1964

DIRECTORY SI, GI



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

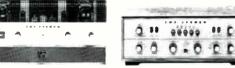
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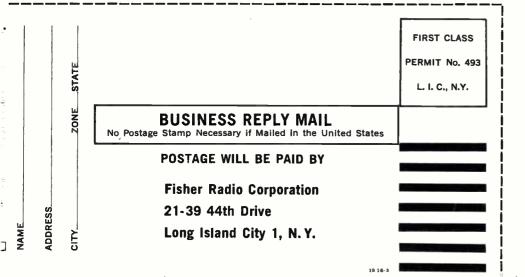




Loudspeaker Systems



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

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DIFFERENT COMMAND
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 - (Stereo 35/mm)
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 (Great Themes from Hit Films)
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- CHEEK TO CHEEK
 (Enoch Light and his Orchestra at Carnegie Hall play Irving Berlin)
- GUITAR ESPANOL (Spanish Guitar) Tony Mottola
- LOVE FOR SALE (The Big Band's back in town)

- VIENI VIENI (Rome Revisited)
- FORTY-SECOND STREET (Off Beat Percussion)
- I'M OVER HERE (Something Wonderful) Ray Charles Singers
- CLOSE YOUR EYES
 (The Persuasive Trombone of Urbie Green)
- THE CRY OF THE WILD GOOSE (Strange Interlude)
- NINA (Roman Guitar)

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8 Selections from the Following 8 Command Classics

WAGNER - Der Ring Des Nibelungen - The Ride of the Valkyries, Steinberg . . . Pittsburgh Symph. Orch.

BRAHMS - Symphony No. 2 in D Op. 73, 3rd Movement. Steinberg . . . Pittsburgh Symph. Orch.

BERLIOZ - Symphonie Fantastique Op. 14 - March to the Gallows. Vandernoot . . . National Symph. Orch. (Paris).

BEETHOVEN - Symphony No. 4 in B Flat Op. 60, 4th Movement. Steinberg . . . Pittsburgh Symph. Orch. MUSSORGSKY-RAVEL -Pictures At an Exhibition - The Great Gate at Kiev. Vandernoot . . . Conservatoire Symph. Orch. (Paris).

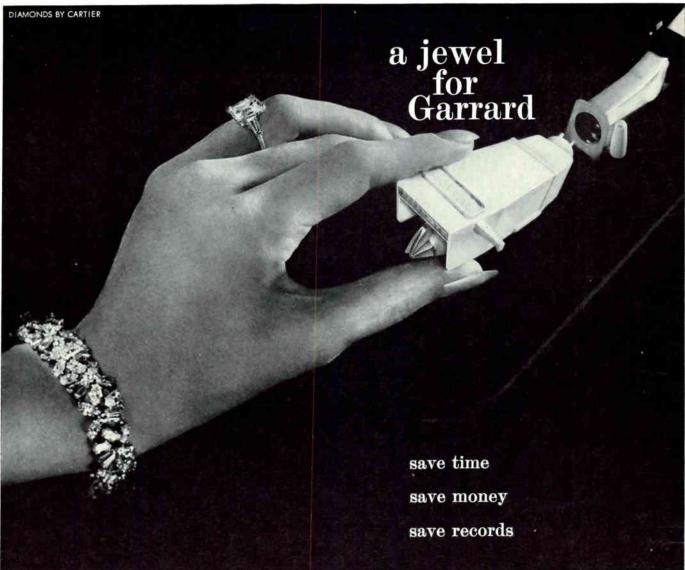
RAVEL - Rapsodie Espagnole - Malagueña. Dervaux . . . Colonne Symph. Orch. (Paris).

SCHUBERT - Symphony No. 3 in D, 4th Movement. Steinberg . . . Pittsburgh Symph. Orch.

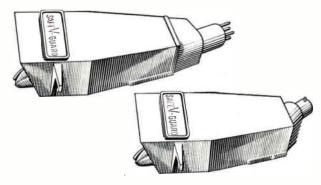
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1

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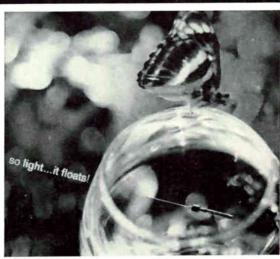
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Featuring Pickering's exclusive "floating stylus" ... so little mass that it actually floats on water... so light it "floats" over the surface of your records. The Pickering "floating stylus" action protects the diamond and the life of the record while it plays.

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STEREO/HI-FI DIRECTORY

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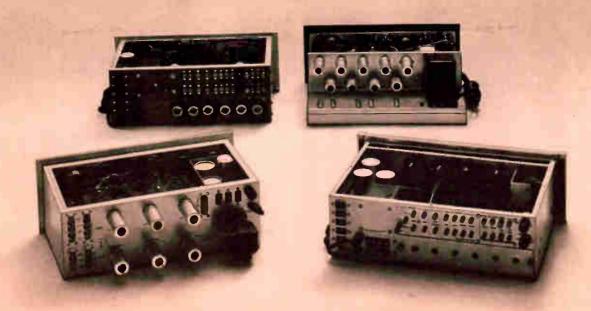
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THERE ARE FOUR EXCELLENT VACUUM TUBE
STEREO CONTROL CENTERS ON THE MARKET TODAY.



WHY DOES THE NEW CITATION A SURPASS THEM ALL?

Part of the answer is suggested by an authoritative report which appeared recently in High Fidelity Magazine. Here are some excerpts:

- ☐ "Marks a major breakthrough in the application of semiconductors to high fidelity sound."
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- ☐ "Its listening quality is superb....The overall effect of listening to Citation A is simply, more music and less fatigue."
- □ "Should meet the demands of the most critical listener and audio perfectionist."
- ☐ "It suggests that...a sound path could be set up that approaches the classic goal of amplifier design—that is, a straight wire with gain."

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GUEST EDITORIAL

By RAYMOND V. PEPE **President**



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

Che HIGH FIDELITY



SINCE its inception eight years ago, the Institute of High Fidelity has grown to a total membership of 70 companies. Although some of these companies represent publications of specific interest to high-fidelity enthusiasts, for the most part the Institute consists of relatively small companies which devote all their efforts toward the design and manufacture of component high-fidelity equipment. Their ultimate objective, and that of the Institute itself, is to develop the art of sound reproduction to its highest level of perfection.

Our industry has come a long way, considering that only twenty years ago sound reproduction in the home wasn't too far removed from that available from a conventional table-model radio set. Today it is possible to reproduce music in the home with the spaciousness, depth, realism, and clarity

of the concert hall.

The Institute itself is a unique organization since it serves a dual purpose. In a way, it is a trade organization since one of its major goals is to keep those in the industry fully informed regarding major developments. At the same time, the Institute and its members serve as innovators, having played a major role in bringing to commercial reality stereo reproduction in the form of discs and tapes and encouraging the development and spread of FM stereo broadcasting. This was a revolutionary technical development and provided an entirely new form of musical entertainment for the home made possible by engineers in the component hi-fi field.

The Institute's second objective is to keep the consumer abreast of the

wide variety of equipment available to him and how he can achieve maxi-

mum sound enjoyment in his own home.

To do this, the Institute puts on three annual public exhibits of high-fidelity products—in Los Angeles and Chicago in the Spring and in New York in the Fall. These "hi-fi shows" have become popular events where any musically minded individual can not only see and listen to all of the new products, but personally discuss his individual audio problems with the well-known engineers and designers of the units.

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

We have also compiled and made available to the public without charge the names of Registered Audio Specialists (see pages 163-174) in each community. These men are experts in all matters pertaining to music systems and can be consulted with confidence. Audio Specialists are the men who staff the component high-fidelity establishments in your community. Their skill and experience with all types of equipment involved in the reproduction of music is your best guarantee of continuing enjoyment of fine music in your home.

Of special interest to those desiring more semi-technical information on individual components, including cartridges, complete record changers, amplifiers, preamplifiers, tuners, and speakers, the Institute has compiled a 64-page booklet that is available to everyone. It has been prepared as a public service in the hope that it will help open the way to greater listening enjoyment through true high-fidelity sound reproduction in the home.

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

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ELAC—Benjamin Electronic Sound Corp. 30 Swalm St., Westbury, N.Y. ELECTRO-VOICE, INC. Buchanun, Mich. EMI—Scope Electronics Corp. 10 Columbus Circle, New York 19, N.Y. EMPIRE SCIENTIFIC CORP. 1075 Stewart Ave., Garden City, L.I., N.Y. EMT—Gotham Audio Corp. 2 West 46th St., New York 36, N.Y. ERIC ELECTRONICS CORP. 2115 Colorado Ave., Santa Monica, Calif. ESTEY ELECTRONICS, INC. 201 W. John St., Hicksville, N.Y. FAIRCHILD RECORDING EQUIPMENT CORP. 10-40 45th Ave., Long Island City 1, N.Y. FERRODYNAMICS CORP. Lodi, N.J. FERROGRAPH—Ercona Corp. 432 Park Ave. So., New York 16, N.Y. FINCO—The Finney Co. 34 W. Interstate St., Bedford, Ohio FISHER RADIO CORP. 21-21 44th Dr., Long Island City 1, N.Y. FRAZIER, INC. 2649 Brenner Dr., Dallas 20, Tex. FREEMAN ELECTRONICS CORP. 729 N. Highland Ave., Los Angeles 38, Calif. FURN-a-KIT, INC.—Furnette Industries, Inc.	151 121 46 .36 .65 .85 159 .97 .86 .75 159
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ELAC—Benjamin Electronic Sound Corp. 80 Swalm St., Westbury, N.Y. ELECTRO-VOICE, INC. Buchanun, Mich. EMI—Scope Electronics Corp. 10 Columbus Circle, New York 19, N.Y. EMPIRE SCIENTIFIC CORP. 20 West 46th St., New York 36, N.Y. ERIC ELECTRONICS CORP. 2115 Colorado Ave., Santa Monica, Calif. ESTEY ELECTRONICS, INC. 201 W. John St., Hicksville, N.Y. FAIRCHILD RECORDING EQUIPMENT CORP. 10-40 45th Ave., Long Island City 1, N.Y. FERRODYNAMICS CORP. Lodi, N.J. FERROGRAPH—Ercona Corp. 432 Park Ave. So., New York 16, N.Y. FINCO—The Finney Co. 34 W. Interstate St., Bedford, Ohio FISHER RADIO CORP. 21-21 44th Dr., Long Island City 1, N.Y. FRAZIER, INC. 2649 Brenner Dr., Dallas 20, Tex. FREEMAN ELECTRONICS CORP. 729 N. Highland Ave., Los Angeles 38, Calif. FIURN-a-KIT, INC.—Furnette Industries, Inc. 1308 Edward L. Grant Highway, Bronx 52, N.Y.	151 121 46 .36 .65 .85 159 .97 .86 .75 159 147 147

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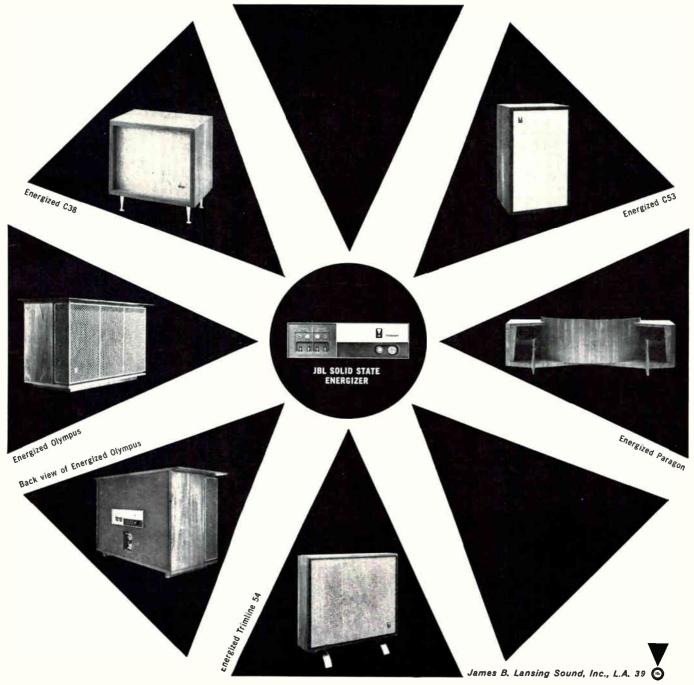
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The Most Sweeping Change in Speaker System Design... Starts with the New E-V FOUR!

Until now, there have been just two ways to determine the absolute quality of a speaker system: the scientific method, and the artistic approach. But each, by itself, has not proved good enough.

The scientist, with the help of impersonal equipment, charts and graphs, has strived to obtain the finest possible measured results. If the figures were right, then it *had* to sound right, and anyone disagreeing was dismissed as "not objective". But often, two speakers measured substantially the same, yet sounded quite different.

On the other hand, the artistic school of loudspeaker design has depended on the judgement of a handful of experts whose "golden ears" were the final yardstick of perfection. If you didn't agree with the experts, your ear was "uneducated" and not discriminating. But too often the measured response of the expert's system fell woefully short of reasonable performance—proof that even trained listeners can delude themselves when listening to loudspeakers.

Now, with the introduction of the E-V FOUR, Electro-Voice has pioneered a blend of the best features of both measurement methods to lift compact speaker performance to a new level of quality. It wasn't easy. The use of both techniques required extensive facilities, something E-V enjoys in abundance.

For instance, E-V has one of the industry's largest, most completely-equipped laboratories for the study of acoustical performance. Actually, the E-V engineering staff alone is larger than the entire personnel complement of many other speaker firms. In the E-V lab, measurement of speaker performance can be made with uncommon precision. And the interpretation of this data is in the hands of skilled engineers whose full time is devoted to electro-acoustics.

But beyond the development of advanced scientific concepts,

vanced scientific concepts, ing its soun E-V embraces the idea that a thorough study of the E-V 12" acoust me tweether the tweether than the transfer of the tweether than the tweether than the transfer of t

subjective response to reproduced sound is essential. E-V speakers must fully meet both engineering and artistic criteria for sound quality. Where we differ from earlier efforts is in greatly increasing the sample of expert listeners who judge the engineering efforts.

To this end, experts in music and sound from coast to coast were invited to judge and criticize the E-V FOUR exhaustively before its design was frozen. Adjustments in response were made on the spot—in the field—to determine the exact characteristics that define superb performance. It was not enough to say that a unit needed "more bass". What kind of bass? How much? At what frequencies? These are some of the more obvious questions that were completely settled by immediate adjustment and direct comparison.

The new E-V FOUR is the final result of this intensive inquiry into the character of reproduced sound. According to widespread critical comment, the E-V FOUR sound is of unusually high calibre. And careful laboratory testing reveals that there are no illusions—the measurements confirm the critics' high opinion of this new system.

Of course, it is one thing to design an outstanding prototype—and something else to produce an acoustic suspension system in quantity at a fair price. It is here that extensive production facilities, combined with creative engineering approaches, guarantee the performance of each E-V FOUR. And these same facilities ensure reasonable value. For instance, the E-V FOUR sells for but \$136.00 with oiled walnut or mahogany finish and just \$122.00 in unfinished birch. Yet, in judging its sound qualities, it was successfully

compared with speaker systems costing as much as \$200.00.

We urge you to join in the analysis of E-V FOUR compact speaker performance. Visit your E-V high fidelity showroom and compare, carefully, this new system. We feel certain that you will agree with the engineers and the critics that the new E-V FOUR offers a truly full measure of high fidelity satisfaction.

E-V FOUR components include:

12" acoustic suspension wooser | Ring-diaphragm
mid-range driver | 5" dynamic cone
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ELECTRO-VOICE, INC.
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TEREO STATION IRECTORY

Compiled by DAVID LACHENBRUCH

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

Freq. (mc.)

Call

Letters

Location	Call Letters	Freq. (mc.)	Location
ALAB	AMA		Santa Ma
Birmingham		96.5	Thousand
	WSFM	93.7	Turlock
Huntsville	WNDA	92.9	Ventura
	*WAHR	99.1	Visalia Walnut C
Mobile	*WKRG·FM	99.9	Woodland
ALA			
Anchorage	KBYR-FM	102.1	Boulder
ARIZ	ONA		Colorado
Phoenix	KEPI	96.9	Denver
I HOGHIA	KNIX	102.5	Manten
Sun City	KTPM	106.3	Manitou
Tucson	*KSOM	92.1	
CALIF	OPNIA		Brookfield
Beverly Hills	KCBH	98.7	Hartford.
Coachella	КСНО	93.7	
Fresno	KCIB	94.5	Meriden
	KXQR	102.7	
Garden Grove	KGĞK	94.3	14/:1
Long Beach	KNOB	97.9	Wilmingto
Los Angeles	KFMU	97.1	
	KMLA KPOL-FM	100.3 93.9	DIS
	KRHM	94.7	Washingt
	*KBMS	105.9	(5
Monterey	KHFR	96.9	
Oceanside	*KUDE-FM	102.1	
Palm Springs	KDES-FM	104.7	Cocoa Be
Riverside	KDUO	97.5	
Sacramento	KHIQ	105.1	Coral Gal
	*KFBK-FM	96.9 92.5	Fort Laud
San Bernardino	*KRCS	95.1	Gainesvill Miami
San Diego	KFMX	96.5	Wilailii
	KGB-FM	101.5	
	KLRO	94.9	Orlando
	KPRI	106.5	Palm Bea
	*KBBW	102.5	Pensacol
San Francisco	KBCO KFOG	105.3 104.5	St. Peter
	KMPX	104.5	Sarasota. Winter H
	KPEN	101.3	AAIIIIGI U
	KSFR	94.9	
	*KAFE	98.1	Athene
	*KEAR	97.3	Athens
	*KEAR *KXKX	97.3 88.5	Athens Atlanta
	*KEAR *KXKX KSJO-FM	97.3 88.5 92.3	
San Jose San Luis Obispo Santa Barbara	*KEAR *KXKX	97.3 88.5	Atlanta

	Letters	(IIIC.)
Santa Maria	KEYM	99.1
Thousand Oaks	*KNJO	92.7
	кном	92.9
Turlock		95.1
Ventura	KUDU-FM	
Visalia	KONG-FM	92.9
Walnut Creek	KWME	92.1
Woodland	*KATT	102.5
COLO	DADO	
		97.3
Boulder	*KRNW	97.3
Colorado Springs	KLST	94.3
Denver	KLIR-FM	100.3
	*KFML·FM	98.5
Manitou Springs	*KCMS-FM	102.7
CONNEC	CTICUT	
Brookfield	WGHF	95.1
Hartford	WTIC-FM	96.5
Traitioid	*WCCC·FM	106.9
Meriden	WBMI	95.7
Menden	AA DIAIT	33.7
DELAV	VARE	
Wilmington	WJBR	99.5
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	*WDEL-FM	99.5 93.7
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DISTRICT OF	COLUMBIA	A
Washington	WASH	97.1
(see also Bet	thesda, Md.)	
FLOR	IDA	
		1042
Cocoa Beach	WRKT-FM	104.3
	*WXBR	101.1
Coral Gables	*WXBR WVCG-FM	101.1 105.1
Coral Gables	*WXBR WVCG-FM WFLM	101.1 105.1 105.9
Coral Gables Fort Lauderdale Gainesville	*WXBR WVCG-FM WFLM *WRUF-FM	101.1 105.1 105.9 104.1
Coral Gables	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ	101.1 105.1 105.9 104.1 102.1
Coral Gables Fort Lauderdale Gainesville	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB	101.1 105.1 105.9 104.1 102.1 101.5
Coral Gables Fort Lauderdale Gainesville Miami	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR	101.1 105.1 105.9 104.1 102.1 101.5 99.1
Coral Gables	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM	101.1 105.1 105.9 104.1 102.1 101.5 99.1 96.5
Coral Gables Fort Lauderdale Gainesville Miami Orlando Palm Beach	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WWOS	101.1 105.1 105.9 104.1 102.1 101.5 99.1 96.5 97.9
Coral Gables	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WWOS WPEX-FM	101.1 105.1 105.9 104.1 102.1 101.5 99.1 96.5 97.9 94.1
Coral Gables	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WWOS WPEX-FM WTCX	101.1 105.1 105.9 104.1 102.1 101.5 99.1 96.5 97.9 94.1 99.5
Coral Gables	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WWOS WPEX-FM WTCX WYAK	101.1 105.1 105.9 104.1 102.1 101.5 99.1 96.5 97.9 94.1 99.5 102.5
Coral Gables	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WWOS WPEX-FM WTCX	101.1 105.1 105.9 104.1 102.1 101.5 99.1 96.5 97.9 94.1 99.5
Coral Gables	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WWOS WPEX-FM WTCX WYAK *WINT-FM	101.1 105.1 105.9 104.1 102.1 101.5 99.1 96.5 97.9 94.1 99.5 102.5
Coral Gables	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WWOS WPEX-FM WTCX WYAK *WINT-FM	101.1 105.1 105.9 104.1 102.1 101.5 99.1 96.5 97.9 94.1 99.5 102.5 97.5
Coral Gables	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WWOS WPEX-FM WTCX WYAK *WINT-FM RGIA WGAU-FM	101.1 105.1 105.9 104.1 102.1 101.5 99.1 96.5 97.9 94.1 99.5 102.5 97.5
Coral Gables	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WWOS WPEX-FM WTCX WYAK *WINT-FM RGIA WGAU-FM WKLS	101.1 105.1 105.9 104.1 102.1 101.5 99.1 96.5 97.9 94.1 99.5 102.5 97.5
Coral Gables Fort Lauderdale Gainesville Miami Orlando Palm Beach Pensacola St. Petersburg Sarasota Winter Haven Atlanta	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WWOS WPEX-FM WTCX WYAK *WINT-FM RGIA WGAU-FM WKLS WSB-FM	101.1 105.9 104.1 102.1 101.5 99.1 96.5 97.9 94.1 99.5 102.5 97.5
Coral Gables	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WYOS WPEX-FM WTCX WYAK *WINT-FM RGIA WGAU-FM WKLS WSB-FM *WRBL-FM	101.1 105.9 104.1 102.1 101.5 99.5 97.9 94.1 99.5 102.5 97.5
Coral Gables Fort Lauderdale Gainesville Miami Orlando Palm Beach Pensacola St. Petersburg Sarasota Winter Haven Atlanta	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WWOS WPEX-FM WTCX WYAK *WINT-FM RGIA WGAU-FM WKLS WSB-FM	101.1 105.9 104.1 102.1 101.5 99.1 96.5 97.9 94.1 99.5 102.5 97.5
Coral Gables	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WWOS WPEX-FM WTCX WYAK *WINT-FM RGIA WGAU-FM WKLS WSB-FM *WRBL-FM WDUN-FM	101.1 105.9 104.1 102.1 101.5 99.5 97.9 94.1 99.5 102.5 97.5
Coral Gables	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WYOS WPEX-FM WTCX WYAK *WINT-FM RGIA WGAU-FM WKLS WSB-FM *WRBL-FM WDUN-FM	101.1 105.1 105.9 104.1 102.1 101.5 99.1 96.5 97.9 94.1 99.5 102.5 97.5
Coral Gables	*WXBR WVCG-FM WFLM *WRUF-FM WAEZ WWPB *WEDR WHOO-FM WWOS WPEX-FM WTCX WYAK *WINT-FM RGIA WGAU-FM WKLS WSB-FM *WRBL-FM WDUN-FM	101.1 105.9 104.1 102.1 101.5 99.5 97.9 94.1 99.5 102.5 97.5

Location	Call Letters	Freq. (mc.)
IDA	НО	
Boise	*KBOI-FM	97.9
	1010	
ILLIN	WJBC-FM	101.5
Bloomington	*WLRW	94.5
Chicago	WEFM	99.5
	WFMQ WFMT	107.5 98.7
	WKFM	103.5
	WMAQ-FM WXRT	101.1
D	WXRT WSOY-FM	93.1 102.9
DecaturJoliet	WJOL-FM	96.7
Mattoon	WLBH-FM	96.9
Quincy	WGEM-FM	105.1 98.9
Rock Island Waukegan	WHBF-FM *WEFA	102.3
		101.0
INDI		
Columbus	WCSI-FM WIKY-FM	98.3 104.1
EvansvilleIndianapolis	WISH-FM	107.9
Richmond	WBKV-FM	101.3
Terre Haute	WVTS	100.7
10\	WA	
Cedar Rapids	KHAK-FM	98.1
	WMT-FM KDMI	104.5 97.3
Des Moines Waterloo	KXEL-FM	105.7
KAN		01.5
Lawrence	KANU KWBB-FM	91.5 101.3
Wichita	*KCMB-FM	107.3
KENT	1101/1	
KENT	WVLK-FM	92.9
Lexington	*WLVL	97.5
Owensboro	WSTO	96.1
Prestonsburg	*WDOC-FM	95.5
LOUIS	SIANA	
Monroe	KMLB-FM	104.1
New Orleans	WWMT	95.7
N/A	INE	
Caribou	*WFST-FM	97.7
MADV	LAND	
Bethesda (Wash., D.		102.3
	WJMD	94.7
Towson (Baltimore)	WAQE-FM	101.9

STEREO/HI-FI DIRECTORY

^{*}Indicates stations expected to begin stereocasting before end of 1963.

Location	Call Letters	Freq.	Location	Call Letters	Freq.	Location	Call Letters	Freq.
MACCACI			Wieken.			F- 4 M- 41		
MASSACH Boston	WBCN	104.1	Hickory		95.7	Fort Worth	WBAP-FM KGAF-FM	96.3 94.5
	WGBH	89.7	Barberton (Akron)	HIO WDBN	94.9	Houston	KFMK	97.9
Waltham		102.5 96.1	Canton	WCNO	106.9		KODA-FM KQUE	99.1 102.9
		00.2	Cincinnati	WKRC-FM	101.9		KŘBE	104.1
MICH!		102.5	Cleveland	*WAEF-FM WCLV	104.3 95.5	Lubbock	KXYZ-FM *KBFM	96.5 96.3
Bay City Detroit	WABX	99.5		WDOK-FM	102.1	Midland	*KNFM	92.3
	WBFG	98.7	Cleveland Heights	WNOB *WCUY	107.9 95.3	Port Arthur	KFMP KEEZ ₁	93.3 97.3
	WDTM WGPR-FM	106.7 98.7	Columbus	WBNS-FM	97.1	Wichita Falls	KNTO	95.1
	WLDM	95.5	Dover	*WMNI-FM *WJER-FM	99.7 95.7	UTA	AH I	
East Lansing	WOMC WSWM	104.3 99.1	Findlay	WFIN-FM	100.5	Salt Lake City	KSL-FM	100.3
Flint	WGMZ	107.9	Kettering Mansfield		99.9 106.1	VIDO	INIIA	
Grand Rapids	WJEF-FM WOOD-FM	93.7 105.7	Middletown	WPFB	105.9	VIRG Martinsville		96.3
Interlochen	*WIAA	89.7	Port Clinton Portsmouth		94.5 104.1	Norfolk	WTAR-FM	95.7
Lansing Midland	WODC WODC	100.7 99.7	Springfield	*WBLY-FM	103.9	Richmond	WYFI WFMV !	99.7 103.7
Mount Pleasant		94.5	ToledoYoungstown	WRRW-FM	104.7 92.3		*WCOD	98.1
MINNE	ATOS				32.0	Roanoke	WSLS-FM	99.1
Minneapolis	KRSI-FM	104.1	Oklahoma City	HOMA KFNB	101.9	WASHII		
	KWFM	97.1		KYFM	98.9	Bellingham		92.9
	WAYL	96.1	Stillwater		91.7	Seattle	KGMJ	101.5 95.7
MISS			Tulsa	KOCW	97.5 96.5	1	KISW	99.9
JoplinKansas City	KCMO-EM	92.5 94.9	0.00				KLSN KZAM	96.5 92.5
Kansas City	KMBC-FM	99.7		GON	07.0		*KGFM	105.3
Springfield St. Joseph	KTXR	101.5	Eugene	KWFS-FM	97.9 96.1	Tacoma	KLAY-FM	106.1
St. Louis	KCFM	105.1 93.7	Portland	KGMG	95.5	WEST V	IRGINIA	
	KSHE	94.7	Springfield	KPFM KEED-FM	97.1 93.1	Charleston Martinsburg	WKNA	98.5
	*KADI *KWIX	96.5 102.5				Martinsburg	WENN-PM	94.3
NEDD			Braddock (Pgh.)	YLVANIA	96.9	WISCO		
Omaha	KQAL-FM	94.1	Chambersburg	. WCHA-FM	95.1	Eau Claire Green Bay	*WIAL	94.1 101.1
		34.1	Harrisburg		104.1 95.5	Kenosha	WAXO	96.9
NEV			Johnstown Philadelphia		101.1	Madison	*WLIP-FM WHA-FM	95.1 88.7
Las Vegas	*KUC-FM	97.1 98.5		WFLN-FM	95.7	Madison	WISM-FM	98.1
		30.3		WHAT-FM WIF	96.5 92.5	Milwaukee	WMFM	104.1
NEW HAN		040	D'Atabasa da	WQAL	106.1	Milwaukee	WFMR WMKE	96.5 102.1
Mount Washington.		94.9	Pittsburgh	*WWSW-FM	93.7 94.5	Wausau	WTMJ-FM *WSAU-FM	94.5 95.5
NEW J	ERSEY		warren	. *WRRN	92.3	West Bend		92.5
Atlantic City Dover		96.9 105.5	Wilkes-Barre York-Hanover		103.3 98.5	WYOI	AINC	
Long Branch	WRLB	107.1	DUODE	IOI AND		Cheyenne		106.3
Paterson		93.1 101.5	Providence	ISLAND WPFM	95.5			200.0
	*WTTM-FM	94.5	1 TOVIGOTIOC	WXCN	101.5	PUERT Aguadilla		100.3
NEW M	IEVICO		SOUTH	CAROLINA		Isabela	*WISA-FM	101.5
Albuquerque		96.3	Beaufort		98.7	Rio Piedras (San Juan)	WFID	95.7
Los Alamos	*KRSN-FM	98.5	Columbia	. WCOS-FM	97.9		Write	
NEW '	YORK		North Charleston Seneca	. WKTM *WSNW-FM	102.5 98.1	ALBE		
Babylon, L.I	WGLI-FM	94.3	Spartanburg		98.9	Calgary	CHFM-FM	95.9
Buffalo	WDCX *WADV	99.5 106.5	TENN	IESSEE		BRITISH C	OLUMBIA	
	*WYSL-FM	103.3	Greenville	. *WGRV-FM	94.9	Kamloops	*CFFM-FM	98.3
Fresh Meadows, L.I. Garden City, L.I	WTFM WLIR	103.5 92.7	Johnson City Kingsport		100.7 98.5	Vancouver	СНQМ-FM	103.5
New York	WABC-FM	95.5	Lebanon	*WCOR-FM	107.3	MANI	TOBA	
	WQXR-FM *WNYC-FM	96.3 93.9	McKenzie Nashville		106.9	Winnipeg	CJOB-FM	97.5
Pachogue, L.I	WPAC-FM	106.1		WSIX-FM	103.3 97.9		*CKY-FM	92.1
Riverhead, L.I Rochester	WAPC-FM	103.9 96.5	Sevierville Tullahoma	. WSEV-FM	102.1	ONT		
Schenectady	WGFM	99.5			93.3	London Ottawa	CFPL-FM CFMO-FM	95.9 93.9
SyracuseUtica	WSYR-FM WUFM	94.5	TE TE	XAS		Toronto	CHFI-FM	98.1
		107.3	Amarillo Austin	KCHO KTBC FM	103.5 93.7		CKFM-FM	99.9
NORTH C		101.1	Beaumont	KHGM	95.1	QUE		
Burlington Charlotte	WBB-FM WBT-FM	101.1 107.9	Corpus Christi Dallas	KTOD-FM KIXL-FM	103.1 104.5	Montreal	CFCF-FM CJFM-FM	92.1
Greensboro	WMDE	98.7		KVIL-FM	105.3	Quebec	CHRC-FM	95.9 98.1
Hickory	WQMG WHKY-FM	97.1 102.9	Fort Worth	*KRLD-FM KXOL-FM	92.5 99.5	Sherbrooke	CHLT-FM	102.7
		202.3	. O. C 1701 UI	. IVOT-LIA	33.0	Verdun	CKVL-FM	96.9
1964 EDITION								11

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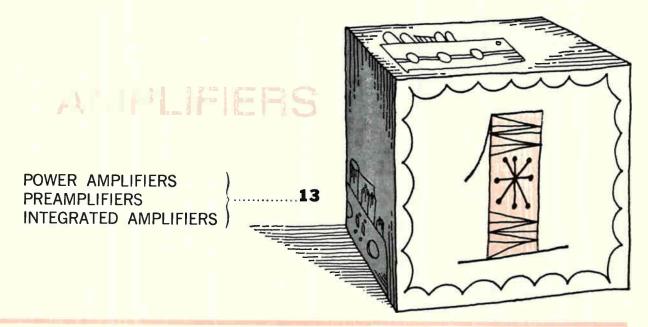
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to qualify for this protection.

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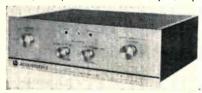
McIntosh Laboratory, Inc. 2 Chambers Street Binghamton, New York
Please send me full information on McIntosh stereo instruments.
Name
Address



ACOUSTECH

Model | Transistorized Stereo Power Amp

40 w./ch. (continuous sine wave) from 20-20,000 cps; 4-8-16 ohms output; clip-



Model II Transistorized Preamplifier

Features stepped decade (10 db) and micro (2 db) level controls; square-wave



characteristic is uniform over entire dynamic range; other front-panel controls: input, mode, individual stepped treble and bass for each channel (switched out of circuit when flat), balance, 3-position equalization (RIAA, NAB tape, and microphone). 3-position low-frequency filter (flat, 20 cps, and 70 cps); 3-position high-frequency filter (flat, 6 kc., and r.f.), and 3-position speaker selector (left, right, or both); push-button switches for power, loudness, tape monitor, and muting; input selector provides for switching between three stereo sets of magnetic inputs with input sensitivities varying from 3-15 mv. and three stereo sets of high-level inputs; at 2.5-volt output HD and IM distortion each less than 0.25%; hum and noise better than —60 db below 2.5 volts in

ALTEC LANSING

Model 351B Transistorized Amplifier

Model 356A Music Distribution Amp

For p.a., paging, music distribution inside or outside the home; one high-level for



Model 360A "Royale II" Transistorized Integrated Stereo Amp.

35 w./ch. music power; HD 1.5% @ 25 w., 20-10,000 cps; response 20-20,000 cps \pm 1



db: input sensitivity for 25 w. @ 1000 cps: radio. tape, aux. 400 mv., mag. phono 4 mv., ceramic phono 200 mv., tape head 1.9

mv., mic. 4.5 mv.; output impedance 4/8 and 16 ohms (ctr. speaker 8/16 ohms); damping factor 10; has conventional operating controls; features solid-state circuitry; matrixing network for center-channel output; automatic reset circuit breakers for channel protection; 28 transistors. 3 diodes & rectifiers; 15" x 5½" x 11¾" d.; with case \$\frac{1}{2}\$ cas

ARKAY

Model A-12 Amplifier Kit

Power output 12 watts; integrated monaural amplifier; controls for loudness, bass, treble, function; distortion less than 2% at 2 watts; frequency response ± 1.5 db, 20-20.000 cps; tubes are 6SC7, 2-6SL7, 6V6, 5Y3........\$23.95 Factory wired......\$31.45

FL-10 Integrated Amplifier Kit

Rated at 12 watts; 20 to 20,000 cps ± 1 db below 10 watts; hum on phono



CS28 Integrated Stereo Amplifier Kit

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

SPA-35 Stereo-Monaural Amplifier Kit

Dual 20-watt amplifiers, IM distortion 0.9%, harmonic distortion 0.8%; bias level adjustment controls; frequency re-



sponse ± ½ db. 20-20,000 cps; tubes are 4-6BQ5A/7189, 2-6AN8, 5U4GR; 15!4"x8"x6".

Kit\$49.95 Factory wired......\$62.95

Model CS-12 Integrated Stereo Amplifier Kit

Integrated amp for both stereo and mono; 12 watts output up to 20 watts peak;



frequency response \pm 1 db, 20-20,000 cps; IM distortion, 4 to 1 60-7000 cps 1.2%; input .3 volt for full output; controls are bass, treble, function, balance, selector; selenium rectifiers; 15"x61/4"x 5½". Kit\$36.95

Model SPA-55 Stereo Power Amplifier Kit

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

Kit\$64.95

BELL

Model 2440 Stereo Amplifier

Integrated design with 22 w./ch. music power; included are separate bass & treble



controls, high & low filter sw., and loudness, balance & volume controls; response 20-20,000 cps \pm 1 db; power response 35-20,000 cps \pm 1 db @ 20 w. r.m.s./ch.; dist. less than 1% @ 1 kc. & 20 w./ch.; hum & noise -76 db from 22 w.; has 6 dual inputs: tape head, 2 mag. phono, ceramic phono, aux.-MPX, tape amp: 4-8-16 ohm outputs: 10 tubes; 5⁷ie" x 17³ie" x 19%" d.; with case................\$159.95

Model 2420 Stereo Amplifier

Similar in many ways in design & styling to Model 2440; power output is 17 w./ch.

BIGG OF CALIFORNIA

Model S-40-C Stereo Power Amp

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

Model 410 Stereo Preamplifier

Circuit design of each channel similar to that used in Model AF12-SM tuner/ampli-



fier: controls are bass, treble, volume, balance, mode, selector; two slide switches for loudness and equalization (flat-RLAA)\$59.95

Model B-40-SC Integrated Amplifier

Stereo design: 40 watts music power/channel; response 20-25,000 cps; sensitivity 4



mv.; 6-12AX7, 4-EL84, 1-EZ81; features 8-function mode switch; balance control, phase switch, ten inputs, 4 outputs, bass and treble tone controls, record equalization, scratch filter, loudness and volume control, stereo/mono switch.....\$119.95

Model BP-KA 40-Watt Mono Amp

Printed circuits throughout: response 5- $20.000 \text{ cps} \pm 1 \text{ db}$; IM distortion less than



1% at rated output; hum and noise 92 db below rated output; sensitivity .3 v. r.m.s. for 40 watts; tubes: 2-EL34, 12AX7, 12AU7, 5U4; 12½" x 8" x 6" including cover\$69.95

BOGEN

Model AP250 Integrated Stereo Amp

25 watt per channel (IHF rating); response 20-20,000 cps ± 1 db; distortion



.6% at 25 watts; hum & noise -60 magnetic phono and tape, -75 db aux. and tuner; stereo headphone output; sensitivity low-level inputs 4.5 mv., high-level .5 v.; 4-8-16 ohm outputs; center-channel output; magnetic phono, tape, aux., tuner, tape monitor inputs; controls: 4-position selector, 4-position mode, volume, balance, bass, treble, rumble filter, scratch filter, loudness, tape monitor, blend, power; 10 Walnut cabinet\$ 26.95

Model AP30 Integrated Stereo Amp

15 watts per channel (IHF music rating); response 20-20.000 cps ± 1 db; dis-



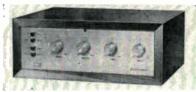
tortion .6% at rated output; hum & noise -55 db magnetic phono and tape, -70 db aux. and tuner; sensitivity 4.5 mv. magnetic phono and tape, .5 v. tuner and aux.; 8-16 ohm output impedance; controls: 4-position selector, volume, balance, bass, troble, blend, loudness, rumble filter, stereo reverse, power; inputs: magnetic phono, tape, aux., tuner, tape amplifier; 9 tubes: 15" w. x 4¾" h. x 11½" d. \$99.95 Metal enclosure\$11.95

Walnut cabinet\$26.95

BURSTEIN-APPLEBEE

BA-24S4 Integrated Stereo Amp

12 watts per channel; 20-20,000 cps ± 1 db at 1 watt; harmonic distortion .5% @



1000 cps & 10 watts; IM distortion 2% @ 10 watts: sensitivity .7 v. tuner, 5.5 mv. mag. phono, .35 v. crystal phono; 4-8-16 ohms and high-impedance tape outputs per channel; hum & noise -72 db tuner, -52 db phono; 4-6EU7, 4-6BQ5, 1-EZ81: 9 front-panel operating controls; 14" w. x 4½" h. x 9" d.\$54.95 Metal cabinet extra\$ 4.95 Walnut cabinet extra\$12.95

BA-40S4 Integrated Stereo Amp

20 watts per channel; response 20-20,000 cps \pm .5 db @ 1 watt; harmonic distor-



tion .6% @ 1000 cps & 15 watts; IM distortion 2% @ 15 watts; sensitivity .4 v. tuner, 4 mv. mag. phono, .25 v. crystal phono; 4-8-16 ohms and high-impedance tape output per channel; hum & noise -75 db tuner, -50 db phono; 5-12AX7, 4-6BQ5, 1-6CA4; has conventional input circuits and 11 front-panel operating controls: 13¾" w. x 4¾" h. x 9¼" d. \$79.95 Metal cabinet extra\$ 4.95 Walnut cabinet extra.....\$14.95

Model BA-20 Mono Amplifier

20 watts peak output: response 20-20,000 cps @ 1 w.; harmonic distortion 1% @ 1000 cps & 10 watts; IM distortion 3% @ 10 watts; sensitivity: .55 v. tuner, 4.5



mv. mag. phono, 5.5 mv. tape head, .25 v. crystal phono; 4-8-16 ohms and high-impedance tape output; hum & noise -72 db tuner, -52 db phono; 2-12AX7, 2-6BQ5, 1-6BW4; conventional inputs; 5 front-panel controls\$29,95 Metal cabinet extra\$ 4.95 Walnut cabinet extra.....\$14.95

CALBEST ELECTRONICS

Model 7615 Mono 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 bclow rated output; inputs: 1 low level, 4 high level; input sensitivity: low level, 6 millivolts; high level, 0.3 volt; bass control allows 16 db boost and 18 db cut at 50 cps; treble control allows 18 db boost and 20 db cut at 15,000 cps; separate bass and treble phono equalization: 5-position contour control; rumble filter; output impedances are 4, 8, and 16 ohms; tape output; tubes are: 3-ECC83/12AX7, 2-EL84, 5Y3GT; 13 ½ " w. x 6½ 6" x 4½"h.

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

\$99.95 Model 7615B (Blonde cabinet)......\$99.95 Model 7615SM (Salem maple cabi-

net; 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 chan-



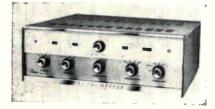
nel; integrated amplifier; frequency response 15-40,000 cps; IM distortion less than 1% at 1 watt output; 21/2% at rated output; controls for turnover, rolloff, rumble filter, treble, bass, loudness; sensitivity 0.3 v. for high-level inputs, 7 my, for low-level inputs for rated output; tubes are 6-ECC83/12AX7, 4-EL84/6BQ5, 5U4GB.

With metal case	\$159.95
Salem maple case	\$199.95
Limed oak case	\$189.95
Walnut case	\$199.95
Mahogany case	\$189.95

CHANNEL MASTER

Model 6601 Integrated Stereo Amp

20 watts per channel (music power); 5



mv. for 10 watts on phono input and 250 mv. for high-level inputs; hum level 46 db below full output; response 20-20,000 cps ±1 db; harmonic distortion less than 1%; inputs: tuner, aux., tape, ceramic & mag. cartridge; outputs: 4-8-16 ohms; has output for center-channel; bass, treble, loudness controls; rumble, noise, centerchannel switches\$101.95

DE WALD

Model R-5000 "Troubador"

Monophonic preamp-equalizer, with its own built-in power amplifier, 15 watts



output; harmonic distortion 1% at 12 watts; -75 db hum level; output impedances are 8 and 16 ohms; equalization for LP, tape, and pop; input jacks for magnetic, aux., crystal phono and tuner, tape and tape monitor; controls are selector, loudness, treble and bass.....\$52.95

Model S-1400A "Concerto" Stereo Amp

17.5 watts per channel; response 20-20,-000 cps ± 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; inputsmagnetic, tuner, ceramic, tape, tape output, aux.\$99.95

DYNACO

Mark IV Mono Amplifier Kit

40 watts power, up to 80 watts peak; less than 1% IM distortion at 40 watts; fre-



quency response ±0.5 db. from 10 cps to 40 kc.; sensitivity 1.3 volts r.m.s. input for 40 watts output; output impedances are 4, 8, and 16 ohms; tubes, 2—EL34, 7199 GZ34 selenium rectifier; 5" x 14" x 6½". Mark IV Kit\$59.95 Mark IV Factory wired\$79.95

Mark III Mono 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 r.m.s. input for 60 watts out; IM distortion less than 1% at rated output; damping factor 15; includes patented Biaset for non-critical balancing control; matched set of KT88 power output tubes; other tubes are 6AN8, GZ34, selenium rectifier; power socket for preamp;

Suh!



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NEW "Plug-in" Mic Cable 25 feet long, 2-conductor, shielded, Cannon XL3-11 and XL3-12 Plugs.

NEW "Plug-in" Mic Cable 25 feet long, 2-conductor, shielded, Amphenol MC3M and MC3F Plugs. No. 91BU92, List \$12.50 | No. 93BU94, List \$9.75

When you need cables for replacement or extension, you'll find a Switchcraft Cable Assembly for most Microphones, Tope Recorders, Hi-Fi, Stereo and P. A. Systems.

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5565 N. Elstan Ave. · Chicaga 30, III.





printed circuit	boar	ds;	9"	x 9"	x	6¾".
Mark III Kit					\$	79.95
Mark III Facto	ry w	ircd			\$	99.95
Mark III-70 4	-8-16	oht	n &	70.7	vo	t out-
put					\$	104.95
Mark III-500	500	or	125	oh	m (output
					5	109.95

"Stereo 35" Power Amplifier

17.5 w./ch. (continuous sine wave): 45 w./ch. music power; IM dist. less than



Stereo 70 Amplifier

Two power amplifiers 35 watts each; full 70 watts on mono operation; printed cir-



cuit board; 7199 driver; push-pull EL34's; frequency response ±.5 db. 15-40,000 cps; IM distortion less than 1% at 35 watts; sensitivity 1.3 volts r.m.s. input for 35 watts output; estimated time of assembly 4-6 hours.

PAM-1 Mono Preamp

Six inputs: high and low level magnetic phono, tuner, TV, tape, plus option of



tape head, mike or extra phono position; two outputs, low impedance (1000 ohms), and tape output; equalization for RIAA, LP, 78 rpm records: tape A—B monitor switch; separate bass and treble controls with up to 15 db of boost or cut at 30 cps and 15 kc; loudness control with switch; IM distortion under .05% at 1.5 volts output; noise level less than 3 microvolts equivalent input noise on RIAA position; frequency response 10 cps to 100 kc, ±1 db; d.c. filaments, 2—12AX7 or ECC83, selenium rectifier; 4 a.c. outlets, 2 switched; scuff-proof and washable; 12" x 6" x 2¾"; 7 lbs.; preassembled printed circuit board.

2¾"; 7 lbs.; preassembled board.	printed	circuit
Kit		\$34,95
Factory wired PM-1 Panel mounting kit		\$ 2.95

PAS-3 Stereo Preamp

Inputs for 3 low level stereo and 4 high level stereo; controls for bass, treble, vol-



ume, balance, blend, tape monitor switch, loudness compensation, feedback scratch filter to eliminate high frequency distortion: RIAA equalization: gain: 60 db at 1000 cps on RIAA, 20 db 20-20.000 cps at high level inputs: d.c. filament supply: tubes are 4-ECC83, 12X4 rectifier: 13" x 8" x 4"; kit. \$69.95 PAS-3 Factory wired. \$109.95 PAS-2 Kit (Same as PAS-3 except styling) \$59.95 PAS-2 Factory wired. \$99.95 PAS-2 Factory wired. \$99.95 PM-3 Panel mounting kit. \$4.95 PK-30 Deluxe panel & knob kit (same as on PAS-3) for modernizing PAS-2 units. \$13.95

SCA-35 Integrated Stereo Amp

Combines dual-channel preamps & power amps: 17.5 w./ch. continuous sine-wave



power; response 20-20,000 cps ± .25 db; IM dist. less than 1% at 17 w.; has 7 pairs inputs: mag. phono, low & high levels; ceramic phono; tape head; radio; tape; and spare; controls: selector, volume, balance, bass, treble, stereo/mono, loudness, on-off, filter; sensitivity 2.5 mv. at tape head, 4 mv. mag. phono, 1 v. at high-level inputs; 13" x 10" x 4"; with cabinet; kit \$99.95

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

Model ST-40 Integrated Stereo Amp

Similar to Model ST-70 except unit has two 20-watt amplifiers; all controls and



features as in ST-70 but no phase-reversal or choice of tape-speed equalization; IM distortion 1% @ 40 watts; response 12-25,000 cps \pm 1 db.

Kit			\$79.95	ö
1211		.,		-
т.		1 1	\$129.95	c
ract	orv	Wired	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,

Model HF-89 Stereo Power Amplifier Each channel rated at 50 watts; cathodecoupled-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 µsec; frequency response ±½ db 5-100,000 cps; sensitivity 0.55 volt for full output; level controls both channels; tubes are ECC83, 2—6SN7GTB, 4—EL34, power and bias rectifiers; inverse feedback, 18 db; 6"x15"x 11".

Kit			\$99.50
Fac	tory	wired	\$139.50

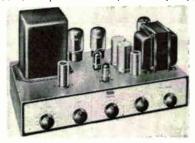
Model HF-12A Preamp-Amplifier

Power output 12 watts (25 watts peak); Williamson type; 25 to 20,000 cps at 12



Model HF-20 Preamp-Amplifier

Power output 20 watts (34 watts peak);



ultra-linear Williamson type; 13 to 35,000 cps, ±0.5 db; harmonic distortion 1% (20 to 20,000 cps at 1 db under 20 watts); intermodulation distortion 1.3% at rated power; hum and noise on magnetic phono -60 db, tuner -75 db; sensitivity: magnetic phono 4 millivolts for 20 watts output, tuner, TV, tape, auxiliary 0.4 volt for 20 watts output.

Model HF-85 Stereo Preamplifier

Frequency response 5-400,000 cps \pm 0.3 db @ 3 v. output; sensitivity for 2 v.



output: phono, 1 mv.; microphone 1 mv.; tape head 0.5 mv.; three low-level stereo inputs; three high-level stereo inputs; tone controls for each channel may be operated separately or simultaneously; stereo outputs to amplifier and tape recorder; self-powered; tubes: five 12AX7/ECC83, 6X4; 3½ "h. x 12" w. x 8¼ "d.

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

Model HF-86 Stereo Power Amplifier

Dual power amplifier, Williamson type circuit; level control for each input; out-



Model AF-4 Integrated Stereo Amp

Two single-ended amplifiers preceded by input selection, mode of operation, tone



and level controls; harmonic distortion 4 watts: 1% 100-10.000 cps; IM distortion 2.2% at 4 watts: frequency response ±0.5 db, 30-20,000 cps; sensitivity (input for 4 watts output per channel), for ceramic phono input—0.26 volt; hum & noise—74 db; tubes: 2—12DW7, 2—EL84 and EZ81.

Kit	\$38	8.95
Factory	wired\$6	4.95

Model HF-87 Stereo Power Amp

Output power: 70 watts (35 watts per channel) continuous, 140 watts peak; IM



Model ST-84 Stereo Preamp

Frequency response 5-25,000 cps \pm .3 db; harmonic distortion from 20-20,000 cps is



2036 Integrated Stereo Amp

18 w./ch. music power, 14 w./ch. continuous sine wave; has four pairs of inputs in-



2050 Integrated Stereo Amp

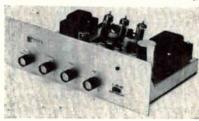
2080 Integrated Stereo Amp

······· \$1	
Factory wired\$	159.95
Metal cover\$	
Walnut case	19.95

ERIC

Model 3459T Integrated Amp

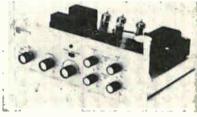
Monophonic design; 17 watts at 1% HD; 20-20,000 cps ± 1 db at normal listening



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-6CA4, 2-6BQ5's, 12AX7, 7247, N+69 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; 13¾" x 4516" x 8¼" deep....\$79.95

Model 3160T Integrated Stereo Amp

20 watts @ 1% harmonic distortion per channel; transistorized preamp; bass, tre-



Model 3560T Integrated Stereo Amp 30 watts @ less than 1% harmonic dis-

1964 EDITION

Wondrous stereo sound by Grommes . . . to thrill the budget-minded as well as the affluent. Enjoy the luxury of Grommes E-Line—a happy marriage of thrift and excellence.



Model E-24 24 watt Stereo Amplifier 79.95
Model E-36 36 watt Stereo Amplifier (Illustrated above)

Model E-104M FM-AM Stereo Tuner 129.95

Model E-104M FM-AM Stereo Tuner 129.95
Model E-105M FM-AM Stereo Tuner 139.95
(Illustrated below)

Prices include desert-gray metal cover

Write GROMMES
Division of Precision Electronics,
Inc., 9101 King Street, Franklin Park,
Illinois





Amplifiers

tortion 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 rated output; IM distortion .8%; hum & noise 80 db below 30 watts; output impedance 4, 8, 16 ohms; tubes—2–12AX7's, 2–7247's, 4–EL86's, GZ34, 2–N469 transistors; metal and walnut cabinets available\$149.95

Model 5761MX Integrated System

Combines dual 30-watt/channel power amplifier, dual preamp, AM & FM tuner



FISHER

Model X-100-B Integrated Amplifier

Power output 25 watts per channel; 18 controls with bias adjust; bass and treble



boost each channel 15 db; scratch filter, rumble filter; provisions for up to 3 tape heads and monitor operation; channel separation better than 50 db; low-level and high-level inputs; 5 1/8 " w. x 12 1/2 " d. x 413 io" h.; less cabinet...............\$169.50

Model X-101-C Integrated Amplifier

30 watts music power per channel at .5% harmonic distortion @ 1000 cps with both



channels operating (27 w. r.m.s.); frequently used controls are in full view; oc-

Model X-202-B Integrated Amplifier

Stereo design 40 watts per channel music power; 20 front-panel controls plus 2



rear-panel controls; center-channel output; 16 inputs; harmonic distortion .5% at 40 watts: 1M distortion 1% at 40 watts: response 20-20,000 cps±1 db; sensitivity—mic. 1.5 nv., R1AA 3.5 nv., 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 ohn output impedance; tubes-4-7591, 6-ECC83, 2-7247; less cabinet.....\$249.50

Model 400-CX Stereo Master Audio Control Center

Push-button control selectors; recordmonitor facilities; controls for bass, treble,



phase, scratch and rumble filters; 10 tubes; 15 1/2 " x 11 1/2 " x 4150"......\$199.50

Model X-1000 Integrated Amplifier

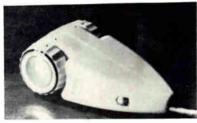
Stereo design 55 watts per channel music power; 22 controls and switches; 18 in-



puts; 11 outputs; center-channel output; built-in "Spacexpander" control; response 18–20,000 cps±.5 db @ 55 watts; harmonic distortion .5% @ 55 watts; IM distortion .8% @ 55 watts; sensitivity for 55 watts—mic. 1.3 nv. 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 nv.; 4-8-16 ohms output impedance; tubes-4-El.34, 5-ECC83, 2-7247, 12AU7, 2-EF86, plus 7 diodes; less cabinet..........\$339.50

Model RK-1

Stereo remote control unit; two volume control dials; 30 foot cable; adapter plug;

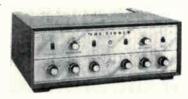


STEREO/HI-FI DIRECTORY

20

Model KX-200 "Stratakit" Integrated Amp

Combination amp-preamp; dual-channel design; 40 watts per channel music power



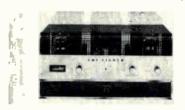
Model KX-100 "Stratakit" Integrated Amp

Similar to Model X-100-B; combination amplifier and preamp, dual-channel de-



Model K-1000 Stereo Power Amp

65 w./ch. continuous sine-wave; HD .25% & IM dist. .4% (both at rated output);



response 20–20,000 cps \pm 5 db: 8–48,000 cps \pm 1 db; sensitivity .5 v.; 15 $\frac{1}{8}$ " x 7 $\frac{3}{4}$ " x 12" d.; less cabinet.

Kit\$279.50 SA-1000 Factory wired.....\$329.50

GROMMES

Model E-LJ8 Mono Amplifier

Power output 10 watts continuous sinewave; controls for loudness, function, con-



tour, bass, treble; frequency response 20-20,000 cps \pm 1 db at 1 watt; harmonic distortion 1% at 10 watts; IM distortion 3% at 10 watts; power bandwidth 45-20,000 cps at half power & 3% harmonic distortion; sensitivity: tuner -.55 volt,

mag. phono -4.5 mv., tape -5.6 mv., crystal phono -.25 volt; tubes: 2-12AX7, 2-6BQ5, EZ80; 11" x 4" x 7½"; with case\$49.95

Model 24PG Stereo Amp-Preamp

Power output 10 watts continuous sinewave each channel; control for loudness,



Model 36PG Stereo Amp-Preamp

Power output 15 watts continuous sinewave each channel; power bandwidth 30-



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

Model 70PG Stereo Amp-Preamp

Similar in appearance and performance to Model 36PG except 35 watts/channel: harmonic distortion .6% at 1000 cps; IM distortion .1% at 30 watts; tubes: 6-6EU7, 5-7868, plus 5 silicon rectifiers....\$199,95 Enclosure\$7.50

HARMAN-KARDON

Citation I Stereo Preamp-Control Center

Frequency response 5-80,000 cps, +0 -0.5 db; distortion less than 0.05% at



2 volts output; main output, 1.75 volts; tape output, 0.7 volt; input sensitivity for rated output: high level 0.5 volt; low level 2.5 mv; tape head 2 mv; ceramic phono 0.1 volt; 5-position mode selector switch: stereo, blend, A/B, chan A, chan B; blend control can also act as 3rd channel gain control; roll-off control: 0/78. 4/FFRR, 10.5/old Lon, 12/AES, 12/RIAA, 16/LP; turnover: tape, 800/RCA, RIAA, LP, AES, 78; step-type tone controls for each channel out of circuit in flat position; balance control; phase switch; contour switch; low and high

frequency filters; tape monitor switch: 4-ECC83 5-ECC81; 6-silicon diodes; 14%" x 12¼" x 6"; 32 lbs......\$159.95 Factory wired......\$249.95 WC-1 walnut enclosure....\$29.95

Citation "A" Transistorized Preamp

Response flat from 1 to 1 million cps ± 0 ± 1 db; square-wave response better than



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

Kit	 		\$269	.95
		1		
		ct		

Citation II Stereo Power Amp Kit

60 watts per channel; frequency response 18-40,000 cps +0 -1 db at rated power;



Citation IV Stereo Preamplifier Kit

Specifications similar to Citation I; continuously variable blend control; variable



type tone controls; balance control; tubes: 6—ECC83; 4 semiconductor rectifiers; 14% " x 11" x 5% "; wt. 25 lbs...\$119,95 Factory wired...................................\$189,95 WC-1 walnut enclosure............\$29,95

Citation V Stereo Power Amplifier Kit

Similar to Citation II except as noted; 40 watts per channel; tubes: 2–12BY7A, 2–6CG7, 4–7581; 4–silicon diodes, 1–selenium rectifier; 13½" x 5½" x 11¼"; 45 lbs. \$119.95 Factory wired. \$179.95





AC-2 metal enclosure.....\$7.95

A-10 "Allegro" Amplifier

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



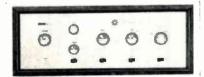
Model A300 Integrated Stereo Amp

Combination preamp & power amplifier; 12 watts per channel continuous sine-



Model A30K Integrated Stereo Amplifier Kit

15 watts per channel music power rating; 12 watts per channel continuous sine-wave



power; less than 1% distortion at rated output; response 15-70,000 cps ± 1 db at normal listening level; hum -80 db below rated output; has conventional inputs and controls with ganged bass and treble tone controls on each channel; 9 tubes plus 2 silicon rectifiers; 7408 output tubes; 15¼″ w. x 5¾6″ h. x 11½″ d.

 Kit
 \$79.95

 Metal enclosure
 \$12.95

 Walnut enclosure
 \$29.95

Model A700 Power Amp

Stereo design 35 w. (music power) per channel; features speaker selector switch



Model A50K Integrated Stereo Amplifier Kit

25 watts per channel music power rating; 20 watts per channel continuous sine-wave



power; .5% distortion at rated output; response 12-70,000 cps ± 1 db at normal listening level; hum -85 db at rated output; has conventional controls and inputs with individual bass and treble tone controls for each channel; gain control for center-channel output; blend control with lamps indicating degree of blend; headphone jack on front panel disengages speakers; 9 tubes plus silicon rectifiers; 7355 tubes in output stages; 15½" w. x 5⁷16" h. x 12" d.

Model A1000T Transistorized Integrated Amp

Features 35 w./ch. music power (30 w./ch. sine wave); high damping factor; trans-



formerless direct-coupled circuitry; silicon output transistors; printed-circuit wiring; stereo/mono blend indicator lights; response

HEATH

Model AA-21 Transistorized Amplifier

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



Model AA-121 Stereo Power Amplifier

Power output 40 watts per channel; frequency response 20-20,000 cps \pm 0.5 db



Model AA-141A Stereo Preamplifier

Input sensitivity (for 2.5 v. output @ 1000 cps) mag. phono .006 v., crystal phono .2



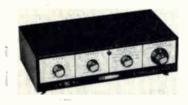
Model AA-111 Stereo Power Amplifier Power output 14 watts per channel; fre-

quency response 30-15,000 cps ± 1 db at rated output; total harmonic distortion



2%; channel separation 65 db; hum and noise 76 db below 14 watts; input sensitivity 0.74 volt for rated power; octal sockets for preamplifier power; phase reversal switch; level control for each channel; output impedances 4, 8, 16 ohms; tubes: 2-7199, 4-EL84, 1-GZ34; 13" w. x 8½" d. x 6" h.; (kit)......\$44.95

Model AA-201 Integrated Stereo Amp Power output 3 watts per channel; frequency response 50-20,000 cps ± 1 db for



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; (kit)\$31.95

Model AA-100 Integrated Stereo Amp Rated output: 25 watts per channel; frequency response 30-15,000 cps ± 1 db for



rated output; IM distortion less than 1%, harmonic distortion less than 0.5% at rated power; channel separation 42 db minimum at 1000 cps; input sensitivity: mag phono, 1.5 mv.; tape head, 1.0 mv.; tuner, aux, aux 2, 0.2 volt; 4-position function switch: stereo, stereo reverse, chan A, chan B; balance control; separation control; dual tandem type level control; dual concentric bass and treble controls for each channel; input level controls for each channel except tape head; power amplifier input level control, one per channel; hum balance controls; phase switch; low impedance tape outputs; output impedances: 4, 8, 16 ohms each channel; tubes 2-EF86, 4-12AX7, 2-7199; 4-7591, 1-GZ34; 15½" w. x 4½" h. x 12½" d. Model AA-100 (kit).....\$ 84.95

Model AA-151 Integrated Stereo Amp Power output 14 watts per channel; frequency response 20-20,000 cps ± 1 db; channel separation better than 45 db; input sensitivity for rated output: mag phono, 4 mv.; crystal phono, 0.25 volt; tuner and aux, 0.2 volt; 4 position selector switch: mag phono, crystal phono, tuner,



From top: Knight, Fisher, Scott, Bogan, Harmon-Kardon

If you do . . . and you don't own a set of Koss stereo headphones...you've got a lot of fun still coming! You've got the whole great experience of Koss "solo flight" listening ahead, because your amplifier is equipped with a jack just right for Koss Stereophones.

Just plug them in, slip them on and . . . well, prepare for take-off. Your Koss phones will send you soaring into private sonic bliss. You'll hear it all with startling clarity and a new "up-closeness" you've never experienced before. What's more. you'll listen in complete seclusion, with no disturbance to or from the others in the room.



PRO-4 STEREOPHONES

Fluid-filled earpads for tight, phone designed for professionals. 30-20,000 c.p.s. response 4-16 ohms impedence. \$45.00.

SP-3X STEREOPHONES

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ELECTRONICS, INC. 2227 NORTH 31ST STREET MILWAUKEE 8, WISCONSIN



aux; dual concentric (clutch) volume control; dual tandem bass and treble controls;



Model AA-161 14-Watt Amplifier

Frequency response 20 to 20,000 cps \pm 1 db; harmonic distortion less than 1% at 12 watts; IM distortion less than 1.5% at 12 watts; three inputs: magnetic phono (RIAA), crystal phono, and tuner; separate bass and treble controls; hum balance control; screen-tapped output circuit uses EL84 output tubes; output impedances: 4, 8, and 16 ohms; complete with cabinet; over-all dimensions $12\frac{1}{12}$ w. x 8^3 is d. x $4\frac{1}{18}$ h.; mono design; (kit)...........\$29.95

Model AA-11 Deluxe Stereo Preamp

Push-button design; all primary operating controls are on front panel; all secondary



Model AA-191 Integrated Amplifier

Mono version; 3 watts output; response 50-20,000 cps ± 1 db; harmonic distor-



tion less than 3% 60-20,000 cps @ 3 watts; IM distortion less than 3% @ 3 watts; sensitivity (crystal phono & tuncr) .15 v. for 3 watts; 4-8-16 ohm outputs; tubes—EF86, EL84, 6X4. Kit.........\$16.88

Model AA-181 Integrated Amplifier

Mono design; 25 watts sine-wave power; frequency response 30-15,000 cps \pm 1 db



KNIGHT

KN-999 Transistor Stereo Amp

50 w./ch. (music power), 35 w./ch. sine wave power; solid-state (all transistor) de-



KN-940 Stereo Amplifier

22 w./ch. music power; 18 w./ch. sine wave power; 9 tubes & 4 silicon rectifiers;



KN-924 Stereo Amplifier

14 w./ch. music power; 12 w./ch. sine wave power: 9 tubes including rectifier;



input selectors: phono, tuner, aux., mode; bass, treble, balance & volume controls: low impedance plus high-impedance output for tape recording; response 30-15,000 cps \pm 1 db; distortion: 1.5%, hum -65 all at rated power: less case.....\$49.95

KN-715 Stereo Amplifier

7.5 w./ch. music power; 4 tubes including

rectifier; inputs; tuner, ceramic & crystal phono; bass, balance & volume controls; treble; input selector & mode switches; re-



sponse 100-10,000 cps \pm 1 db; hum -65 db; complete with metal case.....\$39.95

KN-950 Transistor Stereo Amp

25 w./ch. music power: 15 w./ch. sine wave power: 15 transistors, 2 diodes: input



selector switch: tape, phono, tuner, aux. 1 & 2, bass, treble, balance & volume controls; scratch and rumble filter: mode & stereo reverse switches; stereo headphone jack; response 20-20,000 cps ± 1 db; HD 1%, hum -75 db all at rated power: less case \$119.95 Walnut case \$14.95 Metal case \$4.95

KNIGHT-KIT

Model KG-250 20-Watt Stereo Amp

10 watts per channel; response 30-18,000 cps ± 1 db at full rated power; harmonic



Model KG-400 32-Watt Stereo Amp

Preamps have d.c.-heated filaments: 5 pairs stereo inputs, including tape head input;



center-channel output; outputs for stereo tape recording; response 30-16,000 cps ± 1 db; harmonic distortion less than 1% at 16 watts; tubes 7025, 5-12AX7, 4-7189, GZ34/5AR4.

83YU413-	-KG-40	0Kit \$5	59.95
83YX023	Wood	case\$	9.95
83YX024	Metal	case\$	4.95

Model KA-55 40-Watt Stereo Amp

20 watts per channel: response 25-28,000



cps ± 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.

KB-85 70-Watt Basic Stereo Amp

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



.25% at 35 watts per channel; 1M distortion 0.15% per channel at 35 watts; hum and noise 90 db below 35 watts; individual level controls; printed-circuit boards; output impedances each channel 4-8-16-32 ohms; tubes: 2—EF86, 2—ECC83, 4—EL37, 2—GZ34.

83YU618—KB-85Kit \$69.95 Metal cover\$ 6.50

Model KM-15 12-Watt Amplifier

Response 30-15,000 cps \pm 1 db at 12 watts: harmonic distortion 1% at 1000



cps for rated output; hum and noise level 65 db down at rated output through high-level input; two inputs: bass control 9 db boost or cut at 40.cps; treble control 9 db boost or cut at 10,000 cps; tubes: 2—ECC83/12AX7, 2—EL84, EZ80; output impedances 4-8-16 ohms.

83Y784—KM-15......Kit \$19.95 83Y783 Metal cover\$ 3.95

Model KA-95 70-Watt Stereo Amp

Built-in preamps with d.c.-heated filaments; 6 pairs stereo inputs; dual loudness



control, balance control, blend control; rumble and scratch filters; response 20-30,000 cps ± 0.5 db at rated output; harmonic distortion 0.5% at 35 watts; hum and noise better than 85 db below

35 watts; tubes: 2-12AY7, 2-7025, 2-EF86, 2-ECC83, 4-EL34, 2 GZ34, 83YU934-KA-95......Kit \$99.95

Model KG-240 20-Watt Stereo Amp

Two pairs of inputs (tuner, ceramic phono) selectable by front-panel slide



KG-870 Transistor Stereo Amp

35 w./ch. music power: IM dist. less than 1%: response 20-25,000 cps \pm 1 db at



rated output; 4-8-16 ohm outputs; features 22 transistors and 4 silicon diodes; direct-coupled output (no transformers); 4 pre-driver transistors are silicon type; has stereo headphone jacks; phasing switch; tone controls; 6 input circuits; phono, tape head, tape monitor, two aux., tuner; 13" x 2\frac{3}{4}" x 11" d.; less case.

Kit\$	99.95
Walnut case\$	
Metal case\$	5.95
Factory wired (less case)\$	159.95

KG-320 32-Watt Transistor Amp

32 watts (IHF) 14-transistor, 4-diode circuit; direct-coupled output, no trans-



formers or capacitors in output stage; better than 35 db separation; mag. phono, tuner, and aux. inputs; separate ganged bass and treble controls; output impedance 8-16 ohms; continuous sine-wave power output 20 watts at 8 ohms, 16 watts at 16 ohms; IHF music power output 32 watts at 8 ohms, 30 watts at 16 ohms; response at rated power 25-18,000 cps ± 1 db; harmonic distortion at rated power 1%; hum and noise -68 db.....Kit \$59.95

LAFAYETTE

LA-200 Transistorized Integrated Stereo Amp

22 2./ch. music power: response 20-20.000





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CIRCLE NO. 49 ON READER SERVICE PA



Model LA-55 Mono Amp-Preamp

Model LA-240 40-Watt Stereo Amp

Integrated 40-watt stereo amp-preamp; 20 watts each channel; 8- or 16-ohm speak-



Model KT-236A Stereo Amp Kit

18 watts per channel; frequency response 15-30.000 cps \pm 1 db; sensitivity high



level input: 0.5 volt, low level input 3 millivolts for full output; hum and noise; high level 70 db below full output; phono 53 db below full output; channel separation better than 50 db; inputs (2 each) aux, tuner, crystal phono, magnetic phono; outputs (2 each) speaker, tape out; output impedance 8 and 16 ohms; tubes are 4—EL81, 2 7199, 3—I2AX7; 2 silicon diodes; 14½" w. x 11½" d. x 5½" high \$59.50

KT-250A Stereo Amp-Preamp 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 volt; channel separation better than 55 db at 1000 cps; 4-position selector switch; aux. tuner, phono, tape head; dual concentric bass control ±14

Model KT-550 Basic Stereo Amp Kit

50 watts per channel; frequency response 17-45,000 cps ±1 db at rated power; har-



monic distortion less than 0.5% at rated power; 1M distortion less than 0.5% at rated power; hum and noise better than 90 db below 50 watts; printed circuit board; bias adjustment, a.c., d.c. balance controls with self contained meter; tubes: 4–7027A, 4–6CL6, 2–6BR8A; 5 silicon diodes.

