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Special Section on New FM Multiplex Adapters

TAPE RECORDERS



TAPES

TUNERS & MULTIPLEX ADAPTERS



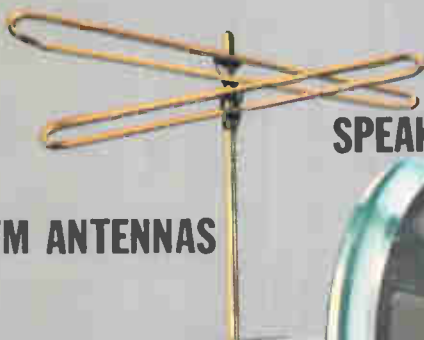
EQUIPMENT ENCLOSURES



SPEAKERS

RECORD CHANGERS

FM ANTENNAS



ARMS
CARTRIDGES



TURNTABLES



MICROPHONES



AMPLIFIERS

ENCLOSURES



Exclusive Assurance of Quality

Only the Stanton Fluxvalve can provide the exclusive and patented features which make it the finest pickup available.

The significance of a document . . . a LETTERS PATENT conferring *exclusive* rights and privileges on an individual to manufacture and vend an invention both *new* and *useful* . . . further signifies a most important responsibility upon that individual.

Endowed with this responsibility, PICKERING & COMPANY pioneered—through their outstanding participation in stereophonic development—the STANTON STEREO FLUXVALVE, the very first (and only) stereo cartridge incorporating the revolutionary T-GUARD stylus.

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Thus; less than one year after the introduction of the stereo record, PICKERING & COMPANY introduced the MODEL 380 STANTON STEREO FLUXVALVE. And, in a few short months, the 380 earned its reputation from the experts as—
"The finest stereo pickup ever tested".

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FOR THOSE WHO CAN HEAR THE DIFFERENCE



Pickering

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PICKERING & CO., INC., PLAINVIEW, NEW YORK

The Stanton Fluxvalve and Stereo Fluxvalve are patented (and patents are pending) in the United States, Great Britain, Canada, Japan and other countries throughout the world.





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STEREO/HI-FI DIRECTORY

1962

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1962 EDITION

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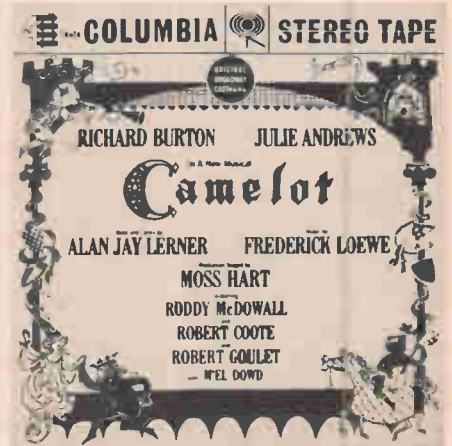
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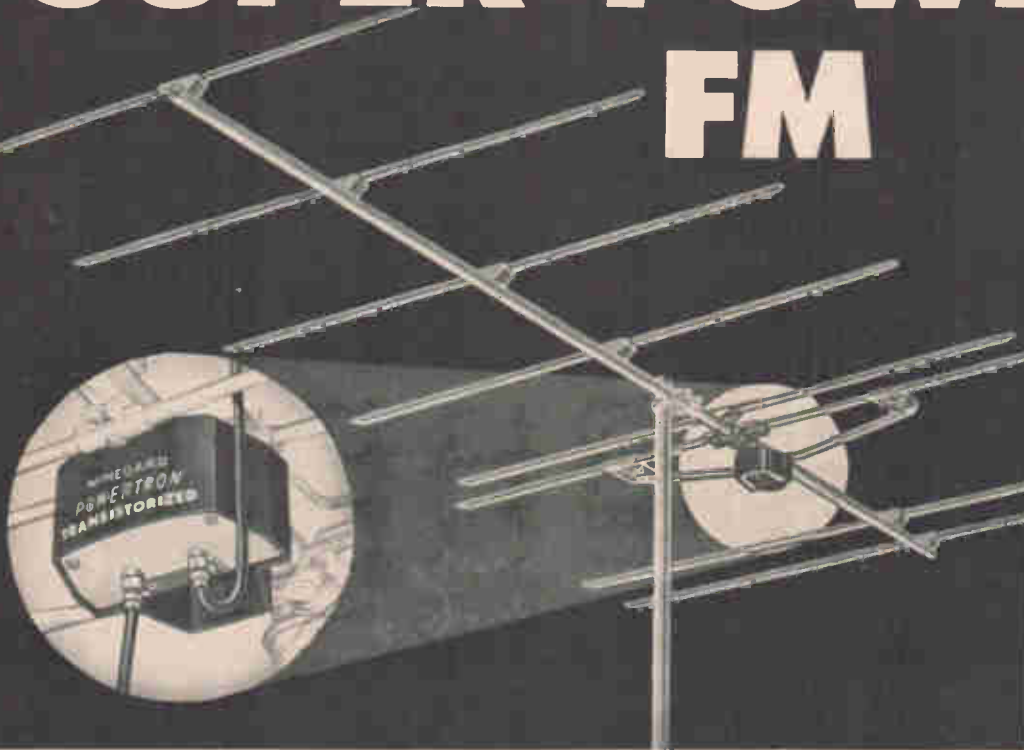
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WORLD'S ONLY ELECTRONIC ANTENNAS FOR SUPER-POWERFUL FM



MODEL PF-8 FM STEREO-TRON YAGI — GOLD ANODIZED

This is the world's most powerful FM antenna. Because Multiplex requires an antenna with greater sensitivity and gain to offset the power loss of the carrier and sub-carrier, Winegard's PF-8 is the best antenna you can install for Multiplex. When you hook up a PF-8, weak signals come in like "locals".

The PF-8 has a minimum gain of 26 DB over a folded dipole with a flat frequency response of $\pm 1/4$ DB from 88 to 108 m.c. It features a built-in TV-FM coupler and has eight elements with EXCLUSIVE "TAPERED T" driven element engineered perfectly to match the powerful transistorized, direct coupled, built-in amplifier. It is available two ways — Model PF-8 for 300 ohm twin lead or Model PF-8C for 75 ohm coax.

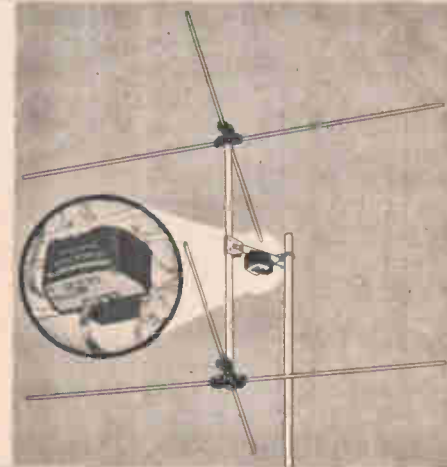
2 NEW TRANSISTORIZED WINEGARD ELECTRONIC FM ANTENNAS FOR LONG DISTANCE FM AND MULTIPLEX

Now WINEGARD brings you super-powerful FM antennas with *BUILT-IN* transistorized amplifiers for L-O-N-G range FM and multiplex reception. You can offer your customers the PF-8 FM STEREO-TRON Yagi (directional) or

the PF-4 FM ELECTRONIC Turnstile (omni-directional). Both models deliver unexcelled performance far beyond ordinary FM antennas—open a new field of opportunity in the fast growing FM and Multiplex market.

Here Are Some Important Features of Winegard Electronic FM Antennas

1. Transistorized amplifier is designed as part of the "Tapered T" driven element (model PF-8) for unprecedented efficiency and signal-to-noise ratio.
2. Built-In FM-TV coupler allows you to use one power supply and down lead when used with a WINEGARD POWERTRON TV antenna.
3. Gold anodized finish—100% corrosion-proofed—all hardware irridized. This is the finest finish of any antenna—meets U.S. Navy specifications.
4. The quality of craftsmanship and materials in these antennas tell their own story—perfect mechanical balance—100 m.p.h. wind tested.



MODEL PF-4 FM ELECTRONIC TURNSTILE — GOLD ANODIZED

Most powerful non-directional FM antenna with 16 DB gain in all directions over a folded dipole. Has Winegard offset mount and transistorized amplifier with TV-FM coupler. Model PF-4 has 300 ohm output.



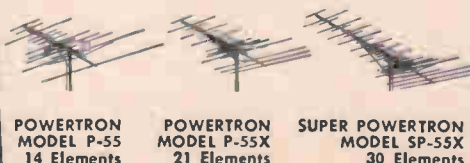
MODEL FM-8—Non-Electronic Yagi — Gold Anodized. The FM-8 is the finest non-electronic FM antenna available. It features the same Winegard "Tapered T" driven element and construction as our super-powerful PF-8.



MODEL FM-3T — Non-Electronic FM Turnstile — Gold Anodized. Very popular WINEGARD omni-directional FM antenna Has WINEGARD'S offset mount and is gold anodized Easy to install — can be mounted on same mast as TV antenna.

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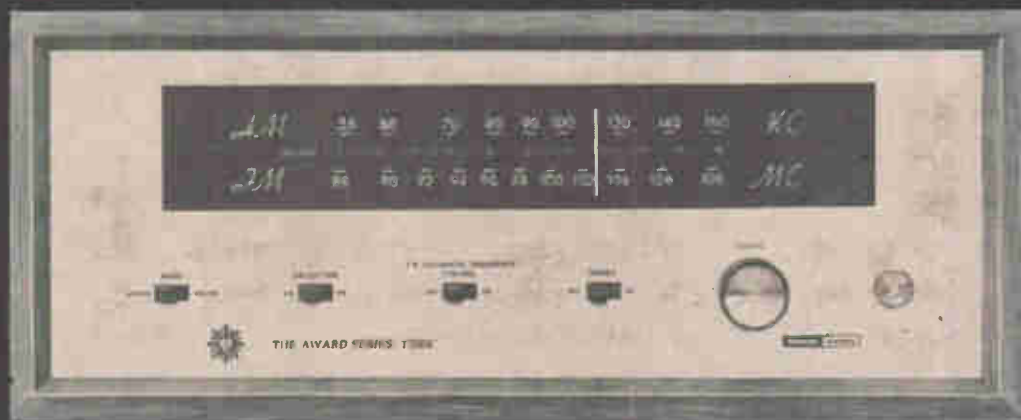
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The Most Trusted Name in Electronics

The new T300X
Award Tuner
does not need
a multiplex
adapter



The T300X, AM/FM tuner, does not need a multiplex adapter. It has one. Right where it belongs—built-in. On the chassis and out of sight. The T300X is completely ready to receive multiplex (FM Stereo) broadcasts now.

What is the significance of multiplex? It represents a major technological advance in the technique of broadcasting. Now, for the first time, you can enjoy all of the color and genuine excitement of stereo with the fidelity that only FM can provide. And what a wonderful opportunity it presents for taping stereo selections right off the air.

The T300X is a striking example of Harman-Kardon's engineering leadership in the development of instruments for multiplex reception. It is designed with a wide-band Foster-Seeley discriminator and a 6BN6 limiter to insure freedom from distortion and noise. A total of 4 IF stages guarantee greater sensitivity. Automatic Frequency Control (AFC) with regulated voltage supply maintains oscillator stability regardless of line voltage variations. The T300X boasts superior impulse noise rejection plus uniform limiting and output at all signals. Here is a solid performer, rock stable and ideal for multiplex reception.

The T300X takes its place in the Award Series alongside the classic F500 tuner shown below. The F500 is a completely professional FM tuner designed with every provision for multiplex now or in the future. It has space on its chassis to accommodate the excellent MX500 wide-band, plug-in multiplex adapter. No spe-

cial controls are needed; no special adjustments. Just one simple connection converts the F500 into a completely integrated multiplex tuner.

Either tuner will provide outstanding performance with the new Award amplifiers. Both are beautifully finished in brushed gold.

The T300X, AM/FM stereo multiplex tuner, is \$149.95; the F500, FM/multiplex tuner—\$129.95. The MX500 multiplex adapter for use with the F500—\$39.95. Optional enclosures, which fit both, include the CX50 (metal)—\$12.95 and the WW50 (walnut)—\$29.95. Prices are slightly higher in the West.

For complete information on the Award Series and other fine Harman-Kardon products write to Dept. D-9, Harman-Kardon, Plainview, N. Y.



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POWER AMPLIFIERS	} 10
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1 AMPLIFIERS

ACRO

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; 1.8 volts RMS for 60 watts output; output impedances are 4, 8, and 16 ohms; 7" x 15 1/8" 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 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
Self-powered (kit)\$79.50
Self-powered (wired)\$129.50

Stereo 120 Power Amplifier



60 watts per channel, continuous sine-wave; harmonic distortion less than 1% 20-20,000 cps; IM distortion less than 1% at 60 watts; response 5-80,000 cps $\pm .5$ db; power response 20-20,000 cps $\pm .1$ db up to 60 watts; sensitivity 1.5 v. for 60 watts; features variable damping factor and meter for bias adjust & circuit check; tubes—2—12AX7, 2—12AU7, 4—KT77 or KT88 or 6500.
Model 120 (kit)\$159.50
Model 120 (factory wired)\$219.50

A.E.S.

Model 225 Integrated Amplifier



25 watts per channel; response 20-30,000 cps $\pm .5$ db; harmonic distortion less than 1% for 25 watts; IM less than .5% at normal listening level; hum & noise 85 db below 25 watts on high-level inputs; channel separation over 50 db; FOB, factory (less cabinet).....\$119.50
Cabinet available in walnut, cherry, mahogany finishes: FOB factory.....\$9.50
Unfinished cabinet: FOB factory.....\$6.50

ALTEC LANSING

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 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.....\$245.00

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 mil-

ivolts; 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.

Cabinet in blond, walnut, or mahogany.\$189.00
.....\$19.95

ARKAY

Model A-12 Amplifier Kit

Power output 12 watts; integrated pre-amplifier; 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.....\$23.95
Factory wired.....\$31.45

FL-10 Amplifier Kit



Rated at 12 watts; 20 to 20,000 cps ± 1 db below 10 watts; hum on phono input 55db below full output; tone controls ± 16 db at 50 and 10,000 cps; bass, treble, and loudness controls; three position record equalization switch; phono and two low gain inputs; output impedances of 4,8 and 16 ohms; tape output; rose gold panel with black cabinet; 12 1/2" x 4" x 8 1/2".
Kit\$29.95

FL-30 Amplifier Kit



Rated at 30 watts; $\pm .5$ db 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, 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" x 5" x 9"; 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 pre-amp; 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. Kit.....\$64.95

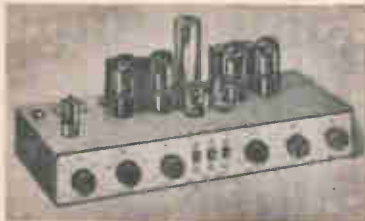
SPA-35 Stereo-Monaural Amplifier

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" x 8" x 6".

Kit \$49.95
Factory wired \$62.95

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" x 6 1/4" x 5 1/2".

Kit \$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; freq. distortion 1.5% at 25 watts; harmonic distortion .9% at 25 watts; controls for input level, balance, bias level.

Kit \$64.95

BELL SOUND

Model 2418 30-Watt Stereo Amplifier
Uses amplifier section of Bell Model 2425 Tuner-Amplifier (refer to tuner section for specifications); 5 7/16" x 14 1/4" x 10 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" x 17 3/16" x 10 3/8"..... \$129.95

Model 2440 44-Watt Stereo Amplifier
Uses amplifier section of Bell Model 2445 Tuner-Amplifier (refer to tuner section for specifications); 5 7/16" x 17 3/16" x 10 3/8"; 28 pounds..... \$179.95

Model 6060 "Carillon" Stereo Amplifier
30 watts r.m.s. each channel, 60 watts mono, 120 watts peak; response 15-30,000 cps ± 1 db; less than 1% THD @ 30 watts, 1000 cps; hum level 71 db below rated output; seven dual inputs (mike, NAB, tape head, magnetic



phono, ceramic phono, tuner, tape pre-amp, aux.), eight controls; four lever

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AMPLIFIERS

switches; dual outputs 4, 8, 16 ohms; 4—EL34/6CA7. 6—ECC83/12AX7, 1—5V3; 6 1/4" x 16" x 11 1/2"\$219.95

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-40-C Stereo Power Amp
20 watts continuous sine-wave power per channel; response 15-65,000 cps ± 1 db. sensitivity .3 volt for max. output; hum & noise -90 db; 4, 8, 16 ohm output\$69.95

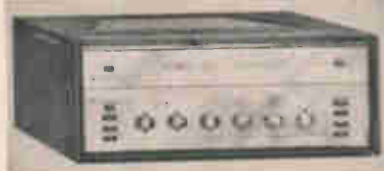
Model S-50-B Stereo Power Amplifier
Simplex output; each channel 25 watts, 50 watts for monaural operation; frequency response 5-200,000 cps. within 2 db.; negative feedback 22 db.; hum balance control; tubes are ECC83 amp and inverter, 12AU7 driver, 2-6CA7 push-pull output, 5V4 rectifier; 12" x 9" x 7 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, EZ81.....\$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" x 8" x 6"\$69.95
Model BP-40-K (kit form).....\$59.95

BOGEN

Model AP60 Integrated Stereo Amp
Response 18-30,000 cps ± 1 db; output 33 watts per channel, 66 watts com-



bined (IHFM standard); distortion less than .8% at full output; hum level -75 db; sensitivity—magnetic cartridge 2.5

mv., tape head 1.4 mv., crystal cartridge 140 mv., aux. input 140 mv.; output impedances 4, 8, 16 ohms; controls—separate programming selectors, dual volume, dual bass, dual treble. blend, speaker selectors, input, loudness, rumble filter, scratch filter, power, dual-power output balance, tape monitor switch; tubes—12 tubes plus 6 silicon rectifiers; 16" x 6" x 13 1/2"\$249.95
Metal enclosure\$13.95
Walnut cabinet\$29.95

Model AP200 Integrated Stereo Amp



Output 22 watts per channel, 44 watts combined (IHFM standard); response 20-20,000 cps ± 1 db; distortion .6% at rated output; hum & noise -60 db mag, -75 db aux. & tuner; sensitivity—mag. 4.5 mv., tuner 5 v., aux. .5 v.; output impedances 4, 8, 16, 32 ohms; controls—separate coaxial volume, treble and bass, mode, input selector, rumble filter, scratch filter, loudness contour, tape monitor, power; tubes—10 plus 2 silicon and 1 selenium rectifier; 15" x 4 3/4" x 11 5/8"\$154.95
Metal enclosure\$11.95
Walnut cabinet\$24.75

BURSTEIN-APPLEBEE

Model 31A207 Integrated Amplifier



17 watts per channel; stereo design; pre-amplifier and power amplifier; response 20-30,000 cps ± 1 db; sensitivity—magnetic input 4.1 mv., tape 2.2 mv., tuner and aux. 100 mv.; 4, 8, 16 ohm outputs; tubes—5-ECC83, 4-EL84, 2-EZ81; 4 1/2" x 14 1/2" x 10 3/4"\$59.95

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 16 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 1/8" w x 6 1/8" x 4 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

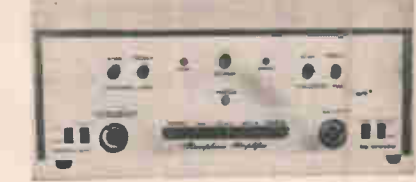
Model 8211 Stereo Amplifier



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 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\$59.95
Salem maple case\$99.95
Lined oak case\$89.95
Walnut case\$99.95
Mahogany case\$89.95

CROSBY ELECTRONICS

Model 680 28-watt Stereo Preamp-Amp
Preamp-amplifier features push-button source selection; individual channel bass and treble controls; mono-stereo blend control; center summed channel; 14



watts per channel, 48 watts peak; response 20-35,000 cps ± 5 db; distortion 1% at full power output; IM distortion less than .4% at normal listening levels; selector switch (tuner, aux. A, aux. B, phono, multiplex); seven inputs and four outputs per channel; 4, 8, 16 ohm impedances, seven tubes, two rectifiers; 13 1/2" x 4 3/4" x 6 3/4"; walnut vinyl-clad cabinet119.95

DE WALD

Model N-5000B "Troubador"



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Monophonic preamp-equalizer, with its own built-in power amplifier, 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

Modal P-1400 "Concerto" Stereo Amp

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



inputs, 4 mv. at 1000 cps for magnetic input; inputs—magnetic, tuner, ceramic, tape, tape output, aux. \$99.95

DYNACO

Dynakit Monophonic Preamplifier



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 under .05% at 1.5 volts output; noise level less than 3 microvolts equivalent input noise on RIAA position; frequency response 10 cps to 100 kc, \pm 1 db; d.c. filaments; 2—12AX7 or ECC-83, selenium rectifier; 4 a.c. outlets, 2 switched; scuff-proof and washable; 12" x 6" x 2 3/4"; 7 lbs.; preassembled printed circuit board.

Kit \$34.95
Factory wired \$59.95

Dynakit Mark III Power Amplifier

Power output 60 watts continuous up to 140 watts peak; frequency response 6-60,000 cps within 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; in-



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S-3000 IV FM/MX Stereo Tuner
14" x 4" x 10 1/2" deep. \$16 0.00



S-5000 II 80 Watt Stereo Amplifier
14" x 4" x 12 1/2" deep. \$199.50



Ravinia Model SR3 3-way
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Speaker System \$139.50

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For complete technical details, write Dept. Y7



1

AMPLIFIERS

cludes 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"x9"x6 $\frac{3}{4}$ ".

Mark III Kit\$79.95
Mark III Factory wired.....\$99.95

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"x8"x4".

PAS-2 Kit\$59.95
PAS-2 Factory wired.....\$99.95

Dynakit Mark IV Amplifier Kit



40 watts power, up to 80 watts peak; less than 1% IM distortion at 40 watts; frequency response ± 0.5 db. from 10 cps to 40 kc.; sensitivity 1.3 volts rms input for 40 watts output; output impedances are 4, 8, and 16 ohms; tubes, 2-EL34, 7199 GZ34 selenium rectifier; 5"x14"x6 $\frac{1}{2}$ ".

Mark IV Kit\$59.95
Mark IV Factory wired.....\$79.95

Stereo 70 Amplifier

Two power amplifiers 35 watts each;



full 70 watts on 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.
Model 70 Kit.....\$99.95
Model 70 Factory wired.....\$129.95

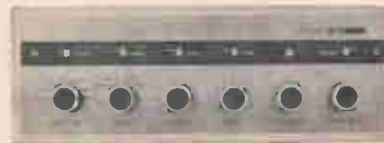
EICO

Model ST-70 Integrated Stereo Amp



Complete stereo control center and amplifier; two 35-watt amplifiers; inputs for tape head, two mag. phono, FM-AM tuners, multiplex; input selection and mode switches; ganged level and separate balance controls; concentric bass and concentric treble controls; tape monitor, tape speed, hi-filter, lo-filter, loudness compensation, phase reversal, and balance-check slide switches; center-channel speaker output; IM distortion 1% @ 70 watts; response 9-60,000 cps ± 1 db. Kit\$94.95
Factory wired\$144.95

Model ST-40 Integrated Stereo Amp



Similar to Model ST-70 except unit has two 20-watt amplifiers; all controls and features as in ST-70 but no phase-reversal or choice of tape-speed equalization; IM distortion 1% @ 40 watts; response 12-25,000 cps ± 1 db.
Kit\$79.95
Factory wired\$124.95

Model HF-89 Stereo Power Amplifier



Each channel rated at 50 watts; cathode-coupled-phase inverter; less than 0.1% IM distortion at normal listening level; less than 0.5% IM distortion at 100 watts continuous; rise time 2.5 μ sec; frequency response $\pm 1/2$ db 5-100,000 cps; sensitivity 0.55 volts for full output; level controls both channels; tubes are ECC83, 2-6SN7GTB, 4-EL34, power and bias rectifiers; inverse feedback 18 db; 6"x15"x1".
Kit\$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.
HF-12 (kit)\$34.95
HF-12 (factory wired)\$57.95

Model WE-70 Cabinet

Unfinished birch\$8.95
Walnut or mahogany\$12.50

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.

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 EF86/6267, 6SN7, 2-6L6GB, 5U4GB; 7"x14"x8".

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-



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.

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; 4 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; hum balance control; 15"wx4 3/4"hx10 1/2"d.
 HF-32 in kit form\$57.95
 HF-32 factory wired\$89.95

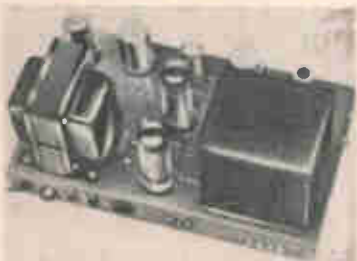
Model WE-71 Cabinet

Unfinished birch\$9.95
 Walnut or mahogany\$13.95

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 EF86/6267, 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



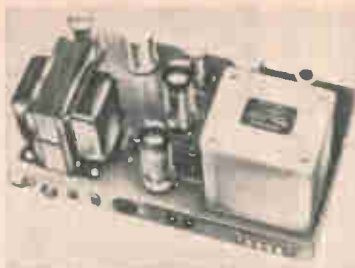
Ultra-linear power amplifier output 50 to 60,000 cps at 1 watt; ± 0.1 db from 15 to 30,000 cps at rated output; harmonic distortion 0.5% 20 to 20,000 cps; intermodulation distortion below 1% at 50 watts, 0.5% at 45 watts; noise level -90 db; sensitivity 0.55 volts input for 50 watts output; 4, 8 and 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.
 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 5/8" 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

Model WE-70 Cabinet

Unfinished birch\$8.95
 Walnut or mahogany\$12.50

Model HF-85 Stereo Preamplifier



Essentially stereo version of Model HF-65 preamplifier; specifications similar

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1 AMPLIFIERS

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 5/8" h x 12" w x 8 1/4" d. HF-85 in kit form.....\$39.95
HF-85 factory wired.....\$64.95

Model HF-81 Integrated Stereo Amp

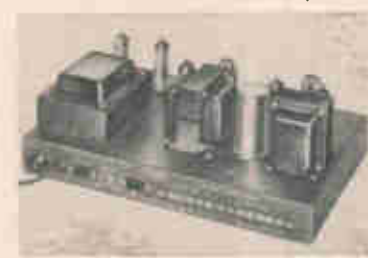


Combines two 14-watt integrated amplifiers on one chassis; 28-watt output on monaural sources (56 watts peak); frequency response 10 to 100,000 cps ± 0.5 db at 1 watt output per channel; IM distortion 2% at 14 watts per channel; hum and noise; phono, -60 db; tape head, -51 db; microphone, -57 db; tuner 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—ECC82/12AU7, 4—EL84, 2—EZ81; 15" w x 4 3/4" h x 10 1/2" d; 24 lbs.
HF-81 in kit form.....\$69.95
HF-81 factory wired.....\$109.95

Model WE-71 Cabinet

Unfinished birch.....\$9.95
Walnut or mahogany.....\$13.95

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 1/2" x 9"; shipping weight, 16 lbs.
HF-86 in kit form.....\$43.95
HF-86 factory wired.....\$74.95

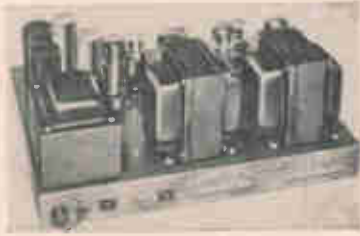
Model AF-4 Integrated Stereo Amp

Two single-ended amplifiers preceded by input selection, mode of operation, tone and level controls; harmonic distortion 4 watts: 1% 100-10,000 cps; IM distortion 2.2% at 4 watts; frequency re-



sponse, ± 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 Stereo Power Amp



Output power: 70 watts (35 watts per channel) continuous, 140 watts peak; IM distortion: 1% at 70 watts; harmonic distortion: less than 1% from 20 to 20,000 cps within 1 db at 70 watts; frequency response: ± 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

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 3/4"; wt 25 lbs.....\$199.50

Stereoscope 556 Stereo Preampifier

Essentially the same as Model 555 less amplifier stage but deluxe version; 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.....\$350.00

ERIC

Model 3459T Integrated Amp



Monophonic design; 17 watts at 1% HD; 20-20,000 cps ± 1 db at normal listening level; transistorized preamp; inputs magnetic & ceramic phono, tuner & aux.; bass & treble controls; scratch filter; IM distortion .9%; hum level 70 db below 10 watts; tubes—5CA4, 2—6BQ5's, 12AX7, 7247, 2N448 transistor; 4, 8, 16 ohm output; metal or walnut cabinets available.....\$69.95

Model 3460P Integrated Stereo Amp



8 watts @ 1% harmonic distortion per channel; bass, treble, loudness, balance & reverse controls: response 20-20,000 cps ± 1 db; IM distortion .9%; hum 65 db below 8 watts; output impedances 8, 16 ohms; tubes—3-12AX7's, 2-6BQ5's, 6CA4; metal or walnut cabinets available.....\$80.00

Model 3160T Integrated Stereo Amp

20 watts @ 1% harmonic distortion per channel; transistorized preamp; bass, treble, loudness, balance & reverse controls; inputs for 20 watts output, mag. phono 2 mv., ceramic phono .5 v., tuner-aux-tape .5 v.; IM distortion .4% at 17 watts; response 20-20,000 cps ± 1 db at normal listening level; hum 70 db below 20 watts; output impedance 4, 8, 16 ohms; tubes—2-12AX7's, 2-7247's, 4-6BQ5's, GZ34, 2-2N448 transistors; metal and walnut cabinets available; panel design similar to Model 3460P.....\$106.20

Model 3560T Integrated Stereo Amp



25 watts @ less than 1% harmonic distortion per channel; transistorized preamp; features 13 individual panel controls; center-channel output; balance & power visual output indicators and "Presence" compensation; response 20-20,000 cps ± 1 db at normal listening levels; IM distortion .8%; hum & noise 80 db below 25 watts; output impedance 4, 8, 16 ohms; tubes—2-12AX7's, 2-7247's, 4-EL86's, 6Z34, 2-2N448 transistors; metal and walnut cabinets available.....\$149.95

FISHER

Model X-100 Integrated 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 X-101-B Integrated Amplifier



Stereo design 26 watts per channel music power; 19 front-panel controls & switches; center-channel output; 14 inputs; harmonic distortion .5% at 26 watts; IM distortion 8% at 26 watts; over-all response 20-20,000 cps \pm 1 db; channel separation 50 db; sensitivity—phono 3.5 mv., tape 2.3 mv., high-level ceramic phono 13 mv., tuner .3 v., monitor .6 v.; 4-8-16 ohms output; tubes—6-12AX7, 4-7591, 5AR4; less cabinet.

\$189.50

Model X-202-B Integrated Amplifier



Stereo design 35 watts per channel music power; 20 front-panel controls plus 2 rear-panel controls; center-channel output; 16 inputs; harmonic distortion .5% at 35 watts; IM distortion 1% at 35 watts; response 20-20,000 cps \pm 1 db; sensitivity—mic. 1.5 mv., RIAA 3.5 mv., Columbia LP 3 mv., tape head (3.75 ips) 1.8 mv., tape head (7.5 ips) 2.1 mv., high-level inputs 280 mv.; 4-8-16 ohm output impedance; tubes—4-7591, 6-ECC83, 2-7247; less cabinet.

\$249.50

Model 400-CX Stereo Master Audio Control Center



Pushbutton control selectors; record-monitor facilities; controls for bass, treble, phase, scratch and rumble filters; 10 tubes: 15 $\frac{1}{8}$ " x 11 $\frac{1}{2}$ " x 4 $\frac{3}{16}$ ".

\$199.50

Model X-1000 Integrated Amplifier

Stereo design 55 watts per channel
1962 EDITION

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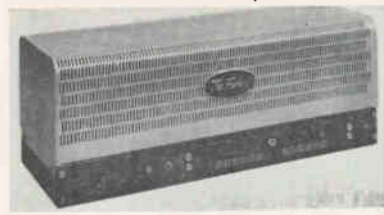
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1 AMPLIFIERS



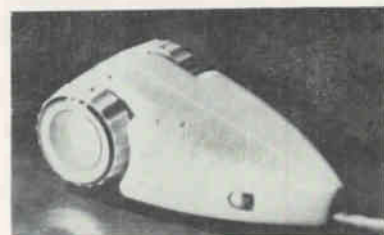
music power; 22 controls and switches; 18 inputs; 11 outputs; center-channel output; built-in "Spacepander" control; response 18-20,000 cps $\pm .5$ db @ 55 watts; harmonic distortion .5% @ 55 watts; IM distortion .8% @ 55 watts; sensitivity for 55 watts—mic. 1.3 mv., RIAA 3.3 mv., Columbia LP 3 mv., tape head (3.75 ips) 1.5 mv., tape head (7.5 ips) 1.8 mv., high-level inputs 230 mv.; 4-8-16 ohms output impedance; tubes—4-EL34, 5-ECC83, 2-7247, 12AU7, 2-EF86, plus 7 diodes; less cabinet.....\$339.50

Model SA-300-B Power Amplifier



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

Model RK-1



Stereo remote control unit; two volume control dials; 30 foot cable; adapter plug; for use with 400-CX, X-202-B, and X-101-B\$17.95

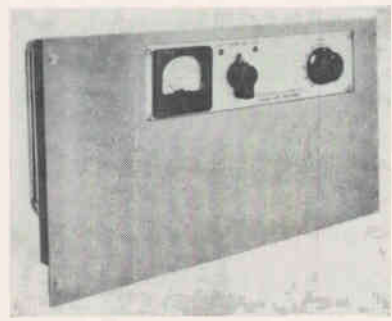
GENERAL ELECTRIC

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

GOTHAM

Model PFB-150WD Power Amplifier



Single channel; 150 watts; push-pull, all-triode design throughout; frequency response at 10 watts $\pm .5$ db, 20-40,000 cps; at 150 watts $\pm .5$ db from 40-15,000 cps; harmonic distortion less than .7% r.m.s. at 150 watts from 40-15,000 cps; intermodulation distortion less than 1% for peak power not exceeding 200 watts; damping factor 40; noise level 100 db below 150 watts output\$815.00

GROMMES

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 -.55 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 $\frac{1}{2}$ ". \$44.95
Enclosure\$5.00

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 -3.5 volts; frequency response ± 1 db 20-20,000 cps; tubes are 4-12AX7, 4-6BQ5, EZ-81; 14" x 4 $\frac{1}{2}$ " x 9".....\$89.95
Enclosure.....\$10.00

Model 36PG Stereo Amp-Preamp

Power output 15 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 @ 1 watt; tubes are 5-12AX7, 4-6BQ5, 4 silicon rectifiers; 14" x 4 $\frac{1}{2}$ " x 11".....\$139.95
Enclosure.....\$10.00

Model LJK Amp-Preamplifier

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 (Kit).....\$27.50

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 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 50PGA Stereo Amp-Preamp

Includes all features of Model 36PG plus 20 watts each channel; power bandwidth 20-20,000 cps @ half power with 1% harmonic distortion; IM distortion 1 $\frac{1}{2}$ % @ 20 watts; tubes—6-6EU7's, 4-6BQ5's, 1-6973...\$189.95
Enclosure\$10.00

Model 20PG-8-K Preamp-Amplifier



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"\$74.95

Model 250KW Power Amplifier

60 watts continuous sine-wave power; response 10-20,000 cps $\pm .25$ db @ 1 watt; harmonic distortion .2% at 60 watts @ 1000 cps; IM distortion 1% at 60 watts; sensitivity 1 volt for 60 watts; noise 90 db below 60 watts; has terminals for measuring output tube current; output 4-8-16 ohms.....\$129.95

Model 250K Amplifier Kit

Power output 60 watts, 120 watts peak; frequency response $\pm .5$ 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

HARMAN-KARDON

Citation I Stereo Preamplifier Control Center Kit



Frequency response 5-80,000 cps ± 0 -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

1962 EDITION

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

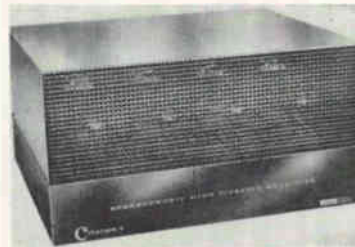
Citation IV Stereo Preamplifier Kit

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



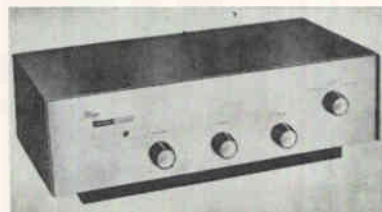
tubes: 6-ECC83; 4 semi-conductor rectifiers; 14 7/8" x 11" x 5 3/8"; wt 16 lbs.....\$109.95
Factory wired.....\$179.95
WC-1 walnut enclosure.....\$29.95

Citation V Stereo Power Amplifier Kit



Similar to Citation II except as noted; 40 watts per channel; tubes: 2-12BY7A, 2-6CG7, 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
AC-2 metal enclosure\$7.95

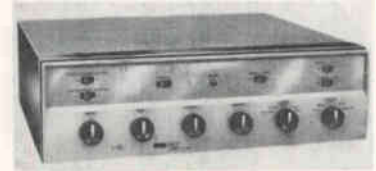
A-10 "Allegro" Amplifier



Output: 10 watts at less than 1% harmonic and 2% IM distortion; frequen-

cy 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 1/4" x 4" x 6 1/8"; 11 pounds\$49.95

Model A260 "Chorale" Stereo Amplifier



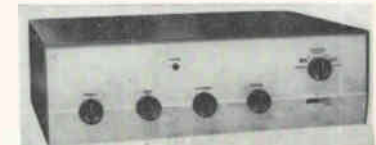
Third channel speaker selector allows remote-local, stereo-monaural combinations throughout the house; output per channel is 30 watts, 60 watts peak power; channel crosstalk is better than 50 db.; B+ regulation held within 1% by silicon diode power supply; less than 0.5% harmonic distortion at full power; front panel controls for function, treble, bass, loudness, mode, 2 speaker selector switches; rumble and scratch filters; tone 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 1/4" x 4 7/8" x 13 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; 13-13/16" x 4 9/8" x 11 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 \pm 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 \pm 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 $\frac{1}{8}$ "w x 10 $\frac{1}{2}$ " d x 4 $\frac{9}{16}$ " h with cage.....\$79.95

A-500 Integrated Stereo Amp

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



low-level 4 mv., tape 2.5 mv.; includes all necessary controls for stereo & tape operations; gain control for center channel; blend control with indicating lamps; stereo headphone jack; high- and low-frequency filters; tubes 4-7355, 1-12AU7, 4-12AX7.....\$164.95

Model A300 Integrated Stereo Amp



Combination preamp & power amplifier; 12 watts per channel continuous sine-wave power; 15-70,000 cps \pm 1 db at normal listening levels; 8 and 16 ohms output; sensitivity—phono (magnetic) 3 mv, phono (ceramic or crystal) 125 mv, tape head 2 mv, tuner 125 mv; has function selector switch, volume control, blend control, bass & treble controls, balance controls, rumble filter, stereo reverse/normal, contour, phono RIAA, and NAB tape equalization; features continuously variable blend control (0 to maximum); tubes—4-7408, 4-12AX7, 12AU7; less cabinet.....\$99.95

HEATH

Model AA-121 Stereo Power Amplifier

Power output 40 watts per channel; frequency response 20-20,000 cps \pm 0.5db 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"wx7 $\frac{1}{4}$ "hx11"d (kit) \$79.95

Model AA-111 Stereo Power Amplifier



Power output 14 watts per channel; frequency response 30-15,000 cps \pm 1db 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"wx 8 $\frac{1}{2}$ "d x 6"h; shpg. wt. 21 lbs. (kit).....\$44.95

Model AA-81 Power Amplifier

Mono version; 35 watt output power; response 20-20,000 cps \pm 1 db @ 35 watts; harmonic distortion less than 2% 20-20,000 cps @ 35 watts; IM distortion less than 2% @ 35 watts; sensitivity .9 v for 35 watts; 4-8-16 ohm output; tubes—6AN8, 2—EL34, GZ34 plus selenium rectifier. Kit.....\$49.95

Model AA-141 Stereo Preamplifier

Frequency response 20-20,000 cps \pm 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 $\frac{1}{8}$ "w x 3 $\frac{7}{8}$ "hx6 $\frac{3}{8}$ "d. (kit).....\$34.95

Model AA-201 Stereo Integrated Amp

Power output 3 watts per channel; frequency response 20-20,000 cps \pm 1 db for rated power; input sensitivity 150 mv. total harmonic, IM distortion less than 3%; 7 position selector switch: mono phono, chan A tuner, chan B tuner, stereo phono, stereo phono reverse, stereo tuner, stereo tuner reverse; phase switch; output impedances: 4, 8, 16 ohms; tubes: 2-EL84, 2-7199, 1-EZ81; shpg. wt. 13 lbs. (kit).....\$31.95

Model AA-100 Stereo Integrated Amp



Rated output: 25 watts per channel; frequency response 30-15,000 cps \pm 1 db for rated output; IM distortion less than 1%, harmonic distortion less than 0.5% at rated power; channel separation 42 db minimum at 1,000 cps; input sensitivity: mag phono; 1.5 mv; tape

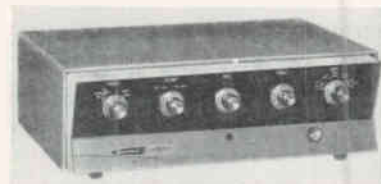
head, 1.0 mv; tuner, aux; aux 2, 0.2 volts; 4 position function switch: stereo, stereo reverse, chan A, chan B; balance control; separation control; dual tandem type level control; dual concentric bass and treble controls for each channel; input level controls for each channel except tape head; power 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 $\frac{1}{2}$ "w x 4 $\frac{3}{8}$ "h x 12 $\frac{1}{2}$ " d.

Model AA-100 (kit).....\$84.95

Model AAW-100 (factory wired).....\$144.95

Model AA-151 Stereo Integrated Amp

Power output 14 watts per channel; frequency response 20-20,000 cps \pm 1 db; channel separation better than 45 db; input sensitivity for rated output: mag phono, 4 mv; crystal phono, 0.25 volts; tuner and aux, 0.2 volts; 4 posi-



tion selector switch: mag phono, crystal phono, tuner, aux; dual concentric (clutch) volume control; dual tandem bass and treble controls; phase switch; 1 filament balance per channel; output impedances: 4, 8, 16 ohms; tubes are: 2-6EU7, 2-6AU6, 2-6AN8, 4-EL84/6BQ5, 1-GZ34/5AR4 Kit.....\$59.95
Wired\$119.95

Model AA-161 14-Watt Amplifier

Frequency response 20 to 20,000 cps \pm 1 db; harmonic distortion less than 1% at 12 watts; IM distortion less than 1.5% at 12 watts; three inputs: magnetic phono (RIAA), crystal phono, and tuner; separate bass and treble controls; hum balance control; screen-tapped output circuit uses EL84 output tubes; output impedances: 4, 8, and 16 ohms; complete with black and gold cabinet; 12 $\frac{1}{2}$ "w x 8 $\frac{3}{16}$ "d x 4 $\frac{3}{8}$ "h; 15 lbs. Mono design (kit).....\$33.54
Model AA-161A assembled.....\$52.95

Model AA-131 Mono Preamp

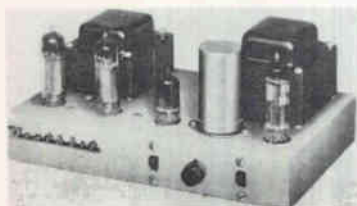
Built-in power supply permits use with any mono power amplifier; six inputs (mag. phono, tape head, microphone, tuner, cry. phono, and aux.); input level controls on tuner and phono inputs; tape-head input NAB equalized so that tape head can be plugged in directly; cathode-followers for both normal and tape recorder outputs; Baxandall-type bass and treble tone controls.
Kit\$24.95

Model AA-91 55-Watt Power Amplifier

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 con-

trolled until tubes have warmed up; black and gold case; 6" h x 8 1/2" d x 1 5/8" w; Mono design (kit).....\$19.95

Model AA-61 14-Watt Integrated Amp



Less than 2% harmonic distortion from 20 to 20,000 cps at 17 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; Mono design (kit).....\$22.95

Model AA-71 Power Amplifier



Rated output: 20 watts, 36 watts peak; Williamson-type circuit; power response: 30 to 15,000 cps ± 1 db; harmonic distortion: less than 2% at 20 watts; IM distortion: less than 1% 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; 5V4; 1 1/2" x 8 7/8" x 7" high. Mono design (kit).....\$41.44

Model AA-191 Integrated Amplifier

Mono version; 3 watts output; response 50-20,000 cps ± 1 db; harmonic distortion less than 3% 60-20,000 cps @ 3 watts; IM distortion less than 3% @ 3 watts; sensitivity (crystal phono & tuner) .15 v. for 3 watts; 4-8-16 ohm outputs; tubes—EF86, EL84, 6X4. Kit\$15.95

KNIGHT

Model KN-400B Transistor Stereo Amp

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

Model KN-611C Mono Amplifier

Supplies 10 watts IHFM music power; separate bass-treble controls; inputs for tape, tuner, mag., xtal, ceramic phono; harmonic distortion less than 2%; IM distortion less than 3%; tape output; 2-EL84 output tubes; response ± 1 db. 30-20,000 cps.\$39.95

1962 EDITION



Massive 130 Watt Power Amplifier, Feature-Packed Control Center use radical ways to simplify Kit building

Exciting News for Kit-Builders! Now, for the first time, H. H. Scott engineering leadership, H. H. Scott quality, and H. H. Scott experience are available to the kit-builder in a massive 130 watt power amplifier kit and a feature-packed stereo pre-amplifier kit.

These new kits utilize the time-saving, labor-saving, techniques pioneered by H. H. Scott in their famous LT-10 FM tuner and LK-72 complete amplifier. To speed assembly time and reduce errors all wires are pre-stripped and cut to proper length; mechanical parts are already riveted in place; each electronic component is mounted on special part charts, easy-to-follow instruction books are in full color.

The new H. H. Scott LC-21 Pre-Amplifier and LK-160 Power Amplifier kits are completely professional units in looks... in design... in specifications. You'll be proud to show and demonstrate them to your friends.



Unique time and labor-saving features of H. H. Scott kits:

1. All mechanical parts pre-riveted in place.
2. All wires pre-cut, pre-stripped.
3. Unique Part-Charts** provide positive identification of parts.
4. Full-color instruction book.
5. Kit-Pak** container opens to convenient work table, folds out of sight when not in use.

** Mass. Trade-Mark Reg. No. 19043, 19044

Outstanding Features and Technical Specifications of These New Kits

LK-150 POWER AMPLIFIER KIT — Output rated at 65 watts music power per channel (60 watts steady state). Famous 6550 matched-pair output tubes, rated at 100 watts. Unique output circuitry assures top performance without external laboratory equipment. IHFM power band from far below 19 cps to more than 25,000 cps (limits of laboratory test equipment). Total Harmonic Distortion less than 0.5% at full power. IM distortion less than 0.5% at full output. Damping factor adjustable to either 16:1 or 8:1 to compensate for differences between some efficient and inefficient loudspeakers. Switchable subsonic noise filter. Amplifier absolutely stable even without load. 15" W x 6 1/2" H x 11 1/4" D. \$169.95*

LC-21 PRE-AMPLIFIER KIT —

Five pairs of stereo inputs, derived center channel output and stereo tape recorder outputs. 16 front panel controls including equalization provisions for microphone, tape head, or RIAA; scratch and rumble filters; magnetic pickup selector; phase reverse; tape monitor; derived center channel level control. Unique power supply shielding, DC tube heaters, and aluminum chassis permit unusually low — 80 db hum level. Distortion less than 0.1% at 2.5 volts output. Can be wired for home or laboratory use where response below 10 cps is required. Frequency response 8 cps to 50,000 cps ± 1 db. 15 1/2" W x 5 1/4" H x 13 1/4" D. \$99.95*

*Cage or case extra. Slightly higher west of Rockies



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1 AMPLIFIERS

Model KN-724 Stereo Amplifier

12 watts IHFM music power per channel; built-in preamp with stereo inputs for mag. phono, crystal or ceramic phono, tuner stereo, and tape deck; switch for stereo/mono operation; individual bass & treble controls each channel; continuous power output 24 watts; response 30-18,000 cps ± 1 db; harmonic distortion 1%; hum & noise -72 db; 4, 8, 16 ohm speaker outputs; output for stereo tape recording; four 6BQ5 output tubes; 4 1/2" x 13" x 9".

\$54.95

Model KN-735 40-watt Stereo Amp

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



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

Model KN-755 55-watt Stereo Amp

All necessary controls including loudness compensation, stereo separation switch; IHFM music power rating 27.5 watts each channel; frequency response ± 1 db. 30-20,000 cps. at 27.5 watts; d.c. for preamp filaments; inputs for ceramic phono, tuner, mag. phono, tape, aux.; tubes are 5-ECC83, 4-6L6GC, 5AS4A rectifier; 4 1/4" x 15 3/4" x 12".

\$99.95

Model KN-780 100-watt Stereo Amp

Has built-in transistorized preamp; tape monitor switch; rumble & scratch filters; individual bass and treble controls; loudness contour switch; speaker phasing switch; six pairs stereo inputs including tape head; IHFM music power output 50 watts per channel; response 25-20,000 cps $\pm .5$ db at full output; IM distortion 1 1/2%; hum and noise -83 db; 4, 8, 16 ohm outputs; output for center-channel speaker; four EL34 output tubes; 4 7/8" x 15 3/4" x 15 1/8".

\$169.95

Model KN-450 Transistorized 75-watt Stereo Amp



Music power output 37.5 watts (IHFM) per channel; response 20-30,000 cps $\pm .5$ db; harmonic distortion .5% at rated power; hum & noise 90 db below rated output (tuner) -65 db (magnetic phono); 5 pairs of inputs—mag. phono, tape preamp, tuner, aux., tape monitor; 2 a.c. convenience outlets; 15 controls including power on-off, tape monitor, stereo/mono, scratch filter, rumble filter,

dual phasing, loudness off-on, stereo normal/reverse, stereo headphone, bass, treble, input selector, stereo balance, volume, and stereo separation; dark brown metal case with brass panel; 3 3/4" x 13 7/8" x 10 3/4"; 4, 8, or 16 ohms impedance. \$199.95

KNIGHT-KIT

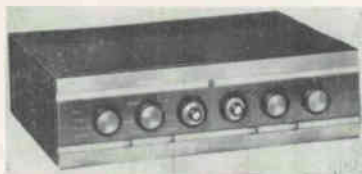
Model KA-25 20-watt Stereo Amp

10 watts per channel; frequency response 35 to 15,000 cps ± 1.5 db at full rated power; harmonic distortion less than 1.5% at rated power; inputs, 4 pair; mag phono, ceramic or crystal phono, tuner, aux.; selector switch positions are: stereo phono, phono reverse, tuner, tuner reverse, aux, aux reverse; mono; phono, tuner; aux; bass and treble on/off controls; concentric volume control; output impedances 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. Kit (83YX927) \$39.95

Model KA-40 32-watt Stereo Amp

Preamplifiers have dc heated filaments; 5 pairs stereo inputs; including tape head input; center-channel output; outputs for stereo tape recording; response ± 1 db 20-20,000 cps; harmonic distortion less than 1% at 16 watts; tubes are 4-7189, 6-ECC83, GZ34. Kit (83YU933) \$59.95

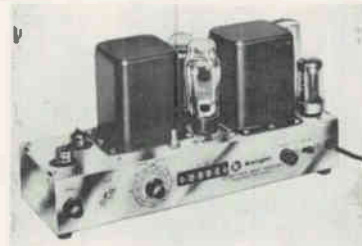
Model KA-55 40-watt Stereo Amp



20 watts per channel; response 15 to 35,000 cps ± 1 db at 10 watts; inputs, 2 each, tape head (NAB), mag phono, ceramic phono, tuner, aux.; 4 position selector switch; 6 position channel selector has stereo, stereo reverse, left channel, right channel, left or right channel through both outputs; impedances are 4, 8, 16 ohms; 8 and 16 ohms for center channel; tubes are 4-12AX7 2-6CM8, 4-6973, GZ34; printed circuit construction. Kit (83YU774) \$76.95

Model KB-30 Basic Amplifier

Power output 25 watts; frequency re-



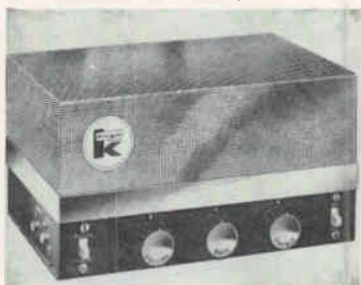
sponse ± 0.5 db, 14 to 45,000 cps at 25 watts; harmonic distortion 0.25% at 25 watts; IM distortion 0.4% at 25 watts; hum and noise 96 db below 25 watts; Williamson-type circuit; output tube balance control; variable damping control; level control; output impedances are 4, 8, and 16 ohms; printed circuit construction; black and chrome finish. Kit (83YU793) \$44.50 Metal cover (83YX794) \$4.75

Model KB-85 70-watt Stereo Basic Amp Features two 30-watt channels; response



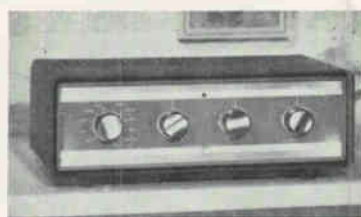
15 to 31,000 cps ± 0.5 db at 30 watts per channel; harmonic distortion 0.15% at 30 watts per channel; IM distortion 0.15% per channel at 30 watts; hum and noise 90 db below 30 watts; individual level controls; printed circuit boards; output impedances per channel are 4, 8, 16, 32 ohms; tubes are 2-EF86, 2-ECC83, 4-EL37, 2-GZ34. Kit (83YU777) \$79.95 Metal cover \$6.50

Model KM-15 12-watt Amplifier



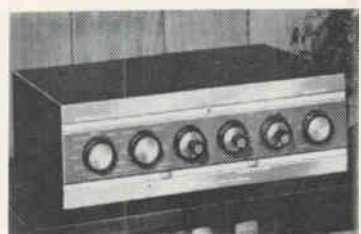
Frequency response 30 to 15,000 cps $\pm 1 1/2$ db at 6 watts; harmonic distortion less than 1% at 1,000 cps for rated output; hum and noise level 65 db down at rated output through high level input; 2 inputs; bass control 9 db boost or cut at 40 cps; treble control 9 db boost or cut at 10,000 cps; tubes are 2-ECC83/12AX7, 2-EL84, EZ80; output impedances are 4, 8, 16 ohms. Kit (83Y784) \$19.95 Metal cover (83Y783) \$3.95

Model KM-20 18-watt Amplifier



Frequency response 20 to 20,000 cps ± 1 db at 18 watts; distortion 0.3% at 18 watts; hum and noise better than 65 db below 18 watts; bass and treble controls; 7-position phono equalization; inputs: magnetic phono, ceramic phono, tape head, tape, aux., tuner; output impedances 4, 8, 16 ohms; tubes are 3-ECC83/12AX7, 2-6973, EZ81; printed circuit construction; complete with cabinet, wire, and solder. Kit (83YX930) \$39.95

Model KP-50 Deluxe Stereo Preamp



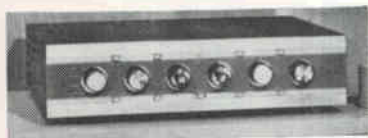
Inputs for 5 stereo pair and mono; dc heated filaments; separate tape outputs; clutch-type controls; frequency response ± 0.5 db 7-120,000 cps; harmonic distortion less than 0.25%; IM distortion less than 0.7% at 1 volt output; bass and treble cut or boost 15 db; scratch and rumble filters.
Kit. (83YX768)\$59.95

Model KX-60 40-watt Integrated Amp

Transistorized unit; built-in preamp has five pairs of stereo inputs including tape head; control for adjusting channel separation; concentric bass & treble controls for individual channel adjustment; rumble & scratch filters; transformerless direct coupling between output stage and speakers; IHFM music power output 20 watts per channel; response 20-20,000 cps ± 1 db at full output; harmonic distortion less than 1% at full output; hum and noise better than 90 db at full output; 20-transistor circuit; less case.

Kit\$79.95
Metal case\$4.95
Wood cabinet\$7.95

70-Watt Stereo Amplifier



Built-in preamplifiers with dc heated filaments; 6 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 4 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.
Kit (83YU934)\$119.95

LAFAYETTE

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 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.

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

Model LA-240 40-Watt Stereo Amplifier

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



loudness switch; rumble filter; mode switch; selector switch (aux., tuner, phono, tape head); hum balance controls. 5 inputs; dual tape output, dual 8- and 16-ohm terminals. Response 12-100,000 cps ± 1 db @ 1 watt; 50-70,000 cps ± 1 db @ full output. 4-6BQ5/EL84, 2-6BL8/ECF80, 3-12AX7/ECC83, 1-GZ34/5AR4. Enclosure and legs included.....\$79.95

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 1/2" x 12 3/4" x 5 1/2"; shpg. wt. 28 lbs.....\$74.50

Model KT-600A 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" x 4 1/2" x 10 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 1/16" x 5 1/4" x 13 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 1/2" x 5" x 4 1/2"\$17.95

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 1/2" w x 11 1/2" d x 5 1/2" h.\$59.50

LEAK

"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% har-



1

AMPLIFIERS

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

"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

"Varislope III" Preamplifier

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



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 mag-

netic inputs, tuner and tape inputs, all with level controls\$79.00

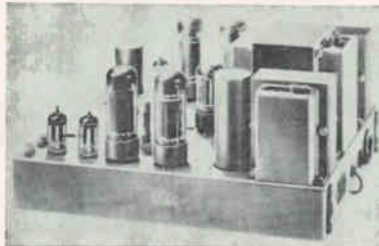
Stereo 50 Basic Amplifier



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

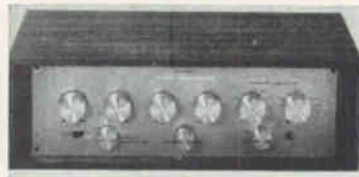
Frequency response 20 to 20,000 cps ± 0.5 db; power output 12 watts per channel; harmonic distortion 0.1% at 10 watts output (1000 cps); hum and



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

MARANTZ

Model IC Mono "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 7000 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 (4 finishes)\$24.00

Model 2A Mono Power Amp.

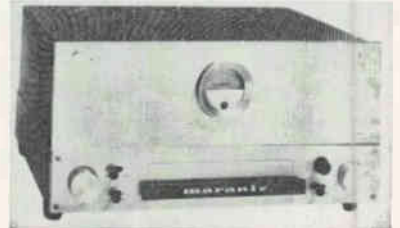
Maximum power output; 40 watts continuous, 80 watts peak; Ultra-linear



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 (supplied with grille)\$219.00

Model 9A 70-Watt Mono Amp

70 watts r.m.s., 140 watts peak; switch for 40-watt triode operation; response 20-20,000 cps $\pm .1$ db at full rated power; subsonic filter switch — .25 db @ 20 cps, —20 db @ 3 cps; harmonic distortion less than .5% at 20 kc; full rated power; IM distortion less than .5%; hum and noise better than 90 db below 70 watts; damping factor 17; can be changed internally; output impedances 4, 8, 16 ohms, plus 1 ohm tap for cen-



ter speaker connection; front panel controls: gain (isolated by cathode-follower phase circuit), phase switch, low filter, test switch (bias readings each tube, built-in test signal for dynamic balance adj.); five bias and balance adjustments plus input and output connections under snap-out access panel; 2—6DJ8/ECC88, 1—6CG7, 4—6CA7/EL34, 1 zener diode, 5 silicon rectifiers; 15 $\frac{3}{8}$ " x 8 $\frac{1}{4}$ " x 10 $\frac{1}{2}$ ".

Model 9A\$324.00

Model 9R (rack mounted)\$354.00

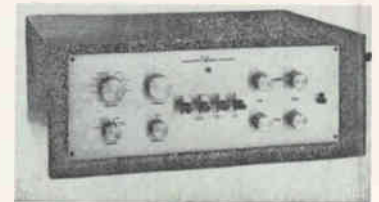
Also available:

Model 970 (70 v. output, plus 8, 16 ohms)

Model 970R (same as Model 970, rack mounted)

Model 7C Stereo Console Preamp

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 $\frac{3}{8}$ " 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 7C but mounted on 19" rack panel.....\$273.00

Model 8A Stereo Power Amplifier



Two 30-watt amps on single chassis; each amp: 60 watts peak; output in triode operation (with minor circuit changes) 18 watts; response 20-20,000 cps \pm 1 db at 30 watts; harmonic distortion less than .1% at mid-frequencies at 30 watts; IM distortion less than .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 plus silicon rectifier (each channel); 13 1/2" x 7 1/4" x 10 1/2".....\$237.00
Accessory grille.....\$9.00

McINTOSH

Model MC-30 Power Amplifier



Power output 30 watts continuous; frequency response 20 to 30,000 cps \pm 0.1 db at 30 watts, 10 to 100,000 cps \pm 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.....\$153.00

Model C-20 Stereo Preamp



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 adjust-

ment; equalization for tape, rumble filter, high frequency filter input sensitivity; tuner 0.25 v; phono 2.5 mv frequency response \pm 0.5 db 20 to 20,000 cps; distortion less than 0.2% at rated output; 17 lb.\$234.00
Walnut or mahogany cabinet for Model C-20.....\$25.00

Model MC-75 Amplifier



Monophonic (single-channel) power amplifier design; 75 watts output continuous sine-wave; harmonic distortion less than .5% at 75 watts for 20-20,000 cps; IM distortion less than .5% (20-20,000 cps, 75 watts); response +0, -1 db 18-40,000 cps at 75 watts; output impedance 4, 8, 16, 67, 150 & 600 ohms; output voltage 25, 70.7, 115 & 230 volts; sensitivity 2 v. for 75 watt output; tubes—12AX7, 12AU7, 12-BU7, 12AT7, 2—KT88 or 2—6550.....\$229.50

Model MC-27 Stereo Amplifier

Basically same as Model MC-75 except dual channel operation; 75 watts per channel; tubes—12AX7, 2—12AU7, 2—12BH7, 2—12AT7, 4—KT88 or 4—6550.....\$444.00

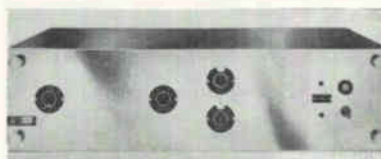
Model MC-240 Stereo Amplifier



40 watts per channel continuous sine-wave; response 20-20,000 cps \pm 1 db at rated power output; harmonic distortion .5% at 40 watts, 20-20,000 cps; IM distortion .5% at maximum output; output impedance 4, 8, 16 (25 v.), 125 (70.7 v.) & 600 ohms; sensitivity 2 volts at full output; tubes—3—12AX7, 2—12AU7, 2—12BH7, 4—6L6GC or 4—7027A.....\$288.00

NEUMANN

Model WV2 Stereo Preamp

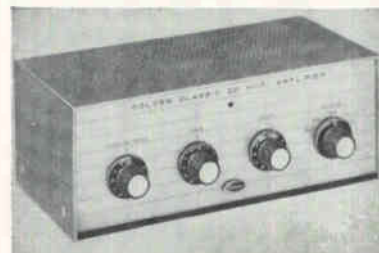


Features non-microphonic 10,000-hour tubes; fully shielded dual input transformer with maximum signal separation and proper impedance match for the DSTa stereo cartridge; two low-impedance inputs are relay selectable; has low-impedance outputs gain 50/70 db

switchable; self noise level less than 1.5 mv.; distortion less than .4% r.m.s.; channel separation 40 db or greater; output level 1.55 v.....\$645.00

OLSON ELECTRONICS

Model AM-171 Integrated Mono Amp



20-watt design with built-in preamp; response 20-30,000 cps \pm 1 db; controls—input selector, volume, bass, treble; inputs—magnetic cartridge, crystal cartridge, tape, tuner, and aux.; outputs 4, 8, 16 ohms; harmonic distortion less than 1% @ 17 watts; tubes—2—12AX7, 2—6BQ5, 6CA4.....\$39.95

Model AM-158 Integrated Stereo Amp



Has built-in preamps; response 30-25,000 cps \pm .5 db; 15 watts per channel; harmonic distortion less than 1%; controls—input selector, balance, volume, mode selector, bass and treble for each channel; inputs—tape head, magnetic, tuner/aux., ceramic cartridge; outputs 4, 8, 16 ohms, tape; tubes—2—12AX7, 4—6BM8, 6CA4; rumble filter; gold hammertone finish.....\$59.95

Model AM-172 Integrated Stereo Amp



Dual 20-watts-per-channel stereo amp with complete front-panel control; channels can be paralleled for 40 watts mono; built-in preamps with d.c. filament supply; response 20-30,000 cps \pm .5 db; 20 watts each channel peak; harmonic distortion .5% @ 15 watts; controls—mode selector, balance, treble, bass, volume, selector switch; inputs—tape head, magnetic, tuner, aux. 1, aux. 2; outputs—4, 8, 16 ohms, tape; built-in hum balance control; tubes—5—ECC/83/12AX7, 4—EL84/6BQ5, GZ34/5-AR4; satin gold with black trim...\$79.95

PACO

Model SA-40 Integrated Stereo Amp



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AMPLIFIERS

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

PILOT

Model 248 Stereo Preamp-Amplifier



36 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

36 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 240 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

Model 246 Integrated Amp



Stereo amplifier-preamp with 30 watts (music power) per channel; 22 watts per channel (continuous sine wave); IM distortion less than .3%; response 10-50,000 cps $\pm .5$ db -1 db; sensitivity—phono & tape head, 3 mv., FM multiplex & tape recorder .11 v.; has provision for center-channel speaker; tubes—6—12AX7, 4—7591, plus silicon power rectifiers; has independent tone controls & loudness switch; two pair high-level inputs, three pair low-level inputs; scratch & rumble filters...\$199.50

PRECISE

Model AMW "Selecta" 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" Integrated Stereo Amplifier



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.\$59.95

QUAD

Model 22 Stereo Control Unit



Frequency response 20 to 20,000 cps $\pm .5$ db on high level input, 20 to 18,000 cps ± 1 db on low level input; push button record equalization with positions for COL-LP, AES, FFRR 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 various cartridges; maximum phono sensitivity; 3—6 millivolts; powered by and designed primarily for use with Quad II power amplifier; tubes: 2-EF86, 2-ECC83/12AX7; 10 1/2" x 3 1/2" x 6 1/2"; designed to be used with Model II power amplifier\$150.00

Model II Amplifier



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

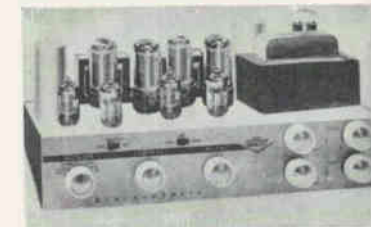
QUALITY

Model 2000 Integrated Amplifier



Rated output: 15 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; hum 60 db below 15 watts on high level input, 50 db on phono input; inputs: magnetic (6 millivolts sensitivity), crystal phono, tape, tuner; output impedances: 4, 8, 16 ohms; one a.c. convenience outlet; tubes: 12AX7, 12AT7, 12AU7, 2-7408, 5Y3; 12 1/2" w x 3 1/2" h x 7 3/8" d.
 Kit form\$28.50
 Metal enclosure.....\$ 5.95

Model STA-24 Stereo Amplifier



Williamson circuit preamp-amp; power output 15 watts per channel; separate bass and treble controls; selector switch for tape high and low, phono high or low, tuner and aux.; four dual inputs for channel A and B, tape and mag. phono, ceramic and xtal phono, tuner and aux.; distortion less than 1%; frequency response ± 1 db, 20-20,000 cps.; tubes are 2-12AX7/ECC83/7025, 2-12AT7/ECC81, 4-7408, 5U4 rectifier; 14" x 8" x 6".....Kit.....\$39.95

Model 2200 Integrated Amplifier

12-watt design; response 20-20,000 cps ± 1 db; distortion 1% at 12 watts; four inputs—mag. phono/tape, crystal phono, tuner, mike/aux.; sensitivity phono 3 mv., others .5 v. for max. output; controls—function, loudness,

bass, treble; tubes—12AX7, 12AT7, 2-6V6's, 5Y3; kit.....\$22.75
Metal enclosure.....\$ 3.95

RAVENSWOOD

Model A-1000 B Stereo Preamp

14 watts per channel music power; response 20-20,000 cps ± 1 db; distortion less than .5% at listening levels; hum 58 db below rated output; controls—bass, treble, balance, loudness, phono, tape/aux., TV, tuner, mono, rumble filter, scratch filter, channel reverse; outputs 4, 8, 16 ohms; tape output; less cabinet.....\$99.95

Model PA-2000 Stereo Power Amp

Power output 30 watts per channel (music power); response 20-20,000 cps ± 1 db; distortion less than .5% hum 90 db below rated output; outputs 4, 8, 16 ohms; less cabinet.....\$99.95

Model PA-3000 Stereo Power Amp

Power output 65 watts per channel (music power); response 20-20,000 cps ± 1 db; distortion less than .5%; hum 90 db below rated output; outputs 4, 8, 16 ohms; less cabinet.....\$199.95

REALISTIC

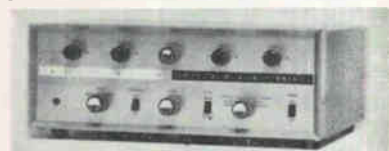
Model AF-12 Mono Amplifier



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.
Kit.....\$24.95
Wired.....\$31.95

Model SAF-40A Stereo Amplifier

Two 20 watt amplifiers, 40 watts monophonic; controls for balance phasing, bass and treble, volume, loud-



ness; 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"x4 1/8"x9 1/16"; includes cabinet.
Kit.....\$59.95
Wired.....\$79.95

Model SAF-24 Stereo Amplifier



12 watts per channel (48 watt mono peaks); response 20-20,000 cps ± 1 db; distortion 1.8% total r.m.s.; hum -52 db phono, -72 db tuner; sensitivity 4 mv. mag. phono, .85 v. tuner;

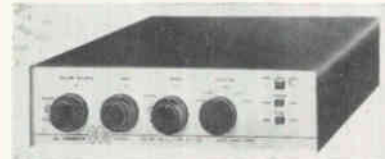
tone controls; output impedances 4, 8, 16 ohms; 12"x4 1/4"x7 3/4".....\$59.95

Model TA-208 Stereo Amplifier



Fully transistorized—6 power transistors, 12 medium-gain transistors, 2 driver transformers, 1 rectifier transformer, no output transformers; 25 watts per channel continuous; response 20-15,000 cps ± 1 db (full power) 10-20,000 cps ± 1 db (10 watts); hum & noise -55 db below rated output for low level inputs, -70 db below rated output for high-level inputs, measurements made at 1000 cps; sensitivity (measured at 1000 cps, full power output) mag. phono 4 mv., tape head 3 mv., high-level 300 mv., output impedances 2-40 ohms; 15"x5"x10".....\$189.95

Model TA-218 36-Watt Transistorized Stereo Amp



Three silicon diodes, 4 power transistors, 4 low-level transistors, 2 germanium rectifiers, 2 germanium diodes; response 20-20,000 cps ± 5 db (IHFM standards). down 3 db at 6 and 45,000 cps; IM distortion .9% @ 1 db below clipping 50 & 60,000 cps; harmonic distortion .5% at 1 db below clipping; sensitivity (full output) mag. phono 3 mv., aux. 140 mv.; tone controls; 105-120 v. a.c., 12-28 v. d.c., 2 watts no signal, 60 watts max. signal; no output transformers; matches all common output loads; 3"x10 1/8"x8 1/2".....\$99.50

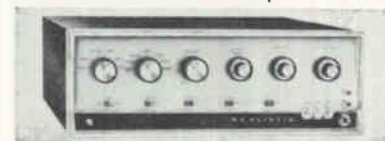
Model STA-50 FM/AM Stereo Receiver/Amp

FM tuner section—response 20-18,000 cps ± 2 db; sensitivity 2 μ v., a.f.c.; separate i.f. and detection stages; negligible drift with a.f.c.; AM tuner section—tuned r.f. stage, superhet circuit, 3 stages a.v.c., ferrite core antenna; amplifier section—20 watts per channel (80 watts mono peaks); response 20-20,000 cps ± 1 db; distortion .9% total r.m.s. @ 400 cps; IM distortion 1.5% (60/3000 cps 4:1 ratio); sensitivity (at full output) mag. phono 3 mv. @ 1000 cps, tape head 2.2 mv. @ 500 cps, tuner 180 mv. @ 1000 cps; aux. 180 mv. @ 1000 cps, d.c. on all tube filaments; loudness control; 20 tubes; 17 1/2" x 5 1/8" x 13 3/4".....\$159.95

Model SA-203 Stereo Amplifier

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

Model SP-212 Stereo Preamp



Response 5-60,000 cps ± 1 db; IM distortion .9% @ 1/2 volt, less than .25% @ 2 volts output (uncompensated); hum & noise, high-level -78 db, low-level, -60 db; attenuation—rumble filter 10 db/octave below 70 cps, scratch filter 6 db/octave above 2000 cps; sensitivity—low-level 2 mv. @ 1.5 volt output; high-level 500 mv. @ 1.5 volt output; has loudness and tone controls; 14 front-panel controls plus tape output jacks and stereo headphone jacks on front panel; 15 1/2"x5 5/8"x6 3/4".....\$99.95
Kit.....\$69.95

Model BA-210 140-Watt Stereo Amp

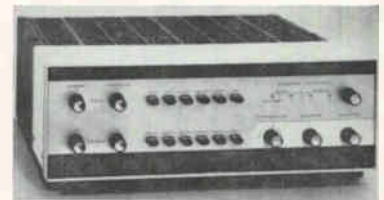
70 watts per channel continuous; response 5-80,000 cps ± 5 db; harmonic & IM distortion less than 2% at full power (20-20,000 cps); sensitivity 1.8 volts r.m.s.; separation 60 db; output impedances 4, 8, 16 ohms; power supply—silicon diode full-wave voltage doubler with filter choke and thermal time delay for protection of filters and tube filaments; 10 3/4"x14"x7".....\$179.95
Kit.....\$109.95

Model HK-200 Stereo Amplifier Kit

Fully transistorized 25 watts per channel; response 10-15,000 cps ± 1 db at full power, 10-20,000 cps ± 1 db at 10 watts per channel; hum & noise unmeasurable at full power; inherent impedance-matching device requires no output transformers yet matches all loads 2-40 ohms; 15" x 5" x 10".....\$139.95

SARGENT-RAYMENT

Model SR-2040

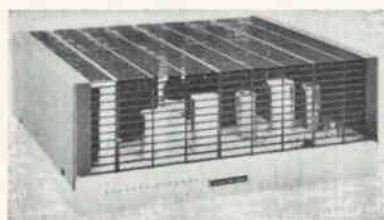


Stereo preamp/amplifier; 20 watts per channel; frequency response 20-20,000 cps; 1 db; IM distortion less than 1.5% for rated power; harmonic distortion less than 1% at rated power; centre channel output; channel reverse; stereo balance control; push-button contour control; dual tape outputs; separate 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.....\$199.50

Model 2051

Stereo 50 watts (per channel) amplifier; other specifications and features similar to SR-2040.....\$263.70

Model SR-540 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

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AMPLIFIERS

rated output; sensitivity: 1.5 volts for 17 watts output; outputs: 4, 8, and 16 ohms; provides power for Models SR-7000 or SR-8000 tuners; 7189 output tubes; 8" d x 14 1/2" w x 5 1/2" h.....\$106.60

Model SR-520 20-Watt Basic Amplifier

Equivalent of one section from Model SR-540; all specifications similar to Model SR-540; provides power for Models SR-7000 or SR-8000 tuners; 5" d x 14 1/2" w x 5 1/2" h; 19 lbs.....\$59.60

H. H. SCOTT

Model 99-D Monophonic Preamp-Amp.



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 iack 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.

Model 99-D.....\$114.95
Model C metal case.....\$12.95
Wood accessory case.....\$19.95

Model 122 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 in-

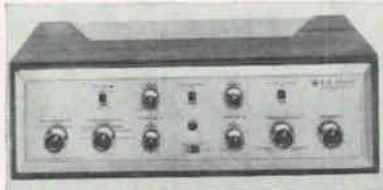


puts, separate level controls each input; sensitivity: mag. phono 3 mv. for 2.5 volts output; NARTB tape 1.5 mv. for 2.5 volts output; tuner .1 volt for 2.5 volts output; 10 volts maximum output; frequency response 20-30,000 cps; harmonic distortion less than .8% at rated output; max. bass boost and 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 1/2" x 13 1/4" x 5 1/4"; 16 lbs.....\$285.00
Metal and wood cases same as for Model 99-D.

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 20-20,000 cps; IM distortion less than 0.3%; inputs are 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.....\$144.95

Model 299-C Stereo Preamp-Amplifier



Two complete amplifiers on one chassis; power output per channel 36 watts, 72 watts peak; both channels in operation when used with monaural program sources; harmonic distortion less than 0.8%; IM distortion less than 0.5%; individual bass and treble controls for each channel; 2 low level and 3 high level inputs per channel; dual outputs to tape recorder and 4, 8, and 16 ohms to speaker; low level input sensitivity: 3 millivolts; 4-position record equalizer; NARTB tape equalization; loudness-volume control; stereo balance control; scratch and rumble filters; phase reverse; stereo reverse; front panel center-channel level control; microphone equalization and earphone outlet for binaural listening; tubes are: 4—12AX7, 2—7189, 5U4GB, 2—7591.....\$224.95

Model LK-72 Stereo Integrated Amp

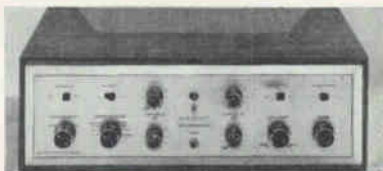
36 watts output each channel; IHFM power band extending down to 20 cps; total harmonic distortion less than 0.8% at 1 kc. full power; hum level



better than 75 db below full power output; stereo controls include center-channel level control, scratch filter, tape recorder monitor, separate bass and treble each channel; tube heaters d.c.-operated.

Model LK-72 (Kit).....\$159.95
Model LK-72 (wired).....\$249.95
Metal & wood cases same as for Model 99-D.

Model 222-C Integrated Amplifier



Power output 22 watts per channel; hum and noise better than 75 db below full power output; harmonic distortion less than .8% at full power; response 20-20,000 cps; IM distortion less than .5%; IHFM power band from below 19 cps to above 20,000 cps; inputs are either 3 mv. or 9 mv. for magnetic phono (RIAA) or tape head (NAB) equalization; tape monitoring provisions; tuner and extra high-level inputs provided; seven position stereo selector switch same as on 299-C and 296; scratch filter; loudness compensation; stereo tape recorder and derived center-channel outputs; front-panel stereo headphone output; tubes—4—12AX7, 2—7189, 4—7189, 1—5AR4; less cabinet.....\$149.95

Model LC-21 Preamplifier



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

Kit (less case).....\$99.95
Model LC-21 (wired, less case) \$169.95

Model LK-150 Stereo Power Amp



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

Model LK-150 Kit (less case)...\$169.95
Model LK-150 (wired, less case).....\$269.95

Model LK-48 Integrated Stereo Amp



Power output 24 watts per channel; hum and noise better than 75 db below full power output; harmonic distortion

less than .8% at full power; response 20-20,000 cps; IM distortion less than .5%; IHFM power band from below 19 cps to above 20,000 cps; inputs are either 3 mv. or 9 mv. for magnetic phono (RIAA) or tape head (NAB) equalization; tape monitoring provisions; tuner and extra high-level inputs provided; seven-position stereo selector switch same as on 299C and 296; scratch filter; loudness compensation; stereo tape recorder and derived center-channel outputs; all wires precut to correct length; tube sockets, terminals, etc. are pre-riveted at factory; tubes—4-12AX7, 2-7199, 4-7189, 5AR4.

Model LK-48 Kit (less case).....\$119.95
 Model LK-48 (wired, less case).....\$189.95

Model 296 Integrated Stereo Amp

Power output 45 watts per channel; hum and noise better than 75 db below full power output; harmonic distortion less than .8% at full output; IM distortion less than .5%; dynamic rumble suppressor removes low-frequency noise without fixed reduction of low-frequency response; IHFM power bandwidth from below 19 cps to above 20,000 cps; input selector includes mic. equalization; RIAA and NAB tape head equalization, tuner and extra high-level input; switching provided for selecting between two magnetic inputs; phase reverse; loudness compensation; and derived center-channel level control; tubes—6-12AX7, 2-7199, 4-7581, 2-5AR4, 6BL8/ECF80; less case.....\$299.95

SHELL

"The Meadowbrook" Integrated Amp

30 watts per channel; response 30-20,000 cps ± 1 db @ 30 watts; IM less than 2% to 30 watts; harmonic distortion less than 1%; sensitivity @ 30 watts—tape head 3 mv.; mag. phono 4 mv., ceramic phono, tuner, and aux. .3 volt; outputs 4, 8, 16 & 32 ohms; has center-channel output; features tone controls, loudness compensation & low-frequency filter; tubes—4-7591, 2-7199, 12AU7,

2-12AX7, 5AR4, 1629.....\$159.95

"The Manhasset" Integrated Amp.

20 watts per channel; response 30-20,000 cps ± 1 db @ 20 watts; IM less than 2% at 20 watts; harmonic distortion 1% 30-10,000 cps; input sensitivity @ 20 watts—tape head 3 mv., mag. phono 4 mv., ceramic phono, & tuner .3 volt; outputs 4, 8, 16, & 32 ohms; features tone controls, loudness compensation, & low-frequency filter; tubes—4-7189, 2-7199, 2-12AU7, 12AX7, 5AR4, 1629; panel design similar to "The Meadowbrook".....\$129.95

"The Northport" Integrated Amp

10 watts per channel; response 30-20,000 cps ± 2 db; inputs—mag. phono, tape, tuner; sensitivity @ 10 watts .3 volt (tuner), 4 mv. (phono-tape); output impedance 8 ohms; tubes—2-7189, 2-12AX7, 2-12AU7, 6CA4.....\$79.95

SHERWOOD

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 flexstone case.....\$5.00

Model S-360 36-Watt Amplifier

Basic amplifier for use with any preamplifier: 4, 8, and 16 ohm outputs; 13 1/2" x 4 3/4" x 6".

S-360S (less cage).....\$59.50
 S-360C (with cage).....\$62.50

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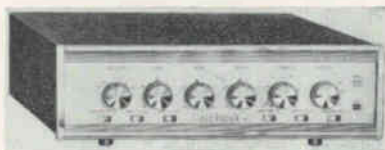
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1 AMPLIFIERS

Model S-5000 II Integrated Stereo Amp
 Similar in appearance to Model S-5500; 36 watts per channel (80 watts total IHFM music power); response 20-20,000 cps $\pm 1/2$ db @ 36 watts; IM distortion 1 1/2% at rated output; hum and noise—phono input, 60 db below rated output; d.c. filament supply; sensitivity—radio 0.25 volt, phono 2 1/2 mv.; inputs—phono, tape head, six high-level; two cathode-follower recording outputs; controls include 2 db/octave scratch and rumble filters and presence rise switch; tubes—4-7591, 6-12AX7/ECC83, 2 silicon and 1 selenium rectifier; less case.....\$199.50

Model S-5500 II Integrated Stereo Amp



Has friction locked dual knobs on bass and treble controls; 32 watts per channel (64 watts total IHFM music power); response 20-20,000 cps $\pm 1/2$ db @ 24 watts with 1 1/2% IM distortion; hum and noise—phono input, 60 db below 24 watts; d.c. filament supply; inputs—phono, tape head, six-high-level; two cathode-follower recording outputs.
 S-5500 II (less case).....\$164.50
 With (brown) or B (black) flextone case.....\$169.50

STROMBERG-CARLSON

Model ASR-437 Power Amplifier

40 watts continuous sine-wave; single-channel design; harmonic distortion .5% 20-20,000 cps @ 40 watts; response 10-60,000 cps ± 1 db @ 40 watts; hum & noise -90 db; sensitivity variable .7-10 volts; impedance 4,8,16 ohms.....\$145.00

Model ASR-660 Integrated Stereo Amp

18 watts per channel; response 20-20,000 cps $\pm .5$ db; IM distortion 1% @ 18 watts; harmonic distortion .6% @ 1 kc. -18 watts; sensitivity, tuner -2 v., mag. phono -2 mv., cer. phono -2 v.; output 4, 8, 16 ohms plus center speaker 8 & 16 ohms; bass, treble controls; rumble, scratch filters.....\$149.95
 Hinged top cover.....\$ 8.95

Model ASE-6 & ASP-60 Amp System

Similar to ASR-660 except power amplifier built on separate chassis from preamp.....\$159.95
 Vinyl top cover for preamp.....\$ 5.95
 Power amplifier cage.....\$ 5.95

Model ASR-880 64-Watt Stereo Amp



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; fre-

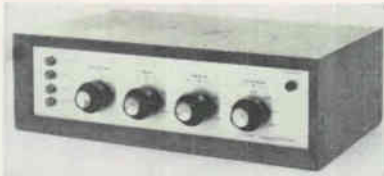
quency response ± 0.8 db 18-38,000 cps; inputs for mag phono, ceramic phono/tape, tuner; scratch and rumble filters; light indicates function...\$199.95
 Model AC-880 Cover.....\$ 8.95

Model 220C Integrated Stereo Amp

12 watts per channel; response 20-30,000 cps $\pm .5$ db; sensitivity, tuner -3 v., mag. phono -3.5 mv., cer. phono -3 v.; output 4, 8, and center speaker 4 & 8 ohms; IM distortion 2% @ 12 watts; harmonic distortion .7% at 1 kc., 12 watts; bass, treble controls; rumble, scratch filters.....\$119.95
 Top cover.....\$ 6.95

TAM

Model S-307 30-Watt Preamp/Amp



30 watts (15 watts per channel); completely transistorized; 110-117 v. a.c. or 12-24 v. d.c.; response 20-20,000 cps ± 3 db; distortion less than 1% at normal listening levels; dual inputs for mag. phono, tuner, tape, and aux.; dual outputs to match any speaker system 4, 8, 16 ohms; controls—bass, treble, & volume each channel, plus function selector; 3"x11"x6 1/2" in metal case.....\$149.50

Model K307 kit with metal case.....\$96.50
 Wood enclosure, unfinished birch.....\$12.00

Wood enclosure, walnut.....\$16.00

Model S-109 10-Watt Preamp/Amp

10 watts (5 watts per channel); completely transistorized; 12-24 v. d.c. (optional power supply available for use with 117 v. a.c.); response 20-20,000 cps; distortion less than 1% at normal listening level; dual inputs for ceramic phono, tuner, tape, aux; dual outputs; individual channel control for bass, treble, & volume, plus function selector; 3"x11"x6 1/2" in metal case.....\$84.95

Model K109 kit with metal case.....\$59.95
 Model KP25 power supply.....\$28.00
 Model KP25 power supply kit.....\$22.00

TEC

Model S-15 Integrated Stereo Amp



All-transistor; 20 watts music power per channel; response 20-20,000 cps $\pm .5$ db; 6-95,000 cps $\pm 0-3$ db; harmonic distortion .5% at 1 db below clipping; sensitivity for 20 watts—phono 3 mv., high-level .14 v.; inputs—magnetic phono, tuner, tape, two aux.....\$129.50

TECH-MASTER

Model PA-39 Integrated Stereo Amp

7 watts per channel; crystal or ceramic phono and tuner inputs; balance control; separate tone controls; mono/stereo switch; speaker reversing switch; tubes—2-EL84, 12AX7, EZ80; 10 3/8" w. x 5 3/8" d. x 4 1 3/16" h.....\$49.50
 For magnetic cartridge input (uses 2-transistor amplifier).....\$69.50

Model P-41 Stereo Preamp

Transistorized design; separate bass and treble, volume and balance controls; six high-impedance and four low-impedance inputs, for low and high output cartridges; four outputs for amplifier and tape; with cabinet, less batteries; 3" h. x 9" w. x 5 1/2" d.....\$59.50

TEECO

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 1/16".....\$19.95

Model 915A/917 Integrated Mono Amp

Separate bass and treble controls; selector for phono equalization (LP, Eur., RIAA); 3-pos. contour switch; hum balance control; output jack for tape recording; 15 watts at less than 1% distortion; 4, 8, 16 ohms output impedance; response flat 30-30,000 cps; input level—crystal phono 75 db gain, radio and aux. 75 db gain, mag. phono and tape 110 db gain, mic. 110 db gain; hum 90 db from rated output; controls include function selector, volume, treble, and bass.....\$56.50

Model 957 Integrated Stereo Amp

7 watts each channel at 2% distortion; separate switch for mono 14-watt oper-



ation; output impedance 4-8 ohms; response 40-20,000 cps; inputs mag. or cer. phono, tape, tuner, aux.....\$67.50

Model 1230 Integrated Stereo Amp

Dual 15-watt power amps plus separate output for center channel; for use with mag. cartridge, tape head, cer. or cry. cartridge, AM-FM tuners, or aux. equipment; switch for either stereo or 30-watt mono; 4, 8, 16 output impedance; 8



ohms for center speaker; response flat 30-30,000 cps; input level gain—tuner or aux. 75 db, cer. or cry. phono 75 db, mag. phono or tape 110 db; controls, power on-off, function selector, stereo selector, treble, bass, balance-loudness, lo-filter, hi-filter, stereo-mono; tubes 5-12AX7, 4-EL84, 2 silicon diode rectifiers.....\$119.75

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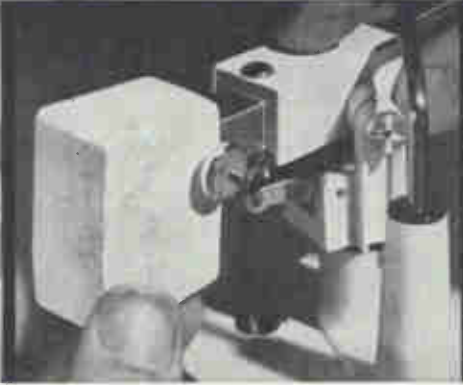
Here, very simply, is why
 Garrard's LABORATORY
 SERIES Type A
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 number one record player



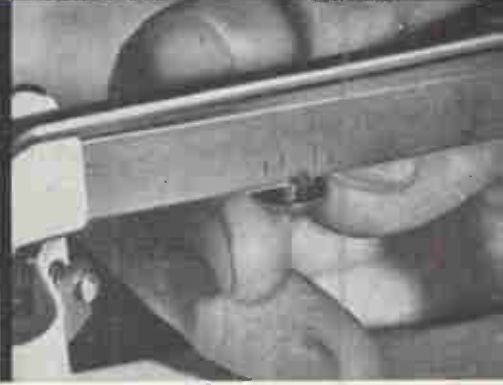
Garrard has combined a dynamically balanced tone arm; a heavy, full-size turntable; a laboratory-balanced precision motor... plus the convenience of the world's finest automatic record-changer (to use when you desire). Each is a precision device comparable to professional equipment of the kind which, up to now, you would have had to buy separately.



