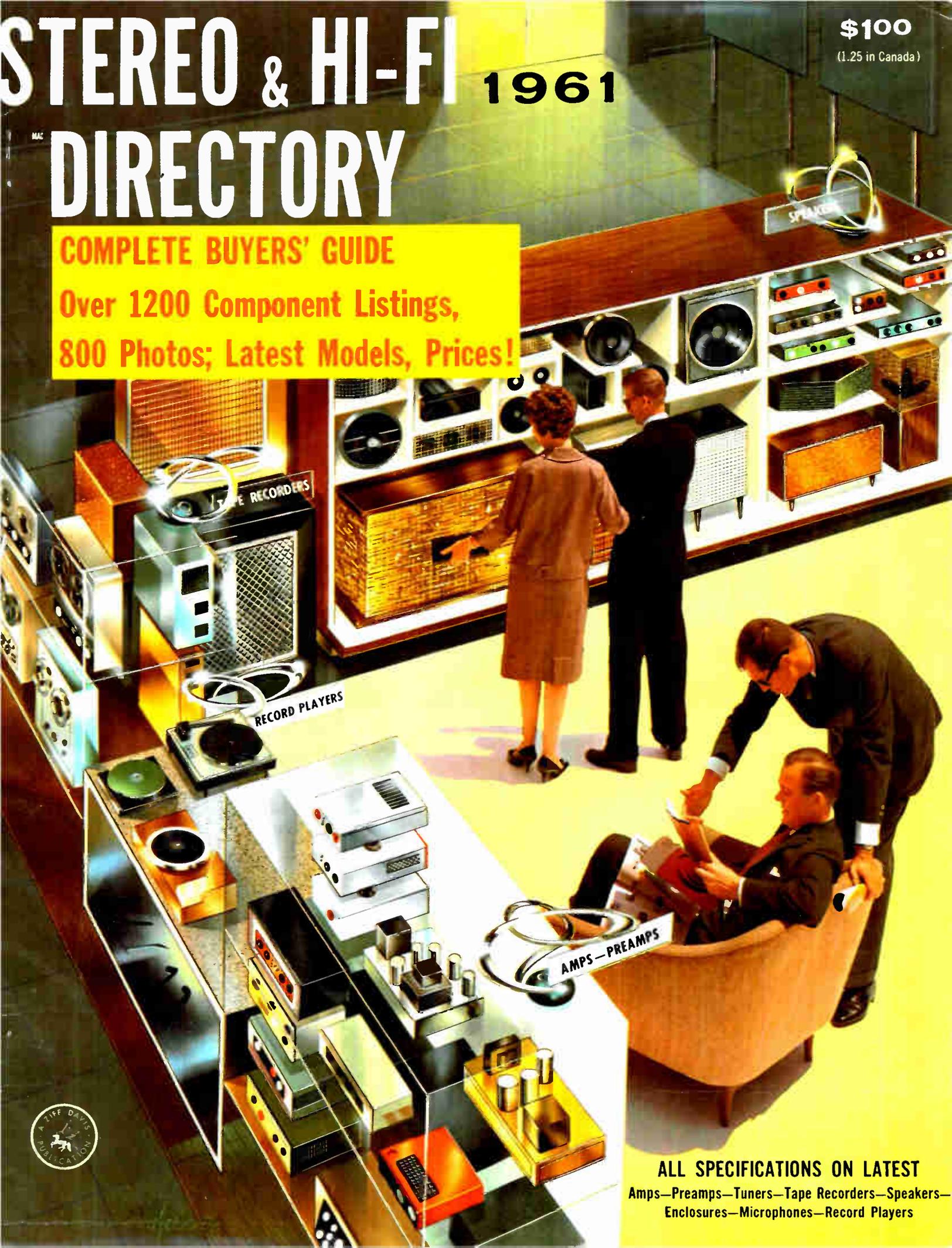


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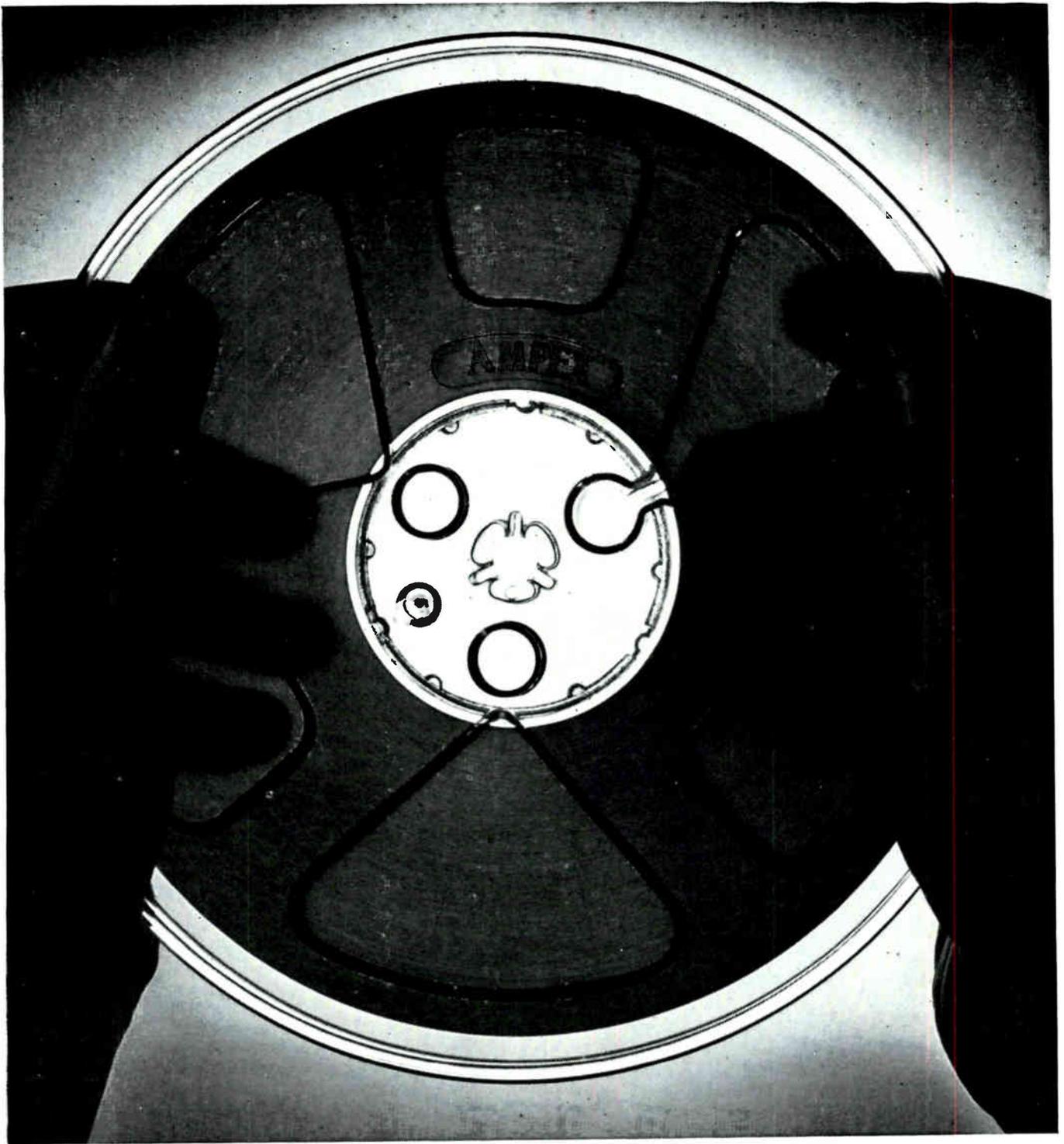


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A Division of The Ampex Corporation, Opelika, Alabama



STEREO & HI-FI DIRECTORY

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1961



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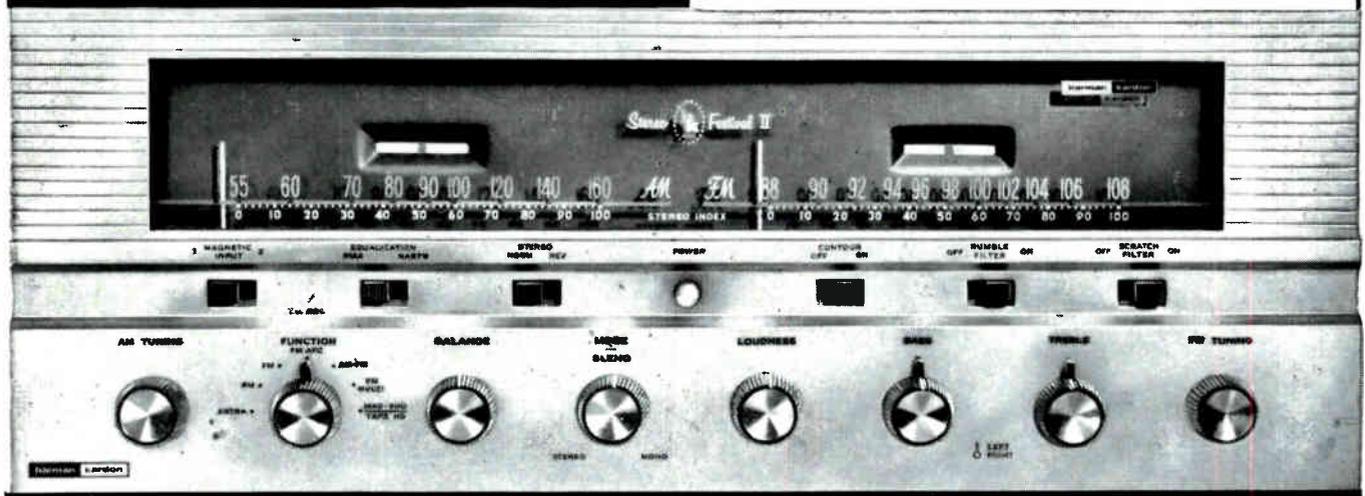
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60 Watts of Power* From 18 to 40,000 cps



TA260 Festival II—60 Watt Stereo AM-FM Receiver

The most powerful receiver of all—the new Stereo Festival II, model TA260, delivers 60 undistorted watts from 18 to 40,000 cycles. But the actual performance of the Festival goes beyond the point of superb specifications. It is the *best sounding* stereophonic receiver you can buy.

The "Citation Sound," acclaimed by audio authorities everywhere, was developed by Harman-Kardon in the design of its remarkable new Citation instruments. It is precisely this quality that distinguishes the performance of the new TA260: the clean, solid bass; the silky transparent highs. And, there is power—power to spare, to drive the most inefficient speakers. The result: the new Stereo Festival II actually sounds recognizably best—regardless of price.

*Music Power Output in accordance with IHFM standards, ½% distortion.

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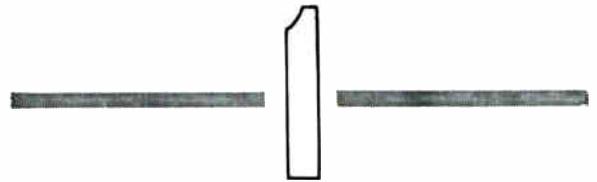
For more complete information on the Stereo Festival II, write: Dept. D-9, Harman-Kardon, Westbury, N. Y.

All prices slightly higher in the West.

harman kardon

STEREO & HI-FI DIRECTORY

SECTION



Amplifiers and Preamplifiers

What's Watt In Amplifiers

by H. H. Fantel



Stereo has given rise to two distinct trends in current amplifier design. One is the compact, integrated stereo amplifier, combining on a single chassis a dual-channel preamplifier and two power amplifiers. In the interest of compactness, the power output of such designs is usually held to 20-25 watts per channel, since large output tubes and transformers would be difficult to accommodate within the available space.

The other current design trend is toward separate preamplifiers and power amplifiers, with preamps sporting ever more versatile control facilities and the power amps burgeoning with ample wattage. These are all-out designs in which no compromise is made either in respect to space or cost. Such combinations of separate preamps and power amps are generally more expensive than the smaller "integrated" amplifiers, but the margin they offer in wattage and flexibility may be worth the added cost to the serious audiophile.

Since the wattage available in an amplifier is usually the decisive factor in the price and in the customer's choice, one may well ask how much wattage is necessary.

First, let us clear the air of popular misconceptions. A lot of watts doesn't necessarily mean a lot of sound. A 100-watt amplifier, for example, doesn't play ten times as loud as a 10-watt amplifier. This is because wattage is only indirectly related to loudness. The human ear, for instance, has its own "transmission ratio." It does not translate the power output of an amplifier directly into

proportional loudness. In terms of human hearing, the loudness difference between 25 watts and 50 watts is only 3 db—a very small increase.

Why then, the customer asks, pay a premium for those extra watts if you can't hear them? The answer is that loudness isn't the whole story.

Let's say you have a 15-watt amplifier and a 50-watt amplifier playing alternately through the same speaker. Even at the identical volume, chances are that you can pick the bigger one blindfolded. You may not be able to put your finger on what the difference is, but somehow the bigger amplifier seem to have a margin in naturalness and get the music across more convincingly.

What lies behind this subtle difference gained by the extra watts? The key to the problem is power reserve. Certain passages in music are like steep hurdles to the amplifier: the crash of the kettledrum, a chord struck loudly on the piano, the deep bass of the bull fiddles, or the swelling sonorities of the full orchestra. At those moments, the power content in the music itself jumps to a multiple of its average value.

At such moments the music may exceed the capabilities of a weak-muscled amplifier and those climaxes then become harsh-sounding. This may last only a moment. As soon as the loud passage subsides, the amplifier returns to its best behavior. But the momentary spell of distortion is remembered unconsciously, and, over prolonged periods of listening, results in the vague

feeling of irritation known as "listener fatigue."

An amplifier with sufficient power reserve, other factors being equal, would glide smoothly and imperceptibly over such tonal hurdles. Even heavily scored passages would remain transparent and the clarity of sound uncompromised. This, rather than mere loudness, is the real advantage of an amplifier with ample power reserve.

The actual power requirement in any given situation depends, of course, on the efficiency of the loudspeakers. Certain speakers, particularly those in horn enclosures or vented (bass reflex) enclosures, are quite efficient in converting the electrical output of an amplifier into acoustic energy. Others, notably the "infinite baffle" and "acoustic suspension" designs now popular among bookshelf speakers, are generally less efficient and consequently need more wattage to produce a given volume. While an amplifier with a power rating of 12 watts per channel might do very well with a vented speaker system (e.g. those produced by University, Altec Lansing, James Lansing, Jensen, or the Lafayette "Eliptoflex"), 20 watts per channel might be regarded as minimum for such "acoustic suspension" designs as the various Acoustic Research and KLH speaker models. And if such loudspeakers are to be used in large rooms to reproduce full orchestral sonorities at concert volume, 40-60 watts per channel may be advisable.

Once you have decided on the wattage suitable to your particular situation, you may well compare amplifiers in terms of their frequency response and distortion ratings. The minimum acceptable response is from 30 to 20,000, which includes the total range of musical tones. But more important than the outer response limits is the linearity of response within these limits. Look therefore for the statement of deviation within the overall range, which is usually given as "plus-or-minus" so many decibels. No deviation should exceed ± 2 db.

If possible, consult a frequency response curve, if one is published for the amplifier you contemplate buying. This curve should stretch flat-backed across the frequency spectrum. Any broad humps in the curve indicate the likelihood of unnatural sound coloration. Also, make sure that the frequency response does not fall off sharply at the low end—the curve should extend flat to at least 40 cps if the amplifier is to furnish full-bodied bass. What's more, it should be able to furnish such bass at full output without exceeding the specified distortion limits. If your amplifier is rated at, say, 20 watts, it should put out such power undistorted throughout its frequency range. Some amplifiers, however, skimp on lows. A 20-watt job might put out its rated power in the mid-range around 1000 cps, but when it gets down to a low note, such as 30 cps, it might not be able to manage more than 12 or 15 watts without breaking up into distortion.

Such discrepancies are not common, but where the information is available it is a good idea to check the "power response" curve of an amplifier. This curve tells you exactly how much power the amplifier delivers within the stated distortion limits. For a clearer understanding of wattage ratings, see the box at left for some common measurement techniques.

Distortion Figures

The distortion characteristics of an amplifier are usually given in terms of a) harmonic distortion, and

b) intermodulation or "IM" distortion. To investigate just how these two types of distortion are generated and defined would lead us into prolonged technical discussions. From the viewpoint of the hi-fi buyer, it is merely important to remember that the lower distortion figure the better. For good, clean sound, IM distortion should remain below 1.5 percent and harmonic distortion below 1 percent.

Current Design Trends

The current trend in amplifier design is to extend the frequency response as far as possible beyond the actual limits of human hearing. We may thus find ourselves confronted with specifications claiming response from "2 to 80,000 cps." The reasoning behind this seemingly superfluous extension of response is that wider response *beyond* human hearing improves amplifier performance *within* the audible range. The extended high frequency response contributes to cleaner transients—the percussive sounds and formants of instrumental tone that lend character and clarity to tonal reproduction. At the low end, it is claimed by some engineers that response below 20 cps results in more clearly defined bass in the 40-100 cps region.

Among circuit innovations, Harman-Kardon is pioneering multiple-loop feedback methods in their "Citation" kits. The purpose of this rather adventurous circuitry is to permit the various amplifier stages to be individually stabilized according to their particular need, rather than throw a single feedback loop around the whole amplifier.

Harman-Kardon's "Citation" series also features an adaptation of video circuitry employing 12BY7A video power pentodes as audio driver stages. As a result of such borrowing from the technology of television, the frequency response of the amplifier, exclusive of output transformer, actually extends way up into the megacycle range.

Operating Features

Perhaps of more immediate interest to the buyer is the fact that many operating features previously found only on rather expensive and elaborate equipment are being introduced on less costly units. For instance, a "blend control" now appears on many moderately priced amplifiers. Sometimes also known as "separation control," this useful device permits the listener to overcome exaggerated "ping-pong" effects in stereo records and tapes, and to compensate for any "hole in the middle" that may be caused by room acoustics, or speaker placement. The control allows the listener to take varying portions of each channel and mix them together. Often this results in giving the impression of a broader, smoother, and more continuous sound source *between* the speakers.

Another notable feature is the "aural null" balancing, originally introduced on the Lafayette KT-600 preamplifier and now also incorporated on the Fisher 400-CX preamp. This ingenious control allows instant balancing of the two stereo channels by cross-feeding the channels in phase opposition and then adjusting the balance for maximum mutual cancellation.

Kit Building

Amplifiers, thanks to the relative ease of construction, have been traditional favorites with kit builders. Some recent kit designs have gone several steps further in

simplifying the job. Harman-Kardon's "Citation", for instance, employs military-type subassemblies and neatly laid-out terminal boards to eliminate possible wiring errors. Moreover, a template is furnished on which wires may be shaped into professional-type harness arrangements that fall into proper place on the chassis.

Kit building affords considerable cash savings in this stereo age. For instance, such well-designed stereo amplifier kits as the Lafayette KT-250, The Heathkit AA-50, the Knight Y-774J, and the Paco SA-40 may all be bought for less than \$80. Considering that these units provide output power of 20 to 25 watts per channel—adequate for many requirements—it can safely be said that this year the price barrier for quality stereo has been effectively broken.

Taking into account the relatively high cost of labor, even those buying factory-wired amplifiers are now getting better dollar value than ever before. Particularly good buys for the economy-conscious are the integrated amplifiers rated at between 20 and 25 watts per channel. And buyers of the more powerful amplifiers consisting of separate preamp and power units can obtain at relatively little additional cost those ultimate tonal improvements so important to the perfectionist.

James Watt, whose observation of a bouncing tea kettle lid stimulated his crafty Scottish brain to the invention of the steam engine, would perhaps be surprised to find his name attached to such exotic items as audio amplifiers. However, the watt is today a common measure of electrical energy, just as horsepower is for mechanical energy.

As a rule, it is measured by running a "pure" sine wave of 1000 cps into an amplifier, connecting the amplifier's output to an oscilloscope, and watching the amplified waveform. The sine-wave input is increased to the highest point at which the output waveform is exactly the same shape as the input. Beyond that lies the "clipping point" where distortion sets in. The number of "unclipped" watts is read on a wattmeter, and this figure is regarded as the maximum useful output of the amplifier.

This is the conventional method of determining amplifier wattage, known as "sine wave output," and represents the maximum output of the amplifier with a continuous tone input.

Lately, another method for measuring amplifier output has been introduced, known as "music power output." This is employed by some manufacturers, notably Scott, Philco, and General Electric, who claim that the "music-power" method takes into account the amplifier's ability to handle drumbeats, plucked strings, and other transient sounds while the ordinary sine wave figure applies only to sustained notes.

A fairly common practice in recent years has been for amplifier manufacturers to specify continuous output and "peak" power output. The peak power rating is derived rather arbitrarily by doubling the sine-wave output. Thus, an amplifier with a sine-wave output of 10 watts can be called a 20-watt *peak* power amplifier. The proponents of the "music power" rating maintain that their method provides a truer picture of an amplifier's performance in actual use than does the sine-wave system. This, however, is a matter of some dispute in the audio industry.

Amplifiers and Preamplifiers

ACOUSTICAL (ELECTRONICS)

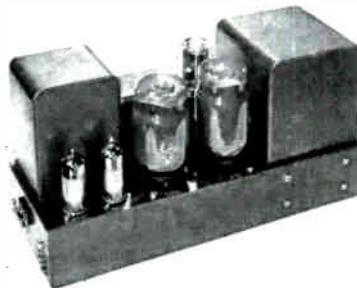
Quad 22 Stereo Control Unit



Frequency response 20 to 20,000 cps ± 3 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, FFR 78, STD 78, other curves available through simultaneous use 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 cutoff 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 va-

rious cartridges; maximum phono sensitivity: 3-6 millivolts; powered by and designed primarily for use with Quad II power amplifier; tubes: EF86, ECC83/12AX7; 10 1/2" x 3 1/2" x 6 1/2"; sold only in combination with Quad II amplifier.

Quad II Amplifier



Power output: 15 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 impedances: 7 and 15 ohms; damping factor: 15; tubes: 2-EF86, 2-KT66, GZ32; 13" x 4 3/4" x 6 1/2"; 18 1/4 lbs.; sold only in combination with Quad II control unit; price for both units.....\$225.00

ACRO PRODUCTS COMPANY

Ultra-Linear II Amplifier Kit

Power output 60 watts; response 18 cps to 30kc ± 1 db at 60 watts;

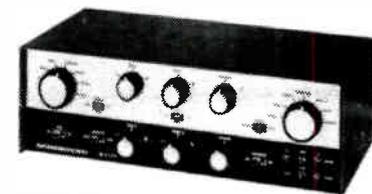
less than 1% IM distortion at 60 watts; hum level 90 db below full output; 2 volts RMS for 60 watts output; output impedances are 4, 8, and 16 ohms; 7" x 1 5/8" x 8" h.; tubes used are 12AU7, 12AX7, GZ34, 2-EL34 or 6CA7; variable damping from 0.5 to 10; damping control may be switched



out to provide a fixed damping factor of 15; 30 lbs.; TO 600 output transformer; dark brown chassis and dust cover.

Kit form\$ 79.50
Wired and assembled\$109.50

Model S-1001 Preamplifier



All feedback preamplifier; sensitivity phono input 2 mv.; gain 60 db. phono and tape; IM distortion 0.15% for 1.5

STEREO & HI-FI DIRECTORY

v. out; individual bass and treble controls; rumble and scratch filters; phase switch, third channel output, mic. dub switch; tubes are 2-7199, 2-7247 (kit)\$69.50 (factory wired).....\$114.50

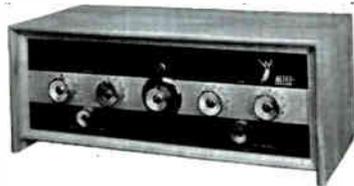
Stereo 20-20 Amplifier



Provides 18 watts each channel; distortion 1.5% IM at rated output; tubes are 4-EL84, 2-12AX7 (kit).....\$69.50 (factory wired).....\$99.50

ALTEC LANSING CORP.

Model 440C Control Preamplifier



Response 10-100,000 cps; d.c. filaments, hum and noise better than -95db; separate bass and treble equalization and tone controls; 3 high level inputs, 2 low level inputs; loudness switch; two cathode follower outputs; 3 switched a.c. outlets; 14 1/2" w x 8 1/2" d x 6 1/2" h.....\$147.00 Cabinet in blond, walnut, or mahogany\$19.95

Model 350A Power Amplifier



Rated at 40 watts continuous with less than 0.5% total harmonic distortion; frequency response 5 to 100,000 cps ± 0.5 db; hum and noise -86 db; output impedances 8 and 16 ohms plus 70-volt output; damping factor variable from 0.13 to 7; 0.75 volts input for 40 watts output; tubes are 12AY7, 12AU7, 2-6550, 5U4GB, OA3/VR75; 27 pounds. 9 5/8" w x 13 1/4" d x 7" h.....\$171.00

Model 353A Stereo Amplifier-Preamp



Power output 25 watts each channel; controls for function, balance, gain,

mode, bass, treble, rumble filter, loudness; 14 inputs for mag phono, ceramic phono, tape, tuner, mic., multiplex; harmonic distortion less than 1% at 20 watts; bass and treble cut or boost 14 db; frequency response ±1 db 20-20,000 cps; dc supply for preamp filaments; tubes are 5-12AX7, 4-6L6GC; 5 7/8" x 15" x 11 1/4"; 35 pounds.....\$225.00

Model 355A



Amplifier and control preamplifier; provides 20 watts from 20 to 22,000 cps; 6 inputs controlled by 4 major source volume controls; 4-position loudness compensation control, continuously variable bass and treble controls; bass provides 17 db boost and 15 db droop, treble 15 db boost and 20 db droop; 3-position rumble and scratch filters; tape recording output; 4-position equalizer; output impedances of 4, 8, and 16 ohms; tubes are 2-12AX7, 6CG7, 2-EL84, EZ81; 2 switch-controlled a.c. outlets.....\$111.00

Model 346A Amplifier



20 watt amplifier with inputs for paging and music distribution; phono input sensitivity .02 volts rated output; less than 2% IM distortion at full power; frequency response ± 2 db. 20-20,000 cps; push button controls for phono, mic., line; tubes are 2-12AX7, 6CG7, 2-EL84, EZ81; 4 7/8" x 13 3/4" x 7 1/8". \$99.00

Model 445A Stereo Control Preamplifier



Features 12 inputs, 3 high level pairs and 3 low level pairs; low level inputs equalized for magnetic cartridges, tape heads, and microphones; input sensitivity for 1.5 volts output: phono, 4.8 millivolts; tape head, 2.6 millivolts; microphone, 6 millivolts; tape, 0.35 volts; tuner, 0.35 volts; auxiliary, 0.35 volts; stereo output to amplifiers and tape recorders; 10 volts maximum output; noise level 59-73 db below 3 volts output on low level inputs, 80 db below 3 volts output on high level inputs; individual bass and treble controls for each channel; stepped contour control; may be used for all stereo and monaural program sources; uses 4-2N168A transistors and 12AY7 and 12AU7 tubes. \$189.00

Cabinet in blond, walnut, or mahogany.\$19.95

Amplifiers and Preamplifiers

Model 345A Stereo Basic Amplifier



Each channel provides 40 watts continuous power at less than 0.5% total harmonic distortion from 40 to 15,000 cps; frequency response 10 to 100,000 cps ± 1 db; output impedances are 8 and 16 ohms; noise level 85 db below full output; both amplifiers may be used in parallel for 80 watts output in monaural systems.....\$270.00

AMPEX AUDIO CO.

Model 404 Stereo Audio Control Center

Separate bass and treble controls; 10 inputs; 2 loudness controls; bass or treble cut or boost 15 db; frequency response ± 2 db 20-20,000 cps; total distortion less than 0.1%.....\$159.50

ARKAY RADIO KITS

Model A-12 Amplifier Kit

Power output 12 watts; integrated preamplifier; controls for loudness, bass, treble, function; distortion less than 2% at 2 watts; frequency response ± 1.5 db.; 20-20,000 cps.; tubes are 6SC7, 2-6SL7, 6V6, 5Y3. Kit\$23.95 Factory wired.....\$31.45

FL-10 Amplifier Kit



Rated at 12 watts; 20 to 20,000 cps ± 1db below 10 watts; hum on phono input 55db below full output; tone controls ± 16db 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 4, 8 and 16 ohms; tape output; rose gold panel with black cabinet; 12 1/2" x 4" x 8 1/2"\$29.95

FL-30 Amplifier Kit



Rated at 30 watts; ± 5db 20 to 20,000 cps; IM 1.5% at 30 watts; hum 120db below rated output; transistor preamp; three position record equalization; controls are function, loudness, bass, treble,

Amplifiers and Preamplifiers

level, and balance; tone controls provide ± 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"x5"x9"; 26 lbs.\$49.95
Factory wired\$74.95

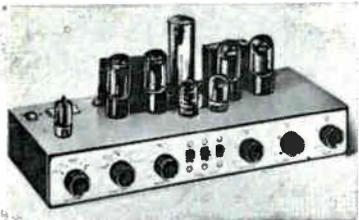
CS28 Stereo Amplifier Kit Preamp, And Control Center

Dual 14 watt amplifiers convert to 28 watts monaural operation; full 28 watts can be combined with existing amp for extended stereo operated with dual preamp; frequency response 20-20,000 cps.; IM distortion 4 to 1; harmonic distortion less than 1%; 30-20,000 cps; preamp output 2 volts; tape recorder output 10 volts; estimated time of assembly 12 to 24 hours.....\$64.95

SPA-35 Stereo-Monaural Amplifier

Dual low impedance phantom output; 2-20 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"x8"x6".....\$49.95

CS-12 Stereo Preamp and Amplifier Kit



Integrated amp for both stereo and monaural; 12 watts output up to 20 watts peak; frequency response ± 1 db., 20-20,000 cps. IM distortion, 4 to 1 60-7,000 cps. 1.2%; input .3 volts for full output; controls are bass, treble, function, balance, selector; selenium rectifiers; 15"x6 1/4"x5 1/2"; estimated assembly time 6-12 hours.....\$36.95

SPA-55 Stereo Bi-Channel Power Amplifier Kit

Two 30 watt amplifiers with combined output of 60 watts; includes phantom channel for resultant information from both channels; no cross-talk; tubes are four 6L6GB, two 6AN8, 5U4GB; frequency response 1.5% at 25 watts; harmonic distortion .9% at 25 watts; controls for input level, balance, bias level; 15 1/4"x8"x6"; estimated time of assembly 6-12 hours\$64.95

BELL SOUND DIVISION (Thompson Ramo Wooldridge, Inc.)

Model 2440 44-Watt Stereo Amplifier
Uses amplifier section of Bell Model 2445 Tuner-Amplifier (refer to tuner section for specifications); 5 7/16"x17 3/16"x10 3/8"; 28 pounds.....\$179.95

Model 2418 30-Watt Stereo Amplifier
Uses amplifier section of Bell Model 2425 Tuner-Amplifier (refer to tuner section for specifications); 5 7/16"x14 1/4"x10 3/8"; 19 pounds.....\$109.95

Model 2420 34-Watt Stereo Amplifier
Power output 17 watts each channel, 34 watt peaks; controls for loudness, rumble filter, scratch filter; bass and treble cut and boost 15 db.; dual inputs for mag phono, ceramic phono, tape, tape amp; tuner level set control; frequency response ± 1 db. 20-20,000 cps.; harmonic distortion less than 1% at 28 watts; tubes are 4-6V6GT, 5-12AX7, EZ81; outputs 4, 8, 16 ohms, and high impedance tape recorder; 5 7/16"x17 3/16"x10 3/8".....\$129.95

BIGG OF CALIFORNIA

Model P-3-D Stereo-Master Preamplifier
Cathode follower output for low impedance; tandem controls; bass or treble cut and boost 20 db.; record equalization, mode switch, rumble filter, loudness control, balance; 14 inputs, 4 outputs; max. output each channel 5 volts; frequency response 10-65,000 cps. at rated output; hum and noise 120 db. down; tubes are 4-ECC83 and rectifier\$79.95

Model S-50-B Stereo Power Amplifier

Simplex output; each channel 25 watts, 50 watts for monaural operation; frequency response 5-200,000 cps. within 2 db.; negative feedback 22 db.; hum balance control; tubes are ECC-83 amp and inverter, 12AU7 driver, 2-6CA7 push-pull output, 5V4 rectifier; 12"x9"x7 1/2"\$109.95

Model S-35-B Integrated Stereo Amplifier

Small, compact unit has 35 watts output both channels combined; controls for mode, phase, balance, bass, treble; 10 inputs, 4 outputs; rumble filter; frequency response from 20-25,000 cps.; distortion less than 1%; tubes are 4-ECC83, 4-EL84, EC81; 9 1/4"x12 1/4"x3 1/2"\$89.95

Model BP-40-KA 40-Watt Amplifier

Printed circuits throughout; frequency response 5-200,000 cps.; IM distortion less than 1% at rated output. hum and noise 92 db. below rated output; negative feedback 20 db.; damping ratio 22:1, tubes are 2-EL34, ECC83, 12AU7, 5U4; hum balance control; 12 1/2"x8"x6"\$69.95
Model BP-40-K (kit form).....\$59.95

BOGEN-PRESTO CO. (Div. of The Siegler Corp.)

Model PR2 Stereo Preamplifier Control Center

Inputs for mic., tape, mag, tuner, multiplex; controls for function, stereo normal/reverse, loudness, phase, scratch and rumble filters, volume, bass, treble; sensitivity tuner and multiplex 350 inv., mag. and tape 4.5 mv., mic. 4 mv.; frequency response ± 1 db. 20-20,000 cps; distortion less than 0.4% at 2 volts out; 15"x4 1/2"x8".....\$99.50

Model AP-40 40-Watt Amplifier

Similar to amplifier used in Model RP-40 tuner-amplifier (refer to tuner section) combination; all preamp controls; inputs for FM, AM, multiplex, mag phono, ceramic phono, tape; 20 watts each channel.....\$199.50

Model BP-50 Stereo 50-Watt Basic Amplifier

Power output 25 watts each channel; distortion 0.5% at rated output; frequency response ± 1 db 20 20,000 cps; input controls each channel; impedance 4, 8, 16 ohms; 16"x17 3/4"x6 1/2".....\$99.50

Model DB212 Stereo Amplifier



Power output 24 watts (two 12-watt channels); peak power 48 watts; frequency response 20 to 20,000 cps ± 1 db; harmonic distortion 1% at rated output; IM distortion less than 2% at rated output; sensitivity: tuner and auxiliary, 0.4 volts; tape, 4 millivolts with preamp, 0.4 volts without preamp; magnetic phono, 4 millivolts; ceramic phono, 0.2 volts (both amplifier channels provide duplicate inputs); hum and noise -55 db on magnetic phono input, -75 db on tuner input; ganged tone controls provide 10 db boost or cut at 60 cps and 8 db boost or cut at 10,000 cps; RIAA phono equalization; NARTB tape equalization; ganged high and low filters; amplifier output impedances are 4, 8, and 16 ohms, stereo tape outputs; speaker phasing switch; both channels used on monaural program sources; tubes are 2-12AX7/7025, 2-6U8, 4-6V6, EZ81; 15"w x4 3/4"h x11 3/8"d.....\$115.00
BEG cage.....\$ 7.50

Model DB-130-A



35 watts output (peak 100 watts); controlled feedback circuitry; 15 to 30,000 cps, $\pm 1/2$ db; harmonic distortion 0.3% at 35 watts; noise level -85 db; nine tubes including two 6AV5-GA/GT output tubes; variable damping factor; built-in preamplifier with seven equalization positions; five position loudness position selector control; sharp cutoff high and low frequency filters; speaker selector switch; chassis 14 3/4"x10 1/4"x4 1/8".
DB-130A (chassis)\$124.50
BCM or BCB (mahogany or blonde finished metal enclosure)\$7.00

CALBEST ELECTRONICS

Model 7615 Amplifier



Power output 15 watts, 30 watts peak; frequency response 15 to 20,000 cps ± 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 volts; 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 $\frac{1}{4}$ " 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 7615M (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 preamplifier; 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, rolloff, rumble filter, treble, bass, loudness; sensitivity 0.3 v. at high-level inputs, 7 mv. at low-level inputs for rated outputs; tubes are 6—ECC83/12AX7, 4—EL84/6BQ5, 5U4GB.
 With metal case.....\$159.95
 Salem maple case.....\$199.95
 Limed oak case.....\$189.95
 Walnut case.....\$199.95
 Mahogany case.....\$189.95

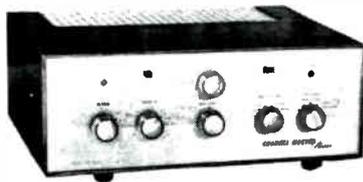
CAPEHART CORP.

Model ST3000PA3 Stereo Amplifier

A deluxe 50 watt dual channel stereophonic amplifier with 25 watts peak power on each channel; two completely separate push-pull output stages with inverse feedback provides wide band frequency response\$99.50

CHANNEL MASTER CORP.

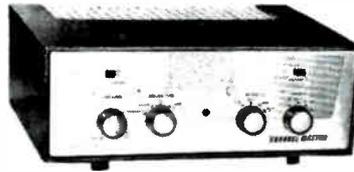
Model 6600 Stereophonic Amplifier



Power output 16 watts per channel, 64 watts peak; front panel controls are volume balance, selector (tuner, phono, tape, aux.), channel selector, stereo, stereo reverse, bass, treble, rumble filter; sensitivities: phono 3 mv., tape head 2.5 mv., tuner and aux. 0.25 volts; bass or treble cut and boost ± 12 db.; rumble filter below 50 cps.; 3 high level inputs. 2 low level; frequency response ± 1 db. 20-30,000 cps.; distortion less than 1% at full output; 4, 8, 16 ohm speaker impedances; tubes are GZ34, 4—EL84/6BQ5, 4—12AX7, 12AU7; 5" x 14 $\frac{3}{8}$ " x 1 $\frac{1}{4}$ "; 18 lbs.\$119.00
 Model 6608 walnut cabinet.....\$19.95
 Model 6609 lacquered metal cabinet.....\$ 6.99

Model 6620 Monaural Amplifier

Built-in preamplifier; inputs for mag. phono or tape, tuner, TV or crystal



phono; infinitely variable equalization; bass and treble boost or cut ± 15 db.; frequency response $\pm \frac{1}{2}$ db. 20-20,000 cps.; sensitivities: phono 3mv., tape 2.5 mv., tuner and aux. 0.25 volts; tubes are 2—EL84, 3—12AX7, EZ81; 3 $\frac{7}{8}$ " x 11 $\frac{3}{4}$ " x 9"; power output 20 watts per channel; 14 lbs.\$79.95
 Model 6618 natural walnut cabinet.....\$19.49
 Model 6619 lacquered metal cabinet.....\$ 6.49

CROSBY ELECTRONICS, INC. (MADISON FIELDING)

Model 360 Stereo Preamp-Amplifier

Power output each channel 20 watts; controls for function, bass, treble, mode, volume, loudness, rumble scratch filters; sensitivity: mag phono 2 mv., ceramic phono 0.1 volts, tape head 1.8 mv., tuner 0.2 volts; lights on panel indicate mode and function of operation; frequency response $\pm \frac{1}{2}$ db. 20-30,000 cps; tubes are 4—ECC83, 4-7189, 12AX7, GZ34; 5 $\frac{3}{16}$ "x14 $\frac{1}{2}$ "x12".
 Cabinet in walnut, mahogany or ebony.\$20.00

Series 340 Stereo Preamplifier



For use with all monaural and stereo program sources; inputs (each channel): magnetic phono, ceramic phono, tape head, microphone, tuner, aux; stereo cathode follower outputs to amplifiers and tape recorders plus third channel output; frequency response 30 to 20,000 cps ± 3 db; harmonic distortion less than 0.2% at 1 volt out; IM distortion less than 0.5% for 1 volt out; hum and noise: high level inputs, 90 db below 2 volts out; low level inputs, 72-80 db below 3-10 millivolt input reference level; sensitivity for 1 volt output: magnetic phono, 2.2 millivolts; ceramic phono, 0.1 volt; microphone, 2.8 millivolts; tape head, 1.2 millivolts; tuner, 0.15 volts; aux. 0.15 volts; two-channel mixing facilities; two 5-position equalization switches; separate bass and treble controls for each channel allow 18 db boost or cut at 20 and 20,000 cps; continuously variable loudness compensation; 3-position rumble and scratch filters; twin recorder output indicators; may be used as electronic crossover; 4 switched a.c. convenience outlets; d.c. on filaments; tubes are 6—7025/ECC83 plus 2 selenium rectifiers; brushed brass front panel; 5 $\frac{1}{8}$ "x14 $\frac{1}{2}$ "x7 $\frac{1}{2}$ "\$160.00
 Cabinet in walnut, mahogany, or blonde\$ 18.00
 Cabinet in ebony.....\$ 23.00

Amplifiers and Preamplifiers

DE WALD RADIO MFG. CORP.

Model N-5000B "Troubador"



15 watts output; harmonic distortion 1% at 12 watts; -7.5 db hum level; output impedances 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 N-1200-B "Concerto"



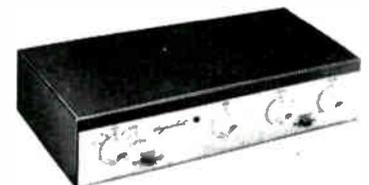
Two 15-watt amplifiers on one chassis; specifications similar to Model N-5000B with additional features; master volume control; dual tone controls; speaker phase switch; input reverse; output impedances 8, 16, and 32 ohms; dual inputs for tuner, crystal, magnetic phono, tape, tape monitor; tubes are 4-12AX7, 4-EL84, 2-EZ80; black and gold cabinet; 14 $\frac{5}{8}$ "wx4 $\frac{1}{2}$ "hx9"d.....\$99.95

Model N-2200 "Classic"

Power output 25 watts per channel; controls for equalization, selector, bass and treble, mode, rumble filter, speaker phase reverse; inputs for tuner, xtal, mag., tape; 10 tubes; 16 $\frac{5}{8}$ " x 4 $\frac{5}{8}$ " x 10 $\frac{3}{8}$ "\$139.95

DYNA CO.

Dynakit Preamplifier Kit



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 (1,000 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

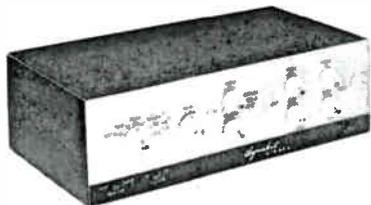
Amplifiers and Preamplifiers

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, ± 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\$34.95

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 rms input for 60 watts out; IM distortion less than 1% at rated output; damping factor 15; includes patented 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 $\frac{3}{4}$ "\$84.95

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; dc filament supply; tubes are 4-ECC83, 12X4 rectifier; 13" x 8" x 4"\$59.95

Dynakit Mark III 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 rms. 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 $\frac{1}{2}$ "\$59.95

Stereo 70 Amplifier

Two power amplifiers 35 watts each; full 70 watts on monaural operation; printed circuit board; 7199 driver; push-pull EL34s; frequency response $\pm .5$ db. 15-40,000 cps; IM distortion less than 1% at 35 watts; sensitivity 1.3 volts rms input for 35 watts; output;



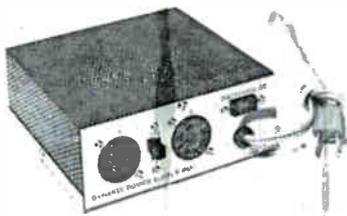
estimated time of assembly 4-6 hours.
.....\$99.95

Model DSC-1 Stereo Control Kit



Provides master controls for stereo systems; adds dual volume control, balance control, blend control, channel reversing, loudness, dual tape monitoring facility.\$12.95

Model PS-1 Power Supply Kit



Provides power for two preamplifiers; individual heater supplies for minimum hum.\$8.95

EICO (ELECTRONIC INSTRUMENT CO., INC.)

Model ST-70 Integrated 70 Watt Stereo/Amplifier

Complete stereo control center and amplifier; 2-35 watt amplifiers; inputs for tape, mag phono, FM/AM tuners, multiplex; clutch-type concentric controls for level, balance, loudness, bass and treble; stereo/mono mode switch; scratch and rumble filters; IM distortion 2% at 70 watts; frequency response $\pm \frac{1}{2}$ db 20-20,000 cps.
Factory wired.....\$144.95
Kit form.....\$94.95

Model ST-40 Integrated 40 Watt Stereo Amplifier



Similar to Model ST-70 except unit has 2-20 watt amplifiers.
Factory wired.....\$124.95
Kit form.....\$79.95

Model HF-89 Stereo Power Amplifier Kit



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 usec; frequency response $\pm \frac{1}{2}$ db 5-100,000 cps; sensitivity 0.55 volts for full output; level controls both channels; tubes are ECC83, 2-6SN7GTB, 4-EL34, power and bias rectifiers; inverse feedback 18 db; 6" x 15" x 11".
.....\$99.50
Factory wired.....\$139.50

Model HF-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; hum and noise on magnetic phono -60 db, tape head -55 db, tuner and aux. -75 db; input for 12 watts output; magnetic phono 9 millivolts, tape head 6 millivolts tuner and aux. 0.5 volts; 4, 8, and 16 ohms output impedances; 2-ECC83/12AX7, ECC82/12AU7, 2-EL84, EZ81; low noise dual-triode preamplifier with equalization for either input; d.c. biased filaments; separate bass, treble, and volume controls; 3 $\frac{3}{8}$ " h x 12" w x 8 $\frac{1}{4}$ " d.
HF-12 (kit)\$34.95
HF-12 (factory wired)\$57.95

Model HF-14 14-Watt Amplifier

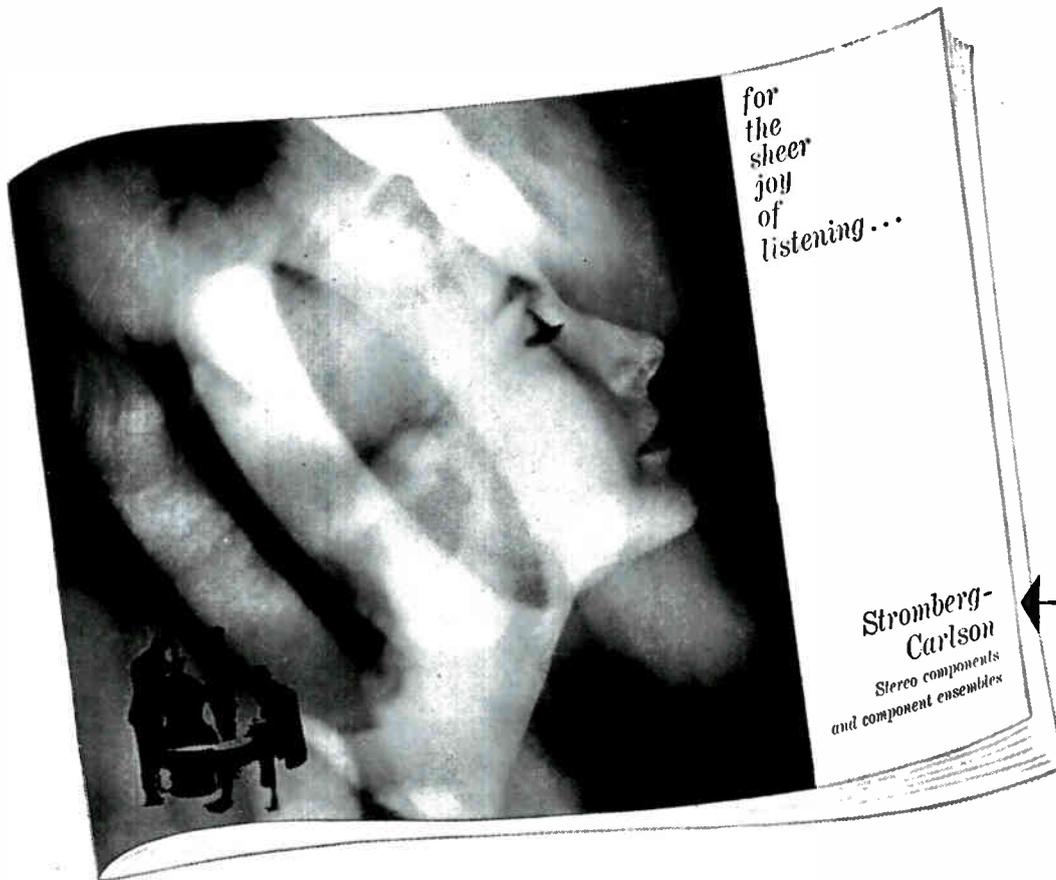
Power output 14 watts, 28 watts peak; frequency response 30 to 15,000 cps 0.1 db at 14 watts, 15 to 100,000 cps ± 0.5 db at 1 watt; harmonic distortion less than 1% at 14 watts; IM distortion 1.7% at 14 watts; hum 90 db below rated output; sensitivity for full output: 1.25 volts; output impedances are 4, 8, and 16 ohms; tubes are ECC83/12AX7, 2-EL84, EZ81; 3 $\frac{3}{4}$ " x 12" x 4"; 10 lbs.
HF-14 in kit form\$23.50
HF-14 factory wired\$41.50

Model HF-22 22-Watt Amplifier

Power output 22 watts, 44 watts peak; frequency response 19 to 40,000 cps ± 0.5 db at 22 watts; harmonic distortion below 1% within 1 db of 22 watts; IM distortion 1% at 22 watts; hum 85 db below rated output; sensitivity for full output: 0.6 volts; output impedances are 4, 8, and 16 ohms; tubes are EF86/Z729, 6SN7, 2-6L6GB, 5U4GB; 7" x 14" x 8".
HF-22 in kit form\$38.95
HF-22 factory wired\$61.95

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 dis-



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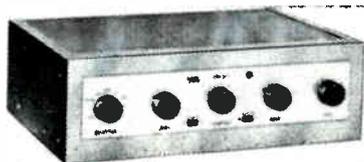
tortion 1% (20 to 20,000 cps at 1 db under 20 watts); intermodulation distortion 1.3% at rated power; hum and noise on magnetic phono -60 db, tuner -75 db; sensitivity; magnetic phono 4 millivolts for 20 watts output, tuner, TV, tape, auxiliary 0.4 volts for 20 watts output; bass, treble, loudness, and level controls; five equalization positions; d.c. biased filament supply; four high-level and two low-level inputs; low impedance tape output jack; potted high quality output transformer; several switched and unswitched convenience outlets: hum balance control; 4, 8 and 16 ohms output impedances; 12AX7/ECC83, 2-12AU7/ECC82, 2-6L6GB, 5U4GB; 8 1/2" h x 15" w x 10" d.
 HF-20 (kit)\$49.95
 HF-20 (factory wired)\$79.95
 E-1 (matching cover)\$4.50

Model HF-30 30-Watt Amplifier



Power output 30 watts continuous, 47 watts peak; frequency response 15 to 50,000 cps ± 0.5 db; harmonic distortion less than 1% 20 to 20,000 cps within 1 db of 30 watts; IM distortion 2% at 30 watts (60 and 7,000 cps mixed 4:1); hum: 80 db below rated output; feedback: 20 db; damping factor: 10; sensitivity: 1.24 volts for 30 watts output; octal socket for powering auxiliary equipment; output impedances: 4, 8, and 16 ohms; tubes are 6AV6, EC90/6C4, 4-EL84, 2-EZ81; power consumption: 125 watts; 5" h x 12" w x 7" d; 17 pounds.
 HF-30 in kit form\$39.95
 HF-30 factory wired\$62.95
 Matching Cover\$3.95

Model HF-32 Preamp-Amplifier



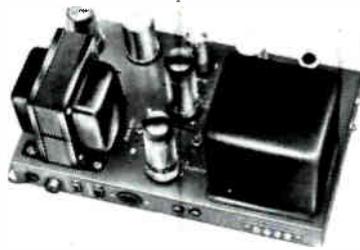
Integrated amplifier with performance specifications identical to HF-30 basic amplifier; tone controls allow 13 db boost and 15 db cut at 10,000 cps, 14 db boost and 15 db cut at 50 cps;

positions record equalization; tape head input is NARTB; sensitivity: phono, 5 millivolts; tape head, 2 millivolts; microphone, 4 millivolts; high level (3), 0.4 volts; hum and noise 60 db down on phono input; rumble and scratch filters operate at 12 db/octave slope at 5,000 and 70 cps; level and loudness controls; tape recorder output; tubes are 2-ECC83/12AX7, 2-EC90/6C4, 4-EL84, 2-EZ81; convenience a.c. outlets; hum balance control; 15" w x 4 3/4" h x 10 1/2" d.
 HF-32 in kit form\$57.95
 HF-32 factory wired\$89.95

Model HF-35 35-Watt Amplifier

Power output 35 watts, 70 watts peak; frequency response 15 to 40,000 cps ± 0.5 db at 35 watts; harmonic distortion less than 1% within 1 db of 35 watts; IM distortion 1.5% at 35 watts; hum 90 db below rated output; sensitivity for full output: 0.43 volts; output impedances are 4, 8, and 16 ohms; tubes are EF86/Z729, 6SN7, 2-EL34/6CA7, GZ34; 7" x 14" x 8"; 25 lbs.
 HF-35 in kit form\$47.95
 HF-35 factory wired\$72.95

Model HF-50 50-Watt Amplifier



Ultra-linear power amplifier output 50 watts (100 watts peak); ± 0.5 db 6 to 60,000 cps at 1 watt; ± 0.1 db from 15 to 30,000 cps at rated output; harmonic distortion 0.5% 20 to 20,000 cps; intermodulation distortion below 1% at 50 watts, 0.5% at 45 watts; noise level -90 db; sensitivity 0.55 volts input for 50 watts output; 4, 8 and 16 ohms output impedances; tubes EF86, 6SN7GTB, 2- EL34, GZ34; damping factor is 17; 21 db inverse feedback; input level control; bias and d.c. balance adjustments; socket provided for preamp power takeoff; 7" x 14" x 8".
 HF-50 (kit)\$57.95
 HF-50 (factory wired)\$87.95

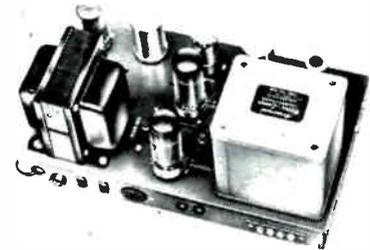
Model HF-52 Preamp-Amplifier



Power output 50 watts (100 watts peak); 20 to 30,000 cps ± 0.1 db at 50 watts; harmonic distortion 1% 20 to 20,000 cps within 1 db of 50 watts; intermodulation distortion 1% at 50 watts, 1/2% at 20 watts (60 and 6,000 cps at 4:1); hum and noise on magnetic phono -60 db, tuner -75 db; sensitivity; magnetic phono, 8 millivolts for 50 watts output, tuner, TV, tape, auxiliary 0.6 volts for rated output; 4, 8 and 16 ohms output impedance; 2- EL34/6CA7, 2- ECC83/12AX7, ECC90/6C4, 6CG7, GZ34;

preamplifier-equalizer circuit has five equalization positions; bass, treble, loudness, and level controls; d.c. biased filament supply; four high-level and two low-level inputs; low-impedance cathode follower tape output jack; high quality fully-potted output transformer; d.c. balance adjustment; bias voltage control; convenience outlets; hum balance control; 8 1/2" h x 15" w x 10" d.
 HF-52 (kit)\$69.95
 HF-52 (factory wired)\$109.95
 Matching cover\$4.50

Model HF-60 60-Watt Amplifier



Ultra-linear power amplifier output 60 watts (130 watts peak); Acro TO-330 output transformer; 5 to 100,000 cps ± 0.5 db at 1 watt, 15 to 35,000 cps, ± 0.1 db at 60 watts; harmonic distortion 0.5% (20 to 20,000 cps at 60 watts ± 1 db); intermodulation distortion 1% at 60 watts (60 and 6,000 cps at 4:1), 0.5% at 50 watts; noise level -90 db; sensitivity 0.55 volt input for 60 watts output; 4, 8 and 16 ohms output impedance; tubes EF86, 6SN7GTB, 2- EL34, GZ34 rectifier for preamp power take-off; 7" x 14" x 8".
 HF-60 (kit)\$72.95
 HF-60 (factory wired)\$99.95

Model HF-65 Preamplifier



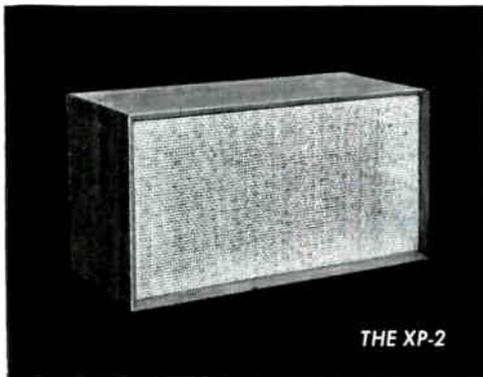
Frequency response 5 to 400,000 cps ± 0.3 db at 3 volts output; sensitivity for 2 volts output: phono, 1 millivolt; microphone, 1 millivolt; tape head, 0.5 millivolt; high level inputs, 0.17 volts; hum and noise: phono and microphone, -60 db; tape head, -50 db; high level inputs, -75 db; IM distortion (60 and 7000 cps at 4:1) 0.03% at 1 volt output, 0.17% at 5 volts output; harmonic distortion 0.1% at 3 volts output; rumble and scratch filters operate at 9 db/octave slope at 50, 100, 5,000, and 10,000 cps; bass and treble controls allow 15 db cut or boost at 50 and 10,000 cps; 4-position phono equalizer; NARTB tape equalization; inputs for magnetic phono, tape head, microphone, tuner, TV, tape, and crystal or ceramic phono; volume-loudness control; low impedance outputs to power amplifier and tape recorder; hum balance control; switched and unswitched a.c. outlets on self-powered models; tubes are 3-12AX7/ECC83, 6X4; 3 3/8" h x 12" w x 8 1/4" d; 9 lbs.
 HF-65A Kit (less power supply)\$29.95
 HF-65A Wired (less power supply)\$44.95
 HF-65 Kit (with power supply)\$33.95
 HF-65 Wired (with power supply)\$49.95

Now! You Can Choose the Stereo System That Meets Your Requirements EXACTLY!

THE 800

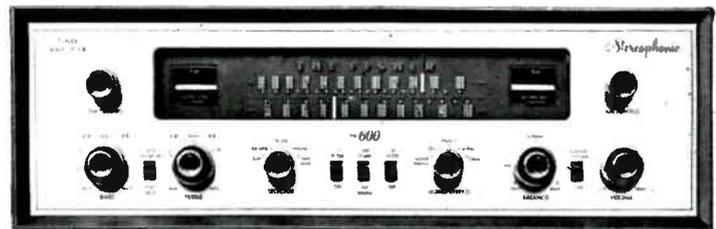


THE XP-1



THE XP-2

THE 600



THE FISHER

Stereo FM-AM Receivers and Speaker Systems

THE FISHER 800

■ *Twice as sensitive* as any competitive stereo receiver in the world—and easily the *most powerful!* Includes the identical Golden Cascade FM front-end used by broadcast stations. AM signal of FM calibre. 24 controls and switches for *unlimited flexibility!* 60 watts of distortion-free music power! **\$429.50**

THE FISHER 600

■ The world's *best-selling* stereo receiver! Says *HP Reports:* "The performance of each portion of the 600 is of top calibre." Has extreme-sensitivity tuners. Music power: 40 watts, free of distortion. 22 controls and 15 connections for every application, including center channel! 22 tubes, two matched diodes. **\$369.50**

THE FISHER XP-1

■ The revolutionary XP-1 offers big-speaker performance—high compliance *plus* high efficiency—in a bookshelf enclosure! The XP-1 is *92% more efficient* than the best conventional ring magnet speakers! Response: 30 to 18,000 cps. *In Unstained Birch, \$124.50*
Mahogany, Walnut and Cherry, \$129.50

THE FISHER XP-2

■ The new XP-2 utilizes the revolutionary design principles of the XP-1, but in an even *more* compact enclosure! Gives top-quality performance even with amplifiers rated as low as *10 watts!* Frequency response: 35 to 15,000 cps. *In Unstained Birch, \$79.50*
Mahogany, Walnut and Cherry, \$84.50

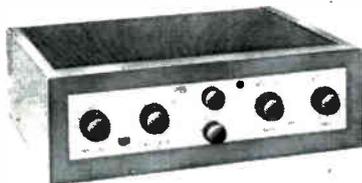
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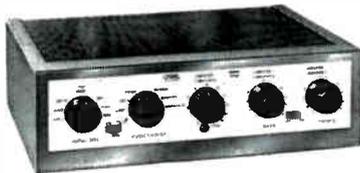
Amplifiers and Preamplifiers

Model HF-85 Stereo Preamplifier



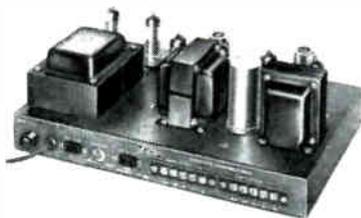
Essentially stereo version of Model HF-65K preamplifier; specifications similar to Model HF-65K: 3 low-level stereo inputs; 3 high-level stereo inputs; tone controls for each channel may be operated separately or simultaneously; stereo outputs to amplifier and tape recorder; self-powered; tubes are 5-12AX7/ECC83 and 6X4; 3 $\frac{3}{8}$ "h x 12" w x 8 $\frac{1}{4}$ " d. HF-85 in kit form.....\$39.95
HF-85 factory wired.....\$64.95

Model HF-81 Stereo Amplifier



Combines two 14-watt integrated amplifiers on one chassis; 28-watt output on monaural sources (56 watts peak); frequency response 10 to 100,000 cps ± 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 volts (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-ECC82/12-AU7, 4-EL84, 2-EZ81; 15" w x 4 $\frac{3}{4}$ " h x 10 $\frac{1}{2}$ " d; 24 lbs. HF-81 in kit form.....\$69.95
HF-81 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, ± 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,

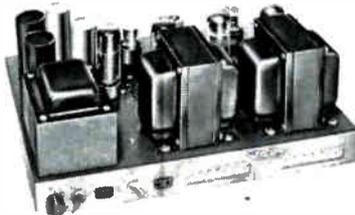
and 32 ohms; tubes, 2-12DW7, 4-EL84, 2-EZ81; power consumption, 115 watts; size 5" x 13 $\frac{1}{2}$ " x 9"; shipping weight, 16 lbs.
HF-86 in kit form.....\$43.95
HF-86 factory wired.....\$74.95

Model AF-4 Stereo Amplifier



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, ± 0.5 db. 30-20,000 cps; sensitivity (input for 4 watts output per channel); ceramic phono input-0.26V; all other hum & noise-74 db; tubes: 2-12DW7, 2-EL84 and EZ81.
AF-4 in kit form.....\$38.95
AF-4 factory wired.....\$64.95

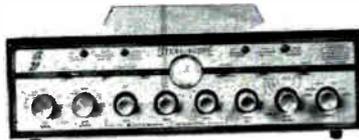
Model HF-87 70-Watt Stereo Power Amplifier



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: ± 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: 0.38V. 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"; Model HF-87 kit.....\$74.95
wired.....\$114.95

EMI (SCOPE ELECTRONICS, INC.)

Stereoscope 555 Stereo Preamp-Amplifier



20 peak watts per channel; frequency response 20-20,000 cps ± 1 db at 10 peak watts; crosstalk 30 db down 20-20,000 cps; input sensitivity: tape head 3 mv; mag phono 2 mv; ceramic phono 60 mv; microphone, high, 2 mv; microphone, low, 20 mv; tuner 150 mv; tape recorder 150 mv; tape out 150 mv; separate 7-position selector switch for each channel: concentric bass and treble controls; 2 scratch filters: 1-rumble

filter (operates on both channels); complete 2-channel mixing facilities; center channel output (approx. 1 volt); loudness compensation switch; built-in cathode ray tube can be used for: balance indication in conjunction with built-in 60 cps test tone, monitoring of output level, checking frequency response of system with frequency test record, checking turntable rumble; tubes: 2-EF86, 6-ECC83, 4-EL84; 4" x 14" x 13 $\frac{3}{4}$ " ; wt 25 lbs.....\$267.50

Stereoscope 556 Stereo Preamplifier

Essentially the same as Model 555 less amplifier stage; 4" x 14" x 9"; 14 lbs.\$227.00

Stereoscope 600 Stereo Power Amplifier



50 watts per channel; 0.5% distortion at rated power; toroidal output and power transformers.....\$285.00

ERIC ENGINEERING

Model 2459 Amplifier



Monaural; power output 17 watts up to 24 watts peak; frequency response 20-20,000 cps.; bass and treble controls; 1% harmonic distortion at 17 watts; tubes are 6CA4, 2-6BQ5, 6CG7, 12-AX7; 12 $\frac{1}{4}$ " x 9" x 4 $\frac{1}{8}$ ".....\$69.95

Model 2160 Dual 20 Stereo Amplifier



Power output 20 watts each channel; input sensitivity mag phono -4 mv for 20 watts out, xtal or ceramic phono -0.5 volts for 20 watts out, tuner and tape -0.5 volts for 20 watts out; 1% harmonic distortion at full output; controls for balance, loudness, mode, function; preamp for mag phono; frequency response 20-20,000 cps.; tubes are 2-12AX7, 4-6BQ5, 2-7247, GZ34; 16 pounds.....\$103.75

Model 2460 Dual 10 Stereo Amplifier

Power output 8 watts each channel; separate bass, treble controls; balance control and loudness; frequency response ± 1 db. 20-20,000 cps.; tubes are 2-12AX7, 2-6BQ5, 6CA4; 12 $\frac{1}{4}$ " x 9" x 4 $\frac{1}{8}$ ".....\$79.95

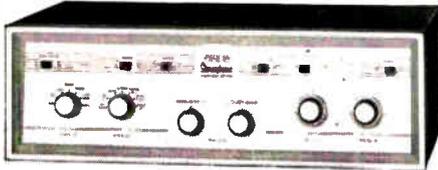
FAIRCHILD RECORDING EQUIPMENT CO.

Model 245 Preamplifier

High quality self-powered preamplifier; 9-pin plug in the rear of chassis allows plugging in all types of special circuits

STEREO & HI-FI DIRECTORY

10 Hi-Fi Editors acclaim the **PACO SA-40** 40 WATT STEREO Preamp/Amplifier KIT



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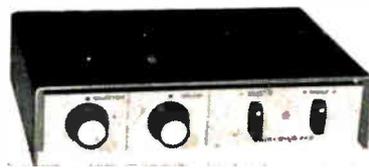
CHARLES TEPFER
Editor
ELECTRONICS ILLUSTRATED:
"...integrated... neater... listening
tests revealed it to be a Good Buy..."

Here you have read a sampling from just a few of the recent **RAVE REPORTS** on the **PACO SA-40**. Now we invite you to send for your personal portfolio of the complete reports. Read them, and you'll agree—for the critical audio enthusiast who wants quality at a moderate price—the **PACO SA-40** is the one truly logical choice to make. **WRITE:**



PACO ELECTRONICS CO., INC.
70-31 84th Street, Glendale 27, L. I., New York
Kit Division of **PRECISION Apparatus Company, Inc.**
a subsidiary of **Pacotronics, Inc.**

1961 EDITION



such as rumble and scratch filters, stereophonic ganged volume control, etc; hum undetectable; distortion less than .1% at 1 volt output\$119.50

Model 247 Stereo Conversion Preamplifier

For owners of Model 245 Preamplifier who wish to convert to stereo; consists of second Model 245 preamplifier with stereo control unit and cabinet for housing entire unit.....\$144.50

Model 248 Stereo Preamplifier

Essentially two Model 245 preamplifiers and stereo control center mounted in one unit; provides independent control for each channel as well as overall loudness and volume control; may also be used with stereo tape inputs direct from tape head and tuner stereo sources; monaural material may be played through both channels or independently; tubes are 4—EF86, 2—6X4, 2—ECC83, plus two rectifiers; with black anodized aluminum cabinet.....\$239.50

Model 255A Power Amplifier

Power output 30 watts; IM distortion under 2% at 30 watts, 0.5% at 22 watts; frequency response $\pm .25$ db 20 to 20,000 cps; power response $\pm .5$ db 20 to 20,000 cps; hum and noise —80 db; sensitivity of .9 volt for full output; gain control; balance control; 8 and 16 ohms outputs; tubes are 6AB4, 12AU7, 2—EL34, GZ34; $9\frac{1}{2}'' \times 6'' \times 6\frac{3}{4}''$, 17 lbs. \$124.50

FISHER RADIO CORP.

Model 400-CX Stereo Master Audio Control Center

Pushbutton control selectors; record-monitor facilities; controls for bass, treble, phase, scratch and rumble filters; 10 tubes; $15\frac{1}{8}'' \times 11\frac{1}{2}'' \times 4\frac{13}{16}''$. \$199.50

Model X-202 Stereo Integrated 50-Watt Amplifier

Complete stereo control center and power amplifier; controls for volume, function, mode, bass, treble, balance, rumble and scratch filters, phase, center channel; input sensitivity: mag phono —2 mv. for 25 watts out, tape —1.5 mv. for 25 watts out; ceramic phono —150 mv., tuner —0.2 volts all for rated output; IM distortion 0.1% for full rated output; tubes are 3—7025, 2—7247, 3—ECC81, 4—7189, GZ34; $15\frac{1}{8}'' \times 4\frac{13}{16}'' \times 12\frac{1}{2}''$; 36 pounds. \$229.50

Model SA-100 Stereo Amplifier

Power output 25 watts each channel; features are input level set, bias control, phase inverter balance; 4 controls for each channel and mono-stereo switch; input impedance 250K ohms; sensitivity 1 volt for full output; 4, 8, 16 ohm speaker terminals; frequency response 20-20,000 cps. — $\frac{1}{2}$ db.; tubes are 2—7247 dual triodes, 4—7189 power output tubes, GZ34 rectifier; damping factor 10; center channel output jack. \$119.50

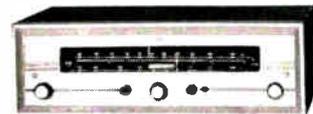
3 Great New Kits for Stereo by **PACO**

... with the famous specially-prepared giant-size diagrams and super-simple step-by-step instructions for fool-proof assembly and wiring. Crafted by **PACO**, Kit Division of **PRECISION Apparatus Company, Inc.**, world-famous manufacturers of laboratory electronic test equipment for over a quarter of a century.



The PACO SA-40 40 WATT STEREO PREAMP-AMPLIFIER The Last Preamp-Amplifier You'll Ever Have to Buy

Model SA-40—KIT, complete with gold and satin black cabinet.Net Price: \$79.95
Model SA-40W —FACTORY-WIRED, complete with gold and satin black cabinet.Net Price: \$129.95



The PACO ST-45 AM-FM STEREO TUNER A Truly Unusual Engineering Achievement In Stability and Sensitivity

AVAILABLE THREE WAYS:

Model ST-45—KIT, with factory pre-aligned transformers, complete with gold and satin black cabinet.Net Price: \$84.95

Model ST-45PA—SEMI-KIT, with both FM and AM tuner sections factory-wired and completely pre-aligned and calibrated for hairline sensitivity, complete with gold and satin black cabinet.Net Price: \$99.95

Model ST-45W —FACTORY-WIRED, aligned, calibrated and assembled, complete with gold and black satin cabinet.Net Price: \$134.95



The PACO ST-35 FM TUNER

AVAILABLE THREE WAYS:

Model ST-35—KIT, with factory pre-aligned transformers, complete with gold and satin black cabinet.Net Price: \$59.95

Model ST-35PA—SEMI-KIT, with tuner section factory-wired and completely pre-aligned for hairline sensitivity, complete with gold and satin black cabinet.Net Price: \$69.95

Model ST-35W —FACTORY-WIRED, aligned, calibrated and assembled, complete with gold and satin black cabinet.Net Price: \$89.95



NEW PACO 2-WAY SPEAKER SYSTEM SEMI-KIT featuring Jensen Mid-Range Woofer and Horn-Type Tweeter

Model L2-U—SEMI-KIT, with unfinished, sanded cabinet.Net Price: \$59.95

Model L2-F—SEMI-KIT, with walnut-finished cabinet.Net Price: \$69.95

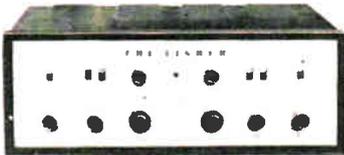


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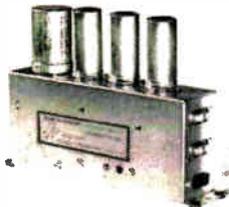
Amplifiers and Preamplifiers

**Model X-100 Stereomaster Audio
Control Center and Amplifier**



Power output 18 watts each channel; 17 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.\$159.50

Model PR-66 Stereo Preamplifier

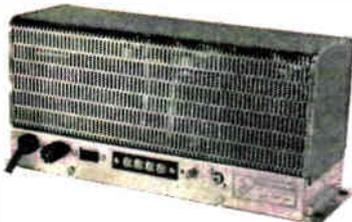


Twin preamplifiers for use with low-level stereo cartridges; RIAA-equalized; can be used with tape heads and microphones when modified; no controls; frequency response 20 to 20,000 cps \pm 2 db to RIAA curve; hum and noise 68 db below 10 millivolts input; crosstalk 60 db down; tubes are 2-EF86/6267 and 7025; 8" w x 1 $\frac{1}{8}$ " h x 5 $\frac{1}{2}$ " d....\$29.95

Model PR-6

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, \pm 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

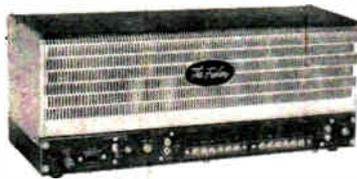
Model 30-A



20 watt amplifier; frequency response 20-20,000 cps \pm 1 db; hum and noise 78 db below rated output; input sensitivity 0.8 volts for rated output; input level control; phase inverter balance control; tubes are 7025, 2-7189, EZ81; 12 $\frac{3}{8}$ " w x 5 $\frac{1}{4}$ " d x 6" h; 14 lbs....\$59.50

Model SA-300 60 Watt Amplifier

2-30 watt channels; frequency response 20-20,000 cps \pm 0.5 db; sensitivity 0.8 volts for rated output; hum and noise 100 db below rated output; controls are: bias, input levels, AC balance, DC balance, hum balance; balance



adjustment switch; output impedances are 4, 8, 16 ohms; terminals for adding resistor for matching speaker damping; 32 lbs.\$179.50

Model MPX-20



Plug-in multiplex adapter for use with FM-100; output voltage .9-1.2 volts RMS; hum and noise better than 70 db; harmonic distortion 0.5% at max modulation; power from tuner.....\$49.50

Model RK-1

Stereo remote control unit; two volume control dials; 30 foot cable; adapter plug; for use with 400-C or 400-CA\$17.95

GAYLOR PRODUCTS CO.

Stereo-Fax

Phase shift network; produces stereo simulation from monaural records; placed between output of first amplifier and input of second amplifier; complete with cable.

Standard Model U-4B.....\$16.95
Audiophile Model U-3A.....\$19.95

GENERAL ELECTRIC CO.

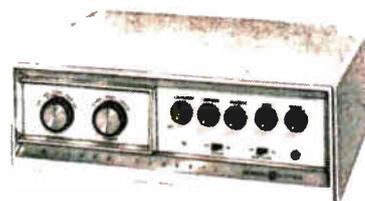
**Model MS-4000A Stereo Preamplifier-
Amplifier**



Accommodates all monaural and stereo program sources; power output 40 watts (two 20-watt channels); frequency response 20 to 20,000 cps \pm 0.5 db; harmonic distortion below 1% at full output; hum and noise 55 db below output on phono, 73 db below output on high level inputs; input sensitivity: phono, 3.5 millivolts; tape head, 3 millivolts; tuner, 200 millivolts; auxiliary, 200 millivolts; stereo outputs to speakers at 4, 8, and 16 ohms; stereo outputs to recorder; stereo balance control; ganged bass, treble, volume, and contour controls; channel reverse; rumble filter; 40 db channel separation; tubes are 4-12AX7, 2-6W8A, 4-6973, GZ34; 15" x 12" x 5 $\frac{1}{8}$ "\$169.95

Model G-7700 Stereo Preamp-Amplifier

28 watts per channel (IHFM music waveform rating); frequency response 20-20,000 cps \pm 0.5 db; harmonic distortion less than 1% at rated power; channel separation 40 db minimum between 100 and 20,000 cps; sensitivity:

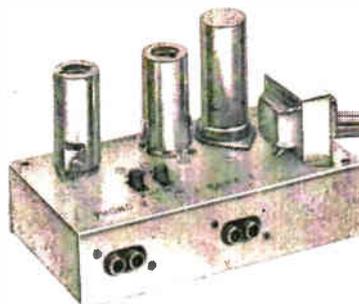


mag phono 4.5 mv; tape head (NA-RTB) 3 mv; tuner, aux 200 mv; stereo reverse; loudness control; contour control; balance control; dual concentric bass, treble controls; rumble, scratch filters; speaker phasing switch; tubes: 4-12AX7, 4-6973, 2-6AW8A, 1-6X4, 1-GZ34; 1 selenium bridge rectifier; beige vinyl on steel case.....\$189.95

Model G-7600

Similar to Model G-7700 except 20 watts per channel; does not have scratch filter or speaker phasing switch; tubes: 4-12AX7, 2-6AW8A, 4-6V6GT, 1-5V4; 1-full-wave selenium rectifier.\$139.95

Model MF-1



Stereo preamplifier; designed primarily for conversion from ceramic to magnetic cartridges where preamplification is not available; channel separation better than 40 db; 47,000 ohms input impedance; low impedance output; sensitivity 4 mv for 0.4 volts output; self-powered\$24.95

Model G-7710 Stereophonic Amplifier

Friction dual concentric bass and treble controls; 28 watts per channel; harmonic distortion less than 1%; channel separation 40 db. between 100 and 20,000 cps; d.c. filament supply; input sensitivities: mag. phono-4.5 mv, tape NARTB-3 mv; tuner and aux.-200 mv; controls for mode, loudness, contour, balance, rumble and scratch filters; speaker phasing switch; output impedances 4, 8, 16 ohms; tubes are 2-7025/12AX7, 2-12AX7, 4-6973, 2-6AW8A, 6x4, GZ34/5AR4, selenium bridge rectifier\$189.95

Model UPX-003B Preamplifier



Self-powered; 18 db bass boost at 50 cps for phono equalization (treble roll-off must be made through separate control unit); switch provides unequalized response for microphone; frequency response: 30 to 15,000 cps; output: 350 millivolts with 10 millivolt input; one input (microphone or phono); low impedance output; shielded output cable; one 6SC7 tube; selenium rectifier; 3 3/4" h x 3 5/8" w x 3 3/8" d\$11.45

**GROMMES
(DIV. OF PRECISION
ELECTRONICS, INC.)**

Model LJ8 Mono Amplifier

Power output 10 watts; controls for loudness, function, bass, treble; frequency response ± 1 db 20-20,000 cps; harmonic distortion 1% at 10 watts; IM distortion 3% at 10 watts; sensitivity: tuner -5.5 volt, mag phono -4.5 mv, tape -5.6 mv, xtal phono -.25 volt; tubes are 2-12AX7, 2-6BQ5, EZ80; 11" x 4" x 7 1/2"\$44.95

Model 24LJ Stereo Amp-Preamp

Power output 10 watts each channel; controls for loudness, bass, treble, function, mode, channel balance; IM distortion 2% at 10 watts; sensitivity: tuner -.7 volt, mag phono -5.5 mv, tape head -7.5 mv, xtal phono -.35 volts; frequency response ± 1 db 20-20,000 cps; tubes are 4-12AX7, 4-6BQ5, EZ81; 14 x 4 1/2" x 9"\$109.95
Enclosure\$10.00

Model 36PG Stereo Amp-Preamp

Power output 20 watts each channel; bass and treble cut and boost 15 db; controls for loudness, rumble and scratch filters, function, mode; harmonic distortion 0.6% at 15 watts; IM distortion 2% at 15 watts; damping factor 8; frequency response $\pm 1/2$ db, 20-20,000 cps; tubes are 5-12AX7, 4-6BQ5, 2 silicon rectifiers; 14" x 4 1/2" x 11"\$169.95
Enclosure\$10.00

Model 20-LJ

Stereo amp-preamplifier; 10 watts per channel; frequency response 20-20,000 cps ± 0.5 db at 1 watt; input sensitivity: aux, tuner 0.4 volts; mag phono 4 mv; tape head 4.5 mv; crystal phono 0.25 volts; 4, 8, 16 ohms; tubes: 4-12AX7, 4-6BQ5, 6CA4\$69.95
Model 20LJK Kit\$59.50

Model LJK Amp-Preamplifier Kit

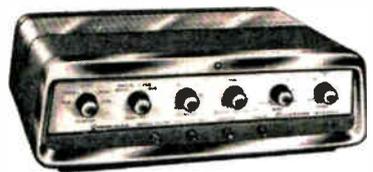
10 watts; frequency response 20-20,000 cps ± 0.5 db at 1 watt; bass and treble boost controls; 5-position selector switch: aux, tuner, phono flat, RIAA, LP; hum and noise, high level input, -80 db; 4, 8, 16 ohms; tubes: 2-12AX7, 2-6V6, 6X5\$24.95

Model G100 Basic Amplifier

100 watts; frequency response 10-20,000 cps 0.25% at 1 watt; IM distortion 0.5%, harmonic 0.5% at rated output; input sensitivity 1 volt; hum and noise 97 db below rated output; input level control; bias control: 8 and 16 ohms output plus 70 volt line; tubes: 2-12AU7, 4-6550, 616GB, OB2; silicon rectifiers\$261.00

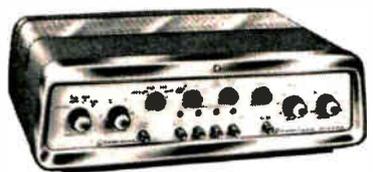
Model 214 Stereo Preamplifier

Preamplifier-control unit designed to work with two basic amplifiers or one stereo amplifier; frequency response 10 to



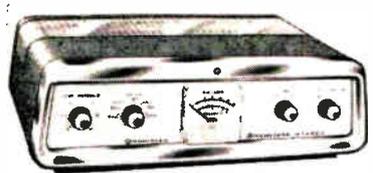
20,000 cps ± 0.5 db; harmonic distortion 0.05%; IM distortion 0.1%; rated output 1 volt, up to 10 volts without overload; sensitivity for 1 volt output: tuner 0.25 volts, crystal phono 0.25 volts, magnetic phono 3 millivolts, tape head 4 millivolts; hum and noise better than 75 db on high-level channels, 60 db on low-level channels below 1 volt output; 20 db bass boost or cut, 15 db treble boost or cut; dual inputs for auxiliary, tuner, tape head, magnetic phono (100,000 ohms), crystal phono (4.8 megohms); dual outputs to amplifiers and recorders: function control for stereo, stereo reverse, channel A, and channel B; balance control provides 12 db attenuation of either channel; push buttons for on-off, loudness in-out, loudness, contour (-10 or -30 db); three a.c. convenience outlets; tubes are 2-12AX7/ECC83/7025, 2-6AN8, EZ80/6V4; 14" w x 4 1/2" h x 9" d; in saddle leather tan and gold\$89.95

Model 209 Stereo Preamplifier



Frequency response 10 to 20,000 cps ± 0.25 db; harmonic distortion 0.05%; IM distortion 0.1%; rated output 1 volt up to 20 volts without overload; hum and noise level 80 db on high-level inputs, 65 db on low-level inputs; sensitivity: auxiliary, tuner, crystal phono 0.25 volts, mike 10 millivolts, magnetic phono 3 millivolts, tape head 4 millivolts; 20 db bass boost and cut; 15 db treble boost and cut; cathode-follower outputs for amplifier channels A and B, tape channels A and B; dual inputs for auxiliary, tuner, mike, crystal phono, magnetic phono, tape head; function selector switch for stereo, stereo reverse, channel A, channel B, channel A test, channel B test; 4-position loudness contour control; 4-position turnover and roll-off controls; channel balance control; fused; three a.c. convenience outlets; tubes are 7-12AX7/ECC83/7025, EZ80/6V4\$159.95

Model 240 Stereo Basic Amplifier

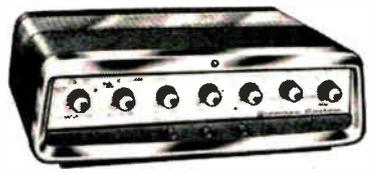


Can be used as monaural amplifier or as two-channel amplifier; power output 40 watts (20 watts each channel), 80 watts peak; frequency response 10 to 50,000 cps ± 0.5 db; harmonic distortion 1% at rated output; IM distortion 2% at rated output; hum and noise level 90 db below rated output; sensitivity 0.5 volts for rated output; damping factor 10;

**Amplifiers
and Preamplifiers**

output impedances 4, 8 and 16 ohms; 500,000-ohm inputs for each channel; VU meter for checking channel balance, power output, frequency response; meter function switch; separate level controls for each channel; on-off switch; two a.c. convenience outlets; tubes are 2-7199; 4-EL84/6BQ5, 6973; 2 silicon rectifiers; 14" w x 4 1/2" h x 11" d\$109.50

Model 40PGA Stereo Preamp-Amplifier



Power output 40 watts (20 watts each channel), 80 watts peak; can be used as 40-watt monaural amplifier; frequency response 20 to 20,000 cps ± 0.5 db; harmonic distortion 1% and IM distortion 2% at rated output; hum and noise level 80 db below rated output on high-level inputs; sensitivity: auxiliary and tuner 0.4 volts, magnetic phono 4 millivolts, tape head 5 millivolts, crystal phono 0.25 volts; 20 db bass boost and cut; 15 db treble boost and cut; output impedances 4, 8 and 16 ohms; high-impedance tape output; dual inputs for auxiliary, tuner, tape head, magnetic phono, crystal phono; function switch for stereo, stereo reverse, channel A, channel B; loudness contour control calibrated for flat, -10, -20, -30 db; channel balance control; push buttons for rumble and scratch filters, power on-off; two a.c. convenience outlets; tubes are 6-12AX7, 4-6BQ5, 6973; 2 silicon rectifiers; 14" w x 4 1/2" h x 11" d\$167.95

Model 24PG Stereo Preamp-Amplifier

Power output 24 watts (12 watts each channel), 48 watts peak; can be used as 24-watt monaural amplifier; frequency response 20 to 20,000 cps ± 0.5 db; harmonic distortion 1%; IM distortion 2%; hum and noise level 80 db below rated output for high-level channels; sensitivity: magnetic phono 2 millivolts, tape head 3 millivolts, high-level 0.25 volts; output impedances 4, 8 and 16 ohms; high-impedance tape output; 10 db bass boost and cut; 15 db treble boost and cut; dual inputs for auxiliary, tuner, NARTB tape head, RIAA magnetic phono, crystal phono; function switch for stereo, stereo reverse, channel A, channel B; channel balance control; push buttons for rumble and scratch filters, loudness in-out, power on-off; two a.c. convenience outlets; finished in saddle leather tan and gold; 14" w x 4 1/2" h x 11" d\$99.50

Model 20PG-8-K Preamp-Amplifier





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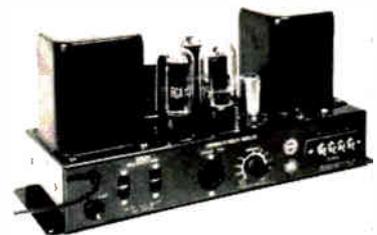
Power output 20 watts, 40 watts peak; frequency response 20 to 20,000 cps ± 1 db at 1 watt; harmonic distortion 1%; IM distortion 3%; hum and noise level 75 db below rated output on high-level channels; damping factor 10; 20 db bass boost or cut; 15 db treble boost or cut; sensitivity: high-level inputs 0.3 volts, magnetic phono 4 millivolts; output impedances 4, 8 and 16 ohms; high-impedance tape output; inputs for auxiliary, tuner, tape preamplifier, tape head, magnetic phono, crystal phono; record compensator for 500-flat, RIAA, early LP, tape head; rumble and scratch filters, loudness in-out, power on-off; tubes are 3—12AX7/ECC83, 2—EL-84, EZ-81, OB2.....\$59.50

Model 207AK



Preamp-control unit; 6 inputs: tuner, tape amp, tape head, magnetic phono, crystal phono, aux; outputs for main amplifier and tape recorder: bass control ± 20 db; treble control ± 15 db; 4 positions for both rolloff and turnover; on-off loudness control; on-off rumble and scratch filters; sensitivity: tuner 2 volts, magnetic phono channel 5 millivolts for 1 volt output; 0.2% harmonic and 0.5% intermodulation distortion at rated output; hum and noise -75 db on high level inputs and 60 db on phono channel below 2 volts output; frequency response ± 0.5 db 20 to 20,000 cps; circuit features feedback throughout\$44.50

Model 221A



Power output 20 watts; 40 watts peak; ultra-linear circuit; frequency response ± 0.5 db 10 to 50,000 cps at 1 watt; distortion: 0.5% harmonic and 1% intermodulation at 20 watts; hum and noise 90 db below rated output; sensitivity 1 volt input for 20 watts output; output impedances 4, 8, 16 ohms; tubes 2—12AU7, 2—6L6GB, 5U4GB; input gain control; damping factor continuously variable from +2 through infinity; socket for preamp power supply; fused; 2 a.c. outlets; for 110-120 volts; 13"x4 1/2"x6 1/4".....\$69.50

Model 260A Basic Amplifier

Power output 60 watts, 120 watts peak; frequency response 20 to 20,000 cps ± 0.5 db; harmonic distortion 0.1% at 30 watts, less than 0.5% at 60 watts; IM distortion 0.2% at 30 watts, 1% at 60 watts; hum and noise level 90 db below rated output; damping factor continuously variable from ± 3 to infinity;

STEREO & HI-FI DIRECTORY



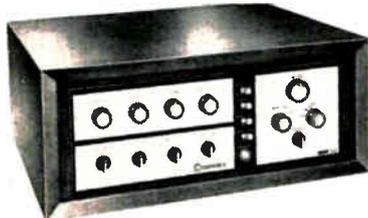
sensitivity 1 volt; controls for input gain, output balance, bias, d.c. balance; output impedances 4, 8 and 16 ohms; tubes are 12AU7, 12BH7, 2- KT88/6550, 2-5U4GB, 6L6GB, OB2..... \$159.50

Model 250K Amplifier Kit

Power output 60 watts, 120 watts peak; frequency response ± 5 db 5 to 50,000 cps; distortion 0.5% harmonic and 1% intermodulation at 60 watts; hum and noise 90 db below rated output; sensitivity 1 volt input for full output; output impedances 4, 8, 16 ohms; tubes are 12AU7, 12BH7, 2-EL34, 6L6, 2-5U4GB; socket supplies, power for preamplifier; size 14"x8 1/4"x8".....\$79.50 Model DF-1 damping factor kit.....\$4.50

HARMON KARDON, INC.

Citation I Stereo Preamplifier Control Center Kit



Frequency response 5-80,000 cps ± 0.5 db; distortion less than 0.05% at 2 volts rated output; main output, 2 volts; tape output, 0.3 volts; input sensitivity for rated output: high level 0.2 volts; 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; tubes: 4-ECC83, 5-ECC81; 6-silicon diodes; 14 7/8" x 12 1/4" x 6"; 23 lbs.....\$159.95 Factory wired.....\$249.95 WC-1 walnut enclosure.....\$29.95

Citation II Stereo Power Amplifier 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 at 60 watts; 4 d.c. bias adjustments, 1 for each tube plus 2 A.C. balance; bias meter; 4, 8, 16 ohms; tubes: 6-12BY7A, 4-KT88; 4-silicon diodes, 1-selenium rectifier; 16 3/8" x 9" x 11 1/2"; 60 lbs.....\$159.95 Factory wired.....\$229.95 AC-2 metal enclosure.....\$7.95

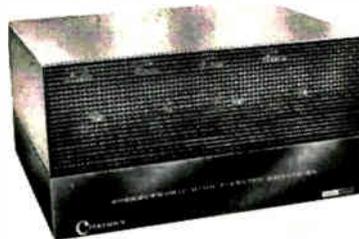
Citation IV Stereo Preamplifier Kit

Specifications similar to Citation 1; continuously variable blend control; variable type tone controls; balance control;



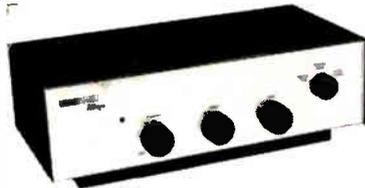
tubes: 6-ECC83; 4 semi-conductor rectifiers; 14 7/8" x 11" x 5 5/8"; wt 16 lbs.....\$109.95 Factory wired.....\$179.95 WCI walnut enclosure.....\$29.95

Citation V Stereo Power Amplifier Kit



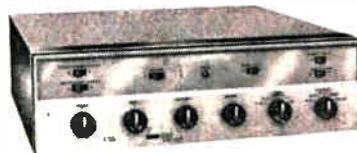
Similar to Citation 11 except as noted; 40 watts per channel; tubes: 2-12BY-7A, 2-6CG7, 4-7581; 4-silicon diodes, 1-selenium rectifier; 13 7/8" x 5 1/2" x 11 1/4"; 40 lbs.....\$119.95 Factory wired.....\$179.95 ACV metal enclosure.....\$7.95

A-10 "Allegro" Amplifier



Output: 10 watts at less than 1% harmonic and 2% IM distortion; frequency response 45 to 20,000 cps ± 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; NARTB 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 1/8"; 11 pounds.....\$49.95

Model A260 "Chorale" Stereo Amplifier



Third channel speaker selector allows remote-local, stereo-monaural combinations throughout the house; output per channel is 30 watts, 60 watts peak power; channel crosstalk is better than 50 db.; B+ regulation held within 1% by silicon diode power supply; less than 0.5% harmonic distortion at full power; front panel controls for function, treble, bass, loudness, mode, 2 speaker selector switches; rumble and scratch filters; tone



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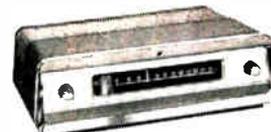
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Amplifiers and Preamplifiers

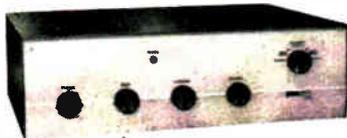
control defeat switch; frequency response ± 0.5 db. 15-30,000 cps. at 1 watt; tubes are 4-6L6GC, 2-ECC82/12AU7, 2-7274, 2-ECC83/12AX7, 4 silicon diode rectifiers, 2 silicon diodes for bias and filament supply; $15\frac{1}{4}'' \times 4\frac{7}{8}'' \times 13\frac{7}{8}''$; weight 35 lbs.\$199.95

Model A230 "The Ballad" Stereo Amplifier



Two EL84 output tubes per channel for 15 watts each, 30 watt peaks; less than 1 percent harmonic distortion at 15 watts; frequency response: ± 1 db 15-70,000 cycles at normal listening level; minimum volume hum, 80 db below 15 watts; friction-clutch tone controls for separate or ganged action; ± 12 db boost or cut at 50 and 10,000 cycles; rumble filter: 10 db cut below 50 cycles; magnetic phono sensitivity: 3 mv. at 1 kc; tape head: 1 mv; speaker selector switches for remote or local speaker operation and operation of third channel speaker: push-button on/off switch, contour switch, phasing switch, speaker impedance switch, mode switch, function switch, tone controls; equalization is RIAA for phono; NARTB for tape; tubes: GZ34, 4-EL84, 2-ECC82/12AU7, 3-ECC83/12AX7; $13\frac{1}{2}'' \times 4\frac{5}{8}'' \times 11\frac{1}{2}''$ \$109.95
Cage Model AC23\$7.95

Model A220 "The Lute" Stereo Amplifier



Two 10-watt channels with preamps; 7408 output tubes for low distortion; frequency response: 20-20,000 cycles ± 1 db at normal volume; harmonic distortion at normal listening levels less than 0.25 percent; hum, 70 db below rated output; inputs for magnetic and ceramic cartridge; tuner/aux.; tone control boost or cut ± 10 db at 50 and 10,000 cycles; illuminated push-button on/off switch; one switched AC convenience receptacle; tubes: 3-12AX7, 12AU7, 4-7408, silicon power supply; $14\frac{1}{8}'' \times 10\frac{1}{2}'' \times 4\frac{7}{16}''$ h\$79.95 with cage.

HEATH CO.

Model AA-40 Stereo Amplifier Kit

Power output 35 watts per channel; frequency response 20-20,000 cps ± 0.5 db for rated output; 20.5 db negative feedback; damping factor, 17; phase reversal switch; centre speaker terminals; tubes: 2-6AN8, 4-EL34; 4 silicon diodes; 1 selenium diode for bias supply; $15'' \times 7\frac{1}{4}'' \times 11''$ d\$79.95

Model AA-30 14 Watt Stereo Amplifier



Power output 14 watts per channel; frequency response 30-15,000 cps ± 1 db at rated output; total harmonic distortion 2%; channel separation 65db; hum and noise 76db below 14 watts; input sensitivity 0.74 volts 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; $13'' \times 8\frac{1}{2}'' \times 6''$ h; shpg. wt. 21 lbs.\$45.95

Model AA-20 Stereo Preamplifier Kit



Frequency response 20-20,000 cps ± 1 db; input sensitivity 2.5 volts output; mag phono, 4mv; crystal phono, 0.15 volts; aux 1 and 2, 0.2 volts; 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, 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; $13\frac{1}{8}'' \times 3\frac{7}{8}'' \times 6\frac{3}{8}''$ h; shpg. wt. 8 lbs.\$34.95

Model SA-3 Stereo Amplifier Kit

Power output 3 watts per channel; frequency response 50-20,000 cps ± 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. 13 lbs.\$29.95

Model AA-50 Stereo Amplifier Kit



Rated output: 25 watts per channel; frequency response 30-15,000 cps ± 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 1,000 cps; input sensitivity: mag phono; 1.5 mv; tape head, 1.0 mv; tuner, aux; aux 2, 0.2

volts; 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; $15\frac{1}{2}'' \times 4\frac{5}{8}'' \times 12\frac{1}{2}''$ d; shpg. wt. 30 lbs.\$79.95

Model SA-2 Stereo Amplifier Kit

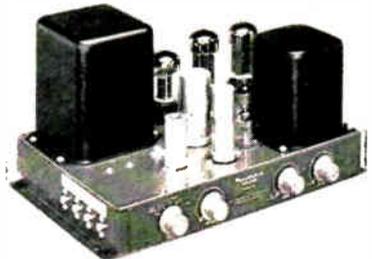
Power output 14 watts per channel; frequency response 20-20,000 cps ± 1 db; channel separation better than 45 db; input sensitivity for rated output: mag phono, 4 mv; crystal phono, 0.25 volts; tuner and aux, 0.2 volts; 4 position selector switch: mag phono, crystal phono, tuner, aux; dual concentric (clutch) volume control; dual tandem bass and treble controls; phase switch; 1 filament balance per channel; output impedances: 4, 8, 16 ohms; tubes are: 2-12AX7, 2-6AX6, 2-6AN8, 4-EL84, 1-GZ34; shpg. wt. 23 lbs.\$59.95

Model EA-3 14-Watt Amplifier Kit



Frequency response 20 to 20,000 cps ± 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 black and gold cabinet; $12\frac{1}{2}'' \times 8\frac{3}{16}'' \times 4\frac{3}{8}''$ h; 15 lbs.\$29.95

Model A-9C Amplifier Kit



Rated output: 20 watts; built-in pre-amp; two-position record equalization; bass control: 15 db boost or cut at 30 cps; treble control: 15 db boost and 20 db cut at 15,000 cps; frequency response: 20 to 20,000 cps ± 1 db; harmonic distortion: 1% at 20 watts; inputs: magnetic (7 millivolt sensitivity), mike, crystal phono, tuner; output impedances: 4, 8, 16, 500 ohms; tubes: 12AX7, 2-12AU7, 2-6L6G, 5V4G; $14'' \times 8\frac{7}{8}'' \times 7\frac{3}{8}''$ high\$35.50

Model WA-P2 Preamplifier Kit

Frequency response 15 to 35,000 cps ± 1.5 db; 4-position turnover control; 4-position rolloff control; bass control; 18 db boost and 12 db cut at 50 cps; treble



control: 15 db boost and 20 db cut at 15,000 cps; harmonic distortion: 0.24% at 2.5 volts out (phono input, 1,000 cps.); IM distortion (60 and 7,000 cps, 4:1) 0.55% at 2.5 volts out on low level input; hum and noise: 72 db below 2.5 volts on high level input, 62 db on phono input; inputs: phono (2.5 millivolts sensitivity for 1 volt output), mike, tuner; cathode follower main out-controls; tubes: 2-12AX7, 12AU7; 12 $\frac{1}{16}$ " \times 3 $\frac{3}{8}$ " \times 5 $\frac{7}{8}$ " \times d; gold finish. \$19.75

Model SP-2A Monaural-Stereo Preamplifier Kits



Basic monaural preamplifier unit, Model SP-1, may be converted to stereo preamplifier unit, Model SP-2, by addition of conversion unit, Model C-SP-1, without rewiring Model SP-1; Model SP-1 features 6 inputs: tape head, microphone, magnetic phono, and 3 high level; magnetic phono and high level inputs have level controls; sensitivity magnetic phono input: 2.5 millivolts; NARTB tape head equalization: 3 positions phono equalization; separate level and loudness controls; two-position scratch filter; a.c. convenience outlets: 1 unswitched, 3 switched, plus 1 on separate switch; cathode follower outputs to amplifier and tape recorder; Model C-SP-1 plugs into Model SP-1 and provides duplicate functions except that scratch filter is replaced by function selector switch—provides two-channel mixing, single or dual channel monaural, and stereo; remote balance control allows balancing stereo channels: printed circuit construction; black leather textured vinyl covered steel cover with gold design.

Model SP-1.....\$37.95
Model SP-2.....\$56.95
Model C-SP-1.....\$21.95

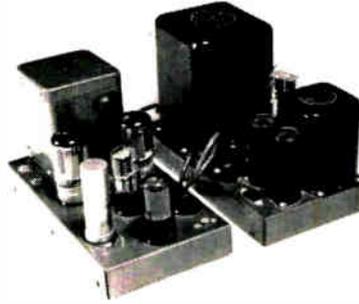
Model UA-1 12-Watt Amplifier Kit



Less than 2% harmonic distortion from 20 to 20,000 cps at 12 watts; output impedances 4, 8, and 16 ohms; 16 ohm tap features switch-controlled damping for unity damping or maximum damping; input level control; octal socket for powering auxiliary equipment; output

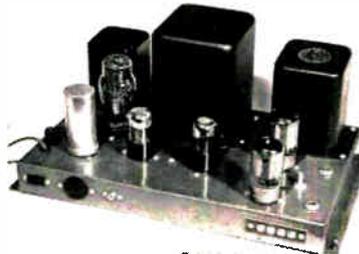
circuit features 6BQ5/EL84 output tubes working in push-pull operation; 13 lbs.\$22.95

Model W-3AM Amplifier Kit



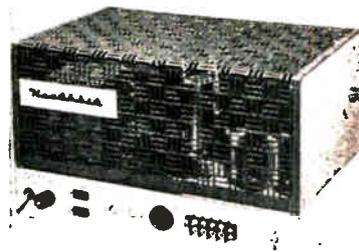
Rated output: 20 watts, 36 watts peak; dual chassis Williamson type circuit; frequency response: 6 to 150,000 cps \pm 1 db at 1 watt; harmonic distortion: less than 1% at 20 watts; IM distortion: less than 1.3% at 20 watts; sensitivity: 1 volt for 22 watt output; hum and noise 88 db below rated output; output impedances: 4, 8, 16 ohms; damping factor: 14; tubes: 2-6SN7GT, 2-5881, 5V4G; Acrosound TO-300 output transformer; each chassis 7" \times 5 $\frac{1}{2}$ " \times 11" \times l.\$49.75

Model W-4B Amplifier Kit



Rated output: 20 watts, 36 watts peak; Williamson-type circuit; frequency response: 10 to 100,000 cps \pm 1 db; harmonic distortion: less than 1.5% at 20 watts; IM distortion: less than 2.7% at 20 watts; sensitivity: 2 volts for full output; hum and noise: 95.2 db below rated output; output impedances: 4, 8, 16 ohms; damping factor: 28.5; tubes: 2-6SN7, 2-5881, 5U4G; 15 $\frac{1}{4}$ " \times 8 $\frac{7}{8}$ " \times 7" high\$39.75

Model W-5M Amplifier Kit



Rated output: 25 watts, 47 watts peak; frequency response: 5 to 160,000 cps \pm 1 db at 1 watt; harmonic distortion: less than 1% at 25 watts; IM distortion: less than 1% at 20 watts; sensitivity: 2.2 volts for 25 watt output; hum and noise 99 db below rated output; output impedances: 4, 8, 16 ohms; damping factor: 40; tubes: 2-12AU7, 2-KT66, 5R4GY; Peerless output transformer; "tweeter saver" prevents damage from high frequency oscillation; "Bass-Bal" circuit requires only voltmeter for output tube balance; black cage, gold finish chassis\$59.75

Amplifiers and Preamplifiers

Model W-7A 55-Watt Amplifier Kit

Power output 55 watts from 20 to 20,000 cps with less than 2% total harmonic distortion; output connections permit switching from "unity" to "maximum" damping for 4, 8, and 16 ohm speakers; each output has separate current feedback circuit; current feedback shorted out when not in use; output tube balance control; EL34 output tubes; screen-tapped Chicago output transformer; special 70 volt output; silicon diode power supply; current controlled until tubes have warmed up; black and gold case; 6" \times 8 $\frac{1}{2}$ " \times 15" \times w; 28 pounds.....\$54.95

Model W-6A Amplifier Kit



Rated output: 70 watts; frequency response: 6 to 70,000 cps \pm 0.5 db at 0.5 watt; harmonic distortion: less than 2% at 70 watts; IM distortion: less than 1% at 70 watts; hum and noise: 88 db below rated output; sensitivity: 1.1 volt for full output; output impedances: 4, 8, 16 ohms; 70.7 volt line output; damping factor variable from 0.5 to 10 by calibrated control; output balance and bias adjustments with meter and meter switch; Peerless output transformer; tubes: 12AU7, 12AX7, 12BH7, 2-6550; 4 silicon diode rectifiers; 11 $\frac{7}{8}$ " \times 9 $\frac{1}{16}$ " \times 14 $\frac{1}{4}$ " \times w; gold finish chassis with black cage\$109.95

Model XO-1 Electronic Crossover Kit

Separates audio signal from preamplifier into high and low frequencies and then provides outputs to allow their being fed to two power amplifiers; virtually eliminates IM distortion and speaker matching problems; crossover frequencies at 100 cps, 200 cps, 400 cps, 700 cps, 1200 cps, 2000 cps, and 3500 cps; 6 pounds\$18.95

HOLT STEREO

Reverbetron Z

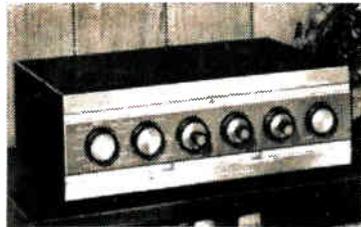


10 watt push-pull amplifier; provides electronic reverbification effect; tubes are 2-6V6, 2-12AX7, 12AU7, 5Y3; 4, 8, 16 ohm taps.....\$84.00

Amplifiers and Preamplifiers

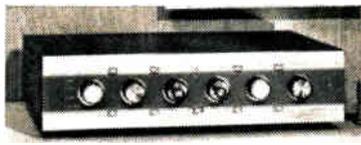
KNIGHT-KIT (ALLIED RADIO CORP.)

Deluxe Stereo Preamplifier Kit



Inputs for 5 stereo pair and mono; dc heated filaments; separate tape outputs; clutch-type controls; frequency response ± 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.....\$64.95

70-Watt Stereo Amplifier Kit



Built-in preamplifiers with dc heated filaments; 5 pairs stereo inputs; dual loudness control, balance control, blend control; rumble and scratch filters; frequency response ± 1 db 20-30,000 cps at rated output; harmonic distortion 0.5% at 35 watts; IM distortion less than 1% at full output using 60 cps and 7 kc mixed 4:1, hum and noise better than 75 db below 35 watts; tubes are 2-12AY7, 2-7025, 2-UF86, 2-ECC83, 4-EL34, 2-GZ34; 17 1/2" x 13 1/2" x 1 1/4".....\$119.95*
* Estimated price at press time.

32-Watt Stereo Amplifier

Preamplifiers have dc heated filaments; slide switch for paralleling mono records with stereo cartridge input; 5 pairs stereo inputs; sensitivity: mag. phono - 2 mv; tape - 2 mv; ceramic phono - 150 mv; tuner - 200 mv, all rated at 16 watts output; frequency response ± 1 db 20-20,000 cps at 8 watts; harmonic distortion less than 1%, 16 watts at 1 kc; tubes are 4-7189, 6-ECC83, GZ34; 11 3/4" x 14 3/8" x 4 1/4".....\$59.95*
* Estimated price at press time.

18-Watt Amplifier Kit



Frequency response 20 to 20,000 cps ± 1 db at 18 watts; distortion 0.5% at 18 watts; hum and noise better than 60 db below 18 watts; sensitivity on low level inputs: 7 millivolts; bass and treble controls: 7-position record equalization; inputs: magnetic phono, ce-

ramic phono, tape head, tape, aux., tuner; output impedances 4, 8, 16 ohms; tubes are 3-ECC83/12AX7, 2-6973, EZ81; printed circuit construction; complete with cabinet, wire, and solder 4 1/4" x 13 1/4" x 8"; 14 3/4 pounds; 83YX930.....\$39.95

40 Watt Stereo Amplifier Kit



20 watts per channel; frequency response 15 to 35,000 cps ± 1 db at 10 watts; hum and noise -70 db at tuner input, -55 db for mag phono; inputs, 2 each, tape head (NAB), mag phono, ceramic phono, tuner, aux; sensitivity: tape head 2.2 millivolts; mag phono 2.2 millivolts; ceramic phono and tuner 300 millivolts; aux 700 millivolts; 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 per channel; 8 and 16 ohms for center channel; tubes are 4-12AX7, 2-6CM8, 4-6973, GZ34; printed circuit board construction. 83YU774.....\$79.50

12 Watt Amplifier Kit



Frequency response 30 to 15,000 cps $\pm 1 1/2$ db at 6 watts; harmonic distortion less than 1% at 1,000 cps for rated output; hum and noise level 65 db down at rated output through high level input; 2 inputs; sensitivity for tuner 1 volt for rated power; mag phono sensitivity, (RIAA equalization) 5 millivolts for rated power; bass control 9 db boost or cut at 40 cps; treble control 9 db boost or cut at 10,000 cps; tubes are 2-ECC83/12AX7, 2-EL84, EZ80; output impedances are 4, 8, 16 ohms; 5" h x 9 3/4" w x 7" d; 83Y784.....\$19.95
Metal cover.....\$3.95

20 Watt Stereo Amplifier Kit

10 watts per channel; frequency response 35 to 15,000 cps ± 1.5 db at half power; harmonic distortion less than 1.5% at rated power; inputs: 4 pair; mag phono, crystal phono, tuner, aux; sensitivity for rated output: stereo: mag phono 6 millivolts; crystal 0.4 volts; tuner and aux 1 volt; crosstalk between channels -45 db; 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 are 4, 8, and 16 ohms; tubes are 2-ECC83, 4-ECL82, EZ81; 4 1/4" x 13 1/4" x 8 1/2", wt. 17 lbs. 83YX927.....\$44.50

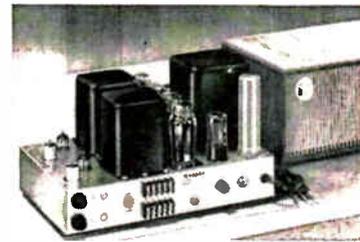
25 Watt Basic Amplifier Kit

Power output 25 watts; frequency re-



sponse ± 0.5 db, 14 to 45,000 cps at 12 1/2 watts; harmonic distortion 0.11% at 25 watts; IM distortion 0.17% at 25 watts; hum and noise 96 db below 25 watts; Williamson-type circuit; output tube balance control; variable damping control; level control; output impedances are 4, 8, and 16 ohms; printed circuit construction; black and chrome finish; 4 3/4" x 14 1/2" x 7 1/8"; 21 pounds. 83YU793.....\$44.50

60-Watt Stereo Basic Amplifier Kit



Features two 30-watt channels; 60 watts monaural; frequency response 15 to 31,000 cps ± 0.5 db at 30 watts per channel; harmonic distortion 0.3% at 30 watts per channel; IM distortion 0.5% per channel at 30 watts; sensitivity for rated output 0.5 volts; hum and noise 90 db below 30 watts; individual level controls; printed circuit boards; output impedances per channel are 4, 8, 16, 32 ohms; tubes are 2-EF86, 2-ECC83, 4-EL34, 2-GZ34; 14" x 9" x 8 1/4"; 83YU777.....\$84.50

Stereo Adapter Control Kit

Centralized control for stereo system using amplifiers up to 20 watts; volume control; balance control; 6-position selector switch (stereo, B-channel, B-monaural, phase reversal, A-channel, A-monaural); channel reverse; master gain control: 4 1/4" x 7 3/4" x 4"; 83Y932 \$9.95

KOSS, INC.