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

Model KT-600A Stereo Preamp Kit

For all stereo or mono program sources; frequency response 10 to 25,000 cps ±.05



Model KT-900 Transistorized Integrated Stereo Amp Kit

Music power rating 60 watts/channel for 8 ohms, 38 watts/channel for 16 and 4



ohms; response 10-25.000 cps ± 1 db at rated output; harmonic distortion .5% at

LEAK

"Point One Stereo" Preamplifier

Features 5 dual inputs; sensitivity tape head (NAB) 4.5 millivolts; tuner 50 mil-



Stereo 60 Basic Amplifier

Power output 30 w./ch. r.m.s.; harmonic distortion 0.1% at 1000 cps for 30 watts



output; hum and noise 80 db below 30 watts; sensitivity 125 millivolts for 30 watts output; frequency response 20 to 20,000 cps ±0.5 db; damping factor 25 at 1000 cps; output impedance 3 to 16 ohns; tubes are 3—ECC83, 4—EL34, 1—GZ34; 100-120 volts; 50-60 cycles.........\$219.00

Stereo 20 Basic Amplifier

Frequency response 20 to 20,000 cps ± 0.5 db; power output 12 watts r.m.s. per chan-



MARANTZ

Model 9A 70-Watt Mono Amp

70 watts r.m.s., 140 watts peak; switch for 40-watt triode operation; response 20-20,-



000 cps ±.1 db at full rated power; subsonic filter switch -.25 db @ 20 cps, -20 db @ 3 cps; harmonic distortion less than 0.3% at 20 ke. full rated power; IM distortion less than 5%; hum and noise better than 90 db below 70 watts; damping factor 17, can be changed internally; output impedances 4, 8, 16 ohms, plus 1 ohm tap for center speaker connection; front panel controls: gain (isolated by cathode-follower phase circuit), phase switch, low filter, test switch (bias readings each tube, built-in test signal for dynamic balance adj.); five bias and balance adjustments plus input and output connections under snap-out access panel; 2-61)18/ECC88, 1-6CG7, 4-6CA7/EL34, 1 zener diode, 5 silicon rectifiers; over-all size 15 3 x x 8 14 x x 10 1/2 x.

Model 9A......\$384.00 Model 9R (rack mounted)....\$414.00 Also available:

Model 970 (70 v. output, plus 8, 16 ohms) Model 970R (same as Model 970, rack

Model 7 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 r.m.s., 0.01% at 2 volts r.m.s; frequency response 20-20,000 cps; tubes are 6—ECC83/12AX7; over-all size 1438 "x 538" x 8½"; total noise level is 80 db below 10 mv. phono input; weight 15 lb.\$264.00 Model 7R—identical to 7 but mounted on 19" rack panel................\$288.00

Model 8B Stereo Power Amplifier

Two 35-watt amps on single chassis; each amp: 70 watts peak; output in triode opera-



tion (with minor circuit changes) 18 watts; response 20-20,000 cps ±1 db at 35 watts;





harmonic distortion less than .1% at midfrequencies at 35 watts; IM distortion less than .5% at 35 watts; damping factor 20 (can be adjusted for 2, 1, and ½); hum better than 90 db below 35 watts; metered bias adjust; tubes are 6BH6, 6CG7; 2— EL34/6CA7 plus silicon rectifier (each channel): 13½" x 7½" x 10½"........\$264.00 Accessory grille........\$9.00

McINTOSH

C11 Stereo Preamp

Less than .05% distortion at 3 v. output, 20-20,000 cps \pm .5 db; less than 1.5 μ v.



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

C20 Stereo Preamp

Flexible amplifier for stereo; mode selector for stereo, reverse, Channel A, Channel B



C22 Stereo Preamp



MC40 Stereo Amplifier

20 watts/channel continuous sine-wave; harmonic distortion less than .5% at



rated output each channel and 20-20,000 cps; 1M distortion less than .5% (20-20,000 cps); phase shift \pm 8° (20-20,000 cps); response 20-20,000 cps +0 -1 db at 20 watts total output (10-100,000 cps +0 -1 db); output impedances 4-8-16-125-150-600 ohms: tubes: 2-12AX7, 12AU7, 12BH7, 2-6L6GC or 2-7027A; 13¾" 1. x 8½" w. x 7¾" h. ...\$159.00

MC75 Mono Power Amp

Guaranteed continuous sine-wave output 75 watts with harmonic distortion less



MC225 Stereo Power Amp

Guaranteed 25 watts (capable of 34 watts) per channel continuous sine-wave power



with less than .5% harmonic distortion, 20-20,000 cps at rated output; IM distor-

MC240 Stereo Power Amp

MC275 Stereo Power Amp

75 watts per channel with each channel identical in performance to Model MC75



power amplifier; 17 ¼ " l. x 12 ¼ " w. x 8" h......\$444.00

MERRELL

MA-12 Integrated Amplifier

Mono 12-watt (music power) design; response 20-20,000 cps ± 1 db; has 4 in-



Kit\$22.95 Case\$ 3.95

SA-210 Integrated Stereo Amp

Features 10 w./ch. music power; response 20-18,000 cps; 3 dual inputs: magnetic



SA-30 Integrated Stereo Amp

Features 15 w./ch. music power; response 20-20,000 cps ± 1 db; 4 dual inputs: magnetic phono, crystal phono, tuner & aux.;



			outputs;				
••••		 		 	 	\$79	.95
Ki	t	 		 	 	\$39	.95
Ca	se .	 	•••••	 	 	\$ 5	.95

SA-40 Integrated Stereo Amp

Features 20 w./ch. music power: response 20-20,000 cps; 4 dual inputs; magnetic



16 oh	m out	puts;	no, tui	x	4"	х	10"	d.
	•••••	*******	•••••	******			.\$99.	95
Cover	*********	********					.\$ 8.	95

NATIONAL

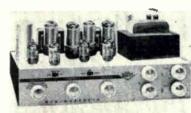
Model 2000 Integrated Amplifier

Rated output: 15 watts; built-in preamp; 3-position record equalization; separate



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".

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

OLSON ELECTRONICS

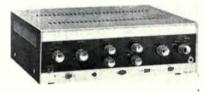
Model AM-214 Stereo Amp

15 w./ch.; response 30-25,000 cps \pm .5 db; HD less than 1%; output 4, 8, 16



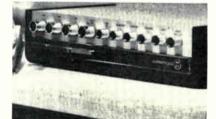
AM-215 Stereo Amp

Complete 20 w./ch. amplifier with built-in preamps; d.c. voltage on preamp tubes; 4,



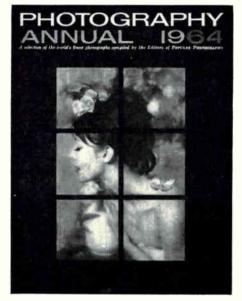
OMEGA

Model 1600 Integrated Amplifier All-transistorized stereo design; 30 watts (IHF music rating) per channel; re-



sponse 18-20,000 cps ± .3 db at full output; harmonic distortion less than 1%; hum and noise 75 db below full output at 10 mv. sensitivity; has 31 transitors, 5 diodes, 2 silicon rectifiers; sensitivity 4 mv. for mag. phono, .25 v. for ceramic phono, 3.5 mv. for tape, .3 v. for TV-aux.-tuner; controls: "on-off volume," bass treble, input selector, mode, volume balance, bass balance, treble balance, blend, loudness, tape monitor, rumble, scratch, phase; bass and treble balance controls balance bass and high-frequency response of amplifier

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Model 1800 Integrated Amplifier

All transistor stereo design: 35 w./ch. music power; response 18-20,000 cps ± 0.2 db at full output; H1) less than 0.5%; hum & noise 80 db below full output at 10 mv. sensitivity; IM distortion less than 0.5%; has 31 transistors, 5 diodes, 2 silicon rectifiers; "Quadripower" output circuitry with silicon driver transistors; sensitivity 4 mv. for mag. phono, .25 v. for ceramic phono, 35 mv. for tape, .3 v. for TV-aux.-tuner; bass & treble balance controls balance lowand high-frequency response of channels separately; phonograph cartridge output compensator; 3" x 15½" x 9" d....\$349,50 Cradle cabinet (cbony)..........\$ 16.00 Panel mounting ring (chrome)......\$

PACO

SA-50 Integrated Stereo Amp

25 w./ch. music power: response 30-90,000 cps \pm 1 db, measured at 1 w. sine-wave



power; HD .5% @ 20 w./ch.: IM 1% at rated output: hum & noise -80 db; sensitivity: high level .25 v.; magnetic phono 5 nv.; ceramic phono .3 v.; has 14 operating controls & conventional inputs; 15 1/8 " x 11 3/4" x 5 3/8"; kit, less cabinet.....\$89.95 Factory assembled, including enclosure \$149.95 Metal enclosure.....\$7.95

PILOT

Model 230 Integrated Amplifier

12 watts per channel (IHF); response 10-30,000 cps ± 1 db; harmonic distor-



Model 246 Integrated Amplifier

30 watts per channel (IHF); response $10\text{-}40,000~\text{cps} \pm 1~\text{db};$ harmonic distortion



.1% (IHF); hum level -80 db; 4-8-16 ohms, center-channel, tape recorder out-

puts; sensitivity: two mag. phono (one can be used for tape head) and tape recorder (high-level) 110 mv.; has 11 operating controls; 5\%" x 14\%" x 12\%"; with cover \$199.50

Model 248B Integrated Amplifier

37 watts per channel (IHF); response 5-50,000 cps ± 1 db; harmonic distortion



.1% (IHF); hum level -80 db; 4-8-16 ohms, center-channel, tape recorder, and headphone outputs; sensitivity: two mag, phono (one can be used for tape head) and tape recorder (high-level) 110 mv.; has 13 operating controls; 6¼" x 15¼" x 12¾"; less cover..........\$269.50

REALISTIC

Model SAF-40B Stereo Amplifier

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



Model SAF-24C Stereo Amplifier

15 watts per channel (60 watt mono peaks); response 20-20,000 cps ±1 db;



Model TA-208 Stereo Amplifier

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



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

impedances 2 to 40 ohms; 15"x5"x10"\$119.95

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

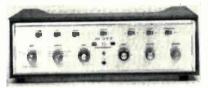
Model HK-208 Stereo Amplifier Kit

Fully transistorized 40 watts per channel (4-ohm load); response 10-15,000 cps ±1 db at full power, 10-20,000 cps ±1 db at 10 watts per channel; hum & noise unmeasurable at full power; inherent impedance-matching device requires no output transformers yet matches all loads 2-40 ohms; 15" x 5" x 10".....\$89.95

H. H. SCOTT

Model 299-D Stereo Preamp-Amp

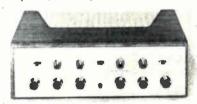
Two complete amplifiers on one chassis; power output per channel 40 watts



music power standard); channels in operation when used with monaural program sources: harmonic distortion less than 0.8%; IM distortion less than 0.5%; individual bass and treble controls for each channel; 2 low level and 3 high level inputs per channel; dual outputs to tape recorder and 4, 8, and 16 ohms to speaker; low level input sensitivity; 3 millivolts; 4-position record equalizer; NAB tape equalization; loudnessvolume control; stereo balance control; scratch and rumble filters; phase reverse; stereo reverse; powered center channel output for direct speaker drive; microphone equalization; earphone outlet for binaural listening with speaker/earphone switch; tubes are: 4-12AX7, 2-6GH8, 5U4GB, 2-7591; Type "C" case extra......\$229.95

LK-72 Integrated Stereo Amp Kit

40 watts output each channel (IHF music power); 1HF power band extending



Model 222-D Integrated Amplifier

Power output 24 watts per channel (IHF



3 GREAT NEW SCOTT AMPLIFIERS

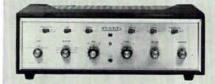
POWERHOUSE



New 299D 80-Watt Stereo Amplifier

This best-selling stereo amplifier, toprated by all leading consumer testing organizations, is now better than ever. New luxury features include: direct connection for powered center channel and extension speakers, speaker switch for private listening, new switching for choice of five low level inputs, non-magnetic electrolytic aluminum chassis, exclusive Scott Balance Left/Balance Right level balancing system, and massive output transformers. Behind the handsome panel, with its easy-grip knobs, is a lifetime of trouble-free performance and power to spare. \$229.95

TOP PERFORMER



New 222D 50-Watt Stereo Amplifier

There's a new look to the ever-popular 222 series . . . and new performance, too. Massive transformers deliver enough power to drive even the most inefficient speaker systems . . . and the 222D gives you power in the low frequencies, where it's really needed. This value-packed performer incorporates a center channel speaker connection without the need for an additional amplifier, speaker switch for private listening, front panel switch for selection of phono or tape deck. Build a quality music system around this most versatile, feature-filled amplifier. \$179.95

SCOTT KIT



New LK-72 80-Watt Stereo Amplifier Kit

The latest version of the most popular high power integrated stereo amplifier kit ever produced. Every conceivable control feature is found on this versatile amplifier. The LK-72 has special equalization positions for phonograph and tape deck*... and separate bass and treble controls for both channels provide maximum flexibility. Assembly is simple and fool-proof, thanks to exclusive full-size full-color instruction book... critical and difficult areas all pre-wired. \$164.95

How to select the right one for your system

FEATURES



Wide Range of Features and Controls

- Oversized output transformers for full bass response.
- Non-magnetic electrolytic aluminum chassis for cool operation and lowest hum.
- Dual tone controls for maximum adjustment of any program material
 Exclusive Scott balancing method
- 4. Exclusive Scott balancing method for perfect stereo regardless of speakers or program material.
- Conservatively designed powersupply assures years of trouble-free enjoyment.

SPECIFICATIONS

	299D	222D	LK-72
Power per channel (IHF watts	40/40	25/25	40/40
Power band (cps)	19-25,000	19-25,000	20-20,000
Hum level (db)	80	80	-80
Tape Monitor	Yes	Yes	Yes
Dual Tone Controls	Yes	Yes	Yes
Stereo Head- phone Output	Yes	Yes	Yes
Low Level Inputs	2	2	2
High Level Inputs	3	3	3
		A STATE OF THE PARTY OF	THE OWNER WHEN

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music power); hum and noise better than 75 db below full power output; harmonic distortion less than .8% at full power; response 20-20,000 cps; IM distortion less than .5%; IHF 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 299-1); scratch filter; loudness compensation; stereo tape recorder outputs; powered center channel output for direct speaker drive; speaker/carphone switch; front-panel stereo headphone output; tubes— 4—12AX7, 2—7189, 4—7189, 1—5AR4; Type "C" case extra.....\$179.95

Model LC-21 Preamplifier Kit

Features five pairs of stereo inputs; derived center-channel output; stereo tape



LK-150 Stereo Power Amp Kit

65 watts (IHF music power) per channel (60 watts steady-state); 6550 matched-



LK-48 Integrated Stereo Amp Kit

Power output 24 watts per channel (IHF music power); hum and noise better than 75 db below full power output; harmonic distortion less than .8% at full power; response 20-20,000 cps; IM distortion less than .5%; IHF 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; sev-



Enclosures

Type	"C"	metal	enclosure.		\$13.95
Type	"C"	wood	enclosure,	walnut	or ma-
hogar	۰۰				\$24.50
Type	"G"	metal	enclosure.		.\$17.95
Type	"G"	wood	enclosure,	walnut	or ma-
hogar	ıy				\$29.95

4270 Transistorized Integrated Amp

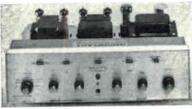
30 w./ch. music power (25 w./ch. sine wave); 4-8-16 ohm outputs; power band-



width (IHF 19-10,000 cps \pm 1 db; response 20-15,000 cps; HI) .8%; hum level -70 db; damping factor 4; has all necessary inputs & outputs including center-channel and all conventional operating controls; 27 transistors, 9 diodes; $17\frac{1}{2}$ " x $6\frac{1}{2}$ " x $16\frac{3}{4}$ " d......\$395.00

200B Integrated Amp

15 w./ch. music power; power bandwidth (IHF) 29-19,000 cps ± 1 db; response



20-20,000 cps \pm 1 db; HD .8% hum level -70 db; sensitivity (phono & tape) 5 mv.: 4-8-16 ohm outputs: has subsonic (below 20 cps) cut-off filter: center-channel output; all necessary input circuits and conventional operating controls; $15\frac{1}{2}$ " x $5\frac{1}{4}$ " x $13\frac{1}{4}$ " d.; less cabinet $\frac{1}{2}$ controls = $\frac{1}$

LK-30 Integrated Amp Kit

Identical to Model 200B amplifier but in kit form......\$99.95

SHERWOOD

Model S-5500 III 80-watt Integrated Stereo Amp

Has friction-locked dual knobs on bass



and treble controls; 40 watts per channel (80 watts total IHF music power); response 20-20,000 cps ± ½ db at 36 watts with 1½% IM distortion: hum & noise, phono input 60 db below 36 watts; d.c. filament supply; inputs: tape head, phono, six high-level; two anode-follower recording outputs, two stereo/mono indicator lights; phono sensitivity 1.4 mv.; tubes: 5-12AX7, 4-7868, plus 4 silicon rectifiers; 14" x 12½" x 4" high.

S-5500 III (less case)......\$174.50 With walnut leatherette case......\$182.00

Model S-5000 II 80-watt Integrated Stereo Amp

Similar in appearance to Model S-5500 III; 40 watts per channel (80 watts total IHF



Model S-1000 III 40-watt Amplifier

Has 5 tubes & 4 silicon rectifiers; circuitry same as one channel of S-5000 II. Also fea-



tures 70-v. line output, low-level microphone channel with separate mixer-level control, and front-panel headphone jack; 14" x 4" x 10½" d. Less cabinet...\$114.50 With walnut leatherette case........\$122.00

SONY

SSA-3 Integrated Amp/Speaker System

Two-way speaker system with 20 w. music power, all-transistor preamp/power amp;



has inputs for phono cartridge, tape head & aux.; response 25-20,000 cps; walnut cabinet; 11¼" x 23½" x 11¼" d.\$119.45

SWITCHCRAFT

Transistorized Amplifier

Miniature size; 9 v. battery operated; "hi-lo" impedance switch: "hi" position 200,000 ohm input impedance & 6 db gain; "lo" position 5000 ohm impedance & 25 db gain; output is high impedance; approxsize of package of cigarettes. Model 501

with 2-conductor phono input jack and 2-conductor output plug.....\$20.00 Model 501 with microphone connectors\$20.00

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; For magnetic cartridge input (uses 2-transistor amplifier).....

TEECO

Model 2225 Integrated Stereo Amp.

15 watts/ch. at less than 1% distortion; response 30-30,000 cps; 4-8-16 ohm output impedance; has 3 inputs-tuner, and crystal & magnetic phono; controls are: "off-on", mono/stereo selector, bass, treble, volume, balance, monitor, and function. 3-12AX7, 4-ECL86 & 2 silicon rectifiers are used \$117.25

ULTRA ELECTRONICS

Model "Stereo 50-50" Power Amp Dual 50-watt per channel continuous sincwave power; sensitivity .65 volt for 50



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

V-M CORP.

Model 1428 Integrated Amplifier

Thirty watts (peak) output per channel (stereo design); 4-8-16 ohm outputs; 1%



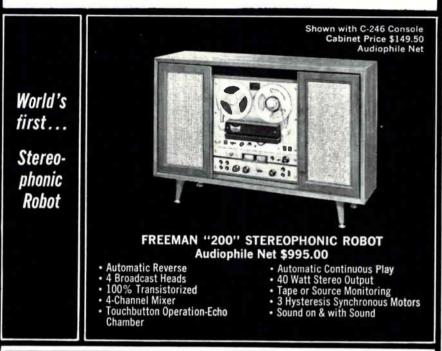
harmonic distortion and 2% IM distortion at rated output; response 20-30,000 cps ± 2 db; has conventional inputs: mag-

Model 1448 Stereo Amplifier

Dual-channel, 20 watts/channel integrated design; inputs for ceramic or crystal cartridge, radio, aux, or tape recorder; harmonic distortion less than 5% at rated output; response 40-25,000 cps; sensitivity: tuner .8 v., all others .25 v.; controls:

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- Hysteresis Synchronous Motor
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- 15 Watt Stereo Output
- Qualifies For School Use
- A Complete Home Music System
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Tapes up to two hours. The finest lecture, report and conference recorder in the world. Battery or AC power.



Audiophile Net

THE FABULOUS "660"

Now, everyone can tape high fidelity anytime, anywhere in a 6-lb package. Battery or AC power.



PROFESSIONAL OYNAMIC MICROPHONE DM-166

in walnut presentation case

REVOLUTIONARY UNDER-CHIN HIGH FIOELITY STEREOPHONES SEP-100 Net \$24.95



FREEMAN ELECTRONICS CORP., Oept, HFS-63 729 N. Highland Avenue Los Angeles 38, California

Please send me:

■ Booklet containing ingenious suggestions on how to get the most from a tape recorder at work or play. I enclose 25¢ (coin, stamps) for postage and handling.

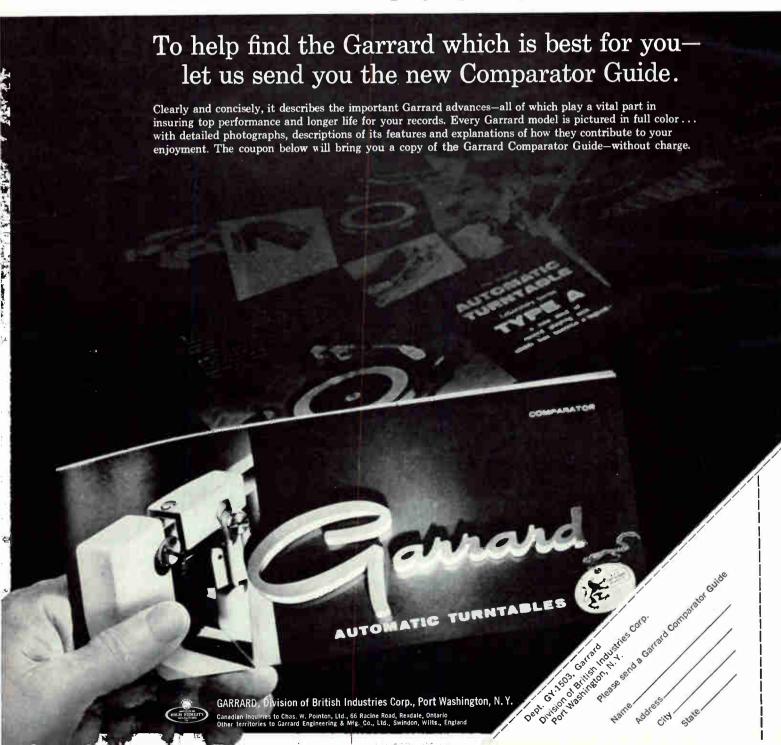
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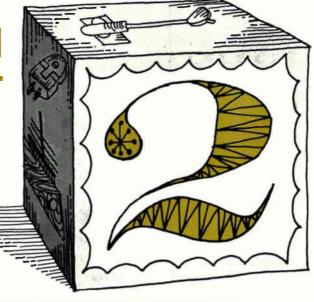
This year again, more people will choose one of these 3 Garrard models than all other record playing components combined.



PHONOGRAPH EQUIPMENT

RECORD CHANGERS AUTOMATIC TURNTABLES MANUAL TURNTABLES

PHONO CARTRIDGES41
TONEARMS46
PHONO ACCESSORIES48



ACOUSTIC RESEARCH

AR Turntable

Two-speed (33 1/3 rpm & 45 rpm) turntable and arm combination; complete with oiled-



ASTATIC

Model 45D "Cantata" Cartridge

Ceramic stereo design featuring miniature alpha ray nuclear source which keeps



BOGEN

Model B61 Turntable

Continuously variable speed from 29 to 86



Model B51 Turntable

Continuously variable 29-86 rpm (fixed for 16 rpm); wow & flutter less than .4%;



CHANNEL MASTER

Model 6652A Turntable



Four speeds (16¾, 33¼, 45, 78 rpm) with built-in four-speed strobe; shielded four-pole motor; heavy cast aluminum

turntable; plug-in cartridge pressure adjustment; without	head; stylus
base	\$79.95
Walnut base	\$8.99

COMPONENTS CORP.

Mark II Turntable

Mark | Turntable

Single speed 33½ rpm belt-driven turntable; 4-pole induction motor; filter capacitor across a.c. switch to eliminate click; improved motor suspension isolates motor vibration from the pickup arm; rumble down 70 db from standard reference of



7 cm./sec. at 1000 cps.; base finished in black with chrome trim......\$49.50

Model TT Turntable

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

DUAL

1009 Automatic Turntable

Manual & automatic single play and automatic changer operation with interchange-





Record Changers & Turntables

1008A Intermix Turntable

1007A Turntable

Same design as	1008A	except	non-intermix;
less cartridge			\$44.95
With cartridge			\$49.95

EMPIRE

Model 208 Turntable

Has three speeds; hysteresis synchronous motor; isolation-suspended motor and base plate; belt driven; 6 lb. aluminum turntable; pop-up 45 rpm adapter spindle; rumble better than -65 db; wow and flutter less than .05%; satin chrome or satin gold finish; 1411/6" x 1611/6" x 67/8" \$110.00 Base in walnut.....\$15.00

Model 398 Transcription System

Includes Model 208 turntable, Model 980 toncarm, walnut base; size 17" w. x 15"



d.	x	8 3/4 "	h\$175.00)
Mo	de	1 388	less base\$160.00)

Model 498 Transcription System

Includes Model 408 3-speed turntable, Model 980 tonearm, walnut base; size 16"



w. x 13 3/4"	d. >	71/2"	h\$165.00
Model 488	less	base	\$150.00

Model 408 Turntable

Available only as part of Models 488 and 498 transcription systems; compact size, 3-speed, belt-driven turntable; has 5 lb.

aluminum turntable; pop-up 45 rpm adapter spindle; hysteresis motor; rumble better than -65 db; wow and flutter less than .07%.

EMT

Model 940 "Studio" Turntable

FAIRCHILD

Series 412-1B 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; synchronous motor.

Model 412-1B (33½ rpm)	.\$99.00
Model 412-1BBF Turntable base	
mounted; 17 % " x 14 % " x 6 % ";	oil fin-
ished walnut	.\$19.95
Model 412-1K Kit version of Mod	el 412-
1B turntable	.\$79.95

Model 440 Turntable

Speeds 33 ½ and 45 rpm; single belt drive; turntable speed variable ±1½%....\$69.95

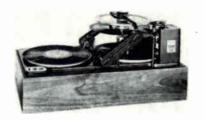


Model 440CBW Walnut mounting and wraparound\$	
Model 440 MBU unfinished mou	nting
Model 440 MBW walnut mounting	board
Model 440-2K turntable (Model	440)
available in kit form; pre-cut m ing board included\$	

FISHER

Model 70 Turnover Turntable

Automatically plays one or both sides of 7", 10", and 12" records intermixed; holds up to 10 records (20 sides); more than 8 hours playing time; repeats one or both sides of each record if desired; only record in motion is one being played, permitting ideal stylus angle and pressure (3 grams) at all times; center spindle revolves with record,



eliminating center-hole wear; electric trip mechanism leaves tonearm free during play; studio-quality turntable; two precision motors: 26½ " x 14" x 19" high over-all; single speed (33 rpm)......\$299.50

GARRARD

Type "A" Automatic Turntable

Dynamically balanced tonearm; adjustable sliding counterweight and built-in calibrat-



ed scale for stylus pressure adjustment; 6 lb. turntable with inside-drive table and outside cast non-ferrous table, foam rubber separator used to damp out vibrations; shielded 4-pole shaded motor; can be used as automatic or manual turntable; $16\frac{3}{4}$ " w. x $14\frac{1}{8}$ " d., 6" above and $2\frac{1}{8}$ " below top of motorboard; four speeds.......\$79.50

Model AT6 Automatic Turntable

Dynamically counterbalanced tubular tonearm; adjustable counterweight for stylus



Model RA-7 7" Record Adapter

Clips on pusher platform of Garrard Type A and Model 88 series to play 7" small-hole 33½ rpm records......\$1.50

"Autoslim/P" Intermix Record Changer

Four speeds; 4-pole shaded motor; separate controls for manual and automatic;



Tambour Table Model Cabinet

Built of stain and scuff resistant formica in walnut; records may be played with



cover closed; over-all dimensions $15\frac{1}{2}$ " d. x $10\frac{1}{4}$ " h. x 18" w.

Dust Cover



GRADO

"LAB Jr." Turntable

Two-speed (33 & 45 rpm); belt-drive design; rumble & noise for full frequency



"Laboratory Series" Turntable

Single speed, belt-driven design; wow & flutter immeasurable; rumble & noise (for





Now the record changer developed expressly for RCA Victor Total Sound Stereo Phonographs is available as a separate component for custom installation and replacement. Besides delivering brilliant sound in stereo or monaural, the Studiomatic Changer is a long-time investment in record protection:

Protects Against Spindle Wear. Kingsize stabilizer holds records steady and wobble-free—drops them gently with virtually no wear on center hole, thus eliminating a major cause of "wow."

Protects Against Groove Wear. Tonearm and stylus pressure are so light that no audible scratches are produced if tone arm accidentally slides across record. Precision-angled head assures true in-groove tracking over entire record.

RESULT: RECORDS TEST-PLAYED OVER 3,000 TIMES SHOW NEGLIGI-BLE LOSS OF FIDELITY

PLUS: • Scientifically balanced, rocksteady cushioned turntable • Automatic shut-off at end of last record • Ultra-sensitive Living Stereo Ceramic Cartridge • Ability to intermix 7", 10" and 12" records of the same speed • Excellent stereo separation.

Ask for it at your nearest RCA Victor dealer's.

RCA PARTS AND ACCESSORIES, CAMDEN, N. J.



Please Note......

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



Record **Changers Turntables**

full freq. range) -70 db; two 12-pole hystersis synchronous motors; 16" w. x 13½" d. x 8½" high with arm (7¼" without arm); turntable & base......\$99.50 With base, "Dustat" & "Lab Series" tonearm mounted.....\$153.00

GRAY

Model PK-33 Turntable

Hysteresis synchronous-drive motor with polyurethane drive belt; multiplane shock



mounts: universal tonearm mounting allows almost all type tonearms to be used; flutter .08%; wow .2%; single 33½ rpm speed; rumble —32 db @ 1000 cps and 7 cm/sec.; 4%" h. x 12¼" l. x 12¼" w. Kit\$49.50

HEATH

Model AD-92 Automatic Changer

Four-speed (16, 33, 45, 78 rpm) featuring automatic or manual, stereo or mono oper-



ation; has automatic shut-off, plug-in cartridge head, friction drive, anti-skate device, and 4-pole motor; wow & flutter .2%; r.m.s.; speed accuracy ± 2%; tracking force variation .9 gr. from first to last record; will hold 10-12" or 12-10" records; has manual reject control; 13 ¼ " w. x 11 ¾ " d. x 5¹¹/₁₆" above & 2 ½ " below mounting board; with ceramic cartridge; (kit) \$46.90 With magnetic cartridge\$49.90 45 rpm adapter spindle\$ 2.95 Walnut base 5.95 Unfinished base\$ 4.95

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% "w. x 15" d. x 3½" below motorboard; (kit)\$124.95

Model Eleven Phono 20-D-95

Garrard AT-6 record changer and Picker-



ing 380C magnetic cartridge are combined with dual-channel transistorized ampli-fiers: power rating 7½ watts music power per channel; controls: volume, bass, treble, balance, and mono/stereo switch; has separate tuner or aux. input; detachable KLH speakers have 40-foot cables; comes in portable carrying case; 24" l. x 14" d. x 7" h.; wt. 26 lbs.....\$199.00

KNIGHT

KN-990 Automatic Turntable

Automatic turntable; 4 speed (16, 33, 45, 78 rpm); tonearm adjustable from 0-8



grams; oversize 11" turntable; 4-pole motor; 13 % " x 12" x 4 3% " above mtg. board, 3" below; controls: speed, function, tracking weight; plug-in pickup head \$49.95

LAFAYETTE

Model PK-240 Turntable

4-speed transcription turntable; 4-pole motor; 12" aluminum table; rim driven;



noise and rumble 50 db below average recorded level; less than 0.2% wow and flutter; single ball bearing for spindle; free-floating shock-mounted motor; idler automatically disengaged in "off" position; magnetic eddy-current brake; motor plate size 11" x 10" x 14½"......\$37.50

Model PK-160S

Four-speed manual record player; 4-pole shaded motor; 10" turntable; rubber mat; magnetic brake for fine speed adjustment; lightweight pickup arm with two plug-in heads and finger lift; stylus-pressure screw on underside of arm; built-in stroboscopic disc; mounting plate dimensions: 12¹⁵16" left to right; 10%" front to rear; wired for stereo.

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

Model PK-449 Turntable & Arm

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

average recorded level; wow and flutter less than 0.2%; tonearm 12"; tracks at lowest stylus pressures recommended by cartridge makers; adjustable stylus; plug-in head; armrest "on-off" operation. Sup-



plied with strobe disc; 45 rpm adapter. $16\frac{1}{2}$ " x $12\frac{1}{4}$ " x 4" below motorboard.

PK-770W Record Changer

Four speed (16, 33, 45, 78 rpm) with 4-pole motor & 8" turntable; wow .5%;



flutter .5%; has speed selector & reject on
automatic cycling operation; wired for
sterco: 14¾" x 13¼" x 5½" above
mounting board & 4" below; less car-
tridge\$29.95
45 rpm spindle\$ 2.50
Walnut or mahogany base\$ 3.95
Unfinished mounting board\$ 1.10

Model PK-800W Record Changer

Produced by Admiral and is similar to their "Ensign" design; four speeds (16%, 331, 45, 78 rpm); automatic three-way shut-off; intermixes records of same speed; Ronette ceramic turnover stereo cartridge; stylus pressure 5-7 grams; will play man-



ually; 13½" x 12" x 7½"	\$19.95
45 rpm spindle	\$1.49
Walnut base	
Mahogany base	
Unfinished mounting board	\$1.10

LESA

Model CD2/21 Automatic Changer

Fully automatic with auto intermix; can be used for manual operation; 4 speeds;



6-second change cycle; universal plug-in head; tonearm mechanism is jamproof; after last record is played, tonearm is short

"Lesamatic" Automatic Changer

Designed by Italian craftsmen; can be used as changer or played manually; has



MIRACORD

Model 10H Automatic Turntable

Can be used as manual single-record player (lifting arm starts turntable and at end



Model 10 Automatic Turntable

Same as Model 10H except bas shaded 4-pole motor; rumble --50 db\$89,50

NEUMANN

Model PA2a Integrated Turntable

Complete playback design including automatic tonearm and DST-62 cartridge; wow and flutter less than .1% r.m.s.; all unweighted components measured flat from 10 to 250 cps; turntable and tonearm are mounted on rigid subassembly; shock mounted from main base; pickup is gently lowered to the disc by air compression cylinder controlled by remote lever; arm disengages when stylus seats in groove;



RCA

"Studiomatic" Record Changer

Four-speed (16, 33, 45 & 78 rpm) design; will accommodate up to 15-7", 12-10", 10-



REK-O-KUT

Model B-12H Stereotable

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



Model B-12GH

Model K-33H Turntable Kit

Single speed (331/3 rpm); belt-driven;

hysteresis synchronous motor; noise level 57 db below average recording level; adjustable belt tension; cast aluminum turntable; 15¾" x 15¾"; tonearm and base



not inclu	ded. Ki	it	.\$59	.95
Base KB	walnut		.\$14	.95

Model B-16H Turntable

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



noise level: 50 db below average recording level; wow, flutter, and speed regulation meet NAB standards; built-in retractable hub for 45 rpm records; built-in stroboscopic disc; size of deck: 18¾ "x20"; clearance required: above deck 1½"; below deck 6½"; finish: wrinkle gray; uses neoprene compound idlers; rotates on single-ball pivot.................................\$275.00

Model TR-43H 12" Turntable

Model C-7B Cabinet

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 cps........\$99.95

Model R-34H Turntable

Dual-speed (331/3 & 45 rpm) design including tonearm & base; features hysteresis



synchronous, capacitor start/run motor; belt driven; wow & flutter .09% r.m.s.; noise —58 db @ 1000 cps; tonearm features

1964 EDITION



plug-in cables, separate ground lead, & minimum 1 gr. tracking pressure; walnut base\$89,95

"Rondine 2" Series Turntables

Single speed (33½ rpm); single "on-off-reject" push-button; hysteresis synchronous motor; belt-driven; noise level -57 db below average recording level; wow and



flutter .15%; aluminum easting turntable; 1478" x 1412", requires 3½" above deck and 4¼" below; finish; white and silver deck plate.

 Model R Turntable only
 \$79.95

 Model R Base walnut finish; 15½" w. x
 15½" w. x

 15¼" d. x 4½" h.
 \$14.95

 Model R320 Turntable with Model \$4.320
 \$129.95

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

STANTON

Model 800B Stereotable

Complete record playing system which includes "Gyropoise" turntable, Model 200



"Unipoise" tonearm & Model 400A stereo cartridge; walnut base: 14¹4" w. x 14¹2" d x 6".....\$129.95

THORENS

Model TD-111 Turntable

Single-speed turntable (33½ rpm): precision Swiss assembly; 8-pound cast non-



Model TD-121 Turntable

Single-speed turntable (33 ½ rpm); same precision Swiss assembly as Model TD-124;



8-pound east non-magnetic 12" turntable with combination belt and idler drive for isolation of motor vibration; adjustable speed control (± 3%); self-lubricating bronze bushings on main drive shaft; separate tonearm board; adjustable built-in leveling feet; metal strobe disc included; 15½" x 12¾" x 2¾" below base plate \$85.00

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

Model TD-124 Turntable

Four-speed transcription turntable; 11½ pound cast-iron and aluminum turntable



with built-in retractable hub for 45 rpm records and heavy rubber mat; extremely low wow, flutter, and rumble; induction-type roto-isolated drive motor; two-step speed reduction between motor and turn-table—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 (±3%) on all speeds with new eddy current brake design; self-contained 12" and 16" tonearm mounting boards; leveling knobs and builtin spirit level; base plate size 15½" x 12%", required depth 2¾"...........\$125.00 Base in walnut, ebony, mah........\$10.00

TD-135 Transcription Turntable

Four-speed transcription turntable with integral professional arm; 8 lb., 12" non-



magnetic turntable (same as Model TI)-121); variable speed control ± 3%; manual & stop switch; arm has instrument-type pivot bearings; calibrated stylus force adjustment: takes any standard stereo cartridge; 14½" x 11¾"......\$125.00 Base........\$7.00

TD-224 "Masterpiece"

Combination turntable & record changer; an unusual design in that record stacking is completely separate from turntable; records are played automatically and changed individually; includes Model BTD-128 tonearm; built-in record cleaning device; illuminated stroboscope; variable speed control; features 4 speeds; plays up to cight 7" to 12" intermixed records automatically; level indica-



tor: automatic shut-off; base size 27" w, x 14½" d, x 4¼" h.; max, height for operation 9¾"\$250.00

Model TDK-101 Turntable

Turntable kit can be assembled in 45 minutes; single speed 33½ rpm; belt



and idler wheel drive; built in strobe disc \$47.50 WBK base in walnut, ebony, mahogany \$10.00

V-M CORP.

Model 1580 Turntable



Plays all four speeds (1623, 331/3, 45, 78 rpm); single-play design; furnished with diamond LP stylus assembly\$27.95

Model 1551 Record Changer

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

1573 Automatic Record Changer

WEATHERS

ML-1-LB "Synchromatic Turntable

Stereo Record Players

Model K-803—Combination of Model ML-1-LB turntable and Model PS-11 pick-up (with base).......S189.45



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

Model "66" Turntable

Employs two synchronous motors mounted on opposite sides of deck; rumble -60 db



ML-66-A Low-Silhouette Turntable

Plug-in head accepts any make cartridge; has micrometer adjustment for normal range of tracking force; full-time vertical & lateral viscous-damped universal tone-arm; no skating; base and tonearm of non-resonant walnut, oiled-walnut or ebony finish \$99,50 Model K-66 with low dynamic mass (C-66) cartridge; tracking pressure below 1.5 grams \$129.50 Model K-66-P with Weathers "Professional Pick-Up" system; pick-up includes its own matched transistorized preamp; response ± 1 db over the audio range; channel separation 40 db; factory-set ¾-gram



tracking force; 0.5-mil radius diamond stylus; walnut or ebony finish.......\$195.50

WEBCOR

Model 1041 Record Changer



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



Phono Cartridges

AUDIO DYNAMICS

Model ADC-1 Stereo Cartridge

Sensitivity 7 mv. @ 5.5 cm./sec.; response 10-20,000 cps ± 2 db; channel separation



30 db, 50-7000 cps; stylus tip radius .0006"; lateral and vertical compliance 25 x 10⁻⁶ cm./dyne. min.; load 47,000 ohms; tracking force .75 to 2 grams; moving magnetic type; with .0006" stylus.......\$49.50

Model ADC-2

Model ADC-3 Stereo Cartridge

Moving magnet design; sensitivity 10 mv. \pm 2 db @ 5.5 cm./sec.; response 10-20,000 cps \pm 3 db; separation 30 db, 50-7000 cps; lateral & vertical compliance 15 x 10⁻⁶ cm./dyne; load impedance 47,000 ohms; tracking force 2-6 grs.; has .0007" stylus..\$37.50

DUAL

DMS-900 Magnetic Stereo Cartridge

DYNACO

Stereodyne II Cartridge

Moving-iron stereo cartridge imported from B & O of Denmark; four coils used in



ELAC

Model 222 Stereo Cartridge

Moving-magnet design; less than 2% IM & 1% harmonic distortion; Response 20-20,000 cps ± 2 db; channel separations 25 db @ 10000 cps, 20 db @ 10,000 cps, 12 db @ 20,000 cps; output per channel 7 mv. @ 7 cm./sec.; compliance 14 x 10⁻⁶ cm./dyne (lateral & vertical); stylus force 1.5-3 grs.



EMPIRE

Model 880 Stereo Cartridge

Model 880P Stereo Cartridge

Response 6-30,000 cps; channel separation more than 30 db; output 8 mv./channel;



dynamic mass less than .5 x 10⁻³ grams; stylus compliance (vertical and horizontal) 30 x 10⁻⁶ cm./dyne; tracking force ½ to 3 grams; .6 mil diamond stylus; inductance 500 mhy.; d.c. resistance 850 ohms; 4-terminal output; load impedance 47,000 ohms \$47,50

Model 108 Stereo Cartridge

Moving-magnet design; frequency response 15-20,000 cps ± 2db; usable output to



30,000 cps; output 7 mv. each channel within ± ½ db; separation more than 25 db; d.c. resistance 1250 ohms; inductance 500 mhy.; weight 10 grams; vertical and horizontal compliance 6 x 10⁻⁸ cm./dyne; tracking force 1.5-5 grams; .7 mil diamond stylus; 4-terminal output; load impedance 47,000 ohms......\$35.00

FAIRCHILD

Model 225A Mono Cartridge

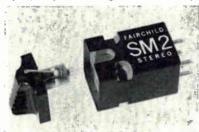


Cartridges

225B (2.5 mil).....\$37.50

Model SM-2 Stereo Cartridge

Moving-magnet type; .0007" diamond stylus; output 5 mv. @ 3.8 cm./sec.; dy-



namic mass 2.0 grams; tracking force 2.5 grams; compliance 5x10⁻⁶ cm/dyne; response 20-15,000 cps ± 2 db; separation 20 db. ± 2 db from 20-15,000 cps...\$37.50 Replacement stylus assembly......\$15.00

Model F-7 Stereo Cartridge

Design technique similar to that of condenser microphone; has its own separate, self-powered transistorized preamp; response essentially flat from 20-20,000 cps; separation 25 db from 20-6000 cps, 15 db from 6000 to 20,000 cps; 1/2-2 gr. tracking pressure; cartridge imp. 50 ohms; preamp output 10 mv. (1 kc.-5 cm./sec.) with 8000 ohm load impedance; cartridge output .5 mv.; compliance 23 x 10.6 cm./sec.; has .5-mil diamond stylus.......\$85.00

GENERAL ELECTRIC

Model VR-225 Stereo Cartridge

Magnetic variable reluctance design; response 20-20,000 cps ± 3 db; output



5 mv. @ 3.8 cm./sec.; separation up to 25 db nominal; channel balance within 1 db 1000 cps; load impedance 47,000 ohms optimum; lateral compliance 4 x 10 6 cm./ dyne; vertical compliance 3 x 10.6 cm./ dyne; tracking force 2-4 grams; .5-mil replaceable diamond stylus.....\$17.95

Model VR-227 Stereo Cartridge

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

Model VR1000-5 "Orthonetic" Stereo Cartridge

For use with professional-type turntables and arms and record changers that will track below 4 grams; response 20-20,000 cps ± 3 db; tracking force 1-3 grams; vertical compliance 9 x 10⁻⁶ cm./dyne; lateral tracking force 6 x 10⁻⁶ cm./dyne; 47,000 ohm load impedance; output 1 mv./cm./sec.; separation 25 db at 1000



cps; channel balance within 2 db at 1000 cps; .5-mil replaceable diamond stylus \$29.95

Model VR1000-7 "Orthonetic" Stereo Cartridge

Similar to VR1000-5 except for use with any changer that will track from 3-7 grams; lateral compliance 4.5 x 10⁻⁶ cm./ dyne; vertical compliance 4 x 10.6 cm./ dyne; separation 20 db; has .7-mil replaceable diamond stylus.....\$24.95

Series VR-II Monophonic Cartridge

Variable reluctance magnetic design; singleand triple-play turnaround models; re-



sponse 20-20,000 cps; output voltage 10 mv. at 5.5 cm./sec.; lateral compliance 1.7 x 10.6 cm./dyne; vertical compliance .5 x 10.6 cm./dyne; load impedance 100,000 ohms with 300 $\mu\mu$ f. shunt capacity; 47,000 ohms with 400 $\mu\mu$ f.; 6200 ohms with 1000 $\mu\mu$ f.; tracking force 4 grams with 1-mil stylus and quality tonearm; 6 grams with 3-mil stylus and quality tonearm; 6-8 grams for dual 1- & 3-mil styli used with record changer; replaceable stylus.

Model 4G-050 (1 and 3 mil sapphire Model 4G-053 (1-mil and 3-mil diamond styli)\$19.95 Model 4G-040 (3-mil sapphire)......\$9.95 Model 4G-041 (1-mil sapphire stylus)\$9.95 Model 4G-061 (1-mil diamond stylus) .\$13.95 Model 4G-063 (3-mil diamond stylus)

GRADO

"Classic" Cartridge

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

"Laboratory Series" Stereo Cartridge



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

"Senator" Cartridge

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

"XR" Stereo Cartridge (Mk-1)

Moving-coil design; response 7 to 50,000 cps; output 4 mv. @ 10 cmv.; impedance 600 ohms/ch.; input load-any value over 2000 ohms; tracking force .2 to 2 grs.; compliance 25 x 10⁻⁶; separation 20 db; diamond stylus.....\$75.00

NEUMANN

Model DST-62 Stereo Cartridge

Professional model originally designed for recording studios; has hand polished Swiss



diamond stylus; to be used with PA2a turntable, STA-12 pickup arm, made in West Berlin\$79.50

ORTOFON

Model SPU/GT Stereo Cartridge

Response 20,20,000 cps; channel separation 20-25 db; load impedance 50,000



ohms; output at 1 kc. 7 mv. per channel; compliance 10 x 10.5 cm./dyne; stylus pressure 1 to 2 grams; 4-pin terminal; cartridge is supplied mounted and enclosed within plug-in head; will fit any Ortofon tonearm.....\$49.95 With elliptical stylus.....\$75.00

Model SPU/T Stereo Cartridge

Identical to Model SPU/GT but without plug-in head; can be mounted in almost any make of tonearm.....\$49.95 With elliptical stylus.....\$75.00

PICKERING

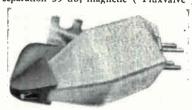
Model U38 Series Stereo Cartridge



Designed especially for use with automatic turntables; response 20-20,000 cps; output

Model 380 Series Stereo Cartridges

Frequency response 20-17,000 cps; output 2.5 mv./cm. of recorded level; channel separation 35 db; magnetic ("Fluxvalve")



design with removable "V-Guard" diamond stylus,

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.

Plug-in Head Assemblies

Assemblies include pre-mounted cartridges for Garrard turntables.

For featherweight operation: 1-3 grams tracking (recommended 2 grams) where



environmental conditions permit light tracking forces; includes U38 stereo "Flux-valve" cartridge with D3807ATG "Golden Safe V-Guard" floating stylus.

GA/38ATG for Garrard Type A....\$52.50

GA/38ATG for Garrard Type A....\$52.50 G6/38ATG for Garrard Model AT6\$52.50

Note on "V-Guard" replacement stylus; AT stylus is for use in automatic turntables, recommended tracking force is from 2-5 grams; Type A stylus is for use in manual toncarms; Type C stylus is recommended for automatic record changers.

SHURE

Model M33 Stereo-Dynetic Cartridge

Features an ultra-compliant stylus for minimum tracking force; instant stylus replacement; tracks at ¾ to 1.5 grams with .0005" diamond (compliance of 22 x 10⁻⁶ cm./dyne): 1.5 to 3 grams with .0007" diamond (compliance 20 x 10⁻⁶ cm./dyne); response



20-20,000 cps; channel separation over 22.5 db; 6 mv. output per channel; load 47,000 ohms.

Model M77 Stereo-Dynetic Cartridge

Particularly suited to use in quality record changers; features extra shielding against



hum; instant stylus changing; tracks at 3 to 6 grams; compliance 6 x 10⁻⁶ cm./dyne; channel separation more than 20 db; response 20-17,000 cps; output 9 mv. per channel; load 47,000 ohms; .0007" diamond stylus\$27,50 N77 stylus\$10.50

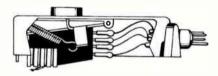
Model 33-1 Dynetic Stylus

Model N78 Mono Stylus

Instant stylus replacement feature of M33 and M77 cartridges permit conversion for playing 78 rpm records with .0027" diamond tip stylus; response 30-15,000 cps; output 11.5 mv.; compliance 6 x 10-8 cm./dyne; tracks at 4 to 6 grams....\$8.25

M-99 "Gard-A-Matic" Cartridge Assembly

Designed for Garrard and Miracord automatic turntables; supplied mounted in shell;



is scratch-proof, bounce-proof & will track all records at 2 grs.; response 20-20,000 cps; tracking force 1.5-3 grs; separation 22.5 db @ 1 kc

#49.50

Model M99/M10 Same, for Miracord M10

& M1011 #49.50

Model N99 Replacement stylus #19.50

Model M3D Stereo Cartridge

May be used with mono or stereo records; frequency response 20 to 15,000 cps ±3 db; compliance (vertical and lateral) $4x10^{-6}$ cm/dyne; output 5 millivolts;



tracking force 3-6 grams; recommended load impedance 50,000 ohms; 0.7-mil diamond stylus......\$45.00 N3D replacement diamond stylus...\$22.50

Model M7D Stereo Cartridge

Model M7/N21D

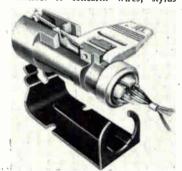
M7D design with N21D tubular stylus; .7 mil diamond; performance similar to Model M3/N21D diamond cartridge \$36.75

......\$12.00

SONOTONE

Model 12 Stereo Crystal Cartridge

Made of plastic; has jack-in terminal plug to connect to tonearm wires; stylus is



Model 10T Stereo Ceramic Cartridge

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

Model 3T-SD Pickup

Ceramic turnover cartridge; frequency response: 20 to 15,000 cps with gradual roll-off to 20,000 cps; compliance: 2.0 microcentimeters per dyne; output: 0.5 volt on



Phono Cartridges

microgroove records (5.5 cm/sec. recording level); 4-6 gram stylus pressure required; standard ½" or ½" mounting centers; diamond LP and sapphire 78 styli \$12.40

Model 1P and 2TA Ceramic Cartridge

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

| Model 1P-1S (1-mil sapphire)......\$ 4.85 | Model 1P-2S (2-mil sapphire)......\$ 4.85 | Model 1P-3S (3-mil sapphire)......\$ 4.85 | Model 1P-1D (1-mil diamond).....\$ 9.50 Model IP-3D (3 mil diamond)......\$ 9.50 Model 2TA-S (2 sapphires).....\$ 6.15 Model 2TA-SD (I-mil diamond, 3-mil sapphire)\$10.20

Model 8TA Stereo Ceramic Cartridge

For use with stereo or mono records; turnover-type; frequency response 20 to 15,000 cps, roll-off beyond; compliance 3.0 x 10 ⁶ cm/dyne; tracking force 3–5 grams for professional arms, 4-6 grams for changers; channel isolation 20 db; recommended load 1-5 megohms.

Model 8TA-4S (0.7-mil and 3-mil sap 3-mil sapphire)\$13.00

Model 9TA Stereo Ceramic Cartridge

Turnover cartridge handles all speeds, stereo or mono; response 20-17,000 cps ± 1 db, roll-off to 20,000 cps; separation 30 db; load 1-5 megohms for ceramic input; tracking force 2-4 grams for professional arms, 3-5 grams for changers.
Model 9TA-S (.7 mil and 3 mil sapphires)

| Model 9TA-SD (.7 mil diamond. 3 mil sapphire) | \$13.00 | Model 9TA-S77 (.7 mil and .7 mil sapphires) | \$8.35 | Model 9TA-D77 (dual .7 mil diamond) | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.200 | \$1.20\$16.00

9TAF Series Ceramic Cartridge

Turnover design handles all speeds, stereo & mono: equipped with "Sono-Flex", flextype, virtually breakproof phono needles; response 20-17,000 cps ± 2 db; separation 30 db: load 1-5 megs for ceramic input; tracking force 2-4 gr. for professional arms,

tracking force 2-4 gr. for professional arms, 3-5 gr. for changers.
9TAF-SF.7-mil & 3-mil sapphires....\$ 8.85
9TAF-S77 Dual .7-mil sapphires.....\$ 8.85
9TAF-SD .7-mil diamond & 3-mil sapphire\$13.75
9TAF-D77 Dual .7-mil diamonds...\$17.00

Model 16TA Stereo Ceramic Cartridge

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



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

Model 16TA-S (.7 mil and 3 mil sapphires)\$ 6.00

Model 16TA-SD	(.7	mil	diam	ιoπ	d. 3	mil
sapphire)					\$	9.75
Model 16TA-S77	(.7	mil	and	.7	mil	sap-
phires)					\$	6.00

16TAF Series Ceramic Cartridge

Turnover design equipped with "Sono-Flex", flex-type, virtually breakproof phono needle; response 20-10,000 cps; separation 25 db; load 2 megs.; output voltage 6 volt; compliance 2.4; tracking force 4-6 gr. for professional arms, 5-7 gr. for changers. 16TAF-S .7-mil & 3-mil sapphires....\$ 6.50 16TAF-S77 Dual .7-mil sapphires....\$ 6.50 16TAF-SD .7-mil diamond & 3-mil sapphire\$10.50

16TAP Series Ceramic Cartridge

Turnover design equipped with economytype plastic needle; response 20-10,000 cps; separation 20 db; load 2 megs.; compliance 1.7; output voltage .6 volt; tracking force 6-8 gr. for professional arms, 7-9 gr. for changers.

16TAP-S .7-mil & 3-mil sapphires....\$ 5.50 16TAP-S77 Dual .7-mil sapphires....\$ 5.50 16TAP-SD .7-mil diamond & 3-mil sap-

Model 18TA Stereo Ceramic Cartridge

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

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

"Velocitone Mark III" Ceramic Assembly

Permits use of Sonotone's stereo cartridge without modification of velocity or magnetic amplifier system of record player; assembly consists of Model 9TA stereo ceramic cartridge and two factory-matched equalizers; response 20-6000 cps ± ½ db and to 17,000 cps ± 1 db. roll-off to 20. 000 cps; output voltage 11 mv.; compliance 6 x 10⁻⁶ cm/dyne; tracking force 2 grams for professional arms, 3 grams for changers.

9TAF-SDV (assembly with diamond/sap-diamond tips)\$22.25

Model 916TA Ceramic Stereo

Turnover cartridge for 78's & LP records; response 20-15,000 cps ± 2 db; output



.45 v.; compliance 4 x 10⁻⁶ cm/dyne; channel separation 28 db; load impedance 2 megohms; tracking force 3-5 grams for professional arms, 4-6 grams for changers.

916TAF Series Ceramic Cartridge

Turnover design handles all speeds, stereo and mono; equipped with "Sono-Flex" phono needle; response 20-15,000 cps ± 2 db; output .45 volt; compliance 4 x 10⁻⁶ cm./dyne; channel separation 28 db; load impedance 2 merculation force 2.5 impedance 2 megs.; tracking force 2-5 gr.

for professional arms, 4-6 gr. for changers. 916TAF-S .7-mil & 3-mil sapphires...\$ 7.65 916TAF-S77 Dual .7-mil sapphires....\$ 7.65 916TAF-SD .7-mil diamond & 3-mil sapphire\$11.75

STANTON

Model 481 "Calibration Standard" Cartridges



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

Model 481AA for use with ultra-light-weight arms capable of tracking within ¼ to 3 grains; output .5 mv./cm. of recorded level; "V-Guard" diamond \$\$\frac{40.50}{50.00}\$\$49.50

Model 481A for use with mono tonearms; mond for 78's.....\$60.00

Model 400 "Professional" Cartridges



Frequency response 20-20,000 cps; channel separation 35 db; magnetic ("Flux-

valve") design. Model 400AA for use with ultra-lightweight tonearms capable of tracking 1/4 to 3 grams; output .85 mv./cm. of recorded level; "V-Guard" diamond stylus....\$40.50 Model 400A for use with mono tonearms; tracking force 2 to 5 grams; output 1.4 mv./cm. of recorded level; "V-Guard" diamond stylus.....\$39.00 Model 400C for use in automatic record changers; tracking force 4 to 7 grams; output 2.6 mv./cm. of recorded level; "V-Guard" diamond stylus.........\$33.00

WEATHERS

C.66 Cartridges

Stress-generator design: 20-20,000 cps ± 2 db; tracks 1 gram; output 5 mv.; chan-



nel separation 35 db; 0.7-mil diamond stylus: 0.3 milligram tip mass; compliance more than 30 x 10⁻⁶ cm./dyne @ ½-gram tracking force, 15 x 10⁻⁶ cm./dyne @ 1.2gram tracking force; matching networks (included) to low-level magnetic input \$39.50



Why We Make the Model 211 Available Now

Although there are many stereo test records on the market today, most critical checks on existing test records have to be made with expensive test equipment.

Realizing this, HiFi/STEREO REVIEW decided to produce a record that allows you to check your stereo rig, accurately and completely, just by listening! A record that would be precise enough for technicians to use in the laboratory—and versatile enough for you to use in your home.

The result: the HiFi/STEREO REVIEW Model 211 Stereo Test Record!

Stereo Checks That Can Be Made With the Model 211

- Frequency response—a direct check of eighteen sections of the frequency spectrum, from 20 to 20,000 cps.
- Pickup tracking—the most sensitive tests ever available to the amateur for checking cartridge, stylus, and tone arm.
- Hum and rumble—foolproof tests that help you evaluate the actual audible levels of rumble and hum in your system.
- Flutter—a test to check whether your turntable's flutter is low, moderate, or high.
- Channel balance two white-noise signals that allow you to match your system's stereo channels for level and tonal characteristics.
- Separation—an ingenious means of checking the stereo separation at seven different parts of the musical spectrum—from mid-bass to high treble.

ALSO:

Stereo Spread

Speaker Phasing

Channel Identification

PLUS SUPER FIDELITY MUSIC!

The non-test side of this record consists of music recorded directly on the master disc, without going through the usual tape process. It's a superb demonstration of flawless recording technique. A demonstration that will amaze and entertain you and your friends.

NOW...GET THE FINEST STEREO TEST RECORD ever produced

for just ... \$4.98

Featuring The Most Spectacular Music Demonstration On Disc Today

UNIQUE FEATURES OF HIFI/STEREO REVIEW'S MODEL 211 STEREO TEST RECORD

- Warble tones to minimize the distorting effects of room acoustics when making frequency-response checks.
- White-noise signals to allow the stereo channels to be matched in level and in tonal characteristics.
- Four specially designed tests to check distortion in stereo cartridges.
- Open-air recording of moving snare drums to minimize reverberation when checking stereo spread.

All Tests Can Be Made By Ear

HiFi/STEREO REVIEW'S Model 211 Stereo Test Record will give you immediate answers to all of the questions you have about your stereo system. It's the most complete test record of its kind—contains the widest range of check-points ever included on one test disc! And you need no expensive test equipment. All checks can be made by ear!

Note to professionals: The Model 211 can be used as a highly efficient design and measurement tool. Recorded levels, frequencies, etc. have been controlled to very close tolerances—affording accurate numerical evaluation when used with test instruments.

DON'T MISS OUT—SUPPLY LIMITED

The Model 211 Stereo Test Record is a disc that has set the new standard for stereo test recording. Due to the overwhelming demand for this record, only a limited number are available thru this magazine. They will be sold by Stereo/Hi-Fi Directory on a first come, first serve basis. At the low price of \$4.98, this is a value you won't want to miss. Make sure you fill in and mail the coupon together with your check (\$4.98 per record) today.

FILL IN AND MAIL TODAY!

Stereo Test Record STEREO/HI-FI DIRECTORY—Dept. SHD4 One Park Ave., New York 16, N.Y.
Please send me test records at \$4.98 each. My check (or money order) for \$ is enclosed. I understand that you will pay the postage and that each record is fully guaranteed. (Add 50¢ to partially defray postage costs outside U.S.A.)
Name(Please Print)
Address
CityState
SORRY—No charges or C.O.D. orders! SHD4



Tonearms

AUDIO DYNAMICS

"Pritchard" Tonearm

Has removable plug-in head; walnut wood arm; adjustable rear counterweight; side-



thrust compensator; over-all arm length 10 % "; pivot to stylus tip 9"; tracking force % gram; will accommodate standard cartridges\$44.50

COMPONENTS CORP.

Model AS Auto-Set Tonearm Kit

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



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

DYNACO

Models TA-12 & TA-16 Tonearms

Both tonearms are manufactured by B & O and designed for use with a Stercodyne II



plug-in cartridge having different mounting assembly; has dynamic 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.

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

EMPIRE

Model 980 Stereo Balance Arm

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



force adjustment 0-8 grams; arm offset at 23.8°; resonant frequency 6 cps; over-all length 123's"; maximum tracking error ± .65°; includes "Dyna-Lift" device which automatically lifts arm from record at end of play; satin gold or satin chrome finish.

Model 98DL "Dyna-Lift"

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

FAIRCHILD

Model 500 Tonearm

Professional tonearm incorporating antiskating 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......\$29.95 With SM-2 cartridge.....\$58.00

GRADO

"Laboratory Series" Tonearm

Gun-stock walnut wood construction; for 12" records; tracking error ± .5°; low-



frequency resonance 11 cps; minimum tracking force ½ gram; has interchangeable cartridge slides and both vertical and lateral balance adjustments......\$39.50 With "Laboratory" cartridge......\$85.00 With "Classic" cartridge.....\$75.00 With "Senator" cartridge.....\$63.00

GRAY

Model 208-S "Professional" Tonearm

A viscous-damped design with a slide & modular weights for mounting single-play



stereo or mono cartridges; arm response ± 1 db from 5 cps to upper limit of cartridge; tracking error from 0° at 2.5" radius to 1° 15' at 5.5" radius: resonance vertical & lateral 6 cps; 15" long x 2 15/16" wide \$\frac{15}{16}\$ wide \$\frac{15}{16}\$ Model 208-S/G is supplied with special head to mount turnaround G-E broadcast cartridge \$\frac{15}{16}\$

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. @



NEUMANN

STA-12 Tonearm

For 12" records (16" available); tracking error 1.19° max.; adjustable tracking force from 0-7 gr.; arm resonance 8 cps; 22.7° offset cartridge angle; has adjustable counterweight with calibrated pressure gauge

ORTOFON

Model RMG-212 Stereo Arm

Counterweight is separated from tube by rubber damper to eliminate resonances;



Model RMG-212T Stereo Arm

Model RMG-309 Stereo Arm

Professional 16" stereo arm; tracks at 2 grams with plug-in Ortofon stereo car-



tridge; 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 12316" pivot to record center 3" radius rear clearance.......\$59.95

Model SMG-212 Stereo Arm

Model SKG-212 Stereo Arm

RABINOW

"Servo-Line" Tonearm

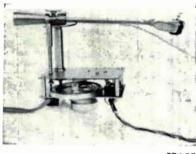
A servo (motor-driven) system, controlled by a photoelectric cell, moves arm in a



REK-O-KUT

Model AP-320 Automatic Tonearm

Model S-320 tonearm with "Auto-Poise"



.....\$74.95

Model S-320 Tonearm

Plugs into amp with permanently attached



cable; has "Micropoise" dynamic balance, spring-cushioned; calibrated from 0-6 grams; isolated counterweight; includes aluminum 4-wire plug-in shell with cartridge adjustment slide; collar locks shell into arm; single hole mounting; features "Omni-Balance" for optimum bearing loads and lateral balance........\$34.95

Model S-260 Tonearm

SHURE

Model M222/M226 "Studio Dynetic" Arm & Stereo Cartridge

Model Shure-SME 3009/Tonearm

Made in England; tracking force ¼ to 6 grams; anti-skating control; precision ball



Models M232 & M236 Tonearm

Accepts all cartridges (mono or stereo); micrometer counterweight; direct-reading

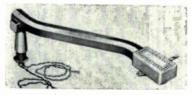


stylus force gauge; slide adjustment for stylus overhang; arm height adjustable; stylus tracking force adjustable 1-8 grams; for 12" records......\$29.95 Model M236 for 16" records......\$31.95

SONOTONE

Model T1 Tonearm & Crystal Stereo Cartridge

Economy unit; all plastic manual tonearm; available with compression rear



mounting post; tracking force 9-11 grams; includes Model 12 crystal cartridge..\$7.45

STANTON

Model 200 "Unipoise" Tonearm

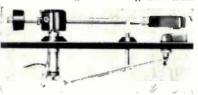


Ultra-lightweight design for tracking pressure of ¼ gram; simple adjustments balance arm in all planes; has calibrated (0-3 gram) stylus force adjustment; over-all weight with base and pivot assembly 6 oz.; for 12" records......\$24.00

THORENS

Model BTD-12S Tonearm

For 12" records; has exclusive cueing control for lowering and raising arm from



WEATHERS

PS-11 Stereo Pick-up System

"Professional" design for use on any highquality turntable; 20-20,000 cps ± 1 db;



MT-66 Universal Tonearm

Interchangeable plug-in head accepts any make cartridge; mounts on any turntable;



designed for cartridges capable of tracking under 3 grams; full-time lateral & vertical viscous damping; micrometer tracking force adjustment; no skating; no spring biasing; walnut wood finish; 11½" long; rubber tonearm rest included.......\$31.50 Accessories

1964 EDITION



Phono Accessories

FISHER

Model PR-6 Preamp

Self-powered preamp; sensitivity for I-volt output; 10 millivolts input for

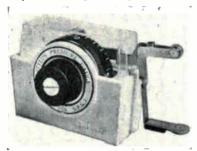


phono, 1 millivolt input for microphone, 5 millivolts input for tape; hum -60 db below 1 volt on phono and tape, -70 db on microphone; 30 to 20,000 cps, ±2 db; 6SC7 dual triode amplifier; 3¾" w x 3¾" d x 3¾" h; 1½ lbs \$14.95\$

GARRARD

Model SPG3 Stylus Pressure Gauge

Stylus pressure gauge; large, legible scale; complete with 5 gram weight to be used



as standard to "zero" unit for complete accuracy\$2.95

GENERAL ELECTRIC

Model UPX-003C Phono Preamplifier

Self-powered converter to convert magnetic cartridges and microphone inputs to tape



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 mv. input

signal\$23.50

"Dustat" Record Cleaner



LAFAYETTE

Model PK-634 Stylograph Stylus Inspector

Shows large illuminated silhouette of needle or other small pointed objects on



Model PK-223 Stylus Pressure Gauge

Returns with pickup in normal play position; range 0-30 grams; no spring and minimum of moving parts......\$0.99

Model MS-785 Tonearm Control

Lowers toncarm into run-in groove and lifts arm off record at end of play; ideal for cueing; will fit most turntable arms as well as changers with manual features

NUCLEAR

Model 3R500 "Staticmaster"



Polonium treated jaguar hair brush. Designed to eliminate static and dust from records \$\frac{14.95}{2}\$

Model 2U500 w/BFI Positioner

Flexible arm with heavy base holds model 2U500 ionizing unit over playing record. Is supplied complete with ionizing unit\$19.75

SHURE

Model M-60 Stereo Preamp

Permits turntable location up to 50 feet from preamplifier; gain 17 db; frequency response 30-80,000 cps ±1 db; input



Model M-61 Stereo Preamp

Transistorized unit with choice of a.c. line or battery power supply; slide-selector



switch provides choice of three equalization inputs: phono, RIAA equalization for conversion of ceramic to magnet input; tape, NAB equalization; and flat amplification for microphone use; gain: 45 db phono, 40 db tape, 63 db microphone, Model M61-1 (for 105-125 v. operation) \$27.50

Model M61-3 (for 30 v. battery, included)\$26.50

Model M65 Conversion Preamp

Provides equalization with amplification for converting ceramic cartridges to magnetic inputs; 60 db of amplification without equalization; provides preamplification



and equalization functions for phono, tape, microphone; gain (phono) 44 db. (special) 45 db, (tape) 40 db, (mic.) 63 db; input impedance 47,000 ohms; output impedance 5000 ohms......\$24.00

SWITCHCRAFT

Model 328A Audio Equalizer

Adapts ceramic phono cartridge to the magnetic phono input of any amplifier;



THORENS

"Dust Bug"

Fits any standard or custom turntable without drilling holes; has suction cup; a trace



SPECIAL INTRODUCTORY OFFER



14 months of HiFi/Stereo review for only \$375

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10 Most Asked Questions About Stereo," "What To Look For In FM Tuners" and "How To Get The Most From Your Record-Playing Equipment."