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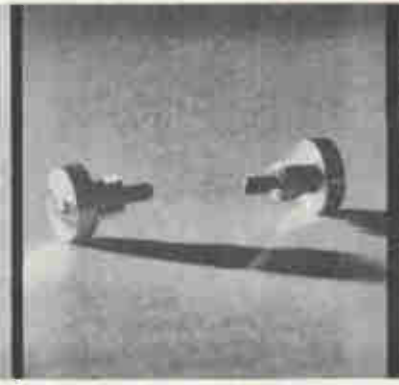
Thus, to adjust the stylus tracking force, you simply move the counterweight until the arm is in perfect balance, at zero pressure.



Then, the scale built into the arm enables you to set the lightest tracking force prescribed for any cartridge, even those labelled "professional."



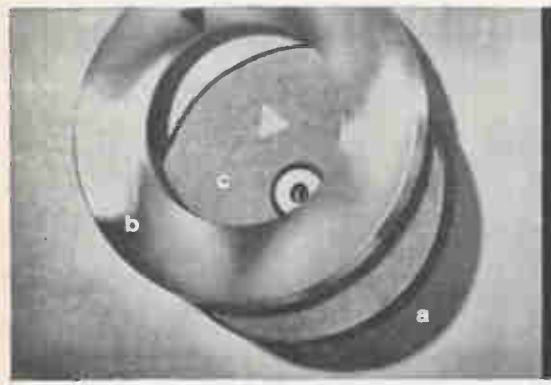
Once balanced and set, the Type A tone arm will track perfectly each side of the stereo groove, even if the record player is intentionally tilted or the record warped.



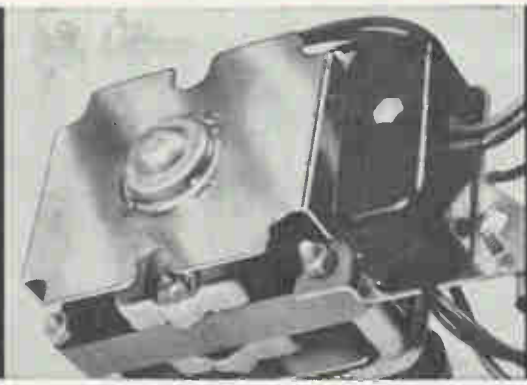
Perfect performance also requires minimum swing friction... guaranteed by the pair of needle pivots holding the arm.



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Garrard's exclusive pusher platform record changing mechanism is foolproof... gives the Type A the tremendous convenience of automatic play.

An extravagant concept, yes... but the price of the Garrard Type A Automatic Turntable is exceedingly modest... only \$79.50. For literature on the Type A and other Garrard automatic turntables, record changers, manual players and accessories, write Dept. GM-1501, Garrard Sales Corp., Port Washington, New York

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SECTION

2

Special Features

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Hi-Fi Record Changers

By WARREN DeMOTTE

Modern record changers have been considerably improved for stereo. Here are important facts to help you make your selection wisely.

ROTATING a phonograph record and enabling a stylus to pick up the program engraved in its grooves can be accomplished in several ways. The basic components required for this purpose—the turntable and the tonearm (with its phono pickup cartridge)—remain constant, but each may vary in design and together, they can be combined in different ways to meet different conditions.

The most popular combination of turntable and tonearm is incorporated in the record changer, a device which ingeniously combines all of the functions of record handling, playing, and changing within one integrated unit that operates automatically. Less common are the individual turntable and tonearm and that compromise combination sometimes called, rather unimaginatively, a record player or semi-automatic turntable.

In high-fidelity circles, the individual turntable and tonearm are frequently accorded qualitative precedence over either of the automatic record-handling devices. Some of the reasons for this are that turntables are available in many types, grades of quality, and differences of size and weight. Tonearms appear in an equally large variety and each can be utilized at its optimum operating efficiency without having to trigger an automatic record-changing mechanism.

However, a substantial majority of record collectors are not primarily concerned with the niceties, refinements, and subtleties of what are, to them, merely mechanical means of getting the record into play. They want something simple to operate, foolproof in performance, and convenient in general use.

For them, the record changer offers an ideal realization of their requirements. Once set, it automatically places the stylus on the record easily and accurately and it plays one record after another without further attention. Little skill or facility is required to operate a changer properly. Stacking the records, pressing the right buttons, and turning the right knobs are light tasks anyone can perform. The record changer does the rest and, today, it does it quite well. As a matter of fact, some record-changer manufacturers have striven to produce a product whose performance equals that of some individual turntables and arms. However, it is not logical to expect that any record changer be equal in performance to a professional-type turntable whose cost is considerably above that of the changer even without any of the automatic facilities.

Stereo Records

With the introduction of the stereo disc, new problems arose in the matter of record reproduction. One of these was the appearance of rumble where little or none had been present before. This nuisance was admitted by the higher vertical compliance of the stereo cartridge, a compliance which was not demanded by the monophonic record and which, therefore, was not incorporated in the monophonic cartridge. High vertical compliance increases rumble and many turntables and changers which functioned entirely satisfactorily with mono records were found less than adequate with stereo records or with mono records played with a stereo cartridge.

As high vertical compliance is a stereo necessity, the situation could be corrected either by a bass cut-off—called a “rumble filter”—or by improving the design of the turntable or changer. The first method is wasteful and unsatisfactory in a high-fidelity system. Cutting off bass tones

to eliminate rumble also means eliminating one of the most attractive features of high-fidelity reproduction—the ability to hear bass tones with clarity. For this reason, it was found more advantageous and more practical to follow the second course and cut out rumble through improvement in design. Thanks to such engineering improvements, many changers today operate more effectively than some of the expensive turntables did during mono days.

Virtually all record changers carry manufacturers' specifications which indicate that they will not introduce objectionable rumble into the average hi-fi system. However, where the system includes speakers with very good bass response, theory sometimes gives way to fact and it is wise when buying a changer to ask that it be demonstrated in conjunction with speakers and an amplifier—preferably similar to those you own. You can then hear if the changer introduces any rumble or not.

The most important function of a turntable—whether a separate unit or incorporated in a changer—is to rotate the record at a constant speed. Deviations from constant speed show up as annoying changes of pitch known as “wow” and “flutter.” Piano tones are particularly affected by this operational defect and a simple test to uncover it is to play a recording of slow piano music. The piano tones should be firm and incisive. If they sound “watery” and quavery, the changer turntable is, of course, unsatisfactory.

When making this test, it is advisable to stack several records on the changer, perhaps to capacity, with the test record last. If the sound of the test record is good, this is also an indication that the motor is powerful enough to function properly with more than one or two records on the platter. A weak motor is quickly exposed by means of this test.

Record Changing Methods

There are three common ways in which the records are changed: one is by pushing, the other two completely by spindle action. Of these, the pusher-type usually employs a bent spindle. In all instances the records are stacked on a discontinuity or step high on the spindle. In two types, they are further supported by either an overhead arm or a pusher platform. The third type has a straight spindle with projecting prongs that support the record stack and retract momentarily within the spindle to let the bottom record drop. The prongs then return rapidly to their original position to support the remaining records.

In purchasing a changer, it is wise to observe the change cycle in action with a stack of records. The actual changing process should be smooth, without sticking. If there is sticking during the change cycle, damage will be inflicted on the records and perhaps on the stylus and cartridge.

There are some changers which will operate automatically with records of various sizes intermixed in any order. Other changers will do the same with different size records, but only when the largest discs are placed at the bottom of the stack and the remainder stacked in order of decreasing size. Still other changers will play only one size of record per sequence. Of course, in all instances, the stack must be made up of records of the same speed.

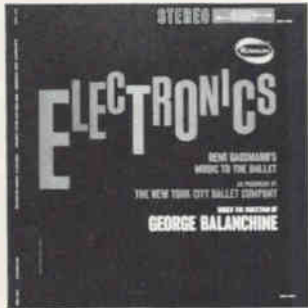
Speeds and Cartridges

Most changers will operate at all four record speeds: 78, 45, 33½, and 16⅓ rpm. Very few records are available at

STEREO/HI-FI DIRECTORY

SINGULAR, INDEED

... one the alpha, one the omega; both by Westminster—and without both, even the most extensive Stereo library is decidedly lacking.



ELECTRONICS: MUSIC TO THE BALLET.

Never available until now, this historic sonic innovation is Remi Gassman's electronic ballet, created without orchestra and danced by the New York City Ballet under the direction of George Balanchine in its 1961 premiere. Unlike anything you have heard before, this is electronic music that goes far beyond the usual limitation of nature sounds and musical instruments. This is the *art* of music emancipated from human limitations . . . lifted to new horizons where the ear hears sounds as never before.

Music created by Gassman in collaboration with Oskar Sala in his electronic sound studio.

XWN 18962 (Mono) \$4.98—WST 14143 (Stereo) \$5.98

TESTING TESTING TESTING: Not a "sampler",

but a precise testing tool, containing material not available on any other record. Created by Westminster to provide sound engineers, technicians, and stereophiles a definitive check on stereo equipment and a guide to corrective measures. You can accurately check—and correct—frequency response, separation, dynamic range, channel phrasing, turntable wow and flutter and stylus tracking. Tests include: (1) Frequency tones, to check with frequency response apparatus; (2) Frequency tones cut to the Fletcher-Munson curve, let you detect variations by ear; (3) Musical and non-musical examples, allow you to judge reproduction, check technical facets by ear. Music was conceived and composed for this recording alone. SRX \$5.98

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Westminster collection—library for perfectionists the world over.

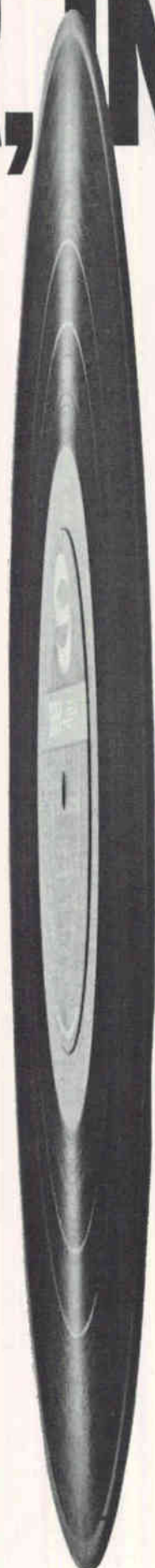
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IS THE SELECTIVE LISTENER

WESTMINSTER RECORDING CO., INC.

A SUBSIDIARY OF AM-PAR CORP., 1501 BROADWAY, NEW YORK 36

1962 EDITION



the slowest speed and, except for speech, 16 $\frac{3}{4}$ rpm is not likely to be used any more extensively in the near future. Some changers employ an extra centerdrop automatic spindle for playing 45's; others use the regular changer mechanism and spindle, requiring small adapters be inserted in the larger holes of the discs. The first method is much more convenient in cases where the record collection contains many 45's which are played more frequently than the 33 $\frac{1}{2}$ discs.

Most changers will accept standard cartridges, but some will not function properly at the very light tracking pressures of a few very high compliance cartridges. This limitation is caused by the arm's having to trip the change mechanism. It is not too serious a limitation, however, as changers now have far more sensitive trips than formerly and most of them function at light enough pressures to accommodate very fine cartridges. Along these lines some manufacturers of cartridges make two slightly different models of a given cartridge type, one specifically designed for record-changer use and the other for separate tonearms. On the other hand, there are some changer manufacturers who claim that their tripping mechanism is sensitive enough to permit stylus pressures that are limited solely by the design of the cartridge itself.

Changers with removable spindles are more convenient to use than those with permanently placed spindles. A removable spindle simplifies record removal. Changers that employ short, straight spindles for single record playing are also more convenient. Another simple convenience is facilities for manual operation when this is desired and a reasonable requirement is automatic shutoff after the last record is played. Another reasonable requirement is a muting arrangement in the changer's electrical circuit so that the change cycle does not cause clicking and popping noises to come through the speakers. There are, however, some changers which, since the manufacturers claim there is little or no electrical noise during the change cycle, employ no muting switch. Of course, the mechanical operation of the changer should be reasonably quiet; clatter and grinding are signs of poor design and perhaps careless workmanship.

No record changer should be asked to do what it has not been designed to do. Records that are very warped may

jam the change mechanism but even if they don't they may not be reproduced well. Records with off-center or badly reamed center holes will sometimes stick on the spindle. While the raised rims of certain brands of records prevent the recorded sections of stacked discs from rubbing against each other, there is often not enough traction between such records to prevent slippage. Bits of masking tape attached to the labels of such records will correct this situation. If the stylus pressure or point at which the stylus is set down at the beginning of a record are not correct, such faults may usually be corrected by simple adjustments indicated in the record changer's installation or operation instruction booklet.

One disadvantage of a changer is that its many convenience features are more or less negated when symphonic LP's are being played. In such cases, the changer must be operated as a manual turntable in order to play both sides of the recording—but changers are still handy for those occasions where hours of uninterrupted background music are the order of the day.

The modern record changer is a precise, ingenious instrument, designed and manufactured to perform an amazing number of functions and marketed at a remarkably low price. It can be made to be qualitatively compatible with most high-fidelity systems. Some changers may have shortcomings, true, but they possess virtues that compensate for these shortcomings. It is these virtues of convenience, dependability and economy that have made the record changer popular and this very popularity has played a major role in increasing the audience for fine recordings.





WIN this 20th Century music room

designed by Marion Heuer...

*furniture by Harvey Probber... superb hi-fi/stereo with source of sound
by Shure... piano by Baldwin... carpeting by V'Soske*

... fabrics by Boris Kroll, hi-fi/stereo amplifiers and preamplifier by Marantz, automatic turntable by Garrard, turntable by Thorens, speaker systems by Acoustic Research, FM/AM Multiplex tuner by Sherwood, tape player by Ampex, Stereo Dynetic Phono Cartridge and Tone Arm by Shure, PLUS \$5,000 cash to add a new room to your home or remodel an existing room from original plans by internationally renowned interior designer Marion Heuer, A.I.D.

A veritable plethora of prizes!

All this to introduce you to the breathtaking sound (and elegant appearance) inherent to modern component stereo in general, and the new Shure M33 and M77 Stereo Dynetic Phono Cartridges in particular.

No purchase is required; you simply listen to a Shure cartridge demonstration at your hi-fi dealer's showroom and describe your reaction to its singular sound recreation qualities (in 25 words or less). If your statement wins (we don't expect an overabundance of entries, so your chances are rather good), you can begin building your music room. Should the winner have purchased a Shure cartridge as a result of the demonstration (a consummation devoutly to be wished), a magnificent \$1,000 RCA Victor stereo record library will also be supplied, as are all other awards, by Shure Brothers, Inc., 222 Hartrey Avenue, Evanston, Illinois.

Contest ends February 28th, 1962.

announcing the new
SHURE Stereo Dynetic

M33 and M77 SERIES HIGH FIDELITY PHONOGRAPH CARTRIDGES

Outstanding achievement in superior sound re-creation. Ultra-light tracking pressure; rugged, high-compliance, easy-to-replace stylus; highest fidelity response; specially shielded against hum.
M33 for 1-3 gm. tracking. \$36.50; M77 for 3-5 gm. tracking. \$27.50.



2 RECORD CHANGERS & TURNTABLES

AUDIO EMPIRE

Model 298 Transcription System

Includes Model 98 arm, Model 208 turntable, walnut base; a.c. line cord &



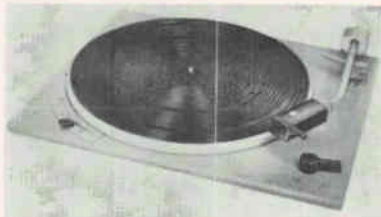
shielded phono input cables; satin gold or satin chrome finishes; less cartridge\$160.00

Model 208 Turntable

Has 3 speeds; hysteresis synchronous motor; isolation-suspended motor and base plate; satin chrome or satin gold finish; 14 $\frac{1}{16}$ " x 16 $\frac{1}{16}$ " x 6 $\frac{7}{8}$ "\$100.00
Base in walnut\$15.00

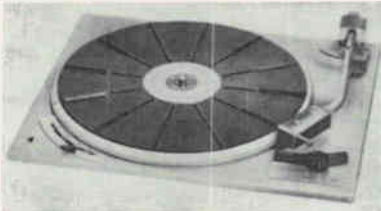
BOGEN-PRESTO

Model B60 Turntable



Continuously variable speed from 29 to 86 rpm; "click-in" position for 16 $\frac{2}{3}$, 33 $\frac{1}{3}$, 45, 78 rpm; wow & flutter less than .25%; rumble 49 db below average recording level; 12" turntable, 3 $\frac{3}{4}$ lb; 4-pole, heavy-duty shielded motor; 4-pin plug-in type cartridge head; adjustable stylus force gauge on tone arm; 15 $\frac{1}{4}$ " x 13 $\frac{1}{4}$ " (2 $\frac{1}{2}$ " above and 2 $\frac{1}{4}$ " below deck); less cartridge\$49.95

Model B61 Turntable



Similar to Model B60; wow & flutter less than .2%; rumble -51 db below average recording level; 12" turntable; 7 $\frac{3}{4}$ lb; less cartridge\$59.95

CHANNEL MASTER

Model 6652A Turntable

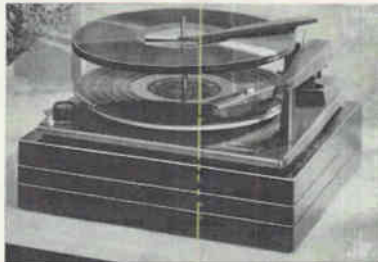


Four speeds (16 $\frac{2}{3}$, 33 $\frac{1}{3}$, 45, 78 rpm) with built-in four-speed strobe; shielded four-pole motor; heavy cast aluminum turntable; plug-in cartridge head; styus pressure adjustment.

With Model 6661 stereo cartridge\$00 00
Model 6654A spare plug-in head\$00.00
Model 6651 walnut base\$00 00

"Pause-O-Matic" Record Changer

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



features "Pause-O-Matic"—turntable stops automatically during change cycle; without cartridge and without base

.....\$0C.00
Model 6655 walnut base\$0C.00
Model 6663 45 rpm spindle\$0C.00

COLLARO

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 $\frac{1}{3}$ 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 $\frac{1}{3}$ rpm; manual operation switch; automatic shut-off after last record; muting switch and condenser; plug-in shells accept all standard stereo or monaural cartridges; less cartridge\$42.50

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 $\frac{1}{2}$ " x 12 $\frac{1}{2}$ "\$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\$2.80
5 pin empty head shell, stereo wired for
"Continental," "Coronation," and
"Constellation"—Model GPES. \$1.75
45 rpm spindle adapter—
Model GSA\$3.30
Walnut finished base for 4TR-200
transcription turntable—
Model TWT\$14 50

COMPONENTS CORP.

Mark II Turntable



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

Mark I Turntable



Single speed 33 $\frac{1}{3}$ r.p.m. belt-driven turntable: 4-pole induction motor; filter capacitor across a.c. switch to eliminate click; improved motor suspension

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

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

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

EICO

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.....\$2.40

ELECTRO-ACOUSTIC

Model 7001 Automatic Record Player



Four-speed manual-automatic stereo record player; has dynamically balanced 4-pole, 4-coil forced-air-cooled motor; rim-drive turntable with automatic idler disengagement after last record; equipped with high-compliance pickup and diamond stylus; tracking force 2.5-3 grams; fast constant-speed change cycle; 10 amp. power switch shuts off all accessory equipment if desired after last record; counterbalanced tonearm free of resonances within the audio spectrum; indexing and tonearm height adjustments; extremely low vertical and lateral tonearm friction; flutter, wow, & rumble well below NAB limits; supplied with two color-coded pickup cables fitted with standard plugs; each changer quality checked and laboratory tested;

1962 EDITION

accompanying test report coded to serial number\$69.50

ESL

Model T200 Turntable



Four-speed; dual capstan; four-pole induction motor.....\$49.95
Walnut base.....\$10.00

Model 200H Turntable
Same as Model T200 but with hysteresis motor\$69.95

FAIRCHILD

Series 412-1A Turntable



2-belt drive; rumble level at least 45 db down vertical and lateral; flutter and wow not more than $\pm 0.1\%$; speed accuracy at least $\pm 0.3\%$ 117 volt 60 cycles; hysteresis synchronous motor.
Model 412-1A (33 1/3 rpm).....\$87.50
Model 412BF Turntable base—shock mounted; 17 3/8" x 14 3/4" x 6 1/4"; oil finished walnut; white formica top..\$23.95

Model 440 Turntable



Speeds 33 1/3 and 45 rpm; single belt drive; turntable speed variable $\pm 1 1/2\%$ \$69.95
Model 440CBW Walnut mounting board and wraparound.....\$19.95
Model 440 MBU unfinished mounting board\$3.50
Model 440 MBW walnut mounting board\$6.00
Model 440-2K turntable (Model 440) available in kit form; pre-cut mounting board included.....\$55.00
Unfinished birch wraparound base for Model 440-2K; complete with shock mounts\$7.75

FISHER

Model 60 Turnover Turntable
Automatically plays one or both sides of 7", 10", and 12" records intermixed; holds up to 10 records (20 sides); more than 8 hours playing time; repeats one

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2

RECORD CHANGERS & TURNTABLES



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

GARRARD

Model "A" Automatic Turntable



Dynamically balanced tonearm; adjustable sliding counterweight & built-in calibrated scale for stylus pressure adjustment; 6 lb. turntable with inside drive table and outside cast non-ferrous table, foam rubber separator used to damp out vibrations; shielded 4-pole shaded motor; can be used as automatic or manual turntable; 15 1/2" w. x 12 3/4" d. x 6" above x 2 3/8" below, motorboard; 4-pin, 5-wire system; four speeds \$79.50

Model AT6 Automatic Turntable



Dynamically counterbalanced tubular tonearm; with adjustable counterweight for stylus pressure adjustment; gram scale built-in; oversize turntable; manual or automatic play; shielded 4-pole shaded motor; replaceable plug-in cartridge shell with 4-pin, 5-wire system; 14 1/2" w. x 12 1/2" d. x 4 1/2" above x 2 3/8" below; four speeds.....\$54.50

Model RA-7 7" Record Adapter

Clips on the pusher platform of Garrard Type A and 88 series to play new 7" small-hole 33 1/3 rpm records.....\$1.50

"Autoslim" Automatic Changer



Four-speed; die-cast tonearm with plug-in cartridge shell; 4-pole shaded motor; separate controls for manual & automatic; intermixes all size records; 14 3/4" w. x 12 1/2" d. x 3" above x 2 3/16" below motorboard\$35.50

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 3/16" below motor board; accommodates all stereo and monaural records; less cartridge\$32.50

Tambour Table Model Cabinet



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

Model TM-1 For Garrard Type A and 88 series.....\$34.50

Model TM-2 For Garrard Model 210, "Autoslim," and AT6.....\$34.50

Model TM-3 Supplied with blank board to mount any model or make.....\$34.50

Dust Cover



Transparent formed-vinyl cover for all Garrard players.

DC-4 For Model AT6.....\$4.95

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

GLASER-STEERS

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 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 1/3 and 45 or 78 rpm position;



automatic speed selection between 33 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 1/2" w x 12" d, 3" below and 5 1/2" above mounting board (without cartridge).....\$59.50
 Model GBS ebony base.....\$9.60
 Model GSUB unfinished base.....\$2.70
 Model GSSBE straight sided, ebony base.....\$5.90
 45 rpm spindle adapter.....\$2.95
 Cover for changer.....\$5.75

Model GS-400

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

GRAY

Model ST-33 Turntable



Hysteresis synchronous-drive motor with polyurethane drive belt; multi-plane shock mounts; universal tonearm mounting allows almost all type tonearms to be used; flutter .08%: wow .2%; single 33 1/3 rpm speed; rumble 35 db down from 1000 cps and 7 cm./sec.; 4 7/8" x 16" x 14 3/8".....\$89.50

Model PK-33 Turntable

Similar to Model ST-33 but kit version;



rumble 32 db down; 4 7/8" x 12 1/4" x 12 1/4". (Kit)\$49.50

HEATH

Model AD-10 Manual Record Player



4-speed manual record player; 4-pole induction motor; friction drive; flutter and wow less than 0.28% at 33 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 1/4" wide x 3" high x 9 3/8" deep.

.....\$32.95
 With G-E VR-227 magnetic cartridge\$37.95
 With Shure M8D magnetic cartridge\$38.95
 Mechanism only, less cartridge, base, and cables.....\$22.95

Model AD-60 Stereo/Mono Record Changer

Features "stereo-mono" switch for instant conversion from stereo to mono disc; has automatic "speed minder" for intermixing 33 1/3 and 45 rpm records at random; turntable pause to protect records during change cycle; includes switch selection of 16, 33 1/3, 45, 78 rpm; quick-change cartridge holders;



automatic shut-off at end of record with idler wheels retracting to prevent flats; dual-channel muting switch; jam-proof mechanism; can be used as manual player if desired; flutter & wow .18% rms or less; speed accurate within ±2%; change cycle 9 sec.; 4-pole, hum-shielded motor; friction drive; tracking force 2 grams; plays 10 records; 13 1/2" x 12" x 5 1/2" above, 3" below mounting board.

Model AD-60 (kit).....\$59.95-\$62.95
 (Price based on type of cartridge)

Model ADP-21 Turntable Assembly

Includes Fairchild 440 turntable in kit form; assembled Fairchild 500 tonearm, Fairchild SM-2 stereo cartridge, Fairchild 440CBW walnut base; 33 1/3 & 45 rpm; arm transport has anti-skate device and dynamic balancing; tracking force 2.5 grams; response 20-15,000 cps ± 2 db; output 5 mv. @ 3.8 cm./sec.; wow .08% peak-to-peak; 17 7/8" w. x 15" d. x 3 1/2" below motorboard\$124.95

Model AD-80 Record Changer

4-speed automatic or manual; plug-in cartridge head; tonearm has anti-skate device; has automatic shut-off; wow & flutter .2% r.m.s. or less; 4-pole hum-shielded motor; less than .9 gram tracking force; record capacity 10-12", 12-10"; 13 1/4" w. x 11 7/8" d. x 5 1/4" above and 2 3/8" below motorboard; kit design.

With Sonotone 8TA4-SD ceramic diamond stylus cartridge.....\$37.95
 With G-E VR-227 magnetic cartridge\$41.95
 With Shure M8D magnetic cartridge\$42.95
 45 r.p.m. adapter.....\$2.95
 Changer bases for AD-80 & AD-60 models; walnut or mahogany assembled\$5.95
 Unfinished\$4.95

KNIGHT

Model KN-1000 Turntable



Hysteresis-synchronous motor; 33 1/3 and 45 rpm; 6-lb. cast aluminum turntable; adjustable bearings; adjustable height, rubber turntable pad; pilot light "on" indicator; hum - 80 db; flutter and wow less than .5% total; rumble 50 db below average recording level; requires 4" below motorboard.....\$49.95
 Oiled walnut base.....\$ 6.95
 Unfinished Korina base.....\$ 4.95

LAFAYETTE RADIO

Model PK-240 Turntable

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



automatically disengaged in "off" position; magnetic eddy-current brake; motor plate size 11" x 10" x 1 1/2".....\$37.50

Model PK-160S

Four-speed manual record player; 4-pole shaded motor; 10" turntable; rubber mat; magnetic brake for fine speed adjustment; lightweight pickup arm

with two plug-in heads and finger lift; stylus-pressure screw on underside of arm; built-in stroboscopic disk; mounting plate dimensions: 12 15/16" left to right; 10 7/8" front to rear; wired for stereo.

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

Model PK-449 Turntable & Arm

4-speed transcription turntable with tone arm. Heavy-duty 4-pole induction motor; rim-weighted 12" aluminum table; click-in shift lever with idler disengaged in "off" position; ±7% allowable speed variation; noise and rumble



-50 db below average recorded level; wow and flutter less than 0.2%. Tone arm 12"; tracks at lowest stylus pressures recommended by cartridge makers; adjustable stylus; plug-in head; arm-rest "on-off" operation. Supplied with strobe disc; 45 rpm adapter. 16 1/2" x 12 1/4" x 4" below motorboard.....\$49.50

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.....\$44.50
 Extra universal plug-in head.....\$2.40



Crystal cartridge dual sapphire turnover styli (Model E-mono)\$9.95

Crystal cartridge dual sapphire turnover styli (Model U-stereo/mono).....\$11.95
 Crystal cartridge sapphire styli (Model S-stereo/mono)\$16.50
 45 rpm spindle.....\$3.75
 Base in mahogany, walnut.....\$4.75
 Base in blonde.....\$5.25
 Pre-cut mounting board.....\$2.00

Model 4V3/11 Stereo or Mono Manual Player

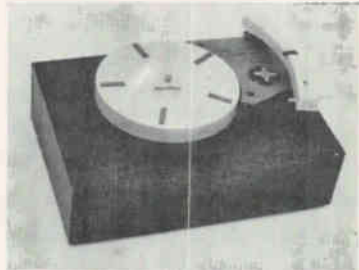
Plays all record sizes and speeds; speed held to within ±1.5%; stops automatically at end of record; tone arm is short-circuited at end of record eliminating hum; universal plug-in head; 4-pole mo-

2

RECORD CHANGERS & TURNTABLES

tor; speed can be changed during play. Stereo or Mono (less cartridge & base)\$23.25
Accessories same as for Model CD 2/21

Model SM5/11 Manual Player



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

MIRACORD

"Studio" Automatic Turntable



Automatic turntable and record changer; shaded four-pole motor; 12", 7 lbs., non-ferrous turntable; including tonearm with plug-in head & stylus pressure gauge; can be used as manual turntable; lifting arm starts motor; at end of record arm returns to rest, shuts off motor, and retracts idler wheel; in automatic turntable operation the start is controlled by push-button; as changer, records can be stacked & played automatically; 45 rpm adapter included; less cartridge & base\$79.95

"Studio-H" Automatic Turntable

Same as "Studio" model except has hysteresis synchronous motor.....\$99.50

NEUMANN

Model PA2a Integrated Turntable



Complete playback design including automatic tonearm and DSTa cartridge; wow and flutter less than .1% r.m.s.; all unweighted components measured flat from 10 to 250 cps; turntable and tonearm are mounted on rigid subassembly;

shock mounted from main base; pickup is gently lowered to the disc by air compression cylinder controlled by remote lever; stylus disengages when stylus seats in groove; leadout groove activates automatic stop switch which raises arm; and disengages driving motor; two-speed design (33 $\frac{1}{3}$ and 45 rpm) for 7", 10" or 12" records; stylus pressure .8 gram; stylus pressure will actuate stop switch; manufactured in West Berlin.....\$495.00

PICKERING

Model 800 Gyrophase Turntable



Single speed (33 $\frac{1}{3}$ rpm) magnetically suspended turntable; compound vertical rumble attenuation 12 db/octave below resonance; vertical period of spring suspension is below 5 cps; 13 $\frac{1}{2}$ "x13 $\frac{1}{2}$ "x1 $\frac{3}{8}$ " above and 3" below.....\$66.00
Model 800CB base in mahogany, walnut, or blonde (14 $\frac{3}{4}$ "x14 $\frac{3}{4}$ "x5 $\frac{3}{8}$ "h).\$15.00

REALISTIC

Model Mark 8A Turntable

4-speed hysteresis turntable; wow and flutter below 0.2%; noise level 45 db below average recording level; complete with tone arm and mounting board\$49.95
Walnut base\$9.95

Model Mark 9 Turntable

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

Model Mark 10 Deluxe Manual Player

4-speeds; rumble-free motor; laminated and concentrically girded turntable; one-piece professional tonearm with adjustable stylus; built-in gauge.....\$29.95
Oiled walnut base.....\$4.95

"Stereomixer 2" Record Changer

Features automatic record protector; special damped tonearm acoustically isolated to prevent mechanical feedback; automatic stylus cleaner anti-skate mechanism; wow & flutter .18% r.m.s. or less; turntable speed accurate to $\pm 2\%$ change cycle complete; minimum rumble ≤ 0 db or better; .31 $\frac{1}{2}$ "x13" x 3".....\$49.95

REK-O-KUT

Model P-VM Record Player

Combines variable speed CVS-12 turntable with A-120 tone arm and magnetic cartridge with dual sapphire needles; portable leatherette covered base. Model P-VM\$144.95
Model P-VC (with ceramic cartridge)\$139.95

Model B-12H Stereotable

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



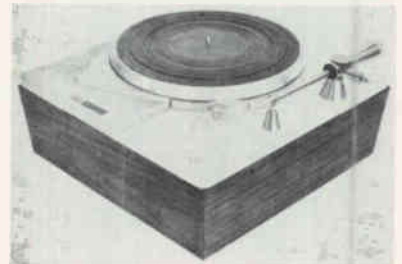
rim driven by idler wheel; noise level: better than 55 db below average recording level; built-in for 45 rpm records; pilot light; stroboscopic disc; dimensions for cabinet installation: left to right 16 $\frac{3}{4}$ ", front to back 16", height above deck 3", height below deck 6 $\frac{1}{2}$ "; finish: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

Model B-12GH

All specifications identical to B-12H with the following exceptions: noise level -55 db; new design hysteresis synchronous motor\$99.95 Net

Models N-33H & NL-33H

Single-speed (33 $\frac{1}{3}$) belt-driven turntable with hysteresis synchronous motor,



noise level 57 db below average recording level; tension on belt may be adjusted; cast aluminum turntable; deck size—Model N-33H, 15 $\frac{3}{4}$ " x 15 $\frac{3}{4}$ "—Model NL-33H, 12 $\frac{5}{8}$ " x 19"; tonearm and base extra.....\$79.95
Walnut base for N-33H.....\$6.95
Walnut base for NL-33H.....\$4.95

Models K-33H & K-34H Turntable Kits



Both are kit versions of Models N-33H and N-34H.
K-33H (33 rpm).....\$59.95
K-34H (33 and 45 rpm).....\$69.95
Walnut base\$14.95

Models N-34H & S-34H Turntables



Similar in performance to Model N-33H except dual speed (33 and 45 rpm); deck size—N-34H, 12 $\frac{5}{8}$ " x 19" and S-34H, 15 $\frac{3}{4}$ " x 15 $\frac{3}{4}$ "; tonearm and

base extra\$89.95
 Walnut base for N-34H.....\$14.95
 Walnut base for S-34H.....\$16.95

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 TR-43H 12" Turntable

Similar in all respects to 16" table\$149.95

Model C-7B Cabinet

Console cabinet designed to accommodate B-16H turntable without use of screws or bolts; 2 storage compartments; hinged doors with flush ring-latches; built-in electrical outlet; adjustable 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

SARGENT-RAYMENT

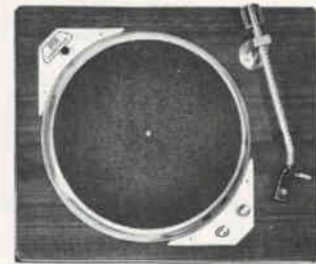
Binophone Record Player

Combines stereo turnover ceramic cartridge, tonearm, turntable, base; response 10-10,000 cps; plays 7", 10", 12" records; four speeds (16 2/3, 33 1/3, 45, 78 rpm); manual operation; has automatic stop at end of record; does not include amplifiers.....\$44.50

SONOGRAF

Model 2500 "The Jobo" Turntable

1962 EDITION



FAIRCHILD

SUPERIOR IN DESIGN, IN EXECUTION, IN PERFORMANCE

COMPONENTS

FAIRCHILD RECORDING EQUIPMENT CORP., 10-40 45TH AVE., LONG ISLAND CITY, N. Y.

ARE SUPERIOR!



◀ **MODEL 412-1. Single Speed Turntable** (\$87.50). Model 500 Arm Transport and SM-2 Cartridge (\$55.00). Mounted on Model 412-BF Walnut and Formica Base (\$23.95).

▶ **MODEL 440. Two Speed Turntable*** (\$69.95). Model 500 Arm-Transport and SM-2 Cartridge (\$55.00). Mounted on Model 440CBW Walnut Base (\$19.95).



*Available in Kit Form—\$55.

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COMPANDER®

FOR THE RECREATION OF ORIGINAL PERFORMANCE DYNAMICS

A new, exciting and completely different development from Fairchild... a product so unusual that we believe every serious audiophile will want to know about the Compander. Briefly, the Compander is an automatic dynamic sensing device that overcomes the controls placed upon both disc and tape recordings and thereby restores the full dynamic range of the original performance. By freeing program material from the usual recording restraints the Compander brings you a giant step closer to the original performance. Accomplished without distortion, the Compander is easily integrated into any monaural or stereo quality component system. The Compander is priced at \$75.00. Write for our fully detailed bulletin.

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2**RECORD CHANGERS & TURNTABLES**

Three-speed; direct-belt drive; built-in stroboscope; variable speed; bubble level; six-pole synchronous motor; built-in 45 rpm adapter; 12" turntable; rumble, lateral & vertical, -55 db; wow & flutter less than $\pm .1\%$; $15\frac{1}{2} \times 13\frac{3}{4}$ "; imported from Holland; turntable only.....\$99.95
 Model 25WB wood base, teak, mahogany, walnut, blonde.....\$14.95

STROMBERG-CARLSON**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; $15\frac{3}{4}$ " wide, $14\frac{5}{8}$ " deep, $5\frac{1}{2}$ " below, 2" above mounting plate; wow .14% r.m.s.; flutter .09% r.m.s.; rumble 55 db below 20 cm./sec. @ 1 kc.....\$149.95
 Base.....\$19.95

THORENS**Model TD-184 Turntable & Arm**

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; $14\frac{1}{2} \times 11\frac{3}{4}$ ".....\$75.00

Model TD-135 Transcription Turntable

Four-speed transcription turntable with



integral professional arm; 8 lb., 12" non-magnetic turntable (same as Model TD-121); variable speed control $\pm 3\%$; manual & stop switch; arm has instrument-type pivot bearings; calibrated stylus force adjustment; takes any standard stereo cartridge; $14\frac{1}{2} \times 11\frac{3}{4}$ ".....\$99.75

Base.....\$6.00

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; built in strobe disc.....\$47.50

WBK base in walnut, ebony, mahogany.....\$10.00

Model TD-111 Turntable

Single-speed turntable ($33\frac{1}{3}$ rpm); precision Swiss assembly; 8-pound cast non-magnetic 12" turntable, with motor isolation through idler and belt-type



drive; self-lubricating bushings on all main drive parts; adjustable speed control ($\pm 3\%$); metal strobe disc included.....\$60.00

Base in walnut, ebony, mahogany.....\$9.00

Model TD-121 Turntable

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



self-lubricating bronze bushings on main drive shaft; separate tonearm board; adjustable built-in leveling feet; metal strobe disc included; $15\frac{1}{2} \times 12\frac{3}{4} \times 2\frac{3}{4}$ " below base plate.....\$80.00

Base in walnut, ebony, mahogany.....\$10.00

Model TD-124 Turntable

Four-speed transcription turntable; $1\frac{1}{2}$ 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 shaft allows pulley to revolve at half the speed of conventional system—affording better contact with idler wheel; automatic disengagement of idler wheel; variable speed control ($\pm 3\%$) on all speeds with new eddy current brake design; self-contained 12" and 16" tone arm mounting boards; leveling knobs and built-in spirit level; base plate size $15\frac{1}{2} \times 12\frac{3}{8}$ ", required depth $2\frac{3}{4}$ ".....\$99.75
 Base in walnut, ebony, mah.....\$10.00

Model TD-134 Turntable & Arm

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; $14\frac{1}{2} \times 11\frac{3}{4}$ ".....\$60.00

Ebony, mahogany, or walnut base \$7.00

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



$1\frac{1}{2}$ grams; wide-range adjustment of stylus force; built-in stylus force measuring gauge; automatic drive wheel and idler disengagement after play; lock-in cartridge holder for use with all standard cartridges; stereo/mono switch; $10\frac{3}{4} \times 13$ " (3" below, 6" above deck); 110 v/220 v, 60 cycles AC (50 cy avail.).....\$79.95

Model WB-2 Wood base, pre-cut, in

STEREO/HI-FI DIRECTORY

mahogany or walnut\$6.95
 Model AS-6 45 RPM Spindle.....\$4.80

WEATHERS

Stereo Record Players



Model K-803—Combination of Model ML-1 turntable and Model PS-11 pickup (with base).....\$189.43
 Model K-834—Combination of Model ML-234 dual-speed turntable and Model PS-11 pickup (with base).....\$204.00
 Model K-601D—Combination of Model ML-1 turntable and MC-1D pickup (with base).....\$119.50
 Model K-634—Combination of Model ML-234 dual-speed turntable and Model MC-1D pickup (with base).....\$130.00

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

Model ML-234 "Synchronatic" Turntable
 Same features as Model ML-1 but with separate drive motor and direct-drive coupling for 33 $\frac{1}{3}$ or 45 rpm operation; speed selector turns on and engages appropriate motor. (Less base).....\$64.50

Turntable Kits

Model KL-1A—Same as ML-1 with seismic platform (less base).....(Kit) \$46.50
 Model KL-2—Same as ML-234 dual-speed turntable with seismic platform (less base)(Kit) \$59.95

WEBCOR

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" 33 $\frac{1}{3}$ RPM records may be intermixed; two phono cables, AC cord; two plug-in heads accommodate most stereo or monaural cartridges; 13 $\frac{1}{2}$ " d x 14 $\frac{1}{8}$ " w; 5 $\frac{1}{2}$ " above, 4" below mounting board.....\$61.75
 Model 1031-1 with Sonotone stereo

ceramic cartridge; .7 mil diamond for 45, 33 $\frac{1}{3}$ 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" 33 $\frac{1}{3}$ RPM records may be intermixed; two phono cables: AC cord; two plug-in heads accommodate most stereo and monaural cartridges; 13 $\frac{1}{2}$ " d x 14 $\frac{1}{8}$ " w; 5 $\frac{1}{2}$ " above, 4" below.....\$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 1041-1 except mounted on base.....\$83.25



ASTATIC

Model 45D "Cantata" Cartridge

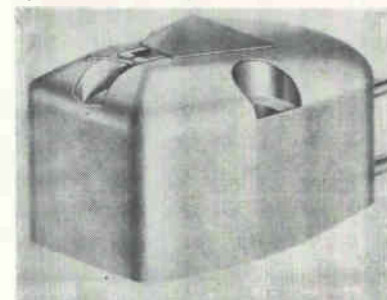


Ceramic stereo design featuring miniature alpha ray nuclear source which keeps grooves free from foreign particles by dissipating static charge from record surface; 20-20,000 cps; .010 volt output at magnetic input (1000 cps @ 5 cm./sec.); separation 30-35 db; tracking force 1 gram; diamond needle; supplied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

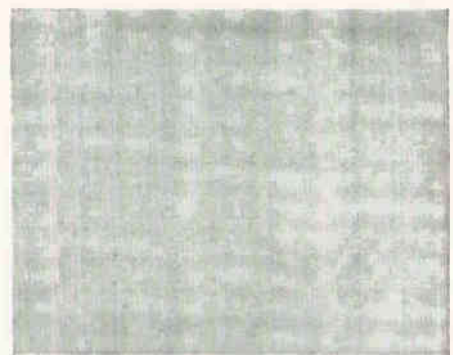
AUDIO DYNAMICS

Model ADC-1 Stereo Cartridge

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



compliance 20 x 10⁻⁸ cm./dyne; min. load 47,000 ohms; tracking force .75 to 3 grams; magnetic type.....\$49.50



The only turntable/changer



better than the DUAL-1006...



is the **DUAL-CUSTOM.**

But they look the same? Naturally. All the changes and refinements are underneath. Where it counts. No added frills or chrome. Only improvements—on a machine that offers honest, outstanding performance—performance and operating features that any other unit would give its eyeteeth for.

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Having done that, we maintain that your judgment will do a better job selling the Dual-Custom than we could ever do. Why not get all the information on the Dual-Custom. Remember, you actually haven't shopped until you've examined all the facts. Write:

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2 PHONO CARTRIDGES

Model ADC-2

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

AUDIO EMPIRE

Model 108 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^{-8} cm./dyne; tracking force 1.5-5 gm.; stylus .7 mil radius diamond; 4-terminal output; load impedance 47,000 ohms.....\$35.00
 Replacement styli for Model 108 cartridge:
 S108-7RD .7 mil diamond.....\$17.50
 S108-1RD 1 mil. diamond.....\$21.50
 S108-3RD 2.7 mil. diamond.....\$21.50

DUOTONE

Model GPS73SD Crystal Cartridge

For use with monaural or stereo cartridges; frequency response 20 to 17,500 cps ± 2 db.; compliance 2×10^{-8} cm./dyne; output 1 volt; tracking pressure 2-6 grams; 0.7-mil stylus.
 With sapphire stylus.....\$8.70
 With diamond stylus.....\$14.70

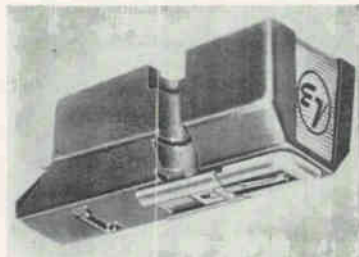
DYNACO

Stereodyne II Cartridge

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

ELECTRO-VOICE

Series 31 Professional Stereo/Mono Cartridge



Available for mag. phono; compliance 3.5×10^{-8} cm./dyne; frequency response

20-20,000 cps; tracking force 4 to 5 gm; output 10 mv.; with .7 mil diamond stylus; recommended load 22K—47K ohms; ceramic elements; standard model output is 300 mv.
 Model 31 MD-7 (with 0.7 mil stylus).
 \$24.00

ESL

ESL C-60

Electrodynamic design; frequency response 18 to 20,000 cps ± 1 db, extending to beyond 30,000 cps; minimum compliance 6.8×10^{-8} cm./dyne; dynamic mass 1 mg; minimum output 1C 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 5×10^{-8} 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 P1 Professional Cartridge

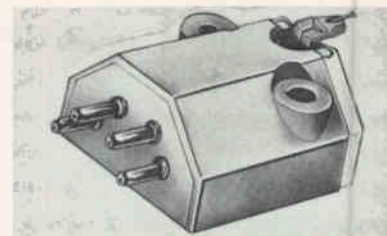
Electrodynamic cartridge with patented d'Arsonval movement; compliance 6.8×10^{-8} cm./dyne or greater; frequency response 16 to 30,000 cps; IM distortion virtually unmeasurable; output voltage 2 millivolts at 10 cm/sec; dynamic mass 0.001 grams; output impedance 1.5 ohms; recommended stylus force 1 to 3 grams.....\$49.50

ESL P60 Professional Cartridge

Identical to Model P1 except that output voltage is 2 millivolts at 10 cm/sec and output impedance is 40 ohms.
 \$49.50

"Redhead" Ceramic Cartridge

Stereo design; 25 v. r. m. s. output per channel; response 20-20,000 cps ± 2 db; channel separation 20 db capacitance 450 μ fd.; compliance (vertical & lateral) 3×10^{-8} cm./dyne; .7 mil diamond stylus; 4-terminal output; 3-4



grams tracking force; supplied with two plug-in adapters for converting cartridge for magnetic input.....\$14.98

FAIRCHILD

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^{-8} cm./dyne.....\$34.95
 Model SM-1-SR stylus replacement for Model SM-1 .7 mil diamond.....\$15.00

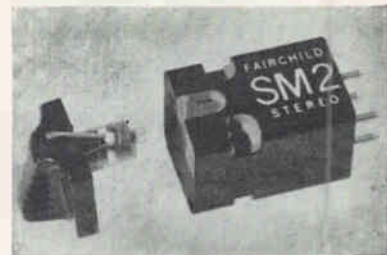
Model 225A Mono Cartridge

Moving coil pickup with "Micradjust" construction, allowing each cartridge to be hand adjusted; response ± 2 db 20 to 20,000 cps; low moving mass; low impedance (nominally 200 ohms) causes insensitivity to hum pickup; output 4.5 millivolts for 2.5 inches per second recorded velocity; tracking pressure 4 to 8 grams; no attraction by iron or steel turntables; 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 Mono Cartridge

Moving coil cartridge for monaural use; 0.7-mil diamond styli; frequency response to beyond 20,000 cps; output 5 millivolts nominal; impedance 600 ohms; high lateral and vertical compliance (can be used with 45/45 stereo records); 4 grams maximum pressure; low moving mass; special free-moving flexure pivot type construction; low Q mechanical circuit practically eliminates low frequency arm resonances; standard mountings.....\$42.50

Model SM-2 Stereo Cartridge



Moving-magnet type; .0007" diamond stylus; output 5 mv. @ 3.8 cm./sec.; dynamic mass 2.0 grams; tracking force 2.5 grams; compliance 5×10^{-8} cm./dyne; response 20-15,000 cps ± 2 db.; separation 20 db ± 2 db from 20-15,000 cps.....\$37.50
 Replacement stylus assembly.....\$17.50

GENERAL ELECTRIC

Series VR-11 Monophonic 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: 7/16" or 1/2" with mounting adaptor; fits all standard arms.

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

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"; micro ball bearings; built-in arm rest mounted on base; maximum tracking error 2°; brushed aluminum and chrome finish.....\$29.95

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 4x10⁻⁸ cm./dyne; vertical compliance 2.5x10⁻⁸ cm./dyne; recommended tracking force 2-4 gm; load 47k ohms; easily replaceable stylus.

- Model VR-225 with .5 mil diamond.....\$18.95
- Model VR-227 with .7 mil diamond.....\$16.95

GRADO

"Classic Series" Stereo Cartridge

Frequency response 10 to 30,000 cps per channel; output 6 millivolts per channel at 10 cmv; impedance 950 ohms per channel; tracking force 3 grams; compliance 12x10⁻⁸ cm./dyne; input load any value above 5,000 ohms; channel separation 30 db; fits all standard tone arms; diamond stylus.....\$37.50

"Laboratory Series" Stereo Cartridge

Same design as "Classic Series" but all parts are selected and hand assembled.....\$49.50



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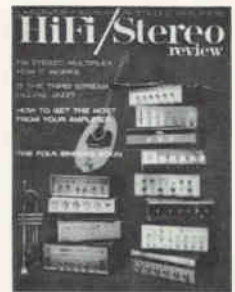
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2

PHONO CARTRIDGES

KNIGHT

Model KN-500 Stereo Cartridge

Four-coil moving-magnet type; user-replaceable .0007" diamond needle for 33 $\frac{1}{3}$ and 45 rpm; front and back Mumetal shielding; tracking force 2-8 grams; response 20-20,000 cps; compliance 4×10^{-6} cm./dyne; fits all arms and heads with standard $\frac{1}{2}$ " mounting centers\$12.95

Model KN-500X Professional Stereo Cartridge



Four-coil moving-magnet type; channels balanced to within 1 db; user-replaceable .0005" diamond needle; front and back Mumetal shielding; tracking force 2-8 grams; response 20-20,000 cps ± 2 db; compliance 6×10^{-6} cm./dyne; fits all arms and heads with standard $\frac{1}{2}$ " mounting centers.....\$17.95

MIRATWIN

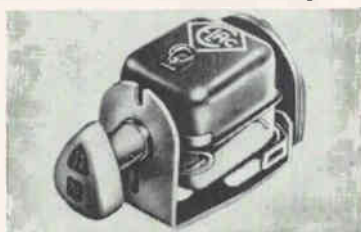
Model MST-1 Mono Cartridge



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.

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

Model MST-2A Turnover 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
MST-2A (sapphire-sapphire stylus)\$15.00

NEUMANN

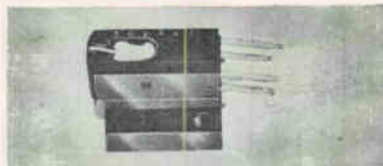
Model DSTa Stereo Cartridge



Professional mode, originally designed for recording studios; has hand polished Swiss diamond styli; to be used with PA2a turntable, TA-2 pickup arm, the SME arm, and the ESL tonearms; made in West Berlin.....\$56.00

ORTOFON

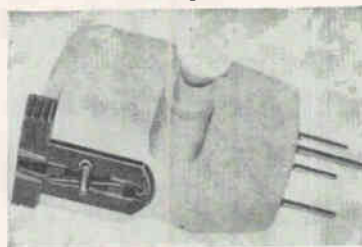
Stereo Cartridge



Sealed-into-shell electrodynamic stereo cartridge with integral self-contained transformers; plugs into any Ortofon arm; also available without shell for other arms; 2 grams tracking; response 20-20,000 cps; 20-25 db channel separation; extremely high compliance of 10×10^{-6} cm./dyne; IM distortion practically unmeasurable; equivalent mass at stylus point 1 milligram.....\$49.95

PICKERING

Stereo "90" Cartridge



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

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
Model S-3827—.0027" Radius Sapphire—aqua "V-Guard".....\$7.50
Model D-9007—.007" Radius Diamond—charcoal gray "T-Guard".....\$9.90

Model Mk 11 Cartridge

Frequency response 20-15,000 cps; output 1.3 mv./cm. of recorded level; channel separation 20/25 db; "T-Guard" stylus assembly.
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; output 2.5 mv./cm. of recorded level; channel separation -35 db; utilizes "V-Guard" easily replaceable stylus assembly; hermetically sealed in mu-metal; fits all pickup arms.

Model 380A—manual arm type; tracking force 2-5 grams.....\$34.50

Calibration Standard 381 Cartridge

Frequency response 20-10,000 cps. ± 1 db; 20-17,000 cps ± 2 db; output 1 mv./cm. of recorded level; channel separation -35 db; ultralinear professional pickup; 250 ohms; 500/600 ohms; standard high impedance 47,000-100,000 ohms; tracking force 2-5 grams.

Model 381A—for use only in high quality manual tone arms.....\$48.00

Model 381E—includes model 381 cartridge with 2 additional styli: .001 inch diamond for mono LP's, .0027 inch sapphire for 78's.....\$60.00

REALISTIC

"V-Drive" Hi-Fi Cartridge

Response 20-20,000 cps ± 2 db; compliance vertical and lateral 3.5×10^{-6} cm./dyne; isolation 28 db @ 1000 cps; stylus .7 mil diamond; output 8 mv.; four standard terminal connectors; tracking 2 grams; ceramic generating elements.....\$11.95

SHURE

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 1.5×10^{-6} cm./dyne; dual styli slip-in assembly, thumbscrew lock; fits all standard arms.

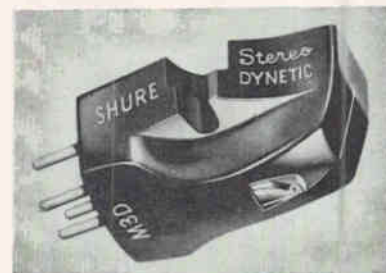
ML 44 (SS) dual sapphire.....\$3.95

ML 44 (DS) 1-mil diamond and 3-mil sapphire\$38.95

ML 44 (DD) dual diamonds\$57.50

Model M3D Stereo Cartridge

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



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

Model M5D Mono Cartridge

For 33 1/3 & 45 rpm records: has .001" diamond stylus; response 20-20,000 cps;



output 21 mv. for 10 cm./sec. @ 1000 cps; 27,000 ohm load impedance; compliance 3×10^{-8} cm./dyne; tracking force 2-6 grams\$27.50

Model M6S Mono Cartridge

Same as Model M5D but for 78 rpm records. .003" sapphire stylus.....\$15.00

Model M7D Stereo Cartridge

Stereo cartridge with 0.7 mil diamond; frequency response 20-15,000 cps; channel separation more than 20 db at 1,000 cps; 5 mv per channel output;



recommended load impedance 47,000 ohms; vertical, lateral compliance 3.5×10^{-8} centimeters per dyne; 4 terminals; standard mounting\$24.00
N7D replacement stylus assembly.....\$12.00

Model M8D Stereo 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 M3/N21D Stereo Cartridge

Includes N21D tubular stylus with .7 mil diamond; tracking force 2 1/2 grams max.; channel separation over 20 db @ 1000 cps; response 20-20,000 cps $\pm 2 1/2$ db; output 4 mv.; load 47,000 ohms; compliance, vertical and lateral, 9×10^{-8} cm./dyne\$47.25

Model M7/N21D

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

Model M3LS Stereo Cartridge

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 ± 2 db; output voltage 5 mv ± 2 db per channel at 1000 cps; compliance 4.4×10^{-8} centimeters per dyne; tracking force 3-4 grams; four terminals; each cartridge has individual response curve\$75.00

Models M12 and M16 Integrated Arm and Mono Cartridge

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Same arms as in Models M216 & M212; response 20-20,000 cps; 14 mv. for 10 cm./sec. @ 1000 cps; vertical compliance 9×10^{-6} cm./dyne; .7 mil diamond stylus; 1-2 grams tracking force; Model M16 for 16" records; Model M12 for 12" records.....\$79.50

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

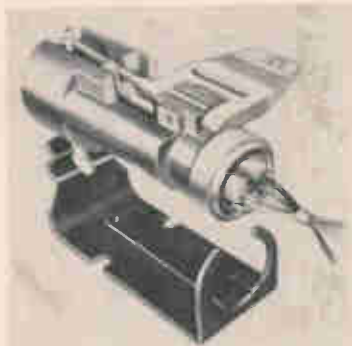
Model W9 Pickup

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

SONOTONE

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 turnover lever; Model 12TH has output of 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 ± 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).....\$6.95

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-1D 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 $\frac{3}{8}$ " mounting centers; diamond LP stylus.....\$14.50

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 $\frac{3}{8}$ " mounting centers; diamond LP and sapphire 78 styli.....\$15.00

Models 1P and 2T Ceramic Cartridge

Model 1P is single-stylus cartridge, Model 2T is two-stylus turnover-type; frequency response 30 to 15,000 cps ± 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).....\$13.50
Model 1P-3D (3-mil diamond).....\$13.50
Model 2T-S (2 sapphires).....\$ 8.50
Model 2T-SD (1-mil diamond, 3-mil sapphire).....\$14.50

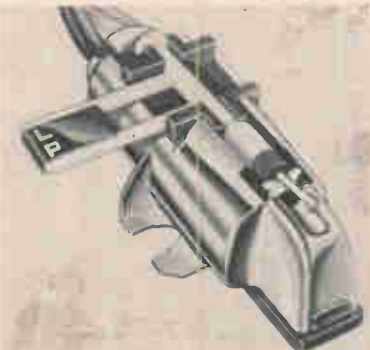
Model 8TA Stereo Ceramic Cartridge

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).....\$17.50

Model 9T Stereo Ceramic Cartridge



Turnover cartridge handles all speeds, stereo or mono; response 20-17,000 cps ± 1 db, roll-off to 0.000 cps; separation 25 db; load 1-5 megohms for ceramic input; tracking force 2-4 grams or professional arms, 3-5 grams for changers.

Model 9T-S (.7 mil and 3 mil sapphires).....\$16.50

Model 9T-SD (.7 mil diamond, 3 mil sapphire).....\$19.50

Model 9T-S77 (.7 mil and .7 mil sapphires).....\$16.50

Model 16T Stereo Ceramic Cartridge

Turnover cartridge; response 20-10,000 cps ± 1 db, roll-off to 12,000 cps; separation 22 db; load 2 megohms; tracking



force 4-6 grams for professional arms, 5-7 grams for changers; standard $\frac{1}{2}$ " mounting centers.

Model 16T-S (.7 mil and 3 mil sapphires).....\$12.50

Model 16T-SD (.7 mil diamond, 3 mil sapphire).....\$15.50

Model 16T-S77 (.7 mil and .7 mil sapphires).....\$12.50

Model 18T Stereo Ceramic Cartridge

Specification same as for Model 16T but with output of .70 volt; channel separation of 20 db; tracking force of 6-8 grams for professional arms, 7-9 grams for changers.

Model 18T-S (.7 mil and 3 mil sapphires).....\$12.50

Model 18T-SD (.7 mil diamond, 3 mil sapphire).....\$15.50

Model 18T-S77 (.7 mil and .7 mil sapphires).....\$12.50

"Velocitone" Ceramic Assembly

Permits use of Sonotone's stereo cartridge without modification of velocity or magnetic amplifier system of record player; assembly consists of Model 9T stereo ceramic cartridge and two factory-matched equalizers; response 20-6000 cps $\pm \frac{1}{2}$ db and to 17,000 cps ± 1 db, roll-off to 20,000 cps; output voltage 11 mv.; compliance 3.5×10^{-6} cm/dyne; tracking pressure 2 grams for professional arms, 3 grams for changers. Assembly with sapphire tips.....\$20.50
Assembly with diamond/sapphire tips.....\$23.50

STEREOTWIN

Model STS-220 Stereo Cartridge



Magnetic design: 20-10,000 cps ± 1 db; response 20-20,000 cps; channel separation @ 1 kc. 24 db; load impedance 33,000 to 51,000 ohms; stylus pressure 3-5 grams; for use with stereo and mono records; stylus radius .7 mil; packaged with spare diamond stylus.....\$34.50

Model STS-310 Stereo Cartridge

Similar to Model STS-200 except has .52 mil radius stylus; suitable for stereo records; is not packaged with extra stylus.....\$45.00

Model DMS-900 Stereo Cartridge

Response 20-20,000 cps ± 3 db; output 6 mv. at 5 cm./sec.; channel separation 28 db; compliance horizontal 4×10^{-6} cm./dyne, vertical 3×10^{-6} cm/dyne; load impedance 12,000-47,000 ohms; tracking force 1.5-5 grams; easily replaceable 7 mil diamond stylus.....\$34.50

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TONEARMS

AUDIO EMPIRE

Model 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 12³/₈"\$37.50

Model 98P Stereo Balance Arm

Maximum tracking error ±0.6°; Arm resonance 8 cps; overall length 15⁷/₈" Professional model\$44.50

Model 980 Stereo Balance Arm

Counterbalanced arm allows adjustment for any cartridge from 2-25 grams; stylus force adjustment 0-8 grams; arm



offset at 23.8°; resonant frequency 8 cps; over-all length 12³/₈"; maximum tracking error ±.65°; satin gold or satin chrome finish\$45.00

COMPONENTS CORP.

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.....\$9.50

DYNACO

Models TA-12 & TA-16 Tone Arms

Both tone arms are manufactured by B & O and designed for use with a Stereodyne II plug-in cartridge having different mounting assembly; has dy-



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

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

ESL

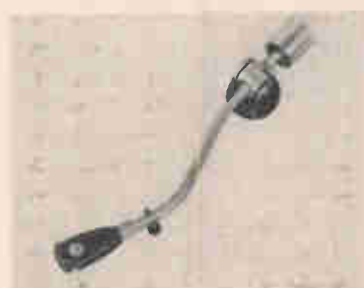
ESL-310 Professional Arm

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



calibrated weight adjustment; overall length with cartridge 15³/₄"; for use with ESL Professional Series cartridges only; available in stereo and monaural models\$57.00

ESL S-2000 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 gm.....\$34.95

GRADO

"Laboratory Series" Tone Arm

Tracking error ±0.8 degrees; height adjustment 1"-2¹/₂"; overhang 2"; over-all length 11¹/₄"; vertical and lateral



balance adjustment; adjustable weight, overhang in shell; interchangeable cartridge shell; no solder connections. Gun-stock walnut wood construction.....\$39.50
With "Classic Series" cartridge \$75.00
With "Laboratory Series" cartridge\$85.00
Extra cartridge slide.....\$2.95

GRAY

Model 212-TN Tonearm

Viscous damped with slide-in type cartridge assembly for 12" stereo or mono records; vertical resonance 20 cps; horizontal resonance 10 cps at 4 grams; tracking force per 5 x 10⁻⁶ cm./dyne; compliance tracking error 1 deg., 20 min. @ 3.75" and 2 deg. 0 min. @ 5.5" radius.



Model 212-TN aluminum finish with black trim.....\$35.50
Model 212-TG same as Model 212-TN but with grey finish.....\$32.50
Model SAK-12N same as Model 212-TN but kit version.....\$28.60
Model SAK-12G same as Model 212-TG but kit version.....\$24.95

Model 216-TN Tonearm

Same as Model 212-TN except for 16" records; lateral resonance 7 cps; tracking error 0 deg., 55 min. @ 3.75" and 1 deg., 30 min. @ 5.5" radius.....\$37.50

KNIGHT

Model KN-1020 Stereo Pickup Arm



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

LAFAYETTE

Model PK-448 Integrated Arm & Cartridge

Panasonic integrated tone arm and moving magnet cartridge; complete with .7 mil diamond stylus; specially designed counterweight, subweight, and lateral damping mechanism minimizes



resonance; nylon bearings and ball bearing pivot assembly; Mumetal shielding; signal-to-noise level over 100 db. Response 20-16,000 cps; flat ± 2 db from 20-15,000 cps; tracking pressure 3 grams.....\$32.50

ORTOFON

Model RMG-309 Stereo Arm



Professional 16" stereo arm; tracks at 2 grams with plug-in Ortofon stereo cartridge; plug-in shells available to fit standard U. S. stereo cartridges; statically balanced by counterweight with spring-controlled stylus force (no table leveling required); micrometer stylus force adjustment reads directly in grams; adjustable height over mounting plate; rubber damping between arm and counterweight; approx. dimensions 12³/₄"

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pivot to record center, 3" rear clearance radius.....\$59.95

Model SMG-212 Stereo Arm



12" stereo arm; takes Ortofon or any standard stereo cartridge; track at 2 grams; special arm shape makes turntable leveling unnecessary; turntable may be up to 30 degrees out of level before tracking difficulties arise: ball bearings on both horizontal and vertical pivots; adjustable height above mounting plate: unique counterweight adjustment can be calibrated by user for any cartridge to read stylus force directly in grams: approx. dimensions 8 3/8" pivot to record center, 3 1/4" rear clearance radius (max. for heaviest cartridges).....\$29.95

Model SKG-212 Stereo Arm



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

PICKERING

Model 198 Unipoise Arm with Stereo Fluxvalve

Consists of Model 380A pickup integrated into Unipoise arm; tonearm features single friction-free pivot bearing;



may be mounted on motorboard 15 1/2" x 15 1/2"; complete with arm rest with sable brush for cleaning stylus tip.....\$54.00

REK-O-KUT

Model S-320 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



1962 EDITION



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COMPLETE MODEL 1953
Imported by LESA of America

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Much of the pleasure you receive from your components depends on how useful you make your record collection. "Quick-See" album files let you see-at-a-glance the full face of your albums, eliminate costly jacket-bottom wear, and make proper filing fun.



The "Quick-See" glides in and out noiselessly on precision ball-bearing tracks. Fold-away cradle drops down for front-view flip-through selection. Installs in any recess or cabinet in five minutes with four screws.

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2

TONEARMS

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

H. H. SCOTT

Model 1000
London-Scott Stereo Pickup and Arm



Stereo arm and cartridge designed as integrated unit; frequency response 20 to 20,000 cps ± 2 db; tip mass less than 1 milligram; compliance 3.5×10^{-9} 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 $1\frac{3}{8}$ "- $2\frac{1}{2}$ " above mounting board; supplied with arm rest, connecting cables, hardware, and templates.....\$89.95

Model 1000-33S cartridge for 33 $\frac{1}{3}$ rpm\$59.95

Model 1000-78 cartridge for 78 rpm\$59.95

SHURE

Models M232 and M236 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

Models M216 and M212 Integrated Arm and Stereo Cartridge

Frequency response 20-20,000 cps ± 2.5 db; channel separation over 20 db at 1,000 cps; 4.5 mv per channel; vertical-lateral compliance 9×10^{-6} cm./



dyne; 0.7 mil diamond; M216 for 16" records. M212 for 12" records; tracking force $1\frac{1}{2}$ - $2\frac{1}{2}$ grams.\$89.50

SME

Models 3009 & 3012 Tone Arms



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 $\frac{3}{4}$ "

Model 3009 (Short).....\$87.00
Model 3012 (Long).....\$99.00

Bias Adjuster

For use with SME arms only; neutralizes "inward swing" tendency common to all offset phono arms; eliminates side pressures and permits distortionless tracking at low stylus forces; uses weight acting on lever attached to bearing system; supplied complete with mounting instructions\$4.05

SONOGRAF

Model 2400 "The Jobo" Tonearm



Employs re-adjustable ball bearings on every turning axis; spring tension stylus pressure adjustment; tubular construction; interchangeable pickup shell; mounts all popular cartridges; 12"; imported from Holland.....\$29.95

SONOTONE

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; include new Model 12 crystal cartridge.....\$7.45

STROMBERG-CARLSON

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); $2\frac{7}{8}$ " above, $2\frac{3}{8}$ " below mounting plate.....69.95
Base (ebony only).....4.95

WEATHERS

"Professional"
Stereo Tonearm & Cartridge

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



puts; response 20-20,000 cps ± 1 db; channel separation 40 db @ 1 kc., 35 db @ 15,000 cps; output 1 volt RIAA equalized), 8 mv. @ 1 kc. for magnetic input; moving mass .6 mg.; compliance 20×10^{-6} cm./dyne; diamond stylus; tracking force $\frac{3}{4}$ -1 gram; for use with 12" turntable.....\$129.50
Model PS-11K Conversion kit for all Weathers viscous-damped tonearms91.00

"Stereoramic"
Stereo Tonearm & Cartridge

Same arm assembly as in "Professional" series; ceramic cartridge; response 20-20,000 cps ± 4 db; separation 25 db @ 1 kc.; output 15 mv. from adapters to mag. phono preamp; moving mass 1 mg.; compliance 10×10^{-6} cm./dyne; tracking force $2\frac{1}{2}$ grams; diamond stylus.

MC-ID Complete system.....\$55.95
C-501DA Conversion kit for all Weathers viscous-damped tonearms.....\$19.50

STEREO/HI-FI DIRECTORY

PLEASE NOTE.....

Most of the prices shown in this **STEREO/HI-FI DIRECTORY** are those prevailing in the manufacturer's immediate marketing area and are "Audiophile Net". Increased shipping costs may be reflected as higher prices in certain areas of the country.

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The KD6 and KD9 are each scientifically designed, acoustically correct enclosures that will add up to an extra octave of performance to any full-range speaker. The folded-horn KD6 uses the corner of the room as part of the horn, to increase performance without increasing size. The KD9 with its rear-facing ducted port provides similar range extension for along-the-wall applications.

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MODEL KD6 ARISTOCRAT KIT
Finest corner enclosure for any 12" full-range or 3-way speaker.



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*Superb response from 12" or 15" speaker when used along the wall.
(shown with AK6 grille)*

MODEL KD6 ARISTOCRAT KIT For any 12" speaker. Also pre-cut for E-V Building Block components and Wolverine Step-Up Kits. Uses folded-horn plus corner of room to extend range—save space. Size: 29 3/4 inches high, 19 inches wide, 15 1/4 inches deep. Shipping weight 36 pounds. Net each \$39.00.

MODEL KD9 MARQUIS Similar to Aristocrat at left, but for 12" or 15" speakers. Ducted rear port design provides optimum bass response in along-the-wall installations. Size: 29 3/4 inches high, 19 inches wide, 14 1/4 inches deep. Shipping weight 38 pounds, Net each \$36.00.

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AK6 TRIM KIT Add a sparkling brass grille to KD6 or KD9. Net each \$4.80.

E-V DO-IT-YOURSELF INSTRUCTION BOOKS Complete, concise instructions help the home workshop enthusiast to build E-V high fidelity enclosures. Available for Aristocrat, Marquis, Regency or Baronet. Net each \$1.00.

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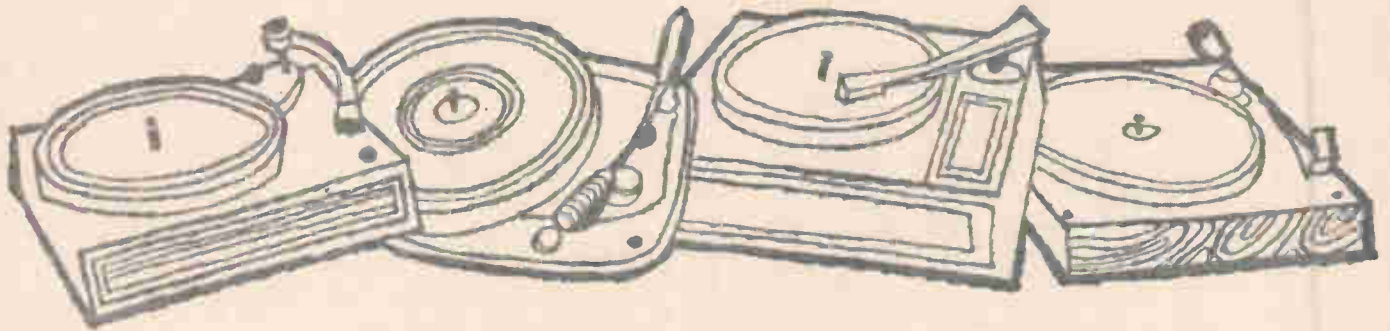
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Manual & Semi-Automatic HI-FI TURNTABLES

By **STANLEY BURWELL** / If you have any doubts about what to buy—here are the facts you should have before making your choice of such equipment.



THE QUEST FOR QUALITY in high-fidelity reproduction of phonograph records usually leads to a professional-type manual (non-automatic) record player or turntable. The record changer has certain operational advantages that have made it very popular, but the manual turntable has limitless quality possibilities, and these endear it to the earnest seeker after audio perfection. Some of these units have a semi-automatic feature in that the turntable motor is switched on when the tonearm is moved into playing position and the motor is turned off at the end of a record. These may be called semi-automatic players or semi-automatic turntables, and they are included in our discussion.

Some turntables are true professional units that meet National Association of Broadcasters (NAB) standards of quality for broadcast use. However, there are others that are used as manual record players that employ the same drive motor and turntable platter used in a record changer. These units may or may not meet professional broadcast standards.

The basic function of the turntable is a simple one. It merely has to rotate the record at a specific, constant speed. The speed most commonly used today is, of course, $33\frac{1}{3}$ rpm, and hence there are turntables which operate at this single speed or a combination of speeds, depending on the individual requirements of the audiophile.

Whatever the speed, $33\frac{1}{3}$, 45, or 78 rpm, the NAB standards require that there be no average speed deviation from it exceeding 0.3 per-cent and that the maximum instantaneous peak deviation from the average speed not exceed 0.2 per-cent. If the average speed is inaccurate, the exact musical pitch will not be reproduced. If there are rapid speed changes, then "wow" at low frequencies or "flutter" at higher frequencies will be heard. This standard is based on the inability of the ear to aurally detect variations in pitch when the speed deviation is kept at or below the latter figure.

Motors and Platters

Naturally, constancy of speed demands the use of high quality motors. The types of motors commonly used in high-fidelity turntables are 4-pole induction motors and hysteresis-synchronous motors. Either type, when well made, will function effectively. However, fluctuations in line voltage will usually affect the speed of induction motors, whereas the speed of hysteresis-synchronous motors is determined by the frequency of the alternating

current. As the constancy of a.c. frequency is more easily kept under control than the constancy of line voltage, this gives the hysteresis-synchronous motor a slight edge over its rival. Yet, it is possible to design excellent induction motors, and some of the best turntables use them. In these, it is not uncommon to use an induction motor designed so that its stator is magnetically saturated. Under these conditions, changes in line voltage have little effect on speed, which now depends mainly on frequency.

The rotation of a motor does not progress with steady smoothness like a stream of water. Actually, it moves in a rapid series of pulls and tugs, chugging along so rapidly that the effect is one of seeming steadiness. However, the minute hesitations between the "chugs" do exist and they manifest themselves as vibrations or ripples ("flutter" in the reproduced sound) unless they are smoothed out. An effective way of doing this is by using a turntable platter too heavy to respond to these tiny hesitations. The weight of the platter also creates a flywheel effect that helps to keep the speed of rotation constant when there are quick line voltage fluctuations.

From this, it would seem that the heavier the turntable platter, the better. This probably would be so, except that the heavier the platter, the more powerful the motor needed to rotate it, and increasing the power of the motor creates additional vibration and adds to the problem of its isolation. Fortunately, there is a point at which platter weight and motor power meet, and good engineering design matches the one with the other for maximum efficiency.

Rumble and Its Causes

Regardless of the nicety with which the motor and the platter are matched, there is a residual vibration in the motor and drive system that must be kept isolated from the platter. If this vibration is transmitted to the platter, it will be picked up by the cartridge stylus and heard through the loudspeakers as "rumble," a low-pitched growl. This low-frequency noise signal is usually heard directly, but even if it is not audible, it may distort and modify the sound of all of the music or other material on the phonograph record.

The NAB standards state that when playing a silent groove test record, rumble should be at least 35 db below the reference level of 1.4 cm. per sec. peak velocity at 100 cps. This reference level is equal to 7 cm. per sec. at 500 cps. and roughly 7 cm. per sec. at 100 cps.

While this style of rumble measurement has been adopted

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new
new new
new new
new

**LESS THAN 3 GRAMS
TRACKING PRESSURE**



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...made
to protect
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The selected Diamond Stylus pickup of the 4-speed Electro-Acoustic 7000 Series stereophonic record player, with its high compliance and extremely low stylus pressure combine to extend record life and maintain the original fidelity of your fine recordings.

The dynamically-balanced 4-pole, 4-coil motor and turntable, micro-honed motor spindle, precisely machined bearings, and the custom-fitted turntable drive... limit rumble to -40db, wow to less than 0.15% RMS and flutter to 0.06% RMS (better than NARTB standards). Turntable speed is certified to be within $\pm 1\%$ of absolute.

The Electro-Acoustic 7000 series handles your records more carefully than human hands. It is designed to capture the full beauty of every recording for hundreds of playings. \$69.50 Audiophile Net.

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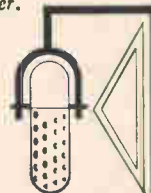
Each record player is laboratory tested and is sold with a written test report coded to the serial number of that particular record player, certifying that performance is within specification limits.



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by most manufacturers, there are a few whose specifications read "35 (or more) db below average recording level." Unfortunately, this "average recording level" is not specified, so for all practical purposes, the rumble specification thus stated has little exact meaning. It may be mentioned here that one manufacturer of quality turntables has suggested that a more meaningful rumble statistic than that set forth by the NAB would be the amplitude of rumble vibration as measured in millionths of an inch. However, this is a matter for the engineers to argue.

It is much harder for a record changer to meet this rumble standard, because of its added mechanism needed for automatic operation, than it is for a good manual or semi-automatic turntable. If this standard is not met, and good loudspeakers are employed in the audio system, the rumble filter will probably have to be switched on when records are played, with a concomitant loss of desirable bass tones. It is axiomatic that the better the speakers and the more capable they are of producing clean, deep bass, the more prominent will be the rumble—if it exists. Hence, the better the related audio equipment, the more necessary a high-grade, rumble-free turntable.

Rumble is fought in many ways and on many fronts. The way the motor is mounted and motion transmitted to the platter is of prime importance. Springs or rubber are used to isolate the motor mounting board from the rotating platter. Motion is transmitted from the shaft of the motor to the platter by means of pulleys, idler wheels, and drive belts, carefully calculated and fabricated. Each method can be made effective and each has its adherents. Whichever is used, important consideration is given to its ability to filter out vibration rather than transmit it.

The motor must not be held solely responsible for all of the rumble that may enter the system. The manner in which the turntable platter is mounted can also contribute a substantial amount. It is imperative that the platter turn freely, with little friction. The turntable shaft must fit in its bearing snugly, without any play, yet with perfect freedom of rotational movement. To minimize friction, the shaft may be supported by a ball and the ball may sit in a nylon seat. Again, there must be no looseness in the fit or the ball will wobble, with the result that there will be an eventual increase in friction and a loss in the trueness of rotation.

The platter itself must be well machined so that the rim is concentric with the shaft. It must be well balanced so that when it rotates, it remains level and there is no wobble and a minimum of up and down movement on the tonearm. Some platters are machined with exceptional care, with the ultimate balancing individually accomplished by means of holes drilled underneath the rim in order to distribute weight evenly. Such a refinement of construction may well result in smoother rotation.

Another method of minimizing rumble is to bring its tonal frequency down below normal hearing ability. Most rumble is at the 30-cps frequency. This is the result of using the very common motor speed of 1800 rpm, equivalent to 30 revolutions per second. This is a very low tone, but it can be heard easily and it can be reproduced by a good loudspeaker. However, it is possible to design a turntable with rumble at the 15- or even 10-cps mark. There are no speakers generally available which can reproduce these very low frequencies, and even if there were, nobody can hear them. However, even this very low frequency, at a high enough level, can produce intermodulation distortion that is audible at the higher audio frequencies.

While most turntables are constructed in accordance with the theory that a powerful motor and a heavy platter provide the most effective means of spinning a record, a few of them are not. These turntables utilize small, low-torque motors and light platters. Their design is based on the fact that modern cartridges and tonearms function at very low tracking pressures, and that motors therefore need not necessarily be as powerful as in the days when tracking pressures were high. Essentially, the lightness of their platters is only relative and is determined by the power of their motors. These turntables take further advantage of the fact that low-torque motors produce very little vibration, and offer fewer problems of motor mount-

ing, isolation and rumble to the discriminating buyer.

In selecting a turntable for his system, the audiophile must first decide whether he requires a single speed or multi-speed unit. The single-speed turntable is less complicated in structure than the others and theoretically can be made to finer basic standards. For this reason, a turntable for playing 33½ rpm record and a changer for 45, 78, and 16⅞ rpm discs find favor in some installations. However, if records other than 33½ are played often, a multi-speed turntable is entirely practical from the quality point of view. The speed-changing facility need not introduce any extra hazards of pitch variation or rumble.

With precision motors that operate at a fixed, constant speed adjustment control is rarely needed. However, if you sing or play an instrument and wish to perform along with records, a speed adjustment is a necessity to achieve unity of pitch. Not all instruments are tuned to A-440 pitch, and some records sound a trifle higher or lower than others. You must play them at the correct indicated speed to duplicate their original pitch and tempi, but if you want to play along, perhaps on a piano, you may have to slow down or speed up the record to match its pitch with your instrument.

While most of the turntables available today are marketed in a manner that permits any preferred tonearm to be used, some have tonearms already supplied and mounted by the manufacturer. Where the tonearm is also a high quality product, an ensemble of this type has the advantage of proper and convenient installation. However, as mentioned before, a few of these ensembles are in reality stripped versions of record changers, with economy motors and short tonearms. These are not in the same class as professional type turntables and tonearms.

We would also like to point out that manufacturers of record changers that are able to play single records manually could refer to their units as "automatic turntables." As a matter of fact, one manufacturer has gone so far as to include a dynamically balanced tonearm and a weighted platter in a player that also incorporates the automatic-play feature of a record changer.

Simple Tests

It is, of course, impossible for the audiophile to make his own laboratory tests on individual turntables when he is shopping for one. He can, however, be guided by manufacturers' specifications and he should not hesitate to avail himself of the salesman's knowledge and experience. The salesman can usually suggest a turntable that is compatible with the type of amplifier and speakers with which it will be used.

If possible the turntable recommended by the salesman or requested by the audiophile should be hooked up with an amplifier and speakers similar to those he owns, and tried out in the store.

Place a stroboscope on the turntable and check the accuracy of speed. Some turntables have built-in strobe discs. Do this again while a record is playing so that you know whether speed is maintained under operating conditions. (To meet professional broadcast standards, not more than 21 bars on the strobe disc should appear to move past a given point in one minute.) Listen to a record or two. Solo piano records provide excellent test material. The tones should be firm, steady and clear, not wavery or fuzzy. Turn the volume up and boost the bass to determine how much rumble the turntable produces.

If the piano tones are pleasing and the rumble is not noticeable or objectionable at fairly high volume with the bass emphasized, you have a good turntable. It will enable your records to be played with maximum fidelity and minimum distortion and thereby provide you with maximum pleasure and minimum frustration.



NEW! ...for the first time in the U. S.! 3 superlative stereo arms and a cartridge by ORTOFON... world famous Danish makers of studio recording equipment!

FINEST! Professional RMG309, 16" stereo arm. Often imitated, but nothing equals the original! Available with plug-in, electrodynamic Ortofon stereo cartridge or with shell to fit standard cartridges. Approximate dimensions: 12 3/16" from pivot to record center; requires 3" rear clearance. Tracks at 2 grams. Micrometer stylus force adjustment (reads directly in grams). Adjustable height over mounting plate. Statically balanced by counterweight with spring controlled stylus force (no leveling required). Rubber damping between arm and counterweight . . . \$59.95 net.

PERFECTION! Ortofon SMG212, 12" stereo arm. Takes Ortofon or any standard stereo cartridge. Tracks at 2 grams. Special arm shape makes turntable leveling unnecessary; turntable may be up to 30° out of level before tracking difficulties arise. Ball bearings on both horizontal and vertical pivots. Adjustable height above mounting plate. Unique counterweight adjustment can be easily and quickly calibrated, without tools or gauges, to read stylus force in grams for any cartridge . . . approximate dimensions: 8 3/8" pivot to record center; 3 1/4" rear clearance (maximum for heaviest cartridges) . . . \$29.95 net.