Model A-1220 Amplifier



For use with stereophones; can be directly connected to stereo ceramic cartridge or outputs of stereo pre-amp or tuner; gain control for each channel; transformer powered; 3 tubes plus rectifier.....\$34.95

LAFAYETTE RADIO

Model LA-55

Monaural amp-preamplifier; power output (speech and music rating) 15 watts; frequency response at normal listening levels, 15-30,000 cps ± 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.....\$39.50

Model LA-210 Stereo Amplifier

5 watts per channel; frequency response at 1 watt, 40-30,000 cps ± 1 db; harmonic distortion 2% at full output; IM distortion 3% at full output; hum and noise 65 db below full output; ganged bass and treble controls; dual concentric volume controls; 7-position selector switch provides mono phono, tuner A, tuner B, phono, phono reverse, tuner, tuner reverse; output impedances: 4, 8, 16 ohms; tubes: 2-12AX7, 2-6BQ5, 1-6CA4; $4\frac{1}{2}'' \times 12\frac{7}{8}'' \times 7''$\$42.50

Model "Stereo 5"

Stereo amplifier features individual volume controls, stereo/mono control, on/off switch, tone control; input for crystal or ceramic cartridge; 4 ohms output; tubes: 1-12AX7, 2-35C5, 1-35W4 \$10.45

Model KT-550 Basic Stereo Amplifier Kit

50 watts per channel; frequency response 17-45,000 cps ± 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, ac, dc balance controls with self contained meter; tubes: 4-7027A, 4-6CL6, 2-6BR8A; 5 silicon diodes.....\$124.50

Model 250A Stereo Amp-Preamplifier Kit

25 watts per channel; frequency response 20-50,000 cps ± 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 volts; channel separation better than 55 db at 1,000 cps; 4-position selector switch; aux, tuner, phono, tape head; dual concentric bass control ± 14 db at 50 cps; dual concentric treble control ± 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 NARTB equalization; third channel output; output impedances 4, 8, 16 ohms; tubes: 4-EL86, 2-7199, 3-12AX7; 3 silicon diodes; $14\frac{1}{2}'' \times 12\frac{3}{4}'' \times 5\frac{1}{2}''$; shpg. wt. 28 lbs.....\$74.50

Model LA-70



Seventy-watt power amplifier; frequency response at 1 watt 10 to 100,000 cps ± 1 db; harmonic distortion less than 2% 20 to 20,000 cps within 1 db at 70 watts, less than 1% at 60 watts; IM distortion below 1 1/2% at 70 watts, below 1% at 60 watts; damping factor

variable .5 to 12; sensitivity 2 volts for 70 watts output; bias and balance adjust controls with meter switch; tubes are 2-KT88, 6AN8, GZ34, plus selenium rectifier; socket for powering preamp; 2 a.c. outlets; outputs 4, 8, and 16 ohms; Chicago transformers; $14\frac{1}{2}'' \times 7\frac{3}{8}'' \times 10''$ d; 40 lbs.

LA-70\$94.50 Net
KT-400 (kit form)\$69.50 Net

Model KT-600 Stereo Preamplifier Kit



For all stereo or monaural program sources; frequency response 10 to 25,000 cps ± 0.5 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 1300 ohms; a.c. outlets: 3 switched, 1 unswitched; tubes are 7-7025 plus 2 selenium rectifiers; $14'' \times 4\frac{1}{2}'' \times 10\frac{3}{8}''$ \$79.50
Wired\$134.50

Model KT-310 Stereo Basic Amplifier Kit



Dual 18-watt amplifiers on one chassis; may be used for stereo or monaurally (36 watts output); frequency response 35 to 30,000 cps ± 0.5 db; harmonic and IM distortion less than 1%; input sensitivity per channel: 0.45 volts for full output; tubes are 2-6AN8, 4-7189, GZ34; $9\frac{3}{16}'' \times 5\frac{1}{4}'' \times 13\frac{1}{4}''$\$44.50

Model KT-126 Stereo Amplifier Kit

Stereo phono amplifier kit; 2 watts output per channel; 4 watts monaural; high impedance input; separate volume control for each channel; ganged tone control; stereo, monaural, and phasing switch; sensitivity for rated output 40 millivolts; pictorial instructions; $9\frac{1}{2}'' \times 5'' \times 4\frac{1}{2}''$ \$17.95

Model KT-315 Stereo Control Kit

Electronic stereo remote control kit; frequency response 10 to 25,000 cps ± 0.5 db; 6 db gain; cross-channel rejection better than 50 db; bridge balancing circuit; variable amounts of signal may

Amplifiers and Preamplifiers



be fed from each channel to the other; third channel output for driving third amplifier and speaker system or for recording or playing monaurally from a stereo source.....\$27.50

Model KT-236A Kit

18 watts per channel; frequency response 15-30,000 cps ± 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; $14\frac{1}{2}'' \times 11\frac{1}{2}'' \times 5\frac{1}{2}''$ h.\$59.50

LA-235 Integrated Stereo Amplifier

Integrated stereo amplifier; $17\frac{1}{2}$ watts per channel; frequency response 20 to 20,000 cps ± 1 db (at normal listening level); harmonic distortion less than 2% at rated output; sensitivity: high level inputs 0.5 volts; mag phono 4 millivolts (at 1,000 cps); hum level 75 db below rated power; channel separation greater than 40 db; inputs, 2 each, aux, tape, tuner, mag phono, crystal phono; 2 tape outputs; 4 position selector switch; volume-balance control; separate bass and treble controls; blend control; rumble filter; phase reverse; channel reverse; output impedances 8 and 16 ohms; tubes are 4-EL84, 2-7199, 2-12AX7, 1-GZ34\$69.50

Model TM-40 Stereo Balance Meter

Dual audio output level indicator for stereo systems; 2 independent a.c. meter movements; scales calibrated in VU and per cent; sensitivity 1.4 volts for "0" VU; 2 variable controls for up to 20 db of attenuation on each channel; calibrating switch; blocking capacitors prevent meter damage by d.c.\$8.95

Model TM-20 Audio Output Level Meter

Output level indicating meter with 20 db continuously variable attenuator; standard VU meter face; input impedance 10,000 ohms; d.c. blocking capacitor; "0" VU indicated with applied sine wave voltage of 1.4 volts; damped movement indicates average level of non-sinusoidal a.c. voltages within audible frequency spectrum; $4'' \times 2\frac{3}{16}'' \times 1\frac{3}{8}''$ d\$5.95

LEAK (BRITISH INDUSTRIES CORP.)

"Varislope III" Preamplifier

Low-noise, low-distortion tone control preamplifier; two stages of feedback; four position negative feedback record compensator; continuously variable

Amplifiers and Preamplifiers



feedback tone controls allowing 16 db boost and cut at 30 cps and 18 db boost and cut at 20,000 cps; three position high frequency filter at 9 kc, 6 kc, and 4 kc with variable Slope Control which allows selection of from 5-35 db/octave attenuation rate above the filter setting; rumble filter; two magnetic inputs, tuner and tape inputs, all with level controls.....\$79.00

"TL/12 Plus" Amplifier



Power output 12 watts with 0.1% harmonic distortion, 14 watts with negligible distortion; triple-loop negative feedback circuitry; highest quality components and workmanship; uses EL84 output tubes\$89.00

"TL/25 Plus" Amplifier

Power output 25 watts with 0.1% harmonic distortion, 32 watts with negligible distortion; triple-loop negative feedback circuitry; highest quality components and workmanship; uses KT66 output tubes\$109.50

Leak "TL/50 Plus" Amplifier

Power output 50 watts with 0.1% harmonic distortion, 64 watts with negligible distortion; triple-loop negative feedback circuitry; highest quality components and workmanship; uses KT88 output tubes\$149.00

"Point One Stereo" Preamplifier



Features 5 dual inputs; sensitivity tape head (NARTB) 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 monaural; balance control (allows for difference of 6 db sensitivity between speakers); outputs for tape recording (stereo or monaural); tubes are 2—Z729 and ECC83. Supplied with four color inserts to fit room color scheme.....\$119.50

Stereo 50 Basic Amplifier



Power output 25 watts per channel; harmonic distortion 0.1% at 1000 cps for 20 watts output; hum and noise 80 db below 20 watts; sensitivity 125 millivolts for 20 watts output; frequency response 20 to 20,000 cps ± 0.5 db; damping factor 23 at 1000 cps; output impedance 3 to 20 ohms; tubes are 3—ECC83, 4—EL34, 1—GZ34; 100-120 volts; 50-100 cycles.....\$199.00

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—ECC81, 4—EL84, 1—GZ34.....\$149.00

McGEE RADIO

Imperial Model NS-400 Stereo Preamp

Complete stereo control center: inputs for tape, phono, tuner; stereo mode switch; separate bass and treble controls; rumble and scratch filters; frequency response 20-25,000 cps. ± 1 db.; less than 2% distortion; all outputs are low-impedance cathode follower: 4—12AX7, one 6X4 tubes; 13" x 4 1/2" x 9"\$100

Imperial Model NS-P52 Stereo Power Amplifier

Delivers 32 watts, 16 watts per channel; requires 1 volt for full output; frequency response 20-20,000 cps; less than 1% distortion; hum and noise 70 db. below full output; 8, 16, 32 ohm output impedances; tubes are 2—6BL8, 4—6BQ5, 5AR4/GZ34; in gold lacquered metal case 14" x 8 3/4" x 6 1/8"\$140.00

Imperial Model NS-P80 Stereo Power Amplifier

Each channel delivers 36 watts power, 72 watts total; frequency response 20-30,000 cps; tubes are 2—12AU7, 4—6CA7/EL34, 2—5AR4/GZ34; 16 3/8" x 11 5/8" x 6 5/8"; 38 lbs.....\$200.00

Imperial Model NA-16H Monaural Amplifier

Built-in preamp; 6 input jacks for mag. phono, xtal phono, radio, TV, tape;

selector switch for equalization; bass boost or cut 17 db. at 50 cps.; treble boost or cut 17 db. at 10,000 cps.; 16 watts power up to 20 watt peaks; frequency response 30-20,000 cps. $\pm 1/2$ db.; rumble filter; output impedances 8 or 16 ohms; tubes are 2—EL84/6BQ5, 3—12AX7, EZ81/6CA rectifier; 11 1/2" x 4" x 9 1/2"; 15 lbs.\$89.95

Imperial Slim Line Model SL-20 Amplifier

Has built-in preamp; 18 db. bass boost or cut; 16 watts output; 15 db. treble boost; inputs for tuner, tape, phono; frequency response 15-20,000 cps; compensation for AES and RIAA phono equalization; 8 or 16 ohm output impedances; tubes are 2—12AX7, 12AU7, 2—EL84, 5Y3GT; includes leatherette covered cabinet; 5 1/4" x 11 1/4" x 8"; 15 lbs.\$69.50

Imperial Slim Line Model SL-10 Amplifier

Power output 12 watts; frequency response 20-17,500 cps; tone controls, equalization control; 8 ohm impedance; tubes are 2—12AX7, 2—6V6GT, 5Y3GT; same size as SL-20.....\$49.50

MARANTZ COMPANY

Audio Console



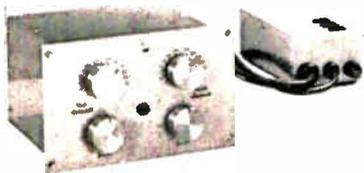
Preamp-equalizer; three low level inputs for microphone and low or medium output magnetic cartridges, four high level inputs for tuner, tape, TV, and extra source (ceramic and FM cartridge can be used in the "Extra" position); 2 outputs, main output: low impedance cathode follower, recording output, IM distortion (volume control at maximum, all other controls in flat position; 60 and 7,000 cps. 4:1 ratio); below 1% at 15 volts rms output, below 0.1% at 2 volts rms output; hum: inaudible at full gain from all inputs; wideband noise (20 to 60,000 cps) better than 70 db below 10 millivolt input, with tone controls in flat positions; frequency response: 20 to 60,000 cps ± 1 db; d.c. on filaments; tubes are three ECC83/12AX7 cabinet not included.....\$153.00 Cabinet\$24.00

Model 2 Power Amplifier



Maximum power output: 40 watts continuous, 80 watts peak; Ultra-linear circuit with switch for 20 watt triode operation to protect speakers of low power-rating; frequency response at 40 watts: 20 to 20,000 cps ± 0.1 db, tubes: ECC83/12AX7, 6CG7, 2—EL34/6CA7, 2—6AU4GTA\$219.00

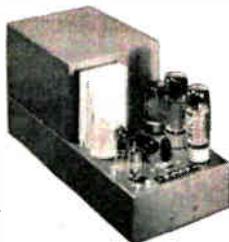
Electronic Crossover



Two-channel electronic crossover for use between preamplifier and two power amplifiers. can be cascaded for multi-speaker systems; 12 crossover points at 1/2 octave intervals; adjustable from 100 cps to 7,000 cps; separate switch and level control for each channel; 12 db/octave rolloffs; self-powered by remote supply; filtered d.c. on filaments of all 3 dual triode tubes; IM distortion: less than 0.1% at 2 volts, less than 1% at 15 volts; 10 db gain with balance controls at maximum; cathode follower outputs; cabinet available to house two units; matching blank panel can be used to cover unused section when only one unit is used.

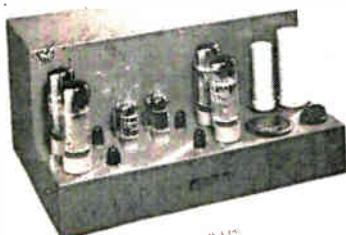
Electronic Crossover\$90.00
Blonde or mahogany cabinet\$19.50
Blank panel\$ 3.00

Model 5 30-Watt Amplifier



Output in ultralinear operation 30 watts, 60 watts peak; output in triode operation (with minor circuit changes) 18 watts; frequency response 20 to 20,000 cps ± 0.1 db at 30 watts; harmonic distortion less than 0.1% at mid-frequencies at 30 watts; IM distortion less than 0.5% at 30 watts; damping factor 20 (can be adjusted for 2, 1, and 1/2); hum better than 90 db below 30 watts; metered bias adjust; tubes are 6BH6, 6CG7, 2-EL34/6CA7, GZ34; 7 3/8" x 6" x 15 1/4"; 35 lbs.\$147.00
Perforated grille.....\$ 7.50

Model 8 Stereo Power Amplifier



Utilizes 2 Model 5 amplifiers on one chassis; specifications are the same as Model 5 with the exception of silicon rectifier; 13 1/2" x 7 1/4" x 10 1/2".....\$237.00
Accessory grille.....\$9.00

Model 7 Stereo Console

Preamplifier; 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 rms., 0.01% at 2 volts rms.; frequency response 20-20,000 cps.; tubes are 6-ECC83/12AX7; size 14 3/8" x 5 3/8" x 8 1/2"; total noise level is 80 db. below 10 mv. phono input; 20 lb.

.....\$249.00

Model 7R—identical to 7 but mounted on 19" rack panel.....\$273.00



Model 6 Stereo Adapter

For master control of stereo systems that use dual preamplifiers with tape monitor and recording outputs; 12 inputs; stereo outputs to power amplifiers and recorders; master volume control; speaker reverse and stereo-monaural switches; 1400-watt master power switch; 9 1/4" x 3 3/8" x 4 1/2".....\$45.00

McINTOSH LABORATORY, INC.

Model MC-30



Power output 30 watts continuous; frequency response 20 to 30,000 cps ± 0.1 db at 30 watts, 10 to 100,000 cps ± 1 db at 15 watts; harmonic distortion less than 0.33% at 30 watts, 20 to 20,000 cps; IM distortion less than 0.5% at 30 watts, 20 to 20,000 cps; impulse distortion negligible; hum and noise -90 db; damping factor 12 or better for 4, 8, and 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 are 12AU7, 2-12AX7, 12BH7, 2-1614, and 5U4GA; 13 1/8" x 8" x 8"; 30 1/2 lbs; chrome and black finish.....\$143.50

Model MC-60

Power output 60 watts continuous; frequency response 20 to 30,000 cps ± 0.1 db; 10 to 100,000 cps ± 1 db at 30 watts; harmonic distortion less than 0.3% at 60 watts; IM distortion less than 0.5% at 60 watts; impulse distortion negligible; hum and noise level -90 db; damping factor 15 or better

Amplifiers and Preamplifiers

for 4, 8, and 16 ohm outputs, 20 for 600 ohm output; 600 ohm output balanced to ground; sensitivity .5 volts input for full output; phase shift $\pm 8^\circ$ 20 to 20,000 cps; tubes are 2-12AX7, 12AU7, 12BH7, 2-5U4GA, and 2-6550; 14 1/4" x 10" x 8"; weight 42 lbs; chrome and black finish.....\$198.50

Model C-20 Stereo Compensator



Flexible amplifier for stereo; mode selector for stereo, reverse, Channel A, Channel B and monaural 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 ± 0.5 db 20 to 20,000 cps; distortion less than 0.2% at rated output; 17 lb.....\$225.00

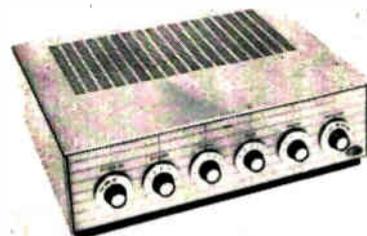
MODEL ENGINEERING & MANUFACTURING, INC.

Model M2 Power Amplifier

Monaural; low and high level inputs; controls for loudness, bass and treble, function; power output 12 watts, 20 watts peak; tubes are 2-12AX7, 2-6V6, 5Y3; frequency response 20-30,000 cps; 12" x 6 1/4" x 3 1/2".....\$32.50

OLSON RADIO CORP.

Model AM-147 Stereo Preamp/Amplifier



Maximum power 15 watts per channel; frequency response 20-30,000 cps ± 0.5 db; hum -79 db; crosstalk 50 db between channels; tone control range ± 12 db at 50 and 10,000 cps; sensitivity: tuner, aux 1, aux 2, 0.2 volts; mag phono (RIAA compensated) 5 mv; tape head (NARTB) 2 mv; distortion less than 1% at 9 watts; stereo reverse; balance control; separate concentric bass and treble controls; input selector switch; dual tape outputs; output impedance 4, 8, 16 ohms each channel; tubes: 3-ECC83; 4-ECL82, 1-GZ34; 14 1/8" x 4 1/2" x 11 1/8"; 21 lbs.....\$69.95

Model AM-150 Stereo Amplifier

Designed for use with high output crystal or ceramic stereo cartridge; controls

Amplifiers and Preamplifiers



are chan 1 volume, chan 2 volume, tone control; response is 50-12,000 cps; output impedance 8 ohms per channel; tubes: 2-12AV6, 2-50C5, 2-35W4; 117 volts, AC or DC; 10" x 3 1/2" x 5 1/4"\$21.32

Model AM-158 Stereo Preamp/Amplifier
15 watts per channel; frequency response 30-25,000 cps ± 0.5 db; hum -60 db; sensitivity: tape, 5 mv; mag phono, 7 mv; ceramic phono, 0.3 volts; tuner, aux, 1 volt; dual tape outputs; input selector switch; balance control; concentric bass and treble controls; volume/loudness; mode selector switch; rumble filter; output impedance 4, 8, 16 ohms each channel; tubes: 2-12AX7, 4-6BM8, 1-6CA4; 12 3/4" x 10 3/8" x 4 3/8"; 16 lbs.....\$69.95

PACO ELECTRONICS CO.

Model SA-40 Stereo Preamp-Amplifier



Inputs for 2 phonos, tape, tuner, and mic; steady state output 20 watts per channel up to 40 watts peak; modulated state output 25 watts per channel up to 50 watts peak power; harmonic distortion less than 0.2% at 20 watts, less than 0.1% at 10 watts per channel; IM distortion less than 1% at full rated output; controls for phono and tape equalization, monophonic-stereo mode, rumble filter, contour, speaker system selector, balance, loudness, bass, treble; bass control range ± 15 db. at 50 cps.; treble control range ± 15 db. at 10 kc.; low impedance silicon diode power supply; tubes are 3-12AX7/ECC83, 2-7199, 4-7189, 2 silicon power rectifiers, 1 selenium bias rectifier; 25 lbs. SA-40W wired\$129.95
SA-40 kit with case.....\$79.95

PERMOFLUX PRODUCTS CO.

Model SKB Stereo Amplifier



Controls for bass, treble, volume, balance.....\$40.00

PILOT RADIO CORP.

Model 248 Stereo Preamp-Amplifier

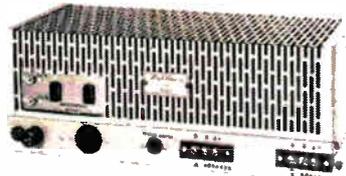


30 watts per channel; frequency response 20-20,000 cps; stereo balance control; rumble, scratch filters; concentric bass and treble controls for each channel; tape monitor switch; 7 stereo inputs; third channel output; total of eleven tubes; 5" x 15" x 10 1/4".....\$249.50

Model 264 Stereo Power Amplifier

30 watts per channel; frequency response 20-20,000 cps ± 0.2 db at 1 watt per channel; sensitivity 1 volt for rated output; IM distortion less than 0.5%; harmonic distortion less than 0.5% for rated output; output impedances: 4, 8, 16 ohms plus center speaker output; 4-7591 output tubes; 5" h x 8" w x 14 3/8" d; complete with cover\$179.50

Model SA-232 Stereo Amplifier



Two identical 20 watt basic amplifiers on one chassis; frequency response 20 to 20,000 cps; harmonic distortion 1%; IM distortion 1.5%; hum 90 db below full output; twin output impedances are 8 and 16 ohms; sensitivity 1 volt for full output; supplies power for Model SP-210 preamplifier; shuts off equipment after last record has played; tubes are 12AU7, 2-12AX7, 4-EL84, GZ34; 13 1/2" x 5 1/2" x 5"\$89.50

Model SA-260 Stereo Amplifier

Two identical 40 watt basic amplifiers on one chassis; frequency response 20 to 20,000 cps; harmonic distortion 0.5%; IM distortion 1%; hum 90 db below full output; twin output impedances are 8 and 16 ohms; sensitivity 0.8 volts for full output; supplies power for Model SP-210 preamplifier; shuts off equipment after last record has played; output tube bias and balance controls; tubes are 12AU7, 2-12AX7, 4-EL34/6CA7, 2-5U4GB; 15 3/4" x 5 3/4" x 7 1/4"\$129.50

Model 216-A Stereo Preamplifier

Twin preamplifier-control units on one chassis; specifications (for each channel): frequency response 20 to 20,000 cps ± 1 db; audio output 1 volt; recorder output 0-1.3 volts adjustable by rear level control; sensitivity for 1 volt at audio output jack: phono, 7 millivolts; tape head, 2.5 millivolts; ganged tone controls allow 14 db cut and 15 db boost at 20 cps, up to 25 db cut and 18 db boost at 20,000 cps; twin VU meters for controlling output to tape recorder.....\$199.50

Model 245A Stereo Control Amplifier

Twin integrated amplifiers on one chassis; specifications (for each channel): power output 16 watts (32 watts peak); frequency response 20 to 20,000 cps ± 1 db; harmonic distortion less than 1%; IM distortion less than 1.5% at full output; hum and noise 80 db below full output; sensitivity for full output: phono, 8 millivolts; tape head, 2.5 millivolts; microphone, 3.5 millivolts; radio and auxiliary, 150 millivolts; ganged bass and treble controls.....\$199.50

Model 240

30 Watt Stereo Preamp-Amplifier

30 watt stereo preamplifier-amplifier (15 watts per channel): for independent tone controls with optional ganging; 3 pair high level inputs: multiplex adapter jack; 2 pair low level inputs: direct tape playback facilities; front panel speaker selector switch; loudness switch; automatic shut-off; eleven front panel controls; sensitivity: phono, 3 mv; FM-AM, multiplex, tape recorder, 110 mv; harmonic distortion 1%; hum and noise 80 db below full output; frequency response: ± 1 db, 20 to 20,000 cps; 5 3/8" h x 14 3/4" w x 10 3/4" d; 23 lbs.....\$134.50

PRECISE DEVELOPMENT CORP.

Model AMW Amplifier

Power output 40 watts; bass and treble controls provide 18 db boost or cut; volume and loudness controls; rumble filter; phono sensitivity 5 millivolts; muting switch; 24 positions of record equalization; output meter reads power output or output to tape recorder; cathode follower tape output; hum -80 db on radio, -60 db on phono; selectors for output impedance and speakers: d.c. on input tubes; 10 tubes; 13" x 4 1/4" x 12"\$89.95

Mark XXIV Integra

Stereo Amplification System



Dual preamps and amplifiers on same chassis; 20 watts each channel 40 watts peak power; 40 watts monophonic operation up to 80 watts peak; separate bass, treble, volume controls; speaker phasing built in; inputs for tape, tuners, mag, ceramic, and xtal phono; 4-tube push-pull output; frequency response 18-20,000 cps; IM distortion less than 0.6% at normal level; total harmonic distortion less than 0.4% at normal level; tubes are 4-6BQ5/EL84, 1-6CA4/EZ81, 1-12AU7/ECC82, 3-12AX7/ECC83, germanium diode.....\$99.95

Mark XIV Eclipse Stereo Amplifier

Integrated stereo amplifier: inputs for 2 tuners, 2 tape recorders; phasing switch for stereo and stereo reverse, monophonic operation; muting switch\$59.95

PRINTED ELECTRONIC RESEARCH, INC.

"Peri-50" Kit

Power output: 50 watts, 100 watts peak; frequency response: ± 0.5 db

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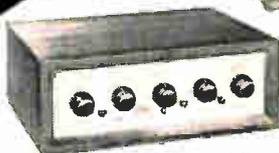
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Stereo Amplifier-Preamplifier HF81†



Stereo Preamplifier HF85††



FM Tuner HFT90††
AM Tuner HFT94††
FM/AM Tuner HFT92††



100W Stereo Power Amplifier HF89
70W Stereo Power Amplifier HF87
28W Stereo Power Amplifier HF86



Stereo Integrated Amplifier AF4††



3-Way Speaker System HFS3
2-Way Bookshelf Speaker Systems
HFS5 and HFS1



Stereo Automatic Changer/
Player 1007

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HF81 Stereo Amplifier-Preamplifier selects, amplifies, controls any stereo source & feeds it thru self-contained dual 14W amplifiers to a pair of speakers. Provides 28W monophonically. Ganged level controls, separate balance control, independent bass and treble controls for each channel. Identical Williamson-type, push-pull EL84 power amplifiers. "Excellent" — SATURDAY REVIEW, "Outstanding . . . extremely versatile." — ELECTRONICS WORLD. Kit \$69.95. Wired \$109.95. Incl. cover.

HF85 Stereo Preamplifier: Complete master stereo preamplifier-control unit, self-powered. Distortion borders on unmeasurable. Level, bass, & treble controls independent for each channel or ganged for both channels. Inputs for phono, tape head, mike, AM, FM, & FM-multiplex. One each auxiliary A & B input in each channel. "Extreme flexibility . . . a bargain!" — HI-FI REVIEW. Kit \$39.95. Wired \$64.95. Incl. cover.

New HF89 100-Watt Stereo Power Amplifier: Dual 50W highest quality power amplifiers. 200W peak power output. Uses superlative ultra-linear connected output transformers for undistorted response across the entire audio range at full power, assuring utmost clarity on full orchestra & organ. 60 db channel separation. IM distortion 0.5% at 100W; harmonic distortion less than 1% from 20-20,000 cps within 1 db of 100W. Kit \$99.50. Wired \$139.50.

HF87 70-Watt Stereo Power Amplifier. Dual 35W power amplifiers identical circuit-wise to the superb HF89, differing only in rating of the output transformers. IM distortion 1% at 70W; harmonic distortion less than 1% from 20-20,000 cps within 1 db of 70W. Kit \$74.95. Wired \$114.95.

HF86 28-Watt Stereo Power Amp. Flawless reproduction at modest price. Kit \$43.95. Wired \$74.95.

FM Tuner HFT90: Prewired, prealigned, temperature-compensated "front end" is drift-free. Prewired exclusive precision eye-tronic® traveling tuning indicator. Sensitivity: 1.5 uv for 20 db quieting; 2.5 uv for 30 db quieting, full limiting from 25 uv. IF bandwidth 260 kc at 6 db points. Both cathode follower & FM-multiplex stereo outputs, prevent obsolescence. Very low distortion. "One of the best buys in high fidelity kits." — AUDIOCRAFT. Kit \$39.95*. Wired \$65.95*. Cover \$3.95. *Less cover, F.E.T. incl.

AM Tuner HFT94: Matches HFT 90. Selects "hi-fi" wide (20-9000 cps @ -3 db) or weak-station narrow (20-5000 cps @ -3 db) bandpass. Tuned RF stage for high selectivity & sensitivity. Precision eye-tronic® tuning. "One of the best available." — HI-FI SYSTEMS. Kit \$39.95. Wired \$65.95. Incl. cover & F.E.T.

New FM/AM Tuner HFT92 combines renowned EICO HFT90 FM Tuner with excellent AM tuning facilities. Kit \$59.95. Wired \$94.95. Incl. cover & F.E.T.

New AF-4 Economy Stereo Integrated Amplifier provides clean 4W per channel or 8W total output. Kit \$38.95. Wired \$64.95. Incl. cover & F.E.T.

HF12 Mono Integrated Amplifier (not illus.): Complete "front end" facilities & true hi-fi performance. 12W continuous, 25W peak. Kit \$34.95. Wired \$57.95. Incl. cover.

New HFS3 3-Way Speaker System Semi-Kit complete with factory-built 3/4" veneered plywood (4 sides) cabinet. Bellows-suspension, full-inch excursion 12" woofer (22 cps res.) 8" mid-range speaker with high internal damping cone for smooth response, 3 1/2" cone tweeter. 2 1/4 cu. ft. ducted-port enclosure. System Q of 1/2 for smoothest frequency & best transient response. 32-14,000 cps clean, useful response. 16 ohms impedance. HWD: 26 1/2", 13 7/8", 14 3/8". Unfinished birch. Kit \$72.50. Wired \$84.50. Walnut, or mahogany. Kit \$87.50. Wired \$99.50.

New HFS5 2-Way Speaker System Semi-Kit complete with factory-built 3/4" veneered plywood (4 sides) cabinet. Bellows-suspension, 5/8" excursion, 8" woofer (45 cps. res.) & 3 1/2" cone tweeter. 1 1/4" cu. ft. ducted-port enclosure. System Q of 1/2 for smoothest freq. & best transient resp. 45-14,000 cps clean, useful resp. 16 ohms.

HWD: 24", 12 1/2", 10 1/2". Unfinished birch. Kit \$47.50. Wired \$56.50. Walnut or mahogany. Kit \$59.50. Wired \$69.50

HFS1 Bookshelf Speaker System complete with factory-built cabinet. Jensen 8" woofer, matching Jensen compression-driver exponential horn tweeter. Smooth clean bass; crisp extended highs. 70-12,000 cps range, 8 ohms. HWD: 23" x 11" x 9". Kit \$39.95. Wired \$47.95

HFS2 Omni-Directional Speaker System (not illus.) HWD: 36", 15 1/4", 11 1/2". "Fine for stereo" — MODERN HI-FI. Completely factory-built. Mahogany or walnut \$139.95. Blond \$144.95.

New Stereo Automatic Changer/Player: Jam-proof 4-speed, all record sizes, automatic changer and auto/manual player. New extremely smooth, low distortion moisture-proof stereo crystal cartridge designed integrally with tonearm to eliminate mid-range resonances. Constant 4 1/2 grams stylus force is optimum to prevent groove flutter distortion. No hum, turntable attractions, acoustic feedback, center-hole enlargement. Only 10 3/4" x 13". 1007S: 0.7 mil, 3 mil sapphire, \$49.75. Incl. FET and "Magnadaptor."

†Shown in optional Furniture Wood Cabinet WE71: Unfinished Birch, \$9.95; Walnut or Mahogany, \$13.95.

††Shown in optional Furniture Wood Cabinet WE70: Unfinished Birch, \$8.95; Walnut or Mahogany, \$12.50.

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Amplifiers and Preamplifiers

6 to 60,000 cps: ± 0.1 db 20 to 30,000 cps at any level from 1 milliwatt to 50 watts; harmonic distortion does not exceed 1% 20 to 25,000 cps within 1 db of 50 watts; intermodulation distortion less than 1% at 50 watts, less than 0.25% below 35 watts; sensitivity 0.75 volts rms for 50 watts; 1 volt rms for 100 watts; output impedances 8 and 16 ohms (4 ohms available on special order); damping factor: 25; 20 db feedback; fixed bias on output tubes (EL-34's); all wiring except transformer leads contained in deep-etched copper printed-circuit laminated to under side of base plate, components leads plug into holes on top side of board and point-soldered to bottom; tubes are 2—EL-34, 6AN8, and 5U4; shipping weight: 22½ lbs.\$69.75

"Peri-60" Kit

Similar to "Peri-50" except for power output of 60 watts, 120 watts peak; all specifications identical except that measurements are made at 60 watts.....\$79.95

Model PPC-300 Stereo Preamplifier



Frequency response 12 to 35,000 cps ± 0.5 db at 1 volt output; harmonic distortion less than 0.095% at mid-frequencies at 1 volt output; IM distortion less than 0.22%; hum and noise 82 db below 3 volts on high level inputs, 68 db below 3 volts on low level inputs; input sensitivity for 1 volt output (twin inputs): magnetic phono (RIAA-equalized), 2 millivolts; tape head (NARTB-7½ ips-equalized), 2 millivolts; tuner and aux. 0.01 volt (each has level control); ganged tone controls allow 16 db boost at 60 cps and 10,000 cps; 3-volt low impedance outputs and 10-volt high impedance outputs; scratch and rumble filters: level, loudness, and balance controls; d.c. on filaments; hum adjust; 2 switched a.c. outlets; tubes are 5—ECC83/12AX7, and EZ90/6X4; 15" x 4" x 8".\$78.75

Model PPC-210-B Preamplifier Kit

Frequency response 10 to 50,000 cps ± 1 db at 1 volt output; harmonic distortion less than 0.15% at 1 volt output; IM distortion 0.02%; hum and noise 60 db below 3 volts on high gain inputs, 82 db below 3 volts on low gain inputs; sensitivity for 1 volt output: tape head and phono, 2 millivolts; tape and tuner, 0.125 volts; ceramic phono, 0.150 volts; microphone, 24 millivolts; aux., 0.4 volts; separate bass and treble equalization allows 16 equalization positions; tone controls allow 15 db boost or cut at 20 cps and 20,000 cps; d.c. on filaments; loudness control; rumble filter: 4 switched a.c. outlets; tubes are 12AX7, 2-12AU7, plus two selenium rectifiers; 12" x 5½" x 3½", separate power supply 4" x 6" x 7½".\$49.75

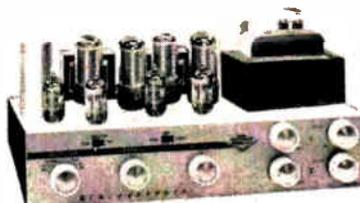
QUALITY ELECTRONICS, INC.

Model 2000 Amplifier Kit



Rated output: 12 watts; built-in pre-amp; 3-position record equalization; separate bass and treble controls with 16 db of boost or cut at 50 and 10,000 cps; frequency response: 20 to 20,000 cps ± 0.5 db, 40 to 15,000 cps ± 0.5 db at 12 watts; hum 60 db below 12 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, 2-6V6, 5Y3; 12½" w x 3½" h x 7¾" d. Kit form\$28.50

Model STA-24 Stereo Amplifier



Williamson circuit preamp; power output 15 watts per channel; separate bass 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 selenium rectifiers: 14" x 8" x 6".....Kit...\$39.95

Model 2200 Amplifier

Integrated amplifier kit; power output 12 watts per channel; inputs for mag. phono, tape, tuner, mike; sensitivities: mag phono/tape 2 mv., xtal phono 0.5 volts, tuner 0.5 volts; controls for function, loudness, bass, treble; tubes are 12AX7, 12AT7, 2-6V6; 11" x 7" x 5"; 10 lbs.\$22.75

RAULAND-BORG CO.

Model HF 1530 30 Watt Stereo Amplifier



Total 30 watts output, 15 watts each channel; d.c. on preamp filaments to eliminate hum; individual channel bass, treble, mixer-balance controls; inputs: 5 pair tape, mag. phono, ceramic phono,

tuner, aux.; sensitivity .15 volts aux., ceramic and tuner, 3.5 mv. mag. phono, 2.5 mv. tape head; 2-8 ohm, 2-16 ohm outputs; frequency response ± 1 db. 30-20,000 cps.; IM distortion less than 2% at 15 watts; harmonic distortion 1% at rated output.....\$123.00

Model HF-1531 30 Watt Amplifier

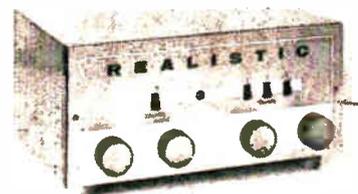
Separate ganged bass and treble controls with single balance control; direct current on preamp filaments for lowest possible hum; power output 15 watts per channel; rumble and scratch filters; 5 pair inputs for tape head, mag. phono, ceramic phono, tuner, aux.; two 8 ohm, two 16 ohm outputs; harmonic distortion 1% at rated output; IM distortion 2% at 15 watts; frequency response ± 1 db. 30-20,000 cps.; sensitivity: 0.15 volts aux., ceramic, tuner: 3.5 mv. mag. phono; 2.5 tape head.....\$123.00

Model HF-1021 20 Watt Stereo Amplifier

Separate ganged bass and treble controls; channel reverse switch; 3 pairs inputs for mag. phono, ceramic phono, and tuner; power output 10 watts per channel, up to 20 watts peak; frequency response ± 1 db. 40-20,000 cps.; IM distortion 3% at 10 watts; tubes are 2-7025, 2-7199, 4-6BQ5/EL84, 6CA-4/EZ81; 4" x 14" x 7¾"; 17 lbs. \$99.25

RADIO SHACK

Model AF-15 Deluxe Amplifier



Can be easily converted to stereo; 15 watts power output with 30 watt peaks; separate bass and treble controls; sensitivities: tuner—.16 volts, phono—3.5 mv., tape—2.2 mv.; harmonic distortion less than ½% at 15 watts; IM distortion less than 1.5% at 15 watts; frequency response 20-70,000 cps; hum balance control rear panel; tubes are 2-12AX7, 12AU7/ECC82, 2-6BQ5/EL84, EZ81; 9½" x 6¼" x 4¼"; 8 lbs.\$39.95

Model AF-12 Amplifier



Power output 12 watts, 20 watt peaks; sensitivities: tuner—.75 volts, mag. phono—4.5 mv., microphone—5.5 mv.; IM distortion 3% at 12 watts; frequency response 40-30,000 cps.; tubes are 2-12AX7, 2-6V6GT, 5Y3GT; 9½" x 6¼" x 6¼"; 12 lbs.\$29.95

StereoMaster

Central control for 2-AF-12 or AF-15 amplifiers; controls gain, function,

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Amplifiers and Preamplifiers

crossover, parallels for monaural operation; $2\frac{1}{8}'' \times 3'' \times 4\frac{3}{8}''$\$7.95

Stereolyne-40 Amplifier

Two 20 watt amplifiers, 40 watts monophonic; controls for balance phasing, bass and treble, volume, loudness; harmonic distortion less than 1% at 400 cps; frequency response 20-20,000 cps; inputs for tuner, phono, tape; output impedances 4, 8, 16 ohms; $12'' \times 4\frac{1}{8}'' \times 9\frac{11}{16}''$; includes cabinet.....\$79.50

Stereolyne-7 Amplifier



Includes rumble and scratch suppression; inputs for tuner, phono, tape; controls for mono-stereo, balance, volume, tone; frequency response 50-30,000 cps; 8 ohms output impedance; $9\frac{1}{4}'' \times 4\frac{1}{2}'' \times 4\frac{3}{4}''$; 8 lbs.....\$19.95

Carnival Amplifier

High impedance mc. and phono inputs; power output 5 watts, 10 watt peaks; tone control range 16 db. at 10,000 cps; tubes are 6X5, 12AX7, 2-6V6GT; separate mic. and phono-tuner gain controls allows mixing programs.....\$19.95

SARGENT-RAYMENT COMPANY

Model 205I



Stereo 50 watt amplifier; other specifications and features similar to SR-2040.....\$247.50

Model SR-2040

Stereo preamp/amplifier; 20 watts per channel; frequency response 20-20,000 cps; 1 db; IM distortion less than 1.5% for rated power; harmonic distortion less than 1% at rated power; centre channel output; channel reverse; stereo balance control; push-button contour control; dual tape outputs; separate bass and treble controls for each channel; tape monitor; "nootch" type scratch and rumble filters; hum 85 db below rated output; output impedances: 4, 8, 16 ohms; tubes: 1-GZ34, 2-7199, 4-7189A, 4-GE12, 4-6EU7; wt 37 lbs.....\$189.50

Model SR-2000 Preamplifier



Frequency response 20-20,000 cps, distortion 0.08% IM at 1 volt. 0.5% IM at 10 volts; controls: loudness, bass treble phono and tape compensation; sensitivity tuner input: 0.05 v for 1 volt output; aux input: 1 mv for 1 volt output; tubes: 2-7199, 4-12AX7; $13\frac{1}{8}'' \times 14\frac{7}{8}'' \times 5\frac{1}{4}''$; 16 lbs.....\$163.50

Model SR-5100 Stereo Power Amplifier

Power output 50 watts per channel; IM distortion 0.7% at 50 watts. 0.18% at 30 watts; sensitivity 1.4 volts for 50 watts; frequency response ± 0.5 db from 10 to 50,000 cps; hum 90 db below rated output; tubes: 2-GZ34, 4-EL84, 2-7199; $13\frac{1}{8}'' \times 14\frac{7}{8}'' \times 5\frac{1}{4}''$\$183.60

Model SR-17-17 Stereo Amplifier

Combines two 20 watt integrated amplifiers on one chassis; each amplifier provides 20 watts output (40 watts peak); both amplifiers are used in parallel for monaural program sources; frequency response 20 to 15,000 cps ± 1 db; harmonic distortion 0.32% at 1000 cps at rated output; IM distortion less than 1.5% at rated output, less than 0.5% at 10 watts output; hum and noise: high level inputs, 70 db below rated output; low level inputs, 60 db below rated output; 2-position phono equalization; 3-position tape playback equalization; ganged bass and treble controls allow 15 db boost at 40 cps and 10,000 cps; channel balance control; stereo reverse switch; 2-position loudness control; stereo inputs for tape head, tape amplifier, phono, aux, tuner; stereo tape recorder outputs; tubes are 4-7189, 2-6AN8, 4-12AX7, GZ34; $13'' \text{d} \times 15'' \text{w} \times 5\frac{1}{2}'' \text{h}$; shipping weight 25 lbs.....\$189.60

Model SR-570 70-Watt Amplifier

Power output 70 watts, 140 watts peak; frequency response 20-20,000 cps ± 0.1 db at 70 watts; harmonic distortion 0.1% at 1000 cps at 70 watts; IM distortion 0.4% at 70 watts, 0.2% at 50 watts; hum 90 db below rated output; sensitivity 0.6 volts for rated output; damping factor: 15; 21 db inverse feedback; output impedances are 4, 8, and 16 ohms; tubes are EF86, 6SN7, 2-KT88, 2-GZ34; provides power for auxiliary equipment; meter jacks and balance control; power consumption 190 watts; $7'' \text{h} \times 6\frac{3}{4}'' \text{w} \times 14'' \text{l}$; $24\frac{1}{2}$ lbs.....\$119.50

Model SR-534 Stereo Basic Amplifier

Combines two 20 watt basic amplifiers on one chassis; frequency response 10 to 50,000 cps ± 0.5 db at 1 watt; harmonic distortion 0.22% at 1000 cps at rated output; IM distortion less than 1% at rated output; hum 90 db below rated output; sensitivity: 1.5 volts for 17 watts output; outputs: 4, 8, and 16 ohms; provides power for Model SR-380 tuner; 7189 output tubes; $8'' \text{d} \times 14\frac{1}{2}'' \text{w} \times 5\frac{1}{2}'' \text{h}$; shipping weight 23 lbs.....\$106.60

Model SR-517 20-Watt Basic Amplifier

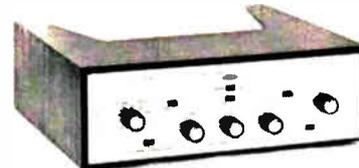
Equivalent of one section from Model SR-534; all specifications similar to Model SR-534; provides power for Model SR-380 tuner; $5'' \text{d} \times 14\frac{1}{2}'' \text{w} \times 5\frac{1}{2}'' \text{h}$; 19 lbs.....\$59.60

Model SR-9000 Power Supply

Supplies power to Model SR-380 tuner or to other equipment; provides 175 volts d.c. at 55 ma. 6.3 volts a.c. at 3.5 amps; $3\frac{1}{4}'' \text{d} \times 9'' \text{w} \times 4\frac{1}{2}'' \text{h}$\$24.60

H. H. SCOTT, INC.

Model 99-D Preamp-Amplifier



Power output: 22 watts; 5 position record equalization; NARTB 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%; preamp 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; tubes: 3-12AX7, 2-6L6GB, 5U4GB; size in accessory case: $15\frac{1}{4}'' \times 12\frac{1}{2}'' \times 4\frac{5}{8}''$; shipping weight: 20 lbs.
Model 99-D.....\$114.95
Wood accessory case.....\$24.95

Model 131 Dual Dynaural Stereo Preamplifier

Separate noise suppressors each channel; selector switch for balance A, balance B, monophonic, stereo, reverse stereo, channel A, channel B; tone controls, stereo balance, loudness controls; 2 mag. stereo inputs, 2 high level inputs, separate level controls each input; sensitivity: mag. phono 3 mv. for 2.5 volts output; NARTB tape 1.5 mv. for 2.5 volts output; tuner .1 volt for 2.5 volts output; 10 volts maximum output; frequency response 19-35,000 cps; harmonic distortion less than .15% at rated output; max. bass boost and cut 15 db. at 60 cps; max. treble boost and cut 15 db. at 10,000 cps; tubes are 10-12AX7, 6AU6, 6X4, 2-6FC6; $15\frac{1}{4}'' \times 12\frac{1}{2}'' \times 4\frac{5}{8}''$; 16 lbs.....\$285.00

Model 130 Stereo Preamplifier



Twin preamplifiers on one chassis; frequency response flat from 19 to 35,000 cps; harmonic distortion less than 0.15% at rated output; hum and noise 80 db below full output on high level input; individual bass and treble controls for each channel allow 15 db boost or cut at 60 cps and 10,000 cps; sensi-

tivity for 2.5 volts output: phono, 3 millivolts; tape head, 1.5 millivolts; tuner and aux, 0.1 volt; 5-position record equalization; NARTB tape equalization; loudness-volume control; stereo balance control; phase reverse; stereo reverse; scratch and rumble filters; may be used with monaural program sources; stereo outputs to amplifiers and tape recorder; center channel output for third amplifier; provisions for tape monitoring; may be used as electronic crossover in monaural systems: 15 1/4" x 4 3/4" x 12 1/2". \$179.95

Model 222-B Complete Stereo Amplifier

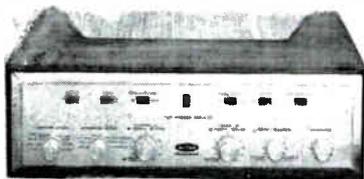
Power output 15 watts per channel; hum and noise better than 80 db. below full power output; harmonic distortion 0.8% at full power; frequency response 20-30,000 cps; IM distortion less than 0.3%; inputs are 3 mv. sensitivity for mag. phono, 9 mv. for mag. phono, tuner, tape; outputs for stereo tape, 4, 8, 16 ohms, center channel, a.c. outlet switched; tubes are 4-6BQ5, 4-12AX7, 2-6BL8, 1-5AR4; input impedance 47,000 ohms phono, 500,000 ohms high level: 15 1/2" x 5" x 12 1/2": 22 lbs. \$144.95

Model 272

Dynauro Stereo Preamp-Amplifier

Power output 44 watts per channel; hum and noise better than 80 db below full power output; harmonic distortion 0.8% at rated output; center channel output; dynamic rumble suppressor; scratch filter; center channel level control on front panel; tape monitor switch; power amplifier level controls; phono input level controls; individual bass and treble controls for each channel; 7-position stereo selector switch: bal A, bal B, mono records, stereo, stereo reverse, chan A, chan B; 5-position input selector switch: EUR 78, NAB tape, RIAA, tuner, aux; phase reversal; tubes are: 6-12AX7, 1-6AU-6, 2-6BL8, 4-EL34, 1-5AR4; 16 3/4" x 13 3/4" x 6 3/4"; shpg wt 42 lbs. \$269.95

Model 299-B Stereo Preamp-Amplifier



Two complete amplifiers on one chassis; power output per channel 25 watts, 50 watts peak; both channels in operation when used with monaural program sources; harmonic distortion less than 0.8%; IM distortion less than 0.3%; 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; NARTB tape equalization; loudness-volume control; stereo balance control; scratch and rumble filters; phase reverse; stereo reverse; tubes are: 4-12AX7, 4-7189, 5U4GB; 15 1/4" x 12 1/2" x 5"; shipping wt. 25 lbs. \$209.95

Model 250 Amplifier

Power output: 40 watts; frequency response: 12 to 60,000 cps with controlled cutoff beyond 60,000 cps; harmonic distortion at rated output less than 0.5%; first-order difference-tone intermodulation less than 0.1%; hum 85

db below rated output; sensitivity: 0.5 volts; separate 1.5 volt input for high-output preamps; output impedances; 4, 8, 16 ohms; self-balancing phase inverter; hum balance control; dc + ac balance; tubes: 2-6CA7, 544G, 2-12AXF; 13" x 11" x 6 1/2"; shipping wt. 28 lbs. \$129.95

Model 290 Stereo Amplifier

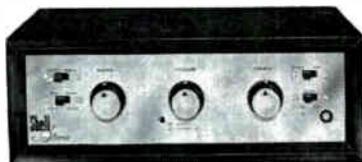
Power output: 45 watts per channel; frequency response: 20 to 40,000 cps with controlled cutoff at both ends; harmonic distortion at rated output less than 0.5%; first-order difference-tone intermodulation less than 0.1% on 160 watt peaks; hum 90 db below rated output; sensitivity: 0.5 volt; separate 1.5 volt input for high-output preamps; output impedances: 4, 8, 16 ohms; self-balancing phase inverter; hum balance control; input level control; 4 bibs adjust; power switch; bias meter; tubes: 2-6CAF, 2-U4G, 12AX7; 15 1/4" x 11 1/4" x 7 1/4"; shipping wt. 48 lbs. \$239.95

Model 135 Stereo-Dapter

Permits master control of two separate amplifiers in stereo systems; designed primarily for use with Scott amplifiers but may be used with any two identical integrated amplifiers with tape monitoring inputs and outputs or with preamplifier-power amplifier systems having power amplifier input impedances greater than 100,000 ohms; master volume-loudness control; stereo "reverse" position; both amplifiers may be used for all monaural sources; provides for monaural or stereo tape recording and playback. \$24.95

SHELL ELECTRONICS

Model 1010 Stereo Amplifier



Two 10 watt amplifiers: 30 watts peak combined power; input sensitivity 3 volts rms.; controls for bass, treble, volume-balance; switches for monaural, stereo, normal-invert, phono-tuner, a.c.; output impedance 8 ohms; tubes are 2-EL84/6BQ5, ECC83/12AX7, 6CA-4/EZ81; 12 3/8" x 4 1/2" x 7 1/4" \$68.00

Model 1010P Stereo Amplifier

Power output 10 watts per channel; d.c. filaments in preamp; 3 inputs each channel; frequency response ±2 db. 30-20,000 cps; output impedance 8 ohms; hum and noise 60 db below rated output; tubes are 2-EL84, 2-ECC83, 1-ECC82, 1-EZ81; size same as 1010 model. \$78.00

STEREO-FAX (GAYLOR PRODUCTS CO.)

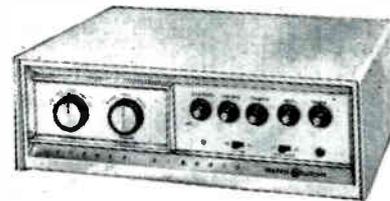
Model U-3A

Passive RLC network links two amplifiers providing time delay in transmission of signal from first to second amplifier; 2 speakers are then separated by time interval ranging from 50 msec. at

McGEE SPECIAL PURCHASE SALE

SAVE \$60.00

MODEL G-7600 40 WATT GENERAL ELECTRIC STEREO AMPLIFIER



Regular \$139.50 General Electric model G7600, 40 watt (20 watts per channel) high fidelity stereo audio amplifier on sale at McGee for only \$79.95. Limited quantities. McGee offers this money saving value on new factory cartoned genuine General Electric Hi-Fi amplifiers, 11 tubes, push pull audio on each channel, dual bass and treble tone controls. Inputs for all phono cartridge plus a radio tuner. Regular \$139.50 McGee sale price \$79.95.

Regular \$129.50 General Electric model FA-17 FM/AM tuner, matches and made for use with the model 7600 amplifier. Offered at a \$60.00 saving. McGee's sale price only \$69.95. Limited quantity available. Send your remittance with your order. COD orders shipped when you send a 25¢ deposit. Prices F.O.B. Kansas City, Mo.

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COMMISSIONED ELECTRONICS CO.

1776 Columbia Road, Washington, D. C.

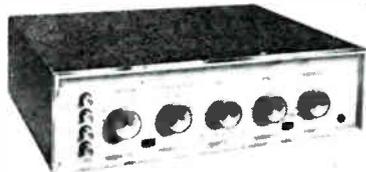
Amplifiers and Preamplifiers

20 cps to 0.1 msec. at 20,000 cps; stereo simulation is result of time delay and phase shifting.....\$19.95

SHERWOOD ELECTRONICS LABORATORIES

Model S-1000 II Amplifier

Rated output: 36 watts; 4-position record equalization, NARTB tape playback equalization; separate bass and treble controls; rumble and scratch filters; presence switch; loudness compensation switch; tape monitor switch; frequency response: 20 to 20,000 cps ± 0.5 db; harmonic distortion: 0.5% at



36 watts; IM distortion: 1.5% at 36 watts; magnetic phono sensitivity: 3 millivolts; output impedances: 4, 8, 16 ohms; variable damping factor control; cathode follower tape output; tubes: 2-ECC83, 6AQ6, 6BA8A, 4-EL84, GZ34; 14" x 10 1/2" x 4" high; 23 lbs. Model S-1000 II.....\$109.50
Brown or black flextone case.....\$5.00

Model S-1060 Amplifier

Similar to Model S-1000 but with 60 watts output; features 6—7189 output tubes.....\$129.50

Model S-5000 Stereo Amplifier-Preamp



Power output 20 watts each channel; controls for bass, treble, phase, rumble and scratch, function, loudness, balance; 12 inputs; bass 20 db cut or boost; treble cut 19 db, boost 16 db; frequency response $\pm 1/2$ db 20-20,000 cps; 18 db feedback; damping factor 10; IM distortion 1.5%; at full output; tubes are 4-7189, 2-7199, 5-ECC83, GZ34; 14" x 13 1/2" x 4".....\$189.50

Model S-4400 Dual Stereo Preamplifier

Used with Model 360 Amplifier and existing mono amplifier; preamp controls and specifications similar to Model S-5000 preamp; tubes are 4-7189, 7199, 3-ECC83, 12W7, 12AU7, GZ-34; 14" x 10 1/2" x 4".....\$159.50

Model 360 Amplifier

Power output 36 watts; used with Model S-4400 preamp; tubes are 4-7189, 7199, GZ34; 13 1/2" x 4 3/4" x 6".....\$59.50

SHURE BROTHERS, INC.

Model M-60 Stereo Preamplifier

Permits turntable location up to 50 feet from preamplifier; gain 17 db; frequency response 30-80,000 cps ± 0.5



db; input impedance 47,000 cps; output impedance 5,000 ohms; hum and noise level better than 60 db below rated output; channel separation better than 30 db; channel balance ± 1 db; 1-ECC83 (dual function); full wave selenium rectifier; may be mounted under turntable.....\$19.95

STENTORIAN

Model WB-12 Amplifier

Power output 12 watts, 15 watt peaks; distortion 0.2% at 400 cps; hum and noise 80 db. below rated output; frequency response 20-20,000 cps; output impedances 4 and 16 ohms; tubes are 2-EL34, ECC83, GZ34; 10 7/8" x 8" x 7".....\$96.50

Model WB-12 Major Control Unit

Input sensitivities: mic.-2.5 mv., phono—10 mv, tuner—100 mv, aux.—50 mv, tape—100 mv; filters at 5, 7, 11 kcs.; bass cut 20 db and boost 15 db at 50 cps; tubes are EF86, ECC83; 11 3/4" x 4 1/2" x 4" x 5 1/4 lbs.\$137.50

STROMBERG-CARLSON CO.

Model ASR-433 Stereo Preamp-Amplifier



Features twin preamplifiers for magnetic phono and tape head; separate tone and volume controls for each channel; for stereo or monaural; power output 12 watts each channel, 24 watts monaural, frequency response 20 to 20,000 cps ± 1 db; harmonic distortion less than 1.5%; noise level 63 db below rated output; dual inputs for magnetic phono, ceramic phono, tape head, tuner, and auxiliary; output impedances: 4, 8, and 16 ohms; dual tape outputs; 15 db bass boost or cut, 14 db treble cut and 12 db treble boost; continuously-variable loudness control with in-out switch; equalization selector switch for RIAA magnetic phono or NARTB tape head; master volume control; channel selector for channel A, channel B, stereo, monaural, or crossover (at 3,000 cps); output balance signal lamp; tubes are 2-12AX7/7025, 2-6AV6, 2-6U8, 4-EL84; 13 1/2" w x 13 3/8" w x 4 5/8" h.\$129.95

Model ASE-434 Stereo Preamplifier



Frequency response 10 to 100,000 cps ± 1 db at 1 volt output; harmonic distortion 0.3% at 2 volts output; IM 0.5% at 2 volts output; hum and noise -70 db; DC on filaments; dual tape out; bass controls ± 15 db; treble controls +12 db, -14 db; rumble and scratch filters; concentric gain control; selector switch; channel A, channel B, stereo, stereo reverse, monaural; 2-cathode follower outputs plus phantom output; 13 1/2" x 8 1/2" x 4 5/8"; less cover.\$99.95

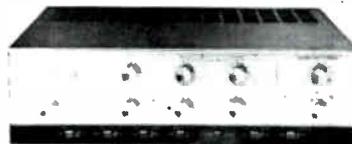
AC-434-B cover in red only.....\$8.95

Model ASR-444 Stereo "60" Amplifier



30 watts per channel; frequency response 20 to 20,000 cps ± 0.9 db; harmonic distortion less than 0.7% at full output; hum and noise -70 db; DC on pre-amp filaments; dual inputs for mag phono, ceramic phono, tapehead, tuner, tape, aux; input sensitivity: mag phono, 3 millivolts; ceramic phono, tuner, tape, aux, 300 millivolts; tapehead 2.5 millivolts; selector switch selects individual channels, stereo, stereo reverse, monaural, or electronic crossover; 2-AC outlets; output impedances are 4, 8, 16 ohms plus phantom output (mixed A-B); less cover.....\$169.95

Model ASR-880 64 Watt Stereo Amplifier



Power output 32 watts each channel; controls for bass, treble, volume, gain, function, mode; bass cut or boost 17 db; treble cut and boost 15 db; frequency response ± 0.8 db 18-38,000 cps; inputs for mag phono, ceramic phono/tape, tuner; scratch and rumble filters; light indicates function.....\$199.95
Model AC-880 Cover.....\$12.95

Model ASP-422 Stereo "40" Power Amplifier

20 watts per channel; frequency response 20 to 50,000 cps ± 1 db; harmonic distortion less than 1% at rated output; hum and noise -80 db; input variable from 1 to 10 volts; output impedances are 4, 8, 16 ohms plus phantom output; circuit breaker.....\$99.95

Model AP-437 Basic Amplifier

Power output 40 watts; frequency response 20 to 20,000 cps ± 0.1 db at 40 watts; harmonic distortion 0.5% at 40 watts; IM distortion 0.4% at 40 watts; noise level 90 db below rated output; output impedances: 4, 8, and 16 ohms; input sensitivity variable from 0.7 to 10 volts; speaker selector switch provides use of two speakers individually or together; hum, balancing, and bias controls; tubes are 2-6550, 12BH7, 7025, 5AR4/GZ34; 10 1/2" w x 6 1/2" h x 10" d.\$145.00

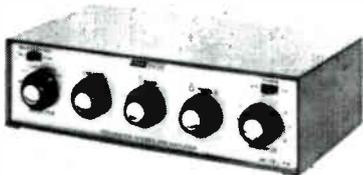
TECH-MASTER CORP.

Model PA-39 Stereo Amplifier-Preamp



Power output 7 watts each channel; inputs for crystal/ceramic phono, tuner; controls for gain, balance, bass, treble, function; tubes are 2-EL84, 12AX7, EZ80; in blue, white, gold.....\$49.50
Model PA-39 (for mag. phono) \$69.50

Model 41 Transistor Stereo Preamplifier



Separate bass and treble controls each channel; 4 low impedance inputs; takes low and high level cartridges; 4 outputs for amp and tape; amp control switch; less cabinet; 3" x 9" x 5 1/2".....\$59.50

Model 38 Stereo Amplifier



Dual-channel amplifier; each channel has volume and tone controls; combined output: 3 watts; output impedances: 4 and 8 ohms; input for high impedance cartridge; 3 3/4" x 9 3/4" x 5".....\$19.80

Model 39 Stereo Amplifier

Similar to Model 38 but has combined output of 10 watts; input for crystal cartridge; 3 3/4" x 9 3/4" x 5".....\$29.95

Model 39A Stereo Amplifier

Similar to Model 39 but with selector switch for use with more than one input source.....\$34.50

TEECO (TRUETONE ELECTRONICS INC.)

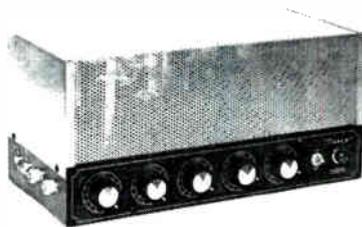
Model 90/Preamplifier



Self-powered preamp for mike, tape, mag. phono; selector switch for proper equalization; 42 db. gain at 1000 cps; hum balance control; 4 3/8" x 4 1/2" x 2 1/8";\$15.95

Model 830 30 watt P.A. Amplifier

For stereo conversion or p.a. installations; bass and treble boost 18 db.; 2



phono inputs, 2 microphones; 5 controls; output impedances 4, 8, 16, 500 ohms and 70 volt line; tubes are 2-6SC7, 6L7GT, 6SN7GT, 6J5, 2-6L6G, 5U4G; 8" x 7"; 18 lbs.....\$118.20

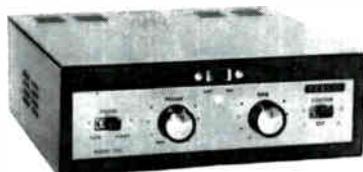
Model 904 Amplifier

Output 5 watts; 2 inputs for tape, mike, phono, mag. phono, tuner, xtal phono; hum balance control; output impedance 4 ohms; tubes are 12AX7, EL84, EZ81; 4 1/2" x 8 1/2" x 4 1/4"; 5 1/4 lbs.....\$38.40

Model 1215 Stereo Amplifier

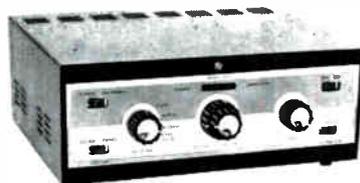
Power output 15 watts each channel; controls for bass, treble, loudness, function, balance; inputs for tuner, ceramic/crystal phono, mag phono/tape; distortion less than 1% at 15 watts; tubes are 5-12AX7, 4-EL84, GZ43.....\$118.35

Model 915 Amplifier



Preamp has separate bass and treble controls; LP, EUR, RIAA phono equalizations; hum balance control; power output 15 watts; output jack for tape; a.c. receptacles; bass-treble boost-cut ± 15 db.; frequency response 30-30,000 cps; tubes are 2-12AX7, 2-EL84, EZ81\$56.50

Model 955 Stereo Amplifier



Each channel 7 watts output; can be paralleled for monophonic use; contour, hum balance control; output impedance 4 ohms; frequency response 40-20,000 cps; tubes and size same as Model 915.\$63.95

TRANSIS-TRONICS, INC.

Model TEC-S25 Stereo Preamp-Amplifier



Power output each channel 25 watts continuous; 16 inputs for low level phono, high level phono, tape, mike,

Amplifiers and Preamplifiers

tuner; bass or treble cut and boost 15 db; mode and function switches; frequency response 20-20,000 cps; loudness contour, rumble and scratch filters; IM distortion 0.9%.

TRIX (ERCONA CORP.)

Model T43A Amplifier



Two-chassis preamplifier-amplifier; power output 12 watts; frequency response 50 to 15,000 cps ± 1 db; harmonic distortion less than 0.4% at 8 watts; separate bass, treble, and volume controls; phono input sensitivity 8 millivolts; 5-position input selector.....\$89.50

ULTRA ELECTRONICS, INC.

Model G Stereo Preamplifier



Audio outputs are cathode-follower; 5 inputs each channel, low level for mag phono, mag tape, special EUR; 2 high level inputs; inputs can be converted to other equalizations; controls for function, stereo L-R, bass, volume, treble; frequency response ± 1 db 20-20,000 cps; IM distortion .006% at 1 volt; tubes are 4-EF86, 4-12AX7; 13 3/4" x 4 1/2" x 8"; less power supply.....\$159.50
Power supply.....\$12.00

VAN NORMAN INDUSTRIES.

Model PB-1000 Transistor Preamplifier



Transistorized preamplifier for use with low-output cartridges; input voltage required for 1 volt output: 8 millivolts; maximum undistorted output: 5 volts; distortion less than 0.3% 20 to 20,000 cps; zero hum and microphonism; noise level 60 db below 1 volt; requires external power supply.....\$21.95

Model PW-1000 Power Supply

Provides enough power to supply two Model PB-1000 preamplifier units.....\$20.95

Model XO-1000 Bi-Amplifier Crossover

Provides 800-cps crossover when used in bi-amplifier systems; 6 db/octave slope; level controls on each channel.....\$19.95

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The Garrard Laboratories Proudly Announce an Entirely New Kind of Record Playing Unit

AN AUTOMATIC TURNTABLE GARRARD'S LABORATORY SERIES TYPE A



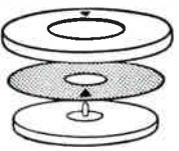
Now, at last, you can enjoy all the advantages of a true, dynamically-balanced tone-arm (with a built-in calibrated pressure gauge), a full-size, heavy-weight professional turntable, a laboratory-balanced precision motor...plus the much-wanted convenience of the world's finest automatic record-player...all in one superb instrument! Δ No one but the Garrard

Laboratories, with their unmatched facilities, could have accomplished it. With 40 years of manufacturing experience, and the highest engineering and precision standards in the Industry, Garrard set out to develop an all-in-one unit that would satisfy every critical requirement, even surpassing the professional turntable standards established by the NARTB.

THE ONLY DYNAMICALLY-BALANCED TONE ARM ON AN AUTOMATIC UNIT Now, for the first time, a tone arm which meets the very latest engineering standards established by the Industry—has been incorporated into an integrated record-playing unit. This highly advanced tone arm is put in perfect dynamic balance by moving an adjustable counterweight. At this point, it is in "gyroscopic" balance, with zero pressure. To set the tracking pressure designated for any cartridge, a pointer is moved along a calibrated scale at the side of the arm which is graduated in grams. This built-in stylus pressure gauge now shows the precise tracking force. The accuracy of this setting is even greater than that which could be measured by any separate stylus pressure gauge. The arm will now track correctly even if the player is intentionally tilted, or if the record is warped or not perfectly concentric.

torque and flywheel action in this unit. This combination insures silent, on-speed running. The Garrard engineers have conceived of this new turntable as a "sandwich". It is actually two turntables balanced together...a drive table inside, and a heavy, cast turntable outside. The two turntables are separated by a resilient foam barrier, which effectively damps out any possibility of noise or vibration. Furthermore, being of non-ferrous metal, the cast tables offer no attraction to sensitive magnetic pickups.

bination of features means that for the first time ever, there is a record playing unit which answers every requirement of both performance and convenience. It accomplishes this to such a degree that it is certain to appeal to every person, regardless of whether he already owns equipment, or is planning to buy a new system. The fact is that the Type A obsoletes all previous equipment. It protects records better. It has performance and features superior to separate turntables and arms. It also incorporates professional characteristics not found in any record changers.



NEW "LABORATORY SERIES" MOTOR The Type A is built around a newly-developed Garrard four-pole shaded motor, which was designed especially for it. This laboratory motor is the perfect match for the new turntable system, and provides quiet accuracy, regardless of load or voltage changes. Constancy of speed is such that this motor will bear the closest scrutiny by sensitive measuring instruments. The armature is micro-balanced on exclusive Garrard equipment, and free of vibration. The total result is true musical pitch and clear sustained musical passages, without the irritation of wow or flutter. The "Laboratory Series" motor is completely shielded, top and bottom, with specially-designed and accurately oriented plates, insuring the absence of hum, even with the most sensitive magnetic pickups. To minimize even the slightest vibrations, the entire motor assembly is isolated from the unit by shock mounts of a special formula and design.

The concept of this great new Garrard record-playing unit was extravagant, but the price of **\$69.50** is surprisingly modest—made possible only because of Garrard's extensive facilities, highly developed production methods and critical quality control procedures. Δ If there ever was a single record-playing device which answered every requirement of every music system—we believe this is it. Δ And with the Type A, once and for all let us lay the ghost that simply because a record player makes available certain automatic conveniences (which you may or may not use at your option)—that this in any way implies that the unit cannot be actually superior to a separate turntable and arm. Δ For in this bold new unit you will find the realization of everything you have wanted in a record player. Examine it thoroughly, and you'll want to install the Garrard Laboratory Series Type A in your own music system—now. Δ Your dealer has—or soon will receive—the LABORATORY SERIES TYPE A GARRARD. Let your own eyes and your own searching examination, prove beyond doubt that this is indeed the record player for you. Or, if you prefer, write today for illustrated, descriptive booklet.



THE GREAT PLUS FEATURE OF AUTOMATIC PLAY—WITHOUT COMPROMISE! The convenience and desirability of being able to play records automatically, and to have the unit shut itself off, have long been recognized and accepted. Certainly, even the most critical user would want these features, but only if they could be incorporated without compromising the quality, performance or inducing record wear. This has now been accomplished in the Type A, by adding Garrard's exclusive pusher platform changing mechanism, with its smooth, one-piece center spindle, to the arm, turntable and motor described above. This unique com-



And incidentally, regardless of the number of records on the turntable, the angle at which the stylus meets the record is negligible, due to the unique geometry of this arm. Δ Since all of these engineering requirements guarantee that there is no unequal pressure on the sides of the stereo record grooves... distortion, channel imbalance, record and stylus wear are eliminated, resulting in perfect stereo reproduction. But "perfect performance" also requires minimum friction, and this is assured by the two precision needle pivots on which the arm is set. This arm is precision-mounted for you, thus affording all the advantages of the separate arm, yet none of its inherent disadvantages. The danger of the tracking error which often occurs in the mounting of separate tone arms, is eliminated completely because there is no possibility of even the slightest mislocation of the arm.



FULL-SIZED, HEAVILY WEIGHTED, BALANCED, CAST, POLISHED TURNTABLE The weight of six pounds has been determined as the optimum for perfect balance,

Garrard

Write Department GJ-1180
Garrard Division of British Industries Corporation,
Port Washington, New York.

There's a Garrard for every high fidelity system...all engineered and wired for Stereo and Monaural records.

	 Type A Automatic Turntable \$69.50	 RC88 Deluxe Changer \$59.50	 Model 210 Deluxe Intermix Changer \$49.50	 301 Transcription Turntable \$89.00	 4HF Transcription Manual Player \$59.50	 Model T/II Manual Player \$32.50
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Canadian inquiries to Chas. W. Poynton, Ltd., 66 Racine Road, Rexdale, Ontario Territories other than U.S.A. and Canada to Garrard Engineering & Mfg. Co., Ltd., Swindon, Wilts., England

SECTION
—2—

Record-Playing Equipment

Your Tone Arm

by Herbert Reid

The most self-effacing of all high fidelity components is the tone arm. Its task is utter passivity. Traveling slowly across the disc, it is propelled not by forces of its own, but limply follows the guiding impetus of the record spiral. It generates no sound of its own. It is, in effect, a "silent partner" in the musical enterprise.

But like a great many "silent partners," the tone arm exerts a subtle but decisive influence on the entire operation of the hi-fi system. It must carry the cartridge across the record in such a way that the stylus can accurately trace the groove contour from beginning to end. The tone arm must 1) compensate for the gradual change in diameter between the outside and the inside of the record, 2) provide correct stylus pressure, 3) travel across the disc with minimal friction, and 4) hold the cartridge steady as it rides through the bumpy terrain of the groove.

The first year of stereo has yielded a crop of professional-type tone arms which tackle these multiple tasks in various and often quite individualistic ways. However, for an over-all survey they can be sorted into several groups according to basic design principles:

- 1) Viscous-damped arms (Gray, Stromberg-Carlson)
- 2) Dynamically balanced arms (Electro-Sonic, Empire)
- 3) Statically balanced arms (Audax, Grado, Lafayette, Rek-O-Kut)
- 4) Spring-balanced arms (Garrard, Fairchild)
- 5) Integrated arm and cartridge combinations (Dynaco, General Electric, Pickering, Scott, Shure and Weathers)

None of these principles is necessarily "better" than another. Many ways lead to perfection. It credits the ingenuity of audio designers who have developed such a variety of approaches. In this profusion of rival principles, it might be simplest for us to get right down to cases and discuss theory in terms of the actual product.



THEORY:

Viscous damping consists of squeezing a thick fluid into the joints of the arm to provide gentle braking action against rapid lateral and vertical movements. This steadies the arm while the stylus follows the frantic dance of the sound vibrations in the record groove. If the arm were to swing back and forth in resonance with the vibrating stylus, the signal would no longer accurately represent the groove pattern but would be dis-

torted by the wiggling of the arm. Non-resonance of the arm is therefore essential to faithful tracking. The viscous fluid effectively dampens whatever vibration the arm itself might gratuitously contribute to the music.

A naval gunner might best appreciate this problem, for it is somewhat akin to holding the firing platform steady while the ship rocks on the waves. In either case stabilization is the answer, and viscous damping is one way of achieving stabilization in tone arms. Fortunately, the "sticky" effect acts only on fast motions. The damping fluid squelches oscillations in the audio frequency range, but offers virtually no resistance to the slow and continuous travel of the arm across the record. Some drag may be felt when swinging the arm back and forth by hand, but at the rate of normal radial travel (about 3½ inches per-half-hour to play one side of a record) the viscous drag is practically nil. Hence, there is no reason to fear that viscous-damped arms will unduly wear the outer-groove walls or cause lateral imbalance of signal pickup.

Then what about tone arms without viscous damping? Are they inferior in their resonant characteristics? Not necessarily, for viscous damping is only one way to skin the resonant cat. Other designs rely mostly on the total mass of the arm to bring resonance below the audio range, where it slumbers quietly and harmlessly without excitation from the stylus movement.

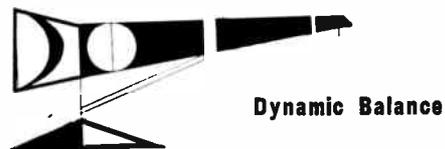
Applications of Viscous Damping:

Gray Manufacturing Company was first to introduce this principle to the hi-fi market after it had been originated and patented by William Bachman, the chief engineer of Columbia Records. Gray's Model 212 takes cognizance of stereo requirements by providing independent vertical and lateral motion. The front section of the arm has a separate damped bearing for vertical movement while the main part of the arm swings laterally on its pivot. This makes it possible to attain sufficient lateral damping, while leaving the vertical motion free enough to follow the ups-and-downs of warped records. Moreover, this type of suspension assures that the stylus stays perpendicular to the record—a "must" for good stereo reproduction. Other features of the Gray 212 arm include quickly exchangeable cartridge clips which readily slide into position through a four-wire male female connector. A vernier screw permits precise adjustment of stylus pressure.

Viscous damping is also espoused by Stromberg-Carlson in their Model RA-498 tone arm, which pivots on a single needle point—somewhat like a dancer pirouetting on her big toe. The base of the arm contains two dovetailing shells. The space between them contains the viscous fluid damping the arm resonance. The stylus

force is adjusted by means of a sliding weight on the rear overhang. The weight can be locked into a fixed position by a pushbutton arrangement.

Since the arm virtually floats on its single-point suspension and the viscous fluid, there might be some danger of its tipping sideways and slanting the stylus in the groove. Stromberg-Carlson engineers have sidestepped this pitfall by the ingenious idea of permitting off-center shifting of the counterweight until it balances the cartridge perpendicularly to the record. A five-wire-cartridge terminal strip provides an extra-ground connection for the arm itself, and cartridges are exchangeable by a snap-in clip.



THEORY:

Dynamic Balance. This term sounds somewhat like a phrasemaker's slogan. However, it is an accurate description of what really happens in certain tone arms where active forces are constantly at play to hold the arm steady under varying conditions. These forces are supplied by a combination of springs and gravity. This type of design is relatively recent, having come into use only within the last two years. Tone arms of this type have startled unsuspecting bystanders by playing records on turntables slanted in just about any direction—forward, backward, sideways—in seeming defiance of gravity. Nothing disturbs the equilibrium of these arms except sudden impact.

Applications of Dynamic Balance:

The Electro-Sonic Model S-1000 (popularly known as the "ESL Gyro-Jewel"), is a pioneer design of this type that well illustrates how such stability is achieved. The arm is first adjusted so that the counterweight exactly balances the frontal portion of the arm holding the cartridge. This, in effect, neutralizes gravity in the vertical direction. The required needle pressure is then supplied by *downward* spring tension.

This downward force is the characteristic feature of these arms. In the conventional design the spring pulls the cartridge *away* from the record to overcome gravity. In the dynamically balanced arm, we start out with zero gravity, thanks to the pre-adjusted counterweight. The spring, therefore, can be used to pull the cartridge *toward* the disc and maintain stylus contact in the groove regardless of changes in gravity.

In addition to this constancy of vertical force, the ESL arm also automatically compensates for sideways slant. A turntable that is not strictly level normally causes the stylus to ride the "downhill" side of the groove. This is bad enough in monophonic discs, but can be downright disastrous with stereo records where the stylus must always maintain equal contact with both sides of the groove to assure proper channel balance and separation. The Electro-Sonic arm is so balanced laterally that if the turntable tilt pulls the arm to the right, the counterweight compensates by pulling it to the left, and vice versa.

The astonishing result of such combined vertical and

lateral stabilization is the arm's ability to keep tracking the groove regardless of turntable tilt. It even would play upside down if the record were glued on to keep it from falling off the platter.

Aside from these spectacular capabilities of dynamic balancing, the Electro-Sonic arm is of quality design throughout, featuring precision ball bearings in both vertical and lateral pivots, and interchangeable cartridge shells with spring-loaded electrical contacts and lock-in mounts to assure correct alignment. Resonance is minimized by the tubular shape and the mass of the arm.

Related to the ESL arm in basic concept is the new Empire 98, which is not surprising since both sprang from the fertile imagination and fastidious engineering mind of audio designer Herb Horowitz. Here again is an arm balanced in all planes so that it stays put despite extraneous vibrations. The spring tension acts downward, providing the necessary tracking force without unbalancing the arm. The dynamic balancing in the lateral plane assures equal tracking on both groove walls, which results in equal frequency response and minimum distortion on both channels under virtually all conditions.

A particular convenience of the Empire 98 is the stylus pressure-adjustment which works by means of a single calibrated knob, accurate within one-tenth of a gram. In effect, the audiophile simply dials the correct pressure for any cartridge he may choose. Especially handy is the built-in bubble-level, which tells at a glance whether the arm is properly leveled. The mass of the arm controls resonance. Plug-in shells permit instant cartridge change.

The Rck-O-Kut Models S-120 and S-160 12- and 16-inch arms are suspended from gimbals with dual ball-bearings to reduce lateral and vertical friction. Stylus pressure is adjusted by a self-locking, threaded counterweight. Resonance is below the audio spectrum. A particular convenience to solder-shy hi-fiers is the four-pole terminal strip which features screw terminals for connecting the shielded input cable to the preamplifier. Cartridge shells can be changed instantly, and are equipped with spring-loaded contacts, assuring minimum electrical resistance to the weak cartridge currents.



THEORY:

Spring-balanced arms. The most conventional method of balancing a tone arm is to have a spring pulling upward against the frontal weight of arm and cartridge. This principle is often misused in cheaply made phonographs—particularly in portable phonographs or shoddy record changers, which have improperly designed spring-balanced arms. They have gained a reputation for being notoriously unstable. Such arms are apt to jump. The spring acts as a sort of mechanical amplifier for outside vibrations. Footsteps on a shaky floor, or passing traffic, makes such arms fly out of the groove, only to come crashing down again a moment later. Owners of common or garden-variety phonographs with dime-store-quality tone arms usually have shattered records, shattered pickups, and shattered nerves.

STEREO TONEARM CHECKLIST

(based on data and specifications supplied by the manufacturer)

	AUDAX (Kit)	DYNACO	EMPIRE 98	ELECTROSONIC S-1000	FAIRCHILD 282	GARRARD TPA/12	GENERAL ELECTRIC	SONOGRAP 2400	GRADO Lab
Design Principle	Static Balance	Dynamic Balance	Dynamic Balance	Dynamic Balance	Spring Balance	Spring Balance	Static Balance	Static-Dynamic Balance	Dynamic Balance
Method of Suspension	Thrust Bearing	Gimbal (pivot)	Ball-bearing (lat & vert)	Ball-bearing (lat & vert)	Thrust Bearing	Needle Type Ball-bearing	Thrust Bearing	Needle Ball-bearing	Needle-Cone
Integrated Arm and Cartridge	No	Yes	No	No	No	No	No	No	No
Adjustable Height	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjustable Tracking Pressure	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Unlimited Cartridge Choice	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes
Interchangeable Heads	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes
Number of Wires	3 ¹	4	4 ¹	4 ¹	— ²	3 ¹	4 ¹	4 ¹	4 ¹
Arm Rest Provided	No ⁴	Yes	Yes	Yes	Yes ³	Yes	Yes	Yes	Yes
Overall Length (inches)	10½	9	11⅞	12⅝/16	13½	12	12⅝/8	12	10⅞/8
Radial Mounting Distance (inches)	8⅜	9	9	8⅝/16	8⅞/32	8⅞/16	8⅞/50	8⅝/8	9⅞/16
Price	\$15.50	\$49.95	\$34.50	\$34.95	\$42.50	\$19.50	\$29.95	\$29.95	\$39.50

	GRAY 212-SX	LAFAYETTE PK-270	LONDON- SCOTT	PICKERING 196	REK-O-KUT	SHURE M212	STROMBERG- CARLSON	WEATHERS	CONNOISSEUR
Design Principle	Viscous Damped	Static Balance	Viscous Damped	Static Balance	Static Balance	Static Balance	Viscous Damped	Viscous Damped	Dynamic Balance
Method of Suspension	Lateral Thrust & Vertical Ball-bearing	Knife-edge	Ball-bearing	Single Point Suspension	Ball-bearing Gimbal	Thrust Bearing	Single Point Suspension	Teflon Bearings	Needle Type Ball-bearing
Integrated Arm and Cartridge	No	No	Yes	Yes	No	Yes	No	— ⁵	Yes
Adjustable Height	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjustable Tracking Pressure	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes
Unlimited Cartridge Choice	Yes	Yes	No	No	Yes	No	Yes	No	No
Interchangeable Heads	No	No	No	No	Yes	Yes	No	No	No
Number of Wires	4 ¹	— ²	3 ¹	— ²	4 ¹	4	4 ¹	— ²	4
Arm Rest Provided	No ⁴	No ⁴	Yes	Yes	Yes	Yes	Yes	Yes	No
Overall Length (inches)	13	12¾	12½	11⅝/8	12	11⅝/16	12¾	13	10¼
Radial Mounting Distance (inches)	8⅝/16	10	9	8⅞/8	8¼	8¼	8¼	9¾	7⅞/16
Price	\$34.00	\$17.50	\$89.95	\$59.85	\$27.95	\$79.50	\$24.95	— ⁵	\$49.50

1. Plus shield or ground wire.
2. Has two shielded cables.

3. Has adjustable arm drop limiter.
4. Not needed; vertical stop provided.

5. Available separately for \$38.50, or with Weathers' cartridge.

Nothing of the sort threatens the possessor of a spring-balanced arm that is properly engineered to high fidelity standards. Such tone arms successfully subdue the temperamental sprightliness of their springs by burdening them with just the right amount of mass to make them sedate and dependable.

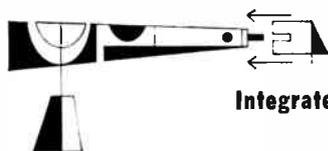
Applications of Spring Balance:

The engineers of Fairchild and Garrard achieved their particular design objectives with such cunning combinations of spring balancing and static mass.

The Fairchild Model 282 employs a hinge to separate the "forearm" from the heavier hind part, thus achieving "dual-mass" action. Only the front part of the arm moves vertically while the total mass of the arm moves laterally. Hence the arm offers less inertia to the vertical than to the lateral motion. This achieves good lateral-vibration damping, without sacrificing the vertical compliance needed to let the arm bob up and down smoothly with the warp of misshapen discs. (It should be noted that "mass" in this sense is something distinct from weight and relates to inertia rather than downward force.)

The Fairchild arm allows instant cartridge change by means of slide-and-spring contacts. However, not all cartridges fit because the pin pattern must conform to the layout of the contacts. Connection cables, complete with phono plugs, come with the arm and eliminate the need for soldering.

The Garrard TPA/12 arm owes to its combination of spring and static balancing the unique feature of variable length by a telescope adjustment. This unusual adjustment makes it possible to shorten the arm to fit tight places or lengthen it where space permits. In extended position, it will also track 16-inch transcription platters. Other geometric factors, such as the offset angle of the head, are also variable to provide optimum tracking for any arm length. Plug-in cartridge shells further add to the versatility of this neatly machined-chrome and enamel arm. Low-friction bearings assure easy tracking at low pressure.



Integrated Tone Arms

THEORY:

So far we have described only general-purpose tone arms that are able to accommodate a variety of stereo or mono cartridges. Yet some cartridges and arms are made exclusively for each other. In such "integrated" designs, the arm and the cartridge are inseparable, permitting neither cartridge change nor choice. In return for acceptance of this limitation, such designs offer assurance of an optimum match between arm and cartridge. In most cases, integrated arm-cartridge combinations track at minimum stylus pressure (in the order of 1-2½ grams). There are other advantages also.

Ordinarily, a cartridge manufacturer must allow a "safety margin" because he doesn't know in what arm the cartridge will be mounted. To make it work in cheap record changers with their short, wobbly and usually

erratic arms, the moving parts of the cartridge must be stiffened. This, in turn, requires heavier tracking pressures often resulting in rougher sound and faster record wear. Some cartridge makers get around this problem by offering two models of their cartridge—one a "compromised" design for use in record changers and ordinary phonographs, and another, a high compliance model for use in professional-type tone arms like those discussed here.

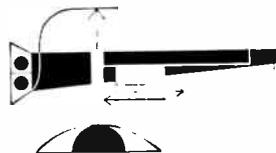
Some manufacturers go one step further. They take no chances whatever about the "working conditions" under which their cartridge has to perform. By making the cartridge part of an integrated arm, they eliminate all compromise by allowing nothing but the optimum.

Let us emphasize that this does not mean that integrated arms and cartridge combinations are necessarily and always the best. Separate cartridges may perform as well, *if* they are mounted in a good arm. The integrated design merely eliminates the "if." Moreover, the cartridge employed in the integrated unit must still be judged on its own merits.

Applications of Integrated Tone Arms:

Scott, Pickering, Dynaco and Shure are the chief proponents of integrated design. Scott, in fact, allows no option in the matter. The Scott-London stereo cartridge is available only in its own arm—a straight, gimbal-suspended, statically balanced design with lateral viscous damping provided by a lubricant between the vertical shaft and its sleeve. Pickering mounts its integral cartridge in the unique Unipoise arm which pivots in static balance on a single needlepoint bearing to minimize friction. Dynaco has developed a gimbal-mounted, dynamically balanced arm. To make the most of integrated-design possibilities, the cartridge in this arm differs from the separately available standard Dynaco cartridges. Thanks to the use of a temperature-compensated alloy, steel-clock mainspring, stylus pressure-adjustment is completely linear in operation for the full rotation of adjusting knob and accuracy of the calibration.

Precision ball bearings minimize both vertical and horizontal friction. The counterweight is suspended from a non-resonant mount, and the tubular shape of the arm itself reduces mass and minimizes inertia. The arm rest contains a special safety feature which permits latching of the arm to prevent accidental motion where it is not in use, or when the turntable is being taken from one place to another.



Static Balance

THEORY:

Static Balance simply means "no springs." Balancing is all done by counterweight. This has the advantage of simplicity; nothing can go wrong. In spring-balanced arms the spring may weaken and need occasional adjustment—though probably not more often than about once a year. On a static-balanced arm, the stylus pressure, once set, stays put.

Being slaves to gravity, statically balanced arms lack the independent, acrobatic ability of dynamic-balance designs to make up for slant and tilt. But as long as the

turntable is strictly level, and nobody is rocking the boat, static-balanced arms will track as steadily as their dynamically balanced brethren.

Applications of Static Balance:

The numerous members of the static-balanced clan include such makes as Audax, Grado, Lafayette, Rek-O-Kut. They vary in their individual features, such as suspension method and cartridge mounts, but all share the same basic principle of fixed counterweights.

The Audax arm is available in either 12-inch or 16-inch models, features a unique suspension which puts the vertical fulcrum well ahead of the lateral pivot, and thereby improves vertical compliance. Cartridge shells can be exchanged with the aid of a screw mount, but each contact point must be individually connected.

Grado offers a tone arm made almost entirely of wood, which has the advantage of being inherently non-resonant. Its walnut body is finished like a fine gunstock and pivots on a single pin for minimum lateral drag. An adjustable metal counterweight slides over the rear overhang of the arm. Cartridges are exchangeable, but no instant change is possible because automatic connectors are not provided. Pin jacks have to be slipped by hand over the pins of the new cartridge to be inserted.

Lafayette's PK-270 and PK-280 arms (12" and 16", respectively) attack the problem of friction by a novel method involving knife-edge bearings similar to those found in the ultra-sensitive balances employed in analytical chemistry. Four knife-edge pivots resting in jeweled V-shape bearings provide almost frictionless motion both up-and-down and sideways, permitting cartridges to track at exceptionally low pressures. At the same time, the straight knife-edges keep the arm from rocking out of vertical alignment. Thanks to the tracking ability of the arm, it has been possible to nearly double the cartridge compliance for the integrated design. The shortness of this trim-looking arm allows it to fit into tight places where other arms might find insufficient "elbow room."

All of these integrated units are relatively light. Their attractive lack of bulk derives from the fact that resonance problems in integrated designs can be solved largely through cartridge compliance; the arm needs no extra mass for damping. In the case of the Scott, viscous damping checks sideways motion as additional protection against resonance.

Shure's renowned Stereo Dynetic Cartridge is also available in an integrated version with its own arm. The Shure Model M212 (for 12" records) and Model M216

(for 16" records) are dynamically balanced designs which accommodate the cartridge in a hinged frontal section that derives the necessary tracking pressure from an adjustable spring. Since the spring acts in a downward direction, the tracking force is maintained regardless of turntable tilt or external vibrational movements. The unique feature of this arm is a button-operated cueing mechanism that sets the stylus down gently at any desired spot on the record. All the vertical movement of the arm is controlled by this push-button mechanism, eliminating the possibility of record or stylus damage due to tone arm "dropping." Both vertical and lateral motion are eased by jewelled bearings which minimize friction. Resonance is dampened by a counterweight "floating" on a block of elastic material. This check in the critical frequency region does not impede the arm's normal motions.

The cartridge, specially designed for this arm, is mounted to a plug-in device which also permits instant substitution of the monophonic model, if so desired. Of course, the stereo head will play mono discs without any need for changeover. Weathers' arms and cartridges are usually combined so that this may be regarded as an integrated design. The arm is viscous damped and non-metallic to assure anti-resonant characteristics. It should be pointed out that in addition to Weathers' pickup, the arm also accepts certain other cartridges.

An offbeat kind of tone arm design is the General Electric Model TM-2G "Stereo Classic." It may be regarded as an "integrated" design because it is designed specifically to accept General Electric cartridges and takes no other.

These GE cartridges, however, as well as those by Weathers, are also available separately, which suggests that they are designed to work in a variety of tone arms rather than optimized for a specific one. Whether one may legitimately speak of a integrated design in this case, is a moot point. Some experts insist that the term applies only where both arm and cartridge are conceived as a single inseparable operational system.

Regardless of the diversity of designs, each of the tone arms surveyed here bespeaks a thoughtful and painstaking effort to solve a host of acoustical and mechanical problems. Moreover, these are precision products far removed from the shaky dime-a-dozen assemblies that make the ordinary department store's or appliance shop's "hi-fi" phonographs such a screaming horror.

Professional-type tone arms give the stereo cartridge every chance to make the most of the music.



ACOUSTICAL (LECTRONICS)

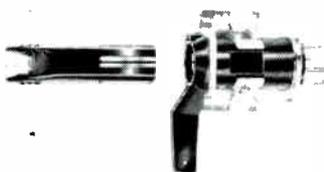
Model SME Tone Arm



Professional pick-up arm; available in two lengths, Model 3009—9", Model 3012—12"; permits longitudinal and lateral balance adjustment; arm control lever operated by hydraulic damper; will accept any cartridge in 4-pin socket; for stereo as well as mono; stylus pressure from 0.5 gm.; height adjustment $\frac{3}{4}$ "; complete with mounting template, alignment protractor.
 Model 3009 (Short).....\$87.00
 Model 3012 (Long).....\$99.00

THE ASTATIC CORP.

Sound-Flo Stereo Cartridge Series



Two-element ceramic plug-in cartridge with turnover holder assembly; frequency response 20 to 15,000 cps; tracking pressure 5 to 7 grams; output 0.5 volts each channel; channel separation 25 db; recommended load 2 megohms; 4 output terminals.
 Model 13 TB (0.7-mil and 3-mil sapphires).....\$ 7.95
 Model 13 TBX (0.7-mil diamond, 3-mil sapphire).....\$20.50
 Model 11 T7B (two 0.7-mil sapphires).....\$ 7.95

AUDIO-EMPIRE

Model 88 Stereo Cartridge



Frequency response 20—20,000 cps; 5 mv. per channel output; 25 db. separation; 500 mh inductance; 1,350 ohms d.c. resistance; recommended load 47,000 ohms; weight 9 gm.; tracking force 2.5 gm.;
 Model 88 with .7 mil diamond.....\$24.50
 Model 88S with .7 mil sapphire \$18.50
 Replacement Styli for Model 88 Cartridge
 S88-7RD .7 mil diamond.....\$12.50
 S88-1RD 1 mil diamond.....\$16.50
 S88-3RD 2.7 mil diamond.....\$16.50
 S88-5RD .5 mil diamond.....\$16.50

Empire 98 Stereo Balance Arm

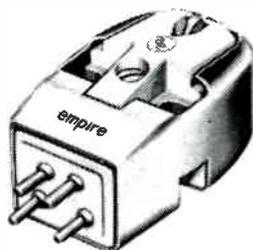


Counterbalanced arm allows adjustment for any cartridge from 2-25 gm.; stylus force adjustment 0-8 gm.; arm offset at 23.8°; resonant frequency at 12 cps; overall length $12\frac{7}{8}$ ".....\$34.50

Empire 98P Stereo Balance Arm

Maximum tracking error $\pm 0.6^\circ$; Arm resonance 8 cps; overall length $15\frac{7}{8}$ ".....\$44.50

Model 108 Empire Stereo/Mono Cartridge



Frequency response 15-20,000 cps.—usable output to 30,000 cps.; output 8 mv. each channel within ± 1 db.; separation more than 25 db.; dc resistance 1250 ohms; inductance 500 mh.; weight 10 gm.; vert. and hor. compliance 6×10^{-9} cm./dyne; tracking force 1.5-5 gm.; stylus .7 mil radius diamond; 4-terminal output; load impedance 47 ohms.....\$34.50
 Replacement styli for Model 108 cartridge:
 S108-7RD .7 mil diamond.....\$17.50
 S1081RD 1 mil diamond.....\$21.50
 S1083RD 2.7 mil diamond.....\$21.50
 S1085RD .5 mil diamond.....\$21.50

Model 208 Empire Stereo/Balance Turntable

Has 3 speeds; hysteresis synchronous motor; isolation-suspended motor and base plate; satin chrome or satin gold finish; $15" \times 17" \times 6\frac{1}{4}"$\$87.50
 Base in walnut, mahogany, fruitwood.....\$12.50

AUDIOGERSH CORP.

Model XS-200 Miracord Changer



Four speeds; push-button operation; four-pole shock-mounted motor; balanced $4\frac{1}{2}$ -lb. turntable; plastic tone arm; intermixes 10" and 12" records; record repeat, stop, and pause features; scratch filter; jam-proof mechanism; plug-in heads accommodate monaural stereo cartridges; adjustable stylus pressure: $12\frac{1}{2}" \times 10\frac{1}{4}"$, clearance required $2\frac{1}{2}"$ above and $2\frac{3}{4}"$ below.
 XS-200.....\$67.50
 XS-200/GE (with GE VRII 4G050).....\$74.50
 XS-200/GED (with GE VRII 4G052).....\$86.25
 XS/XM base.....\$ 5.95

Model MST-1 Miratwin Cartridge



Record playing Equipment

Variable reluctance magnetic type; with proper stylus can be used for either LP or 78; response 30-19,000 cps ± 2 db; output 55 mv on LP, 45 mv on 78; required stylus pressure 6-8 grams; clip-in stylus; clip-in mounting fits any standard arm.

Net
 MST-1D (diamond LP stylus).....\$26.50
 MST-1S (sapphire LP stylus).....\$10.00
 MST-1DN (diamond 78 stylus).....\$26.50
 MST-1SN (sapphire 78 stylus).....\$10.00

Miraphon Model XMS-210 Manual Turntable

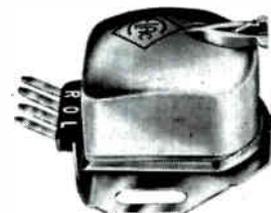
Plays stereo or monaural records; 4-pole motor with rim drive, automatic shut-off at end of record; adjustments made without tools; 4 speed selection; dimensions same as XS-200.
 XMS-210.....\$47.50
 With GE VI-227.....\$71.50

Model MST-2A Miratwin Cartridge



Variable reluctance magnetic turnover type cartridge; clip-in stylus tips, response 30-17,500 cps ± 2 db on microgroove. 30-19,000 cps ± 4 db on standard; output 45 mv on standard, 55 mv on microgroove; required stylus pressure 6-8 grams; fits all standard arms; clip-in mounting.
 MST-2D (sapphire-diamond stylus).....\$31.50 Net
 MST-2A (sapphire-sapphire stylus).....\$15.00 Net

Stereotwin 210-D Cartridge



Instantaneous stylus replacement; output is 13 mv per channel; separation 22 db. at 1000 cps.; tracking pressure 5-6 grams, manual 3-4 grams; flat response entire audio spectrum; fits all standard changers and arms.....\$34.50
 Diamond replacement stylus.....\$17.50

BOGEN-PRESTO CO. (Div. of the Siegler Corp.)

Model B21 Lenco Player

Speeds are $33\frac{1}{3}$, 45, 78, 16; 4-pole motor; serrated rubber pad; wow and flutter less than 0.7%; each speed may be varied within a range of $\pm 5\%$; shock-isolated mounting; supplied with universal plug-in head; operates on

Record playing Equipment



115-volt, 60 cps; mounting space is 13" x 10" x 2 1/2" above and 2 1/2" below motor board; plays discs up to 12" diameter.
 B21 (piezoelectric cartridge, dual sapphire styli).....\$29.55
 B21X (GE cartridge, reversible sapphire styli).....\$32.40
 B21XD (GE cartridge, diamond LP, sapphire standard styli).....\$43.10
 B21-LC (with plug-in head, less cartridge).....\$25.95
 PBO (wood base for B-21 series, 13 3/4" x 10 1/8" x 2 1/2")\$4.80

Model B 50-16 Lenco Player



Speeds are 33 1/3, 45, 78, 16; 4-pole motor; 12-inch turntable with molded rubber pad; wow and flutter 0.5%; universal plug-in heads; continuously variable speed from 29 to 86 rpm; less than 1% variation in motor speed; adjustable stylus pressure; operates on 95-125 volts, 60 cps; mounting space is 15" x 11 7/8" x 2 3/4" above and 1 7/8" below mounting board.

B 50-16 (with piezoelectric cartridge, dual sapphire)\$42.00
 B 50-16X (GE styli, reversible sapphire styli)\$48.95
 B 50-16XD (GE styli with diamond LP, sapphire standard)\$59.75
 B 50-16LC (plug-in head, less cartridge).....\$40.40
 PB-5 (wood base for B 50-16 series 16" x 13" x 2")\$4.80

Model TT3 Turntable

Single speed 33 1/3 rpm; wow and flutter less than 0.15%; belt drive; hysteresis synchronous motor; 12", 5 pound table; built-in strobe disc.....\$59.95

Model TT4 Turntable

Three speeds; rumble 53 db below record level; aluminum cast 12" turntable; 45 rpm. spindle adaptor; inner rim planetary drive; hysteresis synchronous motor; separate intermediate idler for each speed; strobe disc built-in.....\$99.50

Model TT5 Turntable

Three speeds; high-torque hysteresis synchronous motor, professional type.\$129.50

Model T68H Turntable

Three speeds; 15 3/4" turntable; similar to Model TT5.....\$170.00

Model PA1 Professional Tone Arm

Stylus force adjustment by knob end of tone arm; all aluminum construction; 20 gm maximum stylus force; overall length 13 3/4"; mc tracking error 1.9°;

4-pin plug-in head; height adjustment 3/8" - 3"; 10 oz.....\$24.95

CBC ELECTRONICS CO., INC.

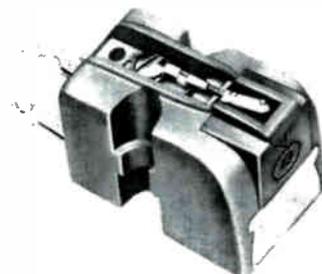
Music Minder



Allows record players or changers with automatic shut-off to automatically turn off amplifier and associated equipment after last record has played; record player and associated equipment plug into Music Minder and Music Minder plugs into a.c. outlet; may be used for conventional operation by turning switch.

CBS ELECTRONICS

Stereo Cartridge



Ceramic-type cartridge for stereo or monaural records; frequency response 30 to 20,000 cps, within 1.5 db from 30 to 7,000 cps; compliance (vertical and lateral) 2 x 10⁻⁶ cm/dyne; output voltage 0.4 volts; conforms to RIAA curve; recommended stylus force 5-7 grams.

Model SC-1D (0.7 mil diamond) \$24.25
 Model SC-2D (0.7 mil diamond) for Simplex amplifier\$24.25
 Model SC-1S (0.7 mil sapphire) \$17.00
 Model SC-2S (0.7 mil sapphire) for Simplex amplifier\$17.00

Professional 55

Ceramic-type cartridge for stereo or mono; designed for transcription turntable use only, not for changers; frequency response 16 to 20,000 cps, within 3 db 20 to 15,000 cps; compliance (vertical and lateral) 3x10⁻⁶ cm/dyne; output voltage 0.4 volt per channel in phase; 0.5 mil diamond stylus; conforms to RIAA curve; recommended stylus force 1.5-4 grams; supplied with plug-in networks for low- or high-level inputs\$28.95

CHANNEL MASTER

Professional Record Player

Plays all 4 speeds; has built-in strobe for all speeds; tone arm has vernier stylus pressure adjustment, also plug-in head; heavy-duty transcription type turntable; 4-pole motor; speed adjustment.

Model 6652 (without base).....\$64.95
 Model 6653 (with mahogany base)\$79.95

COLLARO (Rockbar Corporation)

Model TSC-640 "Conquest II" Transcription Changer



4-speed record changer; 4-pole induction motor; rim-driven turntable with rubber mat; wow and flutter less than 0.25% rms at 33 1/3 rpm; transcription-type tone arm maintains equal stylus pressure from bottom to top of record stack; manual operation switch; automatic shut-off after last record; muting switch and condenser; accepts all standard stereo or monaural cartridges; less cartridge\$38.50

Model TSC-740 "Coronation II" Record Changer

4-speed intermix record changer; 4-pole induction motor; rim-driven turntable with automatic idler disengagement and rubber mat; wow and flutter less than 0.25% rms at 33 1/3 rpm; manual operation switch; automatic shut-off after last record; muting switch and condenser; plug-in shells accept all stand-



ard stereo or monaural cartridges; less cartridge\$42.50

Model TSC-840 "Continental II" Transcription Changer



4-speed intermix record changer; 4-pole induction motor; rim-driven turntable with automatic idler disengagement and rubber mat; wow and flutter less than 0.25% rms at 33 1/3 rpm; transcription-type tone arm maintains equal stylus pressure from bottom to top of record stack; manual operation switch; automatic shut-off after last record; muting switch and condenser.....\$49.50

Model TC-99

"Constellation" Transcription Changer



4-speed automatic-manual intermix changer; 4-pole motor; 6 lb. non-magnetic 12" turntable; rim drive with automatic idler disengagement; flutter less than .04%; wow less than .15%; rumble 50 db; manual operation switch; automatic shut-off muting during change cycle. Plays 7", 10", and 12" records in any order; 2-piece transcription type tone arm, 5-pin plug-in head shell; completely wired and ready for play; 12" x 13", 5" above and 2 5/8" below motor board; shipping weight, 25 lbs; less cartridge.\$59.50

Model TP-59 Record Player



4-speeds; manually operated; rubber-covered steel turntable; 4-pole motor; counter balanced arm accepts all standard monaural and stereo cartridges; automatic stop; 13 1/2" x 12".....\$29.50

Model 4TR200 Turntable



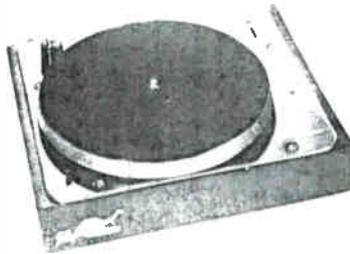
4-speeds; balanced non-magnetic turntable with rubber mat; 4-pole motor; rim drive through rubber idler wheel running on self-oiling bearing; switch noise suppressor; 12 1/2" x 12 1/2".....\$49.50

Accessories for All Collaro Changes

- Mahogany finished hardwood base—Model MT\$5.65
- Blonde finished hardwood base—Model BT\$5.65
- Walnut finished hardwood base—Model WT\$5.65
- Unfinished, sanded hardwood mounting board—Model HT\$280.00
- 5 pin empty head shell, stereo wired for "Continental," "Coronation," and "Constellation"—Model GPES. \$1.75
- 35 rpm spindle adaptor—Model GSA\$3.30
- Walnut finished base for 4TR-200 transcription turntable—Model TWT\$14.50

COMPONENTS CORPORATION

Mark I Turntable



Single speed 33 1/3 r.p.m. 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

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 r.p.m. speed.....\$59.50

Mark III Levermatic



Three speed, "Levermatic" speed change, belt-driven turntable; deep drawn metal base plate sinks major portion of 1 1/4" turntable into base; other specs same as Mark II and Mark III\$79.50

Model PBT Turntable

3-speed; 25 lb 12" turntable with cork pad; Bodine constant-speed two-phase capacitor run induction motor; belt-drive; noise-level better than 70 db below average recording level; wow and flutter 1/20 of 1%; speed accuracy within 1/4 of 1%; expanding collet spindle for records with enlarged center holes; mounted on legs with shock absorbing springs; blonde or mahogany finish; 13 1/2" x 19 1/2" x 8 1/2"; 45 lbs.

Record playing Equipment

Model AS Auto-Set Tone Arm 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.....\$19.50



- Model PBT\$ 99.50
- Model PBT-4 (4-speeds)\$109.50
- Gold finish skirt\$ 15.00

Model 45 Professional Duo-Speed Turntable

33 1/3 & 45 rpm; 4-pole motor with magnetic shielding; 12" turntable with cork pad; belt-drive; noise level better



than 65 db below average recording level; wow and flutter less than 1/10 of 1% rms; speed accuracy within 1/2 of 1%; 12" x 12" x 3 1/2".
 Model 45 (33 1/3 & 45 rpm)\$49.50
 Model 78 (33 1/3 & 78 rpm)\$49.50
 Blonde or Mahogany Base\$10.00
 Walnut Base\$16.50
 Power cord set (with switch & condenser)\$ 4.50

"Professional Junior" Turntable



33 1/3 rpm; extra pulleys available for 16 2/3, 45 & 78 rpm; 4-pole induction motor; 12" turntable with cork pad; belt-drive; noise level better than 60 db below average recording level; wow and flutter under 1/4 of 1%; speed accuracy within 1/2 of 1%; 12" x 12" x 3 1/2".
 Turntable\$39.50 Net
 Extra pulleys\$ 2.50 Each
 Mahogany or blonde base.....\$10.00

Record playing Equipment

Walnut base\$16.50
Power cord set (with switch & condenser)\$4.50

CONNOISSEUR (ERCONA CORP.)

Connoisseur "Cushioned-Control Stereo Pickup and Arm



Arm has knob fitted on above pivot point for raising and lowering onto record, cartridge 0.6 mil stylus; vertical compliance 3.5×10^{-6} cm/dyne; lateral compliance same; channel separation 20-25 db; 250 mf capacitance per channel; tracking force 3 gm; frequency response 20-20,000 cps; output each channel 20 mv into 50,000 ohm load.....\$59.50

Turntable

Three-speed professional quality turntable; hysteresis synchronous motor with speed variation provided at each



speed without motor braking; 12" non-magnetic turntable custom fitted to spindle; rumble -50 db at 7 cm/sec and 500 cps; wow less than 0.15%; speed adjustable $\pm 2\%$ at each speed position; overall $13\frac{1}{2}'' \times 15\frac{3}{4}''$, top clearance $3\frac{3}{4}''$, bottom $\frac{3}{4}''$\$119.50

Connoisseur Stereo Turntable



Hysteresis synchronous motor; 2-speed; rumble down 50 db; flutter 0.1%; wow is 0.15%.....\$59.50

Connoisseur Turntable Type B



3-speed; hysteresis synchronous motor; dynamically balanced rotor; speed variation $m \pm 2\%$ all speeds; $13\frac{1}{2}'' \times 15\frac{3}{4}''$\$119.90

Mark II Pickup Cartridge

Moving iron type; frequency response 20-20,000 cps; output 15 mv; impedance 400 ohms; stylus force 4-6 gm; tracking error 2.5° ; lateral compliance 3.5×10^{-6} cm/dyne.....\$35.00

Connoisseur Stereo Pickup

Ceramic type; output 20 mv per channel separation 20-25 db; frequency response 20-20,000 cps.....\$33.00

Connoisseur Pickup and Arm

Use Connoisseur stereo pickup; knob on rear of arm lifts arm from and to record; pivot base can be adjusted to any height; diamond stylus; in ebony.....\$49.50

DEKAMIX (ERCONA CORP.)

Changer



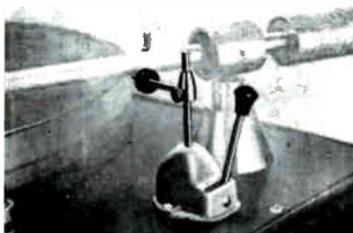
Four speeds; $33\frac{1}{3}$, 45, 78 rpm; intermixes 7", 10", and 12" records; 4-pole motor; non-magnetic turntable; spindle drop operation; balanced tone arm; plug-in heads; muting switch eliminates changing cycle noise; wired for stereo. Changer (less cartridge and plug-in shells)\$39.95
Plug-in shellseach \$1.50
Ronette crystal cartridge in plug-in shell\$4.50

DEXTER CHEMICAL CORP.

Lekstrostat Record Cleaning Kit

Consists of anti-static detergent, velvet applicator, and polyethylene pouch\$2.00

Dextrafix Tonearm Control



Prevents accidental damage to records, stylus, cartridge, tonearm is put in lead-in record groove automatically by Dextrafix control; also lifts arm from record at end of play.....\$4.95

DUOTONE CO., INC.