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3 GREAT NEW SCOTT TUNERS

SUPER SENSITIVE



New 310F FM Stereo Tuner

Here's the multiplex version of the famous tuner used in the "Telstar" experiment. Its extreme sensitivity of 1.9µv, high selectivity, and low distortion make it the logical choice for the most critical installations. Equipped with completely automatic facilities for switching from monaural to stereo, the 310 E is effortless to use. A unique "stereo only" mode of operation helps you find stereo broadcasts faster than ever before. This is the very finest tuner possible at the present state of the art. \$279.95

TOP PERFORMER



New 350C FM Stereo Tuner

The first, and most popular, multiplex tuner ever made now has a new look, and vastly improved performance to match! Time-Switching multiplex circuitry pioneered by Scott assures low distortion and maximum separation. New improved sensitivity of 2.2µv guarantees perfect stereo or mono reception in the most difficult signal areas. The 350C offers a variety of exclusive Scott features like the precision illuminated tuning meter, separate level controls, convenient front panel tape outlet, and Scott's Sonic Monitor. Truly a delight to use. \$224.95

TOP VALUE



LT-110 FM Multiplex Tuner Kit

This is the kit the experts have unanimously acclaimed as one of the finest, easiest to build on the market. The fabulous LT-110 tuner gives unsurpassed reception of both FM Stereo and monophonic FM broadcasts. Critical front end and multiplex sections are pre-wired and factory tested. Wires are already cut to exact length and mechanical parts are in place on chassis. Scott's exclusive full-color instruction book positively identifies each part in full color so you can't make a mistake. Even a novice can expect top performance. \$164.95

How to select the right one for your system

FEATURES



Wide Range of Features and Controls

- 1. Heavily silver-plated "front-end" for maximum usable sensitivity, lowest hum, distortion, and noise.
- 2. Time-Switching multiplex circuitry for full frequency response with extremely low distortion.
- Famous 2 mc Wide-Band detector for drift-free operation.
- 4. Sensitive indicator for accurate tuning and best antenna orientation.
- 5. Easy-to-use vernier tuning dial with logging scale.

SPECIFICATIONS

310F | 350C | 1T-110

The state of the s	SIVE	3300	F1-110		
Usable Sensitivity (µv)	1.9	2.2	2.2		
Signal: Noise Ratio (db)	65	60	60		
Harmonic Distortion (%)	0.5	0.8	0.8		
Drift	0.02	0.02	0.02		
Frequency Response (cps±1db) 30	-15,000	30-15,000	30-15,000		
Capture Ratio (db)	2.2	6,0	6.0		
Selectivity (db)	50	35	35		
Spurious Response Rejection (db)	85	80	80		
AM Suppres- sion (db)	60	55	55		
Separation (db)	30+	30	30+		

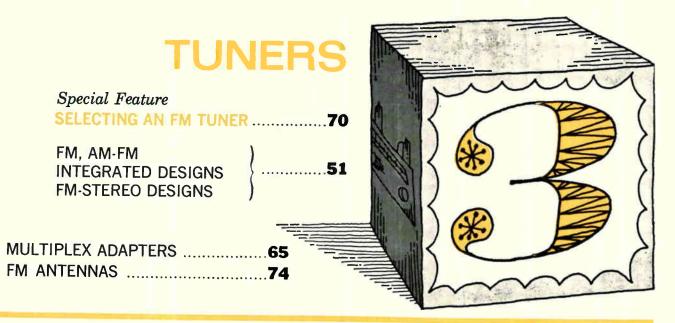
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Send me complete infor new 1964 Scott line of ste and kits.	rmation on the reo components
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ALTEC LANSING

"Astro" AM-FM Stereo Tuner/Amp

Combines an AM & FM tuner with FM multiplex circuitry and dual-channel am-



plifier system; power output 27.5 watts/ channel; response 20-20,000 cps ± 1 db; FM sensitivity 2.9 μν.; automatic indicator light for stereo; combines tubes and transistors for total of 34; controls: input selector switch for tape head, phono, tape, FM or AM, mode switch for mono or stereo plus selector for speaker or head-phones, volume/on-off, balance, loudness, tape monitor, channel reverse, phase reverse, rumble filter, a.f.c., AM bandwidth, bass & treble tone; 5½" x 15" x 14¼"; supplied with cabinet.....\$597.00

315A "Empress Royale" FM Stereo Tuner

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

314A "Emperor Royale" FM Stereo

Sensitivity 1.2 μv. for 20 db of quieting; channel separation 30 db from 50 to 15,000 cps; time-division type multiplex circuitry; supplied with metal cabinet; excise tax included in price.....\$359.00

ARKAY

FM-8 FM Tuner Kit

Three tuned stages, all-triode front end, five double-tuned i.f. stages, dual limiters; Foster-Seeley discriminator, variable a.f.c.; a.g.c. front-panel sound muting control for silent meter tuning; standby switch; low-filter switch; sensitivity 1.9 microvolts for 20 db quieting; tuning meter. frequency response 20 to 20,000 meter, frequency response 20 to 20,000 cps; outputs: cathode follower, high

	and		stereo	(multip	lex);
tubes:	2-12	A1/,	2-6BA	6, 2-6	AU6,
			ge lighte		
dial	********		• • • • • • • • • • • • • • • • • • • •	\$	39.95
Factory	wired		•••••••	S	59.95

AM-5 AM Tuner Kit

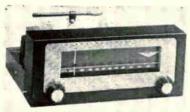
Sensitivity: 2 microvolts for 20 db signalto-noise; frequency response 20 to 8500



cps in wide-band position, 20 to 3500 cps in narrow-band position; 1 volt cathode follower output; 10 kc. whistle filter; tubes are 2-6BA6, 6BE6, 6AL5, 6AV6; self powered\$29.45 Factory wired\$44.95

HFT-7 AM-FM Tuner Kit

FM specifications identical to FM-6-A tuner kit; AM sensitivity is 20 microvolts;



selectivity of 8	kc.	bandwidth	5	db down;	;
51/4"x91/2"x8" Factory wired	••••	******************	••••	\$32.00 \$49.95)

ST-11 AM-FM Stereo Tuner Kit

AM and FM completely separate and independent; FM specifications: sensitivity



4 microvolts for 20 db quieting, bandwidth

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

FM-6-A FM Tuner Kit

Sensitivity: 4 microvolts for 20 db quieting; selectivity: 200 kc. bandwidth 6 db



down; 30 db minimum image rejection; hum level-65 db; temperature compensated oscillator; 3 i.f. stages; Foster-Seeley discriminator; a.f.c. with defeat switch; 51/4"x91/2"x8".

Kit\$25.75

BELL

Model 2445-S2 Stereo Tuner/Amp

Combines AM tuner with separate FM stereo tuner, dual preamps & dual 22 w./



ch. (music power) power amps; features switched a.f.c., individual tuning meters, and stereo indicator light; response 20-20,-000 cps ± 1 db; HD less than 1% @ 1 kc. 000 cps ± 1 db; HD less than 1% @ 1 kc. and 20 w.; hum & noise 76 db below 22 w.; has all conventional controls & inputs; 4-8-16 ohm outputs; FM tuner sensitivity 1.8 μv. for 30 db quieting; selectivity -65 db; dist. below 1% @ 100% modulation; image rejection -65 db; response 20-20, 000 cps ± .5 db; channel separation 28



Tuners

Model 2425-S2 Stereo Tuner/Amp

Similar in many ways to Model 2445-S2 in that it has separate AM & FM tuners



with FM multiplex & stereo amplifiers; the following are variations: 15 w./ch. music power; response 20-20,000 cps ± 2 db; dist. less than 2% @ 1 kc. & 12 w. r.m.s.; hum & noise 66 db below 15 w.; has 3 dual inputs (mag. phono, aux., tape amp./monitor) instead of 6; outputs 8 & 16 ohms; FM tuner sensitivity 2.5 μν. for 30 db quieting; image rejection —38 db; distortion below 1.5% @ 100% modulation; does not have tuning indicators; 19 tubes instead of 23; with case — \$269.95 Model 2425-S1 Similar to S2 version ex-

Model 2419 FM Stereo Tuner

Has stereo/mono indicator, multiplex & storecast filters; sensitivity 3 μ v. for 30

cept for front-panel styling......\$259.95



"Imperial 1000" Transistorized FM Stereo Tuner/Amp

25 w./ch. continuous sine-wave; response 9-50,000 cps \pm 1 db, 9-100,000 cps



± 3 db of full output; inputs: ceramic phono (150 nv. sensitivity), mag. phono (1.5 mv.), aux. 5 v., tape monitor 5 v.; 4-8-16 ohm output; FM tuner sensitivity 1.6 μv. for 30 db quieting; dist. less than 5% @ 100% mod.; response 20–15,-000 cps ± 2.5 db; capture ratio 2 db; channel separation 30 db from 20–15,000 cps; image rejection over 65 db; has tuning/stereo indicator meter; all conventional controls; automatic stereo/mono switching; 35 transistors, 18 diodes & 3 nuvistor tubes; Price to be announced.

Model 2441-S1 AM-FM Stereo Tuner

Features twin tuning meters, a.f.c. & multiplex circuitry; FM tuner sensitivity 1.8



μν. for 30 db quieting; selectivity —6 db (2 250 kc.; image rejection —65 db; dist. below 1% (2 100% mod.; response 20—20,000 cps ± .5 db; hum & noise —52 db; AM & FM tuners can be played simultaneously; with case........\$189.95 Model 2421-S1 Similar in design & style to 2441-S1 except is economy version; does not include tuning meters; with case\$159.95

BIGG OF CALIFORNIA

Model AF12-SM FM-AM Tuner/Amplifier

Basic control center with ten inputs and 4 outputs; variable phono load impedance;



Model FB-2M FM Tuner



Same circuit design and performance as FM section of Model AF12-SM.......\$69,95

BOGEN

RP60 AM-FM Stereo Tuner/Amp

Integrated design including dual-channel amplifiers; 30 watts per channel (IHF



music rating); response 20-20,000 cps \pm 1 db; .6% distortion; hum & noise low-level inputs -60 db, high-level -75 db; FM sensitivity .85 μ v. for 20 db of quieting (2.5 μ v. IHF); electronic-eye tuning indicator; stereo headphone output; audio sensitivity low-level inputs 4.5 mv., high-level inputs .5 v.; controls: 6-position selector, 4-position mode, volume, balance, bass, treble, rumble filter, scratch filter, loudness, tape monitor, power, tuning,

RPF60 FM-Stereo Tuner/Amp

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

RP100-BM AM-FM Mono Tuner/Amp

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



RP230 AM-FM Stereo Tuner/Amp

Combines AM, FM stereo, dual-channel preamps & power amps; 15 w./ch. music pow-



er; response 20-20,000 cps \pm 1 db; hum & noise -50 db mag. & tape, -65 db tuner & aux.; FM sensitivity .85 μv . for 20 db of quieting & $3\mu v$. for 30 db of quieting; has electronic-eye tuning indicator; built-in AM & FM antennas; conventional operating controls & inputs; sensitivity 4.5 mv. tape & mag. phono, 5 v. tuner; features time-division type multiplex circuitry & stereo/mono indicator; separation 25 db to 10,000 cps, 20 db @ 10,000 cps & 17 db @ 15,000 cps; 15^{15} in" x 5^{14} " x 15^{m} d.; less cabinet

			· ·		 	 	 \$2	49	.95
Mctal	en	clo	sui	re	 	 	 S	12	.95
Walnut									

TP250 FM Stereo Tuner

Response 30-15,000 cps ± .5 db; distortion .5% at rated output; hum & noise 60



db below 100% modulation; sensitivity .85 μ v. for 20 db of quieting (2.5 μ v. IHF); tuning indicater; low-impedance output; controls: tuning, a.f.c., mode, power; multiplex circuitry is matrixing-type



Tuners



FMX-3 Stereo Multiplex Adapter

Permits fully automatic conversion of FM-1 Dynatuner to stereo operation; fits on tuner chassis; powered by tuner; two tubes and four diodes in doubler system provide 30 db separation; includes dualbeam "Stereocator" tuning eye; dual volume controls for both channels, replacing standard FM-1 components; tuning station automatically switches adapter to stereo or mono operation; tape recorder filters.

EICO

Model ST-97 FM Stereo Tuner

Prewired, pre-aligned front end and i.f. strips; employs wide-band ratio detector;



Model HFT-90A FM Tuner

Sensitivity 1.5 microvolts for 20 db quieting; frequency response 20 to 20,000 cps



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

						,					
Kit							 •••••		 \$	44	.95
Fac	to	ry	v	vire	d		 ******	••••	 \$	69	.95

Cover	 \$3.	.9	15

Model HFT-92 AM-FM Tuner

Combination HFT-90 FM tuner with AM facilities: "eye-tronic" tuning on both AM



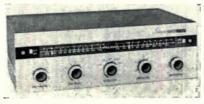
and FM; stabilized low-limiting threshold for weaker stations reception; pre-wired, pre-aligned front end; FM sensitivity 1.5 μv . for 20 db quieting; AM sensitivity 20 μv . for 0.8 volt output with 20 db signal-to-noise ratio; frequency response AM section 20-5000 cps; hum 60 db below 1 volt; AM output 0.8 volt with 20 μv . input 30% modulation AM total harmonic distortion AM section below 2% for 70% produlation

modula	
Kit	\$59.95
Wired	\$94.95

Model HFT-94 AM Tuner

Model ST-96 FM-AM Tuner

Pre-wired, pre-aligned front end shielded in die-cast housing; includes a.f.c., a.g.c.,



tuning eye indicator, narrow and wide AM bandwidth, 10 kc. AM whistle filter; FM section sensitivity, 1.5 μν. for 20 db quieting; FM frequency response 20-15,000 cps; FM output level 1 v. for 5 μν. input, 30% mod.; AM output 1 v. for 3 μν. input, 30% mod.; 157% " x 5" x 14". Has separate AM & FM tuners (kit).....\$89.95 Factory wired and tested......\$129.95

2200 FM Stereo Tuner

Sensitivity 3 μv . for 30 db quieting; stereo sensitivity 3 μv , for synchronization; HD



Factory wired\$1	19.99	5
Metal cover\$	7.50	0
Walnut case\$	19.95	5

2536 FM Stereo Tuner-Amp

18 w./ch. music power, 14 w./ch. continuous sine wave; 4 pairs inputs, 1 low level



pre-wired	δĸ	pre-aligned	in	kit;	se	mi-kit
	•••••				\$1	154.95
Factory w	ired	l			.\$2	209.95
Metal cove	r .	******************			\$	7.50
Walnut ca	se .				Ŝ.	19.95

2715 FM Mono Tuner-Amp

18 w. music power, 14 w. continuous sine wave; 3 inputs, 1 for ceramic/crystal phono



2716 FM Tuner-Amp

ERIC

Model 3357 FM Tuner

Uses wide-band ratio detector; sensitivity 3 µv. for 20 db quieting; variable a.f.c.;



output for multiplex adapter; response 20-20.000 cps; tubes: 2-12AV7, 6BZ6, 6AU6, 6AL5; 13¾" x 4¾6" x 7¾".......\$56.75

Model 3357AF FM-AM Tuner

FM wide-band ratio detector; a.f.c., FM

BURSTEIN-APPLEBEE

BA-240SR-4 AM-FM Stereo Tuner

Integrated design including dual-channel preamps & power amplifiers; 12 watts per



channel; response 20-20,000 cps ± 1 db: harmonic distortion .5% @ 100 cps & 10 watts; IM distortion 2% @ 10 watts; sensitivity 2 µv.; 4-8-16 ohm and high-impedance tape output for each channel; conventional input circuits and operating controls; multiplex channel separation 35 db min. 13 ¼" w. x 4 ½ 15 m h. x 13 m d. \$179.95 Metal cabinet extra \$8.95 Walnut cabinet extra \$14.95

BA-400ST-4 AM-FM Stereo Tuner

FM response 20-20,000 cps \pm .5 db; .5% harmonic distortion; 2 μ v. sensitivity;



multiplex separation 30 db or better; hum & noise 60 db below 100% modulation; AM sensitivity 10 μ v.; response 20-6000 cps \pm 3 db; controls: on-off, a.f.c. on-off, AM or FM, mono/multiplex, tuning; 9 tubes, 8 diodes, 1 silicon rectifier; 13" w. x 9" d. x 4½" h. \$79.95 Metal cabinet extra \$4.95 Walnut cabinet extra \$14.95

BA-700SR AM-FM Stereo Tuner/Amp

Same as Model BA-240SR-4 except has 35 w./ch. stereo amplifier; less cabinet \$219.95 Metal cover extra\$12.95 Walnut cabinet extra\$19.95

CALBEST ELECTRONICS

Model 8150 Stereo AM-FM Multiplex Tuner

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



DE WALD

Model S-803A "Imperial"

AM-FM mono type tuner; FM sensitivity 3 μ v. for 20 db quieting; frequency re-



sponse 20-20,000 cps ± 1 db; a.f.c.; hum 70 db below 1 volt; output 1 volt for 30% modulation; AM sensitivity 75 μ v. loop sensitivity; bandwidth 7000 cps; 7 tubes plus selenium rectifier; black and gold cabinet; 13" w. x 4½" h. x 9" d. ..\$89.95

S-1103A AM-FM Stereo Tuner

Has FM multiplex circuitry; FM sensitivity 3 µv. for 20 db of quieting; response



DYNACO

Model FM-1 FM Tuner Kit

Low-distortion, drift-free FM tuner; etchedcircuit construction; high usable sensitivity;



Model FMA-2 Insert Amplifier

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

Model FM-3 FM Stereo Tuner

Completely integrated design combining FM-1 tuner & FMX-3 multiplex circuitry; etched circuit boards are used throughout; sensitivity 4 µv, for 30 db of quieting at





the ROTRON

Whisper Fan

Beat the heat that wrecks the set by installing a Rotron Whisper Fan Kit. Breathing 60 cubic feet of cool air over, under and around every heat-generating component, the Whisper Fan Improves performance by minimizing drift due to temperature change within the enclosure. Requires only 7 watts, just pennies a week to operate. Measuring only $4\%''_{16}$ " square and $1\%''_{2}$ " deep, it can be set in a corner or mounted on the rear panel in minutes. Comes complete with mounting hardware, plug and cord for electrical connections and installation instructions.



Write for details or see your local dealer.

ROTRON mfg. co., inc. woodstock, New York ORiole 9-2401

CIRCLE NO. 47 ON READER SERVICE PAGE

sensitivity 3 µv. for 20 db quieting; AM sensitivity less than 40 µv.: FM response 20-20,000 cps: tubes—2–ECC85's, 6BZ6; 6AU6, 6AL5, 6BE6: 3-position function switch AM-FM-off; panel design similar to Model 3357......\$72,95

Cabinets

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

Model 3457 MX FM Stereo Tuner

Foster-Seeley discriminator; a.f.c.; FM sensitivity 1 µv. for 20 db of quieting; out-



put voltage .5 v.; response 20-20,000 cps ± 1 db. Has multiplex circuitry...\$119.95

3157MX AM-FM Stereo Tuner

Has built-in multiplex circuitry; separate AM & FM sections; FM sensitivity 3.5 µv.



Model 5760MX AM·FM Stereo Tuner/Amp

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



tuners & multiplex circuitry; indicator light for multiplex reception: FM sensitivity 2 μ v. for 20 db of quieting; response of FM & amplifier 20-20.000 cps \pm 1 db; total harmonic distortion 1% & 8 watts; hum 65 db below full output; output 8, 16 ohms; separate jacks for taping stereo broadcasts; magnetic cartridge sensitivity 4 mv.; 13 ½ " x 45/16" x 12" deep.\$227.40 Without multiplex circuit......\$192.10

FISHER

Model FM-50-B FM Stereo Tuner

ALL-HARDWOOD OILED



FAMOUS
NORELCO 12"
SUPER DELUXE SPEAKER
PLUS BOOKSHELF ENCLOSURE

COMPARE
WITH
10000
SPEAKER
SYSTEMS
95

20-WATTS FULL RANGE

McGee offers the world famous Norelco 12" super deluxe Hi-Fi speaker with the famous twin cone design. Norelco's finest, an improved version of the popular original model 9762M, features an extra heavy Ticonal VII magnet (11,000 gauss). The twin cone assures the finest audio reproduction at 20 watts (30 watts peak) from 35 cps to 18,000 cps. Voice coil impp—8 ohms. Compares with \$60.00 to \$90.00 American made speakers. McGee offers this 12" Norelco speaker with a fine quality hard wood bookshelf enclosure (oiled walnut finish on 3 sides, may be stood on end) for only \$39.95. 24" long 14" high and 11½" front to back, all 34" thick acoustical wood found in only the high priced cabinets. Acoustically ported to make the Norelco speaker sound its best. McGee sale price \$39.95, matched pair for stereo \$78.00. Shipping weight 29 lbs. (Not mailable, shipped by truck or express collect) Stock No. BS-120-5200M.

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CIRCLE NO. 27 ON READER SERVICE PAGE CIRCLE NO. 5 ON READER SERVICE PAGE



Tuners

Model FM-100-B FM Stereo 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 ± 1 db; rated output 2 volts; harmonic distortion .5%; 10 tubes total plus diodes and bridge-type selenium rectifiers \$249.50 cm...\$249.50

Model FM-200-B FM Stereo Tuner

Has multiplex circuitry; features six i.f. stages; five limiters; sensitivity .5 µv.; six



Model R-200 AM-FM Stereo Tuner

Multiplex design based on time-division system with automatic stereo/mono switch-



ing; FM usable sensitivity 1.6 μv. (IHF) 300 ohm line with 100% modulation; response 20-15,000 cps ± 1 db; harmonic distortion less than .15% at rated output of 2 volts; AM tuner sensitivity 5 μv.; 15 tubes, 15 diodes, one bridge-type selenium rectifier; controls: tuning, stereo filter, selector, muting, AM bandwidth, FM-antenna; has "Stereo Beacon" indicator and tuning meter; 15½" w. x 13" d. x 4½16" h.; less cabinet.......\$299.50

Model 400 FM Stereo Tuner/Amp

30 w./ch. music-power control amplifier with multiplex circuitry & "Stereo Beam"



—a stereo/mono indicator light; sensitivity 1.8 μv. for 30 db of quieting & 100% mod.; signal-to-noise ratio 70 db; selectivity (alternate channel) 60 db; image rejection 57 db at 100 mc.; HD less than .5%; separation 35 db @ 1000 cps; amplifier IM dist. .8% @ 26 w./ch.; over-all response 25–25,000 cps ±1 db; input sensitivity for 12.5 w./ch.: phono low 4.4 mv., phono high 14 mv., table head 2.8 mv., aux. 280 mv.; has conventional controls, input, output & tuning

Model 500C FM Stereo Tuner/Amp

37.5 w./ch. music-power control amplifier with multiplex circuitry & "Stereo Beacon"



(indicates stereo/mono program & automatically switches to stereo or mono operation); sensitivity 1.8 μ v. for 30 db of quieting; signal-to-noise ratio 70 db; selectivity (alternate channel) 60 db; HID .5%; amplifier IM dist. .7% @ 17.5 w.; over-all response 25–25,000 cps ± 1.5 db; channel separation @ 1 kc. 50 db; input sensitivity for rated output: phono 3.3 mv., tape head 2.5 mv., aux. 230 mv.; employs time-division mutiplex circuitry; has conventional operating controls, inputs & outputs: $17\frac{1}{2}$ x $5\frac{3}{4}$ " x $13\frac{1}{2}$ " d.; less cabinet......\$389.50

Model 800C AM-FM Stereo Tuner/Amp

Similar to Model 500C but with addition of AM tuner; less cabinet......\$449.50

Model FM-1000 FM Stereo Tuner

Studio Standard Series; features built-in multiplex circuitry; 1.5 μv . sensitivity;



Model KM-61 FM Tuner

Usable sensitivity (1HF) 1.8 μ v. (1.2 μ v. for 20 db of quieting); harmonic dis-



MF-300 Remote Control FM Stereo Tuner

Features a remote control for station tuning; "Tune-O-Matic" uses a center-of-



channel detector, synchronous motor with gear train; tuner has "Stereo Beacon", a stereo/mono indicator light; supplied with 40' cable & remote-control station selector unit (RK-10); transmitter-receiver Model RK-20 is optional equipment (not supplied) and is used to remotely control both volume-"on-off" & tuning; tuner performance same as FM-200B; 15½" x 41¾6" x 13" d.; less cabinet \$359.50 RK-20 Wireless remote control.....\$129.50 RK-15 Wired remote accessory unit: controls volume, tuning, & "on-off"; each station \$14.95 MF-320 Includes wireless remote control, MF-300 tuner, and one-piece control panel in walnut cabinet.........\$513.95

Model KM-60 "Stratakit" FM Tuner

Design is kit version of Model KM-61 FM multiplex tuner; multiplex adapter is pre-



wired; less cabinet; kit.....\$169.50

GROMMES

101M FM Stereo Tuner

Has multiplex circuitry and "Stereo Sentry," a stereo bar tuning indicator; sensi-



tivity 1 μv . (2 μv . 1HF); response 20-20,000 cps \pm .5 db; IM and harmonic distortion .5% at 100% modulation; hum & noise 60 db b-low 100% modulation; multiplex design is balanced diode bridge switching circuit; separation 30 db or better; controls: tuning, mono, stereo; tubes: 6DS4, 3-6DT8, 3-6HS6, 6EU7, 6BN6, 6FG6 plus 7 diodes and silicon rectifier; 14" w. x 4½" h. x 11" d..........\$139.95 Enclosure\$7.50

102M AM-FM Stereo Tuner

502M AM-FM Stereo Tuner-Amp

Combines AM, FM, FM multiplex circuit with preamps and dual power amplifiers



(10 watts/channel continuous sine-wave); power bandwidth 30-20,000 cps at half power and 3% harmonic distortion; response 20-20,000 cps ± 1 db @ 1 watt; 5% harmonic & 2% lM distortion @ 1000 cps and 10 watts; sensitivity FM 4 μν. (IHF), AM 10 μν., high-level inputs 25 ν., low-level inputs 1 mv.; has 18 tubes, 9 diodes; conventional operating controls; 14" w. x 5" h. x 13" d......\$199.95 Enclosure\$7.50

500M AM-FM Stereo Tuner-Amp

Combines AM, FM, FM multiplex circuit with preamps and dual power amplifiers



HARMAN-KARDON

Citation IIIX FM Stereo Tuner

Includes FM multiplex circuitry; sensitivity .65 μv . for 20 db of quieting, -1.65



 μ v. (1HF); response 1-52,000 cps \pm .5 db; distortion less than .1% at 100% modulation; wide-band Foster-Seeley type discriminator; controls—on-off, loudness, a.f.c. on-off, interchannel muting, tuning, local/distance switch; includes balance and level tuning meters; response of multiplex circuit 10-15,000 cps \pm ½ db; channel separation -30 db from 10 to 15,000 cps; 14% " x 6" x 12½" d.; has stereo/mono indicator light.

Kit		\$230.00
Factory	wired	\$315.00
Walnut	enclosure	\$ 29.95

Model T300X AM/FM Stereo Tuner

Integrated design including AM, FM, and multiplex circuits; for FM-.95 μv . for 20



Model TA3000X "Recital II"

Complete combination AM/FM tuner with FM multiplex, stereo amplifier and preamplifier; 15 watts music power per channel; response 15-70,000 cps ±1 db at normal listening level; hum 80 db below rated power; less than 1% distortion at 12 watts/channel output; 7408 output tubes;

FM sensitivity 3.2 μ v. (IHF); .95 μ v. for 20 db of quieting; response 10-35,000 cps ± 1 db; distortion less than .1% at 100% modulation; has wide-band Foster-Seeley solid-state detector and defeatable a.f.c.; response of multiplex adapter 15-15,000 cps ± 1 db; AM tuner response 20-5000 cps ± 2.5 db; sensitivity 80 μ v. per meter;



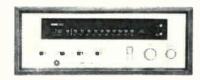
Model TA7000X AM/FM Stereo Tuner/Amp

Combines AM & FM tuner with FM stereo & dual-channel preamps & power amps;



Model F50XK FM Stereo Tuner

Built-in multiplex adapter; sensitivity 2.8 μ v. (IHF) or .85 μ v. for 20 db of quiet-



ing; response 10-52,000 cps ±1 db; distortion less than .1% at 100% modulation; on-off switch; FM/FM stereo switch; local/distance switch; a.f.c. defeat switch; tuning control; incorporates balance tuning meter and stereo indicator light; 15¼" w. x 5¾e" h. w 12" d.

Kit \$129.95

Metal cabinet. \$12.95

Walnut cabinet. \$29.95

Model F500X FM Stereo Tuner

Model F-10 "Tempo" FM Tuner

Model FA-10 "Sonata" Tuner-Amp.

Combination FM tuner and 10 watt amplifier; tuner has Armstrong circuit with limiter and wide-band discriminator, a.f.c., cascode r.f. section; sensitivity: 2.5 µv. for 20 db quieting; selectivity. 200 kc. bandwidth, 6 db down; drift ±5 kc. maximum; image rejection: 40 db; i.f. rejection: 70 db; distortion less than 1% harmonic and IM standard 75 microsecond de-emphasis 60 db below 100% modulation; radiation within FCC requirements; amplifier frequency response 45 to 20,000 cps ±1 db at 10 watts; less than 1% harmonic and less than 2% IM distortion at 10 watts; hum on phono input 60 db below 10 watts; bass and treble controls allow 12 db boost or cut at 50 and 10,000 cps; damping factor: 5; phono input sensitivity 4 millivolts at 1 kc.; 3-position loudness contour; RIAA record equalization, NAB tape equalization for 7½ 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.............\$119.95

Model FA30XK FM Stereo Tuner/Amp Kit

15 w. music power per channel (12 w. sine wave) at less than 1% dist.; response 15-



Model F1000T Transistorized FM Stereo Tuner

Features interchannel muting circuit with threshold adjustment and front-panel defeat switch; tuning meter; time-switching type multiplex circuit; printed-circuit construction and automatic stereo/mono selector (works automatically depending on stereo or mono program being transmitted); sensitivity 2 µv. for 30 db of quieting: image rejection 60 db; response 5-53,000 cps ±¾ db (without 38 kc. notch filter); dist.



Tuners

less than .1% at 100% mod.; signal-to-noise ratio 60 db at 100% mod.; front-panel con-



trols: a.f.c. defeat, interchannel muting, stereo defeat sw., 3-pos. (local-suburbandistance) sw. & "on-off"; rear-panel control: interchannel muting & automatic stereo signal threshold adjustments; 18 transistors, 8 diodes; 14½6" x 3¾" x 8" d.....\$299.95 Walnut cabinet......\$19.95

HEATH

Model AJ-11 AM-FM Tuner

FM sensitivity 2.5 μ v. for 20 db quieting; AM output 1 volt for 750 μ v. input; har-



Model AJ-12 FM Stereo Tuner

Features FM multiplex circuitry, stereo indicator light, phase control, adjustable a.f.c.,



Model AJ-21 AM Tuner

Model AJ-31 FM Tuner

Monophonic design; convertible to stereo by addition of AC-11 multiplex adapter; has



Model AJ-32 AM-FM Stereo Tuner

Features FM multiplex circuitry; stereo phase control; stereo indicator light; vari-



able a.f.c.; printed-circuit construction; filtered output; Built-in antennas; front end is pre-assembled & pre-aligned; FM output 1 v.; image ratio -45 db; HD less than 1%; i.f. rejection -65 db; response 20-20,000 cps \pm 1 db; a.f.c. correction factor 100 kc./v.; AM suppression -27 db; hum & noise -48 db; sensitivity 3.5 μ v. for 30 db of quieting; has cathode-follower outputs (kit) \$89.95

Model AJ-41 Tuner Kit

Complete AM, FM, FM stereo; features stereo indicator light; separate AM and



KARG

"Tunematic" XT-1A FM Tuner

Sensitivity 2 microvolts for 20 db quieting on 300 ohm input; frequency response 15 to 30,000 cps ± 0.5 db, including de-emphasis; i.f. bandwidth 180 kc. flat top, 240 kc. at 6 db points; IM distortion 0.5% maximum at 100% modulation; crystal-controlled oscillator with separate crystals for receiving each of up to 12 stations; tuning accuracy within .025% of correct carrier frequency at any combination of line voltage and temperature from 95 to 135 volts and -55° to 90° C; inputs: balanced 300 ohms, 75 ohm coaxial, internal antenna; outputs: 3-volt cathode follower, 0.3-volt (adjustable) 600 ohm line; 0.3-volt multiplex; tubes are ECC88, 6AU8A, 2-6BZ6, 6BN6, 6AU6, 12AU7. and 2-1N2092, 2-CK705 diodes; 16" w x 5½" h x 5½" d (in metal enclosure), 17" w x 7" h x 7¾" d (in wood cabinet); includes

metal cabinet and mounting accessories. Twelve-channel model......\$229.95

Model FMX-9 FM Stereo Tuner

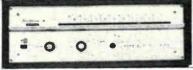
Has 9" slide-rule dial; tuning indicator; background signal filter; a.v.c. switch;



stereo indicator light; stereo-mono-standby switch; sensitivity 2.2 μν. (IHF) or .8 μν for 20 db of quieting; response 40-15,000 cps ± 1 db; harmonic distortion under 1.5%; multiplex channel separation 33 db; 5" h. x 15%" w. x 5½" deep.

SCT-3 FM Stereo Tuner

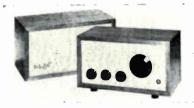
Features automatic stereo signal indicator, automatic stereo/mono switching; sensitiv-



KLH

Model Eight FM System

Complete FM receiving system housed in two walnut cabinets, each measuring



10% "w. x 5% "h. x 6% "d.; one section consists of tuner-amplifier, other contains wide-range speaker system; jacks are provided to permit use of tuner section with other equipment and for addition of multiplex adapter; walnut only\$159.00

Model Eight MX Multiplex Decoder/Amp

Completely transistorized; combines dual-channel preamps and power amp with FM multiplex decoder; designed for use with Model Eight FM system to provide FM stereo reproduction; separate inputs for magnetic cartridges and tape recorder; operating controls: function, volume, treble, switch for audible tone which indicates stereo reception; Model Eight AS speaker unit must be used to complete system: walnut cabinet; 7½"w. x 6½"d. x 6½"h.

Model Eight PR Preamp

Transistorized preamp measuring 4"x2½" x2½"; permits playing of tape recorder or record changer with magnetic cartridge through KLH Model Eight FM-amplifier system......\$19.00

Model Eight AS Speaker System

KNIGHT

KN-255 Transistor AM-FM Stereo Tuner

16 transistors, 8 diodes, 1 selenium rectifier; FM sensitivity 2 μν. for 20 db of quieting;



KN-265 Transistor AM-FM Stereo Tuner

17 transistors, 8 diodes, 1 selenium rectifier; FM sensitivity 2 μv . for 30 db of quieting;



KN-360 AM-FM Stereo Tuner/Amp

30 w./ch. music power; 20 tubes, 8 diodes & 7 rectifiers; response 20-20,000 cps ± 1

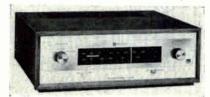


db; hum & noise down 75 db on tuner & amplifier; down 60 db on magnetic & tape; a.f.c.; stereo phono jack; stereo indicator light; controls: program selector, mode selector, volume, balance, bass-treble, low filter, high filter, loudness, tape monitor, output selector, on-off tuning; less case \$\frac{2740}{2740}\$

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Walnut of	ase\$	23.95
Metal cas	e\$	12.95

KN-245 AM-FM Stereo Tuner

9 tubes, 8 diodes, 1 silicon rectifier; FM



KNIGHT-KIT

Model KG-35 FM Tuner

FM tuner kit with printed circuitry; sensitivity 4 µv. for 30 db of quieting (IHIF);



output 2 volts at 1000 μv . input; i.f. bandwidth 200 kc.; distortion less than 0.6%; output jacks for amplifier and tape recorder; cathode-follower main output; output for stereo multiplex adapters. Features prealigned r.f. and i.f. coils. Has 3-position selector switch (on-off, FM, and FM with a.f.c.).

83YX408-	-KG-35	5 (kit)	\$35.9	5
83YX019	Metal	case	\$ 4.9	5
83YX018	Wood	case	\$ 9.9	5

Model KG-50 AM-FM Stereo Tuner

FM sensitivity 3 μv . (1HF) for 30 db of quieting; ratio detector; separation 30 db;

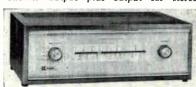


response 50-15,000 cps; hum and noise 40 db below 1 volt; ferrite loop antenna; has cathode-follower outputs on AM and FM.

Kit\$69.95

Model KG-65 AM-FM Tuner

Tuned r.f. stage on FM; a.f.c.; cathodefollower output plus output for stereo



multiplex adapter; flywheel tuning; builtin ferrite antenna; time saving printedcircuit boards; neon-glow dial pointer; sensitivity 4 µv. for 30 db of quieting (1HF); 3 µv. sensitivity for 10 db signalto-noise ratio on AM; response 20-20,000 cps; tubes: 6AN8; 6BE6, 6BA7, 12AT7, 2—6AU6, ECC82/12AU7, 6AL5; 6X4 rectifier.

83YX315-	-KG-6:	5 (kit)\$-	19.95
83YX019	Metal	case\$	4.95
83YX018	Wood	case\$	9.95

Model KF-90 AM-FM Stereo Tuner

Built-in stereo multiplex circuitry; stereo separation control; dual limiter-discrimi-



nator; a.f.c.; 10-kc. AM whistle filter; cathode-follower outputs; magic-eye tuning

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Tuners

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

83-YU-914 (kit)\$99.95

KU-45A AM-FM Stereo Tuner/Amp

All-in-one unit consisting of AM-FM multiplex tuner and 32-watt stereo ampli-



fier; a.f.c.; pre-aligned front end; separate bass and treble controls; tape head input; two aux. inputs; magnetic phono input; stereo/mono switch; power output 16 watts per channel; output 4-8-16 ohms, plus 8-16 ohm center-channel output; satin gold and mocha panel; 4¼" x 16½0" x 13"; less case.

15 , 16.0 64561	
83Y752 KU-45A Kit\$1	39.95
Wood case\$	14.95
Metal case	7.95

KG-70 Transistor AM-FM Stereo Tuner

Factory aligned front end and i.f. strip; positive a.f.c., a.g.c., and multiplex indi-



cator; 13 transistors, 14 diodes; t.r.f. FM front end; IHF antenna sensitivity 2 for 30 db of quieting; response 20-20,000 cps; hum and noise 60 db below 1 volt (kit)\$99.95

LAFAYETTE

Model KT-650 FM Tuner

Sensitivity 1.25 μ v. for 20 db of quieting; response 15-35,000 cps ± 0.5 db; output



1.75 volts \pm 75 kc. deviation (100% modulation); distortion and noise better than 57 db below 1.5 volts; variable a.f.c.; low impedance output; tuning bar; tubes: 1–ECC85, 1–6BK7B, 2–6BA6, 2–7543, 1–6A15, 1–6AV6, dileased in the control of the control 7543, 1-6AL5, 1-6AV6, silicon-diode rectifier.

KT-650	(Kit)\$54.50
LT-650	(Assembled)\$79.95

Model KT-500A AM-FM Tuner Kit

AM-FM tuner kit with independent AM and FM sections for stereo use;



Armstrong FM circuit; sensitivity: FM. 2 microvolts for 30 db quieting; AM, 5 microvolt terminal sensitivity; a.f.c. with defeat provision; tuning eye; frequency response: FM, 20 to 20,000 cps ±0.5 db; AM, 20 to 5000 cps ±3 db; harmonic distortion under 1% on FM, under 1% on AM for up to 80% modulation; hum 60 db below 100% modulation; harmonic distortion was a constant of the second tuning the second tuning tuning the second tuning tu lation; bandwidth: FM, 200 kc, 6 db down; AM, 8 kc, 6 db down; i.f. rejection: FM, 70 db; AM, 50 db; image rejection: FM. 40 db; AM, 30 db; FM drift: drift: ±5 kc max; AM whistle filter; 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; 13¾" w x 10¾" d x

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

LA-226C AM-FM Stereo Tuner-Amp

Combination AM-FM tuners, stereo multiplex circuitry, dual preamps, 20-watts/



channel power amplifiers; tuning meter & stereo multiplex indicator light; sensitivity 3.5 μ v. for 30 db of quieting; includes a.f.c. defeat switch and noise filter switch; amplifier response 20-20,000 cps ±2 db; less than 1.5% harmonic distortion; complete preamp facilities regarding input circuits and operating controls; comes complete with enclosure; 17½" x 5¼" x\$189.95

LT-81C FM Stereo Tuner

Sensitivity 2 μv , for 20 db of quieting: HD 1%; channel separation 30 db.; re-



sponse 20-20,000 cps ± .2 db; has mode selector switch (power, FM, stereo, filter) and a.f.c. on-off switch; 13½" x 9½" x 5 % "; includes enclosure......\$76.50

LT-78C AM-FM Stereo Tuner

Freq. response 20-20,000 cps; i.f. bandwidth 200 kc.- 6 db; channel separation 30 db @ 400 cps; hum -60 db; HD 1%:



sensitivity 2 µv for 20 db of quieting; has variable a.f.c. control; tuning indicator; automatic stereo monitor; 14½" x 5" x 9½" d.; with cabinet.....\$93.95

LEAK

"Trough-Line II" FM Tuner

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



output; sensitivity 1.5 µv. for 20 db quieting: multiplex output. Has a total of 9 tubes \$149.00

MARANTZ

Model 10-FM Stereo Tuner

Has multiplex feature, unique oscilloscope tuning indicator, and all i.f. alignment ad-



justments have been completely eliminated; tube changes and component aging will not detune i.f.; sensitivity 2 μ v. for 40 db of quieting; total system noise figure 7 db; harmonic distortion, input to output, less than .5%; front panel 15¾" x 5¾"; chassis 14¾" w. x 5¼" h. x 15" d. \$555.00

West Coast price.....\$565.00

McINTOSH

MR65B FM Stereo Tuner

Usable sensitivity 2.5 µv. at 100% modulation (IHF); response 20-20,000 cps



.5 db; distortion less than .59 100% modulation; output approx. 2.5 @ low impedance; multiplex circuit peakdetecting, self-matrixing detectors; includes front-panel light as stereo indicator; tuning and signal strength meters; controls: volume-mode selector, a.f.c. muting; front panel 15%" x 5\%" with chassis depth of 12316".\$329.00 Cabinet extra.....\$ 25.00

MR67 FM Stereo Tuner

Features nuvistor tube for 1st r.f. stage: a stereo program indicator light; multi-



path signal indicator; signal-strength indicator; station tuning indicator; response 20-20,000 cps $\pm \frac{1}{2}$ db; usable sensitivity better than 2.5 μ v. @ 100% modulation (3% total noise & distortion); i.f. bandwidth 200 kc. flat top response (-3 db at 200 kc.); dist. less than .5% @ 100% modulation \pm 75 kc. deviation; capture ratio 1.7 db @ 100% modulation; hum better than 70 db below 100% modulation; hum better than 70 db below 100% modulation; output 2.5 v.; channel separation 30 db @ 1000 cps; peak-detecting, self-matrixing multiplex circuit is used; 16" x 5⁷16" x 13" d.\$299.00 Cabinet extra.......\$25.00

MX110 FM Stereo Tuner/Preamp

Combines FM tuner with multiplex circuitry and stereo preamp; tuner sensitivity



MI-2 Multi-path/Tuning Indicator

To be used with an FM tuner to detect & display multi-path signals; by rotating or



repositioning FM antenna, multi-path distortion can be reduced; also can be used as tuning indicator; a 3" cathode-ray tube is heart of unit; 15%" x 51%" x 11½" d. \$219.00 Cabinet extra. \$25.00

NATIONAL

Model 1000 AM-FM Tuner Kit

Armstrong FM circuit with Foster-Seeley discriminator; sensitivity: FM, 5 microvolts for 30 db quieting; AM 25 microvolts; a.f.c. with defeat provision; frequency response; FM, 20 to 20,000 cps ±0.5 db; AM, 20 to 8000 cps ±3 db; distortion: less than 1% on FM; bandwidth: FM, 200 kc.; AM 8 kc.; hum level:



Model 1100 FM Tuner Kit

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

OLSON ELECTRONICS

Model RA-524 FM Stereo Tuner

Has built-in tuning meter, a.f.c.; wideband detector; dual limiters; response 20-



OMEGA

Model 1650 FM Stereo Tuner

Sensitivity (1HF usable) 1.8 mv.; channel separation 33 db; distortion 0.4% max.;



response 15-30,000 cps ± 0.5 db (Toral FM Broadcast Spectrum); hum -60 db; output signal (100% modulation) .8 v.; drift .01%; input, antenna 300 ohms balanced, 75 ohms coaxial; built-in indoor antenna; "Visual Vector" transistor-operated tuning indicator; controls: power switch, a.f.c. switch, quieting threshold control, output level control, local/distant control with indicator light, stereo noise filter with indicator light, tuning indicator, stereo broadcast indicator; 28 transistors, 3 silicon power rectifiers, 1 zener diode voltage regulator, 1 silicon variable capacitance diode & 18 signal diodes; 3" x 15½" x 9" d. \$298.50 Cradle cabinet (oiled walnut).......\$ 16.00 Panel mounting ring (chrome)......\$ 9.95

Model 1850 FM Stereo Tuner

PACO

ST-55MX FM Stereo Tuner

Features a.f.c. & tuning eye indicator; sensitivity 2 µv. for 20 db quieting; HD less



than 1% from 20-20,000 cps; bandwidth over 200 kc.; separation 30 db; supplied less cabinet; $15\frac{3}{8}$ " x $11\frac{3}{8}$ " x $5\frac{3}{8}$ ".

Kit with pre-aligned multiplex circuitry \$109.95 Semi-kit with pre-aligned multiplex, r.f., i.f. and discriminator circuits.......\$139.95 Factory assembled, with enclosure...\$159.95 Matte finish metal enclosure....\$7.95

ST-55 FM Tuner

Similar in design, size, and appearance to Model ST-55MX, except does not have multiplex circuitry; less enclosure; kit...\$69.95 Semi-kit with r.f., i.f. and discriminator sections pre-aligned, less enclosure......\$79.95 Factory assembled with enclosure.....\$99.95

MXP Multiplex Conversion Kit

Multiplex circuitry to convert Model ST-55 FM tuner to stereo operation; designed for installation on chassis of ST-55; kit....\$39.95

ST-25MX FM Stereo Tuner

Features Compactron tube in multiplex section; has 1 v. output; a.f.c.; eye tube tuning



ST-25 FM Tuner

ST-26 FM Tuner/Amplifier

Features a.f.c., eye type tuning indicator; phono input & output jack for an external



multiplex adapter; HD 1.5% @ 1 kc.; 4 to 8 ohm output impedance; response 60-15,000 cps \pm 2 db @ 1 w. output; tuner sensitivity 1.5 μ v. for 20 db of quieting; image ratio 40 db; 13" x 8%" x 3%"; front end pre-aligned; less cabinet; kit \$54.95 Factory wired, less cabinet. \$69.95 Metal enclosure. \$4.95 Walnut enclosure. \$14.95

PILOT

Model "Mark III" FM Tuner

Sensitivity 4 μv .; harmonic distortion 1% at 100% modulation; response 20-20,000





Tuners

Model 280B Stereo Tuner

Same as Model "Mark III" except has multiplex circuitry; channel separation 30



db; has additional control: stereo in/out; supplied with enclosure; 5" x 11 1/4" x 9 1/4" \$99,95

Model 780 Stereo Tuner

Sensitivity 1.8 μν.; harmonic distortion .2% at 100% modulation; response 20-



Model 285 AM-FM Stereo Tuner

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



FM selectivity 24 db; electric-eye used as tuning indicator; AM sensitivity 10 μ v.; supplied with enclosure; has stereo indicator light; $5\frac{1}{8}$ " x $14\frac{1}{8}$ " x $9\frac{1}{8}$ "....\$159.50

Model 610 FM Stereo Tuner/Amp

12 watts per channel (IHF); response 10-30,000 cps ± 1 db; harmonic distor-



Model 602MA FM Stereo Tuner/Amp

15 watts per channel (1HF); response 10-40,000 cps \pm 1 db; harmonic distortion 1% (1HF); hum level -80 db;



4-8-16 ohms. center-channel, tape outputs; input sensitivity: mag. phono 12 mv., mag. phono 3 mv. (can be used for tapehead playback), tape recorder 110 mv.; FM sensitivity 3 μ v.; capture ratio 4 db; response 20-20,000 cps \pm 1 db; harmonic distortion at 100% modulation 1%; tuning-eye indicator; automatic FM stereo indicator; 51% x 14% x 111%; with cover\$249.50

Model 654MA FM Stereo Tuner/Amp

Same as Model 602MA except power output is 30 watts per channel (IHF); harmonic distortion is 1% (IHF); rumble and scratch filters added; 12¹⁵16" d.; with cover\$329.50

Model 602SA AM-FM Stereo Tuner/Amp

Design same as Model 602MA except has added AM tuner; AM sensitivity 3 μv .;



AM tuning-eye indicator; 14% deep; with cover\$299.50

Model 746 AM-FM Stereo Tuner/Amp

30 watts per channel (IHF); response 10-40,000 cps ± 1 db; harmonic distor-



RCA

MX-7 AM-FM Stereo Tuner/Amp

Built-in multiplex circuitry; 15 w./ch. continuous sine-wave (20 w./ch. music pow-



er); features balance control, tuning meter, stereo program indicator; nuvistor FM tuner; surge limiter; tape monitor; local/distance sensitivity switch; a.f.c. switch; dual AM & FM operation; optional remote con

REALISTIC

Model TM-8 AM-FM Stereo Tuner

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



Model STA-50 AM-FM Stereo Tuner/Amp

Model FM-3 Tuner

Armstrong circuit with tuned r.f., doubletuned limiter, triode mixer; sensitivity 2



Model T-4 AM-FM Tuner

Model STA-7 FM Stereo Tuner/Amp

Features built-in multiplex circuitry for stereo reception; tuner section—sensitivity 2.5 μν. for 30 db quieting, grounded-grid



r.f. stage; ratio detector; amplifier section -12 watts per channel, response 20-20,000 cps ±1 db, distortion (at full rated output) less than 1% at 400 cps, hum -52 db mag. phono, -72 db aux., sensitivity 850 mv. aux., 4 mv. mag. phono; 14 tubes (11 dual-purpose); output impedances 4, 8, 16 ohms.....\$119.95

Model TM-214 FM Stereo Tuner

Features built-in multiplex circuitry for stereo reception; sensitivity 2.2 μ v. (IHF) standard, 1.3 µv. for 20 db of quieting; three i.f. stages; three limiting stages; a.g.c.; harmonic distortion less than .5% at 100% modulation; signal-to-noise ratio 70 db mono, 50 db stereo; AM suppression 30 db with 2.8 µv. into 300-ohm antenna; drift .02% from cold start; anode-follower outputs, two for tape, two for audio; 11 tubes plus rectifier and matched germanium diode detectors; designed for maximum attenuation of subcarrier and pilot carrier in the output to eliminate distortion when tape recording; 300-ohm bal-anced antenna input; 15½ "x5% "x1116"; 20 lbs; wired......\$99.00 Kit\$69,00

H. H. SCOTT

Model 350C FM Stereo Tuner

Usable sensitivity 2.2 μv .: includes built-in multiplex section; 80 db rejection spurious



response; 6 db capture ratio; switchable a.g.c. for maximum quieting in multiplex reception; special circuitry to eliminate whistles when making tape recordings; subchannel noise filter reduces noise on subchannel without affecting system's frequency response; stereo noise filter reduces noise without affecting stereo separation; has meter-type tuning indicator and "Sonic "Sonic Monitor" stereo indicator; Type "C" case extra\$224,95

Model 333B AM-FM Stereo Tuner

Separate FM and AM tuners; could be used for FM-AM simulcasts; FM usable



sensitivity 2.5 µv.; capture ratio 6 db; response 30-15,000 cps ± 1 db; signal-tonoise ratio 60 db; harmonic distortion .8%; sensitivity 1 μ v. for 20 db of quieting; tuning meter, subchannel noise filter for multiplex; switchable a.g.c.; "Sonic Monitor" stereo program indicator; 15½" w. x 5¼" h. x 13¼" d.; Type "C" case extra\$274.95

LT-111 FM Stereo Tuner Kit

1964 EDITION

Identical to Model 370B except supplied in kit form; HD .8%; response 30-15,000 cps; separation 28 db; capture ratio 8 \$119.95

Model 370B FM Stereo Tuner



Usable sensitivity 3.5 μv .; tuning indicator; "Sonic Monitor" stereo program indicator;

Model 340B FM Stereo Tuner/Amp

Combines FM tuner, multiplex circuitry, dual-channel amplifier system; FM tuner



section same as that used in Model 350C; usable sensitivity 2.2 μ v., 1 μ v. for 20 db of quieting; capture ratio 6 db; response 30-15,000 cps \pm 1 db; signal-to-noise ratio 60 db; harmonic distortion .8% mcter-type tuning indicator; subchannel noise filter for multiplex; power amplifier 35 watts per channel (IHF music power); response 20-20,000 cps \pm 1 db; harmonic distortion .8%; preamplifier section has 4 stereo inputs, rumble filter scratch filter, separate bass and treble, tape monitor, subsonic cut-off; loudness control; sensitivity for phono or tape head $3\mu v$.; powered center-channel output for direct connection to loudspeaker; derived center-channel output; front-panel headphone output with speaker/ earphone switch; phase reverse; 17½ " x 6¼ " x 16¾ "; Type "G" case extra \$399.95

380 AM-FM Stereo Tuner/Amp

Same as Model 340B except has additional



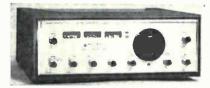
AM tuner circuitry; less cabinet....\$459.95

Enclosures

Type "C	" metal	enclosure.		\$13.95
Type "C	" wood	enclosure,	walnut	or ma-
hogany				\$24.50
Type "G	" metal	enclosure.		\$17.95
Type "G	" enclos	sure, walnu	it or ma	ihogany

Model 4310 FM Stereo Tuner

Usable sensitivity 1.9 μν.; signal-to-noise ratio 60 db; harmonic distortion .5%; re-



30-15,000 cps (limit of 1HF standard of measurement) ± 1 db; capture ratio 2.2 db; sensitivity .75 μ v, for 20 db of quieting; subchannel noise filter for multiplex; switchable a.g.c.; relay-activated squelch; noise filter; automatic program indicator. Features 3 separate meters, tuning meter, right & left channel level indicators\$475.00

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ZONE_	STATE
	ZONE



Tuners

Model LT-110 FM Stereo Tuner

Usable sensitivity 2.2 μ v.; capture ratio 6 db; special circuitry to permit flawless tape



recording; multiplex section pre-assembled and pre-aligned; stereo noise filter and subchannel noise filter same as Model 350B; all wires pre-cut to correct length; tube sockets, terminals, etc. are pre-riveted at factory; 15½" x 5½" x 13½"; Type "C" case extra.

Kit\$164.95

310E FM Stereo Tuner

Features time-switching multiplex circuitry; automatic stereo/mono switching; tuning



meter; stereo/mono program light indicator: interstation noise suppressor using an electronically controlled mechanical relay with threshold level control; usable (IHF) sensitivity 1.9 μν.; signal-to-noise ratio 65 db below 100% mod.; HD .5%; response 30-15,000 cps ± 1 db; capture ratio 2.2 db; separation 30 db; has conventional operating controls; 15½" x 5½" x 13½" d.; less cabinet................\$279.95

4312 Transistorized FM Stereo Tuner

Features time-switching multiplex circuitry; interstation noise suppression; automatic

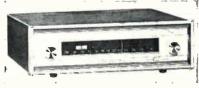


stereo/mono switching; usable sensitivity (IHF) 1.9 μ v.; signal-to-noise ratio 65 db; HD .5%; response 20-20,000 cps \pm 1 db; capture ratio 2 db; separation 30 db; tuning meter; 28 transistors, 22 diodes & a 4-nuvistor tube front-end; 17½" x 6½" x 16¾" d.; less cabinet......\$365.00

SHERWOOD

Model S-3000 V FM Stereo Tuner

Has 11 tubes plus rectifier; circuitry same as S-2100 II except AM circuits are omitted;



14" x 4" x 10½" d.; less case......\$165.00 With leatherette case......\$172.50

Model S-3000 III FM Tuner

Similar in appearance to S-3000 V; adaptable for FM stereo multiplex with insertion (internally) of A-3MX multiplex adapter; circuitry same as S-3000 V FM section; 14" x 4" x 10½" d.; less case.......\$110.50 With walnut leatherette case......\$118.00

S-2100 II AM-FM Stereo Tuner

Features stereo indicator light; low-distortion FM multiplex circuitry; FM interchan-



Model S-2000 IV AM-FM Tuner

Has 12 tubes plus rectifier; circuitry same as S-2100 II except multiplex circuits omitted; 14" x 4" x 10½" d.; less case.......\$160.50 With walnut leatherette case.......\$168.00 Also available mounted on 5¼" or 3½" rack panel\$168.00

Model S-7700 80-watt AM·FM Stereo Tuner-Amp.

Features interchannel hush; tuning indicator; stereo indicator light; source indica-



S-8000 III FM Stereo Tuner-Amp.

Similar to S-7700 except AM circuit omitted; has zero-center tuning meters instead of tuning eye and a.f.c.; less case...\$319.50 With walnut leatherette case.....\$329.00

TEECO

Model "Corsair 289" FM Tuner

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



ity 2 μ v. for 30 db of quieting; hum 55 db below 100% modulation; has a.f.c. de-

feat switch; tubes: 2—12AT7, 6CB6, 6HS6, 6AL5 plus selenium rectifier; 9¼" x 6½" x 4¾16".....\$ 56.60

Model MXT286 FM Stereo Tuner

Has stereo indicator light and automatic stereo/mono reception if desired; controls



are: separation, balance, sterco/mono, a.f.c. & tuning; response 15-15,000 cps \pm 1 db; sensitivity 2 μ v. for 30 db of quieting; separation 30 db.\$121.95

Model 292 AM-FM Tuner

Similar in performance to "Corsair 289" except has additional AM tuner; has built-in antenna; tubes: 2-12AT7, 6CB6, 6BA6, 6BE6, 6AL5, plus selenium rectifier. 10%" x 8¾" x 4¾6"......\$ 82.50

Model 294 AM-FM Tuner-Amp.

Mono design; 15 w. @ 2% dist.; 4-8-16 ohm output; response 40-20,000 cps; sensitivity FM tuner 2 μ v./30 db quieting; has built-in antenna; a.f.c.; input jack for ceramic phono cartridge 12%" x 9¾" x $4^{11/6}$ "\$133.25

Model MXR290 AM-FM Stereo Tuner-Amp.

Performance similar to Model MXT286 FM stereo tuner with Model 2225 15 w./ch. amplifier; has additional AM tuner; 15½" x 7316" x 12" d........................\$234.50

Model MXR299 AM-FM Stereo Tuner-Amp.

Performance similar to Model MXR290 except 10 w./ch. amplifier is used; 14½" x 4½" x 10½" d.....\$180.60

V-M CORP.

1465-2 AM-FM Tuner

FM stereo and FM-AM tuner; response FM 20-20,000 cps $\pm \frac{1}{2}$ db; sensitivity



FM 10 μ v. for 20 db of quieting; distortion less than 1% harmonic on FM: 5% "h. x 13½" w. x 12" d..................\$112.00

1467 AM-FM Stereo Tuner/Amp

Combination AM-FM tuner, FM stereo & dual (4 w./ch. music power) audio ampli-





Multiplex **Adapters**

CALBEST ELECTRONICS

Model MXA 614 Multiplex Adapter

Self-powered; separation 30 db from 50 to 15,000 cps with wide-band tuners; 25



db with narrow-band tuners; less than 1% HD; has automatic mono-stereo switch-

DE WALD

Model P400 Multiplex Adapter

Has "on-off" switch, stereo blend, and mono/stereo operating controls; self-pow-



ered with cathode-follower outputs; 4¼" h. x 9¼" w. x 3%" d......\$57.95

EICO

Model MX-99 FM Multiplex Adapter

Free from phase-distorting filters; designed to required suppression of all spuri-



ous 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 5 volts p-p; self-powered; provides automatic stereo/ mono operation; includes low-impedance cathode-follower outputs; lamp indicates when station is broadcasting multiplex stereo; separation 30 db between channels; over-all gain of unity is provided from input to output on both mono and stereo, about unity on mono; for use with company's Models HFT-90, HFT-92, ST-96 and any other component-quality ratiodetector FM tuners equipped with multiplex output; includes cathode-followerdriven 15 kc. sharp cut-off low-pass filters at each output; 91/8"x63/8"x37/8"; less cover.

Kit\$39.95 Wired\$64.95 E-9 cover.....\$2.95

ERIC

Model MX600D Multiplex Adapter

Fully automatic design; response 50-15,-000 cps ± 1 db; channel separation 30



stereo indicator light is automatic; 6D10 compactron, 6EW6, 2-1N67 tubes and 1 diode; 4¾" w. x 4¾" h. x 8½" d.\$59.95

FISHER

Model MPX-100 Multiplex Adapter

For use with any tuners or receivers having a multiplex output; "Sterec



Beacon" indicates if station is broadcasting stereo; selector switch for mono/stereo; self-powered; 4%" x 141316" x 12"; less cabinet\$119.50 Walnut or mahogany cabinet......\$14.95

Model MPX-200 Multiplex Adapter

Designed for use with all high-quality FM tuners and receivers; may be concealed in



any out-of-the-way space near the component; special control for matching to any tuner or receiver to be set only at time of original installation; standard connecting cables terminating in pin-plugs on both ends; 12" w. x 4" h. x 3½" d.......\$79.50

GENERAL ELECTRIC

Model MA2G Multiplex Adapter

Self-powered, two-tube design; response 50-15,000 cps ± 3 db; gain 1± 3 db; separation 20 db at 1000 cps; input signal 1 to 2 volts r.m.s.; input impedance 2 1 to 2 voits r.m.s.; input impedance megohns & 50 $\mu\mu$ f.; output impedance 12,000 ohns; hum and noise -60 db; 10" 1. x 2½" w. x 3" h......\$39.95

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tested with 3 heads; and controi electronics, stereo record,
and stereo play-hack pre-amplifiers in easy-to-assembly kit
form.



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reg. 2.75, now 1.79

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Multiplex Adapters

HARMAN-KARDON

Model MX500 Plug-In Multiplex Adapter

Designed for the company's Models F500. ST360A, ST360, and ST350 FM tuners \$39.95

Model MX600 Snap-On Multiplex Adapter

Designed for company's stereo receiver Models TA230, TA224, and TA260: adapter snaps on to rear of chassis out of sight and adds only 1½" to depth of receiver; draws power from receiver 449.95

Model MX700 Self-Powered Adapter

Citation IIIMA Adapter

SLK-3 Stereo Indicator Light

Designed to provide visual stereo indication for the "Citation III"......\$10.00

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-11A Black......\$24.95

Model AC-11A Black......\$24.95 Model AC-11B Tan.....\$24.95

KARG

Model MX-3 Multiplex Adapter

KNIGHT-KIT

Model KS-10A Multiplex Adapter

For adapting any Knight-Kit tuner without built-in multiplex for FM stereo



KG-12 Deluxe Multiplex Adapter

Front-panel stereo indicator lights automatically on multiplex broadcasts; frontpanel separation control for optimum stereo effect; compatible with most wideband tuners; self-powered; noise filters; tape recording filters; function switch



(power off, mono, stereo, filter); response 50-15,000 cps ± 1 db; channel separation 30 db. Model KG-12 (kit).....\$29.95

KORTING

Model 23911 Multiplex Adapter

Completely transistorized, 117 v. operation; designed for use with any FM stereo tuner; channel separation 35-50 db; 5½" x 3½" x 1½"....\$39.95

LAFAYETTE

Model LT-200WX Multiplex Adapter

Model KT-200 Multiplex Adapter Kit

Self-powered economy design; has two slide switches noise limiter on-off and



power; separation 30 db @ 400 cps; distortion below 1%; can be remotely located in hi-fi system; tubes: 12AU7, 6BN8, 12AX7, and silicon rectifier; coils are pre-aligned, simplifying construction \$19.50 LT-220 Factory wired.....\$39.95

PACO

Model MX100 Multiplex Adapter

Pre-aligned kit; designed for use with all FM tuners; response 15-15,000 cps ± 1



db; output level 1.5 v.; front panel controls: switch for stereo/mono; dimension control; noise-filter switch; four tubes plus two diodes; 9" w. x 8½" d. x 3½" h. \$49.95

Factory wired \$69.95

PILOT

Model 100 FM Multiplex Adapter

Self-powered, single control (slide switch) design; if your tuner or amplifier selector switch has "multiplex" position, adapter switch is left in "in" position, otherwise switch is manually operated; two tubes

plus rectifier; can be used with any FM tuner; 5" x 3" x 12".....\$49.50

Model 120 FM Multiplex Adapter

Model 200 FM Multiplex Adapter

REALISTIC

Model MPX-215 Multiplex Adapter

Completely self-powered; response 50-15,000 cps ±3 db; selector switch, stereo



balance control on front panel; adapts all Realistic tuners manufactured since 1958; hum & noise -60 db; crosstalk 20 db @ 1 kc.; power and stereo-receive pilot lights on front panel; 7¾"x4¾"x6"; wired \$21.95

SHERWOOD

Model S-3MX FM Multiplex Adapter

Self-powered adapter designed to work with virtually all hi-fi FM tuners; features



Model A-3MX FM Multiplex Adapter

Plug-in multiplex adapter for use with



Sherwood Model S-3000 III FM tuner \$49.50

TEECO

Model 285 FM Multiplex Adapter

HOW TO SELECT AN FM TUNER



OONER or later the owner of a high-fidelity system must decide whether to purchase an FM tuner. By this time, he may have a substantial number of records and tapes, but his choice of program material is still limited by his own recorded library. FM stations offer a wide variety of program material. The average "good music" FM station has a library of upwards of 5000 records with new recordings being added weekly. Such a record library is far in excess of the collections which most music lovers are able to accumulate (and house) throughout a lifetime. In addition, there are a number of live or prerecorded programs which are not available on commercial discs. Also, station record libraries often contain out-ofprint items which are no longer available from any source but are programmed occasionally. The serious music listeners can tape programs of interest from an FM broadcast and thus enlarge his own collection. This is a major source of program material for the audiophile's own tape library.

Station programming is the determining factor as to what kind of tuner to buy. At the present time there are approximately 1100 FM stations on the air and over 200 of these broadcast stereo programs. The number of stereo stations is increasing by more than 10 stations a month while existing stereo FM stations are increasing their stereo broadcast schedules as more and more stereo program material becomes available.

The owner of a monophonic high-fidelity system should select a normal mono tuner if he has no intention of converting his system to stereo. The owner of a stereophonic system may also consider the purchase of a monophonic tuner with the intention of converting it to FM-stereo at a later date by adding a multiplex stereo adapter. This approach should be made cautiously since the manufacturer of his tuner may not have a suitable adapter available when the time comes. It should be remembered that an FM tuner and the multiplex adapter must be matched for optimum performance. Certain manufacturers recommend that their adapters be used only with tuners of their make.

This difficulty can be avoided by buying an FM multiplex tuner that combines a monophonic FM tuner with a multiplex stereo section on a single chassis. Here matching is accomplished automatically.

Whether to buy a monophonic tuner or a stereo FM tuner is only the first decision which must be made. The next problem is to select among the many available models in each category. The various tuner specifications and

other data obtained from magazine reviews, friends' and hi-fi dealer salesmen's recommendations should be assembled for preliminary selection. This material still requires sifting since if one must consider cost, there are economical tuners available that will perform satisfactorily in given areas. On the other hand, a more costly tuner will invariably provide better results under all conditions of reception.

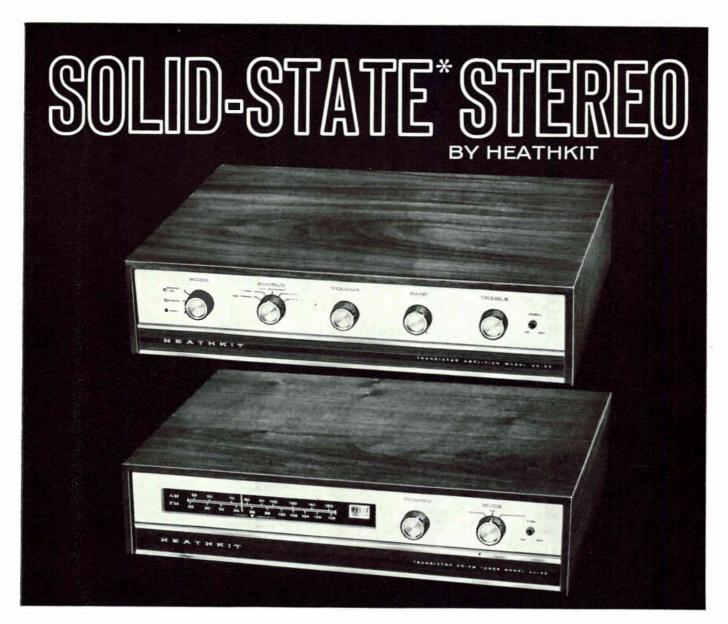
For example, if the tuner is to be used for reception of local stations only, the sensitivity rating is completely unimportant, since signals of a strength between several hundred and several million microvolts are available. Obviously the best signals will be obtained using an outdoor antenna installed at locations less than a mile or two from the transmitter. An indoor antenna located in a steel and concrete building will yield as little as one one-hundredth of this signal voltage because the signal is shielded by the building.

When stations located between 15 and 50 miles away are to be received, the rated tuner sensitivity is of small concern for monophonic reception but of more importance in stereophonic reception. A good, directional outdoor antenna, preferably with a rotator, will improve reception in all cases. With installations of this type, tuner sensitivity becomes an important factor.

The method by which tuner sensitivity is rated is also of importance. For example, it is very difficulty, without further measurements, to decide whether or not tuner A, rated at 1.5 microvolts for 20 db signal-to-noise ratio, is actually better than tuner B, rated at 2 microvolts for 30 db signal-to-noise ratio, or tuner C, rated at 2.5 microvolts for 30 db quieting, is the best.

To eliminate such confusion, in 1958 the Institute of High Fidelity issued the IHF Tuner Standard which, among many other characteristics, specifies the method of rating monophonic sensitivity in FM tuners. This standard is followed by most tuner manufacturers and assures the user of a uniform yardstick for measuring rating. Under IHF conditions, distortion cannot be higher than 3%. In practice, if a tuner has a 2.5 microvolt IHF sensitivity rating, a signal twice that large (or 5 microvolts) will provide listenable monophonic audio output with approximately 50 db signal-to-noise ratio. A signal 15 times larger than 5 microvolts (or 75 microvolts) is needed to insure comparable stereo quality.

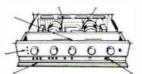
Stations more than 50 miles away require a tuner of good sensitivity. Present-day, high-quality tuners exhibit sensi-



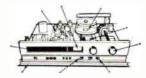
*Solid-State—a term used to refer to germanium or silicon transistors which are of a solid crystalline structure as opposed to vacuum tubes which are evacuated glass bottles containing various fabricated wire structures.

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tivities which are very close to the maximum possible limit. Calculation shows this sensitivity to be a little under 2 microvolts over the 88-108 mc. FM band. It is impossible for a tuner to exceed a sensitivity of 1.5 microvolts over the whole FM band.