ECONOMICAL! Ortofon SKG212 12" stereo arm. A renowned Ortofon arm with true economy. Takes Ortofon or standard stereo cartridges. Adjustable, user-calibrated counterweight shows stylus force directly in grams (same as on SMG212 above). Approximate dimensions: 8 3/8" from pivot to record center; 3 1/4" rear clearance (maximum for heaviest cartridges). A truly superb performer . . . only \$19.95 net.

MIRACULOUS! You'll have to hear it to believe it! New, sealed-into-shell Ortofon electrodynamic stereo cartridge, with built-in transformers, plugs into any Ortofon arm above. Also available without shell for other arms. 2 gram tracking. 20-20,000 cps response. 20-25 db channel separation. Extremely high compliance: 10 x 10⁻⁶ centimeter per dyne. IM distortion practically immeasurable, even on highest recorded levels. Equivalent mass at stylus point: 1 milligram . . . \$49.95 net.

WORLD FAMOUS STUDIO EQUIPMENT



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SRFD-2

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How to Select an FM Tuner

By JEROME M. GILISON

Basic coverage of the specifications and features that are important to the user in picking a hi-fi FM tuner.

WHEN faced with the awesome task of choosing an FM tuner the music enthusiast has often felt completely lost amidst the complex jargon of technical specifications and performance characteristics that seem to be the exclusive property of audio salesmen and electronics engineers. All too often the prospective buyer will throw up his hands and rely on the advice of the salesman or an "initiated" friend, only later realizing that his brand new tuner is lacking a feature that would be particularly useful under his listening conditions. This is especially unfortunate because this all-too-common calamity can easily be avoided with just a little preparation before entering the hi-fi emporium.

Specifications

The technical specifications have very practical "common sense" meanings—expressed in technical shorthand—that indicate the type of performance you might expect under different operating conditions. Sensitivity ratings, for example, are often used to compare different tuners. These ratings indicate the ability of a tuner to receive weaker stations without bringing in, at the same time, an annoying background of noise. Thus the number you see in print is the *minimum* received signal strength which will permit a given degree of *quieting*, or freedom from background noise. If Tuner "A" is rated at 1.5 microvolts for 30 db of quieting (the most meaningful quieting level) with a standard 300-ohm antenna, this means that Tuner "A" will provide an enjoyable music signal with only 1.5 microvolts received at the antenna. Generally speaking, the sensitivity rating for 30 db of quieting with a 300-ohm antenna is the most useful basis of comparison and the prospective buyer should be alert to spot 72-ohm antenna ratings for specialized applications (which are exactly *half* the 300-ohm rating), and ratings for 20 db of quieting, which are lower but also include more noise. Of course, the lower the sensitivity figure, the more sensitive is the tuner.

The Institute of High Fidelity Manufacturers Inc. (IHFM), an industry-wide group, has established two new sensitivity ratings which are now used by practically all tuner manufacturers. These are *usable sensitivity* and *volume sensitivity*. The usable sensitivity test is designed to measure the internal noise (including hum and distortion) generated by the receiver itself, while the volume sensitivity is a measurement of a tuner's ability to provide a listenable signal from weak stations. (*Editor's Note: Usable sensitivity is measured with a -30 db, or 3%, ratio between the tuner's output with and without modulation. Volume sensitivity is measured with a -20 db ratio between the tuner's output with a strong modulated signal to the output with a weak modulated signal.*) Due to the tremendous advances which have been made in tuner sensitivity over the past decade, however, the usable sensitivity

test is the more stringent requirement for most tuners on the market today. What this means, in effect, is that today's tuner is so sensitive to radio signals that it will perform satisfactorily as long as the input signal is higher than the internal noise generated in the receiver tubes and components.

The important factor, however, is the amount of sensitivity that you will actually need in your own area. There is simply no sense in parting with extra cash for a highly sensitive tuner when all the stations you will care to receive can be picked up with ease on a less expensive model. Probably the best way of deciding how much sensitivity you need is to determine the number and location of stations you would like to receive. If your list includes some "must" stations at a distance of over 100 miles, you will probably need a highly sensitive tuner and, in most cases, a specialized outdoor antenna. If your most distant "must" station is located between 50 and 100 miles from your home, a tuner in the more moderate sensitivity range with an outdoor antenna will probably suffice. Local stations should present no problems—at least in regard to sensitivity—to just about all tuners of hi-fi standing now on the market. Of course, *these distances are very approximate*, for the peculiarities of FM transmission could place your domicile squarely in the midst of a "dead" zone while your neighbor is enjoying booming reception from distant places on his low-fidelity table model. If you are particularly interested in distance reception, the most sensible procedure would be to test the tuner of your choice in your home before making a final purchase.

Of course, even in the largest metropolitan areas, highly sensitive tuners can add significantly to the pleasure you derive from FM listening. Many a listener in such an area has been delighted to discover a station just to his taste in a distant city that might have remained beyond his range with a less sensitive unit. Thus the sensitivity rating must be considered along with the applications you have in store for your tuner, before a decision is made.

The AM noise rejection figure is an indication of the tuner's ability to suppress atmospheric static and car ignition noises. If a tuner has good limiting action and thus a high degree of freedom from such interference, this will be indicated by a higher AM noise-rejection figure. You should keep in mind that high tuner sensitivity is usable only if it is accompanied by sufficient limiting action.

Another important specification when judging the reception provided by FM tuners is the capture ratio. This ratio indicates the degree to which a tuner can suppress a weaker station *on the same frequency* as the station you desire. A low capture ratio is particularly important in metropolitan areas where the FM band is crowded. With a sufficiently low capture ratio, you should rarely be troubled with even the faintest whisper of an advertising jingle in

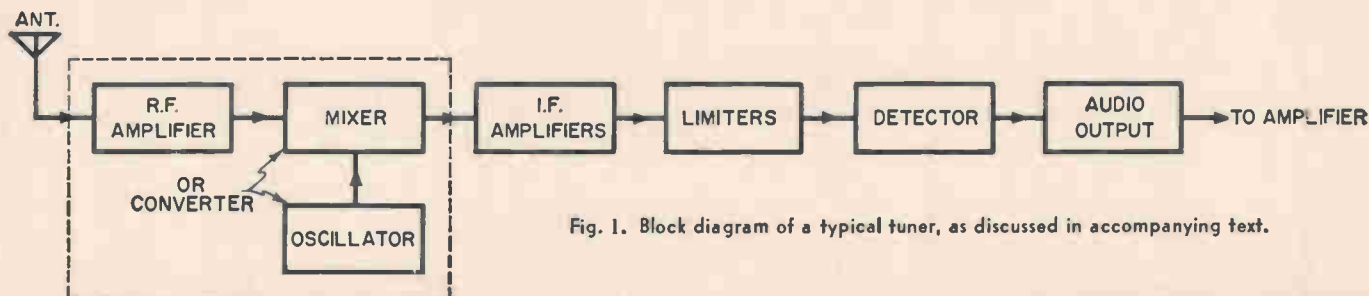


Fig. 1. Block diagram of a typical tuner, as discussed in accompanying text.

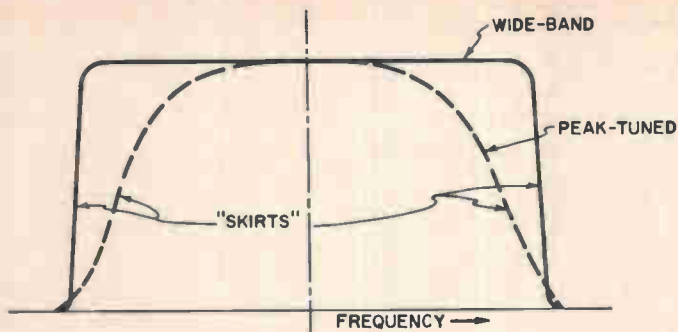


Fig. 2. Typical i.f. response curves of an FM tuner.

the background of a soul-satisfying program of Beethoven or Brubeck. Other indicators of a tuner's ability to eliminate unwanted FM signals are: image rejection, alternate-channel rejection, and adjacent-channel rejection. All of these numbers, expressed in db, have one thing in common—the higher they are, the more selective the tuner is.

All tuners worthy of the name "high-fidelity" should provide an audio response that is essentially flat (± 1 db) from below 50 to 15,000 cps, the usable range transmitted by FM stations. In addition, they should limit harmonic distortion to within 3% over this range. You will find that these figures are, in fact, maintained by just about all component FM sets now on the market.

Circuit Features

These few performance specifications are more than adequate as a basis of comparison in selecting an FM tuner. For a more complete assessment of an FM tuner's performance, however, you should be acquainted with some of the more common design features of the sets most often found on the seemingly endless shelves of the average hi-fi salesroom. The FM signal, after being picked up by the antenna, first encounters the tuner "front-end" (see dashed box in Fig. 1) where it is amplified and separated from other signals close to it in frequency. Since the signal from the antenna is typically measured in *millionths* of a volt, the most important requirement for a front-end is that it not introduce any internal noise of its own which would then be amplified along with the weak signal and appear as a rushing noise or hiss in the tuner output. From the standpoint of both high amplification and low noise, one of the best types of front-end design is the cascode type, which is generally found in the more expensive models. This design uses two triodes (which are the least noisy type of tube) usually within a single tube envelope. Less sensitive tuners will use a single stage of amplification in the front-end or, in rare instances, omit the amplifier.

As shown in Fig. 1, the FM signal is next fed to the mixer or converter stage (also part of the front-end) where it is changed to a lower intermediate frequency (i.f.), standardized at 10.7 megacycles. This can be accomplished by two low-noise triodes, one a mixer and the other an oscillator, or by a pentode-triode converter combining the two functions. This stage should be covered with metal shields to prevent the unavoidable radiation from interfering with the operation of the tuner or other equipment nearby.

The signal is next sent to the i.f. amplifier for a further increase in strength and for elimination of any remaining interfering signals. Generally, the greater the number of i.f. amplifying stages, the better the performance of the tuner. This is due not only to the increased gain (amplification) afforded by the extra stages but by the decrease in gain needed from each individual stage to achieve a usable output. The additional i.f. stages make it possible to increase the stability and thus lower the over-all distortion.

An increasing number of FM tuners these days feature wide-band design. The advantages of wide-band design of the i.f. amplifier are shown in Fig. 2. By providing constant amplification for a broad range of frequencies, the wide-band tuner greatly reduces distortion, especially on loud transients. The steep slope of the "skirts" of the i.f.

response curve aids in eliminating unwanted signals. The narrow-band peak-tuned tuner (dotted line) does not provide the same freedom from distortion because the amplification is non-linear over a portion of the response curve.

After passing through the i.f. amplifier stages, the signal is then fed to the limiters, which remove the peaks of the transmission thus removing AM interference (Fig. 3) such as static and car ignition noise. Here, again, the number of stages can serve as a general indication of the tuner's performance. A well-designed tuner will include several different types of limiters so that the amount of limiting

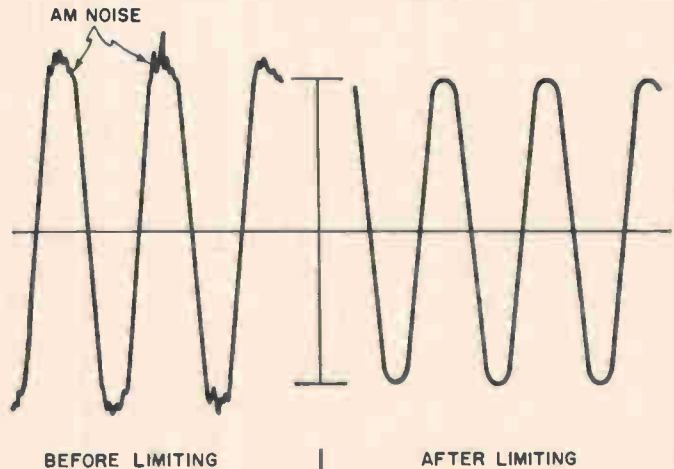


Fig. 3. Action of a typical FM tuner limiter circuit.

action will depend on the strength of the received signal. This variable limiting action permits each stage to operate in its own best limiting range. Some limiters double as i.f. amplifiers on weak signals.

At this point, the signal is ready for conversion to an audio output. This is done either by a ratio detector or a Foster-Seeley discriminator. The ratio detector has come into increasing use because of its distortion-free operation over an extremely wide band. It also provides additional limiting action for strong signals. The only disadvantage of the ratio detector is that the strength of the audio output varies with the strength of the radio transmission, but this defect is normally compensated for by the addition of limiters and automatic volume control (a.v.c.) in the i.f. section. The Foster-Seeley discriminator is being used less and less by tuner manufacturers but it does have the advantage of producing a relatively constant audio output for both weak and strong stations.

In most tuners, the audio signal from the detector is fed to one or more audio amplifiers and a volume control is provided. The final stage is the cathode or plate follower, which permits long lengths of cable to be used between tuner and amplifier without loss of fidelity.

Additional Features

Although we've covered the main points in a typical FM tuner design, there are several additional features which should definitely be considered when purchasing a tuner. The first and one of the most important is automatic frequency control (a.f.c.). There exists today a difference of opinion among tuner designers concerning the relative merits and demerits of including a.f.c.—a controversy which is reflected in the fact that some of the better tuners on the market today do not include it. The argument against a.f.c. is that it is just an added complication which is not needed if the tuning sections are temperature-compensated to prevent drift. The argument for a.f.c. is to the effect that although a.f.c. should not be needed to prevent drifting in a well-designed tuner, it is still indispensable for convenient and accurate tuning to the exact center-channel and minimum-distortion position.

The need for a.f.c. is actually augmented in a wide-band tuner because with such a tuner the peak indication on even the most accurate tuning meter is so broad that it is literally impossible to find the center-channel position. Thus a.f.c. is used, *after* bringing in the station, to correct man-

ual tuning errors. You will probably find a.f.c. an added convenience in most cases—and a switch is provided to turn it off if you should have any problems in receiving a particular station.

Another important feature is an accurate tuning meter or indicator. Generally, a meter is preferable because of its added convenience and increased visibility. However, several of the newer indicator tubes have improved characteristics, such as expanded-scale indication for weaker stations, and can be used without any significant loss in convenience.

Suppression of inter-station noise is another feature well worth having in an FM tuner. This noise can easily become a tranquility-shattering roar if the volume level is not turned down while tuning. The least satisfactory method of noise suppression is to use a filter which merely reduces the noise level. Second-best is the audio squelch circuit which can be recognized by the rather disturbing thumping noise which it produces just before cutting off the noise. A more recent variant of this device employs a mechanical relay to eliminate the thumping and to quicken the reaction time.

The most useful procedure, however, is to cut off the signal in the i.f. section before it ever reaches the audio stages. By doing this, the deficiencies of audio squelching are eliminated and, in addition, the suppression feature will be effective for FM multiplex.

Naturally, anyone at all interested in stereo should be sure that the set he buys includes a multiplex output. A multiplex output will be needed for the connection of a separate adapter. Several tuners now on the market have provision for adding a plug-in adapter directly to the tuner chassis. In other cases, it will be possible to obtain an FM

tuner with the multiplex feature built right in without requiring any separate adapters.

A "Local-Distant" switch may also be helpful, especially in areas close to FM transmitters where the danger of overloading is the greatest. Flipping the switch to the "Local" position cuts down the signal level and thus prevents overload distortion, or imaging. This feature is more important on the highly sensitive tuners because the possibility of overload is greater.

There are a few other convenience features which may prove quite handy, although they are overlooked by many tuner buyers. These include such items as a separate output for a tape recorder, heavy flywheel action on the tuning knob, a front-panel volume control and "on-off" switch, auxiliary power outlets, and a logging scale on the tuning indicator (for quicker location of a desired station). None of these will affect the performance of the tuner but they may make it a bit more comfortable to "live with." Along these lines, it goes without saying that the tuner must be attractively styled and fit the room decor.

In selecting an FM tuner, as with any high-fidelity component, the most important consideration is to match the features of each model with the particular application you have in mind. Looked at in this way, there is no "best" tuner and no "worst"—there are simply a variety of models and features, some of which may fit your requirements better than others. Probably the best procedure is to decide on the essentials—price range, performance specifications, and features—before entering the many-splendored showroom of your local dealer. In this way, you can avoid a great deal of wasted time and confusion, and also bring into your home a tuner that suits your particular requirements.

3

TUNERS & RECEIVERS

A.E.S.

Model R-100 AM-FM Stereo Tuner

Response FM 20-20,000 cps \pm 1 db; FM sensitivity 2 mv. for 20 db of quieting & AM; 3.2 mv. loop sensitivity; has space for FM multiplex adapter; FOB factory (less cabinet).....\$119.50
Cabinet available in walnut, cherry, mahogany finishes; FOB factory.....\$9.50

ALTEC LANSING

Model 309A AM-FM Stereo Tuner



Individual tuning indicators; a.f.c., FM squelch control; sensitivity 2.9 μ v. for 20 db quieting; ratio detector; response FM 20-20,000 cps \pm 1 db; tubes—6GY8, 6AL5, 6BE6, 5-6BA6, 2-EM84, 12AX7; has provision for multiplex adapter.....\$216.00

Model 312A FM Tuner



Adjustable interstation squelch; a.f.c.; ratio detector; response 20-20,000 cps \pm 2 db; sensitivity 2.9 μ v. for 20 db

quieting; space within cabinet for FM multiplex\$111.00

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 \pm 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

ARKAY

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.....29.45
Factory wired44.95

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".
Kit\$25.75

Model FM 7 FM Tuner Kit

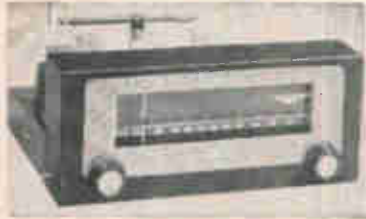
Pre-wired and pre-aligned front end; electronic tuning indicator; 4 i.f. stages; sensitivity 1.9 μ v. for 20 db quieting; i.f. bandwidth 260 kc. at 6 db. down; image rejection 40 db.; includes AFC and AGC; outputs multiplex, high level cathode follower FM; tubes are 6AQ8, 3-6AU6, 6AL5, 6C4, EL84, tuning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

FM-8 FM Tuner Kit

Three tuned stages, all triode front end, five double-tuned i.f. stages, dual limiters; Foster-Seeley discriminator, variable AFC; AGC; front-panel sound muting control for silent meter tuning; standby switch; low-filter switch; sen-

sitivity 1.9 microvolts for 20 db quieting; tuning meter, frequency response 20 to 20,000 cps; outputs: cathode follower, high level, and binaural FM (multiplex); tubes: 2-12AT7, 2-6BA6, 2-6AU6, 6AL5, 12AU7; edge-lighted slide rule dial.....\$39.95
Factory wired.....\$59.95

HFT-7 AM-FM Tuner Kit



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

ST-II AM-FM Stereo Tuner Kit



AM and FM completely separate and independent; FM specifications: sensitivity 4 microvolts for 20 db quieting, bandwidth 200 kc at 6 db down, image rejection 30 db minimum, frequency response ± 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. Kit.....\$49.95
Factory wired.....\$74.50

AUTOMATIC RADIO

Model FM-70 FM Receiver

All-transistorized with provision for multiplex adapter; can be used as tuner, complete receiver, or amplifier for phono or microphone; 9 transistors, 4 diodes; will also operate from 9 or 12 volt



battery; sensitivity 4 μ v. for 30 db quieting; response 20-20,000 cps ± 3 db; full limiting occurs at 10 μ v.....\$64.95

Model AM-60 AM Receiver



Companion design to FM-70; can be used as radio, amplifier, or tuner; 7 transistors, 2 diodes.....\$49.95

BELL SOUND

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; bass 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 1/4" x 17 3/16" x 13 3/4".....\$329.95

Model 2441 FM-AM Stereo Tuner



Uses tuner section of Model 2445 Tuner-Amplifier; 5 1/4" x 17 3/16" x 10 3/8".....\$179.95

Model 6070 "Carillon" FM-AM Stereo Tuner

FM section, sensitivity 1.1 μ v. for 20 db quieting; selectivity 6 db @ 200 kc.; response 20-20,000 cps ± 0.5 db; hum and noise 60 db below 100% modulation; AM section, sensitivity 3.5 μ v. for



20 db signal/noise at 100% modulation; selectivity 8.5 kc. (narrow), 19 kc. (wide); image rejection 72 db; response 20-8000 cps (wide); hum and noise 50 db below @ 100% modulation; four controls, four switches; two tuning indicators. 55 watts; 5" x 16" x 10 3/4". \$219.95

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" x 12" x 3 1/8".....\$119.95

Model FB-2M Multiplex FM Tuner

Sensitivity 2 μ v for 25 db. quieting; distortion less than 1% at 2 volts out; AFC; multiplex output jack; Foster-Seeley discriminator; 13" x 3 1/2" x 7".....\$69.95

BOGEN

Model RP40A FM-AM Stereo Receiver



Output power 22 watts per channel, 44 watts combined (IHFM standard); response 18-30,000 cps ± 1 db; distortion less than .8% at full output; hum & noise level -75 db; FM sensitivity 1 μ v. for 20 db quieting (2.75 μ v. IHFM); AM sensitivity 1.2 μ v. for .5 v. output, 3 μ v. for 20 db signal-to-noise ratio; audio sensitivity—mag. cartridge 2.5 mv., tape head 1.5 mv., crystal cartridge 140 mv., aux. input 140 mv.; output impedances 4, 8, 16 ohms; built-in multiplex; controls—separate programming selectors, dual-volume, dual-bass, dual treble, blend, speaker selectors, input, loudness, rumble filter, scratch filter, FM tuning, a.f.c., FM tune tabs, AM tuning, dual-power output balance; tubes—23 tubes, 3 crystal rectifiers (including one matched pair) plus 6 silicon rectifiers; 16" x 6" x 13 1/2".....\$399.95
Metal enclosure.....\$13.95

Model TP60 FM-AM Stereo Tuner
Response flat to 75,000 cps; distortion .6% FM, .8% AM; FM sensitivity



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TUNERS & RECEIVERS

.9 μ v. for 20 db quieting (2.5 μ v. IHFM); AM terminal sensitivity 1.2 μ v. for .5 v. output, 3 μ v. for 20 db signal-to-noise ratio; built-in multiplex; controls—FM tuning, AM tuning, variable a.f.c., FM tune tabs, function selector, power; tubes—10 plus 1 low-noise nuvistor, 2 tuning eye tubes, and 3 crystal rectifiers; 16" x 6" x 9".....\$269.95
Metal enclosure\$13.95
Walnut cabinet\$29.95

Model RP100 FM-AM Mono Receiver



Output power 15 watts continuous sine-wave; harmonic distortion 2% at rated output; range—FM 88-108 mc., AM 520-1640 kc.; selectivity—FM 180 kc., -3 db; AM—8 kc., -3 db; response FM & phono 20-20,000 cps \pm 1 db, AM—20-4500 cps -3 db; noise & hum -55 db; output impedances 4, 8, 16 ohms; sensitivity FM 1.25 μ v. for 20 db quieting (3 μ v. IHFM) AM 5 μ v. for 20 db signal-to-noise ratio; controls—selector with equalization positions, volume, bass, treble, low filter, hi filter, loudness, speaker selector, tuning, power (on volume control); tubes—13 plus 3 crystal diodes; 15" x 4 3/4" x 12 1/2".....\$169.95
Metal enclosure.....\$11.95
Walnut cabinet.....\$24.75

Model RP200 FM-AM Stereo Receiver



Output power 20 watts per channel, 40 watts combined (IHFM standard); range—FM 88-108 mc., AM—520-1640 kc.; response 20-20,000 cps \pm 1 db; noise & hum FM—58 db, AM—48 db; output impedances 4, 8, 16 ohms; sensitivity FM 1.25 μ v. -20 db, 3 μ v. (IHFM); audio sensitivity—mag. 4.5 mv.; signal-to-noise 60 db crystal/aux .5 v.; signal-to-noise 75 db; distortion FM 1.5%, AM 3%, phono (mag) .6% at continuous power output; controls—function selector, dual volume, dual bass, dual treble, FM tuning, AM tuning, on-off, FM-a.f.c. AM-multiplex, mono-stereo (in rear); built-in multiplex; tubes—16 plus 3 crystal diodes (including matched pair) and 7 rectifiers; 16 1/2" x 5 1/4" x 14".....\$299.95
Metal enclosure.....\$11.55

Model TP200 FM-AM Stereo Tuner
Range 88-108 mc. FM, 520-1640 kc.



AM; response FM 20-18,000 cps \pm .5 db, AM 20-4500 cps \pm 1.5 db; sensitivity 1.25 μ v. 20 db quieting, 3 μ v. (IHFM); AM loop sensitivity 100 μ v./meter. 20 db signal-to-noise ratio; terminal sensitivity 3 μ v./meter 20 db signal-to-noise ratio; controls—selector (stereo, FM-AM, FM, AM, multiplex), a.f.c. output, AM, FM tuning, power; tubes—9 plus 3 diodes; built-in multiplex; 15" x 4 3/4" x 12 1/2".....\$199.95
Metal enclosure.....\$11.95
Walnut cabinet.....\$24.75

BURSTEIN-APPLEBEE

Model 31A201 AM-FM Tuner



Features separate AM and FM circuits for stereo reception; wide band ratio detector; a.f.c.; FM sensitivity 3 μ v. for 20 db of quieting; response 20-20,000 cps; tubes—6T8, 3-6AU6, 6AL5, 6BE6, 6BA6 plus diode detector and selenium rectifier; 4 1/2" x 14 1/2" x 8 3/4".....\$59.95

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 \pm 0.5 db; AM, 20 to 6,000 cps \pm 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 1/8" x 6 3/4" x 4 1/2" h.
Model 7110 (Metal cabinet).....\$114.95
Model 7110M (Mahogany cabinet).....\$139.95

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

Model 8150 Stereo AM-FM Multiplex Tuner

Includes AM 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

CLAIRTONE

Model C 1000 R AM-FM Receiver
Combines stereo AM-FM tuner, a dual 35-watt amplifier, and input facilities



for wireless remote control; remote feature adjusts volume, tone, stereo balance and on-off; amplifier response 20-30,000 cps; harmonic distortion less than .5% @ 1 kc.; FM tuner has a.f.c.; signal-to-noise ratio 2 μ v. for 20 db of quieting or .5 μ v. for 500 mw. output; has provision for multiplex adapter; AM signal-to-noise ratio 6 μ v. for 20 db quieting; 10 μ v. for 1 watt output; controls include 12 light-up push-button and 6 control knobs; push-buttons are for on-off, FM input, a.f.c., aux. input, tape input, channel reverse, TV input, external speaker, multiplex, AM input, phono input, mono-stereo selector; knobs control AM & FM tuning, balance, bass and treble tone controls, master volume.

C 1000 R Receiver only (list) \$438.90
CXR Remote control (list) \$179.95
C 1000 Manually operated version (list) \$324.95

CROSBY ELECTRONICS

Model R80 80-watt Stereo Receiver

Combination AM/FM tuner, preamp, amplifier; two-channel indicator for tuning, program level; illuminated tuning dial; stereo/mono blend control; multiplex dimension control; third-speaker volume control; push-button control for source selection.....\$75.00



Wood enclosure (oiled or satin walnut, fruitwood).....\$30.00
Metal enclosure.....\$17.95

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 \pm 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 % 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.....\$39.95
Walnut, mahogany or ebony cabinet.....\$20.00
Vinyl-clad enclosure.....\$11.95

Model 690 FM Tuner

Two FM plus multiplex outputs; dial-variable amplifier a.f.c.; variable interstation noise muting control; sensitivity 1 μ v. for 20 db quieting at 22.5 kc. de-



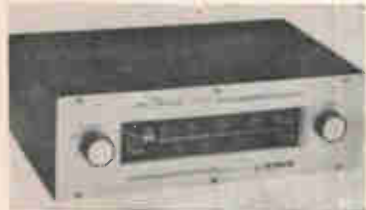
viation (IRE) or 2 μ v. for 30 db signal-to-noise and distortion (IHFM); response 30-20,000 cps \pm 5 db; distortion less than 1% for 100% modulation with 50 μ v. signal; seven tubes, three diodes; 13 1/2" x 4 3/4" x 6 3/4"; walnut finished vinyl-clad cabinet.....\$99.95

Model 650MX FM-Multiplex Receiver

Design details not completed as yet; intentions are that this design be similar in all respects to Model 650 except for addition of built-in multiplex circuitry; less cabinet.....\$249.95

DE WALD

Model N-804-B "Royal" FM Tuner



Sensitivity 3 microvolts for 20 db quieting; frequency response 20 to 20,000 cps \pm 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.....\$75.95

Model N-803-B "Imperial"

AM-FM monophonic-type tuner with FM specifications similar to Model N-804B; AM sensitivity 75 microvolts loop



sensitivity; bandwidth 7,000 cps; 7 tubes plus selenium rectifier; black and the gold cabinet; 13" w x 4 1/2" h x 9" d.....\$79.95

Model M-1000B "Ambassador"



Separate AM and FM sections; specifications similar to Model N-803-B; may be used for monaural or stereo operation; outputs are monaural, stereo, tape recorder, and multiplex; black and gold cabinet; 13" w x 4 1/8" h x 9" d.....\$99.95

DYNACO

"Dynatuner" 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.

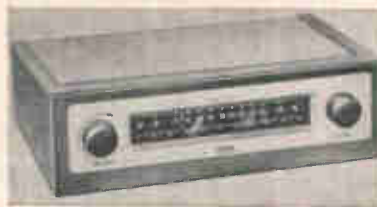
Kit.....\$79.95
Semi-Kit (FM-1SK).....\$99.95
Factory wired.....\$119.95

Model FMA-2 Amplifier

Ten-watt power amplifier designed to fit inside firm's "Dynatuner" will convert tuner to complete FM receiver, less speaker; takes up same space as the company's multiplex adapter...Kit \$29.95

EICO

Model HFT-90 FM Tuner



Sensitivity 1.5 microvolts for 20 db quieting; frequency response 20 to 20,000 cps \pm 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 volt output with 20 db signal 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

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 3/8" x 12" x 8 1/4"; cabinet & panel style similar to model HFT-92.....\$39.95
Factory wired.....\$65.95
Cabinets (wood) for Models HFT-90; HFT-92; and HFT-94.
Unfinished birch cabinet.....\$8.95
Walnut or mahogany cabinet.....\$12.50

Model ST-96 FM-AM Stereo Tuner



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; FM output level 1 v. for 5 μ v. input, 30% mod.; AM output 1 v. for 3 μ v. input, 30% mod.; 15 7/8" x 5" x 14".
Kit form.....\$89.95
Factory wired and tested.....\$129.95

ERIC

Model 3357 FM Tuner



Uses wide-band ratio detector; sensitivity 3 μ v. for 20 db quieting; bandwidth 220 kc. (3 db down); variable a.f.c.; has output for multiplex adapter; tubes—2-12AV7's, 6BZ6, 6AU6, 6AL5; volume control available at additional cost.....\$56.75

Model 3457 FM Tuner

Foster-Seeley discriminator; sensitivity 1.5 μ v. for 20 db of quieting; two FM outputs plus provision for multiplex; has a.f.c. plus defeat; tuned r.f. amplifier stage; tubes—6CL8, 12AV7, 6BZ6, 2-6AU6's, 6AL5, 6C4; cathode-follower output; panel design similar to Model 3357.....\$84.95

Model 3357A FM-AM Tuner

FM wide-band ratio detector; a.f.c., FM sensitivity 3 μ v. for 20 db quieting; AM sensitivity less than 20 μ v.; AM response 20-6000 cps; tubes—2-ECC85's, 6BZ6, 6AU6, 6AL5, 6BE6; 3-position function switch AM-FM-phono; panel design similar to Model 3357.....\$72.95

Model 3157 FM-AM Stereo Tuner

FM sensitivity 1.5 μ v. for 20 db quieting; a.f.c., tuned r.f. stage; AM sensitivity better than 30 μ v.; AM response 20-8000 cps; has provision for multiplex adapter; tubes—6CL8, 12AV7, 6BZ6, 2-6AU6's, 2-6AL5's, 6BE6; panel design similar to Model 3357

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TUNERS & RECEIVERS

\$99.95

Model 5760G FM-AM Stereo Receiver



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

Cabinets

Metal enclosure for Models 3357, 3357AF, 3457, 3157.....\$9.90
Walnut enclosure for same models\$16.00

FISHER

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.....\$169.50
MC-1 cover for FM-100.....\$17.95

Model FM-100-B FM Multiplex Tuner



Features built-in multiplex circuitry; five i.f. stages; four limiters; .6 μ v. sensitivity for 20 db of quieting; response 30-15,000 cps \pm 1 db; rated output 2 volts; harmonic distortion .5%; 10 tubes total plus diodes and bridge-type selenium rectifiers.....\$229.50

Model FM-50 FM Tuner

Features wide-band ratio detector; .65 μ v. for 20 db of quieting; less than .7%



harmonic distortion at 100% modulation: has microray tuning/recording level indicators: four controls—tuning, recording level, selector & sensitivity; five outputs—2 amplifier, 2 recorder, 1 multiplex adapter; tubes—6AQ8, 4-6AU6, 12AX7, 6AV6, EM84, 2-IN542 germanium diodes & bridge-type rectifier; less cabinet.....\$99.50
Designed for use with either MC-1 or 10-U cabinets.

Model FM-50-B FM/Multiplex Tuner

Basically same design as Model FM-50 but with multiplex circuitry included; less cabinet.....\$189.50

Model FM-200 FM Tuner



Features six i.f. stages; five limiters; .5 μ v. sensitivity; 6 control knobs—audio level, tuning, on/off, muting, a.f.c., antenna selector (sensitivity); has 11 tubes, 3 diodes, a.f.c. varicap diode, and selenium rectifier; 15 $\frac{1}{8}$ "x4 $\frac{1}{16}$ "x12 $\frac{3}{4}$ "; less cabinet.....\$229.50

Model FM-200-B FM/Multiplex Tuner

Basically same design as Model FM-200 FM tuner but includes multiplex circuitry; less cabinet.....\$289.50

Model 800-B FM/AM Multiplex Receiver



Sensitivity .9 μ v.; three i.f. stages; stereo multiplex broadcasting indicator; combines separate AM/FM tuners, dual preamps, 32.5 watts-per-channel power amplifiers, and multiplex circuitry; 24 controls and switches; less cabinet.....\$429.50

Model FM-1000 FM Multiplex Tuner



Studio Standard Series; features built-in multiplex circuitry; 1.5 μ v. sensitivity four tuned circuits; seven i.f. stages; 5 limiters; 1.3 db capture ratio; a.f.c.; drift .004% (with a.f.c.) & .02% (without a.f.c.)\$419.50

GROMMES

Model 101GTA FM Tuner

Three-gang tuning unit: two wide band i.f., two limiter stages; ratio detector; a.f.c.; cascode r.f. & triode mixer; flywheel tuning & magic bar tuning indicator; sensitivity 1 μ v. (2 μ v. IHFM); 650 kc. bandwidth; response 20-20,000 cps \pm 1 db; harmonic distortion 1%; IM distortion 2%; hum & noise 60 db below 100% modulation; tubes—2-6DT8's, 2-6EA8's, 1-6CB6A, 1-6FG6, 2 diodes plus silicon rectifier.....\$89.95
Enclosure\$10.00

Model 103GTA Stereo FM-AM Tuner

FM-AM tuner for stereo broadcasts; FM section similar to Model 101GTA plus stereo FM-AM, or stereo FM-multiplex switch; AM section has i.f. bandwidth switch; sensitivity of 5 μ v.; response 20-7500 cps \pm 3 db; bandwidth 5 kc. (sharp) and 15 kc. (broad); 1% harmonic distortion; tubes—2-6DT8's, 2-6EA8's, 1-6CB6A, 2-6BA6's, 1-6BE6, 2-6FG6, 4 diodes plus silicon rectifier.....\$159.95
Enclosure\$10.00

Model 102GTC FM-AM Tuner

FM-AM tuner for mono or FM-FM multiplex reception; 3-gang tuning unit; flywheel tuning; magic bar tuning indicator on FM and AM; FM section has two wide-band i.f. and two limiter stages; ratio detector; a.f.c.; cascode r.f.; triode mixer; sensitivity 2 μ v. (IHFM); response 20-20,000 cps \pm 1 db; bandwidth 200 kc. i.f., 650 kc. detector; distortion .5% harmonic or IM at 100% modulation; AM section sensitivity 5 μ v.; response 20-6000 cps \pm 3 db; bandwidth 10 kc.; distortion 1% harmonic; tubes—2-6DT8's, 2-6EA8's, 1-6CB6A, 1-6BA6, 1-6BE6, 1-6FG6, 4 diodes plus silicon rectifier.....\$229.95
Enclosure\$10.00

HARMAN-KARDON

Citation III FM Tuner Kit



Sensitivity 0.65 μ v. for 20 db of quieting; frequency response 1-52,000 cps \pm 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.....\$49.95
Factory wired.....\$209.95
WC-1 walnut enclosure.....\$29.95

Model T300X AM/FM Multiplex Tuner

Integrated design including AM, FM,



and multiplex circuits; for FM—.95 μ v for 20 db of quieting or 3.2 μ v usable sensitivity, 10-35,000 cps \pm 1 db, less than .1% distortion at 100% modulation; a.f.c.; for AM—10 mv terminal sensitivity, 1% harmonic distortion, 20-5000 cps \pm 2.5 db; five controls—tuning knob, on-off switch, a.f.c. defeat, mode, & selector; tubes—EZ81, 6AJ8, 6AQ8, 2-6BL8, 6EQ7, 6BN6, 12AU7, 6C4; less cabinet.....\$149.95

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 \pm 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 3/8" 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 3/8"; 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 \pm 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 \pm 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 \pm 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 \pm 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-ECC85, 3-6AU6, 1-12AX7, 1-6AL5, 2-EM840, 1-6BA6, 1-6EQ7, 1-6BE6, 4-12AX7, 4-7355; 3-silicon diodes; 15 1/16" 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 \pm 1 db including deemphasis; selectivity: 200 kc bandwidth, 6 db down; drift: \pm 5 kc maximum; image rejection: 40 db; i.f. rejection: 70 db; distortion less than 1% harmonic and IM at 30% modulation; hum 60 db below 100% modulation; radiation within FCC requirements: output level 1.5 volts for 100% modulation, 0.5 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 \pm 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 \pm 1 db at 10 watts; less than 1% harmonic and less than 2% IM distortion at 10 watts; hum on phono input 60 db below 10 watts; bass and treble 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 F500 FM Tuner

Sensitivity .85 μ v. for 20 db of quieting; usable sensitivity 3 μ v. (IHFM); image rejection 66 db; selectivity 240 kc. 6 db down; response 10-52,000 cps \pm 1 db; distortion unmeasurable at 30% modulation; less than .1% at 100%



modulation; wide-band Foster-Seeley discriminator: 1 volt output at 100% modulation; function selector indicator lights; provision for plug-in multiplex adapter.....\$132.95

HEATH

Model AJ-II Stereo AM-FM Tuner

FM Sensitivity 2.5 μ v. for 20 db quieting; AM output 1 volt for 750 μ v. input; harmonic distortion less than 1%; AM broad and narrow tuning; controls for stereo/mono tuning; AM and FM



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OR MONOPHONIC
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3

TUNERS & RECEIVERS

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

Model AJ-21 AM Tuner

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

Model AJ-30 Stereo AM-FM Tuner

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



includes flywheel tuning on both AM and FM; a.f.c.; AM bandswitch; designed around 3 printed-circuit boards; wired, pre-aligned 3-tube-cascode FM tuning unit; pre-aligned i.f. transformers and coils; balanced 300-ohm FM antenna input; built-in AM red antenna; balanced push-pull diode detector, a.v.c. Model AJ-30 (kit).....\$97.50
 Model AJW-30 (factory wired)\$159.95

Model AJ-31 FM Tuner

Controls for tuning, volume AFC; cathode follower output impedance 600 ohms; voltage output 0.5 volts nominal; 2.5 μ v. for 20 db quieting; image ratio 45 db.; harmonic distortion less than 1.5%, IM distortion less than 1%; frequency response \pm 2 db. 20-20,000 cps; tubes are 6DT8, 3-6AU6, 6BN8, silicon diode; 4 1/4"x13 1/4"x5 1/2".
 Kit\$39.95

KARG

Tunematic XT-1A FM Tuner

Sensitivity 2 microvolts for 20 db quieting on 300 ohm input; frequency response 15 to 30,000 cps \pm 0.5 db, including de-emphasis; i.f. bandwidth 180 kc flat top, 240 kc at 6 db points; IM distortion 0.5% maximum at 100% modulation; crystal-controlled oscillator with separate crystals for receiving each



of up to 12 stations; tuning accuracy within .025% of correct carrier frequency at any combination of line voltage and temperature from 95 to 135 volts and -55° to 90° C; inputs: balanced 300 ohms, 75 ohm coaxial, internal antenna; outputs: 3-volt cathode follower, 0.3-volt (adjustable) 600 ohm line; 0.3-volt multiplex; tubes are ECC88, 6AU8A, 2-6BZ6, 6BN6, 6AU6, 12AU7, and 2-1N2092, 2-CK705 diodes; 16" w x 5 1/2" h x 5 1/2" d (in metal enclosure), 17" w x 7" h x 7 3/4" d (in wood cabinet); includes metal cabinet and mounting accessories. Tunematic (12-channel model) \$199.50
 Tunematic (10-channel model) \$189.50
 Tunematic (8-channel model) \$179.50
 Tunematic (6-channel model) \$169.50
 Cabinet (oiled walnut, mahogany, blonde)\$19.95

Model XT-3A 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; mul-



tiplex output to feed aux equipment is 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-4A single channel.....\$235.00
 Transformer output (extra).....\$24.00

Model CT-2 FM Tuner

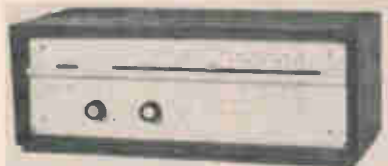
Sensitivity 1.5 μ v for 30 db quieting (IHFM); IF band with 170 kc flat top; audio output 5 volts at 100% modulation; frequency response 20-20,000 cps 1 db; 10" dial; flywheel tuning; AFC



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
 Cabinet (oiled walnut, mahogany, blonde)\$19.95

Model CT-3 FM Tuner

Sensitivity 8 μ v. for 20 db quieting; response 20-20,000 cps; inputs 75 ohm co-



axial and 300 ohms; output two audio at 1.5 volts, one multiplex take-off; distortion under .7% IM at 100% modulation; hum & noise 65 db below maximum output\$99.50
 Brown metal case.....\$ 5.00

KLH

Model Eight FM System



Complete FM receiving system housed in two walnut cabinets, each measuring 10 3/8" w. x 5 7/8" h. x 6 5/8" d.; one section consists of tuner-amplifier, other contains wide-range speaker system; jacks are provided to permit use of tuner section with other equipment and for addition of multiplex adapter; walnut only\$ 59.00

Model Eight PR Preamp

Transistorized preamp measuring 4"x2 1/2"x2 1/2"; permits playing of tape recorder or record changer with magnetic cartridge through KLH Model Eight FM-amplifier system\$ 19.00

KNIGHT

Model KN-125M Stereo Multiplex FM-AM Tuner

Built-in multiplex circuit for stereo FM reception; nuvistor FM front-end; AM whistle filter; separate tuning eye for FM and AM; switch for sharp or broad AM bandwidth; a.f.c.; cathode-follower outputs: 300 and 50 ohm antenna in-



puts; tuned r.f. stage AM; two FM limiters; FM sensitivity 2.5 μ v. for 20 db signal-to-noise ratio; 12 tubes plus nuvistor, tuning eyes, and rectifier.
\$179.95

Model KN-136M FM-AM Multiplex Tuner

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



material direct from tuner; usable FM sensitivity (IHFM) 3 μ v. for 20 db quieting; AM sensitivity 10 μ v for 20 db signal-to-noise ratio; FM bandwidth 180 kc.; FM response 20-20,000 cps \pm .5 db; high-impedance outputs—2 for FM and 2 for AM with level adjustment; tubes (less multiplex circuit) 2-12AT7, 2-6CB6, 6AU6, 6AL5, 6BE6, 6FG6 tuning eye, rectifier; includes two 36" audio cables, built-in ferrite core antenna; and FM folded dipole antenna; dark brown metal case with brass panel; 4 3/8"x11 3/4"x10 1/4"\$119.95
 FM-AM Stereo Tuner less multiplex circuit\$84.50

Model KN-126M Stereo Multiplex FM-AM Tuner

Styled to match KN-755 amplifier; built-in multiplex circuit: separation control; a.f.c.; bar-type tuning indicator: outputs for stereo or mono tape recording; built-in ferrite loop antenna for AM, indoor folded dipole for FM; usable IHFM FM sensitivity 10 μ v. for 20 db signal-to-noise ratio; FM bandwidth 180 kc.; tubes—2-12AT7, 2-6CB6, 6AU6, 6AL5, 6BE6, plus tuning eye, rectifier, and multiplex tubes; dark brown metal case with polished brass panel; 3 $\frac{3}{8}$ "x11 $\frac{3}{8}$ "x9"\$119.95

Model KN-141C FM Tuner



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

Model KN-150M Stereo Multiplex FM Tuner

Built-in stereo multiplex circuit; dynamic sideband regulation; stereo/mono visual indicator; wideband design: a.f.c.; bar-type tuning indicator: IHFM sensi-



tivity 1.5 μ v.: controlled fixed and multiplex outputs; 10 tubes plus multiplex, tuning eye, and rectifier: polished brass panel; dark brown textured cabinet; 4 $\frac{7}{8}$ "x15 $\frac{9}{16}$ "x11 $\frac{3}{8}$ "\$149.50

Model KN-250M Stereo Multiplex FM Tuner

Styling matches KN-400B amplifier; built-in multiplex circuit for stereo FM



reception; nuvistor front-end; signal-strength meter; dark brown textured case; polished brass panel.....\$139.95
Model KN-260MC Same as Model KN-250M but includes built-in clock timer\$154.50

Model KN-310M Stereo Multiplex FM Receiver

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



tors, and four diodes; includes tape head input; output for stereo tape recording; stereo/mono switch; stereo normal/reverse switch; rumble and scratch filters; IHFM music power output 40 watts; response 20-20,000 cps \pm 1 db; harmonic distortion less than 1% at full output; matches any speaker; dark brown textured case; polished brass panel \$239.95
Model KN-310MC Same as KN-310M but includes built-in clock timer.\$254.50

KNIGHT-KIT

Model KF-35 FM Tuner

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 main output; output for stereo multiplex adapter; prealigned r.f. and i.f. coils: 3-position selector switch: on/off, FM, FM with AFC.
Kit (83YX931)\$38.95

Model KF-65 FM-AM Tuner

Tuned r.f. stage on FM: a.f.c.; cathode-follower output, plus output for stereo multiplex adapter; flywheel tuning; built-in AM ferrite antenna: time-saving printed circuit boards; neon-glow dial pointer: 2.5 μ v. sensitivity for 20 db quieting on FM; 3 μ v. sensitivity for 10 db signal-to-noise ratio on AM; response 20-20,000 cps; tubes—6AN8, 6BE6, 6BA7, 12AT7, 2-6AU6, ECC82/12AU7, 6AL5, 6X4 rectifier.
Kit\$49.95

Model KF-90 Multiplex FM-AM Tuner

Built-in stereo multiplex circuit: stereo separation control: dual limiter-discriminator; a.f.c.: 10-kc. AM whistle filter; cathode-follower outputs; magic-eye tuning indicators; separate AM and FM tuning controls; styling matches Knight-Kit KA-55 amplifier; sensitivity 2.5 μ v. for 20 db quieting on FM; 3 μ v. for 10 db signal-to-noise ratio on AM; hum and noise -60 db at 1 volt: tubes—4-6BA6, 2-6AU6, 2-12AU7, 6BE6, 6AW8, 12AT7, 6AL5, plus tuning eyes and rectifier.
83-YU-914 Kit\$99.95

Model KF-90 FM-AM Tuner

Same as Model KF-90 but without stereo multiplex circuit.
83-YU-731 Kit\$87.50

Model KF-75 Multiplex FM Tuner

Same as Model KF-90 but for FM reception only; does not include AM tuner.
83-YU-918 Kit\$84.95

Model KF-75 FM Tuner

Same as Model KF-75 but without stereo multiplex circuit.
83-YU-732 Kit\$67.50

Note: There are two Model KF-90, one with multiplex adapter and one without, the same holds true of the Model KF-75. Specify them by catalogue number.

Model KU-45 Multiplex FM-AM Receiver

All-in-one unit consisting of multiplex FM-AM tuner and 32-watt stereo amplifier: a.f.c.: pre-aligned front end: sepa-





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3

TUNERS & RECEIVERS

rate bass and treble controls; tape head input; two aux. inputs; magnetic phono input; stereo/mono switch; IHFM music power output 16 watts per channel; output 4, 8, 16 ohms, plus 8-16 ohm center-channel output; satin gold and mocha panel; 4 3/4" x 16 1/2" x 12 3/4"; less case.

Kit\$129.95
Metal case\$5.95

LAFAYETTE

Model LA-225 FM-AM Stereo Receiver

Individual AM-FM tuner sections for simulcast plus dual 20-watt amplifiers and preamps; FM section includes output for FM multiplex, sensitivity of 1.5 μ v. for 20 db quieting, a.f.c. and a.f.c. defeat; AM section has 3 stages a.v.c., ferrite loop antenna, broad/sharp bandwidth selection. Response 20-30,000 cps



± 1 db at normal listening levels; channel separation better than 50 db at 1000 cps; front-panel controls for bass, treble, balance/volume, 4-pos. selector switch, 4-pos. mode switch; rear panel phasing switch, hum adjust, headset jack, impedance selection, fuse holder, a.c. outlet; brown and brass enclosure included\$174.95

Model LT-77 AM-FM Stereo Tuner

FM specifications similar to Model LT-80; AM frequency response 20-5,000 cps ± 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 1/2" x 4" x 10 5/8"\$74.50

Model LT-80 FM Tuner

Sensitivity 1.5 μ v for 20 db of quieting; frequency response 20-20,000 cps ± 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 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 ± 0.5 db; output 1.5 volts ± 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.

KT-650 (Kit)\$54.50
LT-650 (Assembled)\$74.50

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 ± 0.5 db; AM, 20 to 5,000 cps ± 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: ± 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 3/4" w x 10 3/8" d x 4 1/2" h.

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

LEAK

"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.\$149.00

McINTOSH

Model MR-55A 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 ± 3 db; AM "broad", 20 to 10,000 cps ± 3 db; AM "medium", 20 to 6,500 cps ± 3 db; AM "narrow", 20 to 2,000 cps ± 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 bal-

anced and 72 ohms unbalanced.\$2 6.00

Model MR-65 Stereo FM Tuner

Basically an FM tuner but front panel design has function controls permitting the tuner to be used for FM-AM, FM-FM, FM-Multiplex stereo programs; plans are to make a multiplex adapter to



to fit within cabinet or externally; sensitivity 3.25 μ v. (IHFM standard); response 20 to 20,000 cps ± 2 db; distortion less than 3% for 100% modulation; hum better than 65 db below 100% modulation; output 4 volts; low impedance; tubes—2-6BN4A, 12AT7, 4-6AU6, 6SC6, 6BN8, 6C4, 6U8A, 6V4\$225.00

Model MR-66 AM-FM Stereo Tuner



Separate AM and FM tuners with provision for multiplex adapter; FM sensitivity 3 μ v. (IHFM standard); response 20-20,000 cps ± 3 db; hum 70 db below full signal; variable a.f.c.; two low-impedance cathode-follower outputs; AM sensitivity 1.5 μ v.; distortion less than 2% at 100% modulation; hum 50 db below full signal; audio bandwidth: narrow 20-20,000 cps ± 3 db, medium #1 20-6500 cps, medium #2 20-8000 cps, broad 20-11,500 cps\$ 25.00

Walnut and mahogany cabinets for Models MR-55A, MR-65, MR-66 25.00

J. W. MILLER

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\$21.75
Model 565 Kit\$17.70

OLSON ELECTRONICS

Model AM-170 Stereo Tuner-Amp

Dual 20-watts-per channel stereo amp
STEREO/HI-FI DIRECTORY



with AM and FM tuner; complete front-panel audio control; response 20-30,000 cps \pm .5 db; harmonic distortion .5% @ 15 watts; FM sensitivity 2 μ v. for 20 db quieting; AM sensitivity 50 μ v.; controls—FM tuning, mode switch, balance, treble, bass, volume, input selector, AM tuning; inputs—magnetic, crystal, aux. 1, aux. 2, FM multiplex; outputs—4, 8, 16 ohms, tape; tubes—2—6AQ8, 3—6BA6, 6AU6, 6BE6, 4—12AX7, 4—6BQ5, 5AR4; satin gold with black trim.....\$139.95

PACO

Model ST-35 FM Tuner



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

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

Model ST-25 FM Tuner



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

Model ST-26 FM Tuner-Preamp

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

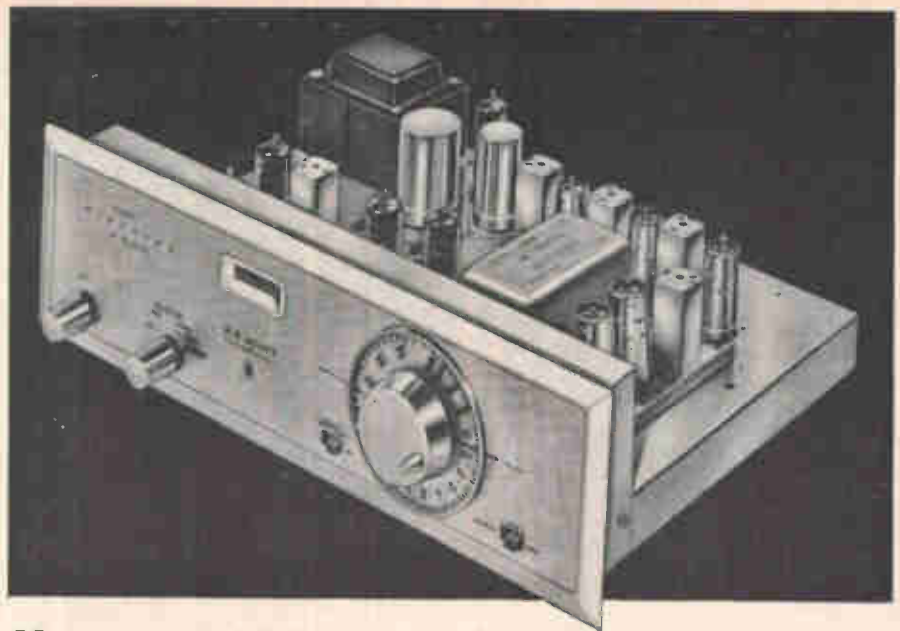
Model ST-26 (kit).....\$54.95
Model ST-26W (factory-wired).....\$69.95

Model ST-45 AM-FM Stereo Tuner



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

Model ST-45 factory-aligned transformers (kit).....\$84.95
Model ST-45PA with both AM and FM



Now... an FM tuner with multiplex built-in!

New H. H. Scott FM Stereo Multiplex Tuner uses Wide-Band design for top performance

Here it is! No adaptor needed! The world's *first* Wide-Band tuner designed specifically for multiplex... H. H. Scott's new Model 350 FM Multiplex Stereo Tuner.

The FCC, in its recent acceptance of FM stereo multiplex, said that the approved system "... like any multiplex transmission system, will increase energy transmission at the edges of the channel involved. Accordingly, for optimum stereophonic reception, the (tuner's) bandwidth... must be considerably greater than that of monophonic (tuners)..."*

From our very first design... the revolutionary 310A... H. H. Scott incorporated substantially wider IF bandwidth than conventional tuners. This gave better selectivity and usable sensitivity. The new 350 incorporates this same exceptional circuitry allowing reception of even weak multiplex stations with amazing clarity. You get other benefits, too—the 2 MC Wide-Band de-

tor provides superior rejection of interference and complete freedom from drift. The Wide-Band design of the IF's and detector give the new 350 a remarkable *usable* sensitivity of 2.5 μ v measured by stringent IHFM standards.

If you are considering a new tuner, or addition of an adaptor to a conventional narrow-band tuner, first listen to the new H. H. Scott Model 350 Wide-Band FM Multiplex Stereo Tuner. Its superiority in sound quality is so dramatically different that you will not want to settle for less.

Important Technical Information

Usable (IHFM) Sensitivity: 2.5 μ v. 10 tubes, 11 diodes. Famous H. H. Scott silver plated front end. Tuning meter. Performance matches FCC transmission specifications. Can receive either monophonic or stereo multiplex programs. Special circuitry for perfect stereo tape recording. Dimensions in handsome accessory case 15½"W x 5¼"H x 13¼"D. Matches styling of all H. H. Scott amplifiers. \$199.95 **, case extra.

*see paragraph 36, FCC Report and Order, Docket no. 13506, 4/19/61. Emphasis ours.

** slightly higher West of Rockies.

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Wide-Band Multiplex Adaptor

Important News for H. H. Scott Tuner Owners

H. H. Scott has once again protected your investment against obsolescence. Your tuner, regardless of age or model, can be quickly converted to multiplex with the new Model 335 Wide-Band Multiplex Adaptor. Because of H. H. Scott's unique no-compromise Wide-Band design, we can guarantee superior multiplex reception only when the 335 and an H. H. Scott tuner are used together. 5 tubes, 8 diodes. \$99.95, case extra.

3

TUNERS & RECEIVERS

tuner sections factory-wired and aligned (semi-kit)\$99.95
 Model ST-45W factory-wired...\$134.95

PILOT

Model 380 FM Multiplex Tuner



Has built-in multiplex circuit with automatic relay-type switch; automatically switches from FM mono to FM stereo; indicator light shows type of program; FM sensitivity 3 μ v. (IHFM standard); cathode-follower output; covers mono & stereo FM: FM frequency band coverage 88-108 mc.....\$169.50

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.....\$159.50

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 654 Stereo Tuner-Amplifier

Power output 60 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 $\frac{1}{8}$ " x 10 $\frac{3}{4}$ " x 16 $\frac{5}{8}$ "; complete with cover.....\$299.50

PRECISE

Mark XV "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; ferriloop antenna; 13" x 4 $\frac{1}{4}$ " x 9 $\frac{3}{4}$ " (without cover)\$99.95

QUAD

FM Tuner

Designed to be used with Quad 22 stereo control unit and Quad II amplifier; tuning range 87.5-108 mc.; sensitivity 3 μ v. for 20 db quieting; output



100 mv. @ 100,000 ohms impedance; tubes 6BJ6, 12AT7, 2-6BH6, 6AU6, 6AL5, 12AX7, overall dimensions 10 $\frac{1}{2}$ " x 3 $\frac{1}{2}$ " x 6"\$125.00

QUALITY

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 8000 cps \pm 3 db; distortion: less than 1% on FM; band-



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

Model 1200 AM Tuner Kit

Specifications similar to AM section of Model 1000 AM-FM tuner.....\$19.95
 Metal enclosure.....\$5.95

Model 1100 FM Tuner Kit

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

RAVENSWOOD

Model TCC-2000 FM/AM Stereo Receiver

Response FM 20-20,000 cps \pm 1 db; distortion .1%; hum level 75 db below 2 volts output; sensitivity 1.8 μ v. for 20 db quieting on FM, 20 μ v. with ferrite antenna on AM; controls—bass, treble, selector, volume, balance, rumble filter, scratch filter, loudness, mono, channel reverse, FM tuning, a.f.c., AM tuning, AM broad; outputs—tape, audio multiplex adapter; less cabinet...\$249.95

Model T-1000 AM-FM Tuner

Sensitivity 1.8 μ v. for 20 db quieting on FM, 20 μ v. with ferrite antenna on AM; distortion less than .5% at 100% modulation; response FM 20-20,000 cps \pm 1 db; controls—FM tuning, AM tuning, a.f.c., AM broad, FM multiplex; outputs—FM, AM, multiplex adapter.....\$99.95

Wood cabinets for all models.

Unfinished\$14.95
 Oiled Walnut\$19.95

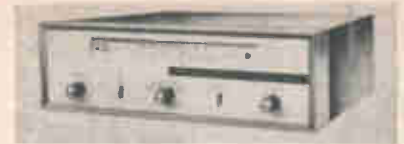
REALISTIC

Deluxe Stereo FM-AM Tuner

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 $\frac{1}{2}$ "; dual meters; shpg. wt. 15 lbs.....\$69.95

Model TM-8 AM-FM/Multiplex Tuner

Features built-in multiplex circuitry for stereo reception; FM section—1.5 μ v.



for 30 db of quieting \pm 75 kc. deviation (100% modulation). response 20-20,000 cps, tuned r.f. stage, two limiters, wide-band ratio detector, a.f.c.; AM section—antenna terminal sensitivity 2 μ v. for 20 db signal-to-noise ratio at 30% modulation, 75 μ v./meter with ferrite core antenna; bandwidth 9.5 kc.; response 20-9500 cps; 12 tubes plus rectifier (incl. multiplex); tuning meters; 14 $\frac{1}{4}$ " x 5" x 10"\$99.95

FM-AM Stereo 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

Model FM-3 Tuner

Armstrong circuit with tuned r.f., double-tuned limiter, triode mixer; sensitivity 2 microvolts for 30 db quieting; frequency response: 20 to 20,000 cps; bandwidth: 180 kc; AFC; outputs for



amplifier and multiplex adapter; 9 $\frac{3}{8}$ " w x 4 $\frac{3}{8}$ " h x 6 $\frac{1}{8}$ " d, 10 lbs.
 Kit.....\$34.95
 Wired.....\$42.95

Model TM-200 FM/Multiplex Tuner



Transistorized circuit with multiplex circuitry for stereo reception; sensitivity 1.2 μ v. for 20 db quieting at 100% modulation (3.5 μ v. for 30 db quieting); selectivity 250 kc. @ 6 db; response 10-25,000 cps; output voltage 1 volt r.m.s.; limiting level 7.5 μ v., hum & noise - 60 db; detector bandwidth 1 mc.; muting control eliminates interstation noise when tuning; local/distant range switch; tape recorder outputs; 3" x 10 $\frac{1}{8}$ " x 8 $\frac{1}{2}$ "\$149.95

Model 40T AM-FM Tuner



FM response 20-18,000 cps \pm 2 db; sensitivity 2 μ v. at 100% modulation with less than 3 $\frac{1}{2}$ % distortion; harmonic distortion .75% on FM, .1% on AM up to 90% modulation; hum -60 db below full output; on-off a.f.c.; separate AM and FM i.f. and detection stages; AM sensitivity 2 μ v.; superhet circuit with 3 stages: a.v.c. and ferrite core antenna; bandwidth \pm 3 db 20-9500

cps; whistle filter better than 65 db at 10 kc.; has multiplex output jack; 14" x 5" x 10".....\$69.95

Model T-4 AM-FM Tuner

Can be used for both mono and stereo systems; FM sensitivity 2 μ v. for 30 db quieting at 100% modulation; response 20-20,000 cps; harmonic distortion .5% at full output; Armstrong-type circuitry with double-tuned limiter and triode mixer; AM section has ultra-quiet r.f. stage, broadband tuned i.f. stage, germanium diode detector, sensitive ferrite core antenna, has provisions for multiplex adapter; 11 $\frac{9}{16}$ " x 4 $\frac{3}{8}$ " x 8 $\frac{1}{16}$ ".....\$49.95

Model HK-200 FM Tuner Kit

Response 20-20,000 cps; harmonic distortion .5% maximum; 3-gang tuning capacitor; pre-wired, pre-aligned cascade front-end; all major parts pre-soldered to chassis; 9 $\frac{3}{8}$ " x 4 $\frac{3}{8}$ " x 6 $\frac{1}{8}$ "; kit.....\$34.95

Model STA-7 Stereo FM/Multiplex Receiver



Features built-in multiplex circuitry for stereo reception; tuner section—sensitivity 2.5 μ v. for 30 db quieting, grounded-grid r.f. stage; ratio detector; amplifier section—12 watts per channel, response 20-20,000 cps \pm 1 db, distortion (at full output) total r.m.s. less than 1% at 400 cps. hum -52 db mag. phono, -72 db aux., sensitivity 850 mv. aux., 4 mv. mag. phono; 14 tubes (11 dual-purpose); output impedances 4, 8, 16 ohms.....\$124.95

Model TM-214 FM Multiplex Tuner

Features built-in multiplex circuitry for stereo reception; sensitivity 2.2 μ v. (IHFM standard), 1.3 μ v. for 20 db of quieting; three i.f. stages; three limiting stages; a.g.c.; harmonic distortion less than .5% at 100% modulation; signal-to-noise ratio 70 db mono, 50 db stereo; AM suppression 30 db with 2.8 μ v. into 300-ohm antenna; drift .02% from cold start; anode-follower outputs, two for tape, two for audio; 11 tubes plus rectifier and matched germanium diode detectors; designed for maximum attenuation of subcarrier and pilot carrier in the output to eliminate distortion when tape recording; 300-ohm balanced antenna input; 15 $\frac{1}{2}$ " x 5 $\frac{3}{8}$ " x 11 $\frac{1}{16}$ "; 20 lbs; wired.....\$189.95
Kit.....\$139.95

SARGENT-RAYMENT

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

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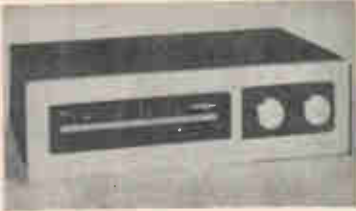
3

TUNERS & RECEIVERS

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 7/8" x 5 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 ± 1 db; IF bandwidth 215 kc for 6 db; AFC defeat; output level control; fly-wheel slide rule tuning; tubes: 1-6-AQ8, 2-6DK6, 1-6AU6, 1-6AL5, 1-6X4, 3-GE12, 1-6FG6; 9 3/4" x 14 7/8" x 4 7/16"\$97.50

Model SR-1040 FM Stereo Receiver



Combination of dual 10 watts-per-channel amplifier with FM tuner; has stereo inputs for ceramic or crystal phono cartridge & tape; center-channel output jack; includes pre-switched input for AM-FM stereo, FM-FM stereo, or FM multiplex stereo; has power output socket for multiplex adapter; a.f.c. defeat switch; loudness button, separation control, dual bass & treble and volume controls, stereo balance control; FM sensitivity 1.8 μ v. for 20 db of quieting; less than .5% distortion at 100% modulation; response 20-20,000 cps ± 1 db; amplifier distortion less than 1% ± 1 db of 10 watts; IM distortion less than 2% ± 1 db of 10 watts; tubes—6AQ8, 6FG6, 6DK6, 6AU6, 1N54, 4-6BM6, 2-6EU7, GE12, EZ81.\$169.50

Model SR-201 Dual Magnetic Preamp

For use with Model SR-1040 FM receiver to permit use of magnetic cartridge; will work with any stereo magnetic cartridge; equalized for RIAA recording curve\$17.70

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

Model SR-900 Power Supply

Supplies power to Models SR-7000 or SR-8000 tuners or to other equipment;

provides 175 volts d.c. at 55 ma, 6.3 volts a.c. at 3.5 amps; 3 1/4" d x 9" w x 4 1/2" h\$24.60

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 ± 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 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, 1-6-AU6; 13 1/8" x 14 7/8" x 5 1/4"; wt 21 lbs.\$199.40

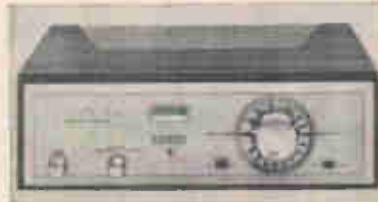
Model SR-1030 FM Receiver

Basically same design as Model SR-1040 but has only one (mono) amplifier circuit; does not have separation and balance controls; employs only one 6EU7 tube; twelve tubes instead of thirteen.\$129.00

H. H. SCOTT

Model 310-D Broadcast Quality 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; "Dynaurl" interstation noise suppres-



sor; AGC compensates for variations in signal strength; outputs for channel A high and low (tape), channel B high and low (tape), FM multiplex, switched a.c.; local/distance switch.\$194.95
Model C metal case.\$12.95
Wood case\$19.95

Model 314 Wideband FM Tuner

Sensitivity 2.5 μ v. IHFM standards; 150 kc bandpass; 80 db rejection of spurious response; AGC; max audio output 1.2 volts; level control; 3 out-



puts: chan A (tuner output), chan B (tape), multiplex; tubes are: 1-6B-S8, 2-6U8, 2-6AU6, 1-6X4, 1-6FG6, 2-1N294\$119.95
Metal & wood cases same as for Model 310-D.

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; sepa-



rate bass and treble controls for each channel; hum 80 db below rated output.\$319.95
Wood case (specify oiled walnut mahogany, or blonde)\$9.95

Model 330-D Stereophonic AM-FM Tuner

Completely separate AM and FM sections for stereo operation; sensitivity: FM, 1 microvolt for 20 db quieting;



AM, 2.5 microvolts 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 strength; 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.\$219.95
Model 330-D\$219.95
Metal case\$12.95
Wood accessory case\$19.95

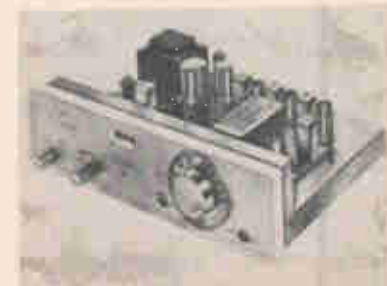
Model LT-10 FM Tuner

2 mc. wide-band detector; sensitivity .75 μ v. for 20 db of quieting incor-



porates tuning meter; level control on rear apron; easily adapted for use with multiplex signals.
Model LT-10 (Kit)\$99.95
Model LT-10 (Wired)\$139.95
Metal & wood cases same as for Model 310-D.

Model 350 FM Multiplex Tuner



Sensitivity 2.5 μ v. (IHFM); includes built-in multiplex section; 80 db rejection spurious response; 6 db capture ratio; switchable a.g.c. for maximum quieting in multiplex reception; special circuitry to eliminate whistles when making tape recordings; subchannel noise filter reduces noise on subchannel without affecting system's frequency response; stereo noise filter reduces noise without affecting stereo separation; uses same silver-plated front-end as on Model 310-D Broadcast Monitor tuner; less case\$199.95

Model LT-110 FM Multiplex Tuner



Usable sensitivity 2.2 μ v. (IHFM); capture ratio 6 db; special circuitry to permit flawless tape recording; silver-plated front-end and multiplex section pre-assembled and pre-aligned; stereo noise filter and subchannel noise filter same as Model 350; all wires precut to correct length; tube sockets, terminals, etc. are pre-riveted at factory; 15 1/2" x 5 1/4" x 13 1/4".

Model LT-100 kit, less case.....\$159.95
Model LT-100 wired, less case...\$239.95

SHELL

"The Nassau" AM-FM Stereo Receiver



Dual 20-watt amplifier with preamps; separate AM-FM tuners; amplifier similar to "The Manhasset" design; FM sensitivity 1.2 μ v. for 20 db quieting; response FM 20-20,000 cps \pm 1 db, AM 20-5000 cps \pm 1 db; balanced ratio detector; a.f.c.; 21 tubes; has output for multiplex adapter.....\$239.95

"The Huntington" AM-FM Stereo Tuner



FM sensitivity 1.2 μ v. for 20 db quieting; response FM 20-20,000 cps \pm 1 db, AM 20-5000 cps \pm 1 db; balanced ratio detector; cathode-follower outputs; a.f.c.; 13 tubes; has output for multiplex adapter\$159.95

"The Hampton" FM Tuner

Sensitivity 1.5 μ v. for 20 db quieting;



response 20-20,000 cps \pm 1 db; a.f.c.; tubes—6AQ5, 3—6AU6, 6AL5, 6X4, 6C4, 1629; has output for multiplex adapter\$79.95

SHERWOOD

Model S-2000 II AM-FM Tuner

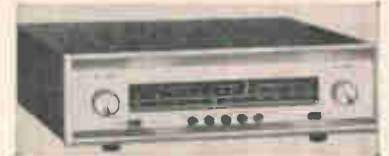
FM specifications identical to S-3000 III tuner; AM sensitivity 2 microvolts at 60% modulation for .5 volt output, 6 db signal-to-noise; selectivity "narrow" 5 kc at -6 db, selectivity "wide" 15



kc at -6 db; frequency response "wide" 20 to 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-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 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.

Brown flextone\$110.50
Black flextone\$110.50
Mahogany gold-tooled leatherette\$120.50
Black, tan, or white gold-tooled leatherette\$125.50



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Rochester, N. Y.

"The instrument operates fine and I was agreeably surprised with the appearance of the components and cabinetry." —Otis S. Kunnerle
Arlington Heights, Ill.

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* Prices do not include shipping. Prices slightly higher when ordered through your dealer. You may order direct from:



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3

TUNERS & RECEIVERS

Model S-3000 IV FM/MX Tuner

Similar in design to Model S-3000 III FM tuner but includes wide-band multiplex circuit with phase-locked synchronous oscillator to re-insert multiplex sub-carrier; has sharp filter circuit to remove 19 kc. pilot carrier and 67 kc. secondary subchannel transmission; has controlled frequency and phase response of the FM i.f. amplifiers, limiters, and discriminator (flat to 75 kc.) for minimum distortion and maximum separation of multiplexed stereo signal through tuner circuits; FM IHFM sensitivity is 1.8 μv . for -30 db noise and distortion below 100% FM; less case.....\$160.00

Model S-7000 Stereo Receiver



Complete AM-FM tuner, preamp, amplifier system; FM sensitivity 0.95 μv for 20 db quieting; AM sensitivity 2 μv 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, ± 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-8000 FM/MX Receiver



Features highly sensitive FM tuner (1.8 microvolt IHFM standard); complete wired-in circuitry for receiving FM multiplex stereocasts; two 32-watt amplifiers; complete with dual preamplifiers for phono and tape and stereo controls; inputs provided for tape playback, tape monitor, phono, AM tuner, and two auxiliary sources; outputs for recording and 4, 8, or 16 ohm speakers; stereo power output 32 watts per channel music power (30 + 30 watts continuous duty) @ 1 1/2% IM distortion; response 20-20,000 cps ± 1 db @ 30 watts; hum and noise (phono input) 60 db below 30 watts; d.c. filament supply; less case.....\$299.50 Net

S-8000D (with walnut tone leatherette case).....\$307.00 Net

STROMBERG-CARLSON

Model SR-445A AM-FM Stereo Tuner



Features a.v.c., switched a.f.c., local-distant switches for both AM and FM; FM section response 20-20,000 cps ± 1 db; sensitivity 3.5 μv . for 20 db quieting; harmonic distortion less than 1%; multiplex output with signal & power connections included: AM section response 20-2500 cps $\pm 1 1/2$ db (sharp), 30-9000 cps $\pm 1 1/2$ db (broad); harmonic distortion less than 1% at 100% modulation; image rejection better than 60 db.; sensitivity 13 μv . for 20 db signal/noise.....\$139.95

Vinyl top cover.....\$ 6.95

Model FM-443 FM Tuner



Identical performance as FM tuner section of Model SR-445A AM-FM Tuner.....\$79.95

Vinyl top cover.....\$ 5.95

TEC

Model FM-15 FM Tuner



Twenty-transistor, 9-diode circuit; tuning meter; illuminated slide-rule dial; local-distant sensitivity control; a.f.c.; interstation muting; sensitivity 1.8 μv . for 20 db quieting, 2.5 μv . for 30 db; usable sensitivity (IHFM) 3.5 μv .; response 20-20,000 cps ± 1 db, section feeding multiplex circuit contains controlled roll-off after 75,000 cps; noise level 66 db below 100% modulation; output level 1 volt at 100% modulation; 88-108 mc.; input impedance 300 ohms; power requirements 105-120 volts a.c., 50-60 cps or 12 to 28 volts d.c. for battery operation; power consumption 4 watts; Matches company's S-15 amplifier; 3" x 10 1/8" x 8 1/2".....\$119.50

Model FM-15 MPX FM/Multiplex Tuner

Same as Model FM-15 except includes multiplex section occupying space 2 1/2" x 6" x 1" inside case; 8 transistors; completely automatic operation; requires no controls; completely aligned and pre-set circuits; current drain 20 ma.; synchronous gate separation of channels from composite signal provides wide-band reproduction of all audio information in original signal, recovered with low distortion.....\$179.50

TEECO

Model 892 AM-FM Tuner

FM same as Model 882; AM frequency response 20-5,000 cps; built-in Ferrite loopstick antenna; sensitivity AM 10 μv\$74.50

Model 882 FM Tuner

Flywheel tuning; AFC; jack for multi-



plex; 2 μv . for 30 db. quieting, hum level 55 db. below 100% modulation; tubes are 2-12AT7, 6CB6, 6AU6, 6AL5, selenium rectifier..... 56.50

Model 999 AM-FM Stereo Tuner

Three-position selector switch for stereo AM-FM or conventional AM or FM tuner operation; flywheel tuning a.f.c. defeat switch; illuminated dial; multiplex adapter jack: AM coverage 510-1800 kc.; FM coverage 88-108 mc.; AM sensitivity 10 μv .; FM 2 μv . for 30 db



quieting; response AM 20-5000 cps ± 3 db, FM 20-20,000 cps ± 1 db; built-in "Hi-Q" ferrite loopstick for AM, built-in line cord ant. with provision for external ant. for FM; hum level 55 db below 100% modulation; tubes 1 6AL5, 1-6AU6, 1-6BA6, 1-6BE6, 1-6CB6, 2-12AT7 plus selenium rectifier.....\$91.50

Model 1002 Tuner-Amplifier



Both AM and FM tuning; specifications for tuner same as Models 882 and 892; 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, 12AX7, EL84, EZ81; 12 3/8" x 9 3/4" x 4 3/8"; 13 lbs..... 108.50

Model 1010 Stereo Tuner-Amplifier

AM-FM tuner with dual 7 watt amplifiers; sensitivity; FM 2 μv for 30 db quieting, AM 10 μv .; frequency response; FM ± 1 db 20-20,000 cps, AM ± 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.\$174.50

Model 1012 FM Tuner-Amplifier

Suitable for PA system; power output 7 watts; sensitivity 2 μv for 30 db quieting; overall frequency response ± 1 db 20-20,000 cps; 4 ohms output impedance.\$112.50

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FM-Multiplex Stereo Broadcasts

By MILTON S. SNITZER / Technical Editor, ELECTRONICS WORLD

A single FM station can now broadcast both stereo channels. Here is what this means to the listener.

ON June 1 of this year the FCC made effective some new regulations for FM broadcasting stations that are of top importance to stereophiles. Some enthusiastic hi-fi manufacturers have called these new rules as important as the introduction of the stereo phonograph record. The reason for all the excitement that heralded the announcement is that now, for the first time, an FM broadcasting station can transmit on a regular basis the two channels that are needed for a stereo broadcast without being tied in with an AM station or another FM station. This is done by a method of broadcasting called "FM multiplex."

All forms of stereo reproduction, whether directly from a phonograph record, a tape, or from a radio station, require two complete amplifying systems and two complete loudspeaker systems. Frequently the two amplifying systems are contained in a single component, called a "stereo amplifier"; and sometimes the two loudspeaker systems are housed in a single cabinet. But the two channels needed for stereo, one representing the left-hand sound and the other representing the right-hand sound, must be kept entirely separate throughout the amplifying and loudspeaker systems. That requirement has not changed with FM multiplex, but here is the difference.

Two Channels, One Station

For several years, for as long as there has been stereo material recorded on tapes or discs, some radio stations have been transmitting stereo. One way of doing this was to have an FM station broadcast, say, the left-hand sound signal, while an affiliated or neighboring AM station broadcast the right-hand sound signal. The listener had to have two separate radio receivers or tuners, one for the FM station and the other for the AM station, to pick up the stereo broadcast. Later, manufacturers put these separate tuners in a single component, the "AM-FM stereo tuner," but the AM and FM circuits were kept completely separate.

Although this method does work, it has several drawbacks. First, since the sound quality and background noise characteristics of the AM channel are usually inferior to those on FM, the resulting stereo sound is not properly balanced. One channel has a different sound than the other. Second, the listener using an FM set alone or an AM set alone, hears only that sound originally picked up by the left-hand or the right-hand microphone. He does not hear the combined left- and right-hand sounds as he should in a regular monophonic setup. The arrangement is said to be *not compatible*.

Sometimes two neighboring FM stations get together to transmit stereo. In this case, the left channel is sent out by one station, while the right channel is transmitted by the other. This method requires two separate FM receivers or tuners. Although the sound balance is better with two FM channels, this system is still not compatible. The listener with a single FM tuner will not hear the entire program content.

With FM multiplex, a single FM station is now able to transmit both the left channel and the right channel needed for stereo. At the same time, the many owners of FM sets who are not interested in stereo are able to pick up that same station, while it is transmitting stereo, and hear *both* left- and right-hand sounds just as for a conventional monophonic broadcast. This seems like a good trick, and for a description of just how it is done, refer to the "How it Works" section of this article.

Very briefly, the left and right channels of the stereo program being broadcast are combined to form a compatible mono signal that is sent out by the station in the usual way. This is what the non-stereo FM listener hears. At the same time, a second signal containing the stereo information is superimposed, piggy-back fashion, on the FM transmitter's output. This second signal, now completely inaudible, rides along with the mono signal, and is so encoded on the transmitter's output that it does not interfere with the mono signal. At the receiving end, special decoding circuits in multiplex adapters or in stereo FM tuners, recover both signals and combine them in such a way that the original left and right channels are produced. These signals are then fed to the stereo amplifier and stereo speakers in the usual way.

From the technical description given below, one would think that the multiplex circuits themselves would be as elaborate and complex as all of those used in the FM tuner. This is not the case. As a matter of fact, a few manufacturers have been able to do the whole job with a single electron tube, a couple of crystal diodes, along with associated electronic parts—and all on a chassis not much bigger than 2 by 4 inches. This unit fits within the associated FM tuner and draws its power from it. On the other hand, other manufacturers believe that more elaborate circuits are needed in order to get the top quality of which the FM multiplex system is capable. Their circuits may use as many as five tubes, plus an even greater number of crystal diodes, with associated parts—on a 6 by 12 inch chassis.

Prices and Problems

Some companies feel that the added circuits should be designed for minimum cost and maximum simplicity. Others feel that no compromise with quality and operating flexibility should be made. Naturally, separate multiplex adapters or built-in multiplex circuitry built with this latter philosophy in mind are more expensive than simpler units. Then, there are the majority of manufacturers who design the best circuits they can but with a given final price in mind. Also, it is natural that separate multiplex adapters be more expensive than the same circuits already built into the FM tuner. Separate adapters require their own chassis, cabinet, and, if self-powered, their own power-supply circuits. Adapters built from kits are, of course, less expensive than factory-wired units.

The present price range of separate multiplex adapters is from about \$30 to \$100. In the case of stereo FM tuners with built-in multiplex circuits, these circuits probably add about \$20 to \$60 to the price of the tuner.

Some adapters are designed for use with a large number of FM tuners, while others are made to match specifically the tuners built by the same company. The purchaser should check the recommendations of the tuner manufacturer before making a purchase. In the case of built-in multiplex circuits, the matching has already been taken care of.

But what about present owners of FM tuners? Will they be able to pick up the new FM multiplex stereo broadcasts? The recent tuners that were designed with multiplex in mind should do a good job when used with a properly matched multiplex adapter. However, many of the older FM tuners will not work too well with FM multiplex, and it would not make too much sense to try to adapt them to the new system. There are many reasons for this. The stereo information is sent out near the edges of the FM

STEREO/HI-FI DIRECTORY

channel, so that the tuner must be of the broad-band type. Also, the tuner's performance must be good over the entire FM channel in order to get good stereo. Finally, a special output connection must be available in the tuner for multiplex. The usual output connection cannot be used. All this does not mean that you will have to discard your old tuner. It can continue to perform just as well as it ever did on ordinary mono FM broadcasts.

One minor problem for users of multiplex equipment will be, just how will the listener know when an FM station is broadcasting a stereo program. The obvious way is to listen to the program carefully and note whether you are hearing the spread of sound that goes with stereo. The listener will also be able to hear different sounds from his two speakers. Some manufacturers are even putting indicator lamps on their multiplex equipment, and these lamps will light when a stereo program comes on.

When stereo is not being broadcast, it is usually necessary to switch off the multiplex circuits to minimize any noise and interference that these circuits may produce. This is especially true if the FM station is transmitting back-

ground-music storecasts while it is transmitting stereo. In some cases this switching is done manually by the user; the switch may be on the multiplex adapter itself, on the tuner, or on the stereo preamp. In other cases, the switching is done automatically by the multiplex equipment itself.

FM multiplex is subject to a little more interference (ignition noise, radiation from other receivers, internally generated noise) than is the ordinary monophonic FM signal. Therefore some who have been getting along fairly well on built-in or indoor FM antennas will have to install outdoor antennas. Also, a little more care will have to be used in tuning in a station otherwise the stereo quality may suffer. A tuning indicator will be helpful in this regard. Tape-recorder enthusiasts will have to be careful to use well-designed multiplex circuits if they are to avoid the presence of some interfering signals on their tapes of FM stereo broadcasts.

All these problems are minor, though, compared to the pleasure that can be derived from listening to a stimulating and satisfying high-fidelity stereo broadcast—thanks to FM multiplex.

HOW IT WORKS

First, both the left and the right channels are added together at the FM transmitter and this combination (called the "main channel") is sent out over the station's FM radio carrier in the conventional manner. It is this combined signal that is picked up by the non-stereo (monophonic) FM tuner or receiver. Notice that the non-stereo listener is not deprived of any of the program material; he hears both the left- and right-hand sounds.

Next, the right-channel sounds are subtracted from those in the left channel, and the resulting *difference* signal is sent out over the air by the FM station by means of a "stereo subchannel." In order that the difference signals not interfere with the sum signals being sent out as the main channel, it is necessary to boost their frequencies above those being used in the main channel. Fig. 1 shows that while the main channel goes up to 15,000 cycles per second (15 kilocycles), the stereo subchannel ranges from 23 kc. to 53 kc. These frequencies are well above the main channel and above the top limit of human hearing. In order to get the frequencies up this high, the difference signal mentioned above is applied to a 38-kc. subcarrier, produced at the FM transmitter from an overtone or harmonic of a 19-kc. circuit. The stereo subchannel is able to handle signals up to 15 kc., just as the main channel does. But these signals show up in the FM transmitter output at 15 kc. below 38 kc. (or 23 kc.) and at 15 kc. above 38 kc. (or 53 kc.). Actually, once the subcarrier does its job of generating these side frequencies, it is not needed any more and it is suppressed at the transmitter.

Now the FM transmitter is sending out two signals at the same time, one is a left-plus-right main channel and the other is a left-minus-right subchannel. The main channel can be turned into audible sound by an ordinary mono FM receiver, while the subchannel remains completely inaudible. But we need the original

left and right channels to reproduce stereo, and they seem to have been swallowed up in the FM transmitter. Here is where the multiplex adapter or the multiplex circuits in a stereo FM tuner come in.

At the Receiving End

Multiplex circuits at the receiving end are able to take the two sets of signals being sent out by the FM transmitter and convert them back into the original left and right channels needed for stereo. The multiplex receiving circuits are sometimes housed in a separate, compact unit installed between the regular FM tuner and the stereo amplifier (Fig. 2). This unit, called a "multiplex adapter," may either be self-powered or it may derive its power from the companion tuner. Multiplex circuits may also be incorporated into the FM tuner itself, as shown in Fig. 3.

The FM antenna and tuner circuits pick up, amplify, and detect the signals from the stereo FM station in the usual way. But the output of the FM tuner (Fig. 2) is not taken at the usual place. Instead, the special "multiplex output" jack, found on just about all modern FM tuners, is used. If this connection is not employed, then there would be little or no stereo subchannel for the multiplex circuits.