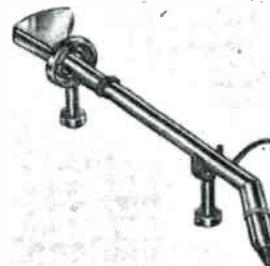
Model GPS73SD Stereo Cartridge

For use with monaural or stereo cartridges; frequency response 20 to 17,500 cps ± 2 db; compliance 2×10^{-6} cm/dyne; output 1 volt; tracking pressure 2-6 grams; 0.7-mil stylus. With sapphire stylus.....\$14.50 List
With diamond stylus.....\$24.50 List

DYNACO

Model TA-12 Tone Arm and Stereodyne II Cartridge

Cartridge has balanced moving-iron with four coils in push-pull pairs; fre-



quency response ± 2 db. 30-15,000 cps; output is 7 mv. per channel at 5 cm/sec. at 1000 cps; tracking force 2-4 gm.; recommended load 47,000 ohms; weight 10 gm.; .7 mil stylus (diamond); arm needs single mounting hole; dynamic balance adjusted by spring tension\$49.95

EICO (ELECTRONIC INSTRUMENT CO., INC.)

Model 1007 Stereo Changer/Player

Intermediate idler wheels for all 4 speeds; fully automatic play and manual with automatic return and stop; push-button start-reject; 2-pole induction motor; stereo crystal cartridge compliance 3.4×10^{-6} cm/dyne; stylus force 4 gm; cartridge sensitivity 80 mv/cm/sec to high level input; frequency response 20-16,000 cps; input adapter supplied for mag phono inputs; 0.7 mil diamond or sapphire, and 3 mil sapphire styli.

Model 1007D (0.7 mil diamond-3 mil sapphire).....\$59.75
Model 1007S (0.7 mil sapphire-3 mil sapphire).....\$49.75
Model MB1 Metal base.....\$3.95
Model WM1 wood mounting board.....\$4.80

ELECTRONIC IMPORTERS, INC.

Point One Five Turntable



Three-speed turntable with eddy current controlled variable speed adjustment; wow under 0.15%; hum -80 db; signal-to-noise ratio -44 db; 2 lb. 9 oz. cast aluminum turntable; cast iron motorboard; motor dynamically balanced at 20,000 cps; mounting space $14'' \text{d} \times 13'' \text{w}$ (plus arm requirements) $\frac{4}{8}''$ below bottom of baseplate\$69.95

Model 16 Arm

Viscous damped; adjustable; guaranteed to track at one gram; 16" size \$34.95

Model 12 Arm

Similar to Model 16 but 12" size\$19.95

NB-30 Needle Brush

Attaches to turntable base; automatically cleans stylus each time tone arm is returned to rest; adjustable height; polished nickel\$1.95

Point Two Five Turntable

Three-speed turntable with eddy current controlled variable speed adjustment; wow under 0.25%; hum -69 db; signal-to-noise ratio -41.5 db; iron turntable with chrome plated record platform; pressed steel motorboard; mounting requirements similar to Model Point One Five turntable; dynamically balanced motor\$44.95

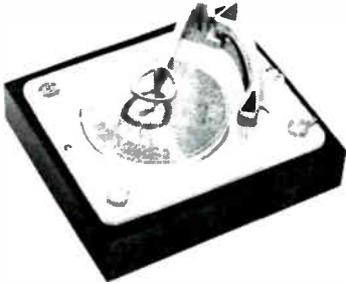
Point Two Turntable

Similar to Model Point Two Five with cast aluminum turntable; wow under 0.2%; hum -70 db; signal-to-noise ratio 43.5 db\$54.95

ELECTROPHONO AND PARTS CORP.

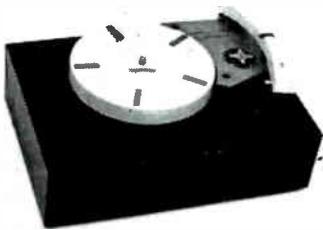
LESA Model CD2/21 Automatic Changer

Fully automatic with auto intermix; can be used for manual operation also; 4 speeds; 6 second change cycle; universal plug-in head; tone arm mechanism is jam proof; after last record is played, tone arm is short circuited to prevent hum; plug-in shell is prewired for mono or stereo; 4-pole motor.....\$39.95
Extra universal plug-in head.....\$2.40



Crystal cartridge dual sapphire turnover styli\$4.75
Base in mahogany, walnut, blonde\$4.75
Pre-cut mounting board.....\$2.00

Lesla Model SM5/DU2 Manual Player



Has 4-speeds; complete with stereo/monaural cartridge with sapphire stylus; pre-wired for stereo or monaural; stereo-mono switch.....\$29.95

LESA Model 4V3/11 Miniature Manual Player

Plays all record sizes and speeds; speed held to within ±1.5%; stops automatically at end of record; tone arm is short-circuited at end of record eliminating hum; universal plug-in head; 4-pole motor; speed can be changed during play.\$23.25

Monaural cartridge, dual sapphire styli\$4.75
Stereo cartridge, sapphire styli.....\$16.50
Extra universal plug-in head.....\$2.40

ELECTRO-SONIC LABORATORIES, INC.

ESL C-100 Gyro/Jewel Stereo Cartridge



Electrodynamic cartridge; frequency response 30 to 15,000 cps ±3 db, extending to beyond 20,000 cps; vertical and lateral compliance 5x10⁻⁶cm/dyne; dynamic mass 0.003 grams; channel separation 20 to 25 db; output voltage 2 millivolts per channel at recorded velocity of 10 cm/second; output impedance 25 ohms at 1,000 cps; four jeweled pivots.....\$100.00

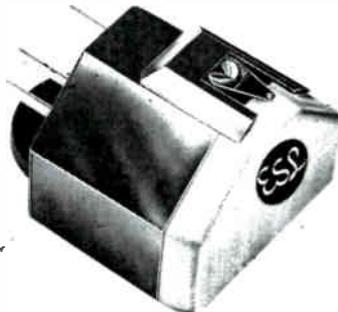
ESL C-60

Electrodynamic design; frequency response 18 to 20,000 cps ±1 db, extending to beyond 30,000 cps; minimum compliance 6.8x10⁻⁶ cm/dyne; dynamic mass 1 mg; minimum output 10 millivolts at 10 cm/sec.; output impedance



40 ohms at all audio frequencies; recommended stylus force 2-4 grams; may be used with record changers.....\$39.50

Model ESL C-99 Microflex Stereo Cartridge



Two d'Arsonval moving elements; vertical and lateral compliance 5x10⁻⁶ cm/dyne; output per channel 6 mv at cm/sec; frequency response 18-20,000 cps; fits any standard arm; Model P99 designed for use with Model ESL-S310 arm.

Model ESL C-99.....\$49.50
Model ESL P-99.....\$54.50

ESL-310 Professional Arm

Features ball bearings in all vertical and lateral pivots; no resonances within the audible range; adjustable height and



calibrated weight adjustment; overall length with cartridge 15¾"; for use with ESL Professional Series cartridges

Record playing Equipment

only; available in stereo and monaural models\$57.00

ESL P1 Professional Cartridge

Electrodynamic cartridge with patented d'Arsonval movement, compliance 6.8 x10⁻⁶ cm/dyne or greater; frequency response 16 to 30,000 cps; IM distortion virtually unmeasurable; output voltage 2 millivolts at 10 cm/sec; dynamic mass 0.001 grams; output impedance 1.5 ohms; recommended stylus force 1 to 3 grams.....\$49.50

ESL P60 Professional Cartridge

Identical to Model P1 except that output voltage is 12 millivolts at 10 cm/sec and output impedance is 40 ohms.\$49.50

ESL P-100 Stereo Cartridge

For use in ESL-310 arm; specifications similar to C-100.....\$79.95

ESL S-1000 Gyro/Balance Stereo Arm



For use with stereo and monaural cartridges; ball bearings used throughout for all vertical and lateral movements; rotationally balanced, tracks at up to 90 degree angle; tracks at 2 grams when used with ESL C-100 cartridge.....\$34.95

ESL "Dustbug"



Mounts similar to pickup arm; loosens and removes dust and dirt; eliminates static charges; complete with special fluid and applicator\$5.75

Dust Bug

Clip-on record-cleaning attachment for use with record changers\$4.75

ELECTRO-VOICE, INC.

Series 21 Stereo/Monaural Cartridges

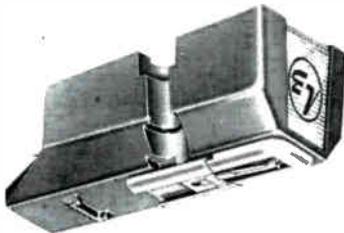


May be used with stereo or monaural records; frequency response 20 to 16,000 cps; distortion less than 2%; channel isolation 20 db; output 0.5 volts; tracking force 6 grams; compliance 2x10⁻⁶ cm/dyne; 15 db rumble suppression; models with "M" suffix directly replace magnetic-type cartridges.

Record playing Equipment

- Models 21S, 21MS (with 0.7-mil sapphire stylus)\$9.90
 Models 21D, 21MD (with 0.7-mil diamond stylus).....\$19.50
 Models 26ST, 26MST (with 0.7-mil sapphire and 3-mil sapphire).....\$12.90
 Models 26DST, 26MDST (with 0.7-mil diamond and 3-mil sapphire).....\$22.50
 Model D1-1 (0.7-mil diamond needle replacement for 21D and 26DST).....\$9.90
 Model S1-1 (0.7-mil sapphire needle replacement for 21S and 26S).....\$2.10
 Model S3-3 (3-mil sapphire needle replacement for 26S and 26DST).....\$2.10
 Model 504 (Magnetic input adaptor . . . for amplifiers without high impedance input channel. Not required for M-series cartridges)\$3.60
 Model 505 (Stereo control switch; magnetic input adaptor, monaural/stereo switch and channel reverse).....\$11.50
- Power Point Cartridges**
 Available in monaural and monaural/stereo models; frequency response fr m 20 to 15,000 cps; output 1 volt; tracking force 5-8 grams.
 Model 61 (Stereo-monaural cartridge with two 0.7-mil sapphire tips).....\$4.76
 Model 61DS (Stereo-monaural cartridge with one 0.7-mil diamond tip and one 0.7-mil sapphire tip).....\$15.60
 Model 66 (Stereo-monaural cartridge with one 0.7-mil sapphire tip and one 3-mil (monaural 78 rpm) sapphire tip)\$4.76
 Model 66DS (Stereo-monaural cartridge with one 0.7-mil diamond tip and one 3-mil (monaural 78 rpm) sapphire tip)\$15.60

Series 31 Professional Stereo/Mono Cartridge



- Available for mag. phono ("M" models), or ceramic phono inputs; compliance 3.5×10^{-9} cm/dyne; frequency response 20-20,000 cps; tracking force 4 to 5 gm; output "M" Models 10 mv; with either .5 or .7 mil diamond styli; recommended load 22K-47K ohms; ceramic elements; standard model output is 300 mv.
 Model 31 Md-5 (with 0.5 mil stylus).\$24.00
 Model 31 Md-7 (with 0.7 mil stylus).\$24.00
 Model 31D-5 (ceramic input 0.5 mil stylus).....\$22.50
 Model 31D-7 (ceramic input 0.7 mil stylus).....\$22.50

ERCONA CORP.

Miragrip Record Handler designed like pliers for handling records without touching with fingers; chrome-plated.\$4.95

FAIRCHILD RECORDING EQUIPMENT CO.

- Model 225A Cartridge**
 Moving coil pickup with "Micradjust" construction, allowing each cartridge to be hand adjusted: response ± 2 db 20 to 20,000 cps; low moving mass; low impedance (nominally 200 ohms) causes insensitivity to hum pickup; output 5 millivolts for 2.5 inches per second recorded velocity; tracking pressure 4 to 8 grams; no attraction by iron or steel turntables; goldplated wire, terminals, and clips for perfect electrical contact; all cartridges have diamond styli, standard mountings.
 225A (1 mil).....\$37.50
 225B (2.5 mil).....\$37.50

- Model 230 Micro-7 Cartridge**
 Moving coil cartridge for monaural use; 0.7-mil diamond styles; 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 SA-12 Stereo Arm**
 Low arm hysteresis (friction); precision, dust protected ball bearings used in vertical and lateral arm motions; low freq. cut-off below 15 cps; micrometer counterweight; no soldering necessary; self cleaning slide; single hole mounting; rear overhang $2\frac{1}{8}$ " max; height $3\frac{3}{4}$ " max.; length $12\frac{1}{4}$ "; distance required from turntable center to arm pivot $8\frac{27}{32}$ "\$39.95

- Model 440 Turntable**


- Speeds $33\frac{1}{3}$ and 45 rpm; single belt drive; turntable speed variable $\pm 1\frac{1}{2}\%$ \$69.95
 Model 440CBW Walnut mounting board and wraparound.....\$19.95

- Series 412 Turntables**

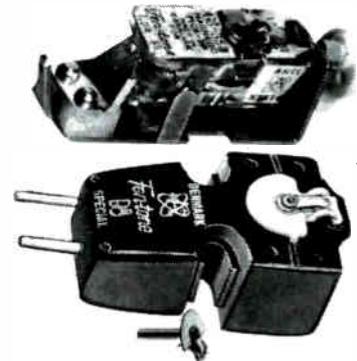

- 2-belt drive; rumble level at least 45 db down vertical and lateral; flutter and wow not more than $\pm 0.1\%$; speed accuracy at least $\pm 0.3\%$; 117 volt 60 cycles; hysteresis synchronous motor.
 Model 412-1 ($33\frac{1}{3}$ rpm).E. of Rockies \$87.50
W. of Rockies \$89.95
 Model 412-2 ($33\frac{1}{3}$ & 45 rpm).E. of Rockies \$107.50
W. of Rockies \$109.95
 Model 412BF Turntable base—shock mounted; $17\frac{3}{8}$ " x $14\frac{3}{4}$ " x $6\frac{1}{4}$ "; oil fin-

- ished walnut; white formica top.
E. of Rockies \$23.95
W. of Rockies \$24.95

- Model SM-1 Stereo Cartridge**
 Rotating magnet type for stereo or monaural records; output 11.5 mv. at 5 cm/sec and 1,000 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 ± 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

FEN-TONE CORPORATION

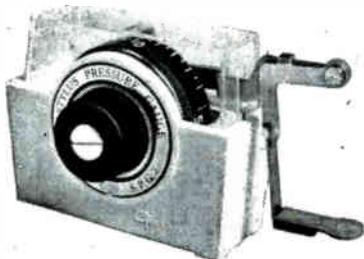
- Model B & O 350A+ Standard Series Pickup**
 Magnetic type cartridges; triple play, lever-shift dual styli; frequency response 20 to 16,000 cps ± 2 db; output 30 millivolts; hum free; recommended load 100,000 ohms; tracking force 3 to 10 grams; compliance 5×10^{-6} cm/dyne; stylus-armature unit clips in without cartridge removal; fits all standard arms; built-in anti-static element.
 Sapphire/sapphire\$9.78
 Diamond/sapphire\$21.78
 Diamond/diamond\$40.20
 B & O 350A+ Special Series. As above, except single play.



- Diamond stylus\$24.20
 Sapphire stylus\$15.60
 B & O 72A+ Series. Duplicates all models of 350A+ series in specifications and prices; but output is 12 millivolts, and recommended load is 1000 ohms.

GARRARD SALES CORP.

- Type A Laboratory Series Automatic**
 Turntable 4-speed auto/manual changer; shielded motor; dynamically balanced tone arm; stylus pressure adjustment; leveling knob: $15'' \times 12\frac{1}{4}'' \times 2\frac{3}{8}''$ below, $5\frac{3}{4}''$ above mounting board. \$69.50
 Complete with Shure, Pickering, or Electro-Voice diamond stereo cartridge\$93.50
 Complete with GE diamond stereo cartridge\$94.45

- Model SPG3**


The greatest beauty of
Thorens famous quality...
you can afford it!

No need to hesitate, you *can* afford Thorens famous quality. You *can* have music as it's meant to be heard. You *can* relax with Thorens *unique* one year guarantee. There's a Thorens model that fits handily into any budget.

Whether you know a lot or a little about high-fidelity equipment, you'll particularly enjoy the courteous and knowledgeable way a Thorens franchised dealer *earns* your confidence. Each Thorens dealer is carefully selected for knowledge, ability and integrity. They'll make buying *your* Thorens almost as much fun as owning it. Shop around this page for a few of the outstanding features and then stop in and *see* all of them for yourself. o.s

Guaranteed for one full year. Sold only through carefully selected franchised dealers.



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SWISS MADE PRODUCTS

MUSIC BOXES • HI-FI COMPONENTS
SPRING-POWERED SHAVERS • LIGHTERS
New Hyde Park, N. Y.

MATCHLESS!

TD-124. All four speeds. Plays any record. Easy-to-use lighted strobe sets exact speed for best musical reproduction. Completely silent. Many more exclusive features... only \$99.95 net.



TD-184

MARVELOUS!

TD-184. Includes tone arm and simple dialing system that lets you select records and start turntable. All 4 speeds. Save \$20 on turntable, up to \$30 on tone arm. Look at TD-184 ... only \$75.00 net.



TD-124

MORE ECONOMICAL!

TD-134. The finest 4-speed manual turntable you can buy. Includes tone arm. Elimination of semi-automatic feature saves you another \$15. You can also save up to \$30 on the tone arm. Look at TD-134 ... only \$59.95 net.



TD-134



TDK-101

MOST ECONOMICAL!

TDK-101. You can assemble this Thorens turntable yourself. The superb quality of the components makes all your work worthwhile. Look at Thorens TDK-101 ... only \$47.50 net.

Record playing Equipment

Stylus pressure gauge; large, legible scale; complete with 5 gram weight to be used as standard to "zero" unit for complete accuracy\$2.95

Model 88 Mark II

4-speed auto/manual changer; rubber traction mat; pusher platform; aluminum tone arm; adjustable stylus pressure and pickup height; plug-in shell; direct drive; muting switch; 4-pin, 5-wire system with separate ground; 15 1/2" w x 13 1/4" d x 5 3/4" above, 3 7/8" below mounting board\$59.50

Model 88/11/SH complete with Shure stereo diamond cartridge\$83.50

Model 88/11/P complete with Pickering diamond stereo cartridge\$83.50

Model 88/11/EV complete with Electro-Voice diamond stereo cartridge\$83.50

Model 88/11/GES complete with GE diamond stereo cartridge\$84.45

Model 210



Deluxe 4-speed auto/manual intermix changer; stylus pressure control; 3 legs mounted to unit plate permit changer operation without mounting in base; 14 7/8" w x 13" d x 5" above, 3 1/8" below mounting board\$44.50

Complete with Shure, Pickering or Electro-Voice diamond stereo cartridge\$68.50

Complete with GE diamond stereo cartridge\$69.45

Model RC 98



Similar in all respects to Model RC 88 with additional features: rheostat controlled variable fine speed adjustment on each standard speed; stroboscopic speed indicator and 45 rpm automatic spindle supplied with changer.

Model RC98/S-M7D (with Shure stereo cartridge Model M7D)\$93.50

Model RC98/P371 (with Pickering stereo cartridge Model 371)\$93.50

Model RC98/EV-26M (with Electro-Voice stereo turnover cartridge Model 26M)\$93.50

Model RC98/GE-GC7 (with GE stereo cartridge Model GC7)\$94.45

Model RC98/GED (with GE monaural cartridge)\$89.45

Model RC98/GE (with GE monaural cartridge)\$79.45

Model 4HF Manual Player



Four-speed unit with variable fine speed adjustment; 12" heavy duty turntable; transcription tone arm with plug-in shell; accommodates stereo or monaural cartridges; automatic "start-stop" can be disengaged; black, white, and chrome styling; less cartridge\$59.50

Model 4HF/S-M7D (with Shure stereo cartridge Model M7D)\$83.50

Model 4HF/P-371 (with Pickering stereo cartridge Model 371)\$83.50

Model 4HF/EV-26M (with Electro-Voice stereo turnover cartridge Model 26M)\$83.50

Model 4HF/GE-GC7 (with GE stereo cartridge Model GC7)\$84.45

Model 4HF/GED (with GE monaural cartridge)\$79.45

Model 4HF/GE (with GE monaural cartridge)\$69.45

Model "T" Mark II Manual Player

Four speed manual player; 4-pole shaded motor with dynamically balanced rotor; heavy steel turntable with rubber traction mat; frictionless bearings on main spindle; rubber mounts; true-turret drive; automatic start and stop; anti "plop" network eliminates shutoff noise; aluminum tone arm; plug-in heads; adjustments for stylus pressure; minimum cabinet dimensions 14 3/4" x 12 1/2" x 3" above motor board, 2 1/16" below motor board; accommodates all stereo and monaural records; less cartridge\$32.50

Model T/II/S-M7D (with Shure stereo cartridge Model M7D)\$56.50

Model T/II/P-371 (with Pickering stereo cartridge Model 371)\$56.50

Model T/II/EV-26M (with Electro-Voice stereo turnover cartridge Model 26M)\$56.50

Model T/II/GE-GC7 (with GE stereo cartridge Model GC7)\$57.45

Model T/II/GED (with GE monaural cartridge)\$52.45

Model T/II/GE (with GE monaural cartridge)\$42.45

Model 301 Turntable



Three speed transcription turntable; 4-pole shaded motor; dynamically balanced armature; rotor set into phosphor bronze bushings; 12", 6 1/2 lb. cast aluminum turntable; rubber mat; wow less than 0.2%; flutter less than .05%;

built-in pressure lubricating system; speed safety lock; turret-drive; resistor-condenser network eliminates shut-off "plop"; eddy current brake provides adjustment of all three speeds; shutoff brake; operates on 100 to 130 volts a.c. and 200 to 250 volts a.c.; 50 cycle pulley available; stroboscope card supplied with unit; minimum cabinet size is 16" x 13 3/4" x 2 1/2" above motor board, 3 1/2" below motor board\$89.00
Model B301E base\$24.00

GENERAL ELECTRIC CO.

Model VR-22 Stereo Cartridge

Damping block assembly enables cartridge to track record grooves precisely; channel separation up to 30 db.; output 6 mv. at stylus velocity 5 cm./sec.; inductance 420 mh; resistance 1600 ohms per channel; lateral compliance 4x10⁻⁶ cm./dyne; vertical compliance 2.5x10⁻⁶ cm./dyne; recommended tracking force 2.4 gm; load 47k ohms; easily replaceable stylus.

Model VR-225 with .5 mil diamond\$27.95

Model VR-227 with .7 mil diamond\$24.95

Series VR-II Cartridge

Variable reluctance magnetic cartridge; single and triple play turnaround mod-



els; frequency response: 20 to 20,000 cps; output: 22 millivolts nominal at 10 cm/second; equalization: 6,200 ohms load resistor for RIAA; required stylus pressure: 4 grams; clip-in stylus tips; plug-in terminals; electrostatic shielding; mounting: 3/16" or 1/2" with mounting adaptor; fits all standard arms.

Model 4G-050 (1 and 3 mil sapphire styli)\$9.95

Model 4G-052 (1-mil diamond; 3-mil sapphire styli)\$19.95

Model 4G-053 (1-mil and 3-mil diamond styli)\$30.95

Model 4G-040 (3-mil sapphire) \$ 7.50

Model 4G-041 (1-mil sapphire) \$ 7.50

Model 4G-061 (1-mil diamond) \$17.95

Model 4G-063 (3-mil diamond) \$17.95

Model GC-5 Stereo Cartridge

Similar to Model GC-7 but with 0.5-mil diamond stylus\$26.95

Model TM-2G Tone Arm

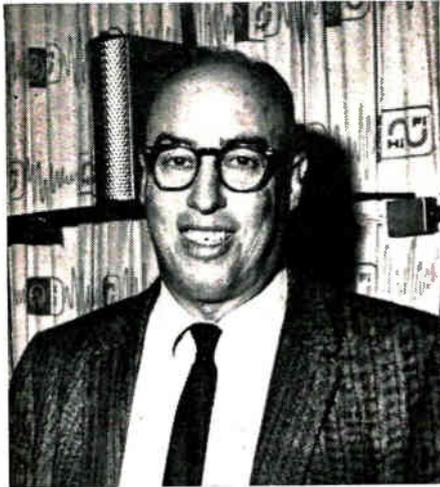
For use with G-E stereophonic or VR-II cartridges; statically balanced; adjustable tracking force from 0 to 6 grams; adjustable height from 3/8" to 2 1/4"; microball bearings; built-in arm rest mounted on base; maximum tracing error 2°; brushed aluminum and chrome finish\$29.95

GLASER-STEERS CORP.

Model GS 77 Changer

4-speed intermixing record changer (16, 33 1/3, 45 & 78 rpm); molded rubber mat; drop-type change mechanism with overhead stabilizing arm; 4-pole

WHY LEON HORNSTEIN OF THE AMERICAN DIST. CO. RECOMMENDS AND SELLS MORE WEATHERS TURNTABLES THAN ANY OTHER!



LEON HORNSTEIN

American Distributing Co., Baltimore, Md.

“THERE ARE MANY reasons why our company confidently recommends the Weathers turntable to every stereophile. For one thing, there's the absolute lack of rumble and vibration in a Weathers turntable. It is the only turntable we suggest for use on shipboard. Even with the most adverse rolling and vibration conditions encountered at sea, the Weathers turntable acts as though it were anchored on terra-firma. The lack of reaction to external vibration is phenomenal.

“Then, there's the quality workmanship in every Weathers turntable. We find that complaints and adjustments are non-existent.

“Price, too, is another important factor that has prompted our enthusiasm for the Weathers Turntable. Considering the performance and the quality, it is our opinion that Weathers is the best value in turntables.”

How Good Should a Turntable Be?

To call a turntable just “acceptable”, means it must simply perform to standards which are tolerable to most listeners. However, for it to be “essentially perfect”, the turntable must be so good that even the most critical

listener is unable to detect any wow, flutter, pitch deviation, or rumble from it. The ideal turntable, then, will perform so well in all respects that the quality of the program will be limited by the recordings themselves rather than by the turntable.

Performance figures which appear to meet this requirement are 0.1% total wow and flutter, and —0.1% deviation from nominal speed under any normal working conditions. These are obviously far higher standards than are usually demanded of turntables, but they must be met if the turntable is to support a claim of “top quality”. The speed accuracy figure is particularly difficult to maintain unless a synchronous drive motor is used. Even this can cause poor flutter characteristics if its “cogging” tendency isn't filtered out by the drive system or the flywheel effect of a heavy turntable. Induction motors, whose speed varies with load and with varying line voltage, must be used with a vernier speed control of some sort if they are to give absolute speed accuracy.

Rumble is harder to pin down to a desirable figure, since it depends so much on so many other factors. In this case, the safest thing to do is get the rumble so much lower than that from discs that it can never compete with the recorded rumble. And if the rumble frequency is reduced to below the range of audibility (as was done in the Weathers synchronous turntable), rumble can be dropped to a level where it will never become audible under any circumstances.



(Advertisement)

Weathers turntables meet all of these stringent requirements, and while it would undoubtedly be possible to improve this turntable further, additional improvement would be rather pointless.



Weathers to Limit Sale of Professional Stereo Pickup System

The first of the Weathers Professional Stereo components — a phono pickup which Mr. Weathers describes as a major design breakthrough — has such high performance capabilities that it was decided not to risk their deterioration through its use with ordinary tone arms or typically inaccurate equalizer pre-amplifiers.

The unit will be sold *only* as a completely integrated system, complete with its own arm and a special self-powered pre-amplifier. The preamp, which has no controls, provides a choice of high-level outputs with accurate RIAA equalization, or low-level outputs for use with those few magnetic phono pre-amplifiers whose equalization accuracy and freedom from distortion can do justice to the pickup's capabilities.

It is expected that a service will be instituted whereby present owners of Weathers pickups may have their tone arms converted for use with the new pickup system.

For more information on Weathers components, write today to Weathers Industries, a Division of Advance Industries, Inc., 66 East Gloucester Pike, Barrington, N. J.

Record playing Equipment

shielded motor; damped tone arm with vernier stylus pressure adjustment and stylus position guide; speed change accomplished by "Speedminder" control by change of turnover cartridge assembly to 33 $\frac{1}{3}$ and 45 or 78 rpm position;



automatic speed selection between 33 $\frac{1}{3}$ and 45; automatic shut-off and idler disengagement; turntable pauses during 9-second change cycle; for use with all stereo or monaural cartridges; stereo-monaural switch; stereo muting switch; supplied with 2—4-ft. audio cables; ebony and brushed gold finish: 13 $\frac{1}{2}$ "w x 12"d, 3" below and 5 $\frac{1}{2}$ " above mounting board.....\$59.50
Model GBS ebony base.....\$9.60
45 rpm spindle adapter\$3.60
Cover for changer\$9.75

Model GS-400

Similar to Model GS-77 but does not have pause, stereo-mono switch features\$47.50

GRADO LABORATORIES

Grado Tone Arm



13" long; tracking error ± 0.8 degrees; height adjustment 1 $\frac{1}{4}$ "; stylus force adjustment ± 7 grams; special adjustment to minimize tracking error; constructed of gunstock walnut; wired for stereo cartridges\$29.95
16" transcription tone arm.....\$32.50

Grado Custom Stereo Cartridge

Magnetic type LP cartridge; frequency response 10 to 24,000 cps; output voltage 7 millivolts at 10 cmv; 1,000 ohms impedance; stylus pressure 3 grams for use in record changers.....\$32.50

Grado Master Stereo Cartridge

Frequency response 10 to 30,000 cps per channel; output 5 millivolts per channel at 10 cmv; impedance 700 ohms per channel; tracking force 3 grams; compliance 8x10⁻⁶ cm/dyne; input load any value above 5,000 ohms; IM distortion 2%; channel separation in excess of 25 db; fits all standard tone arms; 1 milligram stylus mass.....\$49.50

Grado 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 millivolt input.....\$23.50

Laboratory Series Tone Arm

Tracking error ± 0.8 degrees; height adjustment 1"—2 $\frac{1}{2}$ "; overhang 2"; overall length 11 $\frac{1}{4}$ "; vertical and lateral balance adjustment; adjustable weight, overhang in shell; interchangeable cartridge shell; no solder connections.

.....\$39.50

With matched custom cartridge.....\$69.50

With matched master cartridge.....\$85.00

HEATH CO.

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 33 $\frac{1}{3}$ rpm; record player mechanism Garrard model 4SPA; complete with base and Sonotone 8TA5-SD (.7 mil diamond and 3 mil sapphire) cartridge; overall dimensions 12 $\frac{1}{4}$ "w x 3"h x 9 $\frac{3}{8}$ "d; shpg wt 10 lbs.....\$39.95

Model RP-3 Record Changer

Includes automatic speed and record size selection; change cycle 9 seconds; wow and flutter less than 0.18% rms. 33 $\frac{1}{3}$ r.p.m.; friction drive; 4-pole induction motor; 4 speeds; manual repeat; variation in tracking force less than .9 gm. from first to tenth record: 13 $\frac{1}{2}$ " x 12"; complete with arm and cartridge, mounting board; 13 lbs.\$64.95

LAFAYETTE RADIO

Model PK-90S



Viscous damped 12" transcription tone arm; height adjustable by means of a telescoping shaft; self-leveling screw adjustments on arm base; damping adjustable by screw on top of arm; accepts almost all cartridges without soldering; jewel bearing support; viscous damping effective in both vertical and lateral planes; accepts monaural and stereo cartridges.....\$12.95

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 disk; mounting plate dimensions: 12 $\frac{1}{8}$ " left to right; 10 $\frac{7}{8}$ " front to rear; wired for stereo.

Model PK-160\$24.50 Net

Model PK-162 wood base, blonde or mahogany\$3.95 Net

Model PK-163 unfinished mounting board\$.95 Net

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"x10"x14 $\frac{1}{2}$ ".....\$37.50

Model PK-245 Turntable



4-speed turntable; 12" aluminum table with rubber mat; hysteresis synchronous motor; wow and flutter less than 0.2%; single ball thrust bearing; free-floating, shock-mounted motor; rim drive; automatic idler disengagement; rubber shockmounts; strobe disk; 45 rpm adapter: 2 $\frac{1}{8}$ " above and 4" below motor board x14 $\frac{3}{4}$ "d x12 $\frac{1}{4}$ "w.....\$64.50

Model PK-270 Tone Arm



12" transcription tone arm; cast aluminum; plug-in type head secured by thumb screw; minimum tracking pressure 1 $\frac{1}{2}$ grams; vertical and horizontal suspension accomplished by steel knife edges resting on jeweled V plates and steel point set in jeweled bearing; 3 heads designed for Fairchild, Pickering, or GE-type stereo or monaural cartridge\$17.50

Model PK-280 (16" tone arm).....\$19.95

Model RK-400

2-speed (3 $\frac{3}{4}$, 7 $\frac{1}{2}$ ips) portable tape recorder; frequency response 60—8,500 cps; provisions for mike, phono, and extension speaker; holds 5" reel; crystal mike: 11 $\frac{3}{4}$ " x 9 $\frac{7}{8}$ " x 7 $\frac{1}{8}$ "; shpg. wt. 20 lbs.....\$49.50

LEAK (BRITISH INDUSTRIES CORP.)

Dynamic Pickup Arm and Cartridge

Frequency response 40 to 20,000 cps ± 1 db; playing weight 2 to 3 grams for LP, 5 to 6 grams for 78 rpm; low frequency resonance 20 cps; dynamic moving coil cartridge; single pivot arm





Men of decision... demand precision

Captain W. A. Reedholm, American Airlines 707 jet pilot on the New York to San Francisco non-stop run, lives with precision instruments on the job. At home, his records provide him with hours of relaxation as he listens to music on his precision-built Rek-O-Kut STEREO-TABLE. *Precision* in a stereo music system is essential today because the demands of stereo records are more exacting. For this reason, stereo records can only be heard to their fullest advantage on a high quality instrument like Rek-O-Kut's distinctive STEREO-

Speaker System by Audax—model CA-100, illustrated, \$139.95. Other Audax models from \$49.95.

TABLE. The STEREO-TABLE is unique in its remarkable combination of design and styling. It has become the classic of high fidelity instruments — a cherished possession for the music lover. If you seek one of the keys to flawless reproduction of your monophonic and stereo records . . . look to Rek-O-Kut STEREO-TABLE . . . world's most distinguished high fidelity music equipment—9 models to choose from.

Model N-33H shown, \$69.95. Others from \$39.95 to \$139.95. New Dynamically Balanced "Micropoise"™ Tonearm—\$29.95.



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STEREOTABLES

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RK 61

Record playing Equipment

bearing counter weighted; plug-in heads; overall length 11 $\frac{1}{4}$ "; adjustable height and pickup pressure. Complete with diamond LP pickup, transformer and arm rest\$59.00 Net
With diamond 78 rpm cartridge \$32.50

MERCURY SCIENTIFIC PRODUCTS CORP.

Mercury Dis-Charger

Clips to phono arm, ionizes air near record surface, reduces static charges that attract dust; practically infinite life; $\frac{1}{2}$ gram\$4.50

METZNER ENGINEERING CORP.

Starlight Turntable Model 60A

Continuously variable speed from 16 to 84 rpm with exact setting for 16 $\frac{2}{3}$, 33 $\frac{1}{3}$, 45, and 78; wow and flutter less than .2%; rumble and noise better than 52 db below NAB standard reference level; horizontally mounted 4-pole motor has hum shielding, laminations cast in lead, and center drive; precision-cast 3 $\frac{1}{2}$ lb. aluminum turntable with built-in stroboscope; retractable 45 rpm hub; mounting plate 11 $\frac{3}{4}$ "x13 $\frac{1}{4}$ "; mounting board should be 15 $\frac{1}{2}$ "x14 $\frac{1}{2}$ " with 4" below and 6" above.....\$64.50

Starlight Turntable Model 80

Has same features as Model 60A but has wow and flutter level of less than 0.25%, rumble better than —40 db.\$49.50

Starlight Transcription Arm

Die-cast aluminum; 12" overall length; plays records up to 16" diameter; counter-balanced head for minimum mass; resonance outside audible range; ball bearing swivel; adjustable from 4 to 14 grams; lifts to vertical position for easy cartridge replacement; black and satin chrome finish\$22.50

MERIX CHEMICAL CO.

"Anti-Static"

Cleans dirt and dust from records; reduces static electricity and noise.
4 oz. glass bottle.....\$1.00
4 oz. plastic bottle.....\$1.50

NORELCO

Model AG3400 Stereo Cartridge



"Magneto-Dynamic" design; frequency response, frequency response flat from 50 cps to 18 kc; output, 30mv per channel at 10 cm/sec; vertical compli-

ance, better than 3.5 x 10⁻⁶ cm/dyne; lateral compliance, 4.5 x 10⁻⁶ cm/dyne; channel separation, better than 22 db at 1,000 cps; moving mass, 2 mg; stylus pressure, 3-5 grams; complete with 0.7 mil diamond stylus, mounting plate and hardware\$29.95

Model AG1024

4-speed Stereo/Mono Semiautomatic turntable and record changer; push-button controls, manual or automatic play; automatic intermix. plays 7", 10" and 12" records interchangeably; stylus pressure adjustment lever; heavy cast, dynamically balanced turntable; interchangeable cartridge shell accepts all stereo and mono cartridges; includes spindle and empty cartridge shell: 13 $\frac{11}{16}$ " x 11 $\frac{7}{8}$ " x 4 $\frac{7}{8}$ "\$39.50
Mahogany, walnut and blond bases are available.

Model AG-1024

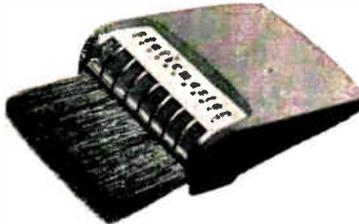
4-Speed Stereo/Mono Record Changer



Push-button controls; manual or automatic speed changes; automatic intermix 7", 10", 12" records with automatic stop; stylus pressure adjustment lever; includes spindle and empty cartridge shell: 13 $\frac{11}{16}$ " x 11 $\frac{7}{8}$ " x 4 $\frac{7}{8}$ "\$39.50

NUCLEAR PRODUCTS COMPANY

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 2U500 ionizing unit over playing record; complete with ionizing unit.\$19.75

OLSON RADIO CORP.

Model SW-138 Stereo Rumble Filter

Lo-pass filter that attenuates turntable rumble and vibrations; plugs in between cartridge and amplifier inputs.....\$3.00

ORTHO-SONIC INSTRUMENTS, INC.

Model 100 V/4 Tone Arm

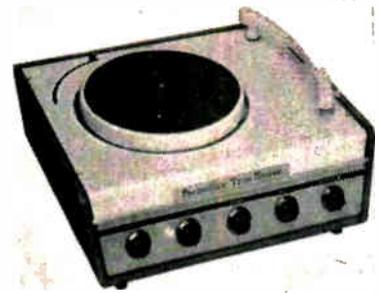
Arm length 7 $\frac{1}{4}$ ", thumbscrew adjusts stylus force from 1 gram up; resonant frequency: 12 $\frac{1}{2}$ cps; accommodates all types of cartridges; cartridge carrier moves in a straight line from the edge of the record to the center on ball-bearing trolley; lateral torque less than $\frac{1}{2}$ gram; all metal construction; calibrated scale on top of arm for accurate cueing; wired for stereo.

Model 100\$35.95
Model 200 (transcription)\$44.50
Model 300 (binaural)\$59.50

PERMOFLUX PRODUCTS CO.

Model RSD-10

Amplifier-Turntable Combination



Dual amplifier with 12 watts peak; frequency response 20-20,000 cps; Compensating volume control; separate tone controls for both channels; balance control; monaural/binaural switch; hum control for each channel; fused; impedance 8 ohms; separate output jacks for speakers and headphones; turntable section has 2 speed four pole motor (33 $\frac{1}{3}$ and 45 rpm); diamond stylus pickup: 19" x 6" x 8"\$175.00

Model RSD-53



Similar to Model RSD-10 except for output of 8 peak watts: 15" x 14" x 6".\$110.00

Model RSD-125 W

Similar to Model RSD-53 except output 4 peak watts; 3-speed phono; turn-over cartridge with 2 jewels; 13" x 11" x 5"\$75.00

PICKERING AND CO., INC.

Stereo "90" Cartridge



Frequency response: smooth 30-15,000 cps; output 8 mv per channel; channel separation —20 db; push-pull circuit; hum bucking coils, magnetic type; "T-Guard" stylus assembly; tracking force 4-6 grams.....\$16.50

Replacement Styli:

Model D-3807C—.0007" Radius Diamond—red "V-Guard".....\$15.00
Model D-3807A—.0007" Radius Diamond—yellow "V-Guard".....\$19.65
Model D-3810C—.001" Radius Diamond—white "V-Guard".....\$15.00
Model D-3810A—.001" Radius Diamond—light gray "V-Guard".....\$19.65
Model D-3827—.0027" Radius Diamond—dark blue "V-Guard".....\$15.00



New: **ESL SUPER GYRO/BALANCE**—the arm that has everything!

1. The only arm with new SUPER GYRO/BALANCE—adjustable with any standard stereo or mono cartridge in three planes for perfect stability.
2. New stylus force adjustment, clearly calibrated in grams, utilizes dual watch-type hairsprings, linear and temperature compensated.
3. No need for turntable leveling; perfect contact by stylus with both sides of record groove wall and constant stylus force are assured even when playing upside down.
4. New indexed metal mounting base permits precise, instantaneous overhang adjustment for all cartridges.
5. New scratch-proof, height-adjustable nylon and metal arm rest provides dual positions for easy lifting or positive locking of arm.
6. Precision, miniature ball bearings for all motions reduce friction to vanishing point, and enable tracking down to 1½ gram force with high quality cartridges.
7. New, larger plug-in aluminum shell with integral finger lift accepts all standard cartridges. New shell shape exposes front of cartridge and stylus for accurate cueing.
8. Unequalled elegance of appearance will grace the finest living rooms.
9. Novel, accurate mounting and aligning aids provided for easy mounting.
10. Extremely short overall length enables mounting in restricted spaces.
11. Height of arm and arm rest are adjustable for all turntables.
12. The ESL-S2000 SUPER GYRO/BALANCE arm is coming soon to your dealer's. Only \$34.95; write for free information.

FOR LISTENING AT ITS BEST



Electro-Sonic Laboratories, Inc. • Dept. Z • 35-54 Thirty-sixth Street • Long Island City 1, N.Y.

Model S-3827—.0027" Radius Sap-
phire—aqua "V-Guard".....\$7.50
Model D-9007—.007" Radius Dia-
mond—charcoal gray "T-Guard"....\$9.90

Model Mk 11 Cartridge

Frequency response 20-15,000 cps ± 2
db; output 10 mv per channel; channel
separation 20/25 db; "T-Guard" stylus
assembly.
Mk 11A for manual arm; tracking force
2-5 grams.....\$26.40
Mk 11C for changer; tracking force 4-7
grams.....\$24.00

Collector Stereo Fluxvalve 380 Cartridge



Frequency response 20-15,000 cps ± 2
db; output 15 mv. per channel; channel
separation —35 db; utilizes "V-Guard"
easily replaceable stylus assembly; her-
metically sealed in mu-metal; fits all
pickup arms.
Model 380A—manual arm type; track-
ing force 2-5 grams.....\$34.50

Calibration Standard 381 Cartridge

Frequency response 20-10,000 cps. ± 1
db; 10-15,000 cps ± 2 db; output 10
mv per channel; channel separation
—35 db; ultralinear professional pickup;
250 ohms; 500/600 ohms; standard
high impedance 47,000-100,000 ohms;
tracking force 2-3 grams.
Model 381A—for use only in high
quality manual tone arms.....\$48.00
Model 381E—includes model 381 car-
tridge with 2 additional styli: .001 inch
diamond for mono LP's, .0027 inch
sapphire for 78's.....\$60.00

Model 198 Unipoise Arm with Stereo Fluxvalve

Consists of Model 380A pickup inter-
grated into Unipoise arm; tonearm fea-
tures single friction-free pivot bearing;
may be mounted on motorboard 15½"x
15½"; complete with arm rest with
sable brush for cleaning stylus tip.
.....\$54.00

Model 800 Gyropoise Turntable



Single speed (33⅓ rpm) magnetically
suspended turntable; compound vertical
rumble attenuation 12 db/octave below
resonance; noise 65 db below reference
level; speed accuracy 0.2% total varia-
tion; 13½"x13½"x1⅝" above and 3"
below.\$66.00
Model 800CB base in mahogany, wal-
nut, or blonde (14¾"x14¾"x5⅝").
.....\$15.00

RADIO SHACK CORP.

Model Mark IIIA

4-speed hysteresis turntable; wow and
flutter below 0.2%; noise level 45 db

1961 EDITION

Record playing Equipment

below average recording level; complete with tone arm and mounting board
Walnut base\$9.95

REK-O-KUT COMPANY

"Imperial" Disc Recorder

Includes Model R8B amplifier; hysteresis synchronous motor; records from 6" to 13 1/4" masters; speeds 33 1/3 and 78 rpm. with idler and adapter for 45 rpm.; has overhead lathe with hand crank for run-in and run-off grooves; lead screws may be interchanged; cam prevents double cutting; calibrated scale for timing; recording head frequency response 30-13,000 cps.; playback arm has dual sapphire styli; 14" x 18" x 20 1/2"; 45 pounds.....\$695.00
Case for unit.....\$50.00

Model R8B Amplifier

Unit for use with Imperial disc recorder; power output 20 watts; inputs for mike, tape, phono; sensitivity: mike input -3.25 mv., XX tape -2.17 mv., phono -4.75 mv.; controls for phono, mike, tape level, volume, bass, treble, record/playback switch; vu meters for recording level; provision for monitoring; tubes are 2-6973, 6AN8; transistors are 3-2N408, 5-2N406, 4-1N20-71 silicon rectifiers; in leatherette case; 7" x 10" x 20 1/2"; 25 pounds.....\$250.00

Model RT-VM Rhythmaster Phonograph



Portable record player, amplifier and speaker combination: specifications turntable: 4-pole induction motor, continuously variable speeds from 25-100 rpm, 12" cast aluminum table, can be played at 50 or 60 cps current; specifications amplifier: power output 20 watts; frequency response ±2 db 20-20,000 cps; mike input gain 99 db; phono input gain 94 db; tuner input gain 50 db; IM distortion 1.5% for full output; controls for tuner-phono, mike, bass, treble; inputs may be mixed internally; includes 2-10" PM speakers with Alnico V magnets; arm has GE mag cartridge; amplifier and turntable dimensions are 22 3/4" x 16 1/2" x 9 1/2", 42 pounds; speaker case dimensions are 23" x 16 1/2" x 12", 20 pounds; case is Pyroloxin-covered plywood.....\$349.95

Model S-220 Tonearm

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

Model S-220 12".....\$29.95
Model S-220 16".....\$34.95
Model PS-20L (extra stereo shell)
.....\$5.95

Models S-120 and S-160 Stereo-Monaural Tone Arms



Accommodate all standard monaural and stereophonic cartridges; stylus pressure adjustable by self-locking, threaded counterweight; offset head; adjustable for turntable height; arm resonance below audible band; interchangeable cartridge shells accept all standard cartridges; dual ball bearing races for horizontal movement; vertical movement pivots in 1 mm chrome-steel ball bearings; arm rest included.

Model S-120 (12" arm).....\$24.95 Net
Model S-160 (16" arm).....\$27.95 Net

Stereo Conversion Kit

Converts Rek-O-Kut A-120 and A-160 arms to stereo.

Model SC-12 (12" arm).....\$17.95 Net
Model SC-16 (16" arm).....\$19.95 Net

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 for 45 rpm records; pilot light; stroboscopic disc; dimensions for cabinet installation: left to right 17 3/4", front to back 16", height above deck 3", height below deck 6 1/2"; finish: silvertone aluminum.....\$139.95 Net

Model L-34 Stereotable



2-speed: 33 1/3 and 45 rpm; 4-pole induction motor; 12" aluminum turntable; rubber mat; rim-driven by idler wheel; noise level: 40 db below average recording level; built-in for 45 rpm records; stroboscopic disc; dimensions for cabinet installation: left to right 16 1/2", front to back 16 1/4", height above deck 3", height below deck 5 1/4"; finish: silvertone aluminum; also available Model L-37 (33 1/3 and 78 rpm).....\$59.95 Net
L-34H (with hysteresis synchronous motor)\$79.95

L37H (same as L34H except 3 speeds).
.....\$79.95

Model B-12GH

All specifications identical to B-12H with the following exceptions: noise level -53 db; new design hysteresis synchronous motor\$99.95 Net

Model B-12

All specifications identical to B-12 with the following exceptions: noise level 50 db below average recording level; 4-pole induction motor.....\$84.95 Net

Model N-33H

Single-speed (33 1/3) belt-driven turntable with hysteresis synchronous motor, noise level 53 db below average recording level; tension on belt may be adjusted; cast aluminum turntable with strobe disc; chassis 15 7/8" x 15"; finished in grey and aluminum\$69.95 Net

Model K-33 Turntable Kit



Single-speed (33 1/3) belt-driven turntable kit; noise level 47 db below average recording level; 4-pole induction motor; cast aluminum turntable with strobe disc; chassis 15 7/8" x 15"
.....\$39.95 Net

Model K33H (with hysteresis synchronous motor).....\$49.95

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 with NARTB 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 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 leveling 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

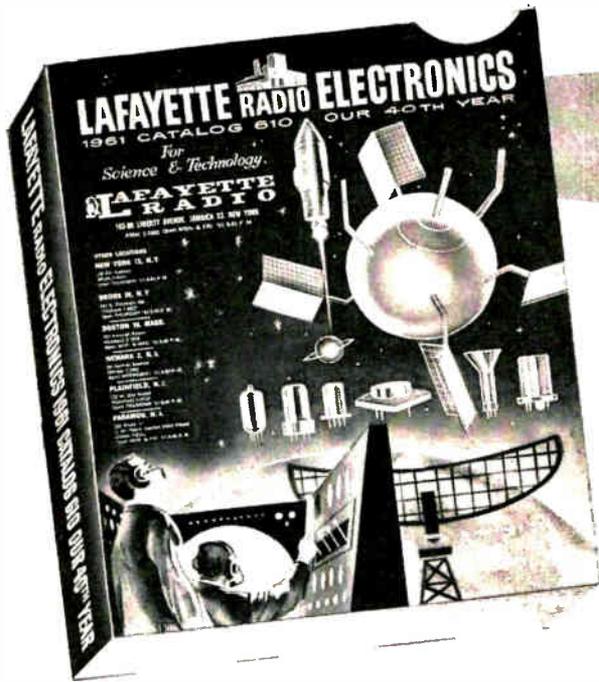
Variable speed turntable operates on either 50 or 60 cycle current; speed variable from 25 to 100 rpm at 60 cycles and from 20 to 85 rpm at 50 cycles.
\$89.95 Net

Model TR-43H 2 Speed Recording 12" Turntable

Similar in all respects to 16" table
.....\$149.95

Model P-VM Record Player

Combines variable speed CVS-12 turntable with A-120 tone arm and magnetic cartridge with dual sapphire nee-



FREE!

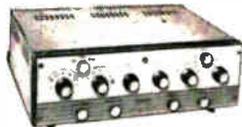
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LA-600A, Wired 134.50



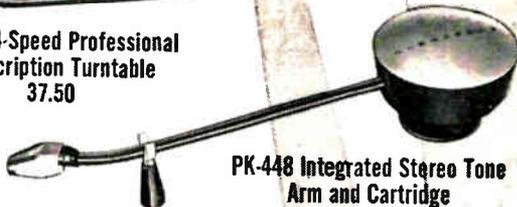
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54.50



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KT-250A, Kit 74.50
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Arm and Cartridge**
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Record playing Equipment

dles; portable leatherette covered base.
Model P-VM\$144.95
Model P-VC (with ceramic
cartridge)\$139.95

Series P-34 and P-37 Record Players

Model P-34M combines 2-speed (33 $\frac{1}{3}$ and 45 rpm) L-34 turntable with A-120 tone arm and magnetic cartridge with dual sapphire needles; portable leatherette covered case.....\$129.95 Net
Model P-37M: Same but with 2-speed (33 $\frac{1}{3}$ and 78 rpm) L-37 turntable...\$129.95 Net
Model P-34C: 2-speed (33 $\frac{1}{3}$ and 45 rpm) L-34 turntable and ceramic cartridge\$124.95 Net
Model P-37C: 2-speed (33 $\frac{1}{3}$ and 78 rpm) L-37 turntable and ceramic cartridge\$124.95 Net

"Imperial" Disc Recorder

Professional disc recorder and playback reproducer; hysteresis synchronous motor; 33 $\frac{1}{3}$ and 78 rpm with adapter and idler for 45 rpm; accommodates masters from 6" to 13 $\frac{1}{4}$ "; uses Model M-12S lathe; hand crank for run-in and run-off grooves; interchangeable leadscrew provisions for standard and microgroove cutting; safety cam prevents double cutting and stylus damage; calibrated scale for timing; Model R-56 recording head with response from 50 to 10,000 cps; Model 160 playback arm with dual sapphire magnetic cartridge; Model M-8A amplifier; frequency response: 30 to 20,000 cps \pm 1 db; power output: 13.5 watts at less than 3% harmonic distortion into resistive load; treble equalizer (continuously variable): maximum 14 db boost and 15 db cut above 8,000 cps; bass equalizer (continuously variable): maximum 14 db boost or cut below 50 cps; inputs: two for high impedance microphones, one for magnetic phono cartridge, one high level for radio and tape; output impedances: 4, 8, 15 and 500 ohms for cutter and speaker; 3-position selector for recording, playback or public address outputs; 3-position switch for monitoring on speaker or headphones; hum and noise: 64 db below 13.5 watts; radio-phonograph fader; speaker: 10"; tubes: 2-6SJ8, 2-6SL7, 6SC7, 2-6V6, 5Y3; gray leatherette finish; size: 25"x22"x12"; weight 77 lbs. Imperial Disc Recorder.....\$599.95 Net

ROBINS INDUSTRIES CORP.

Strobe Disc and Light Kit
For accurate speed adjustment of turntables.....\$1.50

H. H. SCOTT, INC.

Model 710A Stroboscopic Turntable



3-speeds; induction motor; 12" turntable with cork mat; nylon helical drive gear and steel worm housed in permanently oil filled transmission; torsional and two stage mechanical filtering; rumble better than 60 db below recording level; wow and flutter less than 0.1% of rated speed; \pm 5% vernier adjustment of each speed; push-button speed selection; stainless steel motorboard; separate mahogany tone arm mounting board; recessed illuminated stroboscope; special clutch for cueing; sintered bronze permanently lubricated bearings; size, including tone arm mounting board: 16 $\frac{7}{8}$ "x14 $\frac{1}{2}$ "; depth from top of spindle to bottom of mechanism: 7 $\frac{1}{8}$ "; 24 lbs. Model 710A.....\$129.95
Model 710X1 Accessory mounting base\$ 14.95

Model 1000

London-Scott Stereo Pickup and Arm



Stereo arm and cartridge designed as integrated unit; frequency response 20 to 18,000 cps \pm 2 db; tip mass less than 1 milligram; compliance 3.5x10⁻⁶ cm/dyne; output (45/45) 7mv., 5cm/sec, lateral connection (both sides in parallel) 3 db lower; 0.5 mil diamond stylus; impedance 4,000 ohms per channel at 400 cps; recommended load 47,000 ohms; cross-talk better than -20 db; recommended tracking force 3.5 grams; magnetic design pickup; arm length 12.5"; height adjustable 13 $\frac{3}{8}$ "-2 $\frac{1}{2}$ " above mounting board; supplied with arm rest, connecting cables, hardware, and templates.....\$89.95

SHURE BROTHERS, INC.

Model ML44 Cartridge

Ceramic lever-shift triple play type; frequency response 30 to 15,000 cps; output: 0.4 volt at 1000 cps into crystal input; with magnetic adapter (furnished) 25 millivolts at 1000 cps into magnetic phono input; stylus pressure 5 to 8 grams; lateral compliance 1.5x10⁻⁶ cm/dyne; dual styli slip-in assembly, thumbscrew lock; fits all standard arms.

ML 44 (SS) dual sapphire...\$13.95 Net
ML 44 (DS) 1-mil diamond and 3-mil sapphire.....\$38.95 Net
ML 44 (DD) dual diamonds.....\$57.50 Net

Model M232 Tone Arm



Accepts all cartridges (stereo or mono); micrometer counter weight; direct-reading stylus force gage; 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

Stereo Dynetic Integrated Tone Arm and Cartridge

Frequency response 20-20,000 cps \pm 2.5 db; channel separation over 20 db at 1,000 cps; 4.5 mv per channel; vertical compliance 9 x 10⁻⁶ cms/dyne;

0.7 mil diamond; M216 for 16" records, M212 for 12" records; overall length 14 $\frac{3}{4}$ "\$89.50

Model M7D

Stereo cartridge with 0.7 mil diamond; frequency response 20-15,000 cps; channel separation more than 20 db at 1,000 cps; 5 mv per channel output; recommended load impedance 47,000 ohms; vertical, lateral compliance 3.5 x 10⁻⁶ centimeters per dyne; 4 terminals; standard mounting\$24.00
N7D replacement stylus assembly.\$12.00

Model M8D Cartridge



Designed for record changers; frequency response 30-15,000 cps; channel separation more than 20 db at 1,000 cps; output 5 mv per channel at 1,000 cps; recommended load 47,000 ohms; 4 terminals; tracking force 5-8 grams; standard mounting; 0.7 mil diamond\$16.50
Model N8D diamond stylus.....\$8.25

Model M3LS

Laboratory standard version of M3D; channel separation 23 db at 1,000 cps, 15 db at 10,000 cps; channel to channel balance 1.5 db max; frequency response 30-15,000 cps \pm 2 db; output voltage 6.5 mv \pm 2 db per channel at 1,000 cps; compliance 4.4 x 10⁻⁶ centimeters per dyne; tracking force 3-6 grams; four terminals; each cartridge has individual response curve\$75.00

Model WC6 Pickup

Ceramic turnover cartridge; frequency response: 30 to 15,000 cps; required stylus pressure: 7 grams; output: .7 volt for 78 rpm, .5 volt for microgroove; styli replaceable by user.
Model WC6 (sapphire styli) \$14.50 Net
Model WC10 (similar to WC6, except for frequency response of 30 to 12,000 cps, 78 rpm output of 1 volt and microgroove output of 78 volt).....\$9.50 Net

Model W9 Pickup

Ceramic turnover cartridge; frequency response: 30 to 10,000 cps; required stylus pressure: 7 grams; output: 5 volts for 78 rpm, 3.5 volts for microgroove; capacitor furnished to reduce output, if necessary, to 2.5 and 1.7 volts; styli replaceable by user; two sapphire styli.\$9.50 Net

Model M-16 "Studio Dynetic" Pickup and Tone Arm

Integrated cartridge and tone arm assembly; moving magnet cartridge; separate plug-in heads for LP and 78 records; frequency response: 20 to 20,000 cps \pm 2 db; output at 1000 cps: 14 millivolts \pm 2 db; d.c. resistance 180 ohms; inductance: 130 millihenries; recommended load impedance: 10,000 ohms; stylus pressure: 1-2 grams; lateral compliance: 7.0x10⁻⁶ centimeters per dyne; mass at stylus tip: 1.25 milligram; stylus

replaceable by user; tone arm does not move vertically, all vertical movement taking place at head assembly; uses onset stylus; arm resonance below audibility by unique counter-balance damping system; height adjustable over $1\frac{3}{8}$ " range; jewelled pivots: fully balanced around vertical axis; push button method of placing stylus on record; 0.7 mil LP diamond stylus; magnetic arm rest; overall length $14\frac{3}{4}$ ".....\$79.50 Net

"Dynetic" Cartridges



Moving magnet design; frequency response 20 to 20,000 cps ± 2 db; compliance 3×10^{-6} cm/dyne; output 21 millivolts at 10 cm/sec; tracking force 3-6 grams; recommended load impedance 27,000 ohms; stylus replaceable by user. Model M5D (1-mil diamond stylus).....

\$27.00

Model M6S (2.7-mil sapphire stylus).....

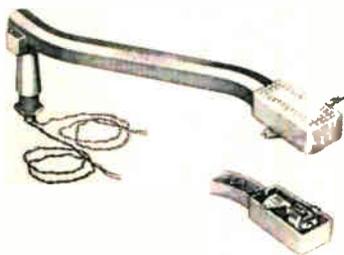
\$15.00

Model M3D "Dynetic" Stereo Cartridge

May be used with monaural or stereo records; frequency response 20 to 15,000 cps ± 3 db; compliance (vertical and lateral) 3×10^{-6} cm/dyne; output 5 millivolts; tracking force 3-6 grams; recommended load impedance 50,000 ohms; 0.7-mil diamond stylus.....\$45.00

SONOTONE CORPORATION

Model T1 Tone Arm and Crystal Stereo Cartridge



Economy unit; all plastic manual tone arm; available with compression rear mount or solid rear mounting post; tracking force 9-11 gm; includes new Model 12 crystal cartridge.....\$7.45

Model 12 Stereo Crystal Cartridge



Made of plastic; has jack-in terminal plug to connect to tone arm wires; stylus is changed by snapping out turn-over lever; Model 12TH has output of

1961 EDITION

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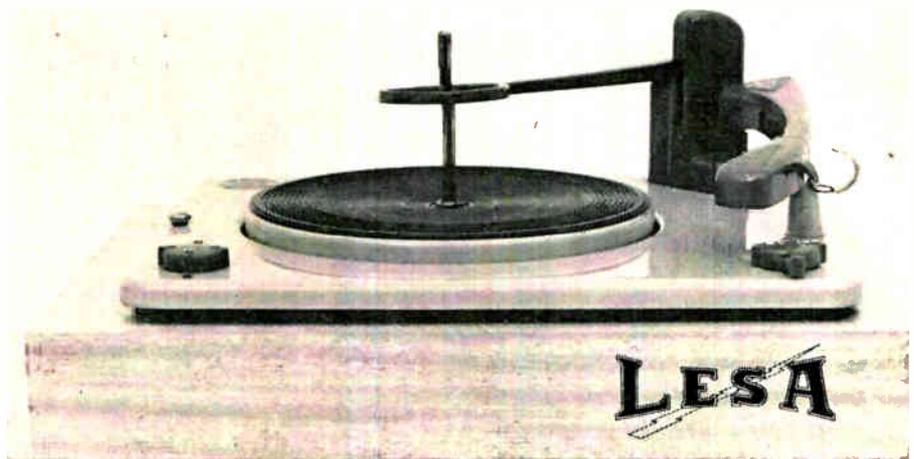
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Record playing Equipment

2.5 volts; Model 12TL has output of 1.0 volt; standard sapphire stylus are 0.7 mil and 3 mil radius.....\$6.45

Model 10T Stereo Ceramic Cartridge

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

Model 10T2-S (0.7-mil sapphire, 3-mil sapphire).....\$6.45

Model 10T2-SD (0.7-mil diamond, 3-mil sapphire).....\$13.45

Model 10T2-S77 (0.7-mil sapphire, 0.7-mil sapphire).....\$6.45

Model 10T2-SD77 (0.7-mil diamond, 0.7-mil sapphire).....\$13.45

Model 10T2-S15 (0.7-mil sapphire, 3-mil sapphire, 15" leads).....\$ 6.95

Model 10T2-SD15 (0.7-mil diamond, 3-mil sapphire, 15" leads).....\$13.95

Model 10T2-S7715 (0.7-mil diamond, 0.7-mil sapphire, 15" leads).....\$ 6.95

Model 10T2-SD7715 (0.7-mil diamond, 0.7-mil sapphire, 15" leads).....\$13.95

Model 3P-ID Pickup

Ceramic single-play cartridge; frequency response: 20 to 15,000 cps with gradual rolloff 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 force required; standard $\frac{1}{2}$ " or $\frac{5}{8}$ " mounting centers; diamond LP stylus.....\$17.50 Net

Model 3T-SD Pickup

Ceramic turnover cartridge; frequency response: 20 to 15,000 cps with gradual rolloff 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 $\frac{1}{2}$ " or $\frac{5}{8}$ " mounting centers; diamond LP and sapphire 78 styli.....\$18.50 Net

Models 1P and 2T Ceramic Cartridges

Model 1P is single-stylus cartridge, Model 2T is two-stylus turnover-type; frequency response 30 to 15,000 cps \pm 3 db; compliance 1.0×10^{-6} cm/dyne; output: 1 volt; tracking force 8-10 grams; recommended load 1-5 megohms. Model 1P-1S (1-mil sapphire).....\$ 7.50
Model 1P-2S (2-mil sapphire).....\$ 7.50
Model 1P-3S (3-mil sapphire).....\$ 7.50
Model 1P-1D (1-mil diamond).....\$16.50
Model 1P-3D (3-mil diamond).....\$16.50
Model 2T-S (2 sapphires).....\$ 8.50
Model 2T-SD (1-mil diamond, 3-mil sapphire).....\$17.50
Model 2T-D (2 diamonds).....\$28.00

Series 8TA Stereo Ceramic Cartridges

For use with stereo or monaural records; turnover-type; frequency response 20 to 15,000 cps, rolloff 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 8TA4S (0.7-mil and 3-mil sapphires).....\$14.50

Model 8TA4SD (0.7-mil diamond and 3-mil sapphire).....\$19.50

Model 8TA4D (0.7-mil and 3-mil diamonds).....\$29.50

Model 8TA4S77 (0.7-mil sapphire and 0.7-mil sapphire).....\$14.50

STROMBERG CARLSON CO.

Model PR-499 Turntable



Continuously variable speeds from 14 to 80 rpm (16, 33 $\frac{1}{3}$, 45, and 78 rpm indicated on speed-adjust knob); wow less than 0.25%; flutter 0.1%; noise level 55 db; four-pole motor; elastic belt drives turntable from remote location to prevent rumble transmission; cone drive on idler wheel completely separated with switch in "off" position; built-in pilot-lighted stroboscope; 45 rpm cutout; deck provided with legs for use without base; finished in morocco with aluminum trim.....\$99.95

Model PR-499B Turntable

4-speed turntable identical to Model PR-499 but includes RA-498 tone arm wired and ready for cartridge; also contains hysteresis-synchronous motor.....\$149.95 (Zone I)

Model RA-498 Tone Arm

For stereo or monaural records; low resonance; calibrated weight adjustment; clip-in cartridge plate.....\$24.95

Model PR-500

Single speed manual turntable and tone arm: dual-drive system consisting of two hysteresis-synchronous motors operated in tandem through one belt drive; table and arm isolated from mounting board; stereo or monaural use: $14\frac{3}{4}$ " w x $14\frac{3}{4}$ " d (with overhang); $\frac{2}{8}$ " above, $2\frac{3}{16}$ " below mounting plate.....\$69.95

TANNOY LTD.

Varilutance Mark II Pickup

Frequency response within 2 db to 16,000 cps; no resonant peaks or undamped resonances in sub-supersonic range; "Complidex" stylus easily replaceable; output 20 millivolts at 12 cm/sec; tracking weight 6 grams; low



mass; optimum vertical to lateral ratio.

Varilutance turnover, diamond/sapphire styli.....\$37.50

Varilutance turnover, diamond/diamond styli.....\$50.50

Varilutance turnover, sapphire/sapphire styli.....\$24.50

Varilutance single, diamond LP \$27.50

Varilutance single, sapphire LP \$14.50

Vari-Twin Stereo Cartridge

Magnetic type stereo cartridge; frequency response 30 to 16,000 cps \pm 2 db; output per channel 6-8 millivolts; recommended tracking force 3-4

grams; not recommended for use with record changers.....\$43.50

THORENS, INC.

Model TDK-101 Turntable

Turntable kit can be assembled in 45 minutes; single speed 33 $\frac{1}{3}$ r.p.m.; belt and idler wheel drive; speed can be adjusted underneath base plate; built in strobe disc.....\$47.50
WBK base in walnut, blond, mahogany.....\$9.00

Model CD-43 Changer



Precision made record changer; intermixes 12", 10", and 7" records and will replay any record size; control for complete manual operation; record reject feature; pause control permits adjustable pause time between records; automatic shutoff after last record; specifications similar to E-53PA transcription turntable: 15"x12"; required space 16 $\frac{1}{2}$ "x13 $\frac{1}{2}$ " with 3 $\frac{1}{4}$ " below mounting surface and 9" above (including record loading space).....\$79.95

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 steps speed reduction between motor and turntable—belt driven flywheel and stepped pulley-idler wheel speed shift 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" tone arm mounting boards; leveling knobs and built-in spirit level; base plate size 15 $\frac{1}{2}$ " x 12 $\frac{7}{8}$ ", required depth 2 $\frac{3}{4}$ ".....\$99.75

Model TD-134 Record Player

Turntable-tone arm combination; uses drive system similar to Model TD-124; 4 speeds plus fine-speed adjustment; accommodates all standard monaural and stereo cartridges: 14 $\frac{1}{2}$ " x 11 $\frac{3}{4}$ ".....\$60.00
Blond, mahogany, or walnut base \$9.00

Model TD-184 Record Player

Similar to Model TD-134 but with semi-automatic operation; arm is placed on record automatically by "dialomatic" tone arm system; 4 speeds plus fine-speed adjustment; accommodates all standard monaural and stereo cartridges; 14 $\frac{1}{2}$ "x11 $\frac{3}{4}$ ".....\$75.00

UNITED AUDIO

Dual-1006 Record Changer

Combination turntable and record changer with four speeds (16, 45, 33 and 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



KL-1 Turntable Kit

Identical to ML-1 turntable but in kit form; does not include motorboard or base; assembled with pliers and screwdriver.\$34.50

"Discushion"

Rubber turntable mat that supports records by contact with outer edges only\$2.98

Stylus Pressure Gauge

Gauge hooks under tone arm; no springs; easy to read.....\$2.00

Model C501 Ceramic Stereo Cartridge

For use with stereo and monaural records; frequency response from 15 to 30,000 cps; vertical and lateral compliance 6×10^{-9} cm/dyne; channel separation 25 db; output 0.25 volts; 4 output terminals; 0.7-mil stylus, recommended tracking pressure 2 grams.

With diamond stylus.....\$17.50
With sapphire stylus.....\$ 9.75

1½ 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; 10¾" x 13" (3" below, 6" above deck); 110 v/220 v, 60 cycles AC (50 cy avail.)\$69.95
Model WB-2 Wood base, pre-cut, in mahogany or walnut\$6.95
Model AS-6 45 RPM Automatic Spindle\$4.80

V-M CORP.

Model 1500 Record Changer

4-speeds; automatic-manual play; dynamically balanced tone arm; 4-pole motor; rumble less than 2%; flutter less than 0.2%; available with plastic base mount; complete with cartridge and diamond stylus.

WEATHERS INDUSTRIES

Tone Arm and FM Pickup



Pickup can be used only in Weathers arm and with Weathers oscillator-power supply; tracks at one gram stylus pressure; minimum record wear; frequency response 20 to 20,000 ±1 db; viscous damped tone arm; tone arm resonance below 15 cps; compliance: 14×10^{-6} centimeters per dyne; stylus retracts when more than two grams pressure are used. MM-10 Ebony tone arm with LP diamond stylus cartridge and oscillator-power supply.....\$97.50

ML-1 Turntable

Lightweight aluminum turntable is suspended on special bearing assembly for minimum friction; 12-pole lightweight synchronous motor; noise level 25 db below noise level on most records; supplied as 33⅓ rpm unit only, but can be adapted to 4-speed operation; complete with gold anodized aluminum mounting plate; ebony base, and "Discushion" record mat; 14⅛" x 15⅛"; overall height 2½".....\$59.95
Same, less base.....\$49.95

Model K-601 StereoRamic Record Player

Complete stereo record player includes viscous damped tonearm and Synchronic Drive turntable; frequency response 15-30,000 cps.; compliance 6×10^{-8} cm./dyne; tracking force 2 gm.; signal output per channel 25 mv. into 47,000 ohms; channel separation 25 db.; speed 33⅓ r.p.m.; 16⅜" x 15⅜" x 6".

K-601D (diamond)\$119.50
K-601S (sapphire)\$111.75

WEBCOR, INC.

Model 1031-27 "Imperial"



4-speed record changer; 4-pole motor; 9" rubber matted turntable; stylus pressure adjustment from 5-11 grams; selector control: on, off, reject; switch for manual operation; automatic shutoff; 10" and 12" 33⅓ RPM records may be intermixed; two phono cables. AC cord; two plug-in heads accommodate most stereo or monaural cartridges; 13½" d x 14¼" w; 5½" above, 4" below mounting board.....\$61.75

Model 1031-1 with Sonotone stereo ceramic cartridge; .7 mil diamond for 45, 33⅓ RPM records; sapphire tip for 78 RPM\$75.50

Model 1031-21 with Shure stereo magnetic cartridge.....\$83.75

Model TR-1041-27 "Custom"

4-speed record changer; 8" rubber matted turntable; stylus pressure adjustment from 5-11 grams; selector control: on, off, reject; switch for manual operation; automatic shutoff; 10" and 12" 33⅓ RPM records may be intermixed; two phono cables; AC cord; two plug-in heads accommodate most stereo and monaural cartridges; 13½" d x 14¼" w; 5½" above, 4" below mounting board\$53.75

Model TR-1041-1 with Astatic stereo turnover cartridge; .7 mil diamond for microgroove records; 2 mil Sapphire for 78 RPM.....\$55.50

Model TR-1041-21 with GE .7 mil diamond stereo cartridge and 4-pole motor\$73.50

Model TS-1042-1 same as model 1041-1 except mounted on base\$65.50

Model TS-1042-21 same as model 1041-21 except mounted on base.....\$83.25

YOUR NEEDLE IS DISTORTING SOUND BY AS MUCH AS 85%

(if it isn't a Fidelitone Pyramid Diamond)

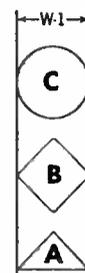
A conventional needle with a rounded ball tip can't fit the microgroove accurately. Its rounded shape prevents proper contact in the high tonal passages. Result? Distortion and noise.

But, Fidelitone's new Pyramid Diamond is shaped like the original cutting stylus to fit the record groove exactly. It maintains proper contact in all frequency areas. This lowers background noise and distortion by as much as 85%, and reproduces only maximum true sound—stereo or monaural.

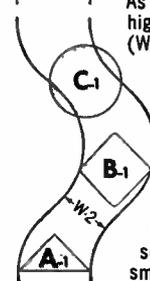
HERE'S WHY...



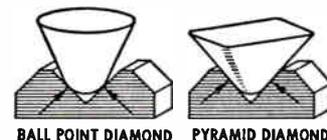
Fidelitone's new Pyramid Diamond is shaped similar to the stylus that recorded the original sound. It perfectly follows every contour created by the recording stylus.



In an unmodulated, or low frequency groove, the recording stylus (A) cuts a groove (W-1) wide enough to let an ordinary ball point needle (C) and the Fidelitone Pyramid Diamond (B) track the centerline of the groove accurately, and contact all recorded sound impressions.



As the groove is modulated by high tones, the groove width (W-2) narrows. This causes the ordinary ball needle (C-1) to rise and "pinch out" of the record groove. It bridges modulation crests, mistracks centerline and distorts sound impressions. The Pyramid Diamond (B-1), because of its new shape, stays solidly in the record groove, smoothly glides along the centerline positively driven by the groove walls.



And the new shape of the Pyramid Diamond allows more surface contact between needle and record, substantially reducing contact pressure. This greatly increases needle and record life.

See your record dealer or hi-fi specialist today. Demand the Fidelitone Pyramid Point. You owe it to your records and your listening pleasure.

For the complete story on the revolutionary new Pyramid Diamond, or the name of your nearest dealer, write Fidelitone, Chicago 26, Illinois.

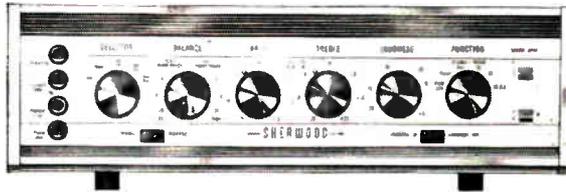
Fidelitone

"Newest shape on records"

only for those who want the ultimate

SHERWOOD

"TOP RATED" again and again- and NOW AGAIN!



Model S-5000 20+20 watt "stereo"
Dual Amplifier-Preamplifier, Fair Trade Price—\$189.50



Model S-2200 FM-AM-MX Stereo tuner,
Fair Trade Price—\$179.50



**AMERICAN
AUDIO INSTITUTE** 
204 EAST 106 ST. PATERSON 4, N. J.

October 27, 1959

Sherwood Electronic Labs, Inc.
4300 North California Avenue
Chicago 18, Illinois

Gentlemen:

We find that the incorporation
of a center-channel output and
a damping factor selector in
July, 1959, increases the
Summary Rating of the Sherwood
S-5000 to the highest of all
16 Stereo Amplifiers tested in
the AAI Evaluation Test Reports

Sincerely,

AMERICAN AUDIO INSTITUTE

Felix R. Brassy
Felix R. Brassy
Executive Director

The "Most honored of them all" S-5000 stereo amplifier-preamplifier is joined by the S-2200 stereo tuner. As with its "Top Rated" predecessors, the S-2200 features FM "Interchannel Hush" plus push button selector, internal plug-in adaptor for Stereo FM Multiplex, 2 "Acro-beam" tuning indicators, simulcast FM/AM stereo. All Sherwood tuners feature FM sensitivity below 0.95 microvolts and 1/3% distortion @ 100% FM. For further details write: Sherwood Electronic Laboratories, Inc., 4300 N. California Avenue, Chicago 18, Illinois.

For complete specifications write Dept. SHD-61

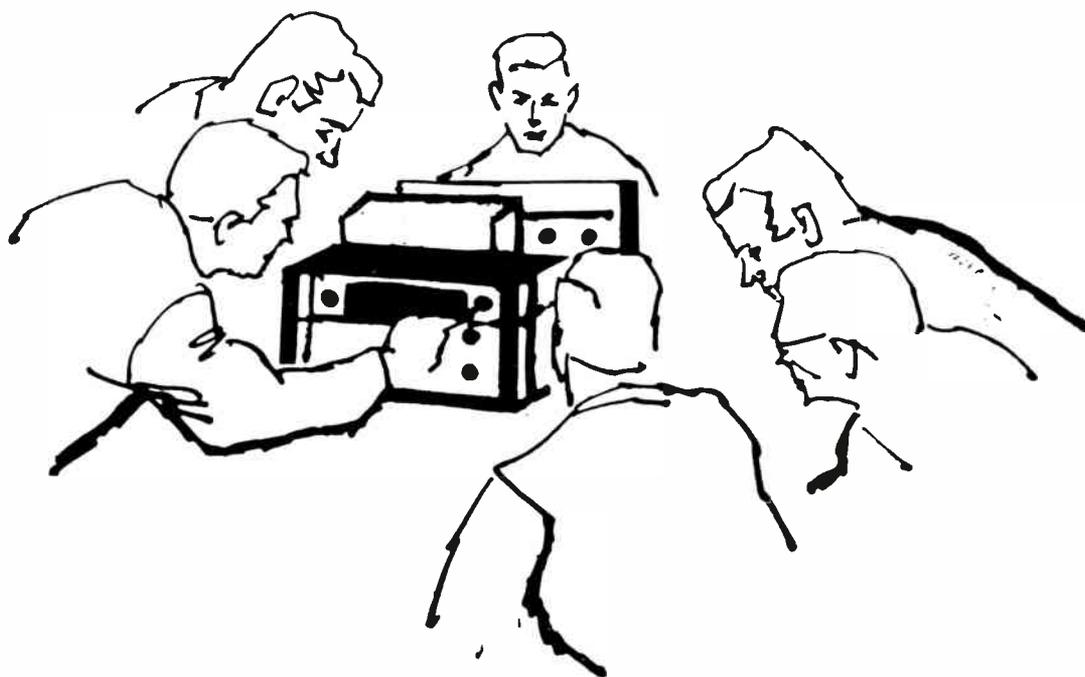
SECTION

— 3 —

Tuners and Tuner-Amplifiers

Tips On Tuners

by David Gibson



Audiophiles have long been aware that FM is the only method of broadcasting capable of meeting the technical demands of high fidelity. In terms of frequency response, signal-to-noise ratio and dynamic range, FM is the only medium really suitable for the presentation of music on the air.

Fortunately, it now seems that this vital broadcasting medium is at last spreading rapidly throughout the country. An increasing number of "good music stations" are servicing areas that were without such facilities before.

Equally important is the growing independence in programming among such stations. No longer do the majority of FM stations merely parrot the program of AM network affiliates or the dismal fare of local disc jockeys. Many FM stations concentrate on classical and "light" music chosen with good taste and designed to appeal especially to the more discriminating listener.

The fertilizing force behind this sudden growth is the discovery by advertisers that the hi-fi and music fans who naturally prefer FM are the only *select* audience reachable by electronic media. After more than a decade of being shunned by advertisers and bitterly fought by the powerful vested interests of the AM and TV networks, the independent FM station at last emerges victorious and viable.

It is this trend toward increased FM coverage and better program service that at this time makes the purchase of an FM or AM/FM tuner in many localities the most rewarding addition to any high fidelity system.

For the stereo owner, FM also bears the promise of stereo multiplex. This will enable FM stations to send out two channels on a single carrier and thus present

stereo programs free from the imbalance inherent in pairing AM and FM channels, as is now done by some stations.

As soon as the Federal Communications Commission decides among the several multiplex FM methods proposed, all-FM stereo will at last be available over the air, at least in the larger cities. This development is expected to take place during 1961. Such stereo broadcasts will do much to popularize component-quality stereo as the best method for bringing music into the home. In anticipation of this, many current FM or AM/FM tuners are equipped with connections for a multiplex adapter that can be added to pull in the second FM stereo channel.

Types of Tuners

Four types of tuners are currently available:

1. FM-only
2. AM-FM (many of these are so called stereo tuners capable of receiving AM and FM simultaneously)
3. AM-FM tuner-preamplifier combinations
4. Complete AM-FM receivers (mostly equipped for stereo by way of simultaneous AM-FM reception).

As noted before, most of these tuners have provisions for connecting an FM multiplex adapter for all-FM stereo as soon as such broadcast service goes into effect.

To help you choose the tuner type best suited to your particular needs, we shall briefly outline the different purposes served by each of these four types.

1. *The FM-only Tuner* is your dish: a) if you live

in or near a big city where all the network programs you want to hear are also available over FM outlets, or b) if you are interested only in independent FM "good music stations" and are located within range of one.

As most audio component buyers realize, the FM tuner is not a complete radio set. It must be played through your regular high fidelity amplifier and speaker.

2. *The AM-FM Tuner*, as its name implies, permits reception of both AM and FM stations. If you live in a locality where only a few FM transmitters are active, you may depend on AM for some of the programs you want to hear. Of course, the audio quality of AM is inherently inferior to FM. But played through your high fidelity system via an AM-FM tuner, even AM sounds surprisingly better than on ordinary radios.

Some stations having both AM and FM transmitters now broadcast certain programs in stereo, sending one channel over AM and the other channel over their FM outlet. The AM-FM stereo tuners are equipped to receive such broadcasts because their AM and FM sections can be tuned separately and both the AM and FM portions of the stereo broadcast received simultaneously. The signal outputs of the AM and FM sections are then fed to the left and right channels, respectively, of a stereo amplifier. In addition to such stereo use, the AM-FM stereo tuners may, of course, be used monophonically as either AM and FM tuners in the conventional sense.

3. *Tuner-Preamplifier Combinations* combine AM-FM tuners, such as the ones discussed above, with a stereo preamplifier on a single chassis. Fisher and Pilot are among the foremost manufacturers of this particular design, which has the advantage that all controls are conveniently grouped together on a single, compact component. Tuning, volume, treble, bass, stereo balance and all other functions are handily combined on a single panel.

Such tuner preamps are intended to work in conjunction with separate stereo power amplifiers. The tuner-preamp may sit handsomely on a shelf while the bulky power amplifier is somewhere stashed out of sight. Moreover, the use of a separate power amplifier usually permits higher output wattage in an installation.

4. *Complete AM-FM Receivers*, sometimes known as "tuner-amplifier combinations" combine in a single unit all the electronic components of a complete sound system. All you have to do is hook on the loudspeakers and you are ready to play. Most of these complete "combos" are for stereo, and are therefore sometimes called "stereo receivers." They accommodate on their chassis two preamp-amplifiers as well as the AM-FM stereo tuners. (A few units, notably some by Harman-Kardon and Bell, are complete *mono* combinations, but among such receivers design for stereo seems to be the rule).

To achieve the compactness necessary to get a complete dual-channel tuner-amplifier system on one chassis, the amplifier wattage in many of these combinations is usually limited, though some may reach as high as 30 watts per channel. Space problems on the crowded chassis also curtail in many instances the possible size of the two output transformers. In some cases this may reduce the power output at low bass frequencies below the rated wattage, but most of these units attain very respectable performance at moderate power levels.

Where a complete stereo system must be squeezed into a minimum of space, these "stereo receivers" can be real life-savers. To have the whole "works" of a sound system so neatly packaged is a great attraction to some buyers.

Moreover, these complete receivers usually cost considerably less than a comparable system consisting of separate tuner, preamp and power amplifier. Part of this saving is due to the fact that in a complete receiver a single power supply serves all sections.

Particularly the newcomer to stereo high fidelity may feel attracted by the convenience and space economy of these units, as well as their lower price. On the other hand, the more experienced audiophile might prefer separate units which he may change one at a time for sake of experimentation.

Quality Points

Having decided which of these four basic tuner types best suits your needs, you then proceed to pick a particular model from within the chosen group. To make an intelligent selection in terms of your requirements and the capabilities of any given tuner, study the specifications given by the manufacturer. The most important FM and AM quality points are explained in our separate glossary.

In addition to basic specs you might consider the operating features of a particular tuner. For instance, a visual tuning indicator—either a meter or a cathode beam indicator, is a great help for accurate FM tuning, vital to distortion-free FM reception. Such a visual indicator eliminates all guesswork and knob-twiddling. A single glance tells you when the station is "right on the beam." It even lets you tune in complete silence, turning up the volume only after the tuning indicator tells you that you got the station "in focus" sharp and clear.

Another feature essential to trouble-free FM reception on most tuners is Automatic Frequency Control (AFC). This is a special circuit to "snap in" the station you are listening to and keep it from drifting out of proper tuning adjustment. However, to tune the station correctly to its center frequency in the beginning, the AFC must be temporarily switched off and an "AFC Defeat Switch" should be provided for this purpose.

It should be noted that one manufacturer, H. H. Scott, does not incorporate AFC in his designs. This does not reflect adversely on his product. The AFC is omitted in Scott designs, because they employ a unique wide-band detector circuit capable of accommodating station drift within its bandwidth and without the need of automatic frequency correction.

Another operating convenience are cathode follower output stages, which allow the use of long connecting cables between tuner and amplifier (necessary where there is more than 15-20 feet distance).

In the AM section of tuners, two features are highly desirable if weak or distant AM stations are to be received. One is a tuned RF stage which greatly increases the AM reach of the tuner and also increases its selectivity so that unwanted interference from neighboring stations on the dial is kept out. The other desirable feature is a bandwidth selector that enables the listener to choose a wider frequency passband for strong nearby stations (thereby gaining wider audio frequency

response) or at will restrict the passband for weak distant stations (thereby limiting audio response but improving signal-to-noise ratio).

A good tuner can be one of the most abundant sources of enjoyment to the hi-fi fan. But it must be remembered that no tuner can adequately do its job unless it receives a signal of sufficient strength. In locations close to FM transmitters, this is usually no problem and an ordinary indoor dipole antenna is all that is

needed. In outlying areas, however, a great improvement in quality usually results from roof antennas, and for very weak signals the use of multi-element yagi antennas is urgently recommended.

Equipped with antenna facilities suited to the location, a tuner can be one of the most abundant sources of enjoyment to the high fidelity listener. It is the key to an inexhaustible reservoir of airborne music and entertainment presented with good audio quality.

Tuners and Tuner Amplifiers

ACOUSTICAL (LECTRONICS)

FM Tuner



Designed for use with Acoustical amplifiers: powered by amplifier: high sensitivity: low distortion: temperature compensated oscillator; 7 tubes: 10 1/2" x 3 1/2" x 6": appearance matches Acoustical control unit.....\$119.50

ALTEC LANSING CORP.

Model 707 Stereo Tuner-Amplifier



Complete stereo control center and AM-FM tuner. 20 watts power output each channel: Tuner section: FM sensitivity 2.5 μ v for 20 db quieting; FM frequency response ± 2 db 20-20,000 cps: FM distortion less than 2% at 100% modulation, 1 volt out; tuning eye indicator; AFC; AM section has broad or sharp tuning switch; AM distortion less than 2% at 30% modulation; Amplifier section: 7 inputs for stereo or mono, mag phono, tape head, tape monitor, multiplex; controls for function, balance, gain, mode, loudness, bass, treble, rumble filter; frequency response $\pm 1/2$ db 20-20,000 cps at 1 watt; harmonic distortion less than 1% at 20 watts, 1000 cps; tubes are: tuner section—6GY8, 6AL5, 5-6BA6, 12AX7, 6BE6, EM84; amplifier section—4-12AX7, 4-7355, 12AU7; 5 7/8" x 15" x 11 1/2"; 35 pounds.....\$387.00

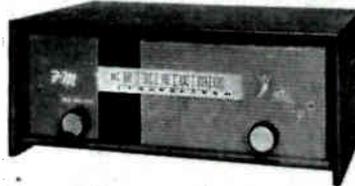
Model 306A AM-FM Tuner



FM sensitivity 2.5 microvolts for 20 db quieting; image rejection 48db; IF re-

jection 72db; frequency response 20-20,000 cps ± 0.5 db; AFC position; distortion less than 1% at 100% modulation; AM sensitivity 3 microvolts; image rejection 66.5db; IF rejection 58.5db; distortion less than 1.5% at 30% modulation; each unit guaranteed to meet or exceed all specifications; tubes are 2-6BQ7A, 6AB4, 3-6BA6, 2-6AU6, 6AL5, 6BE6, 12AU7; 14 1/2" w x 8 1/2" d x 6 1/2" h.....\$199.50 Cabinet in blond, walnut, or mahogany.....\$19.95

Model 307A FM Tuner



Sensitivity 1.5 microvolts; selectivity 6 db; bandwidth 170 kc; image rejection 40 db; i.f. rejection 65 db; frequency response 20 to 20,000 cps ± 2 db; distortion less than 2% at 100% modulation.....\$96.00 Cabinet in walnut, blonde, or mahogany.....\$19.95

AMPEX AUDIO CO., INC.

Model 503 AM-FM Stereo Tuner

For AM-FM stereo reception: FM sensitivity 5 microvolts for 30 db quieting; on-off AFC; frequency response 20 to



20,000 cps (AM 20 to 8,500 cps); total distortion less than 0.5%; 17 tubes.....\$249.50

Model 504 Stereo AM-FM Tuner

Frequency response 20-20,000 cps. FM, 20-8500 cps AM; total distortion less than 0.5%; AFC; AM includes broad and sharp selectivity; 23 tubes; provision for FM multiplex.....\$249.50

Model 550 Stereo Center



Combines stereo tuner and stereo control center on one chassis; independ-

ently tuned AM and FM or AM-FM stereo; visual tuning indicator; AFC; provision for multiplex; functions: AM, FM, tape, phono, external; loudness controls; bass and treble controls; frequency response of tuner is 20-20,000 cps FM, 20-4500 cps AM; 27 tubes; 14 1/2" x 6 1/4" x 14".....\$275.00

ARKAY INTERNATIONAL INC.

AM-5 AM Tuner Kit



Sensitivity: 2 microvolts for 20 db signal-to-noise; frequency response 20 to 8,500 cps in wide-band position, 20 to 3,500 cps in narrow-band position; 1 volt cathode follower output; 10 kc whistle filter; tubes are 2-6BA6, 6BE6, 6AL5, 6AV6; self powered: 9 lbs.

\$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; AFC with defeat switch; 5 1/4" x 9 1/2" x 8"......\$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 AFC and AGC; outputs multiplex, high level cathode follower FM; tubes are 6AQ8, 3-6AU6, 6AL5, 6C4, EL84, tuning eye; 12 lbs.

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

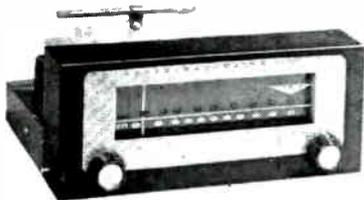
FM-8 FM Tuner Kit

Three tuned stages, all triode front end, five double-tuned i.f. stages, dual limiters, Foster-Seeley discriminator, variable AFC; AGC; front-panel sound muting control for silent meter tuning;

STEREO & HI-FI DIRECTORY

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"x9 1/2"x8".....\$32.00
Factory wired\$49.95

ST-11 AM-FM Binaural 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 ± 5 db 20 to 20,000 cps, hum level -65 db, AFC, cathode follower output: AM specifications: sensitivity 3 microvolts for 20 db signal-to-noise, frequency response 20 to 8,500 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.
\$49.95
Factory wired\$74.50

BELL SOUND DIVISION (Thompson Ramo Wooldridge, Inc.)

Model 2425 AM/FM Tuner-Amplifier Combination

Tuner section: FM sensitivity 1.5 μ v. for 20 db. quieting, AM sensitivity 6 μ v. for 20 db. signal to noise ratio; selectivity FM 6 db. down at 240 kc.; harmonic distortion FM below 1.5% at 30% modulation; AM harmonic distortion 1.5% at 30% modulation; frequency response FM $\pm 1/2$ db. 20-20,000 cps., AM 20-5000 cps.; tuner controls for AFC, tuning meter; 10 kc. whistle filter for AM; tuner tubes are 2-ECC85, 3-6AU6, 6AL5, 6BE6, 6BA6, EZ80; amplifier section: power output each channel 15 watts, 30 watt peaks; controls for loudness, rumble and scratch filters; base and treble cut and boost 10 db.; dual inputs for mag phono and aux.; frequency response ± 2 db. 20-20,000 cps.; distortion less than 2% at 24 watts; dual outputs for 8, 16 ohms, and high impedance tape; amplifier tubes are 4-6V6GT, 4-12AX7, EZ81; 28 pounds; dimensions same as Model 2445\$229.95

Model 2421 FM-AM Stereo Tuner
Uses Tuner section of Model 2425 Tuner-Amplifier\$129.95

Model 2445 AM/FM Tuner-Amplifier Combination



Tuner section: FM sensitivity 1.2 μ v. for 20 db. quieting, AM sensitivity 4 μ v. for 20 db. signal to noise ratio; AFC, signal strength tuning meters; switch for AM, FM, stereo; frequency response FM 20-20,000 cps., AM 20-5000 cps.; tuner distortion below 1% total harmonic; selectivity FM—6 db. down at 250 kc., AM—6 db. at 8 kc.; AM has 10 kc. whistle filter; image rejection FM—-65 db., AM—-100 db.; tuner tubes are 2-ECC85, 6BA4, 3-6AU6, 2-6BA6, 2-6BN8, EZ80; Amplifier section: power output each channel 22 watts, 44 watt peaks; bass and treble cut and boost 15 db.; dual inputs for tape, mag and ceramic phono, tape amp; frequency response 20-20,000 cps. ± 1 db.; harmonic distortion less than 1% at 40 watts; tubes are 4-7189A, 5-12AX7, GZ34; dc. supply for filaments: rumble and scratch filters, loudness control; 35 pounds; 5 7/16"x17 3/16"x13 3/4"\$329.95

Model 2441 FM-AM Stereo Tuner



Uses tuner section of Model 2445 Tuner-Amplifier; 5 7/16"x17 3/16"x10 5/8"\$179.95

BIGG OF CALIFORNIA

Model SAF-19-D Stereo FM/AM Tuner

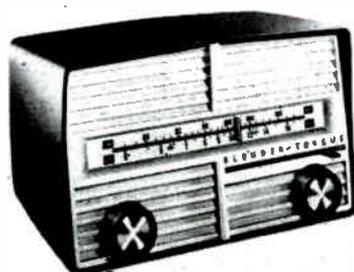
AM section has switch for regular or wide-band; FM section: sensitivity 1.5 μ v. for 25 db. quieting; distortion less than 1% for 75 kc. band width; AFC; noise filter: 7 1/4"x12"x3 1/8".....\$119.95

Model FB-2M Multiplex FM Tuner

Sensitivity 4 μ v. for 25 db. quieting; distortion less than 1% at 2 volts out; AFC; multiplex output jack; Foster-Seeley discriminator; 13"x3 1/2"x7"\$69.95

BLONDER-TONGUE

Model T-88 AM-FM Tuner



RF amplification on both AM and FM; a.c. hum filter; FM sensitivity 4 μ v. for

Tuners and Tuner Amplifiers

20 db. quieting; frequency response ± 10 -15,000 cps.; total harmonic distortion 0.6% at 1 volt rms; tubes are 3-12BA6, 12AT7, 2 diode selenium rectifiers; two tone plastic cabinet.....\$48.50

Model T-89 FM Tuner

Includes a.c. hum filter: FM sensitivity 4 microvolts for 20 db. quieting; frequency response 10-15,000 cps.; total harmonic distortion, less than 1% at 30% modulation; tubes: 2-12BA6, 12AT7, 12AU6, 2 diodes, selenium rectifier; two-tone plastic cabinet.....\$39.95

BOGEN-PRESTO CO. (Div. of the Siegler Corp.)

Model T661 AM-FM Tuner

Sensitivity: FM, 5.0 microvolts for 30 db quieting on 300-ohm input; AM, 3 microvolts/meter, 20 db signal-to-noise ratio (terminal sensitivity); frequency response: FM, 20 to 18,000 cps ± 0.5 db; AM, 20 to 5,000 cps -3 db; distortion: FM, 1.5% at 100% modulation; AM, 2% at 30% modulation; hum 60 db below 1 volt output; AFC with defeat; built-in antennas with provisions for external antennas; tuning meter; tubes are 6AB4, 12AU7A, 12AT7, 6BE6, 6BA6, 4-6AU6, 6X4, 2-1N542 diodes; 12"w x4 3/4"h x12 1/4"d.....\$129.50
AEG cage.....\$6.00

RB115 Tuner-Amplifier



AM-FM tuner with 15-watt amplifier on one chassis; frequency response 20 to 20,000 cps ± 1 db; sensitivity on FM: 7 microvolts for 30 db quieting; AM sensitivity: 5 microvolts for 20 db signal-to-noise ratio; FM selectivity: 180 kc, 6 db; AM selectivity: 8 kc, 6 db; distortion less than 2% at 15 watts output; controls: volume, bass, treble, selector (3 record equalizations positions), low filter, high filter, loudness switch, speaker selector, tuning; inputs for tape recorder, phono, and others; stereo adapter input.....\$149.50
Pearl Gray enclosure\$7.50

Model RP-40 Stereo Tuner/Control Center/Amplifier

Power output of amp 40 watts; inputs for tape, phono, multiplex in addition to AM and FM, AM-FM stereo; controls for blend, stereo reverse, speaker selector, visual tuning indicator, third channel output; tuners have 3 i.f. stages, dual limiter, TRF, AFC; amp has rumble and scratch filters; distortion 0.5% at rated output.....\$329.50
Metal enclosure.....\$10.75
Walnut enclosure.....\$27.75

Model TP-40 Stereo AM-FM Tuner

Similar to tuner used in Model RP-40 combination except has continuously

Tuners and Tuner Amplifiers

variable AFC and cathode follower outputs; regulated power supply; 16"x6"x9".....\$189.50

Model ST442 Stereo AM-FM Tuner

Tuning meter, AFC, AVC, cathode follower output; sensitivity FM 1.5 uv. for 30 db. quieting; frequency response FM 20-18,000 cps ± 0.5 db, AM 20-4500 cps ± 1.5 db; 15"x4 $\frac{3}{4}$ "x12 $\frac{1}{4}$ ".
.....\$149.50

Model SRB20 Stereo Receiver/Amplifier

Power output each channel 10 watts; controls for function: volume, bass, treble, FM and AM tuning. AFC; inputs for tuners, mag, phono; 16 $\frac{1}{2}$ "x5 $\frac{1}{2}$ "x12 $\frac{1}{2}$ ".....\$219.50

Model STP52 Stereo Tuner-Preamplifier

Cathode follower outputs; controls for function, tuning, volume; 2 volts output; 16 $\frac{1}{2}$ "x5 $\frac{1}{2}$ "x12 $\frac{1}{2}$ ".....\$179.50

CALBEST ELECTRONICS

Model 7110 AM-FM Tuner

Sensitivity: FM, 2 microvolts for 20 db quieting; AM, 5 microvolts for 0.5 volts at detector; bandwidth at 6 db down: FM, 200 kc; AM, 8 kc; frequency response: FM, 20 to 20,000 cps ± 0.5 db; AM, 20 to 6,000 cps ± 2 db; hum and noise: FM, 65 db below 100% modulation; AM, 55 db below 100% modulation; FM has AFC with defeat and noise gate; tuning indicator; 11 tubes; 13 $\frac{1}{8}$ "x6 $\frac{3}{4}$ "x4 $\frac{1}{2}$ "h.

Model 7110 (Metal cabinet).....\$114.95

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

Model 7110B (Limed oak cabinet).
.....\$139.95

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

Model 7110W (Walnut cabinet).
.....\$149.95

Model 7160 Tuner-Amplifier



Combination AM-FM tuner and 15-watt amplifier on one chassis; specifications similar to Model 7110 tuner and Model 7615 amplifier; 13 $\frac{1}{8}$ "x10 $\frac{1}{2}$ "x5 $\frac{1}{4}$ ".

Model 7160 (Metal cabinet).....\$189.95

Model 7160M (Mahogany cabinet).
.....\$209.95

Model 7160B (Limed oak cabinet).
.....\$209.95

Model 7160SM (Salem maple cabinet; Early American style).....\$219.95

Model 7160W (Walnut cabinet).
.....\$219.95

Model 8150 Stereo AM-FM Multiplex Tuner

Includes AM loopstick antenna 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 AFC 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-DM70, 4-1N48 crystal diodes, silicon rectifier.

Metal case.....\$159.95

Walnut case.....\$199.95

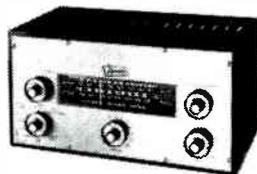
Salem maple case.....\$199.95

Limed oak case.....\$189.95

Mahogany case.....\$189.95

CAPEHART CORP.

Model ST 2500R



Complete Stereophonic FM-AM receiver. FM. with AFC Defeat for tuning back weak stations; 25 watts peak output on split channel stereophonic amplifier.....\$149.50

CHANNEL MASTER

Model 6610 AM-FM Tuner



AFC for FM, AVC for AM; sensitivity 2 μ v. for 20 db. quieting; selectivity more than 300 kc. bandwidth (FM); frequency response 20-20,000 cps; hum level 60 db. below 100% modulation; image rejection better than 30 db.; special multiplex output; tubes are 2-12AT7, 6BA6, 6AL5, 6BE6 2-6AU6, selenium rectifier.....\$84.95

Model 6618 hand-finished walnut cabinet.....\$19.49

Model 6619 lacquered metal cabinet.....\$ 6.49

CHAPMAN (ERCONA CORP.)

Model S-5E Globemaster



AM/FM short wave tuner; FM has two i.f. stages, second i.f. stage acts as

limiter and is followed by ratio detector; FM sensitivity 4 microvolts for 20 db quieting; 300-ohm balanced and 75-ohm unbalanced antenna inputs: AM sensitivity 8 microvolts for 20 db signal-to-noise ratio; Mullard EM-81 tuning eye; tuning ranges cover 1.1-3.3 mc (90-250 meters), 3-8.5 mc (35-100 meters), 8.1-23 mc (12.5-37 meters), 88-108 mc, and 545-1,600 kc; bandwidth 200 kc at -3 db. 250 kc at -6 db; outputs are 100 millivolts high impedance and 2-volt cathode follower for tape recorder; cadmium chassis, satin-aluminum panel; 12"w x9 $\frac{1}{4}$ "d x7 $\frac{3}{8}$ "h (requires 12 $\frac{1}{8}$ "x7 $\frac{1}{2}$ " cutout) \$149.95 Mahogany or blond cabinet.....\$179.95

Model S6B5

9-band AM tuner; 2 i.f. stages; variable sensitivity; sensitivity 2 microvolts for 20 db signal-to-noise ratio on 13, 16, 19, 25, 31, 41, 43-140, 13-43, and 175-570m; 13 $\frac{1}{4}$ "x9 $\frac{5}{8}$ "x9 $\frac{3}{4}$ ".....\$199.50

CROSBY ELECTRONICS, INC. (Madison Fielding)

Series 380 AM/FM Stereophonic Tuner



Switching permits operating each tuner individually for monophonic; includes multiplex output; extra FM output for simultaneous FM multiplex and AM-FM stereo; sensitivity 2 μ v. for 20 db. quieting; distortion less than 1% for full 75 kc. deviation; AFC for zero drift; cathode follower outputs both AM and FM; frequency response within 1 db. 20-20,000 cps; tubes are 2-6BA6, 3-6AU6, 6BE6, 2-6AL5, 12AU7, 2-12AT7, 5Y3, 6AF6; 5 $\frac{1}{2}$ " x 15" x 12".....\$160.00 Cabinet in walnut, mahogany, or ebony.....\$20.00

Model 650 Stereo Receiver

Combination tuner, preamp, amplifier; power output 14 watts continuous each channel; Tuner Section: FM sensitivity 2 μ v. for 30 db. quieting at 75 kc; maximum FM drift ± 5 kc; FM distortion 1% for 100% modulation; FM frequency response $\pm 1/2$ db. 30-20,000 cps; AM section has silicon diode detector. AVC; Amplifier Section: controls for loudness, phase, tape monitor, function, stereo blend; separate bass and treble controls each channel; frequency response 20-35,000 cps; distortion 1% at full rated output; bass and treble cut and boost 14 db.; IM distortion less than 0.4% normal level; tubes are 2-EF89, EF80, 3-1N541 diodes, 6AQ8, EM84 tuning indicator. 3-ECC83, 4-EVL82, 2-6BA6, 6BE6.....\$219.95 Walnut, mahogany or ebony cabinet.
.....\$20.00

Vinyl-clad enclosure.....\$11.95

Model 440 Stereo Receiver

Combination tuner, preamp, amplifier; 20 watts each channel; push-button mode selector; null circuit for channel balance; channel mixing of any two high or low level inputs; dc. supply for preamp filaments; controls for AM and FM tuning, volume, stereo normal-

reverse, rumble filter, scratch filter, loudness, phasing, tape monitor; tuning indicator; indicator lights show mode of operation; tubes are 4-7189, 4-ECC83, 12AX7A, 6BE6, 3-6AU6, 2-6BA6, 2-6AL5, 2-12AT7, EM84 tuning indicator, GZ34, EZ81.....\$350.00
Cabinet in walnut, mahogany, or ebony.....\$30.00

Model 630 FM Tuner

Sensitivity 1 μ v. for 20 db. quieting; frequency response $\pm 1/2$ db. 30-20,000 cps.; distortion 1% for 100% modulation; AFC variable; tubes are 2-EF89, EM84 tuning indicator, EZ80, 6AQ8, 12AX7, EF80, 2 matched discriminator diodes; 4 $\frac{1}{16}$ "x13 $\frac{5}{16}$ "x6 $\frac{1}{8}$ ".....\$84.95

DEWALD RADIO MFG. CORP.

Model N-804-B "Royal"

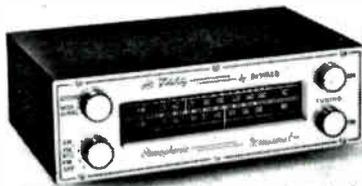


Sensitivity 3 microvolts for 20 db quieting; frequency response 20 to 20,000 cps ± 1 db; AFC; hum 70 db below 1 volt; output 1 volt for 30% modulation; tuning eye; tubes are 6U8, 2-6AU6, 12AT7, 6BA6, 6AL5, EM80, plus selenium rectifier; outputs for amplifier, tape recorder, and multiplex; black and gold cabinet.....\$74.95

Model N-803-B "Imperial"

FM specifications similar to Model N-804B; AM sensitivity 75 microvolts loop sensitivity; bandwidth 7,000 cps; 7 tubes plus selenium rectifier; black and gold cabinet; 13" w x 4 $\frac{1}{2}$ " h x 9" d....\$77.95

Model M-1000B "Ambassador"



Separate AM and FM sections; specifications similar to Model L-803A; may be used for monaural or stereo operation; outputs are monaural, stereo, tape recorder, and multiplex; black and gold cabinet; 13" w x 4 $\frac{1}{8}$ " h x 9" d.....\$99.95

DYNA CO.

Dyna Tuner FM Kit



Complete printed circuits throughout; can be aligned using EM80 tuning eye; 4 i.f. stages; pre-aligned coils; cathode-follower discriminator output; feedback

audio stage furnishes 1.5 volts; 4 μ v. sensitivity at IHFM standard; cathode-coupled dual-triode r.f. stage.....\$79.95

EICO (ELECTRONIC INSTRUMENT CO., INC.)

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; fly-wheel tuning; AGC; 300 ohms input; outputs are cathode follower to amplifier and multiplex; tubes are ECC85/6AQ8, 3-6AU6, 6AL5, 6C4, 6X4, DM70.
HFT-90 in kit form.....\$39.95
HFT-90 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 μ v. for 20 db. quieting; AM sensitivity 20 μ v. for 0.8 volts output with 20 db. sound to noise ratio; frequency response AM section 20-5,000 cps.; hum 60 db, below 1 volt; AM output 0.8 volts with 20 μ v. input 30% modulation; AM total harmonic distortion AM section below 2% to 70% modulation.

Kit.....\$59.95
Wired.....\$94.95

Model HFT-94 AM Tuner Kit

Matches Model HFT-90 FM Tuner; narrow or wide bandwidth selector; sensitivity 3 μ v. at 30% modulation for 1 volt out; frequency response 200-9000 cps; less than 1% harmonic distortion at 100% modulation; 8K ohms output impedance; tubes are 2-6BA6, 6BE6, 12AU7, DM70 exclamation bar tuning eye; 3 $\frac{3}{8}$ "x12"x8 $\frac{1}{4}$ ".....\$39.95
Factory wired.....\$65.95
Unfinished birch cabinet.....\$8.95
Walnut or mahogany cabinet.....\$12.50

Model ST-96 FM-AM Stereo Tuner



Tuners and Tuner Amplifiers

Prewired, prealigned front end shielded in die-cast housing; includes AFC, AGC, tuning eye indicator, narrow and wide AM bandwidths, 10 kc. AM whistle filter; FM section sensitivity 1.5 μ v for 20 db quieting; FM frequency response 20-15,000 cps; output level 2.5 volts for 100% modulation; AM output 1.0 volt; 15 $\frac{7}{8}$ "x5"x14".
Factory wired and tested.....\$129.95
Kit form.....\$89.95

ERIC ENGINEERING

Model FM 100 Auto FM Tuner

Plug-in installation; sensitivity 1.5 μ v. for 20 db quieting; AFC defeat; Foster-Seely discriminator; tubes are 3-ECC86, 3-12EK6, 12AD6, 2-1N541 diodes; self-powered.....\$79.95

Model FM 1000 Auto FM Receiver



Frequency response 60-15,000 cps.; sensitivity 0.5 μ v. for 20 db. quieting; amplifier output is 10 watts; includes Jensen speaker; tubes are 2-ECC86, 3-12EX6, 12K5, 2-1N541 diodes, 2-2N176 transistors.

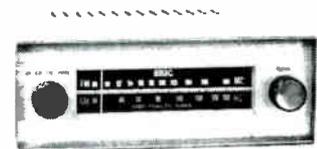
Model 5760 Stereo Receiver

Complete AM/FM tuner and amp-preamp combination; has AFC. outputs for recording or taping broadcasts; power output 10 watts each channel; sensitivity 2 μ v. for 20 db. quieting; harmonic distortion 1% at 8 watts; overall frequency response 20-20,000 cps; ratio detector; bass, treble, function, mode controls; tubes are 6CL8, 12AV7, 2-6BZ6, 6AU6, 6BE6, 2-12AX7, EZ81, 2-EL84.

Model 2457 Professional FM Tuner

Sensitivity 1.5 μ v. for 20 db. quieting; AFC with defeat; tuning bar indicator; tubes are 6CL8, 12AV7, 6BX6, 2-6AU6, 6AL5, 6C4; cathode follower output; 12" x 7" x 3 $\frac{3}{4}$ "; 9 pounds...\$89.95

Model 2357 AF AM/FM Tuner



FM sensitivity 3 μ v for 20 db quieting; ratio detector; FM frequency response 20-20,000 cps.; phono input; 10" x 7 $\frac{1}{2}$ " x 4".....\$59.95

Model 2357 FM Tuner

Similar to FM section Model 2357AF; tubes are 2-ECC85, 6CU6, 6AU6, 6AL5; frequency response 20-20,000 cps.\$74.95

Model 2157 AM/FM Stereo Tuner

Two complete separate tuners on one chassis; tuned r.f. stage; FM sensitivity

Tuners and Tuner Amplifiers

1.5 μ v. for 20 db. quieting; AFC; AM sensitivity better than 30 μ v.; tubes are 6CL8, 12AT7, 2-6BZ6, 2-6AU6, 2-6AL5, 6BE6: 12" x 7" x 3 $\frac{3}{4}$ ".....\$103.75

FISHER RADIO CORP.