To receive very weak signals satisfactorily, a high-gain antenna must be used. Antenna location and the quality of such an installation are of prime importance since moving an antenna as little as one foot can produce drastically different results. Weak signals fluctuate considerably and fade in and out due to atmospheric conditions and reflections from airplanes. Under these conditions, the performance differences between a 2-microvolt and a 2.5-microvolt tuner may be indistinguishable because signal strengths will vary 20 db or more.

It should be remembered that when reception of monophonic signals is marginal, stereo reception can only be worse, ranging between fair and totally unsatisfactory under these conditions.

The touchiest job for a tuner is to pull in weak signals in the presence of strong local signals. This condition is likely to become even more severe in the future because the FCC has authorized local stations in many areas to increase their power up to four times as well as permitting additional local stations to go on the air.

Strong local signals can overload a tuner causing multiple spurious image signals to blanket the signal from desired weak stations. If weak stations are to be received in the presence of strong local signals, the tuner's cross-modulation rejection and selectivity ratings are more important than rated sensitivity. These ratings are included among tuner specifications published by many companies. The higher the ratings, the better the tuner.

All tuner performance specifications are important. In addition to those already discussed, the following are important:

AM Rejection: This indicates the tuner's ability to reduce distortion and noise due to multipath signal conditions and other interference. A figure of more than 40 db is desirable for high-quality listening.

Detector Bandwidth: Indicates a tuner's ability to operate with low distortion although not tuned accurately and shows the tuner's ability to reject interference in both mono and stereo modes. A bandwidth of several times the channel bandwidth of a station (200 kc.) is required for satisfactory listening.

Capture Ratio: This is a monophonic specification which, again, shows the tuner's ability to reject interference from a station located on the same frequency as the desired station. The lower figure, in general, indicates better performance.

Distortion and Frequency Response: This should be equal or better than that of the broadcast station. Three percent distortion should not be exceeded at any audio frequency with either mono or stereo signal, and frequency response should be within ± 1 db between 50 and 15,000 cps, the station's limit on frequency response.

Separation: This indicates how good a stereophonic signal is produced by the tuner. It should be at least 20 db between 100 and 8000 cps for adequate listening and may be as high as 30 db between 50 and 15,000 cps, the station's limit of performance.

The purpose and functioning of the various components of a high-fidelity music system are generally quite clear to the owner of such a system. Of all such components it is the FM tuner which is least (Continued on next page)

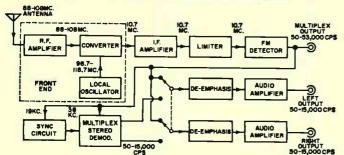
How An FM Tuner Operates

Anyone who has hooked up a high-fidelity music system is familiar with the block diagram. Here a turntable, with its arm and cartridge, may be represented by one block, which is then connected to the amplifier which is shown as a second block. The amplifier itself is then connected to one or more loudspeaker systems which, in turn, comprise a third block. By the same token, an FM tuner connected to the amplifier could be thought of as a block. To explain how an FM tuner works it is necessary to take this one FM tuner system block and break it down into the individual blocks which comprise the FM tuner as a whole. Fig. 1 below is such a tuner block diagram.

Here the FM signal is picked up by the antenna then amplified in the r.f. amplifier which is tuned to the station frequency. The mixer or converter mixes this amplified r.f. signal with a local oscillator signal to create the intermediate frequency. Usually the local oscillator operates at a frequency which is 10.7 megacycles higher or lower than the carrier frequency of the station selected, thereby creating an intermediate frequency of 10.7 megacycles. In many tuners, these three blocks together form a separate sub-assembly, the "front end".

This 10.7-megacycle intermediate frequency is further amplified in the i.f. amplifier sections. Since an FM station varies its carrier frequency with modulation but not its carrier amplitude, a frequency-sensitive detector, usually a discriminator or ratio detector, is used to convert the station's frequency variations into its original modulation components. In order

Fig. 1. Black diagram of a typical FM stereo tuner.



to remove incidental amplitude modulation, noise, and other forms of interference, a limiter circuit is connected between the i.f. amplifier output and the detector.

One of the major output signals from the detector is the audio modulation of the FM station. In order to obtain the proper frequency response, a de-emphasis network on its output reduces signals above 2.1 kc. at a rate of 6 db per octave. This compensates for the corresponding boost or pre-emphasis which the FM station applies to its modulation. The result is flat, over-all frequency response. With the addition of an audio amplifier or cathode follower, the block diagram of a monophonic FM tuner is now complete.

For reception of stereophonic FM signals, stereo adapter circuitry is connected to the detector's output which converts the monophonic audio signal from the station and the supersonic stereo information, with help from the "pilot" or synchronizing signal as transmitted by the station, into left and right audio signals.

The stereo modulation transmitted by an FM station is, in part, an audio signal, audible to the monophonic listener, consisting of the sum of the left and right audio channels at the FM station. The difference between the left and right audio channels amplitude-modulate a 38-kc. carrier which, in turn, frequency-modulates the transmitter of the FM station, thus producing the other part of the stereo modulation. The 38-kc. component is suppressed in the amplitude-modulating process and a 19-kc. "pilot" or synchronizing signal is transmitted instead. This permits the stereo tuner to separate the composite stereo modulation into the left and right audio signals.

When the stereo demodulator circuit treats the supersonic

When the stereo demodulator circuit treats the supersonic signal and audio signal separately and then performs an electronic addition and subtraction function to obtain left and right outputs, this is known as the matrix system.

When the stereo demodulator treats the composite signal as a whole rather than as separate audio and supersonic signals, this demodulator is known as time division multiplex. This latter method is now preferred by many tuner designers, although the original matrix system is also capable of excellent results, but requires more care in adjustment.

De-emphasis networks on the outputs of the stereo demodulator and separate audio amplifiers or cathode followers complete the block diagram of a stereo tuner. A switch then selects between the stereo and mono circuitry of an FM tuner, thereby making both stereo and mono operation possible. understood. Although often described in great detail in the instruction manuals accompanying an FM tuner, this component is worth investigating before the tuner is purchased. For those interested in a semi-technical analysis of tuner operation, refer to Fig. 1.

On the face of it, an FM tuner has a simple job to do. It has to select the desired station so that clean reception with low noise and distortion results. The tuner should also reject interference. How this is done is more complicated.

Any shortcomings of the front end, such as susceptibility to overload or poor sensitivity cannot be compensated by succeeding circuitry. Front ends are often built on a separate sub-chassis and contain between two and four tube sections (or one or two dual tubes). Higher quality tuners generally incorporate more tube sections. The output voltage of the front end is generally more than 50 microvolts and may be as high as several volts. It will also contain not only the desired tuned signal, but also a number of signals near to it in frequency, all converted to signals on the order of 10.7 megacycles.

The i.f. amplifier has to amplify the desired signal further and reject others. For this purpose, two or more stages of amplification are generally used, involving a minimum of three double-tuned i.f. transformers for proper selectivity. High-quality tuners may use more stages of i.f. amplification and more i.f. transformers.

To remove residual amplitude modulation and to obtain true FM performance, one or more limiters are used ahead of the detector. If a ratio detector is used for this purpose, this provides an additional stage of symmetrical limiting. Grid-leak-type limiters are also used with good results. The best limiters usually involve double diodes and gated-beam tubes which act as symmetrical limiters.

Two basic types of FM detectors are to be found in high-quality FM tuners. One is the Foster-Seeley discriminator. This type of detector does not perform any limiting function and therefore a limiter stage has to be added. The ratio detector does not require such a stage. In addition, the ratio detector has a lower internal impedance which makes it more readily adaptable to the supersonic frequencies found in multiplex broadcasts.

The bandwidth of the limiter-detector system will determine how well the tuner is able to discriminate against interference. The greater the detector bandwidth, the better the discrimination. This, in turn, will also improve

the capture ratio. Furthermore, a wide-band detector has inherently less distortion than a narrow-band detector, because the signal uses only a small portion of the linear characteristic of the detector. In addition, a wide-band detector makes tuning easier because, even though the signal may be on the attenuation slope of the i.f. circuitry, it is still within the linear range of the detector.

A number of conveniences have been built into many stereo tuners which permit the listener to tell when a station broadcasts stereo. Some tuners use lights, others tuning eyes, while still others have audible tones actuated by a special switch. They work with varying degrees of success depending upon the care taken in their design. When using an audible tone as an indicator, this tone also permits fine tuning of the stereo signal, since the purest tone indicates most accurate tuning. Here the ear serves as the discriminator between signal and interference. Another type indicator actuates a light when a 19-kc. pilot signal is present and noise is absent. This type of indication requires more complex circuitry. A refinement is to have the mono-stereo switching function take place automatically when the pilot signal is transmitted by the station.

All of these stereo indicators fall down on the job when a station broadcasting stereo fails to turn off its pilot signal when broadcasting mono program material. Here the ear is still the best judge. If the stereo indicator shows a stereo broadcast but the ear can hear only a mono signal, then it is a monophonic broadcast.

Similar conveniences exist for the monophonic listener. For example, squelch circuits permit tuning without interstation noise. Another convenience is the possibility of connecting two or more tuners together, each tuner operating with a separate antenna system so that when fading or airplane flutter conditions exist only the best available signal appears at the common audio output. In addition, tuning eyes or meters facilitate tuning. In more elaborate models vu meters are used to indicate the modulation level of the station. A further refinement is the availability of noise filters permitting the reception of mono or stereo broadcasts with improved signal-to-noise ratio when receiving conditions are marginal.

Convenience features are fine for the user, but how well the tuner does its primary job is the most important feature to consider—since enjoyable hi-fi listening is dependent on performance and reliability of equipment.

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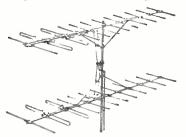
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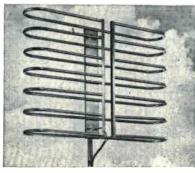
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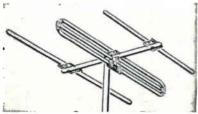
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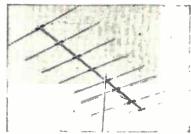
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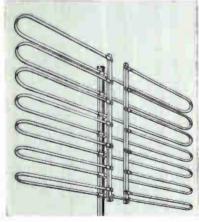


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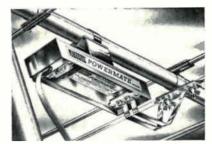
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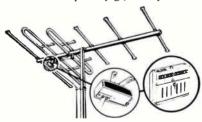
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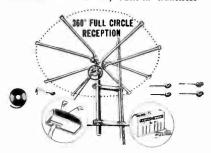
AFM100G Antenna Kit

"Stereo-Cone" antenna with roof mount; includes misc. hardware; 50 feet of 300-ohm twin-lead; for all-new installations \$15.95

AFM150G Antenna Kit

Gold-alodized "Stereo-Cone" antenna including misc. hardware; for existing TVantenna installations.......\$11.95

TNTFM175G "Stereo-Cone" Antenna Electronic gold-abdized "attach-it" alldirection FM antenna; built-in transistor-



ized amplifier with a.c.-powered supply; four FM-set distribution system; for up to 100 miles; includes necessary hardware; 50 feet of 300-ohm twin-lead........\$47.95

AFM175G Antenna Kit

Same as Model AFM150G but includes 50 feet of 300-ohm twin-lead plus additional hardware \$13.95

AFM200G Folded Dipole Kit

AFM250G Dipole Antenna

Gold-alodized stereo folded dipole and reflector antenna only......\$8.60

AFM325G Yagi Antenna

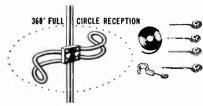
TNT106FM Booster

AFM350G Yagi Antenna

Gold-alodized six-element wide-spaced yagi for fringe FM areas.....\$23.50

AFM450G "S" Antenna

Gold-alodized stereo all-direction "S" kit



for existing TV-antenna installations \$6.95

AFM475G "S" Antenna

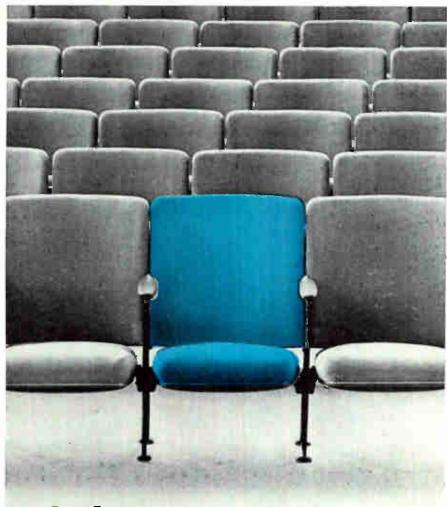
Gold-alodized deluxe stereo all-direction kit for existing TV-antenna installations

Log-Periodic FM Antennas

Harmonically resonant V-elements operating on log-periodic cellular principle; pro-



vides frequency-independent gain and di-



the best seat in the house...

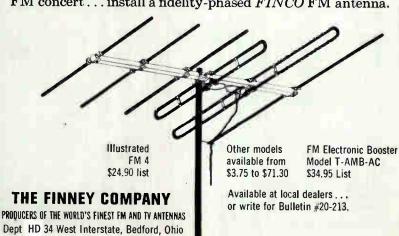
... and it's right in your living room if your FM is equipped with a

FINCO® AWARD WINNING FM ANTENNA

Broadcasting authorities agree that an outdoor antenna is absolutely essential for the reception of full quality monaural and multiplex FM sound.

A FINCO FM antenna will deliver a clean undistorted signal and bring in more stations, regardless of location.

Guarantee yourself the best seat in the house for tonight's FM concert...install a fidelity-phased FINCO FM antenna.





rectivity; gold-alodized aluminum construc-

Model FMLPL4 Four "L" cell log-periodic type; suitable for FM coverage up to 60 miles

Model FMLPL6 Six "L" cell log-periodic type; suitable for FM coverage up to 100 miles.

Model FMLPL8 Eight "L" cell log-periodic type: suitable for FM coverage up to 150 miles.

AFM650G Yagi Antenna

Gold-alodized stereo ten-element widespaced yagi for deep fringe FM areas \$32.50

GC ELECTRONICS

Fringe Master FM Deluxe



Broadband T-match, 300-ohm design; covers 88-108 mc. & has 8 "solid sembled" elements\$14.10

Fringe Master FM Standard



Broadband yagi, 300-ohm design; covers 88-108 mc. & has 8 "solid sembled" elements\$11.97

TACO

Model 615 Bi-Directional Yagi

Bi-directional yagi for stereo multiplex reception; designed especially for locations where signals are desired from two approximately opposite directions......\$12.95

G626-A "S" Antenna

Omnidirectional S-type for installation on existing mast; gold anodized; designed for



KG262-A mounting kit including antenna, 50' lead-in, stand-off & 3 stand-off insula-KBG626-A mounting kit including antenna, 1" x 4' gold iridited bi-mount, 50' lead-in, support legs & stand-offs.....\$12.50

610 Ten-Element Yagi

Similar to 644B but with gain of 8-91/2 db. Silver aluminum.....\$30.70 Gold anodized.....\$36.70

650 Dipole Reflector Antenna

Folded dipole with reflector for medium to

low signal-strength areas......\$7.50 650M includes antenna & 1 ¼ " x 5' aluminum mast......\$9.75

GC677M Turnstile Antenna

Omni-directional (360°); for metropolitan areas; gold permanized finish......\$10.95 KC677M mounting kit including antenna, 5' x 1'4" aluminum mast, guy wire, 50' lead-in, base mount, guy anchor.....\$17.95

644B Six-Element Yagi

For fringe & multi-path problem areas; has high gain & broadband coverage; gain over

Silver aluminum.....\$21.20 Gold anodized.....\$26.20

WINEGARD

SF-8 FM Antenna

High-gain, directional FM and FM stereo antenna for deep fringe and fringe area reception; average gain of +8 db across entire FM band; v.s.w.r. of 1.25:1 assures good impedance match; sharp directivity, high front-to-back ratio with absence of interfering side lobes; gold anodized elements with iridized hardware.....\$23.65

AP-320 Stereotron Amplifier

FM antenna preamplifier designed to boost the signal by a minimum of +18 db; two 13CW4 nuvistors are used; mounts directly on driven element of antenna; built-in twoset coupler and a.c. receptacle on power supply; 300 ohms in and out.....\$39.95

AP-375 Stereotron Amplifier Same as Model AP-320 but 75 ohms in and out for use with coax cable......\$44.95

FM3A "Turnstile"

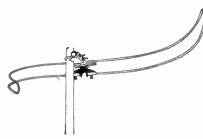
Non-directional FM antenna for local and primary reception areas; gold anodized elements; complete kit includes antenna, universal roof mount with leak-proof fasteners; 50' of 300-ohm twinlead; and all mounting hardware.....\$18.95

FM3T Offset "Turnstile"

Antenna only; same as Model FM3A but with offset mount; up to four bays can be stacked without using stacking bars \$12.55

FR-1K FM "Ranger" Antenna

Non-directional FM antenna for local and primary reception areas; gold anodized ele-



ments and iridized hardware; offset mount for easy installation on mast with TV antenna or on separate mast; wrap-around mast clamp; complete kit includes antenna, 50' 300-ohm twinlead, and 3 stand-offs

RD-300 "Red-Head" Amplifier

Transistorized FM antenna preamplifier for fringe areas; designed to boost signal by an average of +18 db; fully protected against damage due to lightning flashes, static discharges, and power line surges; v.s.w.r. better than 1.5:1; mounts on any antenna, mast, or side of house; built-in two-set coupler; housed in red polystyrene case\$29.95

CA-FM Coupler

Designed to couple a TV and an FM antenna on the same mast with a single downlead and to split the signal to run separate lines to the TV and FM sets; TV & FM are isolated from each other; insertion loss .5 db on TV and 1 db on FM; housed in waterproof high-impact polystyrene case; can be mounted with stainless steel bracket or mounting screws provided.....\$4.50

TR2-13 General-Purpose Trap

Designed to attenuate any selected frequency in the v.h.f. TV-FM bands for the purpose of eliminating interference without affecting adjacent frequencies; can be used to attenuate strong local TV station overriding a weak FM station; consists of three independent traps which together cover entire v.h.f. TV-FM spectrum; any trap can be used individually or in conjunction with the others; housed in waterproof high-impact polystyrene case; can be mounted on mast or inside; 300 ohms in and out.....\$7.50

Model FR-1

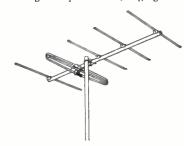
Antenna only, same as Model FR-1K \$6.95

K2-FM Antenna

FM directional antenna for local and suburban reception areas; ideal for use with a rotor for close-in areas; factory pre-assembled; has wrap-around mast clamp \$5.05

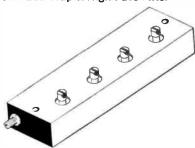
K5-FM Antenna

FM directional antenna for primary and near fringe reception areas; high-gain 5-



element yagi; ideal for use with a rotor; factory pre-assembled; has wrap-around

TR7-213 Trap & High-Pass Filter



Similar to Model TR2-13 but 75 ohms in and out for use with coax cable......\$19.95

EC-230 Color-Coupler

Transistorized two-set coupler designed to split signal to run separate lines to TV and FM sets without signal loss; minimum of +7 db gain provides enough signal for each



outlet, even in deep fringe areas: each outlet isolated from the other by 15 db; can also be used for two TV or two FM sets; mounts on wall.....\$17.95

Why did Sherwood zero-in on the problem of tuning accuracy?



It takes wider bands to broadcast the multiple information for stereo FM multiplex, and the most precise "dead-on-center" tuning to receive it . . . with maximum stereo separation and minimum distortion.

This is why in the new S-3000 $\[mu]$ Tuner, Sherwood engineers incorporated a professional zero-centered tuning meter. Superior to tuning eyes, better than peak meters, it uses the same D'Arsonval meter needed to design, align and test FM tuner circuits. When the meter reads "zero"... you're right on. No guesswork. No maybe's.

Gain three tuning advantages

- Tune accurately, the first time.
- Tune low-power Class "A" stations interspaced between more powerful broadcasts.
- Tune with professional surety.

Added value features of the S-3000 ▼

- Stereo Indicator Light: identifies stereo broadcasts.
- Superb sensitivity: $1.8\mu v$ (IHF) for -30db. noise and distortion.
- No background noise: pace-setting 2.4db. capture effect.
- FM Interchannel Hush: suppresses between-station noises.
- Flywheel tuning: smooth as silk.
- 20% longer dial scales: professional accuracy.
- Price: \$165.00. (Leatherette case optional at \$7.50.)

S-3000 V FM Stereo Multiplex Tuner with professional zero-centered tuning meter and Stereo Indicator Light.



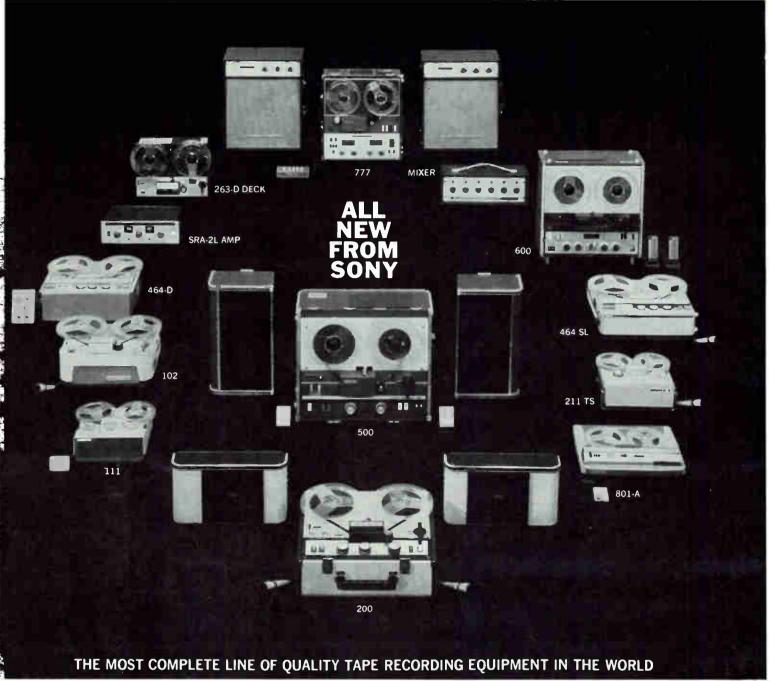
New S-8000 III FM Stereo MX Receiver. Combines above tuner features with an 80-watt stereo amplifier. Price: \$319.50. (Leatherette case optional at \$9.50.)

Prices slightly higher in the Far West.

Sherwood-

Stereo Receivers • Tuners
Amplifiers • Stereo Indicator Lights
Speaker Systems • Contemporary Cabinetry

For complete information write Dept. E-64, Sherwood Electronic Laboratories, Inc., 4300 North California Ave., Chicago 18, III.



■ Sony Sterecorder 777 S—Professional, all transistorized 2 or 4 track stereo/mono tape recording system featuring remote control and the exclusive Sony Electro BiLateral head system. World's finest tape recorder. Less than \$695. ■ Sony Amplifier! Speaker System SSA 777—All transistorized, 10 watt, extended range 8" infinite baffle hi fidelity speakers created to produce perfect, full-sound re-

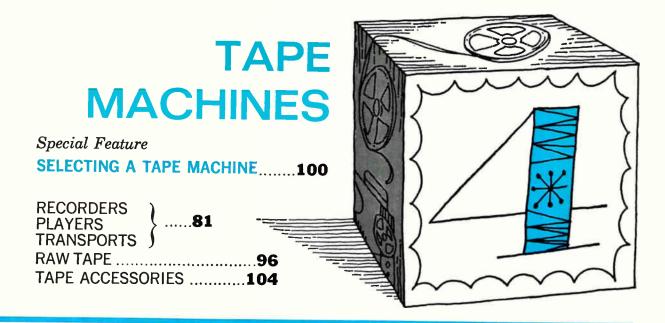
production with the 777 S. Less than \$175. - Sony Stereo Mixer MX 777 - For advanced recording techniques, this alltransistorized, battery-powered 6 channel stereo/mono mixer is the perfect accessory to complete the 777 professional system. Less than \$175. Sony Stereo Tape Deck 263-D - Add tape to any sound system with this 4 track stereo playback tape transport. 3 heads, 2 speeds, vertical or horizontal operation. Less than \$119.50. • Sony Stereo Recording Amplifier SRA-2L - All the facilities for adding stereo recording to the 263-D unit. Less than \$99.50. Sony Sterecorder 464-D Deck -2 speed, 4 track, stereo/mono, record/playback compact tape deck with built-in pre-amps. Ideal for custom installation. Less than \$199.50. Sony Portable Tapecorder 102-Rugged 2 speed, dual track, hi fidelity recorder with deluxe features and 7" reel capacity satisfies the most exacting recording requirements. Less than \$129.50. Sony Tapecorder 111-A popularly priced, high quality bantam recorder for everyday family fun. Less than \$79.50. Sony Sterecorder 200 - The most compact and lightweight quality 4 track tape recording system on the market today. Carrying case lid separates into

NOW ON DISPLAY

AT YOUR FRANCHISED SONY / SUPERSCOPE AUDIO/TAPE DEALER 2 full range speaker systems. Unequalled for performance and price. Less than \$239.50. • Sony Sterecorder 500—A complete 4 track stereo/mono tape system with unsurpassed studio quality. The full range, infinite baffle detachable speaker systems integrate into the recorder lid, and separate 15 feet for optimum stereo effect. Less than \$399.50. • Sony Battery-Operated Executive Portable 801-A

-A distinctively styled, transistorized, 2 speed all purpose recorder of utmost precision and quality. For the executive desk or portable use. The self-storing mike features a remote stop and go switch. Tape it with you for less than \$250. - Sony 'Slide-Sync' Tapecorder 211-TS - Incredibly versatile, serves the photo enthusiast with an exclusive, automatic built-in 'programmer' to activate a slide projector in 'sync' with your own recorded narration. Also the most compact tape teaching recorder available. Less than \$129.50. Sony Tape Teaching Recorder 464-SL - A deluxe language and music teaching aid, 2 speed, 4 track, stereo and mono. Less than \$219.50. Sony Sterecorder 600-3 heads, tape and source monitoring, sound on sound, vertical or horizontal operating, this 4 track stereo recording and playback unit is perfect for professional quality home installation, Less than \$450. • Also available. an extensive line of professional studio quality microphones and accessories. All Sony Sterecorders are Multiplex Ready! For detailed literature and name of nearest franchised tape dealer write Superscope, Inc., Dept. 37, Sun Valley, Calif.

IN NEW YORK, VISIT THE SONY SALON, 585 FIFTH AVENUE.



AMERICAN CONCERTONE

Model 505 Series Tape Recorder

Available as 2- or 4-track recorder; plays 2- and 4-track tapes; features sound-on-



sound record; two speeds (3.75 & 7.5 ips) 50-15,000 cps \pm 2 db @ 7.5 ips; 50-10,000 cps \pm 2 db @ 3.75 ips; flutter and wow less than .2% r.m.s. @ 7.5 ips; four bookless than .2% r.m.s. four heads: stereo erase, stereo record, 2-track playback, 4-track playback; rewind time 45 sec. for 1200 ft.; high-impedance mike and line inputs; mechanical flutter filter; stereo record & playback preamps. Model S505-2 Two-track stereo....\$549.50 Model S505-4 Four-track stereo....\$549.50 Model S505-4R Four-track stereo with "Reverse-O-Matic" feature; plays tape from end-to-end and back again without interruption\$599.50 Model S505-4RK Four-track stereo re-corder, brushed stainless steel with "Reverse-O-Matic" & portable case\$649.50

Model CS505-4R Same as S505-4R except has continuous "Reverse-O-Matic"

Model CS-505-2R Half-track mono with continuous "Reverse-O-Matic".......\$629.50 Model CS505-4RK Same as \$505-4RK except has continuous "Reverse-O-Matic" portable case.....\$679.50 Model CS505-2RK Half-track mono with continuous "Reverse-O-Matic" & portable case\$679.50 Portable case additional......\$ 50.00 Channel integrator for sound-on-sound \$ 24.95 For 7.5 & 15 ips operation add....\$ 42.50 Surround-type metal enclosure add.. \$ 20.00

Model S510 Series Tape Recorder

1964 EDITION

Model S510-2 Same as Model S505-2 with self-contained stereo speakers and am-



self-contained stereo speakers and amplifiers\$699.50 Model S510-4R Same as Model S505-4R with self-contained stereo speakers and amplifiers with "Reverse-O-Matic" \$749.50 Model CS510-2R Same as CS505-2R but in portable case with speakers and am-4R except it has continuous "Reverse-O-Matic"\$779.50

Model 605 Series Tape Recorder

Features plug-in head assembly that converts machine into any desired mode of



operation; "Reverse-O-Matic"; automatic rewind; 3 motors; sound-on-sound & add sound; automatic glass tape lifters including electric cue feature & vu level meters; two speed (3.75 & 7.5 ips); response 50-15,000 cps \pm 2 db @ 3.75 ips, 50-8000 cps @ 3.75 ips; flutter & wow less than .2 r.m.s. @ 7.5 ips; signal-to-noise 2-track -55 db, $\frac{1}{4}$ -track -50 db; has 2 line and 2 mic. high-imp. inputs with mixing facilities and cathode-follower preamp outputs; does not have power amps or speakers; 16¼" w. x 14¼" h. x 6¾" d.

Model 605-2 Two-track stereo recorder

Model 605-4R ¼-track stereo recorder unmounted with "Reverse-O-Matic"

\$795.00 plifiers \$699.50 Portable case, add......\$50.00
Model S510-4 Same as Model S505-4 with Special plug-in head assemblies available:

Full-track including 2-track playback Full-track including 2-track playback
Full-track including ¼-track playback
Two-track including ¼-track playback
¼-track including 2-track playback.....each \$150.00
Remote control assembly....\$59.00

Model 607 Pro Tape Recorder

Similar to Model 605 with same facilities for plug-in heads & remote control; variation is in input circuits; has 2 inputs per channel; line: high-impedance balanced or unbalanced; 600 or 10,000 ohm balanced or unbalanced with plug-in transformers; microphone: high-impedance unbalanced; 50, 250, or 600 ohm balanced or unbalanced with terminating switch to allow connection to high-impedance input

.....\$845.00

AMPEX

PR-10 Series Tape Recorders

Two-speed compact design with 4-position head assembly with separate erase, record & head assembly with separate crase, record & playback heads; extra position for optional 4-track stereo playback or special requirements; has 3" vu meters; response 30-15,000 cps ± 2 db @ 15 ips, 40-12,000 cps @ 7.5 ips, 40-6000 cps @ 3.75 ips; signal-tonoise ratio 55 db @ 15 & 7.5 ips (half-track or 2-track), 50 db @ 3.75 ips; wow & flutter .15% @ 15 ips, .18% @ 7.5 ips, .25% @ 3.75 ips; output + 4 dbm into 600-ohm balanced or unbalanced load: rack space: balanced or unbalanced load; rack space: transport 8¾" x 19" x 6" d.; electronics 5¼" x 19" x 5½" d.

Model PR-10-1 full or half-track; single channel electronics include built-in mixer to mix line and mic or two mics; has two inputs—low-imp. microphone & unbalanced bridging with provisions for plug-in line transformer or low-imp, plug-in microphone

preamp; without case.

Cat. #96001-09 full track 7.5 & 15 ips.\$995.00 Cat. #96001-03 half track 3.75 & 7.5 ips.\$995.00 Cat. #96001-01 half track 7.5 & 15 ips.





Tape Machines

Model PR-10-2 two channel, fits same rack space as PR-10-1; stereo or mono recording; has one input per channel; inputs are unbalanced bridging with provision for plugin line transformers or low-impedance plug-in mic. preamps; features sound-on-sound, cue tracks, and other special effects. Cat. #9600-03 two track, 3.75 & 7.5 ips. \$1195.00 Cat. #96000-01 two track 7.5 & 15 ips. \$1195.00 Portable case for PR-10-1 & PR-10-2 \$60.00

Model 602-1 Mono Recorder

Full-track or half-track recorder; 3 heads; erase, record, playback; frequency re-



sponse: 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 57 db below peak recording level at 3% total harmonic distortion; half track, over 55 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: +4 dbm into 600 ohm load from tapes recorded at program level.

Model 622 Portable Speaker/Amp

Designed for use with Model 602 Series recorder; 10-watt amplifier with frequency



response of 20 to 20,000 cps ±0.5 db; hum and noise 70 db below 10 watts; harmonic distortion less than 1%; speaker frequency response: 65 to 10,000 cps; level and tone controls; a.c. convenience outlet; external speaker jack bypasses internal speaker; input impedance 20,000

ohms; output impedance 12 ohms: 13" x 16" x 8".....\$189.50

Model 602-2 Stereo Recorder

Stereophonic tape recorder using Model 602-1 tape transport and two Model 602-1



electronic chassis for stereo record/play-back; two-track crase head, record and playback heads; all performance specifications identical to Model 602-1.

Cat. #6022-01 7.5 ips, portable case\$875.00

Cat. #6022-07 3.75 ips, portable case\$875.00 Cat. #6022-02 7.5 ips, unmounted...\$795.00

"Fine Line" F-44 Series Recorders

Four-track stereo and mono recorder/player: records 4-track stereo & mono; plays 4-track stereo and 4-track mono half-track and full-track tapes; has three separate heads, crase, record, playback: automatic set shut-off actuated by end of tape; dual speed 7.5 & 3.75 ips; record/playback response 50-15.000 cps ± 2 db @ 7.5 ips; signal-tonoise ratio better than 53 db @ 7.5 ips; flutter & wow under 0.15% @ 7.5 ips; outputs approx. 1 v. r.m.s. from cathode-follower.

Model F-4450 unmounted deck with record/playback preamplifiers...........\$549.50 Model F-4460 tape deck mounted in port-



able brown luggage case; includes record/playback preamplifiers......\$595.00 Model 4470 tape deck with pair of low-level



Model 2044 Amplifier/Speaker

For use with F-44 Series tape units: includes 10-watt power amplifier, woofer, tweeter, and crossover network in a brown portable

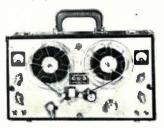


luggage case; response 70-13,000 cps essentially flat.....\$179.50

AMPLIFIER CORP.

Model 312-ST "Transflyweight" Stereo Recorder

Portable design; battery operated; will record and play back stereo or mono; ¼



track; 5" reel size; single play/record head; response 50-10.000 cps ± 2 db @ 7.5 ips; signal-to-noise ratio 55 db; wow and flutter .1% @ 7.5 ips; microphone (50/200 ohm) only input per channel with 4 millivolts sensitivity; (15,000 ohm) 2.5 v. output per channel; has 30 transistors; built-in vu meters for each channel; rechargeable batteries; single-speed (1316, 1%, 3.75, 7.5, or 15 ips) design; prices range from \$624.00 to \$684.00. 110 volt a.c. power pack.......\$30.00

Model 312 "Transflyweight" Transistorized Recorders

Operates from small dry replaceable or rechargeable batteries; multi-purpose vu



meter; battery-operated amplifier; single head for recording and playback; 5" reel; rewind indicator; 8 lbs.; attache carrying case.

case.
Model 312-AV Dual-track; 15/16 ips; 50-
2500 cps: flutter 0.25%\$488.00
Model 312-BV Dual-track; 1% ips; 50-
4000 cps; flutter 0.2%\$438.00
Model 312-CV Dual-track; 3.75 ips; 50-
7500 cps; flutter 0.15%\$448.00
Model 312-TDV Dual-track; 7.5 ips; 50-
10,000 cps: flutter 0.1%\$458.00
Model 312-SDV Single-track; 7.5 ips; 50-
10.000 cps; flutter 0.1%\$458.00
Model 312-F.V Single-track: 15 ips: 50-
15,000 cps; flutter 0.1%\$498.00
With aluminum case add\$ 31.00

Model 612 "TransMagnemite" Transistorized Recorders

Transistorized portable tape recorder; spring-wound motor; multi-purpose vu



meter; battery-operated amplifier; 5" reel size; rewind indicator; 17 lbs.

BELL

Model T-347 Tape Recorder

Includes dual-channel record/playback preamps; does not have power amps or speakers; records & plays back 4-track mono or stereo; has built-in variable echo for any desired reverberation: provides "Duo-Sound" permitting any mono program to be recorded on second channel; features two speeds (7.5 & 3.75 ips), sound-on-sound, 3 motors, vu meters, counter, 3 separate ¼-track heads (record, playback & erase); response 18-16,500 cps ± 3 db @ 7.5 ips, 18-15,000 cps @ 3.75 ips: signal-to-noise ratio better than 50 db @ peak recording (3% HID); flutter less than .2% @ 7.5 ips; 15¼" w. x 13½" front-to-back. 5" below mounting surface & 2" above.......................\$319.95 Model T-310 Tape transport, mono record/playback (no preamps)..................\$149.95 Model T-333 Tape transport, 4-track stereo record/playback (or 2-track stereo playback) (no preamps)......................\$179.95

Model RT-360 Duplicator/Recorder

Features "Duo-Sound", echo effect, soundon-sound & tape duplication; (stereo &



mono program material can be transferred from one tape to a blank tape); has 3 separate ¼-track heads (crase, playback, record); index counter: automatic end-of-tape stop; 4 w./ch. power amplifiers & two removable cover-mounted 6" x 9" speakers: response 40-16,000 cps ± 3 db @ 7.5 ips; signal-to-noise ratio 50 db at peak record signal (3% HI); wow & flutter less than 2% @ 7.5 ips; input sensitivity: aux. 3 mv., mic. 3 mv., mag. phono 12 mv.: will record/playback 4-track stereo/mono @ 7.5 or 3.75 ips

DK-1 Consists of two separate heavy-duty 4-pole, 4-coil motors to permit use of 10½" reels and self-duplicating function on RT-360.....\$49.95

Low-impedance headphones....\$29.95

Wide-range microphone....\$20.00

BRENELL

Mark IV & IVB Tape Decks

Tape deck chassis; dual track; takes up to 4 heads for record, playback, and erase; 3 speeds; 3 motors; frequency response: 3.75 ips, 50 to 6000 cps; 7.5 ips, 50 to 12,000 cps; 15 ips, 30 to 15,000 cps (all ±3 db); flutter and wow less than 0.2%; tuning eye level indicator; dual track operation for up to 7" reel; requires preamp and amplifier; speed change by screw-on 2:1 ratio capstan sleeve and slow-fast stepped flywheel and motor pulley assem-



Mark 5 Series Tape Deck

Four speed (1%, 3.75, 7.5 & 15 ips); two switches control record, playback, wind & rewind; has revolution counter; normally deck is supplied fitted with one erase and one record/playback head (upper track in operation); provision is made for extra heads to be mounted easily when required for special purposes.

Mark 5 Mono record/playback.....\$169.50 Mark 5B Stereo record/playback....\$199.50

Mark 5 Record/Playback Amplifier

Primarily designed for use with Brenell tape decks; frequency compensation is to CCIR standards at 7.5 & 15 ips; 7 watts output; two amplifiers required for stereo operation; has high-frequency tone control; microphone input 2-5 mv. into 2 mcgohms; tuner-phono 250 mv. into 700,000 ohms; tun

BUTOBA

Model MT-5 Portable Tape Recorder

Completely transistorized; two-speed (3.75 & 1% ips); two-track mono design; made



Model MT-7 Transistorized Portable Tape Recorder

Transistorized, battery-operated, two-speed (3.75 and 1% ips); two-track mono design; product of West Germany; volume level indicator; operates from 4 flashlight batteries, accessories available for other power sources; response 60-12,000 cps @ 3.75 ips; signal-to-noise ratio 40 db; 3" reels; 12" x 8" x 3"; 7 lbs.; supplied with



CONCORD

Model 104 Portable Recorder

Two-speed (7.5 & 3.75 ips), dual-track monaural design; response 50-12,000 cps;



Model 220 Mono Tape Recorder

Three speeds (7.5, 3.75, 1% ips); permits playing time of 2 hours at 7.5 ips with



2400 foot, 7" tape; response 40-15,000 cps @ 7.5 ips; 40-5000 @ 1% ips; builtin 4" x 6" speaker; electronic-eye level indicator; digital tape counter; includes dynamic microphone and earphones; adapter available for synchronizing sound to film; 12" x 13" x 7½"\$149.95

Model 550 Tape Recorder

Transistorized preamps; 3-speed (7.5, 3.75, 1% ips) design with built-in amplifiers and speakers; record/playback, ¼-track stereo



1964 EDITION 83



Tape Machines

or mono; response 40-16,000 cps ± 2 db @ 7.5 ips, 50-7000 cps ± 3 db @ 1% ips; wow & flutter .2% r.m.s. @ 7.5 ips, .35% @ 178 ips; signal-to-noise ratio better than -50 db; HD less than 2% (a 3 db below rated output: two inputs/ch. (47-ohm to ext. amp and 8 ohms to ext. spkr.): 30A5 output tubes are used; speakers one 4" x 6" and one 614" in case cover for remote placement; 117-y. a.c. operated; takes up to 7" reels & has 2 vu meters; features sound-on-sound recording; supplied with two dynamic mics & mahogany carrying case; 93/8" h. x 133/8" d. x 14"......\$319.95

Model 550D Tape Recorder



Similar to Model 550 except does not include case, speakers, or mics.....\$229.95

CROWN

700 Series Tape Recorders

Record and play response 20-30,000 cps = 2 db @ 15 ips; 30-17,000 cps ± 2 db @



7.5 ips; and 30-9,000 cps \pm 3 db @ 3.75 ips; has 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 (15/8 ips equalization; 15, 7.5, & 3.75 ps (1% ps available); fast forward and rewind, 1200' in 38 sec.; handles up to 10½" reels; maximum wow & flutter: .06% @ 15 ips, .09% @ 7.5 ips, 18% @ 3.75 ips; timing accuracy 99.8% for synchronous motor: signal-to-noise ratio 56 db @ 15 ips, 54 db @ 7.5 ips, 51 db @ 3.75 ips; overall distortion less than 1.5%; inputs—two high-impedance input channels, mic. or high-impedance input channels, mic. or phono and mic or play; cathode-follower-type output; controls-forward, stop, play/record, thread/idle, stop, rewind switch, bias lock, mic. 1 play, mic. 2 phono, treble, bass, play/record, equalization (three speeds), reel size switch. Model 701 Full-track mono.......\$635.00 Model 702 Half-track mono\$525.00

Model 712 Two-track stereo......\$775.00 Model 714C Four-track stereo with twoand four-track stereo playback......\$795.00

Model TM3 "Transfer-Matic"

Separate panel unit which automatically switches in second or third player according to planned programming functions desired; 19" w. x 5¾" d. x 8¾" h. \$195.00

"BX800" "Broadcaster" Series

Record and playback frequency response $30-28,000 \text{ cps} \pm 2 \text{ db} @ 15 \text{ ips}; 30-16,-$



000 cps \pm 2 db @ 7.5 ips; 30-8000 cps ± 3 db @ 3.75 ips; direct off-the-tape third head monitor: A-B switch; sound-on-sound with stereo models; "Touch" control with all-electric relay and solenoid operation; remote-control facilities; photocell automatic stop in all functions; standard rack mount; stop in all functions; standard rack mount, tape speeds 15, 7.5 & 3.75 ips (1% ips available); handles up to 10½" reels; maximum wow & flutter .06% @ 15 ips, .09% @ 7.5 ips, .18% @ 3.75 ips; timing accuracy 99.8%; signal-to-noise ratio (NAB) 60 db @ 15 ips and 7.5 ips, 55 db @ 3.75 ips; distortion (over-all off tape) less than 1.5%; inputs: two input channels, either low impedance micro-phone or balanced bridge; output 600ohm balanced line output and cathodefollower output; controls: push-buttonstop, rewind, play, & forward; rotary—mic., phono, record (P and R position), play, A-B, equalization (three speeds); switches—cuc, reel size, power on-off; 19" w. x 7½" d. x 14" h.

Model "BX801" Full-track mono \$1035.00 Model "BX802" Half-track mono \$ 945.00 Model "BX822" Two-track stereo \$1395.00 Model "BX824" Four-track stereo \$1340.00

800 Series Tape Recorders

Essentially same as BX800 Series except for: adapted for hi-imp. mic. & has tone controls.



		all-track			
Model	802 Ha	ilf-track	mono	\$	855.00
Model	822 T	wo-track	sterco	\$1	215.00
Model	824 Fc	our-track	sterco	\$1	160.00
Model	822-4	Two-tra	ick ster	co wit	h two-
and for	ur-tracl	stereo p	olaybacl	:\$1	365.00
Model	824-4	Four-tra	ick ster	co wit	h two-
and for	ur-tracl	stereo p	olayback	:\$1	335.00

"Mus-O-Matic" Series

Automatic, self-reversing transport; player only; playback response 30-15,000 cps ±



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; controls-rewind, stop, operation, stop, forward switch, operate switch on-off; tran-

ward switch, operate switch on-oir, daily sistor preamp, cathode-follower output; 19" w. x 7" d. x 12½" h. Model "A314" Half-track mono...\$495.00 Model "A324" Four-track stereo..\$520.00 Model "A1314" Half-track mono indus-Model "A1324" Four-track stereo industrial\$995.00

Accessories

Model A30 30-watt power amplifier; 4-8-16 ohms; 19" x 3½" x 7½": self-powered\$107.00 Model A30-30 Dual 30-watt power amplifier: on single chassis with separate master gain controls; 4-8-16 ohms; 19" x 7½" x 8½"; self-powered..........\$190.00

Series "1000" Tape Recorders

Record and playback frequency response $30-30.000 \text{ cps} \pm 2 \text{ db}$ @ 15 ips; 30-16,-



000 cps \pm 2 db @ 7.5 ips; 30-8000 cps ± 3 db @ 3.75 ips; direct off-the-tape third head monitor; A-B switch; sound-on-sound with stereo models; "Micro-Touch" control with all-electric relay and solenoid operation; remote-control facilities; photooperation; remote-control facilities; photo-cell automatic stop in all functions: tape speeds 15, 7.5, and 3.75 ips with 1% ips available; handles up to 10½" reels; max-imum wow and flutter .06% @ 15 ips, .09% @ 7.5 ips, .18% @ 3.75 ips; timing accuracy 99.8%; signal-to-noise ratio (NAB) 60 db @ 15 ips, 60 db @ 7.5 ips, 55 db @ 3.75 ips; distortion (over-all off tape) less than 1.5%; inputs: two input chan-nels, either low impedance microphone or halanced bridge; output 600-ohm halanced balanced bridge; output 600-ohm balanced line output and cathode-follower output; controls: push-button-stop, rewind, play, forward; rotary-mic., phono, record (P and R positions), play, A-B, equalization (three speeds; switches—cue, reel size, power on-off; 19" w. x 7½" d. x 17½" h. Model 1022-4 Two-track stereo with fourtrack playback\$2139.00 Model 1024-4 Four-track stereo with twotrack playback\$2109.00

Series "1400" Tape Recorders

Record and playback frequency response 30-30,000 cps \pm 2 db @ 15 ips; 30-30-30



 $16,000 \text{ cps} \pm 2 \text{ db}$ @ 7.5 ips, 30-8000 cps ± 3 db @ 3.75 ips; direct off-the-tape third head monitor; A-B switch; sound-on-sound with stereo models; "Micro-Touch" control with all-electric relay and solenoid operation; remote-control facilities; photocell automatic stop in all functions; standard rack mount; tape speeds 15, 7.5 & 3.75 ips, 1% ips available; handles up to 14" reels; maximum wow and flutter .06% @ 15 ips, .09% @ 7.5 ips, .18% @ 3.75 ips; timing accuracy 99.8%; signal-to-noise (NAB) 60 db @ 15 ips, 60 db @ 7.5 ips, 55 db @ 3.75 ips: distortion (over-all off tape) less than 1.5%; inputs: two input channels either low impedance mic. or balanced bridge; output: 600-ohm balanced line output and cathode-follower output. controls: push-button—stop, rewind, play, forward, rotary—mic., phono, record (P and R positions), play, A-B, equalization (three speeds); switches—cue, reel size, power on-off; essentially the same transport as Model 1000: has 14" reel capacity; handles up to 1" tape; designed for multi-track industrial operation: 19" x 1½" d. x 19¼" h.

Model 1422 Two-track stereo\$1695.00
Model 1424 Four-track stereo\$1640.00
Model 1444ST Four-channel/4-track erase
.....\$2650.00

Model 1444IL Four-channel/4-track crase \$3650.00

DUAL

TG12A Four-Track Stereo Recorder

Three-speed (1%, 3.75, 7.5 ips) stereo/mono record/playback with dual-channel amplifiers & speakers: has automatic shutoff: response 40-20.000 cps @ 7.5 ips, 40-16.000 cps @ 3.75 ips; signal-to-noise ratio 52 db @ 7.5 ips; wow & flutter .15% @ 7.5 ips; features sound-on-sound & sound-with-sound; 13" x 15" x 10"........\$349.95 TG-12 Deck only.........\$245.00

EICO

Model RP-100 Tape Deck

Provides stereo/mono ¼-track record, playback, erase; also ½-track stereo/mono



Model 2400 Tape Recorder



ESTEY

Model 20 Tape Recorder

Mono dual-track record/playback, 2-speed (7.5 & 3.75 ips) design; has neon record-



level indicator, complete amplifier system, and an 8" x 4" speaker; response 100-12,-000 cps \pm 2 db @ 7.5 ips; output 2.5 w. music power; ceramic mic included; 12 $\frac{3}{8}$ " x $\frac{16}{8}$ " x $\frac{7}{2}$ "......\$99.95

Model 30 Tape Recorder

Mono dual-track record/playback, 2-speed (7.5 & 3.75 ips) design; has digital counter,



Model 50 Tape Recorder

Stereo record/playback, 4-track, 2-speed (7.5 & 3.75 ips) design; features sound-



Model 70 Tape Recorder

Stereo record/playback, 4-track, 2-speed (7.5 & 3.75 ips) design; features sound-on-





89 MODELS
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Modular design gives
Crown the flexibility
to fulfill almost every
recorder need.

- 700 SERIES Designed for the serious audiophile.
- 800 SERIES Designed to please the most critical in listening or recording.
- BX800 SERIES Designed especially for broadcast use.
- 1000 SERIES Designed for the ultimate in lab, data and other professional recording.
- 1400 SERIES Designed for extra-duty lab, data and industrial use . . . 14" reels.
- A300 SERIES Designed with automatic reversing for continuous background music systems.
- A1300 SERIES Designed with automatic reversing for extra-long continuous playback...14" reels.
- M4S SERIES—Designed for recording and sound studios. Duplicates up to 4 copies from master tape.



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INDIVIDUAL PERFORMANCE
OF EACH CROWN IS
CERTIFIED AND GUARANTEED



CIRCLE NO. 12 ON READER SERVICE PAGE



Tape Machines

FERROGRAPH

Series 5 Stereo Recorder

Features two speeds (7.5 & 3.75 ips); 3 motors; automatic stop; 2 recording am-



Series 5 Mono Recorder

Two-speed (3.75 & 7.5 ips), 3-motor design; wow & flutter .16%; response 40—10.000 eps ± 3 db (@ 3.75 ips, 40—15,000 eps (@ 7.5 ips; dual inputs (.003 v. & 1 v. peak); output speaker or 2^{4} ₂ v. (@ 15 ohms; includes amplifier & speaker. Model 5A/N......\$425.00

FREEMAN

660 Portable Tape Recorder

All-transistorized mono record & playback; 3½" reel; 2-speed (3.75 & 7.5 ips, 178 &



A.C. adapter & battery charger.......\$ 24.50 Cigarette lighter adapter.......\$ 8.50

550 Portable Tape Recorder

Similar in performance to model 660 but different appearance; 400 mw, output; 1%



600 Tape Recorder

Features three speeds (3.75, 7.5, 15 ips); automatic shut-off; 3-head design; dual vu



200 Transistorized Tape Recorder

Features automatic reverse and/or automatic continuous play in both directions;



GRAETZ

Model M50K Tape Recorder

Four-track, two-speed (7.5 & 3.75 ips) record/play stereo design; has mono or stereo inputs for microphone, radio, phono; external speaker outputs; has provision for foot-control pause accessory; response essentially flat from 40 cps to beyond audi-

bility; wow & flutter less than ± .5%; includes built-in preamp and power amplifier for both channels; 5 watts total output; single speaker; built-in mixing facil-



HEATH

Model AD-22 Tape Recorder Kit

Four-track stereo/mono record and playback; two inputs per channel with mixing



controls; fast forward and rewind; has 3-digit counter; two speeds (7.5 & 3.75 ips); wow and flutter .2% or less at 7.5 ips, .0.3% or less at 3.75 ips; frequency response 40-18,000 cps ± 2 db at 7.5 ips; harmonic distortion 1% or less; signal-tonoise level 40 db or better; 12" w. x 15" l. x 9" h. (7" below & 1½" above mounting board); tape deck and amplifiers for record and playback.......\$179.95 Model AD-12 Kit (tape deck without electronic amplifiers)........\$124.95 Model ADA-22-1 Luggage-type

INTER-MARK

"Cipher VII" Stereo Tape Recorder

Four-track, 3-speed (1%, 3.75, 7.5 ips) design; response 35-15,000 cps @ 7.5 ips, 25-



"Cipher I" Tape Recorder

Three-speed (7.5, 3.75, 178 ips), mono two-track design; features recording level light,



"Cipher III" Portable Tape Recorder

"Cipher V" Tape Recorder

Two-speed (17% & 3.75 ips) dual-track mono design; features automatic pause, re-



cording level light, 5" reel, 6" x 3" speaker; frequency range 70-8000 cps @ 3.75 ips, 70-4000 cps @ 178 ips; supplied with dynamic mic, flight-type luggage carrier, earphone; 5½" x 9½" w. x 8½" d.; 9½ lbs.

KNIGHT

Model KN-4000 4-Track Tape Transport

3.75 and 7.5 ips; three motors; separate erase, record, playback heads; push-but-



Model KN-4002 Stereo Record-Playback Preamp

Matches Model KN-4000 transport; provides all controls and features required for stereo or mono tape recordings plus special audio effects; concentric controls for adjusting recording and playback levels; front panel switch for comparison of source and tape sound quality; equalization



switch for 7.5 and 3.75 ips; individual adjustment for bias voltages on each channel; response 25-15.000 cps ± 2 db @ 7.5 ips; 25-12,000 cps ± 2 db @ 3.75 ips; hum and noise -50 db minimum on playback; input impedance: 3.3 megohms mike, 100,000 ohms aux.; record sensitivity: 2 mv. for mike max, level at 1 kc., 200 mv. aux.; output impedance approx. 50,000 ohms\$99.95

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 11%" x 15"; mocha brown carrying case; 19 lbs.

KN4120 Tape Recorder

KORTING

TR3000 Tape Recorder

Two-speed (7.5 & 3.75 ips); plays 4-track & 2-track stereo & mono; records 4-track



Model 260 Tape Deck-Preamps

Stereo, 4-track with 2 heads; similar to TR3000 but does not include mics, speakers, and power amps; does have preamplifiers for record & playback.................\$219.95 Model 270DC with gray carrying case

TR2000 Tape Recorder

Similar in design & performance to Model TR3000 except has only single channel am-



plifier & speaker; has stereo heads for 2nd channel record & playback; can convert stereo tapes to mono for self playback; 14¹⁴" w. x 12½" d. x 7½" h.; supplied with one low-impedance dynamic mic. & gray carrying case..................................\$199.95

TR4000 Transistorized Tape Recorder

Three-speed (7.5, 3.75 & 1% ips); 4-track record & playback with stereo amplifiers &



speakers; features 3 heads (crase, record, playback); separate bass & treble controls in record position; one knob for synchronized dubbing; completely transistorized; record level meters; remote pause; variable echo or reverb effects; response 30-20,000 cps (a. 7.5 ips, 40-7000 cps (a. 7.5 ips, ±3 db; wow & flutter .1% (a. 7.5 ips; S/N ratio 45 db; 10 watts audio output; 117 v. operation; 18" x 13" d. x 8" h.; supplied with two low-impedance microphones \$\frac{8399}{8399} 95

Model 212 "Conferette" Recorder

Features talk/listen/stop/reverse/review/erase remotely controlled from micro-



138S "Studio One" Tape Recorder

Four-track; records ¼-track stereo & mono; plays ¼ & ½ track stereo & mono; has 2 heads and is a single-speed design; features mixer switch for sound-on-sound recording; eye-type level indicator; digital counter; automatic end-of-tape stop; can be used as a p.a. system; has transistorized input stages; stereo amplifiers & speakers; supplied with two dynamic low-impedance



Tape Machines

mics\$279.50

136 "Broadcaster" Tape Recorder

Half-track mono record/playback; 2-speed design; features mixer switch for sound-on-sound; eye-type level indicator; counter; automatic end-of-tape stop; can be used as p.a. system; supplied with dynamic low-impedance mic......\$219.50

158S "Professional" Tape Recorder

Four-track, 2-speed design; records ¼-track mono or stereo; plays ¼ or ½ track mono



114 "Professional" Tape Deck

LAFAYETTE

Model RK-142 Tape Recorder

Two-speed (3.75 & 7.5 ips), dual-track mono record/playback design; has 4" x 6"



Model RK-141WX Tape Deck

Two-speed (7.5 & 3.75 ips) with two-channel (stereo) six-transistor preamps (3



transistors per channel); response 50–15,-000 cps ±2.5 db @ 7.5 ips; 50–9000 cps @ 3.75 ips; wow and flutter .15%

Model RK-137 Tape Recorder

Two-speed (3.75 & 7.5 ips) four-track recorder & playback design; features



pause button, electronic switching between tracks 1-4 and 3-2; separate record and crase heads; vu meter; will record and playback mono 4-track; has amplifiers and speaker for single channel playback; will play back stereo with external second-channel audio system that has input for tape head; signal-to-noise ratio 42 db; outputs for extension speaker, monitor, and second-channel stereo playback; furnished complete with removable top cover & microphone; 13½" w. x 6½" h. x 10%" d.\$89.50

Model RK-155 Tape Recorder

Model RK-140WX Tape Recorder

Four-track, 2-speed (7.5 & 3.75 ips) deluxe design; will record and play back



Model RK-126L "Technicorder" Recorder

Portable design; completely transistorized using 6 transistors and one thermistor; 2-speed (3.75 & 1% ips); dual-track



mono record & playback; has record-level meter; $2\frac{1}{4}$ " x $8\frac{1}{4}$ " speaker; special "Synchro-rod" synchronizes tape speed with any 8 mm. movie projector; 3" h. x $9\frac{1}{4}$ " w. x $7\frac{1}{4}$ " d.; supplied with shoulder strap, dynamic microphone, case

on a contract of the contract	
\$7	9.50
115 v. a.c. adapter\$1	
Telephone pickup\$	
Mike with remote switch\$	
Footswitch for dictation\$	

LUCOR

Model 1200 Stereo Recorder

Records mono or stereo, 4-track or single track; dual speed 7.5 ips & 3.75 ips; has 2



preamps, 2 power amps $(7\frac{1}{2} \text{ w./chan.})$, & 2 (5" x 7") speakers; input impedance 50 K & 500 K; output 8 ohms; wow & flutter .18% @ 7.5 ips & .2% @ 3.75 ips; response 30-20,000 cps \pm 2 db @ 7.5 ips & 40-15,000 cps @ 3.75 ips; has public address facilities; balance meter & level meters; 17" x 15" x $8\frac{1}{2}$ "; 7" reels; will sell for less than......\$350.00

MAGNECORD

Model 101-1 Stereo Magnecordette

In-line stereo or half-track mono record and playback; also ¼-track stereo play-



back; 3.75 and 7.5 ips; frequency response 50 to 12,000 cps ±2 db at 7.5 ips, 50 to 6000 cps ±2 db at 3.75 ips; signal-tonoise 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"x17"; amplifier 5¼"x17"; available with synchronous motor.

Model 101-1 (includes preamp in case

Series N35 Portable Recorder

Portable recorder with amplifier and speaker; half-track heads; tape speeds: 7.5 and 3.75 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: 8½"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 \$36-B Portable Recorder

Portable; full-track; standard tape speeds: 7.5 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 7.5 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" (10½" 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"x19".

\$435.00 \$36-BX, same, less case....\$405.00 \$1X1748 case.....\$30.00

Series PT6-6A Tape Transport

Portable; full track or half track; tape speeds: 3.75, 7.5, 15 ips; dual-speed hysteresis synchronous drive motor; frequency response: 50-15,000 cps ±2 db at 15 ips, 50-7500 cps ±2 db at 7.5 ips; flutter and wow: 0.25% at 15 ips; 0.3% at 7.5 ips; signal-to-noise ratio: 50 db; designed for use with PT6-6J record/playback ampli-



fier; reel size: 7"; size: 11"x7"x19" without case; weight 26 lbs. with case; 10½" 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 impedance:



50 ohm balanced, high impedance bridge (phone jack); 10 watts audio power out at less than 2% harmonic distortion; output impedances: 4, 8, 16, and 500 ohms; vu meter; internal monitor speaker with volume control; dual switch for NAB equalization at 7.5 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: 7.5 and 15 ips; 3 motors, dual speed hysteresis synchronous motor used for direct tape drive; frequency response: 40 to 15,000 cps ±2 db at 15 ips; 40 to 12,000 cps ±2 db at 7.5 ips; flutter and wow: less than 0.2% at 15 ips; less than 0.25% at 7.5 ips; timing accuracy: ±3 seconds in 30 minutes; signal-to-noise ratio (full



track) 56 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, NAB 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; release brake cueing; tape transport unit panel size: 19"x10½"; amplifier panel size: 5½"x19"; tape transport weight: 51 lbs. (in portable case); amplifier weight: 18 lbs. (in case).

Model P75-C Amplifier with case..\$305.00 Model P75-CX Amplifier less case..\$265.00 81D50 Case for amplifier.....\$40.00 81E49 Console cabinet.....\$200.00

Series M90

Portable rack-mounted, or console unit; full track or half track; three heads: erase, record, and playback; tape speeds: 7.5 and 15 ips; direct-tape drive; frequency response: 30 to 15,000 cps ±2 db at 7.5 ips; flutter and wow: less than 0.1% r.m.s. max at 15 ips, less than 0.15% r.m.s. at 7.5 ips; signal-to-noise ratio: 58 db (55



db with half track heads); timing accuracy ±3 seconds in 30 minutes; 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 cascode input stages for maximum signal-to-noise ratio; panel size: standard 19" rack; amplifier size: 19"x5½"; tape transport size: 19"x12½".

Models 728 & 748 Professional

Can record sound-on-sound, stereophonic, or monophonic; up to 10½" reels; fre-



quency response, 30-18,000 cps \pm 2 db at 15 ips; 40-15,000 cps \pm 2 db at 7.5 ips; signal to noise ratio better than 50 db per channel; additional head for 4-track sterce available separately; over-all depth 12"; size in portable case 17%" x 14%" x 13%16".

 Model
 728-4
 7.5
 and
 15
 ips
 with case
 \$909.00

 Model
 748-4
 3.75
 and
 7.5
 ips
 with case
 \$924.00

 Model
 728-4X
 7.5
 and
 15
 ips
 without case

 Model
 748-4X
 3.75
 and
 7.5
 ips
 without case

 \$874.00



Tape Machines

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 (½-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

NORELCO

"Continental 100" Portable Recorder

Fully transistorized; 8 lbs.; uses six "D" type flashlight batteries; 1% ips; 2-track



head; response 120-6000 cps ± 3 db; comes complete with power amp, loud-speaker, 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



"Continental 300" Tape Recorder

Four-track; mono record and playback; stereo playback (head output only); $7\frac{1}{2}$, $3\frac{1}{2}$, and $1\frac{1}{6}$ ips; frequency response, 60-16,000 cps \pm 3 db at $7\frac{1}{2}$ ips, 60-13,000 cps \pm 3 db at $3\frac{1}{2}$ ips; wow and flutter, better than $0.3\frac{1}{6}$ peak to peak; automatic stop; interlocking pause button; sound-on-sound recording; full mixing facilities; monitoring with headphones; modulation indicator



type EM81 magic eye; record and play-back preamplifier, power amplifier and Norelco loudspeaker; inputs, microphone and radio/phono; outputs, external loudspeaker, external amplifier, headphone, stereo outputs; supplied with high impedance microphone\$239.50

"Continental 301" Tape Recorder

Completely transistorized, 4-track, 4-speed (7.5, 3.75, 1% & 15/16 ips) with 2-channel



preamplifiers & monaural power amp. & speaker; has facilities for 4-track mono/stereo record & 4-track mono playback; the 2nd stereo channel playback is made from preamps through any hi-fi system; response 60-16,000 cps @ 7.5 ips, 60-4500 cps @ 15/16 ips; signal-to-noise better than —40 db; wow & flutter .14% @ 7.5 ips; features 2-channel mixing, automatic end of tape stop & can be used as a p.a. amplifier; 16½" x 15½" x 8½"; supplied with cardioid pattern dynamic mic......\$299.50

"Continental 401" Tape Recorder

Completely transistorized, 4-track stereo/ mono record & playback; 4-speed (7.5,



RCA

"Fortnighter" (1YC1) Tape Recorder

Similar in design & performance to Model 3YD1 except does not include stereo power amps & speakers: preamps are included; 7 1/8 " w. x 9 3/4" d. x 11 1/8"..........\$169.95

"Trendliner II" (1YB2) Tape Recorder

Four-track, 2-speed (3.75 & 1% ips) mono record/playback design for use with tape cartridge; features start and stop by remote

"Prompter" (1YB1) Tape Recorder

Similar in design & performance to Model IYB2 except does not have remote control;



all tape cartridge machines provide 2 hours playing time at 3.75 ips & 4 hours @ 1% ips\$ 99.95

"Cordon Bleu" (3YD1) Tape Recorder

Record/playback cartridge design; features stereo & mono 4-track record/playback; 2-



REALISTIC

4-Track Tape Recorder

"Dauphine" Stereo Tape Player

Model T555 4-Track Tape Player

Two-speed (3.75 & 7.5 ips) design; plays all 4- and 2-track stereo and mono tapes; wow & flutter less than .25% r.m.s.; separation 50 db; hum & noise —48 db; four-pole induction motor; automatic shut-off; pause control; 7" reel capacity.......\$24.95

Stereo Equalizing Preamp

Model TR-170 Tape Recorder

Two-speed (3.75 & 7.5 ips), two-track mono design; level indicators; inputs for

microphone and radio; separate erase and record heads; built-in amplifier and speaker; response 40-12,000 cps; microphone and case included.......\$64.95

REVERE

Stereo Tape Cartridge System

Completely automatic tape changing system; automatically threads the tape, plays,



rewinds, rejects the completed cartridge and repeats the process through as many as 20 stereo music selections during a 15-hour period; speed 1% ips; cartridge 3%" square x ½" thick; features new type recording head both diameter of a strand of human hair; specially developed magnetic tape; precision index counter; wow & flutter 0.3%; S/N ratio 48 db; music power output 9 w. per channel: 5 watts continuous @ 5% HID; inputs: microphone 2 mv. @ 10 megs, phono-radio 1 v. @ 1 meg; outputs: aux. 1 v. nominal, speaker 8 ohms; response 40-15,000 cps ± 3 db @ 1% ips; 7" x 14½" x 14¼" (approx.); weight approx. 32 lbs.

ROBERTS

Model 440 Stereo Tape Recorder

Four-track, two-speed (7.5 & 3.75 ips) stereo record and playback; complete with



Model 144DPA Stereo Tape Recorder

Model 997 Stereo Tape Recorder

Four-track stereo record/playback: 3 speed (3.75, 7.5, 15 ips) design: features complete stereo sound system: preamps, power amps, speakers; sound-with-sound; automatic shut-off; pause control; response 40-15,000 cps \pm 2 db @ 7.5 ips, 40-12,000 cps \pm 2 db @ 3.75 ips; 3 watts power out-



put/ch.; wow & flutter less than .12% r.m.s.; signal-to-noise ratio 50 db below recorded "0" level; two high-impedance & two high-level line inputs; 20" x 14" x 9"\$449.95

Model 1055 Stereo Tape Recorder

Four-track, 2-speed (3.75 & 7.5 ips) stereo & mono design; includes self-contained



Model 1057 Stereo Tape Recorder

Four-track stereo/mono play/record; two speeds (3.75 & 7.5 ips, 15 ips optional);



Model 1057-PS Stereo Tape Recorder

Similar to Model 1057 tape recorder but has added feature for automatically synchronizing most slide projectors with sound\$369.95

Model S-903-B Stereo Speakers

Portable, corner-style enclosures using 8" full-range speakers; used as remote units. Pair\$119.95

Model 54-55 Headsets

Dynamic type with separate control box; has channel volume & stereo balance controls; mono/stereo switch......\$29.95

Model 199-D Tape Deck

For stereo & four-track record/play-back\$209.50

Model A-905 Preamp

Record/play preamp & power amplifier for use with Model 199-D tape deck; mono design, use two for stereo......\$124.50

Model 455 Stereo Tape Recorder

Four-track stereo recorder; speeds 3.75 & 7.5 ips with 15 ips conversion kit available as optional accessory; will record up to 8 hours on four-track mono using .5-mil Mylar tape with up to 4 hours playing/ recording time in stereo; timing accuracy 99.5%; wow & flutter .15% max. at 7.5 ips; separate erase, record, and playback monitor heads; three motors: one dual-speed electrically switched hysteresis syn-chronous capstan drive motor with dyna-mically balanced flywheel; individual motors operate take-up and supply reels; includes sound-on-sound: four simultaneous mixing inputs; three-head assembly for instant monitor comparison: "echomagic"; high-impedance headphone output; index counter: automatic shut-off; phasing switch; p.a. system operation; vertical or horizontal mounting; rewind speed 1200 ft. in 45 seconds; special biasing for FM stereo radio broadcasts; remote control which will handle play, rewind, fast forward, and record with safety interlock features available as optional accessory\$599.95

Various accessories: microphones, head demagnetizer, tape craser, recording tape, cables, heads, etc. also available from company.

