"

"Hidden Magnet"

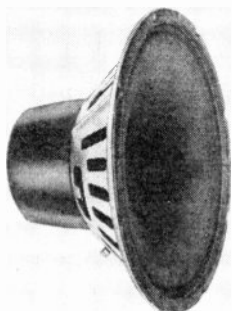
8" shallow design for shallow installations; power rating 10 watts; frequency response 55-18,000 cps; 1" voice-coil; 6 oz. ceramic magnet.....\$9.90

Model HM12K5 12"

"Hidden Magnet"

12" full-range; power rating 15 watts; frequency response 40-14,000 cps; 1 1/4" voice-coil; 12 oz. ceramic magnet....\$11.97

Model W12K508 Woofer



12" design, 1 1/4" voice-coil; 10 oz. Alnico V magnet; 15 watt capacity; resonance 50 cps; 4000 cps roll-off.....\$23.70

1963 EDITION



“O new born big brother, doest thou feel more competent than I to uphold the flawless reputation of KOSS STEREOPHONES”



“O little brother, thy sound is as sharp & clear as the day KOSS invented thee but when it comes to the tough professional jobs, give thee way to my shining armour”

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2227 NORTH 31st STREET, MILWAUKEE, WISCONSIN

CIRCLE NO. 33 ON READER SERVICE PAGE

5

Speakers & Cabinets

Model W12M608 Woofer

12" design; 1½" voice-coil; 20 oz. Alnico V magnet; 25 watt capacity; resonance 45 cps; 3000 cps roll-off.....\$34.50

Model W15M608 Woofer

15" design; 1½" voice-coil; 20 oz. Alnico V magnet; 25 watt capacity; resonance 40 cps; 2000 cps roll-off.....\$39.00

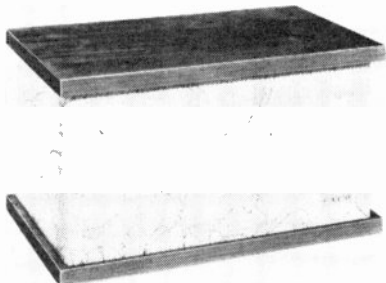
PACO

Model L-1 Speaker System

Response 50 to 17,000 cps; bookshelf design; 15¼" x 9¼" x 8½"; unfinished, but sanded, walnut (semi-kit).....\$24.95

Model L-2 2-Way Speaker System

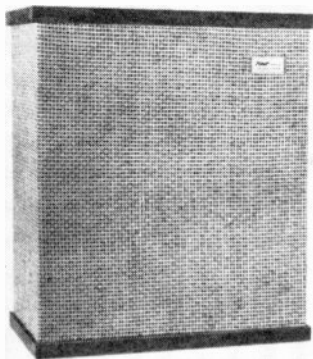
Pre-tuned tube-loaded port; 10" Jensen long excursion woofer and a horn-loaded



compression tweeter; over-all response 45-14,000 cps; high efficiency system; adjustable brilliance control; ¾" furniture grade plywood; 23½" x 13" x 12". Unfinished (semi-kit).....\$59.95 Walnut finish (semi-kit).....\$69.95

PILOT

Model PSV-2 Speaker System



3-way speaker system; 12" woofer, 6" mid-range, 3" cone-type tweeter; frequency response 50-16,000 cps; 16 ohms; power rating 30 watts; 18" x 15¼" x 9¾"; oiled walnut trim.....\$69.50

Model PSV-3A Speaker System

3-way speaker system consisting of 8" woofer, 3½" mid-range, 3½" super-tweeter; frequency response 50-16,000 cps; 8 ohms; power rating 30 watts; 18" x 11½" x 9"; wt. 27 lbs.....\$64.50

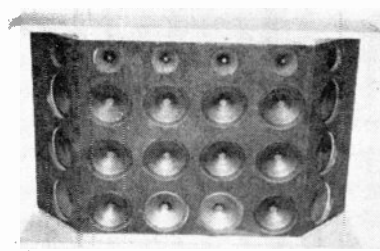
Model PSV-4 Bookshelf Speaker System

12" Air Flex heavy-duty woofer, two 3½" cone-type mid-range speakers, and super tweeter; crossover frequencies 2500 cps and 8000 cps; total range 40-16,000 cps; 8 ohms impedance; 30-watt program power; 25¼" x 14½" x 12" deep; available

in lacquered walnut, oiled walnut, or mahogany\$119.50

POLYCOUSTIC

Model PC-28 Speaker System

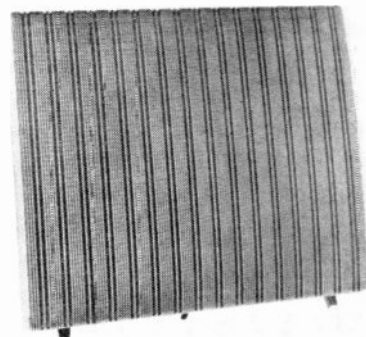


An array of 28 speakers—22 6" speakers and 6 hard-cone tweeters; 180 degree sound dispersion at 5 kc.; 30-15,000 cps ± 2 db.; 25 watts; 1M and harmonic distortion each 1% at 100 db. output; cabinet is vented infinite baffle; 29¾" x 41¼" x 9½"; photo shows assembly without grille cloth mounting; 8 ohms impedance. PC-28K Kit (birch or mahogany).....\$132.00 PC-28K Kit (walnut).....\$138.75 Speaker Kit (without cabinet, speakers only)\$59.50

QUAD

Electrostatic Speaker

Full-range 45-18,000 cps; 15 watts minimum power required from top-quality,



low-distortion power amplifier; dispersion at least 70 degrees horizontal, 15 degrees vertical; sound radiated from front and back in figure-8 pattern; impedance 16 ohms; 31" high x 34½" wide, 10½" deep, weight 39 lbs.\$345.00

QUAM-NICHOLS

Model 6A21X Extended-Range Speaker

6½" dual-cone, extended-range speaker; capacity 5 watts; frequency response 75-15,000 cps ±5 db; 8-ohm impedance; Alnico V magnet; shipping weight 1½ lbs.; baffle opening required 5½", depth 2¾"\$8.95 List

Model 69C6X Extended-Range Speaker

6" x 9" dual-cone, extended-range speaker; capacity 12 watts; frequency response 50-15,000 cps ±5 db; 8-ohm impedance; barium ferrite magnet; shipping weight 2½ lbs.; baffle opening 5¾", depth 8½"\$13.95 List

Model 10A10X Extended-Range Speaker

10" dual-cone, extended range speaker; capacity 12 watts; frequency response 50-15,000 cps ±5 db; 8-ohm impedance; Alnico V magnet; shipping weight 4½ lbs.; baffle opening required 9¾", depth

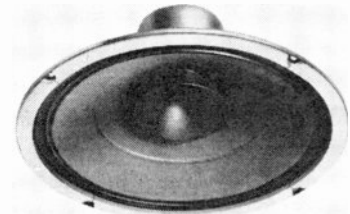
5¼"\$24.00 List

Model 12A10X Extended-Range Speaker

12" dual-cone, extended-range speaker; capacity 15 watts; frequency response 50-15,000 cps ±5 db; 8-ohm impedance; Alnico V magnet; shipping weight 4¾ lbs.; baffle opening required 11¼", depth 5¾"\$26.00 List

R&A

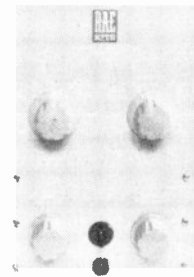
700 Series "Mark IV" Speakers



Dual-cone design with mechanical cross-over and multi-layer 1" voice coil (¾" v.c. on 5" dia.); 8 ohms impedance. Model 750 5" dia.; 220 cps fundamental resonance; 10 watts.....\$9.95 Model 780 8" dia., 65 cps fundamental resonance; 20 watts.....\$14.95 Model 7100 10" dia., 60 cps fundamental resonance; 25 watts.....\$16.95 Model 7120 12" dia.; 55 cps fundamental resonance; 30 watts.....\$18.95 3000 cps LC crossover network available for 5" midrange/super tweeter Model 750\$9.95

R.A.E.

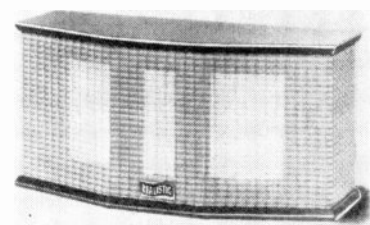
Model 100 Adjustable Dividing Network Kit



Basically an electronic crossover network separating low frequencies from high frequencies; separate low- and high-range controls are adjustable; will set crossover points at 150, 220, 350, 500, 700, 1000, 1500, 2200, and 3500 cps; has separate level controls; tubes: 3-12AX7 providing low impedance cathode outputs; 8¾" h. x 6" w. x 11" d. Kit\$74.95

REALISTIC

"Electrostat-3" Speaker System



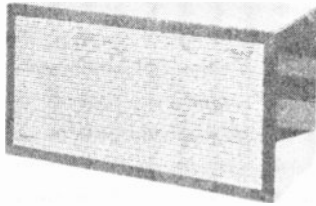
3-element speaker system; frequency response 5000-25,000 cps; built-in power supply; 11¾" x 5¾" x 4½"; shpg. wt. 7 lbs; mahog., walnut, blond; includes 8

or 16 ohm network.....\$15.99

"Solo-I" Speaker System

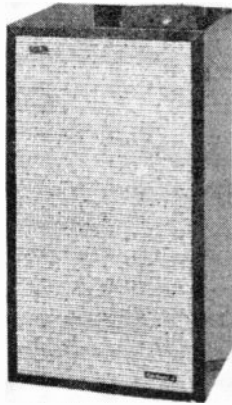
2-way speaker system with 8" woofer and coaxially mounted "whizzer"; frequency response 50-14,000 cps; 14½" x 11" x 10½"; shpg. wt. 12 lbs.; mahogany..\$19.95
Oiled-walnut\$21.95

"Solo-II" Speaker System



Consists of specially designed 8" speaker; frequency response 40-16,000 cps; 8 ohms impedance; 20" x 11" x 10"; 19 lbs.; mahogany or blonde.....\$29.95
Oiled-teak, oiled-walnut.....\$31.95

"Electrostat-4A" Speaker System



Has 4 electrostatic elements plus mid-range cone speaker, woofer, crossover network, balancing controls; frequency response 30-25,000 cps; 8 ohms impedance; cabinet is 27"x13½"x12½"; 43 lbs.
Mahogany\$84.95
Teak, oiled-walnut.....\$89.95

Complete High-Frequency System

Wide dispersion; response 1200-25,000 cps ±2 db; built-in crossover at 1200 cps; impedance 8 ohms; 5" dia. driver; 10½" x 6¼" x 6"; mahogany.....\$54.95
Oiled-walnut\$56.95

"Nova-3" Full-Range Speaker

Two separate cones, one for lows and one for highs; mounted separately but connected to same 2" voice coil; impedance 8 ohms; 1 lb. Alnico V magnet; free air resonance 65 cps.....\$17.95

"Solo-3" Speaker System

Consists of specially designed 8" speaker; response 40-16,000 cps; 8 ohms impedance; 20" x 11" x 10"; mahogany, blonde\$39.95
Oiled-walnut\$42.95

"Solo-9" Speaker

Cabinet ¾" stock; hand-rubbed oil walnut finish; 8" woofer & Realistic Sphericon super-tweeter; wide dispersion; electrical crossover at 3000 cps; 2" dia. voice coil; free air resonance 50 cps; impedance 8 ohms; 14½" x 14" x 22".....\$99.50

"Electrostat-2" Speaker System

Features four-element electrostatic tweeter with built-in crossover and attenuator; response 45-25,000 cps; high-compliance 8"

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The First Complete Stereo Speaker System in ONE unit!

Completely new and revolutionary, SONORAMA* by Rek-O-Kut produces breathtaking stereo sound from just one unit. No matter where you place SONORAMA, no matter where you sit, you'll hear the same vivid separation of tones... from big bass through magnificent mid-range to highs of superb clarity. How? An advanced configuration of SONORAMA's four 8-inch woofers and two super tweeters. Response: 40-17,000 cps. High efficiency: operates from as little as 2 watts power up to 50 watts. Compact, 5" x 12" x 67"... a versatile piece of furniture designed to blend with any decor... doesn't require any floor space. Contemporary design, in oil-rubbed walnut... only \$149.95 net. (Other styles available at slightly higher price)

*PAT. APPLIED FOR

SONORAMA*

BY

REK-O-KUT



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... SHE LIKES 'EM because of their exciting privacy. Her husband watches the ballgame on TV... the kids can clown around — while she is in another world enjoying her very best hi-fi programs.

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only \$29.95.



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5

Speakers & Cabinets

woofer; 120 degrees dispersion; 22½" x 13" x 12½"; oiled walnut, oiled teak\$62.95
Mahogany\$59.95

Bass Reflex Enclosure

¾" stock; will house 15" speaker; complete with 12" reduction ring; 27" x 24" x 15"; unfinished.....\$32.50
Walnut or mahogany.....\$39.95

"Nova-212" 3-Way Speaker

Dual-cone 12" design with diffraction-horn tweeter; response 35-18,000 cps; 2" voice coil; built-in crossover and balance switch; 16 ohms; cone resonance 60 cps; 20 watts; 5½" deep.....\$29.95

"Nova 112" 2-Way Speaker

12" dual-cone design; high-compliance suspension and edgewise wound voice coil; response 40-14,000 cps; 20 watts; 16 ohms; 5½" deep.....\$18.95

"Nova 312" 3-Way Speaker

12" design with dual-cone diffraction-horn tweeter, LC-type crossover; level control; edgewise wound 2½" ribbon voice coil; high-compliance suspension; response 35-20,000 cps; crossover 3500 cps; 30 watts; 16 ohms; cone resonance approximately 50 cps.....\$49.95

"Nova 6" Tweeter

Wide dispersion; hard-cone radiator design; built-in crossover; 8 ohms; 10 watts; 5" dia. x 3" deep.....\$5.95

"Nova T-10" Super Tweeter

Horn-type wide dispersion 120° design; response 5000-18,000 cps; supplied with crossover network and "L" pad balance control; can be used in 8 or 16 ohm systems; 3¼" dia. x 3" deep.....\$12.95

"Electrostat-5" Speaker System

Combination "slim design" enclosure (5½" deep) with woofer and two electrostatic tweeters; response 50-20,000 cps; 8 ohms; 12 watts; high-frequency level control; walnut finish with cane-type grille; 16" x 16" x 5½".....\$49.95

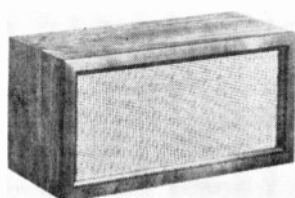
RICH

Model 20/20 Speaker System

Features unique transducer utilizing an active plane radiation system; extremely low harmonic distortion and transient response equivalent to electrostatic speakers; 50 watts capacity; three speakers, woofers, midrange, and tweeter; response 20-20,000 cps ± 8 db; 25½" x 16" x 9½"; oiled walnut finish\$200.00

ROCKFORD

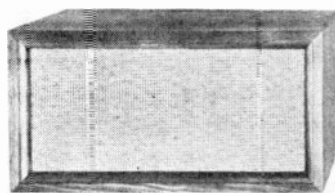
Model 128 Speaker Enclosure



Bookshelf type vented-port design for 8" speaker; 19" x 9" x 11"; finished on all four sides; walnut, mahogany, blonde, or ebony\$21.00

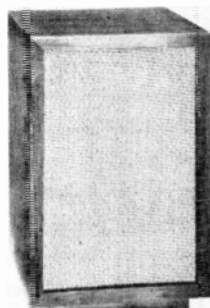
Model 108 Speaker Enclosure

Vented-port design for 8" speaker & tweeter; 12" x 24" x 12"; same finishes



as Model 128.....\$27.00

Model 112 Speaker Enclosure



Vented-port design for 12" speaker & tweeter; 16" x 24" x 13½"; same finishes as Model 128.....\$42.95

SCHOBER

Model LSS-10 Speaker System

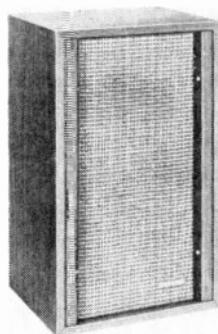
Designed primarily for use with electronic organs; one Electro-Voice SP12B 12" bass speaker

plus LS-8 8" treble speaker with 6000 cps mechanical crossover and "whizzer" cone plus 300 cps electrical LC crossover network; response 32-13,000 cps; 40 watts organ tone or 20 watts average program material; ducted port enclosure tuned to 32 cps; 8 or 16 ohm impedance; 24" x 19" x 36"; sold direct only and as a semi-kit. ¾" birch veneer plywood.

Model LSS-10 (Unfinished).....\$125.00
Model LSS-10W (Walnut finish).....\$150.00
Model LSS-10S (Finish of customer's choice)\$165.00

H. H. SCOTT

Model S-2 Speaker System

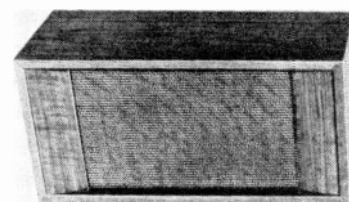


Three-way system using a 12" high-compliance woofer; two midrange drivers mounted on acoustically isolated, angled mounting boards; high-dispersion spherical tweeter; multiple crossover networks; response over entire audible range; continuous tweeter and midrange controls; 23¾" x 14½" x 12½".

Unfinished pine.....\$179.95
Unfinished hardwood.....\$189.95

Mahogany, walnut.....\$199.95

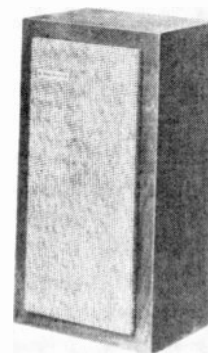
Model S-3 Speaker System



Three-way system, bookshelf size; uses high-compliance 10" woofer; midrange driver; special high-dispersion tweeter; multiple crossover networks with continuous tweeter and midrange controls to provide extended frequency response over entire audible range; size 23½" x 11¼" x 9¼".

Unfinished pine.....\$119.95
Unfinished hardwood.....\$129.95
Mahogany, walnut.....\$134.95

Model SK-4 Speaker System Kit

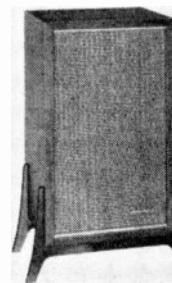


Three-way acoustic compliance system that includes many features of Model S-3; cabinet comes pre-assembled; 22" h. x 11" w. x 9" d.

Unfinished pine.....\$79.95
Walnut and unfinished hardwood... \$89.95
Mahogany\$99.95

SHERWOOD

Model "Ravinia" Speaker System



Three-way design; 12" woofer with free air resonance of 21 cps; 8" mid-range; 3" cone tweeter; electrical crossover network 12 db/octave, 60 & 3500 cps; response 45-17,500 cps ± 2½ db; 12-16 ohms; 50 watts program material; 1M distortion less than .5% at 5 watts input; harmonic distortion 4% at 30 cps with 10 watts input; brilliance level control; 3¼" dia. port to re-inforce low end; all speakers mount from front; cabinet walls 1" thick; 15" x 16¼" x 13¼".

SR3W Walnut finish.....\$139.50
SR3B Unfinished birch.....\$129.50
SR3U Utility design, less grille.....\$119.50
SR3K Three-speakers & crossover, less cabinet\$79.50
R12 12" woofer\$57.50
R8 8" mid-range\$14.95
R3 3" tweeter\$14.95
RB Island base\$ 9.95
RL Console legs\$19.95

SONOTONE

Model T-64 Tweeter

Elliptical cone tweeter; power rating: 20 watts average program above 2000 cps; frequency response (in baffle): 800 to 17,000 cps; impedance: 15 ohms at 10,000 cps; flux density: 12,000 gauss; 3/4" aluminium voice coil; designed primarily for 2000 cps crossover; 6" x 4".....\$12.00

Model WR-8 8" Speaker

Power rating 20 watts average program, frequency range 55 to 15,000 cps; resonance 70 cps; impedance 8 ohms; flux density 12,000 gauss; 1" voice coil....\$13.50

Model CA-12A Speaker

Coaxial 12" loudspeaker; inductor-capacitor dividing network; elliptical tweeter; frequency range 35 to 20,000 cycles; resonant frequency: 50 cycles; crossover frequency: 2000 cycles; power handling: 40 watts average program, 80 watts peak; flux density: woofer—12,000 gauss; tweeter—9500 gauss; impedance 16 ohms..\$31.00

Model W-12

Same 12" woofer used in CA-12A coaxial loudspeaker; frequency range 35 to 7000 cycles; resonant frequency 50 cycles; power handling 40 watts average program 80 watts peak; flux density 12,000 gauss; impedance 16 ohms.....\$19.00

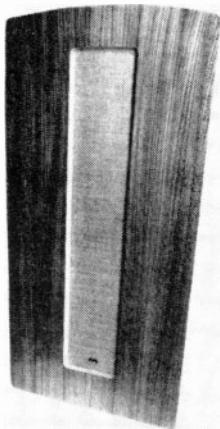
Model W-15

15" woofer; power rating: 25 watts continuous; frequency response: 20 to 7000 cps; impedance: 15 ohms; magnet: 5 lbs. Alnico V; flux density: 15,000 gauss; velour cloth suspension; free air cone resonance: 30 cps; 2" voice coil; over-all diameter 16" with mounting lugs..\$88.00

TANDBERG

Model CS40 Speaker System

Contemporary style corner speaker system; frequency response: 60 to 16,000 cps; uses single 8" coaxial speaker with mechanical crossover and metal diffusion grille for dispersion of highs; copper ring used in



air gap of speaker magnet to reduce self-inductance of voice coil for high frequency response at full energy; light weight permits mounting of enclosure near ceiling; rear of enclosure constructed with one-piece 3/4" plywood with 90 degrees corner bend; volume of enclosure: 4 cubic feet; size: 39.4" h. x 20.9" w. x 9.46" d.; weight: 27 1/2 lbs.; finishes: light elm or fine grain mahogany.....\$87.50

Model 165BK 8" Dual-Cone Speaker

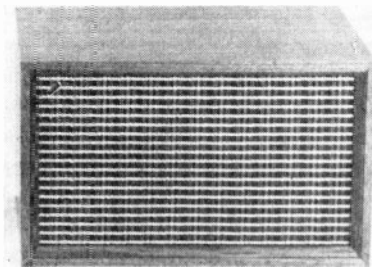
Main cone has extra tweeter cone; flux density 11,000 gauss; maximum applied voltage 5 volts; efficiency 5%.....\$21.50

Model 165B 8" Coaxial Speaker

Consists of bass and mid-range unit with tweeter coaxially mounted; built-in 12 db/

octave filter with crossover frequency at 3000 cps\$31.50

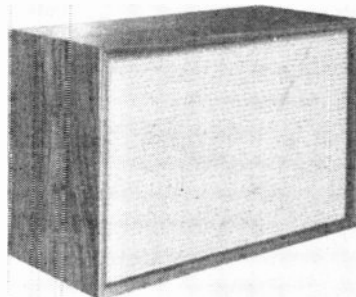
Model CX266 Speaker System



Bookshelf type with Model 165B 8" coaxial speaker; response 60-16,000 cps\$89.50

TANNOY

"Belvedere" Speaker System



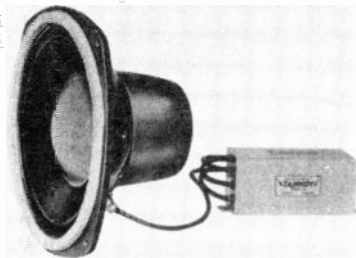
Dual-ported bass reflex design; may be used vertically or horizontally; 26" x 12" x 18"; walnut.

Enclosure only.....\$60.00

Enclosure with 12" Dual-Concentric Monitor speaker.....\$200.00

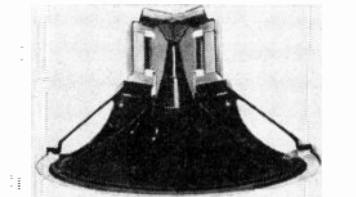
Enclosure with 10" Dual-Concentric Monitor speaker.....\$177.25

10" Dual-Concentric Monitor Speaker



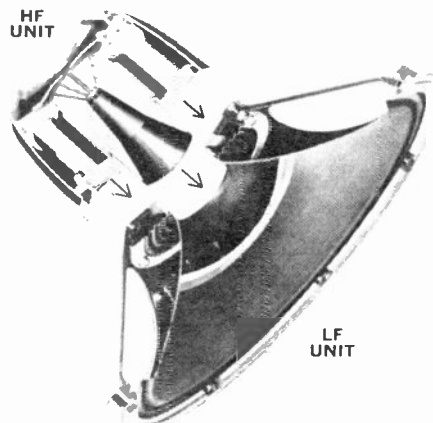
Response 20-30,000 cps; IM product less than 2%; crossover frequency 1800 cps; resonance 27 cps; magnet assembly 6 1/4 lbs.; polar distribution -2 db @ 10,000 cps for 60 degrees; power handling capacity 20 watts; adjustable high-frequency control; impedance 16 ohms; recommended mounting infinite baffle type as low as 1 1/2 cu ft.; shipping weight 13 lbs.....\$112.75

12" Dual-Concentric Monitor Speaker



Coaxial speaker with bass resonance of 35 cps; IM distortion less than 2%; tweeter voice-coil diameter 2"; woofer v.c. diameter 2"; woofer designed for true piston operation; surround treated with stable lossy resin to prevent subsidiary resonance; pow-

HOW CLOSE SHOULD THEY BE?



When instruments, or the human voice, produce the original sound, the entire audio spectrum is closely integrated: both high and low frequencies are created together as a unity. It is only reasonable, therefore, that the reproducing system should adhere to the original principle as far as is possible. Tannoy engineers, realising the basic problems involved, developed the now highly regarded 'Monitor' Dual Concentric principle.

The 'Monitor' Dual Concentrics are not just loudspeakers, but precision-engineered instruments: a fine horn-loaded high frequency unit feeding directly through and closely associated with the low frequency reproducer provides the close unity between high frequencies and low frequencies which is imperative if we are to re-create the original sound. The curvilinear low frequency diaphragm continues the high frequency horn flare, thereby providing the maximum high frequency dispersion. This integration of the audio spectrum was most desirable monophonically, but in stereo, to ensure early left and right channel integration (without which the 'hole in the middle' effect is apparent), we consider it of paramount importance.

The Tannoy Dual is noted for its remarkable instrument definition, and critics have referred to it as "the speaker that produces musical sounds". So, if your pleasure is in hearing music, next time you are at your dealer's, listen to the 'Monitor'—there is a difference!

We should be pleased to send you our literature.

Tannoy (Canada) Limited
36 Wellington St. East,
Toronto 1, Ontario.

Tannoy (America) Limited
P.O. Box 177
East Norwich, N. Y.

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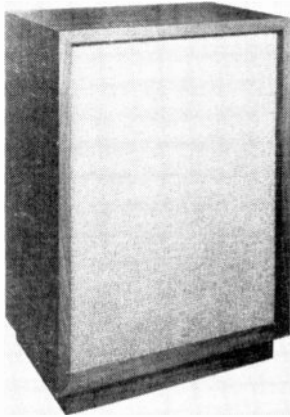
Speakers & Cabinets

er rating 30 watts; flux density 11,500 gauss for woofer, 15,000 gauss for tweeter; dispersion at 60° -3 db at 10,000 cps; crossover 1700 cps; 16 ohms; response 25-20,000 cps; depth 7 1/2".....\$138.00

15" Dual-Concentric Monitor Speaker

Coaxial speaker with bass resonance of 32 cps; IM distortion less than 2%; tweeter voice coil 2" dia.; woofer voice coil 2" dia.; woofer designed for true piston operation; surround treated with stable lossy resin to prevent subsidiary resonance; power rating 50 watts; flux density 13,500 gauss for woofer, 18,000 gauss for tweeter; dispersion at 60° -4 db at 10,000 cps; crossover 1000 cps; 16 ohms; response 23-20,000 cps; depth 9".....\$179.00

"Belvedere" Senior Speaker System



Designed for use with 15" Dual-Concentric Monitor speaker in stereo reproduction; baffle available for use with 12" speaker; 31 1/2" x 23 3/4" x 16"; walnut or mahogany.

Enclosure only.....\$87.50
Enclosure with 12" Dual-Concentric Monitor speaker.....\$231.00
Enclosure with 15" Dual-Concentric Monitor speaker.....\$268.50

"Dalton" Enclosure

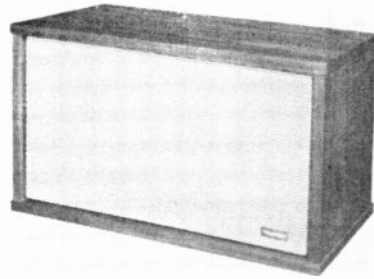


Infinite-baffle type designed for use with either 10" or 12" Dual-Concentric Monitor speakers; 23 3/4" x 23 3/4" x 16"; solid back-to-front legs 2 1/2" high; oiled walnut only.....\$75.00

Enclosure with 12" Dual-Concentric Monitor speaker.....\$215.00
Enclosure with 10" Dual-Concentric Monitor speaker.....\$192.00

"Cadet" Speaker System

Infinite-baffle approx. 1 1/2 cu. feet; operates on principle of pressure loading and acoustic absorption of back radiation; designed to be used with 10" Dual-Concentric Monitor speaker; 23 3/4" x 13 1/2" x 11"; oiled-walnut only; with speaker



.....\$145.00

Model "GRF" Speaker System

Designed especially for use with 15" Dual-Concentric Monitor speaker; horn-loaded; response 30-20,000 cps ± 3 db; 50 watts; 8% approx. efficiency; effective loading down to 30 cps; 42" x 23 1/2" x 17 1/2"; oiled-walnut.....\$385.00
Enclosure only.....\$206.00

UNIVERSITY

"Medallion XII" Speaker System

3-way speaker system consisting of 12" high-compliance woofer, 8" mid-range, Sphericon super tweeter; frequency response 28-22,000 cps; snap-on speaker grilles to match Provincial, Modern, or Contemporary furnishings; mahogany, walnut, oiled-walnut, fruitwood; grilles separate.....\$139.95
Unfinished.....\$134.95
Select-A-Style frame for French Provincial in fruitwood.....\$ 14.95
Select-A-Style frame for Early American in fruitwood.....\$ 14.95
Select-A-Style frame for Italian Provincial in mahog., wal., oiled walnut, fruitwood.....\$ 14.95
Select-A-Style frame for Swedish Modern in mahog., wal., oiled walnut, fruitwood.....\$ 14.95
Above styles unfinished.....\$ 13.95
Select-A-Style frame for Contemporary in mahogany, walnut, oiled walnut, fruitwood.....\$ 9.95
Unfinished.....\$ 8.95
Wood base for Medallion XII (all finishes).....\$ 14.95
Unfinished base.....\$ 13.95

"Medallion XII" Cabinets

Mahogany, walnut, oiled walnut, fruitwood.....\$ 64.95
Unfinished.....\$ 59.95
Cabinet kits in birch only.....\$ 49.95
Contemporary frame kit in birch only.....\$ 7.95
All other style frame and base kits in birch only.....\$ 12.95

Model UC-121 Coaxial Extended Range

Shallow design for flush mounting; Duraluminum dome; power capacity 30 watts; 12" speaker; frequency response 45-10,000 cps; 5 1/4 lbs. \$ 28.00

Model UC-152 2-Way Diffaxial

15" speaker; dual horn loading; wide-angle dispersion; frequency response 30-14,000 cps; power capacity 30 watts; 8 1/4 lbs. \$ 45.00

Model UC-153 3-Way Diffaxial

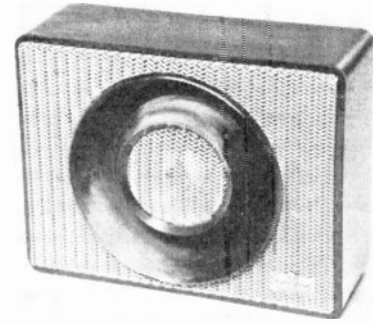
Medium power version of Model 315-C; 15" woofer, Diffusicone element, and super-tweeter; Model UXT-5 is center-mounted; power capacity 30 watts; frequency response 30-18,500 cps; depth 10".....\$ 83.00

Model T-202 "Sphericon" Super Tweeter

Domed phenolic diaphragm and spherical diffractor; frequency response 3000-44,000

cps; 120° dispersion; 4 3/8" diameter; built-in crossover network; 3 lbs.....\$24.95

Model T-203 "Sphericon" Super Tweeter



Similar to Model T-202 except housed in case for exterior use; 30 watt rating; 8 ohm impedance.

Model T-203E (ebony).....\$24.95
Model T-203W (walnut).....\$24.95

Model TM-812 Enclosure

Compact; takes 8" or 12" high-efficiency or high-compliance speakers; 21 1/4" x 15 1/2" x 12 1/2".

Mahogany.....\$43.50
Walnut.....\$46.50

Model S-9S 15" Speaker System

Consists of Model C-15W, Model T-30 "Cobreflex", Model HF-206 speakers; front-loaded folded-horn type; assembled and wired; unfinished; 40" x 30" x 24"......\$340.00

Model UC-122 "Diffaxial" Speaker

12" wide-range speaker with mechanical crossover at 1000 cps; response 45 to 13,000 cycles; power rating 30 watts; 8-16 ohms; 4 3/8" deep.....\$35.50

Model 308 3-way "Diffaxial" Speaker

Employs compression tweeter and 8" woofer; mechanical crossover at 1000 cps and electrical at 5000 cps; response 30-17,000 cps; power rating 35 watts; 8-16 ohms; 6 1/8" deep.....\$42.00

"Diffusicone-8"

Response from 30-15,000 cps; power rating 35 watts; 8-16 ohms; 4 1/2" deep.....\$28.00

Models MM-2FUW, MM-2UW

Completely waterproof speaker for use at swimming pools; stainless steel protective cover; heavy 18 foot connecting cable with third wire for grounding; power capacity 25 watts; impedance 16 ohms; MM-2FUW for flush mounting, MM-2UW for bracket mounting; each.....\$44.55

Model UXT-5 Super Tweeter

Response from 4500 to 17,500 cps; dispersion 120° horizontal and 50° vertical; 8 ohms; power rating 25-50 watts depending on crossover.....\$21.00

Model HF-206 Hypersonic Tweeter

Response 3500 cps to beyond audibility; dispersion 120° horizontal and 50° vertical; power rating 25-50 watts depending on crossover; 8 ohms; 6" x 3 1/16" x 6 1/16".....\$33.00

"Diffusicone-12" Wide-Range Speaker

Response 28-15,000 cps; power rating 35 watts; 8-16 ohms; 7 1/8" deep.....\$39.75

Model 6201 Coaxial Speaker

Compression tweeter and 12" woofer; response 28-18,500 cps; built-in crossover network with "Brilliance" control; power rating 30 watts; 8-16 ohms; 6 3/8" deep.....\$57.75

Model UC-123 3-way Speaker

12" woofer and UXT-5 super tweeter; response 40-18,500 cps; mechanical crossover at 1000 cps and electrical at 5000 cps; power rating 30 watts; 8-16 ohms; includes tweeter control; 9 1/4" deep...\$66.50

Model 312 "Diffaxial" Speaker

Spheric tweeter is projected through the center of the 12" woofer; mid-range reproduction is handled by "Diffusione" section; built-in crossover network and variable "Brilliance" control; mechanical crossover at 1000 cps and electrical at 5000 cps; response 28-40,000 cps; power rating 35 watts; 8-16 ohms; 6 3/8" deep.....\$73.00

Model 315-C Wide-Range Speaker

15" woofer with T-50 "Hypersonic" driver and horn; response 25-20,000 cps; adjustable tweeter balance; 6 1/2 lbs. of Alnico V magnet material; power rating 50 watts; 8-16 ohms; 12" deep.....\$156.00

Model 4401 Tweeter

One-piece die-cast horn with 120° horizontal and 50° vertical dispersion; hermetically sealed construction; response 2000-15,000 cps; 8 ohms; power rating 25 watts; 6" x 2 3/4" x 6 1/16".....\$18.00

Model C-8HC Woofer

8" high compliance dual voice coil woofer; frequency response 38-3000 cps; power rating 30 watts; impedance 8 ohms; 4 1/4" depth.....\$39.95

Model UC-82 Wide-Range Speaker

8" wide range Diffaxial speaker; frequency response 45-14,000 cps; power rating 25 watts; mechanical crossover at 5000 cps; impedance 8-16 ohms; 4 1/4" depth...\$16.95

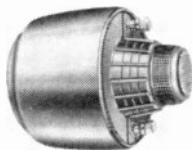
Model T-50 Hypersonic Driver



Heavy duty high efficiency driver for use with H-600 horn; response from 600 cycles to inaudibility; 8 ohms; 1 3/8-18 throat; 4 1/2" diameter; 4 1/8" deep.....\$49.50

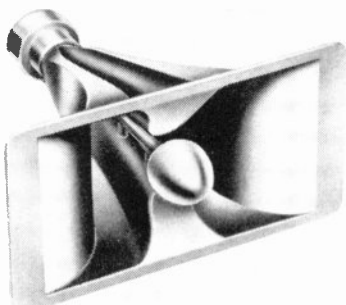
Model T-30 Driver

Mid-range and high-frequency driver for use in 2, 3, or 4-way systems; response 200 to 15,000 cps; use with H-600 or



"Cobreflex" horns; 8 ohms; 3 1/2" diameter; 3 3/4" deep.....\$30.00

Model H-600 Horn



HEAR! HEAR!

In High Fidelity, the name LEAK is acclaimed "The Finest." Performance, Engineering and lowest distortion merit this reputation... as yet unsurpassed. Now LEAK's unrivalled engineering is graced by the elegance of the finest in modern design... styling so beautiful that it has just been awarded the coveted Fashion Foundation of America Gold Medal.

As a critical listener with an equally discriminating eye for appearance, the NEW LEAK Line merits your attention. See* the dynamic, revolutionary NEW LEAK Piston-Action "Sandwich" Speaker System—the first major invention in loudspeakers since 1925.* See* the powerful NEW LEAK "Stereo-60" Amplifier with the "straight-line" response curve. See* the NEW LEAK "Point-One" Control Center—choice of professional broadcast engineers. See* the sensitive NEW LEAK FM tuner with multiplex adaptability... you will even marvel at the Decrodisc controls which color-blends the NEW LEAK system to your room decor...

... they await your appraisal at your nearest LEAK Franchised Dealer

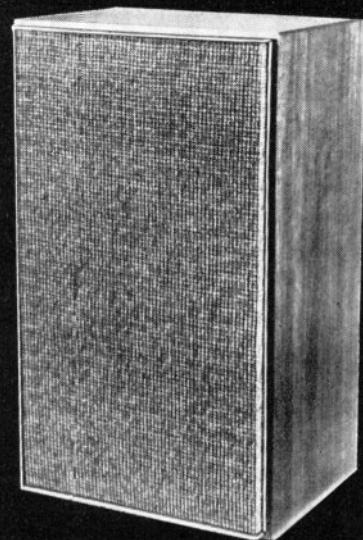


THE NEW LEAK PISTON ACTION SPEAKER SYSTEM

NEW LEAK "STEREO 60" 60 WATT AMPLIFIER

NEW LEAK FM TUNER

NEW LEAK STEREO CONTROL CENTER



THE NEW LEAK LINE

FASHION FOUNDATION OF AMERICA'S GOLD MEDAL FOR DISTINCTIVE STYLING.



*of course, be sure to HEAR it!



Literature, Performance data & Price List available upon request

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In Canada: **ELDON INDUSTRIES of CANADA LTD.**, Don Mills, Ontario

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Speakers & Cabinets

Mid-range and high-frequency horn with 600 cps cut-off; die-cast design with reciprocating flare design for uniform dispersion; fits any driver with standard 1 3/8"-18 throat\$19.00

Model C-8W 8" Woofer

For use as woofer in compact system or as mid-range in low-cost three-way system; suitable for crossover to 5000 cps; response to 50 cps with proper balling; power rating 25 watts; 8 ohms; 4 1/4" deep.....\$15.00

Model C-8M 8" Mid-Range Speaker

Response 500-5000 cps; power rating 50 watts program material; depth 4 1/4".....\$16.95

Model C-12SW Dual Voice Coil Woofer

12" adjustable response woofer; high end may be limited to 700, 2500 or 5000 cps to complement tweeter; 1 1/2 lb. Alnico V magnet; response 30 to 6000 cps; 8 ohms; power rating 30 watts; 6 1/2" deep.....\$39.50

Model C-15W Woofer

15" dual impedance woofer; may be used in any system from 4 to 20 ohms; response from below 25 to 1500 cps; power rating 50 watts; 6 lb. Alnico V magnet; 10 1/2" deep\$85.00

Model C-12HC Dual Voice Coil Woofer

High compliance 12" woofer; "Uniferrox-7" magnet material; response to 3000 cps permits use in two-way systems; dual impedance coil; 4-20 ohms; power rating 60 watts; 5 1/2" d.\$49.50

Model C-15HC Dual Voice Coil Woofer

High compliance 15" woofer with resonance of 15 cps; "Uniferrox-7" magnet material; response to 800 cps; dual impedance coil; 4-20 ohms; operating power should be from 10 watts up. 8 1/8" deep\$89.50

N-1 Adjustable High Pass Filter

Two-way dividing network with tweeter control; crossovers at 2500, 5000, and 10,000 cps at 8 ohms; 1250, 2500, 5000, at 16 ohms; 5000 and 10,000 cps at 4 ohms; fits panels up to 3/4" thick; 3 3/4" x 3 1/4" x 3"\$14.00

Models N-2A and N-2B Networks

Adjustable L/C dividing networks; N-2A is 6 db/octave two-way L/C network; may be used in pairs as 12 db/octave network or singly as 12 db/octave low or high-pass filter; crossover 350 or 700 cps at 8-16 ohms; 700 cps at 4 ohms; N-2B is 6 db/octave two-way L/C network; may be used in pairs as 12 db/octave network or singly as 12 db/octave low or high-pass filter; crossovers are 1250, 2500, or 5000 cps at 8 ohms; 2500 or 5000 cps as 16 ohms; 2500 cps at 4 ohms; N-2A and N-2B may be used in combination for three-way systems.