The first task of the multiplex circuits is to strengthen the weak output of the FM tuner. Then, an electrical filter is used to separate the stereo subchannel (23 to 53 kc.) from the main channel (50 cps to 15 kc.). Next, a circuit generates the subcarrier (38 kc.) that had been suppressed at the transmitter. This is necessary in order that the signals in the stereo subchannel be recreated in the same form they had at the transmitter. The subchannel signals (left minus right) are then extracted by detection and are combined with the signals on the main channel (left plus right).

Now, if we add the left-minus-right signal to the left-plus-right signal, the right channel cancels out, leaving only the left channel. This is then connected to the left-channel input of the stereo amplifier and thence to the left loudspeaker. If we subtract the left-minus-right signal from the left-plus-right signal, the left channel cancels out, leaving only the right channel. This is connected to the right-channel input of the stereo amplifier and the right loudspeaker. What we have just described is not just a bit of tricky math, but something that can be done quite easily with a few simple parts in an electronic circuit.

Fig. 1. Signals produced in FM tuner by a station that is transmitting stereo.

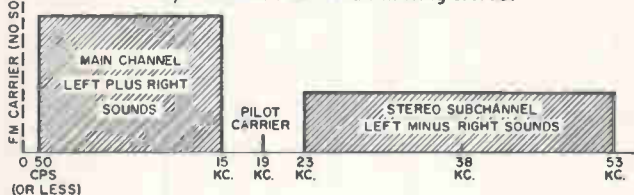


Fig. 2. Use of outboard multiplex adapter with an FM tuner.

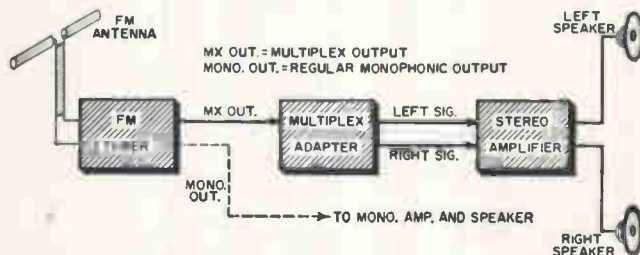
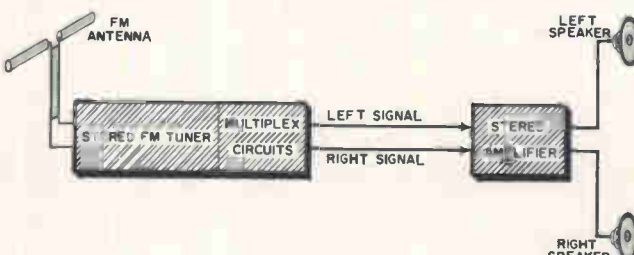


Fig. 3. The stereo FM tuner has multiplex circuits built in.





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4

TAPE MACHINES

AMERICAN CONCERTONE

Mark VII Stereo Tape Recorder

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

Model 201 Stereo Tape Player

Two- or four-track stereo playback, less preamps; 3.75 and 7.5 ips; hysteresis synchronous drive motor; wow and flutter better than .3% r.m.s. @ 7.5 ips; signal-to-noise -50 db @ 7.5 ips. 46 db @ 3.75 ips; up to 7" reels.....\$84.50
Model TP-201A Same as Model 201 but includes transistorized stereo preamplifier; response 40-12,000 cps (-3 db @ 15 kc.) @ 7.5 ips, 40-8500 cps (-3 db @ 10,000 cps) @ 3.75 ips\$159.50
Model AM-201 transistorized stereo preamplifier alone\$69.95

Model 505 Series Tape Recorder



Available as 2- or 4-track recorder; plays 2- and 4-track tapes; features sound-on-sound record; two speeds, 3.75 and 7.5 ips; 30-20,000 cps @ 7.5 ips; 30-15,000 cps @ 3.75 ips; flutter and wow less than .2% r.m.s. @ 7.5 ips; four heads—stereo erase, stereo record, 2-track playback and 4-track playback; rewind time 45 sec. for 1200 ft.; high-impedance mike and line inputs; mechanical flutter filter; stereo playback preamps.
Model 505 (records half-track and two-track, mono and stereo) without case\$495.00
Model 505K same as Model 505 but with case\$550.00
Model 505-4 (records quarter-track) without case\$495.00
Model 505-4K same as Model 505-4 but with case\$550.00
Model 505-4RK same as Model 505-4K but includes "Reverse-O-Matic," an automatic tape reversing system doubling unattended playing time.\$634.50
7.5 and 15 ips operation available on special order (extra charge).....\$25.00

Model 506 Tape Recorder

Similar to Model 508 (below) but supplied as a stereo player only; two heads, both playback; quarter and half-track tape; portable case not available.\$349.50

Model 507 Tape Recorder

Similar to Model 508 (below) but supplied as a two-track stereo recorder with four heads; three half-track (stereo) for erase, record and playback; fourth head is quarter-track playback.....\$655.00
Model 507-4 Same as Model 507 but is supplied as a four-track stereo recorder with four heads—three quarter-track (stereo) for erase, record and playback; fourth head is half-track playback.....\$655.00
Portable case for Models 507 and 507-4\$60.00

Model 508 Tape Recorder



Available as a portable recorder or for rack installation; features high- or low-impedance inputs and outputs; vu meters; separate line and mike inputs; three shielded heads with space for fourth for special-effects work; three hysteresis motors; two speeds 3.75 and 7.5 ips; response 40-12,000 cps ± 2 db @ 7.5 ips, 40-7500 cps ± 2 db @ 3.75 ips; signal-to-noise 55 db full-track, 50 db half-track @ 2% distortion; separate record/play amplifier.
Model 508-1 Full track recorder.\$520.00
Model 508-2 Half-track recorder.\$520.00
Portable case\$50.00
Extra playback head.....\$60.00
7.5 and 15 ips operation factory installed\$30.00
As above but in kit form.....\$20.00

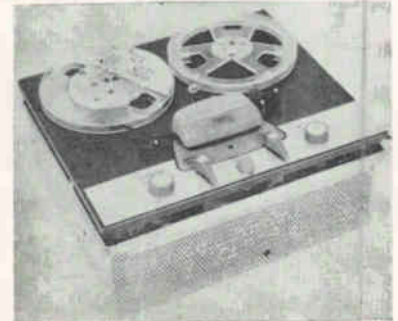
Series 30 Tape Recorder
15 and 7.5 ips or 7.5 and 3.75 ips; 40-15,000 cps @ 15 ips, 50-12,000 cps @ 7.5 ips, 50-5000 cps @ 3.75 ips, all ± 2 db; harmonic distortion 2% @ zero vu; flutter and wow .1% r.m.s. @ 15 ips, .2% r.m.s. @ 7.5 ips, .3% r.m.s. @ 3.75 ips; maximum of five heads; interchangeable mounting bracket; inputs—two mike and line, both variable; sensitivity 1 mv. on mike, .1 volt on line input; fast rewind and forward, 60 seconds for 2500 ft., adjustable for slower speeds.
Model 31 Records and plays back full-track\$795.00
Model 32 Records and plays back dual-track monophonic\$795.00
Model 33 Stereo or mono (dual-track) for record and playback.....\$995.00
Model 33F Stereo or mono (dual-track) for record and quarter-, half-track or mono playback.....\$1050.00

AMPEX

Model 934 Stereo Tape Deck

Two-speed (3.75 & 7.5 ips) for mono or stereo, 2- or 4-track playback; tape head output for use with external preamplifiers; flutter & wow under .25% r.m.s. at 7.5 ips.....\$199.50

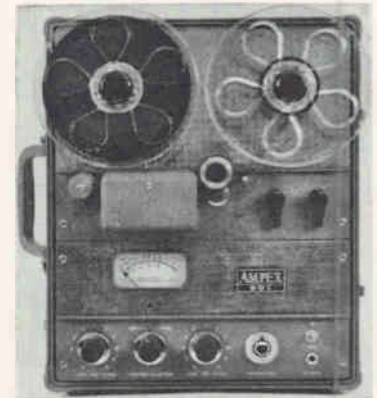
Model 936 Stereo Tape Player



Same basic tape deck as Model 934 but includes built-in stereo preamp; preamp output approx. .75 v.; response 50-15,000 cps ± 2 db @ 7.5 ips, 50-8000 cps ± 2 db @ 3.75 ips.....\$249.50
Walnut table-top cabinet.....\$24.95

Model 601 Monophonic Recorder

Full-track or half-track recorder; 3 heads: erase, record, playback; frequency response: 40 to 15,000 cps, 40 to 10,000 cps ± 2 db, no more than 4 db down at 15,000 cps; wow and flutter under 0.17% rms; signal-to-noise ratio: full track, over 55 db below peak recording level at 3% total harmonic distortion; half track, over 50 db; VU meter; separate record and playback preamplifiers; reel size: 7"; timing accuracy: ± 3.6 seconds in 30 minute recording; microphone and high level inputs with full mixing provisions; vertical or horizontal operation; separate playback preamp permits instantaneous comparison between incoming program material



and actual recording; headphones jack; output: 1.23 volts into 600 ohm load from tapes recorded at program level:
Model 652 Half-track, 7.5 ips, portable case\$595.00
Model 656 Half-track, 3.75 ips, portable case\$625.00
Model 662 Half-track, 7.5 ips, unmounted\$545.00
Model 666 Half-track, 3.75 ips, unmounted\$575.00
Model 654 Full-track, 7.5 ips, portable case\$595.00
Model 658 Full-track, 3.75 ips, portable case\$625.00
Model 664 Full-track, 7.5 ips, unmounted\$545.00
Model 668 Full-track, 3.75 ips, unmounted\$575.00

Model 601-2 Stereo Recorder

Stereophonic tape recorder using Model 601 tape transport and two Model 601 electronic chassis for stereo record/playback; full track erase head; stacked record and playback heads; all performance specifications identical to Model 601; Model 672 7.5 ips, portable

case\$795.00

Model 674 3.75 ips, portable

case\$845.00

Model 676 7.5 ips, unmounted...\$750.00

Model 678 3.75 ips,

unmounted\$795.00

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

Model 910 Tape Recorder

Same as Model 960 except mono record & stereo playback; portable luggage-type grey case\$399.50

Model 902 Uncased.....\$349.50

Model 960 Stereo Recorder:

Portable; stereo record and 1/2-track record; stereo playback (2-track stereo and 4-track stereo playback), 1/2-track and full track playback; 3 heads for erase, record, playback; lever shifts playback head from 2 to 4-track position; 7 1/2 and 3 3/4 ips; frequency response from



30-20,000 cps at 7 1/2 ips; flutter and wow under 0.2% and signal-to-noise down 55 db at 7 1/2 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

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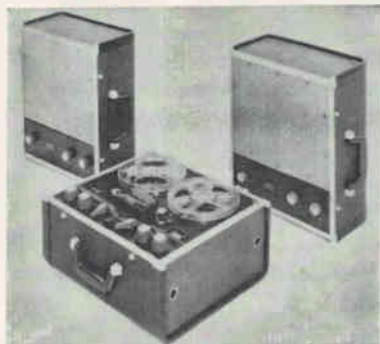
TAPE MACHINES

Model 970 Tape Recorder



Same as Model 960 but includes built-in pair of matched amplifier/speakers; elliptical 7" speakers & sound-directing panels provide optimum placement for monitoring or listening.....\$95.00
With two Model 2010 amplifier/speaker units.....\$949.50

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; over-all size 9" d x 15" w 7 1/2" h; 31 lb.\$199.50

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Model 610 Series, VU "Magnemite"

Portable tape recorder; spring-wound motor; battery operated amplifier;



single or dual track; single head for recording and playback; balanced fly-ball governor; 5" reel size; rewind indicator; multi-purpose vu meter.

Model 610-AV
Dual track; 15/16 ips; 300-2500 cps; flutter 0.25%; 16 lbs.\$365.00

Model 610-BV
Dual track; 1 7/8 ips; 100-3,000 cps; flutter 0.2%; 16 lbs.\$315.00

Model 610-CV
Dual track; 3 3/4 ips; 50-5,000 cps; flutter 0.15%; 19 lbs.\$345.00

Model 610-TV
Dual track; 7 1/2 ips; 50-7,500 cps; flutter 0.1%; 19 lbs.\$365.00

Model 610-DV
Single track; 7 1/2 ips; 50-7,500 cps; flutter 0.1%; 19 lbs.\$385.00

Model 610-EV
Single track; 15 ips; 50-15,000 cps; flutter 0.1%; 19 lbs.\$425.00

Model W-610, Series, "Weatherite VU Magnemite"



Same basic design as Model 610 Series but housed in weather-tight sealed aluminum case.

Model W-610-AV.....\$415.00
Model W-610-BV.....\$365.00
Model W-610-CV.....\$395.00
Model W-610-TV.....\$415.00
Model W-610-DV.....\$435.00
Model W-610-EV.....\$475.00

Model 612 Series, "TransMagnemite"

Transistorized version of Series 610 recorders.

Model 612-AV.....\$495.00
Model 612-BV.....\$445.00
Model 612-CV (50-7500 cps).....\$455.00
Model 612-TDV (50-10,000 cps).....\$465.00
Model 612-SDV (50-10,000 cps).....\$465.00
Model 612-EV.....\$505.00
All of the above models also available in weather-tight sealed aluminum cases.....Add \$50.00

Model 312 Series, "TransFlyweight" Transistorized Tape Recorders

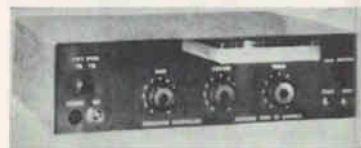


8 lbs.; operates from small replaceable drycell or rechargeable batteries; governor-controlled electric motor; multi-purpose vu meter; single or dual track;

single head for recording and playback; 5" reel size; rewind indicator.

Model 312-AV Dual track; 15/16 ips; 50-2500 cps; flutter .25%; 8 lbs.; in attache case.....\$488.00
In aluminum case.....\$519.00
Model 312-BV Dual-track; 1 7/8 ips; 50-4000 cps; flutter .2%; 8 lbs.; in attache case.....\$438.00
In aluminum case.....\$469.00
Model 312-CV Dual-track; 3.75 ips; 70-7500 cps; flutter .15%; 8 lbs.; in attache case.....\$448.00
In aluminum case.....\$479.00
Model 312-TDV Dual-track; 7.5 ips; 50-10,000 cps; flutter .1%; 8 lbs.; in attache case.....\$458.00
In aluminum case.....\$489.00
Model 312-SDV Single-track; 7.5 ips; 50-10,000 cps; flutter .1%; 8 lbs.; in attache case.....\$458.00
In aluminum case.....\$489.00
Model 312-EV Single-track; 15 ips; 50-15,000 cps; flutter .1%; 8 lbs.; in attache case.....\$498.00

Magnematic Continuous-Loop Cartridge Tape Recorders



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; electrically operated start-stop controls; transistor circuits; over-all height 3 1/4"; wide selection of models from \$199.00 to \$399.00.

ARL

Model P-22 Tape Recorder

Two-track 3.75 ips record and playback design; has automatic self-reversing feature, switching heads at end of tape; will handle 1/2 or 3/4 mil tape; 6 watt amplifier; 6" x 9" speaker; input impedance 4-16 ohms; does not include microphone input; 19" x 16" x 10".....\$199.50



Model P-42 Tape Recorder

Similar to P-22 except four-track; stepping relay automatically switches from track one, two, three, and four, then back to track one again.....\$239.50
7.5 ips speeds available on P-22 and P-42 machines upon request. No additional cost.

BELL SOUND

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 3 3/4 and 7 1/2 ips; flutter

STEREO/HI-FI DIRECTORY



less than 0.2% at 7 1/2 ips.; tape lifter; transport used in combination with Model RP-320 preamplifier; 15 1/4" x 13 1/2" 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 playback\$184.95
- Model T-333 Four-track stereo record/playback; 2-track stereo playback\$199.95
- Model T-337 Four-track stereo record/playback; 2-track stereo playback; includes Model RP-320 preamplifier\$334.95
- Model T-338 Same as Model T-337 with carrying case.....\$369.95

Model RP-320 Record-Playback Preamp
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; 6 1/2" x 8" x 1 23/4"\$129.95

Model RP-321 Record-Playback Preamp
Mono record-playback preamplifier for use with Model T-130 tape transport\$75.00

Model 300-CC Portable Carrying Case
Accessory case for any Bell tape transport; 8 1/2" high x 16 3/8" wide x 18" deep; vinyl finish\$34.95

Model 45A1 Slim-Line Microphone
Crystal type; frequency response 30-15,000 cps; output -55 db.....\$20.00

Model 603 Tape Recorder
Complete stereo player and recorder with built-in two-channel stereo amplifier; second speaker in detachable lid;



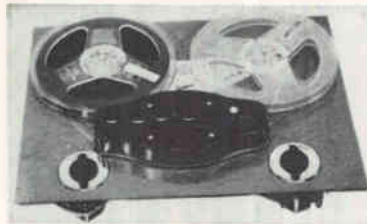
tape-cartridge transport yet permits playing 3" reels; supplied with two microphones; 3 3/4 & 1 7/8 ips speeds; four-track design permits stereo operation in both directions; wow & flutter less than .3% at 3 3/4 ips; has record-level indicators; inputs for microphone, tuner, record changer; weighs 18 lbs.; 10 1/2" x 9" x 7 1/2"; priced not announced, but will sell for under \$200.00.

Model 60 Tape Recorder
Similar to Model 603 except monophonic record & playback.....\$139.95

BRENELL

Pro-2 Tape Preamplifier
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

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" x 11 1/2" x 3 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

Mark 5 Series Tape Deck
Four speed (1 7/8, 3 3/4, 7 1/2 & 15 ips); two switches control record, playback, wind & rewind; has revolution counter; normally deck is supplied fitted with one erase and one record/playback head (upper track in operation); provision is made for extra heads to be mounted easily when required for special purposes.

Mark 5 Monophonic record/playback\$169.50

Mark 5B Stereo record/playback\$199.50

Mark 5 Record/Playback Amplifier
Primarily designed for use with Brenell tape decks; frequency compensation is to CCIR standards at 7 1/2 & 15 ips; 7 watts output; two amplifiers required for stereo operation; has high-frequency tone control; microphone input 2-5 mv into 2 megohms; tuner-phono 250 mv

Famous
Jazz Trumpeter
BOBBY HACKETT
says this about

Tandberg 6

3 SPEED * 4 TRACK
**STEREO RECORD/PLAYBACK
TAPE DECK**



\$498.00

"It's the very best unit anyone can own. I depend on it for clear, natural sound in all the music I record. It's just great!"

This is an impartial judgment from one of the world's finest jazz musicians! He, too, recognizes Tandberg 6 as a remarkable instrument — for portable or built in hi-fi use. Features 4 track stereo record; 2 and 4 track stereo/monaural playback; 3 separate heads; push button control; wide range of frequency response.



NEW Tandberg 65
3 SPEED * 4 TRACK
STEREO PLAYBACK DECK
A pure playback deck offering superior performance. Plays back 2 and 4 track stereo/monaural tapes. Has start-stop button; 2 outputs for plug-in pre-amps; facilities for adding erase-record heads.
\$199.50

SEE YOUR AUTHORIZED DEALER

Tandberg of America, Inc.
8 Third Ave. Pelham, N. Y.

4 TAPE MACHINES

into 700,000 ohms; tubes—EF86, ECC-83, EL84, EZ80, EM81; size 15" w x 4 1/2" h x 5" d; without power supply \$84.60
With power supply.....\$109.50

CROWN

Record and play response for all "700" Series models 30-30,000 cps \pm 2 db at 15 ips; 30-20,000 cps \pm 2 db at 7.5 ips; and 30-11,000 cps \pm 3 db at 3.75 ips.

Model "702" Tape Recorder



Records and plays half-track mono; three-motor transport; differential magnetic braking; automatic stop; separate bass & treble boost on record and playback; d.c. filaments; three-speed record/play equalization; 15, 7.5, & 3.75 ips (1 7/8 ips available); fast forward and rewind, 1200" in 38 sec.; handles up to 10 1/2" reels; maximum wow & flutter—.06% @ 15 ips, .09% @ 7.5 ips, .18% @ 3.75 ips; timing accuracy 99.5% for standard motor, 99.8% for synchronous motor; signal-to-noise ratio 57 db @ 15 ips, 54 db @ 7.5 ips, 51 db @ 3.75 ips; over-all distortion less than 1.5%; inputs—two high-impedance inputs channels, mic. or phono and mike and play; cathode-follower-type output; controls—forward, stop, play/record, thread/idle, stop, rewind switch, bias lock, mic. 1 play, mic. 2 phono, treble, bass, play/record, equalization (three speeds), reel size switch, power on-off.....\$460.00

Model "712" Tape Recorder

Records and plays two-track stereo and mono; features & performance standards same as Model "702"; second record/play amplifier offers twice the facility; 19" w. x 7 1/2" d. x 17 1/2" h.....\$710.00

Model "714C" Tape Recorder



Records and plays quarter-track stereo and mono; plays two-track stereo; record and play response (for quarter-track stereo) 50-28,000 cps \pm 2 db @ 15 ips, 30-17,000 cps \pm 2 db @ 7.5 ips, 30-9000 cps @ 3.75 ips; other features and performance standards same as Model

"702"; 19" w. x 7 1/2" d. x 17 1/2" h.
\$730.00

Automatic Series



Player only; playback frequency 30-15,000 cps \pm 2 db @ 7.5 ips, 30-11,000 cps \pm 3 db @ 3.75 ips; three-motor mechanism with synchronous capstan motor and ball-bearing reel motors; fool-proof automatic photoelectric self-reversing system; differential magnetic braking; plug-in preamp; standard rack mounting; remote control available; 7.5 & 3.75 ips (1 7/8 ips available); handles up to 14" reels; maximum wow & flutter .1% @ 7.5 ips, .2% @ 3.75 ips; signal-to-noise ratio 50 db @ 7.5 ips; controls—play/stop/wind switch, reel-size switch, operate switch (L, A, R positions); 19" w. x 7" d. x 14" h.
Model "A51" "Crown-O-Matic" half-track mono with preamp.....\$895.00
Model "A54" "Stereo-Matic" quarter-track stereo with preamps.....\$995.00

Model TM3 "Transfer-Matic"

Separate panel unit which automatically switches in second or third player according to planned programming functions desired; 19" w. x 5 3/4" d. x 8 3/4" h.
\$195.00

Model "B801" "Broadcaster" Series



Record and playback response 30-28,000 cps \pm 2 db @ 15 ips, 20-17,000 cps \pm 2 db @ 7.5 ips; 30-9000 cps \pm 3 db @ 3.75 ips; records and plays full-track; direct off-the-tape third-head monitor; A-B switch; echo switch; sound-on-sound with stereo models; Crown "X" control with all-electric relay and solenoid operation; remote-control facilities; photocell automatic stop in all functions; three-motor transport; hysteresis synchronous capstan motor; standard rack mount; 15, 7.5 & 3.75 ips (1 7/8 ips available); handles up to 10 1/2" reels; maximum wow & flutter .06% @ 15 ips, .09% @ 7.5 ips, .18% @ 3.75 ips; signal-to-noise ratio (NAB) 60 db @ 15 ips, 60 db @ 7.5 ips, 55 db @ 3.75 ips; over-all distortion less than 1.5%; two input channels—either high-impedance mic. or phono with low-impedance mic. with Cannon connector available and either low-impedance mic. with Cannon connector or balanced bridge; output 600 ohms balanced line with Cannon connector and cathode-follower output; controls—push-button stop, rewind, play, forward; rotary mic. 1, phono 1, mic. 2, bridge 2, record (P, R, and E positions), play, meter (out, bias, A, B), A-B, treble, bass, bias, equalization (three speeds); switches—cue, reel size; 19" w. x 7 1/2" d. x 14" h.

\$885.00
Model "B822" Two-track stereo record/playback\$1195.00

Model "824" Tape Recorder



Record and play response 30-30,000 cps \pm 2 db @ 15 ips, 30-20,000 cps \pm 2 db @ 7.5 ips, 30-13,000 cps \pm 3 db @ 3.75 ips; records and plays quarter-track stereo and mono; features same as "Broadcaster" series; 15, 7.5 & 3.75 ips (1 7/8 ips available); maximum wow & flutter .06% @ 15 ips, .09% @ 7.5 ips, .18% @ 3.75 ips; signal-to-noise ratio 58 db @ 15 ips, 55 db @ 7.5 ips, 51 db @ 3.75 ips; two input channels—either two high-impedance mic. or two phono; cathode-follower output; controls—push-button stop, rewind, play, forward, rotary mic. 1, phono 1, mic. 2, phono 2, meter (out, bias A, B); A-B, treble, bass, bias, equalization (three speeds); switches—cue, reel size; 19" w. x 7 1/2" d. x 14" h.....\$995.00
Model "822" Two-track stereo record/playback\$1050.00
Model "802" Half-track mono record/playback\$690.00

"Mus-O-Matic" Series



Automatic, self-reversing transport; player only; playback response 30-15,000 cps \pm 2 db @ 7.5 ips, 30-11,000 cps @ 3.75 ips; three-motor mechanism with hysteresis synchronous capstan motor; foolproof automatic self-reversing system; standard rack mounting 7.5 & 3.75 ips; maximum wow & flutter .01% @ 7.5 ips, .02% 3.75 ips; signal-to-noise ratio with transistor preamp—52 db @ 7.5 ips; controls—rewind, stop, operation, stop, forward switch, operate switch on-off; 19" w. x 7" d. x 12 1/2" h.
Model "A314" Half-track mono.

.....\$395.00

Model "A324" Four-track stereo

.....\$395.00

Transistor Preamp, cathode-follower output:

"MPT" mono.....\$45.50

"SPT" stereo.....\$75.00

Accessories for "700" & "800" Series

Model LP Long Play Transport handles up to 14" reels; hysteresis synchronous capstan motor.....\$65.00

Model A15 15-watt Power Amplifier; 4-8-16 ohms; 19" x 3 1/2" x 7 1/2"; not self-powered\$75.00

Model A30 30-watt Power Amplifier; 4-8-16 ohms; 19" x 3 1/2" x 7 1/2"; self-powered\$70.00

Model A30-30 Dual 30-watt Power Amplifier; on single chassis with separate master gain controls; 4-8-16 ohms;

19" x 7½" x 8¼"; self-powered...\$90.00
 Model SR Speed Reducer; for 1⅞ ips.
 \$25.00

Cases, 50-cycle speed pulleys, input and output transformers; large hub adapters, and monitor speakers also available for use with these recorders.

DUMONT EMERSON
 (Marketing units made by Telectro)

Model SA121



4-track, 2-track stereo play; mono record/play; 2 speeds (3¾, 7½ ips) frequency response 100-10,000 cps at 7½ 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"x8¼"x12⅞"; 17 lbs. \$129.95

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 7½ ips; 50-10,000 cps ±2 db at 3¾ ips; 50-5,000 cps at 1⅞ ips; 4 high level inputs; ¼ track stereo record/play; wow and flutter less than 0.25% at 7½ ips; neon bulb record indicator; tape counter; 2-6" dual-range speakers; audio output 8 watts per channel; 13½" x 8½" x 14½"; 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; 11⅝" x 5⅝" x 6⅞"; 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

Model SS-461 Stereomaster

Individual channel volume and tone controls for balanced stereo; solenoid-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 1⅞ ips., 3¾ ips., 7½ ips.; head elevator lever for 2-track



or 4-track stereo; frequency response at 7½ ips. ±2 db. 50-15,000 cps.; wow and flutter less than 0.25% at 7½ ips.; distortion less than 1% at normal output; bias oscillator frequency 65 kc.; heads for quarter-track stereo record/play, ¼-track stereo erase; tubes are 4-6AW8A, 2-12AX7, 12AU7, 6X4 rectifier; 8 watts (music power) per channel output; 2 built-in vu meters; 4" x6" speaker built-in; 5" speaker in each "wing"; 2 crystal microphones; 21½" x 14½" x 8½"; 42 lbs. \$349.95

Model MR511 Transistorized Recorder

Transistorized, battery-operated, portable unit; will also operate from 12-volt auto battery; plays 1½ hours from 3" reel; two speed (3.75 & 1⅞ ips); dual-



track; response 100-6500 cps ± 3 db; power output ⅓ watt; bias frequency 37 kc.; 7 lbs.; 10¾"x6⅞"x3"; dynamic mike included. \$129.95

Model MR111 Tape Recorder

Monophonic, dual-track, two-speed (7.5 & 3.75 ips) compact tape recorder; includes necessary record/playback pre-



amps; power amp for playback and crystal mike; single knob (record-idle-play) control; speaker 6"; 5" reel maximum; 15 lbs.; over-all dimensions 7¾" x 11⅝" x 11" \$89.95

Schober

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 tone
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Here is magnificent Pipe Organ tone; tremendous tonal color range; two 61-note pipe-organ keyboards; hand-rubbed cabinetry in the finish of your choice. Taken together they comprise a superlative electronic instrument comparable to organs selling for \$2,500 to \$6,000.

Yet, when you assemble the Schober of your choice, you save more than half the normal cost and create a superb instrument to bring the delightful gift of music to your family.

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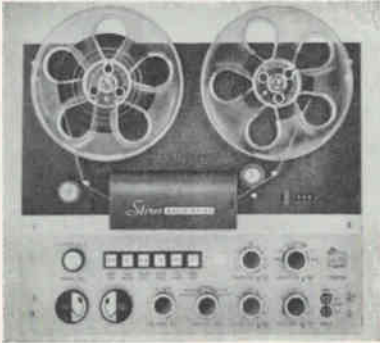
city _____ zone _____ state _____

4

TAPE MACHINES

EICO

Model RP-100 Tape Deck



Provides stereo/mono 1/4-track record, playback, erase; also 1/2-track stereo/mono playback; speeds 7 1/2" and 3 3/4" ips; takes 7" reels; separate record/playback heads; separate record and playback transistor electronics to monitor while recording; permits sound-on-sound recording; dual meters; push-button controls; rewind and fast forward 1200' per minute; frequency response 30-15,000 cps at 7 1/2 ips, 30-10,000 cps at 3 3/4 ips; timing accuracy 0.3%\$395.00
 Model RP-100K (semi-kit includes transport, assembled control electronics and stereo playback amplifiers in kit form)\$289.95

ELECTRONIC APPLICATIONS

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 power lines; 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

FERROGRAPH

Model 4 Series Tape Recorder



Basically a mono record/playback, two-speed tape machine; wow & flutter 2% @ 7.5 ips; response 50-6000 cps ± 3 db @ 3.75 ips, 40-12,000 cps ± 3 db @ 7.5 ips, and 40-15,000 cps ± 3 db @

15 ips; dual inputs (.003 v. & 1 v. peak); output speaker or 2 1/2 watts @ 15 ohms; includes amplifiers & speaker. Model 4A/N (3.75 & 7.5 ips)...\$399.50
 Model 4A/H (7.5 & 15 ips).....\$445.00
 Series 4S same as Model 4 except with additional stacked stereo head for playback only; external amplifier and speaker must be used for second channel reproduction.
 Model 4S/N (3.75 & 7.5 ips)...\$495.00
 Model 4S/H (7.5 & 15 ips).....\$595.00

Model 424 Tape Recorder

Features two speeds (7.5 & 3.75 ips); 3 motors; automatic stop; 2 recording amplifiers and 2 separate playback preamps; each channel may be used separately (recording or playback without affecting the other); wow & flutter less than .2% at 7.5 ips; response 40-15,000 cps ± 3 db @ 7.5 ips and 40-10,000 cps ± 3 db @ 3.75 ips; signal-to-noise ratio unweighted including hum 62 db; has dual inputs (2 mv. & 400 mv. r.m.s.); records mono or stereo; plays back quarter-, half- or full-track mono and twin-track stereo or quarter-track stereo; output from preamps 1.5 v. r.m.s. each track.....\$595.00

Model 808 Tape Recorder

Features full mono & stereo recording/playback; dual preamps provide 1.5 v. across 5000 ohms; external amplifiers & speakers must be used; two-speeds (7.5 & 3.75 ips); wow & flutter 2% @ 7.5 ips; response 60-8000 cps ± 3 db @ 3.75 ips; and 60-14,000 cps ± 3 db at 7.5 ips; dual input (.003 v. & .3 v. peak)\$595.00

GBC

Model PT-12 Tape Recorder



Two-speed (3.75 & 1 7/8 ips); dual-track portable mono recorder & playback unit; 2.5 watts power output; response 75-7500 cps; includes built-in speaker, microphone, record-level indicator, counter; 10 pounds; 4 3/4" x 8" x 9 1/2"; 3 1/2" reels; made in Italy.....\$99.50
 Carrying case\$5.95
 Voltage inverter for 6- or 12-volt battery operation\$29.95

Model PT-15 Tape Recorder

Basically identical to Model PT-12 except deluxe design; different styling; self-contained carrying case.....\$129.50

"Transivoice" Tape Recorder

All-transistorized, battery-operated portable design; weight 4 pounds; 100 hours operation with four 4.5-volt batteries; 3 1/2" reels; made in Italy.....\$129.50

GRAETZ

Model M50K Tape Recorder

Four-track, two-speed (7 1/2 & 3 3/4 ips) record/play stereo design; has mono or



stereo inputs for microphone, radio & phono; external speaker outputs; has provision for foot-control pause accessory; response essentially flat from 40 cps to beyond audibility; wow & flutter less than $\pm .5\%$; includes built-in preamp and power amplifier for both channels; 5 watts total output; single speaker; built-in mixing facility; electrical tape end stop; adapter cord available which permits tracks 1 & 3 or 2 & 4 to be played simultaneously through the built-in speaker; also available is a polytonal sound blender adapter for trick recordings, sound-on-sound, or sound-with-sound; tubes—6FG6, 2-6227, 2-12AX7, 2-6AB4, 2-6DL5.....\$299.95

HARTING

Model HM-4S Tape Recorder

Stereo version; two-track, two-speed (7.5 & 3.75 ips); includes both playback preamps but only one playback power amp and one record preamp; fast forward & rewind 8 ft. per sec.; response @ 7.5 ips flat from 50-16,000 cps, at 3.75 ips 50-10,000 cps; 4 watts power output; wow & flutter .25% @ 7.5 ips; signal-to-noise 55 db; inputs—mic., phono, radio; available in two-tone grey or brown case. Over-all styling like Model HM-8S.....\$264.95

Model HT-4R Record Preamp

Record preamp for second (stereo) channel on Model HM-4S tape recorder; inputs—low-level mic. or phono & tuner or preamp; output—record; erase; monitor\$68.85

Model HT-4A Power Amplifier

Second-channel power amplifier with 8" x 5" oval speaker; 4 watts output.\$58.79

MD403 HN Cardioid-type microphone; 50,000 ohms impedance.....\$37.50

Model HM-8S Tape Recorder

Four-track, two-speed (7.5 & 3.75 ips) stereo recorder including all preamps and power amps for stereo record & playback; one speaker in body of recorder; other in removable lid; 5 watts



total output; end-of-tape stop and counter; basic tape transport similar to Model HM-4S; has inputs for stereo or mono mic.; telephone adapter; still-view adapter; misc. accessories available.\$399.95

HEATH

Tape Recorder

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 (3¾ and 7½ ips); frequency response 30 to 12,000 cps ± 2.5 db at 7½ ips and 40 to 6,000 cps at 3¾ 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.

Model TR-1E (stereo playback of 4-track tapes plus half-track mono record & playback).....\$169.95
Model TR-1C (mono version, 2-track mono record and playback).....\$159.95
Mic. AK-1 separate.....\$9.95

Transport Mechanism



Frequency response 50 to 10,000 cps ± 2 db at 7½ ips, 50 to 5,000 cps ± 2 db at 3¾ 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 15½" w x 13½" h. x 8" d.; includes 1 mic. & 1 TE-1 preamp kit for mono version and two each for stereo version.

Model TR-1A (monaural record playback)\$99.95

Model TR-1AQ (four track monaural and stereo record and playback)\$149.95

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 12½" w x 8" d. \$39.95

Model AD-80 Tape Player

4-track stereo playback only; tape head output for use with any preamp having tape-head input; 3.75 & 7.5 ips; mechanism same as Model TR-1AQ; less base.....Kit \$74.95

Assembled bases will also fit TR-1A & TR-1AQ, walnut or mahogany.....\$6.95
Unfinished\$4.95

KNIGHT

Model KN-4000 4-Track Tape Transport



3.75 and 7.5 ips; three motors; separate erase, record, playback heads; push-button controls; makes 4-track stereo and mono recordings with KN-4001B preamp; digital tape counter; flutter less than .25% @ 7.5 ips; 13½" x 15¼" x 7"; desert beige and sand gold.....\$134.50
Carrying case for KN-4000 and KN-4001B\$24.95

Model KN-4001B Stereo Record/Play Preamp

Permits sound-on-sound recording (with 3-head tape transports); individual mic. and aux. level controls for each channel; provision for mixing mic. and aux. inputs; switches for channel and source-tape comparison; 7.5 and 3.75 ips record/playback equalization, vu meters; 100-kc. bias oscillator; when used with KN-4000 transport, response 25-19,000 cps ± 2 db @ 7.5 ips; hum and noise -52 db at maximum recording level; 4½" (plus 5⁄8" legs) x 15½" x 9"; less case; for two 3-head transports...\$139.95
Metal case.....\$4.95

Model KN-4035 Tape Recorder

Dual-track mono; two speeds (3.75 and 7.5 ips); response 50-10,000 cps @ 7.5 ips; wow and flutter less than .3%; signal-to-noise ratio 40 db; 6-watt amplifier; built-in 5" woofer and 4" tweeter with crossover network; neon recording level indicator; output for external speaker; complete with mic., 7" reel of 1.5 mil acetate tape, 7" take-up reel; 8" x 11½" x 15"; mocha brown carrying case; 19 lbs.....\$79.95

Model KN-4110 Tape Recorder

Dual-track mono record/play; four-track stereo playback through stereo system or second-channel amplifier; response 50-10,000 cps @ 7.5 ips; wow and flutter less than .3%; signal-to-noise ratio 40 db; built-in 6-watt amplifier; 5" woofer and 4" tweeter, plus crossover network; tone control; neon recording level indicator; output jacks for external speaker and second-channel amplifier; complete with mic., 7" reel of tape, 7" take-up reel; mocha brown carrying case; 8" x 11½" x 15"; 19 lbs.....\$99.95

Model KN-4200 4-Track Tape Transport

Four-track stereo/mono recording; matches KN-4001B preamp; record/play and erase heads; single lever for rewind, stop, forward, and fast forward; response 30-14,000 cps @ 7.5 ips; flutter and wow .2%; 9½" x 15½" x 5¾".....\$79.95
Optional third head.....\$16.95

Model KN-4310 Stereo Tape Recorder

Two- and four-track stereo record/playback; two-track mono record/playback; 1½, 3¾ and 7½ ips; two 8-watt ampli-

fier sections; two built-in 6" speakers; automatic shut-off; two vu meters; digital tape counter; input monitoring; individual volume and tone controls for each channel; two pair of stereo inputs for recording from mic., phono, radio, etc.; response 35-16,000 cps ± 2 db @ 7½ ips; black and aluminum case; complete with two ceramic mics., 7" reel of tape, 7" take-up reel.....\$239.95

KORTING

Model 158S Stereo Tape Recorder

West German import featuring self-contained stereo speaker system; permits adjustable track and multiple synchronous dubbing recordings; four-track, two-speed (3.75 & 7.5 ips); response 40-15,000 cps ± 3 db @ 3.75 ips and 30-20,000 cps ± 3 db @ 7.5 ips; wow & flutter .2% @ 7.5 ips; sensitivity 200 mv. for "radio," 100 mv. for "phono," and .07 mv. @ 200 ohms for "mic."; output 1.4 & 1.8 watts per channel; transistor preamp; including case and two microphones.....\$369.50

LAFAYETTE

Model RK-125 Transistorized Recorder

Economy recorder with telephone pick-up; earphone; patchcord; microphone; 3" reel of tape; empty reel; batteries; 3.75 ips speed; half-track tape head;



single function control for rewind, stop, forward; second control volume-play/record; 3 transistors; 2" x 3" PM speaker and amplifier; two-tone plastic and metal case; 6" x 8¼" x 2¾".\$29.95

Model RK-400 Dual-Speed Recorder

Dual-speed portable; single function control plus on/off-volume control; 7.5 and 3.75 ips; response at 7.5 ips 60-8500 cps; built-in 5" PM speaker; record



level indicator light; output jack; separate mike and phono inputs; crystal mike.\$54.50

Model RK-120 Transistorized Recorder

Miniature, all-transistor, battery-oper-

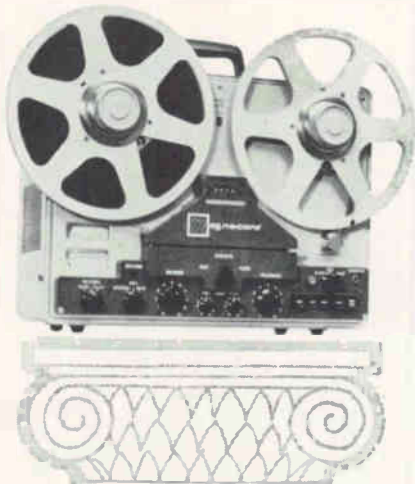
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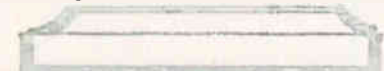
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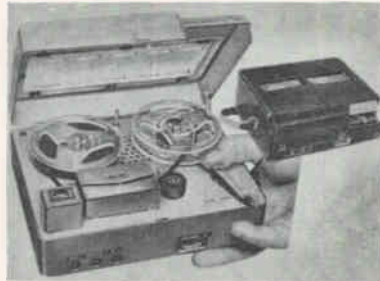
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4

TAPE MACHINES

ated; built-in speaker, amplifier; single lever controls rewind, stop, play, record; safety record button; recording



level and battery condition indication; 17/8 and 3.75 ips operation; 2 heads; powered by 6 penlite cells; dynamic mike; crystal earphone; 3" tape reel; empty reel; leather case.....\$79.95

MAGNECORD

Model 101-1 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. Model 101-1 (includes preamp in case with 1/4-track head).....\$489.95 Model S101-1 (with 1/4-track play head and synchronous motor, in carrying case\$544.95 Model 110 (speaker-amp combination in case) each.....\$129.95

Series N35 Portable Recorder

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).....\$319.95

NS35-B (hysteresis synchronous motor)\$369.95

N35-C (4-pole motor, full-track).....\$334.95

NS35-C (hysteresis synchronous motor, full-track)\$384.95

Series S36-B Portable Recorder

Portable; full track; standard 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".

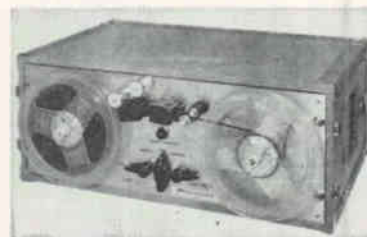
.....\$455.00

S36-BX, same, less case.....\$405.00

91X1748 case\$30.00

Series PT6-6A Tape Transport

Portable; full track or half track; tape speeds: 3 3/4, 7 1/2, 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.....\$425.00 PT6-6AX, less case.....\$390.00

Series PT6-6J Record/Playback Amplifier

Record/playback amplifier for use with PT6-6A tape transport; input imped-



STEREO/HI-FI DIRECTORY

ance: 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 7½ and 15 ips.

PT6-6J record/playback amplifier with case \$310.00
PT6-6JX less case \$265.00

Series P75 "The Editor"

Portable, rack mounted, or console unit; full track or half track; three heads: erase, record, and playback; tape speeds: 7½ 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 7½ ips; flutter and wow: less than 0.2% at 15 ips; less than 0.25% at 7½ 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: 10½"; 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"x10½"; amplifier panel size: 5¼"x19"; tape transport weight: 51 lbs. (in portable case); amplifier weight: 18 lbs. (in case).

Model P75-AC Recorder/amplifier combination in case \$930.00
Model P75-ACX Recorder/amplifier combination less case \$850.00
Model P75-A Recorder, full-track with case \$625.00
Model P75-A-1 Recorder, half-track with case \$625.00
Model P75-AX Recorder, full-track less case \$585.00
Model P75-AX-1 Recorder, half-track less case \$585.00
91C1919 Case for recorder \$40.00
Model P75-C Amplifier with case \$305.00
Model P75-CX Amplifier less case \$265.00
81D50 Case for amplifier \$40.00
81E49 Console cabinet \$200.00

Series M90

Portable, rack-mounted, or console unit; full track or half track; three heads: erase, record, and playback; tape speeds: 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

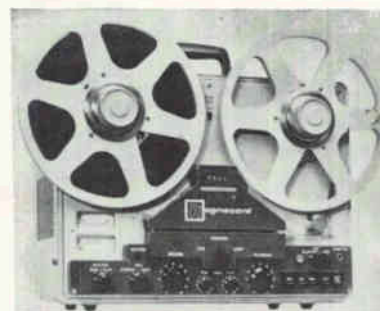


track heads); timing accuracy ±3 seconds in 30 minutes; 10½" reels; uses M90C record/playback amplifier with 4" VU meter and separate record and playback amplifiers for simultaneous monitoring from tape; push button controls; slot loading; automatic tape lifter; record interlock; high speed cueing control; 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".

Model M90-A Recorder, full-track, 7.5 and 15 ips in case \$1060.00
Model M90-A-1 Recorder, half-track, 7.5 and 15 ips in case \$1060.00
Model M90-A-2 Recorder, full-track, 3.75 and 7.5 ips in case \$1060.00
Model M90-A-3 Recorder, half-track, 3.75 and 7.5 ips in case \$1060.00
All above, without cases \$990.00

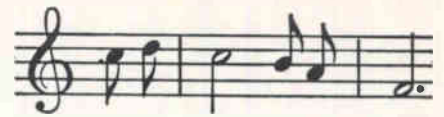
Models 728 & 748 Professional

Can record sound-on-sound, stereophonic, or monophonic; up to 10½" reels; 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

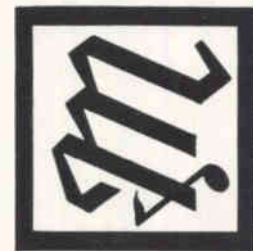


stereo available separately; overall depth 12"; size in portable case 17⅞" x 14⅛" x 13⅞".

Model 728-4 7.5 and 15 ips with case \$909.00
Model 748-4 3.75 and 7.5 ips with case \$924.00
Model 728-4X 7.5 and 15 ips without case \$859.00
Model 748-4X 3.75 and 7.5 ips without case \$874.00
Model 728-44 7.5 and 15 ips and fourth head (¼-track) with case \$950.00
Model 748-44 3.75 and 7.5 ips and fourth head (¼-track) with case \$965.00
Model 728-44X 7.5 and 15 ips and fourth head (¼-track) without case \$900.00
Model 948-44X 3.75 and 7.5 ips and fourth head (¼-track) without case \$915.00



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4

TAPE MACHINES

NEWCOMB

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; $8\frac{1}{2}'' \times 16\frac{3}{4}'' \times 16\frac{3}{8}''$.

.....\$199.50

Model J-200 Tape Speaker System

Portable; 2-way system for use with Model SA-80 recorder; $14\frac{1}{2}'' \times 20'' \times 10\frac{1}{4}''$; 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; $16\frac{7}{8}'' \times 23\frac{1}{2}'' \times 10\frac{1}{4}''$.

.....\$129.50

Model SA-80-J2 Tape System

Consists of Model SA-80, and two Model J-200 speakers; 71 pounds.

.....\$368.40

Model SA-80-C2 Tape System

Consists of Model SA-80 and two Model C-100 speakers; 71 pounds.

.....\$368.40

Model SA-80-L2 Tape System

Consists of Model SA-80 and two Model L-300 speakers; 90 pounds.

.....\$448.40

Model SA-80-K2 Tape System

Consists of Model SA-80 and two Model K-400 speakers; 102 pounds.

.....\$468.40

Model N-36-C Microphone

Dynamic omnidirectional; supplied with shielded cord and plug to fit Model SA-80

.....\$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 $\frac{1}{2}$ -track record/play, Model SM-310-4 is $\frac{1}{4}$ -track record/play; speeds $3\frac{3}{4}$ and $7\frac{1}{2}$ 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 $7\frac{1}{2}$ ips., less than 0.25% at $3\frac{3}{4}$ ips.; frequency response: ± 2 db. 30-15,000 cps. at $7\frac{1}{2}$ ips., ± 3 db. 40-10,000 cps.

at $3\frac{3}{4}$ ips.; output 1.3 volts each channel on cathode follower; 2—high level inputs, 2—mic. inputs; $12\frac{3}{4}'' \times 16\frac{3}{4}'' \times 9\frac{1}{2}''$; 34 lbs; includes case.....\$499.50

NORELCO

"Continental 100" Portable Recorder



Fully transistorized; 8 lbs; uses six "D" type flashlight batteries; $1\frac{7}{8}$ ips; 2-track head; response 120-6000 cps ± 3 db; comes complete with power amp, loudspeaker, dynamic mike; 4" reel with lid off, 3" reel with lid on; wow & flutter less than .5%; signal-to-noise ratio better than 40 db.....\$129.50

"Continental 200" Tape Recorder



Four-track record/playback head; 7.5 ips; response 50-14,000 cps; wow & flutter less than $\pm .3\%$; self-contained recording/playback preamp, power amp, speaker; head output for stereo playback; monophonic record on individual tracks; sound-on-sound, for recording over previously taped material (background effects); 2 inputs, mike & radio/phonos; tubes EF86, ECC83, ECL82, EM84, EZ80; may be used as self-contained phono/p.a. amplifier & speaker system\$179.50

"Continental 300" Tape Recorder

Four track; mono record and playback; stereo playback (head output only); $7\frac{1}{2}$, $3\frac{3}{4}$, and $1\frac{7}{8}$ ips; frequency response, 60-16,000 cps ± 3 db at $7\frac{1}{2}$ ips, 60-13,000 cps ± 3 db at $3\frac{3}{4}$ ips, 60-6,500 cps ± 3 db at $1\frac{7}{8}$ ips; wow and flutter, better than 0.3% peak to peak; automatic stop; interlocking pause button; sound-on-sound recording; full mixing facilities; monitoring with headphones; modulation indicator type EM-81 magic eye; record and playback pre-amplifier, power amplifier and Norelco loudspeaker; inputs, microphone and radio/phonos; outputs, external loudspeaker, external amplifier, headphone, stereo outputs; supplied with high impedance microphone\$269.50

"Continental 400" Tape Recorder

Four track stereo record and playback; $7\frac{1}{2}$, $3\frac{3}{4}$, and $1\frac{7}{8}$ ips; response, 50-18,000 cps at $7\frac{1}{2}$ ips, 50 to 14,000 cps

at $3\frac{3}{4}$ ips, 60 to 7,000 cps at $1\frac{7}{8}$ ips; wow and flutter, less than .15% at $7\frac{1}{2}$ ips, less than .25% at $3\frac{3}{4}$ ips, less than .3% at $1\frac{7}{8}$ ips; signal to noise ratio, 48 db or better; sound on sound recording facilities built-in; mixing facilities, electronic mixing of radio/phonos 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 (1); $18\frac{1}{2}'' \times 5\frac{1}{2}'' \times 11\frac{1}{2}''$; 43 lbs.....\$399.50

REALISTIC

4-Channel Tape Recorder

Push-button operation; two speeds (7.5 & 3.75 ips); record & erase heads; quarter-track stereo; instant tape start, stop, pause; 3-position selector switch; fast forward/rewind; individual gain controls; output 6 watts undistorted; $11\frac{1}{4}'' \times 14\frac{1}{2}'' \times 7\frac{7}{8}''$\$159.95

"Dauphine" Tape Player

One-knob control; two speeds (7.5 & 3.75 ips); playback response with proper preamp equalization, flat from 40-15,000 cps ± 2 db @ 7.5 ips, 40-7500 cps ± 2 db @ 3.75 ips; $14\frac{3}{8}'' \times 10\frac{1}{4}'' \times 3\frac{1}{4}''$ below and $1\frac{3}{4}''$ above mounting board.....\$69.95

REVERE

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 $3\frac{3}{4}$ and $7\frac{1}{2}$ 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 $7\frac{1}{2}$ ips, ± 3 db 40-8000 cps. at $3\frac{3}{4}$ ips; wow and flutter less than 0.3%; input sensitivity mike input -2 mv., phono-radio -1 volt; $7\frac{1}{2}'' \times 14'' \times 14\frac{1}{2}''$; 25 pounds.

.....\$239.50

Model T-2000 (Monaural 2-track only)

.....\$169.50

Model T-11

Monaural and stereophonic; for vertical or horizontal mounting; rack or custom; full track; $7\frac{1}{2}$ 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 $2\frac{1}{2}$ 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; $10\frac{1}{2}$ " 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 $19\frac{1}{2}$ "x $14\frac{1}{2}$ " 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

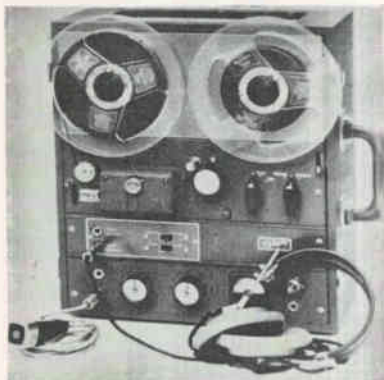
Dual-track dual-speed ($3\frac{3}{4}$ and $7\frac{1}{2}$ ips) portable recorder; frequency response 40 to 15,000 cps ± 3 db at $7\frac{1}{2}$ ips and 40 to 8,000 cps ± 3 db at $3\frac{3}{4}$ ips; wow and flutter less than 0.3%; signal-to-noise ratio 48 db; neon record indicators; index counter; jacks for external speakers; complete with microphone, tape, reels; $13\frac{1}{2}$ "x $14\frac{1}{2}$ "x $8\frac{1}{2}$ "; 32 lbs.....\$207.50

Model T-204 (similar to Model T-202 but with stereo playback; built-in second channel preamplifier).....\$237.50

ROBERTS

Model 90-D "Duet" Tape Recorder

Two-speed (7.5 & 3.75 ips) dual-track; permits sound-on-sound recording any number of times; response 40-15,000 cps ± 2 db at 7.5 ips; wow and flutter



.18%; signal-to-noise ratio 50 db below recorded 0 level; 7" reels max.; high & low-level inputs; includes 6-watt power amp, speaker, headphones, and mike; $15\frac{3}{4}$ " x $14\frac{1}{2}$ " x $9\frac{1}{4}$ "; 28 lbs.....\$349.50
Model A-901 matching recorder-amplifier for stereo available.

Model 192 Monophonic Tape Recorder

Same specifications as Model 90-D except has professional full track or half-track head; hi/lo impedance switch for mike input; 8-ohm speaker and balanced 600-ohm output jacks.....\$349.50

Model 440 Stereo Tape Recorder

Four-track, two-speed (7.5 & 3.75 ips) stereo record and playback; complete

with record, playback, monitor preamps; power amplifiers and speakers for both channels; response 40-15,000 cps ± 2 db at 7.5 ips; signal-to-noise 55 db below recorded 0 level; wow & flutter .12% r.m.s.; 2 mic. high-impedance inputs; 2 line inputs; features "Magic Memory" continuous repeat of all or any portion of tape; automatic shut-off.....\$695.00

Model 144 Stereo Tape Recorder

Same as Model 440 but does not include power amplifiers and self-contained speakers.....\$649.00

Model 990 Stereo Tape Recorder

Four-track, two-speed stereo record and playback; complete with power amplifiers; output 6 watts per channel; response 40-15,000 cps at 7.5 ips ± 2 db; 40-12,000 cps at 3.75 ips ± 3 db; signal-to-noise ratio 50 db below recorded 0 level; wow & flutter .12% r.m.s.; reel size 7" max.; two high-impedance inputs; two high-level line inputs; bias freq. 60 kc.; $20\frac{1}{2}$ " x $14\frac{1}{2}$ " x 9"; $46\frac{1}{2}$ lbs.....\$399.50

Accessories

15 ips conversion kit.....\$10.00
Sound-on-sound modification kit.....\$9.95
Crystal microphone.....\$17.90
Carrying case for Models 90-D & 192.....\$11.50
Matching portable speakers for Models 990 & 440.....\$119.50

Model 1040 Stereo Tape Recorder

Four-track stereo and mono record/play; two-track stereo and mono play; sound-with-sound using either track as basic track; self-contained stereo amplifiers with speakers; microphone inputs; phono/radio inputs; automatic shut-off; edit lever; vu meter; index counter; 5 watts per channel output; response 40-15,000 cps ± 2 db @ 7.5 ips, 35-11,000 cps ± 3 db @ 3.75 ips; signal-to-noise ratio -42 db below recording zero level; less than 2% distortion at listening level; bias oscillator 95 kc.; horizontal or vertical operation; wow and flutter less than .18%; two high-impedance mic. inputs and two high-impedance outputs independent of volume control for connection to external amplifiers; two 8-ohm outputs for external speakers; two speeds (3.75 and 7.5 ips).....\$299.50
S-903 Stereo speaker set (two).....\$119.50
M-500 High-impedance microphone (50-15,000 cps).....\$17.90
53-06 Desk stand for microphone \$2.45
54-01 Stereo master distribution panel (plugs into tape machine to provide 8 stereo outputs-services of 8 sets of stereo speakers, or 8 sets of stereo headphones).....\$29.45
54-04 Dynamic stereo headset (with stereo master control, 25-25,000 cps).....\$24.95
52-94 15 ips conversion kit.....\$10.00

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*See HIGH FIDELITY Magazine,
May 1959, page 39

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4

TAPE MACHINES

Completely battery-operated portable tape recorder; frequency response to 10,000 cps at 7½ 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" x 12" x 5".....\$494.00

SUPERSCOPE

Model CS-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 7½ ips, 50-10,000 cps ± 2 db at 3¾ ips; s/n ratio -50 db; wow and flutter less than .15% at 7½ 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; 16½" x 12¾" x 7⅞"; 42 lbs.; includes carrying case, built-in speakers, 2 F-7 microphones.....\$399.50

Model DK-300 Tape Recorder

Same as Model CS-300 without carrying case, speakers, and microphones.....\$349.50

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

Model 262-D

Transport mechanism of Model 262-SL available without electronics, but with ¼ track stereo erase head and ¼ track stereo record/play head.....\$89.50

Model 101

2-speed (3¾, 7½ ips.) ac operated, transistorized, dual-track mono tape re-

recorder; includes carrying case, speaker, F-7 microphone; 13" x 10" x 6½"; 19 lbs.....\$99.50

Model SRA-2

Recording amplifier for use with Model 262-D; complete facilities for stereo or mono recording; amp includes two vu meters.....\$89.50

TANDBERG

Model 2 Mono Tape Recorder



Two speed (1⅞ ips and 3¾ ips) dual track; wow and flutter below .2% at 3¾ ips and below .25% at 1⅞ ips; frequency response 60 to 7,500 cps ± 3 db at 3¾ ips and 60 to 4,000 cps ± 3 db at 1⅞ ips; signal-to-noise -57 db at 3¾ ips and -54 db at 1⅞ ips; hum level -52 db at both speeds; record-playback head has .00025" gap; erase and bias frequency 33½ kc; record amplifier distortion below 1%; playback amplifier distortion below 5% at full output of 4 watts; included is crystal mike with response 30-12,000 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" x 11" x 6".....\$249.50

Model 2F (with remote foot control).....\$299.50

Model 3 Mono Tape Recorder

Similar to Model 2 except three-speed mono record & playback; includes 7.5 ips; erase & bias frequency 67 kc.; wow & flutter .1% at 7.5 ips; response (all ± 2 db) 40-16,000 cps @ 7.5 ips, 50-9,000 cps @ 3.75 ips, 70-4,500 cps @ 1⅞ ips.....\$299.50

Model 3F (with remote foot control).....\$349.50

Model STK-4529 (consists of 4-track head and playback preamplifier for converting Model 3 to 4-track stereo playback).....\$62.50

Model 241 Stereo Record Preamp (converts Tandberg stereo units to stereo record).....\$69.50

Model 4 Tape Recorder

Similar to Model 2 except three-speed operation; includes 7.5 ips; allows 4-track mono and stereo playback; includes second-channel preamp and first-channel preamp plus 4-watt power amp; erase & bias frequency 67 kc.; wow & flutter .1% @ 7.5 ips; response 30-16,000 cps ± 2 db @ 7.5 ips.....\$349.50

Model 4F (with remote foot control).....\$399.50

Model 5 Tape Recorder

Similar to Model 2 except three-speed, four-track stereo or mono for record & playback; bias frequency 67 kc.; response (all ± 2 db) 30-16,000 cps @ 7.5 ips, 40-10,000 cps @ 3.75 ips, 70-5000 cps @ 1⅞ ips; flutter & wow .1% @ 7.5 ips; playback outputs .7 v. from 500-ohm cathode-followers and 3.7 watts amplifier (without case).....\$419.50

Luggage carrying case.....\$25.00

Model 5-2

Consists of Model 5 tape recorder with two recording amps, two stereo playback amps, two mikes, plus luggage carrying case.....\$514.60

Model 5-3

Same as Model 5-2 but without luggage carrying case.....\$494.50

Model 5-2-266

Same as Model 5-2 but with two Model 266 bookshelf speaker systems.....\$638.50

Model 5-2-CX266

Same as Model 5-2 but with two Model CX266 bookshelf speaker systems.....\$658.50

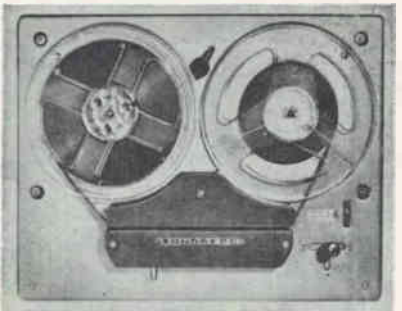
Model 6 Stereo Recorder/Reproducer

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 7½ 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" x 11½" x 6⅜"; 27 lbs.

Model 6.....\$498.00

Model 6F (includes remote pedal for start-stop).....\$549.50

Model 65 Stereo Playback Deck



Three-speed (7.5, 3.75, 1⅞ ips). 4-track stereo playback tape deck; response 30-20,000 cps @ 7.5 ips, 30-15,000 cps @ 3.75 ips, 50-7,000 cps @ 1⅞ ips; hysteresis synchronous motor; lever knob for playback, fast forward, fast reverse; 4-digit revolving counter; complete mechanical drive; 16" x 12" = 6" with mounting brackets.....\$199.50

TECH-MASTER

Model TC-5 Tape Recorder

Transistor design; battery-operated; built-in speaker; 3.75 ips; dual-track record and playback; fast rewind; built-in remote control operation for recording and playback; 5 transistors, push-pull output; supplied with complete set of batteries, roll of tape, take-up reel, and earphone adapter; all-metal case; 7-4" x 4½" x 2⅜"; weight 2½ lbs.....\$99.50

TELECTRO

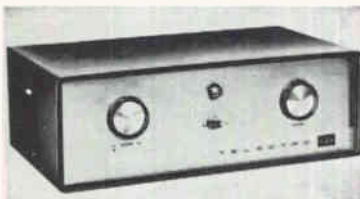
Model 900 Tape Deck Series



All models have 3 speeds— $1\frac{7}{8}$, $3\frac{3}{4}$, $7\frac{1}{2}$ 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 $12" \times 13"$, dress plate $13" \times 14\frac{3}{4}"$, height above motor board $1\frac{1}{4}"$, depth below $6\frac{1}{2}"$; weight 17 lbs. Model 900-1 has $\frac{1}{2}$ -track erase head, $\frac{1}{4}$ -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 $\frac{1}{4}$ -track stereo head; for monaural record/play or stereo play with monitor.....\$115.00

Model 900-3 has $\frac{1}{4}$ -track stereo erase head and $\frac{1}{4}$ track record/play; for monaural and 4-track stereo play, monaural or stereo record.....\$109.00
Model 900-4 has $\frac{1}{4}$ -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 $\frac{1}{4}$ -track head for monitoring.....\$139.00

Model TP-22 Stereo Playback Preamp



Stereo play only; stereo head inputs, 2 audio outputs, dual volume controls, equalization switch; tubes: 2—12AX7, 2—12AU7; 6X4 rectifier, neon pilot light; $4" \times 12\frac{1}{4}" \times 8\frac{3}{4}"$; 9 lbs.....\$57.95

Model TP-12 Mono Playback Preamp

Monophonic version includes equalization switch for 7.5 ips & $3.75-1\frac{7}{8}$ ips; hum balance adjustment; style similar to TP-22\$29.00

Model TRP-11 Record/Playback Preamp

Monophonic record/playback preamp combining features of Models R-12 & TP-12; style similar to Model TP-22\$69.00

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; $4" \times 12\frac{1}{4}" \times 8\frac{3}{4}"$; 9 lbs.\$124.95

Model C-0 Wood base for Telectro deck only; Mahogany or walnut; ship-

ping weight 10 lbs.....\$19.50
Model C-C Console base for tape deck and one preamp.....\$40.00
Model C-P Portable case for tape deck and one preamp.....\$38.50

Model R-12 Record Preamp

Monophonic record preamp with level meter, equalization switch for 7.5 ips & $3.75-1\frac{7}{8}$ ips; high-low input level switch; bias adjustment & erase adjustment; style similar to Model TP-22\$49.50

Model R-22 Record Preamp

Stereo version; has all record features of Model TRP-21.....\$79.50

TRUVOX

Mark 6 Tape Deck

Fully automatic control; $\frac{1}{2}$ -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; $14\frac{1}{4}" \times 13" \times 4\frac{5}{8}"$; $13\frac{3}{4}$ lbs.\$199.50

Model MD5 ($\frac{1}{2}$ -track record/play, $\frac{1}{2}$ -track erase).

Model TD5 (stacked $\frac{1}{2}$ -track stereo record/play, $\frac{1}{2}$ -track erase).

Model TD14 (stacked $\frac{1}{2}$ -track stereo record/play, full-track erase).

Model R6 Tape Recorder

Accepts 7" reels; $\frac{1}{2}$ -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 $8" \times 6"$ speaker; frequency response as straight amplifier 30–20,000 cps; $15" \times 15\frac{3}{8}" \times 9\frac{3}{8}"$; complete with tape and mike\$395.00

Model R7 Tape Recorder

Twin $\frac{1}{2}$ -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; $16\frac{1}{2}" \times 16" \times 10\frac{1}{4}"$ \$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 EF86, ECC83, 2—EL84, EZ81, EM81; $13" \times 2\frac{3}{8}" \times 5\frac{3}{16}"$; separate power supply; 86 lbs. with power supply.....\$129.50

UHER

Stereo Record III

Records quarter-track mono and stereo; separate recording indicators; digital counter; automatic tape stop; monitors recordings on all tracks; can be used as p.a. system; special features include electronic remote control; synchronization with any automatic slide or film-strip



projector; records when there is sound, stops when sound stops; pause button for cueing and editing; records one track, playback on other simultaneously; sound-on-sound; fade-in and fade-out controls; completely self-contained stereo record/stereo playback; dual amplifiers, preamps, speakers; plays back half- and quarter-track stereo or mono; $1\frac{7}{8}$, $3\frac{3}{4}$, $7\frac{1}{2}$ ips; response 40–20,000 cps at $7\frac{1}{2}$ ips, 40–16,000 cps at $3\frac{3}{4}$ ips, 40–9000 cps at $1\frac{7}{8}$ ips; signal-to-noise level greater than –55 db; crosstalk –50 db; power 2.5 watts per channel; inputs—mic. (2 mv. at 500,000 ohms), radio (2 mv. at 20,000 ohms), phono (100 mv. at 1 megohm); outputs—mono or stereo pre-amp (1 volt at 15,000 ohms per channel); $16\frac{1}{4}" \times 15\frac{1}{4}" \times 7\frac{3}{4}"$; 35 lbs.; complete with two dynamic high-impedance microphones and carrying case...\$399.50

"Universal S" Tape Recorder

Standard half-track mono recording; 3 speeds $1\frac{5}{16}$, $1\frac{7}{8}$, $3\frac{3}{4}$ ips; basically designed for voice recording but has 40–16,000 cps response at $3\frac{3}{4}$ ips; digital counter; automatic tape stop; low-impedance microphone input; high-impedance inputs for mic., telephone pickup, radio/phono; outputs for earphones; external amplifier and speaker; connections for voice-operated control and slide-projector synchronizer; response 100–4000 at $1\frac{5}{16}$ ips; 60–8000 cps at $1\frac{7}{8}$ ips; signal-to-noise ratio 45 db; wow & flutter .3% @ $3\frac{3}{4}$ ips; output (speaker) 3 watts; sensitivity .1 mv./200 ohms for mic.; 1 mv./22,000 ohms for radio, 100 mv./2 megohms for phono; features include relay/solenoid control system permitting remote control of record, play, and tape motion; 17 lbs. less carrying case; includes remote control, dynamic microphone, dust cover\$299.95

VIKING

Model 85 Series Tape Deck



Basic design features head bracket that provides for interchanging or adding erase, recording, and playback heads as required; from just a playback head to as many as four heads can provide any recording and playback function; all decks are equipped with tape run-out switch, tape lifters, erase protect switch, and shift-type head bracket permitting

4

TAPE MACHINES

use of quarter-track head with either four-track or two-track tapes; playback response 30-20,000 cps at 7.5 ips, 30-14,000 cps at 3.75 ips; record response 30-14,000 cps \pm 2 db; flutter and wow less than .2%; signal-to-noise ratio 55 db or better; harmonic distortion less than 2%; may be used with Viking RP62-C, RP62-C3, and RP83 record/playback amplifiers, singly for mono, two for stereo.

Model 85R

Monaural record/playback; has half-track erase and record head.....\$130.00

Model 85RQ

Monaural erase/record, stereo playback; same as 85R except in-line quarter-track heads are added for playback of four-channel tapes.....\$158.50

Model 85Q

Playback only of quarter- and/or half-track tapes.....\$132.00

Model 85RMQ

Mono and stereo erase/record/playback; equipped with quarter-track recording and playback heads; records and plays mono and/or stereo quarter-track tapes.....\$179.50

Model 85ES

Monaural-stereo erase/record/playback; has in-line record/playback heads and independent half-track erase heads.....\$152.00

Model 85ESQ

Monaural-stereo erase/record/playback; Same as 85ES except in-line quarter-track heads are added for playback of four-channel tapes.....\$179.50

Model 85ES "Super-Pro"

Consists of Model 85ES tape deck and two RP62-C recording/playback amplifiers.....\$344.50

Model 85ESQ "Super-Pro"

Consists of Model 85ESQ tape deck and two RP62-C3 recording/playback amplifiers.....\$374.50

Model 85RMQ "Super-Pro"

Consists of Model 85RMQ tape deck and two RP62-C3 recording/playback amplifiers.....\$374.50

Model PB70 Playback Preamplifier

NAB-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

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 combination 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.

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

Model 86 "Stereo-Compact"

Features dual speed (3.75 and 7.5 ips); response 20-18,000 cps \pm 3 db; dual-channel preamplifiers with independent vu meters for record and playback; sharp cut-off filter to prevent interaction of recording bias frequency with the 38 kc. FM multiplex carrier frequency; permits selection of sound-on-sound or listen-record function from front panel; has digital tape counter and head-shift control for playback of half- or quarter-track tape; front panel jacks for microphones or low-level source; high-level recording input on back of unit; flutter and wow .2% r.m.s.

Model 86RMQ 1/4-track erase, 1/4-track record, 1/4-track playback (with shift); records and plays quarter-track and may be used for playback of half-track tapes.....\$297.50

Model 86ESQ 1/2-track erase, 1/2-track record; 1/2-track playback (with shift); records half-track and plays half- or quarter-track tapes.....\$297.50

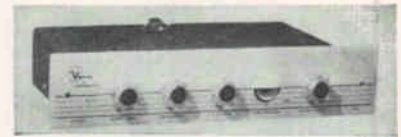
Model 76 Tape Recorder



Records and plays only quarter-track tapes, stereo or mono; 3.75 and 7.5 ips; response 25-16,000 cps \pm 3 db at 7.5 ips and 25-6000 cps \pm 3 db at 3.75 ips; signal-to-noise ratio 55 db; sensitivity mic. or tape input 1 mv. at 1 kc. for zero level recording and 100 mv. at 1 kc. for high-level input; 80 kc. bias oscillator; playback head output, 2 mv. at 1 kc. unequalized.....\$199.50

Model RP62-C Record/Playback Amp

Features fixed recording equalization; variable level control; individual playback and equalization control; hum minimizing adjustment; adjustments for precise setting of both record and erase head currents; signal-to-noise ratio 55-60 db below output from saturation recording; response 30-12,000 cps \pm 2 db recording and 30-14,000 cps \pm 2



db playback; distortion record and playback less than 2%; NAB equalization record and playback; playback channel variable 5 db above or below NAB curve at 10 kc.; recording channel gain 62 db; playback channel gain 55 db; recording inputs—high-impedance microphone (62 db over-all gain) and high-impedance radio or phono input, (32 db gain); playback output +.5 to +5 volts, high-impedance; 13" w. x 2 3/4" h. x 7" d. behind panel.....\$77.50

Model RP83 Record/Playback Preamp



Combination recording amplifier and playback preamp; response 20-18,000 cps \pm 3 db; features vu meter, calibrated bias-current adjustment; independent controls for high- and low-level inputs; recording equalization fixed at NAB standard; slide switch provided for specific equalization of both record and playback at either 3.75 or 7.5 ips; function selector has three positions—off, record, playback; red neon indicator light is energized when amplifier is in "record" position; separate jacks on front for mic. and high-impedance headphones; signal-to-noise ratio 55-60 db below output from saturation recording (d.c. used on heater of preamp stage to provide maximum signal-to-noise ratio); distortion less than 2%; tubes—2-12AX7, 12AU7, 2 selenium rectifiers, 2 silicon rectifiers; 13" w. x 2 3/4" h. x 6" d. behind panel.....\$87.50

V-M CORP.

Model 710A Tape Recorder

Tape recorder is two-speed, 3 3/4 ips and 7 1/2 ips; -45 db signal-to-noise; .4% wow; five-watt amplifier; 6"x9" 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.....\$189.95

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"x9" woofer and 3.5" tweeter; push button controls; "Normal" and "Distort" lights for indication of proper recording level; tape index counter; automatic shutoff at end of reel; dual speed—3 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 7½ or 3¾ 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 ±5 db 40-15,000 cps; record bias and erase 75 kc; tubes are 4-7025, 6L6, 5Y3, 2-12AU7, 6AF6; 9⅞" x 16⅝" x 14¾". \$259.95

WEBCOR

"Microcorder" Transistorized Recorder
All-transistor, battery-operated design; two-speed record and playback (1⅞ & 3¾ ips); uses 3" reels; plays in any position with lid open or closed; one hour playing time on 3" reel, 1 mil tape at 1⅞ ips; rewind, stop, play, and record push-buttons; microphone input, external amp, remote, external power jacks; safety interlock button; tape indicator scale; record level meter & battery life indicator; printed circuit amplifier with 6 transistors; one 9-volt and six 1.5 volt batteries supply power; dual-track recording head; 2½"x3¾" PM dynamic 8-ohm speaker; normal voice frequency at 1⅞ ips, 250-7000 cps at 3¾ ips; power output 200 mw; maximum wow & flutter .6% at 3¾ ips, .8% at 1⅞ ips; minimum signal-to-noise ratio 35 db; 8" w 8"d x 2⅝" h; carrying weight 4¼ lbs; included in standard model—dynamic wide-range mic. with built-in stand, 3" reel of tape, 3" empty reel, adjustable leather carrying strap, complete set of batteries.....\$175.00

Model EP-2203 "Viscount"

Three-speed (1⅞, 3¾ and 7½ ips) monophonic recorder; normal voice frequency at 1⅞ ips, 70-7000 cps at 3¾ ips, 50-12,000 cps at 7½ ips; 4-watt amplifier; one 4" speaker; numerical-type tape counter; 5 tubes including rectifier; slide-synchronizer jack; dual-track recording; record safety lock; monitor-tone control; volume control with record-level scale; hand-held mic. with attached cord has built-on stand; carrying weight 25 lbs.....\$139.95
Model EP-2206 with remote control and stop-start remote mic.\$159.95

Model EP-2201 "Royalite III"



Four-track monophonic tape recorder equipped for stereo playback; features "Synchro-Track" which enables one to listen to one track while recording a second track at same time; plays 3", 5" and 7" tape reels at 1⅞, 3¾ and 7½ ips; two- and four-track head adjustment for stereo tape playback; slide synchronizer jack; push-button operation; two speakers; 8-watt amplifier; edit key; monitor, treble, bass, and volume controls; selector control; numerical-type tape counter; cathode-ray recording level indicator; external amplifier and speaker jacks; microphone; automatic shut-off; carrying weight 20 lbs.; external amplifier and speaker required for stereo playback\$199.95

1962 EDITION

IF YOU BELIEVE THAT ALL RECORDING TAPES ARE THE SAME .. READ THESE FACTS ABOUT SOUNDCRAFT TAPES!



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The course of the motion picture industry was revolutionized by the application of magnetic stripes on film... a Soundcraft achievement which has made possible the stereophonic sound tracks of the great MGM (Camera 65), Cinemascope and Todd-A O productions. For this contribution, Soundcraft received the coveted Academy Award "Oscar"—first and only tape manufacturer ever so honored. Soundcraft achievement never stops.

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REEVES SOUNDCRAFT CORP Main Office: Great Pasture Road, Danbury, Connecticut

EICO new Transistor Stereo/Mono 4-track Tape Deck

Model RP 100W
Completely assembled, wired and tested with 3 heads, and stereo record and stereo playback preamplifiers.

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

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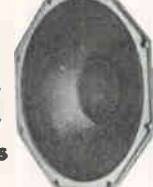


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Selecting A Tape Machine

By HERMAN BURSTEIN*



The important features to look for, along with some helpful suggestions on choosing a tape recorder or a tape player.

THE prospective purchaser of a tape machine is confronted with numerous, and perhaps perplexing, choices. To begin with, home tape machines cover a price range from under \$100 to over \$600. What amount *should* one spend to get what is really wanted, without overspending on what isn't needed? That is just one question. The purchaser must come to grips with a number of other choices, such as: stereo or mono? If stereo, shall it be half-track or quarter-track? Should it have a single record-playback head or separate record and playback heads? Should it be a transport with or without electronics? If *with* electronics—then with record and playback electronics, with record electronics only, or with playback electronics only? Buy a machine with or without a self-contained power amplifier and speaker? How many speeds? Should it have a magic-eye indicator or vu-type meter?

These alternatives suggest that home tape machines come in many variations, but the purchaser need not be confused by this profusion of choices. The various kinds of tape machines do fall into certain basic categories and it is the purpose of this article to describe these basic types and discuss their relative merits.

As a further guide to the would-be purchaser, this article deals with the performance characteristics and tape machine features that must be considered before making a purchase. The relative importance of each characteristic or feature depends upon the use to be made of the machine and the user's requirements as to quality of performance—high fidelity or some other grade of "fidelity." For these reasons, this article cannot presume to say which is more

important and which is less important. This the purchaser must decide for himself. What this article can do, however, is provide the purchaser with a list of things to keep in mind when he goes out looking and listening.

Basic Tape Machine Elements

Before trying to distinguish among basic categories of tape machines, let us first consider the fundamental elements which may be combined in a variety of ways. These are illustrated in Fig. 1. The elements are five: (1) a transport mechanism that moves the tape past the heads or shuttles it rapidly between the reels in the course of winding or rewinding; (2) a record amplifier to build up the incoming signal, provide equalization (mostly or entirely treble boost) before the signal goes to the record head, and supply high-frequency current to the record and erase heads; (3) a playback amplifier to build up the signal generated by the playback head and to provide the necessary equalization (mostly or entirely bass boost); (4) a power amplifier, which is frequently single-ended; and (5) a speaker.

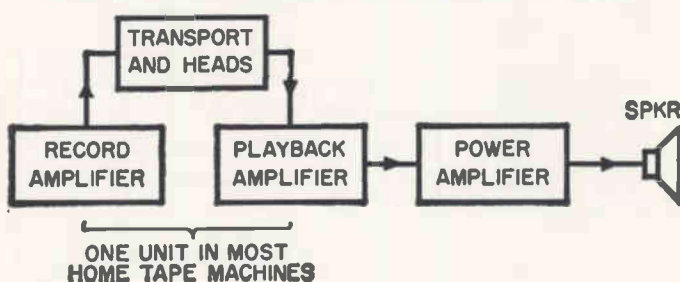
In the majority of home tape machines, namely those employing a single record-playback head, the record and playback amplifiers are fundamentally one unit, with suitable switching to change equalization and connections when alternating signal between record and playback. In a minority of machines—but, oddly enough, the ones that as a rule run highest in price—the power amplifier and speaker are omitted.

(Many home machines include a microphone in the purchase price. However, this is an accessory rather than a fundamental element. Seldom are the accompanying microphones of high-fidelity caliber.)

Basic Variations

The elements of a tape recorder are put together by their manufacturers in five basic ways. This does not include the distinction between mono and stereo machines, nor between those with a single record-playback head and those with separate heads. The latter distinctions will be discussed separately.

Fig. 1. The basic elements of a tape machine discussed in text.



*Author of "Getting the Most Out of Your Tape Recorder," co-author of "Elements of Tape Recorder Circuits."

1. **Tape Player:** The simplest and least expensive purchase is that of a tape player which consists only of the transport mechanism, incorporating a playback head. This is analogous to the record player; it is used only with pre-recorded tapes (commercial or made by your friends) and does not permit recording. The output of the head goes to a conventional audio preamplifier, provided that the latter has an input intended for a tape head. Virtually every preamplifier made during the last few years will accommodate a tape head.

2. **Tape Player with Electronics** This is the same as No. 1, except that it includes a playback amplifier. At somewhat greater cost, this means you need not rely on your preamplifier for the necessary equalization and amplification of the signal from the tape head. There are several possible advantages here. A cable from the tape player to your preamplifier may pick up appreciable hum due to its length or routing. Such a cable, if longer than a foot or two, may cause appreciable treble loss due to cable capacitance.

Audio preamplifiers generally provide equalization for only one tape speed, whereas most transports operate at two or three speeds. The tape player with its own electronics will usually provide different, and appropriate, equalization for each speed. Moreover, change in speed will automatically be linked with change in equalization.

More accurate equalization will possibly be obtained from the tape player that includes electronics because a playback amplifier designed to go with a specific kind of head can take into account the characteristics of this head with respect to frequency response. Ideally, all playback heads should have the same frequency response, but in fact there are deviations from ideal performance at the low- and high-frequency extremes. Finally, a playback amplifier should have extremely low noise and hum, because the output of the playback head is just a few millivolts. Manufacturers of quality tape machines can usually equal or better the noise characteristics of all but a very few preamplifiers.

It is possible to purchase a tape playback amplifier separately. This may be advantageous to the person who owns a mono tape player with electronics and wishes to convert it to stereo by replacing the head and adding playback electronics for the second channel.

3. **Transport with Record-Playback Electronics:** This, in essence, is a tape recorder. Not only can you play pre-recorded tapes, but you can also make tapes of broadcasts, phonograph discs, and (through a microphone) live performances.

As with playback amplifiers, it is possible to buy record-playback electronics separately. However, integrated record electronics are advantageous for several reasons: (a) For optimum performance in terms of low distortion and good treble response, the value of bias current fed to the record head is quite critical; the integrated electronics can take into account the specific requirements of the head on the accompanying transport. (b) Different erase heads require different amounts of current and the integrated record electronics can take this into account. (c) The integrated electronics can assure that the record-level indicator provides proper indication of the amount of signal being impressed on the tape, taking into account the characteristics of the record head on the accompanying transport. All this is not to say that the separate amplifier cannot do a proper job. However, a considerable amount of adjusting and trial may be required before the separate electronics can do as good a job as the integrated unit.

4. **Transport with Record Electronics Only:** This is rather a "new breed." Since most preamplifiers provide inputs for tape playback heads, a fair saving in cost can be effected by omitting the playback electronics, leaving only the record electronics. This is done in at least one brand of tape machine on the market.

5. **Self-Contained Tape Recorder:** This is the type of unit we ordinarily associate with home use—namely one that includes a power amplifier and speaker so that one need not rely on an external audio system for playback. Admittedly, the power amplifier and speaker that can be squeezed into a tape machine case are of limited quality but their usefulness is considerable. For example, if you have made a re-

ording at a friend's home, at a club, at school, etc., you need not wait until you get home to check on whether your recording was successful.

At the same time, every self-contained home tape recorder should provide an output jack so that you can feed the signal into a high-fidelity system. In addition, the output should be located at a point prior to the power output stage so that the signal is free from the distortion and frequency losses that are usually encountered in the power output stage of a tape recorder.

Some tape recorders make available, as an accessory, a combination power amplifier and speaker in a single case. This is apt to be of substantially better quality than the amplifier and speaker in a self-contained unit.

Many stereo tape machines of the self-contained variety have only one speaker, although they may have two power output stages—one of them for an external speaker. If the machine does have two speakers, one is often incorporated in the lid which can be removed and placed at any reasonable distance from the machine. Sometimes there are two speakers in foldout "wings" of the carrying case.

Stereo versus Mono

Although the trend is toward stereo, mono machines are still available. In addition, there are some machines that are "betwixt and between"—namely, those that permit stereo playback but provide only for mono recording.

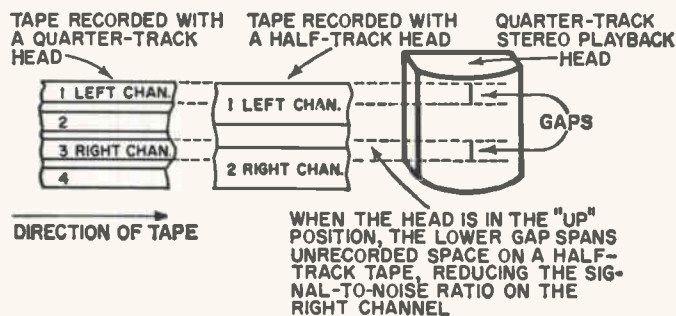
Most home stereo machines incorporate quarter-track heads because half-track stereo has become virtually obsolete. The advantage of quarter-track stereo is that a tape can be recorded in both directions, with resulting economy of tape and convenience of use. However, a quarter-track head can play half-track stereo tapes; for maximum signal-to-noise ratio on both tracks, some machines permit the quarter-track playback head to be raised or lowered so that its two gaps are properly located with respect to each track. This is illustrated in Fig. 2 for a tape moving from left to right. The head is shifted up for playing quarter-track stereo tape, and shifted down for playing half-track stereo tape.

Although the potential purchaser of a tape recorder owns a mono audio system, it may nevertheless be advantageous for him to buy a stereo tape machine. In the first instance, if he converts his audio system to stereo, he need not be concerned about replacing or modifying the tape portion of his set-up. Second, a quarter-track stereo machine enables him to record four mono channels on a reel of tape, whereas a mono machine will record but two. Third, stereo machines, as a rule, are more flexible than mono units.

Separate Record & Playback Heads

Separate record and playback heads involve separate record and playback amplifiers and thus the cost of such a machine is decidedly greater than that of a comparable unit with a single record-playback head and a combination record-playback amplifier. The advantages of separate heads are: (1) While recording with one head, the tape can be played back with the other head so that one can immediately check whether the recording is satisfactory in terms of frequency response, distortion, signal-to-noise ratio, etc. (2) Simultaneous recording and playback greatly facilitates the

Fig. 2. Playing stereo tapes with quarter-track playback head.



THE HEAD IS SHOWN IN THE "UP" POSITION FOR PLAYING QUARTER-TRACK TAPES. IT SHOULD BE MOVED DOWN TO PLAY HALF-TRACK TAPES WITHOUT LOSS IN SIGNAL-TO-NOISE RATIO

various tests of performance and the various adjustments that may be required, such as those of bias current, equalization, and recording level indication. (3) The best results are achieved by using separate heads, each constructed in a somewhat different manner for its specific function. Thus a playback head designed solely for this purpose will yield a somewhat greater output, resulting in a better signal-to-noise ratio. By the same token, the record head will be less demanding in its signal voltage requirements, lessening the chances of distortion. (4) Maximum flexibility is obtained, including the ability to achieve echo effects and sound-on-sound recording.