SONY

Model 777-S2 Tape Recorder

All-transistorized 2-track record and 2and 4-track playback; 2-speed (7.5 & 3.75



Model 777-S4 Tape Recorder

Same as Model 777-82 except 4-track stereo record and 2- and 4-track playback \$695.00

91

1964 EDITION



Tape Machines

AS-777 Amplifier/Speaker System

Model MX-777 Mixer

Accessory for Models 777-S2 and 777-S4 tape recorders; six-channel all-transistor



Model 102 Tape Recorder

Two-track mono, 2-speed (7.5 & 3.75 ips) design; features built-in amplifier & speak-



er; mike & line mixing; vu meter; pause control; response 50-12,000 cps @ 7.5 ips; flutter and wow less than .2% @ 7.5 ips; inputs mic. & line; outputs line & external speaker; supplied with F-96 dynamic mic\$129.45

Model 200 Tape Recorder

Four-track stereo/mono record/playback system; features built-in stereo amplifier &



speakers (15' separation); 2 vu meters; sound-on-sound; two speeds (7.5 & 3.75 ips) & counter; response 30-14,000 cps @ 7.5 ips; flutter & wow less than .19% @ 7.5 ips; signal-to-noise ratio 45 db; inputs: 2 mic & 2 high-level line; supplied with two F-96 dynamic mics......\$239.45

Model 211-TS "Slide Sync" Tape Recorder

Has built-in electronic slide sync pulse generator for programming an automatic slide projector; does not require metallic stripping on tape; features sound-on-sound; built-in amp & speaker; two speeds (3.75 & 1½ ips); response 70-8000 cps; inputs: mic &



Model 111 Tape Recorder

Mono 2-speed (3.75 & 1% ips) design featuring record level indicators; 5" reel capac-



Model 263-D Stereo Tape Deck

Dual speed (7.5 & 3.75 ips) tape deck; features three 4-track heads (erase, record &



playback); automatic shut-off; response heads capable of 20-20,000 cps @ 7.5 ips; wow & flutter .17% @ 7.5 ips; does not include amplifiers; 13" w. x 10½" d. x 5" below mtg. panel & 1½" above..\$119.45

Model SRA-2L Stereo Recording Amp

For use with Model 263-D tape deck; amplifier will provide all facilities for 4-track



Model 464-D Tape Recorder

Four-track stereo or mono record/play-back; two-speed (7.5 & 3.75 ips) design; features built-in stereo preamps; sound-on-

sound; counter; response 40-15,000 cps @ 7.5 ips; signal-to-noise ratio 45 db; wow & flutter .19% @ 7.5 ips; inputs: 2 mic. & 2 high-level line; outputs: 2 high-level line & stereo earphone monitor; does not include power amplifiers & speakers; cominclude power amplifiers & speakers;



plete with channel integrator panel, mounting brackets & custom trim.......\$119.45

Model 464-SL Tape Recorder

Similar to Model 464-D except has built-in mono power amp & speaker; supplied with carrying case & F-96 dynamic mic..\$219.45

Model 500 Tape Recorder

Four-track stereo/mono record & playback; 2-speed (7.5 & 3.75 ips) design; has built-



in stereo amplifiers & speakers which can be detached for 15' separation; features mic & line mixing; sound-on-sound; two vu meters; automatic end-of-reel shut-off; response 50-14,000 cps ± 2 db @ 7.5 ips; S/N ratio 50 db; wow & flutter .17% @ 7.5 ips; inputs: 2 mic & 2 high-level aux.; outputs: two 600-ohm line, two 8-ohm ext. speakers, 8-ohm binaural headphone jack; supplied with carrying case & two F-87 dynamic cardioid pattern microphones \$399.45

Model 801-A Battery-Operated Portable

Two-speed (3.75 & 1% ips) with 5" reel capacity; features remote stop/start switch:



Model 600 Tape Recorder

Four-track stereo/mono record/playback

design; features two speeds (7.5 & 3.75 ips); mic. & line mixing; source & tape



TANDBERG

Series 8 Tape Recorders

Two-speed (3.75 & 1% ips) mono design; response 40-10.000 cps \pm 2 db @ 3.75



ips, 40-5500 cps \pm 2 db @ 1% ips; wow & flutter better than .2% @ 3.75 ips; built-in 7" x 4" speaker; 3 watt output; signal-to-noise ratio 50 db below max. recording level; has recording level indicator; crystal microphone, four-digit counter; 15" l. x 11%" w. x 6¾" h. Model 821 Two-track...........\$219.50

Model 821F Two-track with built-in solenoids; foot pedal for remote control \$269.50

Model 841 Four-track with built-in solenoids; foot pedal for remote control

TC-58 Luggage-type carrying case...\$24.50

Series 3 Mono Tape Recorder

Model 74 Tape Recorder



Three-speed (7.5, 3.75, & 1% ips), 4-track stereo & mono record/playback with output amplifiers & stereo 7" x 4" built-in speakers; has automatic tape stop, pause control, counter, level indicators. Permits sound-on-sound. Response 30-16.000 cps ± 2 db @ 7.5 ips; 40-10,000 cps @ 3.75 ips & 55-5000 cps @ 1% ips. Wow & flutter .15% @ 7.5 ips, .2% @ 3.75 ips, .3% @ 1% ips; inputs 2 mics, .00125 v. r.m.s., 3.3 megohms—2 line, adjustable .007-7 v. r.m.s., 500.000 ohms. Signal-tonoise ratio at least 55 db. Playback outputs 4 ohms. Has teakwood cabinet.......\$399.50 CM-6 Crystal mic. (30-12,000 cps) \$ 15,00 CM-6 Crystal mic. (30-12,000 cps) \$ 15,00

Models 64 & 62 Tape Recorders

Record/playback machine; three speeds (7.5, 3.75 & 1% ips); four-track stereo/



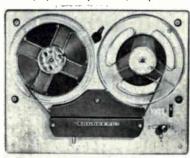
mono record & 2 - and 4-track stereo/mono playback; has separate record, playback, erase heads; built-in facilities for sound-on-sound, echo effects, track adding, direct monitor, and remote control; features FM-MX filter input for direct recording of FM multiplex stereo programs; dual-channel record & playback preamps; response 30-16,000 cps ± 2 db @ 7.5 ips;

40-11.000 cps \pm 2 db @ 3.75 ips; 50-5500 cps \pm 2 db @ 17% ips; output 1.5 v. cathode-followers; flutter & wow .1% r.m.s. @ 7.5 ips; signal-to-noise ratio at least 55 db: has two each microphone, hi-level, & hi-level with filter.

Model 64\$498.00 Model 62 Same as Model 64 but with half-track heads\$498.00

Model 65 Stereo Playback Deck

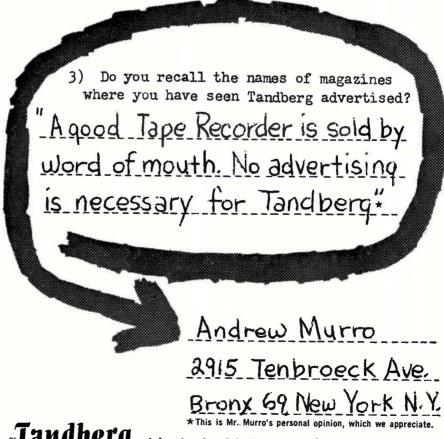
Three-speed (7.5, 3.75, 1% ips), 4-track stereo playback tape deck; response 30-



TELECTRO

Model MM213 Tape Recorder

Two-speed (7.5 & 3.75 ips), dual-track mono design; built-in 3 w.r.m.s. amplifier & speaker system; response 100-10,000 cps; signal-to-noise ratio 42 db; single-control on-off-volume; separate erase and record/



RETAINABETS of America, Inc. P.O. Box 171, 8 Third Ave., Pelham, N. Y.
CIRCLE NO. 56 ON READER SERVICE PAGE



Tape Machines

Model MM214 Tape Recorder

Similar to MM213 but has additional digital counter & tone control.......\$99.95

Model MM115 Tape Recorder

Model MS123 Tape Recorder

Plays ¼- & ½-track stereo; records 4-track mono; dual 3-watt r.m.s. amplifiers; two 4" x 8" oval speakers; features sound-with-sound; two speeds (7.5 & 3.75 ips); has record level indicator; 2 inputs (mic. & high level); response 100-10.000 cps @ 7.5 ips; signal-to-noise ratio better than 45 db; 21½" x 13¾" x 7¾" \$179.95

Model SS133 Tape Recorder

Model SS500W Tape Recorder



TELEFUNKEN

M-72 Tape Recorder

Features simplicity of operation with only record, stop, playback, and volume con-



trols; such functions as on/off, recording level indicator, input selector switch are taken over by an automatic control system; complete system for record/playback, 2-track tape at 3.75 ips; response 40-14,000 cps; wow & flutter ± .2%; S/N ratio 40

UHER

Model "Stereo Record I"

Four-track mono or stereo; 3-speed (1%, 3.75, 7.5 ips); features sound-on-sound;



digital counter; record level indicator; has built-in amplifiers for both channels; speaker for one channel with provision for external speakers or earphones; response 40-20,000 cps @ 7.5 ips; 40-16,000 cps @ 3.75 ips; 40-8000 cps @ 1½ ips; signal-to-noise ratio 45 db; wow & flutter .1% @ 7.5 ips; output 3 watts/channel; sensitivity: microphone and radio 1.5 mv.; phono 100 mv.; 16½" x 15½" x 7¾"; weight 35 lbs; supplied with high-impedance dynamic microphone and carrying case \$299.95

Model 6000 Tape Recorder

"Universal S" Tape Recorder

Standard half-track mono recorder; 3 speeds ¹⁵/₁₆, 1%, 3% ips; basically designed for voice recording but has 40-16,000 cps response at 31/4 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 15/16 ips; 60-8000 cps at 178 ips; signal-tonoise ratio 45 db; wow & flutter .3% @ 3¾ ips; output (speaker) 3 watts; sensitivity .1 mv./200 ohms for mic.; 1 mv/ 22,000 ohms for radio, 100 mv./2 megohms for phono; features include relay/ solenoid control system permitting remote control of record, play, and tape motion; 24 lbs.: includes remote control, dynamic microphone, dust cover, trick key, and carrying case\$339.00

Model 8000 Tape Recorder

Four-track stereo/mono record & playback; completely transistorized; two recording heads; features built-in impulse transmitter for automatic slide-projector synchronization; echo effect; remote control; sound-onsound; automatic shut-off; has built-in stereo speakers, 2 w./ch.; 3 mic. inputs; radio & phono inputs; headphone output; 2 remote speaker outputs; 4 speeds (7.5, 3.75,

1% & 15 16 ips); will accept 7" reels; response 50-20,000 cps \pm 3 db @ 7.5 ips & 50-4000 cps @ 15 16 ips; wow & flutter .15% @ 7.5 ips; 117-volt a.c. operation; 14" x 13" x 7"; 23 lbs.; supplied with one dynamic mic. & portable case.......\$499.95

VERNON

Model 47/26 Transistorized Stereo Recorder

Completely self-contained with amplifiers and 5" speakers; vertical mtg. kit; flush



VIKING

Model 86 Series Tape Decks

Two-speed (7.5 & 3.75 ips); 4-pole motor (hysteresis synchronous motor available



at extra cost); flutter & wow .2% r.m.s.; long-term speed regulation .5%; digital counter and tape run-out switch; handles up to 7" reels; wt. 12½ lbs.; panel size 13" x 9½".

Model 86P Playback only, half-track mono head\$130.00 Model 86R Record/playback, half-track mono, 2 heads.....\$136.00 Model 86Q Playback only 1/2 - & 1/4-track mono & stereo, 1 head.....\$135.50 Model 86RQ Record 1/2-track mono, playback 1/4- & 1/2-track mono & stereo; 3 Model 86ES Record/playback 1/2-track mono & stereo, 2 heads......\$151.00 Model 86RMQ Record ¼-track, playback 1/4 - & 1/2 -track mono & stereo, 3 heads \$163,50 Model 86 ERQ Record 1/2-track, playback 14- & ½-track mono & stereo, 3 heads \$179.50 Model 86ESM Record/playback 1/2-track mono & stereo, 3 heads.....\$177.00 Prices quoted are for tape decks only; for recording with Model 86RQ, ERQ, RMQ, & ESM, use RP83-3 record/playback amplifier; for other models use RP83. For stereo design, use two amplifiers.

Model 86 "Super-Pro" Tape Recorders

amplifiers\$392.00

Model 86ESM tape deck with two RP83-3

amplifiers\$405.50

Model 86 "Stereo Compact" Tape Recorders

Same as "Super-Pro" series except single dual-channel amplifier system is used; con-



trols: record/playback, gain control, function selector, stereo microphone inputs, stereo/mono switch, record warning light, normal-duplicate switch (can record directly from heads of another deck); two vu meters; sound-on-sound, sound-with-sound; Series 86 tape decks have headshift control. Three models available Model 86ERQ\$332.00 Model 86ERQ\$332.00 Model 86ESM\$338.00

Model 76 Tape Deck

"Retro-Matic" 220 Tape Recorder

Features two-directional automatic playback; remote control; sinultaneous recording & playback; photoelectric run-out sensor; level meters; 7.5 ips & 3.75 ips dualspeed, quarter-track stereo operation; response 20-25,000 cps ± 3 db record/playback @ 7.5 ips; monitor output 6 w./ch. to 4 or 8 ohm speakers or 4 to 600 ohm phones; output to music system 1 v./ch. low impedance; input sensitivity: high level, 100 mv., 250K; low level, 1 mv., 2 megohms; 55 db signal-to-noise ratio; dist. 1% at "0" vu; flutter & wow less than .2% r.m.s. @ 7.5 ips; 7" reel size; 15" h. x 16" w. x 8" d. behind panel........\$860.00 Remote control center.........\$59.95 Walnut case\$31.95

WOLLENSAK

Model 1580 Tape Recorder



Model 1570 Tape Recorder

Model 1515-4 Recorder

Plays 2- and 4-track stereo & records up to four separate mono tracks; dual speed (7.5



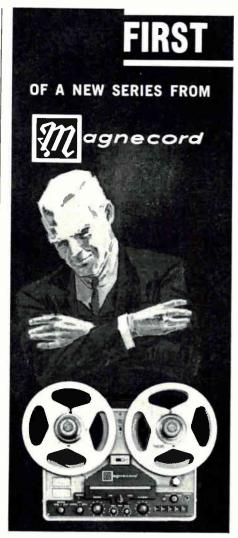
& 3.75 ips); recording indicator; index counter; includes mono record preamp & stereo playback preamps; does not include power amps or speakers; response 30-20,000 cps ± 3 db @ 7.5 ips; 30-15,000 cps @ 3.75 ips; wow & flutter 0.3%; S/N ratio 48 db; signal from preamp output: 0.5-1.5 volts; crosstalk 50 db; 6½" x 10¾" x 11¾"; complete with microphone & cords; less than\$200.00

Model 1500 Mono Recorder

Model T-3000 Mono Recorder

Features digital counter, external speaker output, external amplifier output, record indicator; two speeds (7.5 & 3.75 ips); automatic shut-off; has provisions for remote foot pedal; durable metal and Royalite case; designed as a two-track mono record/play-





THE MODEL 1028*

After two years of research comes a new Series of Magnecord tape recorders. We present here the Model 1028, unquestionably the finest tape recorder ever offered by Magnecord. Other models in the new 1000 Series, yet to be announced, demonstrate how Magnecord research has made possible better equipment . . . for varying requirements . . . and for less money!

Important advances in the model 1028 include new MICRO-OPTIC heads and new electronics for wider, flatter frequency response, better signal to noise ratio, and superior tone quality.

Watch for more news from Magnecord during coming months. The new 1000 Series includes tape recorders that are priced just right for the varying requirements of professional users, for industry, and for all others who know and appreciate the professional quality of sound.

Write today for more information

*from \$995

magnecord

SALES DEPARTMENT

MIDWESTERN INSTRUMENTS

P. O. BOX 7509 • TULSA 35, OKLAHOMA

Model T-1980 Stereo Recorder

Records & plays 2- & 4-track mono & stereo tapes; features digital counter, two- & four-track head control; external speaker output; external amplifier output; hi-level input; low-level input; sound-with-sound; public address; 3.75 & 7.5 ips speeds; two internal speakers; two external speakers; provision for remote foot pedal; response 40-18,000 cps ± 3 db @ 7.5 ips; 40-13,000 cps @ 3.75 ips; wow & flutter 0.3%; S/N ratio 48 db; crosstalk 50 db; power output 22 watts total (11 watts music power per channel); 5 watts continuous at 5% harmonic distortion; inputs: low-level 2 mv., 10 megohms, hi-level 1 v., 1 megohm; outputs: 8 ohms, preamp 0.5-1.5 volts; 21¼" x 13¾" x 9918"; less than.......\$380.00

Model T-1981 Tape Deck

Model T-1780D Stereo Deck

Model T-1440 Tape Recorder

Model T-1400 Mono Recorder

Model T-524 Mono Recorder



Raw Tape

AMERICAN			
Acetate Base (1.5-mil) 1-A 150', 3" rcel \$.55 2-A 250', 3¾" rcel \$.75 3-A 300', 4" rcel \$1.10 6-A 600', 5" reel \$1.75 12-A 1200', 7" rcel \$2.75 15-A 2000', 7" reel \$3.50			
Acetate Base Long-Play (1.5-mil) L-2A 225', 3" reel			
Mylar Base Long-Play (1-mil) L-2M 225', 3" reel			
Mylar Base (1.5-mil) 1-M 150', 3" reel			
Mylar Base Double-Play Tensilized (.5-mil) D-3MT 300', 3" reel			
Mylar Base Double-Play (.5-mil) D-12MS 1200', 5" reel			
Acetate High-Output (1.5-mil) HO-6A 600', 5" reel\$2.25 HO-12A 1200', 7" reel\$3.50			
Mylar High Output (1.5-mil) HO-6M 600', 5" reel\$2.65 HO-12M 1200', 7" reel\$4.25			
Acetate Low-Print "Master" (1.5-mil) LP-12A 1200', 7" reel\$4.40			
Mylar Low-Print "Master" (1.5-mil) LP-12M 1200', 7" reel\$7.70			
AMPEX			
Series 500 Recording Tape Available on .5, 1, and 1.5-mil Mylar, 1 &			

Available on .5, 1, and 1.5-mil Mylar, 1 & 1.5-mil acetate; designed for super-critical home recording.

Type 511 on 1.5-mil acetate. 600 feet, 5" reel\$2.25 1200 feet, 7" reel\$3.50	
Type 521 on 1-mil acetate. 900 feet, 5" reel\$3.50 1800 feet, 7" reel\$5.50	
Type 531 on 1.5-mil Mylar. 600 feet, 5" reel\$2.65 1200 feet, 7" reel\$4.25	
Type 541 on 1-mil Mylar. 900 feet, 5" reel	

Type 551 on .5-mil Mylar. 1200 feet, 5" reel			
Series 900 Recording Tape			
Designed for large-library home recording.			
Type 911 1.5-mil acetate.			
150', 3" reel			
1200′, 7″ reel\$2.95			
Type 921 1.0-mil acetate.			
225′, 3″ reel			
1800', 7" reel\$4.25			
Type 931 1.5-mil Mylar.			
600', 5" reel\$2.25 1200', 7" reel\$3.65			
Type 941 1.0-mil Mylar. 225′ 3″ reel \$1.00			
225', 3" reel			
1800', 7" reel			
Type 951 0.5-mil tensilized Mylar.			
300′, 3″ reel\$1.35 1200′, 5″ reel\$4.50			
1200', 5" reel			
AUDIOTADE			
AUDIOTAPE			
Master 1.5-mil Mylar Tape			
Made on 1.5 mil Mylar base; durable in wide temperature range.			
Type 671M, 600 ft., 5" reel\$3.20 Type 1271M, 1200 ft., 7" reel\$5.10			
Type 1271M, 1200 ft., 7" reel\$5.10			
Double Recording			
(.5-mil tempered Mylar)			
Made on tempered Mylar; allows twice as much recording per reel; stronger than			
double length tape.			

made on tempered my many many	
as much recording per reel; stronger	than
double length tape.	
Type 331T, 300 ft., 3" reel\$	1.60
Type 631-T, 600 ft., 31/4" reel\$	2.95
Type 1231T, 1200 ft., 5" reel\$	5.45
Type 2431T, 2400 ft., 7" reel\$	9.50

Master Plastic-Base Tape

Made on 1.5 mil a	cetate base.	
Type 651M, 600 ft	5" recl	\$2.75
Type 1251M, 1200	fr 7" place	ic reel \$4.30
Type 1251M, 1200	2500 G	101/ "
Type 2551FS-M,	2500 It.,	1072
fiberglass		

Standard Recording (plastic base) Professional-quality recording tape; maxi-

mum fidelity, uniformity, frequency response and freedom from noise and distortion; 1.5 mil acetate.

Type 151, 150 ft., 3" plastic reel.....\$.70
Type 351, 300 ft., 4" plastic reel.....\$1.35
Type 651, 600 ft., 5" plastic reel.....\$2.25
Type 1251, 1200 ft.,
7" plastic reel.....\$3.50
Type 2551R, 2500 ft., 10½" reel...\$10.90
Type 2551FS, 2500 ft., 10½" fiberglass reel (EIA)......\$10.90

Longer Recording (1-mil plastic base)

Provides 50% more recording time per reel; 1-mil cellulose acetate base; maximum economy for applications where high strength is not required.

Type 941, 900 ft., 5" plastic reel...\$3.50
Type 1841, 1800 ft., 7" plastic reel...\$5.50

Longer Recording (1-mil Mylar)

Made on 1-mil Mylar polyester film; provides 50% more recording time per reel; exceptional strength and durability plus longer storage life.

Type 261, 225 ft., 3" plastic reel.....\$1.00

Type 961, 900 ft., 5" plastic reel.....\$3.60

Type 1861, 1800 ft., 7" reel.......\$6.20

Type 3661FS, 3600 ft., 10½"

fiberglass (EIA) reel\$14.40
Standard Recording (1.5-mil Mylar) High-strength, super-durable magnetic tape that meets the highest professional standards of performance; withstands extreme temperatures; virtually immune to humidity; gives maximum tape life under any conditions of use or storage. Type 671, 600 ft., 5" plastic recl\$2.65 Type 1271, 1200 ft., 7" reel\$4.25 Type 2571R, 2500 ft., 10½" aluminum reel\$11.20 Type 2571FS, 2500 ft., 10½" fiberglass reel (EIA)\$11.20
Double Recording (.5-mil Mylar) Made on .5-mil Mylar; twice as much recording time per reel as standard plastic-base tape; suitable for extended-play applications where tape tension is not excessive. Type 1231, 1200 ft., 5" reel
BURGESS
Series No. 111 1.5-mil Plastic 111-1.5 150', 3" recl
Series No. 190 1.0-mil Extra-Play Plastic 190-2.25 225', 3" recl
Series No. 102 1.5-mil Mylar 102-6 600', 5" recl
Series No. 150 1.0-mil Extra-Play Mylar 150-2.25 225', 3" reel
Series No. 200 .5-mil Double-Length Tensilized Mylar 200-3 300', 3" recl
Series No. 290 .5-mil Double-Length Tensilized Mylar 290-6 600', 3¼" reel\$2.50 290-36 3600', 7" reel\$11.95
Series No. 131 1.5-mil Plastic 131-12 1200', 7" recl\$4.40 131-24R 2400', 10½" recl\$12.40

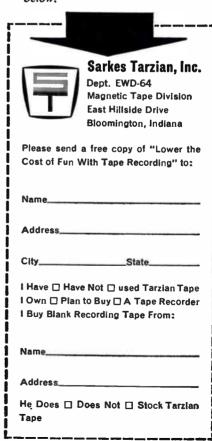
131-48R 4800', 14" reel\$26.00		
Series No. 138 1.5-mil Mylar 138-12 1200', 7" recl\$5.10 138-24R 2400', 10½" recl\$13.50		
Series No. 175 1.5-mil Polyvinyl Chloride Film Base		
175-6 600', 5" reel\$2.40 175-12 1200', 7" reel\$3.75		
Series No. 141 1.5-mil Plastic 141-6 600', 5" recl		
Series No. 140 1.0-mil Extra-Play Plastic		
140-9 900', 5" reel\$2.50 140-18 1800' 7" reel\$4.25		
Series No. 142 1.0-mil Extra-Play Mylar 142-9 900', 5" recl\$2.85 142-18 1800', 7" recl\$4.95		
Series No. 144 .5-mil		
Double-Length Mylar 144-12 1200', 5" rccl\$4.50 144-24 2400', 7" rccl\$7.95		
FERRODYNAMICS		
3" Reels 15C3 150' 15-mil acetate \$64		
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Mylar\$6.15 15D7M 1200 feet 1.5-mil Mylar\$3.75 5D7MT Special 3600 feet .5-mil tensilized Mylar\$9.95		
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"Red Seal" Series 1-mil Long-Play Plastic Base		
10A-9 900 feet, 5" reel\$ 3.50 10A-18 1800 feet, 7" reel\$ 5.50 272C1 3600 feet, 10½" NAB plastic reel\$12.85		
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15A-1.5 150 feet, 3" recl		

Mylar (Polyester) Tensilized Extra-Long Play

HOW can you talk long distance for only Och Per Hour?

This question, and many others about tape quality, tape use, and tape recording for fun, education, and profit, are answered in Tarzian Tape's new booklet, "Lower the Cost of Fun With Tape Recording."

It's free when you mail the coupon below,



Raw Tape

5T'M-24 2400 feet, 7" reel\$ 8.75 275C1 4800 feet, 10½" reel\$20.50
Mylar (Polyester) 1-mil Long-Play 10M-2.25 225 feet, 3" reel
Mylar (Polyester) 1.5-mil Professional-Grade 15M-6 600 feet, 5" reel
"Vibrant Series" Full-Frequency Recordings Acetate (plastic) Base 701C1 600 feet, 1.5-mil, 5" reel\$1.75 702C1 1200 feet, 1.5-mil, 7" reel\$2.95 703C1 900 feet, 1-mil, 5" reel\$2.50 704C1 1800 feet, 1-mil, 7" reel\$4.25
Mylar (Polyester) Base 707C1 900 feet, 1-mil, 5" reel\$2.85 708C1 1800 feet, 1-mil, 7" reel\$4.95 709C1 1200 feet, tensilized, 5" reel\$4.50 710C1 2400 feet, tensilized, 7" reel\$7.95
SARKES TARZIAN
"Standard Play" 1.5-mil Acetate Tape
1131-01 150 feet, 3" reel
1131-01 150 feet, 3" reel
"Long Play" 1-mil Acetate Tape 1121-02 225 feet, 3" reel\$.90 1121-09 900 feet, 5" reel\$ 3.15 1121-18 1800 feet, 7" reel\$ 5.15
"Long Play" 1-mil Acetate Tape 1121-02 225 feet, 3" reel\$.90 1121-09 900 feet, 5" reel\$ 3.15 1121-18 1800 feet, 7" reel\$ 5.15 1121-36R 3600 foot reel\$ 12.00 "Long Play" 1-mil Mylar Tape 1321-02 225 feet, 3" reel\$ 1.00 1321-09 900 feet, 5" reel\$ 3.60 1321-18 1800 feet, 7" reel\$ 6.20
"Long Play" 1-mil Acetate Tape 1121-02 225 feet, 3" reel\$.90 1121-09 900 feet, 5" reel\$ 3.15 1121-18 1800 feet, 7" reel\$ 5.15 1121-36R 3600 foot reel\$ 12.00 "Long Play" 1-mil Mylar Tape 1321-02 225 feet, 3" reel\$ 1.00 1321-09 900 feet, 5" reel\$ 3.60 1321-18 1800 feet, 7" reel\$ 6.20 1321-36R 3600 foot reel\$ 14.70

No. 102 Recording Tape

For applications where extreme toughness and improved resistance to the effects of excessive temperature and humidity change are required; high-strength polyester film backing; magnetic characteristics identical to standard No. 111

102-6	600 ft. Plastic Reel-	
5" size	\$2	.65
102-12	1200 ft. Plastic Reel—	
7" size	\$ 4	.25
102-25 B	2500 ft (NAB 101/2" reel)	

No. 120 ''High Output'' Recording Tape

.....\$11.35

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. Pl	lastic Reel\$	1.35
120-6	600 ft. Pl	lastic Reel\$	2.25
120-12	1200 ft. Pl	lastic Reel\$	3.50
120-25R	2500 ft.	(NAB 101/2"	reel)
120 2		`S	10.80

No. 131 "Low Print"

Acetate backing; reduces print-through to a point below noise level on most professional machines.

SITTIAL IIIACIIIIICO		
121 12 1200	£.	C 4 40
131-121200	LL	1.10
131-25R2500	c. (101/ "\	おもつ つハ
131-25R2500	tt. (10%).	12.20

No. 138 "Low Print"

No. 200 "Double Length"

Tensilized	polyester back	ing.
200-3	300 ft.	
200-24	2400 ft.	\$ 9.50
200 - 18RPS	4800 ft	\$22.00

No. 41 Splicing Tape

Special white thermosetting adhesive guaranteed not to ooze.

41½ S½"	Х	150 "\$	0.39
413/32 3/32"	х	66′\$	0.57
41½L½"	х	66'\$	0.76
41 1/4 1	x	66′\$	1.01
, ,			

No. 24 Leader and Timing Tape

24-1	
No. 140 "Stereo Quality, Extra Play"	

50% more			to	No.
141: 1 mil 140-9 140-18	900	ft	 \$ \$	2.50 4.25

No. 141 "Stereo Quality, Acetate"

No. 14	2 ''	Ster	eo Q	uali	ty,	Extr	a Pla	ay''
Similar	to	No.	141	with	1	mil	poly	ester
base. 142-9		-	900	ft.			\$	2.85
142-18.			1800	ft.			\$	4.95

No. 144 "Double Play"

Stereo	quality,	doub	le	strength;	.50-mil
tensiliz	ed polyes	ter b	ack	ing.	* 450
144-12		1200	ft.		\$ 4.50
144-24		2400	ft.		\$ 7.95

No. 190 Recording Tape

No. 150 "Extra-Play" Recording Tape

Magnetic recording tape offering 50% more recording time and featuring one-mil polyester backing for improved resistance to changes in temperature and humidity and also for greater strength.

150-2.25					1.00
150-9	900	ft.	Plastic	Reel\$	3.60
150-181	800	ft.	Plastic	Reel\$	6.20
***************************************				\$	14.35

No. 290 "Triple Length"

For all general recording uses; especially suitable for continuous recording of lengthy musical performances, conferences, meetings, conventions; .5-mil tensilized polyester backing.

backing.		
290-6 600 ft\$	2	.95
290-36 3600 ft\$	11	95
270-30 3000 11		

SOUNDCRAFT

"Standard" Tape

1.5-mil acetate base; professional	quality;
economy priced,	
S-1 150 ft., 3" reel	\$0.70
S-6 600 ft., 5" reel	\$2.10
S-9 900 ft., 5¾" reel	
S-12 1200 ft., 7" recl	
S-25RM* 2500 ft., 101/2 " reel	

"Standard-50" Tape

Long-play version of "Standard"	tape	on
1-mil acetate base.		
\$5-2 225 ft., 3" reel	\$ 0	,90
\$5-9 900 ft. 5" rcel	\$3	.29
\$5-12 1200 ft., 5 % " reel	\$4	.23
\$5-18 1800 ft., 7" reel	\$5	.17
S5-36RM* 3600 ft., 101/2" reel	\$12	.04

"Lifetime" Tape

For use where utmost strength and quality are necessary; 1.5-mil Mylar base; "Micropolished" oxide coating for perfect high-frequency response.

L-1 150 ft.				
L-6 600 ft.	. 5" re	cl		\$2.65
L-12 1200				
L-25RM* 2	500 6	1014 "	reel	¢11.20
L-23KM- 2) UU IL.,	10 /2	1001	W 11.20

"Plus-50" Tape

	reel	
PL-9 900 ft., 5"	reel	\$3.40
	7" reel	
PL-3RM* 3600 t	ft., 10½" reel	

"Plus-100" Tape

Provides 100% more recording time per tape; base is .5-mil Mylar; impervious to temperature and hymodity changes.

XP-6 600 ft., 31/4" rcel	\$2.29
XP-12 1200 ft., 5" reel	
XP-18 1800 ft., 534" reel.	
XP-24 2400 ft., 7" reel	
XP-48RM* 4800 ft., 101/2"	reel\$10.80

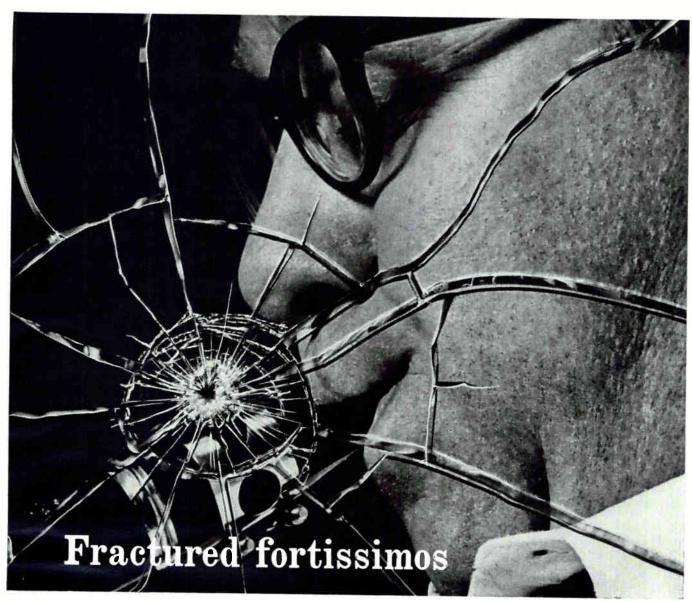
"Plus-100-X" Tape

Similar to "Plus-100" but with twice the
tensile strength; base is .5-mil Mylar.
XP-3X 300 ft., 3" reel\$1.60
XP-18X 1800 ft., 5 3/4 " reel\$7.48
XP-24X 2400 ft., 7" recl\$9.50
XP-48XRM 4800 ft., 101/2" reel\$22.00

"Golden Tone" Tape

High quality special tape; 25% more high-frequency out & 7 db better signal-to-noise ratio; 7" reel.

GTA-	2 1.	5-mil a	acctate	base,	12	00'	\$4.70
GTM-	18T	1-mil	tens	silized	M	lylar	basc
1800'							\$7.50
GTM-	24T	.5-mi	l ten	silized	N	fylar	base
2400'							\$11.40
*Also	avai	lable	with	916"	&	3"	center
openir							



in your concerto?

...then "bargain" recording tape's no bargain!

No doubt about it! Something's wrong with recording tape that carries a bargain-basement price, an unknown name. They're sure signs the tape would flunk some or many of the more than 100 quality tests that "SCOTCH" BRAND Recording Tapes are required to pass to assure flawless sound.

Coating and backing thicknesses of "SCOTCH" Recording

Tapes, for example, are held to microscopic tolerances-especially important in today's 4-track stereo. This uniformity not only guards against crack-ups in sound, it assures wide dynamic range, identical full fidelity recording properties throughout every reel, reel after reel.

High potency oxides used in "Scotch" Tapes permit thinner, more flexible coatings that make intimate head-to-tape contact a certainty for

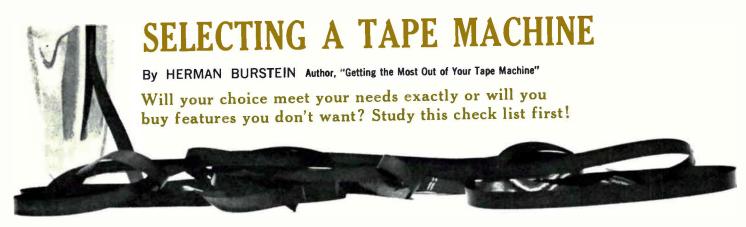
maximum frequency response. Exclusive Silicone lubrication, impregnated throughout the oxide coating, ensures smooth tape travel. This completely dry lubricant protects recorder against head wear and actually extends tape life. For your recording and listening pleasure, step up to the tape professionals prefer: "SCOTCH" BRAND.



On SCOTCH® BRAND Recording Tape, you hear it crystal clear!

Magnetic Products Division **3** Company





OUR first step in selecting a tape machine is to decide the purpose or purposes for which you are buying it. Do you want a companion piece for a high-fidelity system? If so, is the system mono or stereo? And do you want to record tapes or just play prerecorded tapes—in the same way that you play phono discs? Do you merely want an occasional plaything for parties, preserving babytalk, and the like? Do you want, essentially, something akin to a dictating machine? Or do you have another objective in mind?

Assuming that you have fixed the purpose clearly in mind, the next logical step is to understand what a tape machine does, because not all tape machines do the same things. So first we'll discuss functions. This, in turn, will lead us to a discussion of what you can get for your money in terms of versatility (variations of the basic functions), quality of performance, quality of construction (meaning reliability and durability), and operating conveniences.

Functions

In simplest terms a tape machine consists of two fundamental elements: a transport mechanism and a tape amplifier.

The transport shuttles tape between two reels and past a set of heads that erase, record, and play a magnetic tape (plastic coated with iron oxide).

The tape amplifier magnifies, attenuates, produces, shapes the frequency response of, and otherwise manipulates the electrical signals supplied to the tape heads or delivered by them. It also contains a record-level indicator that tells you how much signal to put on the tape—not enough to cause distortion yet not so little as to submerge the audio signal beneath tape and amplifier noise.

In recording, audio information in the form of an electrical signal goes to the record head, which produces a magnetic field that "inscribes" magnetic patterns on the tape. The reverse occurs in playback. Magnetic patterns on the tape cause the playback head to generate an electrical signal, which is ultimately converted into sound.

Most home machines use the same head for recording and playback. A minority, mostly high-price ones, use separate heads. In addition, an erase head is employed when recording. This is located prior to the record head and subjects the tape to a relatively powerful magnetic field that destroys any previously existing patterns on the tape.

What we have described thus far is called a basic tape machine. It requires an external power amplifier and speaker, such as that of a hi-fi installation or public address system, to convert into sound the electrical signal produced in playback.

But what if you don't have a hi-fi system or wish to be independent of it? Then you need what is called a self-contained tape machine. This includes a power amplifier and a speaker to convert the playback signal into sound. Most home machines are self-contained. The tendency is for the high-price ones (costing upward of \$400) to be basic machines. The reason is that it is nigh impossible to include within the restricted space of a tape machine a power am-

plifier and speaker whose quality is consistent with the rest of the expensive unit.

You are apt to want a self-contained machine that can also be connected to a hi-fi system for maximum playback quality. Therefore most self-contained recorders have an output jack to accommodate a cable leading to your hi-fi amplifier. But if you are considering a very inexpensive machine, there may be no output jack; or if there is one it may be connected after rather than before the machine's power output stage, which tends to degrade the playback signal. Check whether the output jack of the machine you are considering is so arranged that when you insert the plug of the output cable the internal speaker is silenced. Otherwise the internal speaker may interfere with listening to your hi-fi speaker system.

In addition to the basic tape recorder and the self-contained one, a third important category is the tape player. This has a role analogous to the record player. It has no recording facilities and is used to play prerecorded tapes.

The tape player subdivides into those with electronics and those without. The one with electronics supplies a relatively strong signal, with nominally flat frequency response, that can be fed into just about any external amplifier. The one without electronics (really just a transport containing a playback head) supplies a very weak signal highly deficient in bass. This signal is taken directly from the playback head and must be fed into an amplifier equipped with a special "tape head" input that supplies the required bass boost plus additional over-all amplification.

Another possibility is to purchase the transport mechanism separately from the tape amplifier since this may offer a saving or a wider choice of features, or a combination of the two. But there are possible disadvantages in such a course because various controls in the tape amplifier have to be adjusted carefully to permit the transport and amplifier to work together properly. Specifically, the responsibility passes from the manufacturer to you in seeing to it that the proper amounts of bias and erase currents are respectively fed to the record and erase heads; and that the record-level indicator accurately warns against putting too much signal on the tape, causing excessive distortion.

A basic decision you must make is whether your tape machine is to be stereo or mono. If the machine is to go with your hi-fi system, the answer probably depends on whether this system is stereo or mono. If you get a stereo machine, it will probably be of the quarter-track type, permitting stereo recording in both directions of the tape. However, some units, particularly high-price ones, offer the option of half-track heads. Although these permit operation only in one direction, they tend to provide a somewhat higher signal-to-noise ratio and greater freedom from dropouts (brief drops in the signal level).

Versatility

An advantage of the stereo machine, in addition to being able to record or play two tracks at once, is greater versatility than the mono machine. Thus many stereo recorders permit you to use all four tracks in sequence (assuming a quarter-track head) for mono. This doubles the recording time per reel of tape compared with a conventional mono machine, which can record or play only two tracks in sequence. If you are considering a stereo machine with four-track mono operation, check whether there is objectionable crosstalk between channels. To do this, take a blank tape (virgin or bulk-erased tape), record on Channel 1, and listen for leak-through of this recording when playing Channel 2.

One of the main claims to versatility on the part of stereo recorders is sound-on-sound. While many stereo machines boast of this sound-on-sound feature, not all can deliver on their promise. True sound-on-sound means that you can do the following: record Signal 1 on Track A; play Signal 1 and record it in synchronization with Signal 2 on Track B; play Signals 1 and 2 and record them in synchronization with Signal 3 on Track A; and so forth, thereby transforming yourself or anyone else into a duo, trio, quartet, etc. If sound-on-sound seems an important feature, satisfy yourself that you are really getting this facility. Some tape recorders merely permit synchronized recordings of just two signals on separate tracks; others merely permit the erase head to be de-activated so that one signal can be recorded atop another, but are without means for synchronizing them.

Home tape machines generally provide at least two operating speeds, usually 7.5 and 3.75 ips (inches per second). The faster speed stresses quality of performance, while the slower stresses tape economy. Surprisingly good results can be obtained at 3.75 ips, although 7.5 ips is generally considered the minimum speed for high fidelity. (A machine recently introduced claims high-fidelity performance at 1.875 ips but a special, not readily available, tape is required.) Several home machines operate at 1.875 ips, either as a third speed or coupled with 3.75 ips. A very few go all the way down to 15/16 ips. Only fair to poor performance can be expected at speeds below 3.75 ips. Going the other way, several of the high-price home recorders operate at 15 ips for maximum performance.

The typical home machine allows you to record from either a low-level source (microphone) or a high-level one (tuner, preamp, etc.), but not from both at once. Some, however, do allow you to mix (combine) the low-level and high-level inputs, which you may or may not find a useful feature, depending on your needs. Where mixing is possible, separate volume controls are sometimes provided for each source, instead of having one control for both. If your envisioned needs involve rather complex mixing, your best bet probably would be to buy a suitable mixer rather than count on the facilities of the tape recorder to handle the job.

Some of the least expensive machines provide only for recording from microphone. Then you face a problem if you are trying to record from a high-level source, for example, from your hi-fi system. True, you can use the microphone to pick up sound from the hi-fi speaker, but the results are inevitably mediocre.

If you wish to copy a recorded tape, ordinarily it is necessary to have two tape machines—one to play the recording and the other to copy it onto fresh tape.

Quality of Performance

Are you interested in a near-perfect facsimile of the original sound or in just a fairly good likeness? If the former, you must expect to pay something more than "average price", and you should take pains to check out the machine you plan to buy in the store where you plan to buy it—if possible. A quite simple test is to tape a good quality phono disc and compare the tape playback with the disc as both are played through the same hi-fi system. At 7.5 ips, the two should be practically indistinguishable. A high-grade tape

machine can smoothly reproduce virtually the whole audio range with unnoticeable distortion, noise, wow, and flutter at this speed.

Inquire whether the machine you are considering provides *true* "NAB playback equalization"—not "NAB-type", "modified NAB", or some such equalization—at 7.5 ips, so that frequency response will be correct when playing pre-recorded tapes.

Another test you may want to make in the store is for playback noise. Put on a reel of virgin or bulk-erased tape. With the machine in the playback mode, listen to the noise when the tape is moving and when it isn't. If much or most of the noise appears to be generated when the tape moves, this suggests that the playback amplifier, where most noise problems arise, is a relatively quiet component.

To check recording noise, you can put several feet of virgin or bulk-erased tape through the recording process but with no input signal and with the volume all the way down. Play back the section of tape that was put through the recording process and compare its noise level with the subsequent tape footage that did not go through this process. The "recorded" portion will be noisier, but it should be only "moderately" noisier. If much noisier, something is wrong.

Another test, if the salesman allows, is to check how well the machine erases tape. Watch out for mechanical noise, which may sound much louder in the quiet of your home than in the tumult of the store. Inquire whether the frequency of the bias current (fed to the record head in order to reduce distortion and increase the amount of recorded signal) is at least 60,000 cycles; otherwise there may be spurious noises due to "beating" between the bias frequency and harmonics of the recorded audio frequencies. You may want to ask if the machine has a multiplex filter to avoid possible beating between the machine's bias frequency and the 19,000-cycle pilot signal, or harmonics thereof, produced by a multiplex tuner.

An important area of performance is summed up by the word "motion". This refers to steadiness of speed (low wow and flutter) and to accuracy of speed. To check steadiness, play a tape containing continuous test tones, preferably around 3000 cycles. Or play a tape containing slow piano tones. If wow and flutter are suitably low, the tones will be relatively free from a wavering, pulsing, or grainy quality. Deviations over 1% from exact speed should be questioned in a machine intended for hi-fi service.

Transport performance is further described by the term "handling". Does the tape start and stop quickly without jerking or spilling? Does the tape wind smoothly onto the takeup reel during normal operation? Can you alternate rapidly between fast forward and fast reverse without spilling or breaking tape? Can a 1200-foot reel of tape be rewound with reasonable rapidity—within 90 seconds?

While seeing (or hearing) is believing, nonetheless many of us tend to give credence to what the manufacturer claims for his product. In practice, there can be an appreciable gap between the design model and production-line units, and rather prodigious quality control that adds substantially to the price is required to keep the gap small. Assuming that a machine lives up to its specifications, here is how they might read for a high-fidelity unit when operating at 7.5 ips: frequency response within \pm 2 db between 30 and 15,000 cps, signal-to-noise ratio 55 db based upon a 400-cycle (or 250-cycle) tone recorded at a level resulting in 3% harmonic distortion on the tape; wow and flutter less than .2%; speed accurate within .5% (or at most within 1%); NAB tape play-back equalization standard.

Quality of Construction

Good construction not only ties in with good performance but also means greater immunity to trouble and longer life. Unfortunately, much like an iceberg nine-tenths submerged,

SELECTING A TAPE MACHINE

quality of construction is only partly apparent. When two tape machines, on the surface, look alike but differ markedly in price, you have to assume that the price differential is due to the grade of construction. To the unpracticed eye, top-notch tape heads look no different than the run-of-themill kind. Out of sight below deck, the well-built machine employs high-quality resistors and capacitors that are accurate, stable, and capable of withstanding voltage surges and heat. For driving the capstan, a hysteresis motor may be used instead of a 4-pole unit to achieve more accurate and uniform tape motion. Three motors may be employed instead of one to facilitate good motion and expeditious tape handling; the two extra units drive the takeup and supply reels. To eliminate flutter caused by friction between the tape and pressure pads (commonly employed in home machines for intimate tape-to-head contact), a well-designed machine will minimize or altogether eliminate the number of pads used; it will not use a pad against the record and playback heads but, at most, against the erase head.

Separate record and playback heads are found in the finest home machines. Although very good results can be obtained by using the same head for record and playback, a slight but worthwhile improvement can be obtained with separate heads because there is a difference in the design requirements for each purpose. The principal advantage is that separate heads give a higher signal-to-noise ratio.

Separate heads also make it possible to build the tape machine so you can play back at the same time that you are recording, permitting an immediate check on recording quality. On the other hand, despite the use of separate heads, a few machines do not include the remaining facilities required for concurrent recording and playback. When purchasing a machine that boasts separate heads, you might want to ask whether it can record and play back simultaneously.

Use of a vu meter as the record-level indicator has long been considered one of the hallmarks of a high-quality tape recorder, so much so that lesser machines have often tried to acquire a professional aura by including a vu or similar meter. However, it is debatable whether the vu meter is really preferable to a magic-eye tube for the purpose of indicating record level. While the meter has the advantage of permitting fine, definite gradations of recording level, the magic eye, being an electronic instead of mechanical device, is better at following sudden, sharp audio peaks that cause noticeable distortion. A meter may fail by anywhere from a few db to as much as 20 db to indicate the true level of signal peaks.

Some tape machines have neon lamps as record-level indicators, but these generally are undesirable where highquality performance is considered important.

A tape machine that is to work at its full potential calls for more or less critical adjustment of bias current, recording current, erase current, and record-level calibration. The well-constructed machine will have a number of internal controls so that the factory or technician may make the necessary adjustments, whereas a low-price machine will use fixed values of resistors and capacitors.

Operating Conveniences

Thus far we have been talking about what a tape machine does, how well it does this, and how long it is apt to go on doing so. Now we must consider another set of features, which we may term "operating conveniences", that make it easier and more fun to use the machine-much in the way that power steering and automatic transmission make driving a car more enjoyable but are not absolutely essential to its operation. Following are most of the conveniences you may want to consider when selecting a tape machine:

- 1. Safeguards against accidental erasure. Nearly all machines require that you push a safety button or lever before you can put the machine in the record mode. This prevents the accidental erasure of a valued tape. Some units provide additional safeguards, such as a warning light that goes on in the record mode. At least one recorder, equipped with push-button controls, requires a much heavier touch on the record button than on the playback button.
- 2. Tape lifter. This spaces the tape away from the heads during rapid forward and reverse winding to prevent accelerated head wear. In the absence of a tape lifter, you should remove the tape from its normal path past the heads and wind it directly from reel-to-reel if possible.
- 3. Automatic equalization change. Equalization requirements differ greatly for each speed, and most tape recorders automatically change the equalization when you move the speed-control lever. Some, however, do not and this creates the danger of spoiling a recording if you fail to adjust equalization manually. One of the disadvantages of buying a transport and a tape amplifier separately is that you then forego the automatic equalization-change feature.
- 4. Tape counter. Found in most machines, this enables
- you to quickly locate a particular passage on the tape.
 5. "Low impedance" output. If you must run a long cable between your tape machine and your hi-fi system for playback, there will be appreciable loss of high frequencies unless the tape machine has a "low impedance" output. (Similarly, for recording a signal produced by your hi-fi system, there will be high-frequency loss unless your amplifier's tape output jack has "low impedance," or unless you take the signal from the speaker leads, which is not recommended.)
- 6. Automatic shutoff. A minority of home tape machines stop the transport if there is any interruption in the tape. This prevents a dreadful snarl of tape or shower of tape confetti if the machine is unattended when the tape runs out or breaks. Some machines provide for semi-automatic shutoff; the transport stops at the end of the reel provided you have attached metallic leaders to the tape ends.
- Push-button controls. Usually of the piano-key variety in home machines, these simplify operation and tend to minimize mistakes on the part of the operator.
- 8. Remote start-stop. Several recorders will accommodate an accessory in the form of a foot-controlled or hand-controlled remote switch that starts and stops the transport. This can be a real convenience for dictation and similar applications.
- 9. Automatic reverse. One or two machines on the market eliminate the need for manually reversing the reels after the tape has been operated in one direction. They automatically reverse the tape's direction when one reel is about empty, and they make the necessary changes in head operation so that different tape tracks will be recorded or played in the opposite direction.
- 10. A-B switching. If the machine you are considering has separate record and playback heads and provides for simultaneous recording and playback, it is desirable that it include an "A-B" switch. This enables you, when recording, to compare the playback signal with the incoming signal.
- 11. Portability. Some machines are so light and compact, yet without sacrificing quality, that the machine is easily portable. This can be a valuable feature if your plans call for moving the tape recorder around a great deal.
- 12. Pause button. Many or most home tape recorders are designed so that, if recording, the machine is automatically disengaged from the record mode when the transport is stopped. Some of these machines at the same time include a pause button, allowing you to stop the transport (for editing or other purposes) but remain in the record mode.



Records automatically—imagine! Eight hours of full-range high fidelity stereophonic music, or 16 monaural hours, are now yours on one 7" reel with the new Roberts Cross Field "770" Tape Recorder. The average tape cost per album: only 33¢. The "770" has an exclusive patented third head, the Cross Field Head, which separates recording and biasing functions. It records 40-22,000 cps... produces true fidelity at 1½ ips, and preserves the high frequency harmonics that breathe life into a music playback. The "770" playback head has a gap width of only 40 micro inches, and is made of a new alloy, NC-88, that is practically wear-proof. Other features: 2-speed, electrically switched, heavy duty hysteresis synchronous motor; miniscule wow and flutter at low speeds; special ventilation keeps "770" cool even after 8 hours; 5"x7" self-contained, extended range, heavy duty Alnico V magnet speakers; automatic total shut-off, vertical or horizontal operation. Only \$499.95.

Specifications: $7\frac{1}{2}$, $3\frac{3}{4}$, $1\frac{7}{8}$ ips. Power Amplifier Output: 12 watts • Frequency response: at $7\frac{1}{2}$ ips, 40 to 22,000 cps \pm 2 db; at $3\frac{3}{4}$ ips, 40 to 18,000 cps \pm 2 db; at $1\frac{7}{8}$ ips, 40 to 13,000 cps \pm 3 db • Signal to noise ratio: -55 below 0 recorded level • Wow and flutter: at $7\frac{1}{2}$ ips, less than 0.12% rms; at $3\frac{3}{4}$ ips, less than 0.20%; at $1\frac{7}{8}$ ips, less than 0.30% • 5° x7" elliptical, extended range, heavy duty Alnico V magnet speakers • Hysteresis synchronous electrically controlled 2 speed motor • Automatic total shutoff • Operates Horizontally or Vertically.

SEE THE ROBERTS CROSS FIELD "770" TAPE RECORDER PRICED FROM \$269.95 to \$699.95 AT BETTER SOUND AND PHOTO CENTERS



SEND FOR
FREE BOOKLET!
"40 AND MORE WAYS TO USE
A ROBERTS TAPE RECORDER"



Roberts Electronics, Inc.
5978 Bowcroft, Dept. EWS-A.
Los Angeles 16, Calif.
Please send free booklet
Please send me complete information
about Roberts Tape Recorders

Name
Address
City
State
Synamics
State

CIRCLE NO. 45 ON READER SERVICE PAGE



Tape Accessories

AEROVOX

Model 710 Degausser

Will demagnetize magnetic tape up to 10" reels, 1" wide, without rewinding: heavy-



duty design; 110-130 v., 10 amps\$49.95

AMERICAN CONCERTONE

Model 18 Head Demagnetizer

Pencil-type will demagnetize any tape recorder head\$5.00

Tape Timer-Strobe

AMPLIFIER CORP.

Model 200C "Magneraser"

Bulk tape craser; operating voltage 100-130 volts; operating frequency 50-60 cps; 2" high, 4" dia. Model 200C.....\$18.00



Also available: Model 220C, identical in price and specifications except for operating voltage of 200-260 volts.

AUDIOTAPE

Audio Head Alignment Tape

Audio Head Demagnetizer

Demagnetizes tape recorder heads; re-



quires only plug-in to conventional a.c. outlet\$10.00

AUDIOTEX

Model 30-114 Tape Demagnetizer Handles all reel sizes up to 10½"; erases

to -52 db level; complete with 6-foot



cord; on-off push-button.....\$33.00

Model 30-112 Head Demagnetizer

Has curved top to reach most heads; soft plastic coating on tip to prevent head



damage: built-in push-button switch; 6-foot cord......\$11.95

DUBBINGS ELECTRONICS

TapeStrobe



Chrome-plated stroboscopic wheel,	ground
to .0003" accuracy.	
Model A 7.5-15-30 ips	\$22.50
Model B 3.75-7.5-15 ips	
Model C 1%-3.75-7.5-15 ips	
For 50 cycles, add \$5.00.	

KNIGHT-KIT

KP-70 Record/Playback Preamp

Separate record/playback sections allow 2- or 3-head operation, monitoring record-



ing, sound-on-sound, recording with echo chamber effect; 6-position selector switch for playback and record each channel, or stereo record and playback; vu meters for both functions; adjustable high frequency recording pre-emphasis; printed circuits; record section sensitivity .0005 volt at mic. input, .080 volt at aux, for maximum recording level; record distortion less than 0.3% at maximum record level; bias oscillator 100 kc; master gain and individual channel balance control.

83YU647—KP-70 (kit)......\$ 89.95 83YX936 Metal case......\$ 1.95 Factory wired.....\$139.95

LAFAYETTE

Model F-928 Miniature Tape Heads

Two-piece set consisting of one record/ playback and one erase tape head; designed for use in dual-track miniature tape recorders or for experimentation; response 100-7000 cps ± 5 db; signal-to-noise ratio better than 45 db; bias system a.c.





and d.c.; impedance 5500 ohms at 1 kc.; d.c. resistance 169 ohms: 11 i6" w. x 7 i6" h. x 5 i2" d. (approx.)...............\$3.95

Model ML-120 Bulk Tape Eraser

Provides tape noise level 4-6 db below noise level from recorder erase heads;



pilot light; fused; draws 6½ amps; 110-120 volts, 60-cycle a.c. operation—\$18.95

MICROTRAN

Model HD-40M Tape Head Demagnetizer

Will remove permanent magnetization; reduces noise level and harmonic distor-



tion;	improves	signal-to-noise	ratio;	4"	1.
x 11/4	" dia			\$6.1	5

Model HD-11M Bulk Eraser

Heavy-duty magnetic tape eraser for tapes up to 1/2"; noise level is reduced below



NORTRONICS

Model PL-100 Playback Amplifier

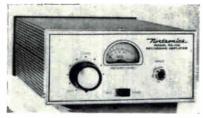
May be used as second playback channel or in pairs for complete stereo playback;



sensitivity: low-level input 2 mv., highlevel input 0.2 volt; equalization variable NAB or RIAA; power output 3 watts at less than 3% harmonic distortion; response 20-16,000 cps \pm 2 db; outputs 4-8-16 ohms to speaker and 1-volt low-impedance to amplifier; tubes: 2--12AX7, 12BH7, 6X4: $2\frac{3}{6}\text{"x}5\text{"x}8\text{".x}8\text{"...}46.50$

Model RA-100 Recording Amplifier

Allows conversion of mono recorder to stereo record or use in pairs for full stereo



Model P-6 Conversion Kit

Converts all Pentron mono and 2-track stereo tape recorders to 4-track stereo playback; patch cord and jack set to connect to external stereo playback amplifier included \$29.70

Model P-7 Conversion Kit

Model R-67 Conversion Kit

Converts Roberts, Metzner, Akai, and Terracoider tape recorders to 4-track stereo playback while retaining existing mono



record/play capabilities; allows 4-track stereo recording with additional amplifier (not included)......\$39.00

Model V-6 Conversion Kit

Converts all mono and 2-track stereo V-M recorders to 4-track playback; includes patch cord and jack set for connecting to external stereo playback amplifier....\$25.50

Model V-7 Conversion Kit

Model W-2 Conversion Kit

Converts Webcor Series 210, 2020, 2100, 2600, and 2700 to 4-track stereo playback only; may not be used for recording unless external amplifiers are used (not included)\$27.50

Model W-6 Conversion Kit

Model W-7 Conversion Kit

For Webcor 2800, 2900, and old 2000

Model RPE-20 Replacement Kit

Direct replacement mono record/play and erase kit for Wollensak and Revere re-



corders; complete assembly mounted on special plate, wired and ready to install \$15.60

Model WR-35 Conversion Kit

Converts all stereo Wollensak and Revere 2-track tape recorders to 4-track stereo playback\$25.50

Model WR-40 Conversion Kit

Converts all mono Wollensak and Revere tape recorders to 4-track stereo playback;



a tape head playback amplifier such as the Model PL-100 is required for playback of second channel (not included)......\$32.50

Model WR-60 Conversion Kit

Converts all 2-track Wollensak and Revere models to 4-track stereo; includes three-



position head shifter for 2-track stereo, 4-track stereo, and 4-track mono operation: allows stereo recording with additional amplifier (not included)......\$49.50

T60F Oscillator Transformer

For 12AU7A tube circuit use with all record, record/playback, and erase heads listed; freq. range 70-100 kc. depending on impedance \$4.50

Model T60E Oscillator Transformer

65-kc. bias for recording and erase current for either high or low impedance heads; one-tube oscillator circuit diagram included \$4.50

Model T60-T2 Oscillator Transformer

Similar to Model T60F, but designed for transistor circuitry; 40-100 kc.; will de-





TAPE RECORDING HEAD DEMAGNETIZER

Removes permanent magnetism, protects tape from erasure, minimizes noise and distortion, extended pole piece —easy access.

MODEL HD-40M



NET \$6.15

MAGNETIC TAPE ERASER



Bulk erasure of recorded tape, restores tape like new, reduces noise, reel size to 101/2" X 1/2" W, epoxy case, sealed for life.

MODEL HD-11M NET \$18.95

STEREO 3RD CHANNEL OUTPUT TRANSFORMER

Add speaker to fill "holein-middle". Matches impedance, polarity and power level. Rating 30 watts. Response 40 to 20,000 C.P.S.

MODEL HM-90 NET \$6.33



MICROTRAN company, inc. 145 E. Mineola Ave., Valley Stream, N. Y. CIRCLE NO. 34 ON READER SERVICE PAGE



COMPONENTS • RECORDERS
KITS • SPEAKER SYSTEMS • TAPE

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Send for FREE "MONTHLY SPECIALS" on other Cartridges, Tapes, and Components.



CIRCLE NO. 7 ON READER SERVICE PAGE

1964 EDITION



Tape Accessories



liver 25 to 150 volts to erase and record heads\$4.50

Model AT-100 Alignment Tape

7.5 ips full-track for checking record/play heads of all types; 40-10,000 cps; recorded for checking azimuth, equalization, and head wear......\$4.95

1000 Series Record/Play Heads

Four-track stereo; laminated core: premium quality with full metal face construc-



tion; replaces older CSQ, TLB, and TLD-L, styles.

#1000—High impedance; 750 mhy. inductance; 100 \(\mu \)in. gap; for use with vacuum-tube circuits; no-mount type \$\frac{\pmatrix}{21.00}\$ #1001—Medium impedance; 350 mhy, inductance; 100 \(\mu \)in. gap; for use with vacuum-tube or transistor circuits; no-mount type \$\frac{\pmatrix}{21.00}\$ #1002—Low impedance; 100 mhy. inductance; 100 \(\mu \)in. gap; for use with transistor circuits; no-mount type \$\frac{\pmatrix}{21.00}\$ #1003—Special record only head; 60 mhy. inductance; 500 \(\mu \)in. gap; for use with vacuum-tube or transistor circuits; no-mount type \$\frac{\pmatrix}{21.00}\$ Same as \(\pmatrix \mu \)000, \(\pmatrix \mu \)001, \(\pmatrix \mu \)003 except rear mount. \$\frac{\pmatrix}{22.50}\$ Same as above with hyperbolic contour \$\frac{\pmatrix}{22.50}\$

1800 Series Record/Play Heads



2600 Series Record/Play Heads

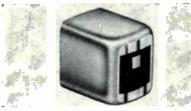
Two-track mono: laminated core; plastic face construction; replaces older SLA style.

#2600—High impedance; 700 mhy. inductance; 160 µin. gap; for use with vacuum-tube circuits; no-mount type \$15.90 #2601—Medium impedance; 350 mhy. in-

#2601—Medium impedance; 350 mhy, inductance; 160 μ in, gap; for use with



3000 Series Record/Play Heads



Two-track mono; solid core; plastic face construction; replaces older SLS style. #3000—High impedance: 900 mhy. inductance; 160 µin. gap; for use with vacuum-tube circuits; no-mount type \$8.40 #3001—Medium impedance; 350 mhy. inductance; 160 µin. gap; for use with vacuum-tube or transistor circuits; no-mount type \$8.40 Same as #3000 and #3001 except rear mount \$9.40

3100 Series Record/Play Heads

Two-track mono; solid core; metal face construction; with center track.



Same as above with hyperbolic contour\$9.90

4000 Series Record/Play Heads

Full-track mono; laminated core; premium quality with plastic face construction; replaces older SF style.

5601 Series Record/Play Heads

Four-channel; hyperbolic contour; metal face; laminated cores.

1400 Series Erase Heads

Four-track stereo; laminated core; double gap; premium quality with full metal face construction; replaces older SEQ and SE-50 styles.

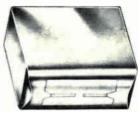
#1400—High impedance; 80 mhy. inductance; 30,000 ohms impedance at 60 kc.;



2200 Series Erase Heads

Two-track stereo; laminated core; double gap; premium quality with full metal face construction; replaces older SEH and SE-100 styles

#2200-High impedance; 80 mhy. inductance; 25,000 ohms impedance at 60 kc.;



volts; no-mount type.....\$12.00 Same as #2200 and #2201 except rear mount\$13.50

3600 Series Erase Heads

Two-track mono; laminated core; premium quality with full metal face con-



struction; double gap; replaces older MEH and ME-100 styles.

#3600-High impedance; 80 mhy. inductance; 25,000 ohms impedance at 60 kc.; for use with vacuum-tube circuits; 60 kc. operating voltage: 100-150 volts: nomount type......\$8.00 #3601-Medium impedance; 8 mhy. inductance; 2000 ohms impedance at 60 kc.; for use with vacuum-tube or transistor circuits: 60 kc. operating voltage: 32-48 volts; no-mount type.....\$8.00 Same as #3600 and #3601 except rear mount\$9.50

4400 Series Erase Heads

Full-track mono; laminated core; double gap; premium quality with full metal face



construction; replaces older MEF and ME-250 styles.

#4400-High impedance; 40 mhy, inductance; 12,000 ohms impedance at 60 kc.; for use with vacuum-tube circuits; 60 kc. operating voltage: 100-150 volts; nomount type......\$14.00 #4401-Medium impedance; 3.6 mhy. inductance; 1000 ohms impedance at 60 ke.; for use with vacuum-tube or transistor circuits; 60 kc. operating voltage: 32-48 mount\$15.50

ROBINS

Model ME-99 Bulk Tape Eraser



Demagnetize up to 1/2" wide; can erase background noise on old tapes; takes up to 10½" reels; size 3¾" x 5¼" x 6¾"\$43.50

Model ME-77 Bulk Tape Eraser

Low-cost version of Model ME-99; accepts reels up to 7".....\$24.50

Model TK-5 Strobetape Kit

Consists of five lengths of 25-inch nonmagnetic 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 TS-8D Deluxe Tape Splicer

Cuts tape diagonally; features "See-Thru" windows indicating cut and trim positions; blade centering adjustment; unit has replaceable cutter cartridge and blade; supplied with roll of ½" x 100" splicing tape\$12.75

Model TS-4S Tape Splicer

Similar to Model TS-8D except does not have "See-Thru" windows: supplied with roll of 3/8" x 100" splicing tape.......\$9.50

Model HD-6 Head Demagnetizer



Allows user to demagnetize tape recorder heads; plugs into a.c. line.....\$10.00

Model HD-3 Head Demagnetizer

Low-cost version of Model HD-6.....\$6.00

SONOTONE

Model RH-4A Tape Head

Stereo ¼-track for record/play; 3000 ohms @ 1 kc. @ 7.5 ips; audio current .025



ma.; bias current @ 65 kc. .5 ma.; response at 10 kc. -5 db; at 3.75 ips audio current .02 ma.; bias current .2 ma.; response −10 db; output @ 1 kc., 3 mv. \$28.50

Model RH-2A Tape Head

Mono ½-track for record/play; 6000 ohms @ 1 kc.; bias current .6 ma. @ 65 kc.; output 3 mv. @ 1 kc.; at 7.5 ips audio current .025 ma.; response -10 db @ 10 kc.; at 3.75 ips audio current 0.2 ma.; response —15 db\$10.00

Model RH-2B Tape Head

Mono 1/2 -track record/play; 1000 ohms @ 1 kc.; audio current .04 ma.; bias current .7 ma. @ 65 kc.; output 1 mv. @ 1 kc.; response at 10 kc. -10 db at 7.5 ips; -15 db at 3.75 ips\$10.00

Model RH-2C Tape Head

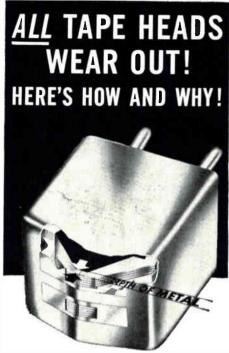
Mono ½-track record/play; 2200 ohms; audio current .03 ma.; bias current .6 ma. @ 65 kc.; output 1 mv. @ 1 kc.; response at 10 kc. -10 db at 7.5 ips; -15 db at 3.75 ips\$10.00

Model EH-4A Erase Head

Stereo ¼-track; 2400 ohms; 65 kc. bias freq.; 12.5 ma. erase current; for 7.5 & 3.75 ips machines\$13.50

Model EH-2A Erase Head

Mono ½-track; 1750 ohms; 65 kc. bias freq.; crase current 3 ma.; for 7.5 & 3.75 type brackets available.



Magnetic tape itself is the real cause of head wear!

The abrasive action of tape as it passes over the head face gradually wears away the depth of metal left on a new head after final polishing (see above). Because wear is nearly always uneven, craters or ripples are also formed on the face as wear progresses, thus making it impossible to achieve good contact between the head gap and the all-important signal recorded on the tape. The severe high frequency losses and erratic output resulting from poor tape-to-gap contact are very annoying to the ear. Head wear should NOT be permitted to reach this point - much less go beyond it to the limit where the gap actually begins to open up.

By replacing the worn head with a new Nortronics professional type of laminated tape head you will obtain improved high frequency response over the original head, plus the added feature of longer life since laminated heads have 50% more depth of metal at the gap. Nortronics manufactures both laminated and solid-core heads, but recommends the use of the laminated types for up-grading of your recorder.

HAVE YOU CHECKED YOUR HEADS LATELY? MAVE TOU CHECKEY TOUR TIRBUS LAILLI: Get the most from your investment in tape equipment. Be certain that head wear is not causing you to lose the clean, crisp sound which only tape gives you. Have your Hi-Fi dealer, Radio/TV serviceman or camera store check your heads for wear. Insist on Nortronics replacement heads and "Quik-Kit" mounting hardware; both correctly matched mounting hardware; both correctly matched to your recorder.

Music sounds best on tape—
Tape sounds best with Nortronics heads



City. CIRCLE NO. 38 ON READER SERVICE PAGE

State

Address.

1964 EDITION



W60

In the streamlined look of fine modern furniture or handsomely crafted provincial, this full-range two speaker system continues to provide superlative performancemaking it the automatic choice when the finest reproduction is desired. True Wood \$116.50. Unfinished, in sanded birch hardwood, without curved molding or dividers \$101.50.

W60 PR Provincial in genuine Fruitwood \$134.50

Superb...because Wharfedale Achromatic Speaker Systems are crafted to reproduce music as music really is. No spurious resonances, no artificial colorations mar the fidelity of reproduction. Listen to your favorite musical work on a Wharfedale-hear, perhaps for the first time, the clear transparent highs, the rich mid-tones, the fullness of a superb low-range.

Sand Filled Baffle

Chief characteristic of the Achromatic construction is the sandfilled technique, which consists of packing white sand densely be-tween layers of hardwood. The resulting inert mass is incapable of



resonating, no matter how deep or strong the bass backwave projected against it. This exclusive Wharfedale technique yields a full range of sound, a per-fectly pure "Achromatic" musical image, without acoustical coloration.

W90

A magnificent new 6 speaker dual 3-way system, destined to restore the legendary sound of the great Wharfedale systems used by G. A. Briggs in his famed Carnegie Hall Concert demonstrations. The meticulously crafted cabinet is proportioned specifically to accommodate the speakers and construction

required to accomplish this ambitious purpose; yet the size (32¼" x 27¾" x 13½") is sufficiently compact to fit into the modern living room. Oiled or Polished Walnut \$259.50. Utility model in sanded birch hardwood without curved molding or dividers \$244.50.



W70

A three-speaker system-handsome by itself, yet still sufficiently compact for shelf or wall inte-gration. The beauty and excellence of perform-ance of this remarkable system makes it unusually attractive to experts and laymen alike. True Wood \$164.50. Unfinished in sanded birch hardwood, without curved molding or dividers \$146.50.



W70 PR

Provincial in genuine Fruitwood \$189.50

W40

Ultra-compact (24" x 12" x 10") full-range system at a most attractive price. Two superior speakers: A newly developed 8½ inch low frequency driver with an extremely high flux density magnet—and Wharfedale's outstanding 5 inch tweeter—the same used in the larger W60 system. True Wood \$79.50. Unfinished in sanded birch hardwood, without curved molding \$69.50.

