Model 100T Stereo FM-AM Tuner Master Audio Control

Similar to Model 202T; 16 tubes; 15 $\frac{1}{8}$ " x 4 $\frac{13}{16}$ " x 11 $\frac{15}{16}$ ".....\$249.50

Model 800 60-Watt Stereo FM-AM Receiver

Complete stereo tuner-amplifier combination; Tuner section: FM sensitivity 1 μ v. for 20 db. quieting; AM has 3-position bandwidth switch; tuning eye indicator; Amplifier section: integrated high-gain preamp-equalizers; bass and treble cut or boost 15 db.; controls for function, loudness, balance, 5-level sets, tape monitor, rumble and scratch filters, phase-reverse, mode; power output 30 watts each channel; frequency response 19-32,000 cps.; 22 tubes including 2-7591 power pentodes.....\$429.50

Model 202T Stereo FM-AM Tuner Master Audio Control



Complete tuner-preamp combination; tuner section similar to Model 800; controls for volume, loudness, FM muting, AM broad, sharp tuning, function, mode, phase, tape monitor, balance, rumble and scratch filters. +7 audio stages each channel; local-distance switch; 20 tubes; input sensitivity: mag phono -2.7 mv. for 2 volts out, ceramic phono -40 mv. for 2 volts out, tape -1.6 mv. for 2 volts out; 4 $\frac{13}{16}$ " x 17" x 13 $\frac{7}{8}$ ".....\$349.50

Model 101-R Stereo Tuner



Separate AM and FM sections; sensitivity: FM, 1.6 microvolts for 20 db quieting; AM, 3.5 microvolts for 0.5 volt output; frequency response: FM, 20 to 20,000 cps \pm 0.5 db; AM, -10 db at 7.5 kc in "broad" position, -10 db at 4 kc in "narrow" position; signal-to-hum ratio (FM): 60 db for 100 r.f. stage, 4 i.f. stages, 2 limiter stages, ratio detector. MicroRay tuning indicator, AGC, interstation noise muting, and low impedance output; AM has tuned r.f. stage, 2 i.f. stages, delayed AGC, 10-kc whistle filter, MicroRay tuning indicator, and low impedance output; interchannel crosstalk 80 db

down; 7 outputs, including multiplex output, for all stereo and monaural purposes; 15 tubes plus 2 germanium diodes; brass-plated steel front panel; 15 $\frac{1}{8}$ "w x 4 $\frac{13}{16}$ " x 13"d.....\$229.50
Mahogany, blond, or walnut cabinet.....\$22.50

Model TA 600

Single chassis Stereo AM-FM tuner, amplifier, stereo audio control, 40 watt stereo amplifier; 20 watts per channel. Tuner: Cascode RF stage; multiplex outlet; 10 kc whistle filter; dc filament supply; rotatable ferrite loop antenna; two tuning indicators; three I. F. stages; ratio detector and separate limiter; FM sensitivity: 1 microvolt will provide sufficient limiting; AM sensitivity: 5 microvolts on external antenna jack for 2 watt output; Master audio control: FM tuning, AM tuning; separate bass and treble control; functions: mono-stereo switch; balance; volume, tape monitor switch; selector positions: aux: fm-mpx; fm: am; phono; tape head; mono-stereo switch positions: monophono; reverse: channel A; channel B; amplifier: 20 watts per channel; frequency response: 25-20,000 cps \pm 1 db; hum and noise inaudible; harmonic distortion: less than 1/2% at rated output; 4, 8 and 16 ohm speaker terminals; 35 lbs; 17" x 14 $\frac{1}{2}$ " x 4 $\frac{13}{16}$ ".....\$369.50

Model TA-6

Simulated leather cabinet for Model 600.....\$17.50

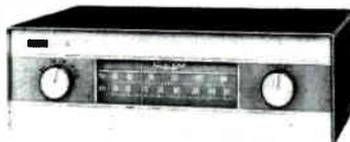
Model FM-100



FM tuner; frequency response 20-20,000 cps \pm .5 db; sensitivity: 0.8 microvolts for 20 db of quieting with 300 ohm antenna; 0.4 microvolts for 20 db of quieting with 72 ohm antenna; harmonic distortion less than 0.5% at full modulation; front panel muting switch; 2 outputs with levels: external FM or AM-FM tuner may be plugged in for stereo application; provision for MPX-20 multiplex plug-in adapter; 2 tape outputs; selector switch chooses AC-off, FM, MPX stereo, main channel, MPX channel; multiplex separation control; tubes are ECC88, ECC85, 4-6AU6, 6AV6, EM80, ECC83, EZ80, 4-germanium diodes; 15 $\frac{1}{8}$ "w x 4 $\frac{13}{16}$ "h x 13"d.....\$169.50
MC-1 cover for FM-100.....\$15.95

GENERAL ELECTRIC CO.

Model FA-10 AM-FM Tuner

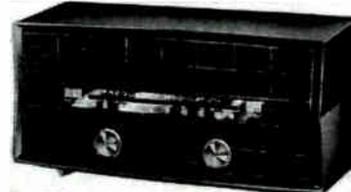


Sensitivity: FM, 2.5m μ for db quieting; AM, 200 microvolts/meter for 20 db signal-to-noise ratio; distortion 1 $\frac{1}{2}$ % harmonic, less than 2% IM; bandwidth 200 kc, 6 db down; AM bandwidth 7,000 cps, 6 db down; noise:

FM, 55 db below 100% modulation; AM, 45 db below 100% modulation; FM has AFC with defeat position; tuning meter; outputs (all cathode follower): 1 $\frac{1}{2}$ volts, 0.5 volt, multiplex; 15 $\frac{1}{32}$ "w x 10 $\frac{1}{8}$ "d x 5 $\frac{1}{8}$ "h.....\$129.95

GRANCO PRODUCTS, INC.

Model T-161 FM Tuner



Frequency response 20 to 20,000 cps; sensitivity 5 microvolts for 20 db quieting; 2.5 volts output; hum level 60 db below rated output at 100% modulation; harmonic distortion 1% at 2.5 volts; built-in line cord antenna with input for external 300-ohm antenna; phono, FM, FM-AFC knob; tubes are 3-6BA6, 1-12AT7, 1-6AL5, 1-6AB4 and selenium rectifier.....\$49.95

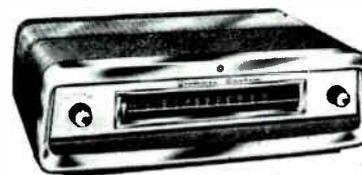
Model AT-130 Tuner-Amplifier



AM-FM tuner-amplifier; frequency response 20 to 20,000 cps \pm 0.5 db; FM sensitivity 5 microvolts for 20 db quieting; AM 25 microvolts per meter; hum 60 db below full output; harmonic distortion, FM 1%; AM 2.5%; 5 controls: treble-on-off, bass, loudness, function selector, tuning; tape output; tape or phono input; inputs for external AM and FM antennas; built-in AM-FM antennas; AC outlet; 13 tubes; output impedance 8 ohms.....\$149.95

GROMMES (DIV. PRECISION ELECTRONICS, INC.)

Model 101GT FM Tuner

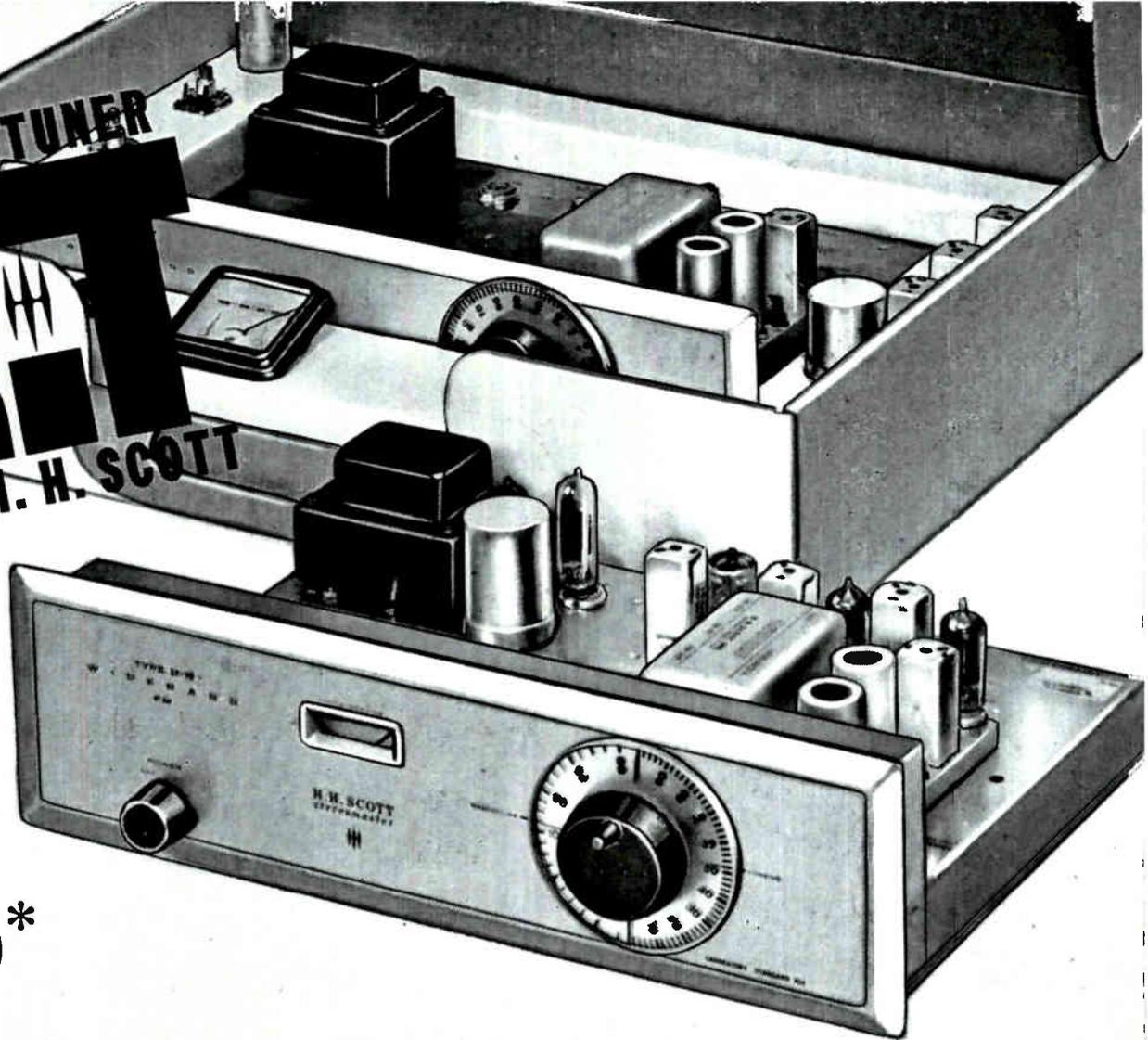


Sensitivity 1 microvolt for 20 db quieting; i.f. bandwidth 250 kc at -6 db; frequency response 20 to 20,000 cps \pm 1 db; harmonic distortion 1%; IM distortion 2%; hum and noise level 60 db; two matched broad-band i.f. stages, two limiters, Foster-Seeley discriminator and matched crystal diodes detector; electronic tuning eye; AFC on-off switch combined with power on-off switch; output for FM multiplex; tubes are ECC85/6BQ7A, 4-6AU6, IN542, EM81, EZ80: 14"w x 4 $\frac{1}{2}$ "h x 9"d.....\$79.50
Enclosure.....\$10.00

Model 102GAT Tuner-Amplifier

AM-FM tuner combined with 20-watt preamp-amplifier; sensitivity: FM 2 mi-

NEW FM TUNER
LT-10
FROM H. H. SCOTT



\$89.95*

**NOW... BUILD AN FM KIT THAT WORKS
AS WELL AS FACTORY ALIGNED TUNERS**

AT LAST! A tuner kit that meets the tough standards of H. H. Scott factory units; yet can be aligned without expensive alignment equipment.

AT LAST! Wide-Band FM design in a kit. Gives you far greater selectivity and sensitivity than ever before possible from a kit.

AT LAST! The very same silver plated front end used exclusively in H. H. Scott factory-assembled tuners... available in this kit, pre-wired and pre-aligned.

H. H. Scott takes the uncertainty out of building your own FM tuner. The new LT-10 is easy to build at home without special tools and equipment. Everything you need is included.

The LT-10 utilizes H. H. Scott's famous Wide-Band circuitry and the exclusive H. H. Scott silver plated front end to assure you of high sensitivity and selectivity and complete freedom from drift.

All parts such as tube sockets, and terminal strips are professionally pre-riveted to the chassis... wires are pre-cut, stripped, and tinned.

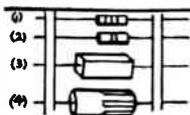
H. H. Scott engineers have devised radically new alignment procedures using the tuner's own meter. This guarantees proper alignment without special alignment generators.

The LT-10 is designed to meet the performance characteristics you expect from H. H. Scott. It is fun to build. It is a tuner you will be proud to own. Kits are now available through more than 500 franchised H. H. Scott dealers across the country.

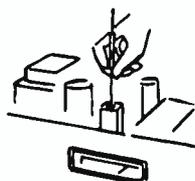
LT-10 Laboratory Tuner Specifications • Usable (IHFM) sensitivity 2.5 μ v
• Signal: noise ratio 60 db below 100% mod. • Harmonic distortion 0.8%
• Drift 0.02% • Frequency response 30 cps—15Kc \pm 1db (IHFM measurements are made only in the range 30-15,000 cps. The LT-10 actually has far wider frequency range than shown here.)



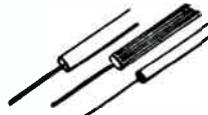
Kit-Pak Container®
Opens to a self-contained work area you can use anywhere.
• Prices slightly higher west of Rockies. Accessory case extra.



Part-Chart®
Speeds your work. All parts are mounted on Kit-Pak cover in numerical sequence. And every part meets H.H. Scott's tough test standards.



Ex-A-Lign Alignment System®
Requires no extra equipment. You align this tuner using the meter on the tuner! All needed alignment tools are included.



Pre-Stripped, Pre-cut wire
Every piece of wire is included. And each piece is pre-cut to proper length, stripped and tinned.

H. H. SCOTT

WORLD'S LEADING COMPONENT MANUFACTURER

H.H. SCOTT INC., 111 Powdermill Rd., Maynard, Mass.

Please send me FREE the following booklets: Dept. ZL

Colorful new 1961 catalog and hi fi guide.

Complete technical specification sheets on your new products, including your new LT-10 Tuner Kit.

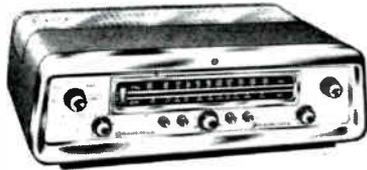
Name _____

Address _____

City _____ Zone _____ State _____

Export: Telesco International Corporation, 36 West 40th Street, N. Y. C.

Tuners and Tuner Amplifiers



crovolts for 20 db quieting, AM 5 microvolts; i.f. bandwidth: FM 250 kc at -6 db, AM 10 kc at -6 db; frequency response: amplifier 20 to 20,000 cps ± 0.5 db, FM 20 to 20,000 cps ± 1 db, AM 20 to 6000 cps ± 3 db; harmonic distortion: amplifier and FM 1%, AM 2%; IM distortion 2%; hum and noise level: FM 60 db, AM 50 db, amplifier 80 db for high-level channels; amplifier sensitivity: auxiliary 0.4 volts, magnetic phono 4 millivolts, tape head 5 millivolts, crystal phono 0.25 volts; output impedances are 4, 8 and 16 ohms; high-impedance output for tape: 10 db bass boost or cut, 15 db treble boost or cut; tape head, RIAA phono equalization; rumble and scratch filters, loudness on-off; built-in ferrite rod AM antenna; electronic tuning eye; flywheel tuning; connections and switch for stereo adapter; a.c. convenience outlet; tubes are 6DT8, 6U8A, 6BE6, 6BAG, 2-6AU6, EM81, 12AX7, 2-CBQ5, 6V4, 6CA4, OB2, 7199; 3 diodes.....\$169.50

Model 102GTB

AM-FM tuner; specifications similar to Model 120 GAT; tubes: 3-6BQ7A, 6U8, 2-6AU6, 2-6BA6, 6BE6, 12AU7, 12AX7; 6 diodes, 2 silicon rectifiers; 14" x 4 1/2" x 11".....\$129.95
Enclosure.....\$10.00

Model 101GTK FM Tuner Kit

Sensitivity 1 μ v for 20 db of quieting; frequency response 20-20,000 cps ± 0.5 db; harmonic distortion 1%, IM 2% (100% modulation); multiplex output; AFC/on off; tuning eye; tubes: 6DT8, 4-6AU6, EZ80; EM81 eye; 2-1N542 crystal diodes.....\$66.00

Model 103GT FM-AM Stereo Tuner

Circuit has grounded grid input, tuned cascode RF stage, AFC; AM section has 10 kc. whistle filter; FM sensitivity 1 μ v. for 20 db. quieting; FM frequency response 20-20,000 cps; AM frequency response 20-7500 cps; FM distortion 0.25% harmonic, 0.5% IM; outputs FM-AM, FM Multiplex; tubes are 3-ECC85/6BQ7A, 1-U8A, 2-6AU6, 2-6BA6, 6BE6, 12AU7, 12AX7, 6 diodes, 2 silicon rectifiers.....\$189.95
Enclosure.....\$10.00

HARMON-KARDON, INC.

Citation III FM Tuner Kit



Sensitivity 0.65 μ v for 20 db of quieting; frequency response 1-52,000 cps ± 0.5 db; distortion less than 0.1% at

100% modulation, unmeasurable at 30% modulation; low impedance output; preassembled and factory aligned converter-if subassembly; 2-tuning meters, signal strength and center channel tuning; AFC with defeat switch; local/distance switch; multiplex output; 2 volts output.....\$149.95
Factory wired.....\$209.95
WCI walnut enclosure.....\$29.95

Model T220 "Aria" Stereo AM-FM Tuner

FM sensitivity 2.5 μ v. for 20 db of quieting; i.f. rejection 60 db; distortion less than 1%; frequency response 30-15,000 cps ± 0.75 db; AM sensitivity 120 μ v per meter; selectivity 8 kc bandwidth 6 db down; AFC; AM ferrite antenna; tubes: 2-6AU6, 1-6CY5, 1-EF-184, 1-6BA6, 1-6BE6, 2-1N87, 2-1N-542, 1-OA202, 1-EZ80; 14" x 12 1/4" x 4 5/8" wt. 11 lbs.....\$99.95
TC20 metal enclosure.....\$4.95

Model T230 "Sonnet" Stereo AM-FM Tuner

Sensitivity: FM 2.5 μ v for 20 db of quieting; AM 80 μ v per meter; AFC; multiplex output; AM ferrite antenna; tubes: 2-ECC85, 3-6AU6, 1-6AL5, 1-6AT8, 1-6BA6; 1N87 crystal diode; 14" x 12 1/4" x 4 5/8"; shpg. wt. 13 lbs. complete with cover.....\$119.95

Model TA224 "Stereo Recital"



Stereo AM-FM tuner with stereo amp-preamplifier; AM-FM section similar to Model TA260; Audio: 12 watts per channel; frequency response 15-30,000 cps ± 0.5 db at normal listening levels; 4-7408/6V6GTA output tubes; shpg. wt. 30 lbs.....\$199.95
Model CX24 metal enclosure.....\$11.95
Walnut or fruitwood enclosure.....\$29.95

Model TA260 "Stereo Festival II"



Stereo AM-FM tuner with stereo amp-preamplifier; FM: sensitivity 2.5 μ v for 20 db of quieting; drift ± 5 kc max; distortion less than 0.5% IM at 30% modulation; hum 60 db below 100% modulation; AM: sensitivity 80 μ v per meter; frequency response 20-5,000 cps ± 3 db; hum level 45 db below 80% modulation; audio: 30 watts per channel; power bandwidth 18-40,000 cps; hum and noise (low level) -65 db; crosstalk better than 50 db; tone control range ± 12 db at 50 and 10,000 cps; rumble filter; scratch filter; tape out; 3rd channel output; speaker phasing switch; 8 inputs: 2-phono, 2-tape head, 2-aux, 2-multiplex; tubes: 2-EC-85, 3-6AU6, 1-12AX7, 1-6AL5, 2-EM840, 1-6BA6, 1-6EQ7, 1-6BE6, 4-12AX7, 4-7355; 3-silicon diodes; 15 1/4" x 6 1/8" x 12 3/4"; 44 lbs. \$299.00
CX26 metal enclosure.....\$12.95
WW30 walnut enclosure.....\$29.95

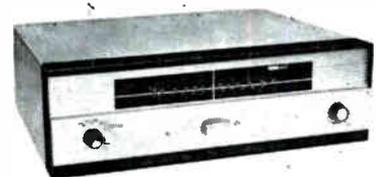
Model F-10 "Tempo" FM Tuner

Sensitivity: 4 microvolts for 20 db quieting; frequency response: 20 to 20,000 cps ± 1 db including deemphasis; selectivity: 200 kc bandwidth, 6 db down; drift: ± 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 volts 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. AFC, cascode r.f. section; sensitivity: 2.5 microvolts for 20 db quieting; selectivity: 200 kc bandwidth, 6 db down; drift ± 5 kc maximum; image rejection: 40 db; i.f. rejection: 70 db; distortion less than 1% harmonic and IM standard 75 micro-second deemphasis 60 db below 100% modulation; radiation within FCC requirements; amplifier frequency response 45 to 20,000 cps ± 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 control 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. NARTB 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

Model F250 "Lyric" FM Tuner

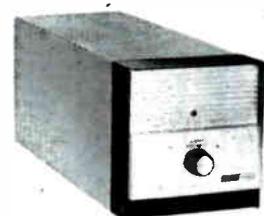


FM version of Model ST 360.....\$129.95

Model ST360A "Madrigal" Stereo AM-FM Tuner

Low impedance cathode follower outputs; controls for AM, FM, AM noise filter, stereo AM-FM, FM multiplex, FM-AFC, power off; sensitivity 0.9 μ v. for 20 db. quieting (FM); distortion less than 0.1% IM at 30% modulation, less than 0.5% IM at 100% modulation; frequency response ± 0.5 db. 20-20,000 cps.; tubes are 1-6CY5, 1-6BC5, 1-6BK7B, 3-6AU6, 3-6BA6, 1-6AL5, 2-12AU7, 1-6BE6, 1-6BN6, 2-EM84.....\$199.95

MA250 Stereo Multiplex Adapter



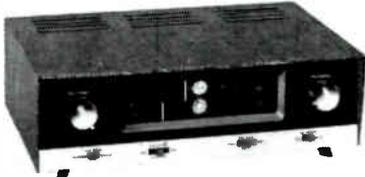
Plug-in stereo adapter for use with F250 Tuner: 30 mv. input; distortion 1% max.; crosstalk -40 db.; frequency response ± 30 -15,000 cps.; takes power supply from tuner; tubes are 3-12AU7, 12AX7, 2-1N34 crystal diodes\$49.95

MA350 Stereo Multiplex Adapter

For use with ST360A tuner; specifications same as MA250.....\$49.95

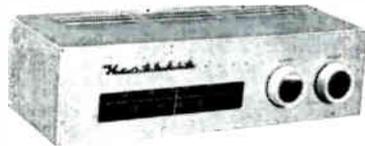
HEATH CO.

Model AJ-10 Stereo AM-FM Tuner



Sensitivity FM 2.5 uv. for 20 db. quieting; AM output 1 volt for 750 uv in; harmonic distortion less than 1%; AM broad and narrow tuning; controls for stereo and mono tuning; AM and FM level controls rear chassis apron; AFC; cathode follower output; tubes are 2-6BA6, 6BE6, 2-6BN8, 2-6ME5, 6CY5, 6EZ8, 3-6AU6; full-wave voltage doubler power supply: $4\frac{3}{8}$ " x $13\frac{1}{4}$ " x $8\frac{1}{2}$ ".\$59.95

Model BC-1A AM Tuner Kit



Detector circuit employs two germanium diodes connected in voltage doubler circuit for increased audio and AVC voltage; sensitivity better than 3 microvolts for 1 volt output; frequency response: 20 to 9,000 cps ± 1 db; 5 db pre-emphasis at 10 kc; 400 cps distortion: 0.8% at 30% modulation, 1% at 70% modulation; signal-to-noise ratio better than 12 db at rated sensitivity; i.f. frequency 455 kc; output voltage: 1 volt average; two outputs: one medium impedance, one cathode follower; 10 kc whistle filter; pre-aligned r.f. and i.f. coils; tubes: 2-6BA6, 6BE6, 12-AU7, 6X4; two germanium diodes; cabinet included; $12\frac{1}{8}$ " x $3\frac{5}{8}$ " h x $5\frac{7}{8}$ " d.\$26.95

Model FM-3A FM Tuner Kit

Ratio detector circuit with temperature compensated oscillator; cascode r.f. amplifier; AGC; pre-aligned i.f. and ratio transformers; sensitivity: better than 10 microvolts for 20 db quieting; frequency response: 20 to 20,000 cps ± 3 db; i.f. frequency: 10.7 mc.; output volt-



age: 1.5 volts for 30% modulation; cathode follower and detector outputs; tubes: 6BQ7A, 6U8, 6AL5, 2-6CB6, 6C4, 6X4; $12\frac{1}{16}$ " x $3\frac{5}{8}$ " h x $5\frac{7}{8}$ " d; gold finish cabinet\$26.95

Model PT-1 AM-FM Stereo Tuner Kit



AM and FM sections may be used separately or simultaneously for AM-FM stereo reception; sensitivity: FM, 1 microvolt, AM, 2 microvolts; FM has AFC; pre-wired, pre-aligned 3-tube FM front end; pre-aligned i.f.; broad-band FM i.f. and FM discriminator; "narrow" and "broad" AM bandwidth; delayed AVC; 10 kc AM whistle filter; tuning meter operates on AM and FM even in stereo operation; cathode follower outputs with individual level controls; built-in AM antenna; provision for external AM and FM antennas; tubes are 5-6AU6, 2-12AU7, 6AL5, 4-6BA6, 6BE6, 6BS8, 6AB4, 12AT7; silicon diode rectifiers; printed circuit construction\$89.95

Model MX-1

FM multiplex adapter kit; frequency response 20-20,000 cps ± 1 db; total harmonic distortion 1% or less; total IM 2% or less; subcarrier band pass 25kc-100kc 3 db; audio gain 10 db; hum and noise at 1 volt output -60db; cathode follower output; 2 inputs: FM (main channel); multiplex (subchannel); 3 outputs: chan A, chan B, FM; controls include dimension control, volume control, channel balance control, on/off-FM feedthrough, selector switch, phase reversal; designed for reception of programs transmitted in accordance with Crosby system; tubes are 3-12AU7, 1-7199, 1-12AX7, 1-6X4; 2 crystal diodes: $13\frac{1}{4}$ " w x $4\frac{1}{2}$ " h x $5\frac{3}{4}$ " d; shpg. wt. 8 lbs\$39.95

KLH RESEARCH & DEVELOPMENT CORP.

Model 8 FM Receiving System

Receiving system housed in 2 walnut cabinets; 1 encloses FM tuner-amplifier; the other consists of 2-2" speakers; 30' cable; mag phono and tape recorders can be played through amplifier by means of a small adapter; multiplex output; on/off switch; treble control; volume control; tubes: 1-6BS8, 1-6U8, 3-6AU6, 2-6BM8; transformer operated; push-pull audio out; not sold separately\$139.00

KARG LABORATORIES, INC.

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



Tuners and Tuner Amplifiers

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 $5\frac{1}{2}$ " h x $5\frac{1}{2}$ " d (in metal enclosure), 17 " w x 7 " h x $7\frac{3}{4}$ " d (in wood cabinet); includes metal cabinet and mounting accessories. Tunematic (12-channel model) \$199.50 Tunematic (10-channel model) \$189.50 Tunematic (8-channel model) \$179.50 Tunematic (6-channel model) \$169.50 Walnut or birch cabinet.....\$ 19.95

Model XT-3 FM Tuner

Similar to Model XT-1A; field-strength meter 5-50 μ v permitting optimum orientation of pickup antenna; 600 ohm line output can be equalized by concealed level-set; additional output can be used for headphone check; multiplex output to feed aux equipment in not affected by level set; alignment can be checked during operation with VTVM; triple trapping for attenuation of high-field radiation including that of rebroadcasting transmitter.

- 12 channels.....\$290.00
- 10 channels.....\$280.00
- 8 channels.....\$270.00
- Model XT-4 single channel.....\$235.00

Model MX-1

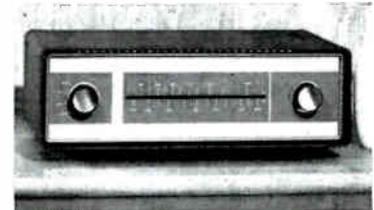
Multiplex adapter; Crosby system; signal-noise ratio 65 db; interchannel isolation 45 db; frequency response 15-30,000 cps; max IM distortion 0.1%; balance control; 16 " x $5\frac{1}{2}$ " x $5\frac{1}{2}$ "; in metal enclosure.....\$99.50 Wood cabinet in walnut or birch \$19.95

Model CT-2 FM Tuner

Sensitivity 1.5 μ v for 30 db quieting (IHFM); IF band with 170 kc flat top; audio output 5 volts at 100% modulation; frequency response 20-20,000 cps 1 db; 10" dial; flywheel tuning; AFC on/off; muting on/off; alignment test points on chassis; 2 audio outputs; multiplex output; tubes: 2-6AQ8, 3-6AU6; 1-6BN6; 3-CK705; T130A silicon rectifier; OA200 AFC control; EM84 tuning indicator; metal cabinet\$139.50 Wood cabinet in walnut or birch \$19.95

KNIGHT-KIT (ALLIED RADIO CORP.)

Deluxe Stereo FM-AM Tuner Kit



Features sideband regulation on FM; choice of narrow or wide bandwidth on

Tuners and Tuner Amplifiers

AM: printed circuits throughout; multiplex adapter jack; bar-type tuning indicator; sensitivity FM- 2.5 μ v. for 20 db. quieting; AM- 3 μ v. for 10 db. signal to noise ratio. AM frequency response 20-10,000 cps. wide bandwidth setting; AFC; cathode follower output impedance 3000 ohms; tubes are 4-6BA6, 2-6AU6, 2-12AU7, 6BE6, 6AW8, 12AT7, 6AL5, 2-EM84 tuning eyes; 10 kc. whistle filter for AM; 4 $\frac{1}{8}$ "x 1 $\frac{1}{2}$ "x12"\$87.50

FM Tuner Kit

FM tuner kit with printed circuit; sensitivity 4 microvolts for 20 db of quieting; output 2 volts at 1000 microvolts input; i.f. bandwidth 200 kc; distortion less than 0.6%; output jacks for amplifier and tape recorder; cathode follower output; prealigned r.f. and i.f. coils; 3-position selector switch: on/off, FM, FM with AFC; 4 $\frac{1}{4}$ "h x13 $\frac{1}{4}$ "w x 8"d; 83YX931.....\$38.95

AM-FM Tuner Kit

FM specifications: sensitivity 2.5 microvolts for 20 db quieting; hum and noise -60 db; i.f. bandwidth 200 kc at 50% down on curve; frequency response 20 to 20,000 cps \pm 0.5 db; distortion less than 0.6%; AFC with defeat switch; AM specifications: sensitivity 3 microvolts for 10 db signal-to-noise ratio; i.f. bandwidth 8 kc at 50% down on curve; frequency response 20 to 8,000 cps; flywheel tuning; two cathode follower outputs; printed circuit construction with pre-aligned r.f. and i.f. sections; complete with gray cabinet, wire, and solder; 4 $\frac{1}{4}$ "x13 $\frac{1}{4}$ "x8"; 12 $\frac{3}{4}$ lb.; 83YX928\$49.95

KNIGHT (ALLIED RADIO CORP.)

Model KN-300 Stereo FM-AM Tuner/24-Watt Amplifier

Complete stereo tuner-amplifier system including dual preamps; tuner specifications similar to Model KN-125B: front panel controls for AM and FM tuning, tuner selector, function (phono hi-lo, tape, multiplex, tuner), stereo, mono, bass, treble, balance; ten inputs; dc. heated preamp filaments; includes bar-type tuning indicator; amplifier section: 4-7408 push-pull power output tubes; each channel 24 watts, up to 48 watts peak; total of 16 tubes for unit; frequency response 15-30,000 cps. \pm 1/2 db.; 6 $\frac{1}{8}$ "x15"x12 $\frac{3}{4}$ ".....\$169.95

Model KN-141 FM Tuner

Includes tuning eye, AFC; sensitivity 4 μ v. for 20 db. quieting; i.f. bandwidth 180 kc.; outputs for amp, tape, multiplex; ratio detector.....\$49.95

Model KN-135B Stereo AM/FM Tuner

Bar-type tuning indicator; separate AM and FM tuning knobs, stereo-mono switch; FM sensitivity 4 μ v. for 20 db. quieting; two 36" audio cables and AM loopstick; folded dipoles for FM reception; FM frequency response within 1/2 db. 20-20,000 cps.; tubes are 2-12AT7, 2-6CB6, 6AU6, 6BE6, 6AS8, EM840 tuning indicator; two high impedance outputs for both AM and FM.....\$84.50

Model KN-125B Stereo FM-AM Tuner

DSR corrective inverse feedback switch and AFC; FM sensitivity 2.5 μ v. for 20 db. quieting; AM sensitivity 4 μ v. for 20 db. signal-to-noise ratio; controls for AM, FM, 3-AM bandwidths, DSR, multiplex switch, stereo; cathode-follower outputs; 12 tubes with EM840 tuning eye indicator; 4 $\frac{3}{8}$ "x15 $\frac{3}{4}$ "x13 $\frac{1}{8}$ "\$139.95

LAFAYETTE RADIO CORP.

Model LT-77 AM-FM Stereo Tuner

FM specifications similar to Model LT-80: AM frequency response 20-5,000 cps \pm 3 db; individual AM-FM volume controls; 4-position function switch provides AM, FM, FM AFC, stereo; multiplex output; twin tuning meters; tubes: 2-6AQ8, 4 BA6, 2-6AU6, 6BE6, 6AL5, 6X4; diode detector: 14 $\frac{1}{2}$ " x 4" x 10 $\frac{3}{8}$ "\$74.50

Model LT-80 FM Tuner

Sensitivity 1.5 μ v for 20 db of quieting; frequency response 20 20,000 cps \pm 0.5 db; harmonic distortion less than 1%; hum -60 db; AFC/AFC; tubes: 2-6AQ8, 2-6BA6, 2-6AU6, 1-6AL5, 1-6X4; 11 $\frac{3}{8}$ " x 8" x 5"\$49.50

Model KT-650 FM Tuner

Sensitivity 2 μ v for 30 db of quieting; frequency response 15-30,000 cps \pm 0.5 db; output 1.5 volts \pm 75 kc deviation (100% modulation); distortion and noise better than 55 db below 1.5 volts; variable AFC; low impedance output; tuning eye; tubes: 1-ECC85, 1-6BK7B, 3-6BA6, 2-EF94, 1-6AL5; silicon diode rectifier\$54.20

Model KT-500 Stereo 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; AFC with defeat provision; tuning eye; frequency response: FM, 20 to 20,000 cps \pm 0.5 db; AM, 20 to 5,000 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; IF 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 x10 $\frac{3}{8}$ "d x 4 $\frac{1}{2}$ "h.

Model KT-500 (Kit form).....\$74.50
Model LT-50 (Assembled)\$124.50

LEAK (BRITISH INDUSTRIES CORP.)

"Trough-Line II" FM Tuner

Matches Point I stereo preamplifier; includes tuning eye, AFC, cathode fol-



lower output; sensitivity 1.5 μ v for 20 db quieting; multiplex output; 9 tubes.

McINTOSH LABORATORY, INC.

Model MR55A AM-FM Tuner

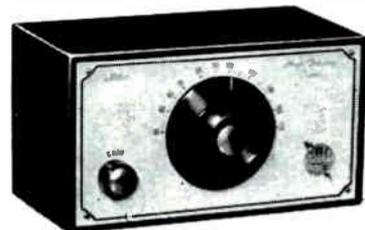


Sensitivity: FM, 3 microvolts at 100% modulation for less than 3% total noise and distortion; AM, 1.5 microvolts; frequency response: FM, 20 to 20,000 cps \pm 3 db; AM "broad", 20 to 10,000 cps \pm 3 db; AM "medium," 20 to 6,500 cps \pm 3 db; AM "narrow," 20 to 2,000 cps \pm 3 db; FM features 4 i.f. stages, 2 limiters, variable AFC, and wideband detector; AM features AVC, 3-position bandwidth, and 10 kc whistle filter; hum: FM, -75 db; AM, -50 db; FM antenna impedances are 300 ohms balanced and 72 ohms unbalanced.

.....\$249.00
Cabinet in blonde, mahogany,
or walnut\$ 25.00

J. W. MILLER CO.

Model 595 AM Tuner



Negative mutual coupled AM band-pass tuner; broad tuning with no sideband cutting; germanium diode crystal detector; no tubes or power supply, no hum or tube microphonics; output voltage ranges from .07 to .7 volt on stations within 25 miles radius; gain control; vernier dial; in ebony black or ivory bakelite cabinet.
Model 595\$19.50
Model 565 Kit.....\$14.70

NEWCOMB AUDIO PRODUCTS COMPANY

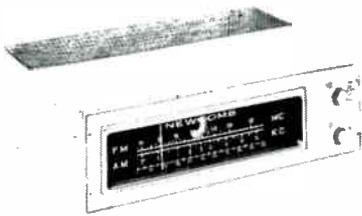
"Compact 100"

AM-FM tuner: FM detector has double limiting action; sensitivity: FM 5 microvolts for 30 db quieting, AM 25 microvolts; frequency response: \pm 1 db 20 to 20,000 cps; distortion less than 1% at 2 volts output; 8 kc. bandwidth on AM; AFC with defeat switch; 3 out-

STEREO & HI-FI DIRECTORY

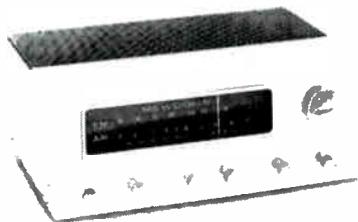
puts: amp, tape, FM multiplex; tubes: 2-6BC5, 6BE6, 6BA6, 6AU6, 6AL5, 12AT7; satin-gold finish.....\$129.50 Net

"Compact 200"



AM-FM tuner; FM detector has triple limiting action; sensitivity: FM 2 microvolts for 30 db quieting, AM 5 microvolts; frequency response: $\pm 1/2$ db 20 to 20,000 cps; distortion less than 0.2% at 5 volts output; 8 kc. bandwidth on AM; maximum output 10 volts; 3 cathode follower outputs, amplifier, tape, FM multiplex; tubes: 2-6BC5, 6BE6, 6AL5, 12AT7, 2-6BA6, 6AU6, 12AX7, 6E5; satin-gold finish: 12 1/2" x 9" x 4 1/8"\$169.50 Net

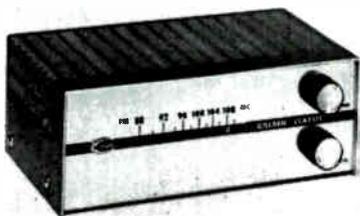
"Compact Royal 712"



Combines "Compact 100" tuner with "Compact 1012" amplifier/preamp on one chassis; all specifications, controls, and features are identical; size: 14 3/8" x 5 3/8" x 10"\$249.50 Net

OLSON RADIO CORP.

Model RA-338 FM Tuner



Sensitivity 3.5 microvolts for 20 db of quieting; response is flat 30-15,000 cps; 0.1 volt output; distortion less than 1% (500 microvolt, 100% modulation input); tubes: 2-6AQ8, 2-6BA6, 1-6AL5, 1-6X4; 6 1/4 lbs.....\$35.95

PACO ELECTRONICS CO.

Model ST-35 FM Tuner

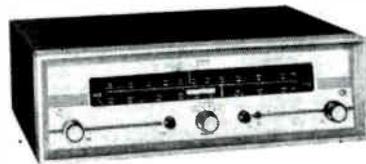
Similar to FM section of Model ST-45; provisions for inclusion of built-in multiplex circuitry; AM printed circuit board may be added at later date; output level control; tubes are: 1-6BK7B, 1-ECC85, 2-6BA6, 1-6AL5, 2-6AU6, 1-12AU7, 1-6X4, 1-EM84 indicator; 15 3/8" x 11 3/4" x 5 3/8"; available three ways.

Model ST-35: kit with factory pre-aligned transformers, complete with case.....\$59.95

Model ST-35PA: semi-kit with tuner section factory wired, complete with case.....\$69.95

Model ST-35W: Factory wired, complete with case.....\$89.95

Model ST-45 Stereo Tuner



FM specifications; sensitivity 2 microvolts for 30 db of quieting; harmonic distortion less than 1%; bandwidth over 200 KC; dual limiters; Foster-Seecley discriminator; 3-gang tuning condenser; cathode follower output; FM circuitry complete on one printed circuit board; AM section has whistle filter; diode detector; cathode follower output; built-in ferrite type antenna; AM circuitry complete on one printed circuit board; EM-84 tuning indicator operates for both sections; provisions for adding multiplex stereo adapter; pilot indicated AFC, separate for AM and FM with pushbutton control; total of 13 tubes; full wave power supply; available in three models.

Model ST-45: kit with factory pre-aligned transformers, complete with case.....\$84.95

Model ST-45PA: semi-kit, with both FM and AM tuner sections factory wired and completely prealigned, complete with case.....\$99.95

Model ST-45W: factory wired, complete with case.....\$134.95

PILOT RADIO CORP.

Model 480 Stereo AM-FM Tuner

FM sensitivity 2 μ v; AM sensitivity 3 μ v; multiplex output; AM phase switch; cathode follower output; total 8 tubes and 1 germanium diode.....\$159.95

Model 602 Stereo Tuner-Amp/Preamplifier

15 watts per channel stereo amplifier with stereo control center; frequency response 20-20,000 cps; multiplex output; 8-position input selector switch; tuner stage similar to Model 480; 16 tubes; 4-silicon diode power rectifiers; tuning indicator\$249.50

Model 590 Stereo FM-AM Tuner and Dual Preamplifier

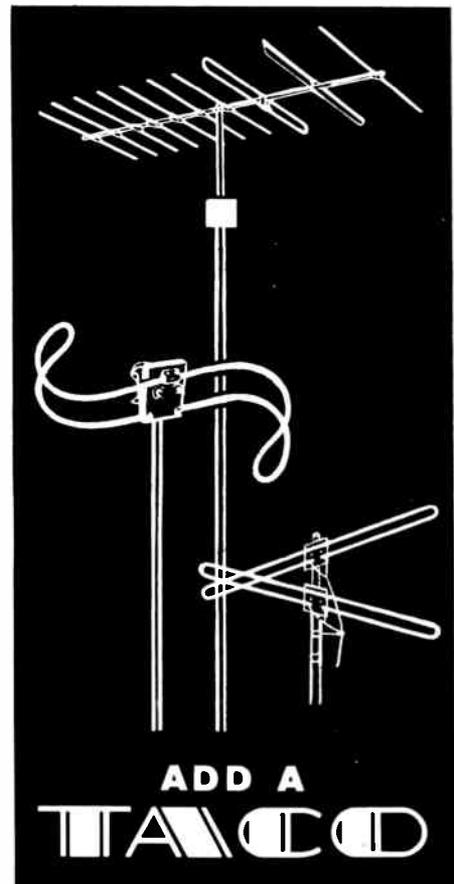
Tuner specifications identical to the Model 580; peramplifier includes 4 independent tone controls with optional ganging; 3 pairs high level inputs; 2 pairs of low level inputs; all inputs non-shorting; direct tape playback; loudness



switch; automatic shutoff; 14 3/8" w x 5" h x 11" d.....\$239.50

Model 654 Stereo Tuner-Amplifier

Power output 22 watts per channel; FM/AM section similar to Model 480; separate, ganged tone controls; rumble, scratch filter; tape monitor switch; AM phase switch; 7591 output tubes; 15 1/8"



FM Antenna

And hear the difference!

A Taco FM antenna makes all the difference in the world—adds new quality and greater station selection to any FM system—new or old... Available in high-gain, uni-directional types, or omni-directional models. Easy to install. Costs less than you'd guess...

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coupon below and mail it today. When your books arrive, read and enjoy them for seven full days. If, after that, you don't agree that they are everything you need and want, return them and owe nothing.



2751. HI-FI GUIDE—STEREOPHONIC SOUND, Hoefler

A "how-to" book on hi-fi, written in simple language. Will help you buy the right equipment and see that you get the most out of your stereo or monaural investment. \$2.50



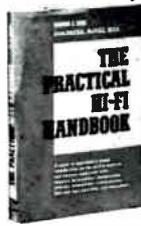
2752. HIGH QUALITY SOUND REPRODUCTION, Moir

The perfect manual for both the professional engineer and the serious amateur interested in high fidelity. The "why" and "how" of sound reproduction is covered in complete detail. \$15.00



2753. LOW-COST HI-FI, Hoefler

Hundreds of hints for budget hi-fi will be found in these fourteen chapters with over 300 detailed photographs, drawings and diagrams. Will save you money in starting or improving your system. \$2.50



2755. THE PRACTICAL HI-FI HANDBOOK, King

A guide to high fidelity sound reproduction for the service engineer and amateur. Chapters on amplifiers, loudspeakers, pickups, microphones, record players, disc, tape and stereo. \$5.95



2756. REPAIRING RECORD CHANGERS, Ecklund

A practical manual on repair of mechanical elements of record changers, including pickups, needles, changer actions, motors, drives, tripping, dropping and shut-offs. Also magnetic recorder repairs. \$5.95



2760. HI-FI STEREO FOR YOUR HOME, Whitman

Tells what stereo is, how it differs from hi-fi, how it works, how it affects home listening habits, and how to install and maintain it. Complete list of terms defined. Generously illustrated. \$3.50



42. REVERSE TAPE RECORDER GUIDE, Tydings

The first non-technical book to provide useful information on the Reverse Tape Recorder. Also a basic guide to the entire field of tape. Will show you new uses and add to your enjoyment. \$1.95



49. TAPE RECORDING GUIDE, Marshall

Designed to help you get the most out of your tape recorder, whether for business, pleasure or professional use. A handy guide to have around, no matter what equipment you own. \$1.95



2750. ELEMENTS OF MAGNETIC TAPE RECORDING, Haynes

Here's how to get professional results with tape the way the experts do. Complete nomenclature, basic techniques, how to splice and edit, how to repair and maintain your recording equipment. \$7.95



2754. MAGNETIC TAPE RECORDING, Spratt

Designed to give principles of magnetic recording and to enumerate characteristics of both the medium and the machines. Excellent for adapting magnetic recording to special needs and wider applications. \$8.95



2757. RIBBONS OF SOUND, Barleben

A handbook on the fundamentals of magnetic tape recording simply and interestingly presented. Factual information you can use no matter what type or make of recorder you own. Paper. \$2.50. 2772. Cloth. \$3.50



2758. TAPE RECORDERS AND TAPE RECORDING, Weiler

An ideal sourcebook of information on all aspects of tape recording. Covers all fundamentals necessary to realize full potential of your tape equipment. Special sections on accessories. \$2.95



2000. STEREO HI-FI GUIDE, 1960, Ziff-Davis

1960 edition features 60-page exclusive by Joseph Marshall on components and how they work. Includes "what you should know before buying stereo". Complete, interesting, invaluable! \$1.00



2002. ELECTRONIC KITS DIRECTORY, 1960, Ziff-Davis

New 1960 edition lists over 750 kits, latest models, prices and features for hi-fi kits—preamps, amplifiers, tuners, speakers—ham radio, SWL, Citizens Band. Fun and education. \$1.00



2004. HI-FI ANNUAL & AUDIO HANDBOOK, Ziff-Davis

1960 edition. Prepared by the editors of Electronics World. An excellent advanced guide to theory, construction and circuitry. Over 40 pages on stereo amplifiers and equipment. \$1.00



2005. HI-FI DIRECTORY & BUYERS' GUIDE, Ziff-Davis

1960 edition. World's only complete listing of all hi-fi and stereo equipment, components and accessories. Five big sections, data on more than 1200 components, over 1,000 illustrations! \$1.00



2006. ELECTRONIC EXPERIMENTER'S MANUAL, Findlay

With a few dollars worth of basic tools and this book to guide you, you can explore the wonder-world of electronics experimentation more completely than ever before. 10 big sections. \$4.95



2769. THE ELECTRONIC MUSICAL INSTRUMENT MANUAL, Douglas

Covers every design phase of the modern electronic musical instrument—including theory, schematics of organ circuits, the science of sound as well as the art of music. \$7.50

Tuners and Tuner Amplifiers

x10 $\frac{3}{4}$ " x 16 $\frac{5}{8}$ "; complete with cover.
.....\$299.50

Model 690-A Stereo FM-AM Tuner-Dual Preamp

Tuner specifications identical to the Model 680; preamplifier has two identical channels; automatic shutoff enables record changer to optionally turn off entire system after last record; dc heater supply; feedback tone control circuits; audio and tape outputs; 4 independent tone controls with optional ganging; 14 inputs; 3 pairs high level inputs for FM-AM tuner, multiplex and tape recorder; 4 pairs of low level inputs for tape head, microphone and cartridge; all inputs non-shorting; 18 tubes, 5 diodes, plus rectifier.....\$289.50

PRECISE DEVELOPMENT CORP.

Model TUMW AM-FM Tuner

Features dual limiters, Foster-Seeley discriminator, variable AFC, output meter, and cathode follower output; 13"x4 $\frac{1}{4}$ "x9 $\frac{3}{4}$ ".\$69.95
Model TUMK (in kit form).....\$49.95

Perfecta AM-FM Tuner

Features include output tuning meter, cathode follower output, phono, AM, FM, TV selector switch; Foster-Seeley discriminator; 2 stages of limiting; ferrite loop antenna; 13"x4 $\frac{1}{4}$ "x9 $\frac{3}{4}$ ".\$99.95

QUALITY ELECTRONICS, INC.

Model 1000 AM-FM Tuner Kit

Armstrong FM circuit with Foster-Seeley discriminator; sensitivity: FM, 5 microvolts for 30 db quieting; AM, 25 microvolts; AFC with defeat provision; frequency response: FM, 20 to 20,000 cps \pm 0.5 db; AM, 20 to 5,000 cps \pm 3 db; distortion: less than 1% on FM; bandwidth: 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 form\$28.95

Model 1200 AM Tuner Kit

Specifications similar to AM section of Model 1000 AM-FM tuner.....\$19.95

Model 1100 FM Tuner Kit

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

RADIO SHACK CORP.

Model T-5

Stereo AM-FM tuner; FM: sensitivity 2.5 μ v for 30 db of quieting; frequency response 20-20,000 cps \pm 1 db; hum level -65 db below 100% modulation; AM: sensitivity 3 μ v for 20 db quieting; 8 kc bandwidth down 6 db; frequency response 20-5,000 cps \pm 1 db; hum level -55 db below 100% modulation; multiplex output; ferrite loop stick antenna for AM; AFC on/off;

tubes: 2-6AQ8, 3-6AU6, 6AL5, 2-6BA6, 6BE6, 6X4; 15" x 4 $\frac{7}{8}$ " x 10 $\frac{1}{2}$ "; shpg. wt. 15 lbs.....\$79.50

Realistic FM-AM Tuner

FM section similar to Model FM-3; AM has broad band tuned IF stage; germanium diode detector; frequency response 20-7,000 cps; ferrite loopstick antenna; 11 $\frac{1}{2}$ " x 4 $\frac{3}{8}$ " x 9"; shpg. wt. 15 lbs\$59.95

Realistic 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; AFC; outputs for



amplifier and multiplex phono input; 9 $\frac{5}{8}$ "w x 4 $\frac{3}{8}$ "h x 6 $\frac{1}{8}$ "d, 10 lbs....\$39.95

RAULAND-BORG

Model HF-100 FM Tuner

Includes multiplex jack and AFC; sensitivity 3 μ v. for 20 db. quieting; 0.5 volts output; hum and noise 38 db. below full output; frequency response \pm 1 db. 30-20,000 cps; tubes are 2-12AT7, 6AL5, 6CB6, 6AU6, EM84.....\$67.00

Model HF-200 AM-FM Tuner

Front end consists of grounded-grid, cathode-fed RF amplifier, wide-band IF stages; AFC and cathode ray tuning indicator; sensitivity 3 μ v. for 20 db. of quieting; output approx. 0.7 volts AM and FM section; frequency response 20-20,000 cps.; tubes are 2-12AT7,



2-6CB6, 6AU6, 6AL5, 6BE6, 6AS8, 2-EM84, selenium rectifier.....\$123.00

SARGENT-RAYMENT COMPANY

Model SR-380

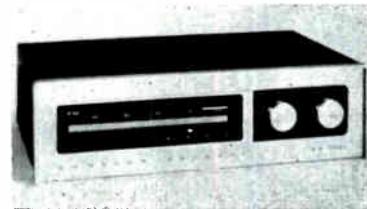
AM-FM Tuner with Stereo Preamplifier
Features twin preamplifiers for use with stereo tapes or stereo records; tuner sensitivity: FM, 3 microvolts for 20 db quieting; AM, 20 microvolts with ferrite loop; frequency response: FM, 20 to 20,000 cps \pm 1 db; AM, 20 to 5,500 cps down 3 db; preamplifier 20 to 15,000 cps \pm 1 db; harmonic distortion 0.017% in all preamp positions with 100 millivolts input; hum: high level inputs, 75 db below 1 volt output; low level inputs, 65 db below 1 volt output; ganged bass and treble controls allow 15 db boost at 40 cps and 10,000 cps; push-button loudness control; 2-position phono equalization; 3-position tape playback equalization; channel bal-

ance control; stereo reverse switch; rumble and scratch filters; FM has AFC with defeat; stereo inputs for tape head, tape amplifier, phono and aux; stereo tape recorder outputs; powered by auxiliary equipment; tubes are 6U8, 12AT7, 6BA6, 2-6AU6, 6AL5, 4-12AX7, 12AU7; 12" d x 15" w x 5 $\frac{1}{2}$ " h.....\$189.60

Model SR-1000B Stereo FM-AM Tuner

FM sensitivity 0.85 microvolts for 20 db of quieting; distortion less than 0.5% at 100% modulation; audio response 18-22,000 cps \pm 1 db; AM sensitivity 20 microvolts with ferrite loop antenna; distortion 0.45% at 100% modulation; audio response: sharp, 4.8 kc flat; broad 8.2 kc flat; 10 kc filter; tubes: 1-6DJ8, 1-12AT7, 1-6DK6, 2-6BA6, 2-6AU6, 2-6AL5, 1-6BE6, 1-12AU7, 1-5Y3, 2-EM80; 14" x 14 $\frac{7}{8}$ " x 5 $\frac{1}{4}$ "; shpg wt 23 lbs.....\$184.50

Model SR-1020 FM Tuner



Sensitivity 1.8 microvolts for 20 db of quieting; frequency response 20-20,000 cps \pm 1 db; IF bandwidth 215 kc for 6 db; AFC defeat; output level control; fly-wheel slide rule tuning; tubes: 1-6AQ8, 2-6DK6, 1-6AU6, 1-6AL5, 1-6X4, 3-GE12, 1-6FG6; 9 $\frac{3}{4}$ " x 14 $\frac{7}{8}$ " x 4 $\frac{7}{8}$ ".\$97.50

Model SR-7000 Stereo AM-FM Tuner and Control Center

FM: sensitivity 1.8 microvolts for 20 db quieting; frequency response 20-20,000 cps \pm 1 db; IM distortion 0.2% at 1 volt output; AFC; bass control +13 db, -15 db at 350 cps; treble control +10 db, -12 db at 1800 cps; phono input RIAA compensated; tape head NAB at 7 $\frac{1}{2}$ ips; sensitivity: 0.05 volts for 1 volt out on tuner, aux, tape out; 1 mv for phono, .002 volts for tape head; tubes: 2-7199, 2-12AX7, 1-EC-C85, 1-6BE6, 1-6BA6, 2-6DK6, 1-6AU6; 13 $\frac{1}{8}$ " x 14 $\frac{7}{8}$ " x 5 $\frac{1}{4}$ "; wt 21 lbs.
.....\$199.40

Model SR-8000 Stereo AM-FM Tuner and Control Center

Specifications similar to SR-7000 in addition has 7 push-button controls for phase, FM-AFC; AM broad, rumble filter, scratch filter.....\$249.40

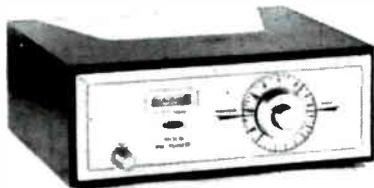
H. H. SCOTT, INC.

Model 310-D Broadcast Monitor Tuner

Sensitivity 2 mv IHFM standards; i.f. passband; 2 mc. limiters and detector; 3 stages of limiting; 85 db. rejection of spurious cross modulation response; "dynamical" interstation noise suppressor; AGC compensates for variations in signal strength; outputs for channel A high and low (tape), channel B high and low (tape), FM multiplex, switched ac.; local/distance switch; 15 $\frac{1}{4}$ "x12 $\frac{1}{2}$ "x4 $\frac{5}{8}$ "; 13 lbs.\$184.95

Model 311-D FM Tuner

Sensitivity: 2 microvolts for 20 db quieting; illuminated tuning and signal strength meter; 150 kc i.f. passband; 2 megacycle detector bandwidth; 2 stages



of limiting; 80 db rejection of spurious cross modulation response; AGC compensates for variations in signal strength; quick or vernier tuning; front panel level control; maximum output: 4 volts for 75 kc deviation; low impedance main output; separate tape recorder and multiplex outputs; tubes: 12AU7, 6BQ7A, 6U8, 6X4, 3-6AU6; 2-IN294 diodes; 1 3/4" x 4 3/4" x 9 3/4"; 13 lbs.

Model 311-D.....\$134.95
Metal case.....\$ 12.95
Wood accessory case.....\$ 24.95

Model 314 Wideband FM Tuner

Sensitivity 2.5 mv IHFM standards; 150 kc bandpass; 80 db rejection of spurious response; AGG; max audio output 1.2 volts; level control; 3 outputs: chan A (tuner output), chan B (tape), multiplex; tubes are: 1-6BS8, 2-6U8, 2-6AU6, 1-6X4, 1-6FG6, 2-IN294; 1 5/4" x 12 1/2" x 4 3/8"; wt 10 lbs.....\$114.95

Model 399

Stereo AM/FM Tuner-Amplifier



Separate AM and FM tuner with individual tuning eyes; AM and FM section same as in Model 330D; 20 watts per channel amplifiers; switching facilities for tape recording and monitoring; phase reversal; third channel output; balance control; switching provisions for FM multiplex or FM-FM stereo; separate bass and treble controls for each channel; hum 80 db below rated output.....\$389.95

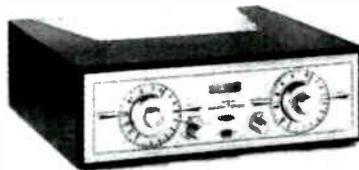
Model 320 AM-FM Tuner



Tuning indicator for precise tuning; FM section: 3 μ v. for 20 db. quieting; 150 kc. i.f. passband for reception of weak stations without distortion; 2 mc. detector bandwidth; AGC eliminates manual sensitivity adjustment; 2 stages of limiting; AM section: separate r.f. stage for maximum selectivity and sensitivity; 10 kc. whistle filter; controls for level, tuning, FM, AM normal, AM wide, monophonic-multiplex stereo switch; 12 1/2" x 5" x 15 1/2"; 12 lbs.....\$159.95

Model 330-D Stereophonic AM-FM Tuner

Completely separate AM and FM sections for stereo operation; sensitivity: FM, 2 microvolts for 20 db quieting;



AM, 1 microvolt for usable audio output; illuminated signal strength meter; FM Section: 150 kc i.f. passband, 2 megacycle detector 80 db rejection of spurious cross-modulation response, AGC compensates for variations in signal strengths two stages of limiting; AM Section: three position adjustable i.f. bandwidth for wide range, normal, and distance reception, 10 kc whistle filter, 4 volt output for 100% modulation; separate AM and FM level controls on rear panel; separate output jacks for stereo operation and tape recording; FM multiplex output; tubes: 6BQ7A, 6U8, 4-6AU6, 6BE6, 6BA6, 2-12AU7, 6X7, 6CN7; 1 5/4" w x 12 1/2" d x 4 3/4" h; 15 lbs.

Model 330-C.....\$209.95
Metal case.....\$ 12.95
Wood accessory case.....\$ 24.95

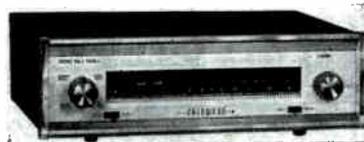
SHERWOOD ELECTRONIC LABORATORIES, INC.

Model S-2000 II AM-FM Tuner

FM specifications identical to S-3000 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 7,500 cps at -6 db; hum and noise 55 db below 100% modulation; built-in antenna; low-distortion diode detector; 11 tubes plus rectifier; 14" x 10 1/2" x 4"; cabinet included.

Brown flextone.....\$139.50
Black flextone.....\$139.50
Mahogany gold-tooled leatherette.....\$144.50
Black, tan, or white gold-tooled leatherette.....\$149.50

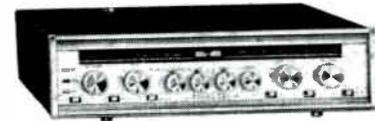
Model S-3000 III FM Tuner



Sensitivity .95 microvolts for 20 db quieting; selectivity 195 kc at -6 db; frequency response 20 to 20,000 cps \pm .5 db; IM distortion less than 1.5% at 100% modulation (60/7 kc; 4/1 w/std, preemphasis), less than 1% harmonic distortion at 100% modulation, 400 cps; FM drift \pm 2 kc with AFC, \pm 15 kc without AFC; AFC correction 16 db; hum and noise 69 db below 100% modulation; cathode follower and FM multiplex outputs; tuning eye; antenna input transformer feeds cascode r.f. amplifier; 2 i.f. amps, cascaded limiters, Foster-Seeley wide-band discriminator; tubes are 6BS8, 6AB4, 4-6AU6, 6BN8, 12AT7, 6BR5, and Brown flextone.....\$110.50
Black flextone.....\$110.50
Mahogany gold-tooled leatherette.....\$120.50
Black, tan, or white gold-tooled leatherette.....\$125.50

Tuners and Tuner Amplifiers

Model S-7000 Stereo Receiver



Complete AM-FM tuner, preamp. amplifier system; FM sensitivity 0.95 μ v for 20 db quieting; AM sensitivity 2 μ v at 60% modulation for 1 volt out; tuning eye indicators for both AM and FM; controls for bass and treble, volume, loudness, stereo balance, phono level, tape monitor, phase; power output 24 watts each channel; frequency response, amplifier, \pm 1 db 20-20,000 cps; 22 tubes; 32 lbs.
Model S-7000S (less case).....\$299.50
Model S-7000D (with brown leatherette case).....\$307.00

Model S-2200 FM-AM/MX Stereo Tuner



Similar to Model S-3000 III except multiplex adapter can be mounted in space provided on chassis; includes switch for multiplex functions; tubes are 6BS8, 6AB4, 2-6BA6, 3-6AU6, 6BE6, 6BN8, 12AZ7A, 2-6FG6, 6CA4. Without case.....\$179.50
Brown Flextone case.....\$184.50
Mahogany, gold-tooled leatherette.....\$189.50
Black, tan, or white gold-tooled leatherette.....\$194.50

Model SMX Multiplex Adapter



For use with Crosby Multiplex System; controls for level, split-circuit, stereo balance; detector bandwidth \pm 30 kc; subcarrier sensitivity 2 mv; output 1 volt; frequency response \pm 1 db 20-20,000 cps; tubes are 12AU7, 12AX7, 7199, 6BF6, selenium rectifier; 5 3/4" x 10 1/2" x 4".....\$60.50
Model AMX (plug-in no power supply).....\$49.50

STROMBERG-CARLSON CO.

Model FM-443

FM tuner: sensitivity 2 microvolts for 20 db quieting, 4 microvolts for 30 db

Tuners and Tuner Amplifiers

quieting; local-distant switch; AFC-off switch; dial station selector; has audio output, detector output, multiplex output; self-powered with aux power for



AM-441 and/or multiplex adapter; tubes are 6AQ8, 3-6AU6, 6C4, EM84; 4 5/8" x 7 1/4" x 12"; less cover. \$79.95

Model AM-442



AM tuner; frequency response 20 to 7,000 cps, down 7 db at 7,000 cps; 9,000 cps bandwidth; local-distant switch; dual antenna inputs, adjustable ferrite loop and external; tubes are 6BE6, 2-6BA6, 6AT6; self-powered; 4 3/8" x 7 1/4" x 12"; less cover.....\$59.95
AM-441 same as 442 but without power supply; less cover.....\$49.95

Model SR-445 AM-FM Stereo Tuner

Combination of AM-441 and FM-443; 4 5/8" x 13 1/2" x 12"; less cover...\$129.95

Model AC-441/3-2

Vinyl-clad top cover in white, black, tan, red for models AM-441, AM-442, FM-443\$10.95
Cover for SR-445.....\$12.95
AC-441/3-P painted top in red only\$8.95
Cover for SR-445.....\$8.95

TEECO (TRUETONE ELECTRONICS, INC.)

Model 880 FM Tuner



Flywheel tuning; AFC; jack for multiplex; 2 μ v. for 30 db. quieting; hum level 55 db. below 100% modulation; tubes are 2-12AT7, 6CB6, 6AU6, 6AL5, selenium rectifier; 10 1/2" x 7 1/4" x 4 1/4"\$56.50

Model 1010 Stereo Tuner-Amplifier

AM-FM tuner with dual 7 watt amplifier; sensitivity: FM 2 μ v for 30 db quieting, AM 10 μ v; frequency response; FM— \pm 1 db 20-20,000 cps, AM— \pm 3 db 20-5000 cps; AFC; hum 55 db below 100% modulation; amplifier has controls for loudness, bass, treble, function, mode; inputs for ceramic/crystal phono, tape; tubes are 6AL5, 6AU6, 6BA6, 6BE6, 6CB6, 2-12AT7, 2-12AX7, 2-EL84, 2 silicon diodes; 15 1/4" x 5 1/2" x 10 1/2".....\$178.60

Model 1012 FM Tuner-Amplifier

Suitable for PA system; power output 7 watts; sensitivity 2 μ v for 30 db quieting; overall frequency response \pm 1 db 20-20,000 cps; 4 ohms output impedance; tubes are 6AL5, 2-6AU6, 6CB6, 2-12AT7, 12AX7, EL84, EZ81; 13 1/4" x 7 7/8" x 4 3/4"\$112.50

Model 899 Stereo Tuner

Separately-tuned AM and FM; AFC; built-in antenna for FM; tubes are 6AL5, 6AU6, 6BA6, 6BE6, 6CB6, 2-12AT7, selenium rectifier; 12 3/8" x 9 3/4" x 4 1/2"\$93.60

Model 890 AM-FM Tuner



FM same as Model 880; AM frequency response 20-5,000 cps; built-in Ferrite loopstick antenna; sensitivity AM 10 μ v.; 10 1/2" x 8 1/2" x 4 1/4"\$74.50

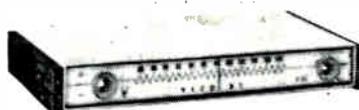
Model 1000 Tuner-Amplifier



Both AM and FM tuning; specifications for tuner same as Models 880 and 890; amplifier output 7 watts with less than 2% distortion; output impedance 4 ohms; frequency response 40 to 20,000 cps; tubes are 6AL5, 6BA6, 6BE6, 6CB6, 2-12AT7, 6AT6, EL84, EZ81; 12 3/8" x 9 3/4" x 4 3/8"; 13 lbs.....\$104.50

VIDEO INSTRUMENTS CO., INC.

Model 81 FM Tuner



Completely transistorized circuitry; sensitivity: 3 microvolts for 20 db quieting; frequency response 20 to 20,000 cps; IF bandwidth: 200 kc; distortion less than 1%; AFC with defeat position; hum inaudible; antenna input: 300

ohms or 75 ohms; power consumption 1 1/2 watts; 2" h x 9" d x 14" w.....\$68.80

Model 82 AM Tuner

Transistorized circuitry; sensitivity: 20 microvolts; "wide band" and "narrow band" positions; frequency response on "wide band" 20 to 16,000 cps; distortion less than 1%; hum inaudible; built-in antenna; power consumption: 1 1/2 watts; 2" h x 9" d x 14" w.....\$68.80

FM Antennas

ADVANCE ELECTRONICS CO.

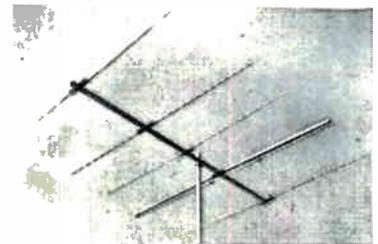
Adelco FML Antenna



Covers entire FM band; separately phased loops for 360 degree field pattern of uniform intensity; double stack produces 30% higher gain; kit includes 6 ft. aluminum mast and 60 ft. coaxial cable with mounting accessories.

Antenna only\$12.50
Complete kit\$22.50

Adelco Model FMY Antenna



5 element FM yagi designed to give maximum signal for particular station frequency (specified on order); kit includes 6 ft. aluminum mast and 60 ft. lead-in wire with mounting accessories.

Antenna only\$14.50
Complete kit\$24.50

APPARATUS DEVELOPMENT COMPANY, INC.

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" x 86"; 5 1/2 lbs.

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" x 67"; 4 1/2 lbs.

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.

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.

CHANNEL MASTER

Model 4400 Antenna

Omni-directional; for metropolitan and suburban areas; turnstile.....\$13.75

Model 4401 Antenna

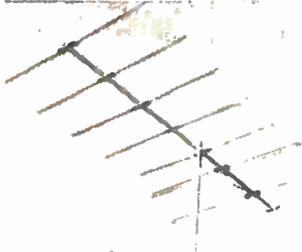
Directional: has 5 elements.....\$16.50

Model 4402 Antenna

Directional: for far-away fringe areas; 10 elements\$27.65

CLEAR BEAM ANTENNA CORP.

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 List
Complete kit\$33.42 List

Model FMHO

"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\$13.80

Model FMDR

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.

Model FM44 Antenna

Omni-direction 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 List
Complete kit\$14.98 List

1961 EDITION

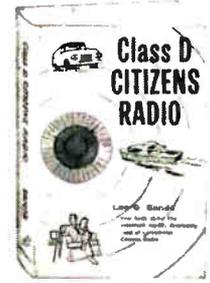
We'd like to send you these important new books for a 7-day free trial examination

Class D CITIZENS RADIO

by Leo G. Sands

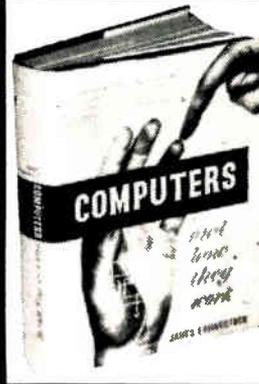
Here is the first complete book on Citizens Radio Operation. Ever since the initial use of 2-way radiotelephone by police departments, this field has been growing in importance and application. Now, with more than a million vehicles equipped for its use, Citizens Radio is a major phase of the electronics field. This important new volume covers every aspect of the field—its history, rules, and everything about how it works—in seven big chapters with one hundred major sections. You'll learn exactly what Citizens Radio is, its applications, what equipment you need, the full story on receiver circuits and transmitters, antennas, installation, and maintenance, full FCC rulings, how to apply for licenses, etc. Many illustrations.

\$4.95



COMPUTERS AND HOW THEY WORK

by James D. Fahnestock



Here is a fact-filled exciting guidebook to the wonderworld of electronic computers, with more than 110 illustrations and easy-to-follow tables in 10 big chapters. Step by step, you'll see and understand the workings of many types of computing machines. This important new book illustrates the basic principles of computers in methods that require no knowledge of electronics. You'll learn all about computer memories, flip-flops and the binary counting system. You'll learn the mathematical language of computers where 1 + 1 = 10. Other chapters show you how computers use tubes and transistors to make complex logical decisions in thousandths of a second. COMPUTERS AND HOW THEY WORK is must reading for career minded students and for electronics pros who want a more complete knowledge of this field.

\$4.95

THE ELECTRONIC EXPERIMENTER'S MANUAL by David A. Findlay

With a few dollars worth of basic tools, and this book to guide you, you can explore the magic of electronics experimentation more completely than ever before. In a few short hours, you'll start your first project. You'll learn about every component used in experimentation, every tool, its function and why it is used. There are 8 big sections, each covering a specific phase of construction. There is a giant section of projects you can build, test equipment you'll construct and use in your future work. THE ELECTRONIC EXPERIMENTER'S MANUAL will give you the professional know-how you must have no matter what phase of electronics is your specialty.

\$4.95



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ELECTRONICS BOOK SERVICE

One Park Avenue, New York 16, N. Y.



Please send me _____ copies of CITIZENS RADIO and bill me at only \$4.95 a copy plus postage and handling.

Please send me _____ copies of COMPUTERS AND HOW THEY WORK, and bill me at only \$4.95 a copy plus postage and handling.

Please send me _____ copies of THE ELECTRONIC EXPERIMENTER'S MANUAL and bill me at only \$4.95 a copy plus postage and handling.

If I don't agree that this is one of the best electronics investments I've ever made, I may return the book(s) within seven days and get a full refund.

\$ _____ enclosed. (SAVE MONEY! Enclose payment with your order and we'll pay the postage.)

Name _____

Address _____

City _____

Zone _____

State _____

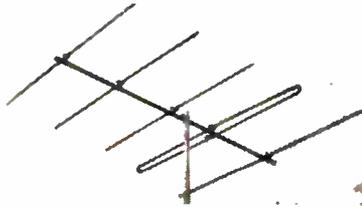
1711

FM Antennas

mast, lead-in wire and necessary hardware. 4 lbs.

Model FMDR Antenna only \$7.62
 Model FMDR Complete kit \$13.32

Model YL5-FM

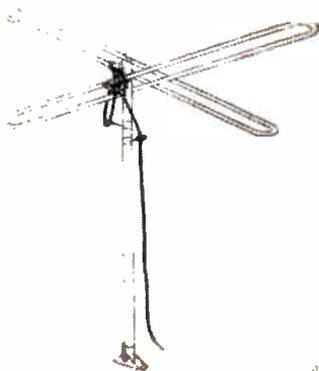


Five element FM yagi with three wide spaced directors, "T" match dipole, and reflector; tuned to center of FM band with frontal lobe receiving angle of 23 degrees; complete kit includes 5 ft. mast, lead-in wire, and necessary hardware; 5 lbs. complete.

Antenna only \$13.68 List
 Complete kit \$19.38 List

THE FINNEY CO.

Finco 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 line, 5 ft. mast, and mounting hardware; 6 lbs. \$14.50

Finco 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 line, and mounting hardware; 6 1/2 lbs. \$14.50

Finco Model FM-3 Antenna

Broad band 4 element FM yagi; narrow directivity pattern; aluminum construction; 5 lbs. \$13.00

Finco Model FM-4 Antenna

Twin drive FM antenna with impedance control "T" match stubs; aluminum construction; 6 1/2 lbs. \$24.90

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 bracket; wt. 6 lbs. \$14.50

HY-GAIN CORP.

FM Halo Antenna

Half wave dipole; ellipsoid shape; supplied with universal mounting bracket; omnidirectional; takes standard 300 ohm lead-in; 11 oz. \$9.95

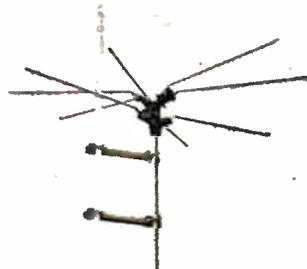
FM Hy-Log Periodic Antennas

For fringe area reception; 7/16" elements are made of heat-treated aluminum; includes mast.

Model FM-6 (6 elements) \$22.95
 Model FM-11 (11 elements) \$37.95

J.F.D. ELECTRONICS

Model AFM100 Stereo Cone Kit Antenna Head



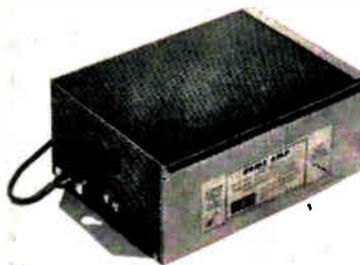
All-directional 6-element dipole Yagi system, kit for new or existing installation; 4-director dipole and reflector beam; Stereo Cone Kit \$15.95
 AFM 150 Stereo Cone "Attach-it" \$13.95
 AFM 200 Stereo Folded Dipole Kit \$14.95
 AFM 300 FM Yagi \$23.50

JERROLD ELECTRONICS CORP.

Model 406A-FM FM Range Extender

Provides 25 db signal boost; connects between antenna and antenna input of FM tuner; two units, one mounts on antenna mast, the other is mounted near tuner and plugs into ac. power, outputs are 72 and 300 ohms, contains own internal power supply for use at 117 v ac. \$38.55
 Mast mounted version (DSA-FM) is also available.

Model HSA-46 Antenna Pre-amplifier



Consists of two two-stage neutralized amplifiers; one for FM plus low band; the other for high band VHF. Input and output impedance is 300 ohms; bandwidth—54-108 mc; 174-216 mc;

noise figure (6.0 db) results in improved FM and VHF reception...\$33.30

TECHNICAL APPLIANCE CORP.

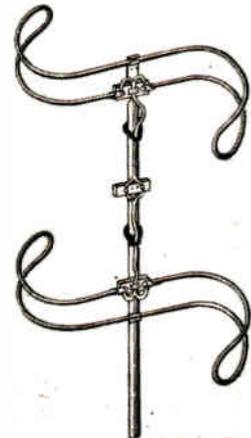
Model 688 FM Antenna

Folded dipole with 2' mast; bi-directional pickup \$5.25

Model 620L FM Antenna

Dipole-reflector with 5' mast; uni-directional pickup; 3 db gain \$9.65

Model 624L FM Antenna



"S" dipole with 5' mast; omni-directional pickup \$7.60
 Model G624L (Model 624L anodized) \$8.60

Model 624STL FM Antenna

Stacked "S" dipole with 10' mast; omni-directional; 3 db gain \$14.95
 Model G624STL (Model 624STL anodized) \$16.45

Model G626 FM Antenna

"S" omni-directional dipole with u-bolt to attach to standard mast; golden anodized \$5.25
 Model G626ST (Stacked "S" dipole as above) \$11.50

Model 644B FM Antenna

Six-element twin-driven yagi for fringe FM pickup \$20.20
 Model G644B (Model 644B anodized) \$24.95

Model 610 FM Antenna



10-element twin-driven yagi for fringe FM reception \$29.25
 Model G610 (Model 610 anodized) \$34.95

Model 646 FM Antenna

Stacking line for 3 db additional gain with Models 644B and 610 antennas. \$2.65

SECTION

4

Tape Recorders, Tapes and Microphones

Buying Guide to Stereo Recorders

By Philip C. Geraci and Warren De Motte



The complete tape recorder comprises for sections: a tape deck or transport, an electronics circuit, an amplifier, and a speaker or speakers. It is immediately obvious that if the tape recorder is easily portable, its speaker and amplifier must be limited in weight and size, and of course, these factors help to determine the ultimate quality of sound generated by the machine. Even in the best of the complete portables, the amplifiers and speakers are merely utilitarian, while the transport and electronics are high quality hi-fi.

The Tapeheads

Regardless of whether it is done using a cheap portable, or with a deluxe console, tape recording or reproducing begins with the tapehead past which the tape moves. This is the sonic nucleus without which the whole apparatus is just so much metal and plastic. The head magnetizes the tape in the process of making a recording; it picks up magnetic impulses from the tape to play the recording; and it demagnetizes the tape to erase previous recording so that the tape will accept the new recording. While it is conceivable for one head to perform all three functions, such a head would be clumsy and inefficient, entailing much switching and extra tape handling. Hence, all tape recorders employ a minimum of two heads, one for record/playback, and the other for erase, while many employ three heads, one

for each individual function. The three-head design simplifies the electronics in the recorder, eliminating the switching network needed to change the function of one head from record to playback and back again to record.

Furthermore, with three heads you can monitor the newly-recorded tape as it is being recorded. Monitoring is the process of listening to the tape the instant that it is recorded. Monitoring indicates what *has been* recorded on the tape, which is really what you want to know. Unfortunately, the word "monitor" is only too often used loosely with relation to two-head recorders, where it is only possible to listen to what is *going to be* recorded as it is being recorded. When the latter is the case, you must replay the new tape in order to hear how the recording came out. The convenience of true monitoring is a necessity to the serious recordist. For this reason, all other things being equal, the machine with three heads is superior to the machine with two.

Basically, a tapehead is simply an electromagnet—a wire-wound, semicircular ring of material that can be magnetized when an electric current is sent through the surrounding wire coils. The gap in the ring is the critical point, and it is the only part of the head that purposefully comes in contact with the tape. The magnetic force focuses at this gap and fulfills its functions of putting sound on the tape or taking it off. It is axiomatic that the narrower the gap, the better these functions are performed. Modern tapeheads have microscopic gaps, enabling the slower tape speeds to produce wider-range sound than high speeds could do only short time ago.

Because these gaps are so critical, every precaution must be taken to avoid excessive wear of the tapehead. Wear causes the gap to become ragged and uneven, and usually wider, with consequent loss of the higher frequencies and a general deterioration of sound. The tapeheads are mostly made of metal, either in a single piece or in laminations. Both types have their partisans and are capable of the highest performance quality and good durability. Less desirable are heads in which the magnetized elements are bonded in plastic.

The smoothness of the face of the tapehead and the amount of pressure with which the tape presses against this face, particularly when traveling at high speed, affect the durability of the head. The lighter the tape pressure in playing and recording (although firm contact must be maintained) and the smoother the surface of the head-face, the less the wear. Good, though expensive, design avoids contact between tape and heads completely during fast winding.

The heads should be shielded. In a well-designed assembly, they are enclosed in mu-metal, which shields them from stray radiation. If they are not so shielded,

there is a possibility that a motor or a transformer, either of which is capable of putting out a vicious electromagnetic field, will cause audible 60-cycle hum in the circuit, and will otherwise reduce the signal-to-noise ratio. As it is most important to keep this signal-to-noise ratio as high as possible, every effort is usually made to place the motor, or motors, and the transformer as far from the heads as space allows.

It is evident that some of the factors determining the quality of the tapeheads and their assembly are beyond the ability of the average purchaser, or even an engineer, to recognize by casual inspection. However, most of them can be discovered by judicious questioning of the salesman and reference to the specification sheets accompanying the recorder. Of course, the answers will depend in measure on the reliability of either or both, but if ambiguities seem to arise, we have an ultimate test that will resolve even them—the test of our ears. But we'll come to that phase of recorder-purchasing shortly.

In the meantime, let's find out something about the tape transport. The motor that runs the "capstan" spindle is responsible for maintaining accurate pitch of the recorded sound. Any variations in motor speed or smoothness of operation, no matter how minute, show up in the forms of distortion known as "wow" (rising and falling of pitch) and "flutter" (rapid fluctuations of pitch). One-hundred percent absence of wow and flutter is an impossibility, because it would call for perfection, but good transport design can reduce these terrors to an inconsequential level.

Motors—How Many?

The motor that drives the capstan must, of course, be the best within the price range. Good motors are expensive; excellent motors are more expensive. It is generally conceded that a motor of the hysteresis synchronous type is superior to the induction type, but it is correspondingly more expensive. The speed of the former is regulated by the stable frequency of the current fed into it; hence, the hysteresis synchronous type is least affected by fluctuations in power-line voltage. This does not mean that good induction motors do not exist. They do, and provided they are carefully utilized, they can give very satisfactory service.

The motor is coupled to the capstan by a belt or a rubber idler wheel or the capstan may be part of the motor itself. All other conditions being equal, the first is most desirable. The belt, being flexible and long enough to permit some distance between motor and capstan, does not transmit motor vibration as readily as the more solid and more closely coupled idler wheel.

In playing a tape, a pressure roller, or pinch wheel, is brought against the capstan, with the tape sandwiched in between. This pressure must be maintained evenly to keep the tape moving evenly. At the same time that the *PLAY* or *RECORD* switch is thrown, levers, belts and pulleys arrange themselves to make the takeup reel wind up the tape as it spills past the capstan.

While the primary function of the capstan motor is to move the tape past the heads at a constant speed, feeding the tape from reel to reel also requires mechanization. As the amount of tape tension is important, the amount of power applied to the feed and takeup reels has to be nicely calculated.

There are two general methods of powering the reels.

One is to link them to the capstan motor; the other is to have an individual motor for each reel. In rare cases, one extra motor is made to care for both reels. In the one-motor method, there is the problem that the added stresses and strains might affect the constancy of capstan speed. These stresses and strains are small, however, and may be obviated by increasing the power of the motor. Three-motor practice, or two motor, enables each motor to perform only the function for which it is designed and best suited. Interconnecting linkages present fewer design problems, and in general there is a salutary simplification that can lead to greater efficiency.

The tape transport should be easy to operate, and it should function decisively and smoothly. The tape should start to move and come to a halt instantly when switched, without jerks, without thrown loops, and without backlash. These virtues are necessary for easy, convenient operation, and they are particularly needed for accurate editing. The *REWIND* and *FAST FORWARD* should also function without jerkiness or tape-spilling, either of which can mean annoying tape breakage. It is nice to have tape wound with the speed of greased lightning, but if this is at the cost of tape breakage, slower winding is a less harrowing penalty. No standard tape transport is so slow that it creates reasonable impatience.

Most designers of tape recorders have gotten away from complicated operating features. If they haven't, they merely handicap their sales departments, because only a tinkerer enjoys complicated operation for its own sake. Most recorders today can be loaded easily, within seconds, due to straightline travel by the tape. Of course, there are a few machines that still require the tape to make detours on its way from reel to reel. The buyer must make up his mind if the other qualities of these instruments compensate for this inconvenience in loading.

Tape Tension

There is, however, a qualification that should be made regarding detours. If the tape has to go around a tension regulator and/or an automatic-stop arm, the machine should not be penalized, even though neither of these functions is an absolute necessity. Extra-sensitive tension control insures a minimum of tape breakage or stretching. An automatic stop is a nice feature, inasmuch as it halts revolution of the takeup reel at the end of the tape or at a break.

Some machines provide automatic stopping without an external arm, the mechanism being actuated by a metallized section at the end of the tape. This will not stop the reel if there is a break in the tape before its proper end. A very few machines are constructed with a stop that requires neither arm nor metal, and these are the most convenient. They stop automatically at a breakage point as well as at the end. Without an automatic stop, the tape will whip around on the takeup reel until you disengage it. When recorded matter is on the few inches of free-flying tape, there is danger that some of it will snap off. Otherwise, the only effect is annoyance when you are not in a position to halt the whirling reel immediately.

In making the tape recorder easy to operate, most designers have shied away from the ultimate simplification. That is, to make recording possible by the mere

pressing of a button. The normal recording process includes simultaneous erasing of everything ahead of the recording head. Hence, there is the obvious danger of pressing the *RECORD* button when one only wants to play a precious pre-recorded tape. For this reason, almost every tape recorder has a built-in safety device, usually in the form of a second button. The thought is that two simultaneous operations are less likely to be unconsciously undertaken than one.

This is good philosophy. Even the most methodical person will sometimes press the wrong button; but if two buttons must be pressed at the same time, even an absent-minded professor must employ conscious thought to select them. The moral is: avoid a recorder that does not have some sort of safety device, interlocking or otherwise, for recording.

In recording, it is necessary to have some indication of the recording level, so that neither too much nor too little signal-power reaches the tape. Too much will overload the tape, creating unpleasant distortion. Too little will put such a weak signal on the tape that the background noises become annoying, or even may overcome the program material. The recording level may be determined by a meter or an eye tube or neon bulb, and one or the other is present on probably every tape recorder. The meter is more accurate and more easily read, but the others are effective in all but critical professional applications.

Since improved tapeheads have made higher fidelity possible at slower speeds and since thinner tape has been made available, it no longer is necessary for the recorder to be able to accommodate reels larger than seven inches, except in rare and unusual situations. This has removed the extra value attached to the machine that can accommodate the 10½ inch reel, although no penalty should be ascribed to it for this.

If you plan to do much recording, you will want to edit your tapes. Ease in editing encompasses being able to spot exactly where the playback head gap meets the tape, being able to stop the tape with a minimum of coasting, and being able to lift the tape away from the head for marking, cutting and splicing. If the recorder design does not allow for easy accomplishment of these, editing will be irksome, inaccurate and time-consuming. Instantaneous stopping ability or a "pause" facility is mandatory here.

Practically every tape recorder has inputs for microphone and tuner. The mike that comes with most recorders, even expensive ones, is usually a medium-grade affair that rarely does the recorder justice. A better microphone is the simplest way to improve results from a recorder. However, determine first whether the microphone input will accept a better unit. This sometimes becomes a matter of different impedances, but it is possible to make relatively simple changes should they be necessary.

By now, you've probably decided what type of tape outfit you want. If you want it solely for listening to pre-recorded tapes, it should be able to play back 2-track mono, 2-track stereo, and 4-track stereo, all at both 7½ and 3¾ ips speeds. Thus, you will be able to listen to any tape in commercial use today.

If you also plan to record, you may want to have the 1⅞ ips speed, as this is most economical in recording

speech. You will want to be able to record at least 2-track mono and 2-track stereo. Recording 4-track mono is not difficult, but it is impossible to edit, and its sets up future inconveniences in finding the part you want to listen to. It therefore is recommended only for extremely lengthy works, like full-length operas, or readings of books. As for recording 4-track stereo, it is more economical than 2-track, but it is very difficult to edit. If you do not plan to edit your stereo recordings, then 4-track stereo is entirely practicable.

With your present hi-fi equipment in mind and with a regard for the amount of portability you will require, you will choose your tape outfit from among six more or less standard categories: (1) Deck only; (2) Deck and playback electronics for use with a hi-fi system; (3) Deck and record/playback electronics for use with a home hi-fi system; (4) Deck and record/playback electronics, integrated for portability; (5) Deck, record/playback electronics and power amplifiers, integrated for portability; (6) Deck, record/playback electronics, power amplifiers and speakers, integrated for portability—the complete package.

Look at the individual makes of the category you want. Compare them for features and price. Then ask the salesman to demonstrate the most expensive one of this category for you. This is in essence "Exhibit A"—the machine that will serve you as a standard for comparison.

Listen to it carefully and note its smoothness of performance and clarity of sound. If it can record, have the salesman record something on it and play it back for you. Also have him play a pre-recorded tape of piano music and observe that the long-held notes do not waver in pitch or sound watery. The better the transport, the more stable the pitch.

Now select one or two machines in your category, or as many as seem attractive to you, around the price that you want to spend. If the salesman recommends a particular brand which you yourself had not selected, include that brand for consideration also. Ask for a demonstration of these machines using the same tapes you originally heard on the "A" machine. Compare the sound you now hear to what you heard then. Be particularly concerned with the stability of the piano tones, for these pretty well tell you how good a transport the machine has.

If associated equipment has to be hooked in (for instance, power amplifiers and speakers for category 3 or 4), insist that the same equipment be used with each unit demonstrated. Have the recording made on the "A" machine played on the others. Make a similar recording on each of the others. Play all of these recordings on each of the machines, including the "A" unit. Listen carefully. Compare the results for clarity, presence, and the amount of hum. Play at medium volume and then loudly. As a general rule, the better the system, the more volume it can produce before distortion appears or becomes annoying.

Listen and compare; listen and compare. It takes a little time, and maybe the salesman will become a little impatient, but you are more likely to wind up with a better tape recorder if you follow this procedure. You want the best tape recorder you can afford, so if eventually you are well satisfied, who can complain?

ALONGE PRODUCTS, INC.

Tape Splicer



Non-magnetic precision splicer; cutting arm has three knives: center knife can be set at 90°, 67½° or 45°; spring pads hold tape in place as side knives trim splicing tape to exact width of recording tape; 4½" x 3½" x 3¾"; 1 lb. \$29.95

ALTEC LANSING CORP.

Model 661 A FB



Dynamic microphone; frequency response 30 to 15,000 cps; output -55 dbm/10 dynes/cm²; output impedance 30/50 ohms; acoustic front damping eliminates high frequency peaks; non-reflecting dark green finish; supplied with 15' two-conductor shielded cable; 1¾" d x 5¾" l\$49.50

Model 661 B (as above except impedances are 30/50, 150/250, 20,000 ohms\$59.40

Model 25 B (desk stand in matching green)\$15.00

AMERICAN ELECTRONICS, INC.

Berlant 31, 32, and 33



Dual speed (7½ and 15 ips) stereo record-playback; frequency response 50 to 15,000 cps ±2 db at 15 ips and 50 to 12,000 cps ±2 db at 7½ ips; signal-to-noise ratio better than 55 db; flutter and wow less than .1% at 15 ips and less than .2% at 7½ ips; three motors with hysteresis synchronous capstan motor; shipping weight 77 lbs.

Model 31 (full track)\$795.00

Model 32 (half track)\$795.00

Model 32-ST (with stereo facilities)\$899.00

Model 33 (stereo)\$995.00

Model 270 Amplifier-Speaker

Consists of 10-watt amplifier and widerange speaker in portable case.\$188.00

Model TR-100 Concertone Transicorder



Book size tape recorder weighing under four pounds; operates from built-in batteries; more than one hour of recording capacity; fully transistorized; head complement consists of two heads, the record play-back unit and an erase head; meter monitor's audio level and indicates condition of batteries; adaptors for 12 volt dc and 110 volt ac power supplies; shoulder strap for use in in-field recording or interviews; one knob control; complete with batteries, microphone and earphones\$199.95

Concertone Model 505

Professional Stereo Recorder. Reproduces full range of audio frequencies in two-channel stereo; may be converted to a single-channel half-track monaural; plays ½ track, full-track, 2-track and 4-track tapes; speeds, 3.7 and 7.5 ips; rewind time, 45 seconds for 1,200 feet; 3 motors, including hysteresis drive, mechanical flutter filter and dynamic balanced flywheel; instant source/tape monitoring, instant start/stop, separate record/P.B. amplifiers, automatic tape lifters, and separate microphone/line inputs, each channel; 36 pounds.\$495.00

Concertone Mark VII

Professional Stereo Tape Recorder, 3-heads, records and plays back two-track stereo and monaural; accommodates all reel sizes up to 10½ in.; electric push-button controls, solenoid operated; direct drive capstan motor, 4-pole induction type reeling motors; instantaneous monitoring, VU meter for checking recording and output levels; dual inputs for microphone and auxiliary sources with four separate level controls; 39 lbs. in carry case, record and playback preamp included \$940.00 With case, \$995.00.

AMERICAN MICROPHONE MFG. CO.

Model DR330 Microphone



Ribbon-dynamic type; frequency response 30 to 15,000 cps; cardioid, bi-directional, or omni-directional polar pattern; output level -57 db at 50 ohms impedance; impedance adjustable at 50, 150, and 250 ohms; supplied with 25' 2-conductor cable; overall height 6½"\$250.00

Tape Recorders, Tapes & Microphones

Model D204 Microphone

Dynamic type; frequency response 70 to 9,500 cps; output level: low impedance, -57 db; high impedance, -55 db; 4¾" long; with 6' shielded cable; less plug\$17.00

Model B204 Microphone

Ceramic type; frequency response 70 to 10,000 cps; output level -63 db; high impedance: 4¾" long; with 6' shielded cable; less plug\$16.00

Model D-11 Microphone

Dynamic type; designed for hand use; output level is -57 db; high impedance can be changed to low impedance by changing connector pin; frequency response 50-11,000 cps\$39.50

Model D-10 Microphone

Dynamic type; omni-directional general purpose; plastic diaphragm; 50 ohms impedance; frequency response 50-11,000 cps; output level is -57 db.\$29.50

Model D-10T Microphone

Similar to Model D-10 but with 40,000 ohms impedance\$33.00

Model D-12 Microphone

Dynamic type; extremely compact 3 25/32" long; 50 ohms impedance; frequency response is 70-12,000 cps; output level -57 db\$59.50

Model X204 Microphone

Crystal type; frequency response 70 to 10,500 cps; output level -60 db; high impedance: 4¾" long; with 6' shielded cable; less plug\$16.00

Model D44 Microphone

Dynamic type; frequency response 50 to 15,000 cps; output level -60 db at 50 ohms impedance; omni-directional; overall height 6¾"\$235.00

Model D33 Microphone

Dynamic type; frequency response 35 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; overall height 8¼"\$130.00

Model D22 Microphone

Dynamic type; frequency response 40 to 13,000 cps; omni-directional; output level -55 db at high impedance; impedance may be adjusted for either 50 ohms or 40,000 ohms; overall height 8¼"; 25' single conductor cable \$99.50

Model DR332 Microphone

Dynamic-ribbon type; frequency response 50 to 10,000 cps; cardioid polar pattern; output level -55 db at high impedance; output impedances are 50, 250, and 40,000 ohms; 25' single-conductor cable\$162.50

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 6½"; 25' single-conductor cable\$140.00

Model D4 Microphone

Dynamic type; frequency response 50 to 8,000 cps; output level -56 db at 50

Tape Recorders, Tapes & Microphones

ohms impedances; omni-directional over all height 4"; 12½' cable.....\$28.00

Model D4T Microphone

Dynamic type; frequency response 50 to 8,000 cps; output level -52 db at 40,000 ohms; omni-directional; height 4"; 12½' single-conductor cable \$31.00

AMPEX AUDIO CO.

Model 620 Amplifier-Speaker

Portable; matching amplifier unit for Model 600 Series; saddle-tan case; 10 watts\$189.50

Model 304 Amplifier-Speaker

Power output 40 watts, 80 watt peaks; includes 15" bass, 8" mid-range, 3" horn-type tweeter, crossover network; total harmonic distortion less than 0.75% at rated output; hum and noise 80 db below rated output; frequency response 20-50,000 cp; push-pull EL34 pentodes; requires speaker enclosure of 7 cu. ft.....\$295.00

Model 960 Stereo Recorder

Portable; stereo record and ½-track record; stereo playback (2-track stereo and 4-track stereo playback), ½-track and full track playback; 3 heads for erase, record, playback; lever shifts playback head from 2 to 4-track position; 7½ and 3¾ ips; frequency response from 30-20,000 cps at 7½ ips; flutter and wow under 0.2% and signal-to-noise down 55 db at 7½ ips; VU meter; takes 7" reels; mike and high level inputs with full mixing and level controls each; separate playback preamp for monitoring tape; playback head gap width is .000090"; in portable luggage-type case\$495.00
Model 952 (uncased).....\$449.50

Model 970 Monitor



Portable stereo tape system; same tape transport as Model 960 but with addition of 2-channel stereo amp and 2-7" oval speakers; records stereo and mono; plays back monaural, 2-track and 4-track stereo; erase, record, playback heads; luggage grey case.....\$595.00

Series 600 Professional Recorders

Available in 7½ or 3¾ ips, in ½-track record/play, or full-track record/play, or in stereo record/play (2-track only); frequency response 30-15,000 cps; signal-to-noise over 50 db at 3% harmonic distortion; separate erase, record, and playback heads; separate record and playback amplifiers; utter and wow below 0.17%; portable case or unmounted chassis for rack mounting.
Monophonic\$545.00
Stereo\$995.00

Model 910 (similar to Model 960 but with monaural record and 2- and 4-track stereo playback).....\$399.50

Model 952 Tape Deck (specifications similar to Model 960; gray finish).....\$449.50

Model 902 Tape Deck (monaural record and 2- and 4-track stereo playback; gray finish).....\$349.50

Model 2510 Portable Stereo System

Consists of Model 910 recorder and 2 Model 2010 amplifier-speaker units; provides monaural record and 2- and 4-track stereo playback.....\$749.50

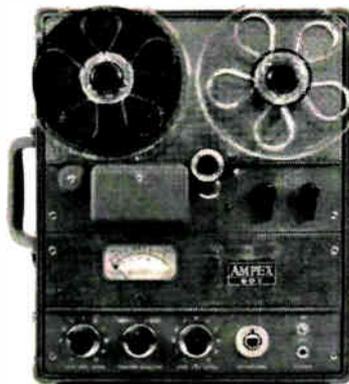
Model 2560 Portable Stereo System

Consists of Model 960 recorder and 2 Model 2010 amplifier-speaker units; provides stereo record and 2- and 4-track stereo playback.....\$849.50

Model 2010 Amplifier-Speaker

Combination amplifier-speaker to match Ampex portable recorders; 10-watt amplifier; sensitivity for rated output 0.18 volts; total harmonic distortion less than 0.5%; tone controls; input jacks; input selector for tape, TV, phono, tuner; 9"dx15"w 7½"h; 31 lb.....\$199.50

Model 601



Portable; full-track or half-track; 3 heads: erase, record, playback; 7½ ips; 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: 15½" h x 12½" w x 1½" below top plate; weight: less than 28 lbs in carrying case\$595.00

Model 601-2 Stereo Tape System

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; 8"x13"x24½"\$995.00

Model 620 Portable Amplifier-Speaker

Designed for use with Model 601 tape recorder; 10 watt amplifier with fre-



quency 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"x16"x8".....\$189.50

AMPEX MAGNETIC TAPE (ORR INDUSTRIES)

Irish Series 300 Recording Tape

Available on 1 mil Mylar, 1 mil and 1.4 mil acetate; reels are clear plastic 3", 4", 5", 5¾", 7".

Type 311 General purpose on 1 mil Mylar.

150'\$.65
600'\$ 1.75
1200'\$ 2.95

Type 321 Extended-play on 1 mil acetate allows 50% more recording.

225'\$.80
900'\$ 2.50
1200'\$ 4.25

Type 331 on 1.5 mil Mylar.

600'\$ 2.65
1200'\$ 4.25

Type 341 Extended-play on 1 mil Mylar.

225'\$ 1.00
900'\$ 2.65
1800'\$ 6.20

Type 351 Pretensitized .5 mil Mylar.

300'\$ 1.60
1200'\$ 5.45
2400'\$ 9.50

Ampex Series 500 Recording Tape

Available on .5 mil, 1 mil and 1.5 mil Mylar; 1 mil, 1.5 mil acetate; 5" and 7" reels.

Type 511 on 1.5 mil acetate.

600'\$ 2.80
1200'\$ 3.95

Type 521 on 1 mil acetate.

900'\$ 3.95
1800'\$ 5.95

Type 531 on 1.5 mil Mylar.

600'\$ 3.10
1200'\$ 4.70

Type 541 on 1 mil Mylar.

900'\$ 4.05
1800'\$ 6.65

Type 551 on .5 mil Mylar.

1200'\$ 5.50
2400'\$ 9.95

AMPEX PROFESSIONAL PRODUCTS CO.

Series 354 Professional Recorders

Two track stereo and monophonic erase, record and playback; three heads; two speeds: 7½-15 ips or 3¾-7½ ips; direct drive dual speed hysteresis synchronous motor plus two torque motors for feed and take-up; solenoid brakes; freq. response: ±2 db 30 to 18,000 cps at 15 ips, ±2 db 40 to 12,000 cps at 7½ ips, ±2 db 40 to 8,000 at 3¾ ips; flutter and wow: 15 ips below 0.15% rms, 7½ ips below 0.2% rms, 3¾ ips below 0.25% rms; operating modes relay-solenoid controlled by push buttons, plug-in remote control accessory available. chassis contains separate VU record meters and playback amplifiers for each channel; separate erase heads plus recording selector switch permits stereo or monophonic recording; "SAFE" position on selector prevents accidental erase; equalizers for NAB curve supplied; Inputs: two independent unbalanced bridge; plug-in balanced bridge or plug-in microphone preamps available or may be fed by stereo mixer; Output normally +4 dbm with maximum output of +22 dbm into 600 balanced or unbalanced load; independent heads and amplifiers permit tape to be monitored while recording; phone jacks provided to monitor either or both channels; rack space: transport 15¾", electronics 7", weight unmounted 80 lbs; console 48" high x 24½" wide x 28½" deep (155 lbs) portable (103 lbs) in two cases.

354-R Unmounted for rack.....\$1,775.00
 354-P Portable\$1,875.00
 354-C Console\$1,925.00
 40 db plug-in mic preamp (low imp) \$42.50

Series 300 Master Tape Recorders



Console or rack mounted; single and two channel ¼" tape width; two, three and four channel ½" tape width; six and eight track models available on special order; designed for master recording, optional sel-sync switching panel permits re-recording any given channel; synchronization to one or more adjacent channels producing stereo masters\$2150.00

Series 352 Tape Reproducer

Full track, half track, two track or two and four track models; plays prerecorded tapes for professional applications; playback functions are identical in reproduction quality to the 351 and 354 series recorders; accidental erasure to valuable tapes is impossible since no record or erase heads are employed; output: single and two track heads +4 dbm; 4-track head -2 dbm into 600 ohms balance or unbalance; rack space: transport 15¾"; single channel electronics 7"; two channel electronics 12¼".

352-U Full or half track, unmounted\$1,195.00
 352-2U Two track, unmounted\$1,485.00
 352-2/4U Two and four track, unmounted\$1,640.00
 6125-01 Console cabinet..... \$158.00

Series 351 Professional Recorder



Full track, half track, or two track stereo (2 track model not available in console); performance specifications are the same as Series 354 except signal to noise ratio on full track model is 60 db at 7½ and 15 ips; electronics: one 7 x 19" panel per channel with built-in microphone preamps, selector switch for mic, balance or unbalance line input; separate bias and erase oscillator, record amps and playback amps on each chassis; 4" VU meter with switch to read "record input," "playback output," "bias" and "erase"; NAB equalization standard, NAB-AME optional at extra cost; output: +8 dbm into 600 ohm balance or unbalance line (may be strapped to +4 dbm); rack space: transport 15¾" (58 lbs) electronics 7" per channel (18 lbs).

351-U Half or full track, unmounted\$1,475.00
 351-P Half or full track, portable\$1,575.00
 351-C Half or full track, console\$1,625.00
 351-2U Two track, stereo, unmounted\$1,995.00
 351-2P Two track, stereo, portable\$2,105.00
 31022-01 Remote control unit, wired \$66.00

Model 351

Console, rack mount or two case portable; erase, record, and playback heads; full track or half track: 7½ and 15 ips or 3¾ and 7½ ips; frequency response: 30 to 15,000 cps ±2 db at 15 ips, 30 to 15,000 cps ±4 db at 7½ ips, 50 to 7,500 cps ±2 db; wow and flutter: below 0.2% at 15 ips, below 0.25% at 7½ ips, below 0.3% at 3¾ ips; signal-to-noise ratio: (maximum record level to unweighted noise) 70 db at 7½ or 15 ips full track, 65 db half track, 60 db at 3¾ ips half track; playback timing accuracy: ±0.2%; VU meter; separate record and playback preamplifiers permit instantaneous comparison of incoming program with actual recording; headphones monitor jack; switched input for microphone or 600 ohm balanced or unbalanced line; accepts 10½" reels; VU meter can be used to read bias and erase current; rack space: panel, 19"; tape transport, 15¾" (58 lbs); electronic assembly, 7" (18 lbs); power supply, 3½" (8 lbs.)\$1475.00

Tape Recorders, Tapes & Microphones

Model MX 35 Two-Channel Mixer

Professional four-position two channel mixer; permits feeding any or all inputs to either channel A, Both, or channel B; inputs: four low imp microphone and two lines; outputs: two program amps feed bridging inputs of all Ampeg or other recorders; master gain (dual pot) may be switched to give overall control when more than one MX35 is employed allowing up to 16 microphone or 8 microphones and 8 lines to be mixed at one time; frequency response ±1db 30 to 15,000 ips; noise: 65 db below signal for inputs of -55-dbm; distortion: 0.2% with -39dbm mic input level, 1v output level; tubes: six EF86's and one 12AU7; 5¾" x 19" x 5¾" d (fits 5¼" rack space or portable case); (uncased).....\$395.00

AMPLIFIER CORP. OF AMERICA

Model 610 Series, "Magnetite"

Portable tape recorder: spring-wound motor; battery operated amplifier; single or dual track; single head for recording and playback; balanced fly-ball governor; 5" reel size; rewind indicator.

Model 610-A
 Dual track; 15/16 ips; 300-2500 cps; flutter 0.25%; 12 lbs.....\$275.00 Net
 Model 610-A (with VU meter)\$365.00 Net

Model 610-B
 Dual track; 17/8 ips; 100-3,000 cps; flutter 0.2%; 12 lbs; 11" x 8" x 5".\$225.00 Net
 Model 610-B (with VU meter)\$365.00 Net

Model 610-C
 Dual track; 3¾ ips; 50-5,000 cps; flutter 0.15%; 16 lbs.....\$255.00 Net
 Model 610-CV (with VU meter)\$315.00 Net

Model 610-TD
 Dual track; 7½ ips; 50-7,500 cps; flutter 0.1%; 17 lbs.; 11" x 10" x 7".\$275.00 Net

Model 610-TV (with VU meter)\$365.00 Net

Model 610-SD
 Single track; 7½ ips; 50-7,500 cps; flutter 0.1%; 17 lbs.; 11" x 10" x 7".\$295.00 Net

Model 610-DV (with VU meter)\$385.00 Net

Model 610-E
 Single track; 15 ips; 50-15,000 cps; flutter 0.1%; 17 lbs.....\$335.00 Net
 Model 610-EV (with VU meter)\$425.00 Net

Two- and three-speed models available; \$335.00 plus \$20.00 per speed.

Four-Speed "Magnetite" Models
 610-DM Net (11/16, 17/8, 3¾, 7½ ips)\$355.00
 610-EM (17/8, 3¾, 7½, 15 ips)\$395.00

Magnetite Continuous-Loop Cartridge Tape Recorders



Tape Recorders, Tapes & Microphones

Records and plays up to 8 hours per cartridge; facilities for stereo record/play, continuous background music, automatic time delay programs, synchronized sound for slides and films, volume expansion control; all units have synchronous inside-out motor with electrically operated start-stop controls; transistor circuits; overall height 3 1/4". Model 920—Series available in record/play and play only; full track, dual track, or four track. Model 930 Series has same track choice as 920 with choice of 5 speeds.

Model W-610 Series, "Weathertite Magnemite"

Portable unit; single or dual track; spring operated motor; battery operated amplifier; single head for recording and playback; flyball governor; 5" reel size; playback through earphones.

Model W-610-A
Dual track; 15/16 ips; 200-2,500 cps. \$305.00
W-610-AV (with VU meter) \$395.00
Model W-610-B
Dual track; 1 7/8 ips; 100-3,000 cps. \$255.00
W-610-BV (with VU meter) \$345.00
Model W-610-C
Dual track; 3 3/4 ips; 50-5,000 cps.
W-610-CV (w. VU intr.) \$375.00 Net
Model W-610-TD
Dual track; 7 1/2 ips; 50-7,500 cps. \$305.00
W-610-TD (with VU meter) \$395.00
Model W-610-SD
Single track; 7 1/2 ips; 50-7,500 cps. \$325.00
W-610-SD (with VU meter) \$415.00
Model W-610-E
Single track; 15 ips; 50-15,000 cps. \$365.00
W-610-EV (with VU meter) \$455.00

Model 611 Series Stereophonic

Stereo/monaural record/playback; specs similar to Model W-610 series.
Model 611-C (3 3/4 ips) \$405.00
Model 611-D (7 1/2 ips) \$445.00
Model 611-E (15 ips) \$475.00

Magneraser Model 200C

Bulk tape eraser: operating voltage: 100 to 130 volts; operating frequency: 25



to 60 cps; 2" high, 4" diameter.
Model 200C \$18.00 Net
Also available: Model 220C, identical in price and specifications except for operating voltage of 200 to 260 volts.

ASTATIC CORP.

Model 988 Vogue Microphone

Dynamic type; either directional or omni-directional, depending on position

of head; frequency response 40-20,000 cps.; impedance selector 50, 150, 250 ohms; output -57 db. at 1mw/ 10 dynes/cm.²; complete with desk-floor stand adaptor; height 9 11/32".....\$150.00

Model 335 Microphone



Dynamic type; frequency response 60-12,000 cps.; high and low impedance models; output -57 db. at 1 volt/dyne/cm.²; complete with lavalier and stand adaptor; 8' extra shielded, single conductor cable.

Model 335L (low impedance).....\$23.50
Model 335H (high impedance).....\$26.50

Model 333 Microphone

Ceramic type; high impedance; frequency response 30-10,000 cps.; output -58 db. at 1 volt/dyne/cm.²; complete with lavalier and adapter.....\$17.50

Model 332 Microphone

Crystal type; output impedance and frequency response similar to Model 333.....\$17.90

AUDIO DEVICES, INC.