Model N-2A\$18.00
Model N-2B\$14.00

Model AP-8 Balance Control

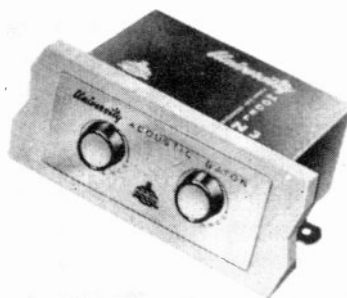
Attenuator pad to regulate speakers of different efficiencies and for balancing sound for room acoustics and personal taste; ideal for N-2A and N-2B networks.....\$3.95

Model A-1 Stereo Adapter Network

Provides means of using single woofer for both stereo channels; not suitable for dual voice-coil speakers; phasing switch in-

cluded\$30.00

Model N-3 "Acoustic Baton"



Three-way L/C dividing network with variable controls for high and mid-range; crossover between woofer and mid-range either at 350 or 700 cps; tweeter crossover at 5000 cps; fits panels up to 3/4" thick; 8 ohms; 7" x 5" x 3"\$32.00

Model BLC Speaker System

Weatherproof coaxial speaker for outdoor use; power rating 25 watts; impedance 8 ohms; frequency response: 70 to 15,000 cps; dispersion: 120 degrees; dia.: 22 1/2"; depth 9"\$53.70

Model MLC Speaker System

Similar to Model BLC but with frequency response from 150 to 15,000 cps; power rating 15 watts; impedance 8 ohms; 12 3/4" x 9 1/2" x 10 1/2"\$34.50

Model WLC Outdoor Speaker

50-15,000 cps; 30 watts; 90 degree dispersion; completely weatherproof; hi-fi quality; 8 ohms.....\$150.00

Model CLC Outdoor Speaker

Balanced "compression" folded-horn design; completely weatherproof; response 55-14,000 cps; 30-watt power capacity; 120 degree dispersion; 8 ohms; 22 3/4" x 12 1/4" deep\$69.95

Model EN-1215C "Debonaire" Enclosure

Enclosure only; may be used for 12" or 15" high-efficiency or high-compliance three-way speaker systems.
Mahogany\$63.00
Blonde, walnut, oiled walnut\$69.00

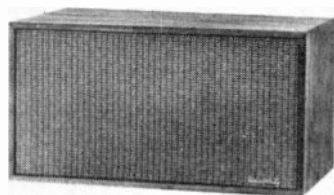
EN-CB Unfinished "Classic" Enclosure

Front-loaded folded horn fully assembled but unfinished; 3/4" white birch veneer plywood with lock and mitre joints and braced with glue blocks; less base and frame but speaker mounting hardware is included; 40" x 30" x 24".....\$120.00

"Cobreflex" Horn

Designed for use as mid-range horn in three-way systems or as high frequency horn in two-way systems; crossover as low as 350 cps; 120° horizontal and 60° vertical dispersion\$24.15

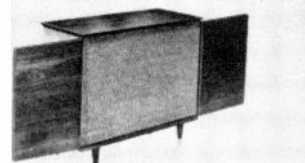
Model S-80 Speaker System



Two-way high-efficiency speaker system; 8" woofer, 3 1/2" direct-radiator tweeter; power rating 25 watts; impedance 8-16 ohms; 21 3/4" x 11 1/2" x 9 1/4"; finished on four sides in mahogany, walnut, fruitwood\$59.95

Unfinished\$56.95

Model TMS-2 "Trimensional" System

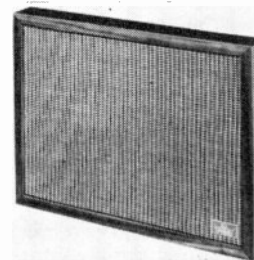


Two multi-speaker systems in one enclosure; consists of C-12HC dual-voice-coil woofer, two 8" mid-range speakers, two wide-angle tweeters; adjustable door; two networks with presence and brilliance controls; 30" x 25" x 12 1/2"; contemporary cabinet, mahogany.....\$258.00
Blonde or walnut.....\$263.00
Oiled walnut\$269.00
Early American style in fruitwood finish\$279.95

"Companionette" Speaker System

Two-way speaker system; 8" high-compliance woofer; direct-radiator tweeter; 1.1 cubic foot enclosure; response 40-17,000 cps; crossover frequency 2000 cps; power capacity 30 watts program material; 8 ohms; 16" x 11" x 11"; oiled walnut\$59.95

"Minni" Speaker System



Two-way speaker system with entire cabinet face acting as low-frequency radiator; separate tweeter; cabinet is only 2" thick and can be hung on the wall; response 50-17,000 cps; power capacity 20 watts program material; 4 ohms; 18" x 13 3/8" x 2"; oiled walnut\$44.95

"Minni-Flex" Speaker System



Three-way speaker system with special viscous-treated moving seal type woofer cone rim suspension; dual-cone mid-range; high-frequency speaker; separate level controls for mid-range and tweeter; response 35-20,000 cps; crossovers at 1000 & 7000 cps (6db/octave slope); power capacity 30 watts; 8 ohms; cabinet .4 cubic foot; 15" x 9 7/16" x 5 3/16"; oiled walnut.....\$69.95

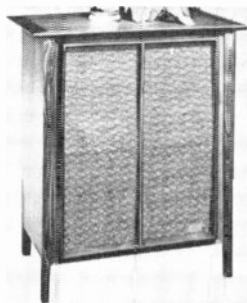
Model RRL-12 "Senior II" Speaker System

Three-way speaker system; 12" woofer, 3 1/2" mid-range, Sphericon super tweeter; response 30-22,000 cps; 8 or 16 ohms; crossover 3000 cps; brilliance control; 25" x 15 3/8" x 12 1/8".
Oiled walnut\$99.50
Unfinished\$89.50

Model RRL-10 "Companion II" Speaker System

Three-way speaker system with RRL ("Radiation Resistance Loading"); has 10" woofer, 3" mid-range, 3½" tweeter; response 35-18,000 cps; 8 or 16 ohms; crossover at 3000 cps.
 Oiled walnut\$79.50
 Unfinished\$69.50

"Classic Dual-12" Speaker System

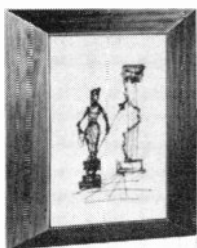


Similar in styling to "Classic Mark II" but more compact; three-way system; 12" large-excursion woofer, 12" high-compliance woofer/mid-range; Sphericon super tweeter; response 30-40,000 cps; 4 or 8 ohms; RRL tuned ducted-port enclosure; 2.8 cubic feet; 3-step mid-range control and continuously variable tweeter control; power capacity 50 watts program material; 23¼" x 31¼" x 15½"; oiled walnut\$229.95

"Classic Mark II" Speaker System

Three-way high-compliance speaker system; 15" woofer, 8" mid-range; Sphericon super tweeter; response virtually flat from 20-40,000 cps; power requirements 10 to 60 watts; crossover 150 cps; 4-8 ohms; has presence and brilliance controls; 35" w x 28¼" h. (with legs) x 17½" d.; oiled walnut.....\$295.00

"Syl-O-Ette" Speaker System



Two-way speaker system in ultra-thin decorator-styled cabinet; choice of interchangeable grille fabric frames; may be used on wall or floor, horizontally or vertically; 8" woofer, 6½" mid-range, subsidiary tweeter-radiator; response 40-20,000 cps; power capacity 30 watts program material; crossover at 500 cps; 23" w. x 29" h. x 4" d. Oiled walnut with decorator cane grille.....\$ 99.95
 Unfinished with decorator cane grille.....\$ 95.95
 Walnut with petit point grille.....\$109.90
 Unfinished with petit point grille.....\$105.90
 Oiled walnut with neo-classic grille.....\$ 99.95
 Unfinished with neo-classic grille.....\$ 95.95
 Imported Madeira petit point grille only.....\$ 9.95
 Silk-screened neo-classic grille only.....\$ 5.95

UTAH

Continental Series

Features controlled resonance design; solderless terminals are phase-coded; cloth skiver roll; 2" voice coil; Alnico V magnets; impedance 16 ohms.
 CT5FP (5" tweeter, 3500-20,000 cps, 40 w. with crossover).....\$15.70

CT5JP (5" tweeter, 3500-22,000 cps, 40 w. with crossover).....\$19.50
 CM8L (8" mid-range, 500-5000 cps, 20 w.)\$26.95
 C8R (8" woofer, 30-4500 cps, 25 w.)\$56.50
 C12R (12" woofer, 25-4000 cps, 30 w.)\$62.00
 C15R (15" woofer, 20-3500 cps, 40 w.)\$68.50

Fabulous G Series Speakers

GT26C (2" x 6" tweeter, 2500-16,000 cps, 20 w.).....\$ 6.50
 GT5F (5" tweeter, 3000-19,500 cps, 30 w.)\$ 9.45
 GT5FN (5" tweeter & crossover, 3000-19,500 cps, 30 w.).....\$13.60
 G8J (8" extended range, 50-14,000 cps, 12 w.)\$13.80
 GM8J (8" mid-range & crossover, 600-13,500 cps, 25 w.).....\$13.80
 G12J (12" extended range, 40-13,000 cps, 15 w.)\$17.30
 G12P (12" woofer, 35-5500 cps, 30 w.)\$39.15
 G12R (12" woofer, 25-4500 cps, 35 w.)\$52.25
 G15R (15" woofer, 20-4000 cps, 40 w.)\$56.75
 G12K26 (12" coaxial, 35-17,500 cps, 15 w.)\$35.50
 G12P5 (12" coaxial, 35-19,500 cps, 30 w.)\$57.50
 G15P5 (15" coaxial, 30-19,500 cps, 35 w.)\$65.00

Dual-Diameter Speakers

Dual-cone speakers with single voice coil and magnet structure; impedance 8 ohms.
 D8J (8" full range, 45-15,000 cps, 10 w.)\$17.50
 D8K (8" full range, 40-15,500 cps, 17 w.)\$21.20
 D8LA (8" full range, 40-16,000 cps, 18 w.)\$24.30
 D8SP (8" full range, 35-13,000 cps, 25 w.)\$32.50
 D12J (12" full range, 35-15,000 cps, 12 w.)\$20.55
 D12LA (12" full range, 30-16,000 cps, 18 w.)\$27.60
 D12SP (12" full range, 30-14,000 cps, 35 w.)\$36.25
 D69J (6" x 9" full range, 45-16,000 cps, 12 w.)\$16.95
 All speaker power ratings are peak audio watts.

Crossover Networks

LC type designs for 2- or 3-way systems; air-core coils; potted can assembly; use one 2500 cps model for 2-way system; use one 600 cps and one 5000 cps for 3-way system; for "G Series" speakers use 8-ohm crossover; for "Continental Series" use 16-ohm crossover; 2½" x 2" x 2".
 X-608 (8 ohms, 600 cps).....\$11.40
 X-2508 (8 ohms, 2500 cps).....\$10.60
 X-5008 (8 ohms, 5000 cps).....\$ 9.95
 X-616 (16 ohms, 600 cps).....\$12.35
 X-2516 (16 ohms, 2500 cps).....\$11.05
 X-5016 (16 ohms, 5000 cps).....\$10.40

Model SH1A Bookshelf Speaker System

Dual ducted-port design with 3" cone tweeter for 4000-17,500 cps; 8" woofer-midrange for 38-4000 cps; peak power 18 watts; impedance 8 ohms; high-efficiency design for 4 to 10 watt amplifier; 11" x 11" x 22½"; walnut.....\$99.95
 Unfinished birch\$89.95

Model SH3 Remote Speaker System

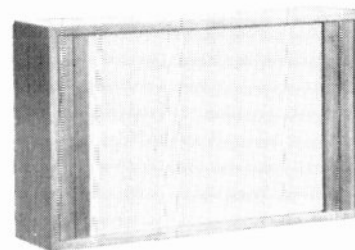
Uses 6" x 9" speaker with 3.16 oz. magnet; 8 ohms; 8" x 10¼" x 6¼"; walnut, blonde, or mahogany finishes.....\$24.95

Model SH4 "Thin" Speaker System



utah
Sorcerer

SPEAKER SYSTEM

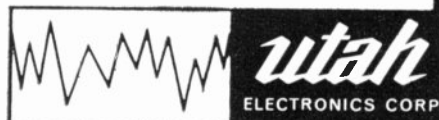


with a flick of the wrist...

and like Magic, your room fills with bewitching, beguiling sound which could only come from Utah's Sorcerer. Only the magic of Utah's electronic ingenuity produces the big, the full, distortion-less sound from such a compact, complete speaker cabinet.

- Styling—fits Early American through Modern decor.
- Components—Two Utah Speakers, an 8" Woofer, 5" Tweeter.
- Cabinet—Hand-rubbed, oiled walnut veneer, applied to ½" plywood, a standard for fine furniture.
- Location—Wall, bookshelf, floor, table-top.
- Dimensions—20" in length, 12" high, 5" deep.
- Power rating—12 watts.
- Uses—Hi-Fi or Stereo, as extension speakers for record player, radio or TV.

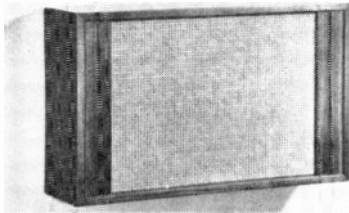
MODEL SH-4W—Finished Walnut Veneer



HUNTINGTON, INDIANA
 CIRCLE NO. 61 ON READER SERVICE PAGE

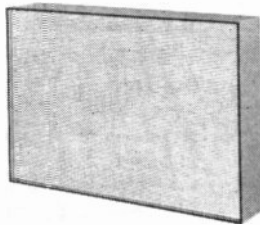
5

Speakers & Cabinets



Can be used on bookshelf or mounted vertically or horizontally on wall; 45-17,000 cps; 12 watts audio peak power; oversize voice-coil 8" woofer and high-efficiency tweeter; 12" x 20" x 4¹³/₁₆"; 8-ohm system; walnut finish.....\$49.95 Unfinished birch\$46.95

Model PT2 Speaker System



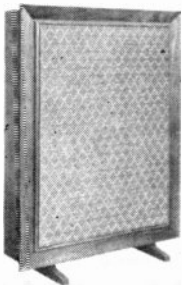
Wall-mounted design 12" x 18" x 3"; bass reflex port; uses 8" woofer and 3" x 5" tweeter; crossover at 2000 cps; 8 ohms; 8 watts peak power; walnut, blonde, or mahogany finishes\$26.95

Model PT3 Speaker System

Deluxe version of PT2; has 3¹/₂" tweeter for response to 18,500 cps; will handle 10 watts audio peak power; 12" x 20" x 3¹/₂"; walnut finish.....\$33.25

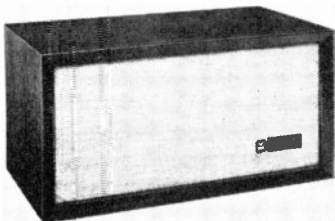
V-M CORP.

Model 62 "Silhouette"



Combines a 10" woofer, 6" mid-range, and 3¹/₂" tweeter with ultra-thin enclosure that can be hung on wall, built into wall, or left free standing; response 30-16,000 cps; crossover 600 cps and 5000 cps; 25 watts program power rating; 8 ohms; 26³/₄" h. x 20¹/₂" w. x 4³/₄" d.; walnut finish\$68.00

Model 32 Speaker System

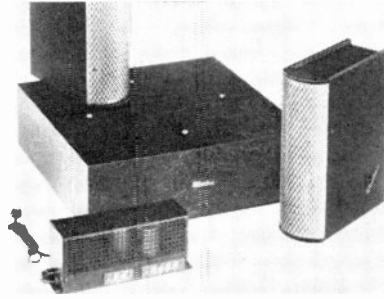


Has two 6" and one 3" speakers; response 60-12,000 cps; 10 watt program power

rating; 4 ohm impedance; 9" h. x 18" w. x 8¹/₈" d.; walnut or mahogany finish\$31.95

WEATHERS

Model SE-150W Book Speaker



Can be used in pairs or singly; shaped like a book; frequency response 60-20,000 cps; full range moving coil; power capacity 10-watts program; 4 ohm impedance; 11" x 9¹/₄" x 3⁵/₈"; oiled-walnut finish\$39.75

Hideaway Bass System

Non-directional bandpass speaker can be placed anywhere; designed for use with Harmony book-type speaker; frequency response 30-70 cps; 10 watts continuous power up to 25 watts program; output impedance 8 ohms; 16¹/₂" x 16¹/₂" x 5¹/₂"; 12 lbs.; A-301 bass amplifier response +0-3 db 10-70 cps; 12 watts continuous sine wave; output impedance 8 ohms; hum & noise -70 db from 12 watts; fully transistorized; output transformerless; 9" x 2³/₄" x 3¹/₄".

Model SE-55A Bass speaker with A-301 amplifier\$129.50

Model SE-55 Bass speaker with crossover network for use with any amplifier..\$69.50

Model SE-155A Two SE-150W speakers, one SE-55A bass speaker; one A-301 amplifier\$199.50

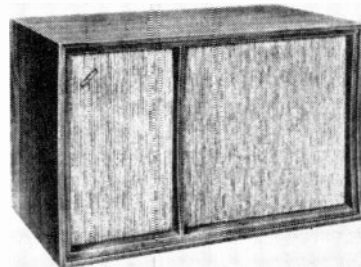
Model SE-156A Two SE-150W and one SE-55A speaker; plus NE-10A dry electronic crossover and bass blending network to permit use of any high-quality power amplifier for bass channel.....\$149.50

WHARFEDALE

Model W40

Can be used vertically or horizontally; sand-filled panels; 8¹/₂" low-frequency driver; 5" tweeter; 24" x 12" x 10" deep; available in oiled walnut, mahogany, polished walnut; 8 ohms; 20 watts continuous; crossover 1500 cps; has treble control.\$79.50 Unfinished utility model.....\$69.50

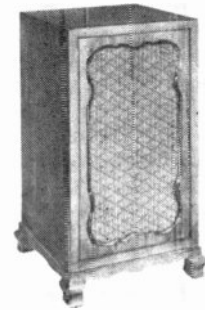
Model W60



Shelf-size speaker system with sand-filled panel, contains 12" and 5" speakers, matched to enclosure; resonance 25 cycles; 8 ohms; oiled walnut, polished walnut, mahogany; 14¹/₂" x 13" x 24".....\$116.50 Sanded unfinished birch.....\$101.50

Model W60PR

French Provincial in fruitwood; otherwise similar to Model W60; 27¹/₄" x 15¹/₈" x



12¹/₈"\$134.50

Model W70

Speaker system; impedance 8 ohms; 24" x 21" x 12"; oiled-walnut, polished walnut, mahogany\$164.50 Sanded unfinished birch.....\$146.50

Model W70PR

French Provincial in fruitwood; otherwise similar to Model W70; 27¹/₄" x 22¹/₈" x 12¹/₈"\$189.50

Mounting Base

For use with Models W60 and W70 systems; two leg assemblies are supplied with connecting dowel; can be used with speakers mounted vertically or horizontally by shortening the connecting dowel; available in walnut, oiled walnut, mahogany.....\$9.95 Unfinished utility model.....\$8.95

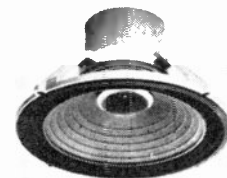
Super 3

Cone-type 3" tweeter; 3000 to 20,000 cps; flux density 14,500 gauss, total flux 57,500 gauss; smooth high-frequency response is achieved by eliminating the conventional centering device; may be used in 2- or 3-way systems as high-frequency tweeter; impedance 8-15 ohms; 2¹/₈" depth.....\$26.50

Super 8/FS/AL

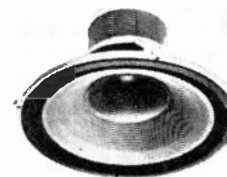
Cone type 8" speaker with aluminum voice coil; frequency response 50-15,000 cps; bass resonance 55-65 cps; 8-10 ohm impedance; flux density 14,500 gauss, total flux 60,000 gauss; foam cone suspension; recommended for use in 2- or 3-way speaker systems with a crossover in the region of 1000 cps, or as a single speaker; 4 watts rated on open ball; depth 4".....\$26.50

Super 10RS/DD Speaker



Full-range; 10" dia. speaker; 1-15 ohms; 50 watts peak input power; bass resonance 37-43 cps; double diaphragm with roll-surround\$47.50

Super 12RS/DD Speaker



Full-range, 12" dia. speaker; 12-15 ohms; 40 watts peak input power; bass resonance 28-33 cps; double diaphragm with roll-surround\$89.50

Model W12/RS Wocfer

Low-frequency speaker; 12" dia.; 12-15 ohms; 40 watts peak input; bass resonance 25-30 cps; speaker depth 6¹/₂".....\$52.50

Model W15/RS Woofer
 Low-frequency speaker; 15" dia.; 15 ohms; 50 watts peak input; bass resonance 22-25 cps; speaker depth 7 1/2".....\$89.50

Crossover Networks
 11S/CR/3 three-way network has crossover points at 800 and 5000 cps with 12 db octave attenuation; 7-16 ohms impedance; may be used as two way network; has controls for treble and mid-range.....\$42.25
 1000 cps two-way network; attenuation 6-9 db/octave; impedance 7-16 ohms.....\$18.25
 3000 cps two-way network; attenuation 6-9 db/octave; impedance 7-16 ohms.....\$18.25

WIGO

Model FW-2 Crossover Network
 Crossover at 5000 cps.....\$5.00

Model ER-85 Full Range Speaker
 8" extended range; capacity 15 watts; frequency response 50 to 15,000 cps; resonance 70 cps; 16 ohms impedance; 5 1/4 oz. magnet; flux density 10,000; baffle opening 7 1/4"; depth 4 1/2"; shpg. wt. 4 1/2 lbs.....\$21.00

Model ERD-12
 12" extended range; capacity 30 watts; frequency response 30 to 15,000 cps; resonance 40 cps; 16 ohms impedance; 8 lb. 13 oz. magnet; flux density 12,500; baffle opening 10 3/8"; depth 6 3/8"; shpg. wt. 13 lbs.....\$59.50

Model CX-2 Twin Tweeter Array
 Dual cone-tweeter assembly kit converts ERD-12 to CX-212; complete with high pass filters, terminals, cables, hardware, instructions; wt. 1 1/2 lbs.....\$20.00

Model CX-212 Coaxial Speaker
 Model ERD-12 speaker with model CX-2 dual cone-tweeter assembly attached raising response to 18,000 cps; all other specifications identical; shpg. wt. 14 1/2 lbs.; includes Model FW-2 crossover network.....\$79.50

Model TW-400 Tweeter
 4" cone tweeter; capacity 10 watts; frequency response 2000 to 18,000 cps; 8 and 16 ohms impedance; 3 oz. magnet; flux density 8000; baffle opening 3 3/8"; wt. 1 1/4 lbs.....\$12.50

Model WD-12 Deluxe Woofer
 12"; capacity 30 watts; frequency response 25 to 3500 cps; resonance 35 cps; 16 ohms impedance; 1 lb., 13 oz. magnet; flux density 12,500; baffle opening 10 3/8"; depth 6 3/8"; wt. 13 lbs.....\$59.50

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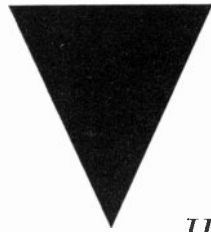
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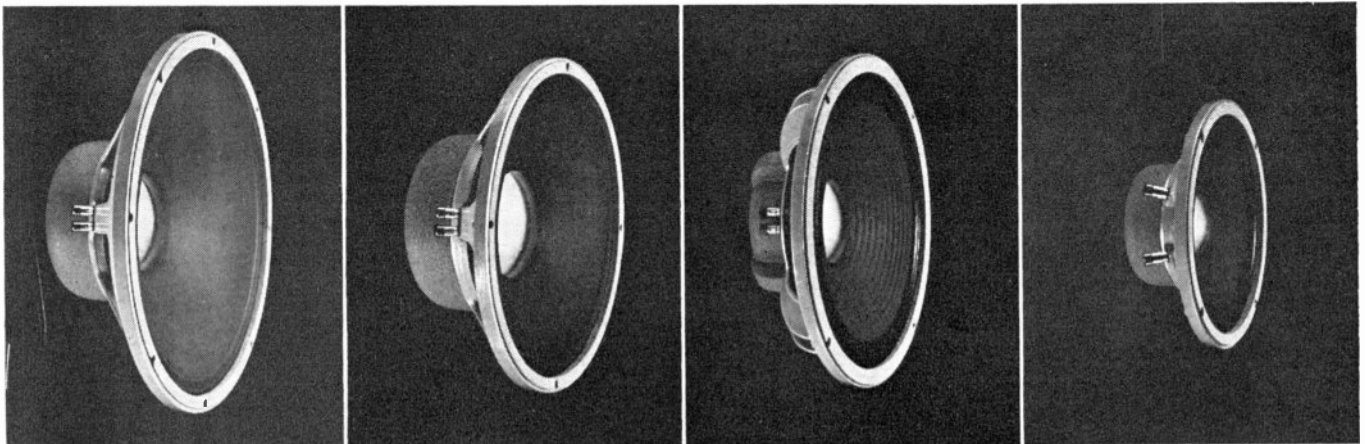


JBL
full-range
HIGH EFFICIENCY

loudspeakers
deliver

THE SMOOTHEST, CLEANEST SOUND THIS SIDE OF LIVE PERFORMANCE

James B. Lansing Sound, Inc., makes the most efficient loudspeakers in the world. At high levels and low, response is smooth, clean, complete. Definition is impeccable. They are without equal when it comes to reproducing transients. They clear the steepest wave front with room to spare, carry plenty in reserve for instantaneous peaks even when reproducing a full orchestra at realistic listening levels. And they don't need public address power to do it. JBL full-range speakers have earned an unchallenged reputation for possessing "presence," the elusive quality that spells the difference between total musical re-creation and mechanical-sounding reproduction. JBL transducers remain alone in their field, the only units made with voice coils at least one-fourth the diameter of their cones, with rigid cast-aluminum frames, with advanced magnetic circuitry free of wasteful stray fields. Big voice coils stiffen the cone for precision bass response. Big voice coils are attached directly to high frequency radiators for brilliant high-end reproduction. Big voice coils formed of aluminum ribbon wound on its narrow edge submit a large amount of conductor to the numerous lines of force in the long-circumference magnet gap. This is essential to high efficiency. It also takes precision construction to create the tight electrical and mechanical coupling that is directly related to efficiency. These JBL speakers are made with the precision usually reserved for the manufacture of scientific instruments. You can hear the difference. It's the difference that makes the eyes light up, that fires the old enthusiasm of the most sophisticated audiophile. Turn one on. Turn it up full. Treat your ears to the original magic of high fidelity.



THE JBL D130
 The classic 15" full-range precision transducer. 4" voice coil, dural dome, 16 ohms.

THE JBL D131
 Never before or since has so much engineering and care been lavished on a 12" unit. 4" voice coil, 16 ohms.

THE JBL D123
 The original compact 12" loudspeaker, only 3 3/4" deep, 3" voice coil, 16 ohms.

THE JBL D208 and D216
 8" transducers made with the same precision workmanship that goes into larger JBL speakers. 2" voice coils. D208 is an 8 ohm unit; D216, 16 ohms.

These high efficiency precision transducers are designed for use in exponentially-tapered horn or bass-reflex enclosures. JBL also makes Linear-Efficiency units designed for use in infinite baffle and ducted port type, minimum volume enclosures. In both categories you will find two-way, divided-network systems as well as full-range units, together with beautifully designed, meticulously finished acoustical enclosures. Write for your free copy of the complete JBL catalog and the name of the Authorized JBL Audio Specialist in your community.

JAMES B. LANSING SOUND, INC., Los Angeles 39, California

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6 Equipment Cabinets

ACOUSTI-CRAFT

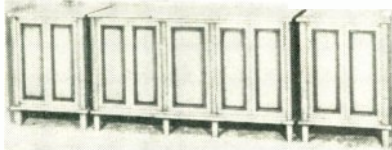
Samoa Stereo Group

Oriental modern styling; consists of twin speaker enclosures Models 2312OS and 2312OHS, 4 cu. ft. each, and Model 2300OE equipment cabinet; extended top has solid inlay construction. Model 2300OE Equipment cabinet; 27"x21½"x19½".....\$300.00

Model 2312OS Speaker enclosure (bass reflex); 27"x21½"x19½".....\$100.00
Model 2312OHS Speaker enclosure (horn loaded); 27"x21½"x19½".....\$112.00

Capri Symphony Stereo Group

Consists of Model 1415 IPS twin speaker enclosures 4.5 cu. ft. each, and Model



1400 EIP or EIPS equipment enclosure; ¼" hardwood birch or walnut veneer; eight finishes available.

Model 1400EIPS Equipment cabinet; 31"x41"x20¼".....\$225.00
Model 1415IPS Speaker enclosure (bass reflex); 31"x22½"x20¼".....\$100.00
Model 1415IPIIS Speaker enclosure (horn loaded); 31"x22½"x20¼".....\$112.00
Model 1400EIP Equipment enclosure; 31"x54¼"x20¼".....\$325.00

Heritage Symphony Stereo Ensemble



Consists of Model 1915PS and 1915 bass reflex and horn loaded 4.5 cu. ft. speaker enclosures, and Model 1900EIP or 1900EPS equipment cabinet; eight finishes available. Model 1900 EIPS Equipment cabinet;

30¼"x40"x20¼".....\$218.00
Model 1915 PS Speaker enclosure (bass reflex); 30¼"x23"x20¼".....\$100.00
Model 1915PIIS Speaker enclosure (horn loaded); 30¼"x23"x20¼".....\$112.00
Model 1900EIP Equipment cabinet; 30¼"x55"x20¼".....\$300.00

Colonial Symphony Stereo Ensemble

Consists of equipment cabinet and twin speaker enclosures; holds all equipment for stereo; ¼" hardwood birch veneer; eight finishes; enclosures are bass reflex or horn loaded.

Model 1800EAS Equipment cabinet; 30½"x40¼"x20¼".....\$218.00
Model 1815AS Speaker enclosure (bass reflex); 30½"x23¼"x20¼".....\$100.00
Model 1815AHS Speaker enclosure (horn loaded); 30½"x23¼"x20¼".....\$112.00
Model 1800EAS Equipment cabinet; 30½"x55"x20¼".....\$300.00

Stockholm Symphony Stereo Group



Consists of twin speaker enclosures Models 1515MS and 1515MHS 4.5 cu. ft. each, and Model 1500EM or Model 1500EMS equipment cabinet; double lift tops have piano hinges; eight finishes available; ¼" American walnut.

Model 1500EMS Equipment cabinet; 30¼"x41"x21".....\$218.00
Model 1515MS Speaker enclosure (bass reflex); 30¼"x21"x21".....\$100.00
Model 1515MHS Speaker enclosure (horn loaded); 30¼"x21"x21".....\$112.00
Model 1500EM Equipment cabinet; 30¼"x55½"x21".....\$300.00

Mediterranean Group



Consists of Model 5400EIP equipment cabinet; two lift-top lids; three compartments; vertical mounted doors; flat record storage both sides; raised base with casters; 54½"x23½"x20"; and speaker enclosure Model 5412IPSD; drum-table style; octagonal shape; raised base with casters; folding doors; ¼" walnut; available in variety of finishes; 12" speaker; 23½"x22½"x22½".

Model 5400EIP equipment cabinet.....\$380.00
Model 5412IPSD speaker cabinet.....\$180.00

Stereo Combo Series

Each is a complete, built-in unit in different stylings.

Model 3900EP Heritage Combo in Ameri-

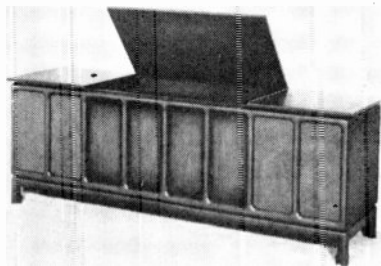


can Provincial style; 31"x75"x21½".
Model 3900EP with bass reflex enclosures.....\$350.00
Model 3900EPIH with horn loaded enclosures.....\$374.00
Model 3800EA Colonial Combo in Early American style; available with raised base and casters only; 31"x75"x21½".



Model 3800EA with bass reflex enclosures.....\$390.00
Model 3800EAIH with horn loaded enclosures.....\$414.00
Model 3400EIP Capri Combo in Italian Provincial style; 31"x75"x21½".
Model 3400EIP with bass reflex enclosures.....\$350.00
Model 3400EPIH with horn loaded enclosures.....\$374.00
Model 5300E Samoa Combo equipment

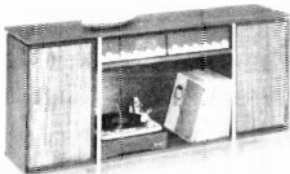
6 Equipment Cabinets



cabinet and stereo speaker cabinets in a single assembly (bass reflex); 75" x 27" x 19 1/2"\$380.00
 Model 5300OHE with horn loaded enclosure\$404.00
 Model 6400EIP Empress stereo combination; raised base with casters; solid top, doors on speaker compartments; for 12" speaker; bass reflex design; walnut or birch; 75" x 29 1/2" x 20"\$440.00
 Model 6400EIPH with horn loaded enclosure\$428.00

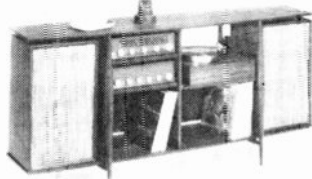
AUDIO ORIGINALS

Model 202 Cabinet



Contemporary designing; has adjustable 2-position equipment shelf; space for changer or turntable; metal legs in brass or white; speaker area 25 1/4" x 15 1/2"; equipment shelf 32 1/2" x 15" (5 1/2" or 7 1/2" positions); available in oiled walnut, fruitwood, cherry, and mahogany; shipped knocked down, easily assembled; over-all size 64" x 31" x 15"\$69.50

Model 303 Cabinet



Scandinavian design featuring pull-out record player shelf; speaker area 25 1/4" x 16 3/4"; component shelves 17 1/8" wide (5 1/2" or 7 1/2" positions); pull-out shelf 17 1/8" wide; over-all size 72 1/2" x 32 1/2" x 16"; available in oiled walnut, fruitwood, cherry, and mahogany; shipped knocked down, easily assembled.....\$99.50

BOZAK

Model C-305U Equipment Cabinet

"Urban" styling; available with either double doors with or without top lifts; over-all size 30"h. x 36 1/2" w. x 20"d.; available in walnut, mahogany, or ebony\$185.00

Model C-305P Equipment Cabinet

Similar to Model C-305U except Provincial styling; over-all size 31" h. x 40" w. x 20"d.; available in walnut, mahogany, or

cherry\$285.00

Model B-5000 Equipment System

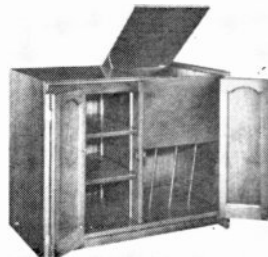
Two B-300U speaker systems and C-305U equipment cabinet with double lift lid; all mounted on metal bench 30"h. x 86"w. x 20"d.; available in walnut, mahogany, or ebony.....\$634.50

Model B-5002 Equipment System

Same as Model B-5000 system except with two B-320AU speaker systems.....\$793.50

ELECTRO-VOICE

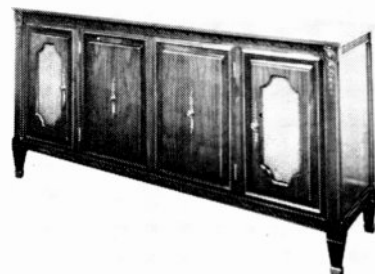
"Contessa" Equipment Consoles



Consoles available in walnut, mahogany, or cherry; space provided for amplifier, tuner, turntable or record changer, plus record and tape storage; over-all dimensions 37 1/4" w. x 30" h. x 20" d.; compartment dimensions: record player 16 3/4" l. x 16 3/4" w. x 7" d.; equipment storage area with adjustable shelves 17 1/2" w. x 18 3/4" d. x 23 1/2" h.; storage 13" h. x 17 1/2" w. x 18 3/4" d.; tape deck may be substituted in the appropriate location, depending on size of deck.....(Price not available)
 Special finishes available at additional cost\$25.00

GRECO

"Montoro" Custom Cabinet



Custom cabinet for individualized requirements; includes cut-outs; Italian Provincial; any finish; 72" w. x 36" h. x 19 1/2" d.....\$375.00

"Solofra" Custom Cabinet

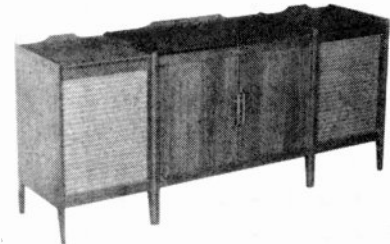


Custom cabinet for individualized requirements; includes lift-top Formica bar; Italian Provincial; any finish; 84" w. x 33" h. x 18" d.....\$575.00
 Company can supply basic cabinetry in contemporary classic, modern Danish, Early American, Italian and French Provincial to specifications.

HEATH

Equipment Cabinet

Factory-assembled, ready-to-use equipment and matching speaker cabinets designed for mono or stereo systems; available in hand-rubbed walnut or unfinished; "gallery" rails; front doors with recessed planes and striated vertical scoring; curved brass door handles mounted on bas relief door edges; 3/4" stock used on all exterior panels and supports; solids for edgings; furniture-grade veneers for front and side panels and shelves; ventilated rear half-panel of Masonite; center cabinet will house complete stereo or mono hi-fi system except speakers; changer compartment



will accept Heathkit record changer or most tape recorders; storage compartment holds records and tapes; or accessory slide-out drawer may be used for tape recorder; two shelf compartments hold tuners and preamps; power amp compartment takes any Heath stereo power amp, pair of UA-2 mono amps, or any single mono amp; speaker-wing cabinets for 12" and 15" speakers; adapter rings for 8" or 12" speakers; special port for horn-type tweeter; instructions for modifying tube-vented design to match any speaker resonance.

Model AE-20U center cabinet (unfinished)\$79.95
 Model AE-20W center cabinet (walnut)\$99.50
 Model AE-30U 12" speaker cabinets (unfinished)\$31.95
 Model AE-30W 12" speaker cabinets (walnut)\$38.95
 Model AE-40U 15" speaker cabinets (unfinished)\$37.95
 Model AE-40W 15" speaker cabinets (walnut)—photo.....\$44.95

KERSTING

Model E-1 Record Cabinet



Constructed of walnut veneer in hand-rubbed oiled walnut and oiled ebony finishes; birch veneer in blonde or mahogany finishes; holds 185 LP records; 22 1/4" h. x 32" w. x 16" d.; contains one "Quick-See" retractable album file allowing front-view flip through selection of records; other compartment has conventional storage\$54.95
 Early American Maple.....\$69.00
 Early American Maple with Captain's rail\$76.00
 Tambour door (legs).....\$91.90
 Tambour door (base).....\$91.90
 Three-compartment (hinged doors)\$160.00

KNIGHT

Model KN-1402 Equipment Cabinet

Contemporary design equipment cabinet to match Model KN-1267 enclosure; sliding

STEREO/HI-FI DIRECTORY

doors; top compartments measure 8 $\frac{3}{4}$ " x 16 $\frac{1}{2}$ " x 16 $\frac{1}{4}$ " and 12 $\frac{3}{4}$ " x 18" x 16 $\frac{1}{4}$ "; over-all size of cabinet 31 $\frac{1}{2}$ " h. x 36" w. x 19" d.; oiled-walnut.....\$74.95
 Prefinished kit\$59.95

Model KN-1267 Speaker Enclosure
 Styled to match Model KN-1402 equipment cabinet; 31" x 19 $\frac{1}{2}$ " x 19"; accommodates any 12" or 15" speaker; oiled-walnut\$49.95
 Prefinished kit\$39.95

Model KN-1285 Speaker Enclosure
 Takes any 12" speaker; adapter board permits use with alternate 8" speaker; $\frac{7}{8}$ " plywood with hardwood veneer; in mahogany or walnut; 30 $\frac{1}{2}$ " x 19 $\frac{3}{4}$ " x 13 $\frac{3}{8}$ "\$34.95
 Unfinished\$29.95

Model KN-1500 Equipment Cabinet
 Danish modern equipment cabinet; for tuner, amplifier, changer or turntable, and record storage; precision-fit doors with magnetic latches; 33" x 36" x 20 $\frac{1}{4}$ "; oiled walnut\$94.95

Model KN-1275 Speaker Enclosure
 Matches KN-1500 equipment cabinet; takes 12" or 15" speaker, plus two- or three-way system components; adapter board permits infinite-baffle or tuned bass-reflex operation; 33" x 21" x 20 $\frac{1}{4}$ "; oiled walnut\$69.95

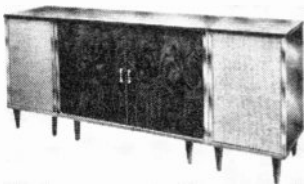
Model KN-1500/KN-1275 Ensemble
 Consists of KN-1500 equipment cabinet and two KN-1275 speaker enclosures.\$239.95

Model KN-1901 Speaker Enclosure
 Matches KN-1900 equipment cabinet; ducted-port, bass-reflex design; takes any 12" speaker (or 8" speaker with adapter board supplied); boucle-weave grille cloth; 28 $\frac{1}{2}$ " x 17 $\frac{3}{4}$ " x 16 $\frac{1}{4}$ "; oiled walnut\$39.95

Model KN-1900/KN-1901 Ensemble
 Consists of KN-1900 equipment cabinet and two KN-1901 speaker enclosures.\$139.95

LAFAYETTE

"Criterion" Equipment Cabinet



Over-all size 40" w. x 32 $\frac{1}{2}$ " h. x 18" d.; has four separate compartments; inside dimensions of top two are 10" h. x 18 $\frac{3}{4}$ " w. x 15 $\frac{3}{4}$ " d.; bottom two are 12 $\frac{1}{16}$ " h. x 18 $\frac{3}{4}$ " w. x 15 $\frac{3}{4}$ " d.; available in walnut or mahogany.....\$89.50

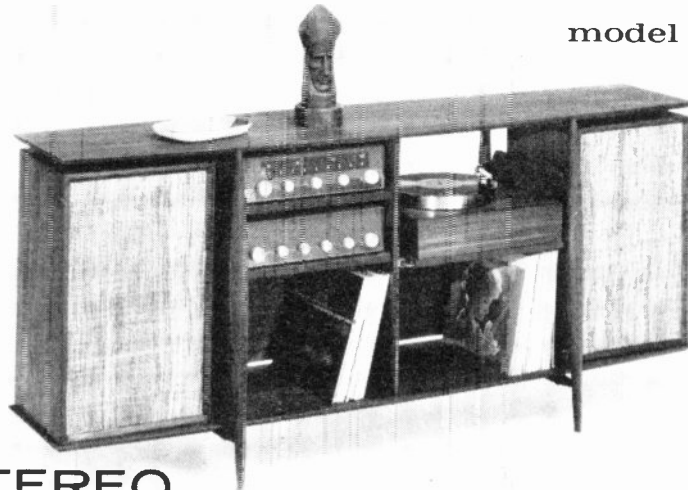
"Criterion" Speaker Cabinet
 Styling identical to equipment cabinet; will accommodate any 12" speaker; designed around elliptical port principle; 32 $\frac{1}{2}$ " x 16" x 18"; available in walnut or mahogany, (see photograph above)\$59.50

ROCKFORD

Model 101 Speaker Enclosure
 Matching speaker enclosure for Model 120 equipment cabinet; same as Model 501 except 18" deep.
 Model 101L with legs\$57.75
 Model 101B with base\$62.50

Model 120 Equipment Cabinet
 Upper section has removable extra shelf;

model 303



STEREO MUSIC CENTER from "shelf speakers"

here's the approach you have been waiting for... simply place your "shelf speakers" at each end, amplifier and tuner on the adjustable shelves, changer, turntable or tape deck on the convenient pull-out shelf, one hundred or so records below and instantly your components become a beautiful stereo music center. Superbly finished from genuine hardwoods in Oiled Walnut, Cherry, Fruitwood and Mahogany at only \$99.50

See this and other models as low as \$69.50 at leading dealers everywhere or write for free brochure today.

prices slightly higher in the west.

Audio Originals

474 SOUTH MERIDIAN STREET • INDIANAPOLIS 25, INDIANA

CIRCLE NO. 9 ON READER SERVICE PAGE

PRECISION HI-FI ACCESSORIES

HUM-BUCKING TELEPHONE PICKUP COIL
 Hum free transcription, no connection to telephone, rugged cast case.
MODEL HP-70 NET \$6.95

TAPE RECORDING HEAD DEMAGNETIZER
 Removes permanent magnetism, protects tape from erasure, minimizes noise and distortion, extended pole piece — easy access.
MODEL HD-40M NET \$4.95

MAGNETIC TAPE ERASER
 Bulk erasure of recorded tape, restores tape like new, reduces noise, reel size to 10 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " W, epoxy case, sealed for life.
MODEL HD-11M NET \$18.95

STEREO 3RD CHANNEL OUTPUT TRANSFORMER
 Add speaker to fill "hole-in-middle". Matches impedance, polarity and power level. Rating 30 watts. Response 40 to 20,000 C.P.S.
MODEL HM-90 NET \$6.33

MICROTRAN company, inc.
 145 E. Mineola Ave., Valley Stream, N. Y.