Universal Mounting base for W60, W70 and W90 systems in matching woods. Easily installed to enhance the beauty of the enclosures.

True Woods \$9.95.
Utility model in sanded birch hardwood \$8.95.



Full Range 10" Super 10 RS/DD \$47.50

Full Range 12" Super 12 RS/DD \$89.50

Woofer W 12/RS

Woofer W 15/RS \$89.50

Tweeter Super 3 \$26.50



For illustrated literature write: Dept. WY984 Wharfedale, a Division of British Industries Corp., Port Washington, N.Y.



LOUDSPEAKERS
ENCLOSURES
SPEAKER SYSTEMS
CROSSOVER NETWORKS



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 2-5" tweeters, 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"x11½"; 33 lbs; hardwood vencer. Bottom side unfinished.

Mahogany or birch\$ 9	6.00
Walnut, cherry, or korina\$10	2.00
Unfinished pine \$ 8	9.00

Model AR-2a

Consists of speakers in AR-2 and the Model AR-3 super-tweeter. Four sides finished.



	lnut, walnut		
or kor	na		\$128.00
Mahogan	or birch		\$122,00
Unfinishe	d pine	••••••	\$109.00

Model AR-3

Acoustic suspension three-way system; 38 to 1000 cps, ±1½ db; 1000 to 20,000 cps, ± 2 db; usable range down to 30 cps; one 12" woofer, one 2" and one 1¾" dome radiator for mid and high frequencies;



built-in three-way crossover with level controls for mid and high ranges; 4 ohms impedance; less than 2% harmonic distortion from 60 to 20,000 cps at 20 watts input, less than 3% to 42 cps; recommended amplifier power, at least 25 watts per stereo channel; 14" by 11% by 25"; 60 lbs.; 4" hardwood veneer.

Mahogany or birch	\$216.00
Walnut, oiled walnut, cherry,	korina, or
oiled teak	
Unfinished pine	\$203.00

Model AR-3st

Separate Model AR-3 super-tweeter with enclosure and crossover network; 5\%"x 6\%"x11\%6".

Mahogany	or birch	*************	\$35.00
Oiled wal	nut, wali	nut, cherr	, or korina
			\$38.00
Unfinished	pine	************	\$32.00

Model AR-3t

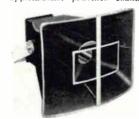
Separate tweeter and super-tweeters of the AR-3 with enclosure and crossover network; 6¾"x7%"x14".

Mahog	any	or bi	irch	******	**********		.\$92.00
Oiled	walr	iut,	waln	ut,	cherry,	οr	korina
*****				*****			.\$96.00
Unfini	shed	pine	*****	•••••			.\$87.00

ALTEC LANSING

Model 50A "Bi-Acoustic" Horn

Dust-, water-, and weather-proof for outdoor applications; provides coaxial type



Model 412C

12-inch Biflex cone-type speaker with second compliance ring in the center of the



Model 415C "Biflex" Speaker

15-inch Biflex conc-type speaker with second compliance ring in the center of the



cone to give mechanical crossover at 1000 cycles and permit 2-way performance with a single voice coil; 25 watts; 30 to 14,000 cycles; 8-ohms impedance; 3-inch edgewound ribbon voice coil; cast aluminum frame; free-air resonance 25 cps.......\$63.00

Model 511B "Sectoral" Horn

Designed to load 804A driver down to 500 cps with upper limit at 22,000 cps;





Speakers Cabinets

cast of heavy resonant-free aluminum; dispersion 90° horizontal and 40° vertical \$39.00

Model 811B "Sectoral" Horn

Similar to Model 511B except cut-off is at 800 cps; used with 804A driver and 800 cps crossover to complement either one 803B or one or two 414A bass speakers \$24.00

Model 601C "Duplex"

12-inch two-way speaker; 12-inch woofer with a high frequency driver and horn in



a single heavy cast frame; complete with 3000 cycle crossover network, frequency response from 30 to 22,000 cycles; 25 watts continuous sine-wave power; 8 ohms; cone resonance 27 cps.....\$103.00

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 3000 cps dividing network; 25 watts continuous sine-wave power; 8 ohms; cone resonance 27 cps.....\$132.00

Model 803B Woofer

15-inch woofer; power rating 30 watts 16-ohms impedance; response 20-1600 cps;



special rim compliance prevents breakup; 3-inch diameter copper cone ribbon voice coil is edge-wound; cast aluminum frame; free-air resonance 25 cps\$60.00

Model 414A Bass Speaker

A 12" equivalent of Model 803B; response 30-4000 cps depending on crossover used\$54.00

Model 605A Duplex

15" coaxial speaker; 35 watts continuous sine-wave and up to 50 watts peak power; 16 ohm impedance; magnet weight 21/2 lbs.



low frequency, ½ lb. high frequency; depth 10": response 20-20,000 cps; free-air resonance 25 cps.....\$168.00

Model 755C 8" "Pancake" Speaker

Wide-angle sound dispersion; 15 watts;



response 40-15.000 cps; 8 ohms; 2" voice coil; cone resonance 52 cps; depth 2½"\$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 415C 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.....\$57.00

Model 831A "Capistrano" System

Incorporates the 15" 803B woofer in bass reflex enclosure, an 800 cps network, and



the 804A high frequency driver with 811B sectoral horn; frequency range from 35 to 22,000 cps; 30 watts; 16 ohms; 30" h. x 47" w. x 23½" d.; in walnut or mahogany\$399.00

Model 834A "Monterey" Speaker **Systems**

Has two 402B high-compliance, low-freq. speakers & fiberglass sectoral horn 3000B; N-3000E dividing network is used; response 40-22,000 cps; 8 ohms; 20 w. power rating;

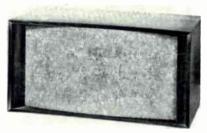


14" x 26" x 141/2" d.; walnut, mahogany or blonde\$174.00

Model 835B (Junior) has 402B speaker & 2000B high-freq. speaker; crossover 2000 cps; response 45-18,000 cps; 16 ohms; 15 w. power rating; cabinet bass reflex type; 11 ¼" x 23" x 1114" d.; walnut, mahogany, or blonde\$85.50 Unfinished\$79.50

Model 836A "Lido" Speaker System

Bookshelf design; speakers have radiating area of over 76 sq. inches; extended fre-



quency response; high efficiency; 12 1/8 "x 26"x12 1/8 "; 15 watt power rating; available in walnut or mahogany.......\$125.00

Model 841A "Coronado" Speaker

Has a 414 12" bass speaker & 3000 sectoral horn & driver; response 40-22,000 cps; 20



w. power rating; N-3000 crossover network is used; walnut or mahogany; 30" x 19" x 14" d.\$199.50

Model A-7 "Voice of the Theatre" System

Utility model of the Altec 2-way theatre system; employs a direct radiating expo-



nential horn enclosure combined with a modified bass reflex principle; 15" 803B woofer, N-8001) 800 cps crossover network, and 804A driver with 811B horn; frequency range from 35 to 22,000 cps;

Model 2000B Tweeter

Direct-radiating; aluminum dome and paper cone; built-in capacitor crossover;



power capacity 14 watts; frequency range 1500-18,000 cps; 8 ohms; 1" voice-coil: depth 331a".....\$19.50

Model 3000B Tweeter

Aluminum diaphragm; multicell-type horn; 20 watts when used with N-3000E net-



work: response 3000-22,000 cps; 8-ohms impedance; edge-wise wound voice coil; requires 3000 cycle crossover network; dispersion 90° horizontal, 40° vertical; 3³i6" h. x 4%" w. x 4%i6" d.\$42.00

Model 838A "Carmel" Speaker System

Two-way system, infinite baffle design; combining two 414A bass speakers and one



804A driver mounted on 811B horn; response 30-22,000 cps; 30 watts power rating; N-800E crossover is used; available in walnut or mahogany; decorator's base available in place of legs at extra cost; 29¾" h. x 35" l. x 17¾" d.\$324.00

Model 837A "Avalon" Speaker System

Identical to Model 838A except only one 414A speaker is used......\$261.00

Model 854A/B Speaker Cabinet

Same as Model 838A except cabinet only; will house any Altec Biflex or Duplex 12" or 15" speaker.....\$110.00

N-500D Dividing Network

Designed for use with 804A h.f. driver &

N-800E Dividing Network

N-3000E Dividing Network

ARGOS

Model AD-1AS "Slimline"

Tube vented (ducted-port) design with wood-grain pyroxylin covering; has Jensen



12" woofer, 3½" tweeter, crossover network; 8 ohms; air volume 3630 cu. in.; 19¼" x 22½" x 10¼" deep; cane grille & brass legs; blonde or walnut......\$39.95 Model 1A Cabinet only including tuning tube to match any speaker to cabinet..\$24.95

Model TL-12S "Thinline"

Floor model system of oiled American walnut; 2680 cu. in; 19" x 24" x 5%" d.;



cane grille; legs included; system includes 12" Jensen woofer and two 3½" Jensen tweeters with matching crossover network; tube vented; response 50–17,000 cps; 8 ohms......\$49.95

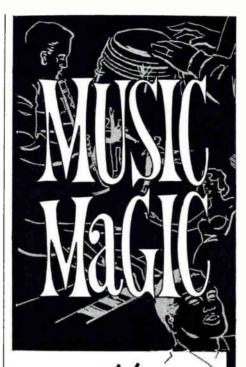
Model TL-12 "Thinline" Enclosure

Identical to TL-12S, complete with tuning tube but without speaker system....\$29.95

Model TSE-1S "Catalina"

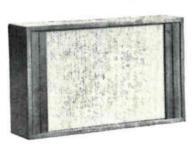
Bookshelf-type ducted-port enclosure; with Jensen 8" woofer, 31/2" tweeter, crossover





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SPEAKER SYSTEM



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and like Magic, your room fills with bewitching, beguiling sound which could only come from Utah's Sorcerer. Only the magic of Utah's electronic ingenuity produces the big, the full, distortion-less sound from such a compact, complete speaker cabinet.

- Styling—fits Early American through Modern decor.
- Components—Two Utah Speakers, an 8" Woofer, 5" Tweeter.
- Cabinet—Hand-rubbed, oiled walnut veneer, applied to ½" plywood, a standard for fine furniture.
- Location—Wall, bookshelf, floor, tabletop.
- Dimensions—20" in length, 12" high, 5" deep.
- Power rating—12 watts.
- Uses—Hi-Fi or Stereo, as extension speakers for record player, radio or TV.

MODEL SH-4W-Finished Walnut Veneer



HUNTINGTON, INDIANA CIRCLE NO. 61 ON READER SERVICE PAGE



Model TSE-2AS "Deluxe Catalina"

Ducted-port enclosure for bookshelf or floor; built of ¾" walnut veneer; has attachable legs; Jensen 8" woofer, 3½" tweeter, crossover network; response 50-17,000 cps; internal air volume 1930 cu. in.: 8 ohms; 24" x 11" x 10" deep; oiled walnut \$39.95 Model TSE-2A Cabinet only, including tuning tube to match any speaker to cabinet \$26.95

Model TSE-3AS "Eldorado"

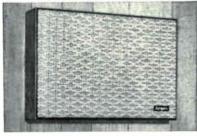
Ducted-port design with Jensen 12" woofer, two 31/2" tweeters, crossover network;



Model TSE-4S "Deluxe Eldorado"

HFWB-8S "Space Saver"

Ducted-port design; 8" Jensen "Profile" woofer, 3½" tweeter, crossover network;



8 ohms: 18" x 12" x 3¾"; available in light American walnut or whited birch \$17.95

Model PHF-1S "Petite"

Response 50-17,000 cps; 2-way system using Jensen-designed woofer and tweeter



with matching network; walnut veneer

with recessed volume control; 8 ohms; 18" x 12" x 31/4"\$24.95

ARGUS-X

X-3 Speaker System

Shelf model using two Argus-X 8" speakers with multi-segmented suspensions, dual cones, and double-wound voice coils and one 2½" super tweeter; response 28-20,000 cps; oiled walnut finish all four sides; 25" x 14" x 11" d...........\$180.00

X-9 Speaker System

Shelf model with two Argus-X 8" speakers with multi-segmented suspensions,



dual cones, and double-wound voice coils and one 2½" super tweeter; features special "variable dynamic infinite damping loudspeaker enclosure" device; response 10-20,000 cps; oiled walnut finish all four sides; 25" x 14" x 11" d....\$240.00

X-5 Speaker System

Floor model with 3" detachable pedestal; has three Argus-X 8" speakers with multisegmented suspensions, dual cones, and double-wound voice coils and one 2½" super tweeter; response 10-20,000 cps; oiled walnut finish; 18" x 24" x 16" d.

ATLAS SOUND

Model DC-5

Six-watt weather-resistant cone-type projector; response 120-7000 cps; 8 ohm



impedance; 14" long, 7" diameter, 5" cone\$14.25

Model WT-6 "Coax-Projector"

Two-way system with two drivers, two horns; built-in electronic crossover filter; 15 watts; response 100-15,000 cps; 8



ohms; 120 degree dispersion; crossover 1000 cps; bell opening 15"; over-all depth 12"; beige enamel finish.......\$36.00

Model W-6

15-watt cone speaker; response 100-8000

Model HR-3 Super-Tweeter

Response 2000-17,500 cps; may be used with any 12-16 ohm crossover network;



AUDIO DYNAMICS

Model ADC-18 Speaker System

Features unique rectangular woofer; frequency range 20-20,000 cps; has walnut



cabinet; 40" x 17" x 121/2".....\$250.00

Model ADC-16 Speaker System

Has rectangular woofer; frequency range 30-20.000 cps; 27½" x 17" x 12½"\$220.00

Model ADC-14 Speaker System

ADC-12 Speaker System

Like the ADC-14, 16 & 18, this system features a rectangular styrene foam diaphragm



AUDIO-TECH

Model JA-15 Speaker System

Floor use; has 15" cone woofer and tweeter; tweeter balance control, LC crossover network; impedance 8 ohms; frequency response 32-20,000 cps; power capacity 30 watts; 29"x26"x16"; fused to protect against overload......\$250.00

Model ME-12 Speaker System

For floor or bookshelf use; has 12" woofer and 3" cone-type tweeter; balance con-

STEREO/HI-FI DIRECTORY

trol for tweeter supplied; frequency response 40-20,000 cps; capacity 30 watts; woofer magnet strength 12,500 gauss;



24"x12"x14"; available in oiled walnut; fused to protect against speaker overload

BIGG OF CALIFORNIA

Model BR-12-HST



Three-way system has 12" woofer, midrange, tweeter, crossover network; bassreflex cabinet.....\$109.95

Model CH-16



Corner compression speaker system; employs air compression principle; 171/k"x9"\$34.96

Model BR-1528T Profundo

Bass-reflex cabinet system; same speakers as FH-12-MHT; 30"x161/2"x33"....\$159.95

Model 14-P Enclosure

Infinite baffle; frequency response 30-18,000 cps; power rating 50 watts program



material; has compression woofer, midrange and tweeter with triple crossover network and brilliance control; mounts

1964 EDITION



Before you buy any speaker system, compare these high fidelity features with any system costing as much as \$20 more!

- Response-50-17,000 cycles-clean highs and a solid-sounding bass.
- · Two, matched 8-ohm Jensen speakers -a high efficiency 8" woofer and a 31/2" tweeter-complete with crossover network.
- Argos tuning tube design—matches speaker system to 2130 cubic inch enclosure-increases effective power output.
- · Craftsmanship construction-neat, attractive appearance-solidly built to minimize distortion.
- Goes anywhere . . . shelf or floor— 24" x 11" x 101/4" size takes the space of twelve books-or stands on the floorattractive matching legs furnished.

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AEROVOX CORPORATION, Distributor Division, New Bedford, Mass.



Model BR-12T "Crescendo"

Same as BR-12-ST except 2-way system; includes 12" woofer, tweeter and cross-over network; 24"x12½"x32¼".....\$79.95

Model FH-15-MHT Impresario

Model FH-12 MHT Impresario Junior

Similar to Impresario except with 12" woofer; 26"x30"x1634".....\$129.95

BOZAK

B-200Y Tweeter

Twin-cone tweeters for use with amplifiers 20 watts or more; 2000-20,000 cps;



B-207A Two-Way Coaxial Speaker

B-209B Mid-Range Speaker

B-199A Woofer

Bozak Panel Systems P-302AP

B-300 Speaker System

Infinite baffle enclosure; ¾" plywood; one B-207A 15" coaxial speaker; 40-20,-



000 cps; can convert to model B-302A. B-300 Urban—24"w x 20"d x 30"h; oiled walnut, mahogany, or ebony.......\$15.00 B-300 Urban (Enclosure only).......\$85.50 B-300 Provincial—28"w. x 19"d. x 31"h.; walnut, mahogany, or cherry......\$217.00 B-300 Provincial (Enclosure

only)\$121.00

B-302A Speaker System

Similar to B-300 with addition of B-209B mid-range speaker and N-10102 crossover network.

\$254.50

B302A Urban \$254.50 B303A Provincial \$290.00

B-200YA Tweeter Array

Eight cone-type tweeters; power rating 60-watts; 1500 to 20,000 cps; 8-ohm im-



pedance; eight 8-oz. Alnico V magnets; cast aluminum frame; 180° horizontal dispersion at 16 kc......\$140.00

B-800 Full-Range Speaker

8" speaker; 8-ohm impedance 50-15,000 cps; 8½" dia. x 3¾" deep; for use with amplifiers 15 watts or more..........\$45.00

B-305 Speaker System

Mahogany, walnut, or birch veneer infinite-baffle enclosure; 35-20,000 cps; 3-way



speaker system; 800 cps and 2500 cps crossover frequencies; two B-207A coaxial speakers, one B-209B mid-range speaker; wide-angle listening area of 120°; 16-ohm impedance; 40"w. x 20"d. 31"h. B-305 Urban—walnut, mahogany,

or cbony.....\$397.50 B-305 Provincial-walnut, mahog-

any, or cherry......\$440.00 B-305 Urban (Enclosure only).....\$140.00 B-305 Provincial (Enclosure only)..\$181.50

N-1012 Crossover Network

N-103 Crossover Network

Crossover 400 and 2500 cps; 16 ohms: used on B-305 system........\$37.50

N-104 Crossover Network

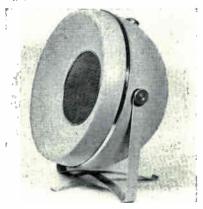
Crossover 400 and 2500 cps; 8 ohms; used on B-310A system.......\$37.50

N-25 Crossover Network

Capacitor bank for use with N-10102 when 400-2500 cps crossover and 8 ohms is desired.......\$11.60

B-1000 "Bard" Outdoor Portable Speaker

Rigid 18" dia. hemispheric housing; 21" high, 12" front-to-back; 22 lbs.; input by



P-305P

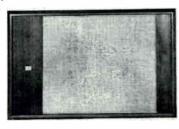
Contains two B-207A, one B-209B and crossover network mounted on a ¾" panel; 8 cu. foot cavity required; panel 24"h. x 34½" w......\$265.00

P-310AP

Contains four B-199A, two B-209B, one B-200YA and crossover network mounted on a ¾" panel; 16 cu. foot cavity required; panel 47"h. x 31"w......\$550.00

Model 2000 "Sonata No. 1" Speaker System

Bookshelf type with B-800 8" full-range speaker, B-200Y dual-tweeter, and type



Model 4000 "Symphony No. 1" Speaker System

Has two B-199A woofers, one B-800 fullrange 8" speaker; eight B-200 tweeters;



and N-105 crossover network; useful frequency 35-20,000 cps; crossovers at 200 and 1500 cps; 8 ohms; for use with amplifiers 30 watts or more; 44"h. x 373/4"w. x 16"d.; available in walnut, mahogany, cbony.....\$495.00

BURSTEIN-APPLEBEE

34A61 12" Diffaxial 3-Way Speaker

Response 28-40,000 cps; high efficiency; Sphericon tweeter to 22,000 cps \pm 2 db; 35

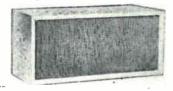


watt music-power rating; crossover 1000 cps (mechanical), 3000 cps (electrical); 65%" d d\$49.95

CABINART

Mark 3 Speaker System

Bass-reflex horn-loaded bookshelf design; dual-cone 8" extended-range speaker plus

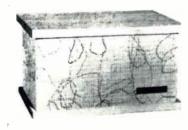


3" whizzer cone; 15 watts power rating; response 70-19,000 cps \pm 7 db; free-air resonance 65 cps; $9\frac{1}{2}$ " d. x 11" h. x

Oiled walnut.....\$30,00 Unfinished birch.....\$19.50

CHANNEL MASTER

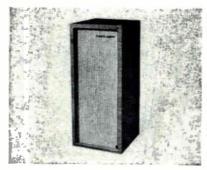
Model 6630 "Minstrel" System



Dynamic air coupling produces large cabinet sound in small enclosure; 50-15,000 cps; 9" x 9" x 16"; available in walnut finish\$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; 23½"x10"x11" deep; available in walnut, mahogany, blonde

Model 6636 "Slim Jim" Speaker System

Bookshelf speaker 5" deep; patented "acoustic transformer" dynamic air coupl-



ing; response 50-15,000 cps; 81/2 " x 15" x 5" d; walnut finished formica.....\$29.95

CINAUDAGRAPH

HFT-1 Direct Radiator Tweeter

Features 1" voice coil & an aluminum phasing plug; recommended crossover frequency is 2000/4000 cps; response 2000-17,000 cps ± 2 db; 16 ohm impedance; +½" o.d. x 2" d......\$12.95

"Cinaudaflex" High-Compliance Woofers

Extended bass, low-efficiency design; has long voice coil with "Cinaudaflex" single roll ultra-compliance suspension.
C6-1 6", 45-2000 cps; for ½ cubic foot min. infinite baffle; 8 ohms, 20 watt rating\$21.95 C10 10", 30-2500 cps (free-air resonance 22 cps); for 1.5 cubic foot min. infinite baffle; 16 ohms, 40 watt rating......\$24,95 C12 12", 30-2000 cps (free-air resonance 21 cps); for 2 cubic foot min. infinite baffle; 11/2" v.c.; 16 ohms, 50 watt rat-

2T6 "Cinaudaflex" Speaker System



Two-way system using Model C6 woofer and new mid-range/tweeter; 50-15,000 cps; 16 ohms, 20 watt rating......\$79.95

DELCO

Model 6869 Speaker

12" woofer; response 20-4500 cps; 20 watts; 11/2" voice-coil diam.....\$29.50

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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

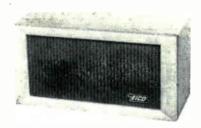
Model 6868 Two-Way System

Covers 20-20,000 cps; includes Model 6869 woofer, Model 6870 horn tweeter, Model 6871 crossover network and treble control

EICO

Model HFS-1 Speaker System

Two-way speaker system; response 70 to 12,000 cps, ± 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-6 Speaker System

Three-speaker ducted-port bass reflex, slim cabinet design; has 10" woofer (30 cps free-



Model HFS-8 Speaker System

Two-speaker, ducted-port bass reflex, slim cabinet design; 8" woofer (60 cps free-air

Model HFS-10 Speaker System

Two-speaker, bass reflex design; 6½" woofer (75 cps free-air resonance) & 2" cone



tweeter; has bridging capacitor tweeter crossover; 8 ohms, high efficiency; 18 watts music power rating; 12" x 18" x 5 14" d.; factory wired\$29.95

ELECTRO-VOICE

Model SP12B "Radax Twelve"

12" dual-cone; capacity 20 watts; response 40-13,000 cps; resonance 40-50 cps; 16



ohms impedance; sensitivity 49 db; 1 lb., 6 oz. ceramic magnet; crossover 4500 cps; baffle opening 11"; depth $6\frac{3}{4}$ "......\$37.50

Model SP-12 "Radax Super-Twelve"

12" dual-cone; capacity 25 watts; response 35-13,000 cps; resonance 35-45 cps; 16



Model SP8B "Radax Super-Eight"

8" dual-cone; capacity 20 watts; response 45-13,000 cps; resonance 50-65 cps; 16



ohms impedance; sensitivity 45 db; 1 lb., 6 oz. ceramic magnet; crossover 6000 cps;

required baffle opening 7"; depth 4%"

TC8 Dynamic Cone Midrange

5" dia.; 2%4" deep; EIA sensitivity rating 45 db; power handling capacity 20 watts



program, 40 watts peak; response 700-15,000 cps.....\$25.00

Model SP15B "Radax Fifteen"

15" dual-cone: capacity 15-20 watts; response 35-13,000 cps; resonance 35-45



Model SP15 "Radax Super-Fifteen"

15" dual-cone; capacity 30 watts; response 30-13,000 cps; resonance 25-35 cps; 16



ohms impedance; sensitivity 52 db; 4% lb. ceramic magnet; crossover 3000 cps; baffle opening 13½"; depth 9".....\$95.00

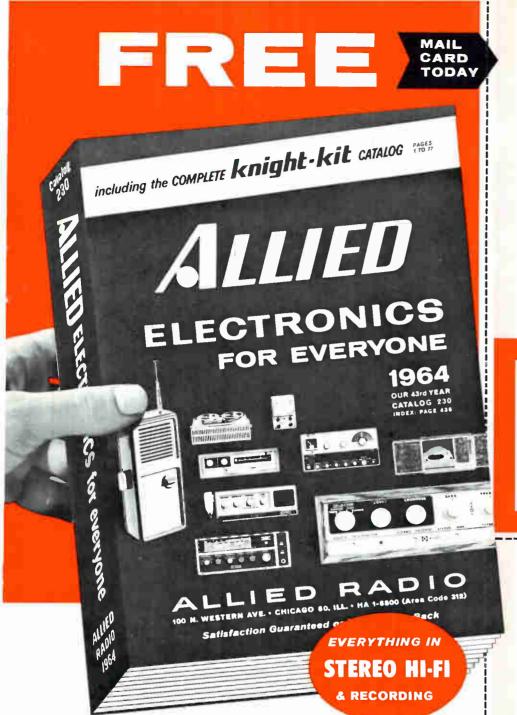
Model 15TRXB

Combines an SP15B with 2000 cps mechanical crossover and integral T35B high-frequency driver; 6 db/octave high-pass filter; level control built-in......\$85.00

The "E-V Four"

Model 12TRXB 3-Way Speaker





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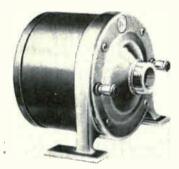
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Model T250 Treble Driver

Response 600-3800 cps \pm 2 db; 3 lb. Alnico V magnet; crossover at 800 cps; ca-



pacity 50 watts; sensitivity 58 db; 5⁷10" h. x 6 ¼ " w. x 5 ½ 2" d.....\$85.00

Model 12TRX

12" three-way combines SP12, T35 high-frequency driver, and integral X36 cross-



Model 30W Woofer

30" woofer; 9 lb., 4 oz. ceramic magnet; power capacity up to 100 watts program



TC35 Dynamic Cone-Tweeter



"Regina 200" Speaker System

Thin system; comparable in performance to much larger systems; 5%" deep; has 10"



to the "Leyton"; 5%" deep; has 10" woofer; 800 cps crossover to TC8 5" cone which is mounted in isolated chamber to prevent interaction with rear wave pressure of woofer; response 50-15,000 cps; impedance 8 ohms; power handling capacity 40 watts peak; 24%" h. x 16%" w. x 5%" d.; oiled-walnut finish.......\$89.50

"Patrician 800" Speaker System

Uses Model 30W woofer to achieve highest efficiency in the 40 cps region, re-



Model 15TRX

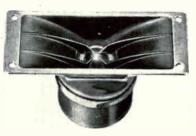
15" three way; capacity 30 watts; frequency response 30 to 15,000 cps (in E-V



Regency enclosure); resonance 35-45 cps; 16 ohms impedance; sensitivity 51 db; magnet 5¾ lbs.; mechanical crossover 2000 cps; electrical crossover 3500 cps; AT37 level control and X36 crossover in-

Model T35

Compression type driver with horn; frequency response to 19 kc; 16 ohms im-



pedance; sensitivity 54 db; 6.8 oz. magnet; crossover 3500 cps; size 2" h. x 5¼" w. x 3¼" d.; driver diameter 2¼"....\$30.00 Model T35B frequency response to 18 kc; for lower efficiency systems.....\$22.00

Model T25A

High-frequency driver; capacity 20-30 watts; response 700-3800 cps \pm 2.5 db; 16 ohms impedance; sensitivity 56 db; 1 lb. Alnico V magnet; $3\frac{3}{4}$ " dia.; depth $4\frac{1}{3}$ ", throat dia. $1\frac{1}{4}$ ".....\$50.00

Model T350

Compression-type driver with horn; response to 35,000 cps; 16 ohms impedance;



Model AT37 Level Control

16-ohm "L" pad; sets output levels in multi-speaker systems to individual taste. \$3.90

Model LS12 12" Speaker

Response 40-13,000 cps; EIA sensitivity rating 43 db; free-air resonance 65 cps;



power handling capacity 20 watts program, 40 watts peak; impedance 8 ohms; mechanical crossover 6000 cps; 8½" dia., 3½" deep; 7½" baffle opening.....\$21.00

Model LS15 15" Speaker

Wide-range design 35-14,000 cps; 20 watts program capacity; free-air resonance 50 cps;

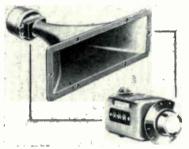


crossover—mechanical at 4500 cps; 8 ohms impedance; 611/42" deep.......\$26.50



Model MF1 Mid-Range Step-Up Kit

Provides increased output in presence range; consists of MR10 driver and CR10



crossover-level control; requires baffle opening 9½" x 3"......................\$29.00

Model LT12 12" Speaker

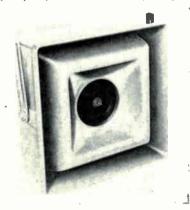
Three-way speaker; combines design features of Wolverine full-range speakers plus



"deep-dish" cone and HF1 tweeter; response 40-18,000 cps; power handling capacity 20 watts program; free-air resonance 65 cps; EIA sensitivity 45 db; impedance 8 ohms; mechanical crossover 2000 cps; electrical crossover 3500 cps; built-in crossover and three-position tonal balance switch; 12½" dia., 5½" deep.

"Musicaster" Outdoor Speaker

Weatherproof speaker for outdoor use; frequency response 60 to 13,000 cps; imped-



ance 8 ohms: dispersion 120°; uses back loaded folded horn design; diecast aluminum horn; 21½" h. x 21½" w. x 8½" d.; shipping weight 34 lbs.\$60.00

"Musicaster II"

Same features as "Musicaster" except has v.h.f. driver to extend range to 18,000 cps\$81.00

"Stereon 850" Speaker System

Three-way speaker system designed to complement "Patrician 800" or "Georgian 400" to expand to stereo; uses mid-bass, treble, and very-high-frequency components of the "Patrician 800" (SP12, T250

with 8HD and T350) with crossover and level controls: response 100-35,000 cps; 17" w. x 167%" x 30" h.; mahogany, walnut, unfinished birch.....\$375.00

Model X8 Crossover

Single crossover, 800 cps; 16 ohms impedance in and out...........\$34.00

Model X36 Crossover

For use with v.h.f. drivers; crossover 3500 cps; impedance 16 ohms in and out..\$10.50

Model X1020 Crossover

For use with 30 w, woofers; crossover of 100 or 200 cps allowing speakers to be used as "super woofers" with any existing system; 16 ohms impedance in and out..\$50.00

Model X1835 Crossover

Wolverine LS8 8" Speaker

Dual-cone 8" wide-range speaker; response 40-13,000 cps; power rating 20 watts; res-



onance 65 cps; impedance 8 ohms; 3½" deep\$19.50

Model 8HD Diffraction Horn

Diffraction principle effects 120° dispersion; crossover 700-800 cps; cut-off 600



Model MC8 8" Speaker

Dual-cone design; response 50-13,000 cps; 12 watts program capacity; 75 cps reso-



nance; crossover—mechanical at 6000 cps; 8 ohms; 3316" deep......\$15.00

Model BB1-BB8 Building Block Kits

Additive kits to expand mid- and high-frequencies of existing system; each package is complete with matched crossover unit, AT37 level control, wiring harness, and full instructions.

Model HF1 High-Frequency Step-Up Kit Extends range beyond audible limit; consists of TW35 tweeter and CR35 crossover-



level control; requires opening 1¾" x 4½"\$25.00

"Georgian 400" Speaker System

Completely compression-operated four-way system; uses 18W 18" low-frequency



"Marquis 300" Speaker System

"Marquis 63" Enclosure

Designed to produce optimum results with separate 12" driver, full-range coaxial, and extended range three-way speaker system; enclosure only; 29½" h. x 19" w. x



STEREO/HI-FI DIRECTORY

KD Enclosure Kits

Enclosure Construction Plans

Model 180	'Aristocrat'	\$2.00
Model IB9	"Marquis"	\$2.00
"Patrician"	plans	\$2.00

"Sentry I" Speaker System

Designed specifically for monitor use in recording & broadcast studios; wall or ceiling



mounting with 12" speaker, diffraction horn high-frequency driver; response 30-20,000 cps; has matching transformer; 16, 150 & 600 ohm impedance; hardwood cabinet, unfinished; 21¾" x 37" x 17" d.\$248.33

"Sentry II" Speaker System

Same design as "Sentry 1" except cabinet is rectangular; finished all four sides; 32" x 20" x 13"......\$265.00

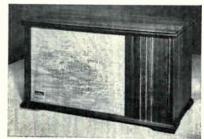
The "E-V Two"

The "E-V Six"

High-efficiency 4-way system with special 18" foam-cone woofers; an 8" driver to cover 250-800 cps; a combination driver & diffraction horn to cover 800-3500 cps; and a compression v.h.f. driver and diffraction horn; response 30-20,000 cps: 35 watts program capacity; 8 ohms; has 4-way crossover; 30" h. x 32" w. x 17½" d.; walnut or mahogany in traditional styling........\$300.00

The "Coronet" Speaker Kit

Pre-finished kit assembled without tools; available with any 8" full-range speaker;



has provision for adding tweeter, crossover & level control; available in walnut finish; 12½" x 22½" x 10½ " d.
Coronet I with Michigan MC8 speaker

\$39.00

Coronet 11 with Wolverine LS8 speaker \$43.50

Coronet III with SP8B speaker.....\$54.00

The "Marquis 300"

Combines low-resonance units with high-efficiency systems; direct-radiator acoustical phase inverter design with 3-way speaker system: SP12B coaxial crossing over at 800 cps through an X8 network to TC8 cone mid-range, crossing over at 3500 cps through X36 to compression-type T35 tweeter; 2 separate L-pads are used for level adjustment: 29½" h. x 19" w. x 15½" d.; similar in appearance to "Marquis 63"; oiled-walnut finish..................\$190.00

Model XT1 Stereo Mixer Transformer

EMI

Model 319 Speaker System

Model 630 Speaker System

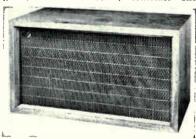
Similar in appearance and design to Model 319; has 10 % " x 6 % " low-frequency



speaker; response 60-15,000 cps; 20½" x 11" x 9%" deep; in oiled walnut...\$69,75 Unfinished gum wood......\$64.75

Model DLS 529 Speaker System

Bookshelf type; walnut veneer with metal grille; 24"x13"x1214"d; combines one



Model 711 3-Way System

Four separate speakers are used, a 13½" x 8½" elliptical woofer with 1½" v.c. and



aluminum cone, a 10 ¼ " x 6 ½ " mid-range, and a pair of 3 ½ " high-freq. speakers; has a C/L crossover network (1200 & 6000 cps) and a 4 push-button level control; adjustable pedestal base is included for either horizontal or vertical operation; 28 ½ " x 14 ¼ " x 15" d; 8 ohms......\$249.00

Stereoscope Model DLS-1

Monitor loudspeakers with built-in amplifiers; EMI 25-watt amplifier (0.1% distortion) is installed in the base of each column enclosure; requires use of 4 adjustable frequency correcting networks to attain uniform frequency response 30-15,000 cps (adjusted at factory); woofer cone resonance 25 cps; 2 tweeters; by arranging the 3 speakers vertically one above the other, the horizontal polar characteristic is maintained uniformly over a wide range of frequencies; column is mounted on 4 casters so it can be moved easily; 50"x 13¼"x17"; wt 110 lbs......\$594.00

Model 1 Baffle Speaker System

For custom installations—¾" baffle board supplied with all components (identical to



those in Model DLS-529; mounted and wired. Recommended for use with 1½ cu. ft. air-tight enclosure; 11½ " x 22½": 4 ohm impedance......\$115.00

FISHER

Model XP-1A Speaker System

Consists of 12" woofer, 5" mid-range, 3½" cone tweeter; crossover has air coils



and oil-filled capacitors; woofer can be used independently; power capacity 60 watts: frequency response 30 cps—inaudibility; brilliance control rear of cabinet; 13½" x 24" x 11¾"; 40 pounds. Walnut, mahogany, cherry..........\$129.50 Unfinished birch\$124.50

Model XP-2A Speaker System



Model XP-4A 3-way Speaker System

Four speakers, 12" woofer with 2" voice coil, 2-5" mid-range, 2" hemispherical



high-frequency unit covering angle of 120 degrees; balance controls for middle and high frequencies; 3-way crossover; 8 ohms; response 30 cps to beyond audibility; 12½" x 24½" x 14".

Mahogany, walnut or cherry.......\$199.50
Unfinished birch.....\$189.50

Model XP-10 Consolette Speaker System

Features 3 speakers: 15" woofer, 8" midrange, 2" dome-type tweeter; has 3-way



L/C crossover (200 & 2500 cps); response 28 cps to beyond audibility; walnut finish; 30¼ " x 24¾ " x 14¾ " d......\$249.50

Model KS-1 "StrataKit" Speaker System

Three speakers, 10" woofer with 4½ lb. magnet structure, 5" mid-range, 3" super-



tweeter; three-way crossover; response 40-18,000 cps; "Slim-Line" design; 18" x 24" x 5 ¼" deep; kit.

X 2 74 decr	r; KIU.	
Unfinished	birch	 \$59.50
Unfinished	walnut	 \$64.50
		\$84.50
		\$89.50

KS-2 "Slim-Line" Speaker Kit

Features 3 speakers: 12" woofer, 5" butyl-coated mid-range, 3" cone-type tweeter; response 35 cps to beyond audibility; 3-way L/C crossover (1200 & 2800 cps); has continuously variable tweeter balance control; 25" x 20" x 6½" d.

Unfinished	birch ki	t\$	89.50
		kit\$	



Factory assembled finished birch....\$114.50 Factory assembled finished walnut..\$119.50

FRAZIER

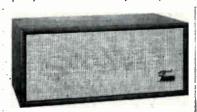
"Del Mar" Speaker System

Response 40-15,000 cps with 8-ohm output impedance; 23% " w. x 23¾ " h. (includ-



"Super Midget" Speaker System

Response 64-12,000 cps, 10 w. power capacity with 8-ohm output impedance;



15% " x 7316" x 9½" d.; walnut finish \$29.95 Unfinished birch \$26.95

"Monte Carlo" Speaker System

Response 70-15,000 cps, 12 w. continuous power capacity and 8-ohm output impedance; has four concealed plastic feet; shipped two to the carton; 15%" x 10%" x 11%" d.; walnut finish.......\$49.75 ea. Unfinished walnut...........\$42.50 ea.

"La Fiesta" Speaker System

GOODMANS

"Triaxiom" Series

Complete range of three-way speakers for every preference and budget; response 20-20,000 cps (unless noted otherwise); "Rigidflex" woofer cones; axially mounted compression tweeter.

Triaxiom	8	(8",	40-	20,000	cps	, 15
Triaxiom, watts)					\$	29.50
Triaxiom	208	(8"	cone	resona	nce 3	5 cps,
20 watts)					\$	44.50
Triaxiom	100C	: (12	2", 20) watts)\$	34.50
Triaxiom	175C	(12	.", 25	-50 wa	tts)	
***************************************		••••			\$	49.50
Triaxiom	250C	(12	″, соп	e reson	ance :	35 cps,

25 watts)\$ 59.50
Triaxiom 550C (12", cone resonance 35 cps,
45 watts)\$ 79.50
Triaxiom 255C (15", cone resonance 25 cps,
40 watts)\$ 69.50
Triaxiom 555C (15", cone resonance 25 cps,
50 watts)\$ 89.50
Twinaxiette 8 (8" twin-cone, 40-18,000
cps, 15 watts)\$ 18.95

Axiette II 8 Speaker

8" speaker; frequency response 40 to 15,000 cps; hyperbolic cone; power rating 15 watts\$27.00

Axiom 450

1DM-30 Mixer/Dividing Network

Designed to work with one or two "Stereospheres"\$39.50

Axiom 80

Audiom 652

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 selfaligning assembly with air chamber and phase equalizer; range 2500-25,000 cps; 50 watts capacity; 16 ohms.............\$46.50

Trebax 35XL Tweeter

Same as 50XL but designed to handle 35 watts in two- or three-way systems...\$39.50

DL-1 Tweeter

Compression design; 2500 cps to beyond audibility; built-in crossover at 5000 cps; 25 watts; 16 ohms......\$12.95

S10-30 "Stereosphere" Speaker

Midax H-750 Mid-Range

Mid-frequency pressure-driven horn-loaded

Alpha Cabinet

Model G Series Speaker Systems



G-11 "Perfectionist" Speaker System

Features 3 speakers—a 12" bass using a "Magnafoam Plastik" bass diaphragm for extra-long-throw voice coil, an 8" domed closed-back mid-freq. radiator, and a compression-type horn tweeter; L/C crossovers are at 900 & 5000 cps; response 35-20,000 cps; 16 ohms impedance; 30 watt capacity; 20" x 28" x 6\%"; walnut cabinet..\$119.50

G-12 "Perfectionist" Speaker System

G-14 "Perfectionist" Speaker System

Features 15" bass speaker with "Magnafoam" diaphragm and a 3" voice coil, an 8"





super-dome closed back mid- & high-frequency propagator covering to beyond 15,-000 cps, and a wide-angle compression horn reenforcing high end from 5000 to 35,000

GRADO

"LAB Jr." Speaker System

Dual speaker—a special 7" dia. rigid-conetype low-freq. (free-air resonance 35 cps)



& a super tweeter; low frequency speaker drop-off at 9000 cps; tweeter response starts at 8000 cps (no crossover used); employs new baffling design "Equi-Progressive" loading—many tubes are rigidly mounted in cabinet around speaker; response 40-20,000 cps & requires 15 watts to drive; 16 ohms; 16" x 16" x 10" d.; walnut......\$89.50

HARTLEY

Model 220 MS 10" Speaker

Model 312 12" Speaker

Cast aluminum frame; polymerized cone; double-U cloth suspension; 5 ¼ lb. magnet; full-range 25-20,000 cps; 8 ohms \$99.95

Model 310 Speaker

Chemically treated polymerized papercone version of Model 220MS speaker less "Magnetic Suspension".......\$85.00

Capri Shelf Model Enclosure

Totally enclosed cabinet containing 35' absorbent material; 24" x 13½" x 12";



in oiled natural walnut with bamboo grille, finished on all sides.
With Model 310 speaker.....\$130.00
With Model 220MS speaker.....\$180.00

Duo Enclosure

Speaker mounting boards are angled out to allow direct radiation and wall reflec-



			36"x30"x	
			\$	
Infini sh e	d birc	h	\$	99.00

"Grand" Enclosure

Interior is designed with a built-in twostage acoustic filter approximating an infinite baffle; accommodates up to four wide-range speakers; modern or traditional styling; 38" h. x 28" w. x 18" d.; mahogany, walnut or blonde......\$250.00

Holton "A" Enclosure

For use with 220MS speaker; heavily braced, damped cabinet in natural woods;



24"x13"		ove	r-all	dimer	nsions	includ	_
ing legs. Cabinet		220	MS s	peaker		\$245.00)
Cabinet							
Cabinet	with	312	speal	cer		\$215.00	d

Holton, Jr. Speaker System

Uses Model 220MS speaker; oiled, rubbed walnut finish with cane front grille; also available with new 310 speaker which is chemically-treated version of Model 220-MS; frequency response 25-25,000 cps.; power capacity 25 watts; Model 310 speaker has donte-shaped center high frequency radiator; 10" diameter; 30"x15" x12" over-all dimensions.

	over-ar				
With	Model	220M	ſS	speaker	\$195.00
					\$135.00
With	Model	312	sp	eaker	\$155.00

HEATH

Model AS-2AU Speaker System

Acoustic-suspension design in infinite baffle; uses 4 speakers—10" woofer, 2-5" cross-



fire mid-range & super tweeter; has built-in crossover network; response 40-20,000 cps ± 5 db; 8 ohms; recommended min. power 20 w.; LC crossover 2000 & 7500 cps; dispersion 90°; has individual level controls for tweeter & mid-range; cabinet factory pre-assembled; 13½" x 24" x 11½ d.; kit unfinished hardwood\$89,95 Finished walnut\$99,95

AS-2U Acoustic Suspension System

AS-10 Acoustic Suspension System

Utilizes acoustic suspension principle; 10" acoustic suspension bass speaker and two





AS-21 "Legato-Compact" System

New speaker system retains performance characteristics of the earlier model while adding contemporary styling and compact size; two 12" Altec Lansing low-frequency speakers cover 30-800 cps; Altec Lansing exponential horn and high-frequency driver cover 800-22,000 cps; high-efficiency speakers permit use of 3-watt amplifiers to drive system; factory-assembled cabinets in pre-finished walnut or unfinished birch; cabinets of 34" furniture-grade plywood; crossover network factory wired; 32" x 19" x 32%"; 132 lbs.



Model AS-21W (walnut kit)......\$239.95 All components except cabinet for custom installation\$184.95

Model AS-22 "Profile" System

Model AS-41 Speaker System

11" x 8" x 6½"d.; in finished or unfinished cabinets; features 6" x 9" extended-range dual-cone speaker, 6.8 oz. magnet; response 60-16.000 cps; handles 12 watts peak; impedance 8 ohms; for use as extension speaker or for converting mono system to stereo; 8 lbs.; cabinet factory preassembled; kit.

Model AS-41U (unfinished)......\$10.95 Model AS-41W (walnut).....\$12.95

Model AS-51 Speaker System

Ducted-port bass reflex bookshelf style enclosure; frequency response: 50 to 12,000

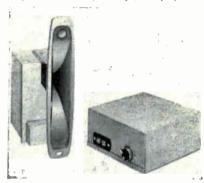


cps ±5 db: power rating: 25 watts of program material; impedance: 16 ohms; 8" Jensen low-frequency speaker with 6.8 oz. Alnico V magnet, Jensen high-frequency horn-loaded compression driver with 4.7 oz. Alnico V magnet; built-in high pass filter and L-pad; ½" plywood; factory pre-assembled cabinet 11½" x 23" x 11¾" d.; unfinished kit...............\$39.95 Model AS-51W (walnut kit).......\$46.95

IONOVAC

Model DuK-5

High-frequency tweeter & power supply; response 3500-20,000 cps; employs no



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; 13½" x 11".............\$79.50



Model DuK-20

Compact, full-range speaker system; can be used as bookshelf unit, upright for



Model DuK-30

Wide-range columnar for corner mounting; includes Model DuK-5 tweeter, two mid-range speakers, one 12" high-compliance woofer; speaker baffle designed specifically for corner mounting; similar in shape to Model DuK-40; 48"x15\%" 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 12½" wide x 9½" deep; similar to Model DuK-30 above\$149.50



Model DuK-50

Wide-range bookshelf speaker system; includes Model DuK-5 tweeter plus specially engineered 8" high-compliance speaker for all frequencies below 3500 cps...\$139.50 Models 10 through 50 available in variety of fine woods with decorator tones.

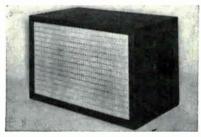
Model DuK-60

Full-range 3-way system; impedance 8 ohms; crossovers 800 & 3500 cps; 40 watts; tweeter is an lonovac (ionized air) type design; mid-range 8" direct radiator; woofers, two 12" high-compliance, 2" voice-coil designs; system incorporates two variable controls for level adjustment of "mids" and "highs"; available in walnut, cherry, mahogany, blonde finishes; 51" h. x 21" w. x 13" d.; wt. 68 lbs......\$246.00

JANSZEN

Model 33 Electrostatic Speaker System

Mid- and high-range only; 1200 to beyond 30,000 cps; less than .5% HD @ 50 watts



input below 10,000 cps; will handle 100 watts music power; includes built-in power supply; 8 ohms impedance.

Model 33OW Oiled walnut.....\$68.25 Model 33U Unfinished, black.....\$59.95

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;



Model 350A Dynamic Woofer

Model Z-400 Shelf Speaker

JanKit 41

Consists of electrostatic two-element model mid/high frequency driver supplied in



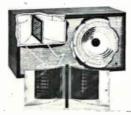
cabinet and Model 350 woofer both mounted on single panel mounting board; designed for custom installations; cabinet should be at least 2 cubic feet in volume; over-all dimensions 19½"h. x 16"w. x 7½"d.\$114.95

JanKit 51

Model Z-500 Speaker System

Single push-pull radiator version of elec-

trostatic mid/high-range tweeter combined with 11" dynamic woofer; response 30-30,000 cps; 72° sound dispersion of tweeters; sound from both sides of flat



JENSEN

Model 3-P Series Speaker Systems



Super-slim designs for floor, shelf, or wall mounting; five speakers identical to Model 3-P/K speaker system kit.

Model 3-P/1 oiled walnut, 13%"x25"x \$119.50

Model 3-P/2 oiled-walnut, 28%"x21\%" \$139.50

Model 3-P/3 Speaker System

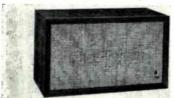
Model ST-979

Matching bases in same wood and styles

Model 3-P/K Speaker System Kit

Model TF-3 3-Way Speaker System

Bookshelf system; has 10" woofer, 2—3½" 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; 13½" x23¾"x11¾"; 38 lbs.

Model TR-9 "Slim" Shelf System

Ducted-port enclosure with 10" woofer, 8" midrange, and tweeter; response 30



cps to beyond audibility; 600 and 4000 cps crossovers; 25 watts; 8 ohms; high-frequency balance controls; 13½"h.x 22¾"w.x5½"d.; 25 lbs.; oiled-walnut finish\$89.50

Model X-20 "Slim" Compact System Includes one woofer and two tweeters; 6-watt rating; can be used with 4,8, or



16 ohm outputs; 12 % "h.x15 % "w.x2 % "d.; 11 ½ lbs.; oiled-walnut finish\$39.95

Model KT-33 Components Kit

Driver components for Models TR-10 and TR-10U speaker systems; complete with instructions for building enclosure and installing speakers; does not include Model DC-3 Stereo Director; includes C12-NF 12" woofer, P8-UM 8" midrange, RP-103B compression driver tweeter, hi-frequency control, crossover network; with cabinet-building directions......\$80.00

Model KTF-3 Speaker Kit

Model KTX-1 Step-Up Kit

Model C12-NF "Flexair" Woofer

12" cone woofer; power rating 30 watts; frequency response in Jensen Bass-Super-



flex cabinet 20 to 2000 cps; Flexair suspension system; resonance 20 cps; impedance 16 ohms\$37.50



HAS EAR APPEAL...

In Jensen's TF-4, smooth finely-balanced full-range reproduction is achieved by expert blending of five speakers: a high-compliance, long travel FLEXAIR® woofer; a special 8" midrange; two direct radiator tweeters; and Jensen's SONO-DOME® ultra-tweeter for frequency extension beyond audibility. Look, listen and compare. We think you'll agree there's nothing like the TF-4 in sound ... and in value.

HAS EYE APPEAL...

The new TF-4 comes to you in a new full-size but gracefully slender format that combines big speaker performance with elegant appearance. The wood is genuine walnut veneer in oil finish. (Available, too, in the money-saving unfinished gum hardwood for custom finishing or building-in.) Both models are available with a choice of fabrics: a two-tone design custom-woven for us in an exciting new pattern, or the popular all-over rattan. Cabinet measures 16" H, 25½" W, 8½" D. Write for Brochure MT.



TF-4 5-SPEAKER 4-WAY SYSTEM

Impedance, 8 ohms. Power Rating, 25 watts.
In Oiled Walnut.......\$114.50

In Oiled Walnut...........\$114.50
In Unfinished Hardwood..... 97.50



JENSEN MANUFACTURING COMPANY
Division of THE MUTER COMPANY
6601 S. Laramie Ave., Chicago 38, Illinois

Canada: Radio Speakers of Canada, Ltd., Toronto
Argentina: Ucoa Radio, S. A., Buenos Aires
Mexico: Fapartel, S. A., Naucalpan, Mex.

CIRCLE NO. 23 ON READER SERVICE PAGE



Speakers & Cabinets

Model G-600

Triaxial 15" 3-way speaker; 35 watts; response 30 cps to upper hearing limit; 16-ohm impedance; 3½ lb. DP-Alnico-V magnet; 15" cone woofer; thrubore compression-driver mid-channel unit with sep-



Model G-610B

Triaxial 15" 3-way speaker; 40 watts; 16-ohm impedance; crossovers at 600 and 4000 cps; heavy duty curvilinear diaphragm unit for lows, compression driver unit for mid-range and compression driver for high end; baffle opening 13 ½"; depth 10 ½"; crossover and control networks \$252.75 Net

Model HF-100A

Weatherproof coaxial speaker; low- and high-frequency units enclosed in projector



Model P6-TX

Six inch extended range speaker: 611/16" diameter, 33/16" deep, 51/4" baffle opening; 7.5 watts; 3.2 ohms; 3.16 oz. Alnico V magnet; voice coil diameter 3/4" \$5.05 Net

Model P8-QF "Flexair" Woofer

Model P8-RL

8" woofer; 4" deep; 63/4" baffle cutout

required; 20 watts; 50 to 3000 cps; 8-ohm impedance; 65 cps, viscous edge damped diaphragm\$8.75 Net

Model P8-RM Mid-Range

Model P8-UM Mid-Range

8" direct radiator mid-range power rating 30 watts; for 600 to 4000 cps range; cover provides acoustic isolation; 2½ oz. DP-Alnico-V magnet; impedance 16 ohms; over-all depth of speaker 4½"\$7.50

Models P10SX, P12-SX

Model P12-NL

12" woofer; 7" deep, 10½" diameter baffle cutout required; single cone; 25 watts; 30 to 2000 cps; resonance 55 cps; 16-ohm impedance; 1¾ lb. DP Alnico-V magnet; viscous edge damped diaphragm; shipping weight 10 lbs.\$36.50 Net

Model P12-RL

Model P15-LF "Flexair" Woofer

Model P35-VAH

Direct radiating cone type tweeter; $3\frac{1}{2}$ " square x $2\frac{1}{6}$ " deep, $3\frac{1}{6}$ " diameter baffle



cutout required; 15 watts; response 2000 to 14,000 cps; 16-ohms.....\$4.00 Net

Model RP-41 Mid-Range

Compression-driver horn-loaded mid-range unit for 400 to 4000 cps range; power rating 40 watts with 400-600 cps crossover; impedance 16 ohms; 7¼" deep; baffle cutout 8½" diameter\$42.50

Model RP-103B

Compression type tweeter; cloth base plastic diaphragm; 30 watts; 2000 to 15,000 cps; 16-ohm impedance; shipping weight



Model RP-302A

High frequency unit covering the range from 4000 cps to the highest audible frequencies; coverage angle 120°: impedance 16 ohms; for use with A-402 network: 40 watts power rating. 2¼ lbs.\$35.00 Net

3-P/W1 Low-Frequency Speaker

Molded "Polytec" plane piston radiatora flat surface instead of conventional cone;



response 20 to 600 cps; 16 ohms; 25 watts, 213/16" deep, 101/4" diam.; must be used with full dividing network, Jensen A640\$39.75

Model E10 Ultra Tweeter

Plastic dome radiator from 10,000 cps to beyond audibility; for use with 4-16 ohm speakers up to 30 w.; has built-in crossover; 16 ohms; 4¼" o.d., 2" deep......\$19.50

Model SG-80 Dual-Cone 8" Speaker

Has Flexair woofer with concentrically mounted auxiliary cone for high end; re-



sponse 40-12.000 cps; 12 watt program capacity; 3 % " depth; 8 ohms.....\$16.50

Model SG-84 3-Element 8" Coax

Flexair woofer combined with aux, radiator and electrically independent direct radiator



provides response 40-14,000 cps: has h.f. balance control; built-in crossover at 2000 cps; 12 watt program rating; 8 ohms; 3%' depth\$24.50

Model SG-88 8" Coax Speaker

Features low crossover compression driver horn-loaded tweeter in an 8" unit; electrical



crossover from high-compliance low-resonance Flexair woofer is 2000 cps; frequency range 35-15,000 cps; has h.f. halance control; 20 watts program capacity; 8 ohms.\$36.50

Model TW-22 Tweeter

Response 2000 to 14,000 cps; use cross-



over frequency of 2000 to 4000 cps; 16 ohms; 3½" cutout; to be used with 25watt systems\$9.75

Model A-61 600 cps Crossover

Two channel, 180° constant-resistance type with 12 db/octave attenuation; crossover point at 600 cps; 51/4"h.x7"w.x41/6"d.; 5¼ lbs.\$19.75 Net

Model A-204 2000 cps Crossover

Two-channel type; high-pass section transmits everything over 2000 cps to tweeter, everything below to woofer; 180° constant-resistance type; 4%"h.x3½"w.x3¼"d.; 21/4 lbs.\$13.00 Net

Model A-402 4000 cps Crossover

Two-channel type; high-pass transmits everything above 4000 cps to tweeter, everything below to woofer; 180° constant-resistance type; 4% "h.x3½" w.x3¼" d.; 3 lbs.\$10.90 Net

Model A-640 Crossover

Crossover unit for 3-way systems with crossovers at 600 and 4000 cps; power rating 40 watts; 12 db/octave slope; impedance 16 ohms; 5¼"x7"x4¼" ...\$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 midrange in systems with power ratings up to 40 watts; impedance 16 ohms......\$4.50

Model SG-210 3-Element 12" Coax

Two-way, 3-element system; Flexair woofer provides high compliance and low reso-



nance; has curvilinear-radiator separate tweeter & mechanically coupled mid-range radiator; electrical crossover at 2000 cps; h.f. control on cord for external mounting; frequency range 20-14,000 cps; 20 watts program capacity; 8 ohms.....\$37.50

Model SG-220 3-Element 12" Coax

Features compression-driver horn-loaded super-tweeter in conjunction with mechan-





MINIATURE SPEAKER SYSTEMS BY JENSEN

Here are two Jensen speakers capable of the sound you'd expect from much larger units. Perfect for economical stereo extension . . . compact stereo hi-fi . . . FM Multiplex stereo. Place them on any surface, or hang them on the wall. Both feature Jensen's custom two-tone grille fabrics. Write for Brochure MX for full details.

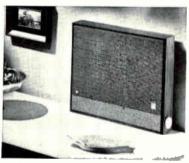
NEW ULTRA-COMPACT X-11

2-speaker 2-way system. A special woofer with a new moving system precisely matched to its diminutive enclosure is largely responsible for the truly remarkable performance of the X-11. A 3" tweeter extends high frequency response to 14,000 cycles. Improved efficiency gives full room volume with amplifiers of low power rating. Volume is adjustable by a control on the side of the cabinet. Dimensions: 65% " H, 1311/16" W, 4" D.



X-11 2-speaker 2-way system. May be used with amplifiers having 4, 8, or 16 ohm output. Power rating 6 watts. Adequate room sound with 1 watt to speaker. In oiled walnut \$29.75

SLIM-COMPACT X-20



3-speaker 2-way system. Unbelievably excellent sound quality is yours from Jensen's famous X-20 speaker system. A specially designed woofer with powerful SYNTOX-6® magnet, plus two tweeters provide smooth, wide-range sound. Extra slim . . . perfect for wall mounting. Side control allows volume adjustment. Dimensions: 12% " H, 15% " W. 2%" D.

X-20 3-speaker 2-way system, May be used with amplifiers having 4, 8, or 16 ohm output. Power rating 6 watts. Adequate room sound with 1 watt to speaker. In oiled walnut. \$39,95





JENSEN MANUFACTURING COMPANY
Division of THE MUTER COMPANY
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ically coupled mid-range radiator and Flexair high-compliance low resonance woofer; electrical crossover at 4000 cps; frequency range 20-15,000 cps; h.f. balance control; 20 watts program capacity; 8 ohms. \$49.50

Model SG-222 Multicell Horn

Compression driver tweeter horn extends through woofer core and terminates in six-



cell mouth for wide angular dispersion of high frequencies; has low electrical and acoustical crossover frequency of 2000 cps; h.f. level control; response 30-15,000 cps; 25 watts program capacity; 8 ohms..\$59.50

Model SG-223 Reflex Horn 12" Coax

Two-way coaxial speaker with horn-loaded low-crossover tweeter and high-compliance



low-resonance Flexair woofer; electrical crossover to reflex horn tweeter 2000 cps; has h.f. control; response range 20-15,000 cps; 30 watts program capacity; 8 ohms. \$69.50

Model X-11 Speaker System

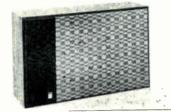
Two-way system; has built-in hangers on back for easy wall mounting; bass response



comes from special woofer with no moving system matched to enclosure; 3" tweeter provides highs to 14,000 cps; high-efficiency design rated at 6 watt capacity; has volume control; walnut finish; impedance 4 to 16 ohms; 6%" x 13¹¹/₁₆ x 4"......\$29.75

Model TF-4 Speaker System

Five-speaker, 4-way bookshelf design; response ranges from 25 cps to inaudibility;

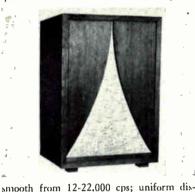


crossovers at 600, 4000, 9000 cps; has highcompliance Flexair woofer, 8" mid-range, two tweeter units, and "Sono-Dome" ultratweeter; high frequency control on back; 25 watts capacity; 8 ohms; 16" x 25½" x 8½"; oiled walnut..................\$114.50 Model TF-4U Unfinished gum hardwood

KARLSON

"Supreme 15" Speaker System

Complete system featuring 15" coaxial speaker in sealed enclosure; response



persion within 120°; dynamic range 120 db; 35 watts; 40% efficiency; tweeter-level control; minimum distortion through patented acoustic coupling with tapered opening; available in walnut only with handrubbed oil finish; 22½" x 33" x 18"; 120 lbs.; 16 ohms. S-15WT With tapered front.....\$339.00 S-15WG With full-grille front.....\$339.00 15U Unfinished sanded birch cabinet 15BSCU Unfinished particle board cabinet

without trim & feet......\$69.50 15K Same as 15U but supplied in kit form\$69.50 15 BSC-K Same as 15BSCU but supplied in kit form.....\$44.95

Asymmetric Sound Projectors

For stereo use in home, office, auditoriums, commercial applications; features



broad fan-like projection in horizontal plane (over 120°); specially controlled dispersion in elevation for maximum coverage of large areas at uniform levels; response 50-15,000 cps; 12 watts; dynamic range 100 db; over 12 db feedback rejection in positions behind projectors; 8 ohms. AP-80 Designed for large indoor & outdoor areas; response 45-15,000 cps; dynamic range 110 db; 8 ohms; 140° horizontal dispersion; 20 watt rating; 20% efficiency; 22″ x 11½″ x 12″......\$59.50

Model "12" Speaker Enclosures

Same coupling and dispersion features as Model "15" but dynamic range of bass slightly reduced; fundamental loading extends to $\frac{1}{3}$ speaker resonance instead of $\frac{1}{2}$; response to 20 cps obtainable with high-compliance speakers; 24¾" x 16¾" x 13 %"; 44 lbs.; for 12" speakers; 10" with adapter.

Model 12W Hand-rubbed oiled walnut with tapered front.....\$99.60 Model 12WG Same as Model 12W but with full-grille front.....\$99.60 Model 12U Unfinished birch.....\$69.50 Model 12BSCU Unfinished particle board for built-in installations; without trim or Model 12BSCK Basic kit.....\$31.95

"Hyper Dynamic" 8 Slimline

Dual speaker design that will respond to a few μv , input yet handle up to 35 w, music



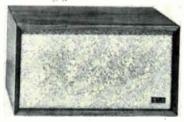
power: response 25-20,000 cps; dynamic range 110 db; eff. 25%; 8 ohms; 14" x 23"

HD-8 Oiled walnut.....\$139.00 HB-8 Unfinished birch.....\$127.50

KLH

Model Four Speaker System

Full-range, two-way system housed in 13 ½ "h. x 25"w. x 12"d. cabinet; low



frequency speaker is 16-ohm 12" acoustic suspension type; two high-frequency speakers are small cone-type direct radiators; LC crossover network has provision for independent adjustment of level above 1500 cps and above 6000 cps; provision is made to allow connection to high-and-lowfrequency sections separately; 16 ohms im-

Unfinished fir\$209.00 Mahogany, unfinished birch.....\$224.00 Walnut, oiled walnut\$231.00

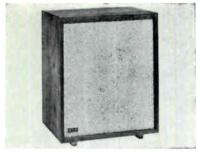
Model Six Speaker System

Full-range, two-way system housed in 23½"h. x 12½"w. x 11½"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 21/2 db; impedance 8 ohms; cabinet similar in appearance to Model Four speaker system.

Unfinished fir\$119.00 Unfinished birch\$124.00 Mahogany\$129.00 Walnut, oiled walnut, cherry\$134.00

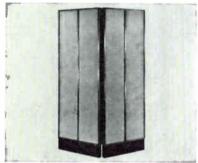
Model Seven Speaker System

Full-range, two-way system housed in 24 ¼ "h. x 21 ½ "w. x 11 ½ "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



Model Nine Electrostatic

Electrostatic speaker system that reproduces entire audio range; for adequate re-



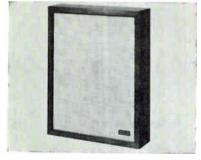
Model Ten Speaker System

Full-range, two-way system housed in a 235a2"h. x 1125a2"w. x 8 ¾ "d. ported cabinet; low-frequency speaker is 10" high-compliance type; high-frequency speaker is small cone-type direct radiator; inpurglance 8 ohrs.

impedance 8 onnis.	
Unfinished birch	.\$86.00
Mahogany, birch	.\$89.00
Walnut, oiled walnut	
Walnut or oiled walnut with wood	1
trim	.\$99.00

Model Fourteen

Dual system using high-compliant, fullrange direct radiators each having effective



diameter of 3"; a passive network reshapes power output of amplifier to match lowfrequency power requirements of speaker

KLIPSCH 3-SPEAKER MASTER STEREO SYSTEM



Acoustics scientist, Bell Telephone Laboratories

Hear this system at your dealer's, or write for free information. For 25c you may receive Paul W. Klipsch's latest paper "Stereo Geometry Tests".

KLIPSCH & ASSOCIATES, INC.

POST OFFICE BOX 96 Z

HOPE, ARKANSAS

CINAUDAFLEX SPEAKER YSTEM



Model 2T6—Cinaudaflex Speaker System

Compact two way speaker system using Model C6 Cinaudaficz woofer and the new Model MT5 midrange tweeter. Response 50 to 15000 cycles 16 ohms, power rating 20 watts.



Model C6—6" single roll Cinaudaflex suspension treated cone woofer—only 23/8" deep.

Response 45 to 2000 cycles. Recommended for an infinite baffle closed box cabinet of at least 3, cubic feet internal volume. C6-1-8 ohms, power rating 20 watts.



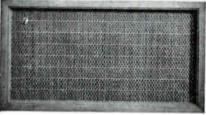
Model MT5—5" closed back mid-range tweeter. 5" by 27/ε" deep, uses fiberglass damping and treated cone.

Response is + or - 3 db from 500 to 15,000 cycles. The ample cavity provided by closed back speaker basket insures a low frequency crossover which makes the MT5 an ideal mate for a woofer which extends up to at least 600 cycles 16 ohms. \$24.95

If not available at your local dealer, order direct from:
CINAUDAGRAPH ACOUSTICAL LABS.
7334 N. CLARK ST. CHICAGO 26, ILL.

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This is a dangerous loudspeaker



MODEL DLS 529

Caution—it will mercilessly reveal the flaws in any defective or outmoded equipment used with it. The transient-perfect sound reproduction is totally different from all other Bookshelf speakers, regardless of size or price! \$159.00*

•Higher in South and West.

For further information write

Scope Electronics Corp.
10 Columbus Circle, New York 19, N. Y.

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KLIPSCH

Klipschorn Corner Speaker System

Employs folded corner horn bass section, straight axis mid-range, and tweeter horns; response 32.7-21,000 cps; ideal for mono or stereo especially when used with com-



patible third speaker bridged for center speaker use; over 30 acoustic watts output can be delivered; priced from \$514 for "Decorator's Model" in unfinished fir to \$852 for hand-rubbed systems. All models are functionally identical.

Shorthorn System

Corner horn back-loading bass system; uses same drive components as Klip-



schorn: priced from \$366 for full threeway 15" drive system in finished hardwoods through many variations of 12" and 15" drive systems and various states of finish to \$48 for speaker less drivers.

Cornwall 3-Way Speaker System

Exceptionally smooth response down to 30 cps; for use as primary speaker for stereo or as center speaker with Klipsschorns in a 3-speaker array; enclosure-type bass with ported exhaust unloading at approximately 8 cps; diaphragm motion and distortion minimal above 16 cps;

horn-type mid-range and tweeter afford accurate reproduction of transients; standard model uses same drive system as Klip-



schorn; also available with horizontal base for use as lowboy; finished on all four sides; priced from \$408 for finished fine furniture grade to \$311 for "Decorator's Model" in fir.

Model H System

Total enclosure bass system with same mid-range and tweeter horns as Cornwall



and Shorthorn; response 45-21,000 cps; diaphragm motion and FM distortion held to minimum; finished on all four sides; compatible with all other Klipsch models for stereo; priced from \$221 for full three-way system with network to \$115 for single-driver building-block system in select hardwoods; same options in fir from \$188 to \$84.