Specifications & Features

In shopping for a tape machine, you should be alert to the performance specifications and features of the various units on the market.

If you are interested in high-fidelity performance, the following are minimum specifications (assuming that the machine lives up to them):

1. Frequency response flat within 2 db, or possibly 3 db, between 40 and 15,000 cycles at 7½ ips.
2. Signal-to-noise ratio of at least 50 db, based on a recording level producing 3% harmonic distortion at 400 cycles (or similar frequency).
3. Wow and flutter not over .2%. (Some home machines get below .1%.)
4. Speed accurate within 1%. (Studio type professional machines are accurate within .2%.)
5. NAB equalization at 7½ ips, for accurate frequency response in playing pre-recorded tapes.

Features to consider include the following:

1. *Type of record level indicator:* The magic-eye type, particularly if it incorporates a "floating action" circuit so that the human eye can follow its maximum indication, is perfectly acceptable. In fact, it is superior to the vu meter in that it indicates peak recording level, where one has to worry about distortion. On the other hand, the vu meter

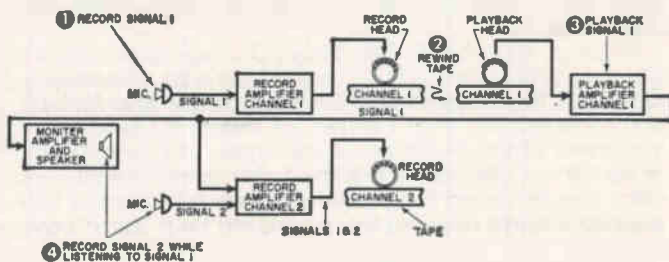


Fig. 3. Basic principles of sound-on-sound recording, which may be done with the aid of a stereophonic tape recorder.

permits one to make finer and more definite gradations of recording level. Be wary of the meter that looks like a vu meter but doesn't have its dynamic characteristics.

2. *Tape speeds:* The 7½ ips speed is still the minimum for high-fidelity. Quite good results can be obtained at 3¾ ips. For long recording sessions where high fidelity is not imperative, 1½ ips can be very useful—for example in recording a long program of dance or background music for an evening of entertainment. With a 7" reel of double-play tape, 8 hours of material can be recorded on two mono tracks; or 16 hours on four mono tracks.

3. *Mixing facilities for the low-level (microphone) and high-level inputs:* Some machines allow you to use only one or the other inputs because inserting a plug into the high-level input disconnects the mike input. Of those that permit you to use both inputs simultaneously, the most flexible ones are those with individual gain controls for each type of input. However, these tape recorders also tend to be the most expensive.

4. *Tape lift device* to space the tape away from the heads when winding or rewinding, thereby minimizing head abrasion.

5. *Tape counter*, which can be helpful in locating desired passages on a recorded tape, indicating how much of the tape has been used up, and showing how much tape remains.

6. *Means employed for tape-to-head contact.* Most home tape machines employ pressure pads to assure good contact

between the tape and the heads. Sometimes pressure pads are used against both the erase head and the record-playback head; sometimes against the erase head only; and sometimes against neither head but against the tape guide. Wow and flutter are apt to be lowest when fewest pressure pads are used and when none is used against the record-playback head. Professional machines avoid pressure pads and, instead, use a combination of tape guides and tape tension to maintain good contact.

7. *Automatic shut-off:* Some machines permit automatic shut-off at the end of a reel, provided that you attach a metallic leader to the tape. A few are designed to shut off at any interruption in the tape.

8. *Adjustment facilities (for the audio service technician):* When the time comes, it will be easier for the audio service technician to obtain maximum operating potential from your machine if it incorporates alignment controls instead of fixed circuit components with respect to bias current, record-level indication, and equalization.

9. *Bias frequency:* The bias frequency should be upward of 60,000 cycles to minimize the change of audible beats between the bias frequency and harmonics of the audio signal.

10. *A-B switching:* If the machine has separate record and playback heads, it should incorporate a switch permitting you, when recording, to compare the playback signal with the incoming signal.

11. *Push-button controls:* Push-button controls can simplify operation. On the other hand, they mean greater mechanical complexity inside the tape machine and that much more to go wrong.

12. *Rapid start and stop:* If you start or stop a recorded tape somewhere in the middle of the reel, it can be most annoying if the machine produces a sort of growl because it comes up to full speed gradually or slows down gradually. A number of machines avoid this disconcerting effect by providing almost instantaneous start and stop.

Sound-on-Sound Recording

Sound-on-sound recording permits a number of signals to be recorded successively on the same track and also synchronized with each other. Thus a person can transform himself into a duo, trio, quartet, etc. by playing various singing or instrumental roles successively on the same stretch of tape.

In the case of the mono machine, sound-on-sound requires separate record and playback heads and that the playback head precede the record head—contrary to conventional practice. This is not so for stereo machines hence sound-on-sound has gained popularity as stereo units have come to the fore.

A stereo recorder permits sound-on-sound recording if (1) one channel can be put in the record mode while the other is in the playback mode (with the record head in the second channel disabled if there are separate heads) and if (2) the high-level and low-level inputs can be used simultaneously. As yet, these requirements, particularly the first, are satisfied mainly in high-priced machines. But, since the problem is essentially one of additional switching flexibility, it can be expected that a substantial number of moderate-priced machines will follow suit.

If the requirements are met, the technique, illustrated in Fig. 3, is as follows. The first signal (usually, but not necessarily, picked up by the microphone) is recorded on channel 1. The tape is rewound. Channel 1 is played back through a Y-connection for recording on channel 2 and for monitoring by the performer via an internal or external audio system. At the same time the performer uses the microphone to record the second signal on channel 2 through the mixing facility. The microphone level is controlled by the recording gain control for channel 2. The level of the playback signal from channel 1 can be controlled by the playback gain control. The procedure is repeated to record additional signals.

This article has covered the many variations in equipment available for use with tape. It is now up to the reader to decide what features he wants, how much quality he requires, and how much money he is prepared to pay to get the tape machine features of his choice.



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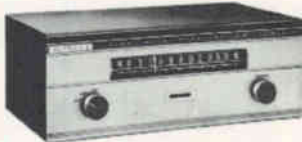


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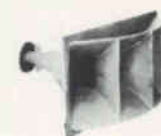
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CALBEST ELECTRONICS 114 <i>4801 Exposition Blvd., Los Angeles 16, Calif.</i>	JANSZEN —Neshaminy Electronic Corp. 125 <i>382 Easton Rd., Neshaminy, Pa.</i>
CATHEDRAL —Cleveland Electronics, Inc. 114 <i>1974 E. 61st St., Cleveland 3, Ohio</i>	JENSEN MANUFACTURING CO. 125 <i>6601 S. Laramie St., Chicago, Ill.</i>
CHANNEL MASTER CORP. 115 <i>Ellenville, New York</i>	KARLSON ASSOCIATES 129 <i>433 Hempstead Ave., West Hempstead, N. Y.</i>
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COSMOS INDUSTRIES, INC. 115 <i>31-28 Queens Blvd., Long Island City 1, N. Y.</i>	KLIPSCH & ASSOCIATES, INC. 130 <i>Hope, Arkansas</i>
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5 SPEAKERS & CABINETS

ACOUSTI-CRAFT

Radcliff Shelf Enclosure

Ducted port construction; for 8" speaker only; choice of Natural, Blonde, Mahogany, Maple, Cherry finishes; 11"x23½"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; ¾" American Walnut; 14"x24"x12" \$45.00

Glenwall Baffles

For speaker extension systems.

Model 3108W Sloping Wall enclosure for 8" speaker—11"x11"x7¼".....\$6.00

Model 3108C Corner enclosure for 8" speaker—14"x13"x6¾".....\$12.00

Model 3112W Sloping Wall enclosure for 12" speaker—15"x15"x9⅞".....\$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; ¾" Douglas Fir Plywood; available either bass-reflex or horn loaded.

Model 412U—31¾"x21⅞"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 12¾"x12¾"; 8" speaker\$9.00

Model 2012U 15⅜"x15⅜"; 12" speaker\$10.00

ACOUSTIC RESEARCH

Model AR-2



Acoustic suspension two-way system; 42-14,000 cps ± 5 db; down 10 db at 30 and 16,000 cps; 10-inch woofer and special tweeter; built-in crossover; 8 ohms impedance; harmonic distortion at 10 watts under 2% to 60 cps, under 3% to 50 cps; recommended amplifier power: at least 25 watts per stereo channel; bookshelf type: 13½"x24"x11⅜"; 33 lbs.; hardwood veneer.

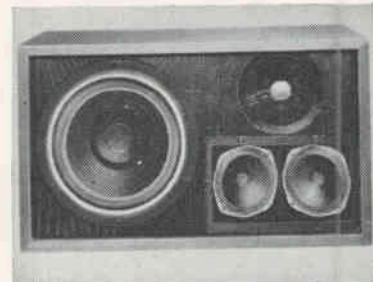
AR-2 (bottom side unfinished)
(mahogany or birch).....\$ 96.00
(walnut or cherry).....\$102.00
(korina)\$102.00
(unfinished pine).....\$ 89.00

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; 5⅛"x6⅞"x11⅞".

AR-3st (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; 6¾"x7⅞"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, ±1½ db.; 1,000 to 20,000 cps, ±2 db.; usable range down to 30 cps; one 12" woofer, one 7" and one 1⅜" dome radiator for mid and high frequencies; built-in three-way crossover with level controls for mid and high ranges; 4 ohms impedance; less than 2% harmonic distortion from 60 to 20,000 cps at 20 watts input, less than 3% to 42 cps; recommended am-

STEREO/HI-FI DIRECTORY



plifier power, at least 25 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.....\$7.50

"Modulaire" Bi-Phonic Coupler



Similar in design to Model 440; 35 cps to beyond audibility; power required 15 watts; 13 $\frac{1}{2}$ " x 22" x 3 $\frac{3}{8}$ "; fits between studs for custom installations; in mahogany, oiled-walnut, lacquered walnut.....\$120.40

Completely sanded ready for finishing.....\$116.40
 "Built-in" wall model.....\$99.00

A.E.S.

Stereo 1500 15" Speaker

Similar to "Stereo 1200"; 50 watts; response 20-14,000 cps \pm 5 db.....\$49.50

X-Over

Crossover network for use with A.E.S. speakers; 2500 cps.....\$9.95

Stereo 300 Tweeter

Hard-cone tweeter featuring curvilinear design; 2500-25,000 cps \pm 5 db; 3" diameter.....\$9.50

Stereo 800 8" Speaker

For use with bookshelf enclosures; 20 watts; response 40-15,500 cps \pm 5 db.....\$14.50

Stereo 1200 12" Speaker

Similar to "Stereo 800"; 35 watts; response 30-16,000 cps \pm 5 db; has free-

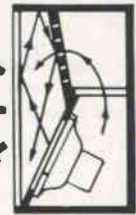


There's a BIG difference...

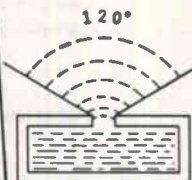
THRILL TO THE SOUND FROM A KARLSON STEREOSONIC ENCLOSURE

DISTORTIONLESS AIR PISTON

By using combined front and rear loading, the highly efficient Karlson enclosure is able to produce large movements of air in its tapered opening from relatively small motions of the speaker cone... thus creating an air piston, while also eliminating the main cause of speaker distortion. Result: extremely sensitive reproduction of the entire spectrum of sound, with greatly improved bass, awe-inspiring dynamic range and unexcelled transient response.



In a Karlson—and only in a Karlson — any speaker produces sounds of brilliance, range, and purity—even beyond the specifications of the manufacturer! Over 100,000 high fidelity enthusiasts all over the world attest to the unexcelled quality produced by these remarkable enclosures. The secret is in the totally different patented engineering, exclusive with Karlson.



WIDE AREA STEREO

The phenomenally wide and uniform dispersion of the highs made possible by the tapered opening in the Karlson enclosures makes them a must for real stereo. Every seat becomes a stereo seat... and there's no hole in the middle! Other acoustic devices do not work as well because they cannot duplicate the ideal semi-cylindrical wave-front formed as the higher internal pressures pass through the slot and expand uniformly outward.

COMPLETE CHOICE OF 8", 12", 15" MODELS

Assembled and finished in genuine wood veneers... walnut (WX), mahogany (MX) and blonde oak (BX). 12" and 15" models available in either Karlson front or full grille (G). 8" models in full grille only. All sizes also available assembled-unfinished and as kits in either birch exteriors (Deluxe-U) or high-density particle board (Basic-BSC-U). All models except Basic are complete with trim and footing.

KARLSON '8'

For 8" speakers, 17 $\frac{1}{4}$ " x 11 $\frac{3}{4}$ " x 9 $\frac{3}{4}$ " deep. Shpg. wt., 14 lbs.

8-MX, 8-WX, 8-BX...\$42.60
 Deluxe, 8-U.....26.70
 Basic, 8-BSC-U.....21.00
 Deluxe Kit, 8-K.....18.80
 Basic Kit, 8-BSC-K, 19.00

KARLSON '12'

For 12" and 10" speakers, 24 $\frac{3}{4}$ " x 16 $\frac{3}{4}$ " x 13 $\frac{1}{4}$ " deep. Shpg. wt., 45 lbs.

12-MX, 12-WX, 12-BX...\$99.60
 *12-MXG, 12-WXG, 12-BXG, 104.38
 Deluxe, 12-U.....66.00
 Basic, 12-BSC-U.....49.50
 Deluxe Kit, 12-K.....42.00
 Basic Kit, 12-BSC-K.....33.00

KARLSON '15'

For 15" and 12" speakers, 22 $\frac{1}{2}$ " x 33" x 18" deep. Shpg. wt., 78 lbs.

15-MX, 15-WX, 15-BX...\$129.00
 *15-MXG, 15-WXG, 15-BXG, 135.45
 Deluxe, 15-U.....87.00
 Basic, 15-BSC-U.....66.00
 Deluxe Kit, 15-K.....57.00
 Basic Kit, 15-BSC-K.....45.00

*Full grille front

NEW! PORTABLE PLUG-IN SPEAKER SYSTEM

Most versatile speaker you can buy! For indoors, outdoors, stereo and p.a. Install leads and plug in where and when needed. Complete instructions included. Offers smooth, clean, wide-range performance up to standards expected from Karlson. Response 40-15,000 cps, dispersion 140°, efficiency 25%, dynamic range 100db, capacity 10 watts, dimensions 12" x 13" x 24", shpg. wt. 16 lbs. Two-tone finish: cherry-bronze and shell-white. Model PPI-8, price \$49.50.



SEE YOUR HI-FI DEALER...
 IF NOT AVAILABLE, ORDER DIRECT

KARLSON ASSOCIATES, INC.

433 Hempstead Avenue, West Hempstead, L. I., N. Y.

Please send me Model _____ at \$_____. Payment is enclosed (Shipping charges collect).

Please send me a free copy of "StereoSonics by Karlson."

NAME _____

ADDRESS _____

CITY _____

ZONE _____

STATE _____

5

SPEAKERS & CABINETS

edge cone suspension for larger power surges\$29.50

"Gigolo I" Speaker System

Bookshelf-type enclosure with 8" high-compliance woofer & 3" hardened diffusion-cone tweeter; response 45-18,000 cps \pm 8 db measured at 10 watts continuous sine-wave; 24"x12"x9 1/2"; available unfinished only; FOB factory.....\$15.00

"Gigolo II" Speaker System

Available assembled and sanded with speaker; bookshelf design; 24"x13"x12"; 29-16,000 cps \pm 8 db measured at 25 watts continuous sine wave; 15-60 watts recommended power; free air resonance 35 cps; 8 ohms impedance; harmonic distortion less than 2%, 50-15,000 cps; available unfinished only; FOB factory.....\$49.50

"Cavalier" Speaker Cabinet

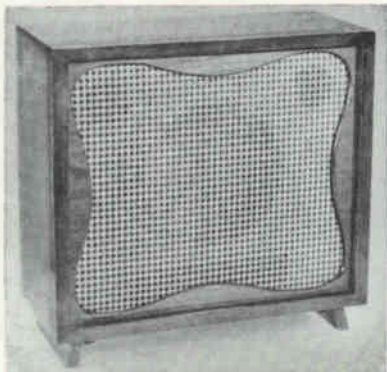
Bookshelf design for either 8" or 12" speaker; can be used as bass reflex or infinite baffle enclosure; 3/4" birch wood; 24"x12"x13 1/2"; available unfinished only; FOB factory.....\$19.95

ALLIED WOOD PRODUCTS

Model HFT-800-S Table Enclosure

Accommodates 8" speaker, 23 1/2" x 11" x 11".
Unfinished\$18.75
Mahogany\$21.75
Walnut or Blond.....\$25.00

Model STP-1200-S Speaker Cabinet



Floor model design; 21" h. x 24" w. x 12" d.
Unfinished\$24.00
Mahogany\$29.00
Walnut, cherry, blonde korina, ebony\$31.50

Model 1223-S Speaker Enclosure



Designed for multiple speakers; 12", 3 1/2", and 5"; 18" w. x 24" h. x 9" d.
Unfinished\$22.00
Mahogany\$25.00
Walnut, blonde korina.....\$27.00

ALTEC LANSING

Model 50A "Bi-Acoustic" Horn

Dust-, water-, and weather-proof for outdoor applications; provides coaxial type sound distribution; 30 watts; 175-12,000 cps; Fiberglass housing; 12 1/2"x15 1/2"x17 1/4"\$57.00

Model 402B Woofer

Power capacity 14 watts; 8"; frequency range 40-10,000 cps; resonant frequency 55 cps; impedance 16 ohms.....\$19.50

Model 412C

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

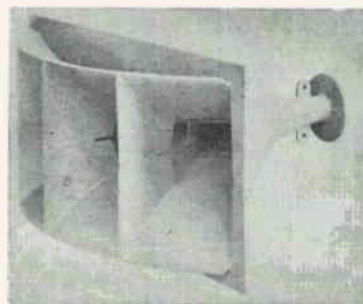
Model 415C

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 414A Bass Speaker

A 12" equivalent of Model 803B; response 30-3000 cps depending on crossover used\$54.00

Model 511B Horn



Designed to load 804A driver down to 500 cps with upper limit at 22,000 cps; cast of heavy resonant-free aluminum; dispersion 90° horizontal and 40° vertical.\$39.00

Model 601C "Duplex"

12-inch two-way speaker; 12-inch woofer with a high frequency driver and horn in a single heavy cast frame; complete with 3,000 cycle crossover network, frequency response from 30 to 22,000 cycles; 20 watts continuous sine-wave power; 8 ohms; cone resonance 32 cps\$120.00

Model 602C "Duplex"

Coaxial 15-inch speaker; range from 20 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; 25 watts continuous sine-wave power; 8 ohms; cone resonance 27 cps...\$143.00

Model 803B 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\$69.50

Model 605A Duplex



15" coaxial speaker; 35 watts up to 50 watts peak power; 16 ohm impedance; magnet weight 2 1/4 lbs. low frequency, 1/2 lb. high frequency; depth 10"; weight 37 lbs. including network.....\$177.00

Model 755C 8" Speaker

Wide-angle sound dispersion; 1" watts; response 40-13,000 cps; 8 ohms; 2" voice coil; cone resonance 52 cycles-per-second\$29.95

Model 804A Driver Systems



Extends to 22,000 cps; features ribbon voice coil & aluminum alloy diaphragm; 16 ohms; 30 watts; can be used with 811B horn & N-800E (800 cps) crossover; for woofer use 803B or 4 5C Biflex speaker; The 804A driver can also combine with 511B sectoral horn & N-500D (500 cps) crossover; use either one or two 803B bass speakers.

Model 804A driver\$63.00
Model 811B horn\$30.00
Model N-800E crossover\$46.50
Model 511B horn\$39.00
Model N-500D crossover\$60.00
Model 803B woofer\$69.50
Model 415C Biflex speaker.....\$67.00

Model 831A "Capistrano" System

Incorporates the 15" 803B 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 1/2" d; in blond, walnut or mahogany. \$399.00

Model 834A Monterey

Bookshelf type; includes 2-woofers, and Model 3000B high frequency sectoral horn; frequency response 40-22,000 cps; power rating 20 watts; 14"x26"x14 1/2"; in walnut, blonde, mahogany.

Unfinished \$174.00

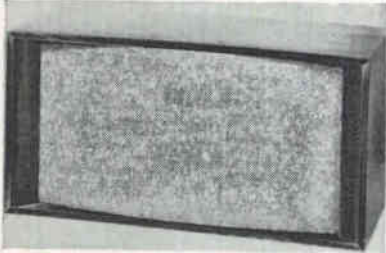
Model 835A Monterey Jr. System

Compact bass reflex enclosure houses Model 402B 8" and 2000B direct ra-



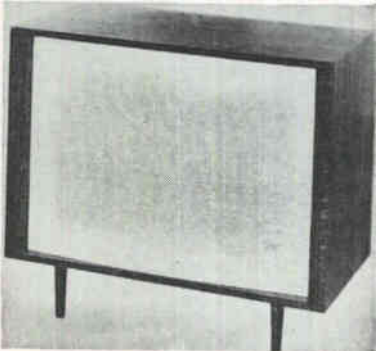
diator speakers; frequency range 45-18,000 cps.; power 15 watts; 16 ohms impedance; 11 1/4" x 23" x 11 1/4"; weight 45 lbs. \$89.50
Unfinished \$84.00

Model 836A "Lido" Speaker System



Bookshelf design; speakers have radiating area of over 76 sq. inches; extended frequency response; high efficiency; 12 7/8"x26"x12 7/8"; available in walnut or mahogany. \$125.00

Model 837A "Avalon" Speaker System



Two-way design; Model 414A 12" bass speaker and Model 804A H.F. driver on a Model 811B sectoral horn; response 35-22,000 cps; 800 cps crossover; 29 3/4" x 35" x 17 1/4"; available in walnut or mahogany cabinet; accessory floor stand available in place of legs. \$246.00

Model 838A "Carmel" Speaker System

Cabinet identical to Model 837A; speakers used 2-12" Model 414A bass speakers & 1-Model 804A driver on a Model 811B sectoral horn; response 30-22,000 cps. \$297.00

Model 854A/B Speaker Cabinet

Cabinet only (same as Model 837A); will house any Biflex and Duplex 12" or 15" speakers. \$99.00

1962 EDITION

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" 803B woofer, N-800E 800 cps crossover network, and 804A driver with 811B horn; frequency range from 35 to 22,000 cps; 30" w x 24" d x 51" h; gray finish. \$299.40

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 3/8". \$15.00

Model 3000B Tweeter

Aluminum diaphragm; multicell-type horn; 20 watts when used with N-3000E 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 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 804A HF and 803B LF Drivers; 16 ohms. \$46.50

Model N-3000E

Altec 3000-cycle crossover network with adjustable high-frequency attenuator; 30 watts; 8-ohm impedance, 3 1/8" h. x 2 3/8" w. x 2 3/8" d. \$22.50

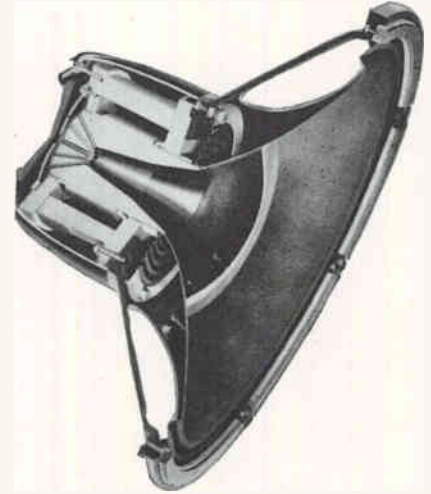
ARGOS

Model AD-1



Ducted port design for limited space; 19 1/4" w. x 23 3/8" h. x 13 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

TALKING ABOUT STEREO



TANNOY HAS INTEGRATION!

An integrated sound source, such as is produced by the unique design of the 'Monitor' Dual Concentrics, maintains the tightest possible coupling over the audio range. This ensures a close sound spectrum being reproduced of each instrument, as was the case when the sound was originally created.

It is important to good stereo that each channel is thoroughly integrated, to avoid the 'hole in the middle' sensation. However, at the same time, the system must maintain the original location and definition of each instrument or vocal placement, and to this end the early integration of individual channels has been found to be of paramount importance.

And what is the final result of all this engineering design and quality in your living room? Excellent instrument definition, smooth overall sound pattern, and a superb feeling of unparalleled presence—a desirability in good monophonic listening, but an essential for the best in stereo.

Write for details of the Tannoy 15", 12" and new 10" Monitor Dual Concentrics to:—

Tannoy (America) Limited

P.O. Box 177
East Norwich, Long Island
New York

Tannoy (Canada) Limited

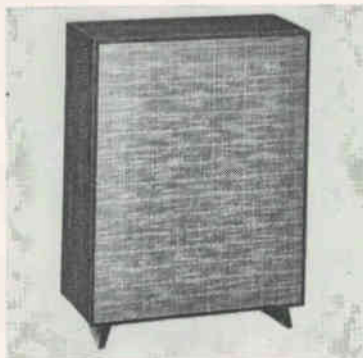
36 Wellington St. East
Toronto 1, Ontario
Canada

5

SPEAKERS & CABINETS

matched to any speaker; blonde or walnut\$24.95

Model DBR-2A



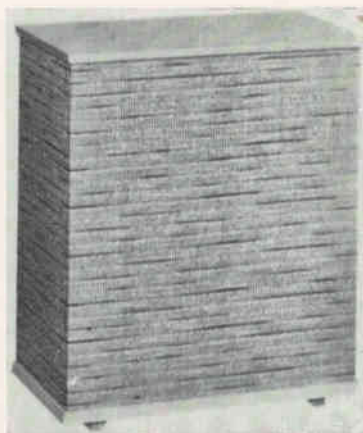
Ducted port design enclosure; 23" w. x 30" h. x 13" d.; 4.3 cubic feet; 1/2" 5-ply pyroxylin covered plywood; fiberglass acoustic padding; Acoustone plastic grille cloth; 15" or 12" woofer and separate tweeter or coax speaker; 15" 12" reducing ring, tweeter port cover, and all hardware included; "ducted port" design extends low frequency response; tuning tube can be exactly matched to any speaker; blonde or walnut.\$36.50

Model DCB-8/12

Corner enclosure; 22 1/2" w. x 26 3/8" h. x 14 3/8" d.; 4320 cu. in.; heavy pyroxylin 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.Net \$22.50

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 tun-

nel" extends low frequency response; fiberglass 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

HFWB-8S "Space-Saver" Baffle

Ducted port design; 8" Jensen "Profile" woofer and 3 1/2" Jensen tweeter with



crossover network; 8 ohm output; 18" x 12" x 3 3/4"; available in light American walnut or whited birch.\$17.95

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 \$5.85
PB-12 (18 1/4"x13 1/4"x9" d.)Net \$8.25

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 blonde or walnut.\$16.95

Model TSE-1S similar to TSE-1 except has Jensen 8" woofer and tweeter installed; 8 ohm input; response 50-17,000 cps\$24.95

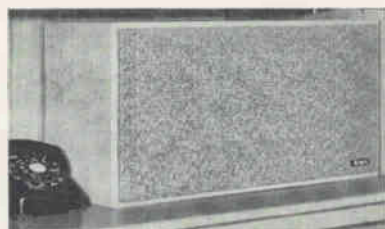
Model TSE-2A

Deluxe ducted-port enclosure for bookshelf or floor; built of 3/4" hardwood; Panelyte; 2160 cu. in.; 24"x11"x10 1/2" d. in blonde or walnut.\$26.95

Model TSE-2AS

Similar to TSE-2A except has Jensen 8" woofer and high dispersion tweeter installed; 8-ohm input; response 50-17,000 cps\$39.95

Model TSE-3A Eldorado



Bookshelf type for 12" speaker and tweeter; 3200 cu. in.; 27 1/2"x14 1/4"x10"; blonde or walnut.\$22.95

Model TSE-8KS Enclosure Kit

Similar to TSE-2AS except in kit form; 3/4" hardwood cabinet ready for assembly and finishing; 8" Jensen woofer and tweeter; 8 ohm input; response 50-17,000 cps.Net \$27.95

Model TSE-3AS Eldorado

Similar to TSE-3A except has 12" Jensen woofer and two 3 1/2" tweeters installed; 8 ohm input; response 40-17,000 cps.Net \$39.95

Model TSE-12KS Eldorado Kit

Similar to TSE-3AS except in kit form; 3/4" hardwood cabinet ready for assembly and finishing; 12" Jensen woofer and two 3 1/2" Jensen tweeters; 8 ohm input; response 40-17,000 cps.Net \$39.95

ARGUS-X

Model X-1B Speaker System

Has 8" speaker with multiple suspension and 2 lb., 13 oz. triconal steel magnet structure; response 35-20,000 cps; system may be driven by amplifiers of 10 to 40 watts; 8 ohms; 12 3/8"x14"x11"; oiled walnut.\$80.00

Model X-3 Speaker System

Two 8" speakers with multiple suspensions and 2 lb., 13 oz. triconal steel magnet structure; response 20-20,000 cps; system may be driven by amplifiers of 10 to 60 watts; 4 to 8 ohms; 25"x14"x11"; oiled walnut.\$60.00

Model X-5 Speaker System

Three 8" speakers with multiple suspensions and 2 lb., 13 oz. triconal steel magnet structure; response 10-20,000 cps; system may be driven by amplifiers of 10 to 100 watts; 4 to 8 ohms; 27"x18"x16", including removable 3" pedestal; oiled walnut.\$240.00

Custom Speaker Systems

Combination of 8", 12", and 15" speakers with multiple suspensions; response from below 10 cps to above 25,000 cps; Custom-built to customer's specificationsFrom \$400.00

ATLAS SOUND

Model DC-5

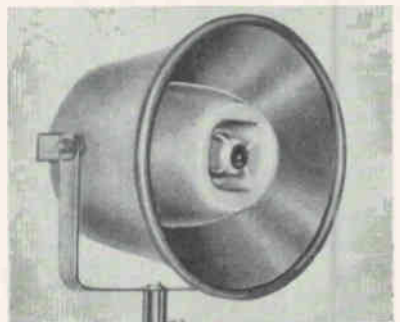
Six-watt weather-resistant cone-type projector; response 120-7,000 cps; 8



ohm impedance; 14" long, 7" dia. 5" cone\$13.20

Model WT-6 "Coax-Projector"

Two-way system with two drivers, two horns; built-in electronic crossover filter; 15 watts; response 100-15,000 cps;



8 ohms; 120 degree dispersion; cross-over 1000 cps; bell opening 15"; over-all depth 12"; enamel finish.....\$34.50

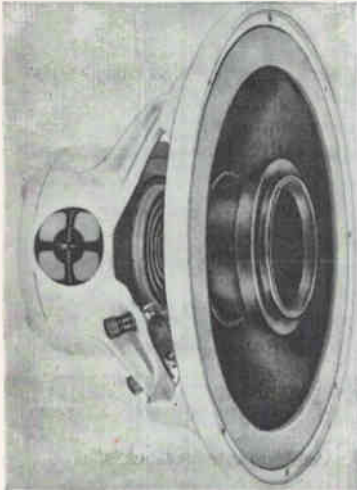
Model SS-4 Speaker stand for WT-6 (extends to over 6' in height).....\$11.70

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-12DX Speaker



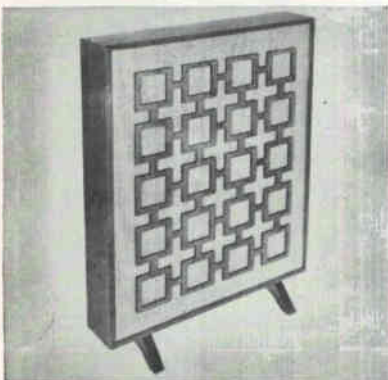
12" with coaxial tweeter; response 35 to 17,000 cps; 12,500 Maxwell; power 20 watts; impedance 8 ohms; 12 lb. \$49.95

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

Model CA-70 Speaker System

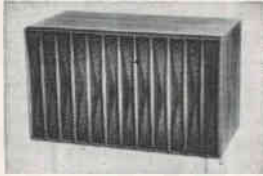


Features front and back sound radiation; two woofers, two midrange, and one tweeter; response 40-18,000 cps; 8 ohms impedance; 45 watts integrated program material; size 4" x 21" x 25"; oil-rubbed walnut.....\$79.95

Model A-80D 8" Speaker

Dual-cone; magnet wt. 10 oz. Alnico V; voice coil diameter 1 1/4".....\$29.95

Model CA-100 Speaker System



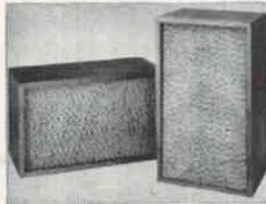
Bookshelf type can be converted to floor model with chrome legs; speakers are located on both sides of ducted slot; ventilated grille construction; consists of 2-10" woofers, 2-tweeters; power rating 40 watts; frequency response, 30-20,000 cps; 12" x 15" x 25".....\$139.95

Model A-35T 3" Tweeter

Direct radiator; paper cone with sealed rear construction; built-in crossover; 2.5 oz. slug magnet.....\$9.95

AUDIO-TECH

Model ME-12 Speaker System



For floor or bookshelf use; has 12" woofer and 3" cone-type tweeter; balance control for tweeter supplied; frequency response 40-20,000 cps.; capacity 30 watts; woofer magnet strength 12,500 gauss; 24" x 12" x 14"; available in walnut, mahogany, fruitwood.....\$109.50

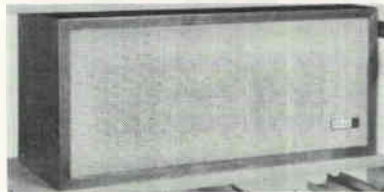
Model JA-15 Speaker System

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" x 26" x 16".....\$225.00

BELL SOUND

Model SS-1 Stereo Speaker System

Bass-reflex enclosure, ducted port, tuned to match 8" woofer and 3 1/2" tweeter



with crossover; 3/4" white birch, walnut finish; 11" x 24" x 10".....\$69.95

Model SS-2 Stereo Speaker System

3-way system with 10" woofer, 4" mid-range, 3 1/2" tweeter, crossover network; response 35-16,500 cps; 30 watts; 8 ohms; 3/4" wood, walnut veneer; ducted port reflex; 12 3/8" x 25 1/16" x 11 1/8" \$99.95

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" x 9" x 17".....\$34.96

MUSIC BIGAS LIFE

Utah's High-Fidelity CONTINENTAL SPEAKERS



C12RD 12" WOOFER
2 Lb. Alnico
V Magnet and
2" Voice Coil

YOU GET LIFE-SIZE SOUND in every range, from 20 to 20,000 CPS, with Utah's precision-engineered stereo/high-fidelity speakers. Tweeters and mid-range speakers feature a specially engineered horn formula to enhance "presence". Each speaker has color-coded 4-way terminals.



Please mail me prices, specifications and performance details of your Continental speaker line.

NAME _____
ADDRESS _____
CITY _____ STATE _____

5

SPEAKERS & CABINETS

Model CS-33 Chairside Equipment Cabinet

Room for all components; lift-up lid has piano hinges; 33½"x18"x24½" \$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"x20½"x29½".....\$199.95

Model FH-12 MHT Impresario Junior

Similar to Impresario except with 12" woofer; 26"x30"x16¾".....\$129.95

Model BR-1528T Profundo

Bas-reflex cabinet system; same speakers as FH-12-MHT; 30"x16½"x33".....\$159.95

Model BR-12T "Crescendo"

Includes 12" woofer, tweeter and crossover network; 24"x12½"x32¼".....\$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"x25½".....\$79.95

BOZAK

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. 6½"w x 3¼"h x 2½"d.\$32.00

B-199A Woofer

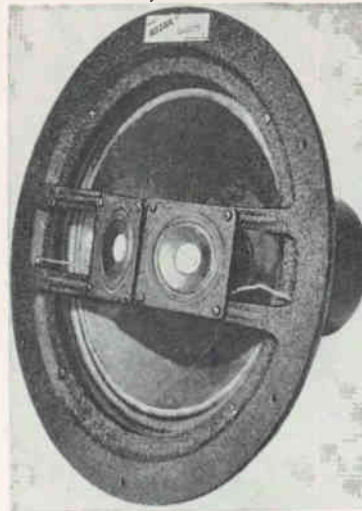


12" woofer; 5⅞" deep; variable density cone; 15 watts, 30 watt peaks; 40 to

4,500 cps; 8-ohms impedance, 16 ohms on special order; 1½-lb. Alnico V magnet; unique voice coil construction; cast aluminum frame.

B-199A\$52.50

B-207A Two-Way Coaxial

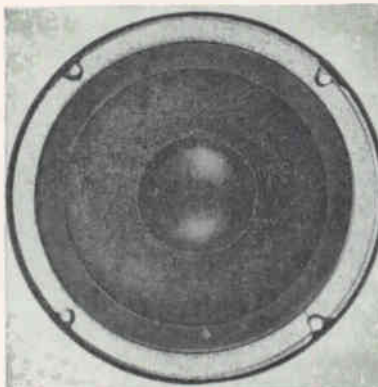


Coaxial speaker; 15" mounting frame; depth 7"; 15-watts continuous, peaks to 30 watts; 40 to 16,000 cps; 8-ohms impedance; composed of B-199A woofer and B-200X twin-tweeter; crossover at 2,500 cps; fits standard cutouts for 12" and 15" speakers; infinite baffle enclosure recommended, minimum 5 cubic feet, optimum 9 cubic feet.

B-207A\$89.50

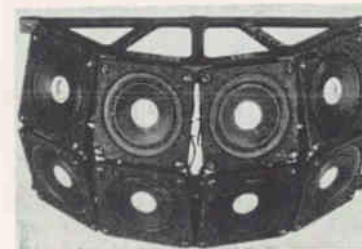
B-209A Mid-Range

Mid-range speaker; 6½" diameter, 3½" deep; unique "sandwich" cone; for 20- to 60-watt systems 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-200XA Tweeter Array



Eight cone-type tweeters; power rating 60-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.\$14.00

B-300 Speaker System

Infinite baffle enclosure; ¾" plywood; one B-207A 15" coaxial speaker; 40-16,000 cps; can convert to mode: B-302A.

B-300 Urban—24"w x 20"d x 30"h; oiled walnut, mahogany, or ebony.....\$17.00
B-300 Urban (Enclosure only).....\$85.50



B-300 Contemporary—23⅝"w x 16⅜"d x 30¾"h; walnut, mahogany, or blonde birch\$169.00

B-300 Contemporary (Enclosure only)\$79.50

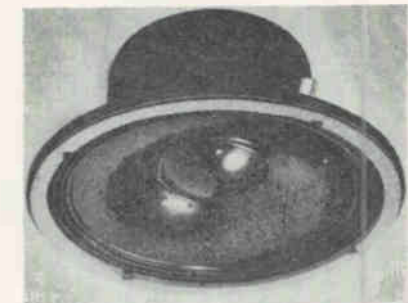
B-300 Provincial—28"w x 19"d x 1"h; cherry\$27.00

B-300 Provincial (Enclosure only)\$11.00

B-300K Contemporary (Enclosure kit)\$-2.50

B-800 Full-Range Speaker

8" speaker; 8 ohm impedance; response 50-15,000 cps; 8½" dia. x 3¼" deep;



25 watts music power.\$-5.00

B-302A Speaker System

Similar to B-300 with addition of B-209A mid-range speaker and N-10102 crossover network; 20 watts continuous, B302A Urban\$254.00
B302A Provincial\$290.00

B-305 Speaker System

Mahogany, walnut, or birch veneer infinite baffle enclosure; 35 to 10,000 cps; 3-way speaker system; 800 cps and 2,500 cps crossover frequencies; two B-207A coaxial speakers, one B-209A 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.

B-305 Urban—walnut, mahogany, or cherry\$397.50

B-305 Provincial—cherry\$440.00

B-305 Contemporary—walnut, mahog-

STEREO/HI-FI DIRECTORY



any, or blonde birch\$415.00
 B-305 Urban (Enclosure only) \$140.00
 B-305 Contemporary (Enclosure only)\$155.00
 B-305 Provincial (Enclosure only)\$181.50

Model B-500 Spinnet 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-801 Speaker System

Full-range B-800 8" speaker; 14 1/2" x 23 1/8" x 11 1/2" deep; vertical or horizontal operation\$89.50



Model B-802 Speaker System

Same as Model B-801 with a B-200X dual tweeter for broader dispersion of highs\$121.50

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-310AP

B-310A driver components and crossovers mounted on 1 1/2" plywood panel 31" w x 47" h\$550.00

P-400P

Horizontal version of P-310AP mounted on 1 1/2" plywood panel 46 1/2" w x

1962 EDITION



TSE-3AS \$3995 NET

Also available in natural wood kit. 3/4" unfinished select white birch. Assemble it yourself. (TSE-12KS) Only \$39.95 NET

the sight and sound of beauty

NEW 12"

Eldorado

WITH 3 JENSEN SPEAKERS

Superbly styled shelf or table-top "compact" with full hi-fi range of fine consoles. Jensen 12" woofer and two 3 1/2" tweeters wired in crossover network to 8-ohm input. Woofer and enclosure perfectly matched with Argos Tuning Tube. Overall range 40 to 17,000 cycles. Polarized screw terminals phased for stereo. Exclusive "wood grain" pyroxylin covering, walnut or blond. 27 1/2" x 14 1/4" x 10" deep.

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WIDE STAGE STEREO

The only array which fulfills the 8 cardinal points of stereo reproduction:

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|-------------------------|----------------------------------------|
| Freedom from distortion | Freedom from cavities |
| Optimum speaker size | Adequate spacing |
| Freedom from rattles | 3 speakers, regardless of size or type |
| Freedom from shadows | Toed-in flanking speakers |

"The best sound and best stereo we have ever heard," reported a group of acoustics scientists at Bell Telephone Laboratories.

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Klipsch and Associates, Inc. OAKHAVEN, HOPE, ARKANSAS

5

SPEAKERS & CABINETS

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-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-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

Model 310A Speaker System

Four B-199A's, two B-209A's, one B-200X, one N-104; response 28-16,000



cps; crossover 6 db/octave @ 400 and 2500 cps; 8 ohms; 60 watts; 36" w x 19" d x 53" h, mahogany, walnut, blonde Korina\$770.00
Model 310A (Enclosure only) \$275.00

B-1000 'Bard' Outdoor Portable Speaker

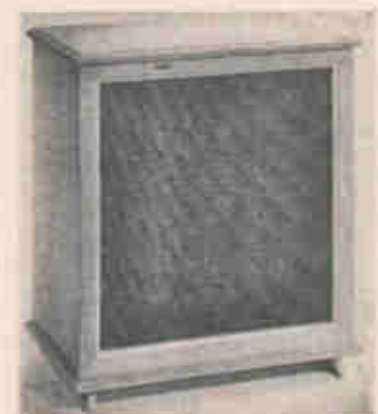


Rigid 18" dia. hemispheric housing; 21" high, 12" front-to-back; 22 lbs.; input

by phone jack (plug supplied); 8 ohms; power input 40 watts max; response 80-15,000 cps; B-800 driver; adjustable friction-type trunion; weatherproof cone; sandlewood beige or white egg-shell with gold trim.....\$79.50

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

CATHEDRAL

Model C-3CT

Cone-type 3" tweeter; frequency response 1800 to 18,500 cps \pm 5 db; 9500 gauss; power rating 10 watts; impedance 8 ohms\$4.75

Model C-3CT4

Cone-type 3" tweeter; frequency response 18 to 18,500 cps \pm 5 db; power rating 4 watts; impedance 4 ohms \$5.30

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-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.....\$ 5.00

Model C-4CT

Cone-type 4" tweeter; frequency response 1800 to 18,500 cps \pm db; 9500 gauss; power rating 10 watts; impedance 8 ohms.....\$4.75

Model C-8JC



Coaxial 8" speaker; composed of 8" woofer and C-3AT tweeter; frequency response 60 to 12,500 cps; resonance 65 cps; power rating 8 watts; impedance 8 ohms\$18.00

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 \pm 5 db; resonance 65 cps; 12,500 gauss; 2" aluminum voice coil; power rating 16 watts; depth 5"; impedance 8 ohms\$27.00

Model C-12NR



Dual cone 12" speaker; frequency response 45 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-12PC

Coaxial 12" speaker composed of 12" woofer and C-4CT tweeter; frequency response 35 to 18,500 cps \pm db; power rating 25 watts; impedance 8 ohms\$53.50

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-12RW Flex-Edge Woofer

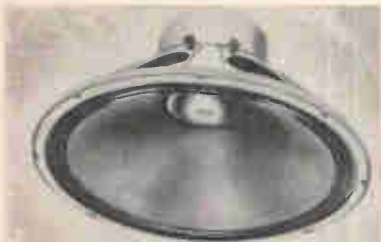


12" speaker; ceramic magnet structure produces over 1,000,000 maxwells; frequency response 16-4000 cps; 2-piece cone construction; capacity 35 watts; 16 ohms impedance.....\$59.00

Model C-12RDW Dual Woofer

Same 12" dia. type design and performance as Model C-12RW but has dual voice-coil; both stereo channels can be fed to speaker, thus single speaker provides dual-channel response.....\$64.00

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; 9 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-800 High-Pass Filter

Divides audio between woofer and tweeter; power capacity 30 watts; range is 2000-20,000 cps. for tweeter; 8 or 16 ohms.....\$7.50

Model C-1220 3-Way LC Network



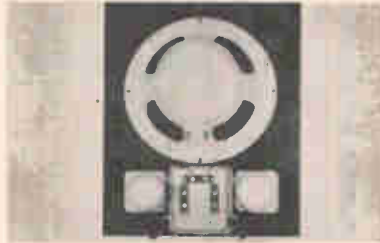
Designed for dual system: matching 16 or 8 ohms; power capacity 50 watts; 12 db. per octave attenuator; ranges: bass

15-1500 cps; mid-range 500-5000 cps, tweeter 2000 cps; 5"x5 1/2"x2 3/4".....\$21.50

Model C-1200 Two-Way Crossover

LC design; 8 or 16 ohms impedance; 8 ohm crossover, 2000 cps; 16 ohm crossover, 1500 cps; 50 watts capacity.....\$17.00

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

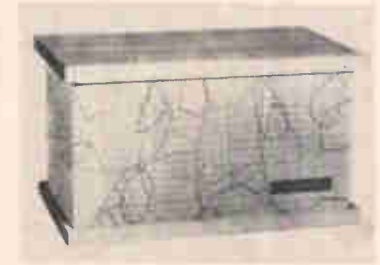
Model C-33812 Matched Speaker Set



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

CHANNEL MASTER

Model 6630 Minstrel Speaker System



Dynamic air coupling produces large cabinet sound in small enclosure; 50-15,000 cps; 9"x9"x16"; available in walnut, mahogany, blonde.....\$29.95

Model CM-10 Coaxial Speaker System



Ducted-port enclosure; 8" speaker with 2" coax tweeter; electrical crossover 3000 cps; 10 watts; 8 ohms; 2 1/2"x10"x11" deep; available in walnut, mahogany, blonde.....\$44.95

CLETRON

Model SS-8JW Wide-Range Speaker



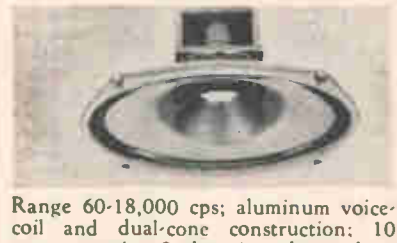
Range 60-15,000 cps; aluminum voice-coil and dual-cone construction; 10 watts capacity; 8 ohms impedance; free-air resonance 60 cps.....\$10.35

Model SS-8EC Coaxial Speaker



Range 60-15,000 cps; aluminum voice-coil; separate 3" tweeter with built-in crossover; 8 watts capacity; crossover 1800-2000 cps; 8 ohms impedance; free air resonance 80 cps; over-all depth 4 5/8"\$9.35

Model SS-69JW8 Wide-Range Speaker



Range 60-18,000 cps; aluminum voice-coil and dual-cone construction; 10 watts capacity; 8 ohms impedance; free-air resonance 70 cps; depth 4 3/16" \$10.00

Model SS-69JW4 Wide-Range Speaker

Same as Model SS-69JW8 except with 4-ohm voice-coil.....\$10.00

Model SS-12JW Wide-Range Speaker



Range 40-15,000 cps; aluminum voice-coil; dual-cone construction; 10 watts capacity; 8 ohms impedance; free-air resonance 45 cps; 6 1/4" deep.....\$13.70

COSMOS

"AH" Electrostatic Tweeter

Combination mid-range and super tweeter; 2 push-pull capacitor elements keep distortion at a minimum; RC cross-

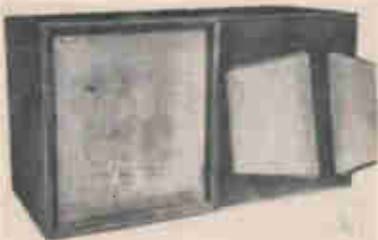
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SPEAKERS & CABINETS



over 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 $\frac{7}{8}$ " x 7 $\frac{3}{8}$ " x 5 $\frac{3}{8}$ "\$49.95

"AH" Speaker System



Full-range 40 cps to beyond audibility; bass woofer in a front- and back-loaded ducted-port bookshelf-type cabinet; mid- and high frequencies covered by two flat electrostatic transducers; includes crossover network and built-in power supply; electrostatic speakers mounted on swivel joints, telescoping shaft permits independent rotation over a wide arc; 35 square inches radiating surface on each unit; 10 watts minimum power requirement; 8 ohms impedance; cabinet finished on all four sides in walnut; Formica surface behind electrostatic elements available in satin-smooth charcoal black or walnut; 30" x 15" x 15"\$149.50

CROSBY/INTEGRAND

Model I

Electronic servo-amplifier-loudspeaker system; one 12" woofer, three 4" mid-range elements; three horn-loaded tweeters; each speaker equipped with individual servo feedback coils; three separate amplifiers, one for each of three frequency ranges; each amplifier receives servo feedback information from its respective speaker or speakers; 12 watts per amplifier (36 watts total); 4% actual acoustic distortion at 42 cps; 2% from 200 to 16,000 cps; sensitivity .75 volt for full output; 33 $\frac{3}{8}$ " h x 16 $\frac{1}{8}$ " w x 14 $\frac{1}{8}$ " d.

Model I Contemporary, walnut\$500.00
 Model I Provincial, fruitwood\$525.00
 Model I Utility model less outer wood housing\$480.00

DELCO

Model 6869 Speaker

12" woofer; response 20-4500 cps; 20 watts; 1 $\frac{1}{2}$ " voice-coil diam.\$29.50

Model 6871 Crossover Network

Input impedance 16 ohms; output impedance 16 ohms; crossover 6 db per

octave attenuation, 2000 cps.....\$14.50

Model 8007 Speaker



Wide-range 8" design covering 30-12,500 cps; 4-ohm voice coil, 20 watts\$15.00

Model 6868 Two-Way System

Covers 20-20,000 cps; includes Model 6869 woofer, Model 6870 horn tweeter, Model 6871 crossover network and treble control.....\$68.50

EICO

Model HFS-1 Speaker System



Two-way speaker system; response 70 to 12,000 cps, \pm 6 db; tuned bass reflex; Jensen 8" woofer, 6.8 oz. magnet, and matching Jensen compression-driver exponential horn tweeter with level control; crossover at 1800 cps; power handling capacity 25 watts; unfinished birch hardwood with neutral grille cloth 23"x11"x9".

Model HFS-1 (Kit)\$39.95
 Model HFS-1 (Factory wired) ..\$47.95

Model HFS-4 Speaker System

Identical to HFS-3 except compression driver horn tweeter supplied instead of cone tweeter. Unfinished, smooth sanded birch (Kit)\$83.50
 Satin mahogany or oiled walnut (Kit)\$98.50

Model HFS-4 (Factory wired)

Unfinished birch\$96.50
 Walnut or mahogany\$112.50

Model HFS-5 Speaker System

Two-way system; 8" woofer, 10.7 oz Alnico magnet; and 3 $\frac{1}{2}$ " closed back tweeter. Frequency division by high pass capacitor filter at 2,000 cps; level control for tweeter. Enclosure is of 3 $\frac{1}{4}$ "



stock and is tuned to 45 cycles by a tubular ducted port. Frequency response essentially uniform from 52 to 14,000 cps; 25 watts continuous rated

power handling capacity; 24" x 12 $\frac{1}{2}$ " x 10". Unfinished, smooth sanded birch (Kit)\$47.50
 Satin mahogany or oiled walnut (Kit)\$59.50

Model HFS-5 (Factory wired)

Unfinished birch\$56.50
 Walnut or mahogany\$69.50

Model HFS-3 3-Way Speaker System



Three-way system; 12" woofer, 1 $\frac{3}{4}$ lb. Alnico magnet; 8" closed back mid-range speaker and 3 $\frac{1}{2}$ " closed back cone tweeter. Frequency divider by quarter-section LC network at 600 cps and high pass filter at 4,000 cps; level control for tweeter. Enclosure is 3 $\frac{1}{4}$ " stock and is tuned to 25 cycles by a tubular ducted port. Frequency response essentially uniform from 45 to 14,000 cps; 30 watts continuous power handling capacity; rated impedance 16 ohms; 26 $\frac{3}{8}$ " x 13 $\frac{7}{8}$ " x 14 $\frac{5}{8}$ "; unfinished, smooth sanded birch (Kit)\$72.50
 Satin mahogany or oiled walnut (Kit)\$87.50

Model HFS-3 (Factory wired)

Unfinished birch\$84.50
 Walnut or mahogany\$99.50

ELECTRO-VOICE

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 $\frac{3}{8}$ "\$28.50

Model SPI2B "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 SPI2 "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; crossover 4000 cps; baffle opening 11"; depth 7 $\frac{1}{2}$ "\$66.00

Model SPI5B 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 SPI5 "Radax Super-Fifteen"

15" coaxial; capacity 30 watts; frequency response 30 to 13,000 cps; resonance 40 cps; 16 ohms impedance; sensitivity

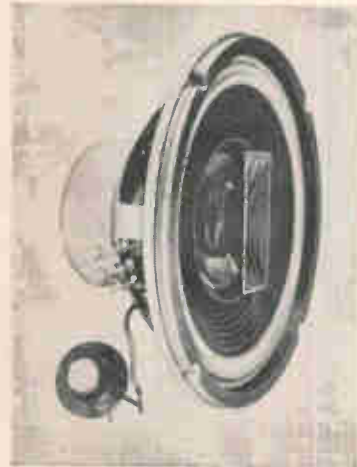


50 db; 5 1/4 lb. Alnico V magnet; crossover 3000 cps; baffle opening 13 1/2"; depth 9"; shipping weight 41 lbs. \$89.00

Model I5TRXB

15" three way; capacity 20 watts; frequency response 30 to 15,000 cps (in 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

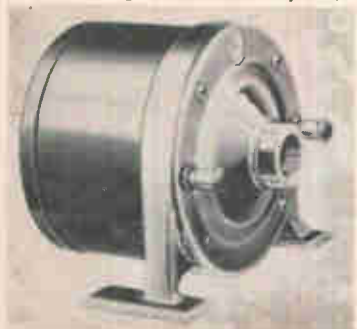
Model I2TRXB 3-Way Speaker



Combines Model SP12B, 2000 cps, crossover, Model T35B driver, Model X36 crossover, Model AT37 level control; 17 pounds.....\$66.00

Model T250 Treble Driver

Frequency response 600-3800 cps; 3 lb. Alnico V magnet; flux density 18,300



gauss; crossover at 800 cps; power capacity 50 watts.....\$81.00

Model I2TRX

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 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

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"x32"x14 3/4". Walnut, mahogany, limed oak....\$249.50 Unfinished fir.....\$199.00

Stereon 200



Contemporary design; auxiliary speaker system; same speakers as Patrician 700 except 30" woofer; 17"x16 7/8"x30".....\$375.00

DISTORTION



We believe that most manufacturers of high fidelity speaker systems are embarrassed to disclose the actual distortion levels of their speaker systems.

Our tests have shown distortion levels exceeding 30% on some very well known speaker systems.

The prime source of speaker distortion is simply the actual movement of the speaker cone within its own environment. This distortion is greatest at the bass frequencies. In fact, some systems have so much distortion at the bass frequencies that most listeners believe these systems are better. Perhaps this is because the human ear cannot detect bass distortion as easily as high frequency distortion. QUANTITY of bass is no substitute for QUALITY of bass.

To reduce distortion caused by suspension non-linearity and mechanical stresses in the cone material, we must design a speaker system with the following features:

1. limit the cone movement,
2. reduce the weight or mass of the cone system,
3. provide proper magnet and voice coil design,
4. insure linear magnetic field throughout voice coil movement
5. and maintain a rigid cone structure.

To limit the cone movement we must increase the cone area to obtain adequate bass radiation. However, increasing the cone area of single speakers also increases the cone weight or mass. THIS HAS BEEN THE GREAT PARADOX OF SPEAKER SYSTEM DESIGN.

The only way we can increase the cone area and at the same time decrease the effective cone mass is to use a large number of small speakers which have light weight and rigid cones.

The first commercial system in the world to use this very simple principle is the POLYCOUSTIC PC-28K system.

The POLYCOUSTIC PC-28K system will reproduce 30 cps tones at a 100 DB level at 1% distortion. This remarkable feat is accomplished with .08 inch cone movement.

There are 28 speakers in the PC-28K system. The output of the amplifier is divided between these speakers. Only 1/28th of the load is at each speaker. This assures us of low distortion and high power handling characteristics. No cone is unduly stressed or distorted because of excessive cone movement.

This is only part of the POLYCOUSTIC story. The rest is common sense.



SPECIFICATIONS

frequency response	2 DB from 30 to 15000 cps. maximum response 1 to 20000 cps.
harmonic distortion	1% from 30 to 15000 cps. (meas. at 100 DB)
Doppler distortion	none
transient distortion	excellent tone burst recovery
resonant peaks	none (circuit patent pending)
response dips	none (circuit patent pending)
impedance variations	impedance constant to within 4 ohms throughout entire audio range. (circuit patent pending)
operating impedance	nominal 8 ohms
peak power	88 watts
efficiency	20%
frequency dispersion	180 deg. at 5000 cps; 180 deg. at 10000 cps. (baffle patent pending)
dimensions	H. 30 1/2", W. 41 3/4", D. 9 1/4"

FEATURES

- LOWEST DISTORTION • SMOOTHEST RESPONSE •
- WIDEST HIGH FREQUENCY DISPERSION FOR STEREO •
- HIGHEST OVERALL EFFICIENCY • HIGHLY DAMPED •
- HIGHEST POWER CAPACITY BY SIZE • BIG SYSTEM SOUND • NO COLORATION OR ARTIFICIAL EMPHASIS •
- NON-CRITICAL ROOM PLACEMENT •
- NARROW SILHOUETTE •

This amazing system is available as a low cost do it yourself kit. Write for brochure.

POLYCOUSTIC COMPANY

958 ARGUELLO DRIVE
SAN LEANDRO, CALIF.

5

SPEAKERS & CABINETS

Model XT1 Stereo Mixer Transformer

To derive extra channel; combines left and right channel.....\$13.50

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" d; in walnut, mahogany, limed oak.....\$795.00

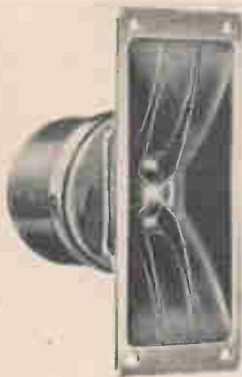
Model XI735 Crossover

Half-section; crossovers at 100, 700, 3500 cps; 17" x 9" x 3 3/4".....\$75.00

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 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 1/10"; throat diameter 7/8".....\$58.00

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 AT37 Level Control

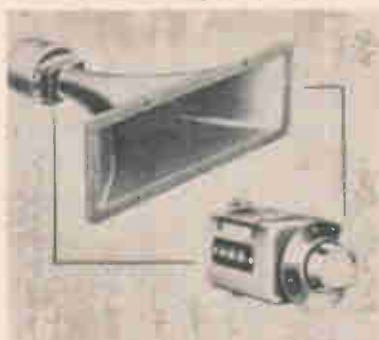
16-ohm "L" pad; sets output levels in multi-speaker systems to individual taste; dark dial.....\$3.90
Model AT37B (blonde dial).....\$3.90

Wolverine LS12 12" Speaker



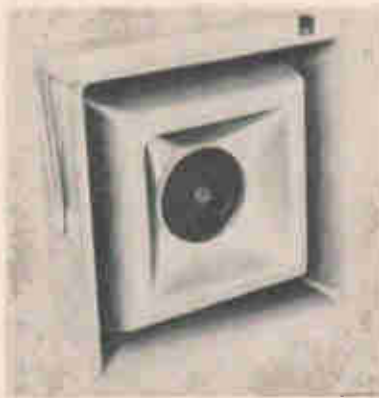
Dual-cone 12" wide range speaker; frequency response 30 to 13,000 cps; power rating 20 watts; resonance 40 cps; total flux 70,700 maxwells; impedance 8 ohms; 12 watts input for 100 db output; 3 1/2" deep.....\$19.50

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 9 1/2" x 3".....\$25.00

"Musicaster" Outdoor Speaker



Weatherproof speaker for outdoor use; frequency response 60 to 13,000 cps; impedance 8 ohms; dispersion 120°; uses back loaded folded horn design; diecast aluminum horn; 21 1/2" h x

21 1/2" w x 8 1/2" d; shipping weight 25 lbs.....\$54.00

Musicaster II (same as Musicaster); except added VHF driver to extend range to 18,000 cps.....\$75.00

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; 3 1/2" deep.....\$18.00

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 BBI-BB5 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

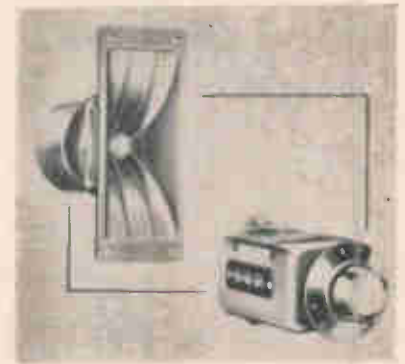
BB2 Adds T35 tweeter and X36 crossover; shpg. wt. 5 lbs.....\$50.00

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 HFI High-Frequency Step-Up Kit



Extends range beyond audible limit; consists of TW35 tweeter and CR35 crossover-level control; requires opening 1 3/4" x 4 1/4".....\$29.00

The "Aristocrat"

Corner horn: for 12" full range speaker



or 2- or 3-way systems; 29 $\frac{3}{8}$ " h x 19" w x 16 $\frac{1}{4}$ " d; shpg. wt. 44 lbs.

Mahogany\$72.00
Blonde or walnut\$79.00

Aristocrat 100

Includes Model SP12B 12" speaker in Aristocrat enclosure.....\$103.00

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 $\frac{3}{8}$ " h x 19" w x 14 $\frac{1}{2}$ " d.

Mahogany\$63.00
Limed oak or walnut.....\$69.00

Marquis 100

Includes Model SP12B 12" speaker in Marquis enclosure.....\$94.00

Model LS-15 15" Speaker

Response 35-13,000 cps; free-air resonance 50 cps; 20 watts program material maximum; 8 watts to drive; 8 ohms; recommended damping factor 15; mechanical crossover 4500 cps; 6 $\frac{1}{32}$ " deep\$24.50

Wolverine Model LT-12 Speaker

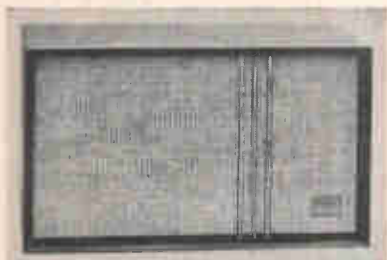


3-way design; 40-18,000 cps; electrical crossover 3500 cps; 20 watts program material; 8 ohms; 6" deep; 2" woofer voice-coil; 1" tweeter.....\$29.50

Model 103F Speaker Kit

Complete set of components used in "Patrician 700"; includes 30W, SP12, T250, T350, 8HD, and 1735 speakers.....\$485.00

The "Regal 300"



Bookshelf design with 12" foam-cone woofer; electrical crossover 200 cps; 8" cone-type midrange mounted in isolated chamber; compression-type diffraction horn-loaded high-frequency driver takes over at 3500 cps; 70 watts program material; response 35-18,000 cps; 8 ohms;

14" h. x 25" w. x 13 $\frac{1}{2}$ " d.; available in walnut, mahogany, or oak.....\$179.00
Unfinished fir 14" h. x 23 $\frac{1}{2}$ " w. x 12" d.\$149.00

Kit version including all speakers & components; 14" h. x 23 $\frac{1}{2}$ " w. x 12" d.\$125.00

The "Leyton"



Bookshelf, two-way design using a 10" woofer, electrical crossover 800 cps; 5" midrange speaker; mounted in isolated chamber to prevent interaction; response 40-15,000 cps; 8 ohms; to be used with 12-watt minimum amplifier; 14" h. x 25" w. x 12" d.; walnut or mahogany.....\$84.50

The "Esquire 200A"



Bookshelf design using 10" woofer; electrical crossover 800 cps; 8" cone-type midrange mounted in isolated chamber to prevent interaction; compression-type diffraction horn-loaded high-frequency driver that takes over at 5000 cps; response 40-18,000 cps; 8 ohms; to be used with amplifier 12 watts minimum; 14" h. x 25" w. x 13 $\frac{1}{2}$ " d.; available in walnut or mahogany.....\$133.00
Unfinished 14" h. x 23 $\frac{1}{2}$ " w. x 12" d.\$107.50

Kit version with all speakers & components; 14" h. x 23 $\frac{1}{2}$ " w. x 12" d.\$93.00

KD Enclosure Kits

Kits of pre-cut clear-grain birch for building standard EV enclosures; complete with glue, screws, and detailed instruction book.

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

KD9 "Marquis"; takes all 12" speakers plus EV Models BB1, BB2, BB3, and BB4 building-block kits; 29 $\frac{3}{8}$ " h. x 19" w. x 14 $\frac{1}{2}$ " d.....\$36.00

EMI

Stereoscape 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

Model DLS 529 Speaker System

Bookshelf type; walnut veneer with metal grille; 24" x 13" x 12 $\frac{1}{4}$ " d.; combines one woofer (13 $\frac{1}{2}$ " x 8 $\frac{1}{8}$ " elliptical driver with aluminum cone, plastic sus-



pension) and two 3 $\frac{1}{2}$ " tweeters; crossover operates from 4500 cps upward; response 40-15,000 cps; high-efficiency-type system; made by EMI of England\$159.00

FISHER

Model XP-1 Speaker System



Consists of 12" woofer, 5" midrange, 3" cone tweeter; crossover has air coils and oil-filled capacitors; woofer can be used independently; power capacity 60 watts; frequency response 30 cps—inaudibility; brilliance control rear of cabinet; 13 $\frac{1}{2}$ " x 24" x 11 $\frac{3}{4}$ "; 40 pounds.
Walnut, mahogany, cherry.....\$129.50
Unfinished birch\$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

Model XP-4 3-way Speaker System



Four speakers, 12" woofer with 2" voice coil, 2-5" midrange, 2" hemispherical high-frequency unit covering angle of 120 degrees; balance controls for middle and high frequencies; 3-way crossover; 8 ohms; response 30 cps to beyond audibility; 12 $\frac{1}{2}$ " x 24 $\frac{1}{2}$ " x 14".

the 1962 PHOTOGRAPHY ANNUAL IS A GEM!!



The editors of POPULAR PHOTOGRAPHY have gathered the finest, most beautiful pictures of the year for the 1962 edition of PHOTOGRAPHY ANNUAL. It's a glittering array of the jewels of the world of photography: page after page of great pictures that illustrate the many facets of the camera. Once again, the publication of PHOTOGRAPHY ANNUAL is the crowning achievement of the photographic year! Here are some of the highlights of the 1962 PHOTOGRAPHY ANNUAL:

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- International Portfolio: pictures from all over the world!

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5

SPEAKERS & CABINETS

Mahogany, walnut or cherry.....\$199.50
Unfinished birch.....\$189.50

FRAZIER

La Fiesta



Same driver units as the Del Mar; modified Helmholtz: 10 1/2" x 11 7/8" x 27 7/8"\$69.50

Midget

Frequency response 80-10,000 cps; power handling capacity 6 watts; 4 ohms; 15 3/4" x 6 1/4" x 9 1/2"; wt. 10 lbs\$19.95

Patio



Corner speaker; frequency response 50-15,000 cps; 15 watts; 8 ohms; 15 7/8" x 15 7/8" x 8 3/4"\$49.75

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 7/8" w

x23 1/2" h x 11 7/8" d; shpg. wt. 40 lbs.....\$89.50

Lexington I Speaker System

Similar to "Del Mar" model with identical speaker system but cabinet styled in Early American.....\$99.50

Coronado I Speaker System

Similar to "Del Mar" model with identical speaker system but cabinet of Contemporary design\$89.50

Black Box I Speaker System

Basically the same as the "Del Mar," "Lexington I," and "Coronado" with 3 cubic foot volume and identical speaker system. Cabinet is utility version to be used for custom installation. 23 7/8" x 19" x 11 7/8"\$57.00

Lexington II, Coronado II, Black Box II

All three designs are similar to the "Del Mar" series except a compression tweeter is used. For greater "presence" in treble range, rather than 3 1/2" cone tweeter; also included is high-frequency variable attenuator; response 40-17,000 cps.

Lexington II\$124.50
Coronado II\$114.50
Black Box II\$ 82.00

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 1/4" w x 30" h x 16 1/2" d\$290.00
Utility model\$195.00

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 1/2" x 16"; 70 lbs.; power handling capacity 15 watts continuous with peaks of 25 watts.....\$137.50

Monte Carlo Enclosure

Book-shelf enclosure; dual tweeters; frequency response 70-15,000 cps.; tweeters mounted for right and left placement: 15 7/8" x 10 3/4" x 11 7/8"\$49.75
Unfinished\$42.30

Cortez Enclosure

Components same as Capri; frequency response 40-17,000 cps.; 8 ohms impedance; complete with speakers and drivers; 23 7/8" x 11 7/8" x 15 7/8"; 28 lbs.\$40.00

GENERAL ELECTRIC

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 G-502

STEREO/HI-FI DIRECTORY



Dual-cone 12" speaker; frequency response 30-16,000 cps; 60 degrees dispersion; power rating 25 watts; 8 ohms. \$34.95

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

Triaxiom Series

Complete range of three-way speakers



for every preference and budget; response 20-20,000 cps; "Rigidflex" cones.

Triaxiom 208 (8", cone resonance 35 cps; 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

Model IDM-30 Mixer and Frequency Dividing Network

Designed to work with one or two
1962 EDITION

We'd like to send you these important new books for a 7-day free trial examination

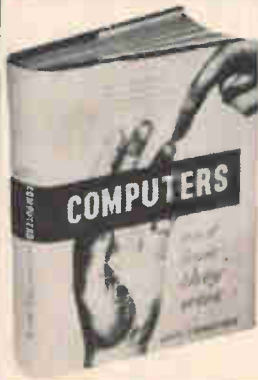
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by James D. Fahnestock



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EF-1715

5

SPEAKERS & CABINETS

stereospheres\$39.50

Axiom 80

9½" speaker, 20 to 20,000 cps, 15 watts, peak power handling, fundamental resonance 20 cps; flux density 17,000 gauss; utilizes 3 pairs of double action cantilevers to provide a custom built, hand assembled, true free edge cone speaker to handle lowest bass tones with minimum distortion.....\$68.50

Audiom 652

12" woofer; cone resonance 30-35 cps; total flux 240,000 maxwells; 3" voice coil diameter; power rating 35 watts\$69.50

Audiom 755

15" woofer; total flux 240,000 maxwells; cone resonance 25 cps; 3" voice coil; power rating 40 watts.....\$78.00

Audiom 955

15" woofer; cone resonance 25 cps; total flux 308,000 maxwells; 3" voice coil; power rating 50 watts.....\$108.00

Trebax 50XL Tweeter



High-frequency pressure driver supplied with built-in Hypelliptical horn (and 12 db twin half-section professional crossover network with constant impedance L pad): driver is custom assembled, employing 1" aluminum voice coil; diaphragm is a self-aligning assembly with air chamber and phase equalizer: range 2500-25,000 cps; 50 watts capacity: 16 ohms\$46.50

Model S10-30 Stereosphere Speaker



Omnidirectional speaker for reproduction of frequencies from 300-20,000 cps.; can handle 30 continuous watts; largest dimension is 10".....\$79.50

Midax H-750 Mid-Range

Mid-frequency pressure-driven horn-loaded speaker; recommended crossover frequencies at 750 and 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

Trebax 35XL Tweeter

Same as 50XL but designed to handle 35 watts in two- or three-way systems\$39.50

Alpha Cabinet

Enclosure can be placed horizontally or vertically; ideal in pairs for stereo; houses Goodmans full-range 8" driver and 3½" cone tweeter; response 40-17,000 cps; capacity 15 watts; genuine walnut or mahogany finish.....\$49.95

Acoustical Resistance Units



Special design acoustical resistance unit for speaker enclosure; reduces the enclosure space required for bass reflex by 1/3; extends bass response down to 20 cps with speakers having cone resonance of 40 cycles or less; effectively loads speaker to zero cps.

Model 172 (10½"x10").....\$10.90 Net
Model 180 (12"x7").....\$11.75 Net
Model 280 (14"x10").....\$14.35 Net
Model 480 (17½"x13½")...\$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

HARMAN-KARDON

Citation X Speaker System

Split, slot-loaded conical horn with two 7½-foot sections folded within enclosure; honey-comb construction with slot terminations located underneath cabinet; speaker is a Lowther design, diffusing sound radiation in a hemispheric pattern; vertically and omnidirectional in a horizontal pattern; range 20-50,000 cps; aluminum voice coil, twin-cone construction with foam plastic



front and rear suspension: 20" w. x 14¾" d. x 36½" h. (semi kit).....\$250.00

HARTLEY

Model XP 10" Speaker

Full range speaker with polymerized cone; built-in high-frequency propogator; 20 watts; frequency response 25-25,000 cps; 8 ohms impedance; ~ lb. Alcomax II permanent magnet; flux density 13,000 gauss; diaphragm displacement ½"\$75.00

Model 220MS 10" Speaker

Full-range speaker; heavy cast-aluminum basket; 5¾ lb. Alcomax II magnet;



16,000 lines/sq. in. flux density; tri-polymer cone with magnetic suspension; 8-ohm voice coil; response at low end to 16 cps.....\$13.00

Model 320 Speaker

Chemically treated polymerized paper-cone version of Model 220MS speaker less "Magnetic Suspension". Sold only with enclosures.

Capri Shelf Model Enclosure



For use with the 320 speaker; totally enclosed cabinet containing 35' absorbent material; 24" x 13½" x 12"; in oiled natural walnut with bamboo grille, finished on all sides.....\$120.00
With Model 220MS speaker.....\$180.00

Duo Enclosure



Speaker mounting boards are angled out to allow direct radiation and wall reflection for stereo diffusion; 36"x33"x15";
Finished cabinet\$125.00
Unfinished Birch.....\$ 99.00

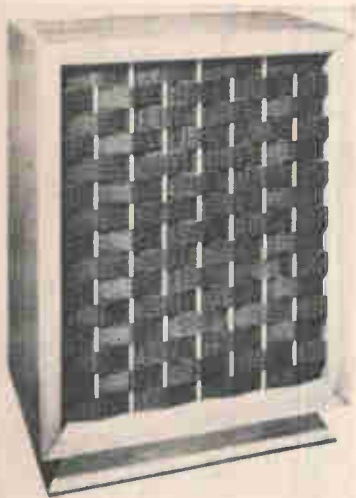
Holton, Jr. Speaker System

Uses Model 220MS speaker; oiled, rubbed walnut finish with cane front

grille; also available with new 320 speaker which is chemically-treated version of Model 220MS; frequency response 25-25,000 cps.; power capacity 25 watts; Model 320 speaker has dome-shaped center high frequency radiator; 10" diameter; 30"x15"x12" over-all dimensions.

With Model 220MS speaker.....\$195.00
With Model 320 speaker.....\$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 220MS speaker; heavily braced, damped cabinet in natural woods; 24"x13"x34" over-all dimensions including legs.

Cabinet with 220MS speaker.....\$245.00
Cabinet with 320 speaker.....\$195.00

"Harp" Enclosure

Accommodates one or two speakers; modern lines\$115.00

Hartley-Luth "Holton" Speaker System

Features Model 220MS wide-range speaker available in mahogany, walnut or blonde\$245.00

Cameo Enclosure



For use with one speaker; 22"x17"x15" over-all dimensions.

In natural wood.....\$90.00
Unfinished\$63.00

HEATH

Model AS-2U Acoustic Suspension 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-2U (Kit Unfinished) \$69.95

Model AS-10 Acoustic Suspension System

Utilizes acoustic suspension principle licensed by Acoustic Research, Inc.; 10" acoustic suspension bass speaker and two 3 1/2" cone-type high-frequency speakers, housed in infinite baffle enclosure, covering 30-15,000 cps; "dis-



persal-array" of tweeter permits either upright or horizontal operation; high-frequency control allows adjustment of highs; cabinets are factory-assembled and finished on four sides; kit assembly involves wiring simple crossover network and installing speakers; 41 lbs. Model AS-10.....\$59.95

Model AS-21 "Legato-Compact"

New speaker system retains performance characteristics of the earlier model while adding contemporary styling and compact size; two 12" Altec Lansing low-frequency speakers cover 30-800 cps; Altec Lansing exponential horn and



high-frequency driver cover 800-22,000 cps; high-efficiency speakers permit use of 3-watt amplifiers to drive system; factory-assembled cabinets in pre-finished mahogany, walnut, or unfinished birch;

cabinets of 3/4" furniture-grade plywood; crossover network factory wired; 32"x19"x32 3/8"; 132 lbs.

Model AS-21 unfinished.....\$224.95
Model AS-21

walnut, mahogany.....\$229.95

All components except cabinet for custom installation.....\$179.95

Model ASW-41 Speaker System

Measures 11"w. x 8"h. x 6 1/2"d.; completely factory-built in finished or unfinished cabinets; features 6"x9" extended-range dual-cone speaker, 6.8 oz. mag-



net; response 60-16,000 cps; handles 12 watts peak; impedance 8 ohms; for use as extension speaker or for converting mono system to stereo. 8 lbs.

Model ASW-41U (unfinished)...\$10.95

Model ASW-41W (walnut).....\$12.95

Model AS-51 Speaker System



Ducted-port bass reflex bookshelf style enclosure; frequency response: 50 to 12,000 cps ±5 db; power rating: 25 watts of program material; impedance: 16 ohms; 8" Jensen low frequency speaker with 6.8 oz. Alnico V magnet, Jensen high frequency horn loaded compression driver with 4.7 oz. Alnico V magnet; built-in high pass filter and L-pad; 1/2" plywood construction; 11 1/2"h x 23"w x 11 3/4"d. (kit).....\$39.95
Model AS-51A

assembled cabinet.....\$43.95

I.M.F.

Mark II Woofer



12" metal and polystyrene cone; 4" voice coil; damped aluminum dome covers 200-3000 cps; polystyrene flare cone covers frequencies below 200 cps; 22 pound magnet; woofer has "piston" action (no edge suspension) with 1/8" linear cone excursion; in suitable enclosure will deliver .5 acoustic watt @ 20 cps at 5% harmonic distortion from 10 w. amplifier; 16 ohms impedance\$135.00

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SPEAKERS & CABINETS

Mark I Woofer

Similar to Mark II except that voice coil is 2" and power rating is at 35 cps; total flux 350,000 Maxwells.....\$78.75

"Styrene Pressure" Speaker System

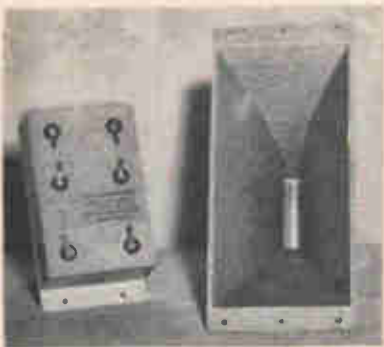


Freely suspended, 12" molded plastic cone woofer, expanded from the rear to convex front surface; aluminum rods transmit mid-range to front surface; impregnated-fabric-diaphragm tweeter; pressure diffusion slits ensure freedom from breakup, extend frequency response, provide smooth dispersion pattern; system response from below 25 cps to over 18,000 cps; impedance 16 ohms; walnut cabinet; 28 1/2" h. (including legs) x 15" w. x 11 1/2" d.....\$200.00

"Standard Pressure" Speaker System

Matched woofer, crossover, high-frequency pressure unit; woofer is felted paper cone, plasticized edge treatment; 11,000 gauss; designed for pressure loading; high-frequency pressure unit has impregnated fabric diaphragm; pressure diffusion slits ensure freedom from breakup, extend frequency response, provide smooth dispersion pattern; system response (in recommended pressure cabinet) 30-18,000 cps; impedance 16 ohms\$55.00

Ribbon High-Frequency Speaker



Horn-loaded ribbon design; range 2000-20,000 cps \pm 2 db; matches to any woofer; for best results recommended for use with Mark I or Mark II woofers; with crossover will handle 30 watts; with crossover\$68.75

IONOVAC

Model DuK-5

High-frequency tweeter & power supply; response 3500-20,000 cps; employs



no moving parts—producing sound by electrically charging air by means of sound-generating cell; horn is 9" high; power supply 2 5/8" x 2 5/8" x 5 3/8"\$69.00

Model DuK-20

Compact, full-range speaker system; can be used as bookshelf unit, upright for floor mounting; horizontally on thin-line legs (end-table height); speakers



include Model DuK-5 high-frequency tweeter, two mid-range speakers covering 800-3500 cps; one 12" high-compliance woofer; 30"x14"x13".....\$187.50
Stand for Model DuK-20.....\$ 15.00

Model DuK-30

Wide-range columnar for corner mounting; includes Model DuK-5 tweeter, two mid-range speakers, one 12" high-compliance woofer; corner baffle designed specifically for corner mounting; similar in shape to Model DuK-40; 48" x 15 3/8" x 11".....\$199.50

Model DuK-40

"Stereo-Vac" small, columnar-type baffle housing the Model DuK-5 tweeter in addition to a specially engineered 8" high-compliance loudspeaker for all frequencies below 3500 cps; Unit measures 37" high x 12 1/2" wide x 9 1/2" deep; similar to Model DuK-30 above\$149.50

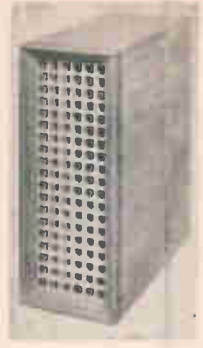


Model DuK-50

Wide-range bookshelf speaker system; includes Model DuK-5 tweeter plus specially engineered 8" high-compliance speaker for all frequencies below 3500 cps.\$139.50

Models 10 through 50 available in variety of fine woods with decorator tones.

Model DuK-10
"Add-On" speaker baffle unit consisting of Model DuK-5 high-frequency speaker and power supply; modulator and horn built into baffle with acoustic lens; 13 1/2" x 11"\$79.50



ISOPHON

Model G-3037 Speaker System

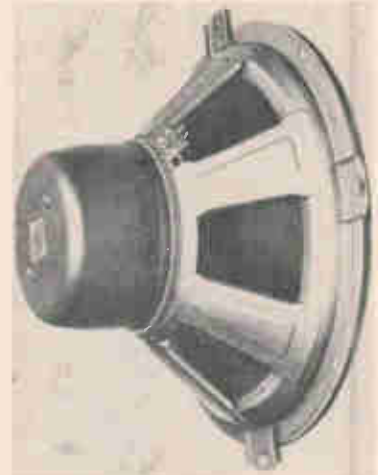
Four-speaker system composed of one 12" woofer, one folded horn compression-type midrange, and two cone-type tweeters; crossover network; response



35-17,000 cps; 25 watts; baffle-mounted\$95.00

Model P-38

15" woofer; frequency response 35-



6,000 cps; resonance 45 cps; peak power rating 50 watts; 12.2 lbs.....\$102.50

Stereonetta



STEREO/HI-FI DIRECTORY

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 $\frac{1}{16}$ " w; 3.8 lbs.....\$29.95

Orchestra

12" coaxial speaker; frequency response 30-18,000 cps; peak power rating 20 watts; 11.2 lbs.....\$69.75

JANSZEN

Model 130 Tweeter

Push-pull, constant charge electrostatic tweeter; capacity 50 watts; frequency response 500 to 30,000 cps; harmonic distortion less than 0.5% at 50 watts input below 10,000 cps; dispersion 120°; a.c.-operated bias supply, LRC

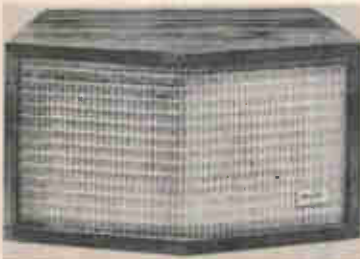


high-pass filter; power supply draws 2 watts, 117 volt 60 cycle a.c.; size 7 $\frac{1}{4}$ " x 22" x 13"; shpg wt 16 lbs.

- 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 $\frac{1}{4}$ " x 23 $\frac{1}{2}$ " x 10").....\$161.00

Model 65 Tweeter

Lower priced version of Model 130: 2 push-pull radiating elements; frequency response 700 to 30,000 cps; maximum input 50 watts; LRC high-pass filter crossover; distortion less than 0.5%



harmonic at 50 watts below 10,000 cps; high frequency dispersion 60°; impedance 8 ohms; power consumption 2 watts; 12 $\frac{3}{4}$ " w x 6 $\frac{3}{4}$ " h x 8 $\frac{1}{2}$ " d.

- Model 65M (Mahogany).....\$89.50
- Model 65B (Birch).....\$89.50
- Model 65W (Walnut).....\$91.50
- Model 65UA (Flat Black).....\$86.00

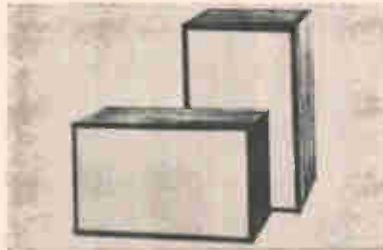
Model 350 Dynamic Woofer



11" cone woofer designed for use with 2.2-cubic foot (or larger) fiberglass-filled enclosure; frequency range 30 to 2000 cps with mechanical rolloff above 2000 cps; fundamental woofer resonance 40 cps; magnet structure weighs 3 $\frac{1}{4}$ lbs.; flux density 10,800 gauss; power handling: up to 100 watts peak on complex music; impedance 8 ohms.....\$44.50

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 $\frac{1}{4}$ 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 $\frac{1}{4}$ "; 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

JanKit 41



Consists of electrostatic two-element model mid/high frequency driver supplied in cabinet and Model 350 woofer both mounted on single panel mounting board; designed for custom installations; cabinet should be at least 2 cubic feet in volume; overall dimensions 19 $\frac{1}{2}$ " h. x 16" w. x 7 $\frac{1}{2}$ " d.....\$99.95

JENSEN

Model GS-3 Galaxy III Stereo System



Consists of 12" Flexair woofer as bass-center speaker and two satellite units consisting of 1 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 $\frac{1}{4}$ " x 25 $\frac{1}{2}$ " x 11 $\frac{3}{8}$ "; satellites 11 $\frac{1}{2}$ " x 7 $\frac{7}{8}$ " x 1 $\frac{3}{8}$ "; finishes are walnut, cherry, oak, mahogany.