CIRCLE NO. 40 ON READER SERVICE PAGE



FRONT-VIEW, FLIP-THROUGH SELECTION

Stop stooping, squinting, straining, to find albums stacked on edge. Quick-See units glide in and out of cabinet or wall for fast, simple selection... you see the full face of your album without removing it. Ends jacket-bottom wear, too. Installs anywhere in five minutes. Sturdy welded steel and ball-bearing construction, black or brass. Nine models for LP's and tape, hold up to 125 albums each... available separately or in special cabinet furniture. Ask for brochure #9.

MODULAR UNITS FOR BUILT-INTO-THE-WALL TV, HI-FI, OR STORAGE

For a really deluxe installation; completely fabricated housings designed to be flush mounted through the wall. Luxurious walnut tambour-door facings; modular component cabinets can be arranged to suit individual requirements of space and equipment. Simple to install. Ask for brochure #28.

DEALER INQUIRIES INVITED

KERSTING MFG. CO., Dept. SD63
 504 S. Date, Alhambra, Calif.

Please send Brochure #9 Brochure #28 with complete specifications and prices.

Name _____
 Address _____
 City _____ Zone _____
 State _____

CIRCLE NO. 31 ON READER SERVICE PAGE

6

Equipment Cabinets

adjustable in height, for mounting components: inside dimensions 18 $\frac{3}{4}$ " wide x 13 $\frac{3}{8}$ " high; lower pull-out drawer for record changer; over-all size 20" wide, 32 $\frac{1}{2}$ " high, 18" deep. Model 101 speaker enclosure can be used as matching unit. Model 120L with legs\$63.00 Model 120B with base\$65.00

Model 500 Equipment Cabinet

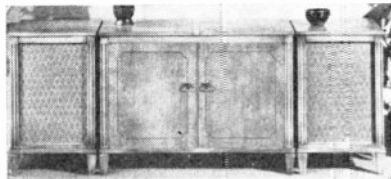


Combination record and equipment cabinet: lower left can hold up to 150 LP records; top left could house tape recorder, record changer, or turntable; top right 18 $\frac{3}{8}$ " wide x 13 $\frac{3}{8}$ " high; has adjustable shelf; over-all size 40" wide, 32 $\frac{1}{2}$ " high, 19 $\frac{1}{2}$ " deep; available in walnut, mahogany, blonde, and ebony finishes. Model 500L with legs\$128.00 Model 500B with base\$136.00

Model 501 Speaker Enclosure

Matching unit for Model 500 equipment cabinet: houses up to 15" speaker and any size tweeter; 20" wide, 32 $\frac{1}{2}$ " high, 19 $\frac{1}{2}$ " deep; available in walnut, mahogany, blonde, and ebony finishes. Model 501L with legs\$62.00 Model 501B with base\$66.00

Models 600 & 601 Enclosures



Matching speaker cabinets and equipment enclosures in Italian Provincial design; speaker cabinets house up to 12" speakers; 17" wide x 27 $\frac{1}{4}$ " high x 17" deep; equipment cabinet—top right compartment with lift-top for record changer, turntable, or tape recorder; inside dimensions 14 $\frac{3}{8}$ " x 17 $\frac{1}{4}$ " x 6 $\frac{3}{8}$ "; lower right space for 100 LP records; left side for amplifiers, tuner, etc.; over-all size, 38" wide, 27 $\frac{1}{4}$ " high, 17" deep; available in fruitwood, walnut, mahogany, blonde, or ebony. Model 600 Equipment cabinet\$107.00 Model 601 Speaker cabinet\$ 52.00

Models 700 & 701 Enclosures

Matching equipment and speaker cabinets in Danish modern design; outside over-all size, design similar to Model 800-801 enclosures; equipment cabinet size 38 $\frac{1}{4}$ " w. x 28 $\frac{1}{4}$ " h. x 17 $\frac{3}{4}$ " d.; speaker size 17" w. x 28 $\frac{1}{4}$ " h. x 17 $\frac{3}{4}$ " d.; oiled-walnut finish. Model 700 Equipment cabinet\$113.00 Model 701 Speaker cabinet\$ 58.00

Models 800 & 801 Enclosures

Matching speaker and equipment cabinets

in Early American styling; speaker cabinet houses up to 12" speaker; over-all size 17 $\frac{1}{2}$ " w. x 27 $\frac{1}{4}$ " h. x 17 $\frac{1}{4}$ " d.; equipment cabinet: upper right lift top for all record changers, most turntables; inside dimension 14 $\frac{3}{8}$ " x 17 $\frac{3}{4}$ " x 6 $\frac{3}{8}$ " deep; lower right will hold 100 LP records; upper left for amplifier and/or preamp or tuner; has adjustable shelf; inside dimension 17 $\frac{3}{8}$ " w. x 14 $\frac{1}{2}$ " h.; blank face panel for custom installation; lower left additional storage space; over-all size 38 $\frac{1}{4}$ " w. x 27 $\frac{1}{2}$ " h. x 17 $\frac{1}{4}$ " d.; forest-tone maple finish.

Model 800 Equipment cabinet.....\$118.00 Model 801 Speaker cabinet.....\$ 59.50

SHERWOOD

Equipment Cabinets

Various designs available; made of finished hardwoods; designs are "modular" and can be used interchangeably; unless otherwise indicated over-all size is 32" w. x 19" d. x 22" h.

S-979 Drop-leaf cabinet; lock & key; interior light\$147.50
S-980 Two-door cabinet\$124.50
S-938 Matching speaker cabinet; cane grille; rubber iso-floats for speaker..\$100.00
S-915 Chest with 2 sliding doors..\$ 85.00
S-916 Bar chest includes 16-glass set.....

.....\$147.50
S-935 Desk with drop-leaf door; interior light\$115.00
S-937 Three-door chest\$ 95.00

S-986 TV cabinet with tambour sliding doors\$105.00
S-911 Hutch with two shelves behind cane doors; over-all size 44" w. x 14" d. x 40" h.\$160.00

S-939 Bookcase with adjustable shelf.....\$ 70.00
S-968 Bookcase with one adjustable shelf behind cane door; 32" x 9" x 44".....\$92.50

S-969 Bookcase with four drawers and 2 cane doors; 32" x 9" x 44".....\$105.00
S-987 Bookcase with open back and 3 shelves; 32" x 9" x 44".....\$ 57.50

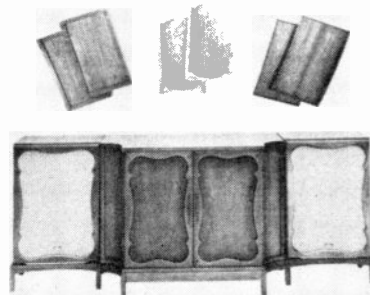
S-917 Junior buffet with 3 drawers and shelves behind door; 48" x 19" x 22".....\$137.50

S-910 Senior buffet with 3 drawers and shelves behind two doors; 64" x 19" x 22"\$165.00

Modular bases with legs are 8 $\frac{1}{2}$ " h.; 32" length \$19.60; 48" length \$24.95; 64" length, \$27.30.

UNIVERSITY

"Credenza" Equipment Cabinet



Designed to match any of the "Medallion XII" speaker system styles, Early American, Swedish Modern, Italian and French Provincial; style change is accomplished simply by changing doors; over-all size 36" w. x 29 $\frac{1}{4}$ " h. x 19" d.; tuner/amplifier inside dimension 24 $\frac{1}{2}$ " w. x 9 $\frac{1}{4}$ " h. x 15 $\frac{1}{2}$ " d.; record changer inside dimension 18 $\frac{1}{8}$ " w. x 12 $\frac{1}{2}$ " h. x 15 $\frac{1}{2}$ " d.; has storage space for records. Cabinet (less doors) in walnut, oiled walnut, fruitwood.....\$139.95
Doors (set of two).....\$ 42.00

6

Phono Accessories

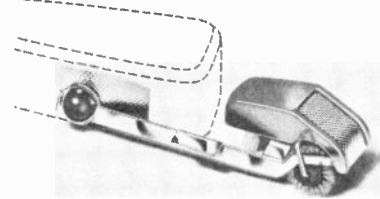
ESL

ESL "Standard" Dustbug



Mounts like a tonearm; for turntable use; loosens and removes dust and dirt; eliminates static charges; complete with special fluid and applicator.....\$5.75

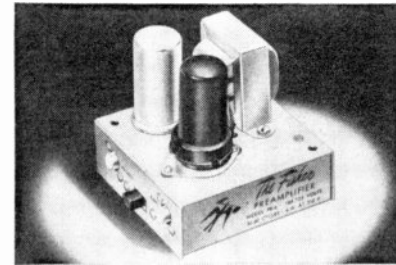
ESL "Changer" Dustbug



Clips directly to tonearm of record changer; otherwise similar to "Standard" model\$4.75

FISHER

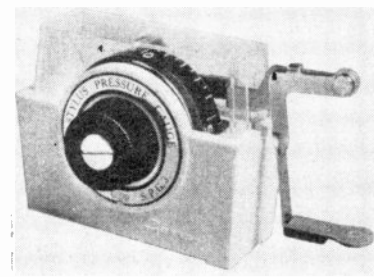
Model PR-6 Preamp



Self-powered preamp; sensitivity for 1-volt output; 10 millivolts input for phono, 1 millivolt input for microphone, 5 millivolts input for tape; hum -60 db below 1 volt on phono and tape, -70 db on microphone; 30 to 20,000 cps, ± 2 db; 6SC7 dual triode amplifier; 3 $\frac{3}{4}$ " w x 3 $\frac{3}{8}$ " d x 3 $\frac{3}{8}$ " h; 1 $\frac{1}{2}$ lbs\$12.95

GARRARD

Model SPG3 Stylus Pressure Gauge

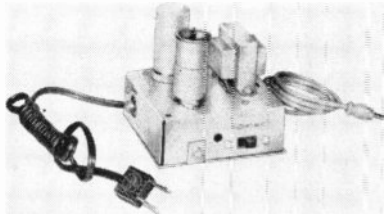


Stylus pressure gauge; large, legible scale; complete with 5 gram weight to be used as standard to "zero" unit for complete accuracy\$2.95

GENERAL ELECTRIC

Model UPX-003C Phono Preamp

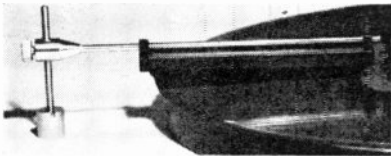
Self-powered converter to convert magnetic cartridges and microphone inputs to tape recorders and auxiliary inputs of ampli-



fiers; switch provides proper equalization for mic. and phono; gain 33 db @ 1000 cps; response flat 30 to beyond 15,000 cps; 3 3/8" w. x 3 3/8" l. x 3 3/8" h.....\$14.95

GRADO

"Dustat" Record Cleaner



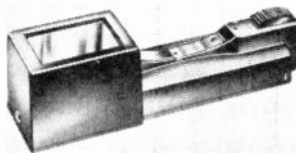
Reduces electrostatic charge and removes dirt from records while playing; contains no radioactive materials.....\$6.95

Stereo Transformer

For increasing output of low-level stereo cartridges; frequency response ± 1 db 10 to 30,000 cps (600 ohms primary source) terminating transformer into 47,000 ohms; hum level -90 db; channel separation 50 db; channel output balance ±0.2 db; distortion unmeasurable with 40 mv. input signal.....\$23.50

LAFAYETTE

Model PK-634 Stylograph Stylus Inspector



Shows large illuminated silhouette of needle or other small pointed objects on 1" x 1 1/2" ground-glass screen; needle cartridge need not be removed from tonearm; complete with bulb and two pen-light batteries.....\$3.29

Model PK-223 Stylus Pressure Gauge

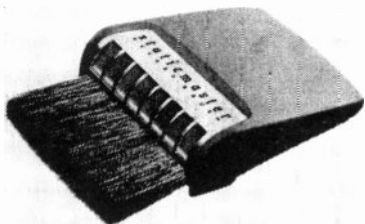
Returns with pickup in normal play position; range 0-30 grams; no spring and minimum of moving parts.....\$9.99

Model MS-785 Tonearm Control

Lowers tonearm into run-in groove and lifts arm off record at end of play; ideal for cueing; will fit most turntable arms as well as changers with manual features..... \$1.95

NUCLEAR

Model 3R500 "Staticmaster"

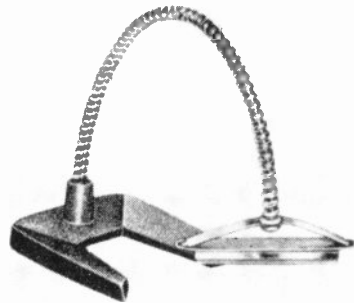


Polonium treated jaguar hair brush eliminates static and dust from records....\$14.95

Model 2U500 w/BFI Positioner

Flexible arm with heavy base holds model

1963 EDITION

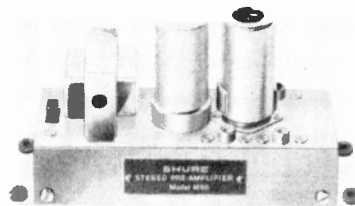


2U500 ionizing unit over playing record; complete with ionizing unit.....\$19.75

SHURE

Model M-60 Stereo Preamp

Permits turntable location up to 50 feet from preamplifier; gain 17 db; frequency response 30-80,000 cps ±1 db; input



impedance 47,000 cps; output impedance 5000 ohms; hum and noise level better than 64 db below rated output; channel separation better than 30 db; channel balance ±1 db; 1-ECC83 (dual function); selenium rectifier.....\$19.95

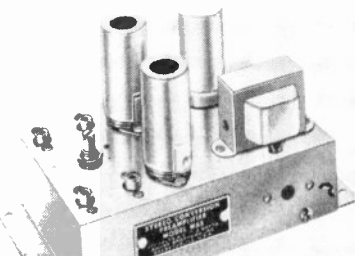
Model M-61 Stereo Preamp



Transistorized unit with choice of a.c. line or battery power supply; slide-selector switch provides choice of three equalization inputs: phono, RIAA equalization for conversion of ceramic to magnet input; tape, NAB equalization; and flat amplification for microphone use; gain: 45 db phono, 40 db tape, 63 db microphone. Model M61-1 (105-125 v.).....\$27.50 Model M61-3 (for 30 v. battery, included).....\$26.50

Model M65 Conversion Preamp

Provides equalization with amplification for converting ceramic cartridges to magnetic inputs; 60 db of amplification without equalization; provides preamplification

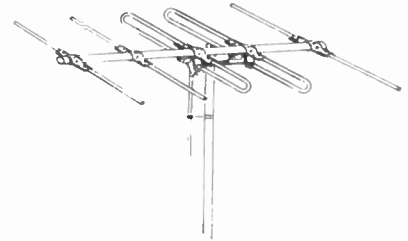


and equalization functions for phono, tape, microphone; gain (phono) 44 db, (special) 45 db, (tape) 40 db, (mic.) 63 db; input impedance 47,000 ohms; output impedance 5000 ohms.....\$24.00

6 FM Antennas

APPARATUS DEVELOPMENT

Model FM/Q "Metropolitan"



Designed for city and suburban FM stereo multiplex; broadband yagi; 300 ohms; five elements; rustproof construction featuring all-aluminum assembly.....\$14.95

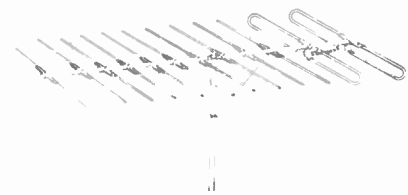
Model FM/Q Sr. Antenna System

72 or 300 ohm FM operation; forward gain in db: 9 db average; 88 to 108 mc. range; gain of two bay stack; 12 db average; minimum interference and noise pickup; aluminum construction; 62"x86"; 5 1/2 lbs.\$29.96

Model FM/Q Jr. Antenna System

72 or 300 ohm FM operation; forward gain: 6 1/2 db average; 88 to 108 mc. range; minimum interference and noise pickup; aluminum construction; 65"x67"; 1 1/2 lbs.....\$22.96

Model FM/Q Super Special



Covers 88 to 108 mc.; 12-element design; gain: 14 db; stainless steel hardware; aluminum antenna; minimum noise pickup and interference; gain when stacked: 17 db.....\$49.96

Model FM/Q Long Ranger

Designed for single-frequency operation in long distance fringe reception; forward gain: 12 db; 10-element yagi design; operating bandwidth: 5 mc.....\$49.96

FM/Q Dipole & Reflector

Heavy duty seamless drawn aluminum tubing, stainless steel hardware, 3 db gain ideal for city and metropolitan reception.....\$10.96

FM/Q Crossed Dipoles Turnstile

Omni-directional duo-dipoles for local or city service.....\$12.59

FM/Q Cub

Folded dipole FM antenna designed for local service; rugged construction.....\$6.89

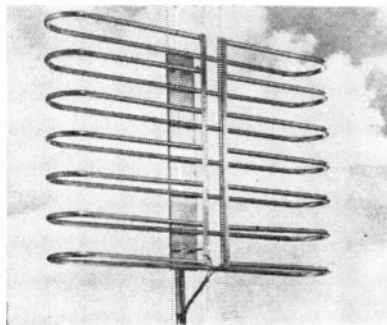
FM/Q 300/72 Ohm Baluns

Outdoor mast mounting and indoor models designed to be used in converting from the standard 300 ohm to 72 ohm impedances; equipped with BNC coax cable connectors; strong "U" bolt mounting. Outdoor.....\$11.95 Indoor.....\$ 6.98 Hardware for all antennas listed is of stainless steel.

B&K

Model ST7B FM Antenna

6 FM Antennas



Omnidirectional 7-element design for improved reception of FM multiplex signals; can be used indoors or outdoors; aluminum construction; 30" w. x 22" h. x 5 1/2" d.; comes complete with hardware.....\$24.95

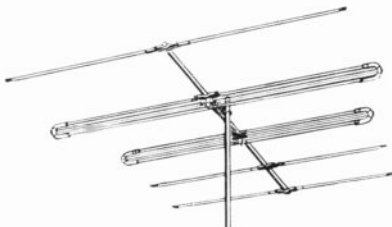
CHANNEL MASTER

Model 4400G Turnstile Antenna



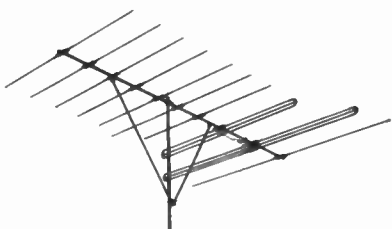
Omnidirectional; for metropolitan and suburban areas; includes all mounting hardware; 50-foot lead-in; swivel base mount; guy ring and clamp, 50-foot guy wire, etc.\$13.75
Antenna only\$9.03

Model 4401G "Futuramic" Antenna



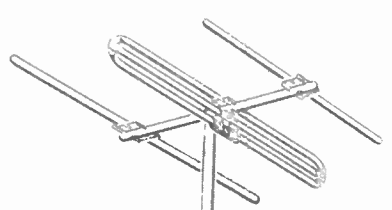
Same as Model 4402G except 5-element\$16.50

Model 4402G "Futuramic" Antenna



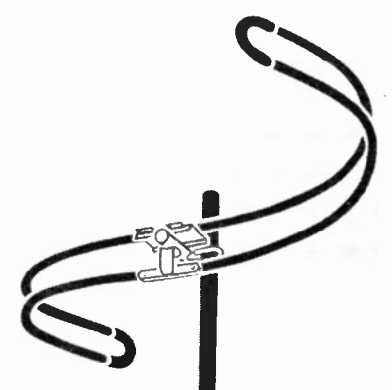
Directional twin-driven Z-match dipoles; for extreme fringe areas; ten elements \$27.65

Model 4404G "Futuramic" Antenna



Same as Model 4402G except 3-element \$12.50

Model 4405G "Sigma" Antenna



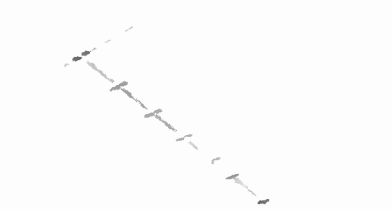
S-type; omni-directional design for metropolitan and suburban reception.....\$7.36

Model 4406G "Sigma" Antenna

Same as Model 4405G but includes accessories: 5-foot mast, 50-foot transmission line, swivel base mount, guy ring, 50-foot guy wire, etc.\$12.08

CLEAR BEAM

Model D8FM "Sonic Tone" Antenna

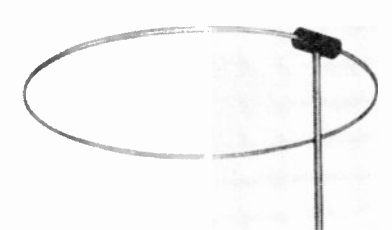


Dual driven FM broad-band yagi with five directors, two driven elements and reflector; complete kit includes 5 ft. mast, lead-in wire and necessary hardware; 10 lbs. complete.

Antenna only\$27.72
Complete kit\$33.42

Model FMHO Mobile Antenna

"Halo" antenna for autos, mobile homes, etc. increases FM signal strength in fringe areas; fits over standard automobile whip



antenna without drilling holes or using special tools, 1 1/2" lbs.
Model FMHO\$ 8.38

Model FMDR Folded Dipole

Folded dipole with reflector; tuned to center frequencies; broad, even response over entire FM band; reception up to 60 miles from transmitters as widely divergent as 110°; kit includes 5 ft. mast, lead-in wire, and all necessary hardware.

Antenna only\$ 7.62
Complete kit\$13.32

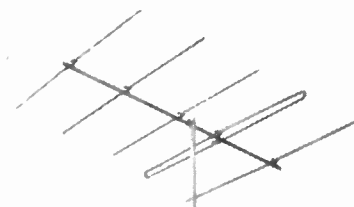
Model FM44 Antenna

Omnidirectional FM dipole; two folded dipoles at right angles, phased with quarter wave matching harness; designed mainly for use in primary reception areas; complete kit includes 5 ft. mast, lead-in wire



and necessary hardware; 4 lbs. complete.
Antenna only\$ 8.98
Complete kit\$14.68

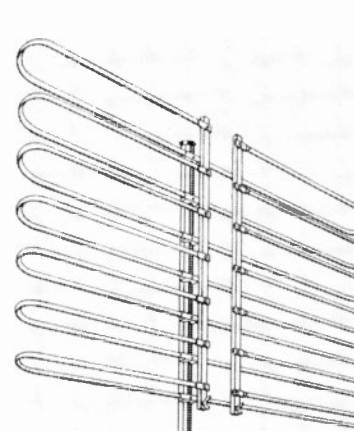
Model YL5-FM Yagi Antenna



Five element FM yagi with three wide spaced directors, "T" match dipole, and reflector; tuned to center of FM band with frontal lobe receiving angle of 23 degrees; complete kit includes 5 ft. mast, lead-in wire, and necessary hardware; 5 lbs. complete.

Antenna only\$13.68
Complete kit\$19.38

Model FM38 Antenna Array



Vertically linear array of dipole elements creating a "screen dipole"; has high gain and flat response over FM band.....\$13.80
Available also with mast, lead-in wire, hardware\$19.50

FINCO

Model FM-4 Antenna

Twin drive FM antenna with impedance control "T" match stubs; aluminum construction, 6-element, wideband (88 to 108 mc.) yagi.....\$24.90

Model FM-4G Same as Model FM-4 with gold corrosive-resistant finish "Corodizing"\$27.75



struction, 6-element, wideband (88 to 108 mc.) yagi.....\$24.90
Model FM-4G Same as Model FM-4 with gold corrosive-resistant finish "Corodizing"\$27.75

Model FMT-1 Antenna

All-direction FM antenna kit with two folded dipoles at right angles with quarter wave phasing stub for 360 degree pick-up pattern without rotation; supplied with 50 ft. of 300-ohm twin-lead 5 ft. mast, and mounting hardware; 6 lbs.....\$14.50

Model FM-2 Antenna

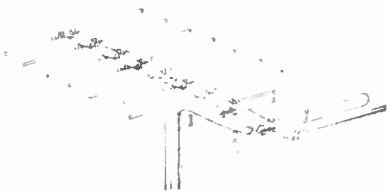
FM antenna kit with folded dipole and reflector; up to 3 1/2 db gain; aluminum construction; supplied with 5 ft. mast, 50 ft. of 300-ohm twin-lead, and mounting hardware; 6 1/2 lbs.....\$14.50
Model FM-FDR (antenna only).....\$7.23

Model FM-3 Antenna

Broadband 4 element FM yagi; narrow directivity pattern; aluminum construction; 5 lbs.....\$13.00

Model FM-5

10-element deluxe gold Corodized antenna; twin drive elements; maximum gain



over full FM band; wt. 8 1/2 lbs.....\$36.35

Model FMT-A

Mounts on TV mast; preassembled, snap-out design; matched for all-directional signal pickup; kit includes FM antenna, 50' twin-lead, 2 mast insulators, 3 screw-in insulators, mounting brackets. Similar to model FMT-1 but mounts on your own TV mast\$14.50
Model FMT (antenna only).....\$9.72

Model FM Stereo S



All-direction S-type design; high gain; gold Corodized.\$3.75
SK-Kit includes 50 feet of 300-ohm twin-lead; one mast stand-off insulator; four screw-eye stand-off insulators.....\$5.75

Model T-AMB "Nova-Tron"

Completely transistorized FM booster; will match any Finco antenna; 300-ohm balanced input with output for four TV or FM sets; gain for 1 set, 15 db; remote power supply at set uses four flashlight batteries\$29.95

HY-GAIN

FM Halo Antenna

Half-wave dipole, ellipsoid shape; supplied with universal mounting bracket; omnidirectional; takes standard 300 ohm lead-in; 11 oz.....\$9.95

FM Hy-Log Periodic Antennas

For fringe area reception; 1/16" elements are made of heat-treated aluminum; includes mast.

Model FM-6 Six-element beam for medium fringe areas; develops 9 db forward gain; boom length 7 feet.....\$22.95

Model FM-11 Eleven-element beam developing 12.4 db gain across FM band; boom 12 feet long.....\$37.95

JERROLD

Model FMX FM Range Extender

One-tube, all FM preamp; connects between antenna lead-in and tuner; provides

THE BEST FM STEREO RECEPTION STARTS WITH A JFD FM STEREO ANTENNA



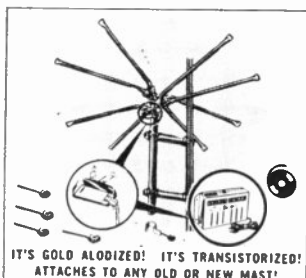
The antenna has always been important in FM. But with stereo multiplex FM, a good antenna is absolutely vital, even in metropolitan areas.
RADIO ELECTRONICS

From listener's standpoint, most significant difference between FM-Stereo and conventional radio is need for far better antenna system.
TELEVISION DIGEST

Don't let an obsolete antenna spoil your FM stereo reception. Install a JFD stereo-engineered FM antenna and enjoy the pure stereo performance your system can give you. Whether you select an ultra-powerful electronic Transis-tenna or one of the other professional-quality JFD antenna kits, you...

1. Overcome the power loss and range limitations of multiplexed FM stereo.
2. Receive more stations — monophonic and stereo.
3. Add true high-fidelity quality to your system — regardless of its price.

And your JFD antenna will keep looking and working like new thanks to its lustrous, protective AAA Gold Bond Alodized aluminum construction.

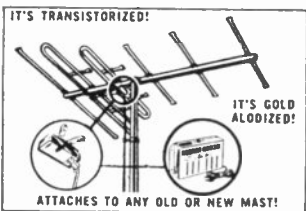


IT'S GOLD ALODIZED! IT'S TRANSISTORIZED! ATTACHES TO ANY OLD OR NEW MAST!

100 MILE YAGI-QUALITY RECEPTION FROM EVERY DIRECTION—WITHOUT A ROTATOR!

JFD ELECTRONIC FM STEREO-CONE TRANSIS-TENNA KIT. For the first time, a transistorized stereo FM antenna that combines all-directional with fringe high-gain design for 25 db response. Result—more stations from more directions, with superlative FM and stereo separation. Complete with transistorized amplifier, AC power supply and distribution unit for operation up to four FM systems—plus 300 ohm twin lead, brackets, stand-offs
NO. TNTFM 175G-AC \$47.95, LIST

No. AFM175G—\$13.95, list. Same kit as above, less amplifier and power supply

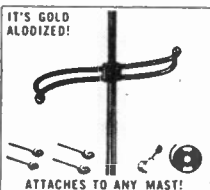


IT'S TRANSISTORIZED! IT'S GOLD ALODIZED! ATTACHES TO ANY OLD OR NEW MAST!

PINPOINTS ANY FM STATION UP TO 200 MILES DISTANT

JFD ELECTRONIC FM STEREO YAGI TRANSIS-TENNA. Powerful twin-driven 6-element Yagi with built-in transistor amplifier captures even weak FM signals and transforms them into superb noise-free, fade-free sounds. Delivers tremendous 34 db gain. Heavy-duty gold alodized aluminum construction.
NO. TNTFM350G-AC \$54.95, LIST

No. AFM350G—\$23.50, list. Same antenna as above, less amplifier and power supply



IT'S GOLD ALODIZED! ATTACHES TO ANY MAST!

25 MILE DISTORTION-FREE RECEPTION—FROM EVERY DIRECTION

JFD FM SUPER-S ANTENNA KIT. Your best buy, if you live in a moderate-strength signal area. Needs no rotator. Rugged one-half inch seamless aluminum. Kit includes 50 feet twin lead, stand-offs and hardware.
NO. AFM475G \$8.95, LIST

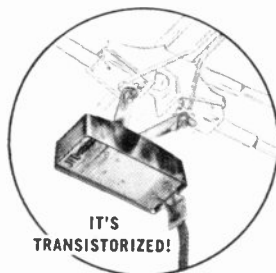
No. AFM450, Antenna only \$6.95, list.

JFD TRANSIS-TENNA FM AMPLIFIER

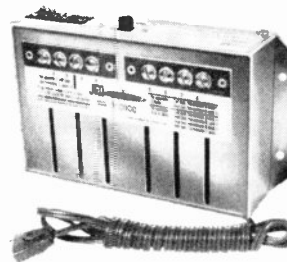
FOR THE ULTIMATE IN FM STEREO POWER, ADD THE NEW JFD FM ANTENNA AMPLIFIER THAT MOUNTS DIRECTLY ON THE TERMINALS OF ANY FM ANTENNA.

Convert your old FM antenna into a new powerful FM stereo antenna! The best place for an amplifier is at the antenna terminals—and that's exactly where the JFD FM Transis-tenna goes...regardless of the antenna type. Increases gain of any FM antenna by 25 db. Complete with AC-powered supply—4 set distribution unit, 300 ohm connectors, and transistorized amplifier.

NO. TNT 106 FM \$36.95, LIST



IT'S TRANSISTORIZED!



AC-powered

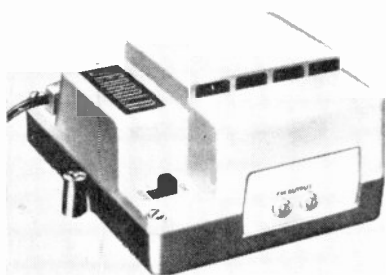


Write for booklet **BETTER FM PERFORMANCE** and JFD brochure No. 88.

JFD ELECTRONICS CORP.

World's largest manufacturer of TV and FM antennas
1462—62nd ST., BROOKLYN 19, N. Y.

6 FM Antennas



20 db boost; has its own power supply\$18.95

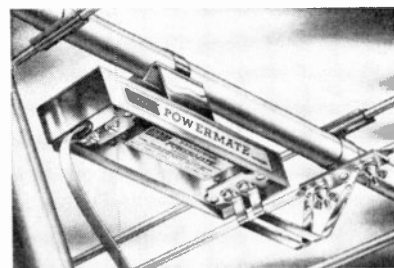
Model DSA-FM FM Antenna Preamp
Mast-mounted outdoor FM preamplifier for reception of distant FM stations; gain 25 db minimum; bandwidth 88-108 mc.; frequency response 1 db max. p/v; input impedance 75 or 300 ohms; output impedance 75 or 300 ohms; maximum output 0.5 v. r.m.s.; tubes: 6BQ7A, 6CB6\$59.70 Net

Model 406A Indoor version with same electrical specifications as DSA-FM except for self-contained power supply; 3" x 4" x 10 1/2"\$41.97 Net

Model HSA-44 Amplified Coupler
Single-tube, four-set coupler for FM/TV; minimum gain 1/2 db at all four outputs; 300-ohm impedance; has own power supply\$18.95

Model TX FM Antenna Coupler
Passive-type bandpass filter; separates FM & TV signals from a TV antenna with negligible signal losses; 300-ohm impedance\$3.57

Model AMP-101 Antenna Booster



Completely transistorized, mast-mounted with remote power supply; input and output 300 ohms balanced; basically a TV booster but provides 12 to 18.2 db on FM band; power consumption 3 watts; 2N1742 transistor\$26.63

Model MF-2 Antenna Coupler
Passive-type which simply divides signal for TV and FM; circuit loss 4 db.....\$2.70

Model MF-4 Antenna Coupler
Similar to Model MF-2 but will divide into 4 signals, FM or TV.....\$3.45

Model DSA-202 Antenna Preamplifier
Mast-mounted with remote power supply; 300 ohms input impedance; 75 & 300 ohms output impedance; two tubes; covers FM bands (54-108 mc.) and TV-VHF band; gain 20 db for TV and minimum of 8 db at 108 mc. (extreme edge of FM band)\$53.97

Model ACL-200 "Challenger" TV/FM Broadband Amp
Has high overload capabilities, preventing interference from strong local FM stations;

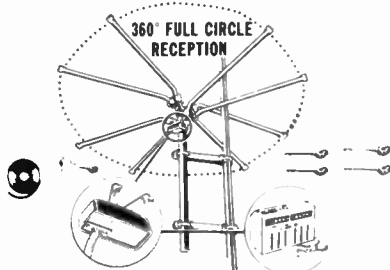
features single 300-ohm antenna input and choice of 300-75 ohm output; amplifier operates from 117 volts a.c.; circuit uses two low-noise 6DJ8 frame-grid tubes giving high output with exclusive match in 300-ohm side\$64.95



ing high output with exclusive match in 300-ohm side\$64.95

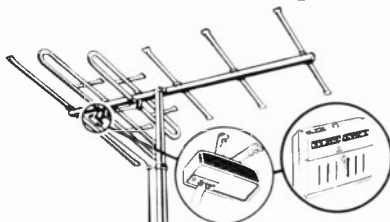
JFD ELECTRONICS

TNTFM175G "Stereo-Cone" Antenna



Electronic gold-anodized "attach-it" all-direction FM antenna; built-in transistorized amplifier with a.c.-powered supply; four FM-set distribution system; for up to 100 miles; includes necessary hardware; 50 feet of 300-ohm twin-lead.....\$47.95

TNTFM350G Six-Element Yagi



Transis-tenna gold-anodized stereo FM 6-element wide-spaced yagi; for up to 200 miles; includes TNT106FM booster \$54.95

AFM100G Antenna Kit
"Stereo-Cone" antenna with roof mount; includes misc. hardware; 50 feet of 300-ohm twin-lead; for all-new installations\$15.95

AFM150G Antenna Kit
Gold-anodized "Stereo-Cone" antenna including misc. hardware; for existing TV-antenna installations.....\$11.95

AFM175G Antenna Kit
Same as Model AFM150G but includes 50 feet of 300-ohm twin-lead plus additional hardware\$13.95

AFM200G Folded Dipole Kit
Gold-anodized stereo folded dipole and reflector kit for all-new installations; includes misc. hardware; 50 feet of 300-ohm twin-lead\$13.85

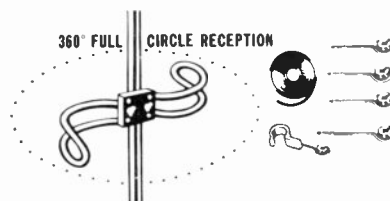
AFM250G Dipole Antenna
Gold-anodized stereo folded dipole and reflector antenna only.....\$8.60

AFM325G Yagi Antenna
Gold-anodized three-element wide-spaced yagi for local FM areas.....\$12.50

TNT106FM Booster
Transis-tenna "Add-On" stereo FM amplifier-distribution system and power supply\$36.95

AFM350G Yagi Antenna
Gold-anodized six-element wide-spaced yagi for fringe FM areas.....\$23.50

AFM450G "S" Antenna



Gold-anodized stereo all-direction "S" kit for existing TV-antenna installations \$6.95

AFM475G "S" Antenna
Gold-anodized deluxe stereo all-direction kit for existing TV-antenna installations\$8.95

AFM650G Yagi Antenna
Gold-anodized stereo ten-element wide-spaced yagi for deep fringe FM areas \$32.50

MOTOROLA

Model FMA-13 Antenna
Six-element yagi design (3 directors, 2 driven dipoles, 1 reflector); for fringe reception up to 75 miles; gold-anodized aluminum\$23.50

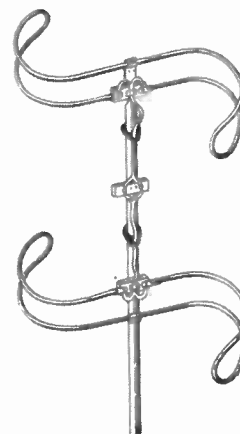
Model FMA-10 Antenna
Omnidirectional turnstile design for fringe areas up to 50 miles; gold-anodized aluminum\$11.95
Model FMA-11 Supplied with 3 1/2" wood-screw stand-offs; 50-foot twin-lead; mast stand-off, 7 1/2" wood-screw stand-off..\$13.95
Model FMA-12 Supplied with 5-foot gold anodized mast; base mount; 50-foot twin-lead; guy wire; guy rings; stand-offs; mounting hardware.....\$15.95

TACO

Model 615 Bi-Directional Yagi
Bi-directional yagi for stereo multiplex reception; designed especially for locations where signals are desired from two approximately opposite directions.....\$12.95

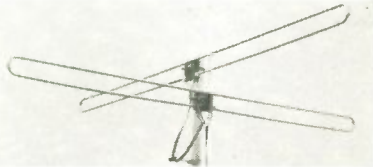
Model KG626-A "Lark Ad-A-Kit"
FM kit includes G626.A antenna, 50 feet of lead-in, wood screw, and mast-type stand-offs\$8.95

Model G626A "S" Antenna



Omnidirectional S-type for installation on existing mast; gold anodized; wood screw and mast-type stand-offs included.....\$6.95

Model G666 Turnstile Antenna



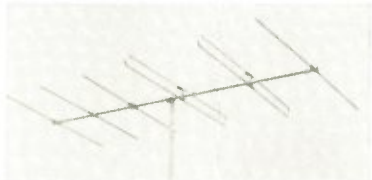
Turnstile antenna complete with phasing line; gold anodized; provides circular gain pattern to permit signal reception from all directions.....\$9.70

Model G44B Twin-Driven Yagi



Six-element twin-driven yagi for high-fidelity fringe FM pickup; gold anodized.....\$21.20

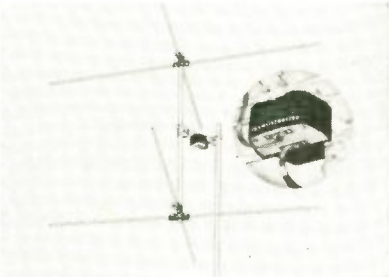
Model G610 Ten-Element Yagi



Ten-element twin-driven yagi for deepest fringe FM reception; gold anodized..\$30.70

WINEGARD

Model PF-4 FM Antenna System



Omnidirectional turnstile design with transistorized booster: 16 db gain over folded dipole over entire band 88-108 mc. and in all directions; all elements gold anodized; 300 ohm input and output.....\$55.80

Model PF-8 FM Antenna System



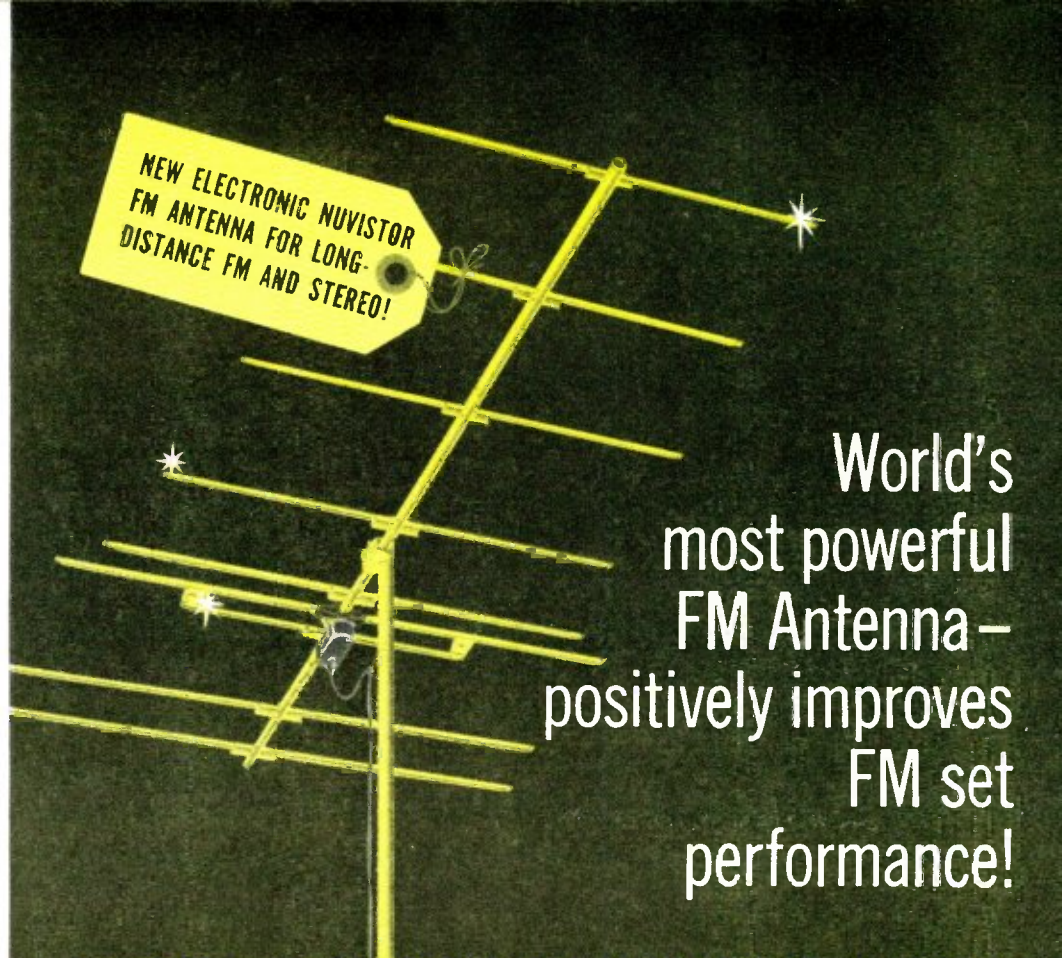
Directional design combining yagi type antenna and transistorized booster; minimum gain of 26 db over a folded dipole with frequency response $\pm 1/4$ db from flat from 88-108 mc.; antenna has eight elements with "Tapered-T" driving element; all elements gold anodized; for 300 ohm twin-lead.....\$64.25
Model PF-8C For 75-ohm coax.....\$64.25

Model FM-3T Turnstile Antenna

Same antenna as Model PF-4 without transistorized booster\$12.55

Model FM-8 FM Antenna

Same antenna as Model PF-8 without transistorized booster.....\$23.65



World's most powerful FM Antenna – positively improves FM set performance!