Colored Audiotape

Made on 1 1/2 mil Mylar base; green and blue colors for identification of spliced sections; eliminates need for leaders.

Type 151, 150 ft., 3" plastic reel, \$0.70
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 2551H, 2500 ft., NARTB hub \$8.50
Type 2551R, 2500 ft., 10 1/2" aluminum reel \$10.50
Type 2551FS, 2500 ft., 10 1/2" fiberglass reel \$10.90
Type 5051H, 5000 ft., NARTB hub \$17.00
Type 5051R, 5000 ft., 14" aluminum reel \$22.10

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

Master Low Print-Through Audiotape

Made on 1 1/2 mil Mylar base; durable in wide temperature range.

Type 671M, 600 ft., 5" plastic reel \$3.20
Type 1271M, 1200 ft., 7" plastic reel \$5.10
Type 2571HM, 2500 ft., NARTB hub \$10.00
Type 2571RM, 2500 ft., 10 1/2" aluminum reel \$13.50
Type 2571FS-M, 2500 ft., 10 1/2" fiberglass reel \$13.50

Audio Self-Timing Leader Tape

Mylar base; spaced markings permit rate timing of leader intervals; 100 ft.\$5.55

Model C560 Snap-Load Cartridge Audiotape

Made on 1 mil Mylar; 2 hubs in plastic magazine: 560 ft.....\$4.50

Super-Thin Audiotape

Made on tempered Mylar; allows twice as much recording per reel; stronger than double length tape.

Type 331T, 300 ft., 3" plastic reel self mailer.....\$1.60
Type 1231T, 1200 ft., 5" plastic reel \$5.45
Type 2431T, 2400 ft., 7" plastic reel \$9.50
Type 4831T-R, 4800 ft., 10 1/2" aluminum reel \$22.00
Type 4831T-FS, 4800 ft., fiber-glass reel \$22.00

Master Low Print-through Audiotape

Made on 1 1/2 mil acetate base.

Type 651M, 600 ft., 5" plastic reel \$2.75
Type 1251M, 1200 ft., 7" plastic reel \$4.30
Type 2551HM, 2500 ft., NARTB hub \$9.80
Type 2551RM, 2500 ft., 10 1/2" aluminum reel \$12.50
Type 2551FS-M, 2500 ft., 10 1/2" fiberglass \$12.50
Type 5051HM, 5000 ft., NARTB hub \$19.55
Type 5051R-M, 5000 ft., 14" aluminum \$26.00

Plastic Base Audiotape



Professional-quality recording tape; maximum fidelity, uniformity, frequency response and freedom from noise and distortion; 1 1/2-mil acetate; available on blue or green base for instant visual identification; for green add "G" to type No., for blue add "B".

Type 151, 150 ft., 3" plastic reel.....\$0.70
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 2551H, 2500 ft., NARTB hub \$8.50
Type 2551R, 2500 ft., 10 1/2" aluminum reel \$10.90
Type 2551FS, 2500 ft., 10 1/2" fiberglass reel (RETMA).....\$10.90
Type 5051H, 5000 ft., NARTB hub \$17.00
Type 5051R, 5000 ft., 14" aluminum reel \$22.10

Plastic-Base "LR" Audiotape

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 3641H, 3600 ft., NART Hub	\$10.00
Type 3641R, 3600 ft., 10½" aluminum reel.....	\$12.85
Type 3641FS, 3600 ft., 10½" fiberglass reel (RETMA).....	\$12.85
Type 7241H, 7200 ft., NARTB Hub	\$20.00
Type 7241, 7200 ft., 14" aluminum reel.....	\$26.00

"LR" (Longer Recording) Audiotape

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 in self-mailer pkg.....	\$1.00
Type 961, 900 ft., 5" plastic reel.....	\$3.75
Type 1861, 1800 ft., 7" plastic reel	\$6.20
Type 3661H, 3600 ft., NARTB Hub	\$12.00
Type 3661R, 3600 ft., 10½" aluminum reel.....	\$14.40
Type 3661FS, 3600 ft., 10½" fiberglass (RETMA) reel.....	\$14.40
Type 7261H, 7200 ft., NARTB Hub	\$24.00
Type 7261R, 7200 ft., 14" aluminum reel.....	\$30.00

Audiotape on 1½-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., NARTB Hub	\$ 8.30
Type 2571R, 2500 ft., 10½" aluminum reel.....	\$11.20
Type 2571FS, 2500 ft., 10½" fiberglass reel (RETMA).....	\$11.20
Type 5071R, 5000 ft., NARTB Hub	\$16.65
Type 5071R, 5000 ft., 14" aluminum reel.....	\$24.50

Super-thin Audiotape

Made on ½-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" plastic reel.....	\$3.50
Type 2431, 2400 ft., 7" plastic reel.....	\$6.50

Audio Head Demagnetizer



Demagnetized tape recorder heads; requires only plug-in to conventional a.c. outlet.....

AUDIO-MASTER CORP.

Butoba Model TS6

Hand-wound, spring-driven motor; speeds are 3¾ and 1⅞ per second; frequency response 50 to 9,000 cps ±3 db; dual track; contains battery-

operated transistorized playback preamp and amplifier; converter available for use with a.c. current; two inputs; push-button operation; recording time indicator; magic eye; accommodates 5" reels; motor operates up to 40 minutes between windings and may be wound while unit is operating; 12" x 15" x 4¾"; 20 lbs.....

**BELL SOUND DIVISION
(Thompson Ramo Wooldridge,
Inc.)**

Stereo Tape Transport



Three motor drive; available in several recording combinations: tape heads 4-track with 3.5 mv. output, 2-track with 5 mv. output; both heads have .00017" gap; 7" reel size capacity; rewind and forward; speeds 3¾ and 7½ ips; flutter less than 0.2% at 1½ ips.; tape lifter; transport used in combination with Model RP-320 preamplifier; 15¼" x 13½" x 5".

Model T-310 Mono record/playback	\$129.95
Model T-313 Two-track Stereo record/ playback	\$169.95
Model T-321 Two- and 4-track stereo playback	\$159.95
Model T-323 Two-track stereo record/ playback; 4-track stereo play- back	\$184.95
Model T-333 Four-track stereo record/ playback; 2-track stereo play- back	\$199.95
Model T-337 Four-track stereo record/ playback; 2-track stereo play- back; includes Model RP-320 pre- amplifier	\$334.95
Model T-338 Same as Model T-337 with carrying case.....	\$369.95

Model RP-320 Tape Recorder Preamplifier

For 2 and 4-track stereo recording transports; record level meters; bias-erase oscillator; record equalization automatic with transport speed keys; sensitivity record—2.5 mv. for 63 db. gain at 1 kc.; sensitivity playback 68 db. gain; harmonic distortion less than 1% at 12 volts playback; frequency response 18-18,000 cps. record; 2 high impedance inputs for mic., 2 high level for tuner; 4 outputs; tubes are 2-12AX7, 2-12AT7, 12AU7, EZ80; 6½"x8"x12¾"

Model 45A1 Slim-Line Microphone

Crystal type; frequency response 30-15,000 cps; output -55 db.....

Models RT-204 and RT-205

Dual track; monaural record-erase-playback; speeds are 3¾ and 7½ ips; three heavy-duty 4-pole motors; frequency response is 30 to 12,000 cps at 7½ ips; flutter and wow are less than ¼ of 1% at 7½ ips; neon light level indicator; uses 7-inch reel; contains playback preamp, 5-watt amplifier and 6" speaker; outputs for external amplifier or speaker; tape lifted from heads during wind and rewind.

RT-204	\$179.50
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**Tape Recorders, Tapes
& Microphones**

RT-205 IB monaural record/erase with stereophonic playback, inline heads	\$224.95
RT-205 OB monaural record/erase with stereophonic playback, offset heads	\$209.95
302-D portable amplifier-speaker; 5 watt amplifier, 6"x9" woofer, 3½" tweeter	\$69.95
305-D cabinet type amplifier-speaker; 5 watt amplifier with 60 to 15,000 cps response; volume and tone controls.	\$89.95

Model BT-76 Recorder

Three-speed (7½, 3¾, and 1⅞ ips) dual track monaural record/stereo playback recorder in portable carrying case; frequency response 30 to 12,000 cps at 7½ ips; wow and flutter less than 0.25% at 7½ ips; built-in 3-watt amplifier and 6"x9" speaker; 3 inputs with mixing facilities; outputs for external amplifier and speaker; tubes are 12AX7, 6C4, 6V6GT, 6X5GT, 2-ECC83; 16¾"x15"x9⅞"

Model T-203 Tape Deck



Available in several monaural-stereo combinations; stereo units may be used for both inline and offset arrangements; specifications with Bell accessories: frequency response 40-10,000 cps; ±2 db; 20-15,000 cps ±4 db (record and playback); speeds are 7½ and 3¾ ips; flutter less than .25% at 7½ ips; overall distortion less than 1% at maximum recording level; signal-to-noise better than 50 db for a recording having 3% third harmonic distortion; tape lifter removes tape from heads during stop and wind-rewind; up to 7" reels; three 4-pole motors; electro-dynamic braking, no belts, pulleys, clutches or mechanical brakes.

Model T-200 (monaural erase/record playback tape deck)	\$109.95
Model T-201 (monaural and stereo inline-offset playback)	\$119.95
Model T-202 (monaural erase/record playback; stereo inline-offset play- back)	\$129.95
Model T-203 (monaural erase/record playback; stereo inline-offset erase/ record playback)	\$149.95
Model T-206 (Model T-202 tape transport, Bell P-100 preamplifier, and Bell RP-120 recording-play- back preamplifier in 200 CC port- able carrying case, 8¾"h x17¼"w x16½"d.)	\$259.95
Model RP-120 record/playback pre- amplifier.....	\$59.95

Tape Recorders, Tapes & Microphones

Tape Cartridge Recorder



Plays RCA-type tape cartridge; speed 3 3/4 ips; flutter less than 0.25% rms; power output 7 watts per channel.
Model 401—(basic deck)\$99.95
Model 402—(deck and amplifier).....

\$129.95
Model 403—(deck and record/play amp)\$199.95
Model 404—(same as above in cabinet)\$229.95
Model 406—(same as above in portable case)\$299.95

BIB (Ercona Corp.)

Tape Splicer



Cuts and trims tapes when splicing is necessary; simple to operate; has tape clamps to hold tapes in place while splicing\$3.95

BRENELL (Fen-Tone Corp.)

Brenell Pro-2 Tape Pre-amplifier

Tape record/playback preamplifier designed for use with Brenell tape deck; NARTB playback equalization for 3 3/4, 7 1/2, and 15 ips; RIAA record equalization; VU meter; frequency response: 30 to 17,500 cps ± 2 db; signal-to-noise ratio: 60 db; inputs: high impedance microphone, magnetic phono (10 millivolt sensitivity), high level; output: 1 volt\$111.50

Brenell Models 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; (monaural)\$144.50
Mark IVB. 1 upper, 1 lower track erase head; 1 upper, 1 lower track record/playback head; (staggered stereo)\$182.87

CAPPS & CO., INC.

Model CM 2001 "Professional" Microphone

Condenser type; omni-directional; frequency response 30 to 15,000 cps ± 3 db; impedance 100,000 ohms or grid input; complete with power supply—preamplifier and 20 feet of No. 51 cable; machined brass and aluminum case, black and chrome; precision design and manufacture throughout; dimensions: mike. 8"x1 1/8"; power supply 6"x6"x7".\$150.00

Studio Model (as above, plus choice of 30 ohms, 250 ohms, and high impedance): 25 feet No. 51 cable with attached swivel; Cannon connectors P-6-CG-11 and P-6-CG-12; size 8 1/4"x1 1/8"; model CM 2030, 30 ohms; CM 2250, 250 ohms. CM2011\$225.00

Model CRBB Crystal Microphone

Omnidirectional; output — 54 db.; frequency response 50-12,000 cps.; adjustable bass boost; high impedance...\$24.00

COLLARO (ROCKBAR CORP.)

Studio Tape Transport

Speeds are 7 1/2, 3 3/4", 1 7/8 ips; 3-motor drive; 3 tape heads; takes 7" reels; wow and flutter less than 0.2% combined; band-type brakes\$100.00

COUSINO ELECTRONICS CORP.

Model PR-100 Mag-Matic Tape Recorder

Cartridge magazine loaded; single spindle 3 3/4" ips; repeats from 12-28 minutes each cycle; built-in 5" speaker.\$225.00

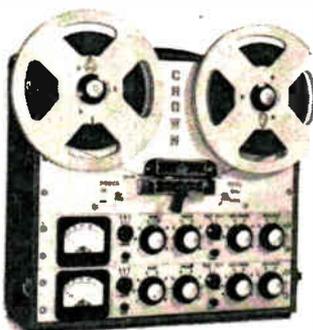
Model U-310 Tape Cartridge Magazine fits Model PR-100 Recorder; available in long or short loops.....\$9.75 to \$36.50

CROWN

(International Radio and Electronics Corp.)

Gold "CROWN" Modular Components All Units:

Head Assemblies:



13 different record, playback, and combination head assemblies such as: PSH, records and plays two track in-line Stereo; C4TSH, plays quarter-track Stereo; RP4P2, records and plays quarter-track Stereo and play two track Stereo.

Guaranteed Specifications: Frequency Response (Record and Playback) Professional Standards: 50 to 28,000 cps ± 2 db at 15 ips, 40 to 17,000 cps ± 2 db at 7 1/2 ips, 30 to 9,000 cps ± 3 db at 3 3/4 ips; signal-to-noise ratio: 57 db at 15 ips, 54 db at 7 1/2 ips, 51 db at 3 3/4 ips; professional NAB standard: below 3% harmonic distortion.

Quarter-Track performance standards: (Record and playback) 50 to 28,000 cps ± 2 db at 15 ips, 40 to 17,000 cps ± 2 db at 7 1/2 ips, 30-9,000 cps ± 3 db at 3 3/4 ips; signal-to-noise ratio: 56 db at 15 ips, 53 db at 7 1/2 ips, 49 db at 3 3/4 ips, professional NAB standard: below 3% harmonic distortion; all 19" rack mount panels; satin silver aluminum anodized front panels; satin gold aluminum anodized sub-chassis; all panel lettering and markings depth engraved; mechanical, visual, and electrical record locks.

GCT Transport

High current silicon diode power supply. 3 speeds: 15, 7 1/2, and 3 3/4 ips, others available on request; differential magnetic brakes, magnetic payoff, and 2 position magnetic torque take up; 10 1/2 inch reels; fast forward, rewind: 34 sec. per 1200 feet of tape; forced air cooling and adjustable micro-sync timing; maximum flutter and wow: 0.06% at 15 ips, 0.09% at 7 1/2 ips, 0.18% at 3 3/4 ips; timing: 99.5%, standard shaded pole motor; 99.9%, high torque synchronous motor. (Only 11 moving parts in transport.) 19"x10 1/2"x7 1/2", 32 lbs.\$190.00

Model 701 Monaural "Broadcaster"

Full track record/playback; synchronous capstan motor; 3-speed; 10 1/2" reel capacity\$544.00

Model 702 Monaural "Prince"

Dual track record/play; standard motor; 3-speed; 10 1/2" reel capacity.\$460.00

Model 702S with 2-track stereo play complete with extra pre-amp for playback only\$520.00

Model 712

2-track stereo record/play, mono record/play; standard motor; 10 1/2" reel capacity\$710.00

Model 714 C "Stereo-X"

1/4 track stereo record/play, mono (4-track) record/play; standard motors; 3-speeds; 10 1/2" reel capacity.....\$730.00

Model 751

Monaural player; one direction, full track play; 3-speeds; cathode follower output; standard motors.....\$299.00

Model 752

Stereo player; one direction 2-track stereo play; 3-speeds; 2 cathode follower outputs; standard motor; 10 1/2" reel capacity\$352.00
Model 752 less stereo pre-amp...\$295.00

Model 754C

Model 752 with combination head play for 2 or 4-track stereo, mono play.\$372.00

Model 754C less stereo pre-amp \$315.00

Model A-51 Crown-O-Matic
 Monaural; 3 motors including hysteresis synchronous drive; automatic photo cell self-reversing system; plays continuously for 16 hours; takes 14" reels; fast forward and rewind; 7½ and 3¾ ips; signal-to-noise ratio 50 db at 7½ ips\$695.00
 Model A-54 (Stereo).....\$695.00

RPA Record-Play Amplifier

2 mike inputs; bass and treble boost; recording bias check; 3 speed record-play equalization; DC filaments; 3" VU meter; cathode follower output level 1.0 volt at 0 VU; response ± ½ db. 20 to 30,000 cps; less than 0.2% distortion for 1 V output; hum and noise: 60 db below -55 db input on mike channel and 75 db below -20 db input on phono channel.....\$190.00

"Gold CROWN Imperial"

Portable; monaural recorder, monaural and Stereo player; components: transport, one record play preamplifier, head assembly, monaural 15 watt power amplifier.
 Record and play full-track.....\$540.00
 Record and play half-track.....\$520.00
 Record and play half-track and play 2-track Stereo\$551.00
 Record and play half-track and play 2-track or quarter-track Stereo\$575.00
 30 watt amp. in place of above 15 watt amp, add \$30.00 to above prices.
 Carrying Case\$ 52.00

"Gold CROWN Royal"

Stereo and monaural recorder and player; components: transport, two record play preamplifiers, head assembly, double 30 watt power amplifier.
 Record and play 2-track Stereo\$885.00
 Record and play quarter-track Stereo\$885.00
 Record and play 2-track Stereo or play quarter-track Stereo.....\$905.00
 Record and play quarter-track Stereo or play 2-track Stereo.....\$905.00
 Carrying case\$ 75.00

DACTRON

(Int'l Magnetic Electronics Co.)

Model 4902 Steradapter Kit

Converts monaural playback unit to stereo in-line playback; attaches to side of recorder; consists of stereo playback head, tape-guides, pressure plate, and mounting hardware; two RCA jack tape head outputs\$18.00

Model 4501 Tape Playback Preamplifier

Battery-operated transistor preamplifier for use with Dactron heads; volume control; includes battery.\$18.75

DUOTONE

Duotape

Magnetic sound recording tapes; cellulose acetate or Dupont Mylar base; reels are polystyrene and have NARTB hubs; either 5" or 7" sizes.
 5-600A 1.5 mil plastic.....600'.....\$2.25
 5-900A 1.5 mil plastic.....900'.....\$3.50
 5-900M .5 mil Mylar.....900'.....\$3.75
 5-1200M .5 mil Mylar.....1200'.....\$5.00
 7-1200M 1.5 mil plastic.....1200'.....\$3.50
 7-1800A 1 mil plastic.....1800'.....\$4.95
 7-1800M .5 mil Mylar.....1800'.....\$6.10
 7-2400M 5 mil Mylar.....2400'.....\$8.75

Model MIC39-1 Lipstyk Microphone

Can be used as hand mike, desk stand, or hanging mike; omnidirectional polar

response; sensitivity 62 db.; overall length 4¼"; diameter 1⅛".....\$20.00

DYNACO

Models 50 and 53 Microphone



Ribbon type bi-directional; impedances 50, 250, and 40K ohms; model 53 has screwdriver-operated selector switch; polar pattern pickup; frequency response ± 2.5 db. 30-13,000 cps.
 Model 50.....\$49.95
 Model 53.....\$59.95
 Stereo Spacer Mount.....\$14.95

EICO

(ELECTRONIC INSTRUMENT CORP.)

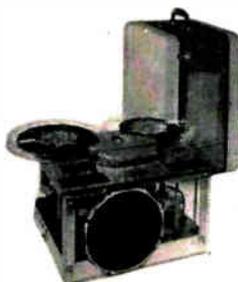
Model RP-100 Tape Deck



Provides stereo/mono ¼-track, record, playback erase; also ½-track stereo/mono playback; speeds 7½ and 3¾ ips; takes 7" reels; separate record/playback heads; separate record/playback electronics to monitor while recording; permits sound-on-sound recording; dual meters; push-button controls; rewind and fast forward 1200' per minute; frequency response 30-17,000 cps at 7½ ips, 40-15,000 cps at 3¾ ips; timing accuracy 0.3%\$395.00
 Model RP-100K (semi-kit includes transport assembled control electronics and stereo playback amplifiers in kit form).....\$289.00

ELECTRONIC APPLICATIONS, INC.

Revox Model D-36 S



Tape Recorders, Tapes & Microphones

Portable stereo; two speeds (3¾ and 7½ ips) three motors; separate recording and playback amplifiers; wow and flutter at 7½ ips .15-.20% max; frequency response at 7½ ips 40 to 15,000 cps ± ½ db. at 3¾ ips 60 to 8,000 cps; signal to noise 50 db or better at normal levels; 6 watt amplifier; 8" coax speaker; push button operation; tuning eye recording level indicator; tape counter; end of tape switch-off; connections for external speaker, amplifier, or remote control; up to 10" reels; overall size in carrying case 18⅛"x11¼"x13⅜"; 43 lbs.\$429.00

Model D248 Microphone

Dynamic directional; frequency response 30-16,000 cps; output -75 db.; impedance 200 ohms; includes bass attenuation switch.....\$165.00

Model D258 Microphone

Dynamic directional; has swivel frame; frequency response 30-15,000 cps; impedance 60 ohms; output -78 db.\$148.50

Model D308 Microphone

Dynamic directional; can be adapted to omnidirectional, ribbon microphone with figure 8, or cardioid pattern; frequency range 30-15,000 cps; output -78 db.; 10¼"x2½"x3⅞".....\$300.00

Model D368 Microphone

Dynamic directional; for studio use; output impedance 150 ohms.....\$450.00

Model D458 Microphone

Dynamic directional; has swivel mount; frequency response 30-15,000 cps.\$485.00

Model D12 Microphone

Dynamic directional; frequency response 40-12,000 cps.; output -78 db.; 5⅝"x2⅞".....\$135.00

Model D15 Microphone

Dynamic directional; talk-back type can be used as speaker; for close talking cardioid pattern; available with built-in switch; frequency response 15-15,000 cps; hi and lo impedance.
 Model D15-60 (no speaker switch).\$66.00

Model D15-60-g (speaker adaptation).\$80.00

Model D17 Microphone

Dynamic directional; frequency response 50-15,000 cps; hi and lo impedance; output -78 db.; 4⅝"x1¾".\$85.75

Model D208 Microphone

Dynamic directional; frequency response 30 15,000 cps; output impedance 60 ohms.....\$139.50

Model D7 Microphone

Omnidirectional dynamic; frequency range 100-10,000 cps; output -73 db.; 200 or 50,000 ohms impedance; 3⅛"x2"x1¼".....\$19.75

Model D9 Microphone

Dynamic omnidirectional; frequency response 80-10,000 cps; output -74 db.; 200 or 50,000 ohms impedance....\$16.00

Model D11N Microphone

Dynamic; cardioid response; has bass attenuation switch; 200 or 45,000 ohms impedance; output -58 db.; frequency response 60-13,000 cps.....\$34.95

Model D198 Microphone

Dynamic; cardioid pattern; frequency response 40-16,000 cps; 200 or 50,000

Tape Recorders, Tapes & Microphones

ohms impedance; low impedance output -75 db; high impedance output -52 db; head dia. 1 3/8"\$68.00

Model D88 Stereo Microphone

Dynamic directional; frequency response 80-15,000 cps.; output same as Model D19B both high and low impedance; double cardioid pattern; 5 7/16" x 2 1/4".
Model D88 -200 (low impedance).....\$72.00

Model D88 Hi-Z.....\$77.50

Model C-12 Condenser Microphone

Choice of 9 directional patterns including hypercardioids; frequency range 30-20,000 cps; sensitivity 1 mv/ubar; output -60 db; 200 or 50 ohms impedance; 16 7/8" x 1 3/8".....\$650.00

Model C-24 Condenser Stereo Microphone

Two condenser microphones using separate outputs; for broadcasting or recording stereo; specifications same as Model C-12.....\$900.00

Model C28A Miniature Condenser Microphone

Directional; 30-20,000 cps; output -75 db; impedance 200 or 50 ohms; 6072 tube; length 6 7/8", dia. 1".....\$350.00

Model C29A Microphone

Similar to Model C28A except length 18" and capsule at angle of 45° to vertical.....\$379.50

Model C30A Microphone

Similar to Model C28A except length 3' 10".....\$425.00

Nagra III B

Portable transistorized tape recorder; 3 heads; 3 3/4, 7 1/2 and 15 ips; speed constancy 0.2% or better; wow and flutter 0.1% at 15 ips or 0.2% at 7 1/2 ips; frequency response 30 to 15,000 cps ± 2 db at 15 ips, 40 to 12,000 cps ± 2 db at 7 1/2 ips, 50 to 8,000 cps at 3 3/4 ips; signal-to-noise 55 db or better; accommodates 7" reels; meter for battery condition and for recording level; output 3 volts at 600 ohms balanced; self-contained monitor speaker; built-in speech filter; 2 line mixers; motor speed servo-controlled; operates from any 12-volt source, self-contained batteries, or all voltage mains; NARTB or CCIR recording characteristics; accessories include leather case and separate mixer for 4 or 8 sources; accessories available at additional charge.....\$1,045.00

ELECTRO-SONIC LABS

Model AT1 Microphone

Omni-directional moving-coil microphone; frequency response 30 to 10,000 cps ± 3 db; internal impedance 200 ohms; output level -53 db re 1 mw/10 dynes/cm²; transducer is shock mounted on base of stand; complete with stand and detachable baffle plate; height (adjustable): 3' to 5'; base diameter: 6 3/4"; weight: 3 1/2 lb.\$80.00

Model AT2 Microphone

Omni-directional table-model moving-coil design; frequency response 50 to 10,000 cps ± 3 db; internal impedance 200 ohms; output level -55 db re 1 mw/10 dynes/cm²; base length 18"; base diameter 2 1/2"; weight 1 1/2 lb.....\$79.50

Model MC1 Microphone



Omni-directional table-model moving-coil microphone; frequency response 50 to 15,000 cps ± 3 db; internal impedance 200 ohms; output level -47 db re 1 mw/dynes/cm²; 4 3/4" x 1 13/16" x 1 13/16"; weight: 8 oz.\$42.50

Model MC2 Microphone

Omni-directional outdoor moving-coil microphone; frequency response 50 to 13,000 cps ± 3 db; internal impedance 200 ohms; output level -47 db re 1 mw/10 dynes/cm²; designed for extreme weather conditions; may be hand-held or used with optional extra base; dimensions (including base): 5" x 2"; weight (including base): 14 oz; less base.....\$63.00

MC2A Base\$16.50

Model MC4 Microphone

Omni-directional moving-coil microphone; frequency response 100 to 10,000 cps ± 5 db; internal impedance 200 ohms; output level -47 db, 6 mv/ubar; reference level 1 mw/10 dynes/cm²; may be hand-held or supported on built-in folding stand; 3" x 2 1/2" x 1 1/2"; weight: 7 oz.\$19.25

Model MC4S (with on-off switch)\$21.00

Model MC4H (with 200,000-ohm impedance for 1 megohm load).....\$21.60

Model MC5 Microphone

Omni-directional, moving-coil speech microphone; internal impedance 200 ohms; speech output 4 mv; mounted in molded synthetic rubber housing usable as table stand; 3" x 2" x 2"; weight: 5 oz.\$14.60

Model MC5H (with built-in step-up transformer: 200,000-ohm internal impedance, 100 mv speech output) \$17.00

Model NC1 Microphone



Noise-cancelling, cardioid, moving-coil microphone; frequency response 50 to 10,000 cps; internal impedance 200 ohms; normal speech output 4.5 mv shock resistant; 7 1/8" x 2 3/8".....\$48.75
Model NC1S (with on-off switch)\$53.50

Model NC2 Microphone

Noise-cancelling, cardioid, moving-coil microphone; insensitive to sound originating at distance; frequency response 200 to 10,000 cps; internal impedance 200 ohms; normal speech output 2.5 mv; hand-held; shock-resistant; 5" x 2"; weight 6 1/2 oz.\$36.50

Model MC2S (with on-off switch)\$40.50

Model SC403 Microphone

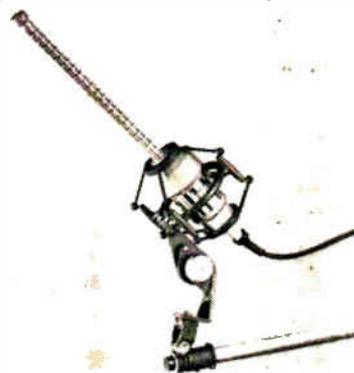
Super-cardoid microphone; frequency response 50 to 12,000 cps ± 3 db; internal impedance 200 ohms; output level -50 db, 2.2 mv/ubar; reference level 1 mw/10 dynes/cm²; designed for use under difficult acoustic conditions; may be hand-held, table-supported on built-in folding stand, or mounted on camera tripod; 2" x 1 1/2" x 3 3/4".....\$25.50
Model SC403H (With 45,000-ohm impedance)\$28.00

Model PI Microphone

Directional moving-coil microphone; frequency response 50 to 13,000 cps ± 3 db; internal impedance 200 ohms; sensitivity at 1,000 cps 0.06 microvolts/ubar; maximum sensitivity variation ± 3 db; output level -56 db re 1 mw/10 dynes/cm²; stand; arm length: 44 3/4"; height (adjustable): 3' to 5'; weight (including stand): 15 lb.\$176.50

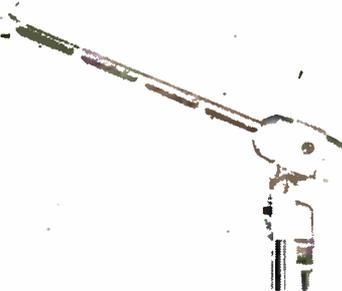
ELECTRO-VOICE, INC.

Model 642 Microphone



Dynamic directional; can be used with boom; frequency response 30-10,000 cps; impedance 50, 150, 250 ohms; output -48 db; length 17 7/8" x 3 3/16".....\$390.00

Model 644 Microphone



Directional dynamic; frequency response 40-12,000 cps; 150 ohms or high impedance; output -53 db; length 16", dia. 2 5/16".....\$110.00

Model 712 Microphone



Ceramic; frequency response 70 to 7000 cps; output -55 db; high impedance; styron case, gray moisture sealed; 5 foot cable; size 3" x 2 1/4" x 1 3/8"; weight 4 oz.\$7.50

Model 652 Microphone

Dynamic; for close hand use; small or large baffle (Model 652A); frequency response 80-8000 cps; matches all low impedances 50-250 ohms.....\$120.00

Model 924 Lavalier Microphone



Crystal; for chest or hand use; frequency response 60 to 8000 cps; output -60 db; high impedance; neck cord and clips included; satin-chrome; 18 foot cable; size 3 1/8"x1 1/4"; weight 8 oz.....\$20.00

Model 926 Slim Microphone



Crystal; general stand use; frequency response 60 to 8000 cps; output -60 db; high impedance; satin-chrome finish; 5/8"-27 thread; 18 foot cable; size 6 3/4"x1 1/4"; weight 11 oz.....\$29.50

Model 611 "Mercury" Microphone

Dynamic; omnidirectional; frequency response 50 to 9000 cps; output -55 db; available in 150 ohms or high impedance; low impedance balanced to ground; on-off switch; built-in MC-3 connector; satin chrome; 18 foot cable; size 6 1/4" x 3 1/8" x 2 3/8"; weight 1 1/4 lbs.....\$45.00

Model 911 Mercury "Microphone"

Crystal version of Model 611; frequency response 50 to 9000 cps; output -50 db; high impedance; built-in MC-1 connector; 18 foot cable; weight 1 1/4 lbs.....\$32.50

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 3/8"-27 thread; satin chrome; 18 foot cable; size 7 1/2"x1 1/4"; weight 15 oz.....\$57.00

Model 630

Dynamic; omnidirectional; frequency response 60 to 11,000 cps; output -55 db; available in 150 ohms or high impedance; on-off switch; built-in MC-3 connector; unaffected by temperature or humidity; satin-chrome; 18 foot cable; size 6 1/4"x2"; weight 1 lb.....\$52.50

Model 635 Broadcast

Dynamic, omnidirectional; frequency response 60 to 13,000 cps; output -55 db; impedance switch 50-250 ohms; 90° head tilt hinge; Cannon XL-3 connector; 3/8"-27 thread; satin chrome; 18 foot cable; size 6 1/4"x2"; weighs 1 lb.....\$82.00

Model 636 "Slimair" Microphone

Dynamic; omnidirectional; frequency response 60 to 13,000 cps; output -58 db; high and low impedance; on-off switch; built-in MC-4 connector; 3/8"-27 thread; pop-proof; 18 foot cable; 10 1/4" long including stud.



Satin-chrome finish.....\$72.50
Gold finish.....\$77.50

Model 646 Lavalier Microphone

Dynamic; omnidirectional; for chest, desk, or hand use; frequency response 50 to 10,000 cps; output -57 db; 150 ohms impedance; 30 foot cable; built-in connector; gray enamel; neck cord and clips included; size 7 1/16"x1".....\$147.50

Model 654 Slim-Trim Broadcast Microphone

Dynamic, omnidirectional; design similar to Model 655C; 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 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 1/4"x1 7/8"; weight 26 oz.
Chrome finish.....\$85.00
Gold finish.....\$90.00

Model 419 Desk Stand

For Models 654, 664, 665; die case base; gray.....\$10.00
Model 419-S with switch.....\$15.00

Model 335 Blast Filter

Curved grill fits Models 630, 635 and 605 mikes; satin-chrome finish.....\$5.50

Model 425 Deluxe Floor Stand

Fits standard 3/8"-27 thread; top button one-hand height control from 37"

Tape Recorders, Tapes & Microphones

to 66"; automatic lock on release; shaft rotates on pressure; locking type adjustable legs; die-cast base; 3-leg spread 17"; weight 7 1/2 lbs.....\$30.00

Model 428 Touch-To-Talk Stand

Fits standard 3/8"-27 thread: DPDT lever switch for relay operation and microphone on-off; closes, opens, or locks in "talk" position; satin-chrome finish; gray switch lever with locking button; 7" high, 5 1/2" base diameter.....\$17.50

Model 502 Matching Transformer

Mounts on amplifier or in series with mike line; frequency response 40 to 20,000 cps ±1 db; matches 50, 150, 250, and 500 ohms to high impedance; low distributed capacity; shielded windings; MC-4 input connector.....\$17.50

Model 524 Windscreen

For Model 666 mike; minimizes wind effect; foam rubber; weight 2 oz.....\$8.00

Model 665 Cardioid Microphone



Dynamic; unidirectional; design similar to Model 666; frequency response 50 to 14,000 cps; switch for 50 or 250 ohms impedance; cast zinc case; gray; 18 foot cable; size 7 1/4"x1 7/8".....\$150.00

Model 655C Slim-Trim TV Microphone

Dynamic; omnidirectional; for boom, stand, or hand use; frequency response 40 to 20,000 cps; output -55 db; 50 ohms impedance, taps for 150 and 250 ohms; pop-proof grill; high ratio signal-to-thermal noise; 20 foot cable; Cannon UA-3 connector; includes clamp-on stand mount with 3/8"-27 thread and 1/2" pipe thread adapter.....\$200.00

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 3/8"-27 thread and 1/2" pipe thread adapter.....\$255.00

Tape Recorders, Tapes & Microphones

ERCONA CORP.

E.M.I. Series L-2



Battery-operated portable tape recorder; single-speed models available for 3 $\frac{3}{4}$ ips, 7 $\frac{1}{2}$ ips, or 15 ips; one motor; response at 15 ips, 50 to 7,000 cps ± 2 db, 7,000 to 10,000 cps, ± 3 db; signal-to-noise ratio 45 db unweighted at 1,000 cps; level indication meter; 5" reels; contains playback preamp and amplifier; operates for 30 minutes at 3 $\frac{3}{4}$ ips; 15 minutes at 7 $\frac{1}{2}$ ips; no erase head or internal speaker. Series L-2 (less batteries)\$395.00

Stuzzi Magnette Portable Tape Recorder



Transistorized, battery operated tape recorder; self-contained speaker system; amplifier has 7 transistors, 2 diodes; 2 speeds - 3 $\frac{3}{4}$ ips and 1 $\frac{1}{8}$ ips; push button controls for stop, record, replay, fast forward and reverse, amp only; safety button prevents accidental erasure; frequency response 50-9,000 cps at 3 $\frac{3}{4}$ ips, 60-4,000 cps at 1 $\frac{1}{8}$ ips; battery life up to 100 hours with battery life indicator; 11" x 4 $\frac{1}{2}$ " x 8"; 8 lbs; equipment includes AKG moving coil microphone, reel of tape, empty reel, connecting cable.....\$269.50

FEN-TONE CORPORATION

Reslo "Blue Ribbon" Series Microphone



Ribbon type; bi-directional, (changed to cardioid or close talk by use of internal pads supplied with instructions); frequency response 18 to 22,000 cps ± 4 db; output -58 db; two dual impedance models: "Celeste," 30-50 ohms balanced and high impedance unbal-

anced with muting switch; "Symphony," 250 ohms balanced and 600 ohms unbalanced, no muting switch; impedance selected by plugging in proper cable: twin balanced lines for low to medium impedances and coaxial line for high; tilt-head swivel; 5/8"-27 thread; foam rubber shock mount; dural ribbon triple screened from blast\$66.75

Model B & O 50 Series Microphone



Ribbon type; bi-directional; 3-position switch: close-talk, music, and off; frequency response in music position 30 to 15,000 cps $\pm 2\frac{1}{2}$ db; in talk position rolloff below 1000 cps; output: -59 db to -55 db; "Ticonal E" magnet; ball swivel; 5/8"-27 thread; dural ribbon double screened from blast; 20 foot shielded balanced 3-conductor cable with 3-connector female socket; size 7 $\frac{3}{4}$ "x1 $\frac{3}{16}$ "; weight 15 oz.

B&O 50 (50 ohms impedance).....\$66.75

B&O 53 (50/250/40K ohm impedance switch)\$78.50

B&O 53G (as above in TV gray)\$80.80

B & O Stereophonic Microphone Rig

Provides operational equivalent of 10 foot conventional spacing when used with B & O mikes as instructed; space between mikes 9"; consists of fiberglass acoustic separator with spacer mounting bracket for two B & O mikes\$25.95

FEN-TONE TRUVOX

Mark 6 Tape Deck

Fully automatic control; 1/2-track record/play; 7 $\frac{1}{2}$ and 3 $\frac{3}{4}$ ips; high frequency bias and erase from common oscillator; frequency response 30-17,000 cps at 7 $\frac{1}{2}$ ips, 30-9,000 cps at 3 $\frac{3}{4}$ ips; interlocked push-button deck controls; takes 7" reel; head has .00025" gap; 14 $\frac{1}{4}$ " x 13" x 4 $\frac{5}{8}$ "; 13 $\frac{3}{4}$ lbs.\$199.50

Model MD5 (1/2-track record/play, 1/2-track erase).

Model TD5 (stacked 1/2-track stereo record/play, 1/2-track erase).

Model TD14 (stacked 1/2-track stereo record/play, full-track erase).

Model R6 Tape Recorder

Accepts 7" reels; 1/2-track record/play; 3 motors; interlocked push-button deck controls; frequency response ± 4 db 30-15,000 cps at 7 $\frac{1}{2}$ ips, ± 5 db 40-9,000 cps at 3 $\frac{3}{4}$ ips; amplifier power output 4 watts; control for record/play, indicator for recording level, volume, tone balance; inputs for high impedance mike, cartridge tuner; includes 8" x 6" speaker; frequency response as straight amplifier 30-20,000 cps; 15" x 15 $\frac{3}{8}$ " x 9 $\frac{3}{8}$ "; complete with tape and mike\$395.00

Model R7 Tape Recorder

Twin 1/2-track tape heads permits play/record in both directions; speeds 7 $\frac{1}{2}$ and 3 $\frac{3}{4}$ ips; capstan has 2-speed reversible capacitor-run motor; amplifier has 10 watts output; inputs similar to Model R6 amplifier; includes 2 speakers; optional monitoring while recording; 16 $\frac{1}{2}$ " x 16" x 10 $\frac{1}{4}$ "\$495.00

Model M Tape Recording Amplifier

For use with Mark 6 Tape Deck; compensation for recording 7 $\frac{1}{2}$ and 3 $\frac{3}{4}$ ips; inputs for high impedance mike at 1-2 mv, 0.2 volts, 20 mv; power output 4 watts; cathode-coupled oscillator; includes volume and tone control; modulation level indicator; hum 45 db below 3.5 watts; overall frequency response 30-15,000 cps; tubes are 6F86, ECC83, 2-EL84, EZ81, EM81; 13" x 2 $\frac{3}{8}$ " x 5 $\frac{3}{16}$ "; separate power supply; 86 lbs. with power supply.....\$129.50

FERRODYNAMICS CORP.

Model 15S7 Recording Tape

Wide-range, wide-latitude tape; 1.5-mil acetate base; 1200 feet; includes plastic container\$3.50

Model 10S7M Recording Tape

Wide-range, wide-latitude tape; 1-mil Mylar base; 1800 feet; climate resistant; includes plastic container.....\$6.00

Model 5S7M Recording Tape

Wide-range, wide-latitude tape; 0.5-mil Mylar base; 2400 feet; lifetime lubricated; recommended for hi-fi uses where tape tension is not excessive; includes plastic container\$8.00

FERROGRAPH (ERCONA CORP.)

Model 800



Half-track and quarter-track stereo machines with 3 $\frac{3}{4}$ -7 $\frac{1}{2}$ inches per second tape speed; portable units have matched outputs at low-level to feed into high fidelity system; accommodate up to 8 $\frac{1}{4}$ " reels; frequency response (± 2 db) of 40-15,000 cps at 15 ips; 50-10,000 cps at 7 $\frac{1}{2}$ ips and 50-8,000 cps at 3 $\frac{3}{4}$ ips; signal-to-noise ratio is better than 50 db from 200-12,000 cps; 45 db unweighted including hum; wow and flutter less than .2% at 7 $\frac{1}{2}$ sec; long term speed stability better than .5%; erase and bias frequency 53,000 cps; three motors including one hysteresis synchronous drive motor for driving capstan; recording level VU meter; auto-switch cutoff and azimuth head adjustment for heads; "Ferrodexer" gear driven turn counter; Model 808/4 quarter-track recording and playback; each pair of tracks served by dual inputs of .003 volt peak (min.) and 0.1 volt peak (min.); impedances of megohm and .1 megohm respectively; matched low-level outputs to feed present high fidelity amplifier systems; Model 808/2 two track recording and playback facilities; each track served by

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Tape Recorders, Tapes & Microphones

dual inputs same as 808/4 with impedances of 1 megohm and .1 megohm respectively; matched low-level outputs to feed present high fidelity amplifier systems.

Model 808/4.....\$595.00
Model 808/2.....\$595.00

Stereo Tape Recorder

Available in 1/2-track or 1/4-track models; stereo record and playback, frequency response ± 2 db 40-15,000 cps at 15 ips; 50-10,000 cps at 7 1/2 ips; 50-8000 cps at 3 3/4 ips; erase and bias frequency 53,000 cps.; 3 motors including capstan drive; recording level VU meter; dual inputs for .003 volts and 0.1 volts; matched low level outputs.

Model 808/4 (quarter-track).....\$595.00
Model 808/2 (half-track).....\$595.00

Model 4S Series Tape Recorder

Portable with monaural record/playback facilities; specifications same as Ferrograph Model 808; stereo playback from stacked head may be fed to external amps.

Model 4S/N (3 3/4" and 7 1/2 ips).....\$496.00
Model 4S/H (7 1/2 and 15 ips).....\$545.00

Model 4 Series Tape Recorder

For monaural record/playback only; portable; speaker included built-in; output 15 ohms and high impedance; available also in chassis form for console mounting.

Model 4A/N (3 3/4 and 7 1/2 ips).....\$395.00
Model 4A/NH (7 1/2 and 15 ips).....\$445.00

FILM INDUSTRIES (ERCONA CORP.)

M8 Ribbon Microphone

Excellent frequency response; 3-magnet Alcomax III magnet assembly; replaceable ribbon; output impedance 30 ohms at 1,000 cps; 4" length of semi-flexible tubing; 12" twin shielded cable; diameter: 1 3/8"; length: 3 3/8".....\$49.50

GENERAL MAGNETICS & ELECTRONICS, INC.

Gemark 101 Recorder



Friction pulley drive; 2-track monaural record/playback; speeds 7 1/2 and 3 3/4 ips; includes 3-watt amplifier and 8" x 4" speaker; takes 5" reel; complete with crystal microphone; portable.....\$79.95

HEATH CO.

Tape Recorder Kit

Available in monaural record/monaural playback or in monaural record/stereo



playback models: tape deck assembly is supplied complete — user assembles only the electronic components: two speeds (3 3/4 and 7 1/2 ips); frequency response 40 to 12,000 cps ± 2 db at 7 1/2 ips and 40 to 6,000 cps at 3 3/4 ips; signal-to-noise ratio 55 db with less than 1% total harmonic distortion; wow and flutter less than 0.3%; two inputs; microphone and high level; two cathode follower outputs; VU meter; monitoring facilities; pause control; safety interlock button; etched circuit amplifier construction; accommodates up to 7" reels.

TR-1C (monaural record and playback).....\$159.95
TR-1D (monaural record/stereo playback).....\$169.95
C-TR-1C Conversion Kit (converts TR-1C to TR-1D).....\$19.95

Transport Mechanism



Frequency response 50 to 10,000 cps ± 2 db at 7 1/2 ips, 50 to 5,000 cps ± 2 db at 3 3/4 ips, flutter and wow less than 0.35%; may be mounted vertically or horizontally; sold in combination with Model TE-1 only; signal-to-noise ratio 45 db below normal recording level with less than 1% total harmonic distortion; includes microphone and blank reel of tape; tape deck and preamp 15 1/2" w x 13 1/2" h x 8" d.

Model TR-1A (monaural record playback).....\$99.95
Model TR-1AH (half track monaural and stereo record/playback).....\$149.95
Model TR-1AQ (four track monaural and stereo record and playback).....\$149.95
MK-4 (conversion kit for model TR-1A to model TR-1AH).....\$62.95
MK-5 (conversion kit for model TR-1A to model TR-1AQ).....\$62.95

Model TE-1 Tape Preamplifier Kit

Provides recording and playback facilities when used with tape deck; two inputs; separate record and playback gain controls; "magic eye" recording level indicator; cathode follower output; hum control; 4" h x 12 1/2" w x 8" d. \$39.95

KNIGHT-KIT (ALLIED RADIO CORP.)

Universal Recording Preamp Kit

Separate record/playback sections allow 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 volts at mic. input for .080 volts at aux. input recording level; record distortion less than 0.3% at maximum record level; bias oscillator 100 kc; master gain and individual channel balance control.....\$79.95*
* Estimated price at press time.

Tape Deck Kit

All push-button operation; 3-motor drive; 3 heads; 1/4-track stereo erase, record and playback; speeds 7 1/2 and 3 3/4 ips; fast forward, reverse, run, stop, pause; flutter 0.25% at 7 1/2 ips; takes up to 7" reels.....\$119.95*
* Estimated price at press time.

Model K-29

Port-A-Pac for use with high impedance tape recorders such as Ampex, Bell, Pentron, Viking, Wollensack etc.; consists of 1 set of Stereophones and Model A-1220 amplifier; carrying case.\$64.50

LAFAYETTE RADIO

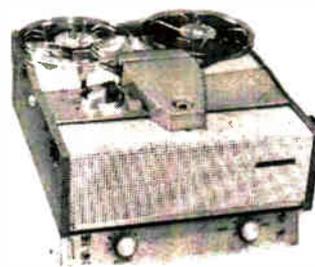
Tancordex Stereo Tape Recorder



Monaural and stereo playback unit with provision for adding single or dual recording preamplifiers, 7 1/2 ips; three capacitor induction motors; 3 heads; erase, record, and playback; frequency response: 40 to 15,000 cps; flutter and wow less than 0.17%; push-button and level controls; cabinet finished in blonde or mahogany with removable lid; 25 1/2" w x 15 3/4" d x 12" h.\$395.00

Model RK-102 Tape Recorder

Monaural half track record with stereo (2-track and 4-track) and monaural playback; speeds are 3 3/4 and 7 1/2 ips; frequency response 50 to 12,000 cps at 3 3/4 ips, to beyond audible range at 7 1/2 ips, flutter and wow below 0.4%; magic eye record level indicator; 5-watt amplifier with 2 speakers, built-in preamp for second channel; separate portable amplifier-speaker combination for second channel; low and high level input; 4-pole motor; supplied with crystal microphone; recorder size 14" w x 17" d x



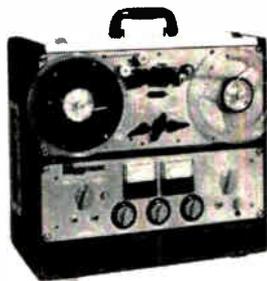
11" h; amplifier-speaker 9 1/4" h x 12 3/4" w x 12 3/4" d; shpg. wt. 30 lbs.\$159.50
 RK-100 (same as RK-102 less amplifier-speaker unit for second channel)\$129.50
 RK-101 (amplifier-speaker combination)\$37.50

Model ML-120 Bulk Tape Eraser

Provide 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.\$21.50

**MAGNECORD
 (Midwestern Instruments)**

Model 100 Stereo Magnecordette



In-line stereo or half-track monaural record and playback; also 1/4-track stereo playback; 3 3/4 and 7 1/2 ips; frequency response 50 to 12,000 cps ± 2 db at 7 1/2 ips, 50 to 6,000 cps ± 2 db at 3 3/4 ips; signal-to-noise ratio 48 db down from the 3% third harmonic distortion point; crosstalk better than 50 db down; inputs: two high impedance microphone, auxiliary (tuner, phono, tape, etc.); cathode follower outputs provide 1 volt output from normal recording level; twin VU meters; tape transport 7" x 17"; amplifier 5 1/4" x 17"; available with synchronous motor for additional\$50.00

Model 101-1 (includes preamp in case with 1/4-track head)\$475.00
 Model 102-1 (less case, with 1/4-track head)\$449.95
 Model 100-AX-1 (less preamp with case and 1/4-track head)\$285.00
 Model 101 (includes preamp and case)\$419.95
 Model 102 (less case)\$419.95
 Model 100-AX (tape transport less case)\$225.00
 Model 100-CK (preamp less case)\$165.00
 Model 110 (speaker-amp combination in case)\$255.00

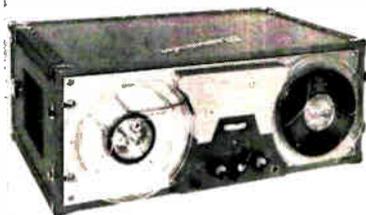
Series N35-B

Portable recorder with amplifier and speaker; half track heads; tape speeds: 7 1/2 and 3 3/4 ips by capstan change; 4-pole motor; frequency response to 12,000 cps; record/playback preamplifier and 8 watt power amplifier feeding internal 6"x9" speaker; outputs furnished at high and low impedances before power amplifier for feeding external system; printed circuit record amplifier; VU meter; phone jack on front panel for monitoring; interlock prevents accidental tape erasure; panel size: 8 1/2" x 15"; weight: 40 lbs.
 N35-B (4-pole motor)\$299.95
 NS35-B (hysteresis synchronous motor)\$349.95

Series S36-B

Portable; full track standard (half track available on special order); tape speeds:

7 1/2 and 15 ips; hysteresis synchronous motor drive; frequency response: 50 to



15,000 cps ± 2 db at 15 ips, 50 to 12,000 cps ± 2 db at 7 1/2 ips; flutter and wow: 0.3% maximum; signal-to-noise ratio: 50 db based on full track recording at 3% total harmonic distortion; illuminated VU meter on front panel; reel size: 7" (10 1/2" adapter available); built-in record/playback preamplifier; input: high impedance microphone, unbalanced bridge (500,000 ohms); monitor jack; output to external power amplifier; panel size: 7" x 19".
 S36-B\$415.00
 S36-BX, same, less case\$385.00

Series PT6-6A Tape Transport

Portable; full track or half track; tape speeds: 7 1/2 and 15 ips; dual speed hysteresis synchronous drive motor; frequency response: 50-15,000 cps ± 2 db at 15 ips, 50-7,500 cps ± 2 db at 7.5 ips; flutter and wow: 0.3% at 15 ips; 0.5% at 7 1/2 ips; signal-to-noise ratio: 50 db; designed for use with PT6-6J record/playback amplifier; reel size: 7"; size: 11"x7"x19" without case; weight 26 lbs with case; 10 1/2" reel adapter arms available.

PT6-6A tape transport
 with case\$420.00
 PT6-6AX, less case\$390.00

Series PT6-6J Record/Playback Amplifier



Record/playback amplifier for use with PT6-6A tape transport; input impedance: 50 ohm balanced, high impedance bridge (phone jack); 10 watts audio power out at less than 2% harmonic distortion; output impedances: 4, 8, 16, and 500 ohms; VU meter; internal monitor speaker with volume control; dual switch for NARTB equalization at 7 1/2 and 15 ips.

PT6-6J record/playback amplifier with case\$295.00
 PT6-6JX less case\$265.00

Stereophonic PT6-BA2HZ

Stereophonic record/playback; specifications similar to PT6-6A; requires use of PT6-BN stereo amplifier.
 PT6-BA2HZ (with carrying case)\$510.00
 PT6-BA2HZX (less carrying case)\$465.00

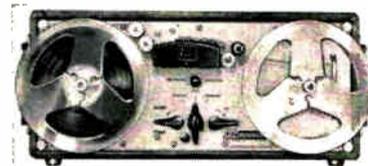
PT6-BN Stereophonic Amplifier

Two low level, low impedance microphone inputs, two VU meters, three gain controls (one master, two single channel); panel 19" x 7".
 PT6-BN (with carrying case) \$540.00
 PT6-BNX (less carrying case) \$495.00

Series PT63-A2HZ Tape Transport

Portable; full track or half track; three heads, erase, record, playback; tape

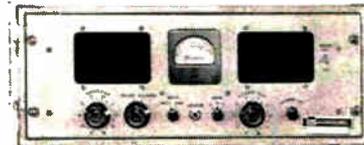
**Tape Recorders, Tapes
 & Microphones**



speeds: 3 3/4 and 7 1/2 ips, or 7 1/2 and 15 ips by capstan change; hysteresis synchronous motor drive; frequency response: 50 to 15,000 cps ± 2 db at 15 ips, 50 to 7,500 cps ± 2 db at 7 1/2 ips; flutter and wow: 0.3% at 15 ips, 0.4% at 7 1/2 ips; signal-to-noise ratio: 48 db unweighted; manual operating switches; solenoid activated pressure roller allows remote control; designed for use with PT63-J record/playback amplifier; panel size: 19" x 7"; weight: 29 lbs in case.

PT63-A2HZ tape transport
 with case\$510.00
 PT63-A2HZX same, less case\$465.00

Series PT63-J Record/Playback Amplifier



For use with PT63-A2HZ tape transport; inputs: 50-250 ohm balanced or unbalanced; unbalanced bridge; output impedances: 4 or 16 ohms to speaker, 600 ohms balanced line; 10 watt power amplifier; switch for NARTB equalization at 7 1/2 or 15 ips; VU meter; panel size: 19" x 7"; weight: 22 lbs. in case.
 PT63-J record/playback amplifier
 in case\$390.00
 PT63-JX same, less case\$345.00

Series P73 Tape Transport

Tape transport for modernizing older Magnecorder tape recorders; compatible with any PT6, PT63, and PT7 model amplifiers; appearance and specifications similar to P75.
 P73-A (with carrying case)\$575.00
 P73-AX (less carrying case)\$535.00

Series P75 "The Editor"

Portable, rack mounted, or console unit; full track or half track; three heads; erase, record, and playback; tape speeds: 7 1/2 and 15 ips; 3 motors, dual speed hysteresis synchronous motor used for direct tape drive; frequency response: 40 to 15,000 cps ± 2 db at 15 ips, 40 to 12,000 cps ± 2 db at 7 1/2 ips; flutter and wow: less than 0.2% at 15 ips; less than 0.25% at 7 1/2 ips; timing accuracy: ± 3 seconds in 30 minutes; signal-to-noise ratio (full track) 66 db based on 3% total harmonic distortion point; reel size: 10 1/2"; uses separate P-75C record/playback amplifier with 4" VU meter, separate record and playback amplifiers for simultaneous tape monitoring, NARTB equalization, unbalanced cathode follower output; push-button controls; deep slot tape loading; automatic tape lifter in rewind and fast-forward; tape break automatic shut-off; released brake cueing; tape transport unit panel size: 19" x 10 1/2"; amplifier panel size: 5 1/4" x 19"; tape transport weight: 51 lbs. (in

Tape Recorders, Tapes & Microphones

portable case); amplifier weight: 18 lbs. (in case).

Tape transport only:

P75-A\$575.00

P75-AX same, less case, for rack mounting\$535.00

Amplifier only:

P75-C\$305.00

P75-CX same, less case, for rack mounting\$265.00

Stereophonic P75

Stereo record/playback recorders; specifications similar to Series P75 "The Editor"; uses two P75 amplifier units; crosstalk 50 db down.

P75BACX recorder/amplifier less cases for rack mounting\$1,185.00

P75BA stereo transport in carrying case\$695.00

P75BAX stereo transport less carrying case\$655.00

Series M90

Portable, rack-mounted, or console unit; full track or half track; three heads; erase, record, and playback; tape speeds: 7½ and 15 ips; direct-tape drive; frequency response: 30 to 15,000 cps ±2 db at 7½ ips; flutter and wow: less than 0.1% rms max. at 15 ips. less than 0.15% rms max at 7½ ips; signal-to-noise ratio: 58 db (55 db with half track heads); timing accuracy ±3 seconds in 30 minutes; 10½" 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"x5¼"; tape transport size: 19"x12¼".

M90-AC portable recorder/amplifier combination\$1405.00

M90-ACC recorder/amplifier in console cabinet\$1495.00

M90-ACX recorder/amplifier less case\$1295.00

Tape transport only:

M90-A\$1005.00

M90-AX, less case, for rack mounting\$ 935.00

Amplifier only:

M90-C\$ 400.00

M90-CX less case, for rack mounting\$ 360.00

Stereophonic M90

Stereo record/playback; specifications similar to Series M90; uses two M90 amplifier units; crosstalk better than 55 db down.

M90BAC stereo record/playback recorder with matched amplifiers in carrying cases\$2255.00

M90BACX stereo record/playback recorder with matched amplifiers less carrying cases\$2105.00

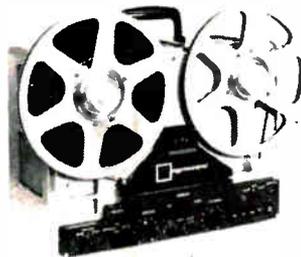
M90BA tape transport in carrying case\$1455.00

M90BAX tape transport less carrying case\$1385.00

Model 728 Professional

Can record sound-on-sound, stereophonic, or monophonic; speeds 7½ ips. and 15 ips., up to 10½" NARTB reel size; frequency response, 30-18,000 cps. ±2 db. at 15 ips; 40-15,000 cps.

±2 db. at 7½ ips; signal to noise ratio better than 50 db. per channel; heads



are erase, full-track, half-track, or split stereo; additional head for 4-track stereo available separately; overall depth 12"; size in portable case 17⅞" x 14⅛" x 13⅞".

Less case\$759.00

With case\$809.00

METZNER ENGINEERING CORP.

Starlight "120" Stereo Tape Deck

Stereo record/playback; requires record/playback preamplifiers; two speeds, 3¾ ips and 7½ ips; frequency response 30 to 15,000 cps ±2 db when NAB-equalized amplifiers are used; wow and flutter under 0.18% at 7½ ips and under 0.25% at 3¾ ips; signal-to-noise ratio 60 db; hysteresis synchronous motor; index counter; recommended bias/erase frequency 60 kc.\$179.50

MICROTRAN CO., INC.

HD-11 Bulk Tape Eraser



Reduces noise level below level of standard erase heads; restores tape to like-new condition or better; reels 5"-10½" may be used; adapter hub for NARTB wheels audible; 117 volts a.c., 5 amps; 3"x5"x8"; 8½ lbs.\$27.50

MOVIC CO., INC.

Movicorder

2-speed tape recorder; frequency response 45-14,000 cps ±2 db at 7½ ips; 40-7,500 cps ±3 db at 3¾ ips; wow and flutter less than 0.1%; signal-to-noise -50 db or better at 7½ ips; 1-capstan motor, hysteresis synchronous, direct drive; 2 reel motors; instantaneous start/stop; 4-heads: 2-staggered half-track erase, 1-stacked record, 1-stacked playback; 2-VU meters; permits sound-on-sound recording; NAB equalization; 2-3 watts output amplifiers; 45 lbs.\$645.00

With additional 4-track playback\$695.00

NEWCOMB AUDIO PRODUCTS CO.

Model SA-80 Stereo Power Tape Amplifier

For use with Model SM-310 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 volts for full output; frequency response ±1 db 20-20,000 cps; 8½"x16¾"x16¾".

.....\$199.50

Model J-200 Tape Speaker System

Portable; 2-way system for use with Model SA-80 recorder; 14½"x20"x10¼"; 19 pounds.\$79.50

Model C-100 Tape Speaker System

Similar to Model J-200; has larger audience coverage.\$79.50

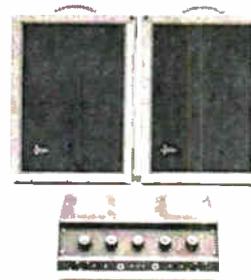
Model L-300 Tape Speaker System

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; 16⅞"x23½"x10¼"\$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.

.....\$448.00

Model SA-80-K2 Tape System

Consists of Model SA-80 and two Model K-400 speakers; 102 pounds.

.....\$468.00

Model N-36-C Microphone

Dynamic omnidirectional; supplied with shielded cord and plug to fit Model SA-80\$51.60

Model N-64-C Microphone

Dynamic directional; fits Model SA-80 input.\$60.00

Model SM-310

Professional Tape Recorder



Records and plays stereophonic or monophonic tape; Model SM-310 is ¼-track record/play, Model SM-310-4 is ¼-track record/play; speeds 3¾ and 7½ 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; 2-VTVM's for reading of recording levels; flutter less than 0.2% at 7½ ips., less than 0.25% at 3¾ ips.; frequency response: ±2 db. 30-15,000 cps. at 7½ ips., ±3 db. 40-10,000 cps.

STEREO & HI-FI DIRECTORY

at 3 3/4 ips.; output 1.3 volts each channel on cathode follower; 2—high level inputs, 2—mic. inputs: 12 3/4" x 16 3/4" x 9 1/2"; 34 lbs; includes case.....\$499.50

NORELCO (NORTH AMERICAN PHILIPS CO., INC.)

Model EL3752/01 Stereo Microphone



Two dynamic (moving coil) elements set at right angles for left and right channels and mounted in single housing; cardioid pattern; sensitivity, 50 db down at 1 volt, at input pressure of 1 μbar/cm², impedance, 25,000 ohms; furnished with 16 feet of shielded cable and three-conductor telephone plug; weight, 20.6 oz.....\$39.50

"Continental 400" (EL3536/54)

Four track stereo record and playback; 7 1/2, 3 3/4, and 1 7/8 ips; response, 50-18,000 cps at 7 1/2 ips, 50 to 14,000 cps at 3 3/4 ips, 60 to 7,000 cps at 1 7/8 ips; wow and flutter, less than .15% at 7 1/2 ips, less than .25% at 3 3/4 ips, less than .3% at 1 7/8 ips; signal to noise ratio, 48 db or better; sound on sound recording facilities built-in; plays standard 2-track tapes; mixing facilities, electronic mixing of radio/phono and mike inputs; modulation indicator, type EM84 electron tube; fast forward and reverse; automatic stop, at ends of tape (with metalized tape); dual recording and playback preamplifiers, dual power amplifiers and two Norelco wide range speakers (one in lid); inputs, one 2-channel input for stereo microphone and two 2-channel inputs for stereo phono or tuners; outputs, external speakers (2), external amplifiers (2), stereo headphones (1); supplied with Norelco Model EL3752/01 stereo microphone; tubes, EF86 (2), ECC83 (3), EL84 (2), EM84 (2), EM84 (1); 18 1/2" x 15 1/2" x 11 1/2"; 43 lbs.....\$399.50

"Continental 300" Model EL3542

Four track; mono record and playback; stereo playback (head output only); 7 1/2, 3 3/4, and 1 7/8 ips; frequency response, 60-16,000 cps ±3 db at 7 1/2 ips, 60-13,000 cps ±3 db at 3 3/4 ips, 60-6,500 cps ±3 db at 1 7/8 ips; wow and flutter, better than 3% peak to peak; automatic stop; interlocking pause button; sound-on-sound recording; full mixing facilities; monitoring with headphones; modulation indicator type EM-81 magic eye; record and playback pre-amplifier, power amplifier and Norelco loudspeaker; inputs, microphone and radio/phono; outputs, external loudspeaker, external amplifier, headphone, stereo outputs; supplied with high impedance dynamic microphone; tube complement, EF86, ECC83, ECL82, EM81, EZ80.....\$269.50

NORTRONICS CO., INC.

Model SK-100 Stereo Conversion Kit

Provides second channel tape head to allow playing back and recording 2-channel stereo tapes (with suitable pre-amplifiers); frequency response 30 to 12,000 cps ±3 db at 7 1/2 ips; crosstalk -50 db; output 4 millivolts.....\$23.50

Model SK-50 Stereo Conversion Kit

Similar to Model SK-100 with facilities for 4-channel stereo tapes; may be used with 2-channel tapes; frequency response 30 to 12,000 cps ±3 db at 3 3/4 ips; output 1 millivolt.....\$26.00

Model EK-100 Erase Attachment

Provides stereo or monaural erase when used in conjunction with Model SK-100 and Model RA-100.....\$14.00

Model EK-50 Erase Attachment

Provides erase facilities when using 4-channel stereo tapes.....\$14.00

Model PL-100 Playback Amplifier



May be used as second playback channel; power output 3 watts at less than 2% harmonic distortion; frequency response 20-16,000 cps ±2 db; outputs are 4, 8, and 16 ohms to speaker and 3 volts low impedance to amplifier; sensitivity: low-level input, 1 millivolt; high level input, 0.2 volts; equalization variable NAB or RIAA; tubes are 2-12AX7, 12BH7, 6X4; 2 5/8" x 5" x 8".....\$46.50

Model RA-100 Recording Amplifier



Allows conversion of monaural recorder to stereo record; sensitivity: low level input, 1 millivolt; high level input, 0.2 volts; three outputs: audio and 65 kc bias to recording head, erase output for high or low impedance erase head, audio monitor; NAB equalization; signal-to-noise ratio: 55 db; tubes are 2-12AX7, 12AU7, and 6X4; 2 5/8" x 5 3/8" x 8".....\$57.50

Model V-6 Conversion Kit

Converts all mono and 2-track stereo VM recorders to 4-track playback; includes patch cord and jack set for connecting to external stereo playback.....\$25.50

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 WR-35 Conversion Kit Assembly

Converts all stereo Wollensak and Revere 2-track tape recorders to 4-track stereo playback.....\$25.50

Model WR-40 Conversion Kit Assembly

Converts all mono Wollensak and Revere tape recorders to 4-track stereo

NEW



THE TAPE THAT COST \$9,000,000 TO PERFECT! SOUNDRAFT TAPE WITH THE NEW FA-4 FREQUENCY ADJUSTED FORMULATION

DESIGNED TO MEET THE UNLIMITED CHALLENGE OF THE MOST EXCITING NEW ERA IN RECORDING HISTORY!

Only years of research... and the most modern and advanced tape manufacturing facilities in the world... could have perfected this tape! Soundcraft's new **FA-4 FORMULATION** is frequency adjusted to provide the superlative sound reproduction demanded in this exciting era of new discoveries and innovations in tape recording. You'll hear "highs" as never before... the full frequency spectrum for perhaps the very first time!

Insist on Soundcraft Tape with the new **FA-4 FORMULATION** before you run another reel through your recorder... you'll never settle for inferior sound reproduction again!

REEVES SOUNDRAFT CORP.

Great Pasture Rd., Danbury, Conn. • Chicago: 28 E. Jackson Blvd. Los Angeles: 342 N. LaBrea • Toronto: 700 Weston Rd.

Tape Recorders, Tapes & Microphones

playback; a tape-head playback amplifier such as the Nortronics Model PL-100 is required for playback of second channel.....\$32.50

Model W-6 Conversion Kit

Converts all Webcor 2800, 2900, and 2000 (except 2020 series) to stereo playback; assembly includes head-shifter to playback 2-track and 4-track tapes.....\$36.00

Model SW-80

Record/Play Selector Switch

Control center for use with stereo r/p head and record and playback amplifiers; selects either or both tracks for record or playback; 5 pushbutton controls; record and play interlock to prevent accidental erasure; input signals may be monitored without recording; allows mixing both outputs for stereo-mono comparison; 2 $\frac{3}{8}$ " x 5 $\frac{3}{8}$ " x 4 $\frac{7}{8}$ "......\$25.50

THE PENTRON CORPORATION

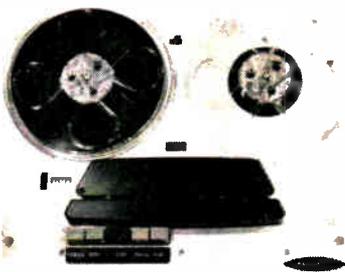
Model CA-14 Tape Mixer

Self-powered microphone and phono mixer; 6 high impedance inputs: 4 microphone (standard phone-type on front) 2 phono (standard phone type



on rear); 4 channels; 8 db gain on mike; frequency response 20 to 20,000 cps; shipping wt. 4 lbs.....\$54.95

Model SD-5 Tape Deck



2-speeds, 7 $\frac{1}{2}$ and 3 $\frac{3}{4}$ ips; $\frac{1}{4}$ -track stereo record/play/erase; $\frac{1}{2}$ track stereo-mono play; 4-track mono record/play/erase; frequency response 30-20,000 cps at 7 $\frac{1}{2}$ ips; wow and flutter less than 0.3% at 7 $\frac{1}{2}$ ips; push button controls: play, pause, fast wind, re-wind, stop; index counter; 11 $\frac{3}{4}$ " x 14" x 6 $\frac{3}{16}$ "; wt. 12 $\frac{1}{2}$ lbs.....\$199.95

Model TR-20 Aristocrat II

Self contained portable system with stereo playback, mono record/playback; 2-speed, 3 $\frac{3}{4}$ and 7 $\frac{1}{2}$ ips; frequency response 40-15,000 cps at 7 $\frac{1}{2}$ ips; signal

to noise ratio -52 db; NAB equalization; 1 mike, 1 radio input; 4 output jacks, 2 external amp or headphone monitoring, 2 for external speakers; index counter: crystal mike; complete with detachable speakers; 22 $\frac{1}{2}$ " x 11 $\frac{3}{8}$ " x 15 $\frac{3}{4}$ "; wt. 42 lbs.....\$350.00

Model NL-4 "Emperor II" Stereo



Monaural/stereo record/playback; features 4-channel stereo head; frequency response 40 to 15,000 cps at 7 $\frac{1}{2}$ ips, 40 to 7,500 cps at 3 $\frac{3}{4}$ ips; two built-in 10-watt amplifiers; twin volume controls, tone controls, and record level indicators; signal-to-noise ratio 50 db; flutter under 0.3% at 7 $\frac{1}{2}$ ips; two 4" x 6" built-in speakers; outputs to external amplifiers and speakers; twin inputs for low-level and high-level sources; automatic shut-off and idler disengagement; single rotary control for mechanical functions; includes two microphones; tubes are 4-12AX7, 2-12AU7, 2-6AN8, 4-6AQ5, 5Y3, and 6X4; 17 $\frac{1}{16}$ " w x 17 $\frac{1}{16}$ " h x 10 $\frac{3}{4}$ " h.....\$500.00
ES-2 matching speakers.....\$75.00
RC-6 remote control.....\$20.00

Triumph Tape Recorder



Push-button operation; plays/records 4 or 2-track tape; electronic record level indicator; wind or rewind 7" reel in 80 sec; speakers: 4" x 6" oval with built-in cone, 4" round PM; frequency response 40-15,000 cps. at 7 $\frac{1}{2}$ ips, 40-12,000 cps. at 3 $\frac{3}{4}$ ips.; monitor switch and speed change while playing; tubes are 6-7025, 12AT7, EM840, 2-6AQ5, 6x4; 6 $\frac{1}{2}$ " x 12 $\frac{1}{4}$ " x 12 $\frac{7}{8}$ "; 18 lbs.
Model XP-60 Monophonic.....\$219.95
Model XP-605 Stereophonic.....\$249.95
Model SS-61 Companion amp/speaker.....\$59.95

Concerto Tape Recorder



Includes record/play/erase head; stereo model plays 2 or 4-track stereo tape;

speeds 7 $\frac{1}{2}$ and 3 $\frac{3}{4}$ ips.; frequency response 40-7,000 cps; 2 input, 2 output jacks; 14" x 17" x 11"; 27 lbs.
Model TR-10 Monophonic.....\$129.95
Model TR-10S Stereophonic.....\$159.95
Model TA-7 Companion amp/speaker.....\$59.95

PREMIER ELECTRONIC LABORATORIES

Model 70-C "Tapesonic"



Portable (2 covers: top and front); dual track; 3 heads; monitoring from tape and from program by AB switch; 3 $\frac{3}{4}$ and 7 $\frac{1}{2}$ ips speeds, 15 ips with interchangeable capstan; 3 motors including hysteresis synchronous drive motor; frequency response ± 3 db 30 to 7,500 cps at 3 $\frac{3}{4}$ ips. 30 to 15,000 cps at 7 $\frac{1}{2}$ ips, 30 to 18,000 cps at 15 ips; flutter and wow 0.1%; signal-to-noise ratio 55 db above tape hiss level; timing accuracy 0.2%; 7 $\frac{1}{2}$ " reels, NAB reel adapters for mounting NARTB 10 $\frac{1}{2}$ " reels; built-in 12 watt push-button amplifier; d.c. on preamp filament; push buttons electrically interlocked and operated using 7 d.c. relays and solenoid actuated by d.c.; d.c. actuated electronic brake and tension system; 4 $\frac{1}{2}$ " VU meter; cathode follower output for external amplifier; jack for external speaker (12-16 ohms); separate mixing controls for mike, radio, TV and other external inputs; variable high and low frequency controls with zero set; separate volume control for playback; built-in 8" extended range speaker; 3 panel lights indicate: amplifier on, motors on, and record; fused; for 117 volt 60 cycles a.c.; available for 50 cycles; black leatherette covered wood carrying case; size 16" x 23" x 11"; shipping weight: 65 lbs.

Model 70-C\$398.75 Net
P70C (15 ips capstan)\$3.25 Net
P70AD NAB reel adapters
2 requiredeach \$2.75 Net

RCA

Model 8TR3 "The Diplomat"



Two-speed portable tape recorder (7 $\frac{1}{2}$ and 3 $\frac{3}{4}$ ips); frequency response at 7 $\frac{1}{2}$ ips 70 to 12,000 cps; power output 2 $\frac{1}{2}$ watts; neon lights for recording level; window counter; push-button controls: play, fast-rewind, fast-forward, record, stop; 3 speakers; accommodates 5" and 7" reels; 9 $\frac{1}{16}$ " x 17 $\frac{1}{16}$ " x 14 $\frac{3}{4}$ "; in gray or green case.....\$219.95

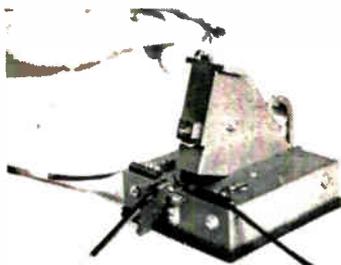
Model 8TR2 "The Senator"

Two-speed portable tape recorder (7 $\frac{1}{2}$ and 3 $\frac{3}{4}$ ips) frequency response at 7 $\frac{1}{2}$

ips 90 to 8,000 cps; power output 2½ watts; 5"x7" speaker; ceramic microphone; push button operation: play, fast rewind, fast forward, record, stop; radio/phono jack; accommodates 5" and 7" reels; 9½"x18½"x14½"; in charcoal or tan and brown.....\$179.95

F. REITER CO

Skila Tape Splicer



Professional quality tape splicer; sturdy construction assures long service; non-magnetic; 4¾"x5¼"; 2 lbs.\$69.75

REEVES SOUNDRAFT CORP.

Soundcraft Standard-50 Tape

Long play version of "Red Diamond" tape on 1 mil acetate base.
 Type S5-9, 900 ft., 5".....\$3.29
 Type S5-12, 1200 ft., 5¾".....\$4.23
 Type S5-18, 1800 ft., 7".....\$5.17
 Type S5-36H, 3600 ft., hub.....\$9.38
 Type S5-36RF3, 3600 ft., 10½".....\$12.04
 Type S5-72R, 7200 ft., 14".....\$24.40
 Type S5-72H, 7200 ft., hub.....\$18.75

Soundcraft Hi-Fi Tape

Standard play on 1½ mil acetate.
 Type HF-3, 300 ft., 4".....\$1.10
 Type HF-6, 600 ft., 5".....\$1.80
 Type HF-12, 1200 ft., 7".....\$2.80

Soundcraft Hi-Fi-50 Tape

Long-play on 1 mil acetate.
 Type HF5-9, 900 ft., 5".....\$2.40
 Type HF5-18, 1800 ft., 7".....\$4.40

Soundcraft "Professional" Tape

"Micropolished" for highest performance; uniformity: at 1000 cps, ±¾ db from reel to reel; at 10,000 cps, within 1 db of response at 1000 cps; on 1½ mil acetate base.
 Type P-12, 1200 ft., 7".....\$4.40
 Type P-24H, 2400 ft., Hub.....\$8.00
 Type P-24RF, 2400 ft., 10½".....\$10.25
 Type P-24RF3, 2400 ft., 10½".....\$10.25
 Type P-24RM, 2400 ft., 10½".....\$10.25
 Type P-48H, 4800 ft., Hub.....\$12.50
 Type P-48R, 4800 ft., 14".....\$20.75

Soundcraft "Lifetime" Tape

For use where utmost strength and quality are necessary: 1½ mil mylar base; "micropolished" oxide coating for perfect high frequency response.
 Type L-1, 150 ft., 3".....\$.75
 Type L-6, 600 ft., 5".....\$ 2.65
 Type L-12, 1200 ft., 7".....\$ 4.25
 Type L-24H, 2400 ft., Hub.....\$ 8.30
 Type L-24RF, 2400 ft., 10½".....\$10.40
 Type L-24RF3, 2400 ft., 10½".....\$10.40
 Type L-24RM, 2400 ft., 10½".....\$11.20
 Type L-48H, 4800 ft., Hub.....\$24.60
 Type L-48R, 4800 ft., 14".....\$16.60

Soundcraft "Plus-50" Tape

Made on 1-mil mylar for 50% more playing time per reel; the best combination of long play and great tape strength.
 Type PL-2, 235 ft., 3".....\$.95
 Type PL-9, 900 ft., 5".....\$ 3.40

Type PL-18, 1800 ft., 7".....\$ 5.80
 Type PL-36H, 3600 ft., 10½".....\$11.25
 Type PL-36RF, 3600 ft., 10½".....\$13.75
 Type PL-36RF3, 3600 ft., 10½".....\$13.75
 Type PL-72H, 7200 ft., 14".....\$22.50
 Type PL-72R, 7200 ft., 14".....\$28.10

Soundcraft "Plus-100" Tape

Provides 100% more recording time per tape; base is ½ mil mylar; impervious to temperature and humidity changes.
 Type XP-12, 1200 ft., 5".....\$3.50
 Type XP-24, 2400 ft., 7".....\$6.50

Soundcraft "Plus 100-X" Tape

Similar to "Plus 100" but with twice the tensile strength; base is ½ mil mylar.
 Type XP-24X, 2400 ft., 7".....\$10.95
 Type XP-48X, 4800 ft., 10½".....\$24.90

Soundcraft "Red Diamond" Tape

"Micropolished" for highest performance at economy price; on 1½-mil acetate base.
 Type SPN-1, 150 ft., 3".....\$.65
 Type SPN-3, 300 ft., 4".....\$1.25
 Type SPN-6, 600 ft., 5".....\$2.10
 Type SPN-12, 1200 ft., 7".....\$3.50
 Type SPN-24RF, 2400 ft., 10½".....\$8.50
 Type SPN-24RF3, 2400 ft., 10½".....\$8.50

Magna-See Kit

Makes tape sound track visible for greater accuracy in editing, checking head alignment, track uniformity, balance, and head wear; includes half-pint can of solution, plastic bath, magnifier, and roll of tape with glass slides to make permanent copies of tape sound tracks.
 Magna-See Kit.....\$11.00
 Type "SO" solution (half-pint can).....\$ 4.25

REVERE CAMERA COMPANY

Model T-2200



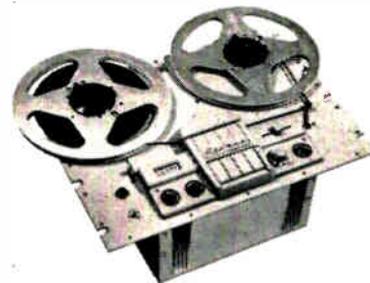
Thinline portable 2 and 4-track stereo recorder; can play and record mono; allows sound-on-sound and recording from stereo records; speeds 3¾ and 7½ ips; preamp has inputs for phono, TV, radio; loudness compensation; record level indicators; fast-forward and rewind; frequency response ±3 db. 40-15,000 cps at 7½ ips, ±3 db 40-8000 cps at 3¾ 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.

.....\$239.50
 Model T-2000 (Monaural 2-track only).....\$199.50

Model T-11

Monaural and stereophonic; for vertical or horizontal mounting; rack or cus-

Tape Recorders, Tapes & Microphones



tom: full track: 7½ ips; one motor; frequency response: 40 to 16,000 cps ±3 db at 1 volt preamp cathode follower output: 50 to 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%; intermodulation distortion less than 2.5%; 2 glow-lamp level indicators; 10½" NAB reel hubs with patented fast reel lock, also accepts up to 7" reels; keyboard controls solenoid operated, permitting remote control operation; 2 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 disk brakes; all functions interlocked; for use with separate amplifier and speaker; top panel 19"x14", depth 9", weight: 34 lbs, with mike plug; 2 connecting cables; attachment cord; power cord; accessory adapter cord; remote control cable; 2 NAB hub adapters; spare fuse and pressure pads; with built-in lower channel preamp.....\$284.50

Model T-202

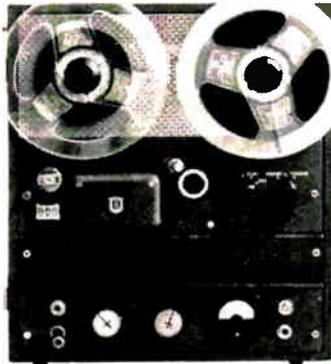


Dual-track dual-speed (3¾ and 7½ ips) portable recorder. frequency response 40 to 15,000 cps ±3 db at 7½ ips and 40 to 8,000 cps ±3 db at 3¾ ips; wow and flutter less than 0.3%; signal-to-noise ratio 48 db; neon record indicators; index counter; jacks for external speakers; complete with microphone, tape, reels; 13½"x14"x8". 32 lbs.\$207.50
 Model T-204 (similar to Model T-202 but with stereo playback; built-in second channel preamplifier).....\$237.50

Tape Recorders, Tapes & Microphones

ROBERTS ELECTRONICS, INC.

Model 90C Stereo Recorder



Two-speed (3 $\frac{3}{4}$ and 7 $\frac{1}{2}$ ips); hysteresis synchronous motor; frequency response 40 to 15,000 cps \pm 3 db at 7 $\frac{1}{2}$ ips, 40 to 7,500 cps \pm 3 db at 3 $\frac{3}{4}$ ips; wow and flutter less than 0.18%; signal-to-noise ratio 50 db below recorded 0 level; NARTB playback equalization; uses up to 7" reels; timing accuracy better than 0.2%; high and low level inputs; VU meter; includes playback pre-amplifier, five watt amplifier and 5" x 7" speaker; tape counter; volume and tone controls; case covered with charcoal-grey vinyl; 15 $\frac{3}{4}$ "h x 14 $\frac{1}{2}$ "w x 9 $\frac{1}{4}$ "d; 28 pounds.

Dual track\$349.50
Four track\$359.50
Model A-901 (matching recording amplifier and speaker for stereo).....\$149.50
Complete stereo record/playback system combining Model 90-C and A-901\$499.00
Model 190-D (2 track stereo tape deck)\$189.50
Model 190-D-4 (four track stereo tape deck)\$199.50
Model A-903 (recording amplifier)\$119.50
Model 191 full track monaural recorder\$325.00

Model 90-D Stereo Recorder

Allows sound-on-sound or sound-with-sound recording any number of times without erasing first recording; other specifications similar to Model 90-C.; complete with headphones and mic.\$349.50

Model 990 Stereo 4-Track Recorder

Tape head control panel for location and identification of 4-quarter track record/play; amplifier output 6 watts; 2-speed hysteresis-synchronous motor; NAB equalization; vu meter for each channel; 2 high impedance inputs; cathode-follower preamp outputs for low impedance; bias frequency 60 kc.; in-line 1 $\frac{1}{4}$ -track record/playback heads; 2-track stereo playback; 20" x 14" x 9"; 42 $\frac{1}{2}$ lbs.....\$450.00

ROBINS INDUSTRIES CORP.

Model VU-100 Gibson Girl VU Meter
For maximum signal-to-noise ratio, 4 $\frac{1}{2}$ "; 2-color scale; 200 μ amp movement; calibration -20 to +3; shunts for 1.2 or 10 volts.....\$22.00

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 $\frac{3}{4}$ " x 5 $\frac{1}{4}$ " x 6 $\frac{3}{4}$ ".
.....\$33.00

Model HD-6 Head Demagnetizer

Allows user to demagnetize tape recorder heads; plugs into a.c. line.....\$10.00

"SCOTCH" TAPES (MINNESOTA MINING AND MFG. CO.)

No. 111 Magnetic Tape

Cellulose acetate recording tape; excellent frequency response, low modulation noise and high sensitivity; patented "dry lubrication" process; 1/2 mils 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	\$ 3.55
111-24H	2400 ft. (NARTB Hub)	\$ 8.50
111-24R	2400 ft. (NARTB 10 $\frac{1}{2}$ " Reel)	\$10.90

No. 102 Magnetic 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 made from DuPont "Mylar;" magnetic characteristics identical to standard No. 111 tape.

102-6	600 ft. Plastic Reel—5" size	\$ 2.65
102-12	1200 ft. Plastic Reel—7" size	\$ 4.25
102-24H	2400 ft. (NAB Hub)	\$ 8.80
102-24R	2400 ft. (NAB 10 $\frac{1}{2}$ " Reel)	\$11.20

No. 120 "High Output" Magnetic 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	\$ 1.75
120-6	600 ft. Plastic Reel	\$ 3.50
120-12	1200 ft. Plastic Reel	\$ 5.50
120-24H	2400 ft. (NARTB Hub)	\$10.00
120-24R	2400 ft. (NARTB 10 $\frac{1}{2}$ " REEL)	\$12.85

No. 131 "Low Print"

Plastic backing; reduces print through to a point below noise level on most professional machines.

131-12	1200 ft	\$4.40
131-24H	2400 ft (hub)	\$10.00
131-24R	2400 ft (10 $\frac{1}{2}$ ")	\$12.40

No. 138 "Low Print"

Same recording characteristics as No. 131 but has tough polyester backing.

131-12	1200 ft	\$5.10
131-24H	2400 ft (hub)	\$11.10
131-24R	2400 ft (10 $\frac{1}{2}$ ")	\$13.50

No. 200 "Double Length"

Tensitized polyester backing.

200-3	300 ft	\$1.60
131-12	1200 ft	\$5.45
131-24H	2400 ft	\$9.50
200-48RPS	4800 ft	\$22.00

No. 41 Splicing Tape

Special white thermosetting adhesive guaranteed not to ooze.

41 $\frac{1}{2}$ S	1/2" x 150'	\$0.39
41 $\frac{1}{2}$ L	1/2" x 66'	\$0.57
41 $\frac{1}{2}$ L	1/2" x 66'	\$0.76
41 $\frac{3}{4}$ L	3/4" x 66'	\$1.00

No. 43P Leader and Timing Tape

For tape lead-ins, cueing, etc.
43P-1.51/4" x 150'\$0.90

No. 141 "Stereo Quality, Plastic"

High potency oxide particles assure max frequency response; 1 $\frac{1}{2}$ mil plastic base.

141-6	600 ft	\$1.75
141-12	1200 ft	\$2.95

No. 140 "Stereo Quality, Extra Play"

50% more playing time; similar to No. 141; 1 mil plastic base.

140-9	900 ft	\$2.50
140-18	1800 ft	\$4.25

No. 142

Similar to No. 141 with 1 mil polyester base.

142-9	900 ft	\$2.85
142-18	1800 ft	\$4.95

No. 190 Magnetic Tape

High-potency oxide coating only half as thick as standard coatings (but with equivalent magnetic properties) coupled with a thinner magnetic 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.

190A-9	900 ft. Plastic Reel	\$ 3.50
190A-18	1800 ft. Plastic Reel	\$ 5.50
190A-36H	3600 ft. (NARTB Hub)	\$10.00
190A-36R	3600 ft. (NARTB 10 $\frac{1}{2}$ " Reel)	\$12.85

No. 150 "Extra-Play" Magnetic Tape

Magnetic recording tape offering 50% more recording time and featuring one-mil polyester backing made from DuPont "Mylar" 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)	\$12.00
150-36R	3600 ft. (NAB 10 $\frac{1}{2}$ " Reel)	\$14.40

SHURE BROTHERS, INC.

Model 51 "Sonodyne" Microphone

Dynamic type; semi-directional; frequency response 60 to 10,000 cps; output -53 db at 35-50 ohms, -52.5 db at 150-250 ohms, -52 db at high impedance; 3-position impedance switch; Alnico V magnet; die-cast zinc case; satin chrome finish; self-adjust swivel; 5/8"-27 thread; Amphenol MC3M connector equivalent; 15 foot 2-conductor shielded cable; size 5 $\frac{1}{4}$ "x3 $\frac{1}{8}$ "x2 $\frac{1}{8}$ "; wt 1 $\frac{3}{8}$ lbs. shpg 3 $\frac{1}{2}$ lbs.....\$49.50

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; 5/8"-27 thread; 20 foot 2-conductor shielded cable; size 7 3/8"x2 1/4"x3 1/16"; wt 3 1/8 lbs, 4 1/2 lbs.....\$83.00

Model 300 Microphone

Gradient (ribbon) type; bi-directional; frequency response 40 to 15,000 cps ±2 1/2 db; output: -59 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; bronze and beige finish; tilt-head self-adjust swivel; live rubber shock mount; Cannon XL-3-11 connector; 5/8"-27 thread; adapter for 5/8"-24 thread or 1/2" pipe; voice-music switch; 20 foot 2-conductor shielded cable; 6"hx 1 1/2"wx2 1/16"d; wt 1 1/4 lbs, shpg 3 3/4 lbs.....\$150.00

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; 5/8"-27 thread; Amphenol MC3M connector equivalent; 20 foot 2 conductor shielded cable; size 6"x1 1/2"x1 1/8"; wt 1 lb, shpg 3 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; 5/8"-27 thread; live rubber shock mount; Cannon XL-3-11 connector; 20 foot 2-conductor shielded cable; size 3 3/4"x1 1/4"x1 7/8"; wt 1 1/2 lbs, shpg 4 lbs.....\$120.00

Model 333 Studio Uni-Ron Microphone

Ribbon type; uni-directional (cardioid); frequency response 30 to 15,000 cps ±2 1/2 db; output: -60 db at 50 ohms, -59 db at 150 and 250 ohms impedance; 3-position impedance switch; Alnico V magnet; die-cast zinc case; bronze and beige finish; tilt-head self-adjust swivel; live-rubber shock mount; Cannon XL-3-11 connector; 5/8"-27 thread; adapter for 5/8"-24 thread or 1/2" pipe; voice-music switch; 20 foot 2-conductor shielded cable; 7 1/4"hx1 1/4"wx1 7/8"d; wt 1 1/4 lbs, shpg 4 lbs.....\$250.00

Model 420 "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; gray polystyrene case; 20 foot 2-conductor shielded cable built-in; lavalier assembly included; size 3 1/2"x 1 3/4".....\$18.00 Net

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; 5/8"-27 thread; Amphenol MC2M connector; 15 foot 2-conductor shielded cable; press-to-talk switch, locking plate furnished; size 6 1/2" long; top diameter 1 3/4"; handle 3/4".....\$38.50

Model 525 Studio "Slendyne" Microphone

Dynamic type; omni-directional; frequency response 40 to 15,000 cps ±2 1/2 db; output -61 db; 3-position impedance switch: 50, 150, or 250 ohms; Alnico V magnet; aluminum case, bronze and beige finish; tilt-head self-adjust A25 type swivel adapter; 5/8"-27 thread; adapter for 5/8"-24 thread or 1/2" pipe; Cannon XL-3-11 connector; 20 foot 2-conductor shielded cable; lavalier assembly; size 8 1/2"x1"; wt 1/2 lb, shpg 3 1/4 lbs.....\$200.00

Model 530 Broadcast "Slendyne" Microphone

Dynamic type; omni-directional; frequency response 50 to 15,000 cps; output -61 db; 2-position impedance switch: 50-250 ohms and high impedance; Alnico V magnet; aluminum case, black and gold anodized finish; tilt-head self-adjust A25 type swivel adapter; response 30 to 15,000 cps ±2 1/2 db; 5/8"-27 thread; Cannon XL-3-11 connector; on-off switch; 20 foot 2-conductor shielded cable; lavalier assembly; size 7 3/8"x1"; wt 1/2 lb, shpg 2 7/8 lbs.....\$110.00

Model 535 "Slendyne" Microphone



Dynamic type; omni-directional; frequency response 60 to 13,500 cps; output -61 db; 2-position impedance switch: 50-250 ohms and high impedance; Alnico V magnet; brass case, satin chrome finish; A25 type swivel adapter;

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UP
STEP

CHOICE OF PROFESSIONALS



THE 728 . . .
The "Professional" . . . only tape recorder at any price that does everything BEST!



THE PT 6 . . .
Rugged, reliable "Workhorse" of the broadcast industry.



THE P 75 . . .
"The Editor" . . . includes all of the capabilities of the PT 6 plus extended performance and utility.



THE M 90 . . .
"Mighty" in all performance characteristics. Magnecord's prestige tape instrument.



THE 100 . . .
Professional performance, popularly priced. Plays 2-track & 4-track tapes.

Magnecord continues to offer the ultimate in tape superiority and versatility . . . jealously guards superlative sound quality with precision heads made by Magnecord. For a complete line of recorders with professional quality and dependability . . . remember "Maggie."

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TULSA 18, OKLAHOMA

Tape Recorders, Tapes & Microphones

5/8"-27 thread; Amphenol MC3M plug equivalent connector; on-off switch; 20 foot 2-conductor shielded cable; lavalier assembly; on-off switch adapter plate; size 7 1/4"x1"; wt 7/8 lb. shpg 2 7/8 lbs.
.....\$72.50

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 556S "Unidyne" Microphone

Dynamic type; uni-directional; frequency response 40 to 15,000 cps $\pm 2\frac{1}{2}$ db; output -54 db at 30-50 ohms, -55 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; 5/8"-27 thread; live-rubber shock mount; Cannon XL-3-11 connector; 20 foot 2-conductor shielded cable; appearance similar to Model 55S; size 7 3/4"x2 1/4"x 3 1/16"; wt 3 3/8 lbs, shpg 4 1/2 lbs.
.....\$135.00

SONOTONE CORP.

Model CM-10 "Ceramide"



Ceramic microphone; frequency response 50 to 13,000 cps ± 2 db; sensitivity 62 db below 1.0 volt per microbar; omnidirectional; high impedance; includes 7 feet of shielded cable with phone plug; does not include stand; 5 1/8" x 1 9/16" diameter at grille.....\$17.50
Model CM-11: for use where greater sensitivity is desired. Specification same as for CM-10 except: frequency response, 50 to 8,000 cps ± 2 db; Sensitivity 57 db below 1.0 volt per microbar.....\$17.50
Model CMS-10 mike stand: table and stored use.....\$4.00

Model CM-12 Microphone

Ceramic microphone; low impedance output includes transformer; 150 ohms impedance; -63.5 db output; frequency response to 8,000 cps; interrupter button; chrome-finished table stand with swivel mount furnished at extra cost.....\$29.50
Table stand.....\$4.00

Model CMT-10 or CMT-11 Matched Twin Microphones

For stereo tape use; ceramic type; acoustically matched to 2 db; Model CMT-10 has frequency response 50-13,000 cps; Model CMT-11 has frequency response 50-8,000 cps; Model CMT-10 output level -62 db.....\$36.75

STANCIL-HOFFMAN CORP.

Minitape

Completely battery-operated portable tape recorder; frequency response to 10,000 cps at 7 1/2 ips; designed for both voice and music recording; transistorized amplifiers; nickel cadmium



battery may be recharged from accessory battery charger, charge lasts at least four hours; 9"x12"x5".....\$494.00

SUPERSCOPE, INC.

Model 300 "Sterecorder"



2-speed tape recorder; 4 and 2-track stereo record/play, 4 and 2-track mono record/play; frequency response 50-15,000 cps ± 2 db at 7 1/2 ips, 50-10,000 cps ± 2 db at 3 3/4 ips; s/n ratio -50 db; wow and flutter less than 0.15% at 7 1/2 ips; tape counter; 2-VU meters; 2-high impedance inputs per channel; 2 level controls; switch tone controls, flat or 8 db bass boost; editing and cueing facilities; 8 ohm output for monitor; tubes: 2-12AD7, 2-6AU6, 2-6AQ5, 1-12BH7, 1-6CA4; 16 1/2" x 12 3/4" x 7 7/8"; 42 lbs.; includes carrying case, built-in speakers, 2 F-7 microphones.....\$399.50

Model F-7

High impedance dynamic microphone; frequency response 70-12,000 cps; semi-directional characteristics.....\$15.00

Model 262-SL



4-track mono recorder with 4 and 2-track stereo play; built-in 2nd channel playback preamplifier; 14" x 11" x 7"; 20 lbs.; includes carrying case, earphone, monitor speaker. F-7 microphone, connecting leads for stereo playback.....\$199.50
Transport mechanism of Model 262-SL available without electronics, but with 1/4 track stereo erase head and 1/4 track stereo record/play head.....\$89.50

Model 101

2-speed (3 3/4, 7 1/2 ips.) ac operated, transistorized, dual-track mono tape re-

recorder; includes carrying case, speaker, F-7 microphone; 13" x 10" x 6 1/2"; 19 lbs.....\$99.50

Model TC-30

Professional Tape Timer/Counter

Mounts instantly to side of recorder, precision made to accurately indicate tape travel in seconds and minutes.....\$19.95

Model F-38 Sony Microphone

A professional quality dynamic microphone mounted table stand; semi-directional characteristic ideal for stereo recording; finished in grey with satin chrome.....\$25.00



Sony C-37A Condenser Microphone

Condenser type, cardioid or omnidirectional pattern; frequency response ± 2 DB 20-18000 CPS, is completely free of resonant peaks and dips; output impedance 200 ohms balanced; output level (cardioid pattern) -50 DB (omnidirectional pattern) -52 DB; microphone complete with Model CP-2 power supply which incorporates variable switch permitting 3 different frequency characteristics for complete versatility in any acoustic application; microphone and power supply may be separated up to 240 ft. complete with power supply, carrying case, and 30 ft. of connecting cable.....\$395.00

TANDBERG (REEVES EQUIPMENT CORP.)

Model 2



Two speed (1 7/8 ips and 3 3/4 ips) dual track; wow and flutter below .2% at 3 3/4 ips and below .25% at 1 7/8 ips; frequency response 50 to 8,000 cps ± 2 db at 3 3/4 ips and 50 to 4,000 cps ± 2 db at 1 7/8 ips; signal-to-noise -57 db at 3 3/4 ips and -54 db at 1 7/8 ips; hum level -52 db at both speeds; record-playback head has .00025" gap; erase and bias frequency 33 1/3 kc; record amplifier distortion below 1%; playback amplifier distortion below 5% at full output of 3.3 watts; included is

crystal mike with response 20 to 13,000 cps ± 3 db; tuning eye has response to 10,000 cps ± 1 db; mixing on phono and radio inputs; clock-counter; tape does not touch heads in fast wind or rewind; no tape spillage; 24 hour operation without overheating; Goodman 5"x7" speaker; tubes are EF804, ECC-83, EL84, EM71, and two selenium rectifiers; hand rubbed furniture cabinet; 15"x11"x6"; 27 pounds with case. Model 2\$249.50

Model 2F (with remote foot control)\$299.50

Model 4-Stereo. Allows 4 track monaural record as well as 4-track monaural and stereo playback; includes second channel preamplifier, does not include second channel power amplifier; Model 4F remote operation.....\$349.50

Model 5-Stereo is similar to Model 3-Stereo but allows 4-track monaural record as well as 4-track monaural and stereo playback; may be used with Model 241 for stereo record function (plug-in connection).....\$419.50

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 Amplifier (converts Tandberg stereo units to stereo record)\$69.50

Model 6 Stereo Recorder/Reproducer



Four preamplifiers for recording and playback; has 4-track head; 3 speeds; separate reproducing and erase heads; inputs for 2 microphones, 2 high level, 2 low level; 1 volt cathode follower preamp outputs; record level indicators; frequency response at 7 1/2 ips 30-20,000 cps; NARTB equalization; hysteresis motor; direct capstan idler drive; fast forward and rewind speeds; automatic tape lifters; remote start-stop operation; tubes are 6-ECC83, 3-ECC82, 2-EAM86, 2-selenium rectifiers; 15" 11 5/8" x 6 3/4"; 27 lbs.

Model 4 (included case).....\$349.50

Model 4F (includes remote pedal for start-stop)\$399.50

TECH-MASTER CORP.

Model TC-5 Memotape Recorder



Battery-operated; remote control for record-playback; fully transistorized; speed 3 3/4 ips; dual-track record/playback; complete with mike, earphone, tape and reel; 7 1/4" x 4 1/2" x 2 1/2" lbs\$99.50

Model TRP-11 Preamplifier



Monaural record and play; essentially a combination of R-12 and TP-12; 4" x 12 1/4" x 8 3/4"; 9 lbs.....\$69.00

Model R-22 Preamplifier



Stereo record only; 2 each low-level and high-level inputs; 2 audio outputs; stereo head jacks, dual volume (level) controls; 2 level indicator meters, equalization switch, "record" switch; tubes: 2-12AX7, 3-12AU7; 6 x 4 rectifier, neon pilot; 4" x 12 1/4" x 8 3/4"; 9 lbs.\$79.50

Model R-12 Preamplifier

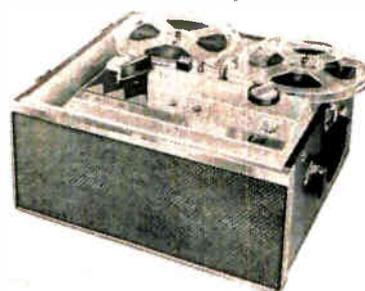
Monaural record playback mike (low level) and tuner (high level) inputs; audio output; record and equalization switches; volume (level) control; record-level indicator meter; tubes: 2-12AU7, 1-12AX7; 6 x 4 rectifier, neon pilot lamp; power consumption 6w; 9 lbs.\$49.50

Model TP-12 Preamplifier

Monaural play only; tape head input, audio output, equalization switch, volume control; tubes: 12AX7, 12AU7, 6 x 4 rectifier, neon pilot lamp; 6 lbs.\$29.00

TELECTROSONIC CORP.

Model SA121



4-track, 2-track stereo play; mono record/play; 2 speeds (3 3/4, 7 1/2 ips) frequency response 100-10,000 cps at 7 1/2 ips; wow and flutter less than 0.3% volume and tone controls; 1 high impedance input; 2 outputs: 4 ohms speaker output and preamplifier output; 3-position function control: record, idle, play; wind-rewind; speed selector push-button; self-contained 5" woofer, 4" tweeter; needs Model SP601 amp/speaker for 2nd channel playback; crystal microphone; 14" x 8 1/4" x 12 7/8"; 17 lbs.....\$129.95

Tape Recorders, Tapes & Microphones

Model MR121

Similar to Model SA121 except mono record/play only.....\$109.95

Model SR441



3-speed stereo tape recorder; frequency response 50-15,000 cps ± 2 db at 7 1/2 ips; 50-10,000 cps ± 2 db at 3 3/4 ips; 50-5,000 cps at 1 7/8 ips; 4 high level inputs; 1/4 track stereo record/play; wow and flutter less than 0.25% at 7 1/2 ips; neon bulb record indicator; tape counter; 2-6" dual-range speakers; audio output 8 watts per channel; 13 1/2" x 8 1/2" x 14 1/2"; 34 lbs.....\$239.95

Model MR241

Similar to Model SR441 except mono record/play.....\$179.95

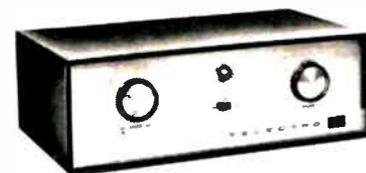
Model SP601 Amp-Speaker

Required for model SA121 for 2nd channel; 5" woofer and 4" tweeter with crossover network; speakers and amplifier integrated with 8' input cable, plug and AC power cord; 2.5 watts peak; frequency response 50-15,000 cps; 11 5/8" x 5 5/8" x 6 1/8"; 6 lbs.....\$29.95

Model SP001-1

Integrated pair of speakers with carrying handles and 8' cables for use with Model SR441 recorder; each unit contains a 5" speaker; frequency response 50-15,000 cps; shpg wt 14 lbs. (pair)\$44.95

TP-22 Preamplifier



Stereo play only; stereo head inputs, 2 audio outputs, dual volume controls, equalization switch; tubes: 2-12AX7, 2-12AU7; 6X4 rectifier, neon pilot light; 4" x 12 1/4" x 8 3/4"; 9 lbs.....\$57.95

Model TRP-21 Preamplifier

Stereo record and play—essentially a combination of R-22 and TP-22 on one chassis; power consumption 40 w; tubes: 2-12AX7, 3-12AU7; 6X4 rectifier, neon pilot; 4" x 12 1/4" x 8 3/4"; 9 lbs.\$124.95

Model C-0 Wood base for Electro deck only; Mahogany or walnut; shipping weight 10 lbs.....\$19.50

Model SS-461 Stereomaster

Individual channel volume and tone controls for balanced stereo; solenoid-

Tape Recorders, Tapes & Microphones

actuated shut-off at end of tape; 2 low level inputs for recording from mic; 2 high level inputs for recording from phono, radio, TV; mechanical controls for pause, play, rewind, wind; rotary speed selector for 1 7/8" ips., 3 3/4" ips., 7 1/2" ips.; head elevator lever for 2-track or 4-track stereo; frequency response at 7 1/2" ips. ± 2 db. 50-15,000 cps.; wow and flutter less than 0.25% at 7 1/2" ips.; distortion less than 1% at normal output; bias oscillator frequency 65 kc.; heads for quarter-track stereo record/play, 1/4-track stereo erase; tubes are 4-6AW8A, 2-12AX7, 12AU7, 6 x 4 rectifier; 8 watts per channel output; 2 built-in vu meters; 4" x 6" speaker built-in; 5" speaker in each "wing"; 2 crystal microphones; 21 1/2" x 14 1/2" x 8 1/2"; 42 lbs. \$349.95

Model 900 Tape Deck Series



All models have 3 speeds—1 7/8, 3 3/4, 7 1/2 ips.; head elevator for 4-track stereo, 2-track stereo or monaural; frequency response 50-50,000 cps.; wow and flutter less than 0.25%; pushbuttons for stop, rewind, play, wind, pause; head assemblies are interchangeable from monaural to stereo; motor board 12" x 13", dress plate 13" x 14 3/4", height above motor board 1 1/4", depth below 6 1/2"; weight 17 lbs. Model 900-1 has 1/2-track erase head, 1/4-track record/play head, head elevator; for monaural record, monaural or stereo 4-track, 2-track play. \$99.00 Model 900-2 same as 900-1 with third 1/4-track stereo head; for monaural record/play or stereo play with monitor. \$115.00

Model 900-3 has 1/4-track stereo erase head and 1/4 track record/play; for monaural and 4-track stereo play, monaural or stereo record. \$109.00 Model 900-4 has 1/4-track record/play head only; for monaural and 4-track or 2-track stereo play only. \$89.95 Model 900-5 similar to 900-3 but with additional 1/4-track head for monitoring. \$139.00

TRITON TAPE (BRAND PRODUCTS)

Long Play Mylar Tape

Made on 1 mil Mylar; permits 50% more recording per reel.

3" reel, 225'	\$1.06
5" reel, 900'	\$3.85
7" reel, 1,800'	\$6.50
10 1/2" reel, 3,600'	\$15.20

Super Play Tensitized Mylar Tape

Twice the playing time per reel; for

long, uninterrupted playing; made on 0.5 mil Mylar.

3" reel, 300'	\$1.75
5" reel, 1,200'	\$5.75
7" reel, 2,400'	\$9.85
10 1/2" reel, 4,800'	\$23.00

Standard Play Tape

Made on 1.5 mil acetate base for home and professional use.

3" reel, 150'	\$1.75
5" reel, 600'	\$2.50
7" reel, 1,200'	\$3.75
10 1/2" reel, 2,400'	\$11.35

Long Play Tape

Made on 1 mil acetate base; permits 50% more recording per reel.

3" reel, 225'	\$1.00
5" reel, 900'	\$3.75
7" reel, 1,800'	\$5.80
10 1/2" reel, 3,600'	\$13.50

Perma Play Tape

Made on 1.5 mil Mylar; lifetime permanence.

3" reel, 150'	\$1.47
5" reel, 600'	\$4.35
7" reel, 1,200'	\$6.95
10 1/2" reel, 2,400'	\$15.25

TURNER CO.

Model 57 Dynamic Microphone



Response 50 to 13,000 cps; quick selection of either high or low impedance; special new diaphragm; output level 55db below 1 volt/d. ne/sq. cm.; 8 3/4" length, 1 1/8" diameter; black satin finish.

Model 57.....\$75.00

Model S-7 (with slide on-off switch).....\$75.00

Model BL-6 desk stand.....\$ 7.00

Series 300 Microphone

Crystal or ceramic; frequency response 60-10,000 cps; complete with desk stand, lavalier assembly, stand adaptor; outputs: Model 304C, -60 db, Model 304X, -54 db.

Model 304C (Ceramic).....\$16.50

Model 304X (Crystal).....\$16.50

Model 707 Microphone

Ceramic; hand-held or stand use; frequency response 60-11,000 cps; output -54 db.....\$12.50

Model 708 Microphone

Crystal; similar to Model 707; output -60 db.....\$12.50

UHER UNIVERSAL

Stereo Record III



3-speed professional type tape recorder (1 7/8, 3 3/4, 7 1/2 ips); frequency re-

sponse at 7 1/2 ips, 40-20,000 cps; plays 2 or 4-track mono/stereo; records quarter track mono/stereo; sound on sound; hysteresis synchronous motor; automatic tape stop; jam-proof controls; wow and flutter $\pm 0.1\%$; signal to noise ratio -55 db; separate level indicators; cueing/editing pause; sound actuated and slide projector sync with Akustomat accessory; complete with 2 dynamic high impedance microphones, amplifiers, speakers, and carrying case; 35 lbs; 16 1/4" x 15 1/4" x 7 3/4" \$399.50

Universal Recorder



Monophonic, portable tape recorder; 3-speed (15/16 ips, 3 3/4 ips, 1 7/8 ips); frequency response 40-16,000 cps; automatic continuous playback; sound on sound; works on any power supply; automatic stop; counter; 4-position transistor mixer; hysteresis synchronous motor; 17 lbs.....\$299.95

ULTRA ELECTRONICS, INC.