KNIGHT

Model KN-281 Two-Way Speaker System

Model KN-612HC 3-Way High-Compliance Speaker

Woofer is 12" cone type; compression type tweeter; "whizzer" mid-range; built-



Model KN-800HC 3-Way 12" Speaker

Includes axially-mounted mid-range cone; diffraction horn tweeter; mechanical and



electronic crossovers; level control on tweeter; 16 ohms\$39.95

Model KN-809 8" Speaker

Wide-range 8" type; 10 oz. ceramic magnet; die-cast frame; response 50-12,-



000 cps; capacity 15 watts; 8 ohms...\$9.95

Model KN-819 Deluxe 8" Coax Speaker

8" woofer; 3" direct-radiator tweeter; built-in electrical crossover; 10 oz. ceramic



Model KN-820 12" Speaker

Ceramic ring magnet; woofer and mid range cones; response 40-13,000 cps.;



capacity 20 watts, 40 watt peak; 8 ohms; magnet weight 12 oz.\$16.95

Model KN-615HC 12" Speaker

Mechanical and electrical crossovers at 2000 and 3500 cps respectively; free-air



resonance 20 cps; response 20-19,000 cps; impedance 8 ohms: rated power capacity

Model KN-830 12" 3-Way Hi-Fi Speaker

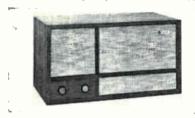
Ceramic magnet, mid-range cone, v.h.f. tweeter; 42-18,000 cps; built-in crossovers;



3-position tonal balance switch; only 51/2" deep\$26.95

Model KN-2300 3-Way Speaker System

Bookshelf design; 12" woofer, 5" midrange; high-frequency horn tweeter: 3/4"



hardwood walnut cabinet; crossovers at 800 and 5000 cps; 13 1/8" x 24 3/4" x \$99.95

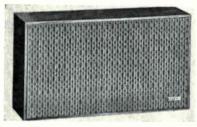
KN-839 Full-Range 8" 3-Way Speaker 8" woofer, 31/2" whizzer, and compression horn-type tweeter with level control; me-



chanical crossover 2000 cps, electrical crossover 4000 cps; response 50-15,000 cps\$19.95

KN-2275 Four-Way Speaker System

Four-speaker system with 10" woofer (1½" voice coil), 8" mid-range, 3½"



closed back cone-type upper range, and compression dome-type h.f. tweeter with adjustable level control; electrical crossovers at 600, 4000, and 10,000 cps; response 30-20,000 cps; vented port; oiled walnut veneers on ¾" hardwood; 13½" x 24" x 6½" d.....\$79.95

KN-2250K Three-Way Speaker System

12"woofer (13/4" voice coil), 6" closed back mid-range; compression tweeter; electrical crossover at 500 cps; kit assembles with screwdriver; oiled walnut veneers on heavy hardwood; 25" x 17" x 7" d.; kit\$59.95

Factory assembled......\$69.95

KN-2222 Three-Way Speaker System

8" coaxial woofer with whizzer cone midrange, compression-type tweeter; infinite bafile; electrical crossover at 4000 cps; response 50-18,000 cps; oiled walnut; 10" x 19" x 5".....\$29.95

KN-2210 Two-Way Speaker System

8" woofer, 31/2" cone-type closed back h.f. tweeter; tuned port; response 60-14,000 cps;



mechanical crossover at 2500 cps; simulated walnut finish; 10" x 20" x 5½" d....\$19.95

LAFAYETTE

Model SK-58

12" coaxial speaker; power rating: 20 watts; frequency response: 30 to 15,000 cps; impedance: 8 ohms.....\$29.50 Net

SK-146 "Sphericon"

Super tweeter; built-in crossover network 3000 cps; frequency response 3000 to 40,-



000 cps ±1 db; phenolic domed diaphragm radiates 120 degrees in all directions; power rating 30 watts; can be used with any 4 to 16 ohm speaker without an L-pad; black plastic case with gold anodized aluminum grille. Built-in attenuator permits matching with any low-efficiency speaker system.....\$22.50

SK-128

8" Duaxial full range speaker; power rating 20 watts integrated program material;



over-all frequency response 40 to 16,000 cps ±3 db; resonance 45 to 65 cps; crossover 2500 cps; brilliance control; recommended enclosure bass reflex; impedance 8 ohms......\$19.50

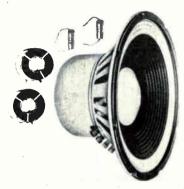
Model LN-5 Crossover Network

Crossover network for two-way and threeway systems; 8 or 16 ohms; crossover rate 6 db per octave; crossover frequencies

for two-way systems are 2000, 3000, and 5000 cps; for three-way systems 350 and 2000-3000 cps; 350 and 5000 cps; 700 and 2000-3000 cps, 700 and 5000 cps; mid-frequency and treble level controls; metal cabinet; removable front panel for mounting level controls on front or side of speaker enclosure.....\$14.95

Model SK-133

12" dual voice coil woofer; 2" voice coil; 2 lh Alnico V magnet; to be used in con-



junction with Model KT-161 crossover network and two mid-range tweeters for satellite stereo speaker systems......\$25.50

Model SK-139

8" dual voice coil woofer; specifications same as Model SK-133.....\$20.95

Model KT-161

350 cps crossover network for use with dual voice coil woofers Model SK-133, Model SK-139......\$7.26

Model 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 ½ " x 4 ½ " electrical outlet plate; heavy duty silvered contacts and terminal board with screw terminals.....\$1.39

Model CAB-19 Enclosure

Bass reflex design accommodates 2- and 3-way speaker systems; cut-outs for 15" and 8" speakers with adapter boards for and 8" speakers; size: (less 7" legs) 23½"w. x 28½"h. x 16¾"d.; ¾" birch; finishes: mahogany, blonde,

Assembled, finished (CAB-19)\$49.50 Assembled, unfinished (CAB-13)...\$39.50 Kit form (CK-10)\$29.50

Model HK-3

Metal-cased 3" cone tweeter; power rating: 20 watts; frequency response: 2000 to 16,-000 cps; impedance: 8-16 ohms; for use with crossover network like Lafayette LN-2, having crossover point of 2000 cps.\$5.95 Net

Model SK-104 Tweeter

Lafayette-Goodmans compression-type wide-angle radiator for high frequencies;



frequency response 2500 to 16,000 cps; 8 db down at 20,000 cps; recommended crossover 5000 cps; power rating 30 watts in 3-way system; voice coil impedance 16



ohms\$10.95

Model SK-180 "Trihelix" Speaker

10", 3-way speaker with 3 mechanically and electronically independent speakers



mounted within single 10" frame; 2" 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\$

Model 235WX "Slenderette" Speaker System

Hermetically sealed enclosure with 5-speaker, 3-way system: two 6" woofers,



Model SK-97 Coaxial Speaker

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 cut-out \$9.95

"Slenderette II" (SK-236WX) Speaker System

Three-speaker, 3-way system; has 8" high-compliance woofer, a 6" mid-range driver,



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

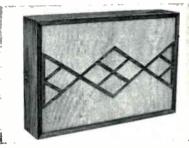
Model SK-103 Midrange

"Slenderette III" (SK-265W) Speaker System

Dual speaker, 2-way system; has $6\frac{1}{2}$ " high-compliance woofer and a $2\frac{1}{2}$ " cone tweeter with crossover network; freq. response 50-10,000 cps; 8 ohms; 12" x 18" x 5 $\frac{1}{4}$ " d.; walnut finish four sides...\$19.50

Model SK-240WX "Decorette" Speaker System

Styled for horizontal or vertical placement; has 5-speaker, 3-way system; two



Model SK-213 8" 3-Way Speaker

Response 40-20,000 cps; aluminum voice-coil; 16 ohms; 20 watts; 3-concentric radi-



SK-130 8" Wide-Range Speaker

Response 40-18,000 cps; 15 watts; free-air resonance 55 cps; 1" voice-coil; 16 ohms; made in England; 4" deep\$12.95

SK-216W Speaker

12" 3-way design made in England; woofer, midrange radiator, and tweeter are axially mounted; 20-20,000 cps; 5 lb. ceramic magnet; 3" voice-coil; has 2000 cps mechanical crossover and 5000



cps electrical crossover; free air resonance 35 cps; 16 ohms; with brilliance control

Model "Eliptoflex" Speaker System

Bookshelf design enclosure with Model SK-210W 3-way speaker; cabinet finished



all four sides; 14" h. x 2378" w. x 13516"
d.; available in mahogany, walnut, blonde
\$82.50
Unfinished birch \$75.50
Same cabinet with Model SK-217W "Cavalier 12 Mark II" 12" 3-way speaker, \$74.50
Same cabinet (unfinished birch) with SK-217W speaker \$67.50
Same cabinet with Model SK-100 10" Trihelix speaker \$66.50
Cabinet only \$36.50

Model SK-215 15" 3-Way Speaker

Built in England; has 6 lb. ceramic magnet; free-edge cone suspension: 3" main



"Decorette II" (SK-270WX) Speaker System

Model SK-216 12" 3-Way Speaker

Identical to SK-215 speaker except 12" dia.; free-air resonance 35 cps; depth 5½"

"Mini-Duct" Speaker System



Cabinet only; reducing boards are supplied so that cabinet will accept 8" woofer, a 6" midrange, and variety of tweeters \$34.25 Cabinet only (unfinished birch)...\$31.25 Cabinet supplied with 8" woofer, 6" midrange, 3" tweeter, crossover networks (750 & 5500 cps); 25 watts power rating; 8-16 ohms; response 35-18,000 cps ...\$52.40 Unfinished birch \$46.95 Cabinet supplied with SK-130 8" widerange speaker \$36.95 Cabinet (unfinished birch) with SK-130, \$33.95

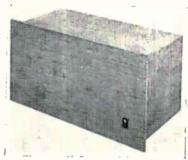
Model SK-210W "Sovereign 12" Speaker

12" 3-way system; made in England; 21/4" lb. ceramic magnet; compression-driver



JAMES B. LANSING

"Wilton" Speaker System



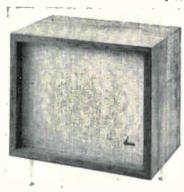
Model C-36 Speaker Enclosure

Bass-reflex design; will accept any 8", 12", or 15" speaker; available in mahog-



Model C-38 Speaker Enclosure

Lowboy version of Model C-36; 24 1/8 x x 15 1/8 x x\$93.00



Prices and speaker combinations same as Model C-36.

Model D44000 "Paragon" Speaker System

Enclosure has convex refractor panel; contains 2 full-range speaker systems, each consisting of LE15A, 375, 075; 35¼" x 103%" x 24".....\$2250.00

Model D45202 "Metregon" System



Stereo system consisting of D123's, 075's, N2400's; 30" x 74" x 22½".......\$933.00 Model D45203 (D130's).......\$804.00 Model D45205 (130A's, 275's, N600's).........\$1248.00

Model D30085 "Hartsfield"

Model C-35 Enclosure

Model C-37 Enclosure

stalled)\$324.00 Model D37130 (D130 installed)...\$264.00

Model C-34 Enclosure

Rear-loaded corner console horn; accommodates 15" speaker or two-way system; size 30¾" h. x 22¾" d. x 23¾" w.; wide variety of woods and finishes; 6-foot exponential folded horn: corner placement not required; designed primarily for two-way speaker system use.....\$201.00

Model C-40 "Harkness"

Lowboy version of Model C-34....\$201.00
Model D40001 (130A, 175DLH, N1200
installed)\$468.00
Model D40030 (D130, 075, N2600 installed)\$399.00

Model C-34 Speaker System

Rear-loaded exponential horn for use with extended-range 15" loudspeakers and 2-way systems.

Model D-123 12" Speaker

Single cone wide-range 12" loudspeaker; power rating: 20 watts; free cone reso-



nance: 35 cps; impedance: 16 ohns; features 3" aluminum voice coil and dural center dome to stiffen piston assembly; shallow curvilinear cone aids dispersion of highs; depth 3%"......\$72.00

Model D-130 15" Speaker

Single cone extended range 15" speaker; power rating: 25 watts; free cone reso-



nance: 37 cps; impedance: 16 ohms; 4" aluminum voice coil and 4" dural center dome; shallow curvilinear cone for dispersion of highs; depth 5½".....\$102.00

Model D-131 12" Speaker

Single cone wide-range 12" loudspeaker; 16 ohms; 4" aluminum voice coil and dural center dome; shallow curvilinear cone for dispersion of highs.......\$96.00

Model 130A 15" Woofer

15" low frequency driver; power rating: 25 watts; free cone resonance: 29 cps; response 20-20,000 cps; impedance: 16 ohms; designed as low frequency unit in conjunction with 175DLH driver and Model N1200 dividing network for systems crossing over at 1200 cps; depth 5%" \$96.00

Model 150-4C 15" Woofer



Model 537-509 Horn-Lens Assembly

Horn-lens assembly for use with 375 high-frequency driver; provides wide horizontal



and narrow vertical diffusion; over-all length 161/2".....\$99.00

Model 375 High-Frequency Driver



High-frequency driver; power rating 60 watts above 300 cps: impedance 16 ohms: diameter 7"; depth 5 1/8".....\$228.00

Model 175-DLH

Driver-horn lens assembly; power rating; 25 watts above 1200 cps; impedance: 16 ohms; combination driver-horn incorporating an acoustic lens for distributing



sound over a 90 degree solid angle; designed for use with N1200; bafile hole 5 \(^{3}\%''; over-all length 11 \(^{1}\%'' \).......\$129.00

Model N-7000 Crossover Network

Dividing network; crossover 7000 cps; nominal impedance 16 ohms; 12 db/octave; variable attenuation control; dimensions: 3 ¼ " x 3 ¼ " x 2 ¾ ".............\$27.00

Model 075 Tweeter

High-frequency speaker; power rating: 20 watts above 2500 cps; impedance: 16 ohms; high-frequency driver of "Annular

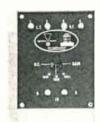


Ring" design for re-inforcing the performance of extended range speakers from 2500 cps; used in conjunction with Model N2400, N2600 dividing network; baffle hole 3316"; over-all length 3¼".....\$63.00

Model N-2600 Crossover Network

Models N400, N600, N1200 Crossover

A three position switch adjusts intensity of high-frequency transducer in 3 db steps:



rate of attenuation around crossover,	12
db per octave; input and output imp	red-
ance, 16 ohms; crossover frequency: N-	100.
500 cps; N600, 600 cps; N1200, 1200	cps.
N400\$8	
N600S60	0.00
N1200\$42	00.5

Model C46 "Minigon" Enclosure

Miniaturized version of the JBL "Paragon": radial refraction system; will accommodate



Model LEST 8" Full-Range Speaker

Full-range 8" transducer; acoustically treated cone to extend high-frequency re-



S5 System

Consists of LE10A 10" low-frequency driver, the LE30 wide band high-frequency driver, and matching LX3 network; de-



signed for use in small sealed enclosures
or infinite baffle installations; free air cone
resonance of LE10A, 15 cps; upper fre-
quency limit of LE30, beyond audibility.
LEI0A\$57.00
LE30\$57.Q0
LX3\$21.00

Model C43

Model 275 Driver

Model C48 "Madison" Enclosure

Danish design enclosure; finished on all four sides as well as the front, allowing



Model "Lancer 33" Speaker System

Bookshelf-type, ducted-port design; Type LE8T full-range speaker; response below

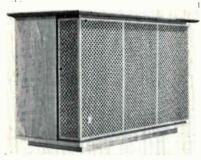


Model "Lancer 66" Speaker System

Similar to "Lancer 33" except 2-way speaker system is used; 10" low-frequency driver plus high-frequency transducer; power handling capacity 6 watts minimum; 14" x 23½" x 11¾" over-all............\$147.00

Model "Olympus" Speaker System

Combines Model LE15A low-frequency driver, Model LX5 dividing network;



Model D216 8" Speaker

8" loudspeaker with 2" edgewound and dural center done: cone resonance 50 cps; power rating 12 watts; 16 ohms (8 ohms available: model D208); depth 2%"\$36.00

Model LE10A L.F. Speaker

Generates powerful bass in enclosures as small as 1 cu. ft.; edge wound copper ribbon voice coil; resonance 15 cps; capacity 30 watts; impedance 16 ohms........\$57.00

Model LE30 Tweeter



Model LE14C Integrated System

Covers entire audible spectrum; may be used in enclosures as small as 1.7 cu. ft.;





system impedance 16 ohms; crossover frequency 1200 cps; power capacity 30 watts with network\$150.00

Model LE20 Tweeter

May be used with most JBL transducers;



1964 EDITION

minimum crossover frequency when used with LX2 network 1500 cps; impedance 8-16 ohms; diameter 4816".....\$33.00

Model C52 "Opus" Enclosure

May be placed in either vertical or horizontal position; available with S9, S10.



Model C51 "Apollo" Enclosure

Designed to accept variety of JBL extended-range speakers and two-way speaker



systems; available in mahogany, tawny walnut, oiled walnut, Danish teak, ebony: 233/6" x 26½" x 18"; with fretwork grille \$225.00 With cloth grille \$174.00

Model C53 Enclosure

Available with LE8T, LE14C, or S5 speaker systems installed; available in



tawny walnut, oiled walnut, ebony; 14" x 23½" x 11¾"\$48.00 With LE14C insalled.....\$198.00

Model C54 "Trimline" Enclosure

Combines an 8" extended-range cone speaker (LE8T) with an 8" passive low-



frequency radiator; 25 watt capacity; 16 ohms impedance; finished all four sides; may be used free-standing or hung on

Model LX2 Crossover Network

For use with LE20; three-position switch allows choice of 1500, 3000, or 6000 cps crossover frequency; separate control allows adjustment of high-frequency level; impedance 8-16 ohms; with flange..\$18.00

SE402 Solid-State Energizer

Transistorized device which takes the place of conventional stereo power amplifier; en-



ergizer is supplied with plug-in equalizer board which precisely controls response characteristics and damping factor for best possible performance in conjunction with a particular JBL loudspeaker system & enclosure; individual equalizer boards are available to match each JBL speaker/enclosure combination; energizer is non-microphonic and generates negligible heat so it can be installed directly in one of the stereo speaker enclosures; resulting integrated combination becomes an energizer/ transducer; available as an integral component of JBL energizer/transducers or as a separate unit for installation in existing JBL speaker systems; with matching circuit board for any pair of JBL speaker systems.

LEAK

"Sandwich" Speaker System

Completely sealed, air-tight enclosure with dual high-efficiency speakers (1 l.f. & 1



MARCOR

Model 415 Speaker System

Combines a soft suspension (32 oz. magnet) woofer, a special 3" tweeter with "acoustic mirror" (a reflecting device for greater h.f. sound dispersion); response 35-17,500 cps; horizontal dispersion ± 2 db across 140° @ 8000 cps, ± 3 db across 130° @ 10,000 cps; crossover at 1500 cps; 8 ohms; fuse protected; 11¾" x 11¾" x 23¾"; available in walnut or cherry..\$88.50 Mahogany\$84.50

MINNEAPOLIS

F-69-HFS Dual-Cone Speaker

6" x 9" high-compliance oval speaker; fits



Model K-120 12" Speaker

12" coaxial construction; response 30 cps to beyond audibility; impedance 8 ohms; power handling ability 30 watts peak \$49.95

MMS-8-F "Music Mini" 8" Speaker

Designed for indoor and outdoor applications: impedance 8 ohms; power handling 8 watts; has knock-out plug for mounting volume control on top or bottom and for universal transformer mounting......\$19.95

Model K-12-HFD 12" Dual-Cone Speaker

8 ohms impedance: 15 watt program material; response 30-13,000 cps; free air resonance 35 cps.......\$29.95

Model K-12-HFW 12" Woofer

Ideal for use with Model D-40HFT tweeter as two-way system or Model D-4-HFT tweeter and Model F-8-HF midrange as three-way system; 8 ohm impedance: 15 watt program material; response 30-4000 cps; free-air resonance 35 cps.......\$27.80

Model F-8-HFD 8" Dual-Cone Speaker

Inner cone has mechanical crossover at 8000 cps; 8 ohms impedance; 10 watt program material; response 40-17,000 cps; free-air resonance 50 cps......\$14.90

Model F-8-HF 8" Wide-Range Speaker



Impedance 8 ohms; 10 watt program material; response 40-13,000 cps; free-air resonance 50 cps......\$13.60

Model D-40HFT 4" Tweeter

MURRAY-TONE

Model "CG" Speaker System

A cavity-generated spherical sound system design; has solid wood panel in front per-



OLSON ELECTRONICS

Model S-541 12" woofer



Slim-line design; 20 watt capacity; response 30-3500 cps; 8 ohms......\$13.95

S-548 (Castle Bell) 8" Speaker

Model S-599 Horn Tweeter

Enclosed in metal housing; can be mounted to front of cabinet or on attached stand;



requires 3" mounting hole; response to 15,000 cps; 8 ohms; 4" x 3½"............\$3.49

ORRTRONIC

Model S-2300 Speaker/Amplifier

Combines an 8" woofer and 31/2" tweeter with built-in crossover and 8-watt power



amplifier; response 20-15,000 cps; can be used directly from FM or AM tuner, phono with crystal or ceramic cartridge, or tape player having its own preamp; hum & noise 55 db below rated output; HID less than 1%; has 2 controls, "on-off"—volume & tone; 18" x 9" x 8¼"; wt. 11 lbs..\$59.95

Model S-500 Speaker/Amplifier

Similar in principle to Model S-2300 but combines 10-watt amplier with 8" woofer



and 3½" tweeter; has 4 high-level inputs & selector switch; 21" x 9¹¾16" x 12¾ deep\$99.95

OXFORD

Model 3W20 Driver Components

Model C15L608 15" Speaker

Coaxial 15" speaker; power rating 25 watts; frequency response 30 to 15,000 cps; resonance 50 cps......\$43.50

Model F12L608 12" Speaker

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

Model T5C208 Tweeter

Model F12J408 12" Speaker

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

HM80H4 8" "Hidden Magnet"

HM12K5 12" "Hidden Magnet"

12" full-range; power rating 15 watts; frequency response 40-14,000 cps; 1 ¼" voice-coil; 12 oz. ceramic magnet....\$11.97

Model W12M608 Woofer

12" design; 1½" voice-coil; 20 oz. Alnico V magnet; 25 watt capacity; resonance 45 cps; 3000 cps roll-off......\$34.50

Model W15M608 Woofer

15" design; 1½" voice-coil; 20 oz. Alnico V magnet; 25 watt capacity; resonance 40 cps; 2000 cps roll-off.......\$39.00

CH39E16G Mid-Range/Tweeter Exponential Horn

1" voice coil, 16 ohm impedance; response 900-18,000 cps; 25 watt capacity; 3" x 9" \$12.45

CH39BO8G Mid-Range/Tweeter Exponential Horn

1" voice coil, 8 ohm impedance, response 900-18,000 cps; 20 watt capacity; 3" x 9"

CH26E16G Compression Horn

1" voice coil, 16 ohm impedance; response 2000-20,000 cps; 25 watt capacity; 2 \$11.25

CH26B08G Compression Horn Tweeter

1" voice coil, 8 ohm impedance, response



2000-20,000 cps; 20 watt capacity; 2" x 6"

PACO

L-3 Bookshelf Speaker System

Has two high-efficiency speakers; supplied in semi-kit form; cabinet is built and fin-ished in walnut; 13 % " x 7 ½ " x 6 ½ "\$19.95

L-4 Speaker System

Has three 6" woofer/mid-range speakers & tweeter; woofers are special designs having



3 struts bonded to front of cone to climinate edge distortion; they have ball diffusers bonded to front of voice coil for better sound dispersion; cone resonance 40 cps; response 45-18,000 cps; 8 ohms impedance; 6%6" d. x 20" x 26 %"; walnut......\$99.95

PILOT

Model PSV-2 Speaker System

3-way speaker system; 12" woofer, 6" mid-range, 3" cone-type tweeter; fre-



quency response 50-16,000 cps; 16 ohms; power rating 30 watts; 18" x 15¾" x 9¾"; oiled walnut trim........\$69.50

Model PSV-3A Speaker System

3-way speaker system consisting of 8" woofer, 3½" mid-range, 3½" super-tweeter; frequency response 50-16,000 cps;

Model PSV-4 Speaker System

12" Air Flex heavy-duty woofer, two 3½" cone-type mid-range speakers, and super tweeter; crossover frequencies 2500 cps and 8000 cps; total range 40-16,000 cps; 8 ohms impedance; 30-watt program power; 25¾"x14½"x12" deep; available in lacquered walnut, oiled walnut, or mahogany\$119.50

QUAM-NICHOLS

Model 6A21X Speaker

61/2" dual-cone, extended-range speaker; capacity 5 watts; frequency response 75-15,000 cps ±5 db: 8-ohm impedance; Alnico V magnet; shipping weight 1½ lbs.; baffle opening required 5%6", depth 2%"\$8.95 List

Model 69C6X Speaker

6" x 9" dual-cone, extended-range speaker; capacity 12 watts; frequency response 50-15,000 cps ±5 db; 8-ohm impedance; barium ferrite magnet; shipping weight 2½ lbs.; baffle opening 5% " x 811/6" x 3" deep.....\$13.95 List

Model 8A10X Speaker

8" extended-range design; 10 w. capacity; 50-12,000 cps \pm 5 db; 4" deep......\$20.00

Model 8A4CO 8" Coaxial

Dual-cone type speaker with built-in cross-over network; 50-50,000 cps ± 5 db; 10 watt rating; resonance 70 cps; 45/16 deep

Model 10A10X Speaker

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10" dual-cone, extended range speaker; capacity 12 watts; frequency response 50-15,000 cps ±5 db; 8-ohm impedance; Alnico V magnet; shipping weight 41/8 lbs.; baffle opening required 9 1/8", depth 5 1/4".....\$24.00 List

Model 12A10X Speaker

12" dual-cone, extended-range speaker; capacity 15 watts; frequency response 50-15.000 cps ±5 db; 8-ohm impedance; Alnico V magnet; shipping weight 4% lbs.; baffle opening required depth 5 1/8 ".....\$26.00 List

Model 12A6CO 12" Coaxial

Dual-cone type speaker with built-in crossover network; 50-15,000 cps ± 5 db; 14 watt rating: resonance 65 cps; 6918" deep

Model 15A10CO 15" Coaxial

Dual-cone type speaker with built-in crossover network; 25-15,000 cps ± 5 db; 20 watt rating; resonance 50 cps; 7¾" deep **\$**52.50

R&A

700 Series "Mark IV" Speakers

Dual-cone design with mechanical cross-over and multi-layer 1" voice coil (¾"



v.c. on 5" dia.); 8 ohms impedance; wide range to 18,000 cps.
Model 750 5" dia.; 220 cps fundamental

resonance; 10 watts.....\$9.95



NEW LISTENING PLEASURE NEW PRINCIPLE CIRCLE NO. 36 ON READER SERVICE PAGE



REALISTIC

"Solo-I" Speaker System

2-way speaker system with 8" woofer and coaxially mounted "whizzer"; frequency response 50-14,000 cps; 14½" x 11" x 10½"; shpg. wt. 12 lbs.; mahogany..\$19.95 Oiled-walnut\$19.95

"Solo-II" Speaker System

Consists of specially designed 8" speaker; frequency response 40-16,000 cps; 8 ohms;



20" x 11" x 10"; mahogany, blonde, oiledteak or oiled-walnut.....\$29.95

"Electrostat-4A" Speaker System

"Nova-3" Full-Range Speaker

"Solo-3" Speaker System

"Electrostat-2" Speaker System

Features four-element electrostatic tweeter with built-in crossover and attenuator; response 45-25,000 cps; high-compliance 8" woofer: 120 degrees dispersion; 22½"x 13"x12½"; oiled walnut, oiled teak, mahogany \$59.95

"Nova T-10" Super Tweeter

"Electrostat-5" Speaker System

138

REK-O-KUT

Model CA-70 Speaker System

Features front and back sound radiation; two 8" woofers, two 6" midrange, and one



Model CA-70A "Early American"

Similar to Model CA-70 with maple veneer



solid hardwood.....\$89.95

Model CA-70E "Mandarin"

Model CA-70M "Modern"

Similar to Model CA-70; solid oil-rubbed



walnut\$89.95

Model CA-70P "Provincial"

Similar to Model CA-70 but fruitwood finish\$89.95

Model S-80C "Sonorama"



Model S-30 "Sonorette"

3-way system; 8" high-compliance woofer, 6" mid-range & 3½" cone tweeter; crossover 5000 cps; 8 ohms; 75-16,000 cps; 20 watts program material; has built-in volume control; 4½" x 14" h. x 18"........\$49.95

ROCKFORD

Model 128 Speaker Enclosure

Bookshelf type vented-port design for 8" speaker; 20 4" x 9" x 10"; finished on all

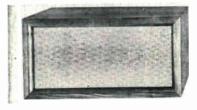


four sides; walnut, mahogany, blonde, or ebony\$25.50

Model 122 Same as 128 except will accommodate 12" speaker; 12" x 11¾" x 24"
......\$35.00

Model 108 Speaker Enclosure

Vented-port design for 8" speaker & tweeter; 12" x 24" x 12"; same finishes



as Model 128.....\$32.50

Model 112 Speaker Enclosure

Vented-port design for 12" speaker & tweeter; 16" x 24" x 13½".....\$48.00

SCHOBER

Model LSS-10 Speaker System

Designed primarily for use with electronic organs; one Electro-Voice SP12B 12" bass speaker plus LS-8 8"

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 ma-



terial; 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.

%" birch veneer plywood.

Model LSS-10W (Walnut finish).....\$125.00

Model LSS-10S (Finish of customer's choice).......\$165.00

Model LSS-10K Semi-kit including speakers, crossover, & construction plans for cabinet\$69.50

STEREO/HI-FI DIRECTORY

H. H. SCOTT

Model S-2 Speaker System

Three-way system using a 12" high-compliance woofer; two midrange drivers mounted on acoustically isolated, angled mounting boards; high-dispersion spherical tweeter; multiple crossover networks: response over entire audible range; continuous tweeter and midrange controls; 23¾" x 14½" x 12½".

Unfinished	pine	\$179.95
Unfinished	hardwood	\$189.95
Mahogany,	walnut	\$199.95

Model S-3 Speaker System

Three-way system, bookshelf size; uses high-compliance 10" woofer; midrange



driver; special high-dispersion tweeter; multiple crossover networks with continuous tweeter and midrange controls to provide extended frequency response over entire audible range; size 23½" x 11¾" x 9¾".

Unfinished	pine\$119.95
	hardwood\$129.95
Mahogany,	walnut\$134.95

Model SK-4 Speaker System Kit

Three-way acoustic compliance system that includes many features of Model S-3; cabinet comes pre-assembled; 22" h. x 11" w. x 9" d.

x 9 (1,	
Unfinished pine	\$79.95
Walnut and unfinished	
Mahogany	\$99.95

SHERWOOD

Model SR3 "Ravinia" Speaker System

Three-way design; 12" woofer with free air resonance of 21 cps; 8" mid-range; 3"



cone tweeter; electrical crossover network 12 db/octave, 60 & 3500 cps; response 45-17,500 cps ± 2½ db; 12-16 ohms; 50 watts program material; lM distortion less than .5% at 5 watts input; harmonic distortion 4% at 30 cps with 10 watts input; brilliance level control; 3½ "dia. port to re-inforce low end; all speakers mount from front; cabinet walls 1" thick; 15" x

10% X 13% .	
SR3W Walnut finish	139.50
SR3B Unfinished birch	129.50
SR3U Utility design, less grille	119.50
SR3K Three-speakers & crossove	er, less
cabinet	

Model SR2 "Berkshire" Speaker System

Same as "Ravinia" except for size (24" x

13" x 9½"); response 53-17,500 2½ db; handles 50 watts program r	naterial;
10 watts min. recommended; walnu	
Unfinished birch	
Three speakers & crossover kit	
R10 10" woofer	
R8 8" mid-range	\$14.95
R3 3" tweeter	
RB Island base	
RL Consolette legs	.\$ 19.95

SONOTONE

Model T-64 Tweeter

Elliptical cone tweeter; power rating: 20 watts average program above 2000 cps; frequency response (in baffle): 800 to 17,000 cps; flux density: 12,000 gauss; ¾" aluminium voice coil; designed primarily for 2000 cps crossover; 6" x 4"...................\$12.00

Model WR8-BH 8" Speaker

Power rating 20 watts average program, frequency range 55 to 15,000 cps; resonance 70 cps; impedance 8 ohms; flux density 12,000 gauss; 1" voice coil....\$13.50

Model CA-12A Speaker

Coaxial 12" loudspeaker; inductor-capacitor dividing network; elliptical tweeter; frequency range 35 to 20,000 cycles; resonant frequency: 50 cycles; crossover frequency: 2000 cycles; power handling: 40 watts average program, 80 watts peak: flux density: woofer—12,000 gauss; tweeter—9500 gauss; impedance 16 ohms..\$31.00

Model W-12

Same 12" woofer used in CA-12A coaxial loudspeaker; frequency range 35 to

TANDBERG

Model CS40 Speaker System

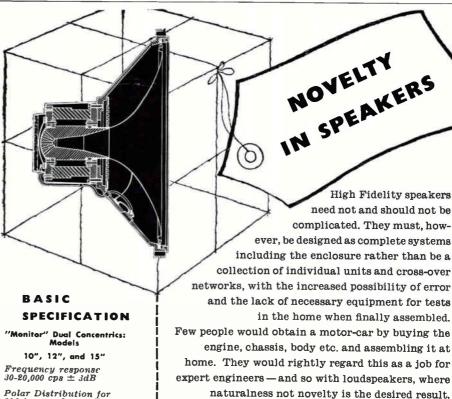
Model 165BK 8" Dual-Cone Speaker Main cone has extra tweeter cone; flux density 11,000 gauss; maximum applied voltage 5 volts; efficiency 5%.......\$21.50

Model 165B 8" Coaxial Speaker

TANNOY

"Belvedere" Speaker System

Dual-ported bass reflex design; may be used vertically or horizontally; 26" x 12" x 18"; walnut.



Polar Distribution for 60° inc. angle — 4dB at 10,000 cps

Write for full details.

TANNOY

DUAL
CONCENTRIC
SPEAKERS

TANNOY (AMERICA) LTD. P.O. BOX 177. EAST NORWICH, N.Y., U.S.A.
TANNOY (CANADA) LTD. 36 WELLINGTON STREET EAST, TORONTO 1, ONTARIO, CANADA
CIRCLE NO. S7 ON READER SERVICE PAGE



tor speaker	\$200.00
Enclosure with 10"	Dual-Concentric Moni-
tor speaker	\$177.25

10" Dual-Concentric Monitor Speaker Coaxial speaker-tweeter voice-coil diameter 2", woofer voice-coil diameter 21/2"; re-



sponse 20-30,000 cps; IM product less than 2%; crossover frequency 1800 cps; resonance 27 cps; magnet assembly 61/4 lbs.; polar distribution -2 db @ 10,000 cps for 60 degrees; power handling capacity 20 watts; adjustable high-frequency control; impedance 16 ohms; recommended mounting infinite baffle type as low as 11/2 cu ft.; shipping weight 13 lbs......\$112.75

12" Dual-Concentric Monitor Speaker

Coaxial speaker with bass resonance of 35 cps; IM distortion less than 2%; tweeter



voice-coil diameter 2"; woofer v.c. diameter 2"; woofer designed for true piston operation; surround treated with stable lossy resin to prevent subsidiary resonance; pow-

15" Dual-Concentric Monitor Speaker

Coaxial speaker with bass resonance of 32 cps; IM distortion less than 2%; tweeter voice coil 2" dia.; woofer voice coil 2" dia.; woofer designed for true piston operation; surround treated with stable lossy resin to prevent subsidiary resonance; power rating 50 watts; flux density 13,500 gauss for woofer, 18,000 gauss for tweeter; dispersion at 60° -4 db at 10,000 cps; crossover 1000 cps; 16 ohms; response 23-20,000 cps; depth 9".....\$179.00

"Belvedere" Senior Speaker System

Designed for use with 15" Dual-Concentric Monitor speaker in stereo reproduction; baffle available for use with 12" speaker; 31½" x 23¾" x 16"; walnut or mahog-

Enclosure	only.			\$87.50
Enclosure	with	12"	Dual-	Concentric Moni-
tor speake	·r			\$231.00
				Concentric Moni-
tor speake	r			\$268.50

"Dalton" Enclosure

Infinite-baffle type designed for use with either 10" or 12" Dual-Concentric Moni-



tor speakers; 23¾" x 23¾" x 16"; solid back-to-front legs 2½" high; oiled walnut Enclosure with 12" Dual-Concentric Monitor spcaker.....\$215.00

"Berkeley" Enclosure

Infinite batfle, 31/2 cubic feet; designed for use with the 10" Dual-Concentric Monitor speaker; 23" x 24" x 11¾"; solid base 2½" high; oiled walnut only. Enclosure only............\$62.00 Enclosure with 10" Dual-Concentric Monitor speaker\$176.75

"Cadet" Speaker System

Infinite-baffle approx. 11/2 cu. feet; operates on principle of pressure loading and



acoustic absorption of back radiation; designed to be used with 10" Dual-Concentric Monitor speaker; 23¾" x 13½" x 11"; oiled-walnut only; with speaker

Model "GRF" Speaker System

Designed especially for use with 15" Dual-Concentric Monitor speaker; horn-loaded; response 30-20,000 cps ± 3 db; 50 watts; 8% approx. efficiency; effective loading down to 30 cps; 42" x 23½" x 17½"; oiled-walnut\$385.00 Enclosure only.....\$206.00

UNIVERSITY

"Medallion XII" Speaker System

3-way speaker system consisting of 12" high-compliance woofer, 8" mid-range, Sphericon super tweeter; frequency response 28-22,000 cps; snap-on speaker grilles to match Provincial, Modern, or Contemporary furnishings; mahogany, walnut, oiled-walnut, fruitwood; grilles separate \$139.95 Unfinished\$134.95 Select-A-Style frame for French Provincial in fruitwood.....\$ 14.95 Select-A-Style frame for Early American in mahog., wal., oiled walnut, fruitwood\$ 14.95 Select-A-Style frame for Swedish Modern in mahog., wal., oiled walnut, fruitwood Select-A-Style frame for Contemporary in mahogany, walnut, oiled walnut, fruitwood\$ 9.95 Unfinished \$ 8.95

Wood						
				 	 \$	14.95
Unfini	shed	bas	e	 	 \$	13.95

Model UC-121 Coaxial **Extended Range**

Shallow design for flush mounting; Duraluminum dome; power capacity 30 watts:

Model UC-152 2-Way Diffaxial

15" speaker; dual horn loading; wideangle dispersion: frequency response 30-14,000 cps; power capacity 30 watts; 81/4 lbs.....\$ 45.00

Model UC-153 3-Way Diffaxial

Medium power version of Model 315-C; 15" woofer, Diffusione element, and super-tweeter; Model UXT-5 is center-mounted; power capacity 30 watts; frequency response 30-18,500 cps; depth 10"\$ *83.00

Model T-202 "Sphericon" Super Tweeter

Domed phenolic diaphragm and spherical diffractor; frequency response 3000-44,000 cps; 120° dispersion; 4%" diameter; builtin 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 S-9S 15" Speaker System

Consists of Model C-15W, Model T-30 'Cobreflex", Model HF-206 speakers: front-loaded folded-horn type; assembled and wired; unfinished; 40" x 30" x 24".\$340.00

Model UC-122 "Diffaxial" Speaker

12" wide-range speaker with mechanical crossover at 1000 cps; response 45 to 13,000 cycles; power rating 30 watts; 8-16 ohms; 4%" deep.........\$35.50

Model 308 3-way "Diffaxial" Speaker

Employs compression tweeter and 8" woofer; mechanical crossover at 1000 cps and electrical at 5000 cps; response 30-17,000 cps; power rating 35 watts; 8-16 ohms; 6\%" deep......\$42.00

"Diffusicone-8"

Response from 30-15,000 cps; power rating 35 watts; 8-16 ohms; 4½" deep.......\$28.00

Models MM-2FUW, MM-2UW

Completely waterproof speaker for use at swimming pools; stainless steel protective cover; heavy 18 foot connecting cable with third wire for grounding; power capacity

25 watts; impedance 16 ohms; MM-2FUW for flush mounting, MM-2UW for bracket mounting; each.....\$44.55

Model UXT-5 Super Tweeter

Response from 4500 to 17,500 cps; dispersion 120° horizontal and 50° vertical; 8 ohms; power rating 25-50 watts depending on crossover.....\$21.00

Model HF-206 Hypersonic Tweeter

Response 3500 cps to beyond audibility; dispersion 120° horizontal and 50° vertical; power rating 25-50 watts depending on crossover; 8 ohms; 6" x 3516" x 6916"\$33.00

"Diffusicone-12" Wide-Range Speaker

Response 28-15,000 cps; power rating 35 watts; 8-16 ohms; 71/8" deep.......\$39.75

Model 6201 Coaxial Speaker

Compression tweeter and 12" woofer: response 28-18,500 cps; built-in crossover network with "Brilliance" control; power rating 30 watts; 8-16 ohms; 63/8" deep \$57.75

Model UC-123 3-way Speaker

12" woofer and UXT-5 super tweeter; response 40-18,500 cps; mechanical crossover at 1000 cps and electrical at 5000 cps; power rating 30 watts: 8-16 ohms: includes tweeter control; 9¼" 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; response 28-40,000 cps; power rating 35 watts; 8-16 ohms; 6%" deep\$73.00

Model 315-C Wide-Range Speaker

15" woofer with T-50 "Hypersonic" driver and horn; response 25-20,000 cps; adjustable tweeter balance; 6½ lbs. of Alnico V magnet material; power rating 50 watts; 8-16 ohms; 12" deep.......\$156.00

Model 4401 Tweeter

One-piece die-cast horn with 120° horizontal and 50° vertical dispersion; hermetically scaled construction; response 2000-15,000 cps; 8 ohms; power rating 25 watts; 6" x 2¾" x 6%s".......\$18.00

Model C-8HC Woofer

8" high compliance dual voice coil woofer; frequency response 38-3000 cps; power rating 30 watts; impedance 8 ohms; 41/4" depth\$39.95

Model UC-82 Wide-Range Speaker

8" wide range Diffaxial speaker; frequency response 45-14,000 cps; power rating 25 watts; mechanical crossover at 5000 cps; impedance 8-16 ohms; 4¼" depth..\$16.95

Model T-50 Hypersonic Driver

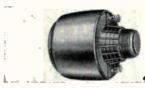
Heavy duty high efficiency driver for use with H-600 horn; response from 600 cycles



to inaudibility; 8 ohms; 13/4-18 throat; 41/2" diameter; 41/4" 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; 3½" diameter; 3¾" deep......\$30.00

Model H-600 Horn

Mid-range and high-frequency horn with 600 cps cut-off; die-cast design with reciprocating flare design for uniform dispersion; fits any driver with standard 138"-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; 41/4" deep....\$15.00

Model C-8M 8" Mid-Range Speaker

Response 500-5000 cps; power rating 50 watts program material; depth 41/4"... \$16.95

Model C-12SW Dual Voice Coil Woofer

12" adjustable response woofer; high end may be limited to 700, 2500 or 5000 cps to complement tweeter; 11/2 lb. Alnico V magnet; response 30 to 6000 cps; 8 ohms; power rating 30 watts; 6½" 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; 10½" deep\$85.00

Model C-12HC Dual Voice Coil Woofer

High compliance 12" woofer; "Uniferrox-7" magnet material; response to 3000 cps permits use in two-way systems; dual impedance coil; 4-20 ohms; power rating 60 watts; 5½" d.\$49.50

Model C-15HC Dual Voice Coil Woofer

High compliance 15" woofer; "Uniferrox-7" magnet material; response to 800 cps; dual impedance coil; 4-20 ohms; operating power should be from 10 watts up. 81/

N-1 Adjustable High Pass Filter

Two-way dividing network with tweeter toway with the recent control; crossovers at 2500, 5000, and 10,000 cps at 8 ohms; 1250, 2500, 5000, at 16 ohms; 5000 and 10,000 cps at 4 ohms; fits panels up to ¼" thick; 3%"x\$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 net-work or singly as 12 db/octave low or high-pass filter; crossover 350 or 700 cps at 8-16 ohns; 700 cps at 4 ohms; N-2B is 6 db/octave two-way L/C network; may be used in pairs as 12 db/octave network or singly as 12 db/octave low or high-pass filter; crossovers are 1250, 2500, or 5000 cps at 8 ohms; 2500 or 5000 cps as 16 ohms; 2500 cps at 4 ohms; N-2A and N-2B may be used in combination for three-way systems.

Model N-2A\$18.00

Model N-2B\$14.00

Model AP-8 Balance Control

Attenuator pad to regulate speakers of different efficiencies and for balancing sound for room acoustics and personal taste: ideal for N-2A and N-2B networks..\$3.95

Model A-1 Stereo Adapter Network

Provides means of using single woofer for both stereo channels; not suitable for dual voice-coil speakers; phasing switch 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 ¾" thick; 8 ohms; 7"x5"x3"......\$32.00

Model MLC Speaker System

Weatherproof coaxial speaker for outdoor use; frequency response 150-15,000 cps; power rating 15 watts; impedance 8 ohms; dispersion 120 degrees; 12¾" x 9¼ x x 10%"\$34.50

Model WLC Outdoor Speaker

50-15,000 cps; 30 watts; 90 degree dispersion: completely weatherproof; hi-fi quality, 8 ohms......\$150.00

Model CLC Outdoor Speaker

Balanced "compression" folded-horn design; completely weatherproof: response 55-14,000 cps; 30-watt power capacity; 120 degree dispersion; 8 ohms; 22 ¾" x 12¹¹16" deep\$69.95

"Cobreflex" Horn

Designed for use as mid-range horn in three-way systems or as high frequency horn in two-way systems; crossover as low as 350 cps; 120° horizontal and 60° vertical dispersion\$24.15

Model S-80 Speaker System

Two-way high-efficiency speaker system: 8" woofer, 3½" direct-radiator tweeter;



power rating 25 watts; impedance 8-16 ohms; $21\frac{3}{4}$ " x $11\frac{1}{2}$ " x $9\frac{1}{4}$ "; finished on four sides in mahogany, walnut, fruitwood\$59,95 Unfinished\$56.95



Oiled walnut\$62.95

"Companionette" Speaker System

Two-way speaker system; 8" high-compliance woofer; direct-radiator tweeter: 1.1 cubic foot enclosure; response 40-17,000 cps; crossover frequency 2000 cps; power capacity 30 watts program material; 8 ohms; 16" x 11" x 11"; oiled walnut\$69.95

"Mini" Speaker System

Two-way speaker system with entire cabinet face acting as low-frequency radiator; separate tweeter; cabinet is only 2" thick and can be hung on the wall; response 50-17,000 cps; power capacity 20 watts program material; 4 ohms; 18" x 1336" x 2"; oiled walnut\$44.95

"Mini-Flex" Speaker System

Three-way speaker system with special viscous-treated moving seal type woofer



cone rim suspension; dual-cone mid-range; high-frequency speaker; separate level controls for mid-range and tweeter; response 35-20,000 cps; crossovers at 1000 & 7000 cps (6db/octave slope); power capacity 30 watts; 8 ohms; cabinet .4 cubic foot; 15" x 9716" x 5716"; oiled walnut......\$69.95

"Senior II" Speaker System

Three-way speaker system; 12" woofer. 3½" mid-range, Sphericon super tweeter; response 30-22,000 cps; 8 or 16 ohms; crossover 3000 cps; brilliance control; 25" x 15%" x 121%".

Oiled walnut\$99.50 Unfinished\$89.50

"Companion II" Speaker System

Three-way speaker system with RRL ("Radiation Resistance Loading"); has 10" woofer, 3" mid-range, 3½" tweeter; response 35-18,000 cps; 8 or 16 ohms; crossover at 3000 cps.

Oiled walnut\$79.50 Unfinished\$69.50

"Classic Dual-12" Speaker System

Similar in styling to "Classic Mark II" but more compact; three-way system; 12" large-excursion woofer, 12" high-compliance woofer/mid-range; Sphericon super



tweeter: response 30-40,000 cps; 4 or 8 ohms; RRL tuned ducted-port enclosure; 2.8 cubic feet; 3-step mid-range control and continuously variable tweeter control; power capacity 50 watts program material; 23¾" x 31¼" x 15½"; oiled walnut\$229.50

"Classic Mark II" Speaker System

Three-way high-compliance speaker system; 15" woofer, 8" mid-range; Sphericon super tweeter; response virtually flat from 20-40,000 cps; power requirements 10 to 60 watts; crossover 150 cps; 4-8 ohnis; has presence and brilliance controls; 35" w x 28!4" h. (with legs) x 17½" d.; oiled walnut.....\$295.00

"Syl-O-Ette" Speaker System

Two-way speaker system in ultra-thin decorator-styled cabinet: choice of inter-



changeable grille fabric frames; may be used on wall or floor, horizontally or vertically; 8" woofer, 6½" mid-range, subsidiary tweeter-radiator; response 40-20,000 cps; power capacity 30 watts program material; crossover at 500 cps; 23" w. x 29" h. x 4" d. Oiled walnut with decorator cane grille.....\$ 99.95 Unfinished with decorator cane grille...... \$ 95.95 Walnut with petit point grille......\$109.90 Unfinished with petit point grille....\$105.90 Oiled walnut with neo-classic grille..... \$ 99.95 Unfinished with neo-classic grille..\$ 95.95 Imported Madeira petit point grille only 9.95 Silk-screened neo-classic grille only..... \$ 5.95

"Tri-Planar" Speaker System

Three-way, ultra-thin system with 2 woofer panel radiators (234 sq. in. radiation) and a 2¾" tweeter; open-back doublet-type design; response 45-17,000 cps; 1-8 ohms; power rating 20 watts; 15" x 23" x 1¾".

UTAH

Fabulous G Series Speakers

.....\$23.49 G15R (15" woofer, 20-4000 cps, 40 w.) \$34.05 G12P5 (12" coaxial, 35-19,500 cps, 30 w.)

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.) \$10.50 1)8LA (8" full range, 40-16,000 cps, 18 w.)\$14.25

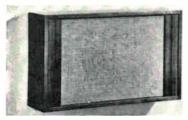
D12J (12" full range, 35-15,000 cps, 12 w.) \$12.33 D12LA (12" full range, 30-16,000 cps, 18 w.) \$16.20 D12P (12" full range, 30-14,000 cps, 35 w.) \$24.00 D69J (6" x 9" full range, 45-16,000 cps, 12 w.) \$10.17 All speaker power ratings are peak audio

Crossover Networks

LC type designs for 2- or 3-way systems; air-core coils; potted can assembly; use one 2500 cps model for 2-way system; X-2508 (8 ohms, 2500 cps)......\$6.57 X-5008 (8 ohms, 5000 cps).....\$6.18

Model SH4 "Thin" Speaker System

Can be used on bookshelf or mounted vertically or horizontally on wall; 45-



17,000 cps: 12 watts audio peak power; oversize voice-coil 8" woofer and high-efficiency tweeter; 12" x 20" x 4¹⁵/₁₀"; 8-ohm system; walnut finish......\$29.97

Model SH5 "Huntington" 3-way System

Small bookshelf system with 8" woofer, 6" midrange, 5" tweeter; response 35-17,500 cps; 13½" x 22" x 6"; peak audio power; 18 watts; walnut veneer.....\$39.96

Model PT2 Speaker System

Wall-mounted design 12" x 18" x 3"; bass reflex port; uses 8" woofer and 3" x tweeter; crossover at 2000 cps; 8 ohms; 8 watts peak power; walnut, blonde, or mahogany finishes\$16.32

Model PT3 Speaker System

Deluxe version of PT2; has 3½" tweeter for response to 18,500 cps; will handle 10 watts audio peak power; 12" x 20" x 31/2"; walnut finish.....\$24.96

V-M CORP.

Model 62 "Silhouette"

Combines a 10" woofer, 6" mid-range, and 31/2" tweeter with ultra-thin enclosure that can be hung on wall, built into wall, or left free standing; response 30-16,000 cps; crossover 600 cps and 5000 cps; 25 watts program power rating; 8 ohms; 26¾" h. x 20½" w. x 4¾" d.; walnut finish

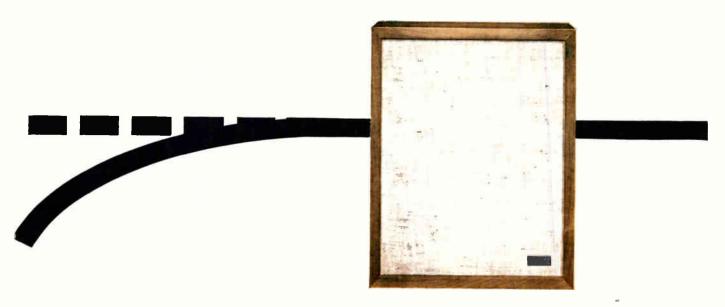
Model 32 Speaker System

Has two 6" and one 3" speakers; response 60-12,000 cps; 10 watt program power rating; 4 ohm impedance; 9" h. x 18" w. x 8%" d.; walnut or mahogany finish

Model 42 Speaker System

Dual system with 6" woofer & 31/2" tweeter; sealed cabinet design; response 50-14,000 cps; crossover 2500 cps; 8 ohms; 15 watts music power capacity; 20" x 15" x 41/4" d.; add 11/2" for legs; walnut......\$40.00

Now you know why you waited



KLH has just introduced a new speaker system—the Model Fourteen—designed to accomplish two objectives:—to reproduce music (1) with less distortion and (2) with more bass than has heretofore been possible for a small speaker system. Inside the compact enclosure of this new speaker are a number of vital departures from any speaker system ever produced before.

The Model Fourteen employs two extremely compliant full-range speakers. The diameter of their cones is only 3". Their maximum excursion is 3%". This excursion is controlled by the highest ratio of magnet power to cone lightness ever engineered into a loudspeaker.

There are a series of problems involved in achieving good bass response in a small speaker system. First, all speakers roll off in the bass region. Small speakers have higher resonant frequencies and roll off at higher frequencies than large speakers. But a large speaker is not effective in a compact enclosure. The conventional small speaker is no better, since it cannot move enough air to produce respectable bass.

In the Model Fourteen, part of the answer is a small speaker with a very powerful magnet and long excursion. This provides two great advantages — the ability to move large volumes of air, and the precise control over cone movement necessary for freedom from distortion. It also provides a problem, however, since the damping effect of the heavy magnet increases at the lower frequencies. This reduces the bass output of the speaker.

The rest of the answer is the first use, in a small

multi-speaker system, of a revolutionary technique which we call frequency contouring. This technique was pioneered by KLH in the now famous Model Eight FM Receiving System and Model Eleven Portable Stereophonic Phonograph — each generally conceded to be the finest example of its class yet produced. Incorporated in the Model Fourteen is a passive electronic network which reshapes the power output of any conventional amplifier to match exactly the low frequency power requirements of the speakers, so that their response curve remains flat far below its normal roll-off point.

This technique can only be applied successfully with speakers whose low frequency response is held precisely to a profile of certain specific characteristics. Only because the speakers used in the Model Fourteen—including their impregnated paper cones—are designed and manufactured in our own plant can they be held to the rigid uniformity required for the use of frequency contouring. No commercially supplied cones have the necessary uniformity. No other manufacturer of small full-range speakers produces its own cones.

The result is a range and quality of reproduction you have never heard before in a compact speaker. The Model Fourteen, at any given level of overall loudness, will deliver more bass power, at lower frequencies, with less distortion than any other speaker system in the same range of cost or size.

The Model Fourteen's dimensions are 18" x 14" x 334". The price is about \$50. Wait no longer.



KLH RESEARCH AND DEVELOPMENT CORPORATION 30 CROSS STREET, CAMBRIDGE 39, MASSACHUSETTS



WEATHERS

Model SE-150W Bookshelf Speaker

Can be used in pairs or singly; frequency response 60-20,000 cps; full range moving



coil; power capacity 10-watts program; 4 ohm impedance; 11" x 9¼" x 3¾"; oiled-walnut finish...........\$39.75

Hideaway Bass System

Non-directional bandpass speaker can be placed anywhere; designed for use with SE-150W bookshelf speaker but equally effective as added bass to most stereo speaker systems; frequency response 30-70 cps; 10 watts continuous power up to 25 watts program; output impedance 8 ohms; 16½" x 16½" x 5½"; 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 2¾" x 3¾".

Model SE-55A Bass speaker with A-301

SE-200 Sound Studio Speaker System

WHARFEDALE

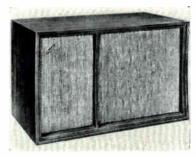
Model W40

Super 3

Cone-type 3" tweeter; 3000 to 20,000 cps; flux density 14,500 gauss, total flux 60,000 gauss; smooth high-frequency response is achieved by eliminating the conventional centering device; may be used in 2- or 3-way systems as high-frequency tweeter; impedance 8 ohms; 2%" depth.......\$26.50

Model W60

Shelf-size speaker system with sand-filled panel, contains 12" and 5" speakers,



matched to enclosure; resonance 25 cycles; 8 ohms; oiled walnut, polished walnut, mahogany; 14¼" x 13" x 24"......\$116.50 Sanded unfinished birch.....\$101.50

Model W60PR

French Provincial in fruitwood; otherwise similar to Model W60; 27¼" x 15¾" x



12 3/8 "\$134.50

Model W70

Speaker system; impedance 8 ohms; 24" x 21" x 12"; oiled-walnut, polished walnut, mahogany \$164.50 Sanded unfinished birch......\$146.50

Model W70PR

Model W90

Features dual 3-way, 6-speaker sand-filled enclosure; has 2-12½" low-freq. drivers



Mounting Base

For use with Models W60, W70, W90 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 sanded birch model.......\$8.95

Super 8/RS/DD

Cone type 8" speaker with aluminum voice coil; frequency response 50–15,000 cps, bass resonance 55–65 cps; 12–15 ohms impedance; flux density 14,500 gauss, total

flux 60,000 gauss; roll-surround suspension; recommended for use in 2- or 3-way speaker systems with a crossover in the region of 1000 cps, or as a single speaker; 4 watts rated on open baffle; depth 4".......\$26.50

Super 10RS/DD Speaker

Super 12RS/DD Speaker

Full-range, 12" dia. speaker; 12—15 ohms; 40 watts peak input power; bass resonance 28—33 cps; double diaphragm with roll-surround\$89.50

Model W12/RS Woofer

Low-frequency speaker; 12" dia.; 12-15 ohms; 40 watts peak input; bass resonance 25-30 cps; speaker depth 6½"......\$52.50

Model W15/RS Woofer

Low-frequency speaker; 15" dia.; 15 ohms; 50 watts peak input; bass resonance 22–25 cps; speaker depth 7½".....\$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 Special three-way network as above except crossover points at 400 & 5000 cps....\$49.50 1000 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

Model ERD-12

Model CX-2 Twin Tweeter Array

Dual cone-tweeter assembly kit converts ERI)-12 to CX-212; complete with high pass filters, terminals, cables, hardware, instructions; wt. 1½ 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. 14½ lbs.; includes Model FW-2 crossover network.

Model TW-400 Tweeter

Model WD-12 Deluxe Woofer

12"; capacity 30 watts; frequency response 25 to 3500 cps; resonance 35 cps; 16 ohms impedance; 1 lb., 13 oz. magnet; flux density 12,500; baffle opening 10%"; depth 6%"; wt. 13 lbs......\$59.50

ACCESSORIES

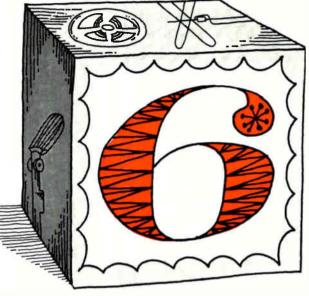
Special Feature

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MICROPHONES 150

MISCELLANEOUS 159



ACOUSTI-CRAFT

Samoan Stereo Group

Oriental modern styling; consists of twin speaker enclosures Models 2312OS and 2312OHS, 4 cu. ft. each, and Model 2300-OE equipment cabinet; extended top has solid inlay construction. Equipment cabinet; 58"x21½"x19½".......\$375.00 Model 2312OS Speaker enclosure (bass reflex); 27"x21½"x19½"......\$120.00 Model 2312OHS Speaker enclosure (horn loaded); 27"x21½"19½".......\$132.00

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; ¾" hardwood birch or walnut veneer; eight finishes available.

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% "x40" x20¼"\$247.50 Model 1915 PS Speaker enclosure (bass reflex); 30% "x23" x20¼"\$110.00 Model 1915PHS Speaker enclosure (horn loaded); 30¾ "x23" x20¼"\$122.00 Model 1900EP Equipment cabinet; 30¾ "x 58" x20¼"\$350.00

Colonial Symphony Stereo Ensemble

Consists of equipment cabinet and twin speaker enchosures; holds all equipment for stereo; ¾" hardwood birch veneer; eight finishes; enclosures are bass reflex or horn loaded.

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; ¾" American walnut,

Mediterranean Group

Consists of Model 5400EIP equipment cabinet; two lift-top lids; three compart-



ments; vertical mounted doors; flat record storage both sides; raised base with casters; 58"x23½"x20"; and speaker enclosure Model 5412IPSD; drum-table style; octagonal shape; raised base with casters; folding doors; ¾" walnut; available in variety of finishes; 12" speaker; 23½"x22½"x 22½".

Stereo Combo Series

Each is a complete, built-in unit in different stylings.

Model 3900EP Heritage Combo in Ameri-



can Provincial style; 31"x75"x21½".

Model 3900EPI) with bass reflex enclosures \$430.00

Model 3900EPH with horn loaded enclosures \$454.00

Model 3800EA Colonial Combo in Early American style; available with raised base and casters only; 31"x75"x21½".



Model 6400EIP Empress stereo combination; raised base with casters; solid top,



Equipment Cabinets

doors on speaker compartments; for 12" speaker; bass reflex design; walnut or birch; 75"x29½"x20"......\$475.00 Model 6400EIPH with horn loaded enclosure\$499.00

Model Florentine

Italian Provincial design constructed as a single unit of walnut wood only; center sec-



tion has lift top for vertical mounting of equipment and touch-latch accordion front doors providing access to storage area; panel doors cover speaker housings (one at each end); cut-out for 12" woofer & blocked for 3" round tweeter opening; detailed base with casters; 96½"x23½"x 20½" deep; 325 lbs.; to opening 53½"x 17"; two storage areas 17"x7¾"x17" d.; weilsblain weilsblain states. available in various finishes.

Model 4400 EIPD\$690.00

Model Parisienne

Contemporary design constructed as single unit of walnut only; center area has lift top



for vertical mounting of equipment; has standard bass-reflex enclosures, one at each end; cut-out for 12" woofer with blocked a" round tweeter opening; recessed kick base with casters; 98½ "x26½" x20½" deep; 325 lbs.; equip. area 3 sections 18" wide x 17" deep; available in various finithm. ishes.

Model 5500 EM\$690.00

Madrid Stereo Combo

Old Spanish design; full banded 1" top; solid hardwood (birch only) detailed panel;



touch-latch doors; horizontal mounting of equipment with pull-out changer drawer & upright record storage (storage area can be converted to pull-out drawer for tape recorder at additional cost); dual adjustable-port speaker enclosures (at each end of cabinet); cut-out for 12" woofer and blocked for 4½"x5" tweeter opening; over-all size 75"x28½"x20¾" deep; over-all size 75"x28½"x20¾" deep; equip, area single compartment 36" w. x 17" deep; 240 lbs.; available in various

Model 7700 ESD\$550.00

Model Regency

Similar to the "Madrid" but French Provincial design; 75"x30¾"x20¾" deep.

Model 4600 EFD\$480.00

Model Antigua

Transitional design equipment cabinet made of walnut wood only; one small and one large lift top for vertical mounting of equipment; has sculptured panels of solid one-piece construction; 58"x24"x20¼" deep; 160 lbs.; available in various finishes. Model 1700 ET\$380.00

Model 1712-TSD Speaker Enclosure

Designed to match styling of "Antigua"; cut-out for 12" woofer and blocked 3" round tweeter opening; 22" w. x 24" h. x 20¼ " d.\$180.00

AUDIO ORIGINALS

Model 101 Wall-Mounted Cabinet

Designed as 2 separate units; supplied in walnut with concealed brackets and blank



panel; equipment enclosure 37 ¼ " x 15 ¾ d. x 8"; record shelf 37 ¼ " x 12 ¼ " d \$69.50

Model 202 Cabinet

Contemporary design; has adjustable 2position equipment shelf; space for chang-



er or turntable: metal legs in brass; speaker area 25½" x 15½"; equipment shelf 32½" x 15" (5½" or 7½" posisions); available in oiled walnut, fruitwood, cherry, and mahogany; shipped

Model 303 Cabinet

Scandinavian design featuring pull-out record player shelf; speaker area 25 ¾ " x



16¾"; component shelves 17¾" wide (5½" or 7½" positions); pull-out shelf 17¾" wide; over-all size 72½" x 32½" x 16"; available in oiled walnut, fruit-wood, cherry, and mahogany; shipped knocked down, easily assembled....\$109.50

Model 404 Cabinet

Has 2 large drawers, one with mounting



board for changer, the other for record storage or tape recorder; drawer fronts available with cane cloth or wood veneer; available with tane cloth of wood veneer, blank panel is included for components; over-all size 41" x 30" x 19½" d.; equipment area 37¼" x 16" d. x 8"; drawer mounting board 17½" w. x 16" d.; sup-

BARZILAY

Model K61 Equipment Cabinet Kit

Contemporary design to match Model 162; all sections made of walnut and pre-assembled with pre-drilled connections; only screwdriver required for assembly; almost or record storage behind 3 sliding doors; equipment may be mounted from front or top; 57" x 28¾" x 18½" d.: kit \$161.50

Factory assembled and finished (Model 161)\$256.00

Design "Two" Equipment System Kit Contemporary styling; black walnut equipment cabinet with stereo speaker en-



closures; all sections pre-assembled & predrilled: assembly time 4-5 hrs. using only a screwdriver: optional top or front mounting of components; sliding doors with textured hardboard speaker grillework; 81" x 28½" x 18½" d. (kit) \$199.50 Factory assembled and finished.....\$360.00 All kits are supplied with complete set of

finishing materials-resins, oils, and waxes. Model 800EC Equipment Cabinet

Three lift-up tops with 4 sections below for record storage & components; 4 tambour doors of fluted walnut and reverse grain veneers; 29" x 78" x 20" d. \$495.00

Model 809 Equipment Cabinet

Same as 9009 except has doors same as 800: may be stacked or wall-hung: 14½" x 72" x 18" d...............\$169.00 Model 809K On island base 17" h. \$182.00

Model 8061 Equipment Cabinet

Lift-up top access to electronics and turntable areas; electronics may be alternately front-mounted; matched-grained tambour doors appear as paneled sections when closed; 29" x 48" x 20" d..........\$282.50

Model 9009 Equipment Cabinet

Tambour doors of solid walnut cover en-.....\$155.00

Model 9009B On sculptured base 22" h.\$182.00

Model 9061 Equipment Cabinet

Touch-up top over turntable section; front mounting for components; solid walnut tambour doors; wrought iron record rack\$287.00

Model 9067 Equipment Cabinet

Low turntable cabinet with tambour doors; may be wall-hung with kits; 4½" x 48"

Model 6009 "Turina" Cabinet

Low equipment cabinet: Spanish design; left side of center section supplied with shelf for components leaving right side open for record player on base: end sections for record storage; 21½" x 77½" x 20" d.......\$390.00

Model 1061 "Da Vinci" Cabinet

Italian Provincial; equipment cabinet has lift top for easy access to control panel and record player; folding doors of solid walnut; raised panels conceal generous record storage; 29" x 43" x 20" d.

BOZAK

Model C-305U Equipment Cabinet

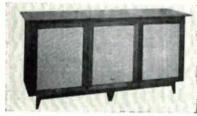
Model C-305P Equipment Cabinet

Similar to Model C-305U except Provincial styling; over-all size 31"h. x 40"w. x 20"d.; available in walnut, mahogany, or cherry\$285.00

FRAZIER

"Playmate" Series Equipment Cabinets

Single equipment cabinet with two separate matching speaker systems; cabinet has



FURN-a-KIT

Various cabinet designs are supplied in kit form; available from 2' to 7' wide in 1' steps for speakers, equipment, or combinations. Kits are supplied sanded.

24-Inch Cabinet Kit

In American black walnut for record storage, speaker, or equipment......\$56.00

6-Foot Contemporary Kit

Designed to house stereo speakers, tuner,



amplifier, tape recorder, turntable, and record storage.........\$190.00

FURNETTE

7-Foot Equipment Cabinet

Designed in American black walnut with elm overlays; 24" end sections for stereo



speakers; 36" center section houses tuner, amplifier, pull-out phono drawer, and storage for 100 records......\$349.00

7-Foot Entertainment Center

American black walnut cabinet houses entire stereo system including speakers; TV, tape recorder, record & tape storage are provided for; drop lid door conceals fully equipped bar with mirror, white formica work area.....\$399.00

Space-Saving Enclosure

Six-foot-high cabinet in American black walnut designed as space-saving housing for stereo speakers, TV, hi-fi equipment, and record storage......\$335.00

Design also available in five-foot-high version for apartments; includes bar & automatic light.....\$299.00

GRECO

"Montoro" Custom Cabinet

"Solofra" Custom Cabinet

Custom cabinet for individualized requirements; includes lift-top Formica bar;

STEREO MUSIC CENTER

from^{ee}shelf
speakers²²



model 303

Here's the cabinet line you have been waiting for ...simply place your "shelf speakers" at each end, amplifier and tuner on the adjustable shelves. changer, turntable or tape deck on the convenient pull-out shelf, one hundred or so records below and instantly your components become a beautiful stereo music center. Superbly finished from genuine hardwoods in Oiled Walnut, Cherry, Fruitwood and Mahogany at only \$109.50. See this and other models as low as \$69.50 at leading dealers or write for free brochure.

audio Originals DEPT. A0-11

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CIRCLE NO. 4 ON READER SERVICE PAGE

NEVER FAIL— ZONE YOUR MAIL

The Post Office has divided 106 cities into postal delivery zones to speed mail delivery. Be sure to include zone number when writing to these cities; be sure to include your zone number in your return address—after the city, before the state.

HOUSE YOUR COMPONENTS IN A

FURNETTE

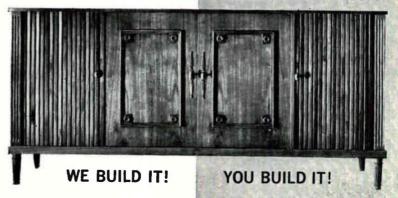
CUSTOM DECORATOR DESIGNED CABINET... available at fine stores everywhere

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FURN-a-KIT

SUPERB PREFABRICATED CABI-NET... do-it-yourself... have fun and save money!

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Equipment Cabinets



"Launeston" Custom Cabinet

Breakfront cabinet for individualized requirements: Regency style, any finish: bot-



"Carina" Custom Cabinet

Cabinet for individualized requirements: Italian Provincial; any finish; 84" x 33" x 18" d.....\$570.00

HEATH

Equipment Cabinet

Factory-assembled, ready-to-use equipment and matching speaker cabinets designed for mono or stereo systems; available in hand-rubbed walnut or unfinished; "gallery" rails; front doors with recessed planes and striated vertical scoring; curved brass door handles mounted on bas relief door edges; 3/4" stock used on all exterior panels and supports; solids for edgings; furniture-grade veneers for front and side panels and shelves; ventilated rear halfpanel 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 slideout drawer may be used for tape recorder; two shell compartments hold tuners and preamps; power amp compartment takes any Heath stereo power amp, 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 tubevented design to match any speaker resonance.