Winegard

STEREOTRON

WITH ELECTRONIC AMPLIFIER

Responds to Weakest Signals But Strong Signals Won't Overload It

(Takes Up to 200,000 Microvolts of Signal Input)

This is the world's most powerful antenna for FM or FM stereo. With the Stereotron and Stereotron amplifier, Winegard GUARANTEES unexcelled performance, GUARANTEES you will receive 85% of all FM stations in a 200 mile radius. The Stereotron, with powerful nuvistor amplifier, has a minimum gain of 26 DB over a folded dipole, with a flat frequency response of $\pm 1/4$ DB from 88 to 108 MC.

With nuvistor amplifier, Stereotron is so sensitive it will pull a 1 microvolt signal out of the noise, yet signals as strong as 200,000 microvolts will not overload the amplifier and cause it to cross modulate. This extraordinary performance is due to a unique amplifier circuit employing 2 RCA nuvistors.

Uppermost in the minds of the engineers in developing the Stereotron amplifier were two things—1. A new high in performance. 2. Long life and trouble-free operation. For example, the life of the 2 RCA nuvistors will be 5 to 8 years at top performance. This is possible because of a heat sink to control operating temperature and an automatic voltage control. A completely weather-sealed

case protects all amplifier parts from rust and corrosion. The antenna is beautifully gold anodized—100% corrosion proofed. Available both for 300 ohm or 75 ohm coax.

SF-8 Stereotron FM Antenna **\$23.65**

AP-320 Stereotron Nuvistor Amplifier **\$39.95**—amplifier can be purchased separately to use with any FM antenna.

READ WHAT USERS SAY—

"The results have been so outstanding under less than ideal conditions, I felt you might be interested. It was truly amazing how a previously blank dial sprang to life."

C. M. S. Elmira, New York

"I now get as strong a signal from out-of-town stations as I get from 'locals'. I told a radio and TV man in Hollister about my reception and invited him over to hear it"

M. J. D. Hollister, Mo.

Write for information or ask your dealer for spec sheets on Stereotron and other Winegard FM and TV antennas and accessories. Get FREE Station Log and FM map of U. S.



Winegard

ANTENNA SYSTEMS

3018A-10 Kirkwood Boulevard • Burlington, Iowa

World Radio History CIRCLE NO. 63 ON READER SERVICE PAGE

6 Tape Accessories

AMERICAN CONCERTONE

Model 18 Head Demagnetizer
Pencil-type will demagnetize any tape recorder head\$5.00

Tape Timer-Strobe
For determining accuracy of tape speed; uses dial and features strobe for instant visual speed check; times length of tape in minutes and seconds.....\$19.00

AMPLIFIER CORP.

Model 200C "Magneraser"
Bulk tape eraser; operating voltage 100-130 volts; operating frequency 50-60 cps; 2" high, 4" dia.
Model 200C.....\$18.00



Also available: Model 220C, identical in price and specifications except for operating voltage of 200-260 volts.

AUDIOTAPE

Audio Head Alignment Tape
Prerecorded at 2 kc., 10 kc., 15 kc., recorded at 15" per second; intervals between tones are 5 seconds duration; 300 ft. on 4" reel.....\$10.00

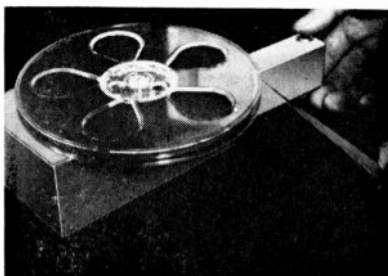
Audio Head Demagnetizer



Demagnetizes tape recorder heads; requires only plug-in to conventional a.c. outlet\$10.00

AUDIOTEX

Model 30-114 Tape Demagnetizer



Handles all reel sizes up to 10 1/2"; erases to -52 db level; complete with 6-foot cord; on-off push-button.....\$33.00

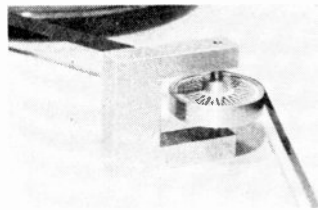
Model 30-112 Head Demagnetizer



Has curved top to reach most heads; soft plastic coating on tip to prevent head damage; built-in push-button switch; 6-foot cord.....\$ 9.95

DUBBINGS ELECTRONICS

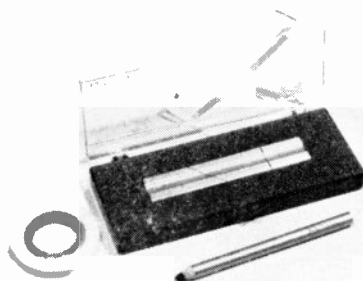
TapeStrobe



Chrome-plated stroboscopic wheel, ground to .010" accuracy.
Model A 7.5-15-30 ips.....\$22.50
Model B 3.75-7.5-15 ips.....\$22.50
Model C 1 1/4-3.75-7.5-15 ips.....\$24.50
For 50 cycles, add \$5.00.

EDITALL

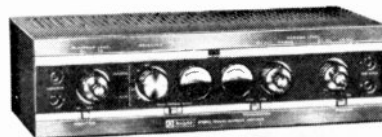
Model KS-2 Tape Splicer



Can be easily fastened to any tape recorder top deck by means of double-sided pressure-sensitive adhesive tape which is attached to the block; ideal for editing; size 4" long x 3/4" wide x 1/4" thick; includes china-marking pencil and roll of 7/32" splicing tape; instruction booklet condensed from "editing" chapter of "Techniques of Magnetic Recording".....\$7.45
Model S-2 (block only).....\$6.50

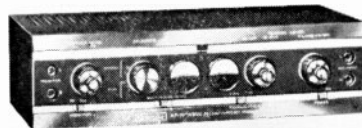
KNIGHT-KIT

Model KP-70 Record/Playback Preamp



Separate record/playback sections allow 2- or 3-head operation, monitoring recording, sound-on-sound, recording with echo chamber effect; 6-position selector switch for playback and record each channel, or stereo record and playback; vu meters for both functions; adjustable high frequency recording pre-emphasis; printed circuits; record section sensitivity .0005 volt at mic. input, .080 volt at aux. for maximum recording level; record distortion less than 0.3% at maximum record level; bias oscillator 100 kc; master gain and individual channel balance control.
83YU647-KP-70 (kit).....\$89.95
83YX936 Metal case.....\$ 4.95

Model KN-4001B Stereo Record/Playback Preamp



Permits sound-on-sound recording (with 3-head tape transports); individual mic. and aux. level controls for each channel; provision for mixing mic. and aux. inputs; switches for channel and source tape comparison; 7.5 and 3.75 ips record/playback equalization, vu meters; 100-ke. bias oscillator; when used with KN-4000 transport, response 25-19,000 cps \pm 2 db @ 7.5 ips; hum and noise -52 db at maximum recording level; 4 1/8" (plus 3/8" legs) x 15 1/2" x 9"; less case; for two 3-head transports.
83YU559-KN-4001B (kit).....\$139.95
83YX936 Metal case.....\$ 4.95

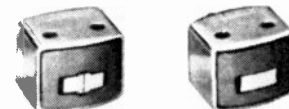
LAFAYETTE

Model ML-120 Bulk Tape Eraser



Provides tape noise level 4-6 db below noise level from recorder erase heads; pilot light; fused; draws 6 1/2 amps; 110-120 volts, 60-cycle a.c. operation—\$18.95

Model F-633 Miniature Tape Heads



Two-piece set consisting of one record/playback and one erase tape head; designed for use in dual-track miniature tape recorders or for experimentation; response 100-7000 cps \pm 5 db; signal-to-noise ratio better than 45 db; bias system a.c. and d.c.; impedance 2200 ohms at 1 kc.; d.c. resistance 169 ohms; 1/2" w. x 7/16" h. x 3/32" d. (approx.).....\$3.95

MICROTRAN

HD-11 Bulk Tape Eraser



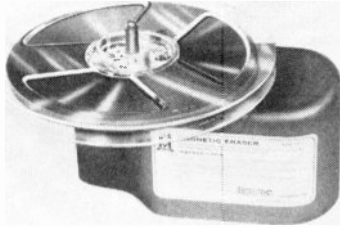
Reduces noise level below level of standard erase heads; restores tape to like-new condition or better; reels 5"-10 1/2" may be used; can be used for demagnetizing tape heads, watches, etc. 3"x5"x8"; 8 1/2 lbs.\$23.38

Model HD-40M Tape Head Demagnetizer



Will remove permanent magnetization; reduces noise level and harmonic distortion; improves signal-to-noise ratio; 4" l. x 1 1/4" dia.....\$4.95

Model HD-11M Bulk Eraser



Heavy-duty magnetic tape eraser for tapes up to 1/2"; noise level is reduced below level of standard erase head; accepts reels from 5" to 10 1/2"; 7" l. x 3 1/2" w. x 3 1/4" h.....\$18.95

NORTRONICS

Model PL-100 Playback Amplifier



May be used as second playback channel or in pairs for complete stereo playback; sensitivity: low-level input 2 mv., high-level input 0.2 volt; equalization variable NAB or RIAA; power output 3 watts at less than 3% harmonic distortion; response 20-16,000 cps ± 2 db; outputs 4-8-16 ohms to speaker and 1-volt low-impedance to amplifier; tubes: 2-12AX7, 12BH7, 6X4; 2 3/8" x 5" x 8".....\$46.50

Model RA-100 Recording Amplifier



Allows conversion of mono recorder to stereo record or use in pairs for full stereo recording with tape decks; sensitivity: low-level input 2 mv., high-level input 0.2 volt; three outputs: audio and 65-kc. bias to recording head, 115 volts for high-impedance erase head; 8 volt low-impedance erase head output available with minor circuit change; audio monitor; NAB equalization; signal-to-noise ratio 55 db; tubes: 2-12AX7, 12AU7, 6X4; 2 3/8" x 5" x 8".....\$57.50

Model P-6 Conversion Kit

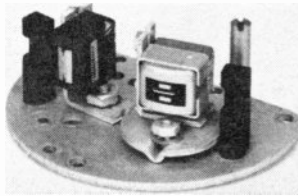
Converts all Pentron mono and 2-track stereo tape recorders to 4-track stereo playback; patch cord and jack set to connect to external stereo playback amplifier included.....\$29.70

Model P-7 Conversion Kit

For Pentron recorders; includes 4-track stereo erase head; replaces mono erase head; used with P-6, permits stereo erase during stereo recording.....\$15.00

Model R-67 Conversion Kit

Converts Roberts, Metzner, Akai, and Terrecorder tape recorders to 4-track stereo playback while retaining existing mono



record/play capabilities; allows 4-track stereo recording with additional amplifier (not included).....\$39.00

Model V-6 Conversion Kit

Converts all mono and 2-track stereo V-M recorders to 4-track playback; includes patch cord and jack set for connecting to external stereo playback amplifier.....\$25.50

Model V-7 Conversion Kit

For V-M recorders; 4-track stereo erase head; replaces mono erase head; used with V-6, permits stereo erase during stereo recording; includes synchronizing cable, isolation capacitor, and erase jack.....\$14.50

Model W-2 Conversion Kit

Converts Webeor Series 210, 2020, 2100, 2600, and 2700 to 4-track stereo playback only; may not be used for recording unless external amplifiers are used (not included).....\$27.00

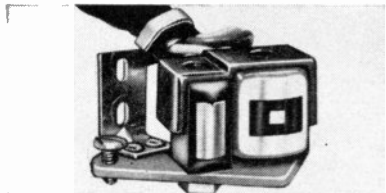
Model W-6 Conversion Kit

Converts all Webeor 2800, 2900, 2000 (old Series, except 2020) to stereo playback; assembly includes head-shifter to play back 2-track and 4-track tapes; original mono recording and playback are retained.....\$36.00

Model W-7 Conversion Kit

For Webeor 2800, 2900, and old 2000 Series (except 2020); 4-track stereo erase head; replaces mono erase head; used with W-6, permits stereo recording when additional amplifier (not included) is used; original 2-track mono erase facilities are retained.....\$18.00

Model WR-20 Replacement Kit

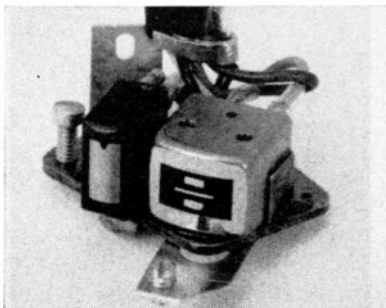


Direct replacement mono record/play and erase kit for Wollensak and Revere recorders; complete assembly mounted on special plate, wired and ready to install.....\$15.60

Model WR-35 Conversion Kit

Converts all stereo Wollensak and Revere 2-track tape recorders to 4-track stereo playback.....\$25.50

Model WR-40 Conversion Kit



Converts all mono Wollensak and Revere tape recorders to 4-track stereo playback;

ALL TAPE HEADS WEAR OUT!

Is head wear causing you to lose the clean, crisp sound which only tape can give you?

SPOT CHECK HEADS IN 2 MINUTES
... Look for ...
A. Grooves or spots on surface.
B. Thin vertical black dividing line either pole piece.

Nortronics

new head replacement program solves head wear problems!

There's no such thing as a wear-proof tape head. No matter who made the heads for your recorder... eventually they will wear out! When this happens, sound quality suffers... violins, castanets, triangles and cymbals are muffled or blurred.

Get the most from your investment in tape equipment by insisting on NORTRONICS correctly matched replacements for worn tape heads. NORTRONICS heads are selected by the nation's top manufacturers for use on their better recorders because of their premium quality, excellent performance and long life.

Have your tape heads checked for wear!

Now—for the first time—your Hi Fi dealer, Radio TV serviceman or camera store can check the tape heads on your recorder and supply you with the correct NORTRONICS Replacement Heads and "Quik-Kit" mounting hardware. Easy to follow detailed drawings and instructions speed up installation! Replacements for more than 250 popular models are now available—with more to come!

If your local dealer or serviceman can't supply you, ask NORTRONICS for the name of your nearest source.

Write today for your FREE copy of "The NORTRONICS Guide to Tape Recording", a new information packed booklet for all tape enthusiasts.

MOST COMPLETE LINE OF CONVERSION KITS

In addition, NORTRONICS provides the most complete line of kits for converting mono-phonics and 2 track stereo to 4 track stereo.



"Music Sounds Best on Tape — Tape Sounds Best on Nortronic Heads"

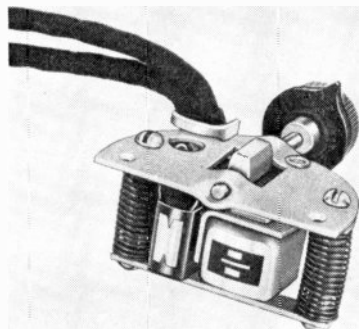
Nortronics

8129 West 10th Ave., North Minneapolis 27, Minnesota.

6 Tape Accessories

a tape head playback amplifier such as the Model PL-100 is required for playback of second channel (not included).....\$32.50

Model WR-60 Conversion Kit

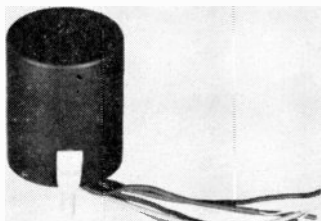


Converts all 2-track Wollensak and Revere models to 4-track stereo; includes three-position head shifter for 2-track stereo, 4-track stereo, and 4-track mono operation; allows stereo recording with additional amplifier (not included).....\$49.50

Model T60E Oscillator Transformer

65-ke. bias for recording and erase current for either high or low impedance heads; one-tube oscillator circuit diagram included\$4.50

Model T60-T2 Oscillator Transformer

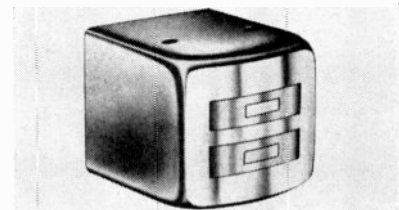


Similar to Model T60E but designed for transistor circuitry; 40-100 ke.; will deliver 25 to 150 volts to erase and record heads\$4.50

Model AT-100 Alignment Tape

7.5 ips full-track for checking record/play heads of all types; 40-10,000 cps; recorded for checking azimuth, equalization, and head wear.....\$4.95

1000 Series Record/Play Heads



Four-track stereo; laminated core; premium quality with full metal face construction; replaces older CSQ, TLB, and TLD-L styles.

#1000—High impedance; 750 mhy. inductance; 100 μ in. gap; for use with vacuum-tube circuits; no-mount type\$21.00
#1001—Medium impedance; 350 mhy. inductance; 100 μ in. gap; for use with vacuum-tube or transistor circuits; no-mount type\$21.00
#1002—Low impedance; 100 mhy. inductance; 100 μ in. gap; for use with transistor circuits; no-mount type\$21.00

#1003—Special record only head; 60 mhy. inductance; 500 μ in. gap; for use with vacuum-tube or transistor circuits; no-mount type\$21.00
Same as #1000, #1001, #1002, #1003 except rear mount.....\$22.60

1800 Series Record/Play Heads

Two-track stereo; laminated core; premium quality with plastic face construction; replaces older TLA and TLD-S styles.

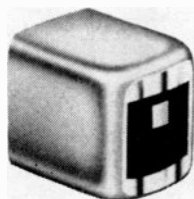
#1800—High impedance; 700 mhy. inductance; 150 μ in. gap; for use with vacuum-tube circuits; no-mount type\$23.30
#1801—Medium impedance; 350 mhy. inductance; 160 μ in. gap; for use with vacuum-tube or transistor circuits; no-mount type\$23.30
#1802—Low impedance; 100 mhy. inductance; 160 μ in. gap; for use with transistor circuits; no-mount type.....\$23.30
#1803—Special record only head; 60 mhy. inductance; 500 μ in. gap; for use with vacuum-tube or transistor circuits; no-mount type\$23.30
Same as #1800, #1801, #1802, #1803 except rear mount\$24.80

2600 Series Record/Play Heads

Two-track mono; laminated core; plastic face construction; replaces older SLA style.

#2600—High impedance; 700 mhy. inductance; 160 μ in. gap; for use with vacuum-tube circuits; no-mount type\$15.90
#2601—Medium impedance; 350 mhy. inductance; 160 μ in. gap; for use with vacuum-tube or transistor circuits; no-mount type\$15.90
#2602—Low impedance; 100 mhy. inductance; 160 μ in. gap; for use with transistor circuits; no-mount type.....\$15.90
#2603—Special record only head; 60 mhy. inductance; 500 μ in. gap; for use with vacuum-tube or transistor circuits; no-mount type\$15.90
Same as #2600, #2601, #2602, #2603 except rear mount\$17.40

3000 Series Record/Play Heads



Two-track mono; solid core; plastic face construction; replaces older SLS style.

#3000—High impedance; 900 mhy. inductance; 160 μ in. gap; for use with vacuum-tube circuits; no-mount type\$8.40
#3001—Medium impedance; 350 mhy. inductance; 160 μ in. gap; for use with vacuum-tube or transistor circuits; no-mount type\$8.40
Same as #3000 and #3001 except rear mount\$9.90

4000 Series Record/Play Heads

Full-track mono; laminated core; premium quality with plastic face construction; replaces older SF style.

#4000—Medium impedance; 250 mhy. inductance; 160 μ in. gap; for use with vacuum-tube or transistor circuits; no-mount type\$33.20
#4001—Special record only head; 70 mhy. inductance; 500 μ in. gap; for use with vacuum-tube or transistor circuits; no-mount type\$33.20
Same as #4000 and #4001 except rear mount\$34.70

1400 Series Erase Heads

Four-track stereo; laminated core; double gap; premium quality with full metal face construction; replaces older SEQ and SE-50 styles.

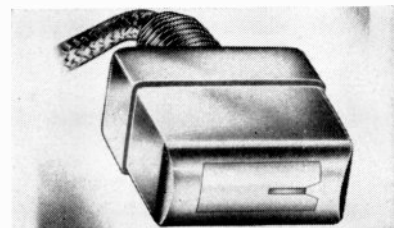
#1400—High impedance; 80 mhy. inductance; 30,000 ohms impedance at 60 kc.; for use with vacuum-tube circuits; 60 ke. operating voltage; 90-150 volts; no-mount type\$12.00
#1401—Medium impedance; 10 mhy. inductance; 2800 ohms impedance at 60 kc.; for use with vacuum-tube or transistor circuits; 60 ke. operating voltage; 28-42 volts; no-mount type.....\$12.00
Same as #1400 and #1401 except rear mount\$13.50

2200 Series Erase Heads

Two-track stereo; laminated core; double gap; premium quality with full metal face construction; replaces older SEII and SE-100 styles.

#2200—High impedance; 80 mhy. inductance; 25,000 ohms impedance at 60 kc.; for use with vacuum-tube circuits; 60 ke. operating voltage; 100-150 volts; no-mount type\$12.00
#2201—Medium impedance; 8 mhy. inductance; 2000 ohms impedance at 60 kc.; for use with vacuum-tube or transistor circuits; 60 ke. operating voltage; 32-48 volts; no-mount type.....\$12.00
Same as #2200 and #2201 except rear mount\$13.50

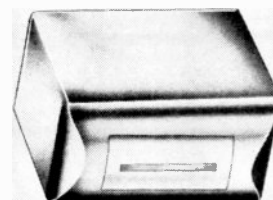
3600 Series Erase Heads



Two-track mono; laminated core; premium quality with full metal face construction; double gap; replaces older MEII and ME-100 styles.

#3600—High impedance; 80 mhy. inductance; 25,000 ohms impedance at 60 kc.; for use with vacuum-tube circuits; 60 ke. operating voltage; 100-150 volts; no-mount type.....\$8.00
#3601—Medium impedance; 8 mhy. inductance; 2000 ohms impedance at 60 kc.; for use with vacuum-tube or transistor circuits; 60 ke. operating voltage; 32-48 volts; no-mount type.....\$8.00
Same as #3600 and #3601 except rear mount\$9.50

4400 Series Erase Heads



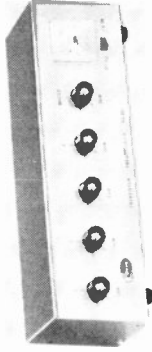
Full-track mono; laminated core; double gap; premium quality with full metal face construction; replaces older MEF and ME-250 styles.

#4400—High impedance; 40 mhy. inductance; 12,000 ohms impedance at 60 kc.; for use with vacuum-tube circuits; 60 ke. operating voltage; 100-150 volts; no-mount type.....\$14.00
#4401—Medium impedance; 3.6 mhy. inductance; 1000 ohms impedance at 60 kc.; for use with vacuum-tube or transistor circuits; 60 ke. operating voltage; 32-48

volts; no-mount type.....\$14.00
Same as #4000 and #4001 except rear
mount\$15.50

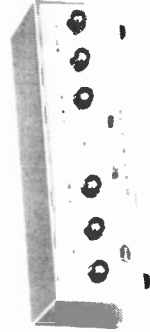
OLSON ELECTRONICS

Model RA-501 Transistorized
Preamp/Mixer



Designed for the professional or serious
amateur tape recordist as well as for p.a.
use; four individually controlled inputs,
each switchable for high- or low-level in-
put; master gain control; vu meter; pow-
ered by six penlite cells; has 10 transistors;
signal-to-noise ratio -65 db; all metal
case; 3 3/4" x 11 7/8" x 3 1/4"\$29.98

Model RA-502 Stereo-Mono
Preamp/Mixer



Designed for serious tape recordists; for
recording mono or stereo programs; each
channel equipped with switching for high-
or low-level inputs; individual gain con-
trols; master gain control for each stereo
channel; switch to adapt to four input
mono; vu meter which can be switched to
either stereo channel; uses six penlite cells;
signal-to-noise ratio -65 db; metal case;
3 3/4" x 11 7/8" x 3 1/4"\$34.98

ROBINS

Model ME-99 Bulk Tape Eraser



Demagnetize up to 1/2" wide; can erase
background noise on old tapes; takes up to
10" reels; 3 3/4" x 5 1/4" x 6 3/4"\$33.00

Model HD-6 Head Demagnetizer



Allows user to demagnetize tape recorder
heads; plugs into a.c. line.....\$10.00

Model HD-3 Head Demagnetizer

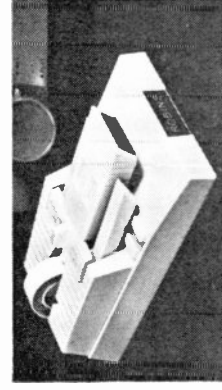
Low-cost version of Model HD-6.....\$5.95

Model TK-5 Strobetape Kit

Consists of five lengths of 25-inch nonmag-
netic leader tape with strobe markings plus
small neon light which flickers at a rate of
120 times per second; designed to be spliced
into a roll of tape and the strobe markings
will indicate relative speed of the tape ma-
chine\$2.00

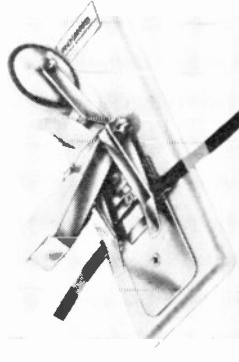
Model TS-8D Deluxe Tape Splicer

Cuts tape diagonally; features "See-Thru"
windows indicating cut and trim positions;
blade centering adjustment; unit has re-



placeable cutter cartridge and blade; sup-
plied with roll of 1/2" x 100" splicing tape
..... \$11.50

Model TS-4S Tape Splicer



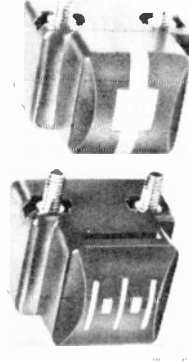
Similar to Model TS-8D except does not
have "See-Thru" windows; supplied with
roll of 1/2" x 100" splicing tape.....\$8.50

Model TS-4J Tape Splicer

Similar to Model TS-4S except does not
have tape dispenser and splicing tape; uses
3/8" splicing tape.....\$6.50

SONOTONE

Model RH-4A Tape Head



Stereo 1/4-track for record/play; 3000 ohms
@ 1 kc.; @ 7.5 ips; audio current .025
ma.; bias current @ 65 kc. .5 ma.; re-
sponse at 10 kc. -5 db; at 3.75 ips audio
current .02 ma.; bias current .2 ma.; re-
sponse -10 db; output @ 1 kc., 3 mv.
.....\$28.50

Model RH-2A Tape Head

Mono 1/2-track for record/play; 6000 ohms
@ 1 kc.; bias current .6 ma. @ 65 kc.;
output 3 mv. @ 1 kc.; at 7.5 ips audio
current .025 ma.; response -10 db @ 10
kc.; at 3.75 ips audio current 0.2 ma.;
response -15 db\$10.00

Model RH-2B Tape Head

Mono 1/2-track record/play; 1000 ohms @
1 kc.; audio current .04 ma.; bias current
7 ma. @ 65 kc.; output 1 mv. @ 1 kc.;
response at 10 kc. -10 db at 7.5 ips;
-15 db at 3.75 ips\$10.00

Model RH-2C Tape Head

Mono 1/2-track record/play; 2200 ohms;
audio current .03 ma.; bias current .6 ma.
@ 65 kc.; output 1 mv. @ 1 kc.; response
at 10 kc. -10 db at 7.5 ips; -15 db at
3.75 ips\$10.00

Model EH-4A Erase Head

Stereo 1/4-track; 2400 ohms; 65 kc. bias
freq.; 12.5 ma. erase current; for 7.5 &
3.75 ips machines\$13.50

Model EH-2A Erase Head

Mono 1/2-track; 1750 ohms; 65 kc. bias
freq.; erase current 3 ma.; for 7.5 & 3.75
ips machines\$ 9.00
Any combination of heads and various
tape brackets available.



THIS MAN is not disturbing his wife while he
listens to a stereo concert. Right by his hand
he can control volume; adjust left-right balance to
suit the music source and the best hearing condi-
tions for him; switch from mono to stereo, or stereo
with SPACE-PERSPECTIVE*; individually select and/
or reverse channels; switch speaker system. 'Phone
jacks for two. All this in Jensen's new CC-1 Head-
phone Control Center.

What makes the extra difference is SPACE-
PERSPECTIVE... the amazing headphone develop-
ment which approximates more closely the sensa-
tion of listening to a stereo speaker system in a
room. You are now "in front of the speakers" via
headphones... not in the middle where the sounds

are isolated to each ear.

The CC-1 will operate with some other stereo
headphones... but for best results the Jensen
HS-1 'phones are recommended... the new pro-
fessional stereo headphones which offer the most
advanced features for top acoustical performance
and comfort. The CC-1 Control Center sells for
\$39.95... HS-1 Stereo Headphones for \$24.95
... and a CFN-1 SPACE-PERSPECTIVE network
only, with 'phone jack, for \$19.50. Write for
Brochure M.H. Jensen Manufacturing Company,
Division of The Muter Company, 6601 S. Laramie
Ave., Chicago 38, Illinois.

*T.M. Devices licensed by CBS Laboratories Division,
Columbia Broadcasting System, Inc.

6 Multiplex Adapters

ALTEC LANSING

Model 359A "Steroplex"
Multiplex Adapter



Has stereo panel light which operates automatically when stereo program is received; sensitivity .25-5 v. peak-to-peak; separation better than 30 db from 50-15,000 cps; total harmonic distortion less than 1% at normal input levels; 5 1/4" h. x 5 1/2" w. x 9 1/2" d.\$89.50

BOGEN

Model PX60 Stereo
Multiplex Adapter



Self-powered; response 50-15,000 cps \pm 3 db; distortion less than 1%; input 1 to 1.5 v. r.m.s.; separation 24 db; hum level -60 db; tape recording filter; controls: stereo separation; adapter switch L + R level power; 4 1/2" x 4 1/2" x 9"\$59.95

CALBEST ELECTRONICS

Model MXA 614 Stereo Adapter

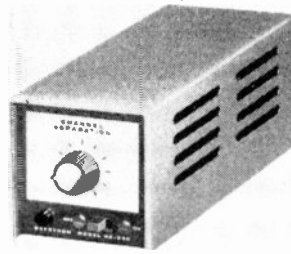


Self-powered; separation 30 db from 50 to 15,000 cps with wide-band tuners; 25 db with narrow-band tuners; less than 1% THD; has automatic mono-stereo switching; stereo indicator light; input voltage .25 to 5 volts peak-to-peak; 5 1/4" long x 5 1/4" wide x 9" deep.\$79.95

DAYSTROM

Model DA-330 Stereo
Multiplex Adapter

Three-tube circuit has built-in fused power supply and pilot light; prealigned coils; balanced diode detectors; separation control is on front panel; response 50-15,000 cps \pm 2 db; 30 db channel separation; has cathode-follower outputs.\$34.95



Factory assembled.....\$89.95

DE WALD

Model P400 Multiplex Adapter



Has "on-off" switch, stereo blend, and mono/stereo operating controls; self-powered with cathode-follower outputs; 4 1/4" h. x 9 1/8" w. x 3 3/8" d.\$57.95

DYNACO

Model FMX-3 Stereo Multiplex
Adapter

Permits fully automatic conversion of FM-1 Dynatuner to stereo operation; fits on tuner chassis; powered by tuner; two tubes and four diodes in doubler system provide 30 db separation; includes dual-beam "Stereoator" tuning eye; dual volume controls for both channels, replacing standard FM-1 components; tuning station automatically switches adapter to stereo or mono operation; tape recorder filters.
FMX-3 Kit\$ 29.95
FMX-3/SK Semi-kit with factory assembled etched-circuit board\$ 39.95
FM-3/A Factory assembled multiplex tuner\$169.95
PM-4 Panel mount accessory kit for any Dynatuner combination\$ 4.95

EICO

Model MX-99 FM Multiplex Adapter



Free from phase-distorting filters; designed to required suppression of all spurious signals including SCA (67-ke.) background-music carrier, re-inserted 38-ke. subcarrier, 19-ke. pilot carrier, and all harmonics thereof; will synchronize with any usable output from an FM tuner and will demodulate, without significant distortion, tuner outputs as high as 5 volts p-p; self-powered; provides automatic stereo/mono operation; includes low-impedance cathode-follower outputs; lamp indicates when station is broadcasting multiplex stereo; separation 30 db between channels; over-all gain of unity is provided from input to output on both mono and stereo, about unity on mono; for use with company's Models HFT-90, HFT-92, ST-96 and any other component-quality ratio-detector FM tuners equipped with multi-

plex output; includes cathode-follower-driven 15 kc. sharp cut-off low-pass filters at each output; 9 1/8" x 6 3/8" x 2 7/8"; less cover.

Kit\$39.95
Wired\$64.95
E-9 cover.....\$2.95

ERIC

Model MX600D Multiplex Adapter



Fully automatic design; response 50-15,000 cps \pm 1 db; channel separation 30 db; stereo indicator light is automatic; 6D10 compactron, 6EW6, 2-1N67 tubes and 1 diode; 4 1/4" w. x 4 7/8" h. x 8 1/2" d.\$59.95

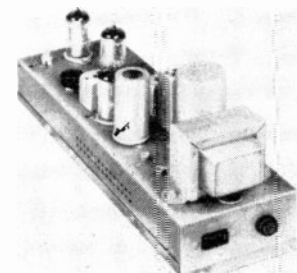
FISHER

Model MPX-100 Multiplex Adapter



For use with any tuners or receivers having a multiplex output; "Stereo Beacon" indicates if station is broadcasting stereo; selector switch for mono/stereo; self-powered; 4 7/8" x 14 13/16" x 12"; less cabinet\$119.50
Walnut or mahogany cabinet.....\$14.95

Model MPX-200 Multiplex Adapter



Designed for use with all high-quality FM tuners and receivers; may be concealed in any out-of-the-way space near the component; special control for matching to any tuner or receiver to be set only at time of original installation; standard connecting cables terminating in pin-plugs on both ends; 12" w. x 4" h. x 3 1/2" d.\$79.50

GENERAL ELECTRIC

Model MA2G Multiplex Adapter

Self-powered, two-tube design; response 50-15,000 cps \pm 3 db; gain 1 \pm 3 db; separation 20 db at 1900 cps; input signal 1 to 2 volts r.m.s.; input impedance 2 megohms x 50 μ f; output impedance 12,000 ohms; hum and noise -60 db; 10" l. x 2 1/4" w. x 3" h.\$39.95

STEREO/HI-FI DIRECTORY

HARMAN-KARDON

Model MX500 Plug-In Multiplex Adapter

Designed for the company's Models F500, ST360A, ST360, and ST350 tuners. \$39.95

Model MX600 Snap-On Multiplex Adapter

Designed for company's stereo receiver Models TA230, TA224, and TA260; adapter snaps on to rear of chassis out of sight and adds only 1½" to depth of receiver; draws power from receiver\$49.95

Model MX700 Self-Powered Adapter
For use with all tuners having multiplex outputs; plastic front plate glows when multiplex signal is received; adapter activated automatically by multiplex signal\$59.95

Citation IIIMA Adapter

Top-of-the-line adapter; available factory wired\$79.95

HEATH

Model AC-11 Multiplex Adapter



Three-tube design with self-contained silicon-rectifier power supply; response 50-15,000 cps; cathode-follower outputs for each channel; has "on-off" switch and separation control.

Model AC-11 Kit.....\$32.50
Model AC-11 Assembled.....\$56.25

KARG

Model MX-3 Multiplex Adapter

Self-powered design; works with tuner outputs as low as .2 v.; separation 39 db; response 30-15,000 cps ± 1 db; harmonic distortion under 1%; has single control on-off/volume; tubes: 6X4, 12AX7, 2-6BL8; over-all size 5" h. x 5½" w. x 10¼" d.....\$89.95

Model MX-5 Multiplex Adapter

Self-powered design; works with tuner outputs as low as .3 v.; 30 db separation; has simple on-off switch; 4" x 3¼" x 5"\$39.95

KNIGHT

Model KN-MX3 Multiplex Adapter



Self-powered; will operate with any late model FM tuner having multiplex output jack; single control plus on-off switch; automatic stereo indicator light; 4¾" x 5" x 8"; dark brown metal case with polished brass panel; supplied with three 36" audio cables\$39.95

KNIGHT-KIT

Model KS-10K Multiplex Adapter



For adapting any Knight-Kit tuner without built-in multiplex for FM stereo reception; also works with other wide-band tuners; built-in 110-125 volt power supply.
83Y656-KS-10A (kit).....\$19.95

Model KG-12 Deluxe Multiplex Adapter

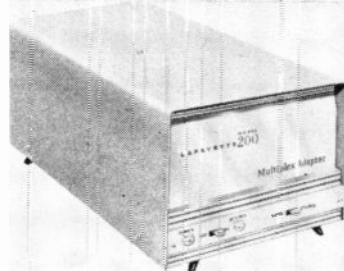
Front-panel stereo indicator lights automatically on multiplex broadcasts; front-



panel separation control for optimum stereo effect; compatible with most wide-band tuners; self-powered; noise filters; tape recording filters; function switch (power off, mono, stereo, filter); response 50-15,000 cps ± 1 db; separation 30 db.
Model KG-12 (kit).....\$29.92

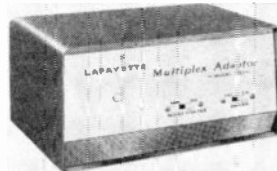
LAFAYETTE

Model LT-200WX Multiplex Adapter



Universal; self-powered design; features separate indicator lamps for power on-off and stereo programs; separation at 400 cps 35 db; harmonic distortion less than .5% from 50-15,000 cps; response 50-15,000 cps ± 1 db; input signal .22 v. to 1.5 v.; output impedance 8000 ohms; supplied with enclosure and 15' cable; has two slide switches "on-off" and "mono-stereo"; tubes: 12AX7, 6X4, 12BZ7, EX80; 10½" l. x 5¾" w. x 4½" h.\$54.50

Model KT-200 Multiplex Adapter Kit



Self-powered economy design; has two slide switches noise limiter on-off and power; separation 30 db @ 400 cps; distortion below 1%; can be remotely located in hi-fi system; tubes: 12AU7, 6BN8, 12AX7, and silicon rectifier; coils are pre-aligned, simplifying construction\$19.50
LT-220 Factory wired.....\$39.95

TAPE RECORDERS



Hi Fi
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Accessories

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KITS

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MM-18 1800' Milar	1.95	1.85

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CIRCLE NO. 19 ON READER SERVICE PAGE
149

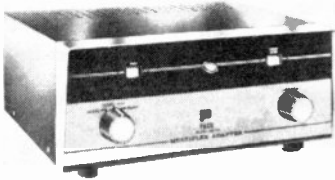
6 Multiplex Adapters

MONARCH

Model MPX-1 Multiplex Adapter
Has dimension control, noise filter, pilot light, and stereo/mono switch; 12½" x 4½" x 4½".....\$46.50

PACO

Model MX100 Multiplex Adapter



Pre-aligned kit; designed for use with all FM tuners; response 15-15,000 cps ± 1 db; output level 1.5 v.; front panel controls: switch for stereo/mono; dimension control; noise-filter switch; four tubes plus two diodes; 9" w. x 8¼" d. x 3½" h.\$49.95
Factory wired.....\$69.95

PILOT

Model 100 FM Multiplex Adapter
Self-powered, single control (slide switch) design; if your tuner or amplifier selector switch has "multiplex" position, adapter switch is left in "in" position, otherwise switch is manually operated; two tubes plus rectifier; can be used with any FM tuner; 5" x 3" x 12".....\$49.50

Model 200 FM Multiplex Adapter
No controls, automatically switches (relay design) to mono or stereo depending on broadcast; self-powered; three tubes plus rectifier; has indicator light to show type of program; for use with any FM tuner; 5" x 3" x 14".....\$79.50

REALISTIC

Model MPX-215 Multiplex Adapter



Completely self-powered; response 50-15,000 cps ± 3 db; selector switch, stereo balance control on front panel; adapts all Realistic tuners manufactured since 1958; hum & noise -60 db; crosstalk 20 db @ 1 kc.; power and stereo-receive pilot lights on front panel; 7¼" x 4½" x 6"; wired\$39.95
Kit\$29.95

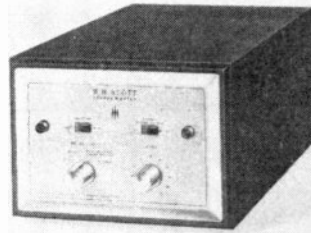
Model 31K90LX099 Multiplex Adapter Kit

Self-powered; pre-aligned coils; response 50-15,000 cps ± 3 db; crosstalk 20 db @ 1 kc.; hum & noise -60 db; input impedance over 10 megohms; 3½" h. x 4" w. x 5" d.; supplied with case.....\$19.95

H. H. SCOTT

Model 335 Multiplex Adapter

Designed to be used with all H. H. Scott



tuners without modification: Models 330, 310A, 310B, 310C, 310D, 311A, 311B, 311C, 311D, 314, 320, 330A, 330B, 330C, 330D, 331A, 331B, 331C, 399, and LT-10; contains special circuitry to prevent whistles on tape recording; connecting cables supplied; self-powered a.c.; 7" x 5¼" x 13"; Type "II" case extra\$109.95

Model LM-35 Multiplex Adapter Kit

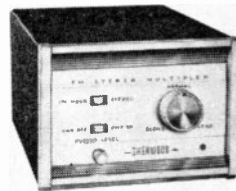
Same design as Model 335; multiplex section comes pre-wired and pre-aligned; just power supply and controls must be built; Type "II" case extra. Kit.....\$79.95

Enclosures

Type "II" metal enclosure.....\$9.95
Type "II" wood enclosure, walnut or mahogany\$14.95

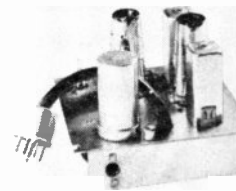
SHERWOOD

Model S-3MX FM Multiplex Adapter



Self-powered adapter designed to work with virtually all hi-fi FM tuners; features two front-panel switches; power "on-off" switch automatically returns stereo adapter operation to normal monophonic operation of its associated FM tuner when in "power-off" position; hum and noise 60 db below rated output; audio output is 2 volts @ ½% distortion; less case.....\$69.50
With brown & black flextone case.....\$74.50

Model A-3MX FM Multiplex Adapter



Plug-in multiplex adapter for use with Sherwood Models S-2200 and S-3000 III FM tuners.....\$49.50

Model SL-1 "Stereo-Lite"



Will provide instant identification of FM station broadcasting stereo multiplex programs; can mount inside cabinet; ⅝" dia. hole is required; sensitivity adjustable; will operate with any FM tuner.....\$29.50

6 Raw Tape

AMERICAN

Acetate Base (1.5-mil)

1-A 150 feet, 3" reel.....\$.70
3-A 300 feet, 4" reel.....\$1.40
6-A 600 feet, 5" reel.....\$2.25
12-A 1200 feet, 7" reel.....\$3.50
15-A 2000 feet, 7" reel.....\$3.50

Acetate Base Long-Play (1.5-mil)

L-2A 225 feet, 3" reel.....\$.90
L-4A 450 feet, 4" reel.....\$1.80
L-9A 900 feet, 5" reel.....\$3.29
L-18A 1800 feet, 7" reel.....\$5.17
L-20A 2000 feet, 7" reel.....\$5.17

Mylar Base Long-Play (1-mil)

L-2M 225 feet, 3" reel.....\$.95
L-9M 900 feet, 5" reel.....\$3.40
L-18M 1800 feet, 7" reel.....\$5.80
L-20M 2000 feet, 7" reel.....\$5.80

Mylar Base (1.5-mil)

1-M 150 feet, 3" reel.....\$.75
6-M 600 feet, 5" reel.....\$2.65
12-M 1200 feet, 7" reel.....\$4.25

Mylar Base Double-Play Tensitized (.5-mil)

D-3MT 300 feet, 3" reel.....\$1.60
D-5MT 500 feet, 3" reel.....\$2.50
D-6MT 600 feet, 4" reel.....\$2.90
D-12MT 1200 feet, 5" reel.....\$5.45
D-24MT 2400 feet, 7" reel.....\$9.50
D-30MT 3000 feet, 7" reel.....\$9.50

Mylar Base Double-Play (.5-mil)

D-12MS 1200 feet, 5" reel.....\$3.50
D-24MS 2400 feet, 7" reel.....\$6.50

Acetate High-Output (1.5-mil)

HO-6A 600 feet, 5" reel.....\$3.50
HO-12A 1200 feet, 7" reel.....\$5.50

Mylar High Output (1.5-mil)

HO-6M 600 feet, 5" reel.....\$4.60
HO-12M 1200 feet, 7" reel.....\$7.65

Acetate Low-Print "Master" (1.5-mil)

LP-12A 1200 feet, 7" reel.....\$4.40

Mylar Low-Print "Master" (1.5-mil)

LP-12M 1200 feet, 7" reel.....\$7.70

AMPEX

Irish Series 300 Recording Tape

Available on .5, 1, 1.5-mil Mylar and 1- & 1.5-mil acetate; reels are clear plastic 3", 5", 7".