Cadenza Ribbon Microphone



Built-in transformer gives high or low impedance; impedance is changed by altering cable connections in adapter socket plugs; high impedance sensitivity, -58 db; low impedance sensitivity, -93 db (ref. 1v/dyne/cm²); ribbon response 30-14,000 cps; British design.....\$66.00

VIKING OF MINNEAPOLIS

Model ESQ Stereo Compact Recorder

Half-track erase and recording heads; short gap 1/4-track play model; specifications same as Model 85 ESQ; push-to-record safety feature; two RA72 amplifiers; anodized aluminum or gold finish.....\$297.50

Model RMQ Stereo-Compact Recorder

Quarter-track recording with wide gap recording heads and short gap play heads; can play 1/2-track or 1/4-track tapes.....\$297.50

Model ES Stereo-Pro Recorder

Consists of the Model 85ES tape deck and 2-RP62 amplifiers; provides erase and record 1/2-track.....\$344.50

Model ESQ Stereo-Pro Recorder

Consists of Model 85ESQ deck and 2-RP62-3 record/playback amplifiers; provides erase and record of 1/2-track; plays either 6-track or 1/4-track without shifting head leads.....\$374.50

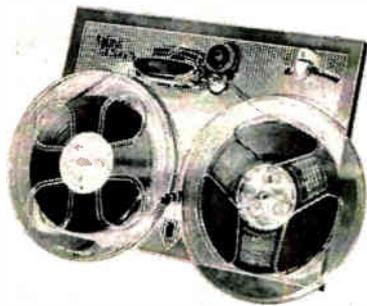
Model RMQ Stereo-Pro Recorder

Similar to Model ESQ except all heads are 1/4-track; provides erase, record, playback of 4-track tape.....\$374.50

Model RA72 Amplifier

For recording only; used with Models RQ, ESQ, RMQ or other 3-head decks; can be used singly for monaural recording; includes adjustments for erase and bias currents.....\$57.50

Model FF75 Series Tape Decks



Two speeds, 3 3/4 and 7 1/2 ips; frequency response 40 to 14,000 cps ±3 db at 7 1/2 ips; flutter 0.2%; features flutter-filter belt drive; 4-pole 60-cycle motor; 7" maximum reel size; 12 1/8" x 8 3/4" x 5" d.

Model FF75

Monaural playback; has single half-track head only, for playback of monaural tapes.....\$66.00

Model FF75-LP

Same as above, but equipped with tapelifter and pressure pad.....\$71.50

Model FF75R-LP

Monaural record/playback. Has half-track record/playback head and erase head; tapelifter and pressure pads. \$78.50

Model FF75RM-LP

Monaural erase/record/monitor; has half-track erase, record/playback and additional record/playback head for monitoring recorded track; tapelifter and pressure pads.....\$87.00

Model FF75SU

In-line, staggered and monaural playback; has in-line heads and single monaural head offset by standard "staggered" spacing; for playback only of in-line, staggered and monaural tapes; tapelifter and pressure pads.....\$106.00

Model FF75SR

Monaural erase-record, stereo playback; has in-line heads for stereo play and monaural erase and record/playback heads; tapelifter and pressure pads. \$113.00

Model FF75ES

Stereo (in-line) erase-record and playback; has in-line record/playback heads control for non-standard tape playback; and two half-track erase heads; may be used with 2-RP61 units for stereo record; tapelifter and pressure pads. \$113.00

Model 85 Series Tape Decks

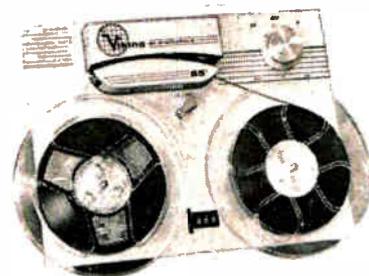
Similar specifications as Model FF75 but with additional features: two motors;



dual rotary control; footage counter; "cue" position; 9 1/2" x 13" x 5".

Model 85P

Monaural playback; has single half-track record and playback head; equipped with tapelifter and pressure pads. \$99.00



Model 85R

Monaural record/playback; has half-track erase and record head, tapelifter and pressure pads.....\$119.00

Model 85SQ

Quarter-track in-line head for playback of four-channel stereo and conventional half-track tapes.....\$134.00

Model 85RQ

Monaural erase/record, stereo playback; same as 85R except in-line quarter-track heads are added for playback of four-channel, 3 3/4 ips tapes.....\$147.50

Model 85SR

has monaural half-track erase and record/playback heads plus in-line half-track stereo heads for playback of stereo tapes; tapelifter and pressure pads. \$143.00

Model 85SRQ

Monaural erase-record, stereo playback; same as 85SR except in-line quarter-track heads are added for playback of four-channel, 3 3/4 ips tapes.....\$167.00

Model 85ES

Monaural-stereo erase/record/playback; has in-line record/playback heads and independent half-track erase heads; may be used with 2-RP61 units for stereo recording, with one RP61 unit for monaural recording; in-line head provides 45 db interchannel cross-talk rejection. \$147.00

Model 85ESQ



Monaural-stereo erase/record/playback; Same as 85ES except in-line quarter-track heads are added for playback of four-channel, 3 3/4 ips tapes.....\$172.00



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Tape Recorders, Tapes & Microphones

Model RP62C Record/Playback Preamplifier



Mike input channel has 62 db gain; hi-level input for radio, etc.; "magic eye" level indicator; NARB equalized, with built-in power supply; signal-to-noise ratio 60 db, for recording with half-track heads only; includes provisions for synchronizing bias oscillators in two RP61 units for stereo recording; bias and equalization are factory adjusted for use with Viking half-track monaural and stereo heads; not recommended for recording with other half-track heads or new quarter-track heads without special modification. 12 1/8" x 2" x 6".....\$77.50

Model PB60 Playback Preamplifier



NARB equalized with control for non-standard tape equalization; compensation range permits use with either half-track or quarter-track heads; built-in power supply; signal-to-noise ratio 60 db; 6 1/2" x 3" x 2".....\$29.50

RP61VU Record/Playback Preamplifier

Same features as RP61, but with VU meter instead of electron ray record level indicator; available with standard 19" relay rack mounting panel only; 600 ohms output impedance; linkage adjustment provided to permit matching either Viking half-track and stereo heads or broadcast type full track erase and record heads.....\$119.00

Rack Mount Kit

For all Viking FF75 decks; 12 1/4" x 15" relay rack mounting panel, to match RP61VU\$11.00

Model 400 Consolelette



Accepts any Viking deck; may be used either vertically or horizontally; may be combined with one or more matching 401 amplifier enclosures to house a complete recorder or stereo combination; available in neutral tan or black...\$14.00

Model 401 Amplifier Enclosure

Amplifier enclosure to match and combine with the 400 Consolelette; accom-

modates one RP61; two or more amplifier enclosures may be stacked if desired; available in neutral tan or black. \$7.50

Model 401A Amplifier Enclosure

Same as 401 except accommodates two PB60 preamplifiers\$8.00

Model D396 Portable Case

Accommodates any Viking 75 Series deck, one or two PB60 or one RP61 Preamp; pre-drilled\$24.50

Model D397 Portable Case

Same as D396 except accommodates 75 Series deck and two RP61's, or one RP61 and two PB60 preamplifiers. \$34.00

Model FF75 Pro Recorder

Consists of FF75R-LP and RP61 in D396 Case; frequency response 30 to 12,000 cps \pm 2 db.....\$179.50

Model Stereo Pro

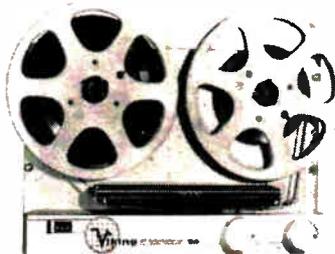
FF75ES or FF75SR deck in portable case with two RP61 (B) preamps, for stereo recording and playback.....\$299.00

Deck mounting flange; for cabinet or built-in installation; provides ample flange to cover rough sawed edges; deck mounts flush with face of flange; available in neutral tan, black and chrome. \$3.00 Net

Reel retainers of molded rubber, recommended for any applications where deck is to be mounted in a vertical position; minimizes reel chatter in rewind or fast forward.....\$1.00 per pair Net

FF95 Tape Deck

Available in speeds of 15 and 7 1/2 ips; 7 1/2 and 3 3/4 ips, or 3 3/4 and 1 7/8 ips; features three motors including hysteresis drive motor; for use with any com-



bination of full-track, half-track, and quarter-track heads; accommodates up to 10 1/2" reels; automatic shut-off and fail-safe; signal-to-noise ratio 55 db or better; flutter and wow less than 0.1% at 15 ips, less than 0.15% at 7 1/2 ips; price less heads.

Model 95FTR (Full-track erase and record/play heads)\$516.50

Model 95R (Half-track laminated erase and record/play heads).....\$487.65

Model 95ES (Half-track laminated in-line erase and record/play heads) \$513.25

Model 95ESQ (Half-track laminated in-line erase and record/play and in-line quarter-track play).....\$546.50

V-M CORP.

Model 710A Tape Recorder shown with Model 25A Speaker System

Tape recorder is two-speed, 3 3/4 and 7 1/2 ips; -45 db signal-to-noise; .4% wow; five-watt amplifier; 6" x 9" woofer and 3.5" tweeter; 30 to 18,000 cps \pm 5 db; push button controls; tape index counter; indicators for proper recording level; pause button that permits stopping tapes while recording or playing;



space for eight 7" reels of tape; 9 1/2" x 14 1/2" x 16"; weight 32 lbs; speaker system uses one 12" woofer and one 3.5" tweeter; 6-8 ohms; gray leatherette case; 14 1/2" x 16" x 20 1/4".

Model 710 Recorder\$189.95 List
Model 25A Speaker\$49.95 List

Model 720 Stereo Tape Recorder

Identical in appearance to Model 710A; 4 track record; stereophonic playback; signal-to-noise -45 db; wow and flutter .4%; 6" x 9" 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 3/4 ips and 7 1/2 ips; 10-watt amplifier; tone control; pause button permits stops while recording or playing; large storage compartment; external amplifier and speaker jacks; records from any sound source; 9 1/2" x 14 1/2" x 16".....\$225.00 List

Model 722 Tape Recorder

Portable; records 4-track, plays back 2 or 4-track; "add-a-track" system allows recording on other track while listening to previous playback; tuning eye level indicator; speeds 7 7/8 or 3 5/8 ips; controls for tone, volume; power output 14 watts peak; includes 6" x 9" woofer and 3.5" tweeter; 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 7/8" x 16 5/8" x 14 3/4". \$259.95

Model 168 Amplifier/Speaker



Portable; matches Model 722; inputs for crystal/dynamic mike, tuner, phono; track selector switch; monitor switch; frequency response 20-205,000 cps;

STEREO & HI-FI DIRECTORY

same speakers as Model 722; dimensions same as Model 722.

Model 755 Stereo Tape Recorder

Monaural record; stereophonic playback; signal-to-noise -45 db; wow .4%; two 8" woofers and one 3.5" tweeter; external speaker jack; push button controls; "Normal" and "Distort" lights for indication of proper recording level; tape index counter; automatic shutoff at end of reel; 3 3/4 ips and 7 1/2 ips; 5-watt amplifier; tone control; pause button permits stops while recording or playing; external amplifier and speaker jacks; large storage compartment; records from crystal or dynamic mike, radio or TV, or any crystal, ceramic, or magnetic pickup; tape index counter; 10 3/4" x 19 1/2" x 22 3/4"; in blonde or mahogany. \$275.00

Model 165 Amplifier-Speaker System

"StereoVoice" speaker system composed of two 8" woofers and a 3.5"



tweeter; bass-reflex enclosure; ideal for bookcase installation; optional brass or black legs; 6-8 ohms; 9 1/4" h x 12 1/2" d x 24" w; amplifier is 5 watts; less than 2% distortion; 30 to 20,000 cps ± 2 db at 5 watts; bass, treble, and volume controls; output 8 ohms; 7 1/4" x 6 3/4" x 3 3/8". \$85.00 List

Model 166 StereoVoice Amplifier-Speaker

Amplifier-speaker to match V-M tape recorders; speaker section has 6" x 9" woofer and 3.5" tweeter; response 40 to 15,000 ± 5 db; 5 watt amplifier, less than 2% distortion; 30 to 20,000 ± 2 db at 5 watts; volume, bass, and treble controls; 9 1/2" x 14 1/2" x 16". \$75.00 List

WEBCOR, INC.

Model 2001 Royalite Tape Recorder



Monaural playback and record 3 speed; frequency response: 1 7/8 ips normal

voice frequency; 3 3/4 ips 70-7000 cps; 7 1/2 ips 50-12,000 cps; 8 watt amplifier; wow and flutter: less than 0.4% at 7 1/2 and 3 3/4 ips; two speakers; 5 tubes; dual track recording; editing key; record level indicator; monitor control; numerical type tape counter; external amplifier jack; external speaker jack; ceramic microphone; 20 lbs; 14 1/4" x 8" x 14 1/2" \$189.95

Model 2005 "Regent" Tape Recorder

3 speed: 1 7/8, 3 3/4, 7 1/2 ips; frequency response: 1 7/8": normal voice frequency; 3 3/4": 70-7,000 cps; 7 1/2": 50-12,000 cps; power output: 8 watts; wow and flutter: less than 0.4% at 7 1/2" and 3 3/4"; signal to noise: 45 db; wide range pm speaker; 5 tubes; dual track recording; editing key; level indicator; monitor control; numerical type tape counter; external amplifier jack; external speaker jack; ceramic microphone; 31 lbs; 14 3/4" x 9 1/4" x 16 1/2" \$159.95

Model 2006 "Regent" Remote Control Tape Recorder

Same as 2005 except includes remote control jack; solenoid permits starting and stopping in record or playback with remote control microphone or remote control foot pedal (optional accessories) \$159.95

Model 2007 "Regent Coronet"

1 7/8, 3 3/4, 7 1/2 ips; frequency response: 70-7,000 cps at 3 3/4 ips; 50-15,000 cps at 7 1/2 ips; record and playback stereo and monaural; dual-channel amplifier, 8 watts per channel; wow and flutter less than 0.4% at 3 3/4, 7 1/2 ips; signal to noise ratio 45 db; 2-track and 4-track head adjustment switch; VU meter; fast forward, fast rewind; 2 speakers; 2 ceramic microphones; tape counter; 2 output jacks for external amplifier; 32 lbs.; 9" h x 14 3/4" w x 17" d. \$289.95

Model 2008 Royalite Stereophonic High Fidelity Tape Recorder

3 speed: 1 7/8, 3 3/4, 7 1/2 ips; frequency response: 1 7/8 ips normal voice frequency; 3 3/4 ips: 70-7,000 cps; dual channel amplifier 8 watts per channel; automatic shut off; wow and flutter: 0.4% at 7 1/2 and 3 3/4 ips; signal to noise: 45 db; two speakers; 7 tubes; two or four track stereo playback; dual track recording; editing key; recording level indicator; monitor control; numerical type tape counter; external amplifier-speaker output in one jack; dual concentric volume controls; in-line playback heads; ceramic microphone; 29 lbs; 14 1/2" x 8" x 14 1/2" \$239.95

Model 2950 Stereophonic Tape Desk

Monaural record, stereo playback; 3 speed; self-contained 2 watt amplifier; dual preamps; 7 tubes; frequency response: 1 7/8 normal voice frequency; 3 3/4 50-10,000 cps; 7 1/2 40-15,000 cps; plays in vertical or horizontal position; signal to noise: 40 db; 4-pole induction motor; wow and flutter less than 0.4% at 3 3/4 and 7 1/2 ips; in-line stereo playback heads; master record-play control; monitor control; edit key; tape counter; dual channel cathode follower output 1.5 volts; aural balance to accommodate stereo remote control unit (optional); 8" x 13" x 13 1/2".

Model 4007 Two Section Portable Speaker System

1-8" and 1-4" speaker in each section with crossover network; two 8' input cords packed with tape recorder serve as speaker connecting cords; ebony. \$59.95

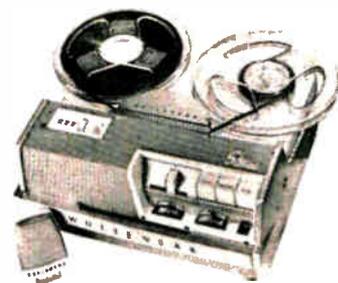
Tape Recorders, Tapes & Microphones

Model 4008 Stereo Channel 2 High Fidelity Speaker System

Addition to Webcor "Royalite"; 2-6 speakers; 10' connecting cord; grey. \$49.50

WOLLENSAK OPTICAL CO.

Model 1500 Tape Recorder



Portable; 3 3/4 and 7 1/2 ips; monaural; frequency response ± 3 db 40-8000 cps, at 7 1/2 ips; takes 7" reels; wow and flutter less than 0.3%; distortion less than 0.8%; 2-level recording indicator; high-speed rewind lever; complete with ceramic mike; 10 1/4" x 11 3/4" x 6 1/2". \$199.50

Model T-1515-4 Tape Recorder

Stereo 4-track; allows playing 2 and 4-track; built-in preamp; frequency response 30-20,000 cps; preamp output 1/2 to 1 1/2 volts; complete with mike and 2 tape reels. \$229.50

T-1600 Tape Recorder



Dual-track two-speed (3 3/4 and 7 1/2 ips) portable tape recorder; frequency response 40 to 15,000 cps ± 3 db at 7 1/2 ips, 40 to 8,000 cps at 3 3/4 ips; wow and flutter less than 0.3%; signal-to-noise ratio better than 50 db; built-in 10-watt amplifier and 5 1/4" speaker; tone control; twin recording level indicators; push-button operation; tape counter; input for microphone and radio or high level phono; outputs for external speakers or amplifier; may be used as PA system; accommodates up to 7" reels; complete with ceramic microphone and tape; 10 1/4" h x 11 3/4" w x 6 1/2" d; 20 pounds. \$299.50

Model 1616

4-track monaural record/stereo playback model; specifications similar to Model T-1500; cross talk -50 db; includes second channel playback preamplifier \$329.50

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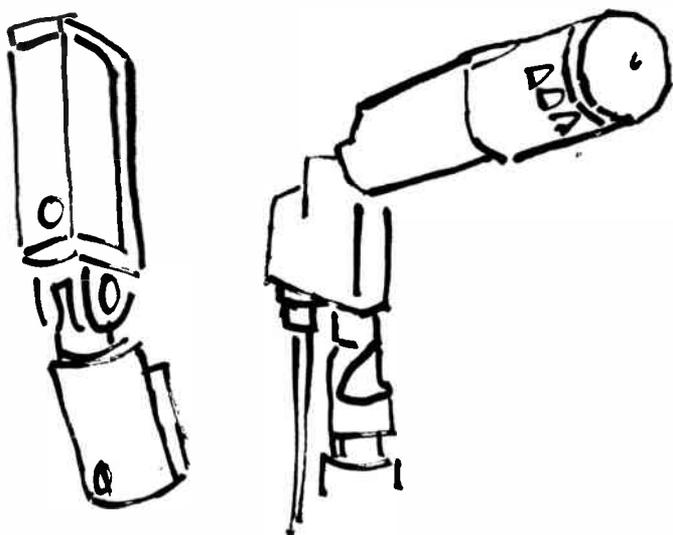
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Choosing The Right Stereo Microphones



by George R. Riley

Most microphones used for home tape recording are seldom utilized to their greatest advantage. Having at least a basic knowledge of what a microphone does and how it accomplishes its purpose, however, can invariably assist the home recordist in obtaining maximum performance from the microphones furnished with the recorder or purchased to use with it. The result is the improvement one would expect and the greater satisfaction derived from the increased knowledge of the proper use of the equipment involved.

The basic function of a microphone is quite simple. Sound waves, as such, cannot be recorded on tape—they must be converted to a useable form of energy. The microphone contains a diaphragm that is moved by the sound waves, they pass by it, at a rate dependent upon the frequency or pitch of the wave itself. The diaphragm is connected to a generator that faithfully translates (or *transduces*, if you wish to become technically proper) that action into electrical impulses that can be amplified and used in the recording heads to form varying magnetic fields. These in turn arrange magnetic particles on the tape coating into reproducible patterns. The microphone diaphragm must follow the action of the sound wave implicitly. If it does not, the electrical impulse created cannot be reproduced faithfully—the result will be only a poor facsimile.

A single audio tone will create a simple waveform and at this point one might ask what happens when many tones, such as those produced by an orchestra or chorus, reach the microphone. The answer is physically complex but grammatically simple: It adds them all up into what is commonly called a *complex waveform*.

Crystal or ceramic microphones are furnished with most home tape recorders because they can be made to do a reasonably good job and are low in cost. The manufacturer, therefore, can include them to present a complete operating package to the consumer without sub-

SPECIAL FEATURE

stantially increasing the cost of the recorder. The paradox here is that the more limited crystal and ceramic microphones require greater user knowledge to obtain best possible results. Similarly fine pictures, even action pictures, could be taken with a simple box camera if one knew the principles of its operation. But the more expensive cameras with variable shutters and diaphragms are much more versatile if one has the same knowledge of their capabilities.

Ribbon Microphones

The sophisticated audiophile should be acquainted with ribbon microphones, sometimes called *velocity* microphones, although they are not used extensively for home recording. This type was designed to extend the frequency response of microphones, at the time it originally appeared in the early 1930's. It utilizes an extremely light corrugated aluminum ribbon with considerable inherent compliance elasticity. Here the ribbon acts both as a diaphragm and generating element. It is suspended in a strong magnetic field and its slightest movement will cut lines of force inducing a voltage and flow of current in the ribbon itself. This is taken off at the ends of the ribbon.

While the frequency range response of the ribbon type microphone can be extended beyond 9,000 or 10,000 cycles some unfortunate characteristics limit its usefulness. For example, in order to obtain a useable output level, the ribbon must be made extremely compliant or "springy." Because of this, it then becomes extremely sensitive and cannot be used outdoors in the slightest breeze. Rumbling and actual stretching of the ribbon will result which, of course, will degrade the quality of the recording. Abnormally high sound levels such as the sound of jet aircraft can damage the ribbon by stretching, and response characteristics of the microphone immediately change thereafter. Output level is so low that there is no margin of safety, particularly on low-cost recorders, and working too close to a microphone of this type results in a "windy and bassy" response.

Using care and a high-quality recorder, the ribbon microphone is preferred by "old-hands" that like its clean-cut upper register response (if the string body is not too spread out) and the natural sounding quality of its speech pickup. For most home recorder applications involving speech the ribbon type has been largely superseded by the dynamic microphone.

Dynamic Microphones

Anyone who has become interested enough in loudspeakers to learn how they work can understand the principle of the dynamic microphone since it is just the reverse of the loudspeaker. A coil of wire, the "voice coil," is attached to the diaphragm and positioned in a strong magnetic field. Whenever sound waves move the diaphragm, the coil moves through the lines of force of this field, thus generating a voltage. The distance the diaphragm oscillates depends on the intensity of the sound, and the speed at which it moves is determined by the pitch or frequency of the sound wave. Corresponding voltages are generated across the voice coil.

The great advantage of the dynamic type microphone is that its frequency response range can be made both extended and very uniform. It is inherently very rugged and can withstand a great amount of accidental mistreatment and hard use before its characteristics change. Its performance can be made equal or superior to much more expensive microphones of other types. This, plus high output level, makes the dynamic mike ideal for all types of home recording. Cost of dynamic microphones is generally higher than crystal or ceramic types. However, when viewed from a quality standpoint, or as an investment in better recordings, the cost becomes secondary. The well-chosen dynamic microphone will last a lifetime with the need of only minor costs for overhaul and repair should the microphone become damaged.

Polar Response

In home stereo recording, probably the most significant characteristic of the microphone is its polar response, or how well it "picks up" sound coming from various directions around the microphone itself. Unfortunately, the polar diagrams furnished with microphones can be very misleading unless the user is well acquainted with the manner in which they are determined and applied.

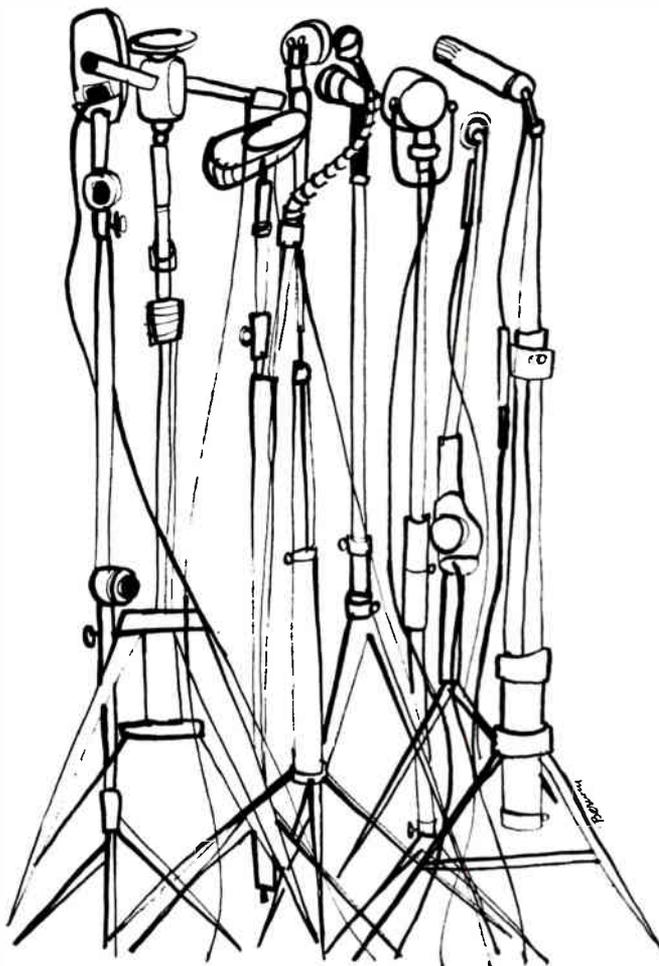
The polar response chart is merely a graph showing how well the microphone accepts and converts to useable electrical output the sounds from various points around its sides and back *as compared to* the same action on the *front axis* of the microphone. Design of the microphone case and interior elements determines how much effect sound waves arriving from various directions will affect the diaphragm and resulting output.

There are three standard types of polar patterns. In looking at a polar diagram imagine always you are looking down on top of the microphone. The front of the microphone is located on the 0° line and the back at 180° . If a microphone is non-directional, no matter at what angle you draw an arrow, it will always be the same length, indicating the output voltage of the microphone is the same regardless of the direction of the source of the sound. The sound, in this case is always of the same intensity and is moved around the microphone keeping the distance from it the same. The chart, then, shows how well sound is accepted and converted into reasonably adequate output voltage.

Some microphones will pick up sound on the back and sides as well as they do from the front which classifies them as non-directional or omni-directional microphones. This is the type normally furnished with home recorders in modest price categories. The physical ap-

pearance of a non-directional microphone is usually misleading in that it is open only at the front; however, the fact that the case is closed at the back does not mean that it will accept sound only from the front. The opposite is true. Sound waves (except those of very high pitch) will easily fold over the back or sides and actuate the diaphragm in the same manner as those arriving from the front. The type of generating element—crystal, ceramic, ribbon or dynamic—is incidental. If the back of the microphone case is closed, the microphone will pick up sounds regardless of the direction from which these sounds originate.

Another type is the bi-directional microphone, so called because it accepts sound from two directions as confirmed by the polar chart—a chart prepared by the manufacturer, showing the sensitivity areas for each in-



dividual microphone. Something new is seen in this chart—sound is not picked up equally well from all directions. At 60° only half the output is obtained from the microphone. This means that if one were to record a chorus with this bi-directional microphone, the members should be spaced around the microphone so those 60° to each side of the front axis are proportionally nearer to the microphone than those who are placed directly in front of it. Or, according to the sensitivity of this particular microphone, it takes twice the sound level at 60° that it does at 0° to produce the same output level from the microphone. Between 60° and 90° the microphone output drops to a theoretical 0 at 90° making the sides of the bi-directional microphone "dead." The term "dead" is often used to describe this point, but it is misleading

since the theoretical point of zero output level cannot be achieved in actual practice. It is sufficient to remember that output level of a bi-directional microphone for sounds arriving from the sides is very low.

A cardioid uni-directional microphone describes a pattern that picks up sound well only at the front. The term "cardioid" means "heart-shaped" which describes the polar pattern produced by this microphone. If a person stands 90° on either side of the front axis of the microphone, to produce the same output or recorded level he will have to talk or sing twice as loud as if he were the same distance from the front. If he is 150° on either side, he will have to talk or sing four times as loud as the same distance in front. Directly behind the microphone, whatever sound he makes will almost be lost.

A long explanation of the decibel at this point could be of little interest to the home recordist. However, he is constantly confronted with this mathematical shortcut. Actually, the decibel, abbreviated db, is merely a figure that represents a ratio or a comparison. It is used to simplify otherwise complex mathematics since decibels, always small numbers, can be added and subtracted thus multiplication or division of large numbers is unnecessary. Manufacturers of recording equipment and accessories often provide information on their equipment in terms of decibels so the home recordist would never be called upon to use the mathematics needed to actually calculate db.

In reading the polar chart, it is easy to make a quick appraisal by remembering that a drop of 6 db means a one-half loss in level. If at 90° to either side of the front axis of the microphone the output level is down 6 db, it means that the level is half of what it would be if the same sound were arriving from the front. At approximately 120°, the level could be down another 6 db so the output is half what it was at 90° or ¼ what it would be on the front axis. Or, at around 140° the level might be down another 6 db and at that point become half what it was at 120° or ⅛ what it would be on the front axis.

Stereo Recording

At this point, we may wonder why a long explanation of microphone generating elements and polar patterns is necessary to make the fine quality stereo recordings we desire. The facts are that at some time the home recordist will be called upon to choose additional microphones if he wishes to progress in his hobby and it is good to base a choice on knowledge that he can get the best value for each dollar invested. Knowledge of the polar characteristics will tell us how the microphone performs and if it is the type which will give us the best results for the acoustical conditions under which our recordings are to be made.

To obtain the best stereo recordings possible, the microphones used must be the same type as far as generating element, polar patterns, frequency response and output level are concerned. Some microphone manufacturers will supply matched microphones at no additional cost. Normally, there is some variation in the recording level controls on the home tape recorder, so the home recordist should not be alarmed if both are not in exactly the same position when the visual indicator shows the microphones are balanced.

Since fine recordings can be made with crystal, ceramic or dynamic microphones and all these are available in non-directional or cardioid types, it is now necessary only to apply what has been discussed above to actual recording conditions.

Most homes, unless they are very modern in decor, are "soft" acoustically speaking; that is, sounds are absorbed readily and there is no problem of echo which will degrade the recording and reduce the stereo effect. Non-directional microphones can be used under these conditions. Remember, however, that the stereo effect is mostly created by the *direction* of the higher frequencies and if the microphone is limited in high frequency response, the stereo effect will be reduced—or realism will be lacking. This, in itself, is the strongest argument for an investment in good microphones.

Under such acoustical conditions, non-directional microphones have the advantage that placement is less critical. If one performer is involved, the microphones can be set up six to eight feet apart and he can stand near either or in the middle, as desired. Naturally, the position in the middle will produce the greatest stereo effect when reproduced since any movement from this position will be readily picked up by both microphones. A few minutes' experimenting will produce proper balance between instruments and performer.

Small groups are easily handled with the same microphone placement; however, in stereo recording of large groups, proper balance may become a problem. The distance between microphones must be increased to cover the group but the group must be placed farther from the microphones. Working farther from the microphones tends to blend the sound so no individual will be close enough to overbalance or mask out the others. Sound level is not a problem when distance is increased since the group is naturally louder than a single performer. The human ear is a wonderful device for picking up all sounds and it simply filters—psychologically—those we wish to ignore. Unfortunately microphones pick up all sorts of sounds and the tape recorder has no way to filter out those not desired. Accordingly, when recording in a very "hard" room or one which contains little sound absorbent material such as drapes, rugs and upholstered furniture, echo and reverberation can seriously degrade the recording. Reverberation, incidentally, is echo which persists until it dies out through being absorbed. The result, in small rooms, is a muddled or hollow sound and degradation of the stereo effect.

A simple test for room hardness is to clap your hands. If sounds persist a noticeable length of time, a directional microphone should be used. Fortunately, if a bi-directional or cardioid microphone is needed to record in a hard room, they can also be used under better conditions, making them more versatile than the non-directional type.

Since conditions under which the home recordist will make stereo recordings are greatly varied, no firm set of rules can be laid down. Using the above information should provide assistance particularly when supplemented by experimentation that is often so interesting and necessary. Fortunately, in stereo tape recording, there is often room for tolerable error before the results become discouraging, and even the most mediocre of stereo recordings puts monophonic home tape recording in its proper place in history.

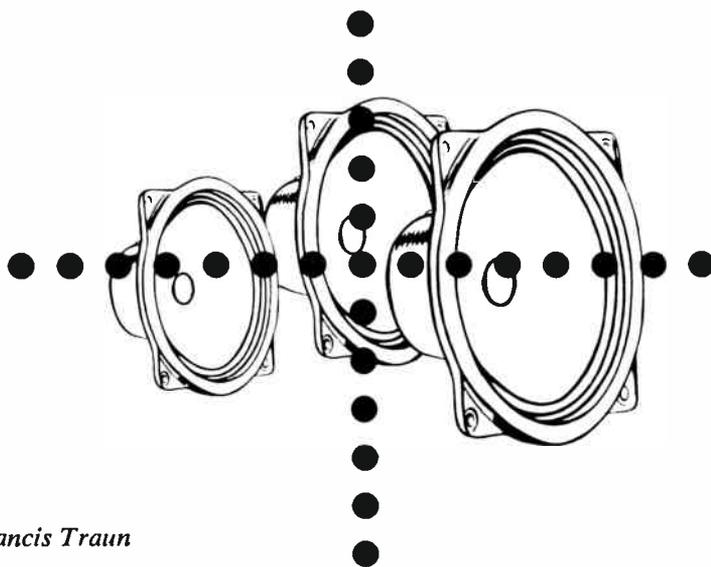
SECTION

—5—

Speakers, Enclosures & Equipment Cabinets

Loudspeakers

For '61



by Francis Traun

An old tenet of high fidelity insists that loudspeakers possess a kind of individuality that cannot be expressed in terms of technical specifications. Unlike amplifiers and tuners, which are purely electronic devices and therefore amenable to precise technical assessment of their performance, loudspeakers belong to a no-man's land lying somewhere in the border region of electronics, mechanics, acoustics, and the ancient craft of musical instrument making. With such diverse factors entering into the picture, it is naturally difficult for any set of printed data to describe the individual sound quality of any given loudspeaker.

Of course, there are technical specifications that serve as objective guideposts in evaluating a speaker. But because measurements alone cannot tell the *whole* story about the quality of a speaker—just as measurements alone cannot define the difference between a Stradivarius and any ordinary fiddle—many experienced audiophiles insist that the only way to choose a speaker is “by ear.”

Choosing a Speaker

Most high fidelity dealers will let you listen at length to various speakers for comparison purposes. Since the choice of your speakers is the most important item in determining the tonal character of your sound system, by all means take your time. Spend at least half an hour in quiet and relaxed listening before you make the final decision. Play the kind of music you like best, perhaps bring your own records. Only after such thorough personal *audiotioning* can you be sure that the “individuality of the speaker most closely matches your own individuality in tonal preference.

Some people like a rather sharply defined, brilliant sound that seems to put the orchestra right in your lap. This is fine for small jazz combos, chamber music, and similar small groups where you naturally want to feel close-up to the music. But for symphony orchestra and

larger instrumental groups you may like a less immediate and more blended overall sound. As a rule, a “brilliant” sounding speaker does not produce the kind of natural, rich and spacious string sound that is the basis of the symphonic sound texture. This requires a different speaker “individuality” and only by careful listening can you pick the speaker that sounds most “musical” to you—i.e. the one that corresponds to your own sense of what sounds “right.”

Even in such a subjective criterion as a personal listening test there are certain factual comparison standards. For instance, you might consciously listen for the smooth, silky sheen in the violins, the solid bass weight in the lower strings of the cellos and bass fiddles, watch for the clear brassy ring of the trumpet that should come through without harshness or buzz. You might cock your ear particularly for such transient sounds as drumbeats, plucked strings, harp or xylophone. If they come through crisp and clear without an aura of tonal fuzz hanging around them it is a very good sign of speaker quality. A speaker that handles such “transients” cleanly and does not sound shrill on strings is likely to reproduce any musical sound with a naturalness that makes listening a pleasure.

Current Trends and Innovations

It now seems generally accepted that a speaker and its enclosure are so closely interdependent that one cannot be considered without the other. They interact somewhat like the vibrating string with the body of the violin, and even the best speaker cannot adequately perform if it is hampered by a poor enclosure.

For this reason the majority of speakers today are sold as “systems” complete with their own properly matched enclosure, in many cases including compatible tweeters and crossover networks. This eliminates all chances of mismatch between speaker and enclosure or woofer and tweeter and assures that the speaker system is operating under optimum conditions.

Most current speakers are compact designs. These so-called "bookshelf" models may still require rather hefty bookshelves to accommodate them. But the fact remains that the bookshelf speaker, today's predominant mode of design, is only a fraction of the size previously thought necessary to produce adequate bass.

The first major breakthrough in getting bass without space came with Edgar Villchur's invention of the acoustic suspension principle, which allowed a woofer to reach down into the 30 cps bass region in an enclosure of only 1.7 cubic feet internal volume. To make the space saving possible, some of the amplifier wattage is diverted into building up a kind of cushion of compressed air in the sealed enclosure to back up and stiffen the loudspeaker cone. Because some of the wattage is so diverted, more amplifier output is required to attain a given degree of loudness. In other words, the space saving is attained at the cost of speaker efficiency. Amplifier outputs of 20 watts per channel at the least are considered necessary to drive acoustic suspension speakers effectively.

This is all very well for people owning high-power amplifiers. They may feed all the extra wattage into such acoustic suspension speakers as the various Acoustic Research, KLH and Knight-kit models and in return obtain from them bass reproduction remarkably free from distortion (thanks to the linear characteristic of the watt-hungry air cushion in back of the speaker).

But what about people with lower-powered amplifiers—particularly those with integrated stereo amplifiers in the 12-18 watts-per-channel class. Must they forego the convenience of compact shelf speakers?

Not at all! There has been a recent trend toward designing bookshelf speakers with lower power requirements. The new Fisher XP-1, for instance, features a novel magnet shape capable of concentrating more magnetic force in the narrow voice coil gap and hence functioning more efficiently. A mere 10 watts suffice to drive this acoustic suspension-type speaker. However, they have to be "clean" undistorted 10 watts all the way down to the low bass.

The trend toward more efficient speakers (i.e. speakers requiring less wattage to drive them) has led several firms to revamp the time-honored bass reflex principle to meet the demands of bookshelf speaker design. Altec Lansing, James Lansing, Jensen, R. J. Wharfedale and University are among the firms that are now producing "ported" speaker systems in bookshelf size. In these designs, a hole or "port" in the enclosure permits the bass to be reinforced by controlled resonance and the energy radiated from the back of the speaker cone contributes to the total sound output. Since this rear radiation is made audible and not absorbed by any internal air cushion (as in the acoustic suspension designs) ample loudness can be obtained in the average listening room with power ratings as low as 12 watts per channel.

Because of the addition of resonance, ported systems tend to sound differently than the acoustic suspension systems. If there is greater tonal clarity in the suspension speakers, particularly in heavily orchestrated passages, the ported systems may have a somewhat warmer coloration. The choice between them therefore becomes partly a matter of available wattage, partly a matter of personal taste.

Tweeter News

Several innovations have recently occurred in the tweeter department of bookshelf speakers. One is the cone-less frequency drivers in the form of rigid, hemispheric sound radiators capable of extremely clean treble reproductions. These are part of the Acoustic Research AR-3 and AR-2a models and are also available separately as Model AR-3st.

A free-floating cone without rim attachment and hence free of distortion engendered by the restraint exercised upon the cone by its suspension is an innovation offered by Fisher in the tweeter of the XP-1 system.

JanZen, Allied Radio (with their Knight KN-3000 speaker) and Radio-Shack's Realistic "Electrostat-4" are speaker designs that have taken a very unusual bull by the horn in combining cone woofers with electrostatic tweeters within the compact confines of a bookshelf speaker system. All these speakers require rather high amplifier wattage since both woofer and tweeter section are of low efficiency. The merits of electrostatic tweeters is a long-standing topic among hi-fiers and to discuss it in detail would exceed the scope of this brief survey. As a group, these speakers have a somewhat tight and dry overall sound, rather on the brilliant side, that some listeners will find to their liking. It is a kind of "analytical sound" that makes jazz combos, modern orchestrations and all kinds of sharply articulated music snap into sharp focus. There is "bite" in the brass and instrumental solos stand out clearly. But some listeners feel that this kind of "analytic" sound lacks a feeling of warmth and depth and does not go with the darkly blended masses of sound characteristic of many symphonic composers.

Satellite Systems

A special group of speaker systems has been designed with the specific purpose of providing a broad three-unit stereo sound source with notable economy of space and cost. These setups consist of a single bookshelf-type speaker flanked by two small "satellites." The principle of these systems is to combine the bass of both channels in the single center speaker while the upper frequencies of the left and right channels are divided among the two satellites.

The pooling of bass from both channels in the common woofer is permissible because the lows contribute little to the directional effect of stereo. The lateral aspect of stereo derives mainly from separation in the sound spectrum above 200-300 cps. As a rule, the center units serve not only in the bass department but extend considerably into the midrange where they overlap with the satellites. Jointly, the three speakers form an impressively broad sound front facing the listener. This contributes "center fill" enough to smooth out any "hole in the middle." Moreover, since the chosen distance between the center unit and either satellite is left wholly to the listener's discretion, there is an uncommonly wide choice in sound distribution pattern to suit the requirements of a particular listening room. Moreover, the small size and weight of the satellite units makes such "speaker moving" no more strenuous than shifting a desk lamp.

The foremost examples of satellite speaker systems are the Lafayette "Celestial," the Jensen "Galaxy," the Electro-Voice "Stereon" and the Weathers "Harmony."

Any of these systems are capable of impressive stereo sound projection. But it should be pointed out that some experts feel that such satellite systems with pooled bass units tend to favor stereo directionality over stereo depth. Their argument is that separate and spaced bass sources are required to convey phase relationships in the lows which they hold to be one of the contributing causes of the stereo depth effect. The opposite contention is that the three-source factor of the satellite systems makes up for any possible loss of depth.

Again it is not possible to resolve the listener's choice with hard and fast rules. Our advice is to compare your personal reactions to satellite systems and conventional speaker setups before reaching a final decision.

Indirect Sound and Omnidirectional Speakers

In recent months, a new trend seems to be in the making which puts the chief emphasis in speaker design not so much on left/right directionality but on an overall sense of musical depth and spaciousness. Here sound is not aimed forward at the listener like from two sharp searchlights. Instead it is diffused in all directions. The walls and ceiling of the listening room are called upon to furnish helpful reflections and the listener feels him-

self enveloped in sound from all sides.

The advocates of indirect and omnidirectional sound claim that type of sound radiation pattern duplicates more realistically the natural sonic environment in which music is heard at a concert. Their argument finds support in the fact that many musically oriented people find the sound of these "indirect sound" and omnidirectional speakers very agreeable.

The Eico HFS-2 speakers were pioneers in omnidirectional design and the University TMS-2 was among the first to employ indirect sound. Today the unorthodox ideas embodied in these speakers seem to be gaining progressively wider favor. Radio Frequency Laboratories (RFL) have designed a whole series of stereo speaker systems relying on reflected sound and wide dispersion. And just as we go to press, word has been received from Harmon-Kardon that the chief engineer of their Citation Division, Stewart Hegeman, has designed a new omnidirectional speaker system employing the famous British-made Lowther driver units.

With such vital and varied speaker developments in the field, the audiophile is likely to find 1961 a stimulating and challenging year for the pursuit of his hobby.

ACOUSTI-CRAFT

Tanganyika Credenza Stereo Group

Tropical style design; consists of twin speaker enclosures Models 2412TSD and 2412THSD, 4.5 cu. ft. each, and Model 2400TE equipment cabinet; lift up tops with room for tape deck and other stereo components; accordion doors; zebra-wood front.

Model 2400TE Equipment Cabinet; 26 $\frac{3}{4}$ "x55"x19"\$350.00

Model 2412TSD Speaker enclosure (bass reflex); 26 $\frac{3}{4}$ "x22"x19"\$125.00

Model 2412THSD Speaker enclosure (horn loaded); 26 $\frac{3}{4}$ "x22"x19"\$137.00

Samoan Stereo Group

Oriental modern styling; consists of twin speaker enclosures Models 2312 OS and 2312OHS, 4 cu. ft. each, and Model 2300-OE equipment cabinet; extended top has solid inlay construction.

Model 2300OE Equipment cabinet; 27"x55 $\frac{1}{2}$ "x19 $\frac{1}{2}$ "\$300.00

Model 2312OS Speaker enclosure (bass reflex); 27"x21 $\frac{1}{2}$ "x19 $\frac{1}{2}$ "\$90.00

Model 2312OHS Speaker enclosure (horn loaded); 27"x21 $\frac{1}{2}$ "x19 $\frac{1}{2}$ "\$102.00

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; $\frac{3}{4}$ " hardwood birch veneer; eight finishes available.

Model 1400EIPS Equipment cabinet; 31"x41"x20 $\frac{1}{4}$ "\$225.00

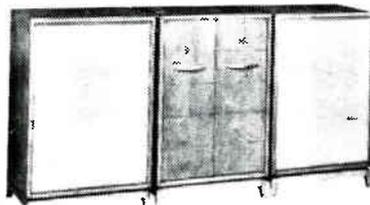
Model 1415IPS Speaker enclosure (bass reflex); 31"x22 $\frac{1}{2}$ "x20 $\frac{1}{4}$ "\$90.00

Model 1415IPHS Speaker enclosure (horn loaded); 31"x22 $\frac{1}{2}$ "x20 $\frac{1}{4}$ "\$102.00

Model 1400EIP Equipment enclosure; 31"x54 $\frac{1}{4}$ "x20 $\frac{1}{4}$ "\$325.00

Radcliff Shelf Enclosure

Ducted port construction; for 8" speaker only; choice of Natural, Blonde, Mahogany, Maple, Cherry finishes; 11"x23 $\frac{1}{2}$ "x10".



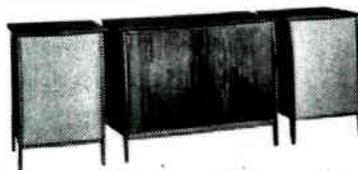
Model 1008M Unfinished\$30.00
Model 1008U Finished\$24.00

Model 2800M Directoire Enclosure



Ducted port construction; for 8" or 12" speakers; solid inlay baffle frame; $\frac{3}{4}$ " American Walnut; 14"x24"x12" \$45.00

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.

Model 1500EMS Equipment cabinet; 30"x40 $\frac{1}{2}$ "x20 $\frac{3}{4}$ "\$218.00

Model 1515EMS Speaker enclosure (bass reflex); 30 $\frac{1}{2}$ "x21"x20 $\frac{3}{4}$ "\$90.00

Speakers, Enclosures & Equipment cabinets

Model 1515MHS Speaker enclosure (horn loaded); 30 $\frac{1}{2}$ "x21"x20 $\frac{3}{4}$ "\$102.00

Model 1500EM Equipment cabinet; 30 $\frac{1}{2}$ "x55 $\frac{1}{2}$ "x20 $\frac{3}{4}$ "\$300.00

Glenwall Baffles

For speaker extension systems; available for 12" or 8" speakers; hardware and brackets supplied; wall or corner enclosures.

Model 3108W Sloping Wall enclosure for 8" speaker—11"x11"x7 $\frac{1}{4}$ "...\$6.00

Model 3108C Corner enclosure for 8" speaker—14"x13"x6 $\frac{3}{4}$ "\$12.00

Model 3112W Sloping Wall enclosure for 12" speaker—15"x15"x9 $\frac{7}{8}$ "...\$8.00

Model 3112C Corner enclosure for 12" speaker—17"x17"x9"\$16.00

Model 412 Ready-to-Paint Enclosure

Auxiliary or built-in use; mounted on 3" legs; $\frac{3}{4}$ " Douglas Fir Plywood; available either bass-reflex or horn loaded.

Model 412U—31 $\frac{3}{4}$ "x21 $\frac{1}{8}$ "x16" Bass Reflex, \$50.00; Horn Loaded, \$62.00

Built-In Flush Mount Enclosure

Available for 8" or 12" speaker; for extension or built-in use; snap-on frame, polish-sanded ready for finishing.

Model 2008U 12 $\frac{3}{4}$ "x12 $\frac{3}{4}$ "; 8" speaker\$9.00

Model 2012U 15 $\frac{3}{8}$ "x15 $\frac{3}{8}$ "; 12" speaker\$10.00

Williamsburg Stereo Triad

Consists of twin 4.5 cubic ft. Model 412P or 2.5 cubic ft. Model 1108 speaker enclosures, either bass reflex or horn loaded, and Model 400EP equipment cabinet; eight finishes.

Model 400EP Equipment cabinet; 32"x21"x15 $\frac{3}{4}$ "\$96.00

Model 412P Speaker enclosure (bass reflex); 32"x21"x16 $\frac{1}{2}$ "\$63.00

Model 412PH Speaker enclosure (horn loaded); 32"x21"x16 $\frac{1}{2}$ "\$75.00

Model 1108P Speaker enclosure (bass reflex); 23 $\frac{1}{2}$ "x17"x12"\$40.00

Speakers, Enclosures & Equipment cabinets

Heritage Symphony Stereo Ensemble

Consists of Model 1915PS and 1915 bass reflex and horn loaded 4.5 cu. ft. speaker enclosures, and Model 1900EP or 1900EPS equipment cabinet; eight finishes available.

Model 1900 EPS Equipment cabinet; 30 $\frac{3}{4}$ "x40 $\frac{1}{4}$ "x20 $\frac{1}{4}$ "\$218.00
 Model 1915 PS Speaker enclosure (bass reflex); 30 $\frac{3}{4}$ "x23"x20 $\frac{1}{4}$ "\$90.00
 Model 1915PHS Speaker enclosure (horn loaded); 30 $\frac{3}{4}$ "x23"x20 $\frac{1}{4}$ "\$102.00
 Model 1900EP Equipment cabinet; 30 $\frac{3}{4}$ "x55"x20 $\frac{1}{4}$ "\$300.00

Colonial Symphony Stereo Ensemble

Consists of equipment cabinet and twin speaker enclosures; holds all equipment for stereo; $\frac{3}{4}$ " hardwood birch veneer; eight finishes; enclosures are bass reflex or horn loaded.

Model 1800EAS Equipment cabinet; 30 $\frac{1}{2}$ "x40 $\frac{1}{4}$ "x20 $\frac{1}{4}$ "\$218.00
 Model 1815AS Speaker enclosure (bass reflex)\$90.00
 Model 1815AHS Speaker enclosure (horn loaded)\$102.00
 Model 1800EA Equipment cabinet; 30 $\frac{1}{2}$ "x55"x20 $\frac{1}{4}$ "\$300.00

Radcliff Stereo Triad

Consists of twin 4.5 cubic ft. Model 412 or 2.5 cubic ft. Model 1108 speaker enclosures, either bass reflex or horn loaded, and Model 400EM equipment cabinet; tuner and amplifier in top section and pull-out record changer drawer bottom; eight finishes.

Model 400EM Equipment cabinet; 32 $\frac{3}{8}$ "x21 $\frac{1}{8}$ "x15 $\frac{3}{4}$ "\$90.00
 Model 412M Speaker enclosure (bass reflex); 32 $\frac{3}{8}$ "x21 $\frac{1}{8}$ "x15 $\frac{3}{4}$ "\$57.00
 Model 412MH Speaker enclosure (horn loaded); 32 $\frac{3}{8}$ "x21 $\frac{1}{8}$ "x15 $\frac{3}{4}$ "\$69.00
 Model 1108M Speaker enclosure (bass reflex); 23 $\frac{1}{2}$ "x17"x12"\$34.00

Stereo Combo Series

Each is a complete, built-in unit in different stylings.

Model 3900 Heritage Combo in American Provincial style; 31"x75"x21 $\frac{1}{2}$ ".
 Model 3900 with bass reflex enclosures\$350.00
 Model 3900 with horn loaded enclosures\$374.00
 Model 3800 Colonial Combo in Early American style; 31"x75"x21 $\frac{1}{2}$ ".
 Model 3800 with bass reflex enclosures\$350.00
 Model 3800 with horn loaded enclosures\$374.00
 Model 3500 Stockholm Combo in Swedish Modern style; 31"x75"x21".
 Model 3500 with bass reflex enclosures\$350.00
 Model 3500 with horn loaded enclosures\$374.00
 Model 3400 Capri Combo in Italian Provincial style; 31"x75"x21 $\frac{1}{2}$ ".
 Model 3400 with bass reflex enclosures\$350.00
 Model 3400 with horn loaded enclosures\$374.00
 Model 4300 Samoan Combo in Oriental Modern style; 31"x75"x21 $\frac{1}{2}$ ".

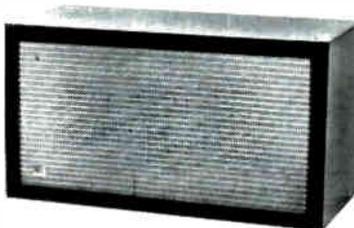
Model 4300 with bass reflex enclosures\$350.00
 Model 4300 with horn loaded enclosures\$374.00

Model 4400 Bermuda Combo in Island Contemporary style; 31"x75"x21 $\frac{1}{2}$ ".
 Model 4400 with bass reflex enclosures\$350.00
 Model 4400 with horn loaded enclosures\$374.00

Model 5000 Americana Combo in Modern American style; 60"x30"x18".
 Model 5000 with bass reflex enclosures\$210.00
 Model 5000 with horn loaded enclosures\$222.00

ACOUSTIC RESEARCH, INC.

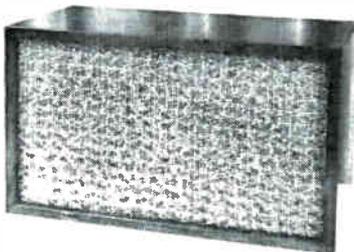
Model AR-1



Uses acoustic suspension principle; two-way system; 38 cps to 1,000 cps \pm 1 $\frac{1}{2}$ db; 1,000 cps to 13,000 cps \pm 5 db; useable range down to 30 cps; one 12" woofer; one 8" mid- and high-frequency unit; built-in crossover; 4 ohms impedance; less than 2% harmonic distortion from 60 cps to 15,000 cps at 20 watts input; less than 3% to 42 cps; recommended amplifier power: 30 to 60 watts; 14"x11 $\frac{3}{8}$ "x25"; 50 lbs; $\frac{3}{4}$ " hardwood veneer.

AR-1 (mahogany or birch)\$185.00
 (walnut or cherry)\$194.00
 (korina)\$194.00
 AR-1U (unfinished fir)\$172.00
 AR-1W (woofer only in mahogany or birch cabinet)\$145.00
 (walnut)\$154.00
 AR-1WU (woofer only, unfinished pine)\$132.00

Model AR-2

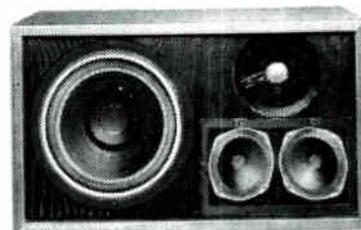


Acoustic suspension two-way system; 42-14,000 cps \pm 5 db; down 10 db at 30 and 16,000 cps; 10-inch woofer and special tweeter; built-in crossover; 8 ohms impedance; harmonic distortion at 10 watts under 2% to 60 cps, under 3% to 50 cps; recommended amplifier power: 20 to 40 watts; bookshelf type: 13 $\frac{1}{2}$ "x24"x11 $\frac{3}{8}$ "; 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 $\frac{1}{8}$ "x6 $\frac{3}{16}$ "x11 $\frac{1}{16}$ ".

AR-2 (mahogany, birch)\$35.00
 (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 $\frac{3}{4}$ "x7 $\frac{7}{8}$ "x14".

AR-3t (mahogany or birch)\$92.00
 (oiled walnut, walnut, cherry, korina)\$96.00
 (unfinished pine)\$87.00

Model AR-3

Acoustic suspension three-way system; 38 to 1,000 cps, \pm 1 $\frac{1}{2}$ db.; 1,000 to 20,000 cps, \pm 2 db.; usable range down to 30 cps; one 12" woofer, one 2" and one 1 $\frac{3}{8}$ " 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 amplifier power 30 to 60 watts, at least 20 watts per stereo channel; 14" by 11 $\frac{3}{8}$ " 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

Model 440 Bi-Phonic Coupler



Employs 15"x 22" rigid radiating panel; panel is driven by ring magnet assembly which is coupled to voice-coil magnetic structure weighing 20 pounds; phenolic diaphragm tweeter; requires 15 watts; will handle up to 50 watts; response 30-25,000 cps; suitable for wall or free-space placement; impedance 8 ohms; 4 $\frac{1}{2}$ "x 18"x 24"; available in mahogany, walnut or oiled walnut\$134.40
 Extra ebony base\$5.00

STEREO & HI-FI DIRECTORY

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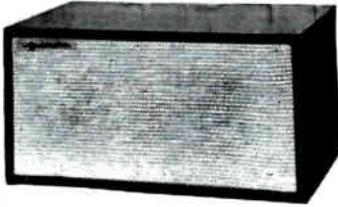
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Speakers, Enclosures & Equipment cabinets

ALCOR

Polaris Speaker System



Bookshelf speaker system designed for stereo: tweeter design uses acoustic reflection for wide dispersion; woofer is a soft-suspension, cast-frame low frequency driver used with LC crossover; satisfactory operation with 10 watts or more; fuse protected; frequency response 35-17,500 cps; 8 ohms; 11 $\frac{3}{4}$ " x 11 $\frac{3}{4}$ " x 24 $\frac{3}{4}$ ".

Unfinished birch\$77.50
Mahogany\$84.50
Walnut or cherry.....\$88.50

ALLIED WOOD PRODUCTS

Model BRS-1227S Floor Enclosure



Bass reflex type for 12" or 15" speaker; available in ribbon-stripped mahogany, walnut, korina; 21"x29 $\frac{1}{2}$ "x16".

Unfinished\$33.50
Mahogany\$40.00
Korina or Walnut\$45.00

Model BRC-1228S Corner Enclosure

For corner use; dimensions and prices same as Model BRS-1227S.

Model HFT-800-S Table Enclosure

Accommodates 8" speaker, 23 $\frac{1}{2}$ " x 11" x 11".

Unfinished\$18.75
Mahogany\$21.75
Walnut or Blond.....\$25.00

ALTEC LANSING CORP.

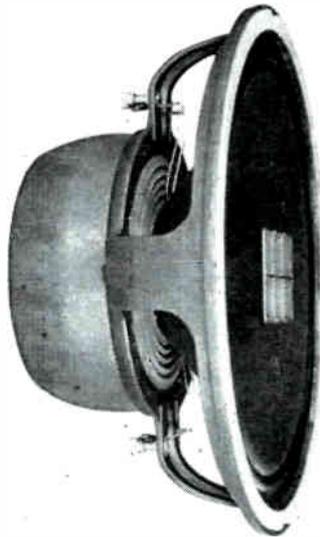
Model 415A

15-inch Biflex cone-type speaker with second compliance ring in the center of the cone to give mechanical crossover at 1,000 cycles and permit 2-way performance with a single voice coil; 25 watts; 30 to 14,000 cycles; 8-ohms impedance; Alnico-V ring magnet; 3-inch edge-wound ribbon voice coil; cast aluminum frame.....\$67.00

Model 602B "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 3,000 cps dividing network \$143.00

Model 601B "Duplex"



12-inch two-way speaker; 12-inch woofer with a high frequency driver and horn in a single heavy cast frame; complete with 3,000 cycle crossover network, frequency response from 40 to 22,000 cycles.....\$120.00

Model 408A



8-inch Biflex cone-type speaker with second compliance ring in the center of the cone to give mechanical crossover at 1,000 cycles and permit 2-way performance with a single voice coil; 15 watts: 60 to 16,000 cycles; 8-ohms impedance; Alnico-V ring magnets; mechanical crossover at 1,000 cycles. \$31.00

Model 412B

12-inch Biflex cone-type speaker with second compliance ring in the center of the cone to give mechanical crossover at 1,000 cycles and permit 2-way performance with a single voice coil; 20 watts: 40 to 15,000 cycles; 8-ohms impedance; Alnico-V ring magnet; 3-inch edge-wound ribbon voice coil; cast aluminum frame.....\$54.00

Model 802D Driver and 811B Horn

In combination are guaranteed to reproduce 800-22,000 cps; driver has

2 $\frac{1}{4}$ " aluminum alloy diaphragm; phasing plug to achieve exact phasing of pressures from all areas of diaphragm; voice coil of edge-wise wound aluminum ribbon 1.75" diameter; 1.2 pound ring magnet; 16 ohm impedance; power rating above 800 cps is 30 watts; diameter 4 $\frac{1}{2}$ " x 3 $\frac{1}{16}$ " h; horn is cast of resonant-free aluminum; dispersion 90° horizontal, 40° vertical; 14" l x 18 $\frac{3}{4}$ " w x 8 $\frac{5}{8}$ " h.

811B Horn.....\$30.00
802D Driver.....\$63.00

Model 803 Woofer



15-inch woofer; power rating 30 watts; 16-ohms impedance; 2.7 pound Alnico-V ring magnet; special rim compliance prevents cone breakup; 3-inch diameter copper ribbon voice coil is edge-wise wound; cast aluminum frame.\$66.00

Model 605A Duplex



15" coaxial speaker; 35 watts up to 50 watts peak power; 16 ohm impedance; magnet weight 2 $\frac{1}{4}$ lbs. low frequency, 1/2 lb. high frequency; depth 10"; weight 37 lbs. including network.....\$177.00

Model 834A Monterey

Bookshelf type; includes 2-woofers, and Model 300B high frequency sectoral horn; frequency response 40-22,000 cps; power rating 20 watts; 14"x26"x14 $\frac{1}{2}$ "; in walnut, blonde, mahogany.\$174.00

Unfinished.....\$169.00

Model 871AB

Bass-reflex cabinet; for use along wall; accepts 12" or 15" speaker; 30 $\frac{1}{2}$ "x33"x15 $\frac{7}{8}$ "; blonde.....\$105.00

Model 872AB

Bass reflex; trapezoid shape for corner use; accepts 12" or 15" speaker; 30 $\frac{1}{2}$ "x33"x19"; in blonde, walnut, mahogany.\$111.00

Model 874BC

Bass-reflex enclosure; accepts 12" or 8" speaker; corner use; 30"x19 $\frac{1}{2}$ "x13 $\frac{7}{8}$ ".\$81.00

Model 2000B Tweeter

Direct-radiating; aluminum dome and paper cone; built-in capacitor crossover; power capacity 14 watts; frequency

range 1500-18,000 cps; depth 3 1/8".
\$15.00

Model 402B Woofer

Power capacity 14 watts; 8"; frequency range 40-10,000 cps; resonant frequency 55 cps; impedance 16 ohms....\$19.50

Model 835A

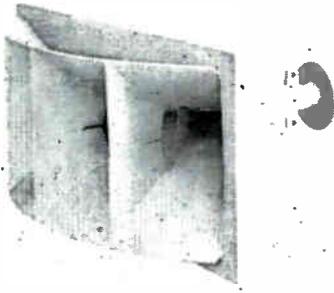
Monterey Jr. Speaker System

Compact bass reflex enclosure houses Model 402A 8" and 2000A direct ra-



diator speakers; frequency range 45-18,000 cps.; power 15 watts; 16 ohms impedance; 11 1/4" x 23" x 11 1/4"; weight 45 lbs.\$89.50

Model 511B Horn



Designed to load 802D 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 3000B Tweeter

Aluminum diaphragm; multicell-type horn; 20 watts when used with N-3000A Network; guaranteed up to 22,000 cycles; 8-ohms impedance; 2.4 ounce "W"-type magnet; edge-wise wound voice coil; requires 3,000 cycle crossover network; dispersion 90° horizontal, 40° vertical; 2 5/8" h. x 2 7/8" w. x 3" d.\$42.00

Model 833A "Verde" Speaker System



Driving component is the newly developed 602B "Duplex" loudspeaker with a frequency range from 35 to 22,000 cps; enclosure works on the bass reflex principle; 30"hx42"wx18"d; in blond, walnut or mahogany\$309.00
853A Cabinet only\$162.00

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Speakers, Enclosures & Equipment cabinets

Model N-800E Crossover Network

800-cycle full two-section parallel-type constant resistance network; adjustable HF attenuator, 12 db per octave slope; for coupling Altec 802C HF and 803A LF Drivers: 16 ohms.....\$46.50

Model N-3000B

Altec 3000-cycle crossover network with adjustable high-frequency attenuator; 30 watts; 8-ohm impedance, $3\frac{1}{8}$ "h. x $2\frac{3}{8}$ "w. x $2\frac{3}{8}$ "d.....\$22.50

Model 832A "Corona" Speaker System



Incorporates the 15" 803A woofer, an 800 cps network, and the 802D high frequency driver with 811B sectoral horn: corner-type bass reflex unit; frequency range from 30 to 22,000 cps; 39"h x $37\frac{1}{2}$ "w x $24\frac{1}{4}$ "d: in blond, walnut or mahogany.....\$399.00
852A cabinet only.....\$198.00

Model 830A "Laguna" Speaker System



Frequency response from 30 to 22,000 cps; free of peaks, false bass, treble rise, or other frequency accentuations; system consists of two 15" 803A woofers, the 802D high frequency driver mounted on the 511B sectoral horn, and a 500 cps dividing network; bass reflex principle: $46\frac{1}{2}$ "h x $42\frac{1}{2}$ "w x $26\frac{1}{2}$ "d. In blond, walnut or mahogany. \$599.00

Model 831A "Capistrano" Speaker System

Incorporates the 15" 803A woofer in bass reflex enclosure, an 800 cps network, and the 802D high frequency



driver with 811B sectoral horn: frequency range from 35 to 22,000 cps; 30"h x 47"w x $23\frac{1}{2}$ "d: in blond, walnut or mahogany.\$399.00

Model A-7 "Voice of the Theatre" Speaker 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" 803A woofer, N-800D 800 cps crossover network, and 802D driver with 811B horn: frequency range from 35 to 22,000 cps; 30"w x 24"d x 51"h; gray finish.....\$299.40

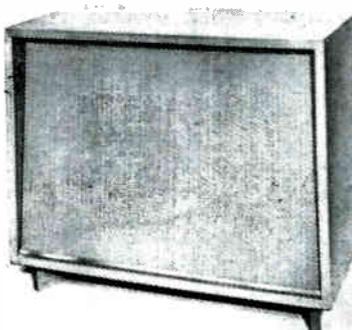
AMERICAN LOUDSPEAKER

Mark 100 Console



Equipment cabinet; changer mounts on drawer equipped with ball-bearing slides; record storage compartment; legs have solid brass ferrules; 27"h x 16"d x 36"w; in walnut or sandalwood \$105.00

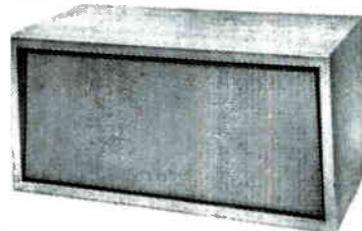
Mark XII Speaker System



Two-way system; 12" woofer and 5" cone tweeter; frequency response 50 to 15,000 cps; power rating 25 watts; impedance 8 ohms; unique loading device for augmenting bass response; 23"h x 14"d x 27"w; in walnut or sandalwood\$105.00
Mark XII enclosure only\$79.95

Mark VIII Speaker System

Bookshelf-type system with 8" woofer and $3\frac{1}{2}$ " cone tweeter; frequency response 60 to 12,000 cps; power rating 20 watts; impedance 8 ohms; slot-loaded design; 10"h x 12"d x 24"w; in



walnut or sandalwood\$52.50
Mark VIII enclosure only\$29.95

ARGOS PRODUCTS CO.

Model AD-1



Ducted port design for limited space: $19\frac{1}{4}$ " w. x $23\frac{3}{8}$ " h. x $13\frac{1}{2}$ " d.; 4800 cu. in.; 5-ply pyroxylin covered plywood 12" or 8" woofer and separate tweeter or coax speaker; 12"-8" reducing ring, tweeter port cover, and all necessary hardware included; "ducted port" design extends low frequency response; tuning tube can be exactly matched to any speaker; blonde or walnut.

.....\$24.95 Net

Model DBR-2A



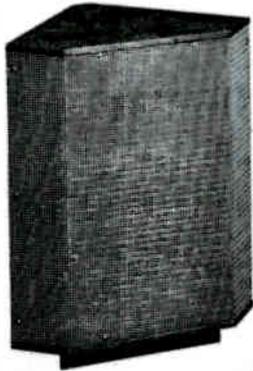
Ducted port design enclosure; 23" w. x 30" h. x 13" d.; 4.3 cubic feet; $\frac{1}{2}$ " 5-ply pyroxylin covered plywood; fiber-glass acoustic padding; Acoustone plastic grille cloth; 15" or 12" woofer and separate tweeter or coax speaker; 15"-12" reducing ring, tweeter port cover.

STEREO & HI-FI DIRECTORY

and all hardware included; "tuned tun- and all hardware included; "ducted port" design extends low frequency response; tuning tube can be exactly matched to any speaker; blonde or walnut.\$36.50 Net

Model DCB-8/12

Corner enclosure: 22 1/2" w. x 26 3/8" h. x 14 3/8" d.; 4320 cu. in.; heavy pyr-



oxlin coated covering over plywood; acoustic padding; plastic grille cloth; Ducted port design; 12" or 8" woofer and separate tweeter or coax speaker; 12-8" reducing ring and tweeter port cover furnished with mounting hardware included; hanger bracket furnished for wall mounting; tuning tube can be exactly matched to any speaker; blonde or walnut.\$22.50 Net

Models DSE-1; DSE-2

Ducted port design with tuning tube to permit matching any speaker: DSE-1 "Californian": 24" w. x 29" h. x 15" d., 4.3 cubic feet—DSE-2 "Californian Jr.": 19 1/2" w. x 23 3/8" h. x 13 1/2" d., 2.5 cubic feet: 1/2" 5-ply plywood, top covered with St. Regis Panelyte, solid wood trim, decorator fabric grille cloth; DSE-1 accommodates 15" or 12" woofer and tweeter or coax speaker; DSE-2 accommodates 12" or 8" woofer and tweeter or coax speaker; "tuned tunnel" extends low frequency response; fibreglas acoustic padding; reducing ring and tweeter port cover supplied with mounting hardware; blonde or walnut.

- DSE-1\$49.95
- DSE-2\$39.95
- DSE-1K (kit form).....\$39.95
- DSE-2K (kit form).....\$29.95

Models PB-8 and PB-12



Extension speaker baffle; Model PB-12 has volume of 1580 cubic inches; in blonde or walnut.
PB-8 (14"x10 3/8"x7"d).....Net \$5.25
PB-12 (18 1/4"x13 1/4"x9"d).....Net \$7.80

Model TSE-1

Bookshelf-type ducted port enclosure; takes 8" woofer and tweeter; volume is

2165 cubic inches; 24" x 11" x 10 1/2"d; in blond or walnut. Short legs included for optional use.\$16.50
Model TSE-1S (similar to TSE-1 except has 8" woofer and tweeter installed; 8 ohm input; response flat 50-17,000 cps)\$24.95

Model TSE-2A

Deluxe ducted-port enclosure for bookshelf or floor; finished in 3/4" hard-wood; with St. Regis Panelyte; 2160 cu. in.; 24"x11"x10 1/2"d; in blonde or walnut.Net \$39.95

Model TSE-2AS

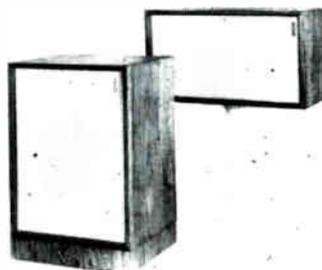
Similar to TSE-2 except has 8" free-cone woofer and high dispersion tweeter installed; 8-ohm input; response flat 80-15,000 cps\$26.50

Model TSE-3 Eldorado

Bookshelf type for 12" speaker and tweeter; 3200 cu. in.; 27 1/2"x14 1/4"x10"; blonde or walnut.....\$22.50

**ARGUS-X ELECTRONICS
(HI-FI SUPPLY)**

Model X-2 Speaker System



Full-range damping; has 8" speaker; frequency response 25-18,000 cps.; power capacity 10 watts; impedance 8 ohms; 25" x 14" x 11"; oiled walnut.....\$115.00

Model X-3 Speaker System

Similar to Model X-2 but has 2-8" speakers.....\$150.00

Model X-4 Speaker System

Consists of 12" speaker; frequency response 16-18,000 cps.; power capacity 30 watts; impedance 8 ohms; 4" x 18" x 16" (with 3" pedestal for floor use.\$180.00

ATLAS SOUND CORP.

Model HR-3 Super Tweeter



Compression-type tweeter; frequency response 2,000 to 17,500 cps; power rating 35 watts; impedance 12-16 ohms; 7 1/4" w x 3" h x 6 1/2" d; 6" x 2" opening required.....\$27.50

Model WT-6 "Coax-Projector"

Weather-proof projector for outdoor use; separate woofer and tweeter; fre-

**Speakers, Enclosures
& Equipment cabinets**

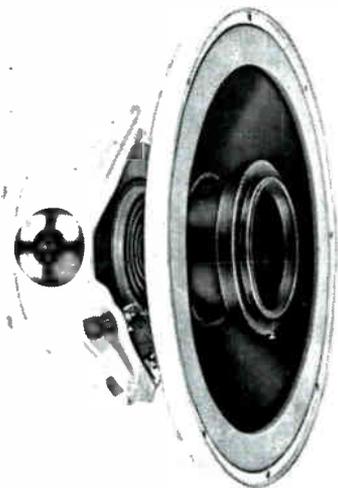
quency response 140 to 15,000 cps; power rating 15 watts; impedance 8 ohms; dispersion 120; crossover at 1,000 cps; finished in beige enamel; bell diameter 15"; depth 12"; shipping weight 14 lbs.....\$57.50

AUDAX

Model A-60M Midrange Speaker

Response 300-6,000 cps; plastic foam suspension; flux 12,000 Maxwell; power 25 watts; impedance 8 ohms; 4 lb.\$35.00

Model A-120X Speaker



12" with coaxial tweeter; response 35 to 17,000 cps; 12,500 Maxwell; power 20 watts; impedance 8 ohms; 12 lb..\$69.95

Model A-120D Speaker

Similar to Model A-120X but less tweeter; response 35-12,000 cps..\$49.95

Model A-120W Woofer

Response 35-5,000 cps; flux 12,000 Maxwell; impedance 8 ohms.....\$42.95

Model A-150X

Similar to Model A-120 but with 15" cone and 18 lb. magnet; response 20-18,000 cps; flux 14,500 Maxwell.\$109.95

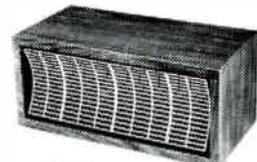
Model A-150D

Similar to Model A-150X but less tweeter; response 20-14,000 cps.....\$79.95

Model A-150W

Woofer for 2 or 3 way system; response 20 to 4,000 cps; 8 lb. magnet.....\$74.95

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

Speakers, Enclosures & Equipment cabinets

Model CA-100 Speaker System



Bookshelf type can be converted to floor model with chrome legs; speakers are located on both sides of ducted slot; ventilated grille construction; consists of 2-10" woofers, 2-tweeters; power rating 40 watts; frequency response, 30-20,000 cps; 12"x15"x25".....\$139.95

Model CA-80 Speaker System

Similar to Model CA-100; consists of 2-8" woofers, one tweeter; frequency response 40-17,000 cps; power rating 30 watts; 12"x12"x24".....\$99.95

Model A-35T3" Tweeter

Direct radiator; paper cone with sealed rear construction; built-in crossover; 2.5 slug magnet.....\$9.95

Model A-80D 8" Speaker

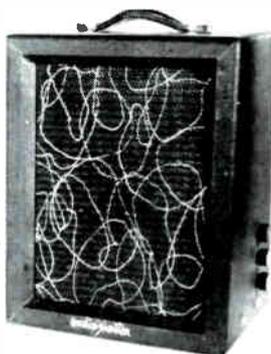
Dual-cone; magnet wt. 10 oz. Alnico V; voice coil diameter 1/4".....\$24.95

Model A-100D Speaker

10" wide range dual cone; frequency response 45-13,000 cps; power rating 20 watts; flux density 11,500 gauss.\$29.95

AUDIO-MASTER CORP.

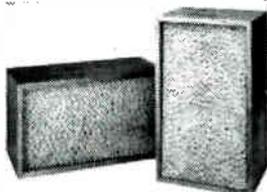
Auditone Amplifier-Speaker



Contains 5-watt push-pull amplifier with frequency response 60 to 12,000 cps; 8" woofer and 3" tweeter in bass reflex enclosure; bass, treble and volume controls; 50 foot extension cord; 15 1/2 lbs.\$150.00

AUDIO-TECH LABORATORIES

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"x12"x14"; available in walnut, mahogany, fruitwood.....\$109.50

Model JA-15 Speaker System

Floor use; has 15" cone woofer and tweeter; tweeter balance control, LC crossover network; impedance 8 ohms; frequency response 32-17,000 cps.; power capacity 30 watts; 29"x26"x16"\$225.00

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 1/8"x9"x17"\$34.96

Model CS-33 Chairside Equipment Cabinet

Room for all components; lift-up lid has piano hinges; 33 1/2"x18"x24 1/2" \$89.95

Model FH-15-MHT Impresario

Three-way system has 15" woofer, mid-range, tweeter, crossover network; frequency response 25-18,500 cps; 33"x20 1/2"x29 1/2"\$199.95

Model FH-12 MHT Impresario Junior

Similar to Impresario except with 12" woofer; 26"x30"x16 3/4"\$129.95

Model BR-1528T Profundo

Bass-reflex cabinet system; same speakers as FH-12-MHT; 30"x16 1/2"x33"\$159.95

Model BR-12T "Crescendo"

Includes 12" woofer, tweeter and crossover network; 24"x12 1/2"x32 1/4"\$79.95

Model TR-8T Tri-ette

Complete with woofer, tweeter, crossover network; 24"x10"x11".....\$49.95

Model 14-P Enclosure

Infinite baffle; frequency response 35-18,000 cps; power rating 50 watts; chamber displacement material fibreglass; either vertical or horizontal placement; 13"x12"x25 1/2".....\$79.95

Model P-2-E Chairside Equipment Enclosure

Space for tuner, amp, changer; lid lifts up; 33 1/2"x18"x24 1/2".....\$49.95

Model FC-101 Equipment Enclosure

Console type enclosure for all equipment except speaker; 41"x18"x33".....\$159.95

R. T. BOZAK SALES CO.

B-200X Tweeter

Twin cone tweeters; 15-watt, 30-watt peaks; 2,000 to 16,000 cps; 8-ohms impedance (two 16-ohm sections in parallel); two 8-oz. Alnico V magnets; direct radiating paper and dural cones; 120° radiation; rubber damping pre-



vents peaking and metallic harshness; power handling capacity may be increased by using multiple B-200X's; 6 1/2"w x 3 1/4"h x 2 1/2"d.\$32.00

B-199A Woofer



12" woofer; 5 7/8" deep; variable density cone; 15 watts, 30 watt peaks; 40 to 4,500 cps; 8-ohms impedance, 16 ohms on special order; 1 1/2-lb. Alnico V magnet; unique voice coil construction; cast aluminum frame.

B-199A\$52.50

B-207A Two-Way Coaxial



Coaxial speaker; 15" mounting frame; depth 7"; 15-watts continuous, peaks to 30 watts; 40 to 16,000 cps; 8-ohms impedance; composed of B-199A woofer and B-200X twin-tweeter; crossover at 2,500 cps; fits standard cutouts for 12" and 15" speakers; infinite baffle enclosure recommended, minimum 5 cubic feet, optimum 9 cubic feet.

B-207A\$89.50

B-209 Mid-Range

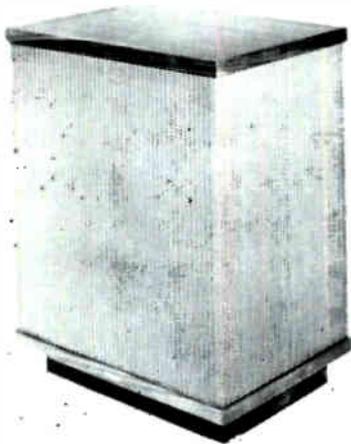
Mid-range speaker; 6 1/2" diameter, 3 1/2" deep; variable density cone; power rat-

ing 50 watts with Bozak crossover network: 200 to 3,500 cps; 8 and 16-ohm models available: 1½-lb. Alnico V magnet; rubberized cloth-edge suspen-



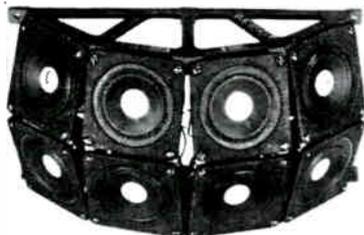
sion; foam-rubber damping gives superb transient response.\$51.00

B-300 Speaker System



E-300 infinite baffle enclosure: ¾" plywood with mahogany, walnut or birch veneer; speaker is the B-207A coaxial; 40-16,000 cps; 2,500 cps crossover; handles 15-watts continuous, peaks to 30 watts; 8-ohms impedance; has provisions for adding B-209 mid-range speaker: 24"w x 17"d x 30½"h; 60 lbs.
 B300 Contemporary.....\$169.00
 B300 Contemporary (Enclosure only)\$79.50
 B300K Contemporary (Enclosure Kit)\$42.50
 B300 Urban\$175.00
 B300 Urban (Enclosure only)...\$85.50
 B300 Provincial\$217.00
 B300 Provincial (Enclosure only)\$121.00

B-200XA Tweeter Array



Eight cone-type tweeters: power rating 50-watts; 1,500 to 16,000 cps; 8-ohms impedance; eight 8-oz. Alnico V magnets; cast aluminum frame; 180° horizontal dispersion at 16 kc; 12½"w x 6½"h x 5"d.\$140.00

1961 EDITION

THE "440" BI-PHONIC COUPLER

The first complete full range reproducer, so radically different that it is classed as a musical instrument. Like a precious violin, the **Bi-Phonic Coupler** is hand-crafted of selected woods — with the panel structure radiating bi-directionally (unlike the usual restricted "boxed-in" speakers) — reproducing the full realm of sound with acoustic depth, fundamental tonal purity and realism. The wafer-thin **Bi-Phonic Coupler** beautifully blends into any decor arrangement.

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 Ebony base (optional)\$7.50

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 • Only 18" x 24" x 4½" thin

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Speakers, Enclosures & Equipment cabinets

B-302A Speaker System

Similar to B 300 with addition of B-209 mid-range speaker and N-101 crossover network; 20 watts continuous.
 B302A Contemporary\$249.00
 B302A Urban\$254.00
 B302A Provincial\$290.00

B-305 Speaker System Contemporary



Mahogany, walnut or birch veneer infinite baffle enclosure; 35 to 16,000 cps; 3-way speaker system; 800 and 2,500 cps crossover frequencies; two B-207A coaxial speakers, one B-209 mid-range, one N-102 crossover network; handles 30 watts continuous, peaks to 60 watts; 16-ohms impedance; 36 1/2" w x 18 1/2" d x 32" h; 110 lbs.
 B 305\$390.00
 E-305 enclosure only\$141.00

B-304, "Stereo Fantasy"

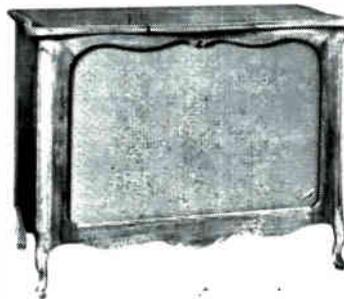
Provincial or contemporary styles; 3/4" plywood; provincial in fruitwood, contemporary in walnut or mahogany; 40 to 16,000 cps; twin 3-way stereophonic system; two B-207A coaxials, two B-209 mid-range, two N-10102 crossover networks; twin infinite baffles; 800 and 2,500 cps crossover frequencies; handles 30 watts per channel; wide-angle reproduction; may be used for single-channel sound; 8-ohms impedance per channel; provincial: 49" w x 24" d x 32" h, contemporary: 48" w x



24" d x 31 1/2" h; provincial: 165 lbs., contemporary: 160 lbs.
 "Stereo Fantasy"—contemporary...\$620
 "Stereo Fantasy"—provincial\$820

B-305 Speaker System—Provincial

Mahogany, walnut, or birch veneer infinite baffle enclosure; 35 to 16,000 cps; 3-way speaker system; 800 cps and 2,500 cps crossover frequencies; two B-207A coaxial speakers, one B-209 mid-range speaker; wide-angle listening area of 120°, 30-watts continuous, peaks to 60 watts; 16-ohms impedance; 40" w x 20" d x 31" h; 120 lbs.
 B-305\$440.00



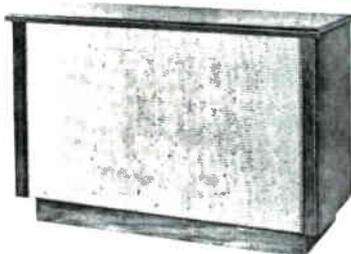
E-305 enclosure only\$181.50
 B305 Urban\$397.50
 E305 Urban (Enclosure only)\$140.00
 B305 Contemporary\$415.00
 B305 Contemporary (Enclosure only)\$155.00

B-305 Urban Speaker System



Similar to B-305 Contemporary but with different styling; 36" w x 20" d x 30" h\$430.00

Model B-400



Mahogany, walnut or birch veneer infinite baffle enclosure; 28 to 16,000 cps; 3-way speaker system; 400 and 2,500 cps crossover frequencies; four B-199A woofers, two B-209 mid-range, one B-200XA tweeter array, one N-104 crossover network; handles 50-60 watts continuous, peaks to 100 watts; 8-ohms impedance; 50" w x 21" d x 34 1/2" h; 220 lbs.
 B-400\$798.00
 E-400 enclosure only\$300.00

Model B-500 Spinet Speaker System



Consists of Model B-199A woofer, Model B-200X dual tweeter; crossover at 2500 cps; impedance 8 ohms; 20 watts capacity; available in walnut, blonde, ebony, or unfinished; 14 1/2" x 23 1/8" x 11 1/2"\$147.50
 Unfinished\$137.50

Model B-502 Spinet Speaker System

Same as Model B-500 with addition of Model B-209 midrange speaker and N-10102 crossover network\$227.50
 Unfinished\$217.50

Bozak Panel Systems

P-302AP

B-302A driver components and crossovers mounted on 3/4" plywood panel 23" w x 27 1/4" h\$175.00

P-305P

B-305 driver components and crossovers mounted on 3/4" plywood panel 34 1/2" w x 24" h\$265.00

P-310P

B-310 driver components and crossovers mounted on 1 1/2" plywood panel 31" w x 47" h\$474.00

P-310AP

B-310A driver components and crossovers mounted on 1 1/2" plywood panel 31" w x 47" h\$550.00

P-400P

B-400 driver components and crossovers mounted on 1 1/2" plywood panel 46 1/2" w x 30 1/2" h\$550.00

N-10102 Crossover Network

Designed to facilitate the expansion of Bozak 3-way speaker systems; may be used with Bozak B-302A and B-305 systems or with B-310, B-310A, and B-400 systems with addition of N-25 condenser bank; provides 6 db/octave crossovers at 800 and 2500 cps at 8 ohms, 800 and 2500 cps at 16 ohms, or 400 and 2500 cps at 8 ohms (with N-25); 8" w x 6" d x 5 1/2" h; 5 lbs. \$27.50
 N-25 Condenser Bank\$11.60

N-103 Crossover Network

For Bozak B-305 system; crossovers at 400 and 2500 cps; 6 db/octave; 16 ohms; 8" w x 8" d x 5 1/2" h; 6 lbs. weight\$37.50

N-104 Crossover Network

For Bozak B-310, B-310A, and B-400 systems; crossovers at 400 and 2500 cps; 6 db/octave; 8 ohms; 8" w x 8" d x 5 1/2" h; 6 lbs.\$37.50

BRADFORD AUDIO CORP.

Ultra 12"



Single-cone wide-range 12" speaker; power rating 20 watts; frequency response 20 to 25,000 cps; flux density: 18,000 gauss; total flux: 190,000 maxwells; cone resonance: 20 cps; voice coil diameter: 1 1/2"; impedance: 15 ohms; depth: 6 1/2"; weight: 15 pounds; plastic foam suspension aluminum voice coil; cast aluminum frame\$85.00

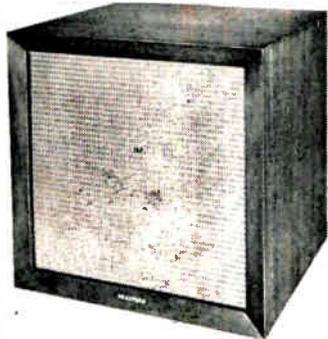
Bradford 4-12B Speaker System

Utilizes 4 Bradford "Ultra 12" wide-range speakers installed in Bradford-

designed enclosure; speakers are in separate compartments, each with a pressure relief valve; frequency response 20 to 25,000 cps; 35"x35"x15"; finished in 3/4" walnut or mahogany veneers\$525.00

"Perfect" Baffle

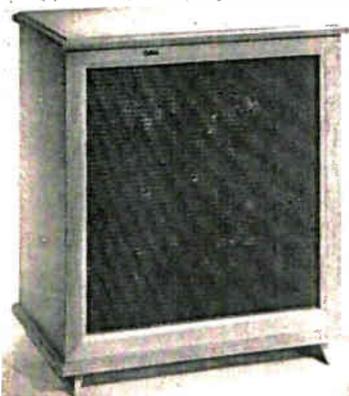
Automatically provides correct speaker damping by use of pressure relief valve in rear of enclosure; 3/4" plywood construction; available finished in mahogany, korina blonde, walnut, and ebony, or in unfinished birch. For 8" and 10" speakers (12"h x 12"w x 9"d);



finished\$39.50, unfinished\$34.50. For 12" and 15" speakers (17"h x 17"w x 14"d); finished \$69.59, unfinished \$59.50.

CALBEST ELECTRONICS

"Bi-Lineal" Speaker System



Four-speaker system; uses 10" woofer, 2-5" midrange speakers, and 5" tweeter; power rating 25 watts continuous, 40 watts peak; 3/4" hardwood construction; acoustical lining; impedance 8 ohms; 24"w x 28"h x 13"d.

- Model 7050M (Mahogany).....\$119.95
- Model 7050B (Limed oak).....\$119.95
- Model 7050SM (Salem maple: Early American styling).....\$129.95
- Model 7050W (Walnut).....\$129.95

CAPEHART CORP.

Model S-2 Speaker System

Bookshelf type, with 8" woofer and 5" tweeter; walnut, mahogany or blonde; 18" wide, 10" high, 10" deep.....\$29.50

Model T-412

Bookshelf-type speaker system; acoustically lined high compliance cabinet, with 1-Jensen 12" coaxial speaker, 1-4" high frequency tweeter and cross-over network; walnut, mahogany and cherry fruitwood; 20 1/2" W. x 16 1/2" H. x 10 3/4" D.\$59.50

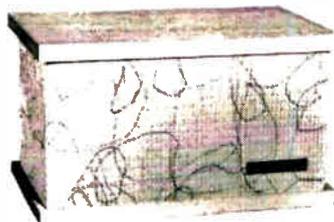
1961 EDITION

Model H2412 Console Speaker System

Acoustically lined high compliance with 1-Jensen 12" coaxial speaker, 2-4" high frequency tweeters and crossover network; walnut, mahogany and cherry fruitwood; 22 3/4" W. x 28 1/2" H. x 11 3/4" D.\$79.50

CHANNEL MASTER

Model 6630 Minstrel Speaker System



Dynamic air coupling produces large cabinet sound in small enclosure; 50-15,000 cps; 9"x9"x16".

Model C-18N3W 18" Woofer



Heavy cast aluminum construction; frequency response 20-4000 cps; power capacity 75 watts; extra-long voice coil; impedance 8 ohms; 11 pound Alnico magnet.....\$180.00

Model C-46CT Tweeter

Cone-type; 4"x6"; power capacity 10 watts; frequency response 1500-20,000 cps; impedance 8 ohms; depth 3".....\$8.50

Model C-8MFR Mid-range Speaker



Solid basket type; frequency response 1000-6000 cps; power capacity 12 watts; 8 ohms impedance.....\$13.20

Model C-8NR

Dual cone 8" speaker; frequency response 60 to 12,500 ± 5 db; resonance 65 cps; 12,500 gauss; 2" aluminum voice coil; power rating 16 watts; depth 5"; impedance 8 ohms\$27.00

Here they are!

...from University come the most advanced, the most exciting new developments in high fidelity speakers and systems.

The all-new

award-winning Series 200 wide-range high compliance speakers ... the fabulous



Sphericon Super Tweeter, a major breakthrough in high frequency engineering... the Medallion XII,

newest concept in speaker systems, featuring the exclusive "Select-a-Style" snap-on

grilles that give you a choice of 5 decor-matching styles. All these, and other new products of University

are included in our latest high fidelity catalog. See your dealer, or write for your copy today. Desk H-5, University Loudspeakers, Inc., White Plains, N. Y.

are included in our latest high fidelity catalog. See your dealer, or write for your copy today. Desk H-5, University Loudspeakers, Inc., White Plains, N. Y.



A Division of Ling-Altec Electronics, Inc.

Speakers, Enclosures & Equipment cabinets

Model C-12RW Flex-Edge Woofer



12" speaker; ceramic magnet structure produces over 1,000,000 maxwells; frequency response 16-4000 cps; 2-piece cone construction; capacity 35 watts; 16 ohms impedance.....\$59.00

Model SS-69JW Speaker

Mid-range with Concentric diffuser cone tweeter; frequency response 60-18,000 cps; Alnico V magnet; power capacity 10 watts; 6"x9"; free air resonance 70 cps; 8 ohms Model SS-60JW4 is 4 ohms; depth 4 1/4".....\$13.35

Model SS-8EC Coaxial Speaker

Has 3" separate tweeter and crossover; 8 watt capacity; frequency response 50-15,000 cps; depth 4 3/8".....\$12.50

Model SS-12JW Speaker

Woofer is 12"; dual cone construction; frequency response 40-15,000 cps; capacity 10 watts; 8 ohms impedance.....\$18.25

Model SS-8JW

8" wide range dual-cone speaker; frequency response 60-15,000 cps; capacity 10 watts; 8 ohms impedance; depth 4 3/8".....\$13.75

Model C-33812 Matched Speaker Set

Consists of Model C-12RW Flex-edge woofer, Model C-8MFR 8" mid-range, dual Model C-3CT 3" tweeter, Model 1220 crossover network; power capacity 35 watts; remote, fine tune, mid-range control.....\$98.00

Quartet Enclosure

Matched to house Model C-33812 Speaker set; unfinished form; complete with speaker set; 30 1/4"x35 3/4"x17 3/4".....\$158.00

Model C-1220 3-Way LC Network

Designed for dual system matching 16 or 8 ohms; power capacity 50 watts; 12 db. per octave attenuation; ranges: bass 15-1500 cps; mid-range 500-5000 cps, tweeter 2000 cps; 5"x5 1/2"x23 3/4".....\$21.50

Model 1200 2-Way LC Network

Same as 3-Way network except no bass range.....\$17.00

Model C-800 High-Pass Filter

Divides audio between woofer and tweeter; power capacity 30 watts; range is 200-20,000 cps.....\$7.50

Model C-12NR

Dual cone 12" speaker; frequency response 30 to 16,000 cps; resonance 30 cps; 12,500 gauss; 2" aluminum voice coil; power rating 25 watts; depth 7"; impedance 8 ohms.....\$33.50

Model C-8FR

Dual cone 8" speaker; frequency response 65 to 16,000 cps \pm 5 db; resonance 70 cps; 9500 gauss; 3/4" aluminum voice coil; depth 3 3/4"; power rating 8 watts; impedance 8 ohms.....\$15.00

Model C-12PC

Coaxial 12" speaker composed of 12" woofer and C-4CT tweeter; frequency response 35 to 18,500 cps \pm 5 db; power rating 35 watts; impedance 8 ohms.....\$53.50

Model C-8JC

Coaxial 8" speaker; composed of 8" woofer and C-3AT tweeter; frequency response 60 to 12,500 cps; resonance 60 cps; power rating 8 watts; impedance 8 ohms.....\$18.00

Model C-12PW

12" woofer with resonance of 35 cps; frequency response 30 to 5000 cps \pm 5 db; 14,500 gauss; power rating 25 watts; 2" aluminum voice coil; depth 7"; impedance 8 ohms.....\$50.50

Model C-4FT



Cone-type 4" tweeter; frequency response 1800 to 18,500 cps \pm 5 db; 10,000 gauss; power rating 10 watts; impedance 8 ohms.....\$6.50

Model C-4CT

Cone-type 4" tweeter; frequency response 1800 to 12,500 cps \pm 5 db; 9500 gauss; power rating 8 watts; impedance 8 ohms.....\$5.60

Model C-3CT

Cone-type 3" tweeter; frequency response 1800 to 18,500 cps \pm 5 db; 9500 gauss; power rating 6 watts; impedance 8 ohms.....\$4.75

Model C-3CT4

Cone-type 3" tweeter; frequency response 18 to 12,500 cps \pm 5 db; power rating 4 watts; impedance 8 ohms \$5.30

Model C-1233

Consists of one 12" woofer with 21 oz. Alnico V magnet and 2" voice coil, two 3" cone-type tweeters, and shielded LC crossover network; mounted on plywood board 16"x20"; depth 7"; frequency response 30 to 18,500 cps; resonance 35 cps; power rating 35 watts; impedance 16 ohms.....\$60.00

CONCERT CABINETRY

Cathay Equipment Cabinet

Accommodates all components except speaker; record player compartment takes up to 12" or 16" record changers; styled like a table; walnut, cherry, mahogany or blond.....\$124.00

Boulevard Equipment Cabinet

Shelf kit is included to simplify component mounting; 17 1/2"x19"x15 1/2".....\$189.00

Masterpiece Equipment Cabinet

Long, low styling; rear of cabinet is open; will house all components except speakers; walnut, mahogany, cherry woods; 70"x24"x21".....\$389.00

Trumpet Speaker Enclosures

Designed to match the equipment cabinets.

Model 401 matches Cathay; 30"x26"x21 1/2".....\$125.00

Model 926 matches Cathay; 24"x23 3/4"x23 3/4".....\$95.00

Model 351 matches Boulevard; 26 1/4"x22"x19 1/2".....\$95.00

COSMOS INDUSTRIES

"AH" Electrostatic Speaker Enclosure



Combination mid-range and super tweeter; 2 push-pull capacitor elements keep distortion at a minimum; RC crossover network and a.c. power supply built in; recommended crossover point between 650-850 cps; frequency response 600-20,000 cps; 2 flat vibrating surfaces and 62" radiating area; 15 7/8" x 7 3/8" x 5 3/8".....\$49.95

CROSBY ELECTRONICS, INC. (MADISON FIELDING)

Troubadour Speaker System

Bookshelf unit; frequency response 50-15,000 cps; all-around grille cloth; 9"x9"x14".....\$29.95

DYAD (ERCONA CORP.)

Model 1251 "Dual"

12" woofer and 5" tweeter mounted coaxially; 12 watts; frequency response 30 to 15,000 cps; 8-ohms impedance at 400 cps; 12,000 gauss magnet; capacitive and inductive dividing network with 1,000 cps crossover; 5 1/2 lbs. \$39.95

EICO (ELECTRONIC INSTRUMENT CO., INC.)

Model HF-SI Speaker Kit



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"......\$39.95

Model HFS-5 Speaker System Kit

Two-way system; 8" woofer, 10.7 oz Alnico magnet; and 3 1/2" closed back tweeter. Frequency division by high pass capacitor filter at 2,000 cps; level control for tweeter. Enclosure is of 3/4" 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 1/2" x 10". Unfinished, smooth sanded birch\$47.50
Satin mahogany, oiled walnut, or oiled teak\$59.50

Model HFS-3 3-Way Speaker System Semi-Kit



Three-way system; 12" woofer, 1 3/4 lb. Alnico magnet; 8" closed back mid-range speaker and 3 1/2" closed back cone tweeter. Frequency division by quarter-section LC network at 600 cps and high pass filter at 4,000 cps; level control for tweeter. Enclosure is 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 3/8" x 13 7/8" x 14 5/8"; unfinished, smooth sanded birch.....\$72.50
Satin mahogany, oiled walnut, or oiled teak\$87.50

Model HFS-4

Identical to HFS-3 except compression driver horn tweeter supplied instead of cone tweeter. Unfinished, smooth sanded birch.....\$83.50
Satin mahogany, oiled walnut, or oiled teak\$98.50

Model HFS-2 Speaker System



Essentially flat response 45 to 20,000 cps, useful range 30 to 40,000 cps; three-way system; two speakers; built-in crossovers with balance control; crossover frequencies at 2,000 cps and

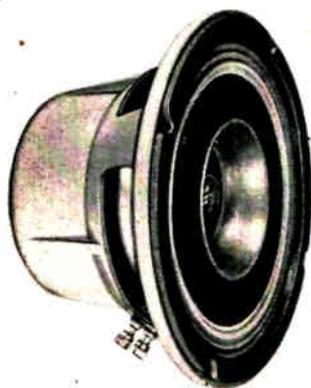
6,000 cps; 8 1/2" twin-cone driver with stiffened cone and damped suspension covers 30 to 6,000 cps range; rear loaded with dual conical horn of 14 feet total length terminated in slots; high-frequency unit is non-directional dual-cone toroidal driver with free-floating, acoustically-loaded cone; treble assembly is coaxially mounted with bass and midrange driver; 30-watts continuous power handling capacity; 16 ohms. Mahogany or walnut.....\$139.95
Blonde\$144.95

ELECTRONIC APPLICATIONS, INC.

Model K50 Dynamic Headphones
Frequency range 30-20,000 cps; impedance 400 ohms; power requirement 1 mw.; max. load 20 mw.....\$32.00

ELECTRO-VOICE, INC.

Model SP8B "Radax Super-Eight"



8" coaxial; capacity 20 watts; frequency response 35 to 13,000 cps; resonance 55-65 cps; 16 ohms impedance; sensitivity 45 db; 1 lb. 6 oz. Ceramic Alnico V magnet; crossover 6000 cps; required baffle opening 7"; depth 4 3/8".....\$28.50

Model SP12B "Radax Twelve"

12" coaxial; capacity 20 watts; frequency response 30 to 13,000 cps; resonance 40-50 cps; 16 ohms impedance; sensitivity 46 db; 1 lb Alnico V magnet; crossover 4500 cps; baffle opening 11"; depth 6"; shipping weight 12 lbs.....\$35.00

Model SP12 "Radax Super-Twelve"

12" coaxial; capacity 25 watts; frequency response 30 to 13,000 cps; resonance 35-45 cps; 16 ohms impedance; sensitivity 48 db; 3 lb Alnico V magnet; crossover 4000 cps; baffle opening 11"; depth 7 1/2"; shipping weight 25 lbs. \$66.00

Model SP15B Radax Fifteen

15" coaxial; capacity 15-20 watts; frequency response 30 to 13,000 cps; resonance 38 cps; 16 ohms impedance; sensitivity 47 db; 1 lb. Alnico V magnet; crossover 3500 cps; baffle opening 13 1/2"; depth 7 5/8"; shipping weight 15 lbs\$43.00

Model SP15 "Radax Super-Fifteen"

15" coaxial; capacity 30 watts; frequency response 30 to 13,000 cps; resonance 40 cps; 16 ohms impedance; sensitivity 50 db; 5 1/4 lb. Alnico V magnet; crossover 3000 cps; baffle opening 13 1/2"; depth 9"; shipping weight 41 lbs. \$89.00

Model 15TRXB

15" three way; capacity 20 watts; frequency response 30 to 15,000 cps (in

Speakers, Enclosures & Equipment cabinets

E-V Empire enclosure); resonance 38-48 cps; 16 ohms impedance; sensitivity 47 db; magnet 18 oz; built-in crossovers; mechanical 2000 cps; electrical 3500 cps; wired-in high frequency control; depth 7 5/8"; shipping weight 17 lbs. \$79.00.

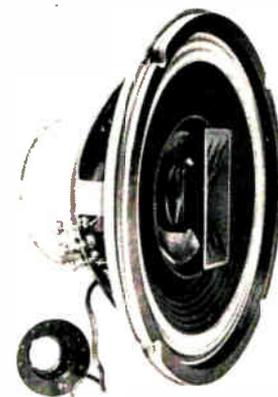
Model 12TRX

12" three way capacity 25 watts; frequency response 30 to 15,000 cps (in E-V Aristocrat enclosure); resonance 40



cps; 16 ohms impedance; sensitivity 49 db; magnet 3 1/2 lbs; mechanical crossover 2500 cps; electrical crossover 3500 cps; AT37 level control and X36 crossover included; depth 8"; shipping weight 32 lbs.....\$125.00

Model 12TRXB 3-Way Speaker



Combines Model SP12B, 2000 cps, crossover, Model T35B driver, Model X36 crossover, Model AT77 level control; 17 pounds.....\$66.00

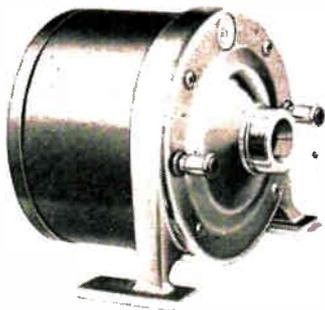
Model 30W

30" woofer; for use in Patrician 700 System; 9 lb. 4 oz. ceramic magnet; 13,500 gauss; power capacity up to 100 watts; frequency response 20-300 cps; 16 ohms impedance; 34 pounds. \$185.00

Model T250 Treble Driver

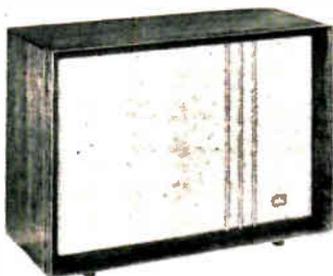
Frequency response 600-3800 cps; 3 lb. Alnico V magnet; flux density 18,300

Speakers, Enclosures & Equipment cabinets



gauss; crossover at 800 cps; power capacity 50 watts.....\$81.00

The Royal 400



System consists of 18" woofer, 8" cone mid-range, vhf. driver with integral diffraction horn; frequency response 30-19,000 cps; 23 1/2" x 32" x 14 3/4".

Walnut, mahogany, limed oak.....\$249.50
Unfinished fir.....\$199.00

The Royal 300

Consists of Model 12WS 12" woofer, 8" mid-range and same vhf driver as Royal 400; 2-level controls, crossover; 13 3/4" x 14" x 25".

Walnut, mahogany, limed oak.....\$179.00
Unfinished fir.....\$149.00

The Esquire 200

Consists of 12" woofer, 8" cone driver and vhf driver; frequency response 40-19,000 cps; 8 ohms impedance; 13 1/2" x 14" x 25".

Walnut, mahogany, limed oak.....\$133.00
Unfinished fir.....\$107.50

Stereo 200



Contemporary design; auxiliary speaker system; same speakers as Patrician 700 except 30" woofer; 17" x 16 7/8" x 30".

.....\$375.00

Speaker Mounting Baffle Kits

Builder's kit permits recessed mounting of 8" or 12" speakers in wall or ceiling; includes aluminum grille and trim.

Model 509 (requires 8 1/2" diameter hole).....\$5.70

Model 510 (requires 12 1/2" diameter hole).....\$7.65

Model XT1 Stereo Mixer Transformer

To derive extra channel; combines left and right channel.....\$13.50

The Leyton

Bookshelf system; consists of 12" woofer, 8" cone driver; 14" x 25" x 12".

Walnut, mahogany.....\$84.50
Unfinished fir.....\$78.50

Marquis 100

Includes Model SP12B 12" speaker in Marquis enclosure.....\$94.00

Aristocrat 100

Includes Model SP12B 12" speaker in Aristocrat enclosure.....\$103.00

Regency 100

Includes Model SP15 15" speaker in Regency enclosure.....\$206.00

The Patrician 700

4-way speaker system; consists of 30" woofer, Model SP12 12" full range speaker, Model T250 treble driver with Model 8HD diffraction horn, Model T350 tweeter; frequency response 40-35,000 cps; contemporary design; 54 1/2" x 33" x 28 1/2" p; in walnut, mahogany, limed oak.....\$795.00

Model X1735 Crossover

Half-section; crossovers at 100, 700, 3500 cps; 17" x 9" x 3 3/4".....\$75.00

Model X325 Crossover

Quarter-section; crossover at 300 cps; 16 ohms; 5 3/16" x 5 1/4" x 3 3/16".....\$32.00

Model X825 Crossover

Quarter-sectional crossover at 800 cps; 16 ohms; 3 7/16" x 4 7/16" x 3 5/8".....\$19.00

Model X8 Crossover

Half-section; cross over at 800 cps; 16 ohms; 4 11/16" x 4 7/16" x 3 5/8".....\$32.00

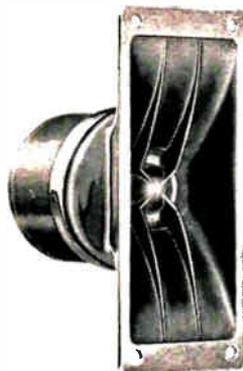
Model X36 Crossover

Half-section; for use with vhf. drivers; crossover 3500 cps; 16 ohms; size same as Model X8.....\$9.50

Model I5TRX

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 5 3/4 lbs; mechanical crossover 2000 cps; electrical crossover 3500 cps; AT37 level control and X36 crossover included; depth 6 1/8"; shipping weight 48 lbs.....\$149.00

Model T35

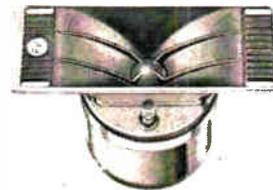


Compression type driver with horn; frequency response to 19 kc; 16 ohms impedance; sensitivity 57 db; 8 oz magnet; crossover 3500 cps; size 2" h x 5 1/4" w x 3 1/4" d; driver diameter 2 1/4"; shipping weight 3 lbs.....\$35.00

Model T35B frequency response to 18 kc; 4 oz magnet; for lower efficiency systems.....\$22.00

Model T350

Compression type driver with horn; frequency response to 21 kc; 16 ohms impedance; sensitivity 60 db; 2 lb magnet; crossover 3500 cps; size 2 7/8" h x



7 1/2" w x 4 1/2" d; driver diameter 3 1/2"; shipping weight 9 1/2 lbs.....\$60.00

Model T25A

High frequency driver, capacity 20-30 watts; frequency response 400 to 13,000 cps; 16 ohms impedance; sensitivity 53 db; 1 lb. Alnico V magnet; fits Models 6HD or 8HD diffraction horns; diameter 3 3/4"; depth 4 1/16"; throat diameter 7/8"; shipping weight 6 lbs. \$58.00

Model T10A

High frequency driver; capacity 20 watts; frequency response 400 to 13,000 cps; 16 ohms impedance; sensitivity 51 db; 1/2 lb. Alnico V magnet; fits Models 6HD or 8HD diffraction horns; diameter 3 3/4"; depth 3 1/4"; throat diameter 7/8"; shipping weight 4 lbs.....\$42.50

Model 8HD Diffraction Horn

Diffraction principle effects 120° dispersion; crossover 800 cps; cutoff 600 cps; mounting hardware included; for T10A & T25A drivers; 3 3/8" h x 14 1/2" w x 7 1/2" d; shipping weight 4 lbs. \$18.00

Model BB1-BB8 Building Block Kits

Additive kits to expand mid- and high-frequencies of existing system; each package is completed with matched crossover unit, AT37 level control, wiring harness, and full instructions.