Model AE-20U center cabinet

(unfinished)			\$79.95
Model AE-20	W center	cabinet	
(walnut)			\$99.50
Model AE-40)U 15"	speaker	•
cabinets (uni			\$37.95
Model AE-40			•
cabinets (wal			\$44.95

KARLSON

SXC-1 Stereo Expander Console

Integrated design including two speaker systems for stereo & an equipment cabinet; produces stereo image 12' x 7'; response 40-15,000 cps; dynamic range 100 db; 8 ohms; power capacity 15 w.; eff. 20%; styled in Swedish modern with walnut finish; has slide aside top; cabinet will house most combinations of components & includes record storage; 44" x 16" x 32"................\$234.00

KERSTING

Model E-1 Record Cabinet

Constructed of walnut veneer in handrubbed oiled walnut and oiled ebony fin-



ishes; birch veneer in blonde or mahogany finishes; holds 185 LP records; 22½" h. x 32" w. x 16" d.; contains one "Quick-Sce" retractable album file allowing front-view flip through selection of records; other compartment has conventional storage \$54.95

Early American Maple \$69.00

Early American Maple with Captain's rail \$76.00

Tambour door (legs) \$91.90

Tambour door (base) \$91.90

Retractable album files are available separately for custom installations. Designed for 12"LP's, 45 rpm's & tape. Nine different designs vary in price from \$7.95 to \$16.95

KNIGHT

KN-1403/KN-1267A Equipment Cabinets

Equipment cabinet (matches KN-1267A speaker cabinets) in oiled walnut veneers



on ¾" hardwood construction; contemporary styling; phono lift top; doors; over-all size 31½" x 19" d. x 36" l.; two shelves are adjustable for components, with blank front panel; component area 17¼" w. x 17½", h. x 15½"; phono compartment 17¼" w. x 6½" h. x 15½"; mono compartment 17½" w. x 6½" h. x 15½" mono compartment 17½" w. x 6½" hardwood construction; contemporary styling; warm brown tone nubby grille cloth; for 12" or 15" speakers with reflex and tweeter openings; 31½" x 19"

x	19"	*****		 ••••••	 	54.95
					speake	
n	ets	*****	•••••	 	 \$	89.95

KN-1503/KN-1275A Equipment Cabinets

Danish modern equipment cabinet (matches KN-1275A speaker cabinets) in oiled wal-



LAFAYETTE

"Criterion" Equipment Cabinet

Over-all size 44" w. x 32½" h. x 18" d.; has four separate compartments; inside



dimensions of top two are 10" h. x 18¾" w. x 15¾" d.; bottom two are 12¹³16" h. x 18¾" w. x 15¾" d.; tambour doors; available in walnut or mahogany. CAB-157 WX......\$89.50

"Criterion" Speaker Cabinet

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, record changer, or turntable; top right 18½" wide x 13½" high; has adjustable shelf; over-all size 40" wide, 32½" high, 19½" deep; available in walnut, mahogany, blonde, and ebony finishes.

Model 500L with legs.....\$163.50

Model 501 Speaker Enclosure

Matching unit for Model 500 equipment cabinet; houses up to 15" speaker and any size tweeter; 20" wide, 32½" high, 19½" deep; available in walnut, mahogany, blonde, and ebony finishes. Model 501L with legs.....\$79.50

Model 501B with base.....\$84.00

Models 600 & 601 Enclosures

Matching speaker cabinets and equipment enclosures in Italian Provincial design;



speaker cabinets house up to 12" speakers; 17" wide x 27¼" high x 17" deep; equipment cabinet-top right compartment with lift-top for record changer, turntable, or tape recorder; inside dimensions 14%" x 17%" x 6%"; lower right space for 100 LP records; left side for amplifiers, tuner, etc.; over-all size, 38" wide, 27%" high, 17" deep; available in fruitwood, walnut, mahogany, blonde, or ebony. Model 600 Equipment cabinet......\$136.50 Model 601 Speaker cabinet...... \$ 67.50

Models 700 & 701 Enclosures

Matching equipment and speaker cabinets in Danish modern design; equipment cab-



inet size 38¼" w. x 28¼" h. x 17¾" d.; speaker cabinet 17" x 28¼" x 17¾" d.; for 12" speaker; oiled-walnut finish. Model 700 Equipment cabinet......\$144.50 Model 701 Speaker cabinet.....\$ 74.50

Model 710 Equip./Speaker Cabinet

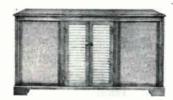
Same as Model 820 except contemporary design; over-all size $57\frac{1}{2}$ " x $33\frac{3}{4}$ " x 19" d.;



available in walnut.....\$249.90

Model 820 Equip./Speaker Cabinet

Early American style with dual lift tops for record player & tape deck; over-all size



 $57\frac{1}{2}$ " x $31\frac{1}{2}$ " x $18\frac{1}{2}$ " d.; component area $18\frac{1}{2}$ " w. x $13\frac{1}{2}$ " w. x 17" d.; phono area $17\frac{1}{2}$ " w. x $6\frac{1}{2}$ " above mtg, board and $3\frac{1}{2}$ " below x $16\frac{1}{2}$ " d.; tape deck area $17\frac{1}{2}$ " w. x 4" above mtg, board and $5\frac{1}{2}$ "

below x 16 1/4" d.; record storage space 18 1/8" w.; speaker enclosure designed for 12" speakers; available in maple or walnut\$271.00

Model 120/101 Equip./Speaker Cabinets

Upper compartment has removable extra shelf; inside dimension 18 % " w. x 13 % "



h.; has drop front & blank face panel; lower pull-out drawer with blank mtg. board; over-all cabinet size 20" w. x 32½" h. x 18" d.; matching speaker cabinets designed for up to 15" speakers & any size tweeter; 12" x 32½" x 18" d.; available with removable base or legs; walnut, mahogany, blonde, or cbony.

Model	120L	with	lcgs\$81.50
Model	120B	with	base\$86.00
			legs\$73.50
Model	101B	with	base\$79.00

Model 810/811 Equip./Speaker Cabinets

Early American ensemble; upper right compartment has lift top; inside size 14%" x



17 1/4" x 6 1/8" d.; lower right has space for 100 records; upper left compartment has removable shelf; inside dimension 17 % " w. x 141/2" h.; has blank face panel; lower left is additional storage space; over-all size 38 %" x 27½" x 17¼" d.; matching speaker enclosures will house up to 12" speakers; 17½" x 27½" x 17¼"; available in maple finish.

Model 810 Equipment cabinet......\$151.50 Model 811 Speaker cabinet...... \$ 77.00

SHERWOOD

Equipment Cabinets

Various designs available; made of finished hardwoods; designs are "modular" and can be used interchangeably; unless otherindicated over-all size is 32"

19" d. x 22" h.
S-979 Drop-leaf cabinet; lock & key; in-
terior light\$147.50
S-980 Two-door cabinet\$124.50
S-938 Matching speaker cabinet; cane
grille with rubber, iso-floats for speaker
\$100.00 S-916 Bar chest includes 16-glass set
\$147.50
S-937 Three-door chest 95.00
S-986 TV cabinet with tambour sliding
doors\$105.00 S-911 Hutch with two shelves behind cane
doors; over-all size 44" w. x 14" d. x
40" h\$160.00
S-939 Bookcase with adjustable shelf
S-917 Junior buffet with 3 drawers and
S-91/ Junior buffet with 3 drawers and
shelves behind door; 48" x 19" x 22"
S-910 Senior buffet with 3 drawers and
shelves behind two doors; 64" x 19" x
22" \$165.00
Modular bases with legs are 8\%" h.; 32"
1
length \$19.60; 48" length \$24.95; 64" length, \$27.30.



FRONT-VIEW. FLIP-THROUGH SELECTION

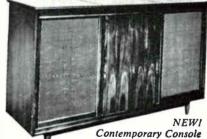
Stop stooping, squinting, straining, to find albums stacked on edge. Ouick-See units glide in and out of cabinet or wall for fast, simple selection...you see the full face of your album without removing it. Ends jacket-bottom wear, too. Installs anywhere in five minutes. Sturdy welded steel and ball-bearing construction, brass finish. Nine models for LP's and tape, hold up to 125 albums. available separately or in special cabinet furniture.



Dealer inquiries invited KERSTING MFG. CO. 504-R S. Date, Alhambra, California

CIRCLE NO. 26 ON READER SERVICE PAGE

See the **ROCKFORD Acoustical Cabinetry**



• Only 571/2" wide.

- Houses complete system, including tape deck, changer or turntable, amplifier, tuner and speakers.
- Record storage for over 100 12" LP's.
- · Speaker compartments are vented port type with 1" acoustical fibre glass lining. Each compartment houses up to 12" speaker.





Dealer Inquiries Invited



AKG

D7A Dynamic Microphone

Omnidirectional characteristic; freq. range 100-10,000 cps; sensitivity -73 db re 1



v./dyne/cm.² (low impedance); output 200/50,000 ohms; 3 ½ " x 2" x 1 ½ "..\$14.50

D19C Dynamic Microphone

Has a gradual rising freq. response 50-15,000 cps ± 6 db; front-to-rear discrimi-



nation 15 db; output imp. 200 ohms; sensitivity —75 db re 1 v./dyne/cm.²; has speech/music switch; cardioid design \$55.00

D19E Dynamic Microphone

Has cardioid directional characteristic; frequence 40-16,000 cps; front-to-back ratio 15



D24B Dynamic Microphone

ALTEC LANSING

Model 681A Microphone

General-purpose, moving-coil dynamic design; response 50-18,000 cps; output im-



pedance 150/250 or 20,000 ohms (specify impedance); output -55 dbm/10 dynes/cm.²; omnidirectional; 11/8" dia. at top,

7%" long; dark green baked enamel and
brushed chrome; has 15-foot cord\$12.00
Desk stand extra\$15.00
"On-off" switch kit

Model 682A Microphone

Model 683A Microphone

Similar in style to Model 681A; cardioid dynamic design; response 45-15,000 cps; 30/50, 150/250, and 20,000 ohms (selectable by cable plug); output —54 dbm/10 dynes/cm.²; front-to-back discrimination 20 db; same finishes available as for Model 682A; has sintered bronze filter for protection against moisture and blasting \$72.00

AMERICAN CONCERTONE

Model M-21 Microphone

AMERICAN MICROPHONE

Model D4L Microphone

Model D4H Microphone

Model D-10 Microphone

Dynamic type; omni-directional general purpose; plastic diaphragm; high or low impedance; frequency response 60-12,000 cps; output level is -57 db......\$17.70

Model D11 Microphone

D11-L 50 ohms\$21.60

Model D-12 Microphone

Dynamic type; compact 325/22" long; response 60-12,000 cps; output level —55 db @ high impedance; includes lavalier and accessories.

accessories.	
D12H high impedance	\$35.70
D12L 50 ohms	\$35.70
D12HE same as D12H with	adapter for
boom or gooseneck mounting.	
D12LE same as D12L with	adapter for
boom or gooseneck mounting.	\$36.21

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 high impedance; over-all height 8¼"; 25'



single conductor cable.....\$59.70

Model D33 Microphone

Model D44 Microphone

Dynamic type with shock-mount suspension for boom use; response 30-14,000 cps; output level -55 db @ 50 ohms impedance; omni-directional; height 6¾"\$141.00
WS2A windscreen for D44\$6.60

Model D55 Microphone



Model D76 Microphone

Cardioid dynamic design; professional version of Model D55; 40-15,000 cps; low impedance only......\$117.00

Model R331 Microphone

Ribbon type; frequency response 50 to 12,000 cps; bi-directional; output level



-60 db at high impedance; variable highlow impedance; height 61/8"; 25' singleconductor cable......\$84.00

206 Series Microphones

B213S Microphones

Ceramic hand-held microphones; response 80-9000 cps; high-impedance; 5-foot coiled



STEREO/HI-FI DIRECTORY

cord; ceramic with d.p.s.t. push-to-talk switch \$10.05 B213 ceramic \$8.25

ASTATIC

988 "Vogue" Dynamic Microphone

Omnidirectional design with "pop-proof" and "blast-proof" diaphragm; insensitive



to moisture and temperature; convertable from hand to stand to lavalier use; detachable cable connector; response 40-17,000 cps; impedance selector for 50-150-250 ohms; output —56 db at 1 mw./10 dynes/cm.²; furnished complete with 20-foot cable, stand adapter, lavalier assembly; 91½2" h. x 1%2" dia............\$150.00

888 "Tempo" Dynamic Microphone

Similar to Model 988 except response 50-15,000 cps; impedance selector for 50-200-



high-impedance; output -58 db.\$110.00

788 "Metro" Dynamic Microphone

Similar to Model 988 except response 60-13,000 cps; impedance 150 or high-imped-



Model 77 Series Microphones

Dynamic cardioid design; front-to-back pickup differential 18 db; rugged and insensitive to temperature and moisture; blast-proof diaphragm; essentially flat from 30-15,000 cps; impedance selector switch: high-impedance position (40,000 ohms), open circuit voltage —52 db @ 1 volt/dyne/cm.²; low-impedance position (30-50 ohms) power level into 50 ohms —52 db @ 1 mw./10 dynes/cm.²; medium-impedance position (150-250 ohms), —53 db.

Model 77	\$82.50
Model 77L	
Model G77 Complete with gri	p-to-talk
desk stand, 8-foot cable	\$97.45
Model 77 (Gold finish)	\$92.50
Model 77L (Gold finish)	\$82.50
All "L" models furnished less	"on-off"
switch, cable, and adapter; inter	nded for
use with Model G grip-to-talk de-	sk stand.

AUDIOTEX

Model 30-900 Microphone

DYNACO

Models 50 & 53 Microphones

Both models are ribbon; bidirectional; B & O manufactured; response ± 2.5 db 30-13,000 cps; output 56 db below 1 volt/ μ bar at high impedance or with matching transformer; $7 \frac{13}{18}$ "; switch provides music, close-talk, and off positions.

Model 200 Microphone

Dual-ribbon mike designed by B & O for stereo operation; bidirectional with figure-8 pattern; top section can be rotated through 100° with respect to lower section so optimum 90° angle or any point in between may be chosen; lower section includes phasing switch and another for muting, normal operation and a close-talk position; response 30-13,000 cps ± 2 db; in "talk" position response is rolled off 3 db/octave below 1 kc.; impedance 150/200 ohms; sensitivity Gm = -156 db; 10"x13"6" \$149.95 Model 100 Mono version \$89.95 MT-2 Matching transformer (dual-200 ohm to high-Z) \$24.95

ELECTRO-VOICE

Model 623 Slim Microphone

Dynamic; omnidirectional; frequency response 60 to 12,000 cps; output-56 db:



high and low impedance; cast case; hinge head; on-off switch; built-in MC-4 connector 1/8"-27 thread; satin chrome; 18 foot cable; size 7½"x1¼"; weight 15 oz. \$57.00

Model 666 Super Cardioid Microphone

Dynamic; unidirectional; for boom, stand, or hand use; frequency response 30 to 16,000 cps; output—55 db; impedance 50 ohms, taps for 150 and 250 ohms; variable directivity increases working distance yet permits closeup without distortion; cast aluminum case; gray; 20 foot cable; built-in Cannon UA-3 connector; includes clamp-on stand mount with %"-27 thread and ½" pipe thread adapter......\$255.00

Model 729 Ceramic Microphone

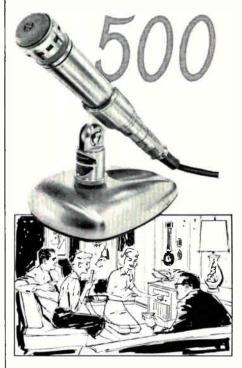
Cardioid design; wide-angle front pick-up; response 6-8000 cps; high-impedance; on-



off switch; output -60 db: $7\frac{1}{4}$ " l. 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

Turner's New Cardioid



They're perfectly matched

New manufacturing methods make all Turner 500's uniform and identical in performance. And that's what you need for in-the-home stereo recording with the professional flair. This uniformity is something you'll have to pay plenty for ... unless you buy Turner's sensibly priced new Dynamic Cardioid 500! So improve the performance of your entire sound system without devastating your budget. Get the Model 500 . . . just \$84.00, list price.

Model 58

A natural for applications requiring freedom and mobility. Doubles as desk mike with stand . . . \$57.00, list price.

Model 95

The perfect PA mike for church, school, club or high quality recording. On-off switch available, 20' cable supplied . . . \$37.50, list price.



THE TURNER	MICROPHONE COMPANY 900 17th Street N.E. Cedar Rapids, Iowa					
Gentlemen: Please send me the Turner Catalog, free. Name						
Address						
City	State					
	el Associates, Ltd.					



Microphones

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 ¼ "x1 ¾ "; weight 26 oz.

Chrome finish\$85.00

Model 665 Cardioid Microphone



Model 655C Slim-Trim TV Dynamic

Response 40-20,000 cps; output-55 db: can be used on stand, in hand, or on boom:



casily concealed in studio props; pop-proof grille; impedances 50, 150, 250 ohms; impedance easily changed; clamp-on stand mount includes 3%"-27 thread and ½" pipe thread adapter; 10½" long, 1" dia; 20-foot cable\$200.00

Model 641 Dynamic Mike

Model 636 "Slimair" Dynamic

For p.a., recording, and general use; re-



Model 634 Dynamic Mike

Identical to Model 641 except furnished without fixed-tilt stand coupler......\$31.50

Model 715 "Century" Ceramic

Use in any position (in hand, on table, on stand, or overhead); ceramic element:



60-7000 cps; output -55 db; Hi-Z; 5-foot cable; nondirectional; rugged and lightweight; 3" x 2³16" x 1"............\$13.00 Model 715S With switch..........\$15.00 Model 715SR With relay control switch

Model 718 Ceramic Mike

For home recording; 5-foot cable with molded-on phono plug; adapter to match

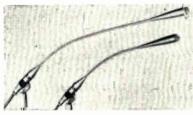


Model 727 Slim Ceramic

Similar in appearance to Model 729; withstands extremes of temperature and humidity; response 60-8000 cps; output -55 db; high-impedance only; 5-foot cable; available with or without on-off switch; 7¾" x 1¾" x 1½"; supplied with desk stand and floor stand coupler.......\$18.00 Model 727SR With relay control switch \$20.00

Model 652 "Thin-Trim" Dynamic

Almost invisible unit mounted on end of semi-rigid tube which brings moving-coil



element closer to user for full-range, popfree response; breath and wind filter an integral part; two clear plastic bailles to give either 8 db or 5 db boost in the brilliance range of 5000 cps; without baffles unit gives smooth response from 80-8000 cps; mounted on \$16" steel tube; output level -60 db; matches all low impedances; furnished with 3-conductor shielded 20-foot cable; 25" long.......\$120.00 Model 652A Same as Model 652 except 15" long......\$120.00

Model 712 Ceramic Mike

Low-cost ceramic unit; meets need for p.a., home recording, paging, general use; hand-



held; moisture-scaled ceramic; response 70-7000 cps; high output -55 db; Hi-Z; 3" x 2¼" x 1¾"; 5-foot cable.......\$7.50

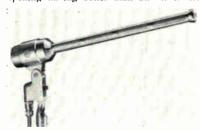
Model 805 Contact Mike



For guitar, banjo, other stringed instruments; Hi-Z; sealed crystal; chrome finish; 15-foot cable......\$20.00

Model 644 "Sound Spot" Mike

Combination cardioid & distributed front opening having better than 2.5 times the



working distance of pressure-type microphone; 20 db cancellation rear & sides above 700 cps; cardioid pattern below 700 cps; response 40-10,000 cps; output —53 db; dual high & low impedance selectable; 2916" x 16"\$110.00

Model 676 Cardioid Dynamic Mike

Response 40-15,000 cps; output -58 db; 150 ohms or high impedance, changed in



Model 630 Dynamic Mike

Response 60-11,000 cps; output -55 db; has "off-on" switch; available in high-impedance or 150 ohns (matches 50-250

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1964 EDITION



Microphones



ohms): low impedance balanced to ground: 2" x 6½".....\$52.50

Model 624 Dynamic Lavalier

Response 100-7000 cps; output -56 db; features wire mesh head acoustically treated



for wind & moisture protection; available in high impedance or 150 ohms; not balanced to ground; 35\(\frac{5}{2}\)" x 17\(\frac{5}{2}\)"......\$42.50

Model 615 "Century" Dynamic Mike Omnidirectional design; will withstand extreme temperatures, humidity, corrosion,



and shock; response 80-8000 cps; output —55 db; available in high- or low-impedance (50-250 ohms); low impedance not balanced to ground; 3" x 2³16" x 1"..\$25.50

KNIGHT

KN-4500 Dynamic Microphone

All directional pickup pattern; high impedance; output -55 db; response 60-12,000 cps; 10' cable: phone plug; 7½" x 1516"; includes desk stand......\$23.95

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

OLSON ELECTRONICS

M-163 Crystal Microphone

Made in England; plastic case with fold-away handle; output -50 db; response



40-6000 cps; six-foot shielded cable....\$2.99

PML

EK-61 Condenser Microphone

Imported from Sweden; a super-miniature design (2 %" in height) supplied with separate power supply to be clipped to belt; omni-directional characteristics with Mylartype diaphragm; output impedance 30/50, 150/200, 600, or Hi-Z; response 20-18,000 cps ± 2 db; sensitivity -42 db; S/N ratio -58 db @ 2000 cps; noise level 14 phons.

\$99.50
Model EC-61 Cardioid pattern\$109.50
Battery power supply\$29.50
A.C. power supply, 117 v\$49.50

RÇA

77-DX Polydirectional Microphone

Features uni-directional, bi-directional, or non-directional pickup patterns changed by



BK-11A Velocity Microphone

General-purpose ribbon design with bi-directional characteristics; response 30-15,000



cps; effective output level -56 dbm @ 1000 cps (EIA rating, -147 db); output

BK-5B Uni-Axial Microphone

Ribbon instrument designed for high noise areas; maximum sensitivity is in the major



BK-6B Dynamic Microphone

Lightweight (23 oz.) microphone 2916" x 1516" in size; effective output level is -67



SK-46B Velocity Microphone

An economy ribbon design for indoor use; has good frequency response and bi-direc-



BK-1A Pressure Microphone

Ideal for outdoor use; offers smooth response for both voice and music; provides uniform response from 60-10,000 cps; swivel mounting can be used to control directional characteristics; vertical position is



non-direction, the horizontal position is semi-direction; output impedance is 250 ohns, but 30 and 150 ohm connections are included; effective output level is -56 dbm (EIA rating, -48 db); hum pickup is below -112 dbm; supplied with 30' of three-conductor cable, less connector..........\$73.50

SK-45B Talk-Back Microphone

Ideal for talk-back, cue, and p.a. use; dynamic microphone is essentially non-direc-



SK-39A Utility Microphone

Inexpensive dynamic microphone for cue and talk-back applications; plastic dia-



phragm is impervious to moisture and rain: output level —55 dbm (EIA rating, —150 db); can be used with amplifiers having 150-250 ohm input: 15 oz.; supplied with 25' two-conductor cable.

..... \$23.4

RESLO

CD Dynamic Microphone

Cardioid characteristics; ideally suited for general audio recording; has flexible stem for head orientation; front-to-rear discrimination of 10 db is achieved at mid-frequencies; supplied with optional perspex ring baffle which adds "presence" around 5 kc. (± 3 db); response 100-10,000 cps ± 5 db; sensitivity 49 db below 1 v./dyne/cm² @ 40,000 ohms.

Model CDM 250/600 ohms......\$99.95 Model CDH 30/50 ohms & Hi-Z.....\$99.95

Model V.M.C. Microphone

Dynamic design for rugged voice applications; response 100-15,000 cps ± 5 db with peak at 5000 cps for maximum speech presence; 15 ohms; with "on-off" switch...\$79.95

Type CR Ribbon Microphone

Cardioid characteristics; response 60 cps (-5 db) to 16,000 cps (+ 4 db); cardioid response 15-20 db; front-to-back discrimination over 1800-12,500 cps (30 db @ 5000-6000 cps); available with either 250/600 ohm or 30/50 ohm/Hi-Z impedances \$99.95

Type RB Miniature Ribbon Mic

Type PR Ribbon Microphone

Designed for tape recorder use; plastic foam acoustic damping pads (removable) are incorporated for close speaking and to give reduction in high-frequency rear pickup; response 100-10,000 cps ± 5 db; has modified figure-8 response with pads fitted: sensitivity 60 db below 1 v./dyne/cm.² @ 40,000 ohms; available in either 250/600 ohm or 30/50 ohm/Hi-Z impedances.....\$89.95

SHURE

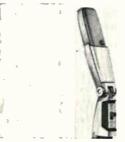
Model 55S "Unidyne" Microphone

Dynamic type; uni-directional; frequency response 50 to 15,000 cps; output: -54 db



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; ½"-27 thread; Amphenol MC3M connector equivalent; 20 foot 2-conductor shielded cable; size 6"x 1½" x 1½"; wt. 1 lb., shpg., 3½ lbs.

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; %"-27 thread; live rubber shock mount; Cannon XL-3-11 connector; 20

foot 2-conductor shielded cable; size $3\frac{3}{4}$ " x $1\frac{1}{4}$ " x $1\frac{7}{6}$ "; wt. $1\frac{1}{2}$ lbs., shpg., 4 lbs.

430 "Commando" Microphone

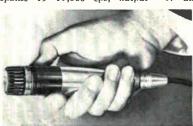
Controlled magnetic type; omni-directional; frequency response 60 to 10,000



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; ½"—27 thread; Amphenol MC2M connector; 15 foot 2-conductor shielded cable; press-to-talk switch, locking plate furnished; size 6½" long; top diameter 1¾"; handle 3¾" \$38.50

Model 545 "Unidyne III" Microphone

Dynamic type: cardioid; frequency response 15-15,000 cps; output -57 db



low level, —55 db high level; dual impedance; 18' three-conductor shielded cable; 6" x 2"\$85.00

Model 710 Crystal Microphone

Hand-held for voice frequencies; response 60-9000 cps; output 50 db; high impedance; semi-directional.

Model 710A......\$12.00 Model 710S (with switch)......\$14.00

Model 300 Bi-directional Microphone

Multi-impedance ribbon design with special anti-breath filter; response 40-15,000 cps $\pm 2\frac{1}{2}$ db; output 30-50 ohms -59 db, 150-250 ohms -60 db; high impedance -57 db; equipped with multi-impedance switch for 30-50 ohms, 150-250



333 Uni-directional Microphone

Ribbon design; response 30-15,000 cps ± 2½ db; output 50 ohm -60 db, 150 ohm



Microphones



540S "Sonodyne II" Microphone

Dynamic type; uni-directional; response 60-10,000 cps (provisions for altering re-



sponse to increase voice intelligibility); output: -57 db at 50-250 ohms, -52.5 db at high impedance; adjusts for high or low impedance: modern dic-cast zinc and Armo-Dur case; satin chrome and black finish; self-adjusting "lifetime" swivel; 15-foot, 2-conductor shielded cable: 6-3/32" x 1-21/32" x 2-9/16".............\$49.95

Model 245 "Uniplex" Microphone

Ceramic type; uni-directional; response 50-7000 cps; output -59 db; high imped-



ance; die-cast zinc case; includes swivel adapter; 15-foot single-conductor shielded cable; 4¾" x 1½"; wt. ½ lb.\$35.00 Model 245S (with "on-off" switch)...\$37.00

575S "Versadyne" Microphone

Dynamic type; omni-directional; response 40-15,000 cps; output: high impedance



-59 db, low impedance -62 db; choice of high or low impedance versions; black

Armo-Dur body with satin anodized cap and stainless steel grille; furnished with special stand adapter; on-off switch; attached 7-froot single-conductor shielded cable; $4\frac{3}{4}$ " x $1\frac{1}{4}$ ".

Model 575S (high impedance)......\$24.00

Model 5758 (high impedance)......\$24.00
Model 5758B (low impedance)......\$21.00
Model 2758 "Versaplex" (ceramic version)\$15.00

578 Omnidyne Ultra-Slim Probe

Designed as a dynamic omnidirectional type p.a. microphone; response 50-17,000 cps;



output: -59 db high impedance, -60 db low impedance; built-in wire mesh "pop" filter reduces breath noises; dual impedance (200 ohms & high); $\frac{3}{4}$ " dia., $7\frac{1}{8}$ " over-all length; complete with "on-off" switch and special slip-in swivel stand adapter; available in matched pairs for stereo recording (matching to ± 1 db in level and $\pm 1\frac{1}{2}$ db in frequency response).......\$82.50

Model 570 Lavalier Microphone

Miniature size professional-quality dynamic microphone designed for lavalier use; fea-



576 Omnidirectional Dynamic Mike

Dynamic probe microphone featuring widerange response for voice & music; ultra-slim



34" dia. x 836" long; response 40-29,000 cps; dual impedance 50 & 150 ohms; output: —60 db; complete with slip-in swivel adapter that permits tilting microphone 90° from vertical to horizontal; also ideal as hand-held mic.; available in matched pairs for stereo, broadcasting and recording for stereo, \$175.00

Model 561 Dynamic Microphone

SONOTONE

Model CM-10A "Ceramike"



sensitivity is desired. Specification same as for CM-10A except: frequency response, 80 to 9000 cps ± 2 db. Sensitivity 53 db below 1.0 volt per microbar.......\$17.50 Moxlel CMS-10 mike stand: table and stored use\$5.00

Model CMT-10A or CMT-11A Matched Twin Microphones

For stereo tape use; ceramic type; acoustically matched to 2 db; Model CMT-10A has frequency response 50 to over 11,000 cps: Model CMT-11A has frequency response 80-9000 cps; Model CMT-10A output level —56 db.......\$35.50 pair

Model CM-32 Microphone

Ceramic type; encased in lightweight, shatterproof neutral gray/tan plastic case; re-



sponse 80-9000 cps; sensitivity -49 db \pm 2 db; has 7-foot, 2-conductor cable with plug\$12.50

Model CM-12A Microphone

Ceramic microphone; low impedance output includes transformer; 150 ohms impedance; --63.5 db output; frequency response to 8000 cps; push-to-talk button; chrome-finished table stand with swivel mount furnished at extra cost.......\$29.50 Table stand\$5.00

Model CM-40 & CMO41 Microphones

Ceramic microphone in plastic case; equipped with swing-type stand; -50 db





SONY

F-81 Dynamic Microphone

Same as Model F-87 except has smoother response\$ 29.50

F-32 Dynamic Microphone

Has omni-directional pattern & bass cut switch; with switch in "music" position, re-



Microphones

Model 204D Same as Model 200D but includes accessories\$40.50

Model 304C Ceramic Microphone

Supplied complete with desk stand, stand adapter, lavalier clip, 12' single-shielded



conductor; response 60-10,000 cps; output level —60 db.....List \$16.50

Model 401 Dynamic Microphone

Omnidirectional design; high-frequency response adjustable from 20,000 cps down to



10,000 cps and low end from 40 to 160 cps; has neutral blue-gray finish with 20' three-conductor shielded cable; choice of high or 150-ohm impedance; 10½" x 1"; output level —60 db at high impedance \$75.00

Model 607 & 608 Microphone

Model 708 Microphone

Model 403 Dynamic Microphone

Omnidirection design: response 50-13,000 cps; output level -60 db; choice of 150



ohms or high impedance; has 20' threeconductor shielded cable with Cannon con-

nector; available in silver or gold....\$48.00 Model 404 Same as Model 403 but with onoff switch.......\$51.00

Model 220A Microphone

Dynamic adjustable lavalier microphone designed for AM, FM, and TV broadcast use;



combination output impedance of 50 or 200 ohms selected at terminal end of cable; response 60-20,000 cps; output —90 db at 50 ohms; has 25' cable.......\$75.00

Model 95D Microphone

Dynamic p.a. microphone; available with "on-off" switch; complete with 20-foot



cable; response 100-10,000 cps; output --58 db; choice of 50, 200 or high ohms

Model 500 Dynamic Microphone



Cardioid design; response 40-15,000 cps; output -55 db; high or 150 ohm impedance, selected at cable end; 20' cable.

List	\$84.00
Model S-500 with switchList	\$87.50
Model C-7 stand List	\$ 950

Model 907 & 908 Microphone

Economy unit for tape recorders; durable polystyrene; hand or desk use; weighted to avoid tipping; ceramic model (907) for use where heat and humidity are problems; Model 908 response 60-8500 cps; output level —45 db; high impedance; Model 907 response 60-8500 cps; output level —55 db; high impedance.......\$ 4.80

Model 80 on C-4 Stand

For home recording, paging, amateur use; crystal microphone; 7-foot cable supplied: response 80-7000 cps; output -54 db; high impedance \$\, 9.57\$

Matching C-4 stand \$\, 3.90\$

UNIVERSITY

Model 501 Modular Cardioid Mic.

Highly directional type; response 30-16,-000 cps; impedance 30/50, 150/250, 20,-

Model 401 Modular Omnidirectional Microphone

All-purpose type; response 30-20,000 cps; impedance 30/50, 150/250, 20,000 ohms:



Models 61 & 61HF Dynamic Mic.

Omni-directional design; immune to shock, temperature, moisture; impedance 25.000

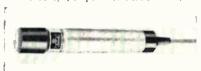


ohms; output level (open circuit) -55 db/1 v./dyne/cm.²; 4" h. x 2¼" w. x 1¾" d.; push-to-talk switch; 6-foot cord. Model 61 (95-9500 cps)......\$24.95 Model 61HF (70-14,000 cps)......\$27.95

Model 403L Lavalier Microphone

Models 70 & 71 General-Purpose Microphone

Omni-directional, dynamic type; response 50-14,000 cps; impedance 30/50 & 20,000



ohms: output level 30/50 50 db/1 mw./ 10 dynes/cm.² (143 db EIA sensitivity rating); 20,000 ohms into high-impedance input 28 mv./10 dynes/cm.²; 15/2" dia. x 6": includes slide-on stand adapter; 15-foot cable.

Model 70\$29.95 Model 71 Same as Model 70 but with onoff slide switch.....\$34.95 sponse is essentially flat; with switch in "voice" position, response is attenuated 8 db at 50 cps & 60 db at 100 cps....\$ 27.50

F-96 Dynamic Microphone



F-87 Dynamic Microphone

High impedance with cardfold directional characteristics; has built-in table stand &



floor-stand adapter insert.....\$ 22.50

TURNER

Model 58 & 58A Lavalier Microphone

Dynamic type with essentially non-directional pickup pattern; designed for use



where freedom of movement is required;

weighs 3½ 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

Model 58A 50 or 200 ohm impedance selected at end of cable; response 60-18,-000 cps; 3-conductor, 25' shielded cable \$34.20

Model 141-11 Microphone

Model 200 Series Microphones

Rugged wide-range sensitive designs available with ceramic, crystal, or dynamic elements; particularly suited for hard use. Model 200C (ceramic) response 50-10,000 cps; output level -60 db; high impedance; single conductor shielded cable; without accessories\$26.50 Model 204C Same as Model 200C but includes accessories\$32.00 Model 200X (crystal) response 60-10.000 cps; output level -51 db; high impedance; single-conductor shielded cable; without accessories\$24.50 Model 204X Same as Model 200X but includes accessories\$30.00 Model 200D (dynamic) high-impedance; response 60-13,000 cps; output level -53 db; single-conductor shielded cable; without accessories\$35.00

SORRY-BUT WE CAN NOT SHOW YOU THE NEW JFD FM STEREO LOG PERIODIC ANTENNA!

Our fantastic new FM Log-Periodic LPL antenna discovery was not ready for its portrait when this magazine went to press. However, shortly after you receive this issue, our FM Log-Periodic LPL will be available from your dealer.

It features revolutionary new Log-Periodic "L" cell design to receive even the weakest and noisiest FM stereo signal with maximum quieting and separation.

Frequency independent operation provides higher gain, sharper directivity, better front-to-back ratio regardless of frequency received.

And why not? The JFD FM Log-Periodic LPL is based on a revolutionary new antenna formula developed by the Antenna Research Laboratories of the University of Illinois for satellite telemetry.

But if you simply can't wait—install one of the FM stereo-proved antennas below. Your FM Stereo unit will love you for it!

RECOMMENDED FOR MULTI-FM STATION AREAS WITHIN 40 MILES JFD FM STEREO-CONE TURNSTILE ANTENNA KITS

Feature exclusive "Stereo-cone" all-directional sensitivity for high fidelity reception of all stations—without a rotator. Includes antenna, mast, mount, lead-in wire and stand-offs. Gold alodized. Available in two types of kits:

model	description	list
AFM100G	for wall or roof	\$15.95
AFM175G	for attaching to existing TV mast	\$13.95



RECOMMENDED FOR FRINGE SINGLE-STATION AREAS UP TO 185 MILES

JFD FM STEREO YAGIS
Multi-element wide-spaced twin-driven sleeve-dipole design pinpoints distant sta-

sleeve-dipole design pinpoints distant station, develops extra gain needed—demanded by high quality stereo systems. Gold alodized. Available in two models:

model

description

list

AFM350G 6-Element Yagi (125 miles) \$23.50 AFM650G 10-Element Yagi (185 miles) \$32.50

T Yagi (185 miles) \$32.30

The best FM stereo starts with a JFD antenna. See your dealer today or write for FREE booklet "Better FM Performance".

AFM350G



AFM650G



ASTATIC

2501 Ceramic Headphones

Freq. range 30-10,000 cps; sensitivity 100 db (sound pressure level) for 6.5 v. input; impedance 20,000 ohms @ 1000 cps; capacity $3800~\mu\mu f. \pm 600$ (each phone); HD less than .5% @ 1 kc. & 20.4 v. input; 8.5 oz. \$27.75 Model 2503 with ceramic boom microphone \$37.75

2601 Crystal Headphone

Freq. range 30-8500 cps; sensitivity 100 db (sound pressure level) for 4.5 v. input; im-



pedance 100,000 ohms @ 1000 cps; capacity 750 $\mu\mu$ f. \pm 150 (each phone); HD less than .35% @ 1 kc. & 14.2 v. input; 8.5 oz. \$22.75 Model 2603 with ceramic boom microphone \$35.25

Ceramic boom microphone for models 2501 & 2601; frequency range 30-8500 cps; output 58 db below 1 v./dyne/cm.²; 200.000 ohm impedance @ 1000 cps; capacity 750 $\mu\mu f$. \pm 150; recommended load 1 megohm min.; wt. 2 oz. less cable.................\$14.00 Headphones & microphone supplied with 6' cables and are available in stereo or mono and in green, grey, or beige.

CLARK

Model 100 Stereo Headset

COLLINS FARLEY

Model S95D Headset

Wired for stereo operation; dynamic-type transducer; impedance 8 ohms; frequency response 30-15,000 cps; weight 8½ oz. \$24.45

Model 95D Headset

Same as Model S95D except wired for mono operation; 4 ohms impedance..\$23.95

COLORSOUND

Model 3500 Color Organ

Three-channel amplifier designed to operate from any hi-fi system; three channels are so designed as to vary intensity of red, green, and blue lamps; has 2 inputs—low level .01 v. for max. output (100K impedance) high level .1 v. (500K impedance); outputs 110-120 v. standard incandescent



lamps; min, load 60 w./ch.; max, load 500 w./ch.; has brightness, bass, treble, time, power controls; crossover (red-green) 500 cps & (green-blue) 1000 cps; has 26 solid-state devices: 13¾" x 8¾" d. x 5½" \$225.00

FAIRCHILD

Model 510 "Compander" Expander-Compressor

Not an amplifier but a device that will expand or compress any program material



from phono, tape, tuner, etc.: expands up to 8 db (twice as loud); requires no power; compresses 20 db max.: attack time 10 msec.: available for stereo (two channel) operation only: can also be used for mono \$75,00 Model 510K Kit version of Model 510 "Compander" \$59.95

FISHER

Model K-10 "Spacexpander"

Single-control reverberation design using



interconnected coil springs; nominal delay 33 sec.; self-powered; three dualpurpose tubes, 7247 and 2–12AX7, decay time variable maximum 2 sec. @ 300 cps; minimum input .2 volt; maximum input 5 volts; input impedance 250,000 ohms; output impedance 2000 ohms; output voltage .2-5 volts; gain is one.......\$69,50

FREEMAN

1400 Transistorized Mixer

Self-powered: mixes & controls any combi-



nation of four mics., tuners, phonos, radios, etc.; gain 6 db; 6" x 2 1/4" x 3 1/2" d...\$24.95

JENSEN

Model HS-1 Headset

Stereo or mono design; response 20-15,000 cps; 8 ohms; sensitivity 95 db sound pressure level for 1 mv.; 110 watt input required for adequate listening; 3-way plug and 8-foot cord provided.......\$24.95

Model CFN-1 Cross-Feed Network

CC-1 Headphone Control Center

For 8-ohm electrodynamic phones; operates with any 10-watt/channel amplifier; stereo design: new "Space-Perspective" design



provides complete controls for personal listening; controls—speaker "on-off." left-or right-channel only or stereo with channel reversal; mono or stereo with choice of "Space-Perspective" or regular; balance; volume; 4½"h.x11¾"w.x3"d.......\$39.75

KNIGHT

Model KN-845 Stereo Headphones

KN-846 Remote Control

For KN-845 stereo headphones; separate



volume controls for 1 or 2 headsets & switch for turning regular speakers on or off...\$7.95

KN-848 Stereo Headphones

Response 20-20,000 cps; liquid-filled ear



cushions ambient noise attenuation-40 db at 1000 cps; 8 ohm impedance......\$29.95

KOSS

Model A-1220 Amplifier

For use with Stereophones; can be directly connected to stereo ceramic cartridge or



outputs of stereo preamp or tuner; gain control for each channel; transformer powered; 3 tubes plus rectifier.......\$34.95



Model SP-3X "Stereophones"

Extremely sensitive 3½" sound reproducers mounted in each earpiece; response



Model SP-5NS Dual Mode "Stereophones"

Switched lavalier with two plugs provides a stereo plug for monitoring or two mon-



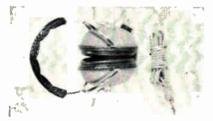
aural plugs for playback use with recorders having two external speaker jacks \$24.95

Model SP-5SM Stereo/Mono "Stereophones"



Stereo and monaural phones in one; switch in lavalier changes operation from stereo to monaural or vice versa......\$24.95

Model Pro-4 Headset



Model SP-5VW Dual-Input "Stereophones"

Designed with two monaural plugs for use with integrated tape recorder or phono



systems having two external speaker jacks

Model T-1 Junction Box

Contains matching transformers for monitoring; 600-10.000 ohm outputs; two output jacks for Stereophones\$7.95

Model T-5 Remote-Control Listening Station

Junction box for connecting Sterephones to existing stereo or mono system; impedance



4-16 ohms; has jacks for two sets of Stereophones; one volume control for each ear; on-off speaker switch for personalized listening \$8.95

Model K-29 "Port-a-Pac"



LAFAYETTE

Model F-767 Headphones

Stereo/mono design; response 30-15,000 cps; 8 ohms impedance each phone; com-



plete with cables, wires, overload junction box\$11.88

Model F-641 Junction Box

Permits stereo headphone operation with-

F-770 Stereo Headphones

Dynamic design; response 25-15,000 cps; 8 ohms impedance per phone; max. power



Headphones



Stethoscope-type earphones; frequency response 40 to 16,000 cps; hinge permits any desired spacing.

MARCOR

Model 700 Headphones

Dynamic moving-coil type with self-supporting voice-coil protected against shock; response 30-16,000 cps; harmonic distortion less than 3% with 100 mw. applied; impedance 20 ohms/earphone or 10 ohms in parallel for monaural use; sensitivity 105 db @ 1000 cps in reference 0 db; .002 dynes/cm.² with input of 1 mw.; earphone elements mounted inside noise-attenuating earcups; weight 10 oz....\$37.50

MOOG

"Melodia" Theremin

An electronic musical instrument played without being touched; distance between player's right hand and instrument's antenna rod determines pitch of the note; distance between player's left hand and instrument's volume antenna plate determines loudness of note; total pitch range is five octaves; tonal quality resembles that of musical saw or cello; completely transistorized and powered by single 6-volt battery; designed to operate into any hi-fi



system; housed in solid hardwood cabinet 22" 1. x 6" d. x 31%" h.; available completely assembled or in kit form.

PERMOFLUX

Series DHS Deluxe Headphones



Sensitivity 112 db at 1000 cps; frequency response 20 to above 20,000 cps; dynamic driving elements.

Stereo	design	12/12	ohm	S	••••	.\$45.00
Stereo	design	300/3	100,	600/60	00,	4000/
4000,	or 15,00	00/15,0	000 c	hms		\$52.50
Mono	design,	25 ol	ıms,			\$42.50
Мопо	design,	600, 2	000.	8000.	or	30,000

Series HD Extended-Range Headphones

Dynamic drivers; sensitivity 108 db at 1000 cps; frequency response 30 to beyond 18,000 cps.

Stereo design, 16/16 ohms.....\$40.00 Mono design, 8 ohms.....\$37.50

Series HL "Feather-Lite" Headphones



Dynamic drivers; sensitivity 108 db at 1000 cps; frequency response 40-15,000 cps.

Stereo	design,	16/1	16 ol	ıms	 9	31.50
	design,					
Mono	design,	8 oh	ıms	• • • • • • • • • • • • • • • • • • • •	 Ġ	30.00
	design,					

PML

D-42 Headphones

Dynamic design; for mono & stereo; impedance 400 ohms for mono & 200 ohms each for stereo; response 30-20,000 cps ± 3 db; max. power handling (2% dist) 50 mw.; supplied complete with 6' cord..\$24.50

R-COLUMBIA

Model A Stereo Headphones

Constructed of unbreakable "Royalite" with left and right drivers and headband plugging into one another; response 20-17,000 cps; 8 ohms per channel; sensitivity 97 db (re. .0002 microbar for 1 mw. input)

ROYCE

Audio Robot

Designed for use with extension speakers for turning off or on any hi-fi system; up to





5 remote stations can be connected. It is a remote-control system using the 2-conductor speaker cable for connections; system is divided into two separate units "Remote Control" (3½" x 3" x 1") and "Robot Control" (5½" x 2½" x 3½"), latter is placed near hi-fi system.

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SCHOBER

Model RV-1 "Reverbatape"

An electronic reverberation system using a special design multi-head tape recorder; re-



verberation time 5-6 sec.; repetition rate 9.1 per sec. (110 msec.); 1-megohm input impedance; cathode-follower output; gain 1; maximum signal 3 v. r.m.s. sine wave; has 1 record, 3 playback, 1 erase heads & 5—12AX7, 3—12AU7 tubes..........\$299.95 Available in kit form........\$150.00

SHARPE

Model HA-8 Stereo Phones

Model HA-10 Earphones



Model HA-10-B Earphones

Model HA-10-C Earphones

Model CB-1 Stereo Phones Control Center

Left & right volume controls; speaker "onoff"; 2 phone jacks; blend control for mix-



ing 2 input signals from full separation (off) to mono output......\$10.50

Model LTC Control Box

Has L-pad volume control for each channel; resistor network and fuses to protect earphones; accommodates two sets of earphones and is equipped with switch to cut out speakers; 6-foot leads with bare wire termination\$21.95

Model LTC-B Control Box

SHERWOOD

Model SL-1 "Stereo-Lite"

Will provide instant identification of FM station broadcasting stereo multiplex pro-



grams; can mount inside cabinet; %" dia. hole is required; sensitivity adjustable; will operate with any FM tuner......\$29,50

SONY

Model SHS-2 Binaural Headset





Low-impedance dynamic headset with acoustical pipe stethoscope principle; completely wired and phased...........\$7.95

Stereo Headsets



Dynamic stereo design; available in low impedance (8 ohms)......\$ 17.50 High impedance (10,000 ohms)....\$ 22.50

STEREOSONICS

Phase & Balance Indicator

Indicates phase and extent of phase of stereo program material; can be used with



Model RM-2 Remote Control

Permits continuous control of volume, tuning, and "on-off"; for remote control



of any component or console system over distances of up to 800 feet.

RM-2 for two channels.....\$49.50

RM-3 for three channels.....\$62.50

SUPEREX

Model ST-M Stereo "Masters" Headset

Low-impedance; 8-16 ohms; has two-way sound reproducers in each phone—dynamic low frequency and ceramic high fre-



quency; response 20-20.000 cps; complete with crossover network......\$29.95

Model ST-MH Stereo "Masters" Headset

Same as Model ST-M except high-impedance 15,000 ohms.....\$34.95

Model ST-S Stereo "Standard" Headset

Dynamic reproducer for 30-15,000 cps response; adjustable headband and plastic ear cups.......\$24.95

Model ST-SU Stereo "Standard Universal" Headset

Model SC-1 Stereo Control Box

Controls volume and stereo balance of headphones; will turn speakers on/off; two phones can be used in parallel........\$6.95

Model SC-2 Stereo Control Box

SWITCHCRAFT

Model 306TR Stereo/Mono Mixer

Model 301TR Mono Mixer

Similar to Model 306TR except for mono operation only.....\$30.00

Model 301 Mono Mixer

Similar to Model 301TR except does not have transistorized amplifier.....\$19.50

Model 306 Stereo/Mono Mixer

Similar to Model 306TR except does not have transistorized amplifier.....\$22.50

Two-Input Audio Mixer

Resistance type with approx. 3 db loss; inputs for 2 microphones with individual volume controls; various models available with different input jacks and output plug......From \$7.95-\$9.95

Color-Coded Phono Plugs

Low-cost, two-conductor phono plugs with cable clamp and color-coded plastic "snap-on" handles for identification of stereo, hif leads. Model 3508-1 red handle; 3508-2 black handle; 3508-5 white handle....\$0.15

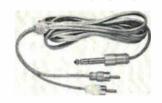
Model 670 Stereo Speaker Selector Switch



For connecting two remote pairs of speakers to stereo amplifier; 3-pos. switch selects either or both pairs of stereo speakers..\$6.25

Model 10FK25 Stereo Cable

For use with 3-conductor dual-input tape recorders and for adapting single micro-



phone-input stereo recorders to stereo microphone mixers......\$2.40

Model 352 Stereo-Monaural Adapter

Adapts stereo headphone or microphone to monaural input (for microphone), or output (for headphone).....\$1.20

Model 330H Flexible "Y" Adapter

Adapts microphone input or speaker output of foreign-built tape recorders, such as Norelco, Grundig, Uher, and Korting, for use with standard Switchcraft phono plugs

TELEX

STC-1 Stereo Control Kit

Remote control stereo convenience used to adjust stereo headset speakers by remote



STX-1 Stereo Extension Cord

Model HDP-53A "Stereo Dyna-Twin"

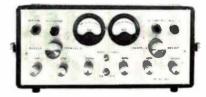
Dynamic driver with moisture-proof Mylar diaphragm; max. power input 1 watt with minimum requirement of 15 mw. 8 ohms each side; response 30-15,000 cps; adaptable to monaural use; supplied with 3-circuit plug; wt. 12 oz.....\$27.95

Model ST-10 "Stereo-Twin"

ULTRA ELECTRONICS

Transistorized Stereo Mixer

Three input, two high-gain, and one low-gain channels per side; monitor & vu circuits switchable; 50-150 ohm input; 600 ohm output; with portable carrying case





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Hughes Electronic Supply, 8th Ave. & 20th St.

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Kruedick Folcar Electronic Supplies, 2428 Shottuck Ave.
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Volley Electronic Supply, 1302 W. Magnalia Blvd.

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California Music House, P.O. Box 2527

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Calbar, 3223 Costro Volley Blvd.

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Gene Tapi Sound Mort, 120 Broadway

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Hi Fi Specialties, 2088 Fawler

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Jay Doty, 224 Yole Ave.

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Pacific Radio, 2115 Pacheco

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Hi Fi Covino, 123 E. Rowland

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Hi Fi Center, 11224 San Pablo Ave.

EL MONTE Kimball & Stark, 713 E. Tyler

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Irving Finkel Electronics, 17640 Burbank Blvd.

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Barcus, 5782 E. 2nd St.
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Shelley Radio Co., 2008 Westwaod BIvd.
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Tectran, 7721 Melrose
United Radio & Electronics, 1924 S. Grand Ave.
Universal Radio Supply Ca., 1727 S. Los Angeles
Warsco Sales Co., 4301 S. Figueroa St.

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Twin Cities Sound, 1716 Sicard St.

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Hillcrest Hi Fi, 349 Broadway

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Peninsula TV & Radio, 695 Lighthouse Ave. Wholesale Electronics, 229 Alvarado Zackit Corporation, 259 Alvarado

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PACIFIC PALISADES

Pacific Sound, 829 Via De La Paz

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Kryger-Nokes Engineering, 1657 So. Riverside Dr.
Palm Springs Music Ca., 360 N. Palm Canyon Dr.
Pat Barbora Music, 121 South Palm Canyon Drive
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California Music House, 127 Town & Ctry Vil Zack Radio, 654 High St.

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Audio Associates, 689 S. Fair Ooks Ave.
Audio Electronics, 286 N. Raymond
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Hi Fidelity House, 536 S. Fair Oaks
Stereo Mort Electronics, 3205 E. Foothill

POMONA

Anderson Maggs, 1095 E. 3rd St.

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Redlands Audio Visual Sales Serv., 10 W. Citrus Ave.

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Hi Fi Sound Supply, 1317 K St.
Hi Fidelity Shop, 1910 16th St.
Market Radio Stores, 1918 16th St.
Minuet in K, 1317 K St.
Narcal Electronics, 1115 R St.

Radia TV Products Co., 2012 19th St. Sacramenta Elect Supply, 1219 S St. Warld af Saund, 4359 Arden Way

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Biggs Hi Fi, 383 Highland Ave.
Dependable Hi Fi & TV, 1606 E. Highland
Hollywood Hi Fi Shop, 1839 E St.
Lier Music Co., 452 North E. St.
Sampson Electronic Service, 843 Colton Ave.

SAN CLEMENTE

Stereo Sound Ctr., 3415 S. El Camino Real

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Electronic Equipment Distributors, 3686 El Calan Blvd.
High Fidelity House, 1635 University Ave.
Highland Hi Fi, 2743 Highland Natl Cty
Radio Parts, 2060 India St.
Radio Parts Co., 2060 India St.
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Telrad Electronics, 3453 University Ave.
Western Radio Supply Co., 1415 Indio St.
Wrights House of Hi Fi, 5140 El Cajon Blvd.

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Cassell's Music Company, 1031 San Fernando Rd.

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Associated Radio Distr., 1583 Howard St.
Bay Recording, 3339 Scott St.
Carousel Elect. Supply Co., 1480 Market St.
Columbia Music Co., 1080 Market St.
Hal Cox Custom Sound, 3325 Filimore
Eber Electronic, 1321 Mission St.
Hi Fi Shop, 3525 California St.
House of Sound, 104 9th St.
Lakeshore Hi Fi Inc., 222 West Portol Ave.
Listening Post, 2290 Fillmore St.
Morket Radio Supply Co., 1276 Market St.
Pacific Wholesale Co., 1850 Mission St.
Radio Parts Supply Co., 1276 Market St.
Pacific Wholesale Co., 1850 Mission St.
Radio Parts Supply Co., 281 9th St.
San Francisco Radio, 1284 Market St.
Schwabacher-Frey Co., 735 Market St.
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Hi-Fi, Inc., 537 S. Clairborne Ave.
Radio Parts Inc., 807 Howard Ave.
Shuler Supply Co., 2508 Tulane Ave.
Southern Radio Supply, 1909 Tulane Ave.
Walther Bros. Co., Inc., 1722 Poydras St.
Philip Werlein Ltd., 605 Conal St.

OPEL OUSAS

Opelousas Radio Equip. Inc., 720 West Gralie

SHREVEPORT

Interstate Elec. Co. of Shreveport, 1419 Culpepper Interstate Elec. Co. at Silverepoir, 630 Spring St. Kolemay Soles Co., 2530 Linwood Ave. Lovender Radio & TV Supply, 1561 Texas Ave. Ports Electronics, 2423 Southern Ave.

AUBURN

Radio Supply Co., 28 Cross St.

AUGUSTA The Corner Music & Book Shop, 98 State St.

BANGOR Andrews Music House Inc., 118 Main St. Moine Electronic Supply Co., 494 Broadway Radio Supply Co., 151 Center St. Viners Music Co., 20 Broad St.

CARIBOU Sports Center Inc., Herschel St.

LEWISTON Deorseys, 23 Lisbon St.

PORTLAND Bortlett Rodio Co., 625 Congress St. Confield Flexiphone Agency, 57 Portland St. Maine Electronic Supply Co., 148 Anderson St.

MARYLAND

ANNAPOLIS

Hi Fi Shop, 78 Maryland Ave. House of Fine Music, 241 West Street

BALTIMORE

BALTIMORE

American Distributing Co., 1200 N. Fulton Ave. Baltimore Dictating Mach., 3316 Greenmount Ave. Henry O. Bermon Co., Inc., 12 E. Lombard St. Custom Music System, 106 W. North Ave. Hermon Electronics, 6014 Harford Rd. Hi Fi Shop, 2 N. Howard St. High Fidelity Center, 317 W. Franklin Ave. High Fidelity House, 5127 Roland Ave. Konn Ellert Elect., 2050 Rackrose Ave. Olin Dist. Co., 6009 Eastern Ave. Park Radio & TV Co., 202 W. Foyette St. Radio Electric Service Co., 5 N. Howard St. Sirkis Music, 3334 Greenmount Ave. A. R. Spartana Co., 239 N. Gay St. Video Elect., 5617 Belair Rd. Wholesole Radio Parts, 308 W. Redwood St.

Audio Center, 4962 Fairmont Ave.

CUMBERI AND

Enterprise Amusement Co., Inc., 170 No. Centre St. Zimmerman Wholesolers, 104 W. Peter St.

EASTON

Royer & Barto, 25 No. Horrison St.

HAGERSTOWN

Stoddord Supply, 354 So. Cannon Ave. Zimmermon Wholesolers, 354 S. Cannon Ave.

OAKLAND

Oakland Hardware & Furniture

SALISBURY

Almo Radia Ca., 317 Pork Heights Ave. Standard Electronic Supply Ca., 301 Snow Hill Rd.

SILVER SPRING

Federoted Electronics, Inc., 1310 Apple Ave. Rucker Electronic Products Co., Inc., 8049 13th St. Silver Spring Electronic Supply, 8203 Georgia Ave.

TOWSON

Baynesville Electronics, 1631 E. Joppa Rd.

MASSACHUSETTS

BOSTON

BOSTON
Audionics Co., 1348 Baylston St.
Cramer Electronics Inc., 811 Boylston St.
De Mambro Hi Fi Center, 1095 Commonwealth Ave.
Jordan Marsh Company, Avon St. Annex
Lafoyette Radio, 110 Federol St.
A. W. Mayer Ca., 895 Boylstan St.
The Listening Post, Inc., 100 State St.
Rodio Shack Corp., 167 Woshington St.
Radio Shock Corp., 730 Cammanweolth Ave.
Sager Electrical Supply Co., 201 Cangress St.
Stero Saund & Music Co., 158 Summer St.

BRAINTREE

Rodia Shack Corp., South Share Plaza

BUZZARDS BAY

Buzzards Bay Electronic Supply Co., 196 Main St.

CAMBRIDGE

Audio Lab, 16 Elliot St.
Electrical Supply Carp., 205 Alewife Brook Pk.
Hi Fi Lab, 1077 Mass. Ave.
Minute Man Radio Co., Inc., 28 Boylstan St.
Natianal Sales Co., 2085 Massachusetts
World-Tronics, 1077 Massachusetts Ave.

FALL RIVER

Modern Phato, 350 Sa. Main St.

FRAMINGHAM

HI FI Studio, 277 Worcester Rd.

LAWRENCE

Alco Electronics, 3 Wolcatt Ave.

MIDDLETON

Custom Craft High Fidelity, Lake St., Box 208

NEW BEDFORD

Audionics Company, 56 Spring St. C. E. Beckman Co., 11 Commercial St.

ORLEANS

HI-Fi Sound Studio, Main Street

PITTSFIELD

Pittsfield Radio, 44 West St. Sammy Vincent, 23 North St.

SAUGUS

Radio Shack Corp., Raute 1 N.E. Shopping Ctr.

SPRINGFIELD

L. L. Delpadre Associates, 999 Worthington St. Soundco Electronic Supply, 147 Dwight St. Springfield Radio Co., 405 Dwight St.

SWAMPSCOTT

Sight & Sound Shop, 489 Humphrey St.

TAUNTON

David B. Dean Co., Rte 44 off Expreswy

WELLESLEY

Music Box Inc., 58 Central St.

WEST NEWBURY Anderson Hi Fi, 841 Main St.

WORCESTER

De Mambro Rodio Supply Co., 222 Summer St. HI Fi Associates, 131 Highland St. High Fidelity House, 261 Park Ave. Radia Maintenance Supply Co., 80 Thomas St.

MICHIGAN

ANN ARBOR

A. A. Radio & TV, 1217 S. University Audio Supply Laboratories, 214 S. State

BATTLE CREEK

All-Tronics, Inc., 3149 Fifth Ave. Bucks TV & Supply, 962 Capital Ave. N.E.

BENTON HARBOR

Bentan Electronic Supply Ca., 643 W. Main St.

BIRMINGHAM

KLA Laboratories, Inc., 635 E. Maple McCallum & Dean, 409 E. Maple Ave.

CHEBOYGAN

Straits Distributing Co., 412 N. Moin St.

DEARBORN

HI Fi Studios Inc., 15031 Michigan Ave.

DETROIT

DETROIT

Detroit Audio Co., 16020 E. Worren

M. N. Duffy & Co., 2040 Grand River
Hoco Distributing Ca., 14529 Greenfield
Hi Fi Studios Inc., 7104 W. 7 Mile Rd.
Hi Fi Systems Co., Inc., 17131 W. McNichols
Hi Fi Workshap, 16400 W. 7 Mile Rd.
Instructamatic Inc., 8310 Fenkell Ave.
J. L. Hudsan, Detroit 26
KLA Loborotories Inc., 7422 Waadward Ave.
Lobby Habby, 17300 Woodword Ave.
Pecar Electranics, 11201 Morang
Reiss Public Address, 7629 E. Jeffersan Ave.
Rena Radio Co., 1314 Braadway
Sihlers Sound Studio, 15822 Grand River

Jensen Inc., 427 Detroit St. Lifsey Distributing Co., 1409 N. Saginaw St. Radio Tube Merchandising, 508 Clifford St.

GRAND RAPIDS

Electranic Sound Equipment, 2249 S. Division House of Saund, 1401 Rabinson Rd. S.E. Karns Radio Co., 910 E. Fulton Ave. Radio Ports Inc., 542 548 S. Division Worren Rodio Co., 24 Lagan St. S.W.

GROSSE POINTE WOODS

Pointe Electronics Co., 19755 Mack Ave.

HIGHLAND PARK

Electrophonic, Inc., 260 Midland Ave.

JACKSON

Fulton Rodio Supply Co., 1208 Greenwood Ave.

KALAMAZOO

The Saund Roam, 233 E. Michigan Ave. Warren Rodio Co., 1710 South Westredge

LANSING

Offenhauer Co., 227 W. Washtenaw St. Tape Recording Industries, 1101 E. Grand River Ave.

MANISTEE

Gardner Radio Supply, 258 River St.

MARQUETTE

Northwest Rodio Supply, Inc., 1010 W. Washington St.

MOUNT CLEMENS

Audio Land, 36633 Gratiot

MUSKEGON

Electronic Distributors, 1845 Peck St. W. Michigan Sound Co., 1932 Peck St.

OAK PARK

Norman Sobel, 23708 Wildwood PETOSKEY

Sound Equipment Sales

PONTIAC

Customade Products Co., 4540 W. Huron

SAGINAW

Audio Communications Co., 1511 Janes St. Radio Center, 1918 Newton St.

ST. JOSEPH

R. A. Howard High Fidelity, 2938 Niles Ave.

SAULT STE. MARIE

John Leblanc, 321 E. Spruce St. TAYLOR

Darwood Honsen, 8763 Clippert Street

MINNESOTA

AUSTIN

Holan Radio & TV, 125 No. Main St.

DULUTH

Endresen Radio & Sound, 12 W. First St. Mels Sales & Service, 1204 E. Superior St. Northwest Radio, 123 E. First St.

Northwest Radio & Electronic Supply, 405 N. Front St. S. Minn Supply, 2nd & Main Sts.

MINNEAPOLIS

MINNEAPOLIS
Andersons Hi Fi, 44 W. 66th St.
Audio King Co., 913 W. Lake St.
Bauman Co., 3033 Lyndale Ave., So.
Lew Bonn Co., 1211 La Solle Ave.
City Electronics Inc., 5831 Admiral Lane
Eckco Sound Equip. Co., 1210 Nicollet Ave.
Electronic Center Inc., 107 Third Ave., N.
Electronic Industries, 2451 Henepin Ave.
Notional Electronics Co., 4241 Toledo Ave., So.
Narthwest Rodio & Electronic, 52 So. 12th St.
Radio Electric Supply, 2451 Nicollet Ave.
Schaak Electronics Co., 3867 Minnehaha Ave.
Paul M. Schmitt Music Co., 88 S. 10th St.
Stark Electronic Supply Co., 112 Third Ave., No.

ROCHESTER

Bach Music Co., 315-317 So. Broadway Elliott & Hanson Co., 119 1st Ave., N.E. Phil's Electronic Center, 1249 15th Ave. S.E.

ST. PAUL

Lew Bonn Co., 141 47 W. 7th St.
Deolers TV HiFi Center, 137 W. Seventh St.
Gopher Electronics Co., 370 Minnesota St.
Gulcks Appl. & Records, 221 No. Snelling Ave.
HiFi Sound, 373 Robert St.
St. Anthony Pork Stereo, 22321/2 Carter ot Cama

STILLWATER

Joseph Roach High Fidelity Center, 120 Na. Main St.

MISSISSIPPI

BILOXI

Egons Music Shap, Porter & West Howard

COLUMBUS

Swon Distributing Co. Inc., 724 5th St., S.

GREENVILLE

Electronic Radio & TV, 103 Highway No. 1 So. The Photo Center, Highway 82 & Fairfox

GREENWOOD

Parham Electronics Ca., 511 Lomar St.

GULFPORT

D A Helwick Co., 1516 30th Ave.

HATTIESBURG

Swon Distributing Co. Inc., 506 Roule St.

JACKSON

MERIDIAN

Brown Music Co., 236 E. Copital Cobal Electr. St., 422 S. Forrish Electrical Dist., P. O. Box 4298 Elington Radio Inc., 824 S. Gollotin May & Jackson Distr. Co., 628 S. State St. Swon Distributing Co. Inc., Box 2698 Teague Porham Co., 123-125 E. Pascagoula

J K Hogemeyer, 2417 10th St. Risher Radio Supply Co., 909 24th Ave. Swan Distributing Co. Inc.

PASS CHRISTIAN The Music Box, 121 Davis Ave.

MISSOURI

CALIFORNIA

Georges Music House

CAPE GIRARDEAU

Suedekum Electronic Sup. Co., 2215 Broadway

COLUMBIA

Lassiter Reminder Co., Uptown Theater Bldg.

INDEPENDENCE

Don Cooks Electronic Equipment Co., 1020 W. Truman Rd.

JEFFERSON CITY

Central Missouri Distr. Co., 324 E. Capitol Ave.

JOPLIN

Four State Radia & Supply Co., 402 Wall St. KANSAS CITY

KANSAS CTTY

BA High Fidelity, 301 E. 55th St.
Basare Longmour Inc., 1207 Grand Ave.
Burstein Applebee Co., 1012 McGee St.
David Beatty, 1616 W. 43rd St.
McGee Radio Co., 1901 McGee St.
Ruskin Hi Fi & Record Center, 11134 Blue Ridge Ext.
Walters Radio Supply, 3645 Main St.

KIRKWOOD

Kirkwood Camera Craft, 122 W. Jefferson Ave.

ST. JOSEPH

Modern Hi Fi, 1118 So. 26th St. St. Joseph Radio & Supply Co., 720 S. 9th St.

ST. LOUIS

ST. LOUIS

Aeolion Co. of Missouri, 1004 Olive St.
Walter Ashe Radia Co., 1125 Pine St.
Crossraads HiFi Show Raom, 9826 Clayton Rd.
Ebinger Electronics Inc., 2501 So. Jefferson
Groybar Electric Co., Inc.
600 So. Toylor Ave.
Hi Fi Center, 3111 Washington
Hi Fi West, 8217 Delmar
The High Fidelity Showroom, 6383 Clayton Rd.
Hollond & Co., Inc., 3900 West Pine Blvd.
Jones & Davis, 522 So. Hanley Rd.
Wary's Hi Bi Fi, 711 Gimblin Rd.
Napper Electronic Supply Ca., 6253 Natural Bridge
Napper Rodio Company, 3117 Washington Ave.
R A Olive Rodio Co., 6242 Columbio
Van Sickle Rodio Co., 1113 Pine St.

SEDALIA

Radio & Television Supply Inc., 810 W. 16th St.

SPRINGFIELD

Horry Reed Rodio & Supply Co., 850 Boonville Ave. Norman Electronics, 952 Trafficway

WERSTER GROVES

Napper Radia Co., 7959 8ig 8end Blvd.

168

MONTANA

BILLINGS

Electronic Supply Ca., 250 Eleventh St. W. Klier Saund, 15 N. 31st St.

BUTTE

Graybar Electric Co., 604 E. Aluminum St. Tretheways Music Box, 49 East Park

GREAT FALLS

Electronic Distributars Inc., 210 Fourth St. So. Geo. Lingren Co., P.O. Box 966 Music Service Co., 204 4th St. Sa.

HELENA

D. N. Latus & Ca., 1531 National Jarud Phato Shap, 320 N. Last Chance Gl.

MISSOULA

Narthwest Distr., 509 S. Higgins Ave.

NEBRASKA

FREMONT

Electronics Service Ca., 610 Na. Main

HASTINGS

Central Radio Supply, 518 W. First St.

LINCOLN

Leuck Radia Supply, 243 S. 11th St.

OMAHA

Hause af Hi Fi, 7001 Dadge St.
J & Distributing Co., 1616 Cass
Moss Recarding Studios, 1908-10 California St.
Omaha Electranics, 2222 Leavenworth St.

SCOTTS BLUFF

Encare Music Ca., 1918 Braadway Joachim Radia Supply, 1913 Braadway

LAS VEGAS

Electronic Supply Co., 8 E. Charleston Radia & Sound Supply, 25 E. California St.

RENO

Art Rempel Sound Supply, 460 Wells Ave. Hi Fi Center, 1008 Wells Ave. Hi Fi House, 720 Tahae St. Osbarne & Dermody, 255 Chestnut St. Radia Supply of Nevada, 690 Tahae St. Saviers Electric Supply, 640 Sierra St.

NEW HAMPSHIRE

CONCORD

Evans Radio, Rt. 3A Bow Junction Rabert W. Newton, 251 Eastman St.

KEENE

De Mambro Radio Supply Co., 300 West St.

MANCHESTER

De Mambro Radio Supply Co., 1308 Elm St. Manchester Music, 89 Manchester St.

NEW JERSEY

ATLANTIC CITY

Almo Radia Ca., 4401 Ventnar Ave. B & R Electronic Supply Co., 926 Atlantic Ave. Kearns Electronic Praducts Co., 3719 Ventnor Ave. Radia Electric Service Ca., 452 N. Albany Ave.

BERGENFIELD

Arnco TV Parts, 77 Sa. Washington Ave. Electronic World, 450 Sa. Washington Ave.

Mid State Radia Supply, 157 W. Whiteharse Pke.

BLOOMFIELD

Variety Electronics, Bloomfield Ave.

BRIDGETON

Joes Radia Shop, 67 69 S. Pearl St.

CAMDEN

Almo Radia Co., 1133 Haddon Ave. General Radio Supply Co., 600 Penn St. Radio Electric Service Ca., 513 15 Caoper St.

CLIFTON

3

Eastern Radio Carp., 312 Clifton Ave.