Type 311 General purpose on 1.5-mil acetate.

150 feet, 3" reel.....\$0.65
600 feet, 5" reel.....\$1.75
1200 feet, 7" reel.....\$2.95

Type 321 Extended-play on 1-mil acetate; allows 50% more recording.

225 feet, 3" reel.....\$0.80
900 feet, 5" reel.....\$2.50
1200 feet, 7" reel.....\$4.25

Type 331 on 1.5-mil Mylar.

600 feet, 5" reel.....\$2.25
1200 feet, 7" reel.....\$3.65

Type 341 Extended-play on 1-mil Mylar.

225 feet, 3" reel.....\$1.00
900 feet, 5" reel.....\$2.85
1800 feet, 7" reel.....\$4.95

Type 351 Pre-tensitized .5-mil Mylar.

300 feet, 3" reel.....\$1.35
1200 feet, 5" reel.....\$4.50
2400 feet, 7" reel.....\$7.95

AmpeX Series 500 Recording Tape

STEREO/HI-FI DIRECTORY

Available on .5, 1, and 1.5-mil Mylar, 1 & 1.5-mil acetate.

Type 511 on 1.5-mil acetate.
600 feet, 5" reel.....\$2.25
1200 feet, 7" reel.....\$3.50

Type 521 on 1-mil acetate.
900 feet, 5" reel.....\$3.50
1800 feet, 7" reel.....\$5.50

Type 531 on 1.5-mil Mylar.
600 feet, 5" reel.....\$2.65
1200 feet, 7" reel.....\$4.25

Type 541 on 1-mil Mylar.
900 feet, 5" reel.....\$3.60
1800 feet, 7" reel.....\$6.20

Type 551 on .5-mil Mylar.
1200 feet, 5" reel.....\$5.45
2400 feet, 7" reel.....\$9.50

AUDIOTAPE

Master 1.5-mil Mylar Tape

Made on 1.5 mil Mylar base; durable in wide temperature range.

Type 671M, 600 ft., 5" reel.....\$3.20
Type 1271M, 1200 ft., 7" reel.....\$5.10

Audio Self-Timing Leader Tape

Mylar base; spaced markings permit rate timing of leader intervals; 100 ft.\$.55

Double Recording (.5-mil tempered Mylar)

Made on tempered Mylar; allows twice as much recording per reel; stronger than double length tape.

Type 331T, 300 ft., 3" reel.....\$ 1.60
Type 1231T, 1200 ft., 5" reel.....\$ 5.45
Type 2431T, 2400 ft., 7" reel.....\$ 9.50
Type 4831T-FS, 4800 ft., reel.....\$22.00

Master Plastic-Base Tape

Made on 1.5 mil acetate base.
Type 651M, 600 ft., 5" reel.....\$2.75
Type 1251M, 1200 ft., 7" plastic reel.....\$4.30
Type 2551RM, 2500 ft., 10½" aluminum reel.....\$12.50
Type 2551FS-M, 2500 ft., 10½" fiberglass.....\$12.50
Type 5051R-M, 5000 ft., 14" aluminum.....\$26.00

Standard Recording (plastic base)

Professional-quality recording tape; maximum fidelity, uniformity, frequency response and freedom from noise and distortion; 1.5 mil acetate.

Type 151, 150 ft., 3" plastic reel.....\$.70
Type 351, 300 ft., 4" plastic reel.....\$1.35
Type 651, 600 ft., 5" plastic reel.....\$2.25
Type 1251, 1200 ft., 7" plastic reel.....\$3.50
Type 2551R, 2500 ft., 10½" reel.....\$10.90
Type 2551FS, 2500 ft., 10½" fiberglass reel (EIA).....\$10.90

Longer Recording (1-mil plastic base)

Provides 50% more recording time per reel; 1-mil cellulose acetate base; maximum economy for applications where high strength is not required.

Type 941, 900 ft., 5" plastic reel.....\$3.50
Type 1841, 1800 ft., 7" plastic reel.....\$5.50
Type 3641R, 3600 ft., 10½" reel.....\$12.85
Type 3641FS, 3600 ft., 10½" fiberglass reel (EIA).....\$12.85
Type 7241H, 7200 ft., NAB hub.....\$20.00
Type 7241, 7200 ft., 14" reel.....\$26.00

Longer Recording (1-mil Mylar)

Made on 1-mil Mylar polyester film; provides 50% more recording time per reel; exceptional strength and durability plus longer storage life.

Type 261, 225 ft., 3" plastic reel.....\$1.00
Type 961, 900 ft., 5" plastic reel.....\$3.60

Type 1861, 1800 ft., 7" reel.....\$ 6.20
Type 3661R, 3600 ft., 10½" aluminum reel.....\$14.40
Type 3661FS, 3600 ft., 10½" fiberglass (EIA) reel.....\$14.40

Standard Recording (1.5-mil Mylar)

High-strength, super-durable magnetic tape that meets the highest professional standards of performance; withstands extreme temperatures; virtually immune to humidity; gives maximum tape life under any conditions of use or storage.

Type 671, 600 ft., 5" plastic reel.....\$2.65
Type 1271, 1200 ft., 7" plastic reel.....\$4.25
Type 2571H, 2500 ft., NAB hub.....\$8.30
Type 2571R, 2500 ft., 10½" aluminum reel.....\$11.20
Type 2571FS, 2500 ft., 10½" fiberglass reel (EIA).....\$11.20
Type 5071R, 5000 ft., NAB hub.....\$16.65

Double Recording (.5-mil Mylar)

Made on .5-mil Mylar; twice as much recording time per reel as standard plastic-base tape; suitable for extended-play applications where tape tension is not excessive.

Type 1231, 1200 ft., 5" reel.....\$3.50
Type 2431, 2400 ft., 7" reel.....\$6.50

BURGESS

Series No. 102 1.5-mil Mylar

102-6 600 feet, 5" reel.....\$2.65
102-12 1200 feet, 7" reel.....\$4.25
102-24R 2400 feet, 10½" reel.....\$11.20

Series 131 1.5-mil Low-Print-Through Plastic

131-12 1200 feet, 7" reel.....\$4.40
131-24R 2400 feet, 10½" reel.....\$12.40

Series No. 111 1.5-mil Plastic Tape

111-1.5 150 feet, 3" reel.....\$.70
111-3 300 feet, 4" reel.....\$1.35
111-6 600 feet, 5" reel.....\$2.25
111-8.5 850 feet, 5¾" reel.....\$2.85
111-12 1200 feet, 7" reel.....\$3.50
111-24R 2400 feet, 10½" reel.....\$10.90

Series 138 1.5-mil Low-Print-Through Mylar

138-12 1200 feet, 7" reel.....\$5.10
138-24R 2400 feet, 10½" reel.....\$13.50

Series No. 140 1-mil Extra Play Stereo Plastic

140-9 900 feet, 5" reel.....\$2.50
140-18 1800 feet, 7" reel.....\$4.25

Series No. 141 1.5-mil Stereo Quality Plastic

141-6 900 feet, 5" reel.....\$1.75
141-12 1200 feet, 7" reel.....\$2.95

Series No. 150 1-mil Extra-Play Mylar

150-2.25 225 feet, 3" reel.....\$1.00
150-9 900 feet, 5" reel.....\$3.60
150-12 1200 feet, 5¾" reel.....\$4.65
150-15 1500 feet, 7" reel.....\$5.15
150-18 1800 feet, 7" reel.....\$6.20
150-36R 3600 feet, 10½" reel.....\$14.40

Series No. 190 1-mil Extra-Play Plastic

190-9 900 feet, 5" reel.....\$3.30
190-15 1500 feet, 7" reel.....\$4.50
190-18 1800 feet, 7" reel.....\$5.50
190-36R 3600 feet, 10½" reel.....\$12.85

Series No. 200 .5-mil Tensitized Mylar

200-3 300 feet, 3" reel.....\$1.60
200-6 600 feet, 4" reel.....\$3.05
200-12 1200 feet, 5" reel.....\$5.45
200-17 1700 feet, 5¾" reel.....\$7.05

200-24 2400 feet, 7" reel.....\$9.50
Various models available on hubs instead of reels.

FERRODYNAMICS

5" Reels

15D5 600 feet 1.5-mil acetate.....\$1.35
10D5 900 feet 1-mil acetate.....\$1.65
10D5M 900 feet 1-mil Mylar.....\$2.00
5D5M 1200 feet .5-mil Mylar.....\$2.80
15D5M 600 feet 1.5-mil Mylar.....\$2.80

7" Reels

15D7 1200 feet 1.5-mil acetate.....\$2.10
10D7 1800 feet 1-mil acetate.....\$2.85
10D7M 1800 feet 1-mil Mylar.....\$3.50
5D7M 2400 feet .5-mil Mylar.....\$4.60
5D7MT 2400 feet .5-mil tensitized Mylar.....\$6.15
15D7M 1200 feet 1.5-mil Mylar.....\$3.75

10½" Reels

15D10 2400 feet 1.5-mil acetate.....\$7.35
10D10 3600 feet 1-mil acetate.....\$8.20
10D10M 3600 feet 1-mil Mylar.....\$10.90

RCA

1-mil Long-Play Plastic Base

1A-9 900 feet, 5" reel.....\$ 3.50
10A-18 1800 feet, 7" reel.....\$ 5.50
272C1 3600 feet, 10½" NAB plastic reel.....\$12.85

1.5-mil Professional-Grade Plastic Base

15A-1.5 150 feet, 3" reel.....\$ 0.70
15A-3 300 feet, 4" reel.....\$ 1.35
15A-6 600 feet, 5" reel.....\$ 2.25
15A-12 1200 feet, 7" reel.....\$ 3.50
267C1 2400 feet, 10½" reel.....\$10.90

Mylar Tensitized Extra-Long Play

5TM-3 300 feet, 3" reel.....\$ 1.60
5TM-6 600 feet, 4" reel.....\$ 3.05
5TM-12 1200 feet, 5" reel.....\$ 4.75
5TM-24 2400 feet, 7" reel.....\$ 8.75
275C1 4800 feet, 10½" reel.....\$20.50

Mylar .5-mil Extra-Long Play

5M-12 1200 feet, 5" reel.....\$ 4.55
5M-24 2400 feet, 7" reel.....\$ 7.85

Mylar 1-mil Long-Play

10M-2.25 225 feet, 3" reel.....\$ 1.00
10M-9 900 feet, 5" reel.....\$ 3.60
10M-18 1800 feet, 7" reel.....\$ 6.20
279C1 3600 feet, 10½" reel.....\$14.40

Mylar 1.5-mil Professional-Grade

15M-6 600 feet, 5" reel.....\$ 2.65
15M-12 1200 feet, 7" reel.....\$ 4.25
285C1 2400 feet, 10½" reel.....\$11.20

"Vibrant Series" Full-Frequency Recordings Acetate (plastic) Base

701C1 600 feet, 1.5-mil, 5" reel.....\$1.75
702C1 1200 feet, 1.5-mil, 7" reel.....\$2.95
703C1 900 feet, 1-mil, 5" reel.....\$2.50
704C1 1800 feet, 1-mil, 7" reel.....\$4.25

Mylar (Polyester) Base

707C1 900 feet, 1-mil, 5" reel.....\$2.85
708C1 1800 feet, 1-mil, 7" reel.....\$4.95
709C1 1200 feet, tensitized, 5" reel.....\$4.50
710C1 2400 feet, tensitized, 7" reel.....\$7.95

SARKES TARZIAN

"Standard Play" 1.5-mil Acetate Tape

1131-01 150 feet, 3" reel.....\$.65
1131-06 600 feet, 5" reel.....\$ 2.10
1131-12 1200 feet, 7" reel.....\$ 3.50
1131-24R 2400 foot reel.....\$10.25
1131-24H 2400 foot hub.....\$ 7.35

"Long Play" 1-mil Acetate Tape

1121-02 225 feet, 3" reel.....\$.90
1121-09 900 feet, 5" reel.....\$ 3.15
1121-18 1800 feet, 7" reel.....\$ 5.15

6

Raw Tape

1121-36R 3600 foot reel.....	\$12.00
1121-36H 3600 foot hub.....	\$ 9.35

"Long Play" 1-mil Mylar Tape

1321-02 225 feet, 3" reel.....	\$ 1.00
1321-09 900 feet, 5" reel.....	\$ 3.60
1321-18 1800 feet, 7" reel.....	\$ 6.20
1321-36R 3600 foot reel.....	\$14.70
1321-36H 3600 foot hub.....	\$12.60

"SCOTCH" TAPES

No. 111 Recording Tape

Cellulose acetate recording tape; excellent frequency response, low modulation noise and high sensitivity; patented "dry lubrication" process; 1½ mil acetate backing.

111-1.5.....150 ft. Plastic Reel....	\$.70
111-3.....300 ft. Plastic Reel....	\$ 1.35
111-6.....600 ft. Plastic Reel....	\$ 2.25
111-12.....1200 ft. Plastic Reel....	\$ 3.50
111-25H.....2500 ft. (NAB hub)....	\$ 7.35
111-25R.....2500 ft. (NAB 10½" reel)	\$10.15

No. 102 Recording Tape

For applications where extreme toughness and improved resistance to the effects of excessive temperature and humidity change are required; high-strength polyester film backing; magnetic characteristics identical to standard No. 111

102-6.....600 ft. Plastic Reel—	
5" size.....	\$ 2.65
102-12.....1200 ft. Plastic Reel—	
7" size.....	\$ 4.25
102-25H.....2500 ft. (NAB hub)....	\$ 8.55
102-25R.....2500 ft. (NAB 10½" reel)	\$11.35

No. 120 "High Output" Recording Tape

Signal-to-noise ratio of from 6 to 12 db greater than conventional recording tapes; designed for critical recording applications where greater signal strength is essential; cellulose acetate backing.

120-3.....300 ft. Plastic Reel....	\$ 1.35
120-6.....600 ft. Plastic Reel....	\$ 2.25
120-12.....1200 ft. Plastic Reel....	\$ 3.50
120-25H.....2500 ft. (NAB hub)....	\$ 7.35
120-25R.....2500 ft. (NAB 10½" reel)	\$10.15

No. 131 "Low Print"

Acetate backing; reduces print-through to a point below noise level on most professional machines.

131-12.....1200 ft.....	\$ 4.40
131-25H.....2500 ft. (hub).....	\$ 8.65
131-25R.....2500 ft. (10½").....	\$11.45

No. 138 "Low Print"

Same recording characteristics as No. 131 but has tough polyester backing.

138-12.....1200 ft.....	\$ 5.10
138-25H.....2500 ft. (hub).....	\$11.10
138-25R.....2500 ft. (10½").....	\$13.90

No. 200 "Double Length"

Tensitized polyester backing.

200-3.....300 ft.....	\$ 1.60
200-24.....2400 ft.....	\$ 9.50
210-48RPS.....4800 ft.....	\$22.00

No. 41 Splicing Tape

Special white thermosetting adhesive guaranteed not to ooze.

41 ½S.....½" x 150".....	\$ 0.39
41 ¾S.....¾" x 66".....	\$ 0.57
41 ½L.....½" x 66".....	\$ 0.76
41 ¾L.....¾" x 66".....	\$ 1.01

No. 24 Leader and Timing Tape

For tape lead-ins, cueing, etc.

24-1.....¼" x 100'.....	\$ 0.90
-------------------------	---------

No. 140 "Stereo Quality, Extra Play"

50% more playing time; similar to No. 141; 1 mil acetate backing.

140-9.....900 ft.....	\$ 2.50
140-18.....1800 ft.....	\$ 4.25

No. 141 "Stereo Quality, Acetate"

High potency oxide particles assure max. frequency response; 1½ mil acetate backing.

141-6.....600 ft.....	\$ 1.75
141-12.....1200 ft.....	\$ 2.95

No. 142 "Stereo Quality, Extra Play"

Similar to No. 141 with 1 mil polyester base.

142-9.....900 ft.....	\$ 2.85
142-18.....1800 ft.....	\$ 4.95

No. 144 "Double Length"

Stereo quality, double strength; .65-mil tensitized polyester backing.

144-12.....1200 ft.....	\$ 4.50
144-24.....2400 ft.....	\$ 7.95

No. 190 Recording Tape

High-potency oxide coating only half as thick as standard coatings (but with equivalent magnetic properties) coupled with a thinner backing of tough cellulose acetate; approximately 30% thinner than conventional acetate tape, nearly 80% as strong; 50% increase in recording and playback time with no noticeable print-through effect; magnetic properties of No. 190 tape are virtually identical to those of "Scotch" brand No. 111 magnetic tape.

190-9.....900 ft. Plastic Reel....	\$ 3.50
190-18.....1800 ft. Plastic Reel....	\$ 5.50
190-36H.....3600 ft. (NAB hub)....	\$ 9.25
190-36R.....3600 ft. (NAB 10½" reel)	\$12.05

No. 150 "Extra-Play" Recording Tape

Magnetic recording tape offering 50% more recording time and featuring one-mil polyester backing for improved resistance to changes in temperature and humidity and also for greater strength.

150-2.25.....225 ft.....	\$ 1.00
150-9.....900 ft. Plastic Reel....	\$ 3.60
150-18.....1800 ft. Plastic Reel....	\$ 6.20
150-36H.....3600 ft. (NAB hub)....	\$10.70
150-36R.....3600 ft. (NAB 10½" reel)	\$13.50

SOUNDCRAFT

"Standard" Tape

1.5-mil acetate base; professional quality; economy priced.

S-6 600 ft., 5" reel.....	\$2.10
S-9 900 ft., 5¼" reel.....	\$2.73
S-12 1200 ft., 7" reel.....	\$4.50
S-25RF 2500 ft., 10½" reel.....	\$8.50
S-25H 2500 ft., hub.....	\$7.35

"Standard-50" Tape

Long-play version of "Standard" tape on 1-mil acetate base.

S5-9 900 ft., 5" reel.....	\$3.29
S5-12 1200 ft., 5¼" reel.....	\$4.23
S5-18 1800 ft., 7" reel.....	\$5.17
S5-36H 3600 ft., hub.....	\$9.38
S5-36RF3 3600 ft., 10½" reel.....	\$12.04
S5-72RM 7200 ft., 14" reel.....	\$24.40
S5-72H 7200 ft., hub.....	\$18.75

"Professional" Tape

"Micropolished" for highest performance; uniformity at 1000 cps ± ½ db from reel to reel; at 10,000 cps within 1 db of response at 1000 cps; on 1.5-mil acetate base.

P-25H 2500 ft., hub.....	\$8.00
P-25RF 2500 ft., 10½" reel.....	\$10.25
P-25RF3 2500 ft., 10½" reel.....	\$10.25
P-25RM 2500 ft., 10½" reel.....	\$10.25

"Lifetime" Tape

For use where utmost strength and quality are necessary; 1.5-mil Mylar base; "Micro-

polished" oxide coating for perfect high-frequency response.

L-1 150 ft., 3" reel.....	\$0.75
L-6 600 ft., 5" reel.....	\$2.65
L-12 1200 ft., 7" reel.....	\$4.25
L-24H 2400 ft., hub.....	\$8.30
L-24FR 2400 ft., 10½" reel.....	\$10.40
L-24RF3 2400 ft., 10½" reel.....	\$10.40
L-24RM 2400 ft., 10½" reel.....	\$10.40
L-48H 4800 ft., hub.....	\$16.60
L-48RM 4800 ft., 14" reel.....	\$24.50

"Plus-50" Tape

Made on 1-mil Mylar for 50% more playing time per reel; combines long play with great tape strength.

PL-2 225 ft., 3" reel.....	\$0.95
PL-9 900 ft., 5" reel.....	\$3.40
PL-18 1800 ft., 7" reel.....	\$5.80
PL-36H 3600 ft., hub.....	\$11.25
PL-36RF 3600 ft., 10½" reel.....	\$13.75
PL-36RF3 3600 ft., 10½" reel.....	\$13.75
PL-72H 7200 ft., hub.....	\$22.50
PL-72RM 7200 ft., 14" reel.....	\$28.10

"Plus-100" Tape

Provides 100% more recording time per tape; base is .5-mil Mylar; impervious to temperature and humidity changes.

XP-12 1200 ft., 5" reel.....	\$3.50
XP-18 1800 ft., 5¼" reel.....	\$5.00
XP-24 2400 ft., 7" reel.....	\$6.50
XP-48RM 4800 ft., 10½" reel.....	\$16.80
XP-48RF 4800 ft., 10½" reel.....	\$16.80
XP-48RF3 4800 ft., 10½" reel.....	\$16.80
XP-48H 4800 ft., hub.....	\$15.50

"Plus-100-X" Tape

Similar to "Plus-X" but with twice the tensile strength; base is .5-mil Mylar.

XP-3X 300 ft., 3" reel.....	\$1.60
XP-12X 1200 ft., 5" reel.....	\$5.45
XP-18X 1800 ft., 5¼" reel.....	\$7.48
XP-24X 2400 ft., 7" reel.....	\$9.50
XP-48XRM 4800 ft., 10½" reel.....	\$22.00
XP-48XRF 4800 ft., 10½" reel.....	\$22.00
XP-48XRF3 4800 ft., 10½" reel.....	\$22.00

Cartridge Tape

Designed for RCA tape cartridge machines; includes cartridge.

CM-6 600 ft.....	\$4.50
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TRITON TAPE

"Crimson Seal" Standard-Play

(1.5-mil acetate for home & professional use)

150 feet, 3" reel.....	\$ 0.75
600 feet, 5" reel.....	\$ 2.50
1200 feet, 7" reel.....	\$ 3.75
2400 feet, 10½" reel.....	\$11.35

"Blue Seal" Long-Play

(1-mil acetate, 50% more recording per reel)

225 feet, 3" reel.....	\$ 1.00
900 feet, 5" reel.....	\$ 3.75
1800 feet, 7" reel.....	\$ 5.80
3600 feet, 10½" reel.....	\$13.50

"Green Seal" Perma-Play

(1.5-mil Mylar, lifetime permanence)

150 feet, 3" reel.....	\$ 1.37
600 feet, 5" reel.....	\$ 4.35
1200 feet, 7" reel.....	\$ 6.95
2400 feet, 10½" reel.....	\$15.25

"Orange Seal" Long-Play

(1-mil Mylar, 50% more recording per reel)

225 feet, 3" reel.....	\$ 1.06
900 feet, 5" reel.....	\$ 3.85
1800 feet, 7" reel.....	\$ 6.50
3600 feet, 10½" reel.....	\$15.20

"Purple Seal" Super-Play Tensitized

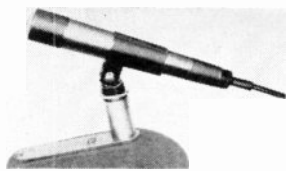
(.5-mil Mylar, twice playing time per reel)

300 feet, 3" reel.....	\$ 1.75
1200 feet, 5" reel.....	\$ 5.75
2400 feet, 7" reel.....	\$ 9.85
4800 feet, 10½" reel.....	\$23.00

6 Microphones

ALTEC LANSING

Model 681A Microphone



General-purpose, moving-coil dynamic design; response 50-18,000 cps; output impedance 150/250 or 20,000 ohms (specify impedance); output -55 dbm/10 dynes/cm.²; omnidirectional; 1 1/8" dia. at top, 7 3/8" long; dark green baked enamel and brushed chrome; has 15-foot cord...\$42.00 Desk stand extra.....\$12.00 "On-off" switch kit.....\$9.00

Model 682A Microphone

Similar in design and style to Model 681A; response 45-20,000 cps; output impedance 30/50, 150/250, and 20,000 ohms (selectable by cable plug); two-tone baked enamel finish, black and dark green, dark brown and platinum, or brushed chrome; has sintered bronze filter for protection against moisture and blasting.....\$54.00

Model 683A Microphone

Similar in style to Model 681A; cardioid dynamic design; response 45-15,000 cps; 30/50, 150/250, and 20,000 ohms (selectable by cable plug); output -54 dbm/10 dynes/cm.²; front-to-back discrimination 20 db; same finishes available as for Model 682A; has sintered bronze filter for protection against moisture and blasting.....\$72.00

AMERICAN CONCERTONE

Model M-21 Microphone

Omni-directional "Slimar" dynamic microphone; wire mesh blast filter; 90-degree swivel; 150-ohm or high-impedance output -58 db; "on-off" switch.
.....\$50.00

AMERICAN MICROPHONE

Model D4L Microphone

Dynamic type; frequency response 50 to 8000 cps; output level -56 db at 50 ohms impedance; omni-directional over-all height 4"; 12 1/2' cable; low-impedance, rugged type\$16.80 D4LS with slide switch.....\$18.60 D4L-WGB with 13" gooseneck, desk flange, adapter with cable slot.....\$19.71

Model D4T Microphone

Dynamic type; frequency response 50 to 8000 cps; output level -52 db at 40,000 ohms; omni-directional; height 4"; 12 1/2' single-conductor cable; high-impedance, rugged type.....\$18.60 D4TS with slide switch.....\$18.60 D4T-WGB with 13" gooseneck, desk flange, adapter with cable slot.....\$21.51

Model D-10 Microphone

Dynamic type; omni-directional general purpose; plastic diaphragm; high or low impedance; frequency response 50-8000 cps; output level is -57 db.....\$17.70

Model D11 Microphone

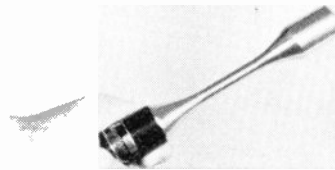
Omnidirectional, dynamic hand-held general-purpose type; 70-9000 cps; push-to-talk switch; 2 3/8" dia. x 2" x 5"; includes 15' three-conductor shielded cable. D11 high impedance\$21.60

D11-L 50 ohms\$21.60

Model D-12 Microphone

Dynamic type; extremely compact 3-25/32" long; high or low impedance; frequency response is 70-12,000 cps; output level -55 db at high impedance; includes lavalier and accessories.....\$35.70 D12-WGA 9" gooseneck, desk flange & 4' cable.....\$37.80 D12-WGB with 13" gooseneck, desk flange & 4' cable.....\$38.10

Model D22 Microphone



Dynamic type; frequency response 50 to 12,000 cps; omni-directional; output level -55 db at high impedance; impedance may be adjusted for either 50 ohms or 40,000 ohms; over-all height 8 1/4"; 25' single conductor cable.....\$59.70

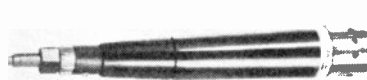
Model D33 Microphone

Dynamic type; frequency response 40 to 15,000 cps; output level -60 db at 50 ohms impedance; impedance may be adjusted for either 50 ohms or 250 ohms; 25' 2-conductor cable; over-all height 8 1/4"\$78.00

Model D44 Microphone

Dynamic type; frequency response 50 to 15,000 cps; output level -60 db at 50 ohms impedance; omni-directional; over-all height 6 3/4"\$141.00 With wind screen.....\$163.50

Model D55 Microphone



All-purpose unidirectional dynamic design; 70-15,000 cps; impedance may be changed to 50, 150, or 40,000 ohms; 7 1/2" long x 1 1/8" dia.....\$53.70

Model D76 Microphone

Cardioid dynamic design; professional version of Model D55; 40-18,000 cps; low impedance only; each model supplied with own response curve.....\$117.00

Model R331 Microphone



Ribbon type; frequency response 40 to 10,000 cps; bi-directional; output level -60 db at high impedance; impedances are 50, 250, and 40,000 ohms; height 6 1/8"; 25' single-conductor cable.....\$84.00

206 Series Microphones

Crystal or ceramic all-purpose designs with clip-on stand and neck cord; high impedance.
X206 crystal with 6' cable.....\$4.77
B206 ceramic\$4.77
X206WG crystal with 6' cable, 3/8"-27 thread male adapter.....\$6.30
B206WG ceramic.....\$6.30
X206WGA crystal, same as X206WG but with 9" gooseneck & desk flange, 4' cable

.....\$8.40
B206WGA ceramic.....\$8.40
X206WGB crystal, same as X206WGA but with 13" gooseneck.....\$8.70
B206WGB ceramic.....\$8.70

213 Series Microphones



Crystal or ceramic hand-held microphones; response 50-8000 cps; high impedance; 5-foot coiled cord.

Model X213C Crystal.....\$ 7.95
Model B213C Ceramic.....\$ 8.25
Model X213BC Crystal with d.p.s.t. push-to-talk switch.....\$9.75
Model B213BC Ceramic with d.p.s.t. push-to-talk switch.....\$10.05

ASTATIC

Model 988 "Vogue" Dynamic Microphone



Omnidirectional design with "pop-proof" and "blast-proof" diaphragm; insensitive to moisture and temperature; convertible from hand to stand to lavalier use; detachable cable connector; response 40-20,000 cps; impedance selector for 50-150-250 ohms; output -57 db at 1 mw./10 dynes/cm.²; furnished complete with 20-foot cable, stand adapter, lavalier assembly; 9 1/2" h. x 1 1/2" dia.....\$150.00

Model 888 "Tempo" Dynamic Microphone



Similar to Model 988 except response 50-15,000 cps; impedance selector for 50-200-high-impedance; output -56 db...\$110.00

Model 788 "Metro" Dynamic Microphone



Similar to Model 988 except response 60-13,000 cps; impedance 150 or high-impedance; output -55 db; has built-in "on-off" switch\$79.50

Model 77 Series Microphones



Dynamic cardioid design; front-to-back pickup differential 18 db; rugged and insensitive to temperature and moisture; blast-proof diaphragm; essentially flat from 30-15,000 cps; impedance selector switch:

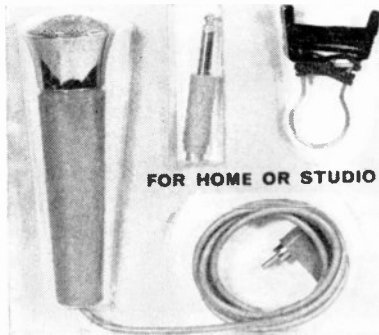
6 Microphones

high-impedance position (40,000 ohms), open circuit voltage -52 db @ 1 volt/dync/cm.²; low-impedance position (30-50 ohms) power level into 50 ohms -52 db @ 1 mw./10 dynes/cm.²; medium-impedance position (150-250 ohms), -53 db.

Model 77\$82.50
 Model 77L\$72.50
 Model G77 Complete with grip-to-talk desk stand, 8-foot cable.....\$97.45
 Model 77 (Gold finish).....\$92.50
 Model 77L (Gold finish).....\$82.50
 All "L" models furnished less "on-off" switch, cable, and adapter; intended for use with Model G grip-to-talk desk stand.

AUDIOTEX

Model 30-900 Microphone



FOR HOME OR STUDIO

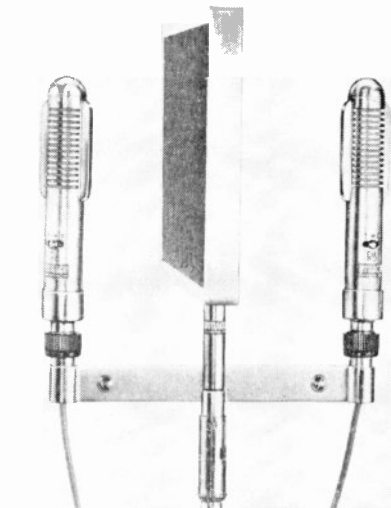
Designed for tape-recorder applications; comes complete with clip-on stand, 6-foot cable, RCA-type phono pin plug, and adapter for standard plug installations; response flat from 40-12,000 cps; high output\$16.50

DYNACO

Models 50 & 53 Microphones

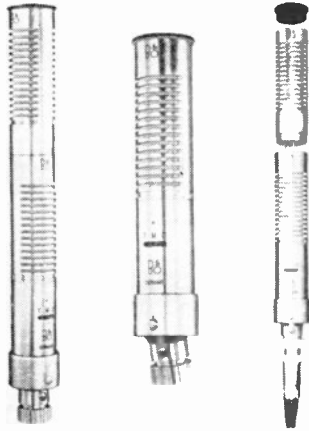
Both models are ribbon; bidirectional; B & O manufactured; response ± 2.5 db 30-13,000 cps; output 56 db below 1 volt/ μ bar at high impedance or with matching transformer; 7 $\frac{3}{4}$ "x1 $\frac{1}{16}$ "; switch provides music, close-talk, and off positions.

Model 50 (50 ohms balanced only).....\$49.95
 Model 53 (with matching transformer for 50 and 250 ohms balanced, 40,000 ohms unbalanced)\$59.95
 Model SS-1 Stereo spacer & dual mount for 50 or 53 microphones\$14.95
 Model MS-1 Desk stand\$ 3.30



MT-1 matching transformer (50-50,000 ohms)\$14.95

Model 200 Microphone



Dual-ribbon mike designed by B & O for stereo operation; bidirectional with figure-8 pattern; top section can be rotated through 100° with respect to lower section so optimum 90° angle or any point in between may be chosen; lower section includes phasing switch and another for muting, normal operation and a close-talk position; response 30-13,000 cps ± 2 db; in "talk" position response is rolled off 3 db/octave below 1 kc.; impedance 150/200 ohms; sensitivity Gm = -156 db; 10"x1 $\frac{1}{16}$ "\$149.95
 Model 100 Mono version\$ 89.95
 MT-2 Matching transformer (dual-200 ohm to high-Z)\$ 24.95

ELECTRO-VOICE

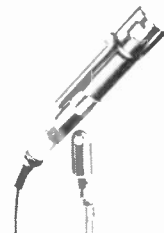
Model 623 Slim Microphone



Dynamic; omnidirectional; frequency response 60 to 12,000 cps; output=56 db; high and low impedance; cast case; hinge head; on-off switch; built-in MC-4 connector $\frac{3}{8}$ "-27 thread; satin chrome; 18 foot cable; size 7 $\frac{1}{2}$ "x1 $\frac{1}{4}$ "; weight 15 oz.\$57.00

Model 666 Super Cardioid Microphone

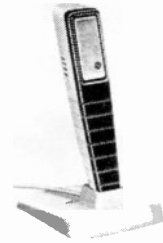
Dynamic; unidirectional; for boom, stand, or hand use; frequency response 30 to 16,000 cps; output=55 db; impedance 50 ohms, taps for 150 and 250 ohms; variable directivity increases working distance yet



permits closeup without distortion; cast aluminum case; gray; 20 foot cable; built-in Cannon UA-3 connector; includes clamp-on stand mount with $\frac{3}{8}$ "-27 thread and $\frac{1}{2}$ " pipe thread adapter.....\$255.00

Model 729 Ceramic Microphone

Cardioid design; wide-angle front pick-up; response 6-8000 cps; high-impedance; on-



off switch; output -60 db; 7 $\frac{3}{4}$ " L x 1 $\frac{1}{2}$ " w. x 1 $\frac{1}{8}$ " d.; single-conductor shielded 8 $\frac{1}{2}$ ft. cable; also available with three-conductor (one shielded) cable.....\$24.50

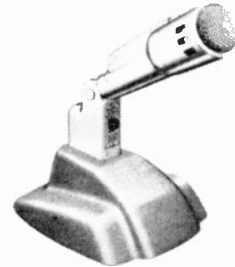
Model 654A Slim-Trim Broadcast Microphone



Dynamic omnidirectional; frequency response 50 to 16,000 cps; output -55 db; impedance switch for 50 or 250 ohms; gray; 18 foot cable; size 10"x1"; net weight 15 $\frac{1}{2}$ oz.\$100.00

Model 664 Cardioid Microphone

Dynamic; unidirectional; frequency response 40 to 15,000 cps; output -55 db; 150 ohm and high impedance; diaphragm shielded from dust; filter to minimize wind



blast; on-off switch; pressure cast case; assembly includes hinge; 18 foot cable; size 7 $\frac{1}{4}$ "x1 $\frac{3}{8}$ "; weight 26 oz. Chrome finish\$85.00

Model 665 Cardioid Microphone

Lower cost professional microphone incor-



porating same design features as Model 666\$150.00

Model 655C Slim-Trim TV Dynamic



Response 40-20,000 cps; output—55 db; can be used on stand, in hand, or on boom; easily concealed in studio props; pop-proof grille; impedances 50, 150, 250 ohms; impedance easily changed; clamp-on stand mount includes $\frac{3}{8}$ "-27 thread and $\frac{1}{2}$ " pipe thread adapter; 10½" long, 1" dia.; 20-foot cable\$200.00

Model 636 "Slimair" Dynamic



For p.a., recording, and general use; response 60-13,000 cps; output —58 db; pop-proof head; wide pickup range; on-off switch; satin chrome finish; tiltable head; Hi-Z or Lo-Z by changing one wire in connector; 18-foot cable; 10¼" long including stud; 1½" max. dia.....\$72.50
Model 636G Gold finish.....\$77.50

Model 633 Dynamic Mike



Dynamic type; high output level; wide range response; for p.a., home recording, communications; integral on-off switch; response 70-10,000 cps; output level —57 db; omnidirectional; 6-foot cable; Hi-Z or balanced 150 ohms (matches standard low impedances)\$35.00

Model 634 Dynamic Mike

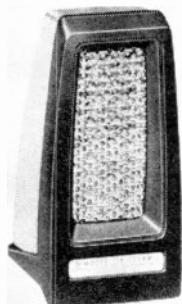
Identical to Model 633 except furnished without fixed-tilt stand coupler.....\$31.50

Model 715 "Century" Ceramic



Use in any position (in hand, on table, on stand, or overhead); ceramic element; 60-7000 cps; output —55 db; Hi-Z; 5-foot cable; nondirectional; rugged and lightweight; 3" x 2¼" x 1".....\$13.00
Model 715S With switch.....\$15.00
Model 715SR With relay control switch\$17.50

Model 718 Ceramic Mike



For home recording; 5-foot cable with molded-on phono plug; adapter to match all late model home recorders; high-level (—55 db) ceramic element resists damage from temperature, humidity extremes; re-

sponse 60-6000 cps; 3¼" x 1¼" x 1¼".....\$12.00

Model 727 Slim Ceramic

Similar in appearance to Model 729; withstands extremes of temperature and humidity; response 60-8000 cps; output —55 db; high-impedance only; 5-foot cable; available with or without on-off switch; 7¼" x 1¾" x 1½"; supplied with desk stand and floor stand coupler.....\$18.00
Model 727SR With relay control switch\$20.00

Model 652 "Thin-Trim" Dynamic



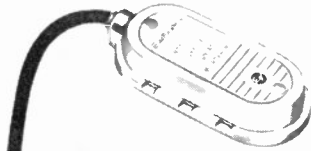
Almost invisible unit mounted on end of semi-rigid tube which brings moving-coil element closer to user for full-range, pop-free response; breath and wind filter an integral part; two clear plastic baffles to give either 8 db or 5 db boost in the brilliance range of 5000 cps; without baffles unit gives smooth response from 80-8000 cps; mounted on ¾" steel tube; output level —60 db; matches all low impedances; furnished with 3-conductor shielded 20-foot cable; 25" long.....\$120.00
Model 652A Same as Model 652 except 15" long.....\$120.00

Model 712 Ceramic Mike



Low-cost ceramic unit; meets need for p.a., home recording, paging, general use; handheld; moisture-sealed ceramic; response 70-7000 cps; high output —55 db; Hi-Z; 3" x 2¼" x 1½"; 5-foot cable.....\$7.50

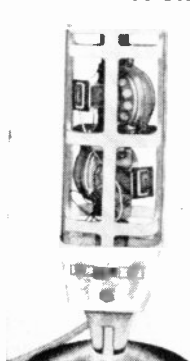
Model 805 Contact Mike



For guitar, banjo, other stringed instruments; Hi-Z; sealed crystal; chrome finish; 15-foot cable.....\$20.00

LAFAYETTE

Model PA-263 Stereo Dynamic Mike



Two separate dynamic mike elements within single housing; sw. for stereo or mono operation; omnidirectional pattern 90 degrees apart for full pickup within 360 degree arc; response 50-15,000 cps; essentially flat 80-10,000 cps; impedance 50,000 ohms\$17.95

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3 Speeds

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± 2 db 30 to 28,000 CPS	15	.06%	60 db
± 2 db 30 to 16,000 CPS	7½	.09%	60 db
± 3 db 30 to 8,000 CPS	3¾	.18%	55 db

Write Dept. D-63 or phone JA 3-4919 for complete information. Some dealer franchises available.

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6 Microphones

RESLO

"Avon" Microphone

Ribbon design with super-cardioid characteristics; front-to-back discrimination 15 db over high- and mid-frequencies; normal bi-directional pattern at low frequencies; response 20-15,000 cps; includes flexible arm.

Model CRL 30 & 50 ohms impedance\$132.50

Model CRM 250 & 600 ohms impedance\$142.50

Model CR11 30, 50, or high impedance\$142.50

Additional cable for CR11 to obtain high impedance\$12.50

"Celeste" Microphone

Ribbon design with bi-directional characteristics (figure-8) at 1 kc.; front 2 db more sensitive, 10 kc. 20 db; available in three models; prices \$116.50, \$125.00, \$125.00 with impedance setup and cables same as in "Avon."

"Symphony" Microphone

Ribbon design; response 18-20,000 cps ± 1.5 db; output level -58 db; features a muting switch; bi-directional; pickup pattern may be changed by use of internal pads (supplied); available in three models; prices \$100.00, \$107.50, \$107.50, depending on impedance.