BB1 Adds T35B tweeter and X36 crossover; shpg. wt. 5 lbs.\$37.00

BB2 Adds T35 tweeter and X36 crossover; shpg. wt. 5 lbs.\$50.00

BB3 Adds T10A driver, 8HD horn and X825 crossover; 10 lbs.\$86.00

BB4 Adds T25A driver, 8HD horn and X8 crossover; 13 lbs.\$114.00

BB5 Adds T350 tweeter and X36 crossover; weight 11 1/2 lbs.\$75.00

Model 15W



15" woofers; capacity 30 watts; resonance 25-35 cps; sensitivity 50 db; 16 ohms impedance; 4 lb. ceramic Alnico V magnet; baffle opening 13½"; depth 9"; shipping weight 41 lbs.\$89.00

Model AT37 Level Control

16-ohm "L" pad; sets output levels in multi-speaker systems to individual taste; dark dial.....\$3.90
Model AT37B (blonde dial).....\$3.90

Wolverine LS12 12" Speaker

Dual-cone 12" wide range speaker; frequency response 30 to 13,000 cps; power rating 20 watts; resonance 40 cps; total flux 70,700 maxwells; impedance 8 ohms; 12 watts input for 100 db output; 3½" deep\$19.50

Model 12TRXB

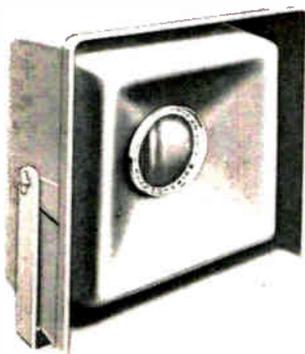


12" three way; capacity 20 watts; frequency response 35 to 15,000 cps (in E-V Aristocrat enclosure); resonance 45 cps; 16 ohms impedance; sensitivity 46 db; magnet 18 oz.; built-in crossovers; mechanical 2000 cps; electrical 3500 cps; depth 6½"; shipping weight 14 lbs.\$66.00

Wolverine Model MFI Mid-Range Step-Up Kit

Provides increased output in presence range; consists of MR10 driver and CR10 crossover-level control; requires baffle opening 9½" x 3".....\$25.00

"Musicaster" Outdoor Speaker



Weatherproof speaker for outdoor use; frequency response 60 to 16,000 cps; impedance 8 ohms; dispersion 120°; uses back loaded folded horn design; diecast aluminum horn; 21½" h x

21½" w x 8½" d; shipping weight 25 lbs.\$90.00

Musicaster II (same as Musicaster) except added VHF driver to extend range to 18,000 cps.....\$125.00

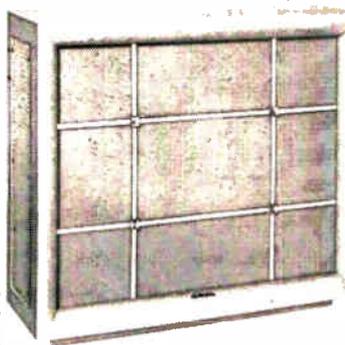
Wolverine LS8 8" Speaker

Dual-cone 8" wide range speaker; frequency response 50 to 13,000 cps; power rating 20 watts; resonance 55 cps; total flux 70,700 maxwells; impedance 8 ohms; 15 watts input for 100 db output; 3½" deep\$18.00

Wolverine Model HFI High-Frequency Step-Up Kit

Extends range beyond audible limit; consists of TW35 tweeter and CR35 crossover-level control; requires opening 1¾" x 4¼".....\$20.00

The "Regency"



Corner horn; for 15" full-range speaker or 2- or 3-way systems; for use in corner or along wall; 29½" h x 33½" w x 19" d; shipping weight 90 lbs.
Mahogany\$130.00
Blonde or walnut\$140.00

The "Aristocrat"

Corner horn; for 12" full range speaker or 2- or 3-way systems; 29½" h x 19" w x 16¼" d; shpg. wt. 44 lbs.
Mahogany\$72.00
Blonde or walnut\$79.00

"Aristocrat 1A"—with Models 12BW, BB1, and BB3 installed; shipping weight 61 lbs.
Mahogany\$240.00
Blonde or walnut\$247.00

KD Enclosure Kits

Kits of pre-cut clear-grain birch for building standard EV enclosures; complete with glue, screws, and detailed instruction book.

KD4 "Regency"; takes 15" full range speakers or 3-way systems with 15" woofers; 70 lbs.....\$73.00

KD6 "Aristocrat"; takes 12" full range speakers or 2- and 3-way systems using 12" woofers; 36 lbs.....\$39.00

KD7 "Baronet"; takes 8" extended range speakers; 16 lbs.....\$26.00

FK Finishing Kits

Consist of stain filler, sealer, shellac, high gloss and satin varnishes, finishing paper, brushes, and instructions. FK10 (walnut), FK20 (mahogany), FK30 (fruitwood), FK40 (cherry), KF50 (golden oak), FK60 (ebony) each \$5.00

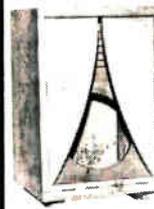
100,000 SAY "STILL THE BEST"



ENCLOSURES, KITS, "ROCKET" SPEAKER SYSTEM
U.S. Patents 2,816,619 and 2,896,736

After hearing everything else, over 100,000 users are more convinced than ever that the Karlson Enclosures are "Still the best". The reason rests in the thoroughly engineered and patented design which includes all the essentials for the utmost in sound for your speakers, including wide-angle stereo dispersion, outstanding bass and unexcelled transient response.

MODELS AVAILABLE in genuine wood veneers, finished in walnut (WX), mahogany (MX) and blonde oak (BX); unfinished assembled and kits in birch exteriors (DeLuxe) and unfinished assembled and kits (Basic) in a high-density particle board.



Karlson '12' for 12" Speakers
Finished Models
12-MX, 12-BX, 12-WX..\$99.60
Unfinished:
DeLuxe, 12-U 66.00
Basic, 12-BSC-U 49.50
Kits: DeLuxe, 12-K 42.00
Basic, 12-BSC-K 33.00
Size: 24¾ x 16¾ x 13¼
Ship. Wt.: 45 lbs.

12-U

Karlson '8' for 8" Speakers

Finished Models
8-MX, 8-BX, 8-WX..\$42.60
Unfinished:
DeLuxe, 8-U 26.70
Basic, 8-BSC-U 21.00
Kits:
DeLuxe, 8-K 18.60
Basic, 8-BSC-K 15.00
Size: 17¼ x 11¾ x 9¾
Ship. Wt.: 14 lbs.



8MX



Karlson '15' for 15" Speakers
Finished Models
15-MX, 15-BX,
15-WX\$129.00
Unfinished:
DeLuxe, 15-U 87.00
Basic, 15-BSC-U 66.00
Kits: DeLuxe, 15-K 57.00
Basic, 15-BSC-K 45.00
Size: 22½ x 33 x 18
Ship. Wt.: 78 lbs.

15-WX

ROCKET SPEAKER SYSTEM
Complete, full-range. Use as satellite, extension, P.A., miniature stereo and reverb speaker. Chameleon Ivory finish. KR-5 \$19.50
5" speaker, 15½" high, 7" sq. at base. Ship. Wt.: 31 lbs.



KR-5

WIDE-AREA STEREO now a reality with Karlson Enclosures! Hear and compare for yourself. Stop in at your nearest dealer's.

If the Karlson Enclosure you want is not available through your dealer, order direct.

Learn more about stereo. Send for free copy of "Stereosonics by Karlson".

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Street _____
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KARLSON ASSOCIATES, Inc.
433-A Hempstead Ave., W. Hempstead, N.Y.

Speakers, Enclosures & Equipment cabinets

AK Metal Trim Kits

Decorative trim for KD enclosures.

AK3 (For "Patrician" and "Georgian") 4 lbs.....	\$12.00
AK4 (For "Centurion") 3 lbs.....	\$9.00
AK5 (For "Regency") 3 lbs.....	\$6.00
AK6 (For "Aristocrat") 3 lbs.....	\$4.80

The "Marquis"

For 12" speakers and 2-way and 3-way systems; designed for along-the-wall placement; enables response to 40 cps; brushed brass grille: 29 $\frac{5}{8}$ "h x 19" w x 14 $\frac{1}{2}$ "d.

Mahogany	\$63.00
Limed oak or walnut.....	\$69.00

EMI

(SCOPE ELECTRONICS, INC.)

Stereoscope Model DLS-1

Monitor loudspeakers with built-in amplifiers; E.M.I. 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 13 $\frac{3}{4}$ " x 17"; wt 110 lbs.....\$594.00

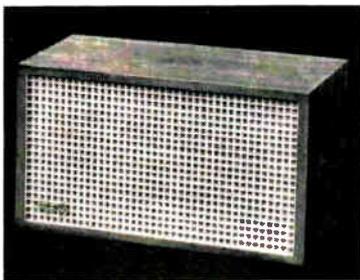
FISHER RADIO CORP.

Model WS-1 Wide-Surround Speaker System

Additive stereo use; has 10" x 2 $\frac{3}{4}$ " oval speaker; frequency response 250-15,000 cps.; impedance 8 ohms; finished on all 4 sides; 11 $\frac{1}{2}$ " x 3 $\frac{7}{8}$ " x 4 $\frac{3}{8}$ "; in walnut, mahogany, teak, cherry.

.....	\$49.50 (per pair)
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Model XP-1 Speaker System



Consists of 12" woofer, 5" midrange, 3" cone tweeter; crossover as air coils and oil-filled capacitors; woofer can be used independently; power capacity 60 watts; frequency response 30 cps—inaudibility; brilliance control read of cabinet; 13 $\frac{1}{2}$ " x 24" x 11 $\frac{3}{4}$ "; 40 pounds.
Walnut, mahogany, cherry.....\$129.50
Unfinished.....\$124.50

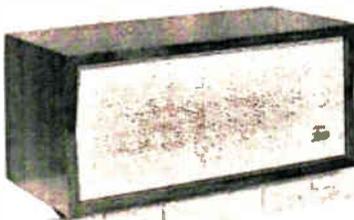
Model XP-2 3-Speaker System

Consists of 2-8" free-piston drivers, 5" cone tweeter; crossover network; frequency response 35-15,000 cps; for bookshelf or upright use; 22" x 12" x 11 $\frac{1}{4}$ ".

Mahogany, walnut.....	\$84.50
Unfinished birch.....	\$79.50

FRAZIER INTERNATIONAL ELECTRONICS CORP.

La Fiesta

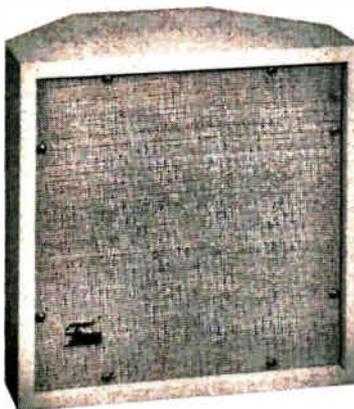


Same driver units as the Del Mar; modified Helmholtz; 10 $\frac{1}{2}$ " x 11 $\frac{7}{8}$ " x 27 $\frac{7}{8}$ "\$69.50

Midget

Frequency response 80-10,000 cps; power handling capacity 6 watts; 4 ohms; 15 $\frac{3}{4}$ " x 6 $\frac{1}{4}$ " x 9 $\frac{1}{2}$ "; wt. 10 lbs\$25.00

Patio



Corner speaker; frequency response 50-15,000 cps; 15 watts; 8 ohms; 15 $\frac{7}{8}$ " x 15 $\frac{7}{8}$ " x 8 $\frac{3}{4}$ "\$50.50

The Del Mar Speaker System



Frequency response 40 to 15,000 cps; impedance 8 ohms; power handling capacity 15 watts; speakers are 8" driver, cone-type tweeter with high pass filter; contemporary cabinet finished in dark mahogany, fruitwood mahogany, ebony, blonde korina or walnut finishes; 23 $\frac{7}{8}$ " w x 23 $\frac{1}{2}$ " h x 11 $\frac{7}{8}$ " d; shpg. wt. 40 lbs.....\$89.50

Model F-8-3X Del Mar in utility cabinet\$57.00

"Dixielander" Speaker System



Folded horn enclosure; frequency response: 40 to 15,000 cps; two-way system with horn-loaded tweeter; 800 cps constant resistance crossover network with 12 db/octave attenuation; 24 $\frac{1}{4}$ " w x 30" h x 16 $\frac{1}{2}$ " d\$290.00

Capri Enclosure



Wide-range system with modified Helmholtz-type enclosure with 8" woofer below 30 cps. and compression type tweeter; constant resistance crossover network; air core inductors, paper capacitors; frequency response 28-17,000 cps.; impedance is 8 ohms; 26" x 26 $\frac{1}{2}$ " x 16"; 70 lbs.; power handling capacity 15 watts continuous with peaks of 25 watts.....\$137.50

F-8-3X Black Box

Direct radiator tuned box speaker; 8" driver, high-pass filter, cone tweeter frequency response 40-15,000 cps.; 23" x 19" x 11 $\frac{7}{8}$ "\$57.00

Monte Carlo Enclosure

Book-shelf enclosure; dual tweeters; frequency response 70-15,000 cps.; tweeters mounted for right and left placement; 15 $\frac{7}{8}$ " x 10 $\frac{3}{4}$ " x 11 $\frac{7}{8}$ "\$55.00
Unfinished\$46.75

Cortez Enclosure

Components same as Capri; frequency response 40-17,000 cps.; 8 ohms impedance; complete with speakers and drivers; 23 $\frac{7}{8}$ " x 11 $\frac{7}{8}$ " x 15 $\frac{7}{8}$ "; 48 lbs.\$140.00
Mark IV utility model.....\$99.50

FURNITURE CRAFTSMEN

Model 116 All-Purpose Cabinet

Early American knotty pine; 26" x 32" x 18".

Style X (shell only).....\$110.00
 Style S (for speaker).....\$130.00
 Style AHRT (for components) \$160.00

Model 316 All-Purpose Cabinet

Italian Provincial cherry; 26" x 32" x 18"

Style X (shell only).....\$130.00
 Style S (for speaker).....\$150.00
 Style AHRT\$186.00

Model 416 All-Purpose Cabinet

French Provincial cherry; 26" x 32" x 18"

Style X (shell only).....\$140.00
 Style S (for speaker).....\$162.00
 Style AHRT\$198.00

Model 816 All-Purpose Cabinet

Contemporary Walnut; 26" x 33" x 18"

Style X (shell only).....\$152.00
 Style S (for speaker).....\$176.00
 Style AHRT\$212.00

Two-Door Cabinets

Model 132 (Early American knotty pine, 40" x 32" x 20")\$250.00

Model 332 (Italian Provincial cherry, 42" x 34" x 20")\$296.00

Model 432 (French Provincial cherry, 42" x 34" x 20")\$340.00

Model 852 (Contemporary walnut, 37" x 32" x 17")\$212.00

Three-Door Cabinets

Model 133 (Early American knotty pine, 60" x 32" x 20")\$350.00

Model 333 (Italian Provincial cherry, 61" x 34" x 20")\$398.00

Model 433 (French Provincial cherry)\$470.00

Model 853 (Contemporary walnut, 54" x 32" x 18")\$298.00

Four-Door Cabinets

Model 134 (Early American knotty pine, 78" x 32" x 20")\$450.00

Model 334 (Italian Provincial cherry, 79" x 34" x 20")\$520.00

Model 434 (French Provincial cherry, 79" x 34" x 20")\$598.00

Model 854 (Contemporary walnut, 72" x 32" x 18")\$390.00

Model 110

Corner Speaker enclosure.....\$65.00

Model 111

Open Bookshelf enclosure.....\$53.00

Model 403

Corner speaker enclosure; bass reflex\$298.00

Model 413

Corner speaker enclosure; folded horn type\$348.00

Chairside Cabinets

Dimensions—22" x 26" x 18"

Model 105 in Early American knotty pine (for equipment).....\$178.00

Model 105 (for speakers).....\$158.00

Model 305 (Italian Provincial cherry for equipment)\$210.00

Model 305 (for speakers).....\$188.00

Model 405 (French Provincial cherry for equipment)\$240.00

Model 405 (for speakers).....\$218.00

One-Door Cabinets

Model 131 (for equipment in Early American knotty pine, 22" x 32" x 20")\$160.00

Model 131 (for speakers).....\$140.00

Model 331 (for equipment in Italian Provincial cherry)\$180.00

Model 331 (for speakers).....\$158.00

Model 431 (for equipment in French Provincial cherry, 23" x 34" x 20")\$210.00

Model 431 (for speakers).....\$188.00

Model 851 (for equipment in Contemporary walnut, 19" x 32" x 18") \$122.00

Model 851 (for speakers).....\$99.00

GENERAL ELECTRIC CO.

Model 850D Speaker



8" wide range single cone speaker; power rating: 15 watts; frequency response: 50 to 12,000 cps; impedance: 8 ohms; magnet: 6.8 oz. Alnico V; free air cone resonance: 90 cps; aluminum voice coil; curvilinear cone.\$10.95

Model 1201B



12" wide-range single cone loudspeaker; power rating: 25 watts; frequency response: 50 to 13,000 cps; impedance: 8 ohms; magnet: 14.5 oz. Alnico V. Model 1201B\$19.95

Model LK-12 Speaker System Kit

Woofer has 31 oz. Alnico magnet, 60 watts power capacity, 25-18,000 cps. frequency response, 8 to 16 ohms impedance, 12"; 2" tweeter is cone type, 20 watts power capacity, 6.8 oz. Alnico magnet, 1500-18,000 cps. frequency response. 8 to 16 ohms impedance; crossover network included for 1500 and 7000 cps.\$89.95

Model G50I Two-Way Speaker System



Includes woofer and 3" tweeter; 25 watts power capacity; frequency response 45-16,000 cps.; crossover at 2000 cps.; 8 ohms impedance; 22" x 13" x 9 1/4"; available in mahogany, cherry, walnut, ebony and walnut\$85.00

Speakers, Enclosures & Equipment cabinets

Model G-502

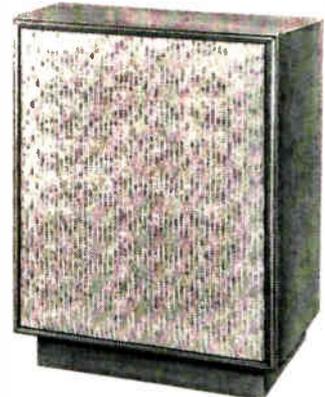


Dual-cone 12" speaker; frequency response 30-16,000 cps; 60 degrees dispersion; power rating 25 watts; 8 ohms.\$34.95

Model G-504

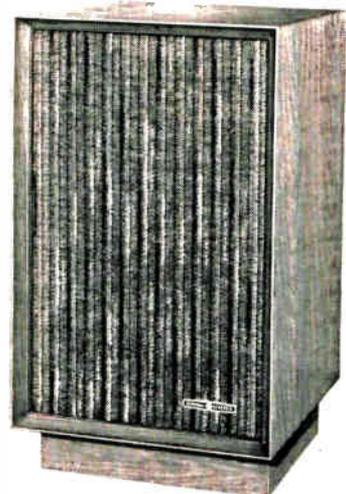
2 3/4" direct radiator tweeter; frequency response 1200-16,000 cps; dispersion 100 degrees; 8 ohms.....\$19.95

Model EN-50



5 cu ft distributed port speaker enclosure: for 12" woofer or coaxial speaker and tweeter up to 4"; 35 5/8" x 23 1/4" x 16 3/4"; mahog, blond oak, cherry or walnut finish.....\$69.95

Model G506 Speaker System

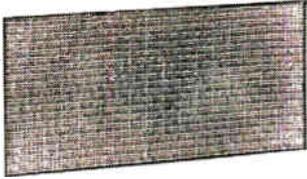


Includes LK-12 system or Model LC-12 coaxial speaker; Model LC-12 speaker

Amplifiers and Preamplifiers

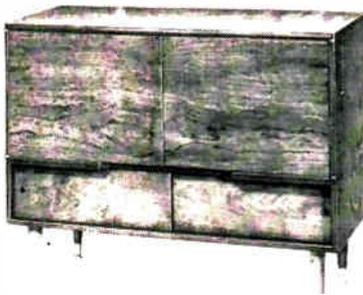
is 12" dia.; frequency response 40-18,000 cps.; 8 to 16 ohms impedance; cabinet is 23 1/4" x 14 1/2" x 15"; available in mahogany, blond oak, cherry, walnut\$129.95

Model LH-6 Speaker System



Two-way speaker system; 6" woofer and 2 3/4" tweeter; infinite baffle enclosure; frequency response 50-15,000 cps ±6 db; power rating 20 watts; crossover frequency 2500 cps; impedance 8 ohms; 9" h x 17 3/8" w x 8 3/8" d; walnut, blonde oak, cherry, or mahogany finish\$77.50
Unfinished\$54.50

Model EQ-1 Equipment Cabinet



Houses tuner-amplifier and record changer or turntable, tuner-amplifier compartment 14 1/2" h x 17 1/2" w x 16" d; record changer-turntable compartment 14 1/2" h x 20" w x 16" d; record storage compartments (two) 6 1/2" h x 18 3/8" w x 14 7/8" d; tuner-amplifier shelf height adjustable; overall dimensions 31" h x 39 3/4" w x 16" d; in mahogany, blonde oak, and cherry.....\$109.95

Model G503



12" coaxial speaker; power rating: 30 watts; frequency response: 30-16,000 cps; impedance; 8 ohms; magnets; woof-

er, 14.5 oz. Alnico V; tweeter, 6.8 oz. Alnico V; mechanical-electrical crossover at 1,500 cps.\$59.95

Model AI-421 Crossover

Two-way crossover; all input and output impedances 8 ohms; power rating 25 watts; crossover at 1500 cps...\$13.95

GOODMANS (ROCKBAR CORP.)

Triaxiom Series

Three radiating elements on a single axis; plastic terminated free-edge cone suspension; high stability mid-range radiators; high frequency treble unit employing aluminum coil and self-aligning diaphragm with air chamber and phase equalizers; 3" main voice coil; all models have 12 db/octave half-section crossover and constance-impedance variable attenuator. Triaxiom 208 (8" cone resonance 35 cycles; total flux 178,000 maxwells; power rating 20 watts).....\$54.50

Triaxiom 212 (12"; cone resonance 35 cps; total flux 178,000 maxwells; power rating 25 watts)\$69.50

Triaxiom 215 (15"; cone resonance 25 cps; total flux 178,000 maxwells; power rating 30 watts).....\$79.00

Triaxiom 412 (12"; cone resonance 35 cps; total flux 240,000 maxwells; power rating 35 watts).....\$92.50

Triaxiom 415 15"; cone resonance 25 cps; total flux 240,000 maxwells; power rating 40 watts).....\$104.50

Triaxiom 612 (12"; cone resonance 35 cps; total flux 308,000 maxwells; power rating 45 watts)\$126.00

Triaxiom 615 (15"; cone resonance 25 cps; total flux 308,000 maxwells; power rating 50 watts).....\$147.00

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

Axiom 350 (same as 450 except power rating 35 watts).....\$68.50

Axiom 80

9 1/2" 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 852

12" woofer; cone resonance 30-35 cps; total flux 308,000 maxwells; 3" voice coil; power rating 35 watts.....\$95.00

Audiom 755

15" woofer; total flux 240,000 maxwells; cone resonance 25 cps; 3" voice coil; power rating 40 watts.....\$78.00

Audiom 955

15" woofer; cone resonance 25 cps; total flux 308,000 maxwells; 3" voice coil; power rating 50 watts.....\$108.00

Trebox 50XL

Horn-loaded pressure-driven high-frequency unit; recommended crossover frequency 5,000 cps; response to beyond audibility; power rating 50 watts\$46.50

Trebox 35XI (same as Trebox 50 except power rating 35 watts).....\$39.50

Midax H-750

Mid-frequency pressure-driven horn-loaded speaker; recommended crossover frequencies at 750 and 5,000 cps; cast horn; 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 5,000 cps).....\$48.50

Model S10-30 Stereosphere Speaker

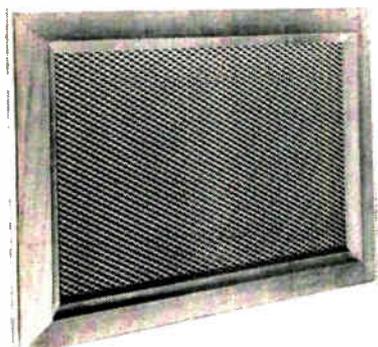


Omnidirectional speaker for reproduction of frequencies from 300-20,000 cps.; can handle 30 continuous watts; largest dimension is 10".....\$79.50

Model IDM-30 Mixer and Frequency Dividing Network

Designed to work with one or two stereospheres\$39.50

ARU 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 (10 1/2"x10").....\$10.90 Net
 Model 180 (12"x7").....\$11.75 Net
 Model 280 (14"x10").....\$14.35 Net
 Model 480 (17 1/2"x13 1/2")...\$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 rolloff beyond crossover frequency; all terminals 16 ohms.
 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

Enclosure Kits

Only a screwdriver needed to build kits; hardware, grille cloth, wood, glue supplied; smooth non-resonant response; prices include Acoustical Resistance Unit.
 Series A (30" x 24" x 20").....\$71.85
 Series B (26" x 20" x 20").....\$63.40

HARTLEY PRODUCTS COMPANY

Model XP Speaker

Full range speaker with polymerized cone; built-in high-frequency propagator; 20 watts; frequency response 10-25,000 cps; 8 ohms impedance; 5 lb. Alcomax 11 permanent magnet; flux density 13,000 gauss; diaphragm displacement 1/2"\$75.00

Capri Shelf Model Enclosure



For use with the XP speaker; totally enclosed cabinet containing 35' absorbent material; 24" x 13 1/2" x 12"; in oiled natural walnut with bamboo grille, finished on all sides.....\$120.00
 In mahogany.....\$125.00

Holton, Jr. Speaker System

Uses Model 220 speaker; oiled, rubbed walnut finish with cane front grille; also available with new 320 speaker which is chemically-treated version of Model 220; frequency response 25-25,000 cps.; power capacity 25 watts; model 320 speaker has domed-shaped center high frequency radiator; 10" diameter; 30" x 15" x 12".
 With Model 220 speaker.....\$195.00
 With Model 320 speaker.....\$135.00

Duo Enclosure

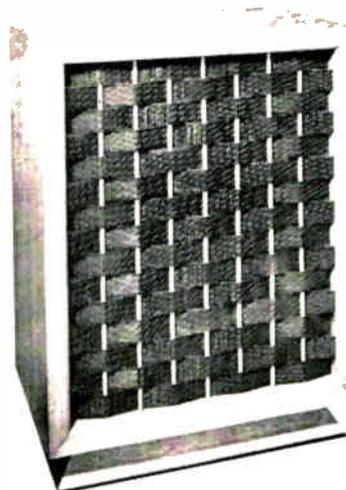


Speaker mounting boards are angled out to allow direct radiation and wall reflection for stereo diffusion; 36"x30"x15";
 Finished cabinet\$125.00
 Unfinished Birch.....\$ 99.00

Model 220 Speaker

Full range speaker; tri-polymer cone; 20 watts; frequency response 20-25,000 cps; 5 lb. Alcomax permanent magnet; diaphragm displacement 1/2".....\$135.00

"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 Enclosure

For use with 220 speaker; heavily braced, damped cabinet in natural woods; 24"x13"x30" cabinet with 220 speaker\$245
 Cabinet with XP speaker.....\$195

trading?

audio exchange makes the BEST Trades!*

*See HIGH FIDELITY Magazine, May 1959, page 39

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Speakers, Enclosures & Equipment cabinets

"Harp" Enclosure

Accommodates one or two speakers; modern lines\$115.00

Hartley-Luth "Holton" Speaker System

Features Model 220 wide-range speaker available in mahogany, walnut or blonde \$245.00

Cameo Enclosure



For use with one speaker: 22"x17"x15"
In natural wood\$90.00
Unfinished\$63.00

HEATH CO.

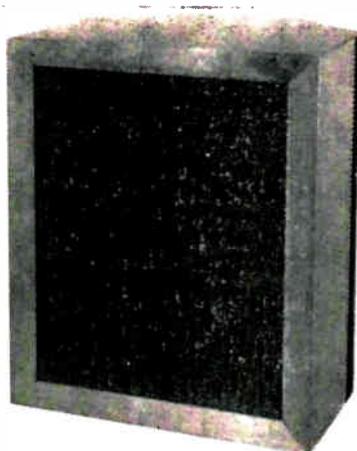
Model SS-2 Speaker System Kit



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; 1/2" plywood construction; 11 1/2" h x 23" w x 11 3/4" d.\$39.95

Model SS-1B Range Extending Speaker System Kit

Designed for use in conjunction with Model SS-1 speaker system for extension of low and high frequency response; frequency response in combination with Model SS-1: 35 to 16,000 cps ± 5 db; power rating: 35 watts of program material; 15" Jensen edge-damped woofer with 56 oz. magnet, compression type horn-loaded super-tweeter with 6.8 oz. magnet; ducted-port bass reflex cabinet; two constant resistance divider networks with 12 db/octave attenuation (600 and 4,000 cps crossovers); provision for use of electronic



crossover; 3/4" plywood construction; 29" h x 23" w x 17 1/2" d.\$99.95

Model HH-1-C "Legato" Speaker System Kit

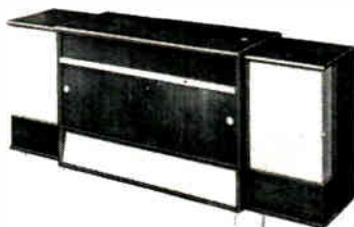


Modified infinite baffle enclosure; frequency response: 25 to 20,000 cps; power rating: 50 watts of program material; impedance: 16 ohms; 3-way, 3-speaker system; two Altec 15" low frequency drivers, one Altec high frequency driver with special horn; speaker magnet weights: low frequency drivers, 2.4 lbs each; high frequency driver, 1.2 lbs.; "M" derived parallel filter type dividing network with 500 cps crossover; 3/4" plywood; 41" w x 22 3/4" d x 34" h\$299.95

Acoustic Suspension Speaker System

Frequency response 40-15,000 cps 5 db; crossover frequency 1,000 cps; recommended amplifier power 20-40 watts; 2-5" cone tweeters mounted in array; 10" Acoustic Suspension woofer has 1.1 lb. Alnico 5 magnet; resonant frequency mounted 58 cps; horizontal dispersion 90 degrees; shpg. wt. 32 lbs. Model AS-2M—Mahogany finish\$79.95
Model AS-2B—Blond finish\$79.95
Model AS-2U—Unfinished\$69.95

Models SE-1M and SE-1B Stereo Equipment Cabinet Kits



Accommodates tuner, preamplifier, amplifier, record changer, record storage,

and speakers; equipped with panels pre-cut for Heathkit components and blank panels for use with any components; 3/4" solid core mahogany or birch plywood construction; sliding top panel for access to tape deck and control unit; sliding doors for front access to changer and record storage compartment; all parts pre-cut and pre-drilled; tape deck and preamplifier area 20 3/4" l x 17 3/4" w x 10" d; record changer area 21" w x 16" d x 9 5/8" h; record storage area 22 5/8" w x 14 1/2" h x 12 1/2" d; speaker wing area (inside) 14" w x 29 1/2" h x 15 3/4" d; tuner area 20 1/2" w x 5 1/4" h x 14" d; amplifier (2 areas) 15 1/4" w x 10 3/4" h x 13 1/4" d; overall measurements (with wings) 82" w x 37" h x 20" d; center unit alone 47" w x 37" h x 20" d.

Model SE-1B (center unit kit in birch)\$149.95

Model SE-1M (center unit kit in mahogany)\$149.95

Model SC-1BR (right speaker wing in birch)\$39.95

Model SC-1BL (left speaker wing in birch)\$39.95

Model SC-1MR (right speaker wing in mahogany)\$39.95

Models CE-2T, CE-2M and CE-2B Chairside Equipment Cabinet Kit



Houses Heathkit preamplifier, basic amplifier, two tuners, and record changer; tilt-out shelf installed on either right or left side; all parts pre-cut and pre-drilled; 18" w x 24" h x 35 1/2" d; changer compartment: 17 3/4" l x 16" w x 9 5/8" d; contemporary style finished in either mahogany or birch, traditional style finished in mahogany; 46 pounds \$43.95

HOLT

Reverbetron Z Speaker

For stereo use the enclosure with 2 12" x 7 1/2" speakers; reverberating circuit precludes use of standard baffle enclosure\$19.00

INTEGRAND (BRAND PRODUCTS, INC.)

Model 36T Monaural Speaker System
Similar to Model 136 but housed in table model cabinet\$300.00

Model 36ST Stereo Satellite Speaker System
Similar to Model 36T with components of Model 136\$375.00

Model 372 Speaker-Amplifier System



Servo-operated speaker system for stereo or monaural operation; employs 7 speakers and six transistorized output-transformerless amplifiers; speakers feed back to amplifiers for automatic frequency response correction; 3 woofers, 2 coaxial midrange and tweeter assemblies; frequency response 30 to 16,000 cps ± 3 db; usable response 20 to 20,000 cps; acoustic distortion less than 1% 30 to 200 cps, less than 0.5% 200 to 800 cps, less than 1% 800 to 16,000 cps; amplifier total output 72 watts; input sensitivity 1 volt for full power output; inputs (3): stereo left, stereo right, monaural; transistorized electronic crossovers (350 and 2,500 cps); 44" w x 30" h x 18" d. Limba/African Korina\$595.00

Model 136 Speaker-Amplifier System
Similar to above but for monaural applications; 3 woofers, 1 coaxial midrange and tweeter assembly; 3 transistorized amplifiers; total amplifier output 36 watts; 30" w x 30" h x 18" d.....\$395.00

INTERNATIONAL SCIENTIFIC INDUSTRIES CORP.

Model A-10 Speaker System

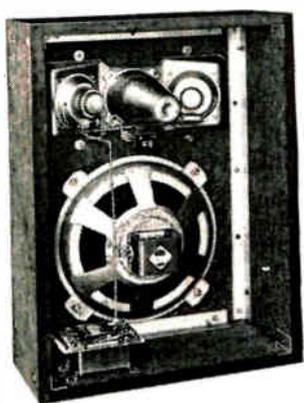


Bookshelf-type speaker system including 5" tweeter, 12" woofer, and crossover; power rating 50 watts; frequency response 30 to 15,000 cps; impedance 8 ohms; 14" x 22 1/2" x 9 3/4"\$119.50

ISOPHON (ARNHOLD CERAMICS, INC.)

Model K-3031 Speaker System

Four-speaker systems composed of one 12" woofer, one folded horn compression-type midrange, and two cone-type tweeters; crossover network and match-



ing transformer; mounted on baffle board in light or dark wood; frequency range 30 to 16,000 cps, power rating 25 watts; Model K3031: frequency range 40 to 16,000 cps, power rating 20 watts.....\$83.30
in enclosure kit.....\$130.05

Stereonetta



4-speaker extension speaker system; frequency response 250-17,000 cps; built-in crossover network; power handling capacity in conjunction with woofer 15 watts; 8" h x 7 3/16" w; 3.8 lbs.\$41.60

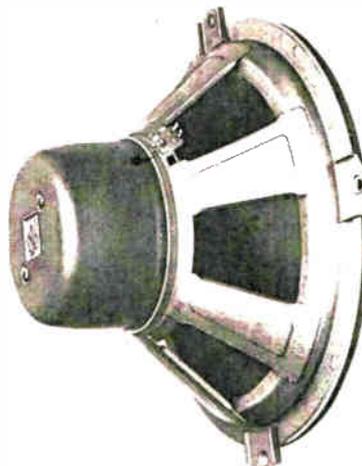
Orchestra



12" coaxial speaker; frequency response 30-18,000 cps; peak power rating 20 watts; built-in crossover network; crossover point 1,000 cps; impedance 4 ohms; 11.2 lbs.\$69.75

Model P-38

15" woofer; frequency response 35-6,000 cps; resonance 45 cps; peak



power rating 50 watts; impedance 4 ohms; 12.2 lbs.\$102.50

Model P-10

4" speaker; power capacity 4 watts; frequency response 180-16,000 cps; impedance 4 ohms; flux density 9000 gauss\$7.15

Model P-21

Full-range 8" speaker; frequency response 40-13,000 cps; power capacity 10 watts; 2.5 pounds.....\$12.75

Speakers, Enclosures & Equipment cabinets

Model P-16



6" mid-range speaker; frequency response 80-10,000 cps; resonance 100 cps; peak power rating 6 watts; impedance 4 ohms.\$8.15

Isophon IV

Similar to K 3031; 29 1/2" h x 20 7/8" w x 12 3/8" d; 57 lbs.\$169.50

Model DH8 6



Frequency response 1,000 to 17,000 cps; may be connected to any woofer; built-in crossover network; crossover point 1,000 cps; power capacity in conjunction with woofer 25 watts; impedance 4-6 ohms; 8 1/4" h x 17 3/4" w x 8 7/8" d; 9.3 lbs.\$79.75

JANSZEN (Neshaminy Electronic Corp.)

JansZen Model 130

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



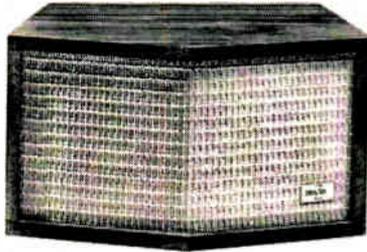
high-pass filter; power supply draws 2 watts, 117 volt 60 cycle a.c.; size 7 1/4" x 22" x 13"; shpg wt 16 lbs.

- 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 7 1/4" x 23 1/2" x 10").....\$161.00

JansZen Model 65

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%

Speakers, Enclosures & Equipment cabinets



harmonic at 50 watts below 10,000 cps; high frequency dispersion 60°; impedance 8 ohms; power consumption 2 watts; 12 3/4" w x 6 3/4" h x 8 1/2" d.

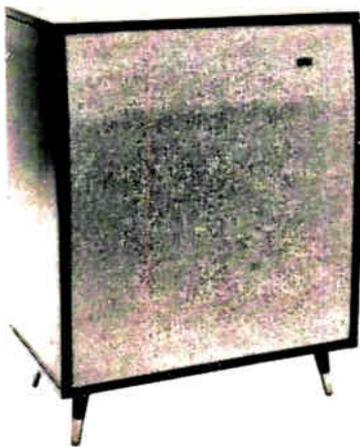
Model 65M (Mahogany).....\$89.50
Model 65B (Birch).....\$89.50
Model 65W (Walnut).....\$91.50
Model 65UA (Flat Black).....\$86.00

JansZen 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 rolloff above 2000 cps; fundamental woofer resonance 40 cps; magnet structure weights 3 1/4 lbs.; flux density 10,800 gauss; power handling: up to 100 watts peak on complex music; impedance 8 ohms.....\$44.50

JansZen Z-200



Combines Model 130U tweeter and Model 250 woofer in one cabinet; frequency response 30 to 30,000 cps; power rating 50 watts; 16 ohms impedance; 32"x24 3/4"x14"; shpg wt 83 lbs.
Model Z-200B Birch.....\$329.00
Model Z-200M Mahogany.....\$329.00
Model Z-200W Walnut.....\$333.00

JansZen Model Z-300

Two-speaker system using Model 350 11" woofer and two electrostatic radiators: frequency response 30 to 30,000 cps; fundamental woofer resonance 52 cps; power handling; 100 watts peak on complex musical content; 8 ohms impedance; power consumption 2 watts; 28" h x 20" w x 13" d.

Model Z-300M (Mahogany).....\$199.75
Model Z-300B (Birch).....\$199.75
Model Z-300W (Walnut).....\$203.50

Model Z-400 Shelf Speaker

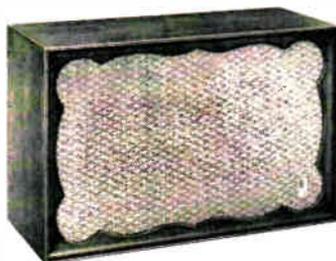
Combination high range electrostatic and 11" woofer; each electrostatic element has 176 push-pull sheathed conductors: woofer is sealed in enclosed fiberglass filled baffle; power handling capacity up to 100 watts on music; magnet weighs 3 1/4 lbs.; frequency response 30-30,000 cps.; LRC high-pass filter for tweeter only; crossover region 1000-2000 cps.; high frequency dispersion 60°; impedance 8 ohms; 15" x 26" x 13 1/4"; 54 lbs.

Model Z-400M Mahogany.....\$149.50
Model Z-400B Maple (birch finish).....\$149.50
Model Z-400OW Oil Walnut.....\$149.50
Model Z-400W Dark Walnut.....\$149.50
Model Z-400U Utility.....\$134.50

JENSEN MFG. COMPANY

Model TR-30

Tri-ette 3-Way Speaker System



Consists of 12" Flexaire woofer, RP-91 mid-range, and RP-302A supertweeter; power rating 30 watts; crossovers at 900 and 6000 cps; 8 ohms; high and mid frequency controls on rear; 4 styles in walnut, cherry, oak, mahogany finishes; 16 1/4"x25 1/2"x11 3/8".

TR-30 (finished).....\$159.50
TR-30U (unfinished in hardwood).....\$134.50

Model GS-3 Galaxy III Stereo System



Consists of 12" Flexair woofer as bass-center speaker and two satellite units consisting of 2 elliptical midrange and 1 super tweeter each; impedance 8 ohms each; power rating 30 watts; bass-center response 20-350 cps; satellite response

350 cps to beyond audibility; bass-center 16 1/4"x25 1/2"x11 3/8"; satellites 11 1/2" x 7 7/8" x 1 5/8"; finishes are walnut, cherry, oak, mahogany.

Model GS-3 (finished).....\$229.50
Model GS-3U (unfinished).....\$195.50

Model TF-3 3-Way Speaker System

Bookshelf system; has 10" woofer, 2-3 1/2" 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; 13 1/2" x 23 3/4" x 11 3/8"; 38 lbs.

.....\$79.50

Model P6-TX

Six inch extended range speaker: 6 1/8" diameter, 3 3/16" deep, 5 1/4" baffle opening; 7.5 watts; 3.2 ohms; 3.16 oz Alnico V magnet; voice coil diameter 3/4".....\$5.05 Net

Model KTG-2 Galaxy II

Stereo Speaker Kit

Speakers are P8-QF dual channel woofer. P6-TM mid range, P35-VAH tweeters; also terminal receptacle, dual channel network, coupling capacitors and balancing resistors, mounting yokes, mounting hardware, grille cloth; 21 lbs.

.....\$92.50

Model DF-1 Duette 2-Way Speaker System

Completely assembled, wired, and tested; uses Flexaire 8" woofer; 12 1/2" x 24" x 10 1/2"; 28 1/2 lbs.; finished in walnut, tawny ash, mahogany.....\$69.50
Model ST-972 Floor Base raises cabinet 3 3/4" from floor.....\$7.50

KDF-1 2-Way Speaker System Kit

Includes P8-QF 8" Flexaire woofer enclosure vent tube, P35-VAH tweeter, coupling element, terminal panel, balance control; 7 3/4 lbs.....\$29.75

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-ohms impedance, 1/2 lb DP-Alnico-V magnet; single cone wide range.

UX-80.....\$14.50 Net
UX-120.....\$17.95 Net

Model TR-10-U Tri-ette Unfinished

Same as the TR-10 except plain rectangular enclosure of 3/4" gum hardwood plywood veneer with attractive grille cloth; may be wood finished or painted; extra grille cloth former included to permit use of your own grille cloth.....\$94.50

Model DF-1-U Duette Unfinished

Same as DF-1 except plain rectangular enclosure of 3/4" gum hardwood ply-

wood veneer with grille cloth; may be wood finished or painted; extra grille cloth former included to permit use of your own grille cloth.....\$59.95

Models DX-120, DX-150



Model DX-120 is 12", Model DX-150 is 15"; DX-120 is 20 watts, DX-150 is 22 watts; response 40 to 13,000 cps, resonance 48-50 cps; 16-ohms impedance; 1 lb DP-Alnico-V magnet; dual cones; mechanical crossover at approximately 4,000 cps; single voice coil.
DX-120\$27.50 Net
DX-150\$35.50 Net

Models P10-SX, 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 1/16" 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

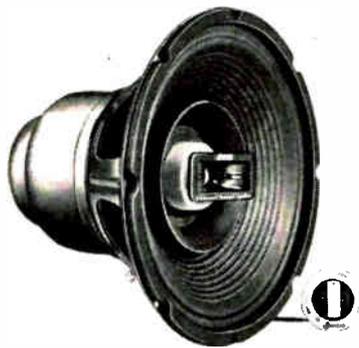
Models K-80A, K-210, K-310A



Coaxial units; K-80 is 10", 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 1/2 lb DP Alnico-V magnet; K-310A uses 3/4 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

Models CX-120, CX-225

CX-120 and CX-225 are 12", three element coaxial systems; Model CX-120 is 20 watts, CX-225 is 25 watts; frequency response 30-15,000 cps; resonance 45-50 cps; 16 ohms impedance; Model CX-120 has 1 lb. DP Alnico-V magnet, Model CX-225 has 1 3/4 lb. DP Alnico-V magnet; compression-driver super-tweeter; two cone radiator for 30 to 4,000 cps range; includes high-fre-



quency balance control.
CX-120.....\$52.50 Net
CX-225.....\$61.75 Net

Model H-222



Coaxial two-way systems; Model H-222 is 12"; response 30 to 15,000 cps; 16-ohms impedance; 1 3/4 lb DP Alnico-V magnet; compression driver horn-loaded tweeter with crossover at 2,000 cps; high-frequency balance control; requires baffle opening 10 1/2"; has 8 1/4" depth.
H-222.....\$62.50 Net

Model G-600

Triaxial 15" 3-way speaker; 35 watts; response 30 cps to upper hearing limit; 16-ohms impedance; 3 1/2 lb DP-Alnico-V magnet; 15" cone woofer; throbore compression-driver mid-channel unit with separate horn for 1,000 to 4,000 cps range; compression super-tweeter; tweeter and midrange controls;

Here's an
unsolicited, independent
lab report on

Tandberg 5

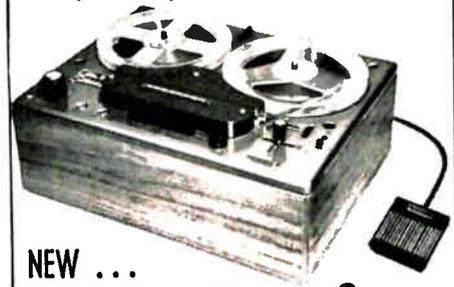
3 SPEED * 4 TRACK
STEREO-MONAURO
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"Certainly...one could not get better performance on any recorder/playback selling under \$1,000..."

(H. H. Labs; 7-60 issue Hi Fi)

That's the impartial judgement of experts! Tandberg is a distinguished achievement in recording/playback brilliance. Offers full operational facilities as a complete stereo system... And it's lightweight, compact and portable.



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A remarkable instrument! For portable or built-in use... 3 separate heads, push button control, built-in demagnetizer & remote control, 4 track record playback, wide range of frequency response.

Tandberg of America, Inc.
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Speakers, Enclosures & Equipment cabinets



depth 11 $\frac{1}{16}$ " ; shipping weight 36 $\frac{1}{4}$ lbs.\$134.50 Net

Model G-610B

Triaxial 15" 3-way speaker; 35 watts; 16-ohms impedance; crossovers at 600 and 4,000 cps; heavy duty curvilinear diaphragm unit for lows, compression driver unit for mid-range and compression driver for high end; baffle opening 13 $\frac{1}{4}$ " ; depth 10 $\frac{3}{4}$ " ; crossover and control networks.....\$252.75 Net

Model P12-RL



12" woofer; 6 $\frac{3}{16}$ " deep, 10 $\frac{1}{2}$ " diameter baffle cutout required; 20 watts; 40 to 2,500 cps; 16-ohms impedance; resonance 60 cps, viscous edge damped diaphragm\$12.90 Net

Model P8-RL

8" woofer; 4" deep; 6 $\frac{3}{4}$ " baffle cutout required; 20 watts; 50 to 3,000 cps; 8-ohms impedance; 65 cps, viscous edge damped diaphragm\$8.75 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 P12-NL



12" woofer; 7" deep, 10 $\frac{1}{2}$ " diameter baffle cutout required; single cone; 25 watts; 30 to 2,000 cps, resonance 55 cps; 16-ohms impedance; 1 $\frac{3}{4}$ lb DP Alnico-V magnet; viscous edge damped diaphragm; shipping weight 10 lbs.\$36.50 Net

Model P12-NF Flexair Woofer



12" cone woofer; power rating 30 watts; frequency response in Jensen Bass-Superflex cabinet 20 to 2,000 cps; Flexair suspension system; resonance 20 cps; impedance 16 ohms.....\$42.00

Model P15-LF Flexair Woofer

15" cone woofer; power rating 40 watts; frequency response in Jensen Bass-Superflex cabinet 16 to 2,000 cps; Flexair suspension system; resonance 16 cps; impedance 16 ohms.....\$69.75

Model KT-24 Speaker Kit

Two-way system driver components; consists of 12" Flexair woofer, compression-type tweeter, and 2000-cps crossover unit; impedance 16 ohms; power rating 30 watts; complete with instructions for building enclosure and installing speakers.....\$72.50

Model P15-LL



15" woofer; 8 $\frac{3}{8}$ " deep, 13 $\frac{1}{4}$ " diameter 2,000 cps in "Imperial" horn, 30 to 2,000 cps in Bass Ultraflex, bass reflex, and others; 16-ohms impedance; 3 $\frac{1}{2}$ lb DP-Alnico-V magnet; resonance 35 cps; viscous edge damped diaphragm.\$56.80 Net

Model P35-VAH



Direct radiating cone type tweeter; 3 $\frac{1}{2}$ " square x 2 $\frac{1}{8}$ " deep, 3 $\frac{1}{8}$ " diameter baffle cutout required; 15 watts; response 2,000 to 14,000 cps; 16-ohms impedance.\$4.00 Net

Model RP-103A



Compression type tweeter; cloth base plastic diaphragm; 20 watts; 2,000 to 15,000 cps; 16-ohms impedance; shipping weight 2 $\frac{1}{2}$ lbs; 3"x7 $\frac{1}{4}$ "x6 $\frac{3}{16}$ "; baffle cutout 6"x2"\$16.50 Net

Model RP-302A

High frequency unit covering the range from 4,000 cps to the highest audible frequencies; coverage angle 120°; impedance 16 ohms; for use with A-402 network; 35 watts power rating, 3 lbs.\$35.00 Net

Model KTX-1 Step-Up Kit

Kit includes RP-302A tweeter, ST-946 balance control, A402 crossover network, interconnecting cable; 35 watts; extends range of system from 4,000 cps to beyond audibility.....\$43.75 Net

Model KTX-2 Step-Up Kit

Kit includes RP-302A tweeter, A-204 network, ST-946 balance control; 16 ohms impedance; 6 $\frac{3}{4}$ lbs shipping weight.....\$32.50 Net

Model KTX-3 Step-Up Kit

Kit includes RP-201 mid-range speaker, A-61 crossover, and ST-947 balance control; 16-ohms impedance; 17 lbs shpg wt.....\$62.50 Net

Model P8-RM Mid-Range

8" direct radiator mid-range; power rating 40 watts; uniform output from 200 to 4,000 cps; cover provides acoustic isolation; $\frac{1}{2}$ lb. DP-Alnico-5 magnet; impedance 16 ohms; 4 $\frac{1}{16}$ " deep.\$12.50

Model P8-UM Mid-Range

8" direct radiator mid-range; power rating 30 watts; for 600 to 4,000 cps range; cover provides acoustic isolation; 2 1/2 oz. DP-Alnico-5 magnet; impedance 16 ohms; 4 1/2" deep.....\$7.50

Model RP-41 Mid-Range

Compression-driver horn-loaded mid-range unit for 400 to 4,000 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 A-61 600 CPS Crossover Network

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 3/8" d; 5 1/4 lbs.....\$19.75 Net

Model A-204 2000 CPS Crossover Network

Two-channel type; high-pass section transmits everything over 2,000 cps to tweeter, everything below to woofer; 180° constant-resistance type; 4 1/2" h x 3 3/8" w x 4 1/2" d; 3 3/4 lbs.....\$13.00 Net

Model A-402 4000 CPS Crossover Network

Two-channel type; high-pass transmits everything above 4,000 cps to tweeter, everything below to woofer; 180° constant-resistance type; 4 1/2" h x 3" w x 4 1/2" d; 3 lbs.....\$10.90 Net

Model A-640 Crossover

Crossover unit for 3-way systems with crossovers at 600 and 4,000 cps; power rating 40 watts; 12 db/octave slope; impedance 16 ohms; 5 1/4" x 7" x 4 3/8". \$32.00

Model A-2440 Crossover

Crossover unit for 4-way systems with crossovers at 200, 400, and 4,000 cps; power rating 40 watts; impedance 16 ohms; 5 1/4" x 7" x 4 3/8". \$42.00

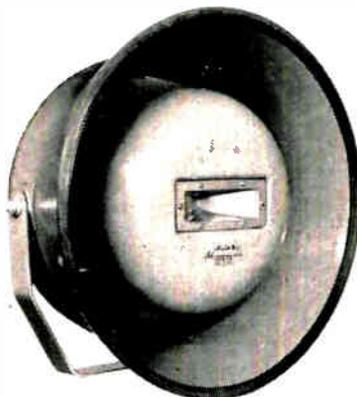
Model ST-946 Balance Control

Provides attenuation of tweeter in systems with power ratings up to 30 watts; impedance 16 ohms.....\$3.50

Model ST-947 Balance Control

Provides attenuation of tweeter and mid-range in systems with power ratings up to 40 watts; impedance 16 ohms. \$4.50

Model HF-100



Weatherproof coaxial speaker; low and high-frequency units enclosed in projection made of glass fibre with aluminum outer horn; 30 watts; 60 to

15,000 cps; 16-ohms impedance; 8" woofer and horn-loaded compression driver high-frequency unit; 2,000 cps crossover; 2 3/8" diameter, 1 1/8" deep.

Model SS-200 Speaker System



Four-way system composed of 15" Flexair woofer, 8" upper bass unit, compression-type mid-range, and supertweeter; frequency response from 16-cps to beyond audibility; crossover frequencies at 200, 400, and 4000 cps; balance controls for mid-range and high-frequency units; lift-top for positioning all speakers except woofer for best stereo effect; impedance 16 ohms; power rating 40 watts; in walnut only; 36 1/2" h x 32 1/4" w x 23" d\$439.50

Model KT-44 Components Kit

Driver components for Model SS-200 speaker system; complete with instructions for building enclosure and installing speakers; does not include Model DC-4 Stereo Director.....\$192.50

Model DC-4

Stereo Director Hardware Kit Provides mounting for Model KT-44 units (excluding woofer); allows positioning speakers for best stereo effect. \$15.95

Model KT-244 Stereo TwinKit

Consists of two Model KT-44 and Model DC-4 units.....\$385.00

Model TP-250 Tri-Plex II Speaker System

Three-way system; lowboy style; frequency response 16 cps to beyond audibility; crossover frequencies at 400 and 4000 cps; impedance 16 ohms; power rating 40 watts; in walnut, tawny and ash; 30 1/2" h x 34 1/2" w x 18 3/4" d\$294.50
Model BF-200 enclosure only.....\$129.75

Model KT-34 Speaker Kit

Driver components for Model TP-250 speaker system; complete with instructions for building enclosure and installing speakers.....\$179.50

Model SS-100 Speaker System

Three-way system; compression-type tweeter, 8" mid-range, and Flexair woofer; crossover frequencies at 600 and 4000 cps; frequency response 20 to 15,000 cps; impedance 16 ohms; power rating 30 watts; in walnut, tawny ash, and mahogany; 32" h x 21" w x 18 1/4" d. \$179.95

Model CN-100 Speaker System

Three-way system; RP-103A tweeter, 8" mid-range, and 12" Flexair woofer; frequency response 20 to 15,000 cps; crossover frequencies at 600 and 4000 cps; impedance 16 ohms; power rating 30 watts; in walnut, tawny ash, and ma-

Speakers, Enclosures & Equipment cabinets



hogany; 32" h x 21" w x 18 1/4" d. \$159.50
Model BF-100 enclosure only.....\$79.50

Model KT-33 Components Kit

Driver components for Models CN-100 and SS-100 speaker systems; complete with instructions for building enclosure and installing speakers; does not include Model DC-3 Stereo Director.....\$80.00

Model DC-3

Stereo Director Hardware Kit Provides mounting for mid-range and high frequency units of Model KT-33; allows positioning speakers for best stereo effect.....\$9.50

Model KT-233 Stereo TwinKit

Consists of two Model KT-33 and Model DC-3 units.....\$160.00

Model DXF-80 Loudspeaker



Woofer is capable of 5/8" total motion bass response down to 36 cps; radiator driven by same voice coil responds up to 14,000 cps; 3/4 lb. DP Alnico 5 magnet; power rating 20 watts, 40 watts peak; impedance 16 ohms; includes tube vent for cabinet; 5 1/4 lbs.....\$24.50

Model TR-10 Tri-Ette Speaker System



Speakers, Enclosures & Equipment cabinets

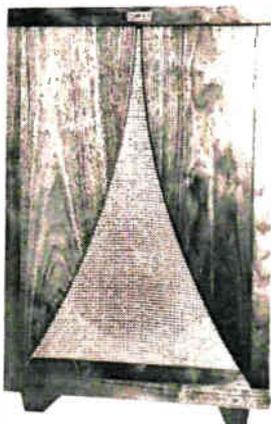
Three-way system; uses RP-103A tweeter, 8" mid-range, and 12" Flexair woofer; frequency response 25 to 15,000 cps; crossover frequencies at 600 and 4000 cps; impedance 16 ohms; power rating 30 watts; in walnut, tawny ash, and mahogany; finished on four sides; 13 $\frac{7}{8}$ "h x 25"w x 11 $\frac{3}{8}$ "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

Galaxy II Stereo Speaker System



System is comprised of bass-center unit with 8" Flexaire woofer, dividing networks for both channels, terminal receptacle panel, and two satellite units for left and right channels; impedance: 16 ohms each of 2 channels; connects to 16 ohm stereo amp outputs with two 2-conductor or one 3-conductor lead; power rating 25 watts; frequency response 36-14,000 cps; B-21 bass center unit 12 $\frac{1}{2}$ " x 24" x 10 $\frac{1}{2}$ "; S-21 satellite unit 11 $\frac{1}{2}$ " x 7 $\frac{1}{2}$ " x 2"; choice of finished walnut, tawny ash, mahogany; 47 $\frac{3}{4}$ lbs.....\$169.50
 Model ST-972 Floor Base for B-21 unit; raises cabinet 3 $\frac{3}{4}$ " from floor.....\$7.50

Ultra-Fidelity Speaker Enclosures



Speaker is front loaded by tapering chamber as shown; will match standard speakers without adjustment or tuning; available for 8", 12", 15" speakers; finished assembled, unfinished assembled, and kit form; also available with tapering pieces in back of grille cloth for full grille appearance; wood veneers are mahogany, walnut, blonde oak.
 Model 15 (33" x 22 $\frac{1}{2}$ " x 18" finished assembled).....\$129.00
 (unfinished assembled).....\$87.00
 (kit form).....\$57.00

Model 12 (24 $\frac{3}{4}$ " x 16 $\frac{3}{4}$ " x 13 $\frac{3}{4}$ " finished assembled).....\$99.60
 (unfinished assembled).....\$66.00
 (kit form).....\$42.00
 Model 8 (17 $\frac{1}{2}$ " x 11 $\frac{3}{4}$ " x 9 $\frac{3}{4}$ " finished assembled).....\$42.60
 (unfinished assembled).....\$26.70
 (kit form).....\$18.60

Model P8-QF Flexaire Woofer



High-compliance 8" woofer; can be used with P35-VAH or RP-103A tweeter; crossover to 2,000 cps; power rating 25 watts; same magnet as DXF-80; 16 ohms impedance.....\$22.50

Model KR-5 Rocket Enclosure

Complete speaker system, mounts anywhere; 16"x7" available in neutral pebble finish.....\$19.50
 Replacement speaker.....\$3.00

Basic Economy Enclosure

Basic Unfinished Assembled
 BSC-U 8".....\$21.00
 BSC-U 12".....\$49.50
 BSC-U 15".....\$66.00
 Basic Unfinished Kit
 BSC-K 8".....\$15.00
 BSC-K 12".....\$33.00
 BSC-K 15".....\$45.00

KAY SPEAKER CO.

Model DV-210

Consists of 2-10" speakers and 2-4" speakers; 16 ohms impedance with 20 watts of power handling capacity; frequency response 28-17,000 cps; same finish as DV-10; 24" x 15" x 28".....\$179.50
 DV-210K Speaker Kit (less cabinet).....\$109.50



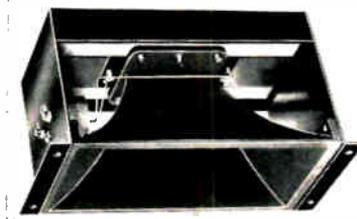
Consists of a 10" and 4" speaker; can handle 20 watts; 8 ohms impedance; frequency response 38-17,000 cps; 13" x 12" x 27"; finished in Philippine mahogany, oil stained and waxed.....\$99.50

DV-10K Speaker Kit (less cabinet).....\$69.50

KELLY (ERCONA CORP.)

Model RLS/1 Ribbon Tweeter

Horn-loaded ribbon high-frequency reproducer; power rating 10 watts; response 3,000 to 20,000 cps \pm 2 db; 15 ohms impedance; flux density 10,000 gauss, duralumin foil diaphragm is suspended in an intense magnetic field and



radiates into a horn of catenoidal shape; cutoff frequency about 1,000 cps; 8 $\frac{1}{2}$ "h x 4 $\frac{1}{2}$ "w x 5 $\frac{1}{2}$ "d; 8 lbs.

Model RLS/1 (less crossover network).....\$69.95
 Model RLS/1 (with crossover network).....\$89.95

KLH RESEARCH AND DEVELOPMENT CORP.

Model One Speaker System

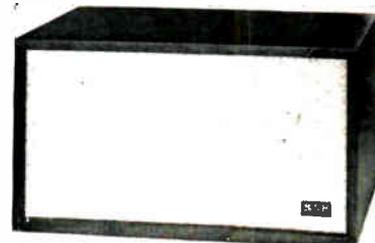
Mid- and low-frequency speaker system; two 11" 32 ohm acoustic suspension speakers in separate 2.25 cubic foot compartments; speakers connected in parallel to match any 16 ohm speaker; finished models supplied with space for Janszen speaker, utility model without; mahogany, black, and walnut finishes; standard enclosure is 16"x25"x37"; utility model, 16"x25"x27 $\frac{1}{2}$ ".
 Mahogany or birch.....\$378.00
 Walnut.....\$390.00
 Utility.....\$336.00

Model Two Speaker System

Mid- and low-frequency speaker system; one 11" 16 ohm acoustic suspension speaker in 1.5 cubic foot enclosure; designed with space for any 16 ohm model of Janszen electrostatic tweeter; mahogany, birch, and walnut finishes; 25"x21"x12".
 Mahogany or birch.....\$197.00
 Walnut.....\$206.00

Model Three Speaker System

Mid- and low-frequency speaker system; 11" 16 ohm acoustic suspension speaker in 1.5 cubic foot enclosure.



Mahogany or birch.....\$174.00
 Walnut.....\$181.00
 Utility.....\$159.00

Model Four Speaker System

Similar to Model Three but with direct radiator tweeter in same enclosure; includes crossover network and level control; impedance 16 ohms.

Mahogany or birch.....\$224.00
 Walnut\$231.00
 Utility\$209.00

Model Six

Two-way speaker system; frequency response 45 to 20,000 cps \pm 2 db; employs 12" woofer using the acoustic suspension principle and a cone-type tweeter; LC crossover network with provision for high frequency adjustment; impedance: 8 ohms; cabinet constructed of 15-ply hardwood; appearance similar to Model Three; 23 1/2" w x 12 5/8" d x 12 1/4" h.....\$124.00

KLIPSCH AND ASSOCIATES

Cornwall 3-Way Speaker System



Designed for corner or wall use; enclosure-type bass and horn-type mid-range and tweeter; driver units same as Klipschorn; supplied with K-33 bass driver or economical 12" bass driver; walnut, mahogany, prima vera; 25 1/4" x 35 3/4" x 15 1/2"

Model CW (finished).....\$383.00
 Model CW Decorator's (unfinished fir).....\$296.00
 Model CW Interim (12" bass-driver unfinished).....\$242.00

Model S "Shorthorn" Speaker System



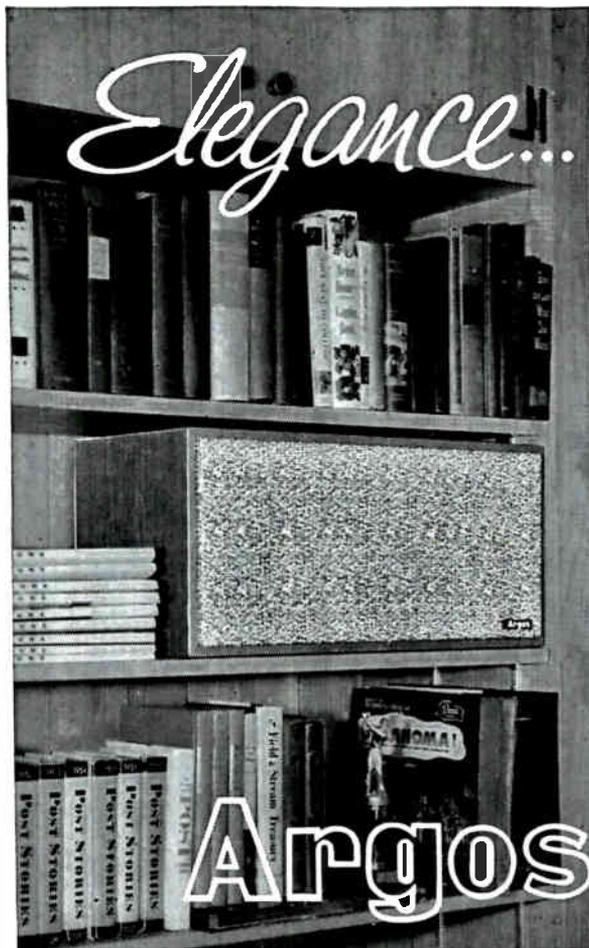
Folded corner horn design; frequency response: 40 to 22,000 cps. with substantial efficiency from 60 to 16,000 cps, down 10 db at 49 cps; three-way, three-speaker system; built-in electrical crossovers at 1,000 and 5,000 cps; uses Stephens or Electro-Voice 15" or 12" bass



REAFFIRMED . . . at the Brussels Exposition . . . the American Exhibition in Moscow . . . and two request performances for Bell Telephone Laboratory personnel . . . the superiority of KLIPSCH derived three channel stereo and KLIPSCH speakers in *faithful tonality, solidity of sound curtain, and accurate geometry.* Write for information.

Klipsch and Associates, Inc.

HOPE, ARKANSAS



on a bookshelf

Gracious listening for bookshelf or floor with TWO Jensen speakers. 8-in. woofer, 3 1/2-in. high-dispersion tweeter, superbly matched. Luxurious 3/4-in. genuine hardwood in Whited Birch or Light American Walnut. 24 x 11 x 10 1/2 in. deep. At your hi-fi store or write Dept. K, Argos Products Co., Genoa, Illinois.

NEW DE LUXE CATALINA
 TSE-2AS \$39.95 NET

Argos Products Company

Speakers, Enclosures & Equipment cabinets

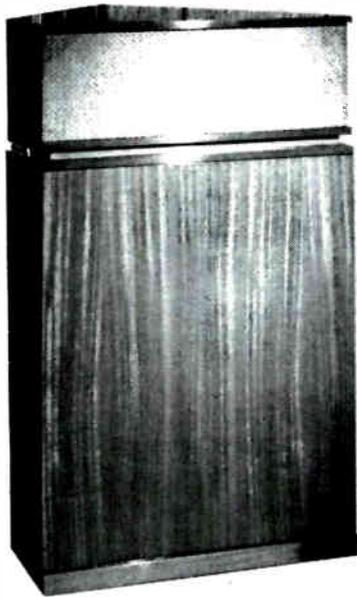
drivers, University SAHF mid-range driver: University 4401 or Electro-Voice T-35 high-frequency driver-horn; designed for use in room corners where size of horn is consideration: power rating: 15 watts continuous below 500 cps, 2 watts continuous above 500 cps, 100 watts complex instantaneous peak, 50 watts momentary complex wave; impedance: 16 ohms; size: 37" h x 25 1/2" w x 23 1/4" d; light or dark mahogany, blonde primavera with satin lacquer finish.

With 15" woofer:
Finished\$354.00
Unfinished\$314.00

With 12" woofer:
Finished\$309.00
Unfinished\$269.00

Enclosure alone:
Finished\$169.00
Unfinished\$129.00
Corner horn utility kit\$ 41.00
Top (panel) assembly\$ 13.00

Klipschorn Corner Speaker System



Folded corner horn; variation in frequency response: less than 10 db down at 32.7 cps, less than 8 db extreme variation to 21,000 cps; fundamental tones to 25 cps; a three-way, three-speaker system: built-in electrical crossovers at 500 and 5,000 cps; uses Klipsch drivers for bass, mid-range and high frequency: bass exponential horn flare rate: 40 cps; deviation from exponential rate less than 0.01 wave length. mid-range distribution: 90 degree horizontal angle, 60 degree vertical angle, cabinet construction: rigidly braced plywood; bass driver completely isolated from other speakers: tweeter mounted in mid-range horn: power rating: 150 watts complex wave instantaneous peak. 50 watts momentary. 15 watts continuous below 500 cps, 2 watts continuous above 500 cps; adequate amplifier rating for home use: 10 watts; impedance: 16 ohms; size: 52" h x 31 1/4" w x 28 1/4" d; in dark or light mahogany, blond primavera, birch, or fir.

Style B: as illustrated
Deluxe\$792.00
Deluxe unfinished.....\$651.00
Laboratory unfinished.....\$633.00
Style C. (without inset at lower part of top housing)
Standard\$693.00
Standard unfinished.....\$617.00
Economy-unfinished only.....\$538.00

Model H Speaker System

Total enclosure bass system with same midrange and treble horns as in other Klipsch systems: bass response down 10 db at 80 cps; may be used as center channel stereo speaker or as independent speaker system; 12" woofers: finished and unfinished models in mahogany and prima vera; utility models in unpainted fir; approximately 20"x15"x12" (depending on model).
Finished\$214.00
Unfinished\$204.00
Utility\$184.00

KNIGHT (ALLIED RADIO CORP.)

Model KN-1401K Equipment Cabinet Kit
Accommodates all hi-fi components except speakers: tongue and groove construction: assembles in an evening; available in mahogany, limed oak, oiled walnut\$59.95

Model KN-825 "Add-On" Electrostatic Tweeter

Complete with crossover, balance control, and power supply: can control woofer attenuation: frequency response from 1000 cps. to limit of hearing; 90° radiation: diaphragm made of Saran film: perforated plastic grille in ivory finish: 8"x10"x3": 35DX763.....\$26.95

Tweeter, Crossover, L-Pad Combination
Tweeter is flanged, exponential horn type 180° dispersion: can be mounted in existing speaker enclosure to add highs to woofer: frequency response 3000-18,000 cps.: crossover at 3500 cps.\$18.95

Model KN-818 Deluxe 8" Speaker
Hyperbolic cone with silicone-treated edge suspension: Alcomax magnet: frequency response 40-13,000 cps.; power capacity 20 watts.....\$18.95

Model KN-808 Quality 8" Speaker
British make: for use as extension speaker: frequency response 50-12,000 cps: capacity 15 watts: impedance 16 ohms\$9.95

Model KN-815A Deluxe 15" Speaker
Three-way speaker: crossover and L-pad high frequency controls include: woofer is edge-suspended cone type; mid range mounted center of woofer: tweeter is exponential horn; magnet material is Alcomax III; 16 ohms impedance: overall response 25-20,000 cps.: magnet weight 6 1/4 pounds: power capacity 50 watts: total flux 227,000 maxwells.....\$89.95

Model KN-850 Deluxe 12" Speaker
Similar to Model KN-815A: magnet material is Magloy X: overall response 30-20,000 cus.: magnet weight 5 pounds: total flux 200,000 maxwells.....\$69.50

Model KN-600HC 2-Way High Compliance Speaker
Woofer is 12" cone type: compression type tweeter; built-in electronic cross-

over: power capacity 50 watts; overall response 25-18,000 cps.: woofer magnet 4.6 pound ceramic: low resonant frequency: impedance 8 ohms.....\$64.50

Model KN-800A 3-Way 12" Speaker
Includes axially-mounted mid-range cone, diffraction horn tweeter: mechanical and electronic crossovers: level control attached to tweeter; impedance 16 ohms\$42.50

Model KN-820 12" Speaker
Ceramic ring magnet; woofer and mid range cones; copper ribbon voice coil; response 40-13,000 cps.: capacity 20 watts. 40 watt peaks; flux density 10,500 gauss; impedance 8 ohms; magnet weight 12 oz.\$16.95

Model KN-810A 3-Way 15" Speaker
Similar to Model KN-800A except with 15" woofer: impedance 16 ohms, \$54.95

KNIGHT-KIT (ALLIED RADIO CORP.)

Model KN-1216K Speaker Enclosure Kit
Ducted port design: accommodates 12" speaker and adapter board for tweeter; matches Model KN1401K Equipment Cabinet: available in mahogany, limed oak, oiled walnut: available assembled at extra cost.....\$54.50

Model KN-1266K Speaker Enclosure Kit
Accommodates 12" speaker; removable adapter board for adding 2-way system: hand-rubbed veneers in mahogany, limed oak, oiled walnut.....\$39.95

KOSS, INC.

Model SP-3 "Stereophones"



Stereo headphones: frequency response 30-15,000 cps; 3 1/2" reproducers mounted in each earpiece; impedance 4 ohms; complete with plug, jacks, instructions\$24.95

Model T-5
Junction box for connecting Stereophones to mono or stereo systems: impedance 4-16 ohms; volume controls; speakers on/off switch.....\$7.95

Model T-1 Junction Box
Contains matching transformers for monitoring 600-10,000 ohms outputs; 2 output jacks for Stereophones; 2 RCA-type phone jacks for connection to preamplifier\$6.95

Model T-7/T-8 Junction Box
Model T-7 has standard phone plugs; Model T-8 has RCA type phone jacks: to plug into any portable phono or tape recorder having 2 plug-in side wing speakers; speaker on/off switch.....\$6.95

LAFAYETTE RADIO

Model SK-58

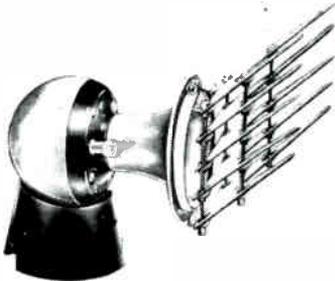
12" coaxial speaker; power rating: 20 watts; frequency response: 30 to 15,000 cps; impedance: 8 ohms.....\$29.50 Net

Model HK-3



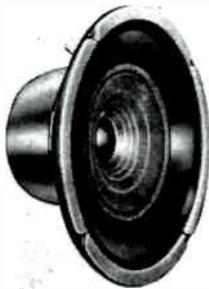
Metal-cased 3" cone tweeter; power rating: 20 watts; frequency response: 2,000 to 16,000 cps; impedance: 8-16 ohms; for use with crossover network like Lafayette LN-2, having crossover point of 2,000 cps.\$5.95 Net

Model HW-7



High-frequency speaker and acoustic lens assembly; power rating: 25 watts; impedance: 16 ohms; crossover point: 2,000 cps; designed for use with crossover network with level control such as Lafayette LN-2; 4 1/4" long, 3" diameter, 2 1/2" lens extension.\$14.95 Net

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 cutout\$9.95

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 cutout.....\$6.95

Model SK-102 Woofer

Lafayette-Goodmans 12" woofer; frequency response 30 to 7000 cps; recom-

mended 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



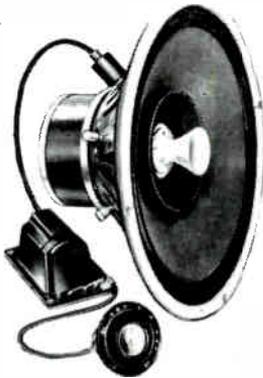
Lafayette-Goodmans 8 1/2" midrange speaker; frequency response 500 to 8,000 cps; recommended crossovers at 700 to 1,000 cps and 5,000 cps; power rating 30 watts in multiple speaker system; impedance 16 ohms.....\$5.95

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-110 3-Way Speaker



Lafayette-Goodmans 12" woofer; mid-range radiator; compression-driver tweeter; free-air cone resonance 35 cps; response 30 to 20,000 cps; power rating 30 watts; impedance 15 ohms; includes 12 db/octave crossover network with crossovers at 2,000 and 5,000 cps; overall depth 7".....\$47.50
SK-111 same design as SK-110 except 15" model; power rating 35 watts.\$54.50

Model SK-100 Tweeter



Dual wide-angle tweeter; frequency response 1500 to 16,000 cps; recommend-

Speakers, Enclosures & Equipment cabinets

ed crossover 2500 to 4000 cps; flux density 18,000 gauss; dispersion angle 125 degrees; power rating 20 watts; 16 ohms impedance (2 8-ohm units in series); 12" l x 2" d x 2 7/8" h.....\$5.95

Model SK-105 Tweeter



Compression-driver horn tweeter; frequency response 1500-16,000 cps; cross-dimension: 6" l x 2 3/8" h x 2 3/8" w.....\$8.75 Net

Model LN-3 Crossover Network

Three-way crossover; two level controls; crossover points; 350 and 5,000 cps; dimensions 8" l x 3 1/4" h x 2 3/4" w.....\$14.95 Net

Model LN-4 Crossover Network

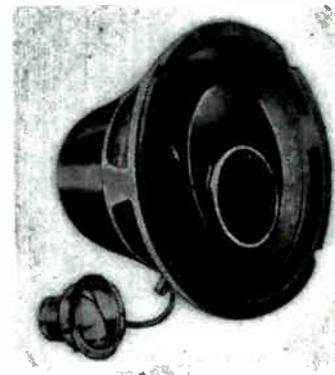
Two-way crossover network; 4000-cps crossover; 6 db/octave attenuation; impedance 16 ohms; constant impedance L-C network; bracket provided for mounting; 2 1/2" x 2 1/8".....\$4.50

SK-131 "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\$19.50

SK-128



8" Dual full range speaker; power rating 20 watts integrated program ma-

Speakers, Enclosures & Equipment cabinets

material; 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 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

"Eliptoflex" Bookshelf Enclosure



Special design reflex type speaker enclosure: any 12" wide range speaker or 12" woofer, tweeter and dividing network.

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 LN-10 Crossover Network

Crossover network for two and three-way speaker systems; 12 db per octave attenuation; provides 4 crossover fre-

quencies for two-way system; 4 pairs of crossover points for three-way system; impedance 8-16 ohms; high-frequency and mid-frequency controls\$19.50

Model VC-49 Level Controls

Speaker level controls; wire wound "L" pads; face plates marked mid frequency-presence and high frequency-brilliance respectively; bushing length 1"; 8 ohms VC-50 (16 ohms).....\$1.95 each

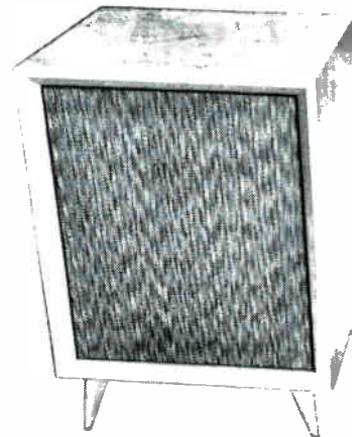
Model CAB-20 Enclosure



Bass reflex design; accommodates 2- and 3-way speaker systems; cut outs for 15" and 8" speakers with adaptor boards for 12" and 5" speakers; size: (less 7" legs) 28 $\frac{7}{8}$ "w x 23 $\frac{1}{2}$ "h x 16 $\frac{3}{4}$ "d; $\frac{3}{4}$ " birch; finishes: mahogany, blonde.

Net Assembled, finished (CAB-20) \$49.50
Assembled, unfinished (CAB-14)\$39.50
Kit form (CK-11).....\$27.75

Model CAB-19 Enclosure



Bass reflex design accommodates 2- and 3-way speaker systems; cutouts for 15" and 8" speakers with adaptor boards for 12" and 5" speakers; size: (less 7" legs) 23 $\frac{1}{2}$ "w x 28 $\frac{7}{8}$ "h x 16 $\frac{3}{4}$ "d; $\frac{3}{4}$ " birch; finishes: mahogany, blonde.

Net Assembled, finished (CAB-19) \$49.50
Assembled, unfinished (CAB-13)\$39.50
Kit form (CK-10).....\$27.75

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; $\frac{3}{4}$ " stock lined with acoustic insulating



material; finishes: mahogany, walnut, blonde.

Net Mahogany, walnut (CAB-16) \$29.50
Blonde (CAB-17)\$31.50
Unfinished (CAB-18)\$26.50

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 $\frac{3}{4}$ "x4 $\frac{1}{2}$ " electrical outlet plate; heavy-duty silvered contacts and terminal board with screw terminals.\$1.39

LANG AND TAYLOR

Model 15W Speaker System



System has woofer, 8" cone mid-range, 3 $\frac{1}{2}$ " cone tweeter; capacity 40 watts program material, 20 watt peaks continuous; LC crossovers at 180 and 7,500 cps.; 4 ohms impedance; 25" x 23 $\frac{1}{2}$ " x 16"; in mahogany, blond, ebony, walnut\$180.00

Model FL-1 Corner Speaker System



Can be placed on wall or in corner; 6 $\frac{1}{2}$ " edge-damped cone. $\frac{1}{2}$ lb. magnet; efficiency 7%; impedance 4 ohms; mahogany and blonde finishes.....\$29.95

Model BL-10 Speaker System

Driver is 6 $\frac{1}{2}$ " edge damped cone with Alnico 5 magnet; frequency response 80-



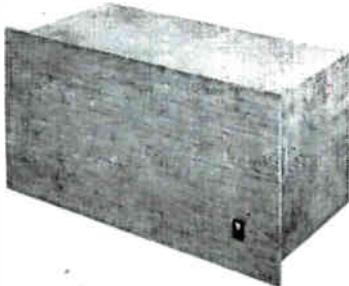
13,000 cps; 10 watts continuous power; impedance 4 ohms; 8 1/2" x 16" x 9" \$29.95

JAMES B. LANSING SOUND, INC.

Model D216

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" \$31.80

Wilton

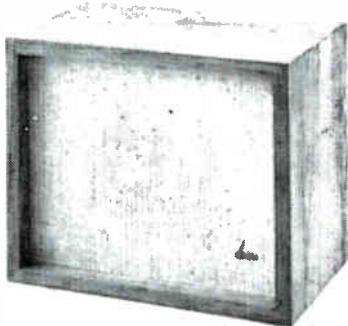


Unfinished Linear-Efficiency system for built-in use: with overlapping grille or flush grille: 11 3/4" x 23 3/4" x 11 3/4". Model D47S5 (LE10, LE30, LX3 installed) \$165.00 Model D47LE8 (LE8 installed) \$95.00

Model C-36

Minimum-size reflex enclosure will house 8", 12" and 15" loudspeakers plus a 075 or 175DHL high frequency driver: 29 1/4" x 19 3/8" x 15 7/8".....\$77.50 Model D36002 (D123, 075, N2600 installed) \$227.40 Model D36123 (D123 installed) \$143.40 Model D36216 (D216 installed) \$109.50

Model C-38



Lowboy version of Model C-36: 24 3/8" x 23 3/4" x 15 7/8" \$77.50 Prices and speaker combination same as Model C-36

Model D44000 "Paragon"

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" \$2070.00 Model D44000 in rough black finish \$1830.00

Model C-37

Lowboy version of Model C-35: 28 7/8" x 36" x 16" \$133.20 Model D37001 (130A, 175DHL, N1200 installed) \$381.75 Model D37030 (D130, 075, N2600 installed) \$309.00 Model D37002 (D123, 075, N2600 installed) \$282.90 Model D37130 (D130 installed) \$225.00

Model D45202 "Metregon"



Stereo system consisting of D123's, 075's, N2400's; 30" x 74" x 22 1/2" \$868.20 Model D45203 (D130's) \$756.60 Model D45205 (130's, 275's, N600's) \$1183.20

Model C-34

Rear-loaded exponential horn for use with extended-range 15" loudspeakers and 2-way systems.....\$170.40 Model D34001 (130A, 175DHL, N1200 installed) \$418.95 Model D34030 (D130, 075, N2600 installed) \$346.20

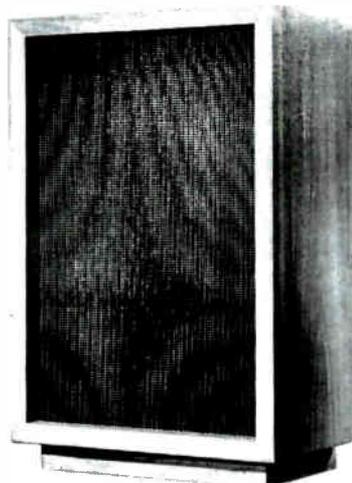
Model C-40 "Harkness"

Lowboy version of Model C-34 \$170.40 Model D40001 (120A, 175DLH, N1200 installed) \$418.95 Model D40030 (D130, 075, N2600 installed) \$346.20

Model D30085 "Hartsfield"

Horn-loaded 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.....\$924.30

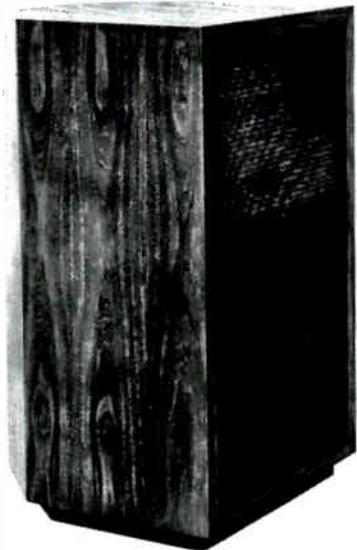
Model 6-35



Speakers, Enclosures & Equipment cabinets

Bass reflex enclosure; designed for 12" and 15" speakers and two-way systems; 38 1/2" h x 16" d x 23 7/8" w; \$124.50 Model D35001 (Model C 35 enclosure with 130A woofer, 175DLH horn-driver, N1200 crossover) \$373.05 Model D35002 (Model C 35 enclosure with D123 12" speaker, 075 tweeter, N2600 crossover) \$274.20 Model D35030 (Model C 35 enclosure with D130 15" speaker, 075 tweeter, N2600 crossover) \$300.30

Models D34001 and D34030



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 (see Model D30085); 6-foot exponential folded horn; corner placement not required; designed primarily for two-way speaker system use.

Model D34001 (Model C 34 enclosure with 130A woofer, 175 DLH horn-driver, N1200 crossover) \$391.75 Premium woods \$406.75 Model D34030 (Model C 34 enclosure with D130 15" speaker, 075 tweeter, N2600 crossover) \$319.00 Premium woods \$334.00 Model C 34 enclosure only \$151.00 Premium woods \$166.00

Model D-123



Speakers, Enclosures & Equipment cabinets

Single cone wide-range 12" loudspeaker; power rating: 20 watts; free cone resonance: 40 cps; impedance: 16 ohms; features 3" aluminum voice coil and dural center dome to stiffen piston assembly; shallow curvilinear cone aids dispersion of high; depth 3 3/8".....\$65.70

Model D-130



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 3/8"\$91.80

Model D-131

Single cone wide-range 12" loudspeaker; 16 ohms; 4" aluminum voice coil and dural center dome; shallow curvilinear cone for dispersion of highs.....\$88.50

Model 130B

15" low frequency driver; power rating: 25 watts; free cone resonance: 36 cps; impedance: 16 ohms; designed as low frequency unit in conjunction with Model N1200 dividing network for systems crossing over at 1200 cps; depth 5 3/8".

Model 130A.....\$81.00
Model 130B (32 ohms).....\$81.00

Model 150-4

15" low frequency driver; power rating: 30 watts; free cone resonance: 27 cps; impedance: 32 ohms; originally designed for theatre use, this unit can be used as low frequency driver in conjunction with Models N500 and N500H dividing networks for systems crossing over at 600 cps; depth 6".

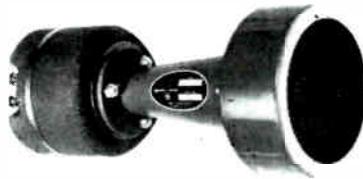
Model 150-4.....\$121.80
Model 150-4C (16 ohms).....\$121.80

Model 537-509



Horn-lens assembly; for use with 375 high frequency driver; provides wide horizontal and narrow vertical diffusion; overall length 16 1/2".....\$84.00

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 sound over a 90 degree solid angle; designed for use with N1200; baffle hole 5 3/8"; overall length 11 1/2". Model 175-DLH.....\$124.50

Model O75



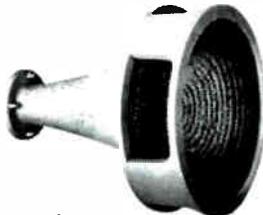
High frequency speaker; power rating: 20 watts above 2500 cps; impedance: 16 ohms; high frequency driver of "Annular Ring" design for reinforcing the performance of extended range speakers from 2500 cps; used in conjunction with Model N2400, N2600 dividing network; baffle hole 3 3/16"; overall length 3 1/4".....\$59.40

Model 375



High frequency driver; power rating: 60 watts above 300 cps; impedance: 16 ohms; for use with 537-500 and 537-509 horn-lens assemblies; diameter 7"; depth 5 3/8".....\$220.50

Model 537-500



Horn-lens assembly; diameter: 13 1/2"; overall length: 15 3/4"; for use with the 375 driver.\$92.70

Model N-1200



Dividing network; crossover: 1200 cps;\$35.25

Model N-7000

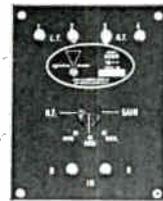


Dividing network; crossover: 7000 cps; nominal impedance: 16 ohms; 12 db/octave; variable attenuation control; dimensions: 3 1/4"x3 1/4"x2 3/4"\$20.40

Model N2600

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 3/4"x6"x3 1/2"\$24.60
Model N2400 (same as N2600 but without dual impedance feature) \$22.50

Models N400, N600



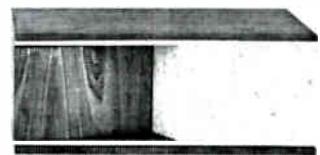
A three-position switch adjusts intensity of high frequency transducer in 3 db steps; rate of attenuation around crossover, 12 db per octave; input and output impedance, 16 ohms. crossover frequency: N400, 500 cps; N600, 600 cps.
N400\$76.50
N600\$54.00

Model H5040



Cast aluminum exponential horn used with JBL 175 and 275 drivers in systems crossing over 600 cps and above; geometry of throat area gives smooth distribution of high frequencies.....\$37.50

Model C46 Minigon



A miniaturized version of the JBL-Ranger PARAGON; radial refraction system; will accommodate LE8 or S5 system; 13" h x 32" w x 15 3/4" d. Single enclosure (all woods and finishes). \$120.00

Model 130A/130B

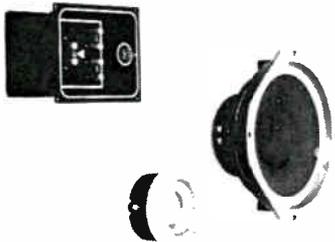
15" low frequency driver designed for two-way systems crossing over at 1500 cps or lower; four-inch edgewound copper ribbon voice coil in long magnetic gap; power rating, 25 watts; free air cone resonance, 36 cps; impedance—130A, 16 ohms; 130B, 32 ohms \$88.80

Model LE8



Full-range eight-inch loudspeaker assembly designed for small sealed enclosures or infinite baffle installation; edge-damped auxiliary radiating ring, sterling silver impedance controlling ring, and Lans-a-loy cone suspension; power rating, 20 watts continuous program; impedance, 16 ohms, 11 lbs. \$59.70

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\$55.80
- LE30\$55.80
- LX3\$17.40

Model C49 Dale



Small enough for actual bookshelf use or table top placement; 12" h x 23 3/4" w x 11 3/4" d; enclosure only.....\$60.00

Model C43



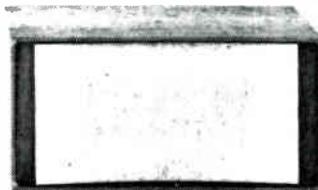
Rear-loading horn for professional and built-in use; will house 15-inch extended range loudspeakers and two-way systems; in rough theater black only; 48" h x 24" w x 24" d. \$84.00

Model 275



A more massive version of the 175 driver; reproduces all frequencies from 600 to 18,000 cps when used with matching exponential horn assembly; impedance, 16 ohms.....126.60

Model C48 Madison



Danish design enclosure; finished on all four sides, as well as the front, allowing horizontal or vertical placement. 11 3/4" h x 23 3/4" w x 13 1/4" d. \$60.00

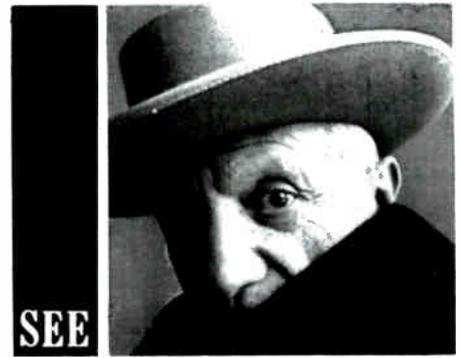
L. E. E. INC.

Musette Speaker System

Bookshelf style enclosure; frequency response: 70 to 15,000 cps; 2-way, 2-speaker system; built-in electrical crossover at 6,500 cps; contains 8" bass and mid-range speaker and cone type tweeter; impedance: 8 ohms; power rating: 15 watts; size: 10" h x 8 1/2" d x 24" w; in mahogany, blonde, and wal-



nut pressure laminate finishes.....\$79.95 Net



Pablo Picasso by Irving Penn

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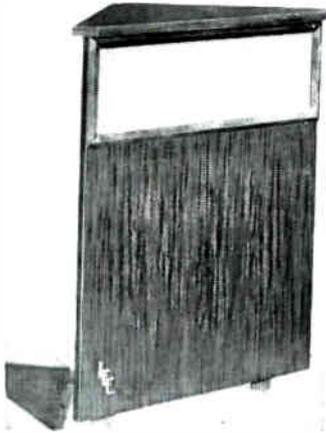
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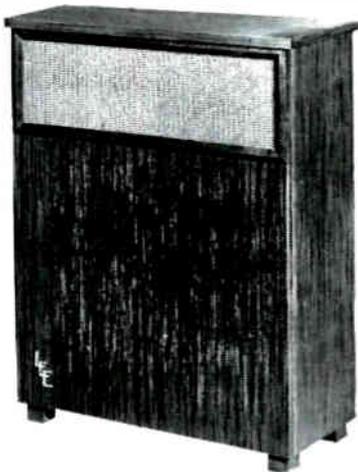
Speakers, Enclosures & Equipment cabinets

Trio Speaker System



Corner enclosure uses resistance damped Helmholtz resonator; frequency response: 50 to 15,000 cps; 2-way, 3-speaker system; built-in electrical crossover at 6,500 cps; 8" bass and mid-range speaker; 2 cone-type tweeters; uses system of distributed slots to increase resistance damping; impedance: 8 ohms; power rating; 20 watts; size: 33 $\frac{3}{4}$ "h x 19" along wall; in mahogany, blonde, and walnut pressure laminate finishes.....\$119.95 Net

Fantasia Speaker System



Enclosure uses resistance damped Helmholtz resonator; frequency response 50 to 15,000 cps; 2-way, 3-speaker system; built-in electrical crossover at 6,500 cps; 8" bass and mid-range speaker; 2 cone-type tweeters; uses system of distributed slots to increase resistance damping; impedance: 8 ohms; power rating: 20 watts; size: 33 $\frac{3}{4}$ "h x 25 $\frac{1}{4}$ "w x 11 $\frac{3}{4}$ "d; mahogany, blonde, or walnut laminate finishes.....\$129.50 Net

Chorale II Speaker System

Enclosure uses Helmholtz resonator for bass range; frequency response: 30 to beyond 22,000 cycles; 3-way, 4-speaker system; built-in electrical crossovers at 300 and 5,000 cps; two 12" woofers; 8" mid-range speaker in infinite baffle;

horn type tweeter; impedance: 8 ohms; power rating: 60 watts; size: 30 $\frac{1}{2}$ "h x 36 $\frac{1}{4}$ "w x 19"d; shipping weight 120 lbs; in mahogany, blonde, or walnut pressure laminate finishes. \$395.00 Net

Catenoid Speaker System



Corner horn enclosure of catenoid design; frequency response 30 to beyond 22,000 cycles; 3-way, 3-speaker system; built-in electrical crossovers at 300 and 5,000 cps; bass speaker feeds horn; 8" mid-range speaker in infinite baffle; horn tweeter; catenoidal design reduces size and design complexity of horn; mid-range speaker sealed in a fully stuffed volume to provide acoustic cut-off one octave below electrical crossover; transient characteristics: full velocity and stop in less than one cycle; impedance: 8 ohms; power rating: 80 watts; size: 37 $\frac{1}{2}$ "h x 29" along wall from corner; shipping weight: 115 lbs; in mahogany, blonde, or walnut pressure laminate finishes.....\$495.00 Net

LORENZ (KINGDOM PRODUCTS, LTD.)

Sound Corner Speaker System



Designed to hang in room corner; frequency response: 40 to 17,000 cps; 2-way, 2-speaker system; HP-1 high pass filter built-in, crossover at 5,000 cps; uses Lorenz LP-215 8" speaker and LP-65 tweeter; power rating: 14 watts; impedance: 8 ohms; foam gasketing along sides and hinged bottom allow sealing against wall; ceiling and wall used as horn extensions for bass response; hangs 16-20 inches from ceiling; extra filling material supplied for sealing against uneven walls; size: 31" x 27 $\frac{1}{2}$ " x 11 $\frac{3}{4}$ "; blonde finish.....\$59.50 Net

KAL Audette Speaker System



Bookshelf style; Helmholtz resonator phase inverter enclosure; frequency range: 45 to 17,000 cps; 2-way, 2-speaker system; HP-1 high pass filter built-in; crossover at 5,000 cps; uses Lorenz LP-215 8" speaker and LP-65 tweeter; power rating: 14 watts maximum; impedance: 8 ohms; size: 11" h x 23 $\frac{3}{4}$ " w x 10" d; brown or blonde tan leatherette.....\$49.50 Net

LP-208



Wide range single cone 8" speaker; power rating: 15 watts average, 25 watts peak; frequency response in suitable enclosure: 35 to 14,000 cps; impedance 8 ohms; 28.5 oz. ALNI magnet; serves as single full range speaker or as woofer in conjunction with LP-65 tweeter and HP-1 high pass filter; baffle opening required 7 $\frac{1}{4}$ "; depth 4".....\$19.95

LP-312

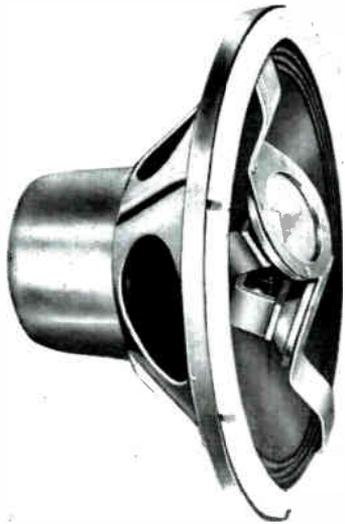
Single cone wide range 12" speaker; power rating: 25 watts average, 40 watts peak; frequency response in suitable enclosure: 20 to 14,000 cps; impedance: 16 ohms; magnet weight: 61.5 ozs; baffle opening 10 $\frac{3}{8}$ ".....\$39.50

LP-312-1

Coaxial 12" speaker combining LP-312 with TB-1 tweeter assembly; power rating: 27 watts; frequency response in suitable enclosure: 20 to 17,000 cps; impedance: 16 ohms; requires use of HP-1 high pass filter or suitable crossover network; baffle opening 10 $\frac{3}{8}$ ".....\$49.50

LP-312-2

Coaxial 12" speaker combining LP-312 with TB-2 tweeter assembly; power rating: 29 watts; frequency response in suitable enclosure: 20 to 17,000 cps; impedance: 16 ohms; requires use of HP-1 high pass filter or suitable cross-



Mahogany\$149.50
Walnut\$154.50

Audette Senior Speaker System



Two-way speaker system; frequency response 35 to 17,000 cps; 22 1/4" x 22 1/4" x 10 1/2".
Mahogany\$69.50
Blonde or Walnut.....\$74.50

Model S-388

over network; baffle opening 10 5/8"\$59.50

TB-2

Two LP-65 tweeters mounted in rigid steel bracket; assembly fits most 12" speakers; solid construction prevents resonance; requires HP-1 high pass filter or suitable crossover network\$21.69

LP-65

Horn-type 2 1/2" tweeter; power rating: 2 watts; frequency response with HP-1 high pass filter: 2,000 to 17,000 cps; impedance: 5.5 ohms; sound dispersion: 120 degrees in all directions; uses soft plastic cone; solid back allows placement in any enclosure without interaction with another speaker; baffle opening 2 1/4"\$8.50

TB-1



LP-65 tweeter mounted in rigid steel bracket; assembly fits most 12" speakers; solid construction prevents resonance; requires HP-1 high pass filter or suitable crossover network.....\$11.85

HP-1



High pass filter; designed for use with LP-65 tweeter, but usable with any tweeter requiring nominal crossover at 5,000 cps; 3 db per octave low frequency attenuation.....\$4.95

Compass-1 Speaker System

Two-way speaker system; uses LP-312 woofer and compression-type tweeter loaded by 360° exponential horn; frequency response 20 to 20,000 cps; power rating 50 watts; phasing switch; 22 1/4" w x 15" d x 29" h with legs.

1961 EDITION

Speakers, Enclosures & Equipment cabinets

15,000 cps.; magnet assembly weight 61.5 oz.; 30 watts peak power; overall diam. 12 1/4"; depth 10 5/8"; 4, 8, 16 ohms impedance.....\$44.50

Model S-888

Can be used alone or with system: dual cones provide broad response 30-14,500 cps; 18 watts peak power; over-all diameter 8 1/2"; depth 4"\$21.50

Model S-1288 II



Consists of S-1288 plus twin tweeters and high pass crossover; frequency response 18-18,000 cps.; 35 watts peak power\$67.50

LOWELL MFG. CO.

Hifilite



All-weather outdoor light and speaker; constructed of heavy gauge aluminum; upper dome section completely lined with 3/4" jute; waterproofed; lamp fixture not wired; suitable for 8" speaker; also available in gas light era construction\$49.95

LOWTHER (LECTRONICS, INC.)

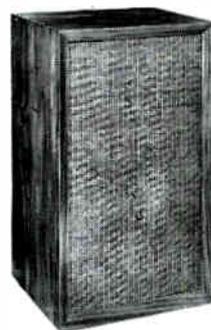
TPI Speaker System

Corner horn speaker system; uses Lowther PM3 6" coaxial driver with mechanical crossover at 4,000 cps, phase stabilizer, and open voice coil radiation for highest frequencies; frequency response: 30 to 20,000 cps; dispersion uniform for all frequencies over an angle of 180 degrees; power rating: 6 watts continuous, over 60 watts peak on program material; magnet: "Ticonal G"; flux density: 22,000 gauss; bass resonance below 10 cps; efficiency: 50% or better; frequencies above 150 cps radiate directly through wide diffusion horn near top of cabinet; back radiation of frequencies below 150 cps feed through compression throat into long horn and

peak; 27" x 14 3/4" x 11 1/2"; 46; Unfinished (sanded).....\$109.50
Oiled Walnut, Mahogany, Walnut, blond or ebony.....\$119.50

Model S-1288

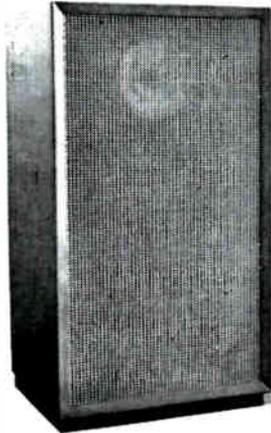
Wide range 12" speaker; dual cones; twin voice coils; frequency response 18-



Speakers, Enclosures & Equipment cabinets

emerge at bottom of cabinet; medium or dark mahogany finishes; 47" h x 32" w x 21" along corner.....\$495.00

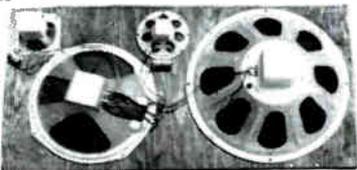
"Acousta" Speaker System



Back-loaded folded horn speaker system; uses Lowther PM6 coaxial driver; frequency response: 50 to 18,000 cps; power rating: 6 watts continuous, 60 watts peak on program material; magnet: "Ticonal G"; flux density: 17,500 gauss; efficiency: 20% over entire range; dispersion uniform over 120 degrees; 5 1/2 foot exponential bass horn; direct radiation of mid- and high frequencies; standard finish: medium mahogany; 34" h x 18 1/2" w x 17" d\$225.00

McGEE RADIO CO.

Model VOX-1512



Four-way speaker system mounted on baffle board 16" x 32"; frequency response 20 to 22,500 cps; 4 ohms impedance; features Magnavox 15" woofer, 12" Magnavox mid-range, 5" cone tweeter and 4 1/4" cone tweeter; crossover network; choice of blond or mahogany plastic grill cloth \$1.25 extra\$24.95

Model H-4H Speaker System

Frequency range 20-20,000 cps; 12" aluminum voice coil woofer, 6" mid-range, two 2 1/2" tweeters; LC crossover; walnut or blond finish cabinet.\$39.95

Model Z-4Z Speaker System

Similar to Model H-4H except for 15" woofer; built-in variable brilliance control.\$49.95

Imperial 81 Speaker System

Comprised of 15" woofer, 8" middler, horn type tweeter; 25 watts; frequency range 18-20,000 cps; 37" x 27 1/2" x 23 1/2".\$69.95

Similar to Model 81 except with two 8" middlers: 8 ohm impedance; built-in LC crossover network.\$89.95

MICROTRAN CO. INC.

HM-80 Matching Transformer

Impedance matching and level adjusting



transformer; matches speakers of different impedances and power levels to output of amplifier or crossover networks; eliminates power wasting resistance pads; 50 watts; frequency response from 20-30,000 cps. ± 1 db.....\$21.75

NORELCO

Model AD 3877M



8", twin cone; capacity 6 watts; frequency response: 75 to 19,000 cps; impedance 4-6 ohms; total magnetic flux 26,000 Maxwell; flux density 11,000 gauss; efficiency 6% at 400 cps. \$9.90 Net

Rembrandt Enclosure

Back-loaded folded horn enclosure designed for speakers AD-5277M or AD-4277M: 8" legs: 26" x 21 1/2" x 17 1/4". Walnut or cherry.....\$99.50
Blonde\$91.00

VanGogh Enclosure

Distributed port bass-reflex type; designed for use with AD-4877 speaker; 23 3/4" x 13 3/4" x 11 3/4". Walnut or cherry.....\$59.95
Blonde\$55.50
Mahogany\$51.00

Vermeer Enclosure

Same type as VanGogh; for use with AD-3800 speaker or other 8" speakers; 18 1/2" x 12" x 8 15/16". Walnut or cherry.....\$35.00
Blonde\$33.25
Mahogany\$31.00

Hague Enclosure

Similar to Rembrandt enclosure except mounted with 2-8" speakers. Walnut or cherry.....\$159.95
Blonde\$154.95

Model AD-5277M



12" speaker; 20 watts rated; frequency response 35-18,000 cps.; total flux 134,000 Maxwells.....\$59.50

Model AD-4277M

12" speaker; 20 watts continuous, 30 watt peaks; frequency response 35-18,000 cps.; impedance 8 ohms; efficiency at 400 cps. 7%.....\$39.00

Model AD-4877M

8" speaker; 6 watts continuous, 10 watt peaks; efficiency at 400 cps. 10%; frequency response 50-20,000 cps.....\$26.00

Model AD-3500M

5" speaker; 3 watts continuous, 5 watt peaks; 4-6 ohms impedance; frequency response 130-19,000 cps.....\$4.95

AD-3690M

6" x 9" speaker; 6 watts continuous, 9 watt peaks; 4-6 ohms impedance; frequency response 70-18,000 cps.; efficiency at 400 cps. 5.5%.....\$6.20

Model AD-2690M

6" x 9" speaker; 6 watts continuous, 9 watt peaks; 4-6 ohms impedance; frequency response 70-16,000 cps.....\$4.95

OLSON RADIO CORP.

Model PH-28

Stereo headphones; response. 30-15,000 cps; 8 ohms; includes 5 1/2' cord terminating in 2 standard 1/4" phone plug\$17.88

Model CA-121



4" speaker in cabinet with volume control to be used as remote speaker; 3.2 ohms; power rating 3 watts; 8" x 5 3/4" x 4 1/8"\$5.19

Model SW-145 Stereo Headphone Adaptor

Enables independent remote control of stereo speaker or stereo phones; switches select phone or speaker operation; dual set of phone jacks allow 2 persons to listen at the same time. \$3.00

Model VC-208 Variable Control Crossover

For use with 3-8 ohm speakers or speakers of mixed impedances; crossover frequencies are 500, 3300 cps; 6" x 4 1/2" x 3".....\$9.99

Model VC-213 Variable Crossover

Variable high pass filter; combination crossover and level control: impedance 4-16 ohms\$3.00

Model VC-220 Dual Audio Mixer

2-position mixer; connects to mike or phono input; input impedances 500,000 ohms; output impedance 500,000 ohms; dual input jacks take either phone plug or RCA type phono jack; output terminates in RCA type phono jack: 4" x 2 5/8" x 1 5/8".....\$3.00

Model VC-223 Stereo Remote Control



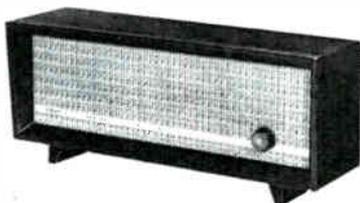
Provides master control of both channels from single knob and selects stereo reverse, or monaural; connects between program source and amplifiers; input and output connections terminate in RCA type phono jacks.\$3.00

Model S-307



Die cast horn tweeter using "reciprocating flare" principal for wide angle dispersion; 20 watt driver unit coupled to horn provides uniform response from 2,000 to above audibility; 8 ohms; 2" x 4 3/4" x 5 1/2".....\$8.95

Model S-348

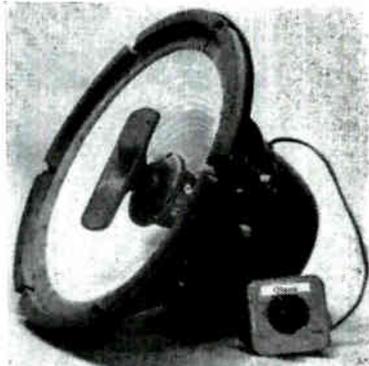


15 watt tweeter in cabinet; variable crossover allows tweeter to be balanced regardless of woofer used; response flat from 1200-15,000 cps; 8 ohms; 3 3/4" x 11" x 4 3/4".....\$6.88

Model S-406

8" coaxial speaker; woofer response 40-4,000 cps; tweeter response 4,000 (crossover point) to 16,000 cps; cone resonance 60 cps; 8 ohms; power handling capacity 8 watts; diameter 8", depth 5 1/8".....\$11.98

Model S-407



12" coaxial speaker with tweeter level control and free edge woofer cone; response 40-16,000 cps; cone resonance 40 cps; 8 ohms; power handling capacity 20 watts; diameter 12", depth 6 3/4".....\$29.37

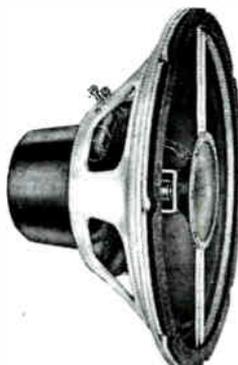
Model S-291



Power rating 10 watts; 8" wide-range design; frequency response 40 to 12,500 cps; felt voice coil spider and variable density cone; high frequency disperser cone; depth: 3 1/2"; impedance 8 ohms.....\$4.91

OXFORD COMPONENTS, INC.

Model C15L608 15" Speaker



Coaxial 15" speaker; power rating 25 watts; frequency response 30 to 15,000 cps; resonance 50 cps.....\$43.50

Model C12J408 12" Speaker

Coaxial 12" speaker; power rating 15 watts; frequency response 40 to 15,000 cps; resonance 75 cps.....\$25.50

STEREO-FIDELITY SPEAKER ENCLOSURES

Superbly Designed for Better Acoustics

NEW!

Model HFT 1284

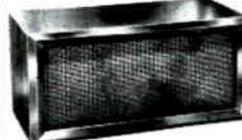


Table model finished on 4 sides to house a 12" speaker. 3 1/2" stock construction. Outside dimensions: Width 11", Height 23 7/8", Depth 13 3/8". Available: raw wood (unfinished), walnut, Korina, Mahogany, Fruitwood, Ebony finishes. French Provincial or Italian inserts upon request. \$5.00 addtl. Weight 25 lbs.

Unfinished \$26.95

Finished \$29.95

Model BRC 1228-S

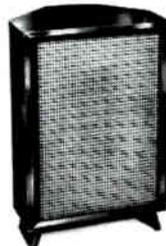
Corner Bass Reflex for 12"-15" speaker. Outside dimensions: Width 21", Height 29 1/2" (plus 3 1/2" legs). Depth 16". Available in Ribbon-Striped Mahogany, Walnut, genuine Blond Korina. Weight 50 lbs.

Unfinished

\$30.00

Finished

\$37.50



Model BRC 1243

Bass Reflex constructed from 1" stock, to house a 12" or 15" speaker. Outside dimensions: Width 23 1/2", Height 29" (plus 6" legs), Depth 16 3/4". Available in genuine Blond Korina, Ribbon-Striped Mahogany, genuine Walnut and Cherry. \$43.50



Model BRS 1227-S

Square Bass Reflex for 12"-15" speaker. Outside dimensions: Width 21", Height 29 1/2" (plus 3 1/2" legs). Depth 16". Available in Ribbon-Striped Mahogany, Walnut, genuine Blond Korina. Weight 50 lbs.

Unfinished \$30.00

Finished \$37.50



Model HFT 800-S—Table Model for 8" Speaker. Outside dimensions: Width 23 1/2", Height 11", Depth 11". Available in raw wood (unfinished), Ribbon-Striped Mahogany and genuine Blond Korina. Weight 15 lbs.