- Model GS-3 (finished).....\$229.50
- Model GS-3U (unfinished).....\$195.50
- ST-979 Console base.....\$9.95

Model TF-3 3-Way Speaker System

Bookshelf system; has 10" woofer, 2-3 $\frac{1}{2}$ " midrange units, and spherical sec-



tor tweeter; crossovers at 2000 and 10,000 cps; power rating 25 watts; high frequency control on rear; impedance 8 ohms; 13 $\frac{1}{2}$ " x 23 $\frac{3}{4}$ " x 11 $\frac{3}{8}$ "; 38 lbs.

- TF-3 (unfinished).....\$79.50
- TF-3 (oiled-walnut).....\$99.50
- TF-3 (decorator walnut or cherry).....\$109.50

Model P6-TX

Six inch extended range speaker: 6 $\frac{1}{16}$ " diameter, 3 $\frac{3}{16}$ " deep, 5 $\frac{1}{4}$ " baffle opening; 7.5 watts; 3.2 ohms; 3.16 oz Alnico V magnet; voice coil diameter 3/4".....\$5.05 Net

KDF-1 2-Way Speaker System Kit

Includes P8-QF 8" Flexair woofer, enclosure vent tube, P35-VAH tweeter, coupling element, terminal panel, balance control; 7 $\frac{3}{4}$ lbs.....\$29.75

Models UX-80, UX-120



Model UX-80 is 8", 6 $\frac{1}{4}$ " depth; Model UX-120 is 12", 8 $\frac{1}{2}$ " 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-10U 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 DX-120

12" full-range unit, 20 watts, response 40-13,000 cps; resonance 48-50 cps; 16

5

SPEAKERS & CABINETS

ohms impedance; 1 lb. DP-Alnico V magnet; dual cones; mechanical crossover at approximately 4000 cps; single voice coil.....\$27.50 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 1/8" deep, 10 1/2" baffle opening required; P10-SX is 12 watts, P12-SX is 13 watts; 8-ohms impedance; 4.64 oz Alnico-V magnets in both models; 1" diameter voice coils.

P10-SX\$9.58 Net
P12-SX\$10.32 Net

Model CX-120

12" three-element coaxial; 20 watts; response 30-15,000 cps; resonance 40-50 cps; 16 ohms impedance; 1 lb. DP-Alnico V magnet; compression-driver su-



per-tweeter; two-cone radiator for 30 to 4000 cps range; includes high-frequency balance control.....\$52.50 Net

Model H-222



Coaxial two-way system; 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

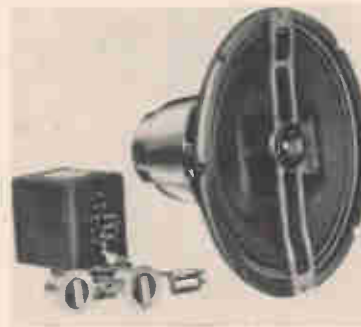
Models K-80A, K-210, K-310A



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

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; thru-bore compression-driver mid-channel unit with separate horn for 1,000 to 4,000 cps range; compression super-tweeter; tweeter and midrange controls;



depth 11 1/8"; shipping weight 33 lbs.\$134.50 Net

Model H-223F Speaker



Coaxial 12" speaker with Flexair woofer; frequency response 20 to 15,000 cps in Model BF-100 enclosure; tweeter balance control; impedance 16 ohms; power rating 30 watts.....\$7.50

Model C12-NL



12" woofer; 7" deep, 10 1/2" diameter baffle cutout required; single cone 25 watts; 30 to 2,000 cps, resonance 55 cps; 16-ohms impedance; 1 3/4 lb DP Alnico-V magnet; viscous edge damped diaphragm; shipping weight 10 lbs.\$36.50 Net

Model P12-RL



12" woofer; 6 3/16" deep, 10 1/2" diameter baffle cutout required; 20 watts; 4- 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 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 G-610B

Triaxial 15" 3-way speaker; 40 watts; 16-ohms impedance; crossovers at 500 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 1/4"; depth 10 3/4"; crossover and control networks.....\$252.75 Net

Model P35-VAH



Direct radiating cone type tweeter; 3 1/2" square x 2 1/8" deep, 3 1/8" diameter baffle cutout required; 15 watts; re-

sponse 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 3 lbs; 3"x7 1/4"x6 1/16"; 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; 40 watts power rating. 2 1/2 lbs.\$35.00 Net

Model C12-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.....\$37.50

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 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-103A tweeter, A-204 network, ST-946 balance control; 16 ohms impedance; 6 3/4 lbs shipping weight.....\$32.50 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; 1/2 lb. DP-Alnico-5 magnet; impedance 16 ohms; 5" deep.....\$12.50

Model P8-UM Mid-Range

8" direct radiator mid-range; power rating 30 watts; for 600 to 4,000 cps range; cover provides acoustic isolation; 2 1/2 oz. DP-Alnico-5 magnet; impedance 16 ohms; over-all depth of speaker 4 1/2"\$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; 2 1/4 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

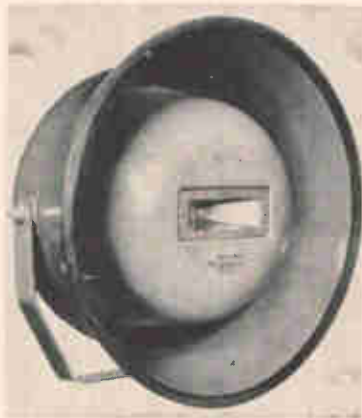
Model ST-946 Balance Control

Provides attenuation of tweeter in systems with power ratings up to 30 watts; impedance 16 ohms.....\$3.95

Model ST-947 Balance Control

Provides attenuation of tweeter and mid-range in systems with power ratings up to 40 watts; output impedance 16 ohms\$4.50

Model HF-100A



Weatherproof coaxial speaker; low- and high-frequency units enclosed in projector made of glass fibre with aluminum outer horn; 25 watts; 60 to 15,000 cps; 16-ohms impedance; 8" woofer and horn-loaded compression

driver high-frequency unit; 2,000 cps crossover; 2 3/8" diameter, 1 3/8" deep.\$77.70

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 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-



hogany; 32" h x 21" w x 18 1/4" d. \$159.50
Model BF-100 enclosure only; without speakers\$79.50

Model KT-33 Components Kit

Driver components for Models CN-100, TR-10, and TR-10U speaker systems; complete with instructions for building enclosure and installing speakers; does not include Model DC-3 Stereo Director; includes C12-NF 12" woofer, P8-UM 8" midrange, RP-103A compression driver tweeter, hi-frequency control, crossover network; complete with cabinet-building directions.....\$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; matched for stereo applications\$160.00

Model DXF-80 Loudspeaker

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Woofer is capable of $\frac{3}{8}$ " total motion bass response down to 36 cps; radiator driven by same voice coil responds up to 14,000 cps; $\frac{3}{4}$ lb. DP Alnico 5 magnet; power rating 20 watts, 40 watts peak; impedance 16 ohms; includes tube vent for cabinet; $5\frac{1}{4}$ lbs. \$24.50

Model TR-10 TRi-ette Speaker System



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

Model P8-QF Flexair 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 KTF-2 Speaker Kit



Includes P10-RJF woofer, $\frac{1}{2}$ lb. Alnico V magnet; two P35-VAH tweeters; crossover network; H.F. control; enclosure vent tube; complete assembly instructions. \$39.75

Model KTF-3 Speaker Kit

Includes P10-PF high-compliance woofer; two special midrange units; ultra-tweeter; M.F./H.F. balance control; crossover network; enclosure vent tube; complete enclosure construction details; ideal for home projects. \$57.75

Model 3-P/W1 Low-Frequency Speaker



Molded "Polytec" plane piston radiator—a flat surface instead of conventional cone; response 20 to 600 cps; 16 ohms; 25 watts, $2\frac{3}{4}$ " deep, $10\frac{1}{4}$ " diam.; must be used with full dividing network, Jensen A640 \$39.75

1962 EDITION

Corner horn back-loading system with bass response down to 10 db at 49 cps; same K-33, K-55, K-77 drive units used in "Klipschorn".

Prices from \$314 to \$281 for complete system; to \$171 with economy drive; also utility box only.

1962 EDITION

Model TW-22 Tweeter



Response 2000 to 14,000 cps; use crossover frequency of 2000 to 4000 cps; 16 ohms; $3\frac{1}{2}$ " cutout; to be used with 25-watt systems \$9.75

Model 3-P/K Speaker System Kit

For custom installation; complete kit of five speakers and crossover network; includes 3-P/W1 woofer, M-80 midrange, two TW-40 tweeters, E-10 ultra tweeter, and M-1473 crossover network; has H.F. control, vent tube for enclosure; range 20 cps to beyond audibility; crossover at 600, 4000, and 10,000 cps; 25 watts; 8 ohms. \$97.50

Model X-10 Speaker System



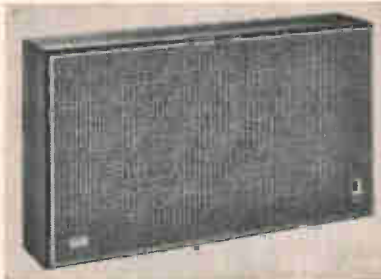
Ultra-compact two-way system; 3" tweeter for frequencies to 14,000 cps; low-end response produced by a special miniature woofer, mass-loaded and 10 oz. "Syntox-6" magnet; volume control on front panel; 6 watts max.; $7\frac{1}{4}$ " x 13 " x $4\frac{5}{8}$ "; oiled-walnut \$29.75

Model TS-2 Speaker System

Bookshelf three-speaker, two-way system; P10-RJF woofer; two P35-VAH tweeters; range 25-14,000 cps; crossover 2000 cps; 20 watt rating; 8 ohms; H.F. balance control on rear; $13\frac{1}{2}$ " x $23\frac{3}{4}$ " x $11\frac{3}{8}$ ".

Utility unfinished \$64.50
 Contemporary oiled-walnut \$79.50

Model 3-P Series Speaker Systems



Super-slim designs for floor, shelf, or wall mounting; five speakers identical to Model 3-P/K speaker system kit.

Model 3-P/1 oiled-walnut, $13\frac{7}{8}$ " x 25 " x $5\frac{1}{2}$ " \$119.50

Model 3-P/2 oiled-walnut, $28\frac{5}{8}$ " x $21\frac{1}{4}$ " x $3\frac{3}{8}$ " \$139.50

Model 3-P/3 Speaker System

Special decorator styles available in Danish, Provincial, and Traditional;

from 1000 cps. to limit or nearing; 90 radiation; diaphragm made of Saran film; 8 " x 10 " x 3 " \$26.95

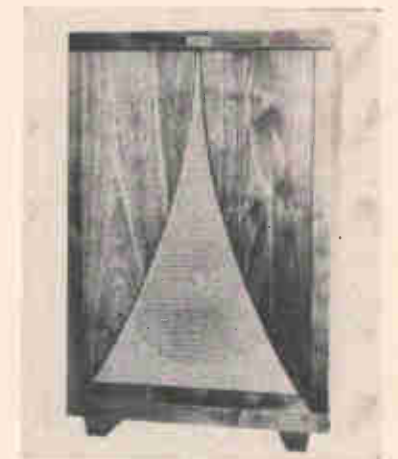
Model KN-850 Deluxe 12" Speaker

Similar to KN-815A; magnet is Magloy X; overall response 30-20,000 cps.; magnet weight 5 pounds. \$79.50

$16\frac{1}{4}$ " x $25\frac{1}{2}$ " x $11\frac{3}{8}$ "; has five-speaker system identical to Model 3-P/K speaker kit \$159.50
 Model 3-P/3U utility model, unfinished gum wood \$129.50
 Matching bases in same wood and styles \$9.95

KARLSON

Model "15" Speaker Enclosures



Speaker is front loaded by tapering chamber as shown; will match standard speakers without adjustment or tuning; available for 12" or 15" speakers; finished assembled, unfinished assembled, and kit form; also available with tapering pieces in back of grille cloth for full grille appearance; 33 " h. x $22\frac{1}{2}$ " w. x 18 " d.; cut for 15" speakers; adapters available for 12" speakers; dispersion for all speakers is uniform for all frequencies within a solid angle 120 degrees, tilted 30 degrees upward.

Model 15MX mahogany, Model 15WX walnut, Model 15-BX blonde oak. \$129.00

With full grille across entire front of cabinet, Model 15MXG mahogany, Model 15WYG walnut, Model 15-BXG blonde oak. \$129.00

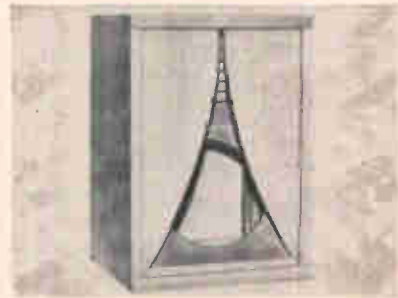
Deluxe unfinished assembled Model 15-U furnished with birch exteriors, trim and footings; finishing instructions included \$87.00

Basic unfinished assembled, Model 15-BSC-U constructed of high-density particle board, ideal for built-in installations, special veneering, decorating, or painting; trim and feet not included \$66.00

Deluxe kit Model 15-K \$57.00
 Basic kit Model 15-BSC-K \$45.00

Model "12" Speaker Enclosures

Same as Model "15" except that the dynamic range in the bass is reduced to an average of 110 db instead of 120 db and the fundamental loading extends down to $\frac{2}{3}$ of speakers' free-air resonance instead of $\frac{1}{2}$; response down to 20 cps attainable with new speakers



129

net 9.90 going at 4.95 plus postage, (10 for 39.95). Other Norelco speaker sizes at bargain prices—SEND FOR SPEAKER SPECIFICATION SHEET.

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5**SPEAKERS
& CABINETS**

now available; 24 $\frac{3}{4}$ " h. x 16 $\frac{3}{4}$ " w. x 13 $\frac{3}{4}$ " d.; suitable for 10" or 12" speaker



Electrostatic speaker system that reproduces entire audio range; for adequate reproduction of very low frequencies total radiating area of 28 sq. ft. is used (14 sq. ft. in front and rear, radiation fore and aft is equal); consists of two complete full-range speakers with built-in power supplies and step-up transformers; two sections can be joined or separated completely for use in stereo

5**SPEAKERS
& CABINETS****Model KN-2200 3-Way Speaker System**

High-compliance system: 10" woofer with flexible-fold cone suspension and 1 lb. Alnico V magnet; two 3 $\frac{1}{2}$ " radiators for treble and midrange; hemispherical u.h.f. tweeter; two crossover networks; response flat from 25 cps to beyond audibility; handles up to 40 watts of program material; 2000 and 10,000 cps crossover points; impedance 8 ohms; 13 $\frac{1}{2}$ "x23 $\frac{3}{4}$ "x11 $\frac{3}{8}$ "; oiled walnut veneer\$79.95
Unfinished smooth-sanded Korina veneer.....\$64.95

LAFAYETTE**Model SK-58**

12" coaxial speaker; power rating: 20 watts; frequency response: 30 to 15,000 cps; impedance: 8 ohms.....\$29.50 Net

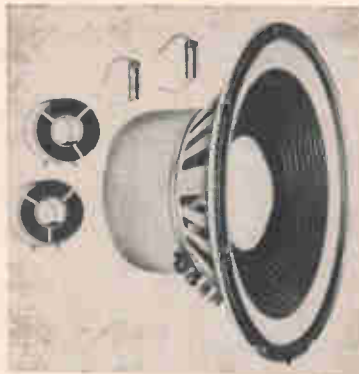
SK-146 "Sphericon"

Super tweeter: built-in crossover network 3000 cps; frequency response 3000 to 40,000 cps \pm 1 db; phenolic domed diaphragm radiates 120 degrees in all directions; power rating 30 watts; can be used with any 4 to 16 ohm speaker without an L-pad; black plastic case with gold anodized aluminum grille. Built-in attenuator permits matching with any low-efficiency speaker system\$22.50

SK-128

8" Duaxial full range speaker; power rating 20 watts integrated program material; frequency response 40 to 16,000

cps \pm 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\$36.50

Model LN-5 Crossover Network

Crossover network for two-way and three-way systems; 8 or 16 ohms; crossover rate 6 db per octave; crossover frequencies for two-way systems are 2000, 3000, and 5000 cps; for three-way systems 350 and 2000-3000 cps; 350 and 5000 cps; 700 and 2000-3000 cps, 700 and 5000 cps; mid-frequency and treble level controls; metal cabinet; removable front panel for mounting level controls on front or side of speaker enclosure.....\$14.95

Model 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
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 x23 $\frac{1}{2}$ "h x16 $\frac{3}{4}$ "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).....\$29.50

Model MS-458 Speaker Switch

7-position speaker selector switch; can switch up to 3 speakers in 7 combinations (1, 2, 3, 1-2, 2-3, 1-3, all); compensates for changes in impedances without need for dummy load resistors; mounted on 2 $\frac{3}{4}$ "x4 $\frac{1}{2}$ " electrical outlet plate; heavy-duty silvered contacts and terminal board with screw terminals.\$1.39

Model CAB-16 Enclosure

Bass reflex design; enclosed volume: 4.3 cubic feet; accommodates any 12" speaker; size: 20"w x23"h x16"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 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 x28 $\frac{7}{8}$ "h x16 $\frac{3}{4}$ "d; $\frac{3}{4}$ " birch; finishes: mahogany, blonde.

Net
Assembled, finished (CAB-19) \$49.50
Assembled, unfinished (CAB-13).....

Woofer is capable of $\frac{5}{8}$ " total motion bass response down to 36 cps; radiator driven by same voice coil responds up to 14,000 cps; $\frac{3}{4}$ lb. DP Alnico magnet; power rating 20 watts, 40 watts peak; impedance 16 ohms; includes tube vent for cabinet; $5\frac{1}{4}$ lbs.....\$24.50

Model TR-10 TRi-ette Speaker System



Three-way system; uses RP-103A tweeter, 8" mid-range, and 12" Flexair woofer; frequency response 25 to 15,000 cps; crossover frequencies at 500 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

Model P8-QF Flexair 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 KTF-2 Speaker Kit

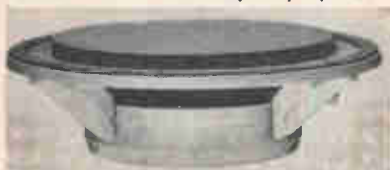


Includes P10-RJF woofer, $\frac{1}{2}$ lb. Alnico V magnet; two P35-VAH tweeters; crossover network; H.F. control; enclosure vent tube; complete assembly instructions.....\$39.75

Model KTF-3 Speaker Kit

Includes P10-PF high-compliance woofer; two special midrange units; ultra-tweeter; M.F./H.F. balance control; crossover network; enclosure vent tube; complete enclosure construction details; ideal for home projects.....\$57.75

Model 3-P/W1 Low-Frequency Speaker



Molded "Polytec" plane piston radiator—a flat surface instead of conventional cone; response 20 to 600 cps; 16 ohms; 25 watts, $2\frac{13}{16}$ " deep, $10\frac{1}{4}$ " diam.; must be used with full dividing network, Jensen A640.....\$39.75

Model TW-22 Tweeter



Response 2000 to 14,000 cps; use crossover frequency of 2000 to 4000 cps; 16 ohms; $\frac{3}{2}$ " cutout; to be used with 25-watt systems.....\$9.75

Model 3-P/K Speaker System Kit

For custom installation; complete kit of five speakers and crossover network; includes 3-P/W1 woofer, M-80 midrange, two TW-40 tweeters, E-10 ultra tweeter, and M-1473 crossover network; has H.F. control, vent tube for enclosure; range 20 cps to beyond audibility; crossover at 600, 4000, and 10,000 cps; 25 watts; 8 ohms.....\$97.50

Model X-10 Speaker System



Ultra-compact two-way system; 3" tweeter for frequencies to 14,000 cps; low-end response produced by a special miniature woofer, mass-loaded and 10 oz. "Syntox-6" magnet; volume control on front panel; 6 watts max.; $7\frac{1}{4}$ " x $13\frac{3}{8}$ " x $4\frac{5}{8}$ "; oiled-walnut.....\$29.75

Model TS-2 Speaker System

Bookshelf three-speaker, two-way system; P10-RJF woofer; two P35-VAH tweeters; range 25-14,000 cps; crossover 2000 cps; 20 watt rating; 8 ohms; H.F. balance control on rear; $13\frac{1}{2}$ " x $23\frac{3}{4}$ " x $11\frac{3}{8}$ ".
 Utility unfinished.....\$64.50
 Contemporary oiled-walnut.....\$79.50

Model 3-P Series Speaker Systems



Super-slim designs for floor, shelf, or wall mounting; five speakers identical to Model 3-P/K speaker system kit.
 Model 3-P/1 oiled-walnut, $13\frac{7}{8}$ " x $25\frac{1}{2}$ " x $5\frac{1}{2}$ ".....\$119.50
 Model 3-P/2 oiled-walnut, $28\frac{5}{8}$ " x $21\frac{1}{4}$ " x $3\frac{3}{8}$ ".....\$139.50

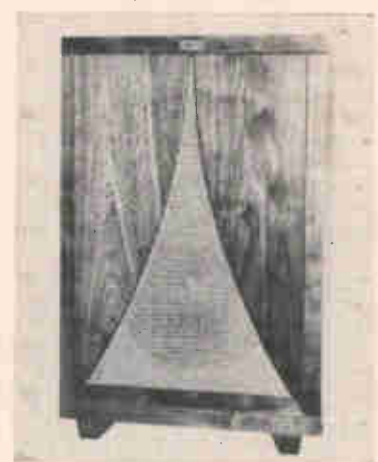
Model 3-P/3 Speaker System

Special decorator styles available in Danish, Provincial, and Traditional;

$16\frac{1}{4}$ " x $25\frac{1}{2}$ " x $11\frac{3}{8}$ "; has five-speaker system identical to Model 3-P/K speaker kit.....\$159.50
 Model 3-P/3U utility model, unfinished gum wood.....\$129.50
 Matching bases in same wood and styles.....\$9.95

KARLSON

Model "15" Speaker Enclosures



Speaker is front loaded by tapering chamber as shown; will match standard speakers without adjustment or tuning; available for 12" or 15" speakers; finished assembled, unfinished assembled, and kit form; also available with tapering pieces in back of grille cloth for full grille appearance: 33" h. x $22\frac{1}{2}$ " w. x 18" d.; cut for 15" speakers; adapters available for 12" speakers; dispersion for all speakers is uniform for all frequencies within a solid angle 120 degrees, tilted 30 degrees upward.

Model 15MX mahogany, Model 15WX walnut, Model 15-BX blonde oak.....\$129.00

With full grille across entire front of cabinet, Model 15MXG mahogany, Model 15WYG walnut, Model 15-BXG blonde oak.....\$129.00

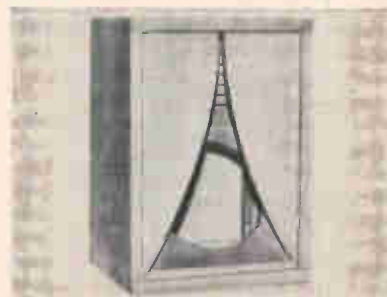
Deluxe unfinished assembled Model 15-U furnished with birch exteriors, trim and footings; finishing instructions included.....\$87.00

Basic unfinished assembled, Model 15-BSC-U constructed of high-density particle board, ideal for built-in installations, special veneering, decorating, or painting; trim and feet not included.....\$66.00

Deluxe kit Model 15-K.....\$57.00
 Basic kit Model 15-BSC-K.....\$45.00

Model "12" Speaker Enclosures

Same as Model "15" except that the dynamic range in the bass is reduced to an average of 110 db instead of 120 db and the fundamental loading extends down to $\frac{2}{3}$ of speakers' free-air resonance instead of $\frac{1}{2}$; response down to 20 cps attainable with new speakers



5

SPEAKERS & CABINETS

now available; 24 $\frac{3}{4}$ " h. x 16 $\frac{3}{4}$ " w. x 13 $\frac{3}{4}$ " d.; suitable for 10" or 12" speakers; footing 1 $\frac{1}{2}$ " high; may be used for upright or lowboy mounting.

- Model 12-MX mahogany, Model 12-WX walnut, Model 12-BX blonde oak\$99.60
- With full grille cloth, Model 12-MXG mahogany, Model 12-WXG walnut, Model 12-BXG blonde oak.....\$99.60
- Deluxe unfinished cabinet Model 12-U\$66.00
- Basic unfinished cabinet Model 12-BSC-U\$49.50
- Deluxe kit Model 12-K.....\$42.00
- Basic kit Model 12-BSC-K.....\$33.00

Model "8" Speaker Enclosures



Similar to Model "12" and "15" but with reduced dynamic range (110 db); fundamental loading down to $\frac{2}{3}$ of speaker's free-air resonance; smooth response down to 40 cps obtainable with many quality speakers; can be used vertically or horizontally: 17 $\frac{1}{4}$ " h. x 11 $\frac{3}{4}$ " w. x 10" d.; available with full front grille cloth only.

- Model 8-MX mahogany, Model 8-W walnut, Model 8-BX blonde oak\$42.60
- Deluxe unfinished assembled Model 8-U\$26.70
- Basic unfinished assembled Model 8-BSC-U\$21.00
- Deluxe kit Model 8-K.....\$18.60
- Basic kit Model 8-BSC-K.....\$15.00

Model KR-5 "Rocket" Speaker System



Miniature design (7"x7" at base x 15 $\frac{1}{2}$ " high); ideally suited as an extension speaker or as combination tweeter-midrange unit (80 cps to beyond 15,000 cps): 4 watts maximum; 140 degrees horizontal plane sound dispersion, 80 degrees vertically; 8 ohms; 5" cone-type speaker; available in chameleon ivory\$19.50

KLH

Model Four Speaker System

Full-range, two-way system housed in 13 $\frac{1}{2}$ " h. x 25" w. x 12" d. cabinet; low frequency speaker is 16-ohm 12" acous-



tic suspension type; two high-frequency speakers are small cone-type direct radiators; LC crossover network has provision for independent adjustment of level above 1500 cps and above 6000 cps; provision is made to allow connection to high-and low-frequency sections separately; 16 ohms impedance.

- Utility\$209.00
- Mahogany, birch.....\$224.00
- Walnut, oiled walnut.....\$231.00

Model Seven Speaker System



Full-range, two-way system housed in 24 $\frac{3}{4}$ " h. x 21 $\frac{1}{2}$ " w. x 11 $\frac{7}{8}$ " d. cabinet; low-frequency speaker is 12" acoustic suspension type; high-frequency section contains two small cone-type direct radiators; LC crossover network has provisions to increase or decrease high-frequency level 2 $\frac{1}{2}$ db; impedance 8 ohms.

Model Six Speaker System

Full-range, two-way system housed in 23 $\frac{1}{2}$ " h. x 12 $\frac{5}{8}$ " w. x 11 $\frac{7}{8}$ " d. cabinet; low-frequency speaker is 12" acoustic suspension type; high-frequency section contains two small cone-type direct radiators; LC crossover network has provisions to increase or decrease high-frequency level 2 $\frac{1}{2}$ db; impedance 8 ohms; similar in appearance to Model Four.

- Unfinished fir.....\$119.00
- Unfinished birch.....\$124.00
- Mahogany, Korina, unfinished walnut\$129.00
- Walnut, oiled walnut, cherry.....\$134.00

Model Eight AS Speaker System

Extension speaker system with adapter plug and level control on rear of cabinet\$54.00

Model Nine Electrostatic Speaker System



Electrostatic speaker system that reproduces entire audio range; for adequate reproduction of very low frequencies total radiating area of 28 sq. ft. is used (14 sq. ft. in front and rear, radiation fore and aft is equal); consists of two complete full-range speakers with built-in power supplies and step-up transformers; two sections can be joined or separated completely for use in stereo systems; impedance nominal 16 ohms and is primarily resistive in audio range; maximum 30 ohms, minimum 16 ohms; recommended amplifier power per section 30 to 75 watts; 70"x23 $\frac{1}{2}$ "x2 $\frac{7}{8}$ " each section; mahogany, walnut, oiled walnut\$1030.00

Model Ten Speaker System

Full-range, two-way system housed in a 23 $\frac{5}{8}$ " h. x 11 $\frac{3}{32}$ " w. x 8 $\frac{1}{4}$ " d. ported cabinet; low-frequency speaker is 10" high-compliance type; high-frequency speaker is small cone-type direct radiator; impedance 8 ohms.

- Unfinished birch\$96.00
- Mahogany, birch\$98.00
- Walnut, oiled walnut.....\$103.00

KLIPSCH

Klipschorn Corner Speaker System

Folded corner horn bass, straight axis midrange and tweeter horns. Midrange shows less than 5 db peak-to-trough ratio 500-4000 cps; over-all response 10 db peak-to-trough 32.7 to 21,000. Provides proper "toe-in" for flanking speakers for stereo; paired and with compatible center-bridged speaker provides ac-



curate spatial values for stereo with least shift of virtual sound source for different listener locations and least error from original tonal values. Power output capacity well over 30 acoustic watts with small diaphragm motion and low distortion. An input power of 0.5 watt, output 0.10 watt, gives 105 db sound intensity in typical listening room.

Prices from \$514 to \$822 for Decorator's Model to the Hand Rubbed Finished System; all units same acoustic quality.

Cornwall 3-Way Speaker System

For corner or wall use, including primary flanking stereo speakers used diagonally in corners or for center-bridged

KNIGHT



Model KN High-Frequency Package

Consists of tweeter, crossover, and level control; tweeter is flanged, exponential horn type; can be mounted in existing enclosure to add highs to woofer; response 3000-18,000 cps; crossover at 3500 cps. \$18.95

Model KN-281 Two-Way Speaker System

Tuned enclosure only 6 1/2" thick; 10" high-compliance woofer with 1/2 lb. Alnico V magnet and 3/4" cone excursion; two 3 1/2" direct-radiator tweeters; built-in crossover with high-frequency level control; response 40-16,000 cps; power handling capacity up to 30 watts of program material; 8 ohm impedance; 2000 cps crossover; 13 1/2" x 23 3/4" x 6 1/2"; oiled walnut hardwood veneer. \$49.95
Unfinished smooth-sanded Korina veneer \$44.95

Model KN-600HC 2-Way High Compliance Speaker

Woofer is 12" cone type; compression type tweeter; built-in electronic crossover; power capacity 50 watts; overall response 25-18,000 cps; woofer magnet 4.6 pound ceramic; 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 on tweeter; 16 ohms \$44.95

Model KN-806 Two-Way Speaker System

For extension use and low-cost stereo systems; 5 1/4" mass-loaded woofer; 3" direct-radiator tweeter; built-in crossover network; power handling capacity 16 watts of program material; impedance 8 ohms; 7 1/2" x 13" x 5 3/8"; oiled walnut hardwood veneer. \$23.50

Model KN-808 8" Speaker

Wide-range 8" type; 10 oz. ceramic magnet; die-cast frame; response 50-12,000 cps; capacity 15 watts; 8 ohms. \$9.95

Model KN-815A Deluxe 15" Speaker

Three-way speaker; crossover and L-pad high-frequency controls included; woofer is edge-suspended; mid range mounted center of woofer; tweeter is exponential horn; magnet material is Alcomax III; 16 ohms; overall response 25-20,000 cps; magnet weight 6 1/4 pounds; power capacity 50 watts. \$89.95

Model KN-819 Deluxe 8" Coax Speaker

8" woofer; 3" direct-radiator tweeter; built-in electrical crossover; 10 oz. ceramic magnet; response 50-14,000 cps; power handling capacity 15 watts; 16 ohms \$18.95

Model KN-820 12" Speaker

Ceramic ring magnet; woofer and mid range cones; response 40-13,000 cps; capacity 20 watts. 40 watt peaks; 8 ohms; magnet weight 12 oz. \$16.95

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; 8" x 10" x 3". \$26.95

Model KN-850 Deluxe 12" Speaker

Similar to KN-815A; magnet is Magloy X; overall response 30-20,000 cps; magnet weight 5 pounds. \$79.50

or third-channel stereo. Response down 10 db at 30 cps; fully compatible with other Klipsch speakers for stereo. Enclosure-type bass, with ported exhaust unloading at approximately 8 cps so that diaphragm motion and distortion are small for frequencies above 16 cps. Horn-type midrange and tweeter provide highly accurate pulse response (transients). Standard model uses same drivers as "Klipschorn", economy model uses 12" bass with exchange policy for 15" standard driver.

Prices \$385 for finished model; \$296 for Decorator's Model; \$147 for single-driver "building block" unit with upgrading policy.

Model H

Total-enclosure bass system with same midrange and tweeter horns used in other Klipsch systems. Compatible with other Klipsch speakers for stereo; originally designed for center-channel or center-bridged speaker; also applicable



for flanking speakers especially if "toed in" at room corners. Response in room corner (with new K-22 bass driver) down 10 db at 45 cycles, usable response at 35 with very low diaphragm excursion and low frequency and amplitude modulation distortion.

Prices \$214 to \$184; also "building block" unit \$80 with upgrading possible by adding midrange, tweeter, and network.

Shorthorn

Corner horn back-loading system with bass response down to 10 db at 49 cps; same K-33, K-55, K-77 drive units used in "Klipschorn".

Prices from \$314 to \$281 for complete system; to \$171 with economy drive; also utility box only.

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18M	1800' Mylar	2.09	1.99	1.85
24M	2400' Mylar	2.69	2.59	2.49

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1200' MYLAR, 1 1/2 mil, (Strong)	1.68
1800' acetate (plastic), 7"	1.79
1800' MYLAR 1 Mil. thick, 7"	1.99
2400' MYLAR, untensitized, 7"	2.69
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SPEAKERS & CABINETS

Model KN-2200 3-Way Speaker System



High-compliance system; 10" woofer with flexible-fold cone suspension and 1 lb. Alnico V magnet; two 3 1/2" radiators for treble and midrange; hemispherical u.h.f. tweeter; two crossover networks; response flat from 25 cps to beyond audibility; handles up to 40 watts of program material; 2000 and 10,000 cps crossover points; impedance 8 ohms; 13 1/2" x 23 3/4" x 11 3/8"; oiled walnut veneer\$79.95
Unfinished smooth-sanded Korina veneer.....\$64.95

LAFAYETTE

Model SK-58

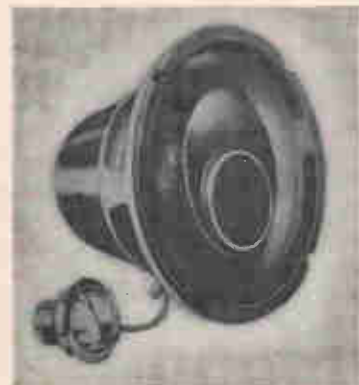
12" coaxial speaker; power rating: 20 watts; frequency response: 30 to 15,000 cps; impedance: 8 ohms.....\$29.50 Net

SK-146 "Sphericon"



Super tweeter; built-in crossover network 3000 cps; frequency response 3000 to 40,000 cps ± 1 db; phenolic domed diaphragm radiates 120 degrees in all directions; power rating 30 watts; can be used with any 4 to 16 ohm speaker without an L-pad; black plastic case with gold anodized aluminum grille. Built-in attenuator permits matching with any low-efficiency speaker system\$22.50

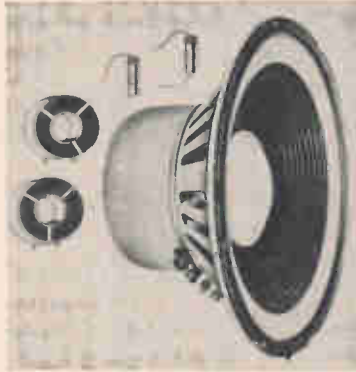
SK-128



8" Duaxial full range speaker; power rating 20 watts integrated program material; 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\$36.50

Model LN-5 Crossover Network

Crossover network for two-way and three-way systems; 8 or 16 ohms; crossover rate 6 db per octave; crossover frequencies for two-way systems are 2000, 3000, and 5000 cps; for three-way systems 350 and 2000-3000 cps; 350 and 5000 cps; 700 and 2000-3000 cps, 700 and 5000 cps; mid-frequency and treble level controls; metal cabinet; removable front panel for mounting level controls on front or side of speaker enclosure.....\$14.95

Model 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\$1.95 each
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 7/8" w x 23 1/2" h x 16 3/4" d; 3/4" birch; finishes: mahogany, blonde

Net
Assembled, finished (CAB-20) \$49.50
Assembled, unfinished (CAB-14)\$39.50
Kit form (CK-11).....\$29.50

Model MS-458 Speaker Switch

7-position speaker selector switch; can switch up to 3 speakers in 7 combinations (1, 2, 3, 1-2, 2-3, 1-3, all); compensates for changes in impedances without need for dummy load resistors; mounted on 2 3/4" x 4 1/2" electrical outlet plate; heavy-duty silvered contacts and terminal board with screw terminals.\$1.39

Model CAB-16 Enclosure

Bass reflex design; enclosed volume: 4.3 cubic feet; accommodates any 12" speaker; size: 20" w x 23" h x 16" d; 3/4" stock lined with acoustic insulating



material; finishes: mahogany, walnut, blonde. Net
Mahogany, walnut (CAB-16) \$29.50
Blonde (CAB-17)\$31.50
Unfinished (CAB-18)\$26.50

Model CAB-19 Enclosure



Bass reflex design accommodates 2- and 3-way speaker systems; cutouts for 15" and 8" speakers with adaptor boards for 12" and 5" speakers; size: (less 7" legs) 23 1/2" w x 28 7/8" h x 16 3/4" d; 3/4" birch; finishes: mahogany, blonde.

Net
Assembled, finished (CAB-19) \$49.50
Assembled, unfinished (CAB-13).....

.....\$39.50
 Kit form (CK-10).....\$29.50

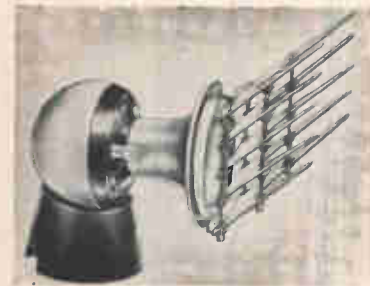
Model HK-3

Metal-cased 3" cone tweeter; power rating: 20 watts; frequency response: 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 SK-97 Coaxial Speaker

6½" 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 5½" diameter cutout.....\$6.95

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; 4¼" long, 3" diameter, 2½" 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 6¾" diameter cutout\$9.95

Model SK-102 Woofer

Lafayette-Goodmans 12" woofer; frequency response 30 to 7000 cps; recommended crossover 700-1000 cps; voice coil diameter 1¾"; power rating 30 watts in multiple speaker system with L/C crossover network; impedance 16 ohms\$23.50

Model SK-103 Midrange

Lafayette-Goodmans 8½" 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-180 "Trihelix" Speaker

10". 3-way speaker with 3 mechanically and electronically independent speakers mounted within single 10" frame; 2" tweeter; 5" mid-range; built-in electrical



crossover at 1500 and 5000 cps; response 20-20,000 cps; 30-12,000 cps ± 3 db; free air resonance 35-55 cps; 8 ohms; 20 watts.....\$32.50

JAMES B. LANSING

Wilton

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built-in use; with overlapping grille or flush grille: 11¾" x 23¾" x 11¾".
 Model D47S5 (LE10, LE30, LX3 installed)\$168.00
 Model D47LE8 (LE8 installed)\$103.50

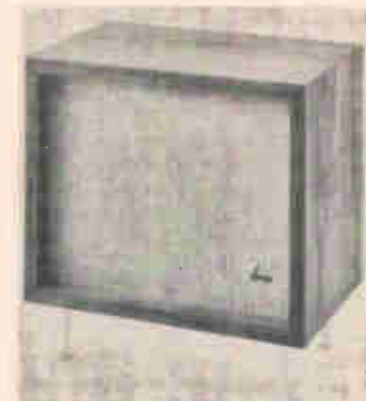
Model C-36

Minimum-size reflex enclosure will house 8", 12" and 15" loudspeakers plus a 075 or 175DHL high frequency driver; 29¼" x 19¾" x 15¾".....\$90.00
 Model D36002 (D123, 075, N2600 installed)\$244.80

Model D36123 (D123 installed)\$160.80

Model D36LE8 (LE8 installed)\$154.80

Model C-38



Lowboy version of Model C-36; 24¾" x 23¾" x 15¾"\$90.00
 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; 35¼" x 103¾" x 24"\$2102.40
 Model D44000 in rough black finish\$1862.40

Model C-37

Lowboy version of Model C-35; 28¾" x 36" x 16".....\$150.00
 Model D37001 (130A, 175DHL, N1200 installed)\$408.00
 Model D37030 (D130, 075, N2600 installed)\$331.51
 Model D37002 (D123, 075, N2600 installed)\$304.80
 Model D37130 (D130 installed)\$247.80

Model D45202 "Metregon"



Stereo system consisting of D123's, 075's, N2400's; 30" x 74" x 22½".
\$876.60
 Model D45203 (D130's).....\$767.40
 Model D45205 (130's, 275's, N600's)\$1199.10

Model C-34

Rear-loaded exponential horn for use with extended-range 15" loudspeakers and 2-way systems.....\$195.00
 Model D34001 (130A, 175DHL, N1200 installed)\$453.00
 Model D34030 (D130, 075, N2600 installed)\$376.80

Model C-40 "Harkness"

Lowboy version of Model C-34 \$195.00
 Model D40001 (120A, 175DLH, N1200 installed)\$453.00
 Model D40030 (D130, 075, N2600 installed)\$376.80

Model D30085 "Hartsfield"

Horn-loaded system with acoustic lens;

5

SPEAKERS & CABINETS

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.....\$948.00

Model C-35



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..... \$144.00

Model D35001 (Model C 35 enclosure with 130A woofer, 175DLH horn-driver, N1200 crossover).....\$402.00

Model D35002 (Model C 35 enclosure with D123 12" speaker, 075 tweeter, N2600 crossover)\$298.80

Model D35030 (Model C 35 enclosure with D130 15" speaker, 075 tweeter, N2600 crossover)\$325.50

Model C-34

Rear-loaded corner console horn; ac-



commodates 15" speaker or two-way system; size: 30 3/4" h x 22 1/4" d x 23 3/4" w; wide variety of woods and finishes; 6-foot exponential folded horn; corner placement not required; designed primarily for two-way speaker system use. \$195.00

Model D-123

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 highs; depth 3 3/8".....\$69.00

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 5/8"\$96.00

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.....\$93.00

Model 130A

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 5/8".....\$93.00

Model 130A.....\$93.00

Model 130B (32 ohms).....\$93.00

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".....\$132.00

Model 150-4.....\$132.00

Model 150-4C (16 ohms).....\$132.00

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".....\$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 3/8"; overall length 3 1/4".....\$ 9.40

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 N-7000

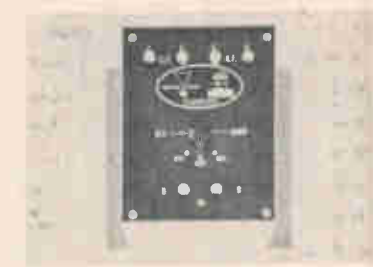
Dividing network; crossover: 7000 cps; nominal impedance: 16 ohms; 12 db/octave; variable attenuation control; dimensions: 3 1/4" x 3 1/4" x 2 3/4"\$20.40

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" x 6" x 3 1/2"\$24.60

Model N2400 (same as N2600 but without dual impedance feature) \$22.50

Models N400, N600, N1200



A three-position switch adjusts intensity of high frequency transducer in 3 db steps; rate of attenuation around crossover, 12 db per octave; input and output impedance, 16 ohms. crossover frequency: N400, 500 cps; N600, 600 cps; N1200, 1200 cps.

N400\$81.00

N600\$57.00

N1200\$39.00

Model C46 Minigon

A miniaturized version of the JBL-Ranger — Paragon; radial refraction system; will accommodate LE8 or 55



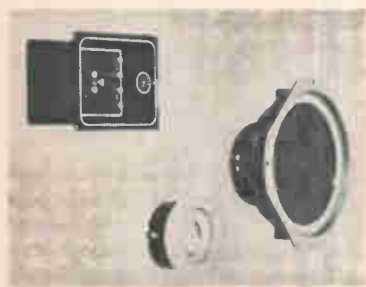
system; 13" h x 32" w x 15 3/4" d. Single enclosure (all woods and finishes).
\$120.00

Model LE8



Full-range eight-inch loudspeaker assembly designed for small 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. \$63.00

S5 System



Consists of LE10 10" low frequency driver, the LE30 wide band high frequency driver, and matching LX3 network; designed for use in small sealed enclosures or infinite baffle installations; free air cone resonance of LE10, 15 cps; upper frequency limit of LE30, beyond audibility.

LE10	\$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. \$66.00

Model C43
Rear-loading horn for professional and

1962 EDITION



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. \$96.00

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 over-all dimensions. \$60.00

Model "Lancer 33" Speaker System

Bookshelf-type, ducted-port design; Type LE8 full-range speaker; response below 35 cps to over 15,000 cps; power handling capacity 6 watts minimum; 12 3/4" x 23 1/2" x 11 3/4"; available in oiled walnut, tawny walnut, dark mahogany, ebony. \$89.10

Model "Lancer 66" Speaker System

Similar to "Lancer 33" except 2-way speaker system is used; 10" low-frequency driver plus new high-frequency transducer; power handling capacity 6 watts minimum; 12 3/4" x 23 1/2" x 11 3/4" over-all. \$139.50

Model "Olympus" Speaker System

Combines Model LE15 low-frequency driver, Model LX5 dividing network;



500 cps crossover; and Model LE85 high-frequency driver; enclosure alone weighs 100 lbs; available with any of five different grille fabrics or with wooden fretwork grille, hand-carved in Orient; wood finishes—dark mahogany, tawny walnut, oiled walnut, Danish teak, or ebony; size 19 3/4" x 40" x 27 1/4"; (cloth grille) \$198.00
System with Oriental hand-carved wooden grille. \$258.00

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" \$33.60

LORENZ (ITT)

Model HP-1 High-Pass Filter



Feeds highs to tweeter & lows to woofer; usable with any tweeter requiring nominal crossover at 2000 cps. \$3.25

Model S-388



Armored horn type tweeter with plastic cone; overall diameter 2 1/2"; frequency response 2,000-18,000 cps.; 2 watts, 5.5 ohms impedance. \$7.05

Model S-1288

Wide range 12" speaker; dual cones; twin voice coils; frequency response 18-15,000 cps.; magnet assembly weight 61.5 oz.; 30 watts peak power; overall diam. 12 1/4"; depth 10 5/8"; 4, 8 or 16 ohms impedance. \$29.50

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" \$13.95

Model 1244 12" Speaker

Response 30-5000 cps; low-frequency design; 20 watts; 16 ohms impedance; free air resonance 55 cps; recommended crossover 1000-2000 cps; especially suited for use with the Model 344 tweeter & HP4 crossover network; depth 5 3/32" \$19.50

Model 1044 10" Speaker

Low-frequency design; response 34-6000 cps; 10 watts; 16 ohms impedance; free air resonance 50 cps; rec-

5

SPEAKERS & CABINETS

Recommended crossover 1000-2000 cps; depth 5³/₃₂"\$19.00

Model 844T 8" Coax Speaker

Full-range 34-18,000 cps; crossover frequency (built-in) 7000 cps; 8 watts; 8 ohms impedance; combination 8" woofer & 3" tweeter; features off-center tweeter mounting; with front protective grille; depth 8.7"\$17.50

Model 344 3" Cone Tweeter

Response 800-20,000 cps; 20 watts; 16 ohms impedance; ideal match with HP4 crossover network & Model 1244 or 1044 low-frequency speaker; depth 2¹/₁₆"\$8.00

Model HP4 Crossover Network

LC type design with input & output impedances of 16 ohms; includes variable high-frequency level control; pre-wired with 36" cable; crossover frequency 1800 cps; 20 watts\$7.05

Kit 1 Junior Hi-Fi Master Kit



Consists of one S-888 8" speaker; two S-388 3" speakers; one HP-1 high-pass filter\$28.20

Kit 2 Deluxe Hi-Fi Master Kit



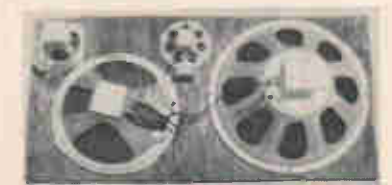
Consists of one S-1288 12" speaker; one S-888 8" speaker; two S-388 3" speakers; one HP-1 high-pass filter; and mounting bracket\$58.80

Kit 3 Stereo Matched Pair Kit

Consists of two S-888 8" speakers; four S-388 3" speakers; two HP-1 high-pass filters\$56.40

McGEE

Model VOX-1512



Four-way speaker system mounted on baffle board 16"x32"; frequency response 20 to 22,500 cps; 4 ohms impedance; features Magnavox 15" woofer, 12"

Magnavox mid-range, 5" cone tweeter and 4¹/₄" cone tweeter; crossover network; choice of blond or mahogany plastic grill cloth \$1.25 extra\$24.95
Thirty-watt system using heavy-duty 15" speaker\$30.95

Model 1213-3 Speaker System

25" pre-finished wall baffle with 3-way speaker system; 12" Magnavox woofer, 12" Magnavox midrange, and 3¹/₂" cone tweeter; 25³/₄" x 12" x 8" (top) and 6³/₈" (bottom); response 35-20,000 cps; 20 watts; available in walnut or blonde\$24.95

Model 1512-HT3 Speaker System

Pre-finished wall baffle with 3-way speaker system; 15" Magnavox woofer, 12" Magnavox midrange, and horn tweeter; 28" x 16¹/₄" x 9¹/₂" (top) and 7" (bottom); response 30-22,500 cps; 35 watts; available in walnut or blonde\$39.95

Model AT-3 Tweeter

Response 1700-22,500 cps; 20 watts; 8 ohms; horn design; 4³/₄" x 2" x 4³/₄"\$8.95

MERCURY

Model CR-1 "Crescendo" Speaker System

Two-way system; 10" biaxial transducer and 4" tweeter; response 25-18,500 cps; completely sealed enclosure featuring a "doublet" design which is an air-tight compartment built of opposed thin flexible rubber sheets, back air pressure is cancelled relieving cone pressure; available in walnut; 24"x12"x12"\$79.95

Model MA-1 "Maestro" Speaker System



Economy counterpart of Model CR-1; employs an 8" biaxial transducer in a two-way system; response 30-16,500 cps; photo shows rear view of cabinet with "doublet" mounted on rear panel; 21"x11"x9¹/₂"\$59.50

MICROTRAN

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 15-30,000 cps\$13.05

NORDIC

"Nordic I" Speaker System

Made in Sweden; features 8" speaker with multi-layer free-floating cone; distortion 1% 100-10,000 cps & 1.5% 10,000-15,000 cps; 5" dia. tweeter cuts in @ 5000 cps with crossover @ 7500 cps; high-efficiency design; response 45-18,000 cps; power rating 20 watts music power; 7¹/₁₆" d. x 10⁵/₈" h. x 22³/₄" w.; available in walnut or teak\$59.50

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

Model AD-5277M

12" speaker; 20 watts rated; frequency response 35-18,000 cps.; total flux 134,000 Maxwells; efficiency 14% @ 400 cps\$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; efficiency 4% @ 400 cps\$6.60

AD-3690M

6" x 9" speaker; 6 watts continuous, 9 watt peaks; 4-6 ohms impedance; frequency response 70-18,000 cps.; efficiency 5.5% @ 400 cps\$7.95

Model AD-2690M

6" x 9" speaker; 6 watts continuous, 9 watt peaks; 4-6 ohms impedance; frequency response 70-16,000 cps; efficiency 2.5% @ 400 cps\$6.75

OLSON ELECTRONICS

Model VC-223 Stereo Remote Control



Provides master control of both channels from single knob and selects stereo, 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" principle 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-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\$5.31

Model S-394 Ceiling Speaker

Mounts flush on wall or ceiling; no holes to cut; suitable for built-in systems or adding extensions to present system; 6" speaker is factory mounted to housing; response 60-13,000 cps; 8 ohms impedance; over-all depth 3"; finished in dull gold\$4.99

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"\$8.75

Model VC-213 Variable Crossover

Variable high pass filter; combination crossover and level control; impedance 4-16 ohms\$2.49

OXFORD

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 watts peak program material; impedance 8 ohms; includes crossover network with crossovers at 600 and 5000 cps.....\$39.00

Model C15L608 15" Speaker



Coaxial 15" speaker; power rating 25 watts; frequency response 30 to 15,000 cps; resonance 50 cps.....\$43.50

Model C12J408 12" Speaker

Coaxial 12" speaker; power rating 15 watts; frequency response 40 to 15,000 cps; resonance 75 cps.....\$25.50

Model C8J408 8" Speaker

Coaxial 8" speaker; power rating 8 watts; frequency response 50 to 15,000 cps; resonance 75 cps.....\$18.81

Model T3C208 Tweeter

Cone-type 3" tweeter; power rating 4 watts; frequency response 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 CH26E16 Horn Tweeter

2"x6" horn-loaded compression tweeter; power rating 20 watts through network; response 20-20,000 cps; 16 ohms impedance\$12.60

Model TC8HB 8" Speaker

8" twin-cone speaker; 10 watts; response 50-20,000 cps; 1" voice-coil; 8 ohms impedance; 4.64 oz. magnet.....\$8.55

Model F12L608 12" Speaker

12" full range speaker; power rating 25 watts; frequency response 40 to 10,000 cps; resonance 70 cps; 1 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

PACO

Model L-1 Speaker System

Response 50 to 17,000 cps.; bookshelf design; 15 1/4"x9 1/4"x8 1/2"; unfinished, but sanded, walnut (semi-kit).....\$24.95

Model L-2 2-Way Speaker System

Pre-tuned tube-loaded port; 10" Jensen long excursion woofer and a horn-loaded compression tweeter; 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 (semi-kit)\$59.95
Walnut finish (semi-kit).....\$69.95

PERMOFLUX

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

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

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

8U8 8" Speaker

Frequency response 50 to 12,000 cps; power rating 15 watts; impedance 8 ohms; magnet weight 7 oz.....\$17.50

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

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

Model D-66 "Ballerino" Speaker System

Similar style to Model D-84; power capacity 7 watts; 18"x12"x8".....\$45.00

Model D-55 "Concerto" Speaker System

Similar style to Model D-84; bookshelf only; power capacity 4 watts; 15"x8"x10"; available in charcoal, walnut\$32.00

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 D-84 "Arpeggio" Speaker System

Bookshelf or floor type; power capacity 10 watts; 8 ohms; 21"x14"x10".....\$59.50

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SPEAKERS & CABINETS

PILOT

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

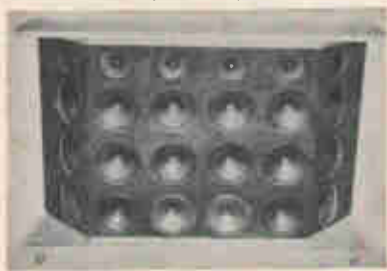
Model PSV-3

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

Model PSV-4 Bookshelf Speaker System
12" Air Flex heavy-duty woofer, two 3 1/2" cone-type mid-range speakers, and super tweeter; crossover frequencies 2500 cps and 8000 cps; total range 40-16,000 cps; 8 ohms impedance; 30-watt program power; 25 3/4" x 14 1/2" x 12" deep; available in lacquered walnut, oiled walnut, or mahogany.....\$119.50

POLYCOUSTIC

Model PC-28 Speaker System



An array of 28 speakers—22 6" speakers and 6 hard-cone tweeters; 180 degree sound dispersion at 5 kc.; 30-15,000 cps \pm 2 db.; 25 watts; 1M and harmonic distortion each 1% at 100 db. output; cabinet is vented infinite baffle; 29 7/8" x 41 3/4" x 9 1/2"; photo shows assembly without grille cloth mounting; 8 ohms impedance.

Fully assembled, birch, walnut, or mahogany\$385.00
Model PC-28 (kit in birch or mahogany)\$176.31
Model PC-28 (kit in walnut).....\$185.00

QUAD

Electrostatic Speaker

Full-range 45-18,000 cps; 15 watts minimum power required from top-quality,



low-distortion power amplifier; dispersion at least 70 degrees horizontal, 15 degrees vertical; sound radiated from front and back in figure-8 pattern; impedance 16 ohms; 31" high x 34 1/2" wide, 10 1/2" deep. weight 39 lbs.....\$300.00

QUAM-NICHOLS

Model 12A10X

12" extended range single cone; capacity: 15 watts; frequency response 50-12,000 cps. \pm 5 db; 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

Model 10A10X

10" extended range single cone; capacity: 12 watts; frequency response 50-12,000 cps. \pm 5 db; 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 3A15T

High frequency tweeter; frequency response: 2,000-15,000 cps \pm 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 1/16" d.; 3/4 lb..\$5.75 List

Model 5A15T

Same as model 3A15T except 5" diameter; resonance point 1400 cps; 2 5/16" deep; 1 lb.....\$6.50 List

Model 8A10X

8" extended range single cone; capacity: 10 watts; frequency response 50-12,000 cps. \pm 5 db; 8 ohms impedance; Alnico V magnet; shipping weight: 3 1/4 lbs; baffle opening required 7"; depth 3 3/4"\$20.00 List

Model 15A10CO

Coaxial; 15"; power handling capacity: 20 watts; frequency response: \pm 5 db 25 to 15,000 cps; 8 ohms impedance; resonant frequency 50 cps; 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 List

Model 12A6CO

Coaxial, 12" capacity 14 watts; frequency response: \pm 5 db 50 to 15,000 cps; 8 ohms impedance; resonant frequency 65 cps; consists of 12" woofer with separate tweeter mounted across front; built-in crossover; shipping weight 6 1/2 lbs; baffle opening required 11 1/16"; depth 6 9/16".....\$34.50 List

Model 8A4CO

8" Coaxial speaker; wide range; fre-

quency response 50-15,000 cps \pm 5 db; power handling: 10 watts; resonant frequency: 70 cps; built-in crossover; 8 ohms impedance; 7" baffle opening required; depth 4 5/16"; 2 3/4 lbs. \$22.95 List

Model 15A10L

15" woofer; capacity 10 watts; frequency response: 30 to 5,000 cps \pm 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 \pm 5 db; resonance 60 cps; 8 ohms impedance; shipping weight: 4 3/4 lbs; baffle opening required 11 1/16"; depth 5 7/8"\$26.00 List

R&A

700 Series Mark IV Speakers



Dual-cone design with mechanical crossover and multi-layer 1" voice coil (3/4" v.c on 5" dia.); 8 ohms impedance.
Model 750 5" dia.: 220 cps fundamental resonance; 10 watts.....\$9.95
Model 780 8" dia., 65 cps fundamental resonance; 20 watts.....\$14.95
Model 7100 10" dia., 60 cps fundamental resonance; 25 watts.....\$16.95
Model 7120 12" dia.; 55 cps fundamental resonance; 30 watts.....\$18.95
3000 cps LC crossover network available for 5" midrange/super tweeter
Model 750\$9.95

REALISTIC

"Triode" 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



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; includes 8 or 16 ohm network.....\$19.95

Electrostat-3 Utility

In utility enclosure for custom mounting.....\$15.95

Solo-1 Speaker System



HOW TO BUY YOUR FIRST (OR YOUR LAST) SPEAKER SYSTEM

If you demand magnificent sound . . . undistorted bass to beyond the limits of audibility—if you demand superb cabinetry and decor flexibility (with five interchangeable grille frames that snap on and off to match *any* decor) . . . then consider the unique University Medallion XII 12" Three-Way Speaker System. Medallion owners *stay* Medallion owners. Let's look inside the Medallion and see why.



Integrated within its precisely-matched cabinet are three superlative speaker components: the 12" high compliance woofer that delivers bass frequencies down to the very threshold of feeling; a newly-engineered 8" speaker to assure you of all-important mid-range *impact*; and the Sphericon super tweeter for highs unlimited. Result: virtually uniform response

1962 EDITION

compare **UNIVERSITY** (in every price category) against all other brands

—smooth and rich—from 28 to 40,000 cps (± 2 db at 22,000 cps). And at your fingertips, network controls to balance the Medallion sound to match the acoustics of your room—*any* room.

Amplifier requirements? Any amplifier capable of delivering a modest ten clean watts. Medallion dimensions? Only 24" x 17" x 11 $\frac{1}{4}$ " deep. Available with or without base—for use as highboy or low-boy. Finishes? Walnut, oiled walnut,



For a solution to a *really* difficult space problem, investigate the TMS-2 single cabinet stereo speaker system.

fruitwood, mahogany *and* unfinished for custom installations. And the Medallion is the world's *only* system with "select-a-style" snap-on grilles. Want to change your decor at some later date? The Medallion stays where it is—all you change is the grille! In Contemporary, Italian or French Provincial, Colonial and Swedish Modern. Medallion prices start at \$139.95, without grille. Grilles from \$9.95. Base, \$14.95.

Write for University's "Informal Guide to Component High Fidelity," Desk FF-10, University Loudspeakers, Inc., White Plains, New York.



For bookshelf speaker systems with astounding 'big system' sound, look into University's RRL speaker systems.



A Division of Ling-Temco-Vought, Inc.

TIMELESS BEAUTY AND THE SOUND OF TRUTH

5

SPEAKERS & CABINETS

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, blonde, walnut...\$29.50

Electrastat-4A Speaker System



Has 4 electrostatic elements plus midrange cone speaker, woofer, crossover network, balancing controls; frequency response 30-25,000 cps; 8 ohms impedance; cabinet is 27"x13 3/8"x12 1/2"; 43 lbs.
Mahogany.....\$79.95
Teak.....\$89.50

Nava-T-1 Tweeter

Wide dispersion: response 1200-25,000 cps ± 2 db; built-in crossover at 1200 cps; impedance 8 ohms; 5" dia. driver; 10 1/2"x6 1/4"x6"; mahogany or oiled walnut.....\$49.95

Nava-3 Full-Range Speaker

Two separate cones, one for lows and one for highs: mounted separately but connected to same 2" voice coil; impedance 8 ohms; 1 lb. Alnico V magnet; free air resonance 65 cps.....\$16.95

Nava-7 Three-Way Speaker

Radiating elements include full 12" bass cone speaker; axially mounted midrange cone, and Sphericon super-tweeter; two crossover points; mechanical crossover at 1000 cps, electrical crossover at 3000 cps; 13" x 6 3/8" deep.....\$49.95

8" or 12" Enclosure Kit

3/4" stock; no hardware required; assembled in minutes; sanded and ready for finish; mounted grille-cloth of cane-type fabric; 14 1/2"x32 1/2"x11 1/2"; unfinished birch.....\$14.95

Oiled walnut.....\$19.95

Solo-3 Speaker System

Consists of specially designed 8" speaker; response 40-16,000 cps; 8 ohms impedance; 20" x 11" x 10"; mahogany, blonde, walnut.....\$29.50

Solo-9 Speaker

Cabinet 3/4" stock; hand-rubbed oil walnut finish; 8" woofer & Realistic Sphericon super-tweeter; wide dispersion; electrical crossover at 3000 cps; 2" dia. voice coil; free air resonance 50 cps; impedance 8 ohms; 14 1/2" x 14" x 22".....\$109.95

Electrastat-2

Features four-element electrostatic tweeter with built-in crossover and attenuator; response 45-25,000 cps; high-compliance 8" woofer; 120 degree dispersion; 22 1/2"x13"x12 1/2"; oiled walnut.....\$59.95
Mahogany.....\$54.95

Slimline Multiple Speaker Enclosure

Constructed of 1/2" stock; designed for 12" speaker & 5" tweeters; 18"x22" (plus 2" legs); walnut finish, mahogany.....\$24.50

Economy Model 8" Speaker Enclosure

1/2" stock; acoustically damped lining; 20" x 15" x 11".....\$14.95

8" Bookshelf Enclosure

1/2" laminated stock; complete with mounting hardware, cane-type grille cloth; 7" x 10" x 15 7/8".....\$9.95

Bass Reflex Enclosure

3/4" stock; will house 15" speaker; complete with 12" reduction ring; 27" x 24" x 15"; unfinished.....\$26.50
Walnut or mahogany.....\$34.50

Cansale Unit Speaker Enclosure

Baffle includes 12" cut-out with 8" adapter; 8" cut-out with blank tweeter mounting; will accommodate most efficient speaker systems; acoustically lined; cane grille cloth front; 20" x 16" x 25".....\$26.95

RICH

Model 20/20 Speaker System

Features unique transducer utilizing an active plane radiation system; extremely low harmonic distortion and transient response equivalent to electrostatic speakers; 50 watts capacity; three speakers, woofer, midrange, and tweeter; response 20-20,000 cps ± 8 db; 25 1/4"x16"x9 1/2"; oiled walnut finish.....\$200.00

SCHOBER

Model LSS-10 Speaker System

Designed primarily for use with electronic organs; one Electro-Voice SP12B 12" bass speaker plus LS-8 8" treble speaker with 6000 cps mechanical crossover and "whizzer" cone plus 300 cps electrical LC crossover network; response 32-13,000 cps; 40 watts organ tone or 20 watts average program material; ducted port enclosure tuned to 32 cps; 8 or 16 ohm



impedance; 24" x 19" x 36"; sold direct only and as a semi-kit. 3/4" birch veneer plywood.

Model LSS-10 (Unfinished).....\$ 25.00
Model LSS-10W (Walnut finish)

.....\$ 50.00

Model LSS-10S (Finish of customer's choice).....\$165.00

H. H. SCOTT

Model S-2 Speaker System

Three-way system using a 12" high-compliance woofer; two midrange drivers mounted on acoustically isolated, angled mounting boards; high-dispersion spherical tweeter; multiple crossover networks; response over entire audible range; continuous tweeter and midrange controls; 23 3/4" x 14 1/2" x 12 1/2".

Unfinished pine (for opaque finish or custom installation).....\$79.95

Unfinished hardwood (for fine furniture finishes).....\$89.95

Mahogany, oiled walnut.....\$199.95

Model S-3 Speaker System



Three-way system, bookshelf size uses high-compliance 10" woofer; midrange driver; special high-dispersion tweeter; multiple crossover networks with continuous tweeter and midrange controls to provide extended frequency response over entire audible range; 23 1/2" x 11 3/4" x 9 3/4".

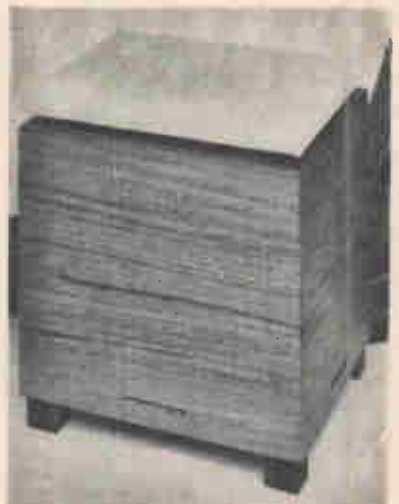
Unfinished pine (for opaque finishes or custom installation).....\$114.95

Unfinished hardwood (for fine furniture finishes).....\$124.95

Mahogany, oiled walnut.....\$129.95

SONOGRAP

Model 253-SS Speaker System



Each system consists of two separate chambers coupled together by means of an acoustic phase-shift network; output efficiency is high because sound from both chambers is in-phase; 360 degree radiation pattern; 10" woofer; 36 watts program material continuously; 5" dia. tweeter; range 30-18,000 cps ± 4 db;

18"x18"x20"; teak finish; sold only in pairs\$169.50

Model 303-SS Speaker System

Same basic design as Model 253-SS; but with 12" woofer; 60 watts power; same tweeter; cabinet twice as high; sold only in pairs\$299.50

SONOTONE

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"x4"\$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; power 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

Model W-15

15" woofer; power rating: 25 watts continuous; frequency response: 20 to 7,000 cps; impedance: 15 ohms; magnet: 5 lbs. Alnico V; flux density: 15,000 gauss; velour cloth suspension; free air cone resonance: 30 cps; 2" voice coil; overall diameter: 16; with mounting lugs.....\$88.00

STEPHENS

Model 80M

8" free cone midrange speaker; frequency response 40-5,000 cps; 2" edge-wound aluminum ribbon voice coil; 25 watts; 1 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

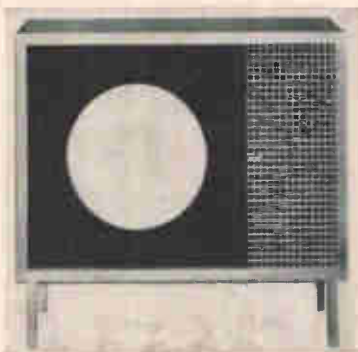
Model 158 T Three-Way System

3-way system consists of a 150W, 80M and L pad; (see individual listings for specifications)\$213.50

Model 12T Two-Way System

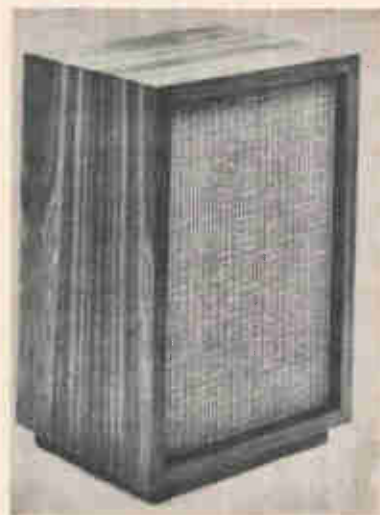
2-way system consists of a 120W and a 5KT; (see individual listings for specifications)\$109.50

Model E-2/12T



Enclosure designed by Charles Eames; contains 12T speaker system.....\$275.00

Model 816 Speaker Enclosure



Upright bass-plane enclosure for use in corner or on wall; designed especially for use with Stephens 80FR & 80CX 8" speakers: enclosure only.....\$51.50
Cabinet with Model 80FR 8" wide-range speaker\$85.00
Cabinet with Model 80CX 8" coaxial speaker\$107.00
Cabinet with Model 80FR 8" speaker & Model 5KT tweeter.....\$134.50

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 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

Model 150W Woofer

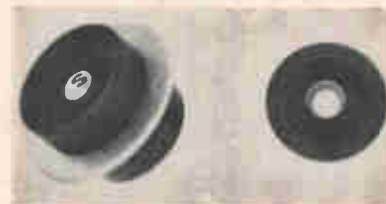
15" woofer; frequency response 20 to 3,500 cps; power rating 35 watts; resonance 20 cps; 3" diameter voice coil; 25 lbs.....\$87.00

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 13/16"\$49.50

Model RT-1 Tweeter



Ring radiator type covering 5000 to 25,000 cps; 1 1/4" edge-wound aluminum ribbon voice coil; special plastic material used for diaphragm; includes crossover & brilliance control.....\$26.50

Model 80CX 8" Coaxial Speaker

Edge-wound aluminum ribbon voice coil, 2" dia.; response 40-25,000 cps; 50 cps free-air cone resonance; 5000 cps crossover; 25 watts program; 16 ohms impedance; includes crossover & brilliance control.....\$55.50

STROMBERG-CARLSON

Model RF-480A 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 max-wells; dispersion 100 degrees; diameter 8 3/32"; depth 3 1/4"\$24.95
Model RF-480W (8" woofer).....\$24.95

Model RF-482A Speaker

12" coaxial speaker; power rating:

5

SPEAKERS & CABINETS

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 \pm 5 cps; total air gap flux; woofer, 110,000 maxwells; tweeter, 18,000 maxwells; dispersion 115 degrees; diameter 12 $\frac{1}{4}$ "; depth 5 $\frac{3}{32}$ ".....\$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 \pm 5 cps; total air gap flux: woofer, 152,000 maxwells; tweeter, 27,900 maxwells; dispersion 140 degrees; diameter 15 $\frac{1}{8}$ "; depth 6 $\frac{3}{32}$ ".....\$124.95

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 \pm 5 cps; total air gap flux: woofer, 97,000 maxwells; tweeter, 27,000 maxwells; dispersion 140 degrees; impedance 16 ohms; depth 5 $\frac{1}{4}$ ".....\$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 resonance 40 cps \pm 5 cps; dispersion 115°, IM distortion 0.4% at 4 watts; impedance 8 ohms; depth 5".....\$39.95

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 \pm 16 cps; dispersion 160 degrees; 16 ohms.....\$24.95

Model RT-477 Tweeter



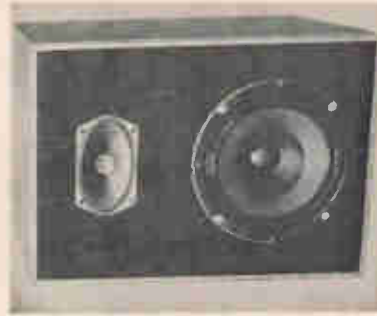
Induction tweeter: power rating over 50 watts; frequency response 800 to 20,000 cps; impedance 8 ohms; total air gap flux 27,900 maxwells; diameter 4 $\frac{1}{3}$ "; depth 3 $\frac{1}{2}$ ".....\$24.95

Model RT-576 Tweeter

3" x 5" elliptical design utilizing elliptical curvilinear diaphragm driven by silver-plated aluminum coil.....\$9.95

Model RS-501 Speaker System

High-compliance system using Helmholtz resonator principle; basic enclosure



is fibrous material; 1-RT-576 3" x 5" speaker; 1-RF-480W 8" woofer; tweeter level switch; recommended power 10 watts min.; 8 ohm impedance; 17 $\frac{3}{8}$ " x 12 $\frac{3}{8}$ " x 11 $\frac{3}{8}$ " (less furniture housing).....\$59.95

With mahogany, oiled walnut, lacquered walnut housing.....\$79.95
With cherry, Early American, Provincial, maple, ebony housing.....\$84.95

Model RS-504 Speaker System

Sealed-enclosure two-way system with basic construction of fibrous material; tweeter same as in Model RS-501 with diffuser added to provide uniform dispersion of highs; 12" woofer, LC-type crossover; tweeter level switch; recommended power 12 watts minimum; 8 ohm impedance (less furniture housing).....\$74.95

With unfinished birch housing...\$94.95
With mahogany, oiled walnut, lacquered walnut housing.....\$99.95
With cherry, Early American, Provincial, maple, ebony housing.....\$104.95

Model RS-506 Speaker System

Same type enclosure as Model RS-504 except mid-range speaker has been added; 12" woofer has very soft, heavy diaphragm providing better bass re-



sponse; mid-range speaker is 6" x 9" elliptical; 8 ohm impedance; 12 watts minimum power; (less furniture housing).....\$105.00
With unfinished birch housing...\$125.00
With mahogany, oiled walnut, lacquered walnut housing.....\$130.00
With cherry, Early American, Provincial, maple, ebony housing.....\$135.00

TANDBERG

Model CS40 Speaker System

Contemporary style corner speaker system; frequency response: 60 to 16,000 cps; uses single 8" coaxial speaker with mechanical crossover and metal diffusion 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

Model 165BK 8" Dual-Cone Speaker

Main cone has extra tweeter cone; flux density 11,000 gauss; maximum applied voltage 5 volts; efficiency 5%.....\$21.50

Model 165B 8" Coaxial Speaker

Consists of bass and mid-range unit with tweeter coaxially mounted; built-in 12 db octave filter with crossover frequency at 3000 cps.....\$31.50

Model 266 Speaker System



Bookshelf type with Model 165BK 8" dual-cone speaker; response 60-16,000 cps.....\$79.50

Model CX266 Speaker System

Bookshelf type with Model 165B 8" coaxial speaker; response 60-16,000 cps; same cabinet as Model 266.....\$89.50

TANNOY

"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 50 watts; efficiency above 18%; dispersion at 60° -4 db at 10,000 cps; 46" h., 40" w. max.; hand rubbed mahogany or walnut.
\$725.00

"Belvedere" Speaker System



Dual-ported bass reflex design; may be

used vertically or horizontally; 26"x12"x18"; walnut.

- Belvedere Enclosure only.....\$65.00
- Belvedere Enclosure with 12" direct radiating speaker.....\$144.00
- Belvedere enclosure with 12" Monitor dual concentric speaker.....\$203.00

Model LZ III Dual Concentric

10" dual concentric speaker; frequency response 20-30,000 cps; IM products less than 2%; crossover frequency 1,800 cps; resonance 27 cps; magnet assembly 6¼ lbs; polar distribution



-2db @ 10 KC for 60 degrees; power handling capacity 20 watts; adjustable h.f. control; impedance 16 ohms; recommended mounting infinite baffle type as low as 1½ cu. ft; shpg. wt. 13 lbs.
\$112.75

12" Direct Radiator

Wide range single cone unit with duralumin diaphragm to extend high frequency response; specially treated surround; 35-17,000 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 Monitor

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

KLH has introduced a new speaker system — the Model Ten.

We believe the Model Ten will serve as a new standard of value among speaker systems — a standard beyond which advance for some time will be so difficult as to appear impossible. In the light of known technology, nothing further can be done to lower any costs without serious losses in performance. This performance cannot be improved without sharply increased costs.

KLH is qualified to make these statements, because we are the only manufacturer of loudspeaker systems in the United States who make in our own factory every part that in any way affects the performance of one of our products. We make the tools, the machines and the instruments that make and test the parts.

This is why we can guarantee — as no other maker can — that any two systems of a given model (Model Ten included) will match within $\pm 1\frac{1}{2}$ db, octave by octave and note by note, throughout their frequency range.

Descriptive literature, with the name of your nearest franchised KLH dealer, is available on request.



*The KLH Model Ten speaker system
Is smaller than our other models —
a true bookshelf speaker,
Costs less than our other models —
under \$90.
Operates with a 12 watt amplifier —
up to 60 watts if you wish,
And — has the KLH sound.*



KLH RESEARCH AND DEVELOPMENT CORPORATION

30 CROSS STREET, CAMBRIDGE 39, MASSACHUSETTS

5

SPEAKERS & CABINETS

10,000 cps; crossover 1700 cps, 16 ohms; response 25-20,000 cps; 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; 16 ohms; response 23-20,000 cps; depth 9"\$179.00

"Belvedere" 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

"Dalton" Enclosure

Infinite-baffle type designed for use with either 12" Dual Concentric "Monitor" or 12" Direct Radiator speakers; 23 3/4" x 23 3/4" x 16"; solid back-to-front legs 2 1/2" high; oiled walnut only.....\$75.00

"Cadet" Enclosure

Infinite-baffle, approx. 1 1/2 cubic feet; operates on principle of pressure loading & acoustic absorption of back radiation;



designed for use with Model LZ111 10" Dual Concentric speaker; 23 3/4" x 13 1/2" x 11"; oiled walnut only; with speaker\$145.00

UNIVERSAL

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.....\$79.50

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

Medallion XII Speaker System

3-way speaker system consisting of 12" high-compliance woofer, 8" mid-range, Sphericon super tweeter; frequency response 28-22,000 cps; snap-on speaker grilles to match Provincial, Modern, or Contemporary furnishings; mahog., wal., oiled wal., fruitwood; grilles separate

- Unfinished\$139.95
- Unfinished\$134.95
- Select-A-Style frame for French Provincial in fruitwood.....\$14.95
- Select-A-Style frame for Early American in fruitwood.....\$14.95
- Select-A-Style frame for Italian Provincial in mahog., wal., oiled walnut, fruitwood.....\$14.95
- Select-A-Style frame for Swedish Modern in mahog., wal., oiled walnut, fruitwood.....\$14.95
- Above styles unfinished.....\$13.95
- Select-A-Style frame for Contemporary in mahogany, walnut, oiled walnut, fruitwood.....\$9.95
- Unfinished\$8.95
- Wood base for Medallion XII (all finishes).....\$14.95
- Unfinished base\$13.95

Medallion XII Cabinets

- Mahogany, walnut, oiled walnut, fruitwood.....\$64.95
- Unfinished\$59.95
- Cabinet kits in birch only.....\$49.95
- Contemporary frame kit in birch only.....\$ 7.95
- All other style frame kits in birch only.....\$12.95

Model UC-121 Coaxial Extended Range

Shallow design for flush mounting; Duraluminum dome; power capacity 30 watts; 12" speaker; frequency response 45-10,000 cps; 5 1/4 lbs.....\$28.00

Model UC-152 2-Way Diffaxial

15" speaker; dual horn loading; wide-angle dispersion; frequency response 30-14,000 cps; power capacity 30 watts; 8 1/4 lbs.....\$45.00

Model UC-153 3-Way Diffaxial

Medium power version of Model 315-C; 15" woofer, diffusicone element, and super-tweeter; Model UXT-5 is center-mounted; power capacity 30 watts; frequency response 30-18,500 cps; depth 10"\$83.00

Model 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 0 5/8" charcoal grey\$43.50

Model Stereoflex II

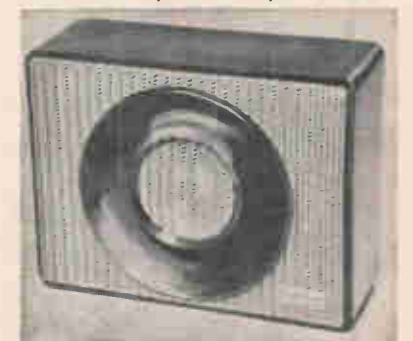
End-table design; consists of heavy duty compression driver and wide angle compression tweeter; 40 lbs; 9 7/8" x 25 3/8" x 19 1/2"; mahogany.....\$1.00

Blonde, walnut\$1.30

Model T-202 Sphericon Super Tweeter

Domed phenolic diaphragm and spherical diffractor; high compliance; frequency response 3-44kc; 120° dispersion; 4 5/8" diameter; built-in crossover network; 3 lbs.....\$24.95

Model T-203 Sphericon Super Tweeter



Similar to Model T-202 except housed in case for exterior use; 30 watt rating; 8 ohm impedance.

Model T-203E (ebony).....\$24.95

Model T-203W (walnut).....\$24.95

Model TM-812 Enclosure

For compact stereo systems; takes " or 12" speakers easily; 21 1/4" x 15 1/2" x 12 1/2"

- 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

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

"Diffusicone-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

Model MM-2FUW

Completely waterproof speaker for use at swimming pools; stainless steel protective cover; heavy 18 foot connecting cable with third wire for grounding; power capacity 25 watts; impedance 16 ohms\$4-.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.....\$2.00

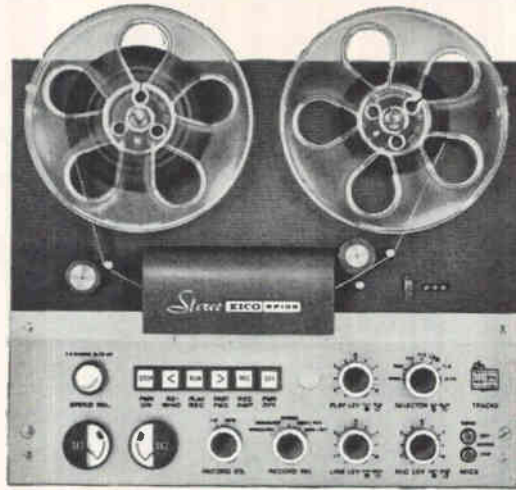
Model HF-206 Hypersonic Tweeter

Response 3500 cps to beyond audibility; dispersion 120° horizontal and 50° vertical; power rating 25-50 watts depend-

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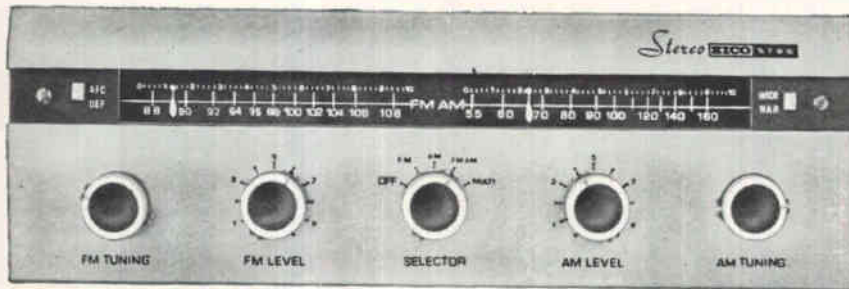
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4-TRACK STEREO TAPE DECK**

MODEL RP-100W
Completely assembled, wired and tested.
\$399.95

MODEL RP-100K
Semi-kit includes a completely assembled and tested transport, electronics in kit form.
\$299.95

Perfected 4-track stereo/mono recording, 4 & 2 track playback. True high fidelity transistor electronics, individual for record & playback, plus separate record & playback heads permitting off-the-tape monitor. 2 recording level meters, mixing, mic & level controls, switched sound-on-sound recording. Electrodynamically braked supply & take-up reel motors; hysteresis synchronous capstan motor. Individual solenoids for pinch-roller & tape lifters. All-electric, interlocked push-button transport control & interlocked safety "record" pushbutton. Precision tape guidance & sweep loading — no pressure pads. No slurring or tape bounce problems. Digital turns counter. Vertical or horizontal mounting. Modular plug-in construction. An original, exclusive EICO product designed & manufactured in U. S. A. (patents pending).

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FM-AM STEREO TUNER ST96
Kit \$89.95 Includes Metal Cover and FET Wired \$129.95

FM and AM stereo tuners on one compact chassis. Easy-to-assemble: prewired, prealigned RF and IF stages for AM and FM. Exclusive precision prewired EYE-TRONIC® tuning on both AM and FM.

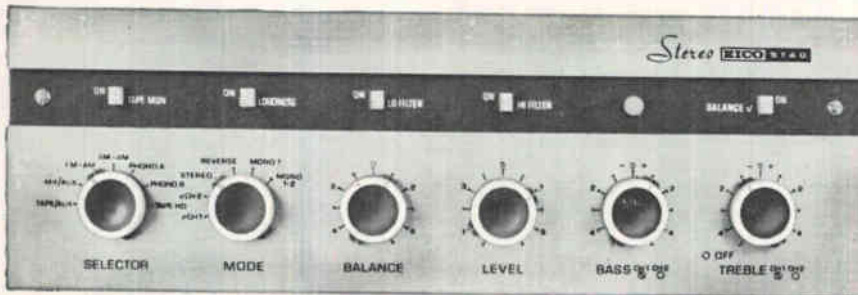
FM TUNER

Switched AFC (Automatic Frequency Control). Sensitivity: 1.5uv for 20db quieting. Frequency Response: 20-15,000 cps ± 1db.

AM TUNER

Switched "wide" and "narrow" bandpass. High Q filter eliminates 10 kc whistle. Sensitivity: 3uv for 1.0V output at 20db S/N ratio. Frequency Response: 20-9,000 cps ("wide"); 20-4,500 cps ("narrow").

OF EICO STEREO.



70-WATT INTEGRATED STEREO AMPLIFIER ST70
Kit \$94.95 Includes Metal Cover Wired \$149.95

40-WATT INTEGRATED STEREO AMPLIFIER ST40
Kit \$79.95 Includes Metal Cover Wired \$129.95

BOTH AMPLIFIERS: Complete stereo centers plus two excellent power amplifiers. Accept, control, and amplify signals from any stereo or mono source.

ST70: Cathode-coupled phase inverter circuitry preceded by a direct-coupled voltage amplifier. Harmonic Distortion: less than 1% from 25-20,000 cps within 1db of 70 watts. Frequency Response: ±½db 10-50,000 cps.

ST40: Highly stable Williamson-type power amplifiers. Harmonic Distortion: less than 1% from 40-20,000 cps within 1 db of 40 watts. Frequency Response: ±½db 12-25,000 cps.

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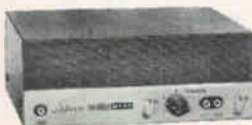
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**FM MULTIPLEX
ADAPTOR MX-99**
Kit \$39.95 Wired \$64.95
An original EICO contribution to the art of FM Multiplex reception



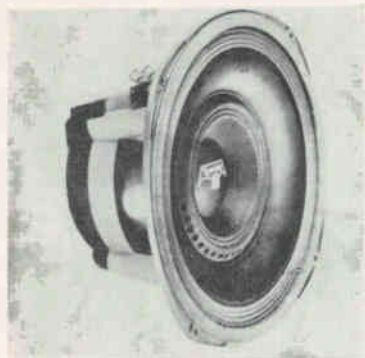
The new EICO MX-99 Multiplex Adaptor incorporates the best features of both the matrixing and sampling techniques. It is free of phase-distorting filters and provides the required, or better-than-required, suppression of all spurious signals including SCA (67kc) background music carrier, re-inserted 38kc sub-carrier, 19kc pilot carrier and all harmonics thereof. This is very important for high quality tape recording, where spurious signals can beat against the tape recorder bias oscillator and result in audible spurious tones in a recording. This adaptor will synchronize with any usable output from the FM tuner and will demodulate, without significant distortion, tuner outputs as high as 7 volts peak-to-peak (2.5 volts RMS). The MX-99 is self-powered and provides entirely automatic stereo/mono operation. A separation of 35 db between channels is typical across the entire audio spectrum. Low impedance cathode follower outputs permit long lines. The MX-99 is designed for all EICO FM equipment (HFT-90, HFT-92, ST-96), and component quality, ratio detector FM equipment provided with a multiplex output.

5

SPEAKERS & CABINETS

ing on crossover; 8 ohms; 6" x 2 3/4" x 6 9/16"\$33.00

"Diffusicone-12" Wide-Range Speaker



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

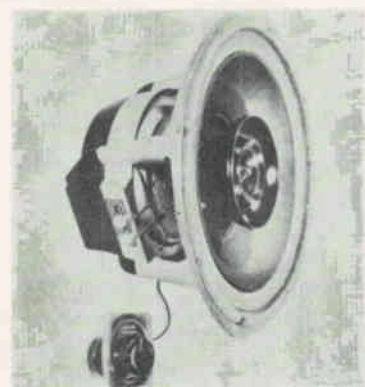
Model 6201 Coaxial Speaker

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

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

Model 312 "Diffaxial" Speaker



Sphericon tweeter is projected through the center of the 12" woofer; mid-range reproduction is handled by "Diffusicone" 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

Model 315-C Wide-Range Speaker

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

Model 4401 Tweeter

One-piece die-cast horn with 120° horizontal and 50° vertical dispersion; her-

metically sealed construction; response from 2000 to 15,000 cps; 8 ohms; power rating 25 watts; 6" x 2 3/4" x 6 9/16"\$18.00

Model C-8HC Woofer

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 Wide-Range Speaker

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

Model T-50 Hypersonic Driver



Heavy duty high efficiency driver for use with H-600 horn; response from 600 cycles to inaudibility; 8 ohms; 1 3/8"-18 throat; 4 1/2" diameter; 4 1/8" deep.\$49.50

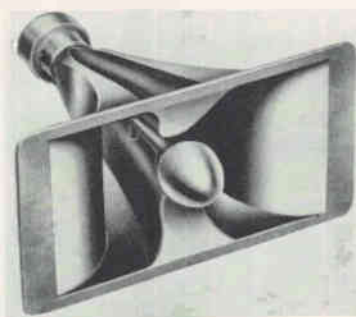
Model T-30 Driver

Mid-range and high frequency driver for use in 2, 3, or 4-way systems; response 200 to 15,000 cps; use with



H-600 or "Cobreflex" horns; 8 ohms; 3 1/2" diameter; 3 3/4" deep\$30.00

Model H-600 Horn



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

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

Model C-125W 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

Model C-15W Woofer

15" dual impedance woofer; may be used in any system from 4 to 20 ohms; response from below 25 to 1500 cps; power rating 50 watts; 6 lb Alnico V magnet; 10 1/2" deep\$85.00

Model C-12HC Dual Voice Coil Woofer

High compliance 12" woofer 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" d.\$49.50

Model C-15HC Dual Voice Coil Woofer

High compliance 15" woofer with resonance of 15 cps; "Uniferrox-7" magnet material; response to 800 cps; dual impedance coil; 4-20 ohms; operating power should be from 10 watts up. 8 1/8" deep\$89.50

N-1 Adjustable High Pass Filter

Two-way dividing network with tweeter control; crossovers at 2500, 5000, and 10,000 cps at 8 ohms; 1250, 2500, 5000, and 10,000 cps at 16 ohms; 5000 and 10,000 cps at 4 ohms; fits panels up to 1" thick; 3 3/8" x 3 1/4" x 3"\$14.00

Models N-2A and N-2B Networks

Adjustable L/C dividing networks; N-2A is 6 db/octave two-way L/C network; may be used in pairs as 12 db/octave network or singly as 12 db/octave low or high-pass filter; crossover 350 or 700 cps at 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

Model N-2B\$14.00

Model AP-8 Balance Control

Attenuator pad to regulate speakers of different efficiencies and for balancing sound for room acoustics and personal taste; ideal for N-2A and N-2B networks\$3.95

Model A-1 Stereo Adapter Network

Provides means of using single woofer for both stereo channels; not suitable for dual voice-coil speakers; phasing switch included\$30.00

Model N-3 "Acoustic Baton"



Three-way L/C dividing network with variable controls for high and mid-range; crossover between woofer and mid-range either at 350 or 700 cps; tweeter crossover at 5000 cps; fits panels up to 1" thick; 8 ohms; 7" x 5" x 3"\$32.00

Model BLC Speaker System

Weatherproof coaxial speaker for out-
STEREO/HI-FI DIRECTORY

door use; power rating: 25 watts; impedance: 8 ohms; frequency response: 70 to 15,000 cps; dispersion: 120 degrees; diam.: 22½"; depth: 9".....\$53.70

Model MLC Speaker System

Similar to Model BLC but with frequency response from 50 to 15,000 cps; power rating 15 watts; impedance 8 ohms.....\$34.50

Model EN-1215 "Debonaire" Enclosure

Enclosure only; may be used for 12" or 15" three-way speaker systems.

Mahogany.....\$63.00
Blonde, walnut, oiled walnut.....\$69.00

EN-CB Unfinished "Classic" Enclosure

Front-loaded folded horn fully assembled but unfinished; ¾" 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

UTAH

Continental Series

Feature controlled resonance design; solder-less terminals are phase-coded; cloth skiver roll: 2" voice coils; Alnico V magnets; impedance 16 ohms.

CT5FP (5" tweeter, 3500-20,000 cps, 40 w. with crossover).....\$15.70

CM8L (8" mid-range, 500-5000 cps, 20 w.).....\$26.95

C8R (8" woofer, 30-4500 cps, 25 w.).....\$56.50

C12R (12" woofer, 25-4000 cps, 30 w.).....\$62.50

C12RD (12" dual-voice coil woofer, 25-4000 cps, 30 w.).....\$66.25

C15R (15" woofer, 20-3500 cps, 40 w.).....\$69.00

Fabulous G Series Speakers

GT26C (2" x 6" tweeter, 2500-16,000 cps, 20 w.).....\$ 6.90

GT5F (5" tweeter, 3000-19,500 cps, 30 w.).....\$ 9.45

GT5FN (5" tweeter & crossover, 3000-19,500 cps, 30 w.).....\$13.60

G8J (8" extended range, 50-14,000 cps, 12 w.).....\$13.80

GM8J (8" mid-range & crossover, 600-13,500 cps, 25 w.).....\$13.80

G8K (8" extended range, 45-10,000 cps, 20 w.).....\$17.50

G12J (12" extended range, 40-13,000 cps, 15 w.).....\$17.30

G12K (12" extended range, 40-9000 cps, 20 w.).....\$21.95

G12P (12" woofer, 35-5500 cps, 30 w.).....\$39.50

G12R (12" woofer, 25-4500 cps, 35 w.).....\$52.25

G15R (15" woofer, 20-4000 cps, 40 w.).....\$56.75

G12K26 (12" coaxial, 35-17,500 cps, 15 w.).....\$37.50

G12P5 (12" coaxial, 55-19,500 cps, 30 w.).....\$57.50

G15P5 (15" coaxial, 30-19,500 cps, 35 w.).....\$65.00

Dual-Diameter Speakers

Dual-cone speakers with single voice coil and magnet structure; impedance 8 ohms.

D8J (8" full range, 45-15,000 cps, 10 w.).....\$17.50

D8K (8" full range, 40-15,500 cps, 17 w.).....\$21.20

D8LA (8" full range, 40-16,000 cps, 18 w.).....\$24.30

D8M (8" full range, 40-15,000 cps, 20 w.).....\$30.55

D8P (8" full range, 35-13,000 cps, 20 w.).....\$35.25

D12J (12" full range, 35-15,000 cps, 12 w.).....\$20.55

D12K (12" full range, 30-15,500 cps, 18 w.).....\$24.20

D12LA (12" full range, 30-16,000 cps, 18 w.).....\$29.00

D12M (12" full range, 30-15,000 cps, 25 w.).....\$36.25

D12P (12" full range, 30-14,000 cps, 30 w.).....\$40.75

D15P (15" full range, 25-12,000 cps, 35 w.).....\$44.50

D69J (6" x 9" full range, 45-16,000 cps, 12 w.).....\$16.95

Model SH-1 Bookshelf Speaker System

Dual ducted-port design with 2" x 6" cone tweeter for 4000-17,500 cps & 8" woofer for 38-4000 cps; peak power 18 watts; impedance 8 ohms; high-efficiency design for 4 to 8 watt amplifier minimum; 10" x 10" x 20"; walnut, blonde, or mahogany finishes.....\$99.95

Model SH-3 Remote Speaker System

Uses a 6" x 9" speaker with 3.16 oz. magnet; 8 ohms; 8" x 10¼" x 6¾"; walnut, blonde, or mahogany finishes.....\$24.95

Model PT-2 Speaker System

Wall-mounted design 12" x 18" x 3"; bass reflex port; uses 6" x 9" woofer & 3" x 5" tweeter; crossover at 2000 cps; 8 ohms; 8 watts; walnut, blonde, or mahogany finishes.....\$32.50

Crossover Networks

LC type designs for 2- or 3-way systems; air-coil coils; potted can assembly; use one 2500 cps model for 2-way system; use one 600 cps and one 5000 cps for 3-way system; for "G Series" speakers use 8-ohm crossover; for "Continental Series" use 16-ohm crossover; 2-5/8" x 2" x 2".

X-608 (8 ohms, 600 cps).....\$11.40

X-2508 (8 ohms, 2500 cps).....\$10.60

X-5008 (8 ohms, 5000 cps).....\$ 9.95

X-616 (16 ohms, 600 cps).....\$12.35

X-2516 (16 ohms, 2500 cps).....\$11.05

X-5016 (16 ohms, 5000 cps).....\$10.40

Deluxe Wall Enclosure

Satin finishes similar in design to Custom enclosures; mahogany, walnut, and blond finishes.

Model DM8 accommodates 8" speaker; 12" x 9½" x 6".....\$10.40

Model DM12 accommodates 12" speaker; 17" x 13½" x 8½".....\$14.95

Deluxe Corner Enclosure

Similar to Custom Corner Enclosure; mahogany, walnut, and blond finishes.

Model CDM8 accommodates 8" speaker; 12" x 9½" x 8".....\$12.45

Model DCM12 accommodates 12" speaker; 19½" x 17½" x 10¼".....\$16.90

Standard Wall Enclosure

Model B-6 accommodates 6" speaker; 8¼" x 9¾" x 4¾".....\$6.05

Model B-8 accommodates 8" speaker; 9¾" x 11" x 5¾".....\$7.50

Model B-10 accommodates 10" speaker; 11¾" x 12½" x 6¾".....\$9.10

Model B-12 accommodates 12" speaker; 13¾" x 14¾" x 8¼".....\$11.50

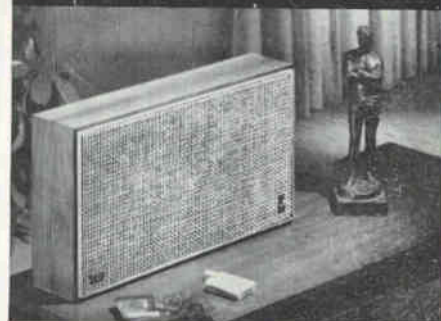
Custom Wall Enclosure

Mounts on any flat wall; speaker mounting hardware included; mahogany, oak, walnut.

Model P8 accommodates 8" speaker; 12" x 9½" x 6".....\$10.70

Model P12 accommodates 12" speaker; 17" x 13½" x 8¾".....\$14.95

Jensen's new 3-P Speaker Systems Make Sound Better 7 Ways!



3-P/1 Slim Shelf. Oiled Walnut, 13½" H; 25" W; 5½" D—\$119.50

The new Jensen 3-P Speakers make possible new smoothly blended transparent sound PLUS new flexibility in speaker placement never thought possible. Choose decorator styling in shelf size . . . or space-saving contemporary slim shelf and super-slim panel—a mere 3½" from front to back. All are 4-way, 5-speaker units—all 5 speakers feature new POLYTEC* radiators and other brilliant Jensen developments.



3-P/2 Super-Slim Panel. Oiled Walnut, 28½" H; 21½" W; 3½" D—\$139.50



3-P/3 Decorator Shelf. Danish in Walnut, Cherry Provincial, Mahogany Traditional, 16½" H; 25½" W; 11½" D—\$159.50. Utility unfinished—\$129.50



COMPONENTS

New 3-P 10¼" Woofer, special 8" midrange, two 3½" tweeters, SONO-DOME* Ultra-Tweeter, crossover network. Available in kit form at \$97.50.

See for yourself how Jensen's new 3-P Speaker Systems make sound better 7 ways!



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5

SPEAKERS & CABINETS

WEATHERS

Model SE-50 Harmony Stereo Speaker

Can be used in pairs or singly; shaped like a book; frequency response 60-15,000 cps.; full range moving coil; power capacity 10-watts program; 4 ohm impedance; 11" x 9 1/4" x 3 3/8"; 3 1/2 lbs.; ebonny or cordova leatherette\$29.75

Hideaway Bass System

Non-directional band-pass speaker can be placed anywhere; designed for use with Harmony book-type speaker; frequency response 30-70 cps; 10 watts continuous power up to 25 watts program; output impedance 8 ohms; 16 1/2" x 16 1/2" x 5 1/2"; 12 lbs.; A-301 bass amplifier response +0-3 db 10-70 cps; 12 watts continuous sine wave; output impedance 8 ohms; hum & noise -70 db from 12 watts; fully transistorized; output transformerless; 9" x 2 3/4" x 3 3/4".

Model SE-55A Bass speaker with A-301 amplifier\$119.50

Model SE-55 Bass speaker with crossover network for use with any amplifier\$ 69.50

Model SE-60A One bass speaker, two SE-50 speakers, A-301 amp.....\$169.00

Model SE-60 One bass speaker, two SE-50 speakers, crossover network...\$119.50

WHARFEDALE

Model W-40

Can be used vertically or horizontally; sand-filled panels; 8 1/2" low-frequency driver; 5" tweeter; 24" x 12" x 10" deep; available in oiled walnut, mahogany, polished walnut; 8 ohms; 20 watts continuous; crossover 1500 cps; has treble control\$79.50
Unfinished utility model.....\$69.50

Model W-60

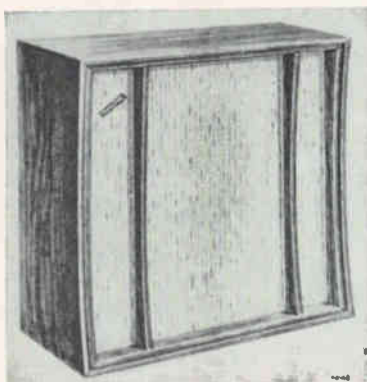
Shelf-size speaker system with sand-filled panel, contains 12" and 5" speakers, matched to enclosure; resonance 25 cycles; 8 ohms; oiled walnut, polished walnut, mahogany; 14 1/2" x 13" x 24"\$109.00
Sanded unfinished birch.....\$94.50

Model W-60PR

French Provincial in fruitwood; otherwise similar to Model W-60; 27" x 15 1/2" x 13 1/2".....\$134.50

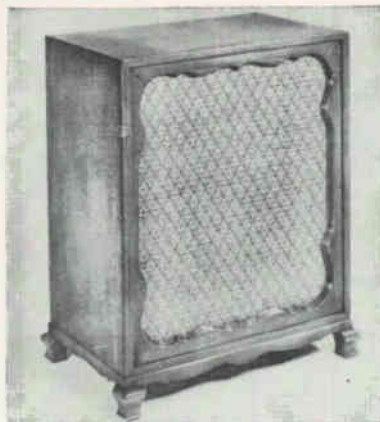
Model W-70

Speaker system; impedance 8 ohms; 24" x 21" x 12"; walnut veneer, ma-



hogany\$149.50
Unfinished utility model.....\$139.50

Model W-70PR



French Provincial in fruitwood; otherwise similar to Model W-70; 27" x 25" x 22"\$189.50

Mounting Base

For use with Models W-60 and W-70 systems; two leg assemblies are supplied with connecting dowel; can be used with speakers mounted vertically or horizontally by shortening the connecting dowel; available in walnut, oiled walnut, mahogany.....\$9.95
Unfinished utility model.....\$8.95

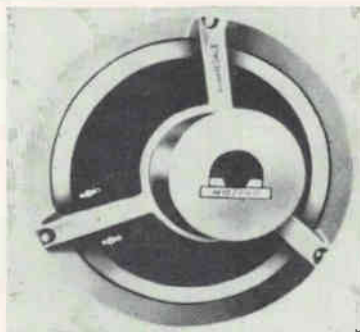
Super 3

Cone-type 3" tweeter; 3,000 to 20,000 cps; flux density 14,500 gauss, total flux 57,500 gauss; smooth high-frequency response is achieved by eliminating the conventional centering device; may be used in 2- or 3-way systems as high-frequency tweeter; impedance 8-15 ohms; 2 3/8" depth\$26.50

Super 8/FS/AL

Cone type 8" speaker with aluminum voice coil; frequency response 50-15,000 cps, bass resonance 55-65 cps; 8-10 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; 4 watts rated on open baffle; 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 16,000 gauss, total flux 85,000 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 10 watts on open baffle; depth 5 1/4"\$47.50

W/12/FS

12" woofer; for two- or three-way systems; bass resonance 30-35 cps; impedance 12-15 ohms; flux density 13,000 gauss, total flux 145,000 gauss; 12 watts rated on open baffle; depth 6 1/2".....\$52.50

W/15/FS

15" woofer; 25-3000 cps; rigid cone and extra-long voice coil; impedance 12-15 ohms; flux density 13,500 gauss, total flux 180,000 gauss; 15 watts rated on open baffle; depth 7 1/2".....\$89.50

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 12 watts on open baffle; depth 7".....\$89.50

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 7-16 ohms.\$18.25

3000 cps two-way network; attenuation 6-9 db/octave; impedance 7-16 ohms.\$18.25

WIGO

Model FW-2 Crossover Network

Crossover at 5000 cps.....\$5.00

Model ER 85 Full Range Speaker

8" extended range; capacity 15 watts; frequency response 40 to 15,000 cps; resonance 70 cps; 16 ohms impedance; 5 1/4 oz magnet; flux density 10,000; baffle opening 7 3/4"; depth 4 3/4"; shpg wt 4 1/2 lbs.\$21.00

Model ERD 12

12" extended range; capacity 30 watts; frequency response 30 to 15,000 cps; resonance 40 cps; 16 ohms impedance; 8 lb. 13 oz. magnet; flux density 12,500 gauss; baffle opening 10 3/8"; depth 6 5/8"; shpg wt 13 lbs.\$59.50

Model CX-2 Twin Tweeter Array

Dual cone-tweeter assembly kit converts ERD-12 to CX-212; complete with high pass filter, terminals, cables, hardware, instructions; wt 1 1/2 lbs.\$20.00

Model CX-212 Coaxial Speaker

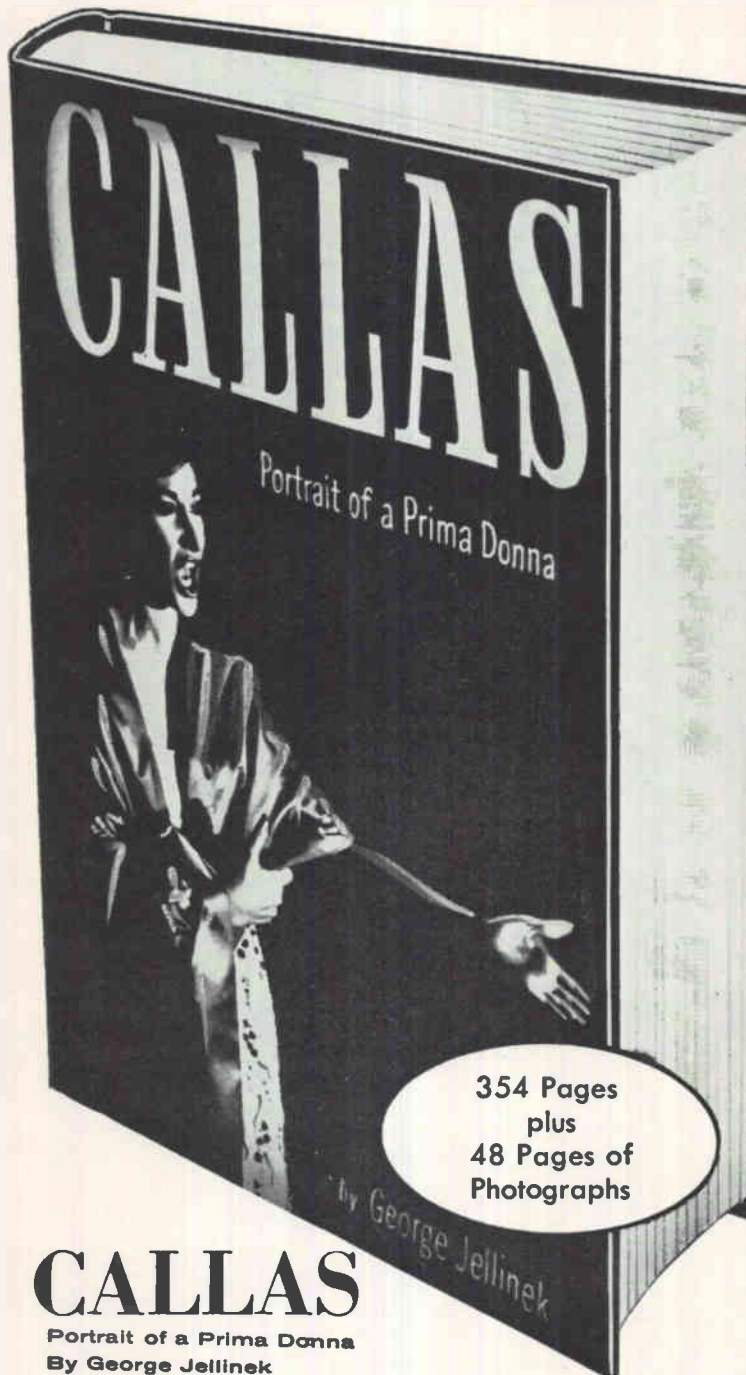
Model ERD-12 speaker with model CX 2 dual cone-tweeter assembly attached raising response to 18,000 cps; all other specifications identical; shpg wt 14 1/2 lbs.; includes FW-2 crossover network\$79.50

Model TW400 Tweeter

4" cone tweeter; capacity 10 watts; frequency response 2000 to 18,000 cps; 8 and 16 ohms impedance; 3 oz magnet; flux density 8000; baffle opening 3 3/8"; wt 1 1/4 lbs.\$12.50

Model WD-12 Deluxe Woofer

12"; capacity 30 watts; frequency response 25 to 3,500 cps; resonance 35 cps; 16 ohms impedance; 13 oz magnet; flux density 12,000; baffle opening 10 3/8"; depth 6 5/8"; wt 13 lbs.\$59.50



CALLAS

Portrait of a Prima Donna
By George Jellinek

About the Author . . .

George Jellinek, who has written for Saturday Review, Opera News, The Metropolitan Opera Program, and High Fidelity, and is a contributing editor to Hi Fi/Stereo Review, has brought to this work his vast knowledge of the world of opera and of music.

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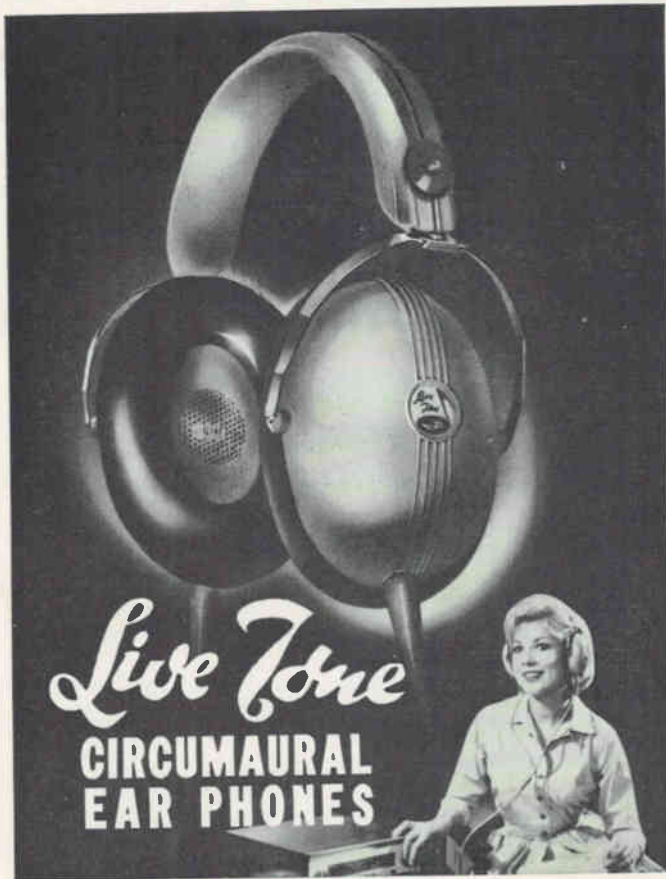
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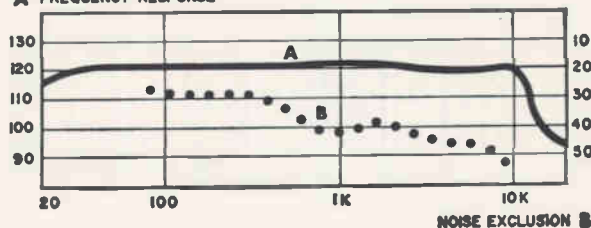
A MAJOR BREAKTHROUGH IN STEREO REPRODUCTION!

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Specially designed liquid seals distribute pressure evenly about the ear effectively sealing the ear from extraneous noises, thus placing you in the realm of a new world of stereo listening pleasure!

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EQUIPMENT CABINETS

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"\$325.00

Model 2412TS Speaker enclosure (bass reflex); 26 $\frac{3}{4}$ "x22"x19"\$90.00

Model 2412THS Speaker enclosure (horn loaded); 26 $\frac{3}{4}$ "x22"x19"\$102.00

Model 2412 TSD Speaker enclosure with doors (bass reflex) 12" speaker; 26 $\frac{3}{4}$ "x22"x19"\$115.00

Samoan Stereo Group

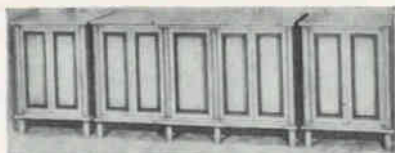
Oriental modern styling; consists of twin speaker enclosures Models 2312 OS and 2312OHS, 4 cu. ft. each, and Model 2300-OE equipment cabinet; extended top has solid inlay construction. Model 2300OE Equipment cabinet; 27"x55 $\frac{1}{2}$ "x19 $\frac{1}{2}$ "\$300.00

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

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

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

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 1515MS Speaker enclosure (bass reflex); 30 $\frac{1}{2}$ "x21"x20 $\frac{3}{4}$ "\$90.00

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

Mediterranean Group



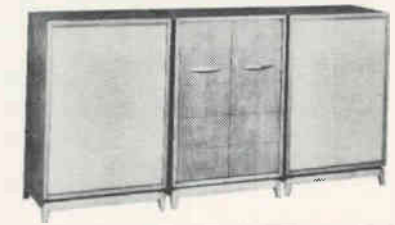
Consists of Model 5412EIP equipment cabinet; two lift-top lids; three compartments; vertical mounted doors; flat record storage both sides; raised base with casters; walnut finish; 55"x23 $\frac{1}{2}$ "x21"; and speaker enclosure Model 5412IPD; drum-table style; octagonal shape, raised base with casters; folding doors; walnut; 12" speaker; 23 $\frac{1}{2}$ "x23 $\frac{1}{2}$ "x23 $\frac{1}{2}$ ".

Model 5400EIP equipment cabinet\$380.00

Model 5412 IPD speaker cabinet\$180.00

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 $\frac{5}{8}$ "x21 $\frac{1}{8}$ "x15 $\frac{3}{4}$ "\$90.00

Model 412M Speaker enclosure (bass reflex); 32 $\frac{5}{8}$ "x21 $\frac{1}{8}$ "x15 $\frac{3}{4}$ "\$57.00

Model 412MH Speaker enclosure (horn loaded); 32 $\frac{5}{8}$ "x21 $\frac{1}{8}$ "x15 $\frac{3}{4}$ "\$69.00

Model 1108M Speaker enclosure (bass reflex); 23 $\frac{1}{2}$ "x17"x12"\$36.00

Stereo Combo Series

Each is a complete, built-in unit in different stylings.

Model 3900 Heritage Combo in Amer-



ican 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

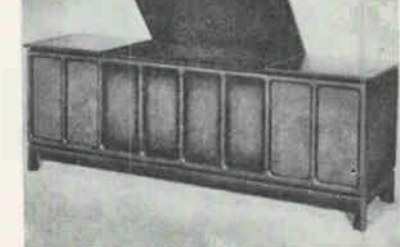
Model 3800 with horn loaded enclosures\$374.00

Model 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 53000E Samoan Combo equip-



ment cabinet and stereo speaker cabinets in a single assembly (bass reflex); 75"x27"x19 $\frac{1}{2}$ "\$380.00

Model 6400EIP Empress stereo combination; raised base with casters; solid top, doors on speaker compartments; for 12" speaker; bass reflex design; walnut or birch; 75"x31"x21 $\frac{1}{2}$ "\$440.00

A.E.S.

Equipment Cabinet



STEREO/HI-FI DIRECTORY

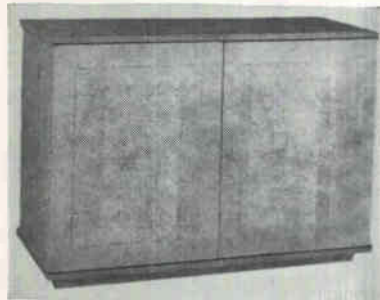
Designed for custom installations; available with matching speaker enclosure in Danish walnut, Provincial cherry, and traditional mahogany; each wood finish has its own unique styling; 31"x19½"x22"\$119.50

Speaker Enclosure



Available with matching equipment enclosure in Danish walnut, Provincial cherry, and traditional mahogany; cut-outs for 8" and 12" speakers; 31"x19½"x22"\$49.50

"Cavalier" Equipment Enclosure



Available with matching speaker enclosure (Mk I & Mk II); birch wood, completely assembled & sanded; blank panel for custom installation; 16"x27½"x39"; available unfinished only; FOB factory.....\$59.50

"Mk I" Speaker Enclosure

Available with matching equipment cabinet ("Cavalier"); birch wood; assembled & sanded; for use with 8" or 12" speaker; 16"x27½"x18"; available unfinished only; FOB factory.....\$24.50

"Mk II" Speaker Enclosure



Similar to "Mk I" but for 8" or 15" speaker; 16"x27½"x24"; available unfinished only; FOB factory.....\$29.50

BIGG OF CALIFORNIA

Model P-2-E Chairside Equipment Enclosure

Space for tuner, amp, changer; lid lifts up; 33½"x18"x24½".....\$49.95

Model FC-101 Equipment Enclosure
Console type enclosure for all equipment except speaker; 41"x18"x33".....\$159.95

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

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

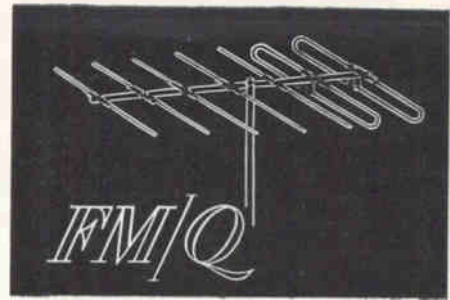
Model 431 (for speakers).....\$188.00

Model 851 (for equipment in Contemporary walnut, 19" x 32" x 18") \$122.00

Model 851 (for speakers).....\$99.00

Stereo-Mono Cabinets

Ten differently styled cabinets but all same size (33" h. x 18" d. x 58" w.); for one or two speakers and equipment; speakers housed in lower left and right areas with special floating technique;

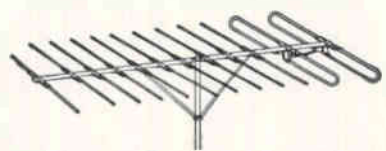


America's foremost high performance FM broadband Yagi

IT'S A MUST FOR STEREO MULTIPLEX

There is no compromising with multiplex. To minimize distortion, better signal strength and directional pickup are essential for optimum stereo resolution.

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World's most powerful FM Broad band yagi

Get more good music stations with your FM tuner. Improved sensitivity increases signal strength and minimizes fading, distortion and background noise.

To be fully informed, send 30¢ for book "Theme And Variations" by L. F. Carini and containing FM Station Directory.



APPARATUS DEVELOPMENT CO.
Wethersfield 9, Connecticut



EQUIPMENT CABINETS

speaker cabinets rest on special base which, in turn, rests on floor; cutout in bottom of cabinet permits special base to protrude into enclosure; physical isolation is reduced between equipment and speaker cabinets; will accept speaker cabinets 14" h. x 14" d. x 26" w.; top-hinged doors lift up allowing access to storage area (left), tuner-amplifier (center), turntable or changer (right).

Model 100 Early American, knotty pine wood, Winchendon pine finish.....

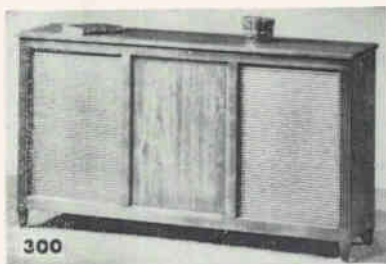
.....\$199.00

Model 200C Rural English, cherry wood, Savona fruitwood finish.....

.....\$238.00

Model 200M Rural English, mahogany wood, brown mahogany finish.....

.....\$238.00



Model 300 Italian Regency, cherry wood, Savona fruitwood finish.....

.....\$218.00

Model 301A Italian Regency, cherry wood, Savona fruitwood finish.....

.....\$238.00

Model 301M Italian Regency, mahogany wood, brown mahogany finish.....

.....\$238.00

Model 400 French Provincial, cherry wood, Breton fruitwood finish.....

.....\$269.00

Model 500 Traditional, mahogany wood, brown mahogany finish.....

.....\$238.00

Model 800 Contemporary, walnut, bone walnut or oiled walnut finish.....

.....\$238.00

Model 900 Oriental Contemporary, walnut wood, bone walnut or oiled walnut finish.....

.....\$269.00

For ebony, antique white or black and gold finishes for Models 800 and 900 add.....

.....\$20.00

For speaker enclosures, 13 5/8" x 13 5/8" x 19" or 23" wide, painted black add.....

.....\$20.00

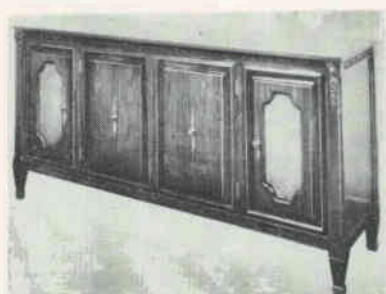
Cabinets without grille cloth (entire front easily removed) deduct \$12.00

Unfinished cabinets all models, deduct.....

.....\$24.00

GRECO

"Montoro" Custom Cabinet



Custom cabinet for individualized requirements; includes cut-outs; Italian Provincial; any finish; 72" w. x 36" h. x 19 1/2" d.\$375.00

"Solofra" Custom Cabinet



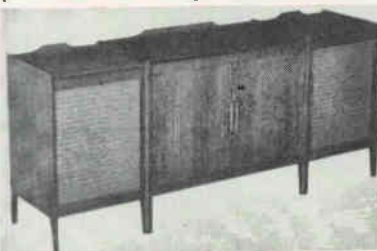
Custom cabinet for individualized requirements; includes lift-top formica bar; Italian Provincial; any finish; 84" w. x 33" h. x 18" d.\$575.00

Company can supply basic cabinetry in contemporary classic, modern Danish, Early American, Italian Provincial, and French Provincial to customer's specifications.

HEATH

Equipment Cabinet

Factory-assembled, ready-to-use equipment and matching speaker cabinets designed for mono or stereo systems; available in hand-rubbed walnut, mahogany, or unfinished; "gallery" rails; front doors with recessed planes and striated vertical scoring; curved brass door handles mounted on bas relief door edges; 3/4" stock used on all exterior panels and supports; solids for edgings; furniture-grade veneers for front and side panels and shelves; ventilated rear half-panel of Masonite; center cabinet will house complete stereo or mono hi-fi system except speakers; changer compartment will accept Heathkit record



changer or most tape recorders; storage compartment holds records and tapes; or accessory slide-out drawer may be used for tape recorder; two shelf compartments hold tuners and preamps; power amp compartment takes any Heath stereo power amp, pair of UA-2 mono amps, or any single mono amp; speaker-wing cabinets for 12" and 15" speakers; adapter rings for 8" or 12" speakers; special port for horn-type tweeter; instructions for modifying tube-vented design to match any speaker resonance.

Model AE-20 center cabinet (unfinished).....\$74.50

Model AE-20 center cabinet (walnut, mahogany).....\$94.50

Model AE-30 12" speaker cabinets (unfinished).....\$29.50

Model AE-30 12" speaker cabinets (walnut, mahogany).....\$34.50

Model AE-40 15" speaker cabinets (unfinished).....\$35.50

Model AE-40 15" speaker cabinets—photo—(walnut, mahogany).....\$41.50

KERSTING

Furniture-Type Record Cabinets



Model EI-85 Walnut veneers in hand-rubbed oiled walnut and oiled ebony finishes or birch veneer in blonde, Salem maple, or mahogany finishes. 22 1/4" h. x 32" w. x 16" d.; slide-out record drawer with "Quick-See" rack feature; conventional record storage in second compartment.....\$9.95

Model EM1-85 Selected birch veneer with Salem maple finish and Early American legs; 22 1/4" h. x 32" w. x 16" d.; one compartment with "Quick-See" feature; other has conventional record storage space.....\$9.95

Model TB1-85 Modern styled record cabinet in hand-rubbed oiled walnut and oiled ebony finishes or birch veneer in Salem maple finish; 25" h. x 3" w. x 16" d.; one record compartment with adjustable shelf; second compartment with "Quick-See" feature; available with legs; can be stacked without legs.....\$89.95

Model TK1-85 Selected birch veneer with Salem maple or antique white finish; 19" h. x 36" w. x 16" d.; one record compartment with adjustable shelf; other compartment has "Quick-See" feature.....\$89.95

KNIGHT

Model KN-1401 Equipment Cabinet



Contemporary design combining equipment cabinet with a choice of three matching speaker enclosures; cabinet has sliding doors; top compartments measure 8 3/4" x 16 1/2" x 16 1/4" and 12 3/4" x 18" x 16 1/4"; over-all size of cabinet 31 1/2" h. x 36" w. x 19" d.; available in mahogany, limed oak, or oiled walnut.....\$9.95

Model KN-1216 Speaker Enclosure



Styled to match KN-1401 equipment cabinet; 31½"x32"x19"; included is ducted port for tuning bass response and adapter board for mounting tweeter; accommodates any 12" or 15" speaker; available in mahogany, limed oak, or oiled walnut.....\$64.50
 Prefinished kit.....\$54.50

Model KN-1266 Speaker Enclosure



Styled to match KN-1401 equipment cabinet; 31"x19½"x19"; accommodates any 12" or 15" speaker; available in mahogany, limed oak, or oiled walnut.....\$49.95
 Prefinished kit.....\$39.95

Model KN-1285 Speaker Enclosure

Styled to match KN-1401 equipment cabinet; takes any 12" speaker; adapter board permits use with alternate 8" speaker; 5/8" plywood with hardwood veneer; in mahogany, limed oak, or walnut; 30½"x19¾"x13¾".....\$34.95
 Unfinished.....\$29.95

Model KN-1275 Speaker Enclosure

Matches KN-1500 equipment cabinet; takes 12" or 15" speaker, plus two- or three-way system components; adapter board permits infinite-baffle or tuned bass-reflex operation; 33"x21"x20¼"; oiled walnut.....\$69.95

Model KN-1500/KN-1275 Ensemble

Consists of KN-1500 equipment cabinet and two KN-1275 speaker enclosures.....\$229.50

Model KN-1501 Equipment Cabinet

French Provincial; for tuner, amplifier, changer or turntable, and record storage; 32¾"x37½"x20"; fruitwood.....\$129.95

Model KN-1276 Speaker Enclosure

Matches KN-1501; takes 12" or 15" speaker; space for adding tweeters for two- or three-way system; 32¾"x22½"x20"; fruitwood.....\$79.95

Model KN-1501/KN-1276 Ensemble

Consists of KN-1501 equipment cabinet and two KN-1276 speaker enclosures.....\$295.00

Model KN-1502 Equipment Cabinet

American Colonial; for tuner, amplifier, changer or turntable, plus record storage; brass door pulls; magnetic latches; 29¾"x37½"x20"; maple.....\$129.95

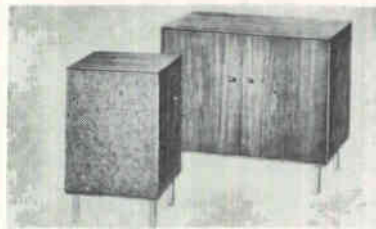
Model KN-1277 Speaker Enclosure

Matches KN-1502; takes 12" or 15" speaker; space for adding tweeters for two- or three-way system; 29¾"x22½"x20"; maple.....\$79.95

Model KN-1502/KN-1277 Ensemble

Consists of KN-1502 equipment cabinet and two KN-1277 speaker enclosures.....\$290.00

Model KN-1700 Equipment Cabinet



Contemporary style features lift top for access to record changer or turntable; two full doors expose area with shelves for mounting tuner and amplifier; adequate space for record storage; over-all size 30½" x 36" x 17¼"; record playing compartment is 16¾" w. x 14" d. x 5¾" above and 14" below the supplied motorboard; tuner-amplifier storage section is 20" h. x 16¾" w. x 14" d.; available in mahogany, limed oak, or oiled walnut.....\$69.95

Unfinished model sanded & ready for finishing.....\$59.95

Model KN-1725 Speaker Enclosure

Styled to match Model KN-1700 equipment cabinet; available in mahogany, limed oak, or oiled walnut.....\$39.95
 Unfinished.....\$34.95

Model KN-1900 Equipment Cabinet

Contemporary styling; for tuner, amplifier, changer or turntable, and record storage; 28½"x36"x17¾"; oiled walnut.....\$69.95

Model KN-1901 Speaker Enclosure

Matches KN-1900 equipment cabinet; ducted-port, bass-reflex design; takes any 12" speaker (or 8" speaker with adapter board supplied); boucle-weave grille cloth; 28½" x 17¾" x 16¼"; oiled walnut.....\$39.95

Model KN-1900/KN-1901 Ensemble

Consists of KN-1900 equipment cabinet and two KN-1901 speaker enclosures.....\$139.95

Model KN-1500 Equipment Cabinet

Danish modern equipment cabinet; for tuner, amplifier, changer or turntable, and record storage; white interior; precision-fit doors with magnetic latches; 33"x36"x20¼"; oiled walnut.....\$89.95

LANE

"Perception" Equipment Cabinet

Designed to house stereo or mono components plus a TV set; hutch top provides space for storing records; base cabinet measures 20" x 80" x 31"; hutch measures 14½" x 72" x 28¼"; available in oiled walnut with wovenwood panels. Model 908-31 base cabinet.....\$320.00
 Model 908-71 hutch.....\$250.00

"Cameo" Equipment Cabinet

Cabinet will house stereo, radio, TV equipment; hutch top provides record storage space; base cabinet measures 19" x 79" x 32"; hutch measures 14¼" x 49" x 40¼"; cameo walnut with pecan trim; cane door panels. Model 967-31 base cabinet.....\$300.00
 Model 967-71 hutch.....\$250.00

REALISTIC

Equipment Cabinet

Early American pine cabinet, walnut

STEREO-FIDELITY SPEAKER ENCLOSURES

Superbly Designed for Better Acoustics

NEW!

Model HFT 1284

Table model finished on 4 sides to house a 12" speaker. ¾" stock construction. Outside dimension: Width 14"; Height 28¾"; Depth 13¾". Available: raw wood (unfinished), walnut, Korina, Mahogany, Fruitwood, Ebony finishes. French Provincial or Italian inserts upon request, \$5.00 addl. Weight 25 lbs.



Unfinished \$26.95

Finished \$29.95

Model BRC 1228-S

Corner Bass Reflex for 12"-18" speaker. Outside dimensions: Width 21", Height 29½" (plus 3½" 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 28½", Height 29" (plus 6" legs), Depth 16¾". 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 29½" (plus 3½" 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 23½", 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 23½", Height 26½" (plus 6" legs), Depth 16¼". 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

6

EQUIPMENT CABINETS

finish: 3/4" stock; piano hinges; 32 5/8" h x 40" w x 18 3/4" d.; internal dimensions—record compartment, 17" x 19" x 14"; turntable compartment, 16 1/4" x 19" x 11"; equipment area, 11" x 18 3/4" x 16 1/4".....\$79.95
 Matching speaker enclosures: acoustically tested grille cloth in cane and white; 4 1/2 cubic feet inside; 32 5/8" x 20" x 18 3/4".....\$79.95

Colonial Pine Chest Cabinet

Designed to match colonial decor; brass hardware and carved apron sides; 3/4" stock; pine rubbed stained finish; 32 5/8" x 40" x 18 3/4"; internal dimensions—record compartment, 17" x 19" x 14"; turntable compartment 16 1/4" x 19" x 11"; equipment area, 11" x 18 3/4" x 16 1/4".....\$79.95
 Matching speaker enclosures; brown-white weave "homespun" grille; 4 1/2 cubic feet; 32 5/8" x 20" x 18 3/4".....\$79.95

Ultra-Modern Single Unit Stereo Cabinet

Fiber glass lining; ball-bearing rollers for drawer holding equipment; available in birch, walnut, mahogany; 30 1/4" x 56 7/8" x 17 3/4".
 Birch.....\$142.00
 Walnut or mahogany.....\$157.00

Lift-Top Console Cabinet

Space provided for record changer; houses 12" speaker; acoustically damped lining; 23 1/2" x 25 1/2" x 16 1/4".....\$39.95

ROCKFORD

Model 500 Equipment Cabinet



Combination record and equipment cabinet; lower left can hold up to 150 LP records; top left could house tape recorder; top right 18 3/8 wide x 13 3/8 high; has adjustable shelf; over-all size 40" wide, 32 1/2" high, 19 1/2" deep; available in walnut, mahogany, blonde, and ebony finishes.
 Model 500L with legs.....\$119.95
 Model 500B with base.....\$129.95

Model 120 Equipment Cabinet



Upper section has removable extra shelf; adjustable in height, for mounting components: inside dimensions 18 3/4" wide x 13 3/8" high; lower pull-out drawer for record changer; over-all size 20" wide, 32 1/2" high, 18" deep. Model 101 speaker enclosure can be used as matching unit.

Model 120L with legs.....\$59.50
 Model 120B with base.....\$64.50

Model 501 Speaker Enclosure

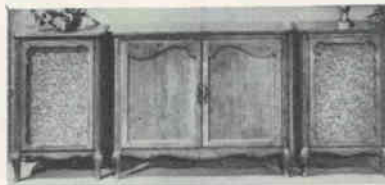
Matching unit for Model 500 equipment cabinet; houses up to 15" speaker and any size tweeter; 20" wide, 32 1/2" high, 19 1/2" deep; available in walnut, mahogany, blonde, and ebony finishes.

Model 501L with legs.....\$59.95
 Model 501B with base.....\$64.95

Model 101 Speaker Enclosure

Same as Model 501 except 18" deep.
 Model 101L with legs.....\$55.95
 Model 101B with base.....\$59.95

Models 1100 & 1101 Enclosures



Matching speaker cabinets and equipment enclosure in authentic French Provincial design; speaker cabinets house up to 15" speaker & tweeter; includes adapter board for 12" speaker; size 21" wide, 32 1/4" high, 19 1/2" deep; equipment cabinet top right compartment with lift-top for record changer, turntable, or tape recorder; inside dimensions 16 3/8" x 19 3/8" x 6"; lower right space for 150 LP records; left side for amplifiers, tuner, etc.; over-all size 41 1/4" wide, 32 1/4" high, 19 1/2" deep; available in cherry wood finished in fruitwood.

Model 1100 Equipment cabinet \$239.50
 Model 1101 Matching speaker enclosure.....\$110.00

Models 600 & 601 Enclosures



Matching speaker cabinets and equipment enclosures in Italian Provincial design; speaker cabinets house up to 12" speakers; 17" wide x 27 1/4" high x 17" deep; equipment cabinet—top right compartment with lift-top for record changer, turntable, or tape recorder; inside dimensions 14 3/8" x 17 1/4" x 6 3/8"; lower right space for 100 LP records; left side for amplifiers, tuner, etc.; over-all size, 38" wide, 27 1/4" high, 17" deep; available in fruitwood, walnut, mahogany, blonde, or ebony finishes.

Model 600 Equipment cabinet only.....\$99.95
 Model 601 Speaker cabinet.....\$49.95

UNIVERSAL

Model CX-68 Equipment Cabinet

Double-door design with separate compartments for record changer, tuner, amplifier, and storage space; 33" high x 24" wide x 17" deep; doors have magnetic latches; available in mahogany, walnut, limed oak, or cherry.....\$79.50

6

FM ANTENNAS

APPARATUS DEVELOPMENT

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.....\$29.96

Model FM/Q Jr. Antenna System

72 or 300 ohm FM operation; forward gain: 6 1/2 db average; 88 to 108 mc. range; minimum interference and noise pickup; aluminum construction; 65" x 67"; 4 1/2 lbs.....\$22.96

Model FM/Q Super Special

Covers 88 to 108 mc; 12-element design; gain: 14 db; stainless steel hardware; aluminum antenna; minimum noise pickup and interference gain when stacked: 17 db.....\$49.96

Model FM/Q Long Ranger

Designed for single-frequency operation in long distance fringe reception; forward gain: 12 db; 10-element yagi design; operating bandwidth: 5 mc.\$49.96

FM/Q Dipole & Reflector

Heavy duty seamless drawn aluminum tubing, stainless steel hardware, 3 db gain ideal for city and metropolitan reception.....\$10.96

FM/Q Crossed Dipoles Turnstile

Omni-directional duo-dipoles for local or city service.....\$12.59

FM/Q Cub

Folded dipole FM antenna designed for local service; rugged construction.\$6.89

FM/Q 300/72 Ohm Baluns

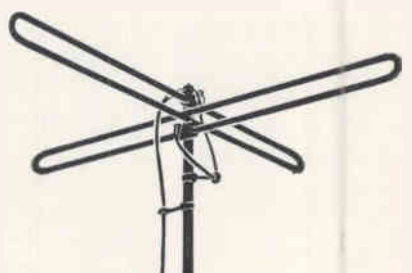
Outdoor mast mounting and indoor models designed to be used in converting from the standard 300 ohm to 72 ohm impedances; equipped with BNC co-ax cable connectors; strong "U" bolt mounting.

Outdoor.....\$11.95
 Indoor.....\$6.98

Hardware for all antennas listec is of stainless steel.

CHANNEL MASTER

Model 4400 Antenna



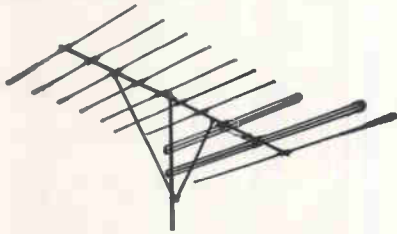
Turnstile antenna; omni-directional; for metropolitan and suburban areas; includes all mounting hardware, 5' aluminum mast, 50' lead-in.....\$13.75

Model 4401 Antenna



Directional: has 5 elements.....\$16.50

Model 4402 Antenna



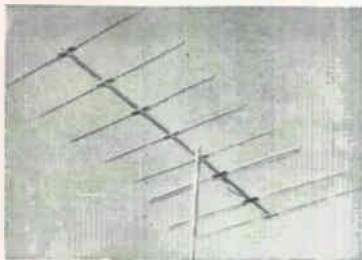
Directional: for far-away fringe areas; 10 elements.....\$27.65

Model 4403 Antenna

Same as Model 4400, but antenna only.\$9.03

CLEAR BEAM

Model D8FM "Sonic Tone" Antenna

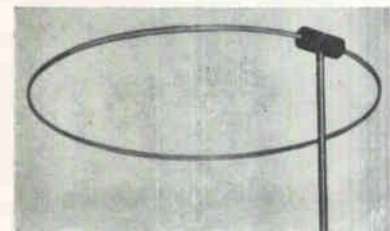


Dual driven FM broad band yagi with five directors, two driven elements and reflector; complete kit includes 5 ft. mast, lead-in wire and necessary hardware; 10 lbs. complete.

Antenna only\$16.63
Complete kit\$20.05

Model FMHO

"Halo" antenna for autos, mobile homes, etc. increases FM signal strength in fringe areas; fits over standard au-



tomobile 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. mast, lead-in wire, and all necessary hardware.

Antenna only\$4.57
Complete kit\$7.99

Model FM44 Antenna

Omni-direction FM dipole; two folded

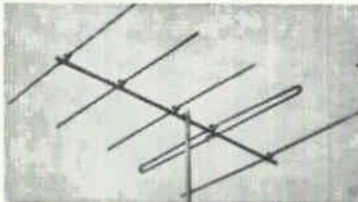
dipoles at right angles, phased with



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\$5.39
Complete kit\$8.81

Model YL5-FM

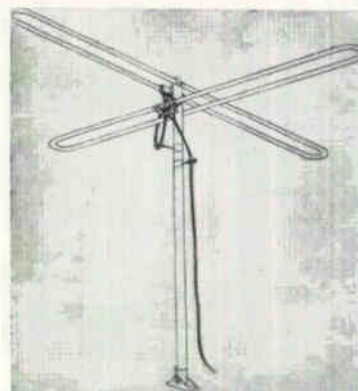


Five element FM yagi with three wide spaced directors, "T" match dipole, and reflector; tuned to center of FM band with frontal lobe receiving angle of 23 degrees; complete kit includes 5 ft. mast, lead-in wire, and necessary hardware; 5 lbs. complete.

Antenna only\$8.21
Complete kit\$11.63

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

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

Model FM-3 Antenna

Broad band 4 element FM yagi; narrow directivity pattern; aluminum construction; 5 lbs.\$13.00

HI-FI 'HO-HUM?' 

You need a **TELEX**

HI-FI STEREO DYNA-TWIN 



So-so or ho-hum response is not good enough! Get all of the recording sound you're paying for . . . with a sensitive hi-fi stereo Dyna-Twin. The new Dyna-Twin has been specially designed with "life-matched" receivers to give perfect balance and thrilling reproduction of your favorite music—symphonic, jazz, musical comedy—in private. Frequency response provides extremely accurate reproduction from 30 to 15,000 cps.

No longer do you need costly extra speakers or need to face fancy speaker placement problems in order to get the most out of your set. The Dyna-Twin's deluxe foam rubber cushions provide a perfect "acoustic room" for each ear—and exceptional comfort, too! Dyna-Twin weighs only 12 oz. and has headband adjustment for truly personalized fitting. Other features: single non-tangle cord, sturdy Tenite and stainless steel construction, moisture and rust proof.

CHOICE OF PHONE PLUGS! TELEX can provide terminals compatible with most existing equipment.

Item	Model
Dyna-Twin Headset, cord stripped and tinned	HDP-1A
Dyna-Twin Headset, standard phone plug—monaural	HDP-2A
Dyna-Twin Headset, 3-circuit plug—stereo	HDP-53A

Try a Dyna-Twin Today! For more information and demonstration, see your TELEX dealer, or write directly to us.



TELEX/Communications Accessories Division
Telex Park, St. Paul 1, Minnesota, Dept. 1214

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FM ANTENNAS

Model FM-4 Antenna

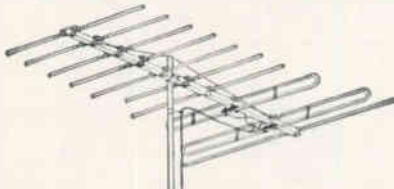
Twin drive FM antenna with impedance control "T" match stubs; aluminum construction. 6-element, wideband (88 to 108 mc.) yagi.....\$24.90



struction. 6-element, wideband (88 to 108 mc.) yagi.....\$24.90

Model FM-5

10-element deluxe gold corodized antenna; twin drive elements; maximum gain over full FM band; wt. 8½ lbs. \$36.35



gain over full FM band; wt. 8½ lbs. \$36.35

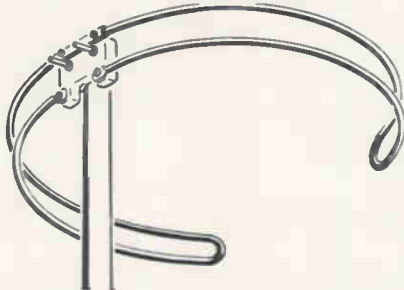
Model FMT-A

Mounts on TV mast; preassembled, snap-out design; matched for all-directional signal pickup; kit includes FM antenna, 50' twin lead, 2 mast insulators, 3 screw-in insulators, mounting brackets. Similar to model FMT-1 but mounts on your own TV mast.....\$14.50

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

JERROLD

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.....\$41.95
Mast mounted version (DSA-FM) is also available.....\$59.70

Model FMX FM Range Extender



One-tube, all FM preamp; connects between antenna lead-in and tuner; provides 20 db boost; has its own power supply.....\$18.95

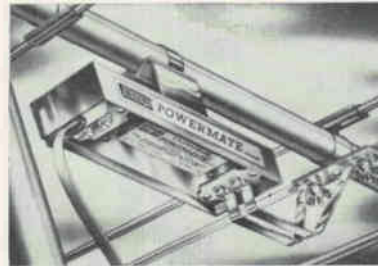
Model TX FM Antenna Coupler

Passive-type bandpass filter; separates FM & TV signals from a TV antenna with negligible signal losses; 300 ohms impedance.....\$3.57

Model HSA-43 Amplified Coupler

Single-tube, 3-set coupler for FM/TV; gain 5 db across TV/FM band on 2 outputs; no loss on third output; 300 ohms impedance; has own power supply.....\$17.95

Model APM-101 Antenna Booster



Completely transistorized, mast-mounted with remote power supply; input and output 300 ohms balanced; basically a TV booster but provides 12 to 18.2 db. on FM band; power consumption 3 watts; 2N1742 transistor.....\$26.63

Model HSA-44 Amplified Coupler

Same as Model HSA-43 except provides 4 outputs.....\$18.95

Model MF-2 Antenna Coupler

Passive-type which simply divides signal for TV and FM; circuit loss 4 db.....\$2.70

Model MF-4 Antenna Coupler

Similar to Model MF-2 but will divide into 4 signals, FM or TV.....\$3.45

Model DSA-202 Antenna Preamplifier

Mast-mounted with remote power supply; 300 ohms input impedance; 75 & 300 ohms output impedance; two tubes; covers FM bands (54-108 mc.) and TV-VHF band; gain 20 db for TV and minimum of 8 db at 108 mc. (extreme edge of FM band).....\$53.97

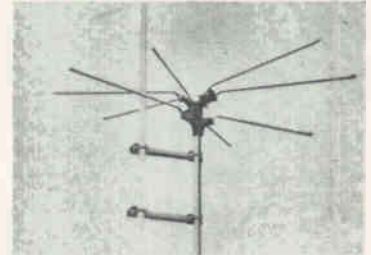
Model HSA-46 Antenna Preamplifier



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

JFD ELECTRONICS

Model AFM100 "Stereo Cone Turnstile FM Antenna



Omnidirectional 8-element turnstile system for new or replacement installation. (Kit).....\$15.95

Model AFM150

Same as Model AFM100 less miscellaneous hardware but with mast brackets. Kit.....\$11.95

Model AFM-175

Same as Model AFM150 plus 50 ft. twin-lead, screw-eyes, and stand-offs. Kit.....\$13.95

Model AFM200

Stereo folded dipole kit.....\$4.95

Model AFM300

FM yagi kit.....\$23.50

TACO

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

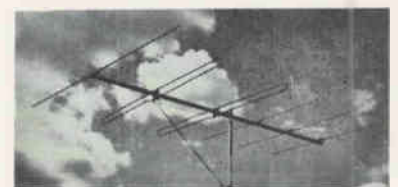
Stacked "S" dipole with 10' mast; omni-directional; 3 db gain.....\$4.95

Model G624STL (Model 624STL anodized).....\$16.45

Model G626A FM Antenna

"S" omni-directional dipole with u-bolt to attach to standard mast; golden anodized.....\$6.95

Model 644B FM Antenna



Six-element twin-driven yagi for fringe FM pickup.....\$20.20

Model G644B (Model 644B anodized).....\$24.95

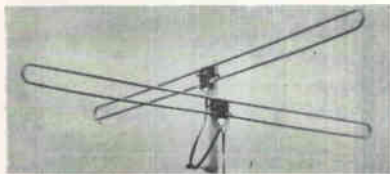
10-element twin-driven yagi for fringe FM reception.....\$29.25

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

Model C666 FM Antenna



Turnstile antenna; gives excellent performance up to 35 miles; complete with matching network and installation instructions; gold anodized. \$9.95

Model 670 FM Antenna

Five-element yagi; fringe area; directional; pre-assembled. \$11.45

Model 677 FM Antenna

Pre-assembled, all-direction FM turnstile with snap-out elements; swagged mast section for mounting onto new or existing 1/4" mast. \$8.15

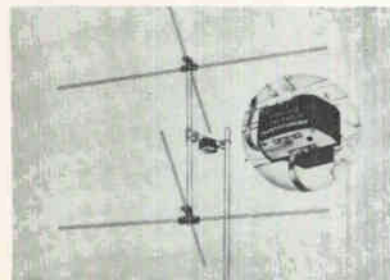
Model 677M same as Model 677 but with arm mount to attach to any new or existing mast. \$8.85

Model 690 FM Antenna

Directional dipole-reflector for medium-signal areas; "Quick-Rig," snap-out elements; pre-assembled. \$6.35

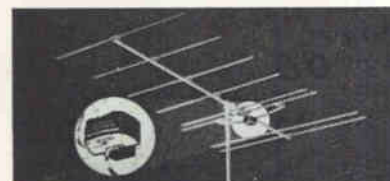
WINEGARD

Model PF-4 FM Antenna System



Omnidirectional turnstile design with transistorized booster; 16 db gain over folded dipole over entire band 88-108 mc. and in all directions; all elements gold anodized; 300 ohm input and output. \$41.50

Model PF-8 FM Antenna System



Directional design combining yagi type antenna and transistorized booster; minimum gain of 26 db over a folded dipole with frequency response $\pm 1/4$ db from flat from 88-108 mc.; antenna has eight elements with "Tapered-T" driving element; all elements gold anodized; for 300 ohm twin-lead. \$49.95
Model PF-8C For 75-ohm coax. \$49.95

Model FM-3T Turnstile Antenna

Same antenna as Model PF-4 without transistorized booster. \$12.55

Model FM-8 FM Antenna

Same antenna as Model PF-8 without transistorized booster. \$23.65

6 MICROPHONES

AKG

Model C-12 Condenser Microphone

Choice of 9 directional patterns including hypercardioids; frequency range 30-20,000 cps; sensitivity 1 mv/ μ bar; output -60 db; 200 or 50 ohms impedance; 1 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

Model C-60 Condenser Microphone System

"Walk-around" feature; miniature design; battery or a.c. operated; ideal for field recordings; 4" long, 2 oz.; response 30-30,000 cps; has two capsules (cardioid & omni-directional) interchangeable in seconds; power pack provides 20 hours service on single charge; supplied with power pack and either capsule. \$259.50

Model D7 Microphone

Omnidirectional dynamic; frequency range 100-10,000 cps; output -73 db.; 200 or 50,000 ohms impedance; 3 1/8" x 2" x 1 1/4". \$14.50

Model D9 Microphone

Dynamic omnidirectional; frequency response 80-10,000 cps; output -74 db.; 200 or 50,000 ohms impedance. \$16.50

Model D12 Microphone

Dynamic directional; frequency response 40-12,000 cps.; output -78 db.; 5 3/8" x 2 7/8". \$99.00

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 50-15,000 cps; hi and lo impedance. Model D15-60 (no speaker switch). \$49.50

Model D15-60-g (speaker adaptation). \$60.00

Model D17 Microphone

Dynamic directional; frequency response 50-15,000 cps; low impedance; output -78 db.; 4 3/8" x 1 3/4". \$66.00

Model D19B Microphone

Dynamic; cardioid pattern; frequency response 40-16,000 cps; 200 or 50,000 ohms impedance; low impedance output -75 db; high impedance output -52 db; head dia. 1 3/8". \$68.00
Model 19BK low impedance. \$52.00
Model 19BK high impedance. \$58.00

Model D20B Microphone

Dynamic directional; frequency response 30-15,000 cps; output impedance 60 ohms. \$180.00

Model D24B Microphone

Dynamic directional; frequency response 30-16,000 cps; output -75 db.; impedance 200 ohms; includes bass attenuation switch. \$165.00

Model D25B Microphone

Dynamic directional; has swivel frame; frequency response 30-15,000 cps; impedance 60 ohms; output -78 db. \$195.00

Model D30B 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.; 10 1/4" x 2 1/2" x 3 7/16". \$300.00

Model D36B Microphone

Dynamic directional; for studio use; output impedance 150 ohms. \$450.00

Model D45B Microphone

Dynamic directional; has swivel mount; frequency response 30-15,000 cps. \$485.00

Model D-58 Dynamic Microphone

Noise-cancelling, uni-directional design for close talking particularly in noisy locations; sound originating farther away from mike is cancelled; response 50-12,000 cps; sensitive only up to 10 cm; 200 ohm impedance; also available with 50 & 15 ohms; 33 mm. long & 20 mm. diameter. \$42.00

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). \$46.50

Model D88 Hi-Z. \$54.00

Model D-110 Dynamic Microphone

Omnidirectional design for compactness and ruggedness; can be carried as a



lavalier or lapel mic.; response 100-12,000 cps ± 2.5 db; 200 ohm impedance; sensitivity .12 mv/ μ bar; 85 mm. long x 28 mm. dia. at front end and 18 mm. dia. at connector end. \$60.00

ALTEC LANSING

Model 681A Microphone

General-purpose, moving-coil dynamic design; response 50-18,000 cps; output impedance 150/250 or 20,000 ohms (specify impedance); output -55

6

MICROPHONES

dbm/ 10 dynes/ cm.²; omni-directional, 1 1/8" dia. at top, 7 3/8" long; dark green baked enamel or brushed chrome; separate slip-on adapter 5/8"-27 thread furnished\$36.00
 Desk stand extra.....\$12.00
 "On-off" switch kit.....\$9.00

Model 682A Microphone

Similar in design & style to Model 681A; response 45-20,000 cps; output impedance 30/50, 150/250, and 20,000 ohms (selectable by cable plug); two-tone baked enamel finish, black & dark green, dark brown & platinum, or brushed chrome.....\$49.50

Model 683A Microphone

Similar in style to Model 681A; cardioid dynamic design; response 45-15,000 cps; 30/50, 150/250, and 20,000 ohms (selectable by cable plug); output -54 dbm/ 10 dynes/ cm.²; front-to-back discrimination 20 db; same finishes available as for Model 682A.....\$66.00

AMERICAN CONCERTONE

Model M-21 Microphone

Omnidirectional "Slimar" dynamic microphone; wire mesh blast filter; 90-degree swivel; 150-ohm or high-impedance output -58 db; "on-off" switch.....\$50.00

AMERICAN MICROPHONE

Model DR330 Microphone



Ribbon-dynamic type; frequency response 40 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.....\$250.00

Model D204 Microphone

Dynamic type; frequency response 70 to 9,500 cps; output level: low impedance, -57 db; high impedance, -55 db; 4 7/8" long.
 D204 low-impedance 6' cable.....\$10.20
 D204B low-impedance 6' cable with min. type plug.....\$10.98
 D204T high-impedance 6' cable.....\$13.80
 D204TB high-impedance 6' cable with min. type plug.....\$14.58

Model B204 Microphone

Ceramic type; frequency response 70 to 10,000 cps; output level -63 db; high impedance; 4 7/8" long; with 6' shielded cable; less plug.....\$9.60

Model D-10 Microphone

Dynamic type; omni-directional general purpose; plastic diaphragm; 50 ohms impedance; frequency response 50-8000 cps; output level is -57 db.....\$17.70

Model D-12 Microphone

Dynamic type; extremely compact 3-25/32" long; 150 ohms impedance; frequency response is 70-12,000 cps; output level -57 db.....\$35.70
 D12-WGA 9" gooseneck, desk flange & 4' cable.....\$37.80
 D12-WGB with 13" gooseneck, desk flange & 4' cable.....\$37.80

Model X204 Microphone

Crystal type; frequency response 70 to 8000 cps; output level -60 db; high impedance; 4 7/8" long; with 6' shielded cable; less plug.....\$9.60

Model D44 Microphone

Dynamic type; frequency response 50 to 15,000 cps; output level -60 db at 50 ohms impedance; omni-directional; overall height 6 3/4".....\$141.00
 With wind screen.....\$163.50

Model D33 Microphone

Dynamic type; frequency response 40 to 15,000 cps; output level -60 db at 50 ohms impedance; impedance may be adjusted for either 50 ohms or 250 ohms; 25' 2-conductor cable; overall height 8 1/4".....\$78.00

Model D22 Microphone

Dynamic type; frequency response 50 to 12,000 cps; omni-directional; output level -55 db at high impedance; impedance may be adjusted for either 50 ohms or 40,000 ohms; overall height 8 1/4"; 25' single conductor cable.....\$59.70

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 6 1/8"; 25' single-conductor cable.....\$84.00

Model D4 Microphone

Dynamic type; frequency response 50 to 8,000 cps; output level -56 db at 50 ohms impedance; omni-directional overall height 4"; 12 1/2" cable; low-impedance, rugged type.....\$16.80
 D4S with slide switch.....\$18.60
 D4-WGB with 13" gooseneck, desk flange, adapter with cable slot.....\$19.71

Model D4T Microphone

Dynamic type; frequency response 50 to 8,000 cps; output level -52 db at 40,000 ohms; omni-directional; height 4"; 12 1/2" single-conductor cable; high-impedance, rugged type.....\$18.60
 D4TS with slide switch.....\$18.60
 D4T-WGB with 13" gooseneck, desk flange, adapter with cable slot.....\$21.51

206 Series Microphones

Crystal or ceramic all-purpose designs with clip-on stand and neck cord; high impedance.
 X206 crystal with 6' cable.....\$4.77
 B206 ceramic.....\$4.77
 X206B crystal with 6' cable, RCA phono plug, adapter.....\$5.55
 B206B ceramic.....\$5.55
 X206WG crystal with 6' cable, 5/8"-27 thread male adapter.....\$6.30
 B206WG ceramic.....\$6.30
 X206WGA crystal, same as X206WG but with 9" gooseneck & desk flange, 4' cable.....\$8.40
 B206WGA ceramic.....\$8.40

X206WGB crystal, same as X206WGA but with 13" gooseneck.....\$8.70
 B206WGB ceramic.....\$8.70

Model X203 Microphone

Crystal design; 100-7000 cps; response -55 db; omnidirectional; high impedance.....\$5.01

Model B203 Microphone

Ceramic type; 100-6000 cps; response -62 db; omnidirectional; high impedance.....\$6.90

Model D55 Microphone

All-purpose unidirectional dynamic design; 70-15,000 cps; impedance may be changed to 50, 150, or 40,000 ohms; 7 1/2" long x 1 3/8" dia.....\$53.70

Model P55 Microphone

Cardioid dynamic design; professional version of Model D55; 40-18,000 cps; low impedance only; each model supplied with own response curve.....\$117.00

Model D11 Microphone

Omnidirectional, dynamic general-purpose type; 70-9000 cps; push-to-talk switch; 2 5/8" dia. x 2" x 5"; includes 15' three-conductor shielded cable.
 D11 high impedance.....\$21.60
 D11-M 150 ohms.....\$21.60
 D11-L 50 ohms.....\$21.60

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 1/32".....\$50.00

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; 30-50 ohms.
 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

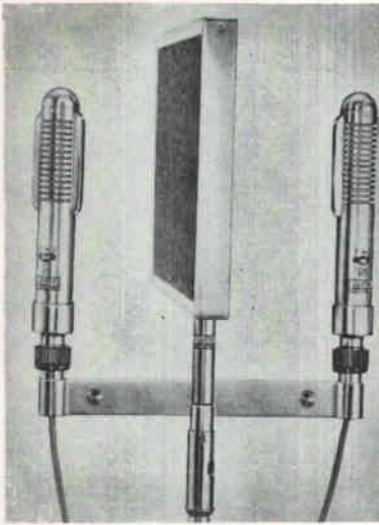
Model 332 Microphone

Crystal type; high impedance; response 30-15,000 cps; output -54 db (1 volt/dyne/cm.²); complete with lavalier and stand adaptor.....\$17.90
 All microphones have built-in "on-off" switch with "lock-on" provision.

DYNACO

Models 50 & 53 Microphones

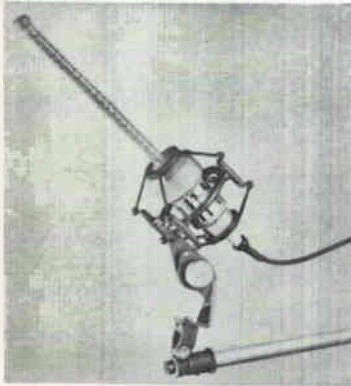
Both models are ribbon; bi-directional; B & O manufactured; response ±2.5 db 30-13,000 cps; output 56 db below 1 volt/μbar at high impedance or with matching transformer; 7 3/4" ± 1/16"; switch provides music, close-talk, and off positions.
 Model 50 (50 ohms balanced only).....\$49.95
 Model 53 (with matching transformer for 50 and 250 ohms balanced, 40,000 ohms unbalanced).....\$59.95
 Model SS-1 Stereo spacer & dual mount



Model MS-1 Desk stand.....\$14.95
 MT-1 matching transformer (50-50,000 ohms).....\$3.30
\$9.95

ELECTRO-VOICE

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 $\frac{7}{8}$ "x3 $\frac{3}{16}$ ".
\$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 $\frac{5}{16}$ ".
\$110.00

Model 623 Slim Microphone

Dynamic; omnidirection; frequency response 60 to 12,000 cps; output -56 db; high and low impedance; cast case; hinge head; on-off switch; built-in MC-4 connector $\frac{3}{8}$ "-27 thread; satin chrome; 18 foot cable; size 7 $\frac{1}{2}$ "x1 $\frac{1}{4}$ "; weight 15 oz.
\$57.00

Model 666 Super Cardioid Microphone 1962 EDITION

Dynamic; unidirectional; for boom, stand, or hand use; frequency response 30 to 16,000 cps; output -55 db; impedance 50 ohms, taps for 150 and 250 ohms; variable directivity increases working distance yet permits closeup without distortion; cast aluminum case; gray; 20 foot cable; built-in Cannon UA-3 connector; includes clamp-on stand mount with $\frac{3}{8}$ "-27 thread and $\frac{1}{2}$ " pipe thread adapter.....\$255.00

Model 729 Ceramic Microphone

Cardioid design; wide-angle front pickup; response 6-8000 cps; high-impedance; on-off switch; output -60 db; 7 $\frac{3}{4}$ " x 1 $\frac{1}{2}$ " w x 1 $\frac{3}{8}$ " d; single-conductor shielded 8 $\frac{1}{2}$ ft. cable; also available with three-conductor (one shielded) cable\$24.50

Model 654A Slim-Trim Broadcast Microphone

Dynamic, omnidirectional; frequency response 50 to 16,000 cps; output -55 db; impedance switch for 50 or 250 ohms; gray; 18 foot cable; size 10"x1"; net weight 15 $\frac{1}{2}$ oz.....\$100.00

Model 664 Cardioid Microphone

Dynamic; unidirectional; frequency response 40 to 15,000 cps; output -55 db; 150 ohm and high impedance; diaphragm shielded from dust; filter to



minimize wind blast; on-off switch; pressure cast case; assembly includes hinge; 18 foot cable; size 7 $\frac{1}{4}$ "x1 $\frac{7}{8}$ "; weight 26 oz.
 Chrome finish.....\$85.00

Model 502A Matching Transformer



Mounts on amplifier or in series with mike line; frequency response 40 to 20,000 cps \pm 1 db; matches 50, 150, 250, and 500 ohms to high impedance; low distributed capacity; shielded windings; MC-4 input connector.....\$17.50

Model 665 Cardioid Microphone

Lower cost professional microphone in-



corporating same design features as Model 666.....\$150.00

ESL

Model AT1 Microphone

Omni-directional moving-coil microphone; frequency response 30 to 10,000 cps \pm 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 $\frac{3}{4}$ "; weight: 3 $\frac{1}{2}$ lb.\$80.00

Model AT2 Microphone

Omni-directional table-model moving-coil design; frequency response 50 to 10,000 cps \pm 3 db; internal impedance 200 ohms; output level -55 db re 1 mw/10 dynes/cm²; probe length 18"; base diameter 2 $\frac{1}{2}$ "; weight 1 $\frac{1}{2}$ lb.....\$79.50

Model MCI Microphone

Omni-directional table-model moving-coil microphone; frequency response 50 to 15,000 cps \pm 3 db; internal impedance 200 ohms; output level -47 db re 1 mw/dynes/cm²; 4 $\frac{3}{4}$ "x1 $\frac{13}{16}$ "x1 $\frac{13}{16}$ "; weight: 8 oz.\$42.50

Model MC4 Microphone

Omni-directional moving-coil microphone; frequency response 100 to 10,000 cps \pm 5 db; internal impedance 200 ohms; output level -47 db, 6 mv/ μ bar; reference level 1 mw/10 dynes/cm²; may be hand-held or supported on built-in folding stand; 3"x2 $\frac{1}{2}$ "x1 $\frac{1}{2}$ ".
\$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"x2"x2"; 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 SC403 Microphone

Super-cardioid microphone; frequency response 50 to 12,000 cps \pm 3 db; internal impedance 200 ohms; output level -50 db, 2.2 mv/ μ bar; 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"x1 $\frac{1}{2}$ "x3 $\frac{3}{4}$ ".
\$25.50
 Model SC403H (With 45,000-ohm impedance)\$28.00

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 $\frac{1}{8}$ "x2 $\frac{3}{8}$ ".
\$48.75

Model NC1S (with on-off switch)
\$53.50

Model NC2 Microphone

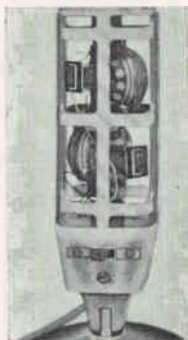
Noise-cancelling, cardioid, moving-coil microphone; insensitive to sound originating at distance; frequency response 200 to 10,000 cps; internal impedance 200 ohms; normal speech output 2.5 mv; hand-held; shock-resistant; 5"x2"; weight 6 $\frac{1}{2}$ oz.\$36.50

6 MICROPHONES

Model MC2S (with on-off switch) \$40.50

LAFAYETTE

Model PA-263 Stereo Dynamic Mike



Two separate dynamic mike elements within single housing; sw. for stereo or mono operation; omnidirectional pattern 90 degrees apart for full pickup within 360 degree arc; response 50-15,000 cps, essentially flat 80-10,000 cps; impedance 50,000 ohms\$17.95

NORELCO

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 μ bar/cm², impedance, 25,000 ohms; furnished with 16 feet of shielded cable and three-conductor telephone plug; weight, 20.6 oz.....\$39.50

RESLO

"Avon" Microphone

Ribbon design with super-cardioid characteristics; front-to-back discrimination 15 db over high- and mid-frequencies; normal bi-directional pattern at low frequencies; response 20-15,000 cps; includes flexible arm.

Model CRL 30 & 50 ohms impedance\$132.50
 Model CRM 250 & 600 ohms impedance\$142.50
 Model CRH High impedance, 30 or 50 ohms\$142.50
 Additional cable for CRH to obtain high impedance.....\$12.50

"Celeste" Microphone

Ribbon design with bi-directional characteristics (figure-8) at 1 kc.; front 2 db more sensitive, 10 kc. 20 db; available in three models; prices \$116.50, \$125.00, \$125.00 with impedance setup and cables same as in "Avon."

"Symphony" Microphone

Ribbon design; response 18-20,000 cps \pm 1.5 db; output level -58 db; features a muting switch; bi-directional; pickup pattern may be changed by use of internal pads (supplied); available in three models; prices \$100.00, \$107.50, \$107.50, depending on impedance.

SHURE

Model 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; $\frac{3}{8}$ "-27 thread; Amphenol MC3M connector equivalent; 15 foot 2-conductor shielded cable; size $5\frac{1}{4}$ "x $3\frac{1}{8}$ "x $2\frac{1}{8}$ "; 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; $\frac{3}{8}$ "-27 thread; 20 foot 2-conductor shielded cable; size $7\frac{3}{8}$ "x $2\frac{1}{4}$ "x $3\frac{1}{16}$ "; wt 3 $\frac{1}{8}$ lbs, shpg. 4 $\frac{1}{2}$ lbs.....\$83.00

Model 215 Ceramic Microphone

Response 50-8000 cps; output 56.5 db; high impedance; semi-directional; for voice & music.....\$8.00

Model 300 Microphone

Gradient (ribbon) type; bi-directional; frequency response 40 to 15,000 cps \pm 2 $\frac{1}{2}$ 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; $\frac{3}{8}$ "-27 thread; adapter for $\frac{3}{8}$ "-24 thread or $\frac{1}{2}$ " pipe; voice-music switch; 20 foot 2-conductor shielded cable; 6"hx 1 $\frac{1}{2}$ "wx 2 $\frac{3}{16}$ "d; wt 1 $\frac{1}{4}$ lbs, shpg 3 $\frac{3}{4}$ 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; $\frac{3}{8}$ "-27 thread; Amphenol MC3M connector equivalent; 20 foot 2 conductor shielded cable; size 6"x1 $\frac{1}{2}$ "x1 $\frac{1}{8}$ "; wt 1 lb, shpg 3 $\frac{1}{4}$ lbs\$89.50

Model 330 "Uni-Ron" Microphone

Ribbon type; uni-directional; frequency output: -60 db at 50 ohms, -59 db at



150 and 250 ohms; 3-position impedance switch; Alnico V magnet; die-cast zinc case; satin chrome finish; self-adjust swivel; $\frac{3}{8}$ "-27 thread; live rubber shock mount; Cannon XL-3-11 connector; 20 foot 2-conductor shielded cable; size 3 $\frac{3}{4}$ "x1 $\frac{1}{4}$ "x1 $\frac{1}{8}$ "; wt 1 $\frac{1}{2}$ lbs, shpg 4 lbs.....\$120.00

Model 333 Studio Uni-Ron Microphone

Ribbon type; uni-directional (cardioid); frequency response 30 to 15,000 cps \pm 2 $\frac{1}{2}$ 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; $\frac{3}{8}$ "-27 thread; adapter for $\frac{3}{8}$ "-24 thread or $\frac{1}{2}$ " pipe; voice-music switch; 20 foot 2-conductor shielded cable; 7 $\frac{1}{4}$ "hx1 $\frac{1}{4}$ "wx1 $\frac{1}{8}$ "d; wt 1 $\frac{1}{4}$ 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 $\frac{1}{2}$ "x 1 $\frac{3}{4}$ "\$30.00

Model 430 "Commando" Microphone

Controlled magnetic type; omni-directional; frequency response 60 to 10,000 cps; output: Lo-Z, -54 db; Hi-Z, -55 db; changeable pin jacks give choice of 2 impedances; 150-250 ohms or high impedance; polystyrene and die-cast zinc case; satin-chrome and gray finish; A25 type swivel adapter; $\frac{3}{8}$ "-27 thread; Amphenol MC2M connector; 15 foot 2-conductor shielded cable; press-to-talk switch, locking plate furnished; size 6 $\frac{1}{2}$ " long; top diameter 1 $\frac{3}{4}$ "; handle $\frac{3}{4}$ "\$38.50

Model 525 Studio "Slendyne" Microphone

Dynamic type; omni-directional; frequency response 40 to 15,000 cps \pm 2 $\frac{1}{2}$ 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; $\frac{3}{8}$ "-27 thread;

adapter for $\frac{3}{8}$ "-24 thread or $\frac{1}{2}$ " pipe; Cannon XL-3-11 connector; 20 foot 2-conductor shielded cable; lavalier assembly; size $8\frac{1}{2}$ "x1"; wt $\frac{1}{2}$ lb, shpg $3\frac{1}{4}$ 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 $\pm 2\frac{1}{2}$ db; $\frac{3}{8}$ "-27 thread; Cannon XL-3-11 connector; on-off switch; 20 foot 2-conductor shielded cable; lavalier assembly; size $7\frac{3}{8}$ "x1"; wt $\frac{1}{2}$ lb, shpg $2\frac{7}{8}$ 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; $\frac{3}{8}$ "-27 thread; Amphenol MC3M plug equivalent connector; on-off switch; 20 foot 2-conductor shielded cable; lavalier assembly; on-off switch adapter plate; size $7\frac{1}{4}$ "x1"; wt $\frac{7}{8}$ lb, shpg $2\frac{7}{8}$ 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; $\frac{3}{8}$ "-27 thread; live-rubber shock mount; Cannon XL-3-11 connector; 20 foot 2-conductor shielded cable; appearance similar to Model 55S; size $7\frac{3}{4}$ "x $2\frac{1}{4}$ "x $3\frac{1}{2}$ "x1"; wt $3\frac{3}{8}$ lbs, shpg $4\frac{1}{2}$ lbs. \$135.00

Model 710 Crystal Microphone

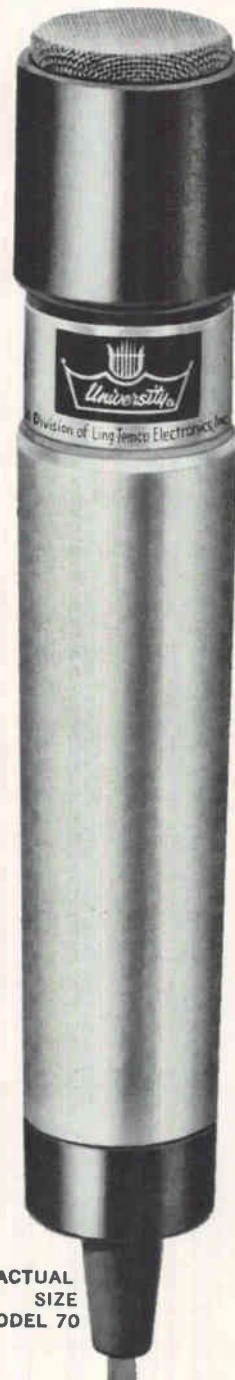
Hand-held for voice frequencies; response 60-9000 cps; output 50 db; high impedance; semi-directional.

Model 710A \$12.00
Model 710S (with switch) \$14.00

LONELY

New microphone in town looking for a home. Not one with hypercritical professional standards, nor interested in just low price—but one that wants more than a little of both. Will improve home tapes . . . upgrade a P.A. system . . . or put new life in a ham operator's rig. Offering quite a bit—a dynamic cartridge, for example . . . also, good looks, dependability, rugged construction and an honest frequency response from 50-14,000 cps. Will move in complete with slide-on stand adapter and 15' of cable for only \$29.95. Can be interviewed at authorized University sound distributor—or write for resume. **UNIVERSITY MODEL 70**, c/o Box FM-10, University Loudspeakers, Inc., 80 South Kensico Avenue, White Plains, N. Y.

OPPORTUNITY for sound engineers to learn more about University's dynamic new line of professional modular cardioids, omnidirectionals and lavaliers. Just send for new 12 page catalog with complete details. Write Box FM-10, address above.



ACTUAL
SIZE
MODEL 70

SONOTONE

Model CM-10A "Ceramik"



Ceramic microphone; frequency response 50 to over 11,000 cps \pm 2 db; sensitivity 56 db below 1.0 volt per microbar; omnidirectional; high impedance; includes 7 feet of shielded cable with phone plug; does not include stand; $5\frac{1}{8}$ " x $1\frac{1}{16}$ " diameter at grille.....\$17.50
 Model CM-11A; for use where greater sensitivity is desired. Specification same as for CM-10A except: frequency response, 80 to 9,000 cps \pm 2 db; Sensitivity 53 db below 1.0 volt per microbar.....\$17.50
 Model CMS-10 mike stand: table and stored use.....\$4.00

Model CM-12A Microphone

Ceramic microphone; low impedance output includes transformer; 150 ohms impedance; -63.5 db output; frequency response to 8,000 cps; push-to-talk button; chrome-finished table stand with swivel mount furnished at extra cost.....\$29.50
 Table stand.....\$4.00

Model CMT-10A or CMT-11A
Matched Twin Microphones

For stereo tape use; ceramic type; acoustically matched to 2 db; Model CMT-10A has frequency response 50 to over 11,000 cps; Model CMT-11A has frequency response 80-9,000 cps; Model CMT-10A output level -56 db.....\$36.75

SUPERSCOPE

Sony C-37A Condenser Microphone

Condenser type; cardioid or omnidirectional pattern; frequency response \pm 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.....\$295.00

TURNER

Model 57 & 57A Microphone

Dynamic type suitable for music or voice; not sensitive to wind or shock, heat or humidity; has non-directional pickup pattern; adjustable swivel permits 60 degree swing.

Model 57 High or 150 ohms selected at end of cable; response 50-13,000 cps for high impedance; output level -60 db for high impedance; 3-conductor, 20' shielded cable.....\$75.00

Model S-57 Same as Model 57 but with line-shorting switch.....\$75.00

Model 57A Combination 50 or 200 ohms, otherwise same as Model 57.....\$75.00

Model S-57A Same as Model 57A but with line-shorting switch.....\$75.00

Model 58 & 58A Lavalier Microphone

Dynamic type with essentially non-directional pickup pattern; designed for use where freedom of movement is required weighs $3\frac{1}{2}$ oz., 4" long.

Model 58 High or 150 ohms, selected at end of cable; output level -60 db with high impedance; response 60-13,000 cps for high impedance & 60-18,000 cps for low impedance; 3-conductor, 25' shielded cable.....\$57.00

Model 58A 50 or 200 ohm impedance selected at end of cable; response 60-18,000 cps; 3-conductor, 25' shielded cable.....\$57.00

Model 141-11 Microphone

Lightweight crystal model; ideal for tape recorder use; chrome finish; for use in hand, on stand, or as lavalier mic.; response 60-10,000 cps; output level -52 db; 6' single-conductor cable; molded phone plug and phone plug adapter; accessories extra.....\$15.00
 L-14 Lavalier assembly.....\$4.50
 144 Desk stand.....\$4.50

Model 162 Microphone

Lightweight crystal; broad base prevents tipping in desk use; brown polystyrene case; for tape recorder use or general p.a. work; response crystal & ceramic 60-8500 cps; output level—crystal—45 db; complete with 5' cloth-covered cable.....\$9.00

Model 166 & 166C Microphone

Crystal type (166) or ceramic (166C) with rugged die-cast case; features "Lether-X" painted finish; response 60-8000 cps crystal, 80-7000 cps ceramic; output level -45 db crystal, -57 db ceramic; complete with 6' fabric-covered cable.....\$14.00

Model 200 Series Microphones

Rugged wide-range sensitive designs available with ceramic, crystal, or dynamic elements; particularly suited for hard use.

Model 200C (ceramic) response 50-10,000 cps; output level -60 db; high impedance; single conductor shielded cable; without accessories.....\$26.50

Model 204C Same as Model 200C but includes accessories.....\$32.00

Model 200X (crystal) response 60-10,000 cps; output level -51 db; high impedance; single-conductor shielded cable; without accessories.....\$24.50

Model 204X Same as Model 200X but includes accessories.....\$30.00

Model 200D (dynamic) response 60-13,000 cps; output level -53 db; 50/200 ohm combination; 3-conductor shielded cable; without accessories.....\$35.00

Model 300X Microphone

Slender crystal unit with 60-10,000 cps response; -54 db output; complete with 12' cable.....\$11.50

Model 300C Same as Model 300X except ceramic; response 60-10,000 cps; output level -60 db.....\$11.50

Model 401 Dynamic Microphone

Broadcast-type featuring adjustable impedance and response; wide-response; essentially non-directional; can be mounted on desk or floor stand for .80 degree swivel operation; 150 ohms or high impedance adjustable at mic.; 3-conductor 20' shielded cable; response 40-20,000 cps; adjustable for 40, 80, or 160 cps cut-off at low end and 10,000 or 20,000 cps cut-off at high end; $10\frac{1}{2}$ " long; 9.5 oz.....\$125.00

Model 402 Dynamic Microphone

Same as Model 401 but with line-shorting switch; $11\frac{7}{8}$ " long; 10.5 oz.....\$130.00

Model 403 Dynamic Microphone

Same as Model 401 except impedance adjustment made at end of cable; 12' cable; response 50-13,000 cps; $9\frac{1}{8}$ " long; 7 oz.; does not have frequency response adjustment.....\$80.00

Model 404 Dynamic Microphone

Same as Model 403 but with line-shorting switch; $10\frac{1}{2}$ " long; 8 oz.....\$85.00

Model 607 Ceramic Microphone

Response 60-8500 cps; output level -55 db; high impedance.....\$8.00

Model 608 Crystal Microphone

Response 60-8500 cps; output level -45 db; high impedance.....\$6.00

Model 708 Microphone

Small tape recorder microphone in satin-chrome finish, die-cast case with 6' cable; for use as hand or desk unit; response 60-10,000 cps; output -54 db.....\$12.50

Model 808 Microphone

Suitable for home recording; rugged crystal mic. in die-cast case finished in baked-on gray enamel; complete with adapter for stand mounting and 6' cable; response 60-8500 cps; output -45 db.....\$10.85
 Model 807 Same as Model 808 except ceramic; response 80-7000 cps; output level -57 db.....\$10.85

Model 909 & 908 Microphone

Economy unit for tape recorders; durable polystyrene; hand or desk use; weighted to avoid tipping; ceramic model (907) for use where heat and humidity are problems; Model 908 response 60-8500 cps; output level -45 db; high impedance; Model 907 response 60-8500 cps; output level -55 db; high impedance.....\$8.00

UNIVERSITY

Model 501 Cardioid Microphone

Highly directional type; response 30-16,000 cps; impedance 30/50, 150/50, 20,000 ohms; output level 30/50 & 150/250 ohms -54 db/1 mv./10 dynes/cm.² (-147 db EIA sensitivity rating); 20,000 ohms into high-imped-



ance input 17 mv./10 dynes/cm.²; 1½" dia. x 6¾"; dynamic type.....\$75.00
 Model 502S Same as Model 501 with shock mounting\$87.00

Model 401 Omnidirectional Mike

Similar in design and performance to Model 501 except omnidirectional; response 30-20,000 cps; 1½" dia. x 6¾"\$43.50

Model 402S Same as Model 401 with shock mounting.....\$47.70

Model 403L Lavalier Microphone

Omnidirectional lavalier, dynamic type; response 60-20,000 cps; other speci-



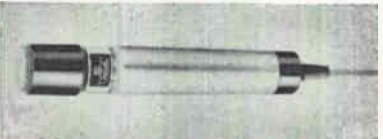
cations same as Model 501; 1¾" dia. x 3¾"; supplied with 25 ft. cable & neck cord\$52.50

Model 404L Lavalier Microphone

Similar to Model 403L except response 50-20,000 cps and larger size 1½" dia. x 5½"\$57.00

Model 70 General-Purpose Microphone

Omnidirectional, dynamic type; response 50-14,000 cps; impedance 30/50 & 20,000 ohms; output level 30/50—50 db/1 mv./10 dynes/cm.² (-143 db



EIA sensitivity rating); 20,000 ohms into high-impedance input 28 mv./10 dynes/cm.²; 1¾" dia. x 6"; includes slide-on stand adapter & 15 ft. cable.\$29.95

Misc. adapters and accessories available for all microphones.



MULTIPLEX ADAPTERS

A.E.S.

Model MX-100 Multiplex Adapter

Designed to be used with the firm's Model R-100 FM tuner; can also be used as "add-on" unit with other FM tuners having a multiplex output; price and technical specifications not available at this time.

ALTEC LANSING

Model 359A Multiplex Adapter

The firm is presently in the process of

developing this unit and technical specifications are not available as we go to press. The unit will, however, be designed to accommodate the multiplex facilities of the firm's Models 353A stereo amp-preamp, 309A stereo AM-FM tuner, and 312A FM tuner. The adapter will require no controls since the above-mentioned components already have the required controls built-in. The adapter will be integrated to the rear of the chassis in the above mentioned tuners and will be out of sight.

ARKAY

This firm reports plans to make a multiplex adapter. Since this unit is now in the development stage, technical specifications and prices are not available as we go to press.

BELL SOUND

Multiplex Adapters

Company expects to have two adapters on the market in late August. Model MXA-1 will be a plug-in adapter for all tuners in the firm's present component line; it is small enough to fit on chassis under the cover; will be priced at\$39.95

Model MXP-2 will be a completely self-powered adapter with solid-state power supply; designed for use with any Bell stereo tuner ever produced; can be used with stereo tuners of other manufacturers; will be priced "around \$60.00."

BOGEN

Model PX60 Multiplex Adapter



Self-powered external mounting type designed specifically for use with Bogen tuners, model numbers R660, R710, FM51, RC412, RP40, SRB20, SRB40, T661, STP52, TC322, ST442, ST662, RP100, TC200, TC200A, TV100, RB140, TP40, RB115; 4½" x 3¼" x 8½"\$69.95

CROSBY ELECTRONICS

Model MX-80 Multiplex Adapter

Company plans to have model available early fall 1961; will be basically the same as Model MX-101 but without power supply and cathode-follower output circuits; designed to be used with Crosby Model R-80 stereo receiver; will fit inside R-80 receiver; 6" x 4½" x 3¾"\$49.95

Model MX-101 Multiplex Adapter

Dual control—dimension and stereo/filter; response 30-15,000 cps with 20 db separation over entire range; cathode-follower outputs; suitable for discriminator or ratio-detector type FM tuners; tubes—2-12AU7, 6C4, EZ80



plus 2-IN541 diodes; self-powered; 3¼" x 4½" x 9".....\$69.95

DYNACO

Model FMX-3 Multiplex Adapter

Design and price are not finalized as we go to press; plans are for a design to be used with the firm's "Dynatuner"; space had previously been allotted on tuner chassis; unit will include all necessary control functions.....(Kit) approx. \$29.95

EICO

Model MX-99 FM Multiplex Adapter



Free from phase-distorting filters; designed to required suppression of all spurious signals including SCA (67-kc.) background-music carrier, re-inserted 38-kc. subcarrier, 19-kc. pilot carrier, and all harmonics thereof; will synchronize with any usable output from an FM tuner and will demodulate, without significant distortion, tuner outputs as high as 3.9 volts r.m.s.; self-powered; provides automatic stereo/mono operation; includes low-impedance cathode-follower outputs; lamp indicates when station is broadcasting multiplex stereo; separation 35 db between channels; over-all gain of two is provided from input to output on stereo, about unity on mono; for use with company's Models HFT-90, HFT-92, ST-96 and any other component-quality ratio-detector FM tuners equipped with multiplex output; 9½" x 6¾" x 3¾".

Kit\$39.95
 Wired\$64.95

FISHER

Model MPX-100 Multiplex Adapter

For use with any Fisher tuners or receivers or other makes having a ratio detector design and multiplex output; "Stereo Beacon" indicates if station is broadcasting stereo; selector switch for mono/stereo; self-powered; 4½" x



14½" x 12"; less cabinet.....\$89.50
 Walnut or mahogany cabinet.....\$14.95

6

MULTIPLEX ADAPTERS

GENERAL ELECTRIC

Model MA-2G Multiplex Adapter

Two-tube self-powered unit designed to be used with G-E component tuners & certain other tuner models having proper characteristics. Other technical details not available at this time.....\$39.95

HARMAN-KARDON

Model MX500 Plug-In Multiplex Adapter

Designed for the company's F500, ST-360A, ST360, and ST350 tuners.....\$39.95

Model MX600 Snap-On Multiplex Adapter

Designed for company's stereo receiver Models TA230, TA224, and TA260; adapter snaps on to rear of chassis out of sight and adds only 1 1/2" to depth of receiver; draws power from receiver.....\$49.95

Model MX700 Self-Powered Adapter

For use with all tuners having multiplex outputs; plastic front plate glows when multiplex signal is received; adapter activated automatically by multiplex signal.....\$59.95

Citation III MX Adapter

Top-of-the-line adapter; available as a kit or factory wired.
Kit.....\$69.95
Factory wired.....\$99.95

HEATH

Model AC-11 Multiplex Adapter

Three-tube design with self-contained silicon-rectifier power supply; response 50-15,000 cps; cathode-follower outputs for each channel; has "on-off" switch and separation control.
Model AC-11 Kit.....\$32.50
Model AC-11 Assembled.....\$56.25

KARG

Model MX-2 Multiplex Adapter

Multiplex stereo adapter; plug-in type for Model CT-2 tuner.....\$44.50

Model MX-3 Multiplex Adapter

Self-powered design for FM stereo; for use with Models XT-1A, XT-3A, and CT-3 FM tuners; price not determined.

KNIGHT

Model KN-MX Multiplex Adapter

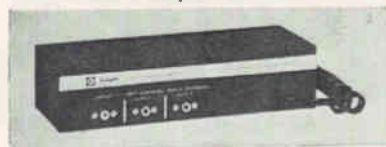


Self-powered; will operate with any late model FM tuner having multiplex output jack; single control plus on-off switch; 4 7/8" x 5" x 8"; dark brown metal case with polished brass panel; supplied with three 36" audio cables.....\$44.50

KNIGHT-KIT

Model KS-10 Multiplex Adapter

For adapting any Knight-Kit tuner without built-in multiplex for stereo FM reception; also works with other wide-band tuners; built-in 110-125 volt power supply.....\$19.95



ception; also works with other wide-band tuners; built-in 110-125 volt power supply.....\$19.95

LAFAYETTE

Model LA-215 Multiplex Adapter

Features low distortion; channel separation in excess of 30 db from 30-15,000 cps; response 20-15,000 cps \pm 1 db; required tuner characteristics are frequency response from 50-53,000 cps \pm 1/2 db and at least .7 volt out at 100% modulation; input stage is high-impedance cathode-follower to prevent loading high-impedance discriminator-type tuners; 19 kc. pilot carrier is filtered, doubled, amplified and re-inserted in such a manner that push-pull detector diodes switch in proper phase; following de-emphasis is 15 kc. low-pass filter and anode-follower outputs providing 1 volt output at 1500 ohms impedance; stereo indicator light; stereo/mono switch; dimension control; self-powered; available in fall; price not set as yet, but will be approximately \$39.50.

PILOT

Model 100 FM Multiplex Adapter

Self-powered, single control (slide switch) design; if your tuner or amplifier selector switch has "multiplex" position, adapter switch is left in "in" position, otherwise switch is manually operated; two tubes plus rectifier; can be used with any wide-band FM tuner; 4 1/2" x 9" x 5".....\$49.50

Model 200 FM Multiplex Adapter

No controls, automatically switches (relay design) to mono or stereo depending on broadcast; self-powered; three tubes plus rectifier; has indicator light to show type of program; for use with any wide-band FM tuner; 5" x 3" x 14".....\$79.50

REALISTIC

Model MPX-215 Multiplex Adapter



Completely self-powered; response 50-15,000 cps \pm 3 db; selector switch, stereo balance control on front panel; adapts all Realistic tuners manufactured since 1958; hum & noise -60 db; crosstalk 20 db @ 1 kc.; power and stereo-ceive pilot lights on front panel; 7 3/4" x 4 3/8" x 6"; wired.....\$39.95
Kit.....\$29.95

SARGENT-RAYMENT

Model SR-810 Multiplex Adapter

Designed for use with any quality tuner to provide second stereo channel; original model was designed for the Halstead system of multiplex but we assume will be converted to presently approved system; power requirements must be obtained from power amplifier.....\$49.50

Model SR-920 Multiplex Adapter

Same as Model SR-810 but includes power supply.....\$59.50

H. H. SCOTT

Model 335 Multiplex Adapter



Designed to be used with all H.H. Scott tuners without modification; Models 330, 310A, 310B, 310C, 310D, 311A, 311B, 311C, 311D, 314, 320, 33CA, 330B, 330C, 330D, 331A, 331B, 331C, 399, and LT-10; contains special circuitry to prevent whistles on tape recording; connecting cables supplied; self-powered a.c.; 7" x 5 1/4" x 13" in accessory wood or metal case.....\$99.95

SHERWOOD

Model S-3MX FM Multiplex Adapter



Self-powered adapter designed to work with virtually all hi-fi FM tuners; features two front-panel switches to add sharp filter at 67 kc. (for complete removal of background music programs) and hiss filter (for use in fringe-area reception); power "on-off" switch automatically returns stereo adapter operation to normal monophonic operation of its associated FM tuner when in "power-off" position; hum and noise 60 db below rated output; audio output is 2 volts @ 1/2% distortion; less case.....\$69.50

Model A3MX FM Multiplex Adapter

Plug-in multiplex adapter for use with Sherwood Models S-2200 and S-3000 III FM tuners.....\$49.50

TEC

Model MPX-1 Multiplex Adapter

For use with TEC FM-15 and other FM tuners; all transistor; completely automatic operation; requires no controls; all circuits factory aligned and pre-set; current drain 20 ma.; synchronous-gate separation of channels from composite signal assures extremely wide-band reproduction of all audio information in original signal, recovered with exceptionally low distortion; self-powered.
.....\$69.50

6

PHONO ACCESSORIES

ARL

Model HF-10 Phono-Indexer Head

Will lower phono arm on any section of LP with precision; calibrated drum-type



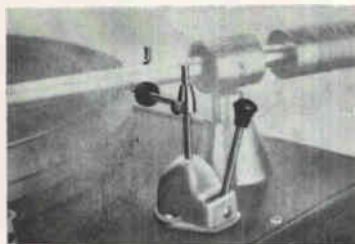
dial can locate needle within one groove of predetermined point on most records; once lowered, indexer disengages; will work with any pickup arm used with any single-play hi-fi turntable; single drilled hole required for mounting; adjusts vertically to match any pickup height\$24.95

DEXTER

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

"Selecto-Brush"

Fastens to any tonearm to permit feather touch selection of any record groove or band, thus protecting records and needles from scratches and scrapes; adjustable imported camel hair brush cleans record while playing without adding extra weight to tonearm because arm rides on brush; designed to mount to front edge of phono cartridge.....\$0.98

ESL

ESL "Dustbug"



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

1962 EDITION

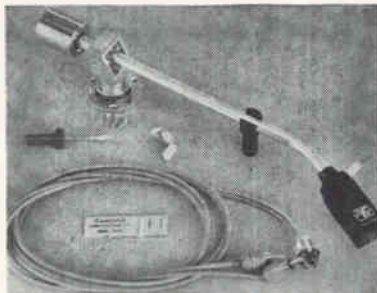
Dust Bug



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

FAIRCHILD

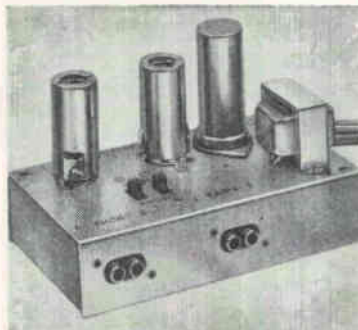
Model 500 Tonearm



Professional tonearm incorporating anti-skating feature; will track 30 cm./sec., 1000-cycle tone sinusoidally; plug-in 3-foot cables; vertical and lateral hysteresis less than 1 gram at stylus tip; tracking force 2½ grams to 9 grams; 11½" long; 2" to 3" counterweight overhang; arm-transport only\$28.00
With SM-2 cartridge.....\$55.00
Model 501 16" arm-transport with removable head\$37.50

GENERAL ELECTRIC

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 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; 3¾" h x 3⅝" w x 3⅜" d\$11.45

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 signal.\$23.50

NUCLEAR

Model 3R500 "Staticmaster"



Polonium treated jaguar hair brush eliminates static and dust from records.\$14.95

Model 2U500 w/BFI Positioner

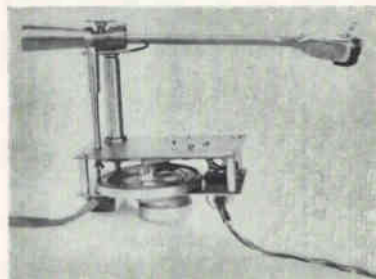
Flexible arm with heavy base holds



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

REK-O-KUT

Auto-Poise Tonearm Lift



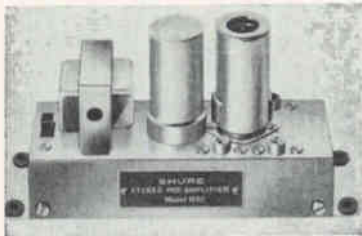
Fully automatic, self-powered (synchronous motor driven) tonearm rest and lift; arm will lower onto start of record and rise at end; disengages completely during record play; for use with any Rek-O-Kut tonearm.....\$59.95
With S-320 tonearm.....\$76.95

6 PHONO ACCESSORIES

SHURE

Model M-60 Stereo Preamplifier

Permits turntable location up to 50 feet from preamplifier; gain 17 db; frequency response 30-80,000 cps ± 1



db; input impedance 47,000 cps; output impedance 5,000 ohms; hum and noise level better than 64 db below rated output; channel separation better than 30 db; channel balance ± 1 db; 1-ECC83 (dual function); full wave selenium rectifier; may be mounted under turntable\$19.95

Model M65 Conversion Preamp

Provides equalization with amplification for converting ceramic cartridges to magnetic inputs; 60 db of amplification without equalization; provides pre-



amplification and equalization functions for phono, tape, microphone; gain (phono) 44 db, (special) 45 db, (tape) 40 db, (mic.) 63 db; input impedance 47,000 ohms; output impedance 5000 ohms\$24.00

6 RAW TAPE

AMPEX

Irish Series 300 Recording Tape

Available on 1 mil Mylar, 1 mil and 1.4 mil acetate: reels are clear plastic 3", 5", 7".

Type 311 General purpose on 1.5 mil Acetate.

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'\$2.25
1200'\$3.65

Type 341 Extended-play on 1 mil Mylar.

225'\$1.00
900'\$2.85
1800'\$4.95

Type 351 Pretensitized .5 mil Mylar.

300'\$1.35
1200'\$4.50
2400'\$7.95

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'\$2.25
1200'\$3.50

Type 521 on 1 mil acetate.

900'\$3.50
1800'\$5.50

Type 531 on 1.5 mil Mylar.

600'\$2.65
1200'\$4.25

Type 541 on 1 mil Mylar.

900'\$3.60
1800'\$6.20

Type 551 on .5 mil Mylar.

1200'\$5.45
2400'\$9.50

AUDIOTAPE

Master 1.5-mil Mylar Tape

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.\$.55

Model C560 Snap-Load Cartridge

Made on 1 mil Mylar; 2 hubs in plastic magazine; 560 ft.\$4.50

Super-thin Tempered Mylar Tape

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., fiberglass reel\$2.00

Master Plastic-Base Tape

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 Tape

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\$.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" Tape

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., NAB Hub\$10.00

Type 3641R, 3600 ft., 10 1/2" aluminum reel\$12.85

Type 3641FS, 3600 ft., 10 1/2" 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) Tape

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\$3.60

Type 1861, 1800 ft., 7" plastic reel\$6.20

Type 3661H, 3600 ft., NARTB Hub\$12.00

Type 3661R, 3600 ft., 10 1/2" aluminum reel\$14.40

Type 3661FS, 3600 ft., 10 1/2" fiberglass (RETMA) reel\$14.40

Type 7261H, 7200 ft., NARTB Hub\$24.00

Type 7261R, 7200 ft., 14" aluminum reel\$30.00

1.5-mil Mylar Tape

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., 10 1/2" aluminum reel\$11.20

Type 2571FS, 2500 ft., 10 1/2" fiberglass reel (RETMA)\$11.20

Type 5071R, 5000 ft., NARTB Hub\$16.65

Type 5071R, 5000 ft., 14" aluminum reel\$24.50

Super-thin .5-mil Tape

Made on 1/2-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

BURGESS

Series No. 111 1.5-mil Plastic Tape

111-1.5 150 feet, 3" reel.....	\$.70
111-3 300 feet, 4" reel.....	\$1.35
111-6 600 feet, 5" reel.....	\$2.25
111-12 1200 feet, 7" reel.....	\$3.50

Series No. 150 1-mil Extra-Play Mylar

150-2.25 225 feet, 3" reel.....	\$1.00
150-9 900 feet, 5" reel.....	\$3.60
150-18 1800 feet, 7" reel.....	\$6.20

Series No. 102 1.5-mil Mylar

102-6 600 feet, 5" reel.....	\$2.65
102-12 1200 feet, 7" reel.....	\$4.25

Series No. 190 1-mil Extra-Play Plastic

190-9 900 feet, 5" reel.....	\$3.50
190-18 1800 feet, 7" reel.....	\$5.50

Series No. 200 .5-mil Tensitized Mylar

200-3 300 feet, 3" reel.....	\$1.50
200-6 600 feet, 4" reel.....	\$3.05
200-12 1200 feet, 5" reel.....	\$5.45
200-24 2400 feet, 7" reel.....	\$9.50

Series No. 141 1.5-mil Stereo Quality Plastic

141-6 900 feet, 5" reel.....	\$1.75
141-12 1200 feet, 7" reel.....	\$2.95

Series No. 140 1-mil Extra-Play Stereo Plastic

140-9 900 feet, 5" reel.....	\$2.50
140-18 1800 feet, 7" reel.....	\$4.25

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
7-1200A 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

RCA

1-mil Long Play Plastic Base

289C1—900 ft. standard 5" reel.....	\$3.50
286C1—1800 ft. standard 7" reel.....	\$5.50
269C1—3600 ft. NAB hub.....	\$10.00
270C1—3600 ft. NAB 10 1/2" metal reel.....	\$12.85
272C1—3600 ft. NAB 10 1/2" plastic reel.....	\$12.85
271C1—3600 ft. EIA 10 1/2" plastic reel.....	\$12.85

1.5-mil Professional Grade Plastic Base

262C1—150 ft. standard 3" reel.....	\$0.70
284C1—600 ft. standard 5" reel.....	\$2.25
285C1—1200 ft. standard 7" reel.....	\$3.50
265C1—2400 ft. NAB hub.....	\$8.50
266C1—2400 ft. NAB 10 1/2" metal reel.....	\$10.90
267C1—2400 ft. NAB 10 1/2" plastic reel.....	\$10.90
268C1—2400 ft. EIA 10 1/2" plastic reel.....	\$10.90

1962 EDITION

Mylar Snap-Load Cartridge

264C1—560 ft. cartridge.....	\$4.50
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Mylar Tensitized Extra-Long Play

296C1—300 ft. standard 3" reel.....	\$1.60
260C1—1200 ft. standard 5" reel.....	\$4.75
288C1—2400 ft. standard 7" reel.....	\$8.75
273C1—4800 ft. NAB 10 1/2" metal reel.....	\$20.50
275C1—4800 ft. NAB 10 1/2" plastic reel.....	\$20.50
274C1—4800 ft. EIA 10 1/2" plastic reel.....	\$20.50

Mylar .5-mil Extra-Long Play

252C1—1200 ft. standard 5" reel.....	\$4.55
287C1—2400 ft. standard 7" reel.....	\$7.85

Mylar 1-mil Long Play

263C1—225 ft. standard 3" reel.....	\$1.00
253C1—900 ft. standard 5" reel.....	\$3.60
258C1—1800 ft. standard 7" reel.....	\$6.20
276C1—3600 ft. NAB metal hub.....	\$12.00
277C1—3600 ft. NAB 10 1/2" metal reel.....	\$14.40
279C1—3600 ft. NAB 10 1/2" plastic reel.....	\$14.40
278C1—3600 ft. EIA 10 1/2" plastic reel.....	\$14.40

Mylar 1.5-mil Professional Grade

290C1—600 ft. standard 5" reel.....	\$2.65
291C1—1200 ft. standard 7" reel.....	\$4.25
280C1—2400 ft. NAB metal hub.....	\$8.80
281C1—2400 ft. NAB 10 1/2" metal reel.....	\$11.20
283C1—2400 ft. NAB 10 1/2" plastic reel.....	\$11.20
282C1—2400 ft. EIA 10 1/2" plastic reel.....	\$11.20

Tape Accessories

505C1—Leader & Timing Tape.....	\$0.85
506C1—5" standard reel with box.....	\$0.65
507C1—7" standard reel with box.....	\$0.75
509C1—7" empty box.....	\$0.20
511C1—1/2" x 100" splicing tape.....	\$0.29
512C1—1/2" x 150" splicing tape.....	\$0.39
513C1—3/4" x 100" splicing tape.....	\$0.42
514C1—3/4" x 150" splicing tape.....	\$0.51
515C1—1/4" x 100" splicing tape.....	\$0.22
STSD-4—Deluxe tape splicer.....	\$11.50

SARKES TARZIAN

1.5 mil Acetate

1131-01 150 ft., 3" reel.....	\$.65
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High-Output

1131-06 600 ft., 5" reel.....	\$2.10
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High-Fidelity

1131-12 1200 ft., 7" reel.....	\$3.50
1131-24H 2400 ft., hub.....	\$7.35
1131-24R 2400 ft., reel.....	\$10.25

1 mil Acetate

1121-02 225 ft., 3" reel.....	\$.98
1121-09 900 ft., 5" reel.....	\$3.15
1121-18 1800 ft., 7" reel.....	\$5.15
1121-36H 3600 ft., hub.....	\$9.35
1121-36R 3600 ft., reel.....	\$12.00

Accessories

Empty 3" reel with box.....	\$.15
Empty 5" reel with box.....	\$.50
Empty 7" reel with box.....	\$.60

"SCOTCH" TAPES

No. 111 Magnetic Tape

Cellulose acetate recording tape; excellent frequency response, low modulation noise and high sensitivity; patented "dry lubrication" process; 1 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.....	\$ 3.50
111-24H.....2400 ft. (NARTB Hub).....	\$ 8.50
111-24R.....2400 ft. (NARTB 10 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; magnetic characteristics identical to standard No. 111

102-6.....600 ft. Plastic Reel— 5" size.....	\$ 2.65
102-12.....1200 ft. Plastic Reel— 7" size.....	\$ 4.25
102-24H.....2400 ft. (NAB Hub).....	\$ 8.80
102-24R.....2400 ft. (NAB 10 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.....	\$ 1.35
120-6.....600 ft. Plastic Reel.....	\$ 2.25
120-12.....1200 ft. Plastic Reel.....	\$ 3.50
120-24H.....2400 ft. (NARTB Hub).....	\$ 8.50
120-24R.....2400 ft. (NARTB 10 1/2" Reel).....	\$10.90

No. 131 "Low Print"

Acetate backing; reduces print-through to a point below noise level on most professional machines.

131-12.....1200 ft.....	\$4.40
131-24H.....2400 ft (hub).....	\$10.00
131-24R.....2400 ft (10 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 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 1/2 S.....1/2" x 150".....	\$0.39
41 7/32.....7/32" x 66'.....	\$0.57
41 1/2 L.....1/2" x 66'.....	\$0.76
41 3/4 L.....3/4" x 66'.....	\$1.01

No. 43P Leader and Timing Tape

For tape lead-ins, cueing, etc.

43P-1.5.....1/4" x 150'.....	\$0.90
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No. 140 "Stereo Quality, Extra Play"

50% more playing time; similar to No. 141; 1 mil acetate backing.

140-9.....900 ft.....	\$2.50
140-18.....1800 ft.....	\$4.25

No. 141 "Stereo Quality, Acetate"

High potency oxide particles assure max frequency response; 1 1/2 mil acetate backing.

141-6.....600 ft.....	\$1.75
141-12.....1200 ft.....	\$2.95

169



Quarter-track record/playback stereo head; supplied complete with 3" reel of azimuth alignment tape, electrical connector, and necessary hardware for mounting head; designed to be used with both U.S. and imported tape machines.....

1962 EDITION



Will remove permanent magnetization; reduces noise level and harmonic distortion; improves signal-to-noise ratio; 4" l. x 1 1/4" dia.....

Model T60E Oscillator Transformer

65 kc. bias for recording head and erase current for either high- or low impedance erase heads; one-tube oscillator circuit diagram is included.....

Model T60-T2 Oscillator Transformer

Similar to Model T60E but designed for transistor circuitry; 40-100,000 cps; will deliver 25 to 150 volts to erase and record heads.....

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RAW TAPE

No. 142 "Stereo Quality, Extra Play"

Similar to No. 141 with 1 mil polyester base.

142-9 900 ft \$2.85

142-18 1800 ft \$4.95

No. 144 "Extra Strength"

"Professional" Tape

"Micropolished" for highest performance; uniformity: at 1000 cps, $\pm 3/8$ db from reel to reel; at 10,000 cps, within 1 db of response at 1000 cps; on 1 1/2 mil acetate base.

Type P-12, 1200 ft, 7" \$4.40

Type P-24H, 2400 ft, Hub \$8.00

Type P-24RF, 2400 ft, 10 1/2" \$10.25

Type P-24RF3, 2400 ft, 10 1/2" \$10.25

Type P-24RM, 2400 ft, 10 1/2" \$10.25

Type P-48H, 4800 ft, Hub \$12.50

Type P-48R, 4800 ft, 14" \$20.75

Tensilized Mylar Base .5-mil Tape

MDPX-3 300 feet, 3" reel \$1.60

MDPX-12 1200 feet, 5" reel \$5.45

MDPX-24 2400 feet, 7" reel \$9.50

TRITON TAPE

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

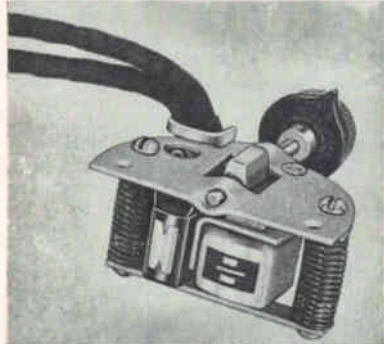
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TAPE ACCESSORIES

Model AT-100 Alignment Tape

7.5 ips full-track for checking record/play heads; 40-10,000 cps; recorded for checking azimuth, equalization and head wear \$4.95

Model WR-60 Conversion Kit Assembly



Converts all two-track Wollensak and Revere models to four-track stereo; includes three-position head shifter for two-track stereo and four-track mono operation; allows stereo recording with additional amplifier (not included) \$49.50

Model SLS-1 Tape Head

Half-track; solid core; monophonic record/playback head; 30-12,000 cps @ 7.5 ips; high impedance \$8.90

Model "HQ" Erase Heads

Double-gap construction; metal face; high impedance requires 115 volts @ 60,000 cps; specify mounting.

SEH1 Stereo erase half-track (or two-track) \$12.50

SEQ1 Stereo erase quarter-track (or four-track) \$12.50

MEH1 Monophonic half-track \$7.50

MEQ1 Monophonic quarter-track \$7.50

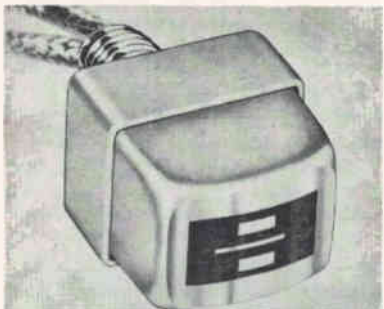
Model TLA-3 Tape Head

Two-track record/playback head; laminated core; 30-12,000 cps @ 3.75 ips; 30-17,000 cps @ 7.5 ips; high impedance; 3 mv. output; general-purpose type \$23.80

Model SLA-3 Tape Head

Same as one section of Model TLA-3 for half-track monophonic record/playback \$16.40

Model TLB Tape Heads



Four-track stereo record/playback head; 30-15,000 cps @ 3.75 ips; 30-20,000 cps @ 7.5 ips; crosstalk rejection 50 db; specify mounting desired.

TLB-2 High-impedance; 2 mv. output for general-purpose use; laminated core \$21.60

TLB-4 Low-impedance for use with transistors \$21.60

OLSON ELECTRONICS

Model TA-7 Bulk Eraser

Will erase any tape from 1/4" to 1" wide; handles 3", 5", 7", 10 1/2" reels; 117 volts a.c. \$18.95

Model TA-8 Tape Eraser



Portable bulk eraser will erase any tape reel 3" to 10"; operates on 117 volts a.c. \$11.91

RASON

"Jiffy" Tape Splicer



Mounted on plastic base; produces 30° butt joint; 4 1/4" long x 1 1/2" wide. \$2.50

Model P-30 "Jiffy Rase" Bulk Eraser

Bulk tape demagnetizer; also suitable for tape heads, tools, etc.; 100-130 volt a.c. operation; 4 3/4" x 4 1/2" high \$28.75

ROBINS

Model VU-100 Recording VU Meter

For maximum signal-to-noise ratio, 4 1/2"; 2-color scale; 200 μ amp movement; calibration -20 to +3; shunts for 1.2 or 12 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 3/4" x 5 1/4" x 6 3/4" \$33.00

Model HD-6 Head Demagnetizer

Allows user to demagnetize tape record-



er heads; plugs into a.c. line \$10.00

TS4A-DLX Tape Splicer

Deluxe model; includes roll of splicing tape mounted in dispenser \$ 1.50
Other models available from \$1.00 to \$11.50.

Model TK-5 Strobetape Kit

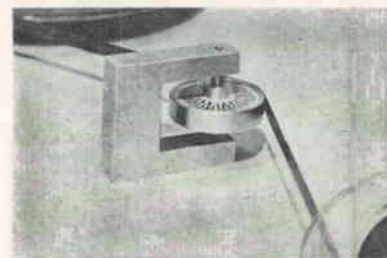
Consists of five lengths of 25-inch non-magnetic leader tape with strobe markings plus small neon light which flickers at a rate of 120 times per second; designed to be spliced into a roll of tape and the strobe markings will indicate relative speed of the tape machine \$2.00

Model ME-77 Bulk Tape Eraser

Smaller version of ME-99; will handle reels up to 1/4" wide and 7 1/2" in diameter; background noise levels reduced from 2 to 4 db below normal erase-head level; 2 1/2" x 3 3/4" x 6 1/4"; 4 lbs; 110-120 volt a.c. \$22.00

SCOTT INSTRUMENT

TapeStrobe



Chrome-plated stroboscopic wheel, ground to .010" accuracy.

Model A 7.5-15-30 ips \$22.50

Model B 3.75-7.5-15 ips \$22.50

Model C 1 7/8-3.75-7.5-15 ips \$24.50

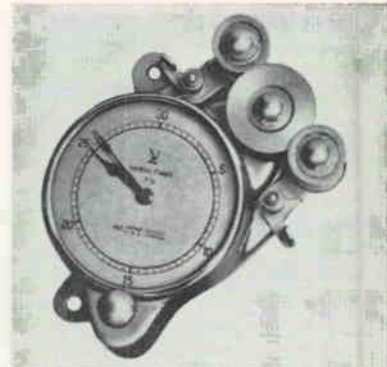
For 50 cycles, add \$5.00.

SUPERSCOPE

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

Super-thin .5-mil Tape

Made on 1/2-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

BURGESS

Series No. 111 1.5-mil Plastic Tape

111-1.5 150 feet, 3" reel.....	\$.70
111-3 300 feet, 4" reel.....	\$1.35
111-6 600 feet, 5" reel.....	\$2.25
111-12 1200 feet, 7" reel.....	\$3.50

Series No. 150 1-mil Extra-Play Mylar

150-2.25 225 feet, 3" reel.....	\$1.00
150-9 900 feet, 5" reel.....	\$3.60
150-18 1800 feet, 7" reel.....	\$6.20

Series No. 102 1.5-mil Mylar

102-6 600 feet, 5" reel.....	\$2.65
102-12 1200 feet, 7" reel.....	\$4.25

Series No. 190 1-mil Extra-Play Plastic

190-9 900 feet, 5" reel.....	\$3.50
190-18 1800 feet, 7" reel.....	\$5.50

Series No. 200 .5-mil Tensitized Mylar

200-3 300 feet, 3" reel.....	\$1.50
200-6 600 feet, 4" reel.....	\$3.05
200-12 1200 feet, 5" reel.....	\$5.45
200-24 2400 feet, 7" reel.....	\$9.50

Series No. 141 1.5-mil Stereo Quality Plastic

141-6 900 feet, 5" reel.....	\$1.75
141-12 1200 feet, 7" reel.....	\$2.95

Series No. 140 1-mil Extra-Play Stereo Plastic

140-9 900 feet, 5" reel.....	\$2.50
140-18 1800 feet, 7" reel.....	\$4.25

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
7-1200A 1.5 mil plastic.....1200'	\$3.50
7-1800A 1 mil plastic.....1800'	\$4.95
7-1800M .5 mil Mylar.....:800'	\$6.10
7-2400M .5 mil Mylar.....2400'	\$8.75

RCA

1-mil Long Play Plastic Base

289C1—900 ft. standard 5" reel..	\$3.50
286C1—1800 ft. standard 7" reel..	\$5.50
269C1—3600 ft. NAB hub.....	\$10.00
270C1—3600 ft. NAB 10 1/2" metal reel.....	\$12.85
272C1—3600 ft. NAB 10 1/2" plastic reel.....	\$12.85
271C1—3600 ft. EIA 10 1/2" plastic reel.....	\$12.85

1.5-mil Professional Grade Plastic Base

262C1—150 ft. standard 3" reel..	\$0.70
284C1—600 ft. standard 5" reel..	\$2.25
285C1—1200 ft. standard 7" reel..	\$3.50
265C1—2400 ft. NAB hub.....	\$8.50
266C1—2400 ft. NAB 10 1/2" metal reel.....	\$10.90
267C1—2400 ft. NAB 10 1/2" plastic reel.....	\$10.90
268C1—2400 ft. EIA 10 1/2" plastic reel.....	\$10.90

Mylar Snap-Load Cartridge

264C1—560 ft. cartridge.....	\$4.50
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Mylar Tensitized Extra-Long Play

296C1—300 ft. standard 3" reel..	\$1.60
260C1—1200 ft. standard 5" reel..	\$4.75
288C1—2400 ft. standard 7" reel..	\$8.75
273C1—4800 ft. NAB 10 1/2" metal reel.....	\$20.50
275C1—4800 ft. NAB 10 1/2" plastic reel.....	\$20.50
274C1—4800 ft. EIA 10 1/2" plastic reel.....	\$20.50

Mylar .5-mil Extra-Long Play

252C1—1200 ft. standard 5" reel..	\$4.55
287C1—2400 ft. standard 7" reel..	\$7.85

Mylar 1-mil Long Play

263C1—225 ft. standard 3" reel..	\$1.00
253C1—900 ft. standard 5" reel..	\$3.60
258C1—1800 ft. standard 7" reel..	\$6.20
276C1—3600 ft. NAB metal hub.....	\$12.00
277C1—3600 ft. NAB 10 1/2" metal reel.....	\$14.40
279C1—3600 ft. NAB 10 1/2" plastic reel.....	\$14.40
278C1—3600 ft. EIA 10 1/2" plastic reel.....	\$14.40

Mylar 1.5-mil Professional Grade

290C1—600 ft. standard 5" reel..	\$2.65
291C1—1200 ft. standard 7" reel..	\$4.25
280C1—2400 ft. NAB metal hub..	\$8.80
281C1—2400 ft. NAB 10 1/2" metal reel.....	\$11.20
283C1—2400 ft. NAB 10 1/2" plastic reel.....	\$11.20
282C1—2400 ft. EIA 10 1/2" plastic reel.....	\$11.20

Tape Accessories

505C1—Leader & Timing Tape..	\$0.85
506C1—5" standard reel with box..	\$0.65
507C1—7" standard reel with box..	\$0.75
509C1—7" empty box.....	\$0.20
511C1—1/2" x 100" splicing tape..	\$0.29
512C1—1/2" x 150" splicing tape..	\$0.39
513C1—3/4" x 100" splicing tape..	\$0.42
514C1—3/4" x 150" splicing tape..	\$0.51
515C1—1/4" x 100" splicing tape..	\$0.22
STSD-4—Deluxe tape splicer.....	\$11.50

SARKES TARZIAN

1.5 mil Acetate

1131-01 150 ft., 3" reel.....	\$.65
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High-Output

1131-06 600 ft., 5" reel.....	\$2.10
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High-Fidelity

1131-12 1200 ft., 7" reel.....	\$3.50
1131-24H 2400 ft., hub.....	\$7.35
1131-24R 2400 ft., reel.....	\$10.25

1 mil Acetate

1121-02 225 ft., 3" reel.....	\$.98
1121-09 900 ft., 5" reel.....	\$3.15
1121-18 1800 ft., 7" reel.....	\$5.15
1121-36H 3600 ft., hub.....	\$9.35
1121-36R 3600 ft., reel.....	\$12.00

Accessories

Empty 3" reel with box.....	\$.15
Empty 5" reel with box.....	\$.50
Empty 7" reel with box.....	\$.60

"SCOTCH" TAPES

No. 111 Magnetic Tape

Cellulose acetate recording tape; excellent frequency response, low modulation noise and high sensitivity; patented "dry lubrication" process; 1 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..	\$ 3.50
111-24H.....2400 ft. (NARTB Hub).....	\$ 8.50
111-24R.....2400 ft. (NARTB 10 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; magnetic characteristics identical to standard No. 111

102-6.....600 ft. Plastic Reel— 5" size.....	\$ 2.65
102-12.....1200 ft. Plastic Reel— 7" size.....	\$ 4.25
102-24H.....2400 ft. (NAB Hub)	\$ 8.80
102-24R.....2400 ft. (NAB 10 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.....	\$ 1.35
120-6.....600 ft. Plastic Reel.....	\$ 2.25
120-12.....1200 ft. Plastic Reel.....	\$ 3.50
120-24H.....2400 ft. (NARTB Hub).....	\$ 8.50
120-24R.....2400 ft. (NARTB 10 1/2" Reel).....	\$10.90

No. 131 "Low Print"

Acetate backing; reduces print-through to a point below noise level on most professional machines.

131-12.....1200 ft.....	\$4.40
131-24H.....2400 ft (hub).....	\$10.00
131-24R.....2400 ft (10 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 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 1/2S.....1/2" x 150".....	\$0.39
41 7/32L.....7/32" x 66'.....	\$0.57
41 1/2L.....1/2" x 66'.....	\$0.76
41 3/4L.....3/4" x 66'.....	\$1.01

No. 43P Leader and Timing Tape

For tape lead-ins, cueing, etc.

43P-1.5.....1/4" x 150'.....	\$0.90
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No. 140 "Stereo Quality, Extra Play"

50% more playing time; similar to No. 141; 1 mil acetate backing.

140-9.....900 ft.....	\$2.50
140-18.....1800 ft.....	\$4.25

No. 141 "Stereo Quality, Acetate"

High potency oxide particles assure max frequency response; 1 1/2 mil acetate backing.

141-6.....600 ft.....	\$1.75
141-12.....1200 ft.....	\$2.95

6 RAW TAPE

No. 142 "Stereo Quality, Extra Play"
 Similar to No. 141 with 1 mil polyester base.
 142-9 900 ft. \$2.85
 142-18 1800 ft. \$4.95

No. 144 "Extra Strength"
 Stereo quality, double length; .65-mil tensilized polyester backing.
 144-12 1200 ft. \$4.50
 144-24 2400 ft. \$7.95

No. 190 Magnetic Tape
 High-potency oxide coating only half as thick as standard coatings (but with equivalent magnetic properties) coupled with a thinner backing of tough cellulose acetate; approximately 30% thinner than conventional acetate tape, nearly 80% as strong; 50% increase in recording and playback time with no noticeable print-through effect; magnetic properties of No. 190 tape are virtually identical to those of "Scotch" brand No. 111 magnetic tape.
 190-9 900 ft. Plastic Reel \$ 3.50
 190-18 1800 ft. Plastic Reel \$ 5.50
 190-36H 3600 ft. (NARTB Hub) \$10.00
 190-36R 3600 ft. (NARTB 10 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 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 1/2" Reel) \$14.40

SOUNDCRAFT

Standard-50 Tape
 Long play version of "Professional" tape on 1 mil acetate base.
 Type S5-9, 900 ft., 5" \$3.29
 Type S5-12, 1200 ft., 5 3/4" \$4.23
 Type S5-18, 1800 ft., 7" \$5.17
 Type S5-36H, 3600 ft., hub \$9.38
 Type S5-36RF3, 3600 ft., 10 1/2" \$12.04
 Type S5-72R, 7200 ft., 14" \$24.40
 Type S5-72H, 7200 ft., hub \$18.75

Hi-Fi Tape
 Standard play on 1 1/2 mil acetate.
 Type HF-1, 150 ft., 4" \$.65
 Type HF-6, 600 ft., 5" \$1.75
 Type HF-12, 1200 ft., 7" \$2.80

Hi-Fi 50 Tape
 Long-play on 1 mil acetate.
 Type HF5-9, 900 ft., 5" \$2.50
 Type HF5-18, 1800 ft., 7" \$4.25

Hi-Fi 50M Tape
 Long play on 1 mil Mylar.
 HF5-9M, 900 ft., 5" \$2.85
 HF5-18M, 1800 ft., 7" \$4.95

Hi-Fi 100M Tape
 Extra long play on 1/2 mil Mylar, tensilized for extra strength.
 HF10-3M, 300 ft., 3" \$1.35
 HF10-12M, 1200 ft., 5" \$4.50
 HF10-24M, 2400 ft., 7" \$7.95

"Professional" Tape
 "Micropolished" for highest performance; uniformity: at 1000 cps, ± 3/8 db from reel to reel; at 10,000 cps, within 1 db of response at 1000 cps; on 1/2 mil acetate base.
 Type P-12, 1200 ft., 7" \$4.40
 Type P-24H, 2400 ft., Hub \$8.00
 Type P-24RF, 2400 ft., 10 1/2" \$10.25
 Type P-24RF3, 2400 ft., 10 1/2" \$10.25
 Type P-24RM, 2400 ft., 10 1/2" \$10.25
 Type P-48H, 4800 ft., Hub \$12.50
 Type P-48R, 4800 ft., 14" \$20.75

"Lifetime" Tape
 For use where utmost strength and quality are necessary; 1/2 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., 10 1/2" \$10.40
 Type L-24RF3, 2400 ft., 10 1/2" \$10.40
 Type L-24RM, 2400 ft., 10 1/2" \$10.40
 Type L-48H, 4800 ft., Hub \$16.60
 Type L-48R, 4800 ft., 14" \$24.50

"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, 225 ft., 3" \$.95
 Type PL-9, 900 ft., 5" \$ 3.40
 Type PL-18, 1800 ft., 7" \$ 5.80
 Type PL-36H, 3600 ft., hub \$11.25
 Type PL-36RF, 3600 ft., 10 1/2" \$13.75
 Type PL-36RF3, 3600 ft., 10 1/2" \$13.75
 Type PL-72H, 7200 ft., hub \$22.50
 Type PL-72R, 7200 ft., 14" \$28.10

"Plus-100" Tape
 Provides 100% more recording time per tape; base is 1/2 mil mylar; impervious to temperature and humidity changes.
 Type XP-12, 1200 ft., 5" \$3.50
 Type XP-24, 2400 ft., 7" \$6.50
 XP-18, 1800 ft., 5 3/4" \$ 5.00
 XP-48RM, 4800 ft., 10 1/2" \$16.80
 XP-48RF, 4800 ft., 10 1/2" \$16.80
 XP48RF3, 4800 ft., 10 1/2" \$16.80
 XP-48H, 4800 ft., hub \$15.50

"Plus 100-X" Tape
 Similar to "Plus 100" but with twice the tensile strength; base is 1/2 mil mylar.
 XP-3X, 300 ft., 3" \$ 1.60
 XP-12X, 1200 ft., 5" \$ 5.45
 XP-18X, 1800 ft., 5 3/4" \$ 7.48
 XP-24X, 2400 ft., 7" \$ 9.50
 XP-48XRM, 4800 ft., 10 1/2" \$22.00
 XP-48XRF, 4800 ft., 10 1/2" \$22.00
 XP-48XRF3, 4800 ft., 10 1/2" \$22.00
 XP-48XH, 4800 ft., hub \$19.50

TANDBERG

Acetate Base 1.5-mil Tape
 A-1 150 feet, 3" reel \$.70
 A-6 600 feet, 5" reel \$2.25
 A-12 1200 feet, 7" reel \$3.50

Acetate Base 1-mil Tape
 ALP5-2 225 feet, 3" reel \$.90
 ALP5-9 900 feet, 5" reel \$3.29
 ALP5-18 1800 feet, 7" reel \$5.17

Mylar Base 1.5-mil Tape
 M-6 600 feet, 5" reel \$2.65
 M-12 1200 feet, 7" reel \$4.25

Mylar Base 1-mil Tape
 MLP-2 225 feet, 3" reel \$.95
 MLP-9 900 feet, 5" reel \$3.40
 MLP-18 1800 feet, 7" reel \$5.80

Tensilized Mylar Base .5-mil Tape
 MDPX-3 300 feet, 3" reel \$1.60
 MDPX-12 1200 feet, 5" reel \$4.45
 MDPX-24 2400 feet, 7" reel \$9.50

TRITON TAPE

Long Play Mylar Tape
 Made on 1 mil Mylar; permits 50% more recording per reel.
 3" reel, 225' \$.06
 5" reel, 900' \$.85
 7" reel, 1,800' \$6.50
 10 1/2" reel, 3,600' \$12.20

Super Play Tensilized 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' \$.75
 5" reel, 600' \$2.50
 7" reel, 1,200' \$3.75
 10 1/2" reel, 2,400' \$11.35

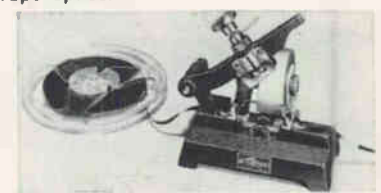
Long Play Tape
 Made on 1 mil acetate base; permits 50% more recording per reel.
 3" reel, 225' \$1.00
 5" reel, 900' \$3.75
 7" reel, 1,800' \$5.80
 10 1/2" reel, 3,600' \$13.50

Perma Play Tape
 Made on 1.5 mil Mylar; lifetime performance.
 5" reel, 600' \$4.35
 7" reel, 1,200' \$6.95
 10 1/2" reel, 2,400' \$11.35

6 TAPE ACCESSORIES

ALONGE

Tape Splicer



Non-magnetic precision splicer; cutting arm has three knives; center knife can be set at 90°, 67 1/2° or 45°; spring pads hold tape in place as side knife trim splicing tape to exact width of recording tape; size 4 1/2" x 3 1/8" x 3 3/4"; 1 lb. \$29.95

AMERICAN CONCERTONE

Model 18 Head Demagnetizer
 Pencil-type will demagnetize any tape recorder head \$5.00

Model 19 Bulk Eraser
 Will handle all reel sizes up to 10 1/2", 117 volt operation \$18.00

Tape Timer-Strobe
 For determining accuracy of tape speed; uses dial and features strobe for instant visual speed check; times length of tape in minutes and seconds \$19.00

AMPLIFIER CORP.

Magneraser Model 200C

Bulk tape eraser; operating voltage: 100 to 130 volts; operating frequency; 50 to 60 cps; 2" high, 4" diameter.

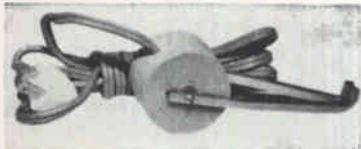
Model 200C.....\$18.00
Also available: Model 220C, identical in price and specifications except for operating voltage of 200 to 260 volts.

AUDIOTAPE

Audio Head Alignment Tape

Prerecorded at 2 kc., 10 kc., 15 kc.; recorded at 15" per second; intervals between tones are 5 seconds duration; 300 ft. on 4" reel.....\$10.00

Audio Head Demagnetizer



Demagnetizes tape recorder heads; requires only plug-in to conventional a.c. outlet.....\$10.00

EDITALL

Model KS-2 Tape Splicer



Can be easily fastened to any tape recorder top deck by means of double-sided pressure-sensitive adhesive tape which is attached to the block; ideal for editing; size 4" long x 3/4" wide x 1/4" thick; includes china-marking pencil and roll of 7/32" splicing tape; instruction booklet condensed from "editing" chapter of "Techniques of Magnetic Recording".....\$7.50
Model S-2 (block only).....\$6.50

FIDELITONE

Magnetic Tape Head



Quarter-track record/playback stereo head; supplied complete with 3" reel of azimuth alignment tape, electrical connector, and necessary hardware for mounting head; designed to be used with both U.S. and imported tape machines.....\$24.95

KNIGHT-KIT

Model KP-70 Tape Record/Playback Preamp

Separate record/playback sections allow 2- or 3-head operation, monitoring recording, sound-on-sound, recording with echo chamber effect; 6-position selector switch for playback and record each channel, or stereo record and playback; VU meters for both functions; adjustable high frequency recording pre-emphasis; printed circuits; record section sensitivity .0005 volts at mic. input, .080 volts at aux. for maximum recording level; record distortion less than 0.3% at maximum record level; bias oscillator 100 kc; master gain and individual channel balance control.
Kit (83YX929).....\$79.95
Metal case (83YX936).....\$4.95

LAFAYETTE

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. operation...\$21.50

MICROTRAN

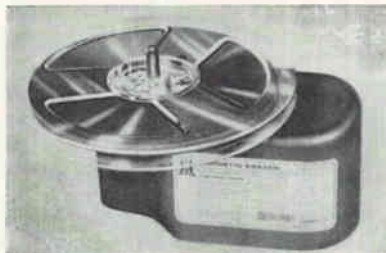
HD-11 Bulk Tape Eraser

Reduces noise level below level of standard erase heads; restores tape to like-new condition or better; reels 5"-10 1/2" may be used; can be used for demagnetizing



tape heads, watches, etc. 3"x5"x8"; 8 1/2 lbs.\$23.38

Model HD-11M Bulk Eraser



Heavy-duty magnetic tape eraser for tapes up to 1 1/2"; noise level is reduced below level of standard erase head; accepts reels from 5" to 10 1/2"; 7" l. x 3 1/2" w. x 3 1/4" h.....\$18.95

Model HD-40M Tape Head Demagnetizer



Will remove permanent magnetization; reduces noise level and harmonic distortion; improves signal-to-noise ratio; 4" l. x 1 1/4" dia.....\$4.95

NORTRONICS

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 1 volt low impedance to amplifier; sensitivity: low-level input, 2 millivolts; high level input, 0.2 volts; equalization variable NAB or RIAA; tubes are 2—12AX7, 12BH7, 6X4; 2 3/8"x5"x8".....\$46.50

Model RA-100 Recording Amplifier



Allows conversion of monaural recorder to stereo record; sensitivity: low level input, 2 millivolts; 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.....\$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 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 T60E Oscillator Transformer

65 kc. bias for recording head and erase current for either high- or low impedance erase heads; one-tube oscillator circuit diagram is included.....\$4.50

Model T60-T2 Oscillator Transformer

Similar to Model T60E but designed for transistor circuitry; 40-100,000 cps; will deliver 25 to 150 volts to erase and record heads.....\$4.50

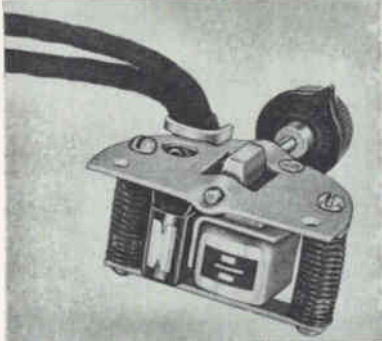
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TAPE ACCESSORIES

Model AT-100 Alignment Tape

7.5 ips full-track for checking record/play heads; 40-10,000 cps; recorded for checking azimuth, equalization and head wear\$4.95

Model WR-60 Conversion Kit Assembly



Converts all two-track Wollensak and Revere models to four-track stereo; includes three-position head shifter for two-track stereo and four-track mono operation; allows stereo recording with additional amplifier (not included)\$49.50

Model SLS-1 Tape Head

Half-track; solid core; monophonic record/playback head; 30-12,000 cps @ 7.5 ips; high impedance.....\$8.90

Model "HQ" Erase Heads

Double-gap construction; metal face; high impedance requires 115 volts @ 60,000 cps; specify mounting.
SEH1 Stereo erase half-track (or two-track).....\$12.50
SEQ1 Stereo erase quarter-track (or four-track).....\$12.50
MEH1 Monophonic half-track.....\$7.50
MEQ1 Monophonic quarter-track \$7.50

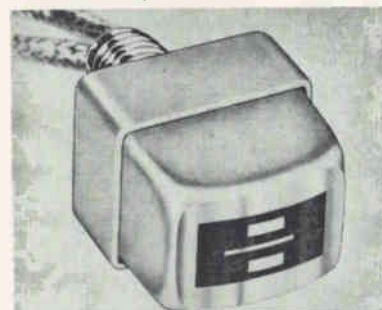
Model TLA-3 Tape Head

Two-track record/playback head; laminated core; 30-12,000 cps @ 3.75 ips; 30-17,000 cps @ 7.5 ips; high impedance; 3 mv. output; general-purpose type\$23.80

Model SLA-3 Tape Head

Same as one section of Model TLA-3 for half-track monophonic record/playback\$16.40

Model TLB Tape Heads



Four-track stereo record/playback head; 30-15,000 cps @ 3.75 ips; 30-20,000 cps @ 7.5 ips; crosstalk rejection 50 db; specify mounting desired.
TLB-2 High-impedance; 2 mv. output for general-purpose use; laminated core\$21.60
TLB-4 Low-impedance for use with transistors\$21.60

OLSON ELECTRONICS

Model TA-7 Bulk Eraser

Will erase any tape from 1/4" to 1" wide; handles 3", 5", 7", 10 1/2" reels; 117 volts a.c.\$18.95

Model TA-8 Tape Eraser



Portable bulk eraser will erase any tape reel 3" to 10"; operates on 117 volts a.c.\$11.91

RASON

"Jiffy" Tape Splicer



Mounted on plastic base; produces 30° butt joint; 4 1/4" long x 1 1/2" wide.\$2.50

Model P-30 "Jiffy Rase" Bulk Eraser

Bulk tape demagnetizer; also suitable for tape heads, tools, etc.; 100-130 volt a.c. operation; 4 3/4" x 4 1/2" high \$28.75

ROBINS

Model VU-100 Recording VU Meter

For maximum signal-to-noise ratio, 4 1/2"; 2-color scale; 200 µamp movement; calibration -20 to +3; shunts for 1.2 or 12 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 3/4" x 5 1/4" x 6 3/4"\$33.00

Model HD-6 Head Demagnetizer

Allows user to demagnetize tape record-



er heads; plugs into a.c. line.....\$10.00

TS4A-DLX Tape Splicer



Deluxe model; includes roll of splicing tape mounted in dispenser\$11.50
Other models available from \$1.50 to \$11.50.

Model TK-5 Strobetape Kit

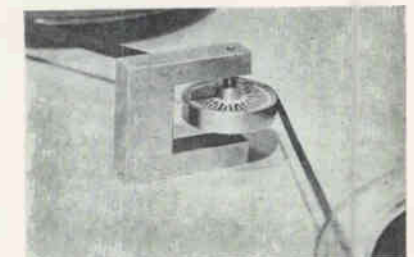
Consists of five lengths of 25-inch non-magnetic leader tape with strobe markings plus small neon light which flickers at a rate of 120 times per second; designed to be spliced into a roll of tape and the strobe markings will indicate relative speed of the tape machine\$2.00

Model ME-77 Bulk Tape Eraser

Smaller version of ME-99; will handle reels up to 1/4" wide and 7 1/2" in diameter; background noise levels reduced from 2 to 4 db below normal erase-head level; 2 1/2" x 3 3/4" x 6 1/4"; 4 lbs; 110-120 volt a.c.....\$22.00

SCOTT INSTRUMENT

TapeStrobe

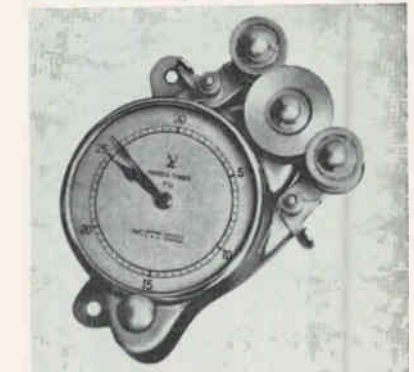


Chrome-plated stroboscopic wheel, ground to .010" accuracy.
Model A 7.5-15-30 ips.....\$22.50
Model B 3.75-7.5-15 ips.....\$22.50
Model C 1 7/8-3.75-7.5-15 ips.....\$24.50
For 50 cycles, add \$5.00.

SUPERSCOPE

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

ACOUSTONE

Acoustic Grille Cloth

Extensive line of all-plastic, metallic, hand-print, and cane grille cloth; available in 36" and 72" rolls & 36"x36" and 18"x24" packages; prices per yard range from \$4.25 to \$6.75 and the packages from \$2.50-\$4.25 (18"x24") to \$5.60-\$8.50 (36"x36").

AKG

Model K-50 Dynamic Headphone

For mono & stereo reproduction; 30-20,000 cps; impedance 400 + 400 ohms; power requirement less than .001 watt; distortion 1% or less at 1 mw. input\$22.50

AUDIONICS

"Duo-Phonic" Inductor

An electro-mechanical transducer that creates slight time delay and 90° phase-



shift between audio channels; suitable as a reverberation unit for stereo or mono reproduction\$29.90

BEYER

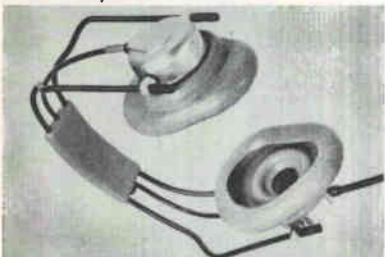
Model DT-48 Headphones



Dynamic design; 20-15,000 cps; distortion unmeasurable above 100 cps; less than .3% below 100 cps; 5 ohms impedance each side; monaural version\$79.50

S. G. BROWN

Model "Super K" Headset



Frequency extremely smooth 25-17,000 cps; input impedance 52 ohms @ 1000 cps; moving-coil design\$32.50

FAIRCHILD

Model 510 "Componder" Expander-Compressor



Not an amplifier but a device that will expand or compress any program material from phono, tape, tuner, etc.; expands up to 8 db (twice as loud); requires no power; compresses 20 db max.; attack time 10 msec.; available for stereo (two channel) operation only; can also be used for mono.....\$75.00

FISHER

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, ±2 db; 6SC7 dual triode amplifier; 3 3/4" w x 3 5/8" d x 3 5/8" h; 1 1/2 lbs\$12.95

Model K-10 "Spacexpander"



Single-control reverberation design using interconnected coil springs; nominal delay 33 sec.; self-powered; three dual-purpose tubes, 7247 and 2-12-AX7, decay time variable maximum 2 sec. @ 300 cps; minimum input .2 volt; maximum input 5 volts; input impedance 250,000 ohms; output impedance 2000 ohms; output voltage .2-5 volts; gain is one.....\$69.50

GARRARD

Model SPG3 Stylus Pressure Gauge



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

HEATH

Model GS-61 Reverberation Unit

Hammond Type IV reverberation unit is used & supplied with 3-watt amplifier, built-in power supply, and 8" speaker; pickup is from your present speaker system; response 200-4000 cps ± 3 db; sensitivity 250 mv for 3 watts; stereo or mono inputs; reverberation time approx. 2 sec. at 300 cps; delay time—long spring .037 sec., short spring .029 sec.; pre-assembled birch cabinet (11 1/2" h. x 23" w. x 11 3/4" d.); walnut or mahogany finish.....\$69.95

KNIGHT

Model KN-840 Hi-Fi Stereo Headset

For private stereo listening; full-range electrodynamic speaker in each phone; lightweight; response 20-16,000 cps; matches 16 to 600 ohms; with 3 ft. cord\$19.95

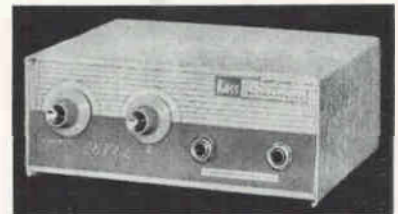
KNIGHT-KIT

Stereo Adapter Control

Centralized control for stereo system using monophonic amplifiers rated at 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".
Kit (83Y932)\$12.95

KOSS

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

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

6

MISC.

Model T-5

Junction box for connecting Stereophones to mono or stereo systems; im-



pedance 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 phono jacks; to plug into any portable phono or tape recorder having 2 plug-in side wing speakers; speaker on/off switch.....\$6.95

LAFAYETTE**Headphones**

Stethoscope-type earphones; frequency response 40 to 16,000 cps; hinge permits any desired spacing.

- MS-431 (binaural magnetic, impedance 6 ohms).....\$2.35
- MS-432 (binaural magnetic, impedance 5000 ohms).....\$2.35
- MS-433 (binaural crystal, impedance 100,000 ohms).....\$1.95
- MS-429 (monaural magnetic, impedance 6 ohms).....\$1.75
- MS-430 (monaural magnetic, impedance 5000 ohms).....\$1.95
- MS-369 (monaural crystal, impedance 100,000 ohms).....\$1.34

MELLOTONE**Grille Fabrics**

Speaker grille fabrics available in 54 colors and patterns; sizes 18" x 24", 36" x 36", 36" x 72", 10 and 25 yard bolts; prices vary, according to weave, from \$5.00 to about \$8.00 per sq. yard; 18" x 24" size available from \$2.50 to \$4.25

MOOG**"Melodia" Theremin**

An electronic musical instrument played without being touched; distance between player's right hand and instrument's antenna rod determines pitch of the note; distance between player's left hand and instrument's volume antenna plate determines loudness of note; total pitch range is five octaves; tone quality resembles that of musical saw or cello; completely transistorized and powered by single 6-volt battery; designed to op-



erate into any hi-fi system; housed in solid hardwood cabinet 22" l. x 6" d. x 3 1/8" h.; available completely assembled or in kit form.

- "Melodia" kit (FOB factory).....\$49.95
- "Melodia" assembled (FOB factory).....\$75.00

OLSON ELECTRONICS**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\$11.88

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-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

PERMOFLUX**Headphones**

Dynamic high-fidelity headphones; response 40-16,000 cps; lightweight headband with soft, comfortable ear cushions.

Binaural Type

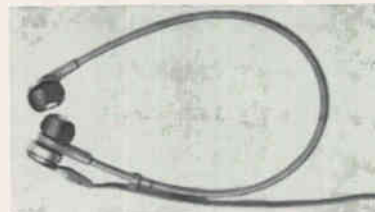
- HDB-16-16 16/16 ohms impedance\$40.00
- B-DHS-17 300/300 ohms impedance\$52.50
- B-DHS-28 12/12 ohms impedance\$45.00
- B-DHS-600 600/600 ohms impedance\$52.50
- B-DHS-25M 25M/25M ohms impedance\$52.50

Monaural Type

- HDA-8 8 ohms impedance.....\$37.50
- DHS-17 600 ohms impedance.....\$50.00
- DHS-28 25 ohms impedance.....\$42.50
- DHS-12M 12,000 ohms impedance\$50.00
- DHS-50M 50,000 ohms impedance\$50.00

RYE SOUND**Model UCL-IS Stereo Headphone**

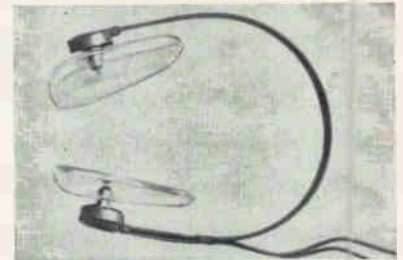
Lightweight semi-elastic plastic with



spring action to assure universal fit; special diaphragm equalizes sound pressure at two ears; comes with nylon foam earpads, nylon earloop, cord, and PL55 plug (or open-ended); available in impedances from 3.2 to 8000 ohms...\$13.95

Model UCL-2S Stereo Headphone

Comes with dual-driver units, cords, and plugs, ready for stereo application.....\$4.95

Model S-IS Stereo Headphone

Complete with two molded-in earphones, two plugs and two cords; available with lucite earcups or foam earpads; available in 15, 120, 500, 2000, or 4000 ohm impedances\$17.95

SARGENT-RAYMENT**Model SR-202 Reverberation Unit**

No-gain, no-loss circuit with normal 300 cps reverberation time of 2 sec.; delay lines (short & long spirals) designed to 29 & 37 milliseconds respectively; response "normal" flat—20-20,000 cps, "reverb" flat—20-20,000 cps with acoustic dimension control at zero, 200-5000 cps ± 1.5 db with dimension control at max.; "echo left"—right channel 20-20,000 cps ± 1 db, left channel 200-5000 cps ± 1.5 db; "echo right"—left channel 20-20,000 cps ± 1 db, right channel 200-5000 cps ± 1.5 db; tubes—2-12AX7, 1-6JD8; power requirements 175 volts "B+" & 63 volt c.t.; must be obtained from basic power amplifier\$47.75

Binaphone Stereo Headphones

Response 90-12,000 cps; has soft sponge phenolic plastic ear muffs \$24.50

Binaphone Amplifier

Dual-channel convenience amplifier for use with headphones; has stereo/monaural switch; dual volume & tone controls; dual output jacks for multiple listening\$34.50

SHARPE**"Circumaural" Earphones**

STEREO/HI-FI DIRECTORY

Dual-channel design (binaural); features liquid-seal ear pads; response 30-11,000 cps \pm 3 db.....\$43.50

STEREO-FAX

Model U-3A Time-Delay Network
Passive RLC network links two amplifiers providing time delay in transmis-



sion of signal from first to second amplifier; 2 speakers are then separated by time interval ranging from 50 msec. at 20 cps to 0.1 msec. at 20,000 cps; stereo simulation is result of time delay and phase shifting.....\$19.95
Standard Model U-4B.....\$16.95

STEREOSONICS

Phase & Balance Indicator



Indicates phase and extent of phase of stereo program material; can be used with all grounded or ungrounded line systems and any high-fidelity component; can also be used as a balance meter.....\$29.50

SUPERSCOPE

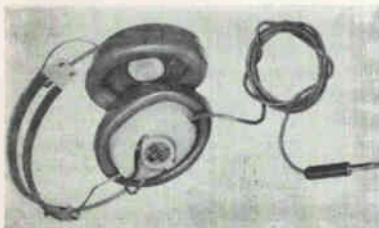
Model SHS-2 Binaural Headset



Low-impedance dynamic headset with acoustical pipe stethoscope principle; completely wired and phased.....\$7.95

TELEX

Model 3-D Headphone



Foam rubber acoustic seal; response 30-15,000 cps; 8 ohms impedance; 1 watt maximum power input.
Twin headset, monaural plug.....\$39.75
Twin headset, stereo plug.....\$40.65
Prices are "suggested list prices."

1962 EDITION

AIDS FOR AUDIOPHILES

The manufacturers listed below will provide brochures and technical specifications as indicated. Each manufacturer is numbered, corresponding to the number on the coupon below. Circle the items you want, enter the total in the box on the coupon, and we will do the rest. Where a price is indicated, please enclose the exact sum as we cannot handle refunds. Booklets cannot be sent C.O.D., so please send full payment with your original order

1. AEROVOX—as advertised.
2. DIXIE HI-FI—as advertised.
3. ALLIED RADIO—"This is Stereo High Fidelity," a 36-page color booklet all about stereo. Explains frequency range, tone balance, description of all components—prepared with the editorial assistance of Edward Tatnell Canby, 25 cents postpaid.
4. ALLIED WOOD PRODUCTS—as advertised.
5. ALTEC LANSING CORP.—as advertised.
6. AMERICAN CONCERTONE—as advertised.
7. APPARATUS DEVELOPMENT—as advertised.
8. ARGOS PRODUCTS—complete new catalogue of hi-fi cabinets and kits.
9. AUDIO DEVICES—complete description of Audiotape line with explanation of differences in 8 basic types and listing of complete range of reel types and sizes from 150 to 7200 feet.
10. AUDIO EMPIRE—complete technical specifications on playback arms, cartridges, and turntables.
11. AUDIO EXCHANGE—as advertised.
12. AUDIO FIDELITY—catalogue of extensive list of stereo tapes, stereo and mono discs.
13. AUDIO UNLIMITED—as advertised.
14. BRITISH INDUSTRIES—as advertised.
15. BURSTEIN-APPLEBEE—1962 catalogue No. 621 containing 212 pages with hundreds of dollar-saving buys in hi-fi components, systems, and LP stereo records.
16. COLUMBIA RECORD CLUB—as advertised.
17. COMMISSIONED ELECTRONICS—as advertised.
18. DIXIE HI-FI—as advertised.
19. EICO—"What is Stereo," a 4-page booklet; also a 36-page "Guide to High-Fidelity" (25 cents); identification sheets for all electronic components, symbols, capacitors, and resistors plus copy of latest hi-fi component catalogue.
20. ELECTRO-ACOUSTIC PRODUCTS—literature and specification data on the newly introduced Model 7001 automatic record player.
21. ELECTROPHONO & PARTS CORP.—Data on Lesa changers, manual players, and portable stereo phonographs.
22. ELECTRO-VOICE—12-page hi-fi catalogue listing speakers, systems, kits, and enclosures. Also "Your Guide to Component Hi-Fi Systems," a detailed listing of 70 component stereo systems, including products of 13 major manufacturers. Systems range from \$200-\$2000 and up. 25 cents postpaid. Blueprints for constructing the "Patrician 700" enclosure; complete, factory prints \$2.00.
23. FAIRCHILD—as advertised.
24. FINNEY CO.—as advertised.
25. FISHER RADIO CORP.—as advertised.
26. HARMAN-KARDON—as advertised.
27. HI-FIDELITY CENTER—as advertised.
28. JENSEN—as advertised.
29. KLH RESEARCH & DEVELOPMENT—as advertised.
30. KARLSON ASSOCIATES—brochure "Stereosonics by Karlson" explaining principles of operation of firm's enclosures plus a discussion of stereo sound theory.
31. KERSTING—as advertised.

TO: STEREO/HI-FI DIRECTORY—1962

P. O. BOX 186, VILLAGE STATION, N. Y. 14, N. Y.

Please arrange to have the booklets whose numbers I have circled sent to me as soon as possible.

1	2	3	4	5	6	7	8	9	10	11	Total number of booklets requested.
12	13	14	15	16	17	18	19	20	21	22	
23	24	25	26	27	28	29	30	31	32	33	
34	35	36	37	38	39	40	41	42	43	44	
45	46	47	48	49	50	51	52	53	54	55	
56	57	58	59	60	61	62	63				

\$ _____ Total Amount enclosed for pay booklets.

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

- 32. KEY ELECTRONICS—as advertised.
- 33. KOSS—as advertised.
- 34. LAFAYETTE—as advertised.
- 35. McGEE RADIO—complete 1962, 176-page electronic buyers guide including hi-fi components, industrial sound equipment, speakers, electronic parts and equipment.
- 36. MAGNECORD—"207 Ways to Use a Tape Recorder"—an informative booklet that describes ways to use tape recorders in business, professions, schools, in the home, etc. Includes helpful hints on handling and splicing of tapes, operating recorder.
- 37. MARANTZ—as advertised.
- 38. MINNESOTA MINING & MFG.—as advertised.
- 39. MOOG, R. A.—complete description of the Melodia Theremin kit, plus related literature, which includes a reprint of Electronics World article explaining circuit.
- 40. NORTED AUDIO—specification sheet covering Neumann phono products; Beyer dynamic headphones; and Gotham power amplifier.
- 41. NORTH AMERICAN PHILIPS—as advertised.
- 42. OLSON ELECTRONICS—32-page flyer which includes many pages on hi-fi equipment as well as general electronic parts and equipment.
- 43. PICKERING & CO.—planning guide for stereo hi-fi systems complete with handy shopping chart. Also complete specifications on the Stanton Fluxvalve.
- 44. POLYCOUSTIC CO.—as advertised.
- 45. PRECISION ELECTRONICS—colorful brochures covering complete line of Grommes high-fidelity stereo amplifiers, tuners, multiplex adapters, and hi-fi kits.
- 46. RCA INSTITUTES—as advertised.
- 47. REEVES SOUNDCRAFT—as advertised.
- 48. SCHOBER ORGAN—as advertised.
- 49. SCOTT, H. H.—as advertised.

- 50. SHARPE INSTRUMENTS—technical specifications on hi-fi earphones including frequency response and ambient noise curves.
- 51. SHERWOOD—4-color brochure illustrating and describing "Correlaire" modular hi-fi furniture and stereo hi-fi tuners, amplifiers, multiplex receivers and adapters.
- 52. SHURE BROS.—as advertised.
- 53. SUPERSCOPE, INC.—as advertised.
- 54. TANDBERG—brochure covers extensive line of tape recorders/players with complete listing of tape recorder accessories.
- 55. TANNOY—specifications and technical data on enclosures and speakers for both stereo and mono applications.
- 56. TELEX—information on the firm's stereo "Dyna-Twin" headphones.
- 57. THORENS—illustrated data on the new Models TD-121, TD-135, TD-111 as well as information on Models TD-124 and TDK-101 and BTD-12s tonearm.
- 58. TRANSVISION—catalogue P-361 including complete information on a line of 23", 24" and 27" "Professional" series TV kits and wired chassis. 8 pages.
- 59. UNITED AUDIO PRODUCTS—booklets on the "Dual-1006" turntable-changer plus a data sheet on the "Wigo" line of high-fidelity speakers.
- 60. UNIVERSITY LOUDSPEAKERS—"Informal Guide to Component High Fidelity," a 16-page brochure including complete description of all speakers and speaker systems. Also modular microphone brochure describing the new line of microphones.
- 61. UTAH SPEAKERS—complete specifications on a line of ultra-high-fidelity woofers, tweeters, and mid-range units.
- 62. WESTMINSTER RECORDS—as advertised.
- 63. WINEGARD—brochure on new super-powerful transistorized FM antennas for FM and multiplex. Technical specifications and information on how to get long-distance FM reception.

Say you saw it in

STEREO/HI-FI DIRECTORY

NOW! FAIRCHILD PRESENTS THE NEW

COMPANDER®

FOR THE RECREATION OF ORIGINAL PERFORMANCE DYNAMICS

A new, exciting and completely different development from Fairchild... a product so unusual that we believe every serious audiophile will want to know about the Compander. Briefly, the Compander is an automatic dynamic sensing device that overcomes the controls placed upon both disc and tape recordings and thereby restores the full dynamic range of the original performance. By freeing program material from the usual recording restraints the Compander brings you a giant step closer to the original performance. Accomplished without distortion, the Compander is easily integrated into any monaural or stereo quality component system. The Compander is priced at \$75.00. Write for our fully detailed bulletin.

FAIRCHILD RECORDING EQUIPMENT CORP., 10-40 45th AVE., LONG ISLAND CITY, N.Y.

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STEREO/HI-FI DIRECTORY



the giggles

Put one little girl together with something that tickles her funny bone—and out comes the purest, merriest of sounds. We don't propose there's anything quite as nice. But we can tell you about another kind of purity of sound that's worth discovering.

Make your next tape recording on Audiotape. Then listen. Audiotape . . . it's wonderful!

It has less distortion, less background noise, more clarity, more range than other tapes, because it's made to professional standards.

Let it be your silent (but knowing) partner in capturing

fresh, clear, memorable sounds. (Like Sissy's giggles, for instance.)

Remember: if it's worth recording, it's worth Audiotape. There are eight types . . . one exactly suited to the next recording you make.



audiotape
"it speaks for itself" TRADE MARK

AUDIO DEVICES INC., 444 Madison Ave., N. Y. 22, N. Y.
Hollywood: 840 N. Fairfax Ave., Chicago: 5428 N. Milwaukee Ave.

**NOW...
a Norelco 'Continental'
Tape Recorder
for every application**



the **Norelco®**
CONTINENTAL '400'
guild-crafted by Philips of the Netherlands

- ◆ FOUR-TRACK STEREOGRAPHIC RECORDING AND PLAYBACK ◆ FOUR-TRACK MONOPHONIC RECORDING AND PLAYBACK ◆ THREE TAPE SPEEDS — 1½, 3¼ AND 7½ IPS ◆ COMPLETELY SELF-CONTAINED, INCLUDING DUAL RECORDING AND PLAYBACK PREAMPLIFIERS, DUAL POWER AMPLIFIERS AND TWO NORELCO WIDE-RANGE LOUDSPEAKERS (SECOND IN LID) ◆ CAN ALSO BE USED AS A QUALITY STEREO HI-FI REPRODUCING SYSTEM WITH TUNER OR RECORD PLAYER ◆ FACILITY FOR MIXING PHONO AND MIKE INPUTS ◆ HEAD-GAP WIDTH — .00012" ◆ FREQUENCY RESPONSE—50 TO 18,000 CPS AT 7½ IPS ◆ WOW AND FLUTTER—LESS THAN .15% AT 7½ IPS ◆ SIGNAL-TO-NOISE RATIO—48 DB OR BETTER ◆ CROSS-TALK — 55 DB ◆ SIMPLE PUSH-BUTTON PIANO-KEY CONTROLS ◆ RUGGED ◆ PORTABLE ◆ STYLED BY THE CONTINENT'S TOP DESIGNERS

For a convincing demonstration of all of the features that make the Continental '400' the immediate delight of the discriminating music lover, visit your favorite hi-fi center, or photo dealer, or write for your free copy of our illustrated brochure giving all details on the Norelco tape recorders shown here plus loudspeakers, record changers and other quality Norelco high fidelity components.



A Norelco dual element stereo-dynamic microphone is standard equipment with the CONTINENTAL '400'



EVERY CONTINENTAL '400' is completely self-contained including 2 Norelco wide range loudspeakers (2nd in lid), dual power amplifiers and dual recording and playback preamplifiers.

COMPARE
the special features...

LOOK
at the low prices...

LISTEN
to the matchless quality...

CHOOSE
the Norelco 'Continental' tape recorder designed especially for you!

CONTINENTAL '300'
TAPE RECORDER (EL3542)

- ◆ 4-track stereo playback ◆ 4-track mono record-playback ◆ 3-speeds ◆ completely self-contained ◆ mixing facilities ◆ sound-on-sound button ◆ suitable for use as a phono/P.A. system ◆ can also play through external hi-fi system ◆ dynamic microphone



CONTINENTAL '200'
TAPE RECORDER (EL3541)

- ◆ 4-track mono record and playback ◆ facilities for 4-track stereo playback ◆ lightweight compact ◆ mixing facilities ◆ high-quality microphone ◆ sound-on-sound track button ◆ can also play through external system ◆ self-contained phono/P.A. system



CONTINENTAL '100'
TAPE RECORDER (EL3 85)

- ◆ transistorized, battery portable ◆ records/ plays back anywhere, 2 hours on 4" reel ◆ tapes interchangeable with Continentals '400' and '300' ◆ rugged, lightweight, simple in use ◆ response 100-5000 cps ◆ complete with speaker and quality microphone