SHURE

Model 55S "Unidyne" Microphone



Dynamic type; uni-directional; frequency response 50 to 15,000 cps; output: -54 db at 35-50 ohms, -55 at 150-250 ohms; -57 at 35,000 ohms; 3-position impedance switch; Alnico V magnet; die-cast zinc case, satin chrome finish; Amphenol MC3M connector equivalent; self-adjust swivel; $\frac{3}{8}$ "-27 thread; 20 foot 2-conductor shielded cable; size 7 $\frac{1}{8}$ "x2 $\frac{1}{4}$ "x3 $\frac{1}{16}$ "; wt. 3 $\frac{1}{2}$ lbs., shpg. 4 $\frac{1}{2}$ lbs.\$83.00

Model 315 Gradient Microphone



Ribbon type; bi-directional; frequency response 50 to 12,000 cps; output -59.5 db at 30-50 ohms; -60 db at 150-250 ohms, -57 db at high impedance; 3-position impedance switch; Alnico V magnet; die-cast zinc case; satin chrome finish; self-adjust swivel; $\frac{3}{8}$ "-27 thread; Amphenol MC3M connector equivalent; 20

foot 2-conductor shielded cable; size 6" x 1 $\frac{1}{2}$ " x 1 $\frac{1}{8}$ "; wt. 1 lb., shpg., 3 $\frac{1}{4}$ lbs.\$89.50

Model 330 "Uni-Ron" Microphone

Ribbon type; uni-directional; frequency output: -60 db at 50 ohms, -59 db at



150 and 250 ohms; 3-position impedance switch; Alnico V magnet; die-cast zinc case; satin chrome finish; self-adjust swivel; $\frac{3}{8}$ "-27 thread; live rubber shock mount; Cannon XL-3-11 connector; 20 foot 2-conductor shielded cable; size 3 $\frac{3}{4}$ " x 1 $\frac{1}{4}$ " x 1 $\frac{1}{8}$ "; wt. 1 $\frac{1}{2}$ lbs., shpg., 4 lbs.\$120.00

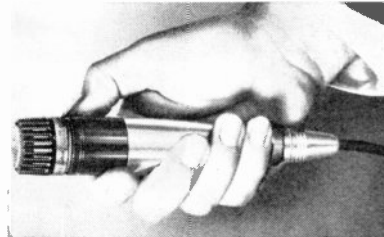
Model 430 "Commando" Microphone



Controlled magnetic type; omni-directional; frequency response 60 to 10,000 cps; output: Lo-Z, -54 db; Hi-Z, -55 db; changeable pin jacks give choice of 2 impedances: 150-250 ohms or high impedance; polystyrene and die-cast zinc case; satin-chrome and gray finish; A25 type swivel adapter; $\frac{3}{8}$ "-27 thread; Amphenol MC2M connector; 15 foot 2-conductor shielded cable; press-to-talk switch, locking plate furnished; size 6 $\frac{1}{2}$ " long; top diameter 1 $\frac{3}{4}$ "; handle $\frac{3}{4}$ "\$38.50

Model 545 "Unidyne III" Microphone

Dynamic type; cardioid; frequency response 15-15,000 cps; output -57 db



low level, -55 db high level; dual impedance; 18' three-conductor shielded cable; 6" x 2"\$85.00

Model 710 Crystal Microphone

Hand-held for voice frequencies; response 60-9,000 cps; output 50 db; high impedance; semi-directional.

Model 710A\$12.00

Model 710S (with switch)\$14.00

Model 300 Bi-directional Microphone

Multi-impedance ribbon design with special anti-breath filter; response 40-15,000 cps $\pm 2\frac{1}{2}$ db; output 30-50 ohms -59 db, 150-250 ohms -60 db; high impedance -57 db; equipped with multi-impedance switch for 30-50 ohms, 150-250



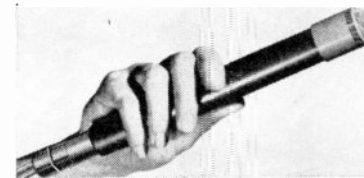
ohms, and 35,000 ohms; equally sensitive front and rear with sides down 15 to 20 db; has shock mounting; supplied with 20-foot cable and switch to adjust frequency characteristic; 6" h. x 1 $\frac{1}{16}$ " x 2 $\frac{1}{16}$ " d.\$150.00

Model 333 Uni-directional Microphone



Ribbon design; response 30-15,000 cps $\pm 2\frac{1}{2}$ db; output 50 ohm -60 db, 150 ohm -59 db, 250 ohm -59 db; response at rear down 12-20 db; multi-impedance switch and adjustment for frequency characteristics; shock mounted; supplied with 20-foot cable; 7 $\frac{3}{32}$ " h. x 1 $\frac{1}{8}$ " w. x 1 $\frac{1}{8}$ " d.\$250.00

Model 525 Omni-directional Microphone



Dynamic type; rugged; for general use indoors or outdoors; response 40-15,000 cps $\pm 2\frac{1}{2}$ db; output -61 db; has multi-impedance switch for 30-50, 150, 250 ohms; polar pattern is omni-directional; supplied with 20-foot cable and lavalier assembly; 8 $\frac{3}{8}$ " h. x 1" dia.\$200.00

Model 540S "Sonodyne II" Microphone



Dynamic type; uni-directional; response 60-10,000 cps (provisions for altering response to increase voice intelligibility); output: -57 db at 50-250 ohms, -52.5 db at high impedance; adjusts for high or low impedance; modern die-cast zinc and Armo-Dur case; satin chrome and black finish; self-adjusting "lifetime" swivel; 15-foot, 2-conductor shielded cable; 6-3/32" x 1-21/32" x 2-9/16"\$49.95

Model 245 "Uniplex" Microphone

Ceramic type; uni-directional; response 50-7000 cps; output -59 db; high impedance; die-cast zinc case; includes swivel adapter; 15-foot single-conductor shielded cable; 4 3/4" x 1 1/2"; wt. 3/8 lb.\$35.00
Model 245S (with "on-off" switch)...\$37.00

Model 575S "Versadyne" Microphone



Dynamic type; omni-directional; response 40-15,000 cps; output: high impedance -59 db, low impedance -62 db; choice of high or low impedance versions; black Armo-Dur body with satin anodized cap and stainless steel grille; furnished with special stand adapter; on-off switch; attached 7-foot single-conductor shielded cable; 4 3/4" x 1 1/4".
Model 575S (high impedance).....\$24.00
Model 575SB (low impedance).....\$21.00
Model 275S "Versaplex" (ceramic version)\$15.00

SONOTONE

Model CM-10A "Ceramike"



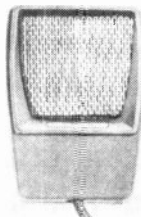
Ceramic microphone; frequency response 50 to over 11,000 cps ± 2 db; sensitivity 56 db below 1.0 volt per microbar; omni-directional; high impedance; includes 7 feet of shielded cable with phone plug; does not include stand; 5 1/4" x 1 9/16" diameter at grille.....\$17.50
Model CM-11A: for use where greater sensitivity is desired. Specification same as for CM-10A except: frequency response, 80 to 9000 cps ± 2 db. Sensitivity 53 db below 1.0 volt per microbar.....\$17.50
Model CMS-10 mike stand; table and stored use\$5.00

Model CMT-10A or CMT-11A Matched Twin Microphones

For stereo tape use; ceramic type; acoustically matched to 2 db; Model CMT-10A has frequency response 50 to over 11,000 cps; Model CMT-11A has frequency response 80-9000 cps; Model CMT-10A output level -56 db.....\$35.50 pair

Model CM-32 Microphone

Ceramic type; encased in lightweight, shatterproof neutral gray/tan plastic case; re-



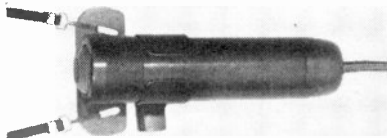
sponse 80-9000 cps; sensitivity -49 db ± 2 db; has 7-foot, 2-conductor cable with plug\$12.50

Model CM-12A Microphone

Ceramic microphone; low impedance output includes transformer; 150 ohms impedance; -63.5 db output; frequency response to 8000 cps; push-to-talk button; chrome-finished table stand with swivel mount furnished at extra cost.....\$29.50
Table stand\$ 5.00

TURNER

Model 58 & 58A Lavalier Microphone



Dynamic type with essentially non-directional pickup pattern; designed for use where freedom of movement is required; weighs 3 1/2 oz., 4" long.
Model 58 High or 150 ohms, selected at end of cable; output level -60 db with high impedance; response 60-13,000 cps for high impedance & 60-18,000 cps for low impedance; 3-conductor, 25' shielded cable\$57.00
Model 58A 50 or 200 ohm impedance selected at end of cable; response 60-18,000 cps; 3-conductor, 25' shielded cable\$57.00

Model 141-11 Microphone

Lightweight crystal model; ideal for tape recorder use; chrome finish; for use in hand, on stand, or as lavalier mic.; response 60-10,000 cps; output level -52 db; 6' single-conductor cable; molded phone plug and phone plug adapter; accessories extra.....\$15.00
144CH Lavalier assembly.....\$ 6.00
144-CH Desk stand.....\$ 5.50

Model 162 Microphone

Lightweight crystal; broad base prevents tipping in desk use; brown polystyrene case; for tape recorder use or general p.a. work; response crystal & ceramic 60-8500 cps; output level-crystal -45 db; complete with 5' cloth-covered cable.....\$ 9.00

Model 200 Series Microphones

Rugged wide-range sensitive designs available with ceramic, crystal, or dynamic elements; particularly suited for hard use.
Model 200C (ceramic) response 50-10,000 cps; output level -60 db; high impedance; single conductor shielded cable; without accessories\$26.50
Model 204C Same as Model 200C but includes accessories\$32.00
Model 200X (crystal) response 60-10,000 cps; output level -51 db; high impedance; single-conductor shielded cable; without accessories\$24.50
Model 204X Same as Model 200X but includes accessories\$30.00
Model 200D (dynamic) high-impedance; response 60-13,000 cps; output level -53 db; single-conductor shielded cable; without accessories\$35.00
Model 204D Same as Model 200D but includes accessories\$40.50

Model 300X Microphone

Slender crystal unit with 60-10,000 cps response; -54 db output; complete with 12' cable\$11.50
Model 304C Same as Model 300X except with stand & lavalier.....\$16.50

Model 401 Dynamic Microphone

Broadcast-type featuring adjustable impedance and response; wide-response; essentially non-directional; can be mounted on

TURNER'S MAGNIFIQUE



Studio mike quality priced for the home

If you're not getting the studio quality you'd like in your home (or studio) recordings, the trouble could be in your present microphone. The famous Turner "Magnifique 400" series delivers studio quality at home prices. One of these fine broadcast-type microphones will fit your needs and your budget perfectly, and the performance of your entire sound reproduction system will be improved.

MODEL 401

Screwdriver adjusts frequency response. Combination impedance. Comes with exclusive mounting adapter. Stand extra. List Price\$125.00

MODEL 402

Same as Model 401, but with recessed line shorting switch. List Price\$130.00

MODEL 403

Flat response. Combination impedance. Mounting adapter included, stand extra. List Price\$80.00

MODEL 404

Same as Model 403, but with line shorting, recessed switch. List Price\$85.00

FOR COMPLETE SPECIFICATIONS USE READER SERVICE CARD.

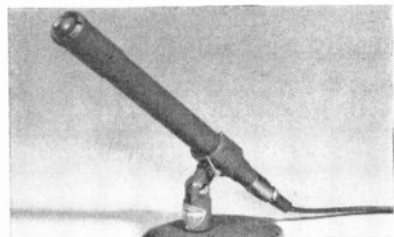


900 17th Street N.E.
Cedar Rapids, Iowa

IN CANADA: Tri-Tel Associates, Ltd.
81 Sheppard Avenue West
Willowdale, Ontario

CIRCLE NO. 58 ON READER SERVICE PAGE

6 Microphones



desk or floor stand for 180 degree swivel operation; 150 ohms or high impedance adjustable at mic.; 3-conductor 20' shielded cable; response 40-20,000 cps; adjustable for 40, 80, or 160 cps cut-off at low end and 10,000 or 20,000 cps cut-off at high end; 10 1/2" long; 9.5 oz.....\$125.00

Model 402 Dynamic Microphone

Same as Model 401 but with line-shorting switch; 11 7/8" long; 10.5 oz.....\$130.00

Model 403 Dynamic Microphone

Same as Model 401 except impedance adjustment made at end of cable; 12' cable; response 50-13,000 cps; 9 1/8" long; 7 oz.; does not have frequency response adjustment\$80.00

Model 404 Dynamic Microphone

Same as Model 403 but with line-shorting switch; 10 1/2" long; 8 oz.....\$85.00

Model 607 & 608 Microphone

Response 60-8500 cps; output level -55 db; high impedance.....\$ 8.00
Model 608 Same as Model 607 except output level -45 db.....\$ 8.00

Model 708 Microphone

Small tape recorder microphone in satin-chrome finish, die-cast case with 6' cable; for use as hand or desk unit; response 60-10,000 cps; output -54 db.....\$12.50

Model 807 & 808 Microphone

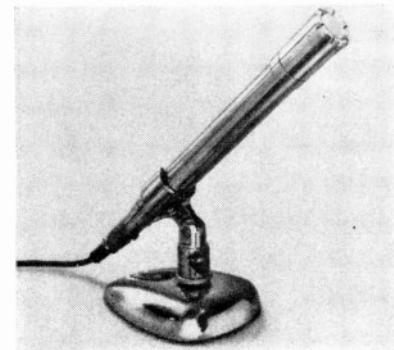
Suitable for home recording; rugged crystal mic. in die-cast case finished in baked-on gray enamel; complete with adapter for stand mounting and 6' cable; response 60-8500 cps; output -45 db.....\$10.85
Model 807 Same as Model 808 except ceramic; response 80-7000 cps; output level -57 db.....\$10.85

Model 907 & 908 Microphone

Economy unit for tape recorders; durable polystyrene; hand or desk use; weighted to avoid tipping; ceramic model (907) for use where heat and humidity are problems; Model 908 response 60-8500 cps; output level -45 db; high impedance; Model 907 response 60-8500 cps; output level -55 db; high impedance.....\$ 8.00

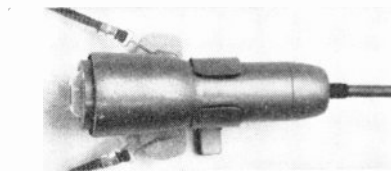
Model 401 Microphone

Dynamic broadcast-type for motion-picture



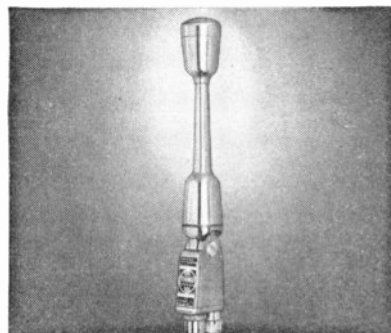
studio, TV, broadcast, and high-fidelity recording applications; adjustable impedance and response; positive grip cam lock allows instant insertion or removal of microphone without disconnecting; response 40-20,000 cps; output -60 db at high impedance; supplied with 20-foot cable\$125.00

Model 220A Microphone



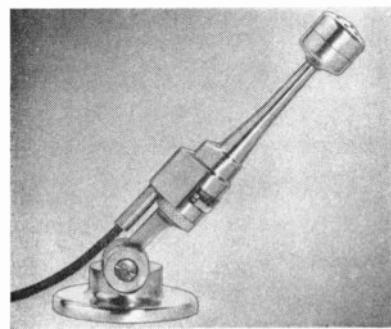
Dynamic adjustable lavalier microphone designed for AM, FM, and TV broadcast use; combination output impedance of 50 or 200 ohms selected at terminal end of cable; response 60-20,000 cps; output -90 db at 50 ohms; supplied with 25-foot cable\$125.00

Model 95D Microphone



Dynamic p.a. microphone; available with "on-off" switch; complete with 20-foot cable; response 100-10,000 cps; output -58 db; choice of 50, 200 or high ohms\$37.50

Model 80 on C-4 Stand



For home recording, paging, amateur use; crystal microphone; 7-foot cable supplied; response 80-7000 cps; output -54 db; high impedance\$15.95
Matching C-4 stand.....\$6.50

Model 210A Microphone

Dynamic type for recording, FM, AM, and TV broadcast; combination output impedance of 50 or 200 ohms, selected at terminal end of cable; response 50-20,000 cps; output -86 db at 50 ohms, 80 db at 200 ohms; supplied with 20-foot cable\$125.00

UNIVERSITY

Model 501 Modular Cardioid Mic.

Highly directional type; response 30-16,000 cps; impedance 30/50, 150/250, 20,000 ohms (selected by push-on connectors); output level 30/50 and 150/250 ohms -54 db/1 mw./10 dynes/cm.²



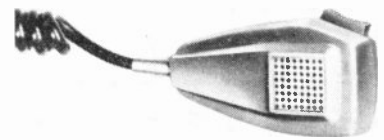
(-147 db EIA sensitivity rating); 20,000 ohms into high-impedance input 17 mv./10 dynes/cm.²; 1 1/2" dia. x 6 1/8"; dynamic type\$75.00
Model 502S Same as Model 501 but with internal shock mounting; 1 3/4" dia. x 7 1/8" long\$87.00

Model 401 Modular Omnidirectional Microphone



All-purpose type; response 30-20,000 cps; impedance 30/50, 150/250, 20,000 ohms; output level -55 db/1 mw./10 dynes/cm.²; 1 1/4" dia. x 6 1/8" long.....\$43.50
Model 402S Same as Model 401 except has internal shock mounting; 8 3/4" long\$47.70
All modular microphones (401, 402S, 501, 502S) have multiple applications and must be used with one of the following adapters. CA-10 Cannon plug with 18' cable..\$ 6.00
CC-10 Cable adapter with 18' cable..\$ 6.00
PA-10 Cannon plug adapter, less switch\$ 6.30
SA-10 Slide-on stand adapter.....\$ 4.20
SP-10 Cannon plug adapter, with switch\$ 6.90
SSP-10 Stand adapter with switch & Cannon plug receptacle.....\$11.10

Model 61 & 61HF Dynamic Mic.

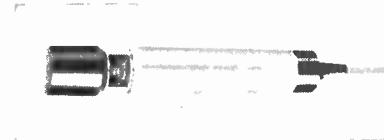


Omni-directional design; immune to shock, temperature, moisture; impedance 25,000 ohms; output level (open circuit) -55 db/1 v./dyne/cm.²; 4" h. x 2 1/4" w. x 1 3/4" d.; push-to-talk switch; 6-foot cord. Model 61 (95-9500 cps).....\$24.95
Model 61HF (70-14,000 cps).....\$24.95

Model 403L Lavalier Microphone

Omni-directional lavalier, dynamic type; response 60-20,000 cps; impedance 30/50, 150/250 ohms; output level -55 db/1 mw./10 dynes/cm.²; 1 3/8" dia. x 3 3/8"; supplied with 25-foot cable and neck cord\$52.50
Model 404L Same as Model 403L except response 50-20,000 cps; 1 1/8" dia. x 5 3/8"\$57.00

Models 70 & 71 General-Purpose Microphone



Omni-directional, dynamic type; response 50-14,000 cps; impedance 30/50 & 20,000 ohms; output level 30/50 50 db/1 mw./10 dynes/cm.² (143 db EIA sensitivity rating); 20,000 ohms into high-impedance input 28 mv./10 dynes/cm.²; 1 5/8" dia. x 6"; includes slide-on stand adapter; 15-foot cable.
Model 70\$29.95
Model 71 Same as Model 70 but with on-off slide switch.....\$34.95

6 Miscellaneous

ACOUSTONE

Acoustic Grille Cloth

Extensive line of all-plastic, metallic, hand-print, and cane grille cloth; available in 36" and 72" rolls & 36"x36" and 18" x 24" packages; prices per yard range from \$4.25 to \$6.75 and the packages from \$2.50-\$4.25 (18"x24") to \$5.60-\$8.50 (36"x36").

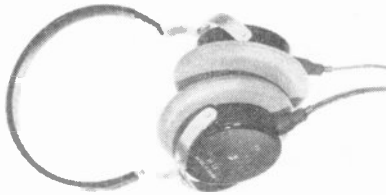
AUDIOTEX

Model 30-150 Telephone Pickup

Will record both sides of conversation; does not connect directly to phone but has suction cup mounting; comes with 72-inch cord\$5.95

BEYER

Model DT-48 Headphones



Dynamic design; 20-15,000 cps; distortion unmeasurable above 100 cps; less than .3% below 100 cps; 5 ohms impedance each side; monaural version.....\$79.50

COLLINS FARLEY

Model S95D Headset



Wired for stereo operation; dynamic-type transducer; impedance 8 ohms; frequency response 30-15,000 cps; weight 8 1/2 oz.\$25.00

Model 95D Headset

Same as Model S95D except wired for mono operation; 4 ohms impedance..\$21.50

FAIRCHILD

Model 510 "Compander" Expander-Compressor



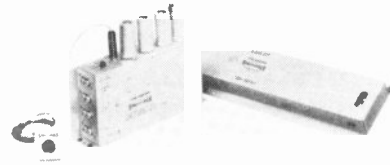
Not an amplifier but a device that will expand or compress any program material from phono, tape, tuner, etc.; expands up to 8 db (twice as loud); requires no power; compresses 20 db max.; attack time 10 msec.; available for stereo (two channel)

1963 EDITION

operation only; can also be used for mono\$75.00
Model 510K Kit version of Model 510 "Compander"\$59.95

FISHER

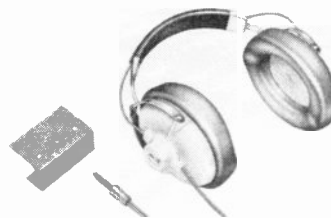
Model K-10 "Spacexpander"



Single-control reverberation design using interconnected coil springs; nominal delay 33 sec.; self-powered; three dual-purpose tubes, 7247 and 2-12AX7; decay time variable maximum 2 sec. @ 300 cps; minimum input .2 volt; maximum input 5 volts; input impedance 250,000 ohms; output impedance 2000 ohms; output voltage .2-5 volts; gain is one.....\$69.50

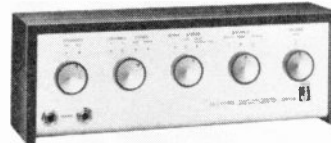
JENSEN

Model HS-1 Headset



Stereo or mono design; response 20-15,000 cps; 8 ohms; sensitivity 95 db sound pressure level for 1 mv.; 10 watt input required for adequate listening; 3-way plug and 8-foot cord provided.....\$24.95

Model CC-1 Headphone Control Center



For 8-ohm electrodynamic phones; operates with any 10-watt channel amplifier; stereo design; new "Space-Perspective" design provides complete controls for personal listening; controls—speaker "on-off," left- or right-channel only or stereo with channel reversal; mono or stereo with choice of "Space-Perspective" or regular; balance; volume; 4 1/4" h. x 11 3/4" w. x 3" d.\$39.75

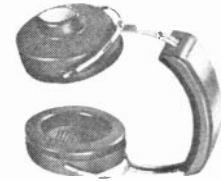
Model CFN-1 Cross-Feed Network



Provides full cross-feed characteristics to simulate speaker listening; can be connected to any 10-watt/channel or larger amplifier; to be used with 8-ohm stereo headsets\$19.50

KNIGHT

Model KN-845 Stereo Headphones



Response 25-16,000 cps; contains 3 1/2" cone-type dynamic reproducers; matched 4-16 ohm amplifiers; for use with any hi-fi stereo amp; complete with 8-foot cord with 3-conductor phone plug attached and phone jack mounted on "L" bracket with leads for connecting to amplifier.\$19.95

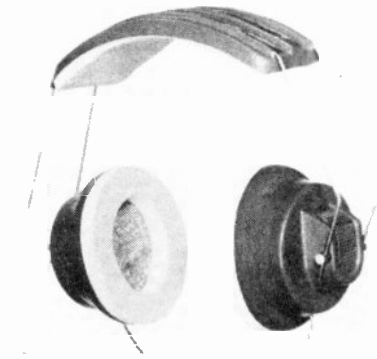
KOSS

Model A-1220 Amplifier



For use with Stereophones; can be directly connected to stereo ceramic cartridge or outputs of stereo preamp or tuner; gain control for each channel; transformer powered; 3 tubes plus rectifier.....\$34.95

Model SP-3 "Stereophones"



Extremely sensitive 3 1/2" sound reproducers mounted in each earpiece; response 10-15,000 cps; impedance 4-16 ohms; comes complete with adapter plate that connects to any system that will drive speakers\$24.95
Model SP-100 Same as Model SP-3 except for impedance of 100 ohms; for special and multiple installations.....\$24.95

Model SP-5NS Dual Mode "Stereophones"

Switched lavalier with two plugs provides a stereo plug for monitoring or two monaural plugs for playback use with recorders having two external speaker jacks.\$24.95

Model SP-5SM Stereo/Mono "Stereophones"

Stereo and monaural phones in one; switch in lavalier changes operation from stereo to monaural or vice versa.....\$24.95

Model SP-5VW Dual-Input "Stereophones"

Designed with two monaural plugs for use with integrated tape recorder or phono systems having two external speaker jacks.\$24.50

Model Pro-4 Headset

Response 30-20,000 cps; max. input 10 watts/channel (60 w./channel music pow

6 Miscellaneous

er): distortion less than 1% at maximum output; 4 ohms (600 ohms available); 8-foot cord; rugged, shock-proof and fluid-filled ear cushions.....\$45.00

Model T-1 Junction Box

Contains matching transformers for monitoring; 600-10,000 ohm outputs; two output jacks for Stereophones\$7.95

Model T-5 Remote-Control Listening Station

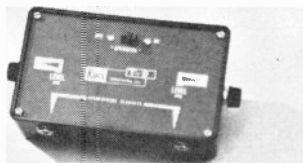


Junction box for connecting Stereophones to existing stereo or mono system; impedance 4-16 ohms; has jacks for two sets of Stereophones; one volume control for each ear; on-off speaker switch for personalized listening\$8.95

Model T-7 Junction Box

Will plug directly into any portable phonograph or tape recorder having two external speaker jacks; has two mono speaker jacks, two jacks for Stereophones; on-off speaker switch.....\$7.95

Model T-9 Junction Box



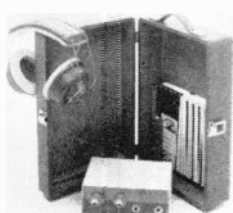
Remote-control listening station; similar in function to Model T-5 except for one dual pot for volume control of each set of Stereophones\$11.95

Model PL-61 Personal Listener



Four-speed phono provides sound in either mono or stereo; ceramic turnover cartridge; diamond stylus for LP records, sapphire for 78's; plays any size record; separate leatherette case; walnut cabinet; equipped with one set of Stereophones with jack provided for plugging in an additional set.....\$110.00
Model PL-61CM Counter model, without carrying case.....\$99.50

Model K-29 "Port-a-Pac"



Stereophones and A-1220 stereo amplifier in compact carrying case.....\$66.50

LAFAYETTE

Headphones



Stethoscope-type earphones; frequency response 40 to 16,000 cps; hinge permits any desired spacing.

- MS-431 (binaural magnetic, impedance 6 ohms).....\$2.35
- MS-432 (binaural magnetic, impedance 5000 ohms).....\$2.35
- MS-433 (binaural crystal, impedance 100,000 ohms).....\$1.95
- MS-429 (monaural magnetic, impedance 6 ohms).....\$1.75
- MS-430 (monaural magnetic, impedance 5000 ohms).....\$1.95
- MS-369 (monaural crystal, impedance 100,000 ohms).....\$1.34

Model F-767 Headphones



Stereo/mono design; response 30-15,000 cps; 8 ohms impedance each phone; complete with cables, wires, overload junction box\$13.95

Model F-641 Junction Box

Permits stereo headphone operation without disconnecting speakers; separate jacks for stereo or mono; 4-16 ohms; has individual volume controls.....\$4.59

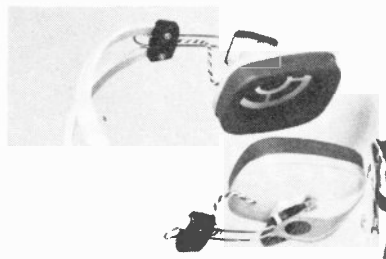
MARCOR

Model 700 Headphones

Dynamic moving-coil type with self-supporting voice-coil protected against shock; response 30-16,000 cps; harmonic distortion less than 3% with 100 mw. applied; impedance 20 ohms/earphone or 10 ohms in parallel for monaural use; sensitivity 105 db @ 1000 cps in reference 0 db; .002 dynes/cm.² with input of 1 mw.; earphone elements mounted inside noise-attenuating earcups; weight 10 oz.....\$37.50

MONARCH

Model ES-300 Stereo Headset



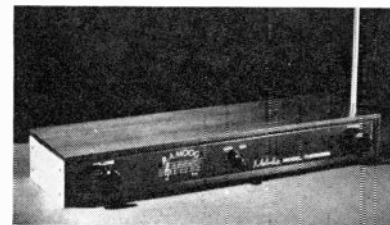
Frequency response 25-15,000 cps; impedance 8-16 ohms; has 6-foot cord and phono plug.....\$19.95

MOOG

"Melodia" Theremin

An electronic musical instrument played

without being touched; distance between player's right hand and instrument's antenna rod determines pitch of the note; distance between player's left hand and instrument's volume antenna plate determines loudness of note; total pitch range is five octaves; tonal quality resembles that of musical saw or cello; completely transistorized and powered by single 6-volt battery; designed to operate into any hi-fi

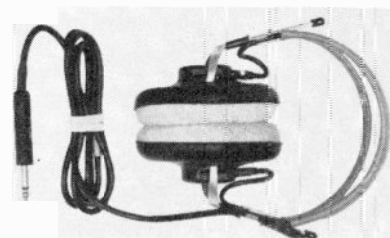


system; housed in solid hardwood cabinet 22" l. x 6" d. x 3 1/8" h.; available completely assembled or in kit form.

- "Melodia" kit (FOB factory).....\$49.95
- "Melodia" assembled (FOB factory)\$75.00

PERMOFLUX

Series DHS Deluxe Headphones



Sensitivity 112 db at 1000 cps; frequency response 20 to above 20,000 cps; dynamic driving elements.

- Stereo design 12/12 ohms.....\$45.00
- Stereo design 300/300, 600/600, 4000/4000, or 15,000/15,000 ohms.....\$52.50
- Mono design, 25 ohms.....\$42.50
- Mono design, 600, 2000, 8000, or 30,000 ohms\$50.00

Series HD Extended-Range Headphones

Dynamic drivers; sensitivity 108 db at 1000 cps; frequency response 30 to beyond 18,000 cps.

- Stereo design, 16/16 ohms.....\$40.00
- Mono design, 8 ohms.....\$37.50

Series HL "Feather-Lite" Headphones

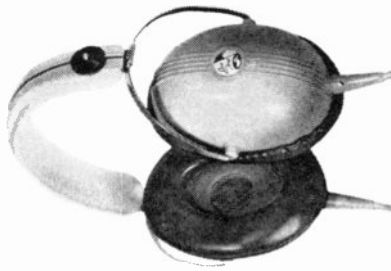


Dynamic drivers; sensitivity 108 db at 1000 cps; frequency response 40-15,000 cps.

- Stereo design, 16/16 ohms.....\$31.50
- Stereo design, 100/100 ohms.....\$34.50
- Mono design, 8 ohms.....\$30.00
- Mono design, 25, 50, 100, or 200 ohms\$33.00

SHARPE

Model HA-10 Earphones



Stereo design; 8 ohms impedance; 6-foot cord terminated with standard 3-circuit phone plug\$43.50

Model HA-10-B Earphones

Stereo design; 8 ohms impedance with 100 ohm resistor in series with each channel; 8-foot cord terminated with standard 3-circuit phone plug.....\$43.50

Model HA-10-C Earphones

Stereo design; 8 ohms impedance; 8-foot cord terminated with two 2-circuit phone plugs; for stereo equipment having individual channel outputs.....\$43.50
All stereo headsets available in monaural on request. The following impedances are available at no additional cost on all units upon request: stereo—300, 600, 1200, or 3000 ohms; mono—16, 150, 300, 600, 120, 2400, or 6000 ohms.

Model LTC Control Box

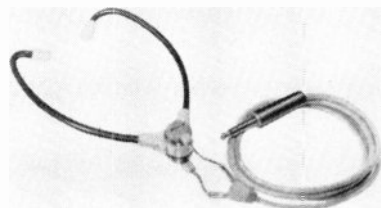
Has L-pad volume control for each channel; resistor network and fuses to protect earphones; accommodates two sets of earphones and is equipped with switch to cut out speakers; 6-foot leads with bare wire termination\$24.75

Model LTC-B Control Box

Similar to the Model LTC; provides remote stereo balance and volume control for the two headsets; resistor network and fuses to protect headset; 5-foot cord with male phone plug.....\$21.95

SONY

Model SHS-2 Binaural Headset



Low-impedance dynamic headset with acoustical pipe stethoscope principle; completely wired and phased.....\$7.95

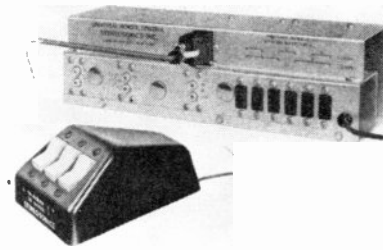
STEREOSONICS

Phase & Balance Indicator



Indicates phase and extent of phase of stereo program material; can be used with all grounded or ungrounded line systems and any high-fidelity component; can also be used as a balance meter.....\$29.50

Model RM-2 Remote Control



Permits continuous control of volume, tuning, and "on-off"; for remote control of any component or console system over distances of up to 800 feet.

RM-2 for two channels.....\$75.00
RM-3 for three channels.....\$95.00

SUPEREX

Model ST-M Stereo "Masters" Headset



Low-impedance; 8-16 ohms; has two-way sound reproducers in each phone—dynamic low frequency and ceramic high frequency; response 20-20,000 cps; complete with crossover network, monaural adapter, connecting cables.....\$29.95

Model ST-MH Stereo "Masters" Headset

Same as Model ST-M except high-impedance 15,000 ohms.....\$34.95

Model ST-S Stereo "Standard" Headset

Dynamic reproducer for 30-15,000 cps response; adjustable headband and plastic ear cups.....\$24.95

Model ST-SU Stereo "Standard Universal" Headset

Has same features as Model ST-S but includes separate case with matching transformers & switch to match either low (4-12 ohm) or high (10,000-25,000 ohm) impedance\$29.95

Model SC-1 Stereo Control Box

Controls volume and stereo balance of headphones; will turn speakers on/off; two phones can be used in parallel.....\$6.95

SWITCHCRAFT

Model 306TR Stereo/Mono Mixer

All-transistorized (9 v. battery) 4-channel high-impedance mixer for microphones, tuners, phonos, etc.; individual gain controls; single mono output for feeding recorder or amplifier; for stereo operation 2 inputs are used per channel; response 20-20,000 cps; gain 6 db.....\$37.50

Model 301TR Mono Mixer

Similar to Model 306TR except for mono operation only.....\$30.00

Model 301 Mono Mixer

Similar to Model 301TR except does not have transistorized amplifier.....\$19.50

Model 306 Stereo/Mono Mixer

Similar to Model 306TR except does not have transistorized amplifier.....\$22.50

Two-Input Audio Mixer

Resistance type with approx. 3 db loss; inputs for 2 microphones with individual volume controls; various models available with different input jacks and output plug.....From \$7.95-\$9.95

Transistorized Amplifier

Miniature size; 9 v. battery operated; "hi-lo" impedance switch; "hi" position 200,000 ohm input impedance & 6 db gain; "lo" position 5000 ohm impedance & 25 db gain; output is high impedance; approx. size of package of cigarettes. Model 501 with 2-conductor phono input jack and 2-conductor output plug.....\$20.00
Model 501 with microphone connectors\$20.00

Model 670 Stereo Speaker Selector Switch



For connecting two remote pairs of speakers to stereo amplifier; 3-pos. switch selects either or both pairs of stereo speakers..\$6.25

TELEX

Model HDP-53A "Stereo Dyna-Twin"

Dynamic driver with moisture-proof Mylar diaphragm; max. power input 1 watt with minimum requirement of 15 mw, 8 ohms each side; response 30-15,000 cps; adaptable to monaural use; supplied with 3-circuit plug; wt. 12 oz.....\$27.95

Model ST-10 "Stereo-Twin"

Response 30-15,000 cps; dynamic driver with moisture-proof Mylar diaphragm; available with two phone plugs for stereo, with one 3-circuit plug for monaural use, or with leads tinned.....\$24.40

TRANSVISION

Model KG-HF TV Kit

Designed specifically for use with a hi-fi system and for custom installations; does not include audio system but has cathode-follower output circuit; r.f. sensitivity 5 μ v.; high voltage 20,000 volts; Standard Coil tuner; u.h.f. strips can be added to tuner; front-panel controls: volume, contrast, tone, horizontal hold, brightness, vertical hold, tuning; rear controls: vertical height, vertical linearity, stabilizer, horizontal frequency, horizontal phasing; i.f. strip supplied wired and aligned to 4 mc.; 19" and 23" picture tubes are bonded types requiring no separate safety glass or shield; 27" picture tube version must have shield.

Kit with 19" picture tube.....\$178.00
Kit with 23" picture tube.....\$183.00
Kit with 27" picture tube.....\$243.00

Model CK-321 Color TV Kit

21" design with all critical circuits pre-wired and tested by RCA; cathode-follower output for connection to hi-fi system; designed for custom installation.

Kit\$419.00
Factory wired\$619.00
Remote-control unit\$60.00



directory of

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Complete listing of all U.S. High-Fidelity Salons. Visitors are welcome, not only to view available products but, in most cases, to participate in actual demonstrations.

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Herbert Music, 134 East Magnolia

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Audio Hi Fidelity Co., 1911 5th Ave. N
James W. Clary Co., 1713 Second Ave. S
Jacoway Audio, 5336 5th Ave. S
Lawrence Hi Fi Center, 1923 11th Ave. S
Melonas Hi Fi Stereo Ctr., 3611 So. 5th Ave.

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DOTHAN

Hand Supply Co., 705 S. Oakes St.
Signal Supply Co., Montgomery Highway

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Electronic Distributors, 103 West Bombigee St.
Lair Distributing Co., 118 W. Tombigbee St.

GADSDEN

Southeastern Radio Parts Co., 120 Chestnut St.

HOMESWOOD

Hi Fi & Commercial Sound, 2906 S. 18th St.

HUNTSVILLE

Melody Music Center, Heart of Huntsville Shopping Ctr.
Radio & Television Supply Co., 717 Pratt St.
Record Shop, 107 North Side Sq.

JASPER

Hughes Electronic Supply, 8th Ave. & 20th St.

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Hi Fi Auditorium, 302 Durand Dr.
Hoovers High Fidelity & Record Ctr.
1861 Old Government
House of Music, 311 B Seafreeze Court, Mobile

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Nalin McClinnis Inc., 211 Commerce St.
John M. Thorington Co., 2748 Boulflier St.

TUSCALOOSA

Audio House, 505 15th St.
Radio Parts Inc., 402 20th Ave.

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Alaskan Electronics Supply Inc., 833 Gambell St.
Anchorage Radio & Television Inc., 443 Fourth Ave.
Effco Hi Fi Center, 328 4th Ave.
The Record Shop, 409 4th Ave.
Yukon Radio Supply Inc., 645 I St.

FAIRBANKS

Polar Electronic Supply Inc., 231 Illinois St.
Television Center, 525 Second Ave.

JUNEAU

Alaska Radio Supply, 307 Seward St.

MT. EDGEOME

Music Box, P. O. Box 836

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Arizona Hi Fi, 4807 North Central
Audio Specialists, 333 E. Camelback Rd.
Bruces World of Sound, 2711 E. Indian School
Dalis Radio & TV Supply, 124 E. Buchanan
Electrical Communications Co., 202 E. Fillmore
Harry Moore Sales Co., Box 7245

Hi Fidelity Sound Systems, 1811 E. McDowell Rd.
Minthorne Music, 2517 No. Central
Southwest Wholesale Radio, 126 S. Second St.

SEDONA

Al Anderson, P. O. Box 154

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Inland Electronic Supply, 715 E. Broadway
Niles Radio Corp., 400 N. Fourth Ave.
Standard Radio Parts, 218 N. First Ave.
The Sound Shop, 4659 E. Broadway

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Yuma Radio Telev. Supply, Inc., 149 Main Street

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Lavender Radio & TV Supply, 1114 N. West Ave.

FORT SMITH

Wise Radio Supply Co., 1001 Towson Ave.

LITTLE ROCK

Carlton Bates Co., 1210 E. 6th St.
Carlton Wholesale Radio Inc., 616 E. Capitol St.
David White Radio Supply, 1222 Main St.
Moses Melody Shop, 311 Main St.
Southern Radio Supply, 1419 Main St.

PINE BLUFF

David White Radio Supply, 615 Main St.
Lavender Radio & TV Supply, 407 17th St.

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Harmony Hi Fi, 1020 E. Main

ANAHEIM

Audiophonics, 1083 North Harbor
Stereo Mart, 979 So. Los Angeles St.

ARCADIA

Mitchells El Rancho TV, 1119 W. Huntington Dr.

AZUSA

Rancho Sound, 18508 E. Alosta

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Arbuckle, 500 E. 19th St.
Bakersfield Audio, 2534 F St.
Cletes Elect, 419 E. 19th St.
Kiesub Corp., 2615 F St.
Miligan Audio Visual, 301 18th St.
Valley Radio Supply Co., 1134 33rd St.

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BELLFLOWER

Giant Electronics, 8635 Artesia Blvd.

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Berkeley Music House, 2538 Bancroft Way
Electronic Suppliers Inc., 2428 Shattuck Ave.
Krueckick Folcar Electronic Supplies, 2428 Shattuck Ave.
Pacific Radio Supply Inc., 2801 Shattuck Ave.
Robert E. Lee, 2826 Telegraph Ave.
Thos. Tenney, 2984 College Ave.

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Crawfords, 460 S. Spaulding Dr.
Talk O Communications Co., 407 J Commercial Ctr.

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Ford Electronics, 8431 Commonwealth

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Andrew Electronics, 1500 W. Burbank Blvd.
Audio Mart, 921 W. Magnolia
Burbank Radio & TV, 1303 W. Magnolia
Electronic City, 4001 W. Burbank Blvd.
Hagerty Radio Supply, 2926 W. Magnolia Blvd.
Torbet Hi Fi, 831 N. Hollywood Way
Valley Electronic Supply, 1302 W. Magnolia Blvd.

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CARMEL

California Music House, P.O. Box 2527

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CHICO

Gene Tapi Sound Mart, 120 Broadway

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Hi Fi Specialties, 2088 Fowler

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CLAREMONT

Jay Doty, 224 Yale Ave.

CONCORD

Pacific Radio, 2115 Pacheco
Stevenson Electronics, 1628 Contra Costa

CORONADO

Mels Hi Fi, 935 Orange Ave.

COVINA

Gabriel Music Co., 150 Shoppers Lane
Hi Fi Covina, 123 E. Rowland

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Bar Shel TV Supply, 5512 S. Sepulveda Blvd.
Electronic Trading Post, 4364 Sepulveda Blvd.
Hi Fi Matic, 5554 Sepulveda Blvd.

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Hi Fi Center, 11224 San Pablo Ave.

EL MONTE

Kimball & Stark, 713 E. Tyler

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Irving Finkel Electronics, 17640 Burbank Blvd.

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Redwood Elect Supply, 317 W. 7th St.

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Dejarnatt Whol Radio Co., 223 Fulton St.
Dunlap Wholesale Radio, 2617 Tulare St.
Hockett Cowan Music Co., 1254 Fulton St.
Jack C. Arbuckle Co., 2349 Kern St.
Jack Schiefer Sound, 2247 Blackstone
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United Radio, 122 S. Pomona Ave.

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Holly Park Music, 2226 W. Rosecrans Blvd.
Stereo Hi Fi Center, 13996 Crenshaw Blvd.
Video Suppliers, 14526 Crenshaw Blvd.

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Halls Hi Fi, 9110 Garden Grove Bl.

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Logens Glendale Wholesale, 937 N. Pacific
Medico Electric Labs, 1111 E. Chevy Chase
Radio Lab, 806 S. Central

GOLETA

Ran Dels Electronic Paris, 5857 Hollister Ave.

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North Valley Electronics, 10146 Balboa

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Calif. Radio & Electr. Co., 823 North Highland
Hi Fi Corner, 7901 Melrose Ave.
Hollywood Electronics, 7460 Melrose Ave.
Hollywood Radio, 5250 Hollywood Blvd.
Pacific Hi Fi House, 1407 Cahuenga Blvd.
Pantages Maestro, 6233 Hollywood Blvd.
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Barcus, 5782 E. 2nd St.
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Electronic Supply, 3363 Lime Ave.
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Crenshaw Hi Fi Center, 107 Santa Barbara Pl.
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Federated Purchasers Inc., 11275 W. Olympic Blvd.
Figarts Radio Supply Co., 6320 Comodore Sloat
Henry's Radio, 11240 W. Olympic Blvd.
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Hollywood Electronics, 7460 Melrose Ave.
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Pacific Radio Exchange, 1407 Cahuenga Blvd.
Papel Bros., 4652 E. 3rd St.
Radio Parts Sales, 5220 South Vermont
Radio Products Sales, Inc., 1501 S. Hill St.
Radio Television Supply Co., 2025 S. Figueroa St.
S & F Electronics, 7959 Melrose Ave.
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Sound Foyer, 1421 South Hill
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Universal Radio Supply Co., 1727 S. Los Angeles
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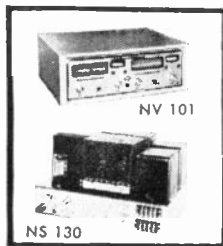
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Telco, 22221 Pacific Coast

MARYSVILLE

Twin Cities Sound, 1716 Sicard St.

MENLO PARK

Hi Fidelity Unltd., 935 El Camino Real

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MODESTO

Marshall C. Neel, 1018 J St.
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Peninsula TV & Radio, 695 Lighthouse Ave.
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Zackit Corporation, 259 Alvarado

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Elmar Elect, 140 11th St.
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E. C. Wenger, 1450 Harrison St.

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Rudi Pack, 604 N. Euclid Ave.

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Kierulff Sound, 430 South Main St.

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Pacific Sound, 829 Via De La Paz

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Kryger-Nakes Engineering, 1657 So. Riverside Dr.
Palm Springs Music Co., 360 N. Palm Canyon Dr.
Pat Barbara Music, 121 South Palm Canyon Drive
The Music Shop, 123 N. Palm Canyon Dr.

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Zack Radio, 654 High St.

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Audio Associates, 689 S. Fair Oaks Ave.
Audio Electronics, 286 N. Raymond
Cox Radio Supply Co., 1758 E. Colorado St.
Electronic Supply Corp., 2085 E. Foothill Blvd.
Hi Fidelity House, 536 S. Fair Oaks
Stereo Mart Electronics, 3205 E. Foothill

POMONA

Anderson Maggs, 1095 E. 3rd St.

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Redlands Audio Visual Sales Serv., 10 W. Citrus Ave.

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Griffey Elect, 212 S. Pacific

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Harwood Bros., 7015 Reseda Blvd.
Vega & Assoc., 7355 Reseda Blvd.
West Valley Radio Supply, 7041 Reseda Blvd.

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Electronic Supply Co., 2486 3rd St.
Hi Fi Shop, 3643 Main St.
Massey's Radio Supply Co., 2944 Eighth St.

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California TV Supply, 2454 Del Paso Blvd.
Dunlap Wholesale Radio Co., Inc., 1628 'S' St.
Hi Fi Music Center, 1317 K St.
Hi Fi Sound Supply, 1317 K St.
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Market Radio Stores, 1918 16th St.
Minuet in K, 1317 K St.
Norcal Electronics, 1115 R St.

Radio TV Products Co., 2012 19th St.
Sacramento Elect Supply, 1219 S St.
World of Sound, 4359 Arden Way

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Gadsbys Music Co., 345 Main St.

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Dependable Hi Fi & TV, 1606 E. Highland
Hollywood Hi Fi Shop, 1839 E St.
Lier Music Co., 452 North E. St.
Sampson Electronic Service, 843 Colton Ave.

SAN CLEMENTE

Stereo Sound Ctr., 3415 S. El Camino Real

SAN DIEGO

Audio Enterprises, 4204 Voltaire St.
Breier Sound Center, 3731 Fifth Ave.
Custom Electronics, 901 W. Washington Blvd.
David Arden Enterprises, 4337 Fairmount Ave.
Electronic Equipment Distributors, 3686 El Cajon Blvd.
High Fidelity House, 1635 University Ave.
Highland Hi Fi, 2743 Highland Natl City
Radio Parts, 2060 India St.
Radio Parts Co., 2060 India St.
Recording Center, 3941 Fifth Ave.
Shanks & Wright, 2045 Kettner Blvd.
Silvergate Radio Supply, 1528 India St.
Telrad Electronics, 3453 University Ave.
Western Radio Supply Co., 1415 India St.
Wrights House of Hi Fi, 5140 El Cajon Blvd.

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Cassell's Music Company, 1031 San Fernando Rd.

SAN FRANCISCO

Allegro High Fidelity, 367 Market St.
Associated Radio Distr., 1583 Howard St.
Bay Recording, 3339 Scott St.
Carousel Elect. Supply Co., 1480 Market St.
Columbia Music Co., 1080 Market St.
Hal Cox Custom Sound, 3325 Fillmore
Eber Electronic Supply, 2355 Market St.
Fortune Electronics, 1321 Mission St.
Hi Fi Shop, 3525 California St.
House of Sound, 104 9th St.
Lakeshore Hi Fi Inc., 222 West Portal Ave.
Listening Post, 2290 Fillmore St.
Market Radio Supply Co., 1276 Market St.
Music & Sound, 222 West Portal
Offenbach & Reimus Co., 1564 Market St.
Pacific Wholesale Co., 1850 Mission St.
Radio Parts Supply Co., 281 9th St.
San Francisco Radio, 1284 Market St.
Schwabacher-Frey Co., 735 Market St.
Sherman Clay & Co., Sutter & Kearney St.
Trade Winds Music, Box 629
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Wholesale Radio & Electric Supply, 140 9th St.
Zack Radio Supply Co., 1422 Market St.

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Allied Paramount, 79 So. Third St.
Frank Quement Co., 170 W. San Fernando
House of Hi Fi, 399 1/2 West San Carlos
Peninsula Electronic Supply, 656 S. 1st St.
Schad Elect Supply, 256 W. San Fernando
Tru Sound, 3400 Stevens Creek

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SAN LUIS OBISPO

Allens Sound Center, 771 Higuera St.
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San Marino Hi Fi, 2986 Huntington Dr.

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Mateo Hi Fidelity, 2199 El Camino Real

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Audio Center of Santa Barbara, 3321 State Street
Audio Vision Co., 1276 E. Coast Hwy
Channel Radio Supply Co., 18 E. Ortega
H. T. Bennett Music Co., 827 State St.
Hi Fi Music Center, 43 W. Calle Laureles
Pacific Audio Supply Co., 818 State St.
I. Newton Perry Music Center, Main Center, Breakwater

S. CANADA

Whittier Hi Fi, 4458 Rosebank

SANTA CLARA

Audio Phils Hi Fi Shop, 1805 Pruneridge

SANTA CRUZ

Burdicks TV, 902 Soquel Ave.

SANTA MARIA

Hi Fidelity Sound, 114 W. Church

Wholesale Electronic Supply, 311 N. McLelland

SANTA MONICA

Clef TV, 1642 Ocean Park Blvd.
Santa Monica Radio Parts Corp., 1517 2nd St.

SANTA ROSA

Basham & Christanson, 26 Mendocino
M. L. Bruner Co., 532 Mendocino
The Golden Ear, 1050 4th St.

SOUTH GATE

Mac's Radio Co., 8320 Long Beach Blvd.

STOCKTON

Dejarnat Whol Radio Co., 515 N. Hunter St.
Dunlap Whol Radio Co., 27 N. Grant St.
Jack Hanna Music, 6130 Pacific Ave.
Universal Radio & TV, 2350 E. Main St.

STUDIO CITY

Emmons Audio Equip., 12608 Ventura Blvd.
Kierulff Sound Corp., 12123 Ventura Blvd.

TARZANA

Valley Sound Corp., 18841 Ventura Blvd.

TUJUNGA

Hi Fi Sound Mart, 7487 Foothill Blvd.

TUSTIN

Sound, Inc., 12932 Newport Ave.

UKIAH

Hayes Music Shop, 200 So. State St.

VALLEJO

Boyd Wann Hi Fi Shop, 923 Tennessee St.
Electronics Wholesale, 1219 Monterey
Samuels TV, 1305 Tenn. St.

VAN NUYS

Gates Electronics, 7118 Van Nuys Blvd.
House of Sight & Sound, 14513 Victory Blvd.
Tags Radio & TV, 14530 Calvert
Thrifty TV Supply Co., 13647 Burbank Blvd.
Valley Electronic Supply Co., 17647 Sherman Way

VENTURA

Adams Sound Prod., 1980 E. Main
Wholesale Electronic Supply, 265 S. Laurel St.

WALNUT CREEK

Music Town, 1256 Broadway

WHITTIER

Hi Fi Haven, 442 S. Greenleaf Ave.
Oxbow Elect, 15908 E. Whittier Blvd.
Whittier Electronics, 6606 S. Greina Ave.
Whittier Hi Fi, 9936 Larrylyn

YUBA CITY

Custom Radio, 335 Second St.
Music World, 219 Clark Avenue

COLORADO

BOULDER

Abers of Boulder, 1326 Peach St.
Boulder Distributing Co., 1840 24th St.
John E. Lauer, 1032 13th St.

COLORADO SPRINGS

Deits Bros., 119 E. Pikes Peak Ave.
Dick Jurgens, 530 S. Tejon
L. B. Walker Radio Co., Inc., 324 1/2 North Tejon

DENVER

Ben Bezoffs Record Rack, 2260 Kearney St.
Chas. E. Wells Music Co., 1629 California St.
Davis Audio Visual Co., 2023 E. Colfax Ave.
Electric Accessories Co., 1620 Blake St.
Electronic Parts Co., 20 W. 13th Ave.
Empire Radio & Television Co., 1100 Broadway
Fistells Electronics Supply, 1001 Bannock St.
Inter State Radio & Supply Co., 1200 Stout St.
Lakewood Sound, Inc., 8596 W. Colfax Ave.
L. B. Walker Radio Co., Inc., 620 Broadway
Lloyds Hi Fi, 4956 E. Colfax
Radio Products Sales Co., 1237 16th St.
Russ Record Shop, 4337 Stuart
Sight & Sound Stage, 562 So. Broadway
The Electric Accessories Co., Stout at 20th St.
Ward Terry & Co., 70 Rio Grande Blvd.
Warren D. Hall Inc., 1440 Jasmine St.

GRAND JUNCTION

Radio & Electronic Supply Co., 640 White Ave.
Custom Music, 809 North Ave.
L. B. Walker Co., 537 N. First

GREELEY

Camera Supply Inc., 903 16th St.

LITTLETON

Ortho Hi Fi, 918 Littleton Blvd.

NUCLA

San Miguel Natural Gas Co., P.O. Box 477

PUEBLO

L. B. Walker Radio Co., 100 No. Victoria

CONNECTICUT

BRIDGEPORT

Congress Electric Supply Co., 215 Maplewood Ave.
Hatry of Bridgeport, 2465 Main St.
Hi Fi Center, 94 Congress St.

HARTFORD

Audio Workshop Inc., 1 S. Main St.
Belmont Record Shop, 163 Washington St.
Del Padre Supply of Hartford, 88 Flower St.
Dressler Electronic Inc., 325 Trumbull St.
Harty of Hartford, 100 High St.
Margolis, 28 High St.
Record Shop, 227 Asylum St.
Scefi Electronics Inc., 78 Maple Ave.
Tel Rad Inc., 592 New Park Ave.

MERIDEN

Halversons, 592 West Main St.

MIDDLETOWN

G. U. Reed, 143 William St.

NEW BRITAIN

United Appliance Dist., 98 John St.
Warrens Music Center, 54 West Main St.

NEW HAVEN

Cutlers Record Shop, 33 Broadway
M & S Sound & TV Co., 65 Kensington St.
Radio Shack Corp., 230 Crown St.
David Dean Smith Inc., 262 Elm St.

NEW LONDON

Aikins, 428 Bank St.
American TV & Radio, 99 Bank St.
Douglas Audiometrics, 75 Coit St.

RIDGEFIELD

New Horizons, Shoppers Village
Ridgefield TV & Sports Center, 54 West Main St.

STAMFORD

Atlantic Electr., Inc., 441 Atlantic St.
Maikin Electronics, 28 Broewood Lane
Phonograph Shop, 66 Broad St.
Radio Shack, 29 High Ridge Rd.

WATERBURY

Bond Radio Supply, 439 W. Main St.

WEST HARTFORD

Audio Workshop Inc., 1 South Main St.
High Fidelity Salon, 965 Farmington Ave.
Radio Shack Corp., 39 So. Main St.

WESTPORT

Music Systems of Westport, 1021 E. State

DELAWARE**NEWARK**

Delaware Music House, 132 E. Main St.

WILMINGTON

Almo Radio Co., 1122 French St.
D & M Radio Sales & Service, 215 W. 4th St.
Delaware Electr. Supply, 220 W. 4th St.
Radio Electric Service Co., 3rd & Tatnall Sts.
Wholesale Electronic Supply Co., 901 W. Fifth St.
Wilmington Electrical Specialty Co., 405 Delaware Ave.

DIST. OF COLUMBIA

Audio Dynamics, 1625 Eye St., N.W.
Capitol Radio Wholesalers Inc., 2120 14th St., N.W.
Custom Hi Fi Radio & TV, 1811 Columbia Rd. N.W.
Electronic Wholesalers Inc., 2345 Sherman Ave., N.W.
Emco Electronic Wholesalers, 509 11th St., N.W.
Kitt Music Co., 1330 G St., N.W.
Penco Electronic Supply Co., 1501 Penn. Ave. S.E.
Shrader Sound Inc., 2803 M St., N.W.
Silberne Radio & Electronics, 3400 Georgia Ave., N.W.
Stereo Galleries, 2934 M St., N.W.
Sun Parts Distributors Ltd., 514 10th St., N.W.

FLORIDA**BRADENTON**

Thurou Electronics Inc., 1018 9th St.

CLEARWATER

Clearwater Electronics Inc., 625 Franklin St.
Thurou Electronics Inc., 924 Pierce St.

COCOA

Thurou Electronics Inc., 540 St. John St.

CORAL GABLES

The Concerto Room Inc., 1722 Ponce de Leon
Flagler Radio Co., 1558 So. Dixie Highway
High Fidelity Asn., 3396 Coral Way

DAYTONA BEACH

M & M Electronics & TV, Inc., 315 Seabreeze Blvd.
Reliance Radio & Music Shop, 2649 N. Atlantic
Sound Center Inc., 500 Orange Ave.
Thurou Electronics Inc., 566 Ballough Rd.

DELAND

Deland Music Center, 211 North Blvd.

DUNEDIN

The Record Salon, 2002 Valley Drive

EAU GALLE

Stereo Center, 1512 Hauch Ave.

FT. LAUDERDALE

Vance Baldwin Inc., 2207 S. Andrew Ave.
Charles V. Cooper Co., 2673 N.E. 37th Dr.
General Dist. Corp., 2308 N. Dixie Hwy
High Fidelity Associates, 1620 N. Federal Highway
High Fidelity Sound Systems, 1978 E. Sunrise Blvd.
Music Center Inc., 1009 E. Sunrise Blvd.

Thurou Electronics Inc., 901 N. E. 13th St.

FORT MEYERS

Thurou Electronics Inc., 2111 Fowler St.

GAINESVILLE

Dumac Hi Fi, 917 W. University Ave.
Melody Mart Inc., 1002 N. Main St.
Thurou Electronics Inc., 1012 S. Main St.

HALLANDALE

Classic High Fidelity Showcase, 202 S. Dixie Highway

HOLLYWOOD

Carl's Radio & Television, 2323 Hollywood Blvd.

INDIALANTIC

McHose Electronics, 145 5th Ave.

JACKSONVILLE

Hoyt High Fidelity Center, 1540 Longwood Rd.
Hoyt High Fidelity Center, 4477 Roosevelt Blvd.
Southeast Audio Co., 1125 Roselle St.
Thurou Electronics Inc., 956 Liberty St.

LAKELAND

Thurou Electronics Inc., 420 N. Ingraham Ave.

KENDALL

Suniland Hi Fi, 11503 S. Dixie Highway

MIAMI

East Coast Music Hall, 1900 N. W. Miami Court
Electronic Supply Co., 61 N. E. 9th St.
Flagler Radio Co., Inc., 1068 W. Flagler St.
Herman Radio Supply Co., 1365 N. W. 23rd St.
High Fidelity Associates, 3180 Biscayne Blvd.
Modern Sound, 1835 S. W. 8th St.
Radio TV Parts Distributors Inc., 2751 N. W. 75th St.
Thurou Electronics Inc., 1800 N. W. 23rd St.

NAPLES

House of High Fidelity, 712 5th Ave.

NORTH MIAMI BEACH

Sound Box Inc., 1930 N. E. 163rd St.

OCALA

Goldman Radio & Appliances, 116 South Main St.
Thurou Electronics Inc., P. O. Box 1816

ORLANDO

Baggett Electronics, 2507 E. Colonial Dr.
East Coast Radio, 1012 Sligh Blvd.
Goddard Orlando, 631 West Central Ave.
Hammond Electronics Inc., 533 West Central Ave.
Thurou Electronics Inc., 822 West Central Ave.

PALM BEACH

Salon of Music, 401 So. Country Rd.

PANAMA CITY

Electronic Supply Co., 316 Luverne Ave.
Thurou Electronics Inc., 528 E. 6th St.

PENSACOLA

F. T. C. Brewer Co., Jefferson Bldg.
Grice Electronics Inc., 300 E. Wright St.
Thurou Electronics Inc., 99 S. Alcazniz St.
True Fidelity Music Systems, 908 N. Spring St.

PERRINE

Ronnie's Record & Hi Fi, 626 Perrine Ave.

ST. PETERSBURG

Allcorn Electric, 1746 Central Ave.
Better Listening Studio, 5124 Ninth Ave. N.
Cooper Radio Co., P. O. Box 10010
High Fidelity Music Shop, 6821 Central Ave.
Salon of Music, 6840 Central Ave.
Thurou Electronics Inc., 330 19th St. S.

SARASOTA

Buder's Tele Radio Hi Fi, 2140 Bee Ridge Rd.
Sound Systems Inc., 1015 General Spatz

STUART

Bartlett Bros., 317 Osceola Ave.

TALLAHASSEE

North Florida Hi Fi Sales, 418 East Tennessee
Thurou Electronics Inc., 729 N. Monroe St.

TAMPA

Burdett Sound & Recording, 3619 Henderson Blvd.
Galloways, 601 S. Audabon
House of Music, 7738 Hillsboro Ave.
Leader Electronics, 3411 S. Dale Mabry Hy.
Sound Equipment Co., 316 N. Dale Mabry Hwy
Thurou Electronics Inc., 121 S. Water St.
Viviana Stereo & Hi Fi Center, 3200 W. Hillsboro
Yale Electronic Enterprises, 2732 Florida Ave.

VERO BEACH

Creed's Hi Fi House, 2902 Ocean Dr.

WEST PALM BEACH

Goddard Distributors Inc., 1309 N. Dixie P.O.B. 829
Henry Peerson, 509 So. Olive
Thurou Electronics Inc., 327 Lawe Okeechobee Rd.

WINTER HAVEN

Carter's, 1393 6th St., N.W.

WINTER PARK

Audiotronics Inc., 918 Orange Ave.
Laird Electronics, 803 W. Fairbanks Ave.
The Music Box, 333 Park Ave. So.

GEORGIA**ADEL**

Sineath's House of Music

ALBANY

The Walter Flint Co., 615 Third Ave.

ATLANTA

Baker Audio Associates, 1140 Peachtree St., N.E.
High Fidelity S. S. S., 606 Peachtree St., N.E.
L & M Electronics Inc., 3693 Roswell Rd., N. E.
Olson Electronics, Inc., 485 Peachtree St., N.E.
Southeastern Radio Parts Co., 400 W. Peachtree St.
Specialty Distributing Co., Inc., 763 Juniper St., N.E.

AUGUSTA

Edwin's Teletronics Sales & Service, 1016 Broad St.
N & W Camera Exchange, 220 8th St.

COLUMBUS

Dan's Tape & Hi Fi Center, 1208 First Ave.
Radio Sales & Service, 2000 12th Ave.
Specialty Distr. Co., 1325 Webster Ave.

MACON

Specialty Distributing Co., Inc., 539 Arch St.

SAVANNAH

Norwood's Record Shop, 210 Broughton St., E.
Public TV Radio Supply Co., 10 W. State St.

HAWAII**HONOLULU**

Audio Center Ltd., 1633 Kapiolani Blvd.
Precision Radio Ltd., 1160 So. King St.
Radio Wholesale & Supply, 610 Ward St.
The Audio Center, 1241 Kona St.

IDAHO**BOISE**

Audio Visual Consultants Inc., 120 N. 10th St.
Robbies Radio & TV Supply, 3715 W. State Bx 5021

CALDWELL

John Rawlings Hi Fi, Marble Front Rd.

IDAHO FALLS

Larsen Music Co., 351 Broadway
Schwendimans, 380 "E" St.

POCATELLO

Bill Meyers Wholesale Dist., 621 635 S. 1st St.

ILLINOIS**ALTON**

Ebinger Sales Co., 2416 E. Broadway
Radionics Alton Inc., 1858 E. Broadway

AURORA

Hi Fi Record Shop, 47 Fox St.

BELLEVIEW

Lurtz Electric Co., 219 21 N. Illinois St.

BENTON

Lampley Radio Co., 812 N. McLeansboro St.

BLOOMINGTON

Moulic Specialties, 1005 W. Washington

BROADVIEW

Hi Fi Unlimited, 1303 5 Roosevelt Rd.

CARTHAGE

Wade's Hi Fi, 708 Buchanan St.

CHAMPAIGN

Radio Doctor's Hi Fi, 811 W. Springfield

CHARLOTTESVILLE

Music Center Hi-Fi House, 2110 Barracks Rd.

CHICAGO

Allied Radio Corp., 100 N. Western Ave.
Allied Voice & Vision, 921 N. Rush St.
Arpio, 4305 N. Lincoln
J. G. Bowman & Co., 515 E. 75th St.
Custom Audio, 201 N. La Salle
Dehaan Hi Fi, 9680 Plaza Terr
Devon Audio Center Inc., 2909 W. Devon Ave.
Evergreen Allied Hi Fi Inc., 2025 W. 95th St.
E-Z Teleservice, 2825 W. 58th St.
Ferrari, Inc., 3162 N. Sheridan Rd.
Frieds Inc., 3801 W. 26th St.
Gills Custom House Inc., 8805 S. Euclid
I. J. Koyle, 6116 N. Lincoln Ave.
Irving Joseph Radio Parts Inc., 5959 Fullerton Ave.
Arthur Nagel Inc., 918 E. 55th St.
Lukko Sales Corp., 4900 N. Elston Ave.
Harey A. Lund Co., 5236 So. Blackstone
Harvard Productions Inc., Nathan Yorke—Suite 1056,
208 S. LaSalle
Hi-Fi Inc., 10309 S. Western Ave.
Lambert Electronics, 2822 W. North Ave.
Merquip Co., 5904 W. Roosevelt Rd.
Midwest Electronics, c/o Nation Wide Radio 311 S.
Western Ave.
Mr. T Record Shop, 4700 Ingleside Ave.
Musicraft Inc., 48 E. Oak St.
Nation Wide Radio, 572 Randolph St.
Newark Electric, 223 W. Madison St.
Olson Electronics, Inc., 4101 N. Milwaukee Ave.
Olson Electronics, Inc., 123 N. Western Ave.
Photo Sound Equip., 6542 South Halsted St.
Ralph's Hi Fi, 5310 W. North Ave.

Radioelectric Sales & Service, 5819 W. Belmont Ave.
Schwartz Bros. Woodlawn Appl., 1215 E. 63rd St.
Star Electronic Distr., 7736 S. Halsted St.
Stolz Wicks Inc., 8110 S. Western Ave.
Viking Sales Corp., 3300 North Harlem
Walker Jimieson Inc., 311 S. Western Ave.
Winkler Sales Co., 5353 Milwaukee Ave.

DANVILLE

Bud Electronic Supply Co., 114 E. North St.

DECATUR

Macon Music, 227 N. Main St.
York Radio Supply Co., 518 Prairie

DIXON

Illinois Appliance, 407 W. First St.

EVANSTON

Allied Hi Fi Stores Inc., 602 Davis St.

EVERGREEN PARK

De Haan Hi Fi, 9680 Plaza Ter Evgrn

FOREST PARK

Tri Par Sound Systems Inc., 7320 Madison St.

FREEPORT

Custom Electronics, 842 S. Galena St.

GALESBURG

Knox Electronic Supply Inc., 67 North Cherry St.

HARWOOD HEIGHTS

Matherson-Selig Co., 7301 W. Wilson Ave.

HIGHLAND PARK

Columbia Household, 1805 St. Johns Ave.
Grant & Grant, 708 Central Ave.

HILLSIDE

Hillside Music Center, Hillside Shpg Ctr.

HINSDALE

Conn. TV Service, 11 S. Lincoln St.
Village Music Shop, 11 E. First Street

JACKSONVILLE

Baptist Radio Laboratories, 419 Mauvistierre St.

KANKAKEE

Radio Doctors Supply House, 892 W. Station St.
Veronda's Music Store, 360 E. Court Street

LIBERTYVILLE

Hi-Fi Center, 424 S. Milwaukee

LITCHFIELD

Hi Fi Music Center, 116 W. Union

MATTOON

Christie Hi Fi Studio, 1414 Broadway Ave.
Mattoon Radio & TV Supply, 212 N. 20th St.

MOLINE

Lofgren Distr. Co., 1202 4th Ave.

MT. PROSPECT

Harvard Productions Inc., 854 E. Northwest Hwy.

OAK PARK

Allied Voice & Vision Inc., 7055 W. North Ave.
Audio Interiors, 137 N. Oak Park Ave.
Melvin Electronics, 541 W. Madison
Village Hi Fi, 113 No. Oak Park Ave.

PARK RIDGE

Electronic Center, 804 Higgins Rd.

PEORIA

Camera Center, 221 Main Street
Electronics Diversified Inc., 1825 W. Gilbert Ct.
Klaus Radio & Electric, 403 E. Lake St.
United Radio Service, 707 Main St.

QUINCY

Gates Radio Co., 123 Hampshire

RIVERDALE

Audio Distr, 14218 S. Indiana Ave.

ROCKFORD

J & M Radio & TV Supplies, 1133 Railroad Ave.
Mid West Associated, 506 Walnut St.
Rockford Hi Fi Shop Inc., 120 N. Church St.
Schnulle's Hi Fi Shop, Inc., 1413 North Main St.
Superior Rockford Inc., 606 7th St.
The Record Shop, 120 N. Church St.

SPRINGFIELD

Harold Bruce Co., 1120 E. Capitol
The Music Shop, 220 S. Fifth St.
United Television Co., 217 E. Washington St.

VILLA PARK

Villard Audio, 126 S. Myrtle

WAUKEGAN

The Record Hi Fi Shop, 1817 Glenflora Rd.
Waukegan Radio Supply, 2730 Grand Ave.

WOOD RIVER

Audio Electronics Co., 15 E. Ferguson Ave.

ZION

Petes Radio, 2700 Enoch

INDIANA

ANDERSON

Anderson Electronic Supply, 515 Pendleton Ave.
Joe's Record Shop, 1240 Meridan St.
Jones Hi Fi Sound Supply, 2237 Crystal

ANGOLA

Lakeland Radio Supply, 525 S. West St.
Shaw Electronic Supply, 200 S. Darling St.

BLOOMINGTON

Lefferson Radio Co., 405 S. Walnut St.
Stansifer Radio Co., 1805 S. Walnut St.

BRAZIL

House of Music, 816 No. Alabama St.

EAST CHICAGO

Acro Distributing Co., 4801 Olcott Ave.

ELKHART

Electronic Parts Inc., 1003 S. Main St.

EVANSVILLE

Castrups, 1014 W. Franklin St.
Geo. C. Mottle Co., 17 S. E. First St.
Ohio Valley Sound, 20 E. Sycamore St.
Service Assoc., 1162 Mt. Auburn Rd.
Wesco Radio Parts, 428 Pennsylvania St.
Sam Wherry Hi Fi House, 1702 Division St.

FORT WAYNE

Bohn Sound Engr. Co., 6137 Lincoln Hwy East
Brown Electronics Inc., 1032 Broadway
Holland Standards Inc., 2435 Hoewelwood Dr.
Maxwell's Radio, 804 E. Jefferson
Roehm Radio & Sound, 3706 So. Calhoun St.
Warren Radio Co., 1716 So. Harrison St.

GARY

Cosmopolitan Radio Co., 524 Washington St.
Steel City Tire & Tape Co., 439 E 5th Ave.

HAMMOND

Hall's Electronic Distributor, 7428 Calumet Ave.
Tri City Electric Co., Inc., 6241 Calumet Ave.

HARTFORD CITY

Hedstrom Hi Fi, Park Ave.

INDIANAPOLIS

Brown Distributing Co., 3746 College Ave.
Fidelity Radio, 3873 East Washington
The Golden Ear, 24 W. Washington
Graham Electronic Supply Inc., 122 So. Senate Ave.
Marsh & Assoc., 960 Consolidated Bldg.
Meunier Radio Supply Co., 811 E. Michigan St.
Radio Dist Co., 814 No. Senate
Raub Radio & TV, 5908 No. College Ave.
Rodefald Co., Inc., 614 N. Capitol Ave.
Van Sickle Radio & Supply Co., 4131 No. Keystone
G. L. Vonnegut & Co., 5023 N. Capitol St.
Walton Hi Fi, 4121 N. Keystone Ave.

LAFAYETTE

Lafayette Radio Supply Inc., 408 E. North

MARION

Hedstrom Hi Fi, 126 E. 5th St.

MICHIGAN CITY

Tri-State Electrical Supply, 210 E. Michigan St.

MUNCIE

Muncie Electronics Supply Inc., 222 No. Madison
Muncie Hi Fidelity, 2320 So. Madison Ave.

PERU

Clingaman Sound Equipment Co., 814 W. Main St.

PLYMOUTH

Shemberger's Music Store, 125 E. Laporte St.

RICHMOND

Fox Electronic Co., 711 So. 9th St.
Radio & TV Distributing of Richmond, 717 So. Fifth St.

ROLLING PRAIRIE

Rolling Sound Service, 350 E. 350 North

ST. JOHN

Knollwood Hi Fi, Box 273

SOUTH BEND

Colfax Co., Inc., 747 S. Michigan St.
Frick Electric & TV Inc., 1901 Miami St.
Mendozas, 241 Dixie Way North
Radio & TV Distr. of South Bend, 116 No. Hill St.
Radio Dist. Co., 1212 S. High St.
Al Smith's Hi Fi Studio, 412 S. Michigan St.

TERRE HAUTE

C. T. Evinger Co., 1216 Wabash Ave.
Midwest Radio & Supply Co., 2015 Garfield Ave.

VALPARAISO

Jess Bowman & Assoc., 257 W. Lincoln Way
Erwin & Owenby, Route 6

VINCENNES

Gray's Jewelers, 227 Main St.

WABASH

Mark's Camera & Hi Fi, 14 W. Canal St.

WEST LAFAYETTE

The Golden Ear, 108 Northwestern Ave.

IOWA

BURLINGTON

Electronic Engr & Supply Co., 100 F & M Bank Bldg.

CEDAR RAPIDS

Ken Els Radio Supply Co., 128 31st St. N. E.
Iowa Radio Supply Co., Inc., 719 Center Point Rd.

COUNCIL BLUFFS

World Radio Laboratories, 3415 West Broadway

DAVENPORT

Arthur P. Griggs Piano Co., 320 Harrison St.
Tapetronics, 234 Dixwell Court
TCR Distributors, 1205 East River Dr.

DES MOINES

Hieb Radio Supply Co., 4118 Lincoln Place Dr.
Iowa Sound Co., 1210 Grand Ave.
Radio Trade Supply Co., 1224 Grand Ave.

DEWITT

Donald Waggoner Radio & TV Service, 804 Eighth St.

DUBUQUE

Modern Music, 599 Main St.
Roshek Bros. Co.

FORT DODGE

Ken Els Radio Supply Co., 428 Central

IOWA CITY

Woodburn Sound Service, 218 E. College St.

MARSHALLTOWN

John C. Steffa, 503 Lee St.

MASON CITY

A & B TV Supply Co., 15-5th St., S.W.
The Record Salon, 25 First St. N.E.

SIOUX CITY

Molstad Dist. Co., Inc., 701 Fifth St.
Wolffs Hi Fidelity, 1907 Morningside Ave.

SPIRIT LAKE

Avery, 1905 Erie Ave.

WATERLOO

Farnsworth Radio & Television, 201 E. Mullan Ave.

KANSAS

ATCHISON

Marple Music Company, 707 Commercial St.

DODGE CITY

Dodge Music & Jewelry, 720 2nd Ave.

GIRARD

Girardis, R R 3

HUTCHINSON

Mayfield Music Co., 5 So. Main

LAWRENCE

Fred E. Sutton & Co., 925 Massachusetts Ave.

McPHERSON

Crabbs Town & County Store, 319 No. Main St.

PITTSBURG

Girardis Hi Fi Center

TOPEKA

Acme Radio Supply, 412 E. 10th St.
Plaza Television, 1408 Huntoon

WELLINGTON

Schrag Radio & Television, 302 No. Washington

WICHITA

Audio Arcade, 445 North Oliver
Electronics, 337 North Waco
Excel Distributors, 118 W. 2nd St.
McClelland Gardner Sound Inc., 229 W. William
Radio Supply Co., 115 Laura
Sound Merchandisers, Inc., 6401 E. Kellogg
Stark Suburban Sound, 6401 E. Kellogg

KENTUCKY

ASHLAND

Buchanan Recording Serv., 1409 Central Ave.

COVINGTON

Hi Fi Music Co., 524 Madison Ave.
United Radio Co., 313 Bakewell St.

LEXINGTON

J. M. Hisle & Associates, 405 7 So. Upper St.
Lexington Electronic Supply Co., 824 E. Third St.
Barney Miller Inc., 232 E. Main St.

LOUISVILLE

Arcby Electronics, 540 E. Gray St.
P. I. Burkes & Co., 659 S. Ninth St.
W. D. Gatchel & Sons Inc., 431 W. Walnut
Hi Fi Trading Post Inc., 1024 So. 3rd St.
Lewis Sound Service, 226 W. Liberty St.
Magi Chord Hi Fi, 2730 Frankfort St.
Sound Unlimited, 109 W. Broadway
The Golden Ear, 610 S. 3rd Street
Universal Radio Supply Co., 533 So. 7th St.

OWENSBORO

Wilson Brothers, 2628 New Hartford Rd.

PADUCAH

Warren Radio Co., 455 S. 31st St.

ST. MATTHEWS

Southern Dist., 3712 Lexington Rd.

LOUISIANA

ALEXANDRIA

Bell Radio Supply Co., 1109 Bolton Ave.
Central Radio Supply, 601 N. 3rd St.
Stanley Projection Co., 1000 Bolton Ave.

BATON ROUGE

Electronic Supply, 1753 N. 21st St.
Huards Sound Service, 4900 Government St.
Louisiana Radio & Television, 1645 Plank Rd.
Ogden Park Record Shop, 618 No. 3rd St.
Ralphs Radio Elec. Supply, 812 Main St.
Southern Radio Supply Co. Inc., 1112 North Blvd.

BOSSIER CITY

Wilson's H F, 108 Bossier Center

LAFAYETTE

Butcher Brothers, 102 E. Sincow
Lafayette Radio Equipment, 1023 West Simco
Lopez Music Store, 700 Gen. Mouton St.
The Music Mart, 235 No. Main
Ralphs Radio Electronic Supply, 3004 Cameron St.

LAKE CHARLES

Electronics Unlimited, 3220 Ryan St.
Quality Electronics, 326 Broad St.
Ralphs Radio Electronic Supply, 911 Fourth Ave.
Sylvans Sound Service, 604 10th St.
Wholesale Radio Equip., 1722 Common St.

MONROE

C & O Electronics, 201 S. Stanley St.
Hole & McNeil, 421 Walnut
Joannes House of Sound, 1308 N. 18th St.
Television Wholesale Supply Co., 816 18 Jackson St.

MORGAN CITY

Ralphs Radio Electronic Supply, 715 Brasher St.

NEW IBERIA

Brooks Elec. Supply, 300 W. Pershing St.
Ralphs Radio Electronic Supply, P.O. Box 588

NEW ORLEANS

A C Denny Radio, 512 St. Charles St.
Wm. B. Allen, 1601 Orleans Ave.
Bell Radio Supply, 2625 Tulane Ave.
Columbia Radio & Supply Co., 3940 Third St.
Consolidated Tech Inc., 7825 Forshey St.
Crescent Radio & Supply Inc., 1600 Baronne St.
Custom Electronics Inc., 4215 S. Clairborne
Electronic Parts Corp., 223-225 N. Broad St.
Hi-Fi, Inc., 537 S. Clairborne Ave.
The Music Shop, 4215 S. Clairborne Ave.
Radio Parts Inc., 807 Howard Ave.
Shuler Supply Co., 2508 Tulane Ave.
Southern Radio Supply, 1909 Tulane Ave.
Walther Bros. Co., Inc., 1722 Poydras St.
Philip Werlein Ltd., 605 Canal St.

OPELOUSAS

Opelousas Radio Equip. Inc., 720 West Galie

SHREVEPORT

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Kolemay Sales Co., 2530 Linwood Ave.
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Sports Center Inc., Herschel St.

LEWISTON

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Canfield Flexiphone Agency, 57 Portland St.
Maine Electronic Supply Co., 148 Anderson St.

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House of Fine Music, 241 West Street

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Baltimore Dictating Mach., 3316 Greenmount Ave.
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High Fidelity House, 5127 Roland Ave.
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Olin Dist. Co., 6009 Eastern Ave.
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Sirkis Music, 3334 Greenmount Ave.
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Radio Shack Corp., South Shore Plaza

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Buzzards Bay Electronic Supply Co., 196 Main St.

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Minute Man Radio Co., Inc., 28 Boylston St.
National Sales Co., 2085 Massachusetts
World-Tronics, 1077 Massachusetts Ave.

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Hi Fi Studio, 277 Worcester Rd.

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Alco Electronics, 3 Wolcott Ave.

MIDDLETON

Custom Craft High Fidelity, Lake St., Box 208

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C. E. Beckman Co., 11 Commercial St.

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Sammy Vincent, 23 North St.

SAUGUS

Radio Shack Corp., Route 1 N.E. Shopping Ctr.

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Soundco Electronic Supply, 147 Dwight St.
Springfield Radio Co., 405 Dwight St.

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Sight & Sound Shop, 489 Humphrey St.

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David B. Dean Co., Rte 44 off Expresswy

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Music Box Inc., 58 Central St.

WEST NEWBURY

Anderson Hi Fi, 841 Main St.

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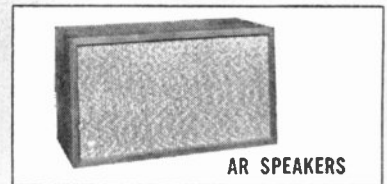
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Hi Fi House, 720 Tahoe St.
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Radio Supply of Nevada, 690 Tahoe St.
Saviers Electric Supply, 640 Sierra St.

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Wright Sound Systems, 25A South St.

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Music Age, 171 Route 4

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Nidisco-Trenton, Inc., 985 Princeton Ave.
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Radio Equipment Corp., 5 Center St.

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Snyder Electronics, 39 25 Bell Blvd.

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Morris Distr. Co., Inc., 195 Water St.
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Fordham Radio Supply Co., 265 E. 149th St.
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Gem Electronics, 1216 Jerome Avenue
Lafayette Radio, 542 E. Fordham Pl.
Slate & Co., 3960 Merritt Ave.
Tri-Par Dist. Co., 1558 White Plains Rd.
Wescon Electronics, 580 East Fordham Rd.

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AMA, 1625 Bedford Ave.
Audio Exchange, Inc., 1065 Flatbush Ave.
B. S. A. Customs Inc., 876 Flatbush Ave.
Bay Electronic Distributors, 3480 Nastrand
Benray Electronic Distributors, 485 Coney Island Ave.
Sam Buchman, 860 Atlantic Ave.

Churchill Custom Hi Fi, 436 Rockaway Ave.
Dorasin Distributing Corp., 1749 McDonald Ave.
Electronic Equipment, 2912 Atlantic Ave.
F. D. Cabinet Works, 2731 Atlantic Ave.
Jerome Fulton Inc., 943 Flatbush Ave.
Gem Electronics, 59 Willoughby St.
Giltone Hi Fi, 5004 Kings Hwy.
Green Tele. Radio Distributors, 3701 18th Ave.
Hy Grade Electronics Inc., 9216 Church Ave.
Kent TV, 505 Driggs Ave.
E. J. Korvette, 485 Fulton St.
Laco, 49 24 4th Ave.
Masterpiece Showplace, 1801 Kings Hwy.
Mark Electronics, 1171 Flatbush Ave.
National Radio Parts, 572 Albany Ave.
Paulton Electronics Corp., 6325 New Utrecht Ave.
The Sound Room, 1509 Bedford Ave.
Starling Electronics Corp., 1600 Sheepshead Bay Rd.
Styleline Television Corp., 597 Flatbush Ave.
Styleline Television Corp., 447 Rockaway Ave.
Television Parts Inc., 1910 Coney Island Ave.
Witmal Electronics Corp., 126 Manhattan Ave.

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Fisher Sound Systems, 2238 Bailey Ave.
Genesee Radio & Parts Co., 2550 Delaware Ave.
O'Brien Electronics, 1383 Delaware Ave.
Olson Electronics, Inc., 711 Main St.
Radio Equipment, 147 Genesee St.
Sheridan High Fidelity Ctr., 2200 Sheridan Drive
Standard Electronics Inc., 1497 Main St.
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Sirkins Inc., 2339 Hempstead Tpke.

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Bay Electronic, 136 05 35th Ave.
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Hempstead Electronics, 414 Fulton Ave.
Newmark & Lewis, 43 Main St.
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Lafayette Radio, 165 08 Liberty Ave.
Norman Radio Distr. Inc., 94 29 Merrick Rd.
Peerless Radio Distr. Inc., 92 32 Merrick Rd.
Radio Wire Television, 165 08 Liberty Ave.

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Sheridan Hi Fi Center, 2200 12 Sheridan Dr.

KINGSTON

Arace Electronic Dist., 16 Van Deusen St.
Central Electronics Inc., Albany Ave. Ext.

LAURELTON

Inamex, 131-74 230th Street

LEVITTOWN

Newmark & Lewis, 2557 Hempstead Turnpike

LINDENHURST

TV Radio Parts, 26 28 E. Sunrise Hwy.

LOCKPORT

Lockport Audio Center, 415 High St.

LONG BEACH

Tiben Music Center, 60 W. Park Ave.

LONG ISLAND CITY

Electronic Supply Corp., 41 08 Greenpoint Ave.
Graybar Electric Co., 21 15 Bridge Plaza N.

LYNBROOK

Dantomauro Furniture, 616 Merrick Rd.
Peerless Radio Dist. Co., 19 Wilbur St.

MALONE

Roy Supply Inc., 55 W. Main St.

MAMARONECK

Custom Design of Westchester, 510 W. Post Rd.

MANHASSET

Audio Exchange, 451 Plandome Rd.

MASSAPEQUA

Sunrise Electronic Supply, 12 Sunrise Hwy.

MIDDLETOWN

Certified Electronics Inc., Wickham Ave. Ext. Rt. 84
S & L Electronics, 17 21 Cottage St.

MINEOLA, L. I.

Arrow Electronics Inc., 525 Jericho Turnpike

MT. VERNON

Davis Radio Dist. Co., Inc., 66 E. 3rd St.
Fischer Dist. Co., 620 So. Columbus Ave.
Gem Electronics of Mt. Vernon, 66 East 3rd St.

NEWBURGH

Chief Electronics Inc., 248 Washington St.
Seaman's Photo Supplies, 386 Broadway

NEW HYDE PARK

Dressner Audio Sales, 1523 Jericho Tpke.

NEW YORK CITY

Adson Radio & Electronics Co., 189 Greenwich St.
Airex, 85 Cortlandt St.
Amparon Electronics, 24 East 81st Street
Argus X Electronics, 505 East 12th St.
Arrow Electronics Inc., 65 Cortlandt St.
F. B. Arthur Inc., 149 E. 57th St.
Asco Sound, 115-17 West 45th Street
Audio Unlimited, 190 Lexington Ave.
Bonafide Radio & Electronics Corp., 72 Cortlandt St.
Burgers Television & Radio Service, 1409 Second Ave.
Bryce Audio Appliance, 110 W. 40th St.
Center Electronics, 72 Cortlandt St.
Churchill Custom Hi Fi, 11 East 45th St.
Concord Radio, 81 White St.
Consolidated Radio Sales Corp., 768 Amsterdam Ave.
Coronet Electronics, 120 Liberty St.
Crown Electronics, 64 Cortlandt St.
Dale Electronics Co., 244 W. 14th St.
Davega, 63 Cortlandt St.
Dorson Distributing Corp., 60 W. 15th St.
Durant Sound Equipment Co., 793 Lexington
Electronic Center, 160 Fifth Ave.
Electronic Workshop Sales Corp., 26 W. Eighth St.
Electronic World Inc. 1799 First Ave.
Festival Hi Fi & Recording Co., 70 W. 39th St.
Carl Fischer Inc., 165 W. 57th St.
G. Schirmer Inc., 4 E. 49th St.
Gem Electronics, 202 East 44th St.
Gem Electronics, 205 Fulton Street
Sam Goody Inc., 666 Third Ave.
Sam Goody Inc., 250 West 49th Street
Grand Central Radio, 124 E. 44th St.
Gray Sound, 441 Madison Ave.
Greylock Electronics Supply, 554 West 168th St.
Harmony House, 1085-85 Lexington Ave.
Harrison Radio, 225 Greenwich St.
Harvey Radio Co., 103 W. 43rd St.
Heins & Bolet, 68 Cortlandt St.
Hi Fidelity Center, 220 East 23rd Street

Hi Fiddle Dee, 189 West 10th St.
Hi Fi Hq. Inc., 235 East 60th St.
Hudson Radio & Television Corp., 37 W. 65th St.
Key Electronics Co., 120 Liberty St.
Kopper Products, 125 East 88th Street
E. J. Korvette Inc., 12 E. 46th St.
E. J. Korvette, 575 Fifth Ave.
Lafayette Radio, 100 6th Ave.
Leonard Radio, 69 Cortlandt St.
Liberty Music Shops, 450 Madison Ave.
Lion Electronics, 215 Fulton Street
Lyric, 1221 Lexington Ave.
Magic Vue Television Corp., 323 E. 13th St.
Marconi Bros., 864 Lexington Ave.
A. L. Matthews & Co., 2751 Holland Ave.
Midway Radio & Electronics Corp., 60 W. 45th St.
Milo Electronics, 530 Canal St.
Milo Trading Corp., 215 Fulton St.
Murrays Audio Center Inc., 655 Lexington Ave.
Murray's Audio Centre, 12 East 42nd St.
Music Masters, 25 West 43rd Street
National Radio Distr Manhattan Inc., 1799 First Ave.
New York Hi-Fi Exchange, 1034 A Lexington Ave.
O & W Radio Co., 141 Cedar St.
Rabson's, Inc., 119 West 57th St.
Recording Tape Co., 123 E. 88th St.
G. Schermer, 4 East 49th St.
Sonocraft Corp., 115 117 W. 45th St.
Stentors Recording Machine Co., 469 Fourth Ave.
Sun Radio & Electronics Co., Inc., 650 6th Ave.
Sylvan Wellington Co., 269 Canal St.
Terminal-Hudson Elect., 48 West 48th Street
Terminal Hudson Electronics Inc., 3 W. 61st St.
Terminal Hudson Electronics Inc., 212 Fulton St.
Terminal Radio Corp., 85 Cortlandt St.
Thalia Hi Fi, 762 Madison Ave.
Wexler Weikers & Co., 4380 Broadway
Wexler & Sporty, Inc., 125 Lafayette Street

NIAGARA FALLS

Highland Furniture Co., 2521 25 Highland Ave.
Niagara Falls Audio Center, 1720 Pierce Ave.

NORTH BABYLON

Sirkins, 1182 Deer Park Ave.

OLEAN

Blumenthal Co., 234 N. Union
Radio Equipment Corp., 1615 W. State St.

ONEONTA

Lynn M. Finch, South Side Dr.

PATCHOGUE

Standard Paris Corp., 325 West Main Street

PLATTSBURG

Roy Supply Inc., 13 Saily Ave.

POUGHKEEPSIE

B & B Electronics Co., 535 Main St.
Central Electronics Inc., 5 Parker Ave.
Chief Electronics Inc., 14 N. Bridge St.
Dutchess Television, 5 Spackenkill Rd.
Higgins & Sheer Electronics Dist., 105 Dutchess Turnpike

REGO PARK

Churchill Custom Hi Fi Ltd., 95-28 Queens Blvd.

RICHMOND HILL

Anchor Electronics Distr. Corp., 116 01 101st Ave.

RIVERHEAD, L. I.

D & S Electronics Inc., 201 Railroad Ave.

ROCHESTER

Craig Audio Laboratory, 12 Vine St.
Jerry Fink Co., 644 Clinton Ave. S.
Masline Electronics Inc., 511 Clinton Ave. S.
Rochester Radio Supply Co., 600 E. Main

ROCKVILLE CENTRE

Green Tele Radio, 14 16 So. Village Ave.

ROME

Rome Electronics Inc., 108 110 Spring St.

ROSLYN

Audio by Zimet Inc., 1038 Northern Blvd.

SCARSDALE

Boynton-Goodall Audio, 737 White Plains Rd.

SCHENECTADY

Adirondack Electronics, 710 12 Broadway
Electric City Radio Supply, 2469 Albany St.
House of Harmony, 1444 State St.
Schenectady Electronic Dist. Corp., 1708 Altamont

STATEN ISLAND

B & D Distributing Co., 639 Thompkins Ave.
Green Tele Radio, 144 Bay St.

SYOSSET

Lafayette Radio, 111 Jericho Turnpike

SYRACUSE

W. E. Berndt, 655 S. Warren St.
W. G. Brown Sound Equip. Corp., 521 E. Washington
Cambridge Electronics, 468 Westcott St.
Morris Distributing Co., Inc., 1153 W. Fayette St.
Olmsteads Victrola Shop, 752 So. Crouse Ave.
Stewart W. Smith Inc., 325 E. Water St.
Syracuse Arms & Supply Co., 125 Cambridge St.
Syracuse Radio Supply Co., 620 S. Salina St.
Varsity Camera Shop Inc., 804 So. Crouse Ave.

TROY

Trojan Electronic Supply Co., 15 Middleburgh St.

Troy Camera Shop Inc., 51 3rd St.

TUCKAHOE

Boynton Studio, 295 Main St.

UTICA

Associated Electronic Supply, 1429 Sunset Ave.
Soundrama Hi Fi Components, 1411 Oriskany St.
Vaeth Electric, 35 Genesee St.
Valley Electronics Labs., Inc., 1415 19 Oriskany St.

VALLEY STREAM

Gem Electronics of Valley Stream, 218 Sunrise Hwy.
Sam Goody, 44 N. Parking

WATERTOWN

Severance Photo Inc., 46 Public Sq.
Watertown Electronics, 680 Mill St.

WEST HEMPSTEAD

Churchill Custom Hi Fi, 159 Hempstead Turnpike

WHITE PLAINS

Audio Exchange, 203 Mamaroneck Ave.
Churchill Custom Hi-Fi, 141 East Post Road
Melville Radio Corp., 39 Main St.
Westchester Electronics, 610 Mamaroneck Ave.

WOODMERE

J & S TV, 1040 Broadway
Mort Electr Labs of N. Y. Inc., 1053 Broadway

WOODSIDE

Boro Electronics Inc., 69 18 Roosevelt Ave.

YONKERS

Gem Electronics, 1937 Central Ave.
Genco Lab. Sales, 12-14 Engine Place
Sam Goody Cross County, 5 Xavier Drive

NORTH CAROLINA

ASHEVILLE

Bradley Hi Fi Center, 826 Hendersonville
Freck Radio & Supply Co., 38 Billmore Ave.
Longs Distributing Co., Inc., 12 Billmore Ave.

CHAPEL HILL

Kemps Record & Hi Fi Equip., 207 E. Franklin St.

CHARLOTTE

Bradt Music Co., 1409 N. Independence
Dixie Radio Supply Co., Inc., 1431 Bryant St.
Joe Little Record Shop, 126 W. Fifth St.
Music Inc., 1415 Elizabeth Ave.
Holly Smith Sound Center, 213 So. Tryson St. and 4145
Park Rd.

DURHAM

Cobbs Television & Sound Inc., 308 Ban Air Ave.

FAYETTEVILLE

Eastern Radio Supply Inc., 835 Bragg Blvd.

GASTONIA

Hi Fi Sound Systems, 112 Green Dr.

GOLDSBORO

The Melody Shop, Sunrise Shpg Center

GREENSBORO

Harvey West Music Co., 226 W. Market St.
Johannesen Electric Co., Inc., 312 N. Eugene St.

JACKSONVILLE

Mallory Sales Inc., Hghy 24 E. P.O.B. 428

KINSTON

Custom Music Installations, 1101 S. Queen St.

NASHVILLE

Morris Bros., 812 St. Alston St.

RALEIGH

Southeastern Radio Supply Co., 414 Hillsboro St.
Stephenson Music Co., 2011 Cameron St.

ROCKY MOUNT

W. C. Reid & Co., 143 S. Main St.

WILMINGTON

French Radio Co., 1220 Dock St.

WILSON

Dicks Electrical Co. High Fidelity Dept.

WINSTON-SALEM

Dalton Hege Radio Supply Co., 938 Burke St.
Electronic Wholesalers, Inc., 938 Burke St.

NORTH DAKOTA

BISMARCK

Electronic Center, 214 Broadway

FARGO

Bristol Distributing Co., 1345 Main Ave.
Radio Equipment Co., 806 "P" Ave.
Walter Electronic Co., 9402 N P Ave.

MINOT

Bristol Distr Co., 25 N. Main St.
John Iverson Co., 216 2nd St., S.W.

OHIO

AKRON

Electronic Engineering Co., 362 W. Bowery St.
Olson Electronics, Inc., 69 West State Street
Sun Radio Co., 110 E. Market St.
Temple Square Hi Fi Inc., 739 N. Main St.

ASHTABULA

Morrison Radio Supply, 331 Center St.
Warren Radio Inc., 776 Center St.

ATHENS

Vere Smiths Audio Visual Service, 42 N. Court St.

CANTON

Burroughs Radio Co., 2705 Fulton Rd., N.W.
Canton Stereo, 3023 Cleveland Ave., N.W.
George F. Ebel Co., 3017 Cleveland Ave.
Grasham Camera Center, 1326 Whipple N.W.
Walkeradio, 3301 Harrison N.W.
Geo. C. Willie Co., 601 Cleveland Ave. N.

CINCINNATI

Customcrafters Inc., 2259 Gilbert Ave.
Economy Electronics Dist. Co., 619 Elm Street
Herrlinger Distr. Co., 112 East Liberty St.
Hi Fi Audio Inc., 2000 Madison Rd.
Halub & Hogg, 14 Sycamore St.
Industrial Comm. & Sound, 3197 Linwood Ave.
Mytronic Co., 2145 Florence Ave.
Porter Engineering Co., 619 Elm St.
Steinbergs Inc., 633 Walnut St.
United Radio, 1314 Vine St.

CLEVELAND

Adventures In Music, 2172 S. Taylor
Atlas Radio Company, 714 Prospect Ave.
Audio Craft Co., 2915 Prospect Ave.
Custom Audio, 848 Huron Rd.
Custom High Fidelity Inc., 13449 Euclid Ave.
Edelmuth & Company, 1741 Euclid Ave.
Electronic Products, 1231 Main Ave.
Fox Radio Parts Company Inc., 4314 Lee Rd.
Hillcrest Record & Hi Fi Center, 6717 E. Gate Dr.
Music Unlimited, 13410 Detroit Ave.
National Audio Center, 1000 Hamilton Ave.
Olson Electronics, Inc., 2020 Euclid Ave.
Olson Electronics, Inc., 6813 Pearl Road
Perry Briggs Co., 4135 W. 150 St.
Pioneer Radio Supply Co., 5403 Prospect Ave.
The Progress Radio Supply Co., 413 415 Huron Rd.
Progress Radio Supply Co., 413 Huron Rd.
Radio & Electronic Parts Corp., 3235 Prospect Ave.
Seeway Electronic Supply Corp., 10014 Carnegie Ave.
Shaker Music Shop Inc., 16505 Kinsman Rd.
Phil Thal Appliance Co., 736 Prospect Ave.
Winteradio Inc., 1468 W. 25th St.

COLUMBUS

Anderson High Fidelity Center, 2453 Neil Ave.
Anthony Music Co., 3430 Indianola Ave.
Buckeye Electronics Distr. Inc., 242 E. Long St.
Electronic Supply Corp., 814 W. 3rd Ave.
Fisher Music Co., Inc., 3430 Indianola Ave.
Hughes Peters Inc., 111-117 E. Long St.
Magnetic Service Corp., 1670 West 1st Ave.
Olson Electronics, Inc., 142 N. High St.
Palmer Eng. & Electronics, 1589 West 5th St.
Scott Stereo, 2388 W. Broad St.
Whitehead Radio Co., 124 N. Grant Ave.

DAYTON

Custom Electronics Inc., 1918 S. Brown St.
Dayton Music Service, 311 Salem Ave.
Execulone Systems Co., 2671 South Dixie Hwy.
Goldkamp TV 3746 Salem Ave.
Ham N Hi Fi Inc., 314 Leo St.
Klopfs Music Shop, 320 Salem Ave.
Srepcu Inc., 314 Leo St.
Statts Friedman Co., 108 N. Jefferson

ELYRIA

El A Co., 235 Lodi St.

EUCLID

V. Demshor & Son Inc., 22034 Lake Shore Blvd.

FAIRVIEW PARK

Counterpoint Inc., 20971 Westgate Shop

LANCASTER

Bletzaker Electronics, 135 W. Chestnut St.
Commercial Music Service, P.O. Box 20
The Hi Fi Shop, 111 S. George St.

LIMA

Acme Photo Supply Inc., 207 W. High St.

LORAIN

Nelson & Fain, 1755 Oberlin Ave.
Pioneer Electronic Supply Co., 1648 Broadway

MANSFIELD

Audio Consultants, 81 Parkwood Blvd.
The Burroughs Radio Inc., 218 E. 2nd St.
Metronome, 1354 Lexington
Wholesaling Inc., 775 Springmill Rd.

MARIETTA

Marietta Radio & TV Supply Co., 1028 N. Greene St.

MARION

Audio Duplication Services, 239 East Church St.

MASSILLON

M. H. Martin Co., 1118 Lincoln Way E.

MIDDLETOWN

Hinkles Electronics, 5021 Grand Ave.

PARMA

Winteradio Electronic Sup. Co., 5373 Ridge Rd.

PORTSMOUTH

Sound Electronic Supplies, 7th & Findley Sts.

SALEM

Jones Company, 1090 Jones Drive

SANDUSKY

Barco Electronic Parts, 1725 Columbus Ave.
Monroe Service Inc., 640 Camp St.

SHAKER HEIGHTS

Adventures in Music, 20320 Farnsleigh Rd.

SPRINGFIELD

Standard Radio of Springfield, 1300 St. Paris Rd.

STEUUBENVILLE

D & R Radio Supply, 221 S. Third St.
Gerrero, 136 South 5th St.

TIFFIN

Electro Alarms Co., 24 S. Washington St.

TOLEDO

The Audio Center, 1546 Alexis Rd.
Hillebrand Electronics, 4665 W. Bancroft St.
Hines World of Sound, 621 Madison St.
The Jamieson Co., 3417 Dorr St.
Lifetime Electronics, 1501 Adams St.
Selectronic Supplies, 3185 Bellevue Rd.
Toledo Sound Equipment Co., 1758 Sylvania Ave.
Warren Radio Co., 1002 Adams St.

WARREN

Custom Electronics Co., 129 High St., N.E.
D & J Electronic Supply Co., 207 Elm Rd., S.E.
Radio Specialties Co., 136 Pine Ave., S.E.

YOUNGSTOWN

Armies Electronics, 320 W. Federal St.
Kochs Hi Fi Shop, 805 N. Hazelwood Ave.
Radio Paris Co., 230 E. Boardman St.
Ross Radio Co., 325 W. Federal St.

ZANESVILLE

Thompson Radio Supplies, 110 S. Sixth St.

OKLAHOMA**ARDMORE**

Steve The Radio Man, 525 R S W

ENID

Bill Cunningham Hse of Sound, 102 So. Grant
Johnsons Wholesale Electronics

LAWTON

I. G. Coles, 1805 Cache Rd.

MUSKOGEE

Sooner Radio & TV Supply, 208 N. Main

NORMAN

Hi Fi House, 753 Asp
Thompson Sound Systems, 315 W. Boyd

OKLAHOMA CITY

Atomic Sound Equip. Co., 117 N.W. 23rd St.
Biggs of Calif. Hi Fi, 417 N High
Electronic Supply Co., 212 N.W. 10th St.
General Electronics Inc., 1052 Classen Blvd.
Johnson Wholesale Electronics, 927 N.W. First
Larsen Music Co., 314 Park St.
Miller Jackson Co., 111 E. California
Radio & Sound Clinic, 1003 N. Shattell
Radio Supply Inc., 724 N. Hudson
Pete Soule Radio & TV, 3319 N. Villa
Trice Wholesale Co., 800 N. Hudson

SAPULPA

Jacks Camera Shop, 13 S. Park St.

SHAWNEE

Music Mart, 128 W. MacArthur

STILLWATER

Audio Sound Systems, 507 S. Washington

TULSA

Audio Electronics Inc., 216 E. 10th St.
High Fidelity Center Inc., 3529 So. Harvard
Imperial Sound Inc., 3505 S. Peoria
Midwest Electronic Supplies, 625 Wright Bldg.
Oil Capitol Electronics, 708 S. Sheridan
Radio Inc., 1000 S. Main St
S & S Radio Supply, 537 S. Kenosha
Science & Sound Center, 3529 S. Howard
Sight & Sound, 2120 So. Harvard
Sound Unlimited, 3745 S. Peoria

OREGON**ALBANY**

Home of Sound, 334 West Second Ave.

BEAVERTON

Sight & Sound, 4325 S.W. 96th Ave.

COOS BAY

Musicland, 134 S. 3rd

CORVALLIS

Chase Radio & TV, 435 S. Second

EUGENE

Lou Johnson Co., Inc., 207 E. 8th St.
Smeed Sound Service, 790 West Eighth St.
Thompsons, Broadway & Oak St.
United Radio Supply Inc., 974 W. 6th Ave.

GRANTS PASS

Rolfings Radio & TV, 120 S.W. H St.

KLAMATH FALLS

R. F. Supply Co., 2367 S. 6th St.

MEDFORD

United Radio Supply Inc., 605 N. Fir St.
Verl G. Walker Co., 205 W. Jackson

PENDLETON

Pendleton Music House, 112 S. Main St.
The Town Shop, Main at Court Ave.

PORTLAND

Adon Oregon Ltd., 40 N.E. 28 Ave.
H & R Radio Supply, 5141 N. E. Sandy Blvd.
Hawthorne Electronics, 712 S.E. Hawthorne Bl.
Hi Fidelity Unlimited Inc., 2816 S.W. Sam Jackson
Lou Johnson Co., Inc., 1506 N.W. Irving
Manchester Chandler Co., 2915 N.E. Alberta St.
Meier & Frank Inc., Fifth & Sixth Sts.
Oregon Typewriter & Recorder Co., 340 S.W. 5th Ave.
Otis Radio & Appliance, 3670 S.E. Hawthorne
Portland Radio Supply Co., 1234 S.W. Stark
Sixth Avenue Records, 511 S.W. 6th Ave.
Television & Radio Supply Co., 1327 S.E. Grand
United Radio Supply Inc., 22 N.W. Ninth Ave.

SALEM

Cecil Farnes Co., 440 Church St., N.E.
Lou Johnson Co., Inc., 935 S. Commercial

PENNSYLVANIA**ALLENTOWN**

Baker Communications, 9 S. 12th St.
Federated Purchaser Inc., 1115 Hamilton St.
E. J. Harte & Co., 1339 1/2 Gordon St.
A. A. Peters, 231 No. 7th St.
Radio Electric Service Co., 1313 Linden St.

ALTOONA

Book & Record Shop, Pleasant Valley Shopping Center
Hollenhacks Radio Supply, 2221-25 Eighth Ave.

ARDMORE

Crt. Dist. Co., 53 W. Lancaster Ave.
Soundex Electronics, 45 W. Lancaster Ave.

BRADDOCK

Marks Paris Company, 317 Braddock Ave.

BEAVER FALLS

Grubers, 1327 Seventh Ave.
Reliable Radio & TV Supply, 617 17th St.

BETHLEHEM

Audio Laboratories, 808 Mahican St.
Buss Radio Supply Co., 431 W. Broad St.

BLOOMSBURG

Alvo Elect. Dist. Inc., 1027 Old Berwick Rd.

BRISTOL

Pewell Elec. Sales Co., 400 Otter St.

BUTLER

Barron's Radio Supplies, 333 W. Jefferson St.

CHARLEROI

Mon Valley Electronics Inc., 615 McKean Ave.

CHESTER

A C Radio Supply Co., 126 E. 24th St.
Bell Electronics Supplies Inc., 1835 W. 9th St.

DOYLESTOWN

Louis Pearlman, 34 S. Main St.

EASTON

Federated Purchaser, 921 Northampton St.
Radio Electric Serv. Co., 1700 Northampton St.

ELKINS PARK

A. G. Radio Parts Co., 939 Township Line

ERIE

Mace Electronics, 24th & French
Warren Radio Co., 1313 Peach St.

HARRISBURG

D & H Dist. Co., 2535 N. 7th St.
Electric Wholesalers Inc., 1922 Paxton St.
Harrisburg Radio Laboratory, 1124 Market St.
Music Box, 1325 Derry St.
Radio Distributors Co., 915 S. 13th St.
Terry Phone Inc., 3805 Paxton St.

HAVERFORD

Kass Electronics Distr., Westchester Tpke.

HAZELTON

Moyer Electronic Supply Co., 758 N. Locust St.
Pensocks, 136 N. Wyoming St.

HOLLIDAYSBURG

Peggy & Toms Music Corner, On the Diamond

HOMESTEAD

M. Leff Radio Parts, 247 W. 8th Ave.

JOHNSTOWN

Cambria Equipment Co., 17 Johns St.
Hesselbein Sound Studio, Westmont Shpg Center
TV & Radio Parts Co., Johnstown, Inc., 226 Main St.

LANCASTER

Geo. D. Borbey Co., 622 Columbia Rd.
Robert Romig Elect. Spec., 307 N. Duke St.

LEBANON

Geo. D. Borbey Co., Inc., 821 Quantin Rd.

Marts Music Store, 32 So. 9th St.

LEECHBURG

Kiski Valley Photo Supply, 160 Market St.

LEVITTOWN

Audio Lab., 121 Hedge Rd.

LEWISTOWN

Alvo Elect. Dist. Inc., 207 W. Market St.

LOCK HAVEN

Alvo Elect. Dist. Inc., 801 Bellefonte Ave.

MANSFIELD

B. A. Neal TV & Appl. Co., 50 W. Wellsboro St.

MCKEESPORT

Barno Radio Co., 927 Walnut St.
Hi Fi Center of McKeesport, 321 Sixth Ave.
McKeesport Electronics Inc., 1661 Fifth Ave.

MEADVILLE

Warren Radio Inc., 1057 S. Main St.

MERIAN

Hi Fidelity Electronics Sound Corp., 368 Montgomery Ave.

MEYERSDALE

Leo's Radio & TV Sales & Service, 331 Meyers Ave.

NEW BRIGHTON

Television Parts Co., 518 Fifth Ave.

NEW CASTLE

Home Music Systems, 311 Neschannock St.

NEW KENSINGTON

RPC Electronics Co., 1102 Second Ave.

NEWTON SQUARE

Herbicek & Mathews, 3109 W. Chester Pike

NORRISTOWN

Alma Radio Co., 550 Markley St.
General Radio Sup. Co., 624 W. Airy St.
Kratz Brothers, Corner Oak & Kohn St.

PAOLI

Hi Fi Center, 1550 E. Lancaster Ave.

PHILADELPHIA

A C Radio Supply Co., 1539 W. Passyunk Ave.
Air Tone Sound & Recording Co., 1710 Sansom St.
Allied Parts, 1320 W. Erie Ave.
Almo Radio Co., 913 Arch St.
Austin Electronics, 1627 Sansom St.
Barnett Bros. Radio Co., 622 Arch St.
Crl. Dist. Co., 13 So. 21st St.
Danby Radio Corp., 19 S. 21st St.
Friends, 614 Arch St.
General Sound Inc., 3500 N. 9th St.
Sam Goody of Snellenburgs Inc., 1125 Chestnut St.
Graybar Electric Co., 910 Cherry St.
Herback & Rademan, 1204 Arch St.
Lectronics of City Line Cir., 7644 City Line Ave.
Lee Electronics, 1112 Knorr St.
Harry Levin Inc., 3064 Kensington Ave.
J. F. McCarthy Inc., 719 No. 24th St.
Penn Electronic Parts Co., 5303 Frankford Ave.
Phila Electronics Inc., 1225 Vine St.
R E S Co. of Pennsylvania, 3412 Germantown Ave.
R E S Co. of Pennsylvania, 5930 Market St.
Radio 437 Store, 437 Market St.
Radio Clinic, 154 So. 60th St.
Radio Electric Service Co., 701 Arch
Record Shop, 251 So. 15th St.
Ree Bros., 7711 Ogontz Ave.
Raymond Rosen & Co., 51 St. & Parkside Ave.
Ten Gates Assoc., 6128 Marston St.
Al Steinberg & Co., 2520 N. Broad St.
Walker Radio Service Sales, 3rd & Fern Sts.

PITTSBURGH

Audio Associates, 115 Hawthorne Drive
Audio Video Co., 609 Hill Ave.
Cameradio Co., 1121 Penn Ave.
Concerto Room, 824 S. Aiken Ave.
Fotoshop Sq. Hill Inc., 5854 Forbes Ave.
Graybar Electric Co., 900 Ridge Ave.
Joseph Horne Co., Penn & Stanwix
House of Audio, 508 Stanwick St.
L. B. Electronics, 1521 Brownsville Rd.
Metropolitan Elect., Inc., 5648 Friendship Ave.
Modern Sound Co., Noblestown Road, RD #5
Olson Electronics, Inc., 5918 Penn Ave.
Opus One, 225 Oliver Ave.
Radio Parts Co., 929 Liberty Ave.
Sam Goody, 639 Liberty Ave.
So. Hills Electronics Sup. Co., 1420 W. Liberty Ave.
Tydings Co., 3337 Penn Ave.
Walks High Fidelity Center, 306 Forbes Ave.

POTTSTOWN

Geo. D. Barbey, 157 No. York St.

POTTSVILLE

Moyer Elect. Supply, 330 E. Norwegian St.

READING

A G Radio Parts Co., 628 Schuylkill Ave.
Geo. D. Barbey Co., Inc., 333 No. 4th St.
Electronic & TV Distr. Co., 201 S. 4th St.
Rader & Fasig, 704 Walnut St., 938 No. 8th St.

ROCHESTER

Grubers, 234 Adams

ROSLYN

Hi Fi Stereo Center, 1373 Easton Rd.

SCRANTON

General Radio & Refrig. Co., 1129 Wyoming Ave.
Fred P. Pursell, 1221-27 N. Wash. Ave.

SHARON

Radio Parts Co., 1891 E. State St.
Sharon Electronic Supply Co., 1344 E. State St.

SHARPSVILLE

L. C. Vath, P. O. Box C

ST. MARYS

B & R Electric Co., 26 Railroad St.

STATE COLLEGE

Alvo Electronics Dist. Inc., 103 S. Pugh St.
Shadle Associates, 151 So. Allen St.

SUNBURY

Moyer Electronic Supply, 310 No. 2nd St.

SWARTHMORE

Hi Fi Studio, 17 So. Chester Rd.
Wholesale Electronic Supply Co., P.O. Box 7

UNIONTOWN

TV & Radio Parts Co., 1 Mill St.

WARMINSTER

Allied Elect. App. Parts, York Rd. & Street Rd.

WASHINGTON

Electronic Sales & Service, 569 E. Maiden St.

WAYNE

High Fidelity House, 167 W. Lancaster Ave.

WEST HOMESTEAD

M. Leff Radio Parts Co., 247 W. 8th Ave.

WILKES-BARRE

Communication Eng. Corp., 41 N. Franklin St.
General Radio & Electronics Co., 396 S. Main St.
Radio Service Co., 346 S. Main St.
Shelborne Elects. Inc., 169 Penna Ave.

WILLIAMSPORT

Alvo Electronics Distributors, 123 E. 4th St.
General Radio & Electronics Co., 232 William St.
Lowry Elect. Sup., 643 Elmira Ave.

WILLOW GROVE

Radio Elec. Service Co., 29-31 York Rd.

WYNCOTE

Audio Electro, 300 E. Glenside Ave.

WYNNEDWOOD

Shryock Radio & Television Co., Bonwit Teller Bldg.

YORK

J R S Dist., 645 W. Market St.
Sol Kesslers Melody Shop, 205-207 S. George St.
Resco, 850 Bull Rd.
Wholesale Rad. Parts, 1650 White Rd. Rd. 7

RHODE ISLAND

CRANSTON

Radio Shack Corp., 1301 Reservoir Ave.
Sound O Rama Inc., 758 Reservoir Ave.

NEWPORT

J & S Supply Company, 25 Third St.

PROVIDENCE

Audionics Co., 790 N. Main St.
Del Padre Supply, 41 Broadway
De Mambro Radio Supply Co., Inc.
Wm. Dandreta & Co., 28 Wolcott St.
W. H. Edwards Co., 94 Broadway
Electronic Distributors, 41 Broadway
Gertz Inc., 257 Adelaide Ave.

WOONSOCKET

Adams Electronics, 176 Park Pl.

SOUTH CAROLINA

CHARLESTON

Fox Music House, 535 King St.
Radio Laboratories, 475 E. Bay St.
Wholesale Radio Supply Co., 515 E. Bay St.

COLUMBIA

Bradford's Record Shop, 1225 Main St.
Dixie Radio Supply Co., Inc., 1900 Barnwell St.
Hi Fi Music & Record Center, 621-23 Harden St.

FLORENCE

De Leon Finklea, Inc., 223 S. McQueen St.

GREENVILLE

Mary's Record & Hi Fi Center, 520 S. Main St.

SPARTANBURG

Four Star Distributors Inc., 491 Union St.

SOUTH DAKOTA

ABERDEEN

Burghardt Radio Supply, 102 S. 2nd St.

RAPID CITY

Burghardt Radio Supply, 403 Sturgis St.
Reade Electronics, 223 East Oakland

SIoux FALLS

Gefke Music Co. Hi Fi, 222 So. Main

McKenzie Distributors Inc., 800 N. Main Ave.
Warren Radio Supply, 115 S. Indiana Ave.

WATERTOWN

Burghardt Radio Supply Co., 621 4th St., S.E.

TENNESSEE

CHATTANOOGA

Camera & Craft, E. Ridge Shopping Ctr.
College High Fidelity, 2345 McCallie Ave.

JOHNSON CITY

Bowman-Howard Electronics, 2207 Kingsport-Bristol Blvd.

KINGSPOrt

Radio Electric Supply Co., 961 E. Sullivan
Watkin's Sound & Hi Fi, 116 Virginia St.

KNOXVILLE

McClung Appliances, 310 Georgia St., N.E.
Eunice Miller Interiors, 2704 Kingston Pike
Music Land, 5911 Kingston Pike

MEMPHIS

Glenn Allen Co., 1146 Union Ave.
Bluff City Distributing Co., 234 East St.
Hirsh Electronics, 1658 Union Ave.
Lavender Radio Supply Co., 180 S. Cooper St.
W & W Distributing Co., 644 Madison Ave.

NASHVILLE

Electra Distr. Co., 1914 West End Ave.
Nicholson's High Fidelity, 113-115 Nineteenth Ave. So.

NEWBERN

Audio Components, P.O. Box 207

OAK RIDGE

The Music Box, 5 Broadway

TEXAS

ABILENE

Crescendo Enterprises, 1801 Lincoln Dr.
R & R Electronic Co., 1010 Pine St.

AMARILLO

Audio Communications, 1601 West 3rd.
Nichols Paint & Wallpaper, 123 W. 6th St.
R & R Electronics Co., 707 S. Adams
Red Fearn Co., 1418 15th St.
West Texas Electronics, 1601 W. Third St.

ARLINGTON

Audio Acoustics, 130 Fairview

AUSTIN

Berkmans, 2234 Guadalupe St.
Hargis Austin Inc., 410 Baylor
High Fidelity Inc., 1605 Lavaca
Music Center, 2313 North Loop
Speedway Radio & TV, 2010 Speedway

BAYTOWN

Genes Hi Fi Center, 122 E. Texas Ave.

BEAUMONT

Audio Engineering, 2520 Calder St.
Brock Audio Inc., 2293 Calder Ave.
Gateway Audio, 186 Gateway
Montague Radio & Dist Co., 760 Laurel
Sterling Radio of Beaumont, 1160 Laurel

BIG SPRING

Hi Fi House, 503 Edwards Blvd.
Lavender Radio & TV Supply, 401 E. 2nd Ave.

BORGER

Humphreys Hi Fi Sales, 305 W. 10th St.

BROWNSVILLE

Blackburns, 747 E. Elizabeth
Electronic Equip. & Engr., 12th & Madison

BRYAN

Fidelity House, 2014 Texas Ave.

CONROE

Richard Keyes Electronics, 210 N. Main

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Electronic Equip. & Eng. Co., 805 S. Staples St.
Greens Music Shop, 3165 S. Alameda
Hi Fi Systems, 2126 Leopard
High Fidelity Inc., 56 Parkdale Plaza
Lavender Radio & TV Supply, 1627 31 S. Alameda
Leader Electronic Supply, 1701 Morgan
Radio Center, 1718 So. Alameda at 6th
Wicks Radio Equipment, 513 15 S. Staples St.

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Inman Radio, 325 Inwood Village
Inman Radio, 217 Lake Pk Shpg Vil
Music & Sound of Dallas, 118 Leslie
Ross Radio & Sound Equip., 1608 N. Haskell
Sanborns Hi Fi Center, 5551 W. Lovers Lane

Sound Engineering Co., 4329 Belmont
 Southwest Radio Supply, 1820 N. Harwood
 Town North Music, 5328 W. Lovers Lane
 Virginias Records, 26 Highland Pk VIII
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Denison Radio Supply, 310 W. Woodward

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Coxs Hi Fi, 303 Dumas Ave.

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 Hi Fi Shop, 2323 Washington Blvd.

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 House of Music, 115 So. Main St.
 Moore Radio Supply Inc., 147 E. 6th So.
 O'Laughlins Radio Supply, 113 E. Broadway
 Ralph Rytting Audio Inc., 3096 Highland Drive
 Standard Supply Co., 225 E. 6th So.

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 Meridian Electronic Equip Co., 1001 W. Broad St.
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 Lee Hartman & Sons Sound Equip., 3236 Cove Rd., N.W.
 Peoples Radio & TV Sup. Co., 1015 Moorman Rd., N.W.

WAYNESBORO

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WINCHESTER

G & M Music Center, 38 W. Boscawen St.
 Kann Ellert Electronics, 1650 Valley Ave.

WISE

J. N. Datson, Box 575

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ABERDEEN

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BELLEVUE

Shipmans, 315 Shopping Square

BELLINGHAM

Advanced Electronics, 110 Grand Ave.
 Pioneer Sound, Douglas Bldg.
 Pringle Radio Wholesale Co., 204 Unity St.
 Stanley Waitkus Hi Fi, 110 Grand St.

BREMERTON

C & G Radio Supply Co., 1301 Pacific

CENTRALIA

C & G Radio Supply Co., 217 So. Tower

CLARKSTON

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W. A. Geiger Radio, 1101 Columbia

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 Miller Radio Co., 2614 Colby Ave.
 Pringle Radio Whlse Co., 2101 Colby Ave.

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LONGVIEW

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Quality Hi Fi Components Co., W. 109 Third Ave.

MT. VERNON

High Fidelity Sound Systems, 305 Milwaukee St.
 Pringle Radio Wholesale Co., 822 N. 4th

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Kortens, 1351 Geo. Washington

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 Electricraft Inc., 1408 6th Ave.
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 F. B. Connelly Co., 1015 Republican St.
 Graybar Electric Co., King & Occidental St.
 Hamlins Audio Workshop, 2128 Third Ave.
 Hi Fidelity Sales Co., 2008 Westlake Ave.
 House of Hi Fi, 325 East 136th St.
 Northgate Radio, 1044 Northgate W. Dr.
 Olympic Engineering Co., 309 Floyd Bldg.
 Pacific Electronics Sales Co., 1209 First Ave.
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 C & G Radio Supply Co., 2502 6 Jefferson Ave.
 House of Hi Fi, 6010 Mt. Tacoma Dr.
 Wible Radio Supply, 2360 Fawcett Ave.

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EAU CLAIRE

Bushland Radio Specialties, 115 Ninth Ave.

FOND DU LAC

Harris Radio Corp., 289 N. Main St.

GREEN BAY

Neslo Electronic Dist., 715 S. 14th St.

JANESVILLE

Audio Shack, 1208 Milwaukee Ave.
 Thompson Electronics, 110 Academy St.

KENOSHA

Chester Electronics, 2012 52nd St.

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Satterfield Electronics Inc., 1900 S. Park St.
 The Hi Fi Corner, State at Gorham

MENASHA

Tip Top Radio & TV, 216 Main St.

MILWAUKEE

A & F Electro Mart, 1616 S. 81st St.
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 Allied Radio of Wisconsin, 5314 N. Port Wash. Rd.
 Audio Eng. Inc., 7420 W. Greenfield Ave.
 Consin Sound Equipment Co., 4429 W. North Ave.
 Electronic Expeditors Inc., 811-817 E. Vienna St.
 Hein Electronic Supply Co., 1032 N. 6th St.
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 The Hi Fi Center, 4236 W. Capital Dr.
 Hi Fi Dist. Co., 7518 West Center St.
 Hi Fi Fa Fum Div. of Tosa Recording, 2532 W. Wisconsin
 Hi Fi Salon Inc., 7627 Greenfield Ave.
 Jax Hi Fi House, 132 W. Wisconsin
 Marsh Radio Supply Co., Box 2871
 Mid City Electronic Sales, 2327 W. Wells St.
 Midwest Radio Co., 2414 W. North Ave.
 Chas. F. Netzow, 2630 N. Downer Ave.
 Olson Electronics, Inc., 423 W. Michigan
 Pesick Radio Supply Co., 2415 W. Fond du Lac
 Photo Art Visual Service, 840 N. Plankinton Ave.
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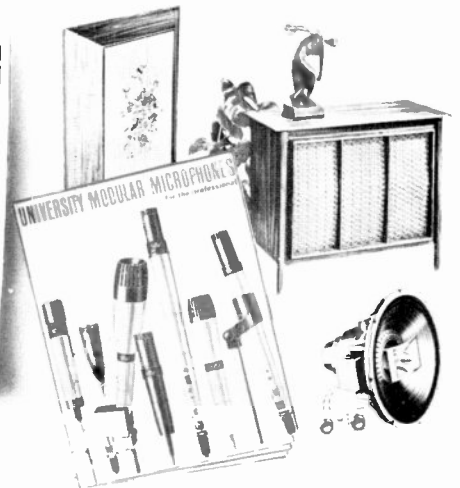
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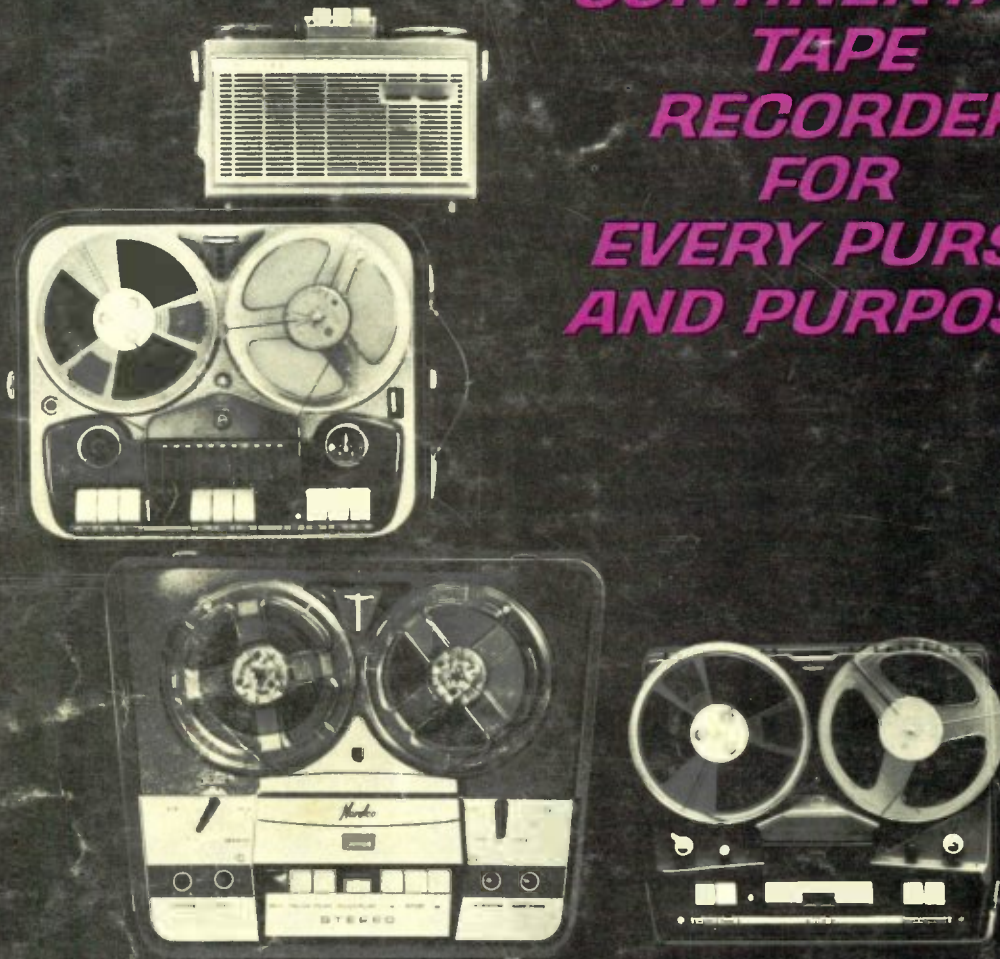
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