Unfinished \$17.00

Finished \$21.00

SPECIALS!

8" WALL BAFFLE. Mahogany, Walnut and Blond finishes.....\$2.95
12" WALL BAFFLE. Mahogany, Walnut and Blond finishes.....\$3.95

UTILITY CABINET

Model UC-100
To House a 12" Speaker.

Outside dimensions: Width 23 1/2", Height 25 1/2" (plus 6" legs), Depth 16 3/4". Available in Ribbon-Striped Mahogany, Walnut, Korina, Fruitwood, Ebony. RECORD CHANGER CUTOUT FREE where specified. \$37.50



Available at Leading Jobbers. Write for Catalog.
ALLIED WOOD PRODUCTS CORP.
675 Hudson St., New York 14, N. Y. Oregon 5-6590

Speakers, Enclosures & Equipment cabinets

Model C8J408 8" Speaker

Coaxial 8" speaker; power rating 8 watts; frequency response 50 to 15,000 cps; resonance 75 cps.....\$21.00

Model T3C208 Tweeter

Cone-type 3" tweeter; power rating 4 watts; frequency response 1,800 to 15,000 cps.....\$4.35

Model T5C208 Tweeter



Cone-type 5" tweeter; power rating 4 watts; frequency response 1,100 to 15,000 cps.....\$5.10

Model W15M608 Woofer

15" woofer; power rating 25 watts; roll-off frequency 2,000 cps; resonance 40 cps.....\$39.00

Model W12M608 Woofer

12" woofer; power rating 25 watts; roll-off frequency 3,000 cps; resonance 45 cps.....\$22.50

Model W12K508 Woofer

12" woofer; power rating 15 watts; roll-off frequency 4,000 cps; resonance 50 cps.....\$23.70

Model F12L608 12" Speaker



12" full range speaker; power rating 25 watts; frequency response 40 to 10,000 cps; resonance 70 cps; 1/2" voice coil; 14 oz. magnet.....\$29.55

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 BR-1 Series Speaker Enclosures

Bass reflex design rectangular enclosure; for use with Model 3W20 driver components; 3/4" plywood finished on four sides; may be used as "high boy" or "low boy"; 33 3/8" x 23 3/4" x 17"; legs 6 1/2" h; runners 2 1/8" h.

Mahogany.....\$111.00
Cherry or blonde oak.....\$117.00

Model 3W20 Driver Components

Consists of 12" woofer, 8" midrange and 3 1/2" tweeter; frequency response 35 to 15,000 cps; power rating 20 watt-peak program material; impedance 8 ohms; includes crossover network with crossovers at 600 and 5000 cps.....\$39.00

PACO ELECTRONICS CO.

Model 12W 2-Way Speaker System



Pre-tuned tube-loaded port; 10" Jensen long excursion woofer and a horn-loaded compression tweeter; overall response is 45-14,000 cps; high efficiency system; adjustable brilliance control; 3/4" furniture grade plywood; 23 1/2" x 13" x 12".
Unfinished.....\$59.95
Walnut finish.....\$69.95

PERMOFLUX PRODUCTS CO.

Model D-84 Arpeggio Speaker System

Bookshelf type; power capacity 10 watts; impedance 8 ohms; 21" x 14" x 10".....\$59.50

Model D-66 Ballerino Speaker System

Bookshelf type; power capacity 7 watts; 18" x 12" x 8".....\$45.00

Model D-55 Concerto Speaker System

Floor or bookshelf use; power capacity 4 watts; in charcoal walnut; 15" x 8" x 10".....\$32.00

12X8 12" Speaker

Frequency response 30 to 12,000 cps; power rating 20 watts; impedance 8 ohms; magnet weight 16 oz.; depth 6 1/8"; shipping weight 5 3/4 lbs. \$32.50

12W8 12" Speaker

Frequency response 40 to 12,000 cps; power rating 20 watts; impedance 8 ohms; magnet weight 10 oz.; depth 4 1/2"; shipping weight 4 1/2 lbs. \$22.50

8W8 8" Speaker

Frequency response 45 to 14,000 cps; power rating 20 watts; impedance 8 ohms; magnet weight 10 oz.; depth 4 1/2"; shipping weight 4 1/2 lbs. \$22.50

8U8 8" Speaker

Frequency response 50 to 12,000 cps; power rating 15 watts; impedance 8 ohms; magnet weight 7 oz.....\$17.50

Linlar Stereo Kit A-1

Converts standard phonographs to stereo in minutes; comes complete with matched stereo speakers; 15" x 10" x 8" deep. 1 pair of Dynamic stereophones; stereo diamond needle (LP) cartridge, turnover type, with sapphire needle for 78 records.....\$115.00

Dimensi-Fones—Binaural



PermoFlux Dynamic hi-fi Dimensi-Fones, audio frequency response from 40-16,000 cps; lightweight head-band with soft, comfortable cushions.

Model HBD-16/16 (16/16 ohm impedance; PMR-16 earspeaker).....\$40.00
Model B-DHS-17 (300/300 ohm impedance; PDR-8 earspeaker).....\$50.00
Model B-DHS-28 (12/12 ohm impedance; PDR-10 earspeaker).....\$45.00
Model B-DHS-600 (600/600 ohm impedance; PDR-600 earspeaker).....\$50.00
Model B-DHS-10M (10M/10M ohm impedance; PDR-10M earspeaker).....\$50.00

Model HDA-8 (8 ohm impedance; PMR-16 earspeaker).....\$35.00
Model HDA-600 (600 ohm impedance; PMR-16 earspeaker).....\$40.00
Model DHS-17 (600 ohm impedance; PDR-8 earspeaker).....\$45.00
Model DHS-28 (25 ohm impedance; PDR-10 earspeaker).....\$40.00
Model DHS-20M (20,000 ohm impedance; PDR-10M earspeaker).....\$45.00

Largo Hi-Fi Speaker System

Equipped with one Super Royal 8" hi-fidelity mid-range speaker and woofer; 2 tweeters; cabinet size; 4.7 cubic ft. free edge, slotted and treated cones; response—50 to 15,000 cps; impedance—8 ohms.

Model ML-W Walnut.....\$89.50
Model ML-M Mahogany.....89.50
Model ML-B Blonde.....89.50

Model 8T8 8" Speaker

Frequency response 50 to 12,000 cps; power rating 10 watts; impedance 8 ohms; magnet weight 5 oz.; depth 4 1/2"; shipping weight 3 1/4 lbs. \$15.00

Model 6M8 6" Speaker

Frequency response 60 to 10,000 cps; power rating 6 watts; impedance 40 ohms; magnet weight 3 1/2 oz.; depth 2 3/4"; shipping weight 2 1/4 lbs. \$10.00

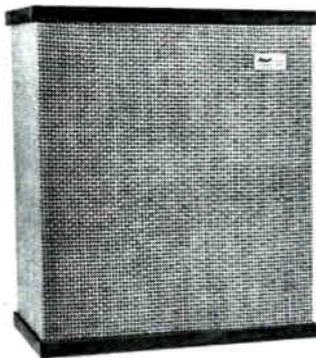
PILOT RADIO CORP.

Model PSV-1

3-way bookshelf speaker; 12" Air-Flex woofer, 2-6" mid-range, 2-3" tweeters; frequency response 40-16,000 cps; woofer free air resonance 22 cps; 25 3/4" x 14 1/4" x 12"; wt. 45 lbs; finished on

four sides in mahog., walnut, or unfinished walnut\$139.50

Model PSV-2



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 15 3/8" x 9 3/4"; wt. 23 lbs; oiled walnut trim\$69.50

Model PSV-3

3-way speaker system consisting of 8" woofer, 6" mid-range, 3" armored-type tweeter; frequency response 50-16,000 cps; 8 ohms; power rating 30 watts; 18" x 11 1/2" x 9"; wt. 27 lbs.....\$64.50

PRINTED ELECTRONIC RESEARCH, INC.

Model EC-100 Equipment Cabinet



Accommodates record player, tape unit, and electronic components; includes balance meter and balance control; 42" w x 15 1/2" d x 17" h with 3", 6", or 9" legs.....\$69.75

QUAM-NICHOLS COMPANY

Model 12A10X



12" extended range single cone; capacity: 15 watts; frequency response 50-12,000 cps. ± 5 db; 6-8 ohms impedance; Alnico V magnet; shipping weight: 4 3/4 lbs.; baffle opening required 11 1/8"; depth 5 7/8".....\$26.00 List

1961 EDITION

Model 10A10X

10" extended range single cone; capacity: 12 watts; frequency response 50-12,000 cps. ± 5 db; 6-8 ohms impedance; Alnico V magnet; shipping weight: 3 3/4 lbs; baffle opening required 9 1/8"; depth 5 1/4".....\$24.00 List

Model 8A10X

8" extended range single cone; capacity: 10 watts; frequency response 50-12,000 cps. ± 5 db; 6-8 ohms impedance; Alnico V magnet; shipping weight: 3 1/4 lbs; baffle opening required 7"; depth 3 3/4"\$20.00

Model 15A10CO

Coaxial: 15"; power handling capacity: 20 watts; frequency response: ±5 db 25 to 15,000 cps; 6-8 ohms impedance; consists of 15" woofer with separate tweeter mounted across front; built-in crossover; shipping weight 8 1/2 lbs; baffle opening required 13 7/8"; depth 7 3/4".....\$52.50

Model 12A6CO

Coaxial, 12" capacity 14 watts; frequency response: ±5 db 50 to 15,000 cps; 6-8 ohms impedance; consists of 12" woofer with separate tweeter mounted across front; built-in crossover; shipping weight 6 1/2 lbs; baffle opening required 11 1/8"; depth 6 9/16".....\$34.50

Model 15A10L

15" woofer; capacity 10 watts; frequency response: 30 to 5,000 cps ±5 db; resonance 45 cps; 8 ohms impedance; shipping weight: 7 lbs; baffle opening required, 13 7/8"; depth 7 1/2".....\$35.00 List

Model 12A10L

12" woofer; capacity 10 watts; frequency response: 40 to 5,000 cps ±5 db; resonance 60 cps; 6-8 ohms impedance; shipping weight: 4 3/4 lbs; baffle opening required 11 1/8"; depth 5 7/8".....\$26.00 List

Model 5A15T



Same as model 3A15T except 5" diameter; 1 lb.....\$6.50

Model 3A15T

High frequency tweeter; frequency response: 2,000-15,000 cps ±10 db; maximum power: 10 watts; 1.47 oz. alnico V magnet; 9/16" voice coil; resonance: 1100 cps; impedance: 14 ohms; 3 1/2" square x 2 1/8" d.; 3/4 lb.....\$5.75

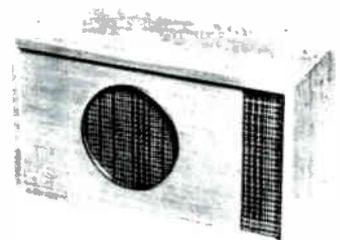
Speakers, Enclosures & Equipment cabinets

Model 8A4CO

8" Coaxial speaker; wide range; frequency response 50-15,000 cps ±5 db; power handling: 10 watts; resonant frequency: 70 cps; built-in crossover: 8 ohms impedances; 2 3/4 lbs.....\$22.95

Q-SONICS, INC.

"Caprice" and "Mazurka" Speaker Enclosures



Designed for use with Sonotone Model WR-8 speakers: "Caprice" accommodates single speaker, is 20" w x 11" h x 10" d; "Mazurka" accommodates two speakers, is 24" w x 17 1/2" h x 10 7/8" d; 3/4" plywood construction; Fiberglass acoustic lining.
"Caprice"\$53.50
"Mazurka"\$55.50

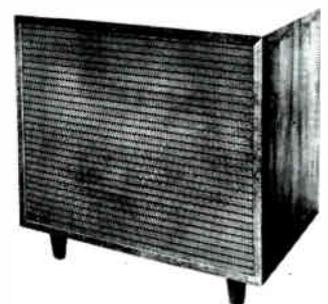
R & A (ERCONA CORP.)

700 Series Mark III Speakers



Coaxial speakers; frequency response to 15,000 cycles; impedance: 8 ohms; flux density: 12,000 gauss; 1" aluminum voice coil; Type 780 (8") rated at 15 watts, with fundamental resonance of 90 cps; Type 7100 (10") rated at 20 watts, with fundamental resonance of 75 cps; Type 7120 (12") rated at 25 watts, with fundamental resonance of 65 cps.
Type 780\$13.95
Type 7100\$15.95
Type 7120\$17.95

Hallmark Speaker System

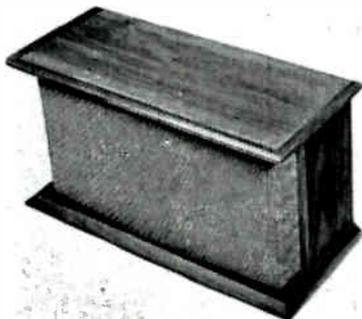


Speakers, Enclosures & Equipment cabinets

Uses a duplex-coaxial full range speaker; bass and treble units are separated mechanically and electrically; control for bass and treble balance; frequency response 30-15,000 cps; power rating 15 watts; 15 ohms impedance: Tallboy model 24" x 20" x 16 1/2"; Lowboy model 20" x 24" x 16 1/2"; available in hand-rubbed walnut, mahogany finishes, as well as teak hand-stained finish.....\$199.50

RGF ENGINEERING & DESIGN CO.

Model RGF-1 "Multifocus System"



Bookshelf speaker system with 1-12" high compliance woofer and 2 tweeters; frequency response 30-20,000 cps ± 6 db; crossover 5,000 cps; 8 ohms impedance; 14" x 26" x 11"; finished on 4 sides in mahogany, blonde, walnut, black teak.....\$189.50

Model RGF-2 "Multifocus System"

Similar to RGF-1; frequency response 48-18,000 cps ± 6 db; 16 ohms impedance.....\$129.50

Model RGF-M-222

12" full-range speaker with 2 coaxially mounted tweeters; 5 1/2 lb magnet; frequency response 36-20,000 cps ± 6 db; 8 ohms.....\$89.40

Model M-12

12" dual cone speaker; frequency response 38-17,000 cps.....\$39.60

Model M-112

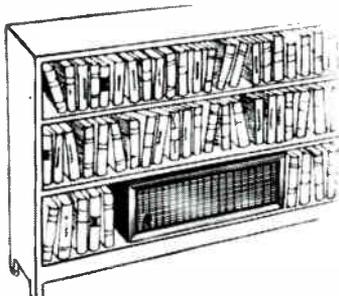
12" dual cone speaker; frequency response 46-16,000 cps.....\$59.50

R-J AUDIO PRODUCTS, INC.

(BRITISH INDUSTRIES CORP.)

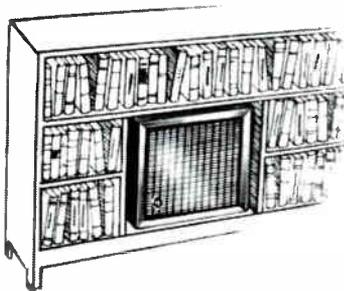
Model RJ/8 Enclosure

Bookshelf enclosure; accommodates 8"



speakers of any type; exceptional bass response with small enclosure; no cabinet resonances; sanded, unfinished: 11" h x 10" d x 23 1/2" w.....\$28.50
Finished in walnut, mahogany, or blonde.....\$37.50

Model RJ/12-5 Enclosure



Accommodates 12" speakers of any type; sanded, unfinished; exceptional bass response with small enclosure; no cabinet resonances; 24" h x 21" w x 10" d.....\$38.50

Finished in walnut, mahogany, or blonde.....\$49.50

Model RJ/12F Enclosure



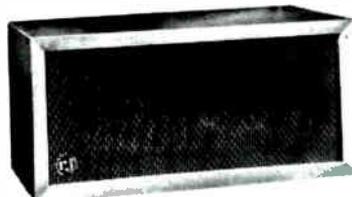
Exclusive design allows exceptional bass response with small enclosure; no cabinet resonances; 20" h x 20" w x 16" d. Unfinished.....\$45.00
Finished in walnut, mahogany, or blonde.....\$56.00

Model RJ/15F Enclosure

For 15" speakers; identical in size, finishes and prices as Model RJ/12F.

Model RJ/Super 8

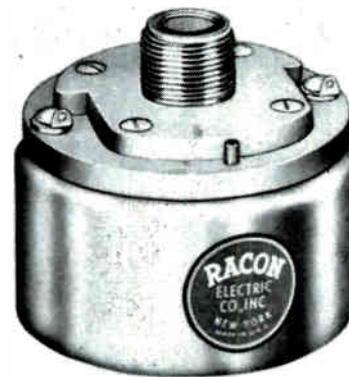
Bookshelf style; supplied complete with special 8" Wharfedale full-range speaker



er with aluminum voice coil; response 50 to 16,000 cps; exceptional bass response with small enclosure; no cabinet resonances; 11" h x 10" d x 23 1/2" w. Unfinished.....\$50.50
Finished in walnut, mahogany, or blonde.....\$59.50

RACON ELECTRIC CO., INC.

Model CHU Driver



Compression type driver unit 25 watts above 600 cycles, 600-2000 cps; impedance 8 ohms; 3 1/2 lbs.....\$21.50

Model CHU-5 Tweeter

Complete with driver unit frequency range 1000 to 15,000 cycles, 25 watt capacity; impedance 8 ohms; crossover 2000 cycles.....\$24.00

Model CHU-2 Tweeter

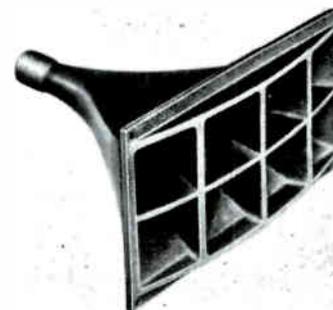
Complete with driver unit; frequency range 750 to 15,000 cycles; 25 watt capacity; impedance 8 ohms; crossover 1000 cycles.....\$32.50

Model 6M Mid-Range Speaker



Frequency range 300-6000 cps; uses plastic diaphragm and foam suspension; power 25 watts; impedance 8 ohms.....\$35.00

Model COB-21 Tweeter Horn



Supplied without driver; cut-off 600 cycles; dispersion angle 120°; requires panel opening 5" x 10 3/8"; dimension 11" x 6" x 11" deep.....\$17.00

Model CON-20

Crossover network input and output

STEREO & HI-FI DIRECTORY

impedance 8 ohms: crossover at 1000 cycles; 3 1/4" x 6 1/4" x 2 1/4"\$15.50

Model CON-30

Crossover network same as Con-20 except crossover at 2000 cycles.....\$15.50

Model CON-6

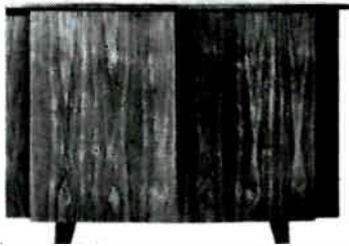
Crossover network input and output impedance 8 ohms; crossover 600 and 5000 cycles: 5 1/4" x 6 3/4" x 2 1/2" ..\$18.50

Model CON-4M

Crossover network input and output impedance 8 ohms; crossover 300, 600, 1200, 5000 cycles; 5 1/4" x 6 3/4" x 2 1/2"\$28.50

RADIO FREQUENCY LABS, INC.

"Spacial Fidelity" Stereo Speaker Systems



Complete systems in differently-styled enclosures: consists of from 2-6 cone-type speakers each model; each system is acoustically balanced and sealed; no grille opening: will handle average power; frequency response measured from 32' organ pedal tone to inaudibility; geometry of enclosure determines response: mono input gives stereo illusion: wide dispersion.

The Contemporary in walnut: 49" x 33 7/8" x 21 7/8"\$735.00

The Colonial in period pine: 46" x 40 5/8" x 22 3/4"\$630.00

The Provincial in platinum-walnut or fruitwood; 49" x 33 7/8" x 21 7/8"\$795.00

The Classic in red or brown mahogany; 49" x 33 7/8" x 21 7/8"\$765.00

The Suburban in walnut or brown mahogany; 35 5/8" x 27 7/8" x 15 7/8"\$375.00

The Metropolitan in walnut or darkened korina; 39" x 12 1/8" x 11 7/8"\$225.00

RADIO SHACK CORP.

Delta-12 Speaker System

Includes 12" woofer, mid range, tweeter; speakers are separately housed; for use with amps of 15 watts or more; 16 ohms impedance; 9-position balance switch; 24 3/4" x 13 1/2" x 11"; 45 lbs.

Delta-12 in mahogany.....\$79.95

Delta-12 in oak, walnut, blond.....\$82.95

Realistic "Trio" Speaker System



Three-speaker system with 8" woofer and two tweeters: frequency response: 35 to 17,500 cps: tweeters may be rotated for maximum sound dispersion; impedance: 8 ohms; may be used as "low-boy" or "high-boy"; finished in

mahogany, blond and walnut; 22 1/2" x 13" x 11 1/2"; 25 pounds.....\$39.95

Electrostat-3 Crossover Network

For tweeter-woofer combination; low frequency balance control: specify 8 or 16 ohms\$6.95

Electrostat-3



3-element speaker system: frequency response 5,000-25,000 cps: built-in power supply; 11 7/8" x 5 7/8" x 4 1/2"; shpg. wt. 7 lbs; mahog, walnut. blond.\$27.50

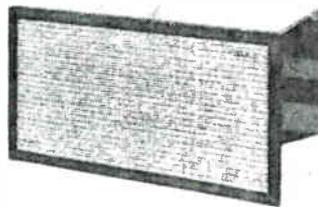
Electrostat-3 Utility

In utility enclosure for custom mounting\$19.95

Solo-I

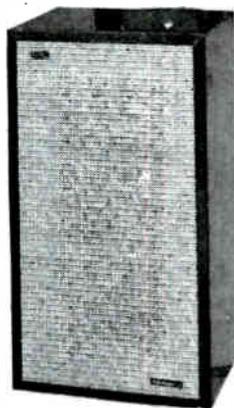
2-way speaker system with 8" woofer and coaxially mounted "whizzer"; frequency response 50-14,000 cps: 14 1/2" x 11" x 10 1/2"; shpg. wt. 12 lbs; mahog., walnut, blond\$15.95

Solo-II Speaker System



Consists of special designed 8" speaker; frequency response 40-16,000 cps; 8 ohms impedance; 20" x 11" x 10"; 19 lbs.; mahogany.....\$29.50
blond, walnut.....\$31.50

Electrostat-4 Speaker System



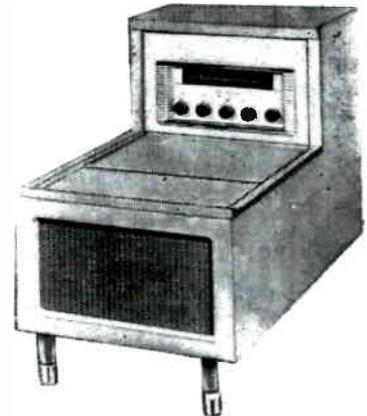
Has 3 electrostatic elements plus mid-range cone speaker, woofer, crossover network, balancing controls; frequency response 30-25,000 cps; 8 ohms impedance; cabinet is 24 3/4" x 13 1/2" x 11"; 31 lbs.

Electrostat-4 in mahogany.....\$119.50

Electrostat-4 in blond, walnut, oak.....\$122.50

Speakers, Enclosures & Equipment cabinets

Model 420 Chairside Cabinet

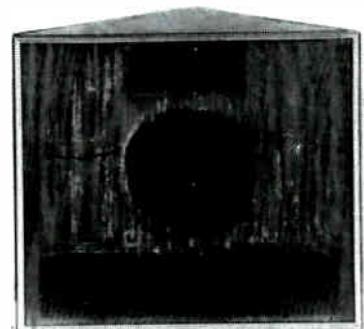


Available in models accommodating equipment only or with built-in R-J 8" speaker enclosure: cherry mahogany, cordovan mahogany, blonde mahogany, walnut, platinum walnut, limed oak, African oak, maple, ebony and natural birch finishes: 18 1/2" w x 32" d x 27 1/2" h.
Mahogany\$89.50
Walnut, limed oak.....\$99.50

Model 100 Equipment Cabinet and Model 110 Enclosure Kit

Model 100 accommodates record changer and tuner with amplifier and 12" speaker or 2-way system with 12" woofer and any tweeter up to 7" x 12" round or rectangular: 3/4" birch hardwood; modular design: units may be added and stacked at any time while preserving style uniformity: kits include all necessary plywood, lumber, precut and machined to size: all hardware, glue, wood filler, sandpaper, grille cloth, acoustical insulation and simplified assembly and finishing instructions: equipment panels are removable: both cabinets 36" w x 16" d x 16" h.
Model 100 (Equipment cabinet in kit form).....\$39.50
Model 100 (Equipment cabinet assembled but unfinished).....\$49.50
Model 110 (Loudspeaker enclosure in kit form).....\$39.50
Model 110 (Loudspeaker enclosure assembled but unfinished).....\$49.50

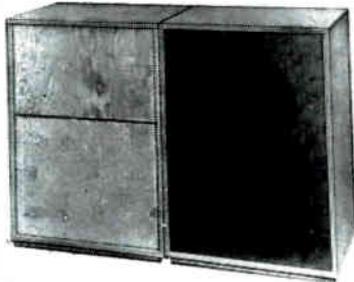
Model 900K



Horn loaded corner enclosure kit: corner speaker enclosure, accommodates

Speakers, Enclosures & Equipment cabinets

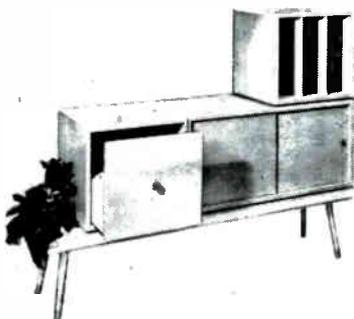
12" or 15" woofer and any size tweeter up to 7"x12", rectangular or round, all necessary adaptors included; all plywood and lumber supplied pre-cut to exact size; full acoustical insulation supplied; also glue, wood filler, and sandpaper; complete instructions for assembly and finishing are provided; all equipment panels are removable; 36" w x 18 3/4" d x 32" h (assembled but unfinished)\$24.50



Model 915 is a bass reflex enclosure for 15" speakers—Model 912 available at same price for 12" speakers; Model 920 cabinet holds changer, tuner, and amplifier; kits contain plywood and lumber, cut and machined to exact size; acoustical insulation, glue, wood filler, sandpaper, and full instructions for assembly and finishing; all equipment panels are removable; both cabinets 23" w x 16" d x 33 1/2" h.

Model 920 (Equipment cabinet assembled)\$36.00
 Model 920 (Equipment cabinet kit)\$27.50
 Model 912 (12" speaker enclosure kit)\$24.00
 Model 912 (12" speaker enclosure assembled)\$19.50
 Model 915 (15" speaker enclosure kit)\$24.00
 Model 915 (15" speaker enclosure assembled)\$19.50

Model 120 Record Storage Unit; Model 130 Auxiliary Player Cabinet, Model 140 Bench Kits



Modern, modular design; 3/4" birch hardwood; unassembled, pre-cut, unfinished wood kits; kits include all necessary materials, hardware, etc. and complete assembly and finishing instructions; equipment panels are removable; sliding doors are supplied prefinished in blonde mahogany, cherry mahogany and walnut; Models 120 and 130 18" w

x 16" d x 16" h; Model 140 16" d x 14" h x 60" l.
 Model 120 (Record storage cabinet in kit form)\$19.50
 Model 120 (Record storage cabinet assembled but unfinished)\$24.50
 Model 130 (Auxiliary player cabinet in kit form)\$29.50
 Model 130 (Auxiliary player cabinet assembled but unfinished)\$39.50
 Model 140 (60" bench with four wooden legs in kit form)\$29.50
 Model 140 (60-inch bench with four wooden legs assembled but unfinished)\$39.50
 Model 150 (Set of four black wrought iron or wooden legs (16" high) for use with any 100 Series cabinet in kit form) \$6.50

RUXTON ELECTRONICS CO.

Model CW Equipment Cabinet

For all components except speakers; record storage space; 2 compartments; inside dimensions 27 1/2" x 17 1/4" x 15 3/4"; outside dimensions 29" x 18 3/4" x 25"; in oiled walnut\$159.50

Model A-100W Potsdam

Houses speakers and equipment; 2.5 cu ft for speakers; mounting panel 13" x 20"; equipment cabinet dimensions 33" x 16" x 20"; lift-up top; overall dimensions 62" x 20" x 27"; in oiled walnut.\$389.50

Model OOW-200 Olympic

Speaker enclosures and equipment cabinet are separate; speaker enclosures are 16" x 17" x 22"; will house JBL Model LE-8 speaker; equipment cabinet is 49" x 17" x 22"; 3 compartments; in oiled walnut.

Model OSOW-200 Speaker Enclosure.\$89.50
 Model OEOW-200 Equipment cabinet.\$159.50

Model VOW-300 Venezuela

Similar to Model OOW except speaker enclosures and equipment cabinet are larger; speaker enclosures are 34" x 19" x 29"; cabinet is 49 1/2" x 19" x 29".

Model VSOW-300 Speaker Enclosure.\$224.50
 Model VEOW-300 Equipment cabinet.\$289.50

SONOTONE CORPORATION

Model T-64 Tweeter

Elliptical cone tweeter; power rating: 20 watts average program above 2,000 cps; frequency response (in baffle): 800 to 17,000 cps; impedance: 15 ohms at 10,000 cps; flux density: 12,000 gauss; 3/4" aluminum voice coil; designed primarily for 2,000 cps crossover; 6" x 4"\$9.00

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\$12.00

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: 2,000 cycles; pow-

er handling: 40 watts average program, 80 watts peak; flux density: woofer—12,000 gauss; tweeter—9,500 gauss; impedance 16 ohms\$27.50



Model W-12

Same 12" woofer used in CA-12A coaxial loudspeaker; frequency range 35 to 7,000 cycles; resonant frequency 50 cycles; power handling 40 watts average program 80 watts peak; flux density 12,000 gauss; impedance 16 ohms\$16.00

STENTORIAN (Barker Sales Corp.)

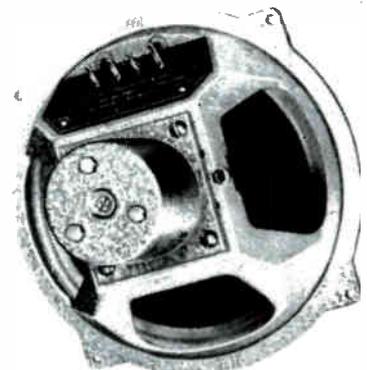
Model HF 610

6" cone type; 3 watts; 60 to 12,000 cps; 15 ohms; 11-oz. Alcomax magnet system; cambric cone; bass resonance is 70 cps; 5 3/4" baffle cutout required.\$8.95 Net

Model HF 810

8" cone type; 5 watts; 50 to 12,000 cps; 15 ohms; 1 lb., 5 oz. Alcomax magnet system; cambric cone with 1-inch voice coil; bass resonance 65 cps; 7" baffle cutout required.\$10.95 Net

Model HF 812U



8" Cone type; 50 to 12,000 cps; 4, 8, or 16-ohms universal impedance voice coil; 2-lb. Alcomax magnet system; cambric cone and mid-range stabilizers; bass resonance 65 cps; 7" baffle cutout required.\$14.95 Net

Model HF 816U

Same as HF 812U with 3 1/2-lb. Alcomax magnet system.\$29.50 Net

Model HF 1012U

10" Cone type; 12 watts; 30 to 14,000 cps; 4, 8, and 16-ohm universal impedance voice coil; 2-lb. Alcomax magnet system; 1-inch voice coil; cambric cone with mid-range stabilizers; bass resonance, 35 cps; 9 1/4" baffle cutout required.\$18.95 Net

Model HF1016U Universal Speaker



10" cone type; 15 watts; 3 1/2 lb. Alcomax magnet; impedance 4, 8, 16 ohms; 1" voice coil; frequency response 30-15,000 cps; 9 lbs.\$36.50

Model T-359 Tweeter



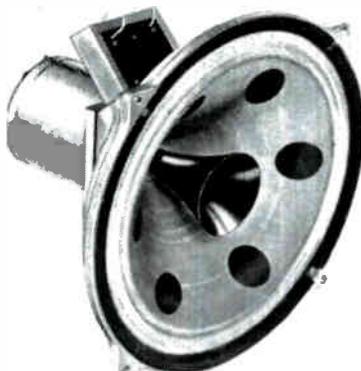
3 1/2" cone type; 15 watts; 8 oz. Alcomax magnet; voice coil .625"; baffle cutout 3" diameter; 1 lb; frequency response 3,000-17,000 cps.....\$14.95

Model HF 1214

12" cone type; 15 watts; 25 to 14,000 cps; 15 ohms; 5 1/4 lb. Alcomax magnet system; 1 1/2" voice coil; cambric cone and mid-range stabilizers; bass resonance is 39 cps; 11" baffle cutout required.\$52.50 Net

12" Duplex

Coaxial type; 15 watts; 20 to 20,000 cps; 15 ohms; 11 1/2 lbs. Alcomax magnet system; built-in crossover at 3,000



cps; two 1 1/2" voice coils; cambric cone and mid-range stabilizers; 11" baffle cutout required.\$119.00 Net

15" Duplex

Coaxial type; 25 watts; 20 to 20,000 cps; 15 ohms; 16-lb. Alcomax magnet system; 2-inch low frequency voice coil with cambric curvilinear cone and mid-range stabilizers; built-in 1,500 cps crossover network; 2-inch aluminum-wound high-frequency voice coil; phase-matched, machined center pole magnet forming pressure-type moving coil unit; 13 5/8" baffle cutout required.\$159.50 Net

Model T 816

8" cone-type tweeter; 15 watts above 1,500 cps; 1,500 to 17,000 cps; 15-

ohms impedance; 3 1/2-lb. Alcomax magnet system; 1" voice coil; fibre-paper cone; special suspension; 7" baffle cutout required.
T 816\$29.50 Net

Model HF 1514

15" Cone-type woofer; 25 watts; 25 to 14,000 cps; 15 ohms; 10-lb. Alnico V magnet system; 2-inch voice coil; curvilinear cone and mid-range stabilizers.\$89.50 Net

Model T 10

Pressure-type moving coil tweeter; 5 watts; 2,000 to 16,000 cps; 15-ohms impedance; 2 1/2 lbs. Alcomax magnet system; 1" aluminum-wound voice coil; phase-matched machined center pole magnet; 2" baffle cutout required.\$20.95 Net

Model T 12

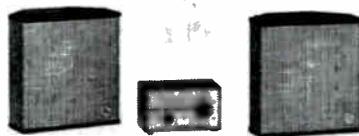
Pressure-type moving coil tweeter; 15 watts; 3,000 to 20,000 cps; 15-ohms impedance; 9 lb. Alcomax magnet system; 1 1/2" aluminum-wound voice coil; phase-matched machined center pole magnet; 2 3/4" baffle cutout required.\$58.50 Net

STEPHENS TRU-SONIC, INC.

Model 80M

8" free cone midrange speaker; frequency response 250-5,000 cps; 2" edge-wound aluminum ribbon voice coil; 25 watts; 4 lb. magnet; 16 ohms; shpg. wt. 6 1/2 lbs.....\$33.50

Model SD 101 "Stereodot" System



2 speakers and control unit to be used in conjunction with a third speaker system for a stereo system requiring little space\$139.50

Model SD 102

Similar to standard "Stereodot" system but each speaker housing contains a special 8" midrange speaker and a model 5KT Toroid tweeter.....\$249.50

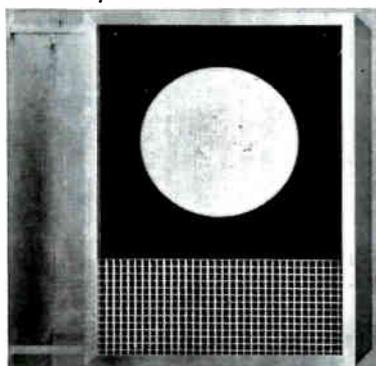
Model 158 T Three-Way System

3-way system consists of a 150W, 80M and 80M cover assembly, 5CX, 5KT, and L pad; (see individual listings for specifications)\$213.50

Model 12T Two-Way System

2-way system consists of a 120W and a 5KT; (see individual listing for specifications)\$109.50

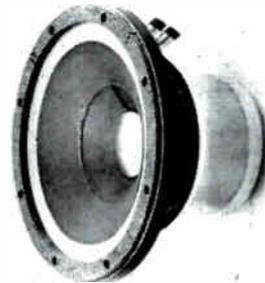
Model E-2/12T



Enclosure designed by Charles Eames; contains 12T speaker system.....\$275.00

Speakers, Enclosures & Equipment cabinets

Model 80FR



8" single-cone wide range speaker; power rating: 25 watts continuous, 50 watts peak; frequency response: 40 to 15,000 cps; impedance: 16 ohms; magnet weight: 1 lb; free air cone resonance: 50 cps; 2" aluminum voice coil; plastic impregnated cone suspension; curvilinear cone; diameter: 8 1/4"; depth: 4 1/4"\$33.50

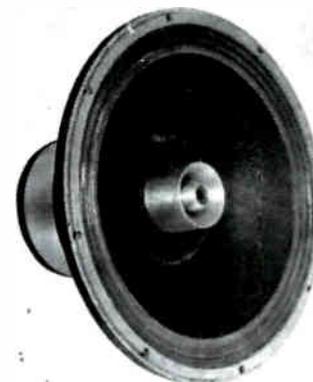
Model 120FR

12" wide-range speaker; frequency response 30 to 15,000 cps; power rating 30 watts; resonance 40 cps; edge-wound 2 1/2" diameter aluminum voice coil; 15 lbs.\$60.00

Model 150FR

15" wide-range speaker; frequency response 20 to 14,000 cps; power rating 35 watts; resonance 23 cps; edge-wound 3" diameter aluminum voice coil; 25 lbs.\$87.00

Model 120CX



12" coaxial speaker; incorporates Model 5KT toroid tweeter; resonance 30 cps; power rating 30 watts; includes tweeter balance control; 20 lbs.....\$99.50

Model 150CX

15" coaxial speaker; incorporates Model 5KT toroid tweeter; frequency response 20 to 30,000 cps; power rating 35 watts; resonance 23 cps; includes tweeter balance control; 30 lbs.....\$129.50

Model 120LX Woofer

12" woofer; frequency response 20 to 5,000 cps; resonance 40 cps; power rating 20 watts.....\$39.50

Model 120W Woofer

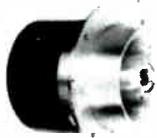
12" woofer; frequency response 30 to 5,000 cps; power rating 30 watts; resonance 30 cps; edge-wound aluminum voice coil; 15 lbs.....\$60.00

Speakers, Enclosures & Equipment cabinets

Model 150W Woofer

15" woofer: frequency response 20 to 3,500 cps; power rating 35 watts; resonance 20 cps; 3" diameter voice coil: 25 lbs.....\$87.00

Model 5KT Toroid Tweeter



Frequency response 5,000 to 25,000 cps; toroid diaphragm with 1 1/2" voice coil of edge-wound aluminum; dispersion 100°; complete with 5,000-cps crossover and balance control; overall length 4 1/8"; mounting hole required 2 1/16"\$49.50

STEREO CRAFT (20th Century Woodworking Co.)

Model 12 Enclosure

For 12" speaker: low-boy styling; 8" adaptor board; 20" x 22 3/4" x 14 3/4"\$21.75

Model 15 Enclosure

Designed for 15" speakers; baffle volume approx. 9 cu. ft.; 12" adaptor board: 20 3/4" x 33 1/2" x 16 3/4"\$41.50

Model 100 Speaker Enclosure Kit

For 12" speaker; 4 1/2 cu. ft.; 20" x 30" x 12 1/2"\$19.95

Model 200 Enclosure Kit

For 12" speaker with adaptor board for 8" speaker; 2 1/2 cu. ft.; 21" x 12" x 14"\$19.95

Model EC Equipment Cabinet

Designed to accommodate all component equipment; full lift lid; 36" x 33 1/2" x 16"\$56.00

STROMBERG-CARLSON CO.

Model RF-480 Speaker



8" single-cone speaker: power rating 18 watts; frequency response 30 to 17,000 cps for 10:1 average loudness range; impedance 8 ohms; magnet flux density 10,000 gauss; free air resonance 80 cps, ±5 cps; total air gap flux 29,700 maxwells; dispersion 100 degrees; diameter 8 3/32"; depth 3 1/16"\$24.95

Model RF-482A Speaker



12" coaxial speaker: power rating: woofer, 50 watts; tweeter, 32 watts; frequency response 30 to 17,000 cps for 10:1 average loudness range; impedance 8 ohms; free air resonance 50 cps ± 5 cps; total air gap flux: woofer, 110,000 maxwells; tweeter, 18,000 maxwells; dispersion 115 degrees; diameter 12 1/4"; depth 5 9/32"\$59.95

Model RF-484 Speaker

15" coaxial speaker: power rating: woofer, over 100 watts; tweeter, over 50 watts; frequency response 15 to 20,000 cps; impedance: 16 ohms; free air resonance 20 cps ± 5 cps; total air gap flux: woofer, 152,000 maxwells; tweeter, 27,900 maxwells; dispersion 140 degrees; diameter 15 1/8"; depth 6 7/32"\$149.95

Model RS-404

12" "Acoustical Labyrinth" speaker system: contains RW-486 woofer, RT-476 tweeter, crossover network; frequency response 30-20,000 cps; less furniture housing\$54.95
Enclosure kit\$14.95

Model RS-401

"Acoustical Labyrinth" speaker system; contains RF-480 woofer, RF-476 tweeter, crossover network; frequency response 35-18,000 cps; less furniture housing\$44.95
Enclosure kit\$ 9.95

Model RF-487



12" coaxial speaker: power rating: woofer 75 watts; tweeter, 50 watts; frequency response 20-20,000 cps for 10:1 loudness ratio; free air cone resonance 25 cps ± 5 cps; total air gap flux: woofer, 97,000 maxwells; tweeter, 27,000 maxwells; dispersion 140 degrees; impedance 16 ohms; depth 5 1/4"\$74.95

Model RF-478

12" coaxial speaker: power rating: woofer 50 watts; tweeter, 30 watts; frequency response 25-18,000 cps for 10:1 average loudness ratio; free air reso-



nance 40 cps ± 5 cps; dispersion 115°; IM distortion 0.4% at 4 watts; impedance 8 ohms; depth 5"\$39.95

Model RX-462

Two-way crossover network; crossover point 4,000 cps\$9.94

Model RX-463

Three-way crossover network; crossover points 1,000 cps and 4,000 cps\$34.95

Model RS-424

15" "Acoustical Labyrinth" 3-way speaker system: contains RW-490 woofer, RM-485 mid-range, RT-477 tweeter, crossover network; frequency response 30-20,000 cps; less furniture housing\$199.95

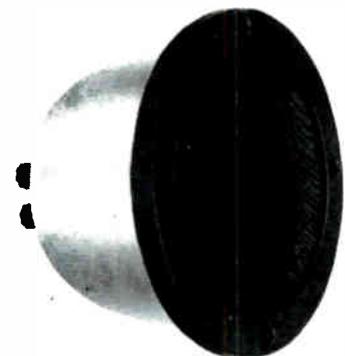
Model RS-406

12" "Acoustical Labyrinth" 3-way speaker system: contains RW-489 woofer, RM-485 mid-range, RT-477 tweeter, crossover network; frequency response 30-20,000 cps; less furniture housing\$119.95
Enclosure kit\$19.95

Model RS-405

12" "Acoustical Labyrinth" 3-way speaker system; contains RW-486 woofer, RM-485 mid-range, RT-476 tweeter, crossover network; frequency response 30-20,000 cps; less furniture housing\$84.95

Model RM-485



5" mid-range speaker; power capacity 50 watts; frequency response 120-11,000 cps for 10:1 loudness ratio; free air resonance 60 cps ± 16 cps; dispersion 160 degrees; 16 ohms\$24.95

Model RW-486



12" woofer; power capacity 50 watts; frequency response 25-11,000 cps for 10:1 loudness ratio; free air resonance

40 cps ± 5 cps; 8 ohms; depth $4\frac{3}{4}$ "
\$29.95

Model RW-489 Speaker



12" woofer; power rating 50 watts; frequency response 15 to 5,500 cps for 10:1 average loudness range; impedance 8 ohms; free air resonance 30 cps ± 5 cps; total air gap flux 110,000 maxwells; diameter $12\frac{1}{4}$ "; depth $5\frac{9}{32}$ "
\$49.95

Model RW-490 Speaker

15" woofer; power rating over 100 watts; frequency response 15 to 5,000 cps for 10:1 average loudness range; impedance 16 ohms; free air resonance 20 cps ± 5 cps; total air gap flux 152,000 maxwells; diameter $15\frac{1}{8}$ "; depth $6\frac{1}{4}$ "
\$99.95

Model RT-476 Tweeter

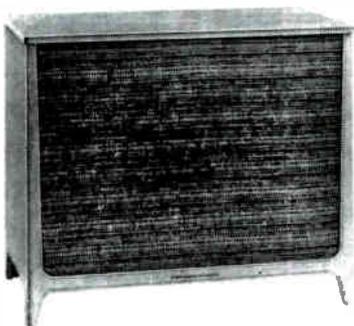
$2\frac{3}{4}$ " cone tweeter; power rating 32 watts; frequency response: 800 to 18,000 cps for 10:1 average loudness range; impedance 8 ohms; total air gap flux 18,000 maxwells; diameter $3\frac{5}{8}$ "; depth $3\frac{1}{16}$ "
\$9.95

Model RT-477 Tweeter



Induction tweeter; power rating over 50 watts; frequency response 800 to 20,000 cps; impedance 8 ohms; total air gap flux 27,900 maxwells; diameter $4\frac{1}{3}$ "; depth $3\frac{1}{2}$ "
\$49.95

Model RF-416 Speaker Enclosure



Wall enclosure: uses "Acoustical Labyrinth" to augment bass response; accommodates 15" speaker or combination of one woofer and two tweeters; $32\frac{1}{4}$ " h x $38\frac{5}{8}$ " w x 21" d.
 Mahogany\$129.95
 Lined Oak\$139.95
 Walnut\$139.95

Model MSS-491 Speaker System

Uses "Acoustical Labyrinth" to augment bass response; contains one RW-

490 15" woofer, one RF-480 mid-range speaker, one induction tweeter, and three-way crossover network; frequency response 16 to 22,000 cps; system resonance 20 cps.

Mahogany\$379.95
 Walnut and Oak\$389.95

Model RH-417C Speaker Enclosure

Wall enclosure: uses "Acoustical Labyrinth" to augment bass response; accommodates one 12" speaker or combination of 12" woofer and two tweeters; in natural cherry finish matching RH-418C equipment cabinet or in walnut; $32\frac{1}{2}$ " h x $33\frac{3}{4}$ " w x $16\frac{3}{4}$ " d\$129.95

Model MSS-492 Speaker System

Uses "Acoustical Labyrinth" to augment bass response; contains one RW-489 12" woofer, one RF-480 mid-range speaker, two RT-476 tweeters, and three-way crossover network; frequency response 22 to 18,000 cps; crossover at 500 and 3,000 cps; system resonance 27 cps; in cherry and walnut.....\$249.95

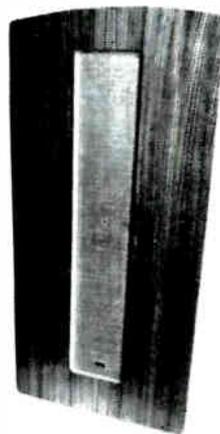
Model EH-418C Equipment Cabinet



Accommodates record player, tuner, and amplifier; hinged top; louvered door; $32\frac{1}{4}$ " h x $33\frac{3}{4}$ " w x $16\frac{3}{4}$ " d; natural cherry finish\$129.95

TANDBERG (REEVES EQUIPMENT CORPORATION)

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 grill 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; lightweight permits mounting of enclosure near ceiling; rear of enclosure constructed with one-piece $\frac{3}{4}$ " 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: $27\frac{1}{2}$ lbs; finishes: light elm or fine grain mahogany\$87.50

Speakers, Enclosures & Equipment cabinets

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

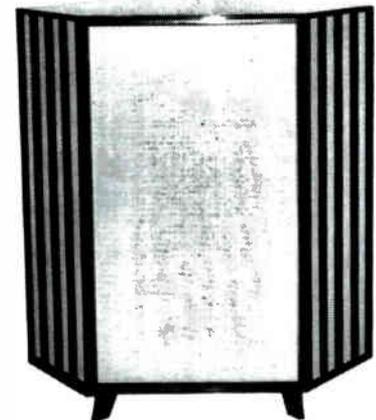
Model 165B 8" Coaxial Speaker

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

TANNOY LTD.

"G.R.F." Speaker System

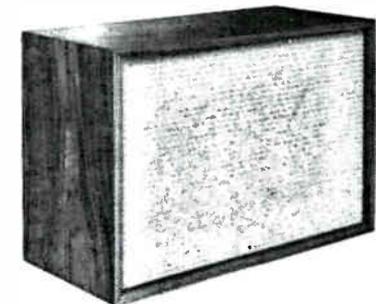
Horn loaded corner enclosure driven by the Tannoy 15" dual concentric speaker; 30 to 20,000 cps ± 3 db; below 250 cps horn loading both front and rear, 250 to 1000 cps direct radiation, above 1000 cps horn loaded tweeter unit radiation; power rating 35 watts; efficiency above 18%; dispersion at 60° -4 db at 10,000 cps; $3'8\frac{1}{2}"$ h x $27\frac{1}{2}"$ w (at



wall) and 23" w (at front) x $27\frac{1}{2}"$ d; hand rubbed mahogany or walnut.

.....\$725.00

"Belvedere" Speaker System



Dual-ported bass reflex design; may be used vertically or horizontally; $26" \times 12" \times 18"$; in mahogany or walnut.

Complete with Tannoy 12" Dual Concentric speaker\$195.00
 Complete with Tannoy 12" Direct Radiator speaker\$137.00
 Belvedere Enclosure only.....\$65.00
 Belvedere Enclosure with 12" direct radiating speaker\$144.00
 Belvedere enclosure with 12" Monitor dual concentric speaker.....\$264.00

Model LZ 111

10" dual concentric speaker; frequency response 30-30,000 cps; IM products less than 2%; crossover frequency 1,800 cps; resonance 27 cps; magnet assembly $6\frac{1}{4}$ lbs; polar distribution

Speakers, Enclosures & Equipment cabinets



-2db @ 10 KC for 60 degrees; power handling capacity 20 watts; impedance adjustable to 4, 8, or 16 ohms; recommended mounting infinite baffle type as low as 1/2 cu. ft; shpg. wt. 13 lbs.

12" Direct Radiator



Wide range single cone unit with duralumin diaphragm to extend high frequency response; specially treated surround; 40 to 14,000 cps ± 4 db; flux density 14,000 gauss; 20 ohms; 2" voice coil diameter; resonance at 40 cps; power rating 15 watts; depth 7".....\$79.00

12" Dual Concentric

Coaxial speaker with bass resonance of 35 cps and IM distortion of less than 2%; tweeter voice coil diameter 2"; woofer voice coil diameter 2"; woofer designed for true piston operation; surround treated with a stable lossy resin to prevent subsidiary resonance; power 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 1,700 cps; 18 ohms; depth 7 1/2".....\$138.00

15" Dual Concentric

Coaxial speaker with bass resonance of 32 cycles and IM distortion of less than 2%; tweeter voice coil diameter 2"; woofer voice coil diameter 2"; woofer designed for true piston operation; surround treated with a stable lossy resin to prevent subsidiary resonance; power rating 50 watts; flux density for woofer 13,500 gauss, 18,000 gauss for tweeter; dispersion at 60° -4 db at 10,000 cps; crossover 1000 cps; 15 ohms; depth 9".....\$179.00

12" Woofer

Resonance 35 cps; recommended crossover 1,700 cps; 15 ohms; flux density 10,000 gauss; voice coil diameter 2";

specially treated surround; power rating 15 watts; depth 7 1/2".....\$78.75

15" Woofer

Resonance 32 cps; recommended crossover 1000 cps; 15 ohms; flux density 12,000 gauss; voice coil diameter 2"; specially treated surround; power rating 25 watts; depth 9".....\$123.75

Tweeter

Frequency response from 1000 to 20,000 cps; 15 ohms; flux density 15,000 gauss; power rating 20 watts; efficiency 40%; aluminum voice coil and horn; plastic-coated light alloy diaphragm; maximum depth 7"; maximum diameter 9 15/16".....\$86.00

Belevedere Senior Speaker System



Designed for use with Tannoy 15" Dual Concentric speaker in stereo reproduction; baffle available for use with 12" speaker; 31 1/2" x 23 3/4" x 16"; walnut or mahogany.

Senior Enclosure only.....\$85
Senior Enclosure with 12" Direct Radiator Speaker.....\$164
Senior Enclosure with 12" Monitor Dual Concentric Speaker.....\$223
Senior with 15" Monitor Dual Concentric Speaker.....\$264

TWINBROOK DISTRIBUTING CO., INC.

Model 15W Speaker System

Frequency response: 30 to 17,000 cps; 3-way, 3-speaker system; electrical crossovers at 180 and 5,000 cps; Lang "Sonocell" woofer, 8" cone mid-range speaker, 3 1/2" cone tweeter; power rating: 20 watts program material, 10 watts sine wave continuous; imped-



ance: 4 ohms; efficiency: 4% measured with 2 octaves of white noise; wood: mahogany veneers; finishes: mahogany or blond; size: 25" h x 23 1/2" w x 16" d.
.....\$180.00 List

Model BL-10 Speaker System

Frequency response: 80 to 13,000 cps; uses 6 1/2" speaker with edge-damped cone and 6.8 oz. Alnico V magnet; power rating: 10 watts continuous; impedance: 4 ohms; efficiency: 7% measured with 3 octaves of white noise; cabinet: mahogany on all exposed wood, formica top; plastic Lumite grille cloth; finishes: mahogany, blond, ebony, natural; size: 8 1/2" h x 16" w x 9" d.....\$29.95 List

ULTRA ELECTRONICS, INC.

Model BS-17

Two full-range 6" speakers in bookshelf enclosure; finished on all 4 sides for horizontal or vertical placement; 24" x 12" x 11 1/2".....\$80.00

Model EI-812

Single full-range elliptical speaker 8 1/2" x 12 5/8"; in contemporary enclosure: 31" x 22" x 16".....\$119.00

Model 812X4

Four speakers: one elliptical woofer, one 6 1/2" mid-range, two 4" tweeters; built in 3-way crossover network in Model EL-812 enclosure.....\$169.00

Model PRX4

Four speakers: one 14" woofer, one elliptical mid-range, two 5" tweeters; built-in crossover network in low-boy contemporary enclosure; 31" x 40" x 18".....\$320.00

Model ST-812



Six speakers: each channel has one elliptical woofer, one 6 1/2" mid-range, one 5" tweeter, separate 3-way crossover network; expandable low-boy contemporary enclosure; variable acoustic coupling; 31" x 40" x 18".....\$389.00

UNITED SPEAKER SYSTEMS

Premiere 500 Speaker System



Corner enclosure housing 15" speaker coupled to nine-cubic-foot horn; high-frequency driver coupled to wide-dispersion sectoral horn; crossover network employs air-core coils and oil-filled capacitors; power rating 40 watts; frequency response 27 to 22,000 cps; impedance 16 ohms; horizontal dispersion 90 degrees; vertical dispersion 40 degrees; in walnut, mahogany, or korina; 41" h x 33" w x 28 1/4" d; weight 200 lb.
.....\$495.00

STEREO & HI-FI DIRECTORY

Model X-100 Speaker System

Employs two 12" speakers and cone tweeter; enclosure resistance loaded to provide optimum low-frequency damping; power rating 24 watts; designed to operate at room volume with 1/4-watt input; frequency response 40 to 18,000 cps; impedance 8 ohms; woofer flux density. 12,000 gauss; free air resonance 40 cycles; in mahogany, birch, or walnut; 24"x24"x15 1/2"; shipping weight 50 lbs.
 Mahogany or birch \$109.50
 Walnut \$114.50

Model X-100-E Equipment Cabinet

Accommodates record player, tuner, and amplifier; front-opening doors; matches X-100 speaker system; 24"x24"x15 1/2".
 Mahogany or birch \$89.50
 Walnut \$94.50
 Optional slide-out shelf \$5.00

UNIVERSAL WOODCRAFTERS, INC.

Model UV-30 Speaker System

Similar to Model UV-33; 24" x 14 1/2" x 13"; shpg. wt. 32 lbs.....\$59.50

Model SW-75 Speaker System

Jensen engineered sound system; swivel mounted cabinet; 19" x 27" x 14"; shpg. wt. 44 lbs.....\$79.95

Model UV-33 Speaker System



Three-way Jensen speaker system composed of 12" woofer, 8" midrange, and 3 1/2" tweeter; power rating 15 watts; crossovers at 600 and 2,000 cps; impedance 6-8 ohms; fiberglass acoustical lining; 7-ply veneer in mahogany, cherry, blonde, or walnut.....\$69.50
 Model UV-34 (as above but with straight legs).....\$69.50

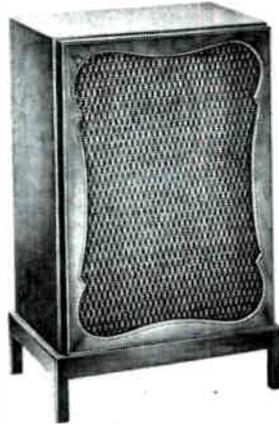
Model UV-35 Speaker System

Similar to Model UV-33 but furnished with wooden base rather than legs. \$79.50

UNIVERSITY LOUDSPEAKERS, INC.

Medallion XII

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; mahog., wal., oiled wal., fruitwood.....\$139.95
 Select-A-Style frame for Modern in mahog., wal., oiled wal.....\$9.95
 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 wal.....\$14.95
 Select-A-Style frame for Swedish Modern in mahog., wal., oiled wal.....\$14.95



Wood base for Medallion XII (all finishes)\$14.95

Model U-C-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, diffusicon element, and super-tweeter; Model UXT-5 is center-mounted; power capacity 30 watts; frequency response 30-18,500 cps; depth 10"\$83.00

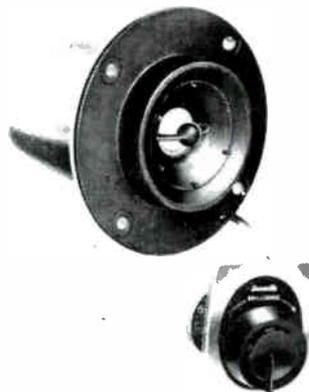
Model SLC Stereo "Add-On" Speaker

Consists of 6" driver and compression wide angle tweeter; frequency response 150-15,000 cps; 11 1/2" x 12 3/4" x 10 5/8" \$43.50

Model Stereoflex II

End-table design; consists of heavy duty compression driver and wide angle compression tweeter; 40 lbs; 9 7/8" x 25 3/8" x 19 1/2"\$110.00

Model T-202 Sphericon Super Tweeter



Domed phenolic diaphragm and spherical diffractor; high compliance; frequency response 3-44kc; 120° dispersion; 4 3/8" diameter; built-in crossover network; 3 lbs.....\$24.95

Model TM-812 Enclosure

For compact stereo systems; takes 8" or 12" speakers easily; 21 1/4" x 15 1/2" x 12 1/2".

Speakers, Enclosures & Equipment cabinets

Mahogany\$43.50
 Blond, walnut\$46.50
 Unfinished\$37.75

Model S-9S 15" Speaker System

Consists of Model C-15W, Model T-30, Model HF-206 speakers; front-loaded folded-horn type; assembled and wired; unfinished\$340.00

Model UC-122 "Diffaxial" Speaker

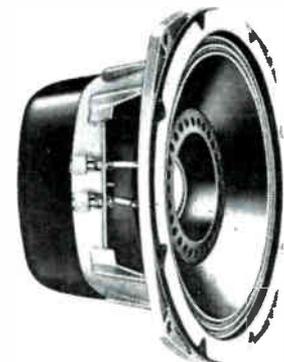
12" wide-range speaker with mechanical crossover at 1000 cps; response 45 to 13,000 cycles; power rating 25 watts; 8-16 ohms; 4 3/8" deep\$35.50 Net

Model 308 3-way "Diffaxial" Speaker



Employs compression tweeter and 8" woofer; mechanical crossover at 1000 cps and electrical at 5000 cps; response to 15,000 cps; power rating 35 watts; 8-16 ohms; 5 1/2" deep.....\$42.00 Net

"Diffusicon-8"



Response from 30-15,000 cps; power rating 25 watts; one pound Alnico V magnet; 8-16 ohms; 4 1/2" deep. \$28.00 Net

Model MM-2FUW

Completely waterproof speaker for use in swimming pools; stainless steel protective cover; heavy 18 foot connecting cable with third wire for grounding; power capacity 25 watts; impedance 16 ohms\$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 Net

Model HF-206 Hypersonic Tweeter

Response 3500 cps to beyond audibility; dispersion 120° horizontal and 50° ver-

Speakers, Enclosures & Equipment cabinets

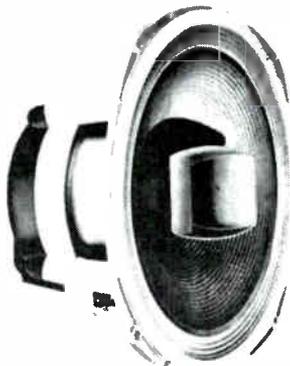
tical: power rating 25-50 watts depending on crossover; 8 ohms; 6" x 2 3/4" x 6 9/16"\$33.00 Net

"Diffusicon-12"



Response from 28-15,000 cps; power rating 35 watts; 1 1/2 pound Alnico V magnet; 8-16 ohms; 7 1/8" deep. \$39.75 Net

Model 6201 Coaxial Speaker

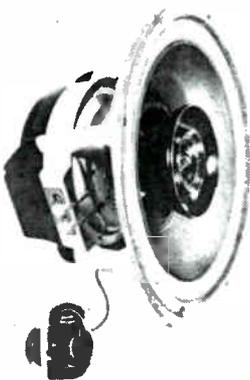


Compression tweeter and 12" woofer; response 28-18,500 cps; built-in crossover network with "Brilliance" control; power rating 25 watts; 8-16 ohms; 8 3/8" deep.....\$57.75 Net

Model UC-123 3-way Speaker

12" woofer and UXT-5 super tweeter; response 45 to 17,500 cps; mechanical crossover at 1000 cps and electrical at 5000 cps; power rating 25 watts; 8-16 ohms; includes tweeter control; 8 1/4" deep.....\$66.50 Net

Model 312 "Diffaxial" Speaker



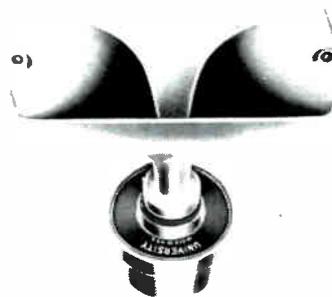
Sphericon tweeter is projected through the center of the 12" woofer; mid-range reproduction is handled by "Diffusicon" section; built-in crossover network and variable "Brilliance" control; mechanical crossover at 1000 cps and electrical at 5000 cps; 2 lb Alnico V magnet; frequency response to inaudibility; power rating 35 watts; 8-16 ohms; 8" deep.....\$73.00 Net

Model 315-C



15" woofer with T-50 "Hypersonic" driver and H-600 horn; response 25 cps to inaudibility; adjustable tweeter balance; 6 1/2 lbs of Alnico V magnet material; power rating 50 watts; 8-16 ohms; 12" deep.....\$156.00 Net

Model 4401 Tweeter



One-piece die-cast horn with 120° horizontal and 50° vertical dispersion; hermetically sealed construction; response from 2000 to 15,000 cps; 8 ohms; power rating 25 watts; 6" x 2 3/4" x 6 7/16". \$18.00 Net

Model C-8HC



8" high compliance dual voice coil woofer; frequency response 38-2,200 cps;

power rating 30 watts; impedance 8 ohms; 4 1/4" depth.....\$39.95

Model UC-82



8" wide range Diffaxial speaker; frequency response 45-14,000 cps; power rating 25 watts; mechanical crossover at 5,000 cps; impedance 8-16 ohms; 4 1/4" depth\$16.95

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\$23.00 Net

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 Net

Model T-30 Driver

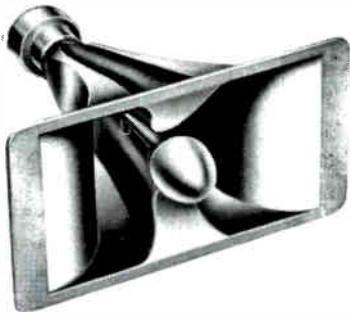
Mid-range and high frequency driver for use in 2, 3, or 4-way systems; response 200 to 15,000 cps; use with H-600 or "Cobreflex" horns; 8 ohms;



3 1/2" diameter; 3 3/4" deep.....\$30.00 Net

STEREO & HI-FI DIRECTORY

Model H-600 Horn



Mid-range and high frequency horn with 600 cps cutoff; die-cast design with reciprocating flare design for uniform dispersion; fits any driver with standard 1 3/8"-18 throat.....\$19.00 Net

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 baffling; power rating 25 watts; 8 ohms; 4 1/4" deep.....\$15.00 Net

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 40 to 6000 cps; 8 ohms; power rating 30 watts; 6 1/2" deep.....\$39.50 Net

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 Net

Model C-12HC Dual Voice Coil Woofer

High compliance 12" woofer with resonance at 18 cps; "Uniferrox-7" magnet material; response to 2500 cps permits use in two-way systems; dual impedance coil; 4-20 ohms; operating power should be from 15 watts up; 5 1/2" deep.....\$49.50 Net

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 Net

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,

and 10,000 cps at 16 ohms; 5000 and 10,000 cps at 4 ohms; fits panels up to 1" thick; 3 3/8"x3 1/4"x3".....\$14.00 Net

Models N-2A and N-2B



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 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 at 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 Net
Model N-2B\$14.00 Net

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 1" thick; 8 ohms; 7"x5"x3".....\$53.33

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; diam.: 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.....\$34.50

Speakers, Enclosures & Equipment cabinets

Model EN-1215 "Debonaire" Enclosure
Enclosure only; may be used for 12" or 15" threeway speaker systems.
Mahogany\$63.00
Blonde or 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.....\$120.00 Net

Model S-80
2-way high efficiency speaker system; 8" woofer and 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 RRL-12
3-way speaker system; 12" high compliance woofer, 3 1/2" direct radiator speaker, super tweeter; power rating 40 watts; variable brilliance control; impedance 8-16 ohms; 25" x 15 3/8" x 12 1/2"; finished on four sides in mahogany\$119.95
Finished in walnut, limed oak, oiled walnut\$123.95
Unfinished model\$114.95

Model RRL-8
3-speaker system; 8" high compliance woofer; 2-3 1/2" direct radiator tweeters; power rating 30 watts; impedance 8-16 ohms; 22 1/4" x 12" x 10 3/16"; finished on four sides in mahogany.....\$99.50
Walnut, limed oak.....\$102.50
Oiled Walnut.....\$105.50
Unfinished model.....\$95.50

Model TMS-2
2-multi speaker system in one enclosure; consists of C-12HC dual voice coil woofer, 2-8" mid-range speakers, 2-wide-angle tweeters; adjustable door; two networks with presence and brilliance controls; 30" x 25" x 12 1/2"; contemporary cabinet, mahogany.....\$258.00
Blond or walnut.....\$263.00
Early American style in fruitwood finish\$279.95

UTAH RADIO AND ELECTRONIC CORP.

Continental Series



Feature controlled resonance design; solder-less terminals are phase-coded; cloth skiver roll; 2" voice coils; Alnico V magnets; impedance 16 ohms.

Speakers, Enclosures & Equipment cabinets

CM6J (6" mid-range).....	\$24.50
CM8L (8" mid-range).....	\$37.95
C8R (8" low frequency).....	\$53.95
C12P (12" woofer).....	\$51.50
C12RD (12" woofer) dual voice coil.....	\$65.00
C12R (12" low frequency).....	\$58.95
C15R (15" low frequency).....	\$66.75
CT5FN (5" hi-frequency).....	\$16.25
C8RD (8" woofer) dual voice coil.....	\$59.50

Fabulous G Series

Alnico V magnets; seamless cones; solderless terminals; impedance 8 ohms.

GM6F (6" mid-range).....	\$12.60
G8J (8" ext. range).....	\$13.80
GM8J (8" mid range).....	\$13.80
GMT8J (8" mid-range tweeter).....	\$17.95
G8S (8" low freq.).....	\$32.25
G12J (12" ext. range).....	\$17.30
G12S (12" low freq.).....	\$35.90
G12P (12" low-mid range).....	\$39.50
G15P (15" low-mid-range).....	\$44.25
G15R (15" low freq.).....	\$56.75
G12J26 (12" co-axial).....	\$38.75
G12P5 (12" co-axial).....	\$57.50
G15P5 (15" co-axial).....	\$65.00
GT5F (5" hi-freq.).....	\$ 8.75
GT5FN (5" hi-freq.).....	\$12.50
G8K (8" ext. range).....	\$17.50
G12K (12" ext. range).....	\$21.95
G12R (12" woofer).....	\$52.25

Uni-drive Series



Dual-cone speakers with single voice coil and magnet structure: impedance 8 ohms.

Model D8J (8").....	\$17.50
Model D8LA (8").....	\$24.95
Model D8P (8").....	\$35.25
Model D12J (12").....	\$19.95
Model D12LA (12").....	\$29.95
Model D12P (12").....	\$40.75
Model D15P (15").....	\$44.50
Model D69J (6"x9").....	\$16.95

Scotsman Series

Alnico V magnets; seamless cones; moisture resistant; impedance 8 ohms.

Model TSP35A (3 1/2" hi-freq.).....	\$5.50
Model TSP4A (4").....	\$5.95
Model TSP5D (5" hi-freq.).....	\$6.90
Model SP57DC (5"x7").....	\$6.90
Model SP69DC (6"x9").....	\$7.95
Model SPD69E (6"x9").....	\$17.45
Model CSP69E3 (6"x9").....	\$16.95
Model CSP8G2 (8" co-axial).....	\$17.95
Model SP8GC (8" dual cone).....	\$12.95
Model SP8JC (8").....	\$16.50
Model CSP15J5 (15").....	\$34.55

Model SS103 Stereo Console

System has 3 speakers with presence-brilliance control; enclosure lined with

fibreglas; 20 watts continuous; 8 ohms impedance; 30 3/4" x 21 1/2" x 14".....

Enclosure only\$139.95

Model SS-101
Stereo Wall, Desk, or Table System



Fits into small spaces; 8" speaker; 5 watts; 8 ohms; 9 1/2" x 13" x 7".....\$30.40

Model SS-102 Stereo Bookshelf System

Fiberglass lined; 2 speakers: stereo balance control; 10 watts; 8 ohms; 10" x 20" x 10 1/4".....\$63.50

Enclosure only\$25.60

Model SA-102 Stereo Bookshelf System



Stereo sound system with 10 watt 6V6 push-pull amplifiers; inverse feedback; 2 inputs for ceramic and reluctance phono cartridges and tuner; 8" speaker; 8 ohms.....\$110.95

Deluxe Wall Enclosure

Satin finishes similar in design to Custom enclosures; mahogany, walnut, and blond finishes.

Model DM8 accommodates 8" speaker; 12" x 9 1/2" x 4 3/16" x 6".....\$10.25

Model DM12 accommodates 12" speaker; 17" x 13 1/2" x 5 7/8" x 8 7/16".....\$15.10

Deluxe Corner Enclosure

Similar to Custom Corner Enclosure; mahogany, walnut, and blond finishes.

Model DCM8 accommodates 8" speaker; 15 1/2" x 14" x 8 1/8" x 7 3/4".....\$12.85

Model DCM12 accommodates 12" speaker; 19 1/2" x 17 1/8" x 10 1/4" x 12".....\$17.25

Standard Wall Enclosure

Model B-6 accommodates 6" speaker; 8 1/4" x 9 3/8" x 2 15/16" x 4 5/8".....\$5.95

Model B-8 accommodates 8" speaker; 9 3/4" x 10 13/16" x 3 7/8" x 5 13/16".....\$7.50

Model B-10 accommodates 10" speaker; 11 3/8" x 12 1/2" x 4 11/16" x 6 13/16".....\$8.95

Model B-12 accommodates 12" speaker; 13 3/8" x 14 7/8" x 5 11/16" x 8 5/16".....\$11.50

Standard Corner Enclosure

Model C-8 accommodates 8" speaker; 9 1/2" x 9 1/2" x 6 1/4".....\$6.75

Model C-12 accommodates 12" speaker; 13 1/2" x 13 1/2" x 8 3/4".....\$10.50

Custom Wall Enclosure

Mounts on any flat wall; speaker mounting hardware included; mahogany, oak, walnut.

Model P45 accommodates 4 & 5" speakers; 8 7/8" x 7 3/8" x 2 1/2" x 4 3/8".....\$8.50

Model P6 accommodates 6" speaker; same size as P45.....\$9.10

Model P8 accommodates 8" speaker; 12" x 9 1/2" x 4 1/2" x 6 1/8".....\$10.50

Model P12 accommodates 12" speaker; 17" x 13 1/2" x 5 7/8" x 8".....\$14.95

Custom Corner Enclosure

Designed to fit in corner; brackets supplied to mount on flat walls; mahogany, oak, walnut finishes.

Model CP8 accommodates 8" speaker; 15 1/2" x 15 1/2" x 8 1/8".....\$12.95

Model CP12 accommodates 12" speaker; 17 1/2" x 17 1/2" x 9 1/4".....\$17.25

Crossover Networks

Model X-608: 600 cps. crossover, 8 ohms.....\$10.95

Model X-616: 600 cps. crossover, 16 ohms.....\$11.95

Model X-2508: 2500 cps. crossover, 8 ohms.....\$10.50

Model X-2516: 2500 cps. crossover, 16 ohms.....\$10.85

Model X-5008: 5000 cps. crossover 8 ohms.....\$ 9.95

Model X-5016: 5000 cps. crossover, 16 ohms.....\$10.40

VIDAIRE ELECTRONICS MFG. CO.

Model MS-12 Speaker Selector

Switches 6 pairs of speakers; keeps constant load on output transformer while switching; external resistors.....\$2.64

Model CN-8 Crossover Network

High-pass filter; low frequency rolloff; used with 8 or 16 ohms impedance.....\$1.32

CN-5 Crossover Network

High pass filter for 8 or 16 ohm speakers; slow bass roll off; includes tweeter control.....\$3.57

RS-10 and RF-10

RS-10 is remote speaker switch; has three positions. "hi-fi set," "remote," or "both"; heavy gold embossed brass plate.....\$1.17

RF-10 is two-speaker balance control; gold embossed brass plate.....\$1.41

Model MS-6 Multiple Remote Speaker Switch

Constant impedance switching device for remote switching of one to six speakers; gold embossed brass plate; complete with hardware.....\$210.00

L-Pad

Mounted on wall plate with 2 jacks for plugging in additional speaker or phones; constant impedance.

Model JL-8 8 ohms.....\$7.77

Model JL-16 16 ohms.....\$7.77

Model SE-8, 16 Stereo Equalizer

Balances speakers; constant impedance L-pads; phasing switch changes polarity of speaker.

Model SE-8 for 8 ohm speakers; SE-16 for 16 ohm speakers.....\$7.50

Model AL-8, 16 L-Pad

Controls audio level of any speaker; 8 or 16 ohms.....\$3.57

Model AT-8, 16 T-Pad

Controls audio level of speakers; 8 or 16 ohms.....\$5.37

Model DL-3 Speaker Dummy Load

Prevents speakers from burning out by accidental application of excess power; will dissipate 40 watts power at each terminal.....\$2.37

VITAVOX (ERCONA CORP.)

DU-120 Duplex 12" Coaxial

Coaxial unit with 12" woofer and 3" tweeter; power rating: 30 watts; fre-



frequency response: 30 to 15,000 cps; resonance: 40-45 cps; impedance: 15 ohms; crossover frequency: 2,000 cps; woofer magnet weight: 3 1/4 pounds Ticonal G; tweeter magnet weight: 2 1/2 ozs. Ticonal G; flux density of woofer: 16,000 gauss; flux density of tweeter: 15,000 gauss; recommended enclosure: 6 cubic feet; weight: 14 1/2 pounds.
.....\$89.50

WATSON INDUSTRIES, INC.

Crossover Networks

Inductance-capacitance crossover networks; quarter-section constant impedance type; 6 db/octave slope; air-core inductors; paper dielectric capacitors; plastic case.

Model FDS-1, 2500 cps crossover: 8 ohms	\$8.75
Model FDS-2, 5000 cps crossover; 16 ohms	\$7.95
Model FDS-3, 2500 cps crossover: 16 ohms	\$8.75
Model FDS-4, 5000 cps crossover: 8 ohms	\$7.95
In Kit Form	
Model FDS-1K, 2500 cps crossover: 8 ohms	\$5.95
Model FDS-2K, 5000 cps crossover: 16 ohms	\$5.50
Model FDS-3K, 2500 cps crossover: 16 ohms	\$5.95
Model FDS-4K, 5000 cps crossover: 8 ohms	\$5.50
Model FDS-5K, 200 cps crossover: 8 ohms	\$13.95
Model FDS-6K, 200 cps crossover: 16 ohms	\$13.95
Model FDS-7K, 800 cps crossover: 8 ohms	\$10.95
Model FDS-8K, 800 cps crossover: 16 ohms	\$10.95

WEATHERS INDUSTRIES

"Decorator" Speaker System



Uses 12" woofer and 3" tweeter; power rating 14 watts continuous, 30 watts peaks; 8 ohm impedance; 26" h x 32" w x

8 3/4" d.	
Mahogany	\$135.00
Blonde	\$139.50

"Fiesta" Speaker System



Bookshelf-type design; frequency response 60 to 20,000 cps; power rating 10 watts continuous, 20 watts peak; 8" full range speaker and 3" tweeter; impedance 8 ohms; 10 1/4" h x 22 1/4" w x 6 3/4" d.

Mahogany	\$59.95
Blonde	\$62.50

Model SE-50 Harmony Stereo Speaker

Can be used in pairs or singly; shaped like a book; frequency response 70-15,000 cps.; full range moving coil: 3 watts continuous, up to 10 watts peak; 4 ohm impedance: 11" x 9 1/4" x 3 5/8"; 3 1/2 lbs.; ebony or corova.....\$29.75

Model SE-55 Hideaway Bass

Non-directional band-pass speaker can be placed anywhere; designed for use with Harmony book-type speaker; frequency response 30-100 cps; 10 watts continuous power up to 25 watts peak; RC crossover network; requires 10 watt amplifier; output impedance 8 ohms: 16 1/2" x 16 1/2" x 5 1/2"; 12 lbs.....\$69.50
Model SE-60 Set of 2-Harmony, 1-Hideaway speakers.....\$119.50

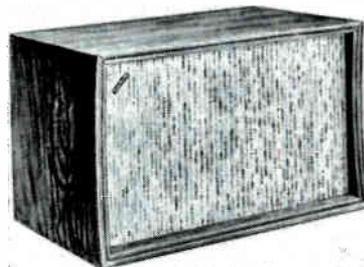
WHARFEDALE (BRITISH INDUSTRIES CORP.)

Model W-60



Shelf-size speaker system with sand-filled panel, contains 12" and 5" speakers, matched to enclosures; resonance 25 cycles; 8 ohms; oiled walnut, polished walnut, mahogany and limed oak: 14 1/2" x 13" x 24"\$109.50
Sanded unfinished birch.....\$94.50

Model W-50

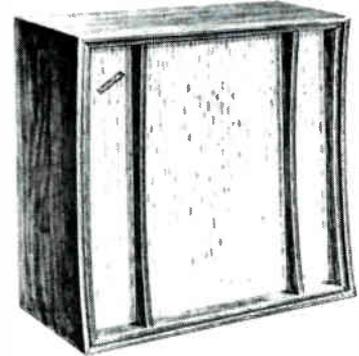


Shelf-size speaker system with sand-filled panel, contains 10" and 5" speakers, matched to enclosures; resonance 30 cycles; 8 ohms: 12" x 12" x 24".

Speakers, Enclosures & Equipment cabinets

Genuine walnut veneer, oiled or polished walnut	\$99.50
Mahogany, limed oak.....	\$94.50
Sanded birch, ready to finish.....	\$89.50

Model W-70



Speaker system; impedance 8 ohms; 24" x 21" x 12"; walnut veneer, limed oak, mahogany\$199.50

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 ohms 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 1,000 cps, or as a single speaker; 15 watts; depth 4"\$26.50

W/10/FSB



Single cone 10" wide range speaker; frequency response from 30 to 18,000 cps; bass resonance 30-38 cps; 12-15 ohms impedance; flux density 14,500 gauss, total flux 77,000 gauss; aluminum center dome for improved high-frequency response; recommended for baffle or reflex loading, as well as for use as a treble unit in two-speaker systems; foam cone suspension; power rating 15 watts; depth 5 1/4"\$47.50

Super 12/FS/AL

Single cone 12" wide range speaker; frequency response from 30 to 18,000 cps; bass resonance 30-38 cps; 12-15 ohms impedance; flux density 17,000 gauss; total flux 190,000 gauss; foam cone suspension; high sensitivity and excellent damping; power rating 40 watts; depth 7"\$89.50

Super 3

Cone-type 3" tweeter; 3,000 to 20,000 cps; flux density 13,000 gauss, total flux

Stereo HiFi Directory 1961

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54,000 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; 2 $\frac{3}{8}$ " depth\$26.50

Crossover Networks

HS/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 15 ohms. \$18.25

3000 cps two-way network; attenuation 6-9 db/octave; impedance 7-16 ohms. \$18.25

SFB/3 Deluxe Speaker System

Resonance-free, free-standing sand-filled baffle with range of 30 to 20,000 cps; 12" woofer, 10" wide range, and 3" tweeter, all matched to enclosure; resonance 30 to 35 cps; 15 ohms: in mahogany, walnut, and blonde: 35 $\frac{1}{2}$ "w x 31 $\frac{1}{2}$ "h x 13"d\$279.50

SFB/3 Custom Speaker System

Resonance-free, free-standing sand-filled baffle with range of 30 to 20,000 cps; 12" woofer, 10" wide range, and 3" tweeter, all matched to enclosure; resonance 30 to 35 cps; 15 ohms: in mahogany, walnut, and blonde. 34"w x 31"h x 12"d\$225.00

Coaxial 12 Full Range Speaker



Main cone is foam suspended producing response below 30 cps.; Tweeter assembly is paper cone suspended in foam, aluminum center dome, aluminum voice coil: capacitor protects tweeter from low frequency input below 4 kc.; volume control attached to tweeter; 2 magnet gaps of 1 $\frac{3}{4}$ " and 1": 12 watts input; impedance 12-15 ohms; baffle opening 10 $\frac{7}{8}$ " depth 7"; weight 26 lbs..\$139.50

WIGO (United Audio Products Div. of United Optical Mfg. Corp.)

Model FW-2 Crossover Network
Crossover at 5000 cps.....\$5.00

Model ER 85
8" extended range; capacity 15 watts; frequency response 40 to 15,000 cps; resonance 70 cps; 16 ohms impedance; 5 $\frac{1}{4}$ oz magnet; flux density 10,000; baffle opening 7 $\frac{3}{4}$ "; depth 4 $\frac{3}{4}$ "; shpg wt 4 $\frac{1}{2}$ 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 $\frac{5}{8}$ "; depth 6 $\frac{3}{8}$ "; shpg wt 13 lbs.....\$59.50

Model CX 2

Dual cone-tweeter assembly kit converts ERD 12 B to CX 212 B; complete with high pass filter, terminals, cables, hardware, instructions; wt 1 $\frac{1}{2}$ lbs.....\$20.00

Model CX 212



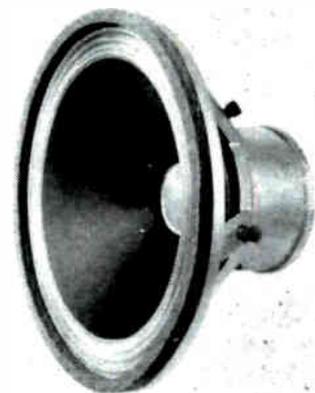
Model ERD 12 B speaker with model CX 2 dual cone-tweeter assembly attached raising response to 18,000 cps; all other specifications identical: shpg wt 14 $\frac{1}{2}$ lbs.....\$79.50

Model TW400



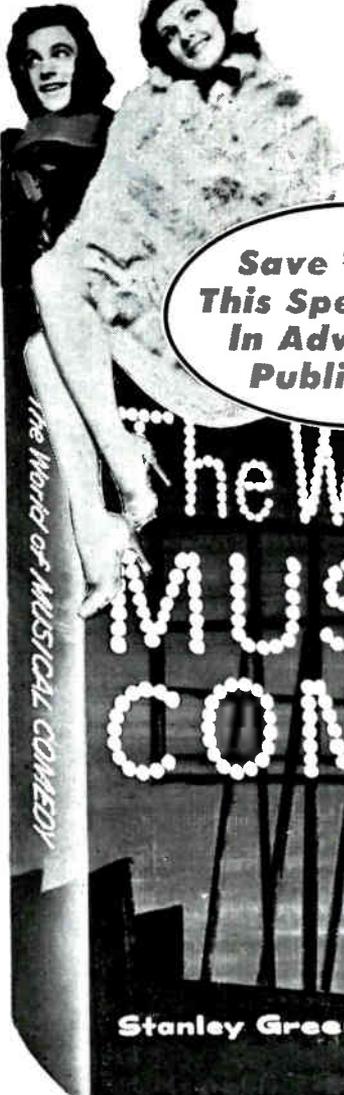
4" conc tweeter; capacity 10 watts; frequency response 2000 to 18,000 cps; 8 and 16 ohms impedance; 3 oz magnet; flux density 8000; baffle opening 3 $\frac{3}{8}$ "; wt 1 $\frac{1}{4}$ lbs\$12.50

Model WE 12 Deluxe Woofer



12": capacity 30 watts; frequency response 25 to 3,500 cps; resonance 35 cps; 16 ohms impedance; 13 oz magnet; flux density 12,000; baffle opening 10 $\frac{7}{8}$ "; depth 6 $\frac{3}{8}$ "; wt 13 lbs.....\$59.50

Here's Mary Martin (with Gene Kelly) about to sing *My Heart Belongs To Daddy*...in the show that made her a star.



Save \$1.05 on This Special Offer In Advance Of Publication!

Here's your front row seat to OVER 400 GREAT BROADWAY SHOWS!

An Extravaganza of Today's and Yesterday's Most Exciting Shows, Show People, and Show Tunes Thrillingly Captured in Story and Pictures

NEVER before has there been a book which so vividly brings to life the magical sights and sounds...the stars, dancers, and showgirls...the wonderful singable tunes of America's musical theatre!

You'll re-live nostalgic favorites such as *Babes in Toyland*, *No, No, Nanette*, the *Ziegfeld Follies*, and other classics of bygone days. You'll thrill to *Pal Joey*, *Bloomer Girl*, *Finian's Rainbow*, *South Pacific*, *Carousel*...all the exciting, tuneful shows of the 30's and 40's. You'll cheer the spectacular hits of today—shows like *My Fair Lady*, *Music Man*, *Take Me Along*, *The Sound of Music*, *Fiorello!*...even "off-Broadway" musicals!

And that is not all. You also step backstage to get intriguing glimpses of the theatre at work—of life behind the footlights! You'll get new insight into the music of Victor Herbert, Sigmund Romberg, Irving Berlin, George Gershwin, Cole Porter and all the other "greats." You're there when composers and playwrights like Rodgers and Hammerstein, or Lerner and Loewe, write songs that enchant audiences the world over. You see stars like Judy Holliday, Rosalind Russell, Pat Suzuki, Gwen Verdon create great roles out of their own, inimitable blend of art and personality...watch Ray Bolger, Marilyn Miller, Fred Astaire develop their exhilarating dance routines... get to know actors like William Gaxton, Alfred Drake, and Anthony Perkins...see Bert Lahr work out his funny "bits"...chuckle at Phil Silvers, Stubby Kaye, and Andy Griffith.

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This fabulous book will entertain you by the hour...with amusing incidents, personal highlights, rare photographs—and above all with the rousing parade of musical comedy from its very beginning right up to the present time. It's a delightful, heartwarming book...and one that you won't be able to put down without smiling—whistling—humming!

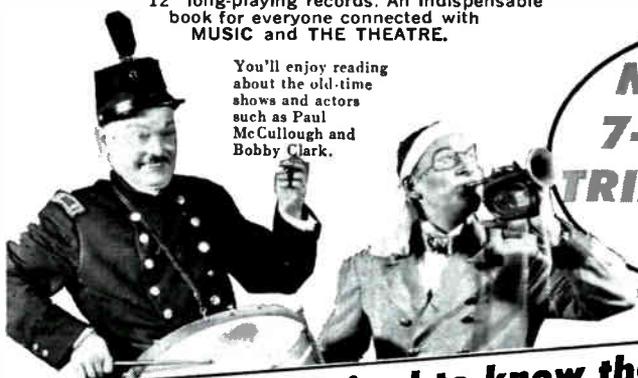
And if you're looking for factual information, it's all here: show titles, authors and collaborators... date of opening and length of run...principal songs...leading cast members and their replacements... even a vast, informative listing of recordings that will help you choose the finest available records of musical shows for your collection!

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"The World of Musical Comedy" is now on press. After publication its price will be \$10—but NOW, if you mail the coupon below, we'll send you a copy for a 7-Day Free Trial Examination. Read the book, and if you're not completely delighted, return it. You pay nothing, owe nothing. If you wish to keep the book, you'll be billed—not the regular retail price of \$10.00—but the special pre-publication price of only \$8.95 plus postage—a full saving to you of ten percent! Mail no-risk coupon below today!

GIANT LIBRARY SIZE — 374 PAGES — OVER 200 PHOTOGRAPHS — SPECIAL REFERENCE SECTION listing opening dates, number of performances, authors, composers, leading cast members, principal songs—plus complete record collector's buying guide of 12" long-playing records. An indispensable book for everyone connected with MUSIC and THE THEATRE.

You'll enjoy reading about the old-time shows and actors such as Paul McCullough and Bobby Clark.



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You'll find many intimate profiles of your favorite screen and TV personalities. Photo shows Walter Pidgeon and Jackie Gleason in TAKE ME ALONG.

You'll be surprised to know that...

George M. Cohan's rousing "You're a grand old flag" originally was "You're a grand old rag"!

A Cole Porter show containing a shipwreck had to be rewritten overnight because of the *Morro Castle* disaster!

Howard Dietz, the lyricist, created the M.G.M. lion—by borrowing Columbia University's emblem!

West Side Story was originally conceived as a musical called *East Side Story*!

Mary Martin was auditioned for Eliza Doolittle in *My Fair Lady*... but she didn't like the songs!

The estate of Vincent Youmans holds 175 unpublished and unused tunes by the composer!

One of the hit songs in *Gigi* was cut from *My Fair Lady*!

Ziff-Davis Publishing Company
One Park Avenue
New York 16, N. Y.



I want to take advantage of your pre-publication offer. Send me, on publication, a copy of THE WORLD OF MUSICAL COMEDY for 7-day free trial examination. I understand that if I am not completely delighted, I may return the book and owe nothing. Otherwise I will remit not the regular price of \$10.00, but the low pre-publication price of only \$8.95 plus postage and handling.

1710

NAME _____ (please print)

ADDRESS _____

CITY _____ ZONE _____ STATE _____

SAVE! Enclose \$8.95 now with this coupon, and we'll pay all shipping charges. Same return privilege and prompt refund guaranteed if not 100% delighted!

Reader's Report To The Editors

Dear Audiophile,

We hope that you have found the 1961 Edition of STEREO & HI-FI DIRECTORY to be a helpful guide in helping you choose the audio equipment best suited to your needs. Keep it handy and you will have at your fingertips the most complete information available from one source on more than 150 leading audio equipment manufacturers.

Let's make a deal--if we've helped you maybe you'd like to help us. We want to know about you and the extent of your interest in stereo and hi-fi. On the following two pages you'll find a comprehensive questionnaire which will give us this information and help us in our preparation of future editions.

In appreciation for your cooperation, and to acquaint you with some of the other Ziff-Davis Electronics Annuals, if your reply is within the first thousand which we receive, we'll be happy to send you (with our compliments) your choice of any one of our other Annuals (they normally sell for \$1.00 each) shown on this page.

The Editors



1959 ELECTRONIC EXPERIMENTER'S HANDBOOK

For anyone who likes to build useful, money-saving electronic devices and experiment with new projects! Step-by-step instructions, illustrations, and diagrams for projects for your hi-fi, your home, car and boat, workshop, and ham shack.



ELECTRONIC KITS--

The First Edition of KITS was so well-received, this sequel was published --to give hobbyists over 150 pages of all-new projects! Tips on trouble shooting, identification guide, advice on stereo units and ham gear.



YOUR CAREER IN ELECTRONICS--1960 EDITION

Valuable guide to career opportunities in electronics: the technical training needed, how to get started in TV and radio repair, data on rockets and missiles, electronic research. Find out where you fit into this exciting field!

1960 HI-FI ANNUAL

The world's leading advanced guide to high fidelity construction! Detailed coverage on circuits, systems, maintenance. Ideal for technicians, advanced students, music lovers.



1960 HI-FI DIRECTORY & BUYERS GUIDE



The world's most comprehensive reference to hi-fi equipment. Listings cover virtually every piece of hi-fi equipment manufactured--complete with prices and specifications. Illustrations of hundreds of products--

1959 HI-FI GUIDE & YEARBOOK

World's leading basic guide to high fidelity. Valuable information on how to buy, install and maintain systems and components. Facts on preamps, speakers, tuners, stereo, controls, enclosures.



STEREO & HI-FI DIRECTORY — 1961

Reader's Confidential Report To The Editors

NAME _____
 STREET & ADDRESS _____
 CITY _____ ZONE _____ STATE _____

ABOUT THIS ANNUAL:

1. Where did you obtain it?
 Newsstand Parts Supplier Hi-Fi Dealer
 From a friend Other (Please specify) _____
2. Which electronics magazines do you read regularly? _____
3. Have you ever read Stereo & Hi-Fi Directory (formerly Hi-Fi Directory & Buyer's Guide) before?
 Yes No
4. How long will you keep this annual? _____
5. How many other interested people will read or use your copy? _____
6. Have you read any other Ziff-Davis Electronics Annuals (see page 172)? _____
7. Which ones? _____

ABOUT YOUR HI-FI INTERESTS:

8. a) How long have you been interested in Hi-Fi? _____
- b) Do you (or does anyone in your household) own a complete, self-contained Hi-Fi set built by one manufacturer to be sold as a single unit (Package equipment)?
 Yes No (If "NO"... skip to Q. 9a)
- c) If "YES": Please tell us how many sets you own, the type (stereo or monaural), the make and cost of each, and when it was purchased.
 Number owned: _____

SET	MONAURAL	STEREO	MAKE	COST	YEAR BOUGHT
1	<input type="checkbox"/>	<input type="checkbox"/>	_____	\$ _____	_____
2	<input type="checkbox"/>	<input type="checkbox"/>	_____	\$ _____	_____
3	<input type="checkbox"/>	<input type="checkbox"/>	_____	\$ _____	_____

- d) Please indicate where you purchased your package Hi-Fi set or sets.

Appliance Store <input type="checkbox"/>	Music Store <input type="checkbox"/>
Discount House <input type="checkbox"/>	Hi-Fi Salon <input type="checkbox"/>
Department Store <input type="checkbox"/>	Other _____

(Write in)

9. a) Do you own component, Hi-Fi equipment? (One or more components such as amplifier, tone arm, speaker, etc., which can be bought separately).
 Yes No (If "NO"... skip to Q. 10a)
- b) If "YES": Please indicate below which components you own, the number you own, the number that were assembled from kits, and the total cost of each type of component owned.

	NOW OWN	NUMBER OWNED	NUMBER ASSEMBLED FROM KITS	TOTAL COST
Turntable (not record changer)	<input type="checkbox"/>	_____	_____	\$ _____
Tone Arm (for turntable only)	<input type="checkbox"/>	_____	_____	\$ _____
Record Changer and/or Manual Player	<input type="checkbox"/>	_____	_____	\$ _____
Tuner	<input type="checkbox"/>	_____	_____	\$ _____
Pre-Amplifier	<input type="checkbox"/>	_____	_____	\$ _____
Power Amplifier	<input type="checkbox"/>	_____	_____	\$ _____
Integrated Amplifier and Pre-Amplifier	<input type="checkbox"/>	_____	_____	\$ _____
Speaker System	<input type="checkbox"/>	_____	_____	\$ _____
Tape Recording or Playback System	<input type="checkbox"/>	_____	_____	\$ _____
Microphone	<input type="checkbox"/>	_____	_____	\$ _____
Phono Cartridge	<input type="checkbox"/>	_____	_____	\$ _____

- c) When you bought your last component, did you fill out a guarantee or warranty card and send it back to the manufacturer?
 Yes No

10. a) Do you plan to buy any Hi-Fi components in the next 12 months?
 Yes No (If "No"... skip to Q. 11a)
- b) If "YES": Please indicate below which components you will buy, the number you will buy, the number you will assemble from kits and how much you will expect to spend for each type of item.

	PLAN TO BUY	TOTAL NUMBER	NUMBER WILL ASSEMBLE FROM KITS	ESTIMATED TOTAL COST
Turntable (not record changer)	<input type="checkbox"/>	_____	_____	\$_____
Tone Arm (for turntable only)	<input type="checkbox"/>	_____	_____	\$_____
Record Changer and/or, Manual Player	<input type="checkbox"/>	_____	_____	\$_____
Tuner	<input type="checkbox"/>	_____	_____	\$_____
Pre-Amplifier	<input type="checkbox"/>	_____	_____	\$_____
Power Amplifier	<input type="checkbox"/>	_____	_____	\$_____
Integrated Amplifier and Pre-Amplifier	<input type="checkbox"/>	_____	_____	\$_____
Speaker System	<input type="checkbox"/>	_____	_____	\$_____
Tape recording or playback system	<input type="checkbox"/>	_____	_____	\$_____
Microphone	<input type="checkbox"/>	_____	_____	\$_____
Phono Cartridge	<input type="checkbox"/>	_____	_____	\$_____

11. a) Have you bought a replacement stylus (needle) in the past 12 months?
 Yes No (If "NO": . . . skip to Q. 5a)
- b) If "YES": Did you specify the brand of stylus wanted?
 Yes No (Please skip to Q. 15a)
- c) What brand did you buy? _____
12. a) How much money did you spend in the last 12 months on Hi-Fi (not counting records or tapes)?
 \$_____ None
- b) How many of each of the following items did you or your family buy during the past year?
 Records _____ None
 Pre-Recorded Tapes _____ None
 Reels of raw Tape _____ None

ABOUT YOUR ELECTRONICS INTERESTS:

13. Do you have an electronics hobby such as: building electronics equipment from plans, servicing radio, TV, Hi-Fi or other electronics equipment for enjoyment *only* (not assembling Hi-Fi from major finished components or kits)?
 Yes No
14. a) Do you ever buy separate parts — for your business or hobby—such as tubes, capacitors, resistors, transistors, etc. for radio, TV, Hi-Fi or other electronics equipment?
 Yes No (Please skip to Q. 10a.)
- b) If "YES": Please tell us where you buy your electronics parts and about how often you buy from each source:
 Local Radio-TV Service Shop or Dealer About _____ times a year.
 Mail Order About _____ times a year.
 Parts Jobber or Distributor (not mail order) Other (please specify)
 About _____ times a year. About _____ times a year.
15. a) Do you derive *any* part of your income from selling or servicing radio, TV, Hi-Fi or other electronics equipment either full-time or part-time?
 Yes No (Please skip to Q. 11a)
- b) If "YES": Full-time or Part-time

ABOUT YOURSELF:

16. Your approximate age, please? _____ Are you: Male Female
17. a) Are you now employed? _____ either in business for yourself, or working for someone else?
 Full-time Part-time
 Not presently employed (student, housewife, etc. do not count as employment)
- b) If now employed: What sort of work do you do? (please be specific).

18. Will you please check your approximate total family income bracket?
 (This is STRICTLY confidential.)
- | | | | |
|-------------------|--------------------------|-------------------|--------------------------|
| Less than \$3,000 | <input type="checkbox"/> | \$7,500-\$9,999 | <input type="checkbox"/> |
| \$3,000-\$4,999 | <input type="checkbox"/> | \$10,000-\$14,999 | <input type="checkbox"/> |
| \$5,000-\$7,499 | <input type="checkbox"/> | \$15,000 and over | <input type="checkbox"/> |

19. Which one of the Ziff-Davis Annuals (shown on page 174) would you like us to send you free?

**MAIL QUESTIONNAIRE TO: EDITORS, STEREO & HI-FI DIRECTORY,
 ONE PARK AVENUE, NEW YORK 16, NEW YORK**

Now available at electronics parts stores, hi-fi salons, and record shops!

Stereo-Monophonic
Test Record

Specially packaged
at only

\$1.59

(\$1.98 In Canada)



As a man who is seriously interested in hi-fi, you will certainly want to take advantage of this new and important test record, now on sale at electronics parts stores, hi-fi salons, and record shops. It will enable you to know your system inside-out. As a result, your listening enjoyment will be even greater than ever before.

This Stereo-Monophonic Test Record is the most complete test record of its kind—containing the widest range of essential check-points ever incorporated into one test disc! And, best of all, you need no expensive test equipment when you use this record! Just listen and get the thorough results you want—all checks can be made by ear!

This special test record brings you an extraordinary 2-way value. First, it guides you in evaluating the quality of reproduction your equipment now produces. Second, it specifies the adjustments necessary to get the best recorded sound you have ever heard! This is easily the best value of the year for everyone who owns a hi-fi system—either monophonic or stereo!

NOW ON SALE EXCLUSIVELY AT ELECTRONICS PARTS STORES, HI-FI SALONS AND RECORD SHOPS!

You can be sure this Stereo-Monophonic test record comes as close to perfection as is humanly possible, because the editors of *ELECTRONICS WORLD*—leading technical magazine in the field of electronics—have poured their accumulated know-how into this record. Purchase your record today! (If you find your dealer does not yet have a supply available, ask him to order them for you.)

SPECIAL NOTE TO DEALERS: for information on ordering your supply of records, contact Ziff-Davis Publishing Company, Direct Sales Division, One Park Avenue, New York 16, N. Y.

Here are some of the questions this record will answer for you!

- ✓ How good is my stylus? Is it worn? Will it damage my records?
- ✓ What about my stereo cartridge? Does it have enough vertical compliance so that it won't ruin my expensive stereo records?
- ✓ Is my turntable running at the right speed? Is it free of rumble, wow, and flutter?
- ✓ What sort of standing waves do I get in my listening room?
- ✓ Are my speakers hooked up correctly? Are they phased properly, and is the correct speaker connected to the right stereo channel?
- ✓ How perfectly is my system equalized?
- ✓ What about separation? Is it adequate?

FREE AIDS FOR AUDIOPHILES

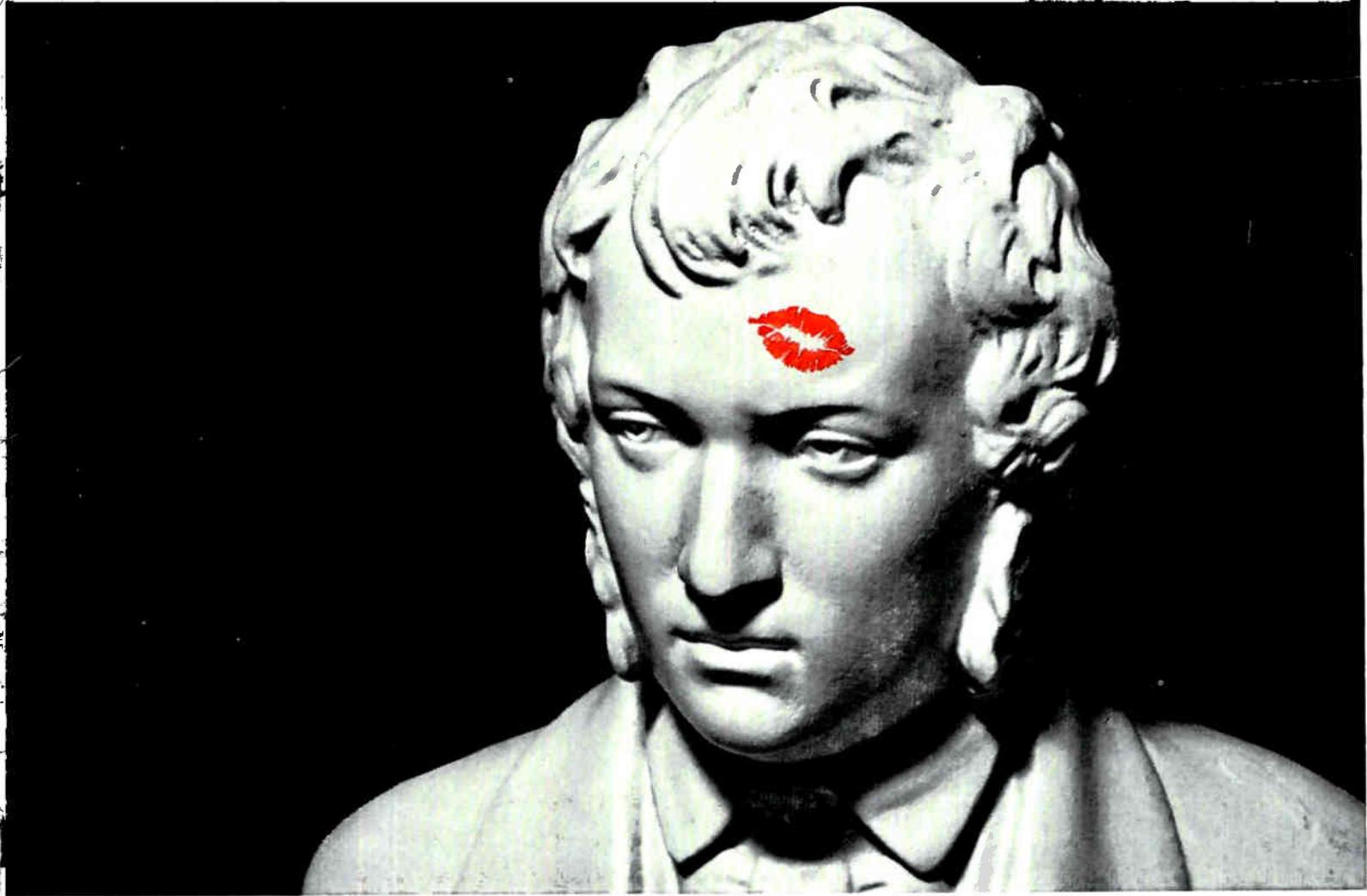
A library of useful information is available free, or at little cost thanks to the instructional literature many manufacturers offer. There are, no doubt, several booklets described here that will interest you. Just circle your choices on the coupon below and mail directly to STEREO & HI-FI DIRECTORY 1961. We'll be happy to pass your requests to the manufacturers concerned.

- 1 Fisher Radio - Complete catalogue of Hi-Fi components and separate complete specification sheets.
- 2 Key Electronics - catalogue of all Hi-Fi equipment, audio components and Audio Catalogue A-12.
- 3 Norelco - Hi-Fi components Catalogue NAP 160.
- 4 RCA Institutes - Catalogue of basic and advanced electronics courses for home study.
- 5 Paco - Comprehensive catalogue of hi-fi components and test equipment, both kit and factory-wired.
- 6 Allied Radio (Knight) - "This Is Stereo High Fidelity", a 35 page color booklet about stereo. Explains frequency range, tone balance, description of all components. Also Allied's 1961 catalogue of electronic equipment and components including hi-fi furniture.
- 7 Fidelitone - Report and complete description of newly-designed Pyramid Stylus.
- 8 H. H. Scott - "How To Use Stereo High Fidelity Components In Your Decorating Plans", and booklet describing Stereomaster components. Separate specification sheets also available.
- 9 Stromberg Carlson - 48 page brochure on component ensembles. Also catalogue and specifications for tuners, turntables, amplifiers.
- 10 Thorens - Complete specifications on turntable kits - including laboratory reports.
- 11 British Industries - Comparator sheets with complete specifications and illustrations of RJ Enclosures, Garrard Record Changers, Wharfedale Speakers, Leak Amplifiers, Multicore Solder.
- 12 Sherwood - Complete specification sheets on all Sherwood hi-fi components.
- 13 Shure Bros. - Two booklets, "Art of Selecting, Playing and Preserving Recordings", 25c, and "The Critical Ear", a discussion of high-fidelity.
- 14 Taco - Technical brochure on FM Antennas, "Why An FM Antenna".
- 15 Heath - 76 page catalogue of hi-fi components, marine, ham, test equipment, and products for the home.
- 16 Olson Radio - Catalogue issued every six weeks includes hi-fi components, test equipment, accessories, and radios.
- 17 Ampex Magnetic Tape - Complete specification sheets on magnetic tapes. Also two informative brochures, "How To Make Better Tape Recordings" and "How To Tape Off The Air".
- 18 University Loudspeakers, Inc. - "Hi-Fi - An Informative Guide to Stereo And Monophonic Speaker Systems and Components".
- 19 Precision Electronics - Full color catalogue of current Grommes line along with detailed specifications.
- 20 Burstein-Applebee - Catalogue (204 pp.) listing ham, hi-fi kits for experimenter.
- 21 Harmon Kardon - Complete specifications, operating characteristics of the Citation I and II preamplifier and amplifier. Assembly manuals cost \$3 for Citation I and \$2 for Citation II.
- 22 Audax Division of Rek-O-Kut publishes a complete instruction about building your own speaker enclosure. Includes list of all Audax speakers. Only 25c.
- 23 Weathers Industries - Information about the Stereomaster Cartridge, Turntable, and Harmony Speakers.
- 24 Argos Products Co. - Catalogue of Argos speaker enclosures. Enclosure may be matched to any speaker with special tuning fork, this catalogue tells you how.
- 25 Klipsch and Associates, Inc. - Paul Klipsch offers copies of his articles: (1) "Stereophonic Sound With 2 Tracks, 3 Channels By Means Of A Phantom Circuit", (2) "Three-Channel Stereo Playback of 2-Tracks Derived From 3 Microphones".
- 26 Radio Shack's 1961 catalogue free to readers, usually 35c. Contains articles by authorities, an electronic handbook, description and prices of over 40,000 items.
- 27 Magnecord - Literature on Model 728 Professional Stereo Tape Transport and 100 Magnecordette.
- 28 Koss - Information on stereo phones and accessories. Trade press reviews.
- 29 Eico - Identification sheets for all electronic components, symbols, capacitors and resistors, plus Eico's catalogue of hi-fi components.
- 30 Lafayette will send you their 324 page electronic parts catalogue No. 610, plus other informative hi-fi literature from time to time.
- 31 Audio Devices - 28 page illustrated directory of all tape recorders sold in the United States. Only 10c.
- 32 Advanced Acoustics - Brochures and technical reprints about AA equipment.
- 33 Premier Electronics - RLS-101 "Record Life Saver" Catalogue.
- 34 Audio Empire - "Do It Yourself" Stereo Balance Kit. Actively demonstrates scientifically if your system is properly balanced.
- 35 Electrophono & Parts - Flyers and data sheets on Electrophono's equipment.
- 36 Reeves Soundcraft - Booklet "How to Choose the Right Recording Tape."
- 37 Audio Exchange - Catalogue and details of A.E.'s unusual trade-in values.
- 38 Allied Wood Products - Catalogue and price list of all Allied Wood products.
- 39 Karlson Associates - New brochure "Stereosonics by Karlson;" it's a complete Karlson catalogue plus articles which expound new theories on stereo.
- 40 Commission Electronics - Catalogue and price list of tape equipment and accessories.
- 41 Tandberg of America - Literature and complete specifications about new Model 6 tape deck.
- 42 Pickering & Co. - Complete catalogue plus booklet "Tech-Specs" which tells how to set up a hi-fi system.
- 43 Electro Sonic Labs - Complete specs and details of their brand new ESL-S-2000 Super Gyro/Balance Stereo Mono Arm, also Micro/Flex Stereo Cartridge, Gyro Jewel Stereo Cartridge, Moving Coil Microphone, and Dust Bug.

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CLASSICS THAT MADE THE HIT PARADE

DETAILS OF THE PROGRAM

"Classics that Made the Hit Parade" includes these popular symphonic themes:

Borodin	Polovtsian Dances from Prince Igor (Stranger in Paradise)
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Waldteufel	Espana Waltz (Hot Diggity)
Chopin	Polonaise No. 6, in Ab Major (Till the End of Time)
Tchaikovsky	Symphony No. 6 in B (The Story of a Starry Night)
Rachmaninoff	Piano Concerto No. 2 in C Minor (Full Moon and Empty Arms)
Chopin	Fantasia Impromptu in C# Minor (I'm Always Chasing Rainbows)
Tchaikovsky	Romeo and Juliet Overture (Our Love)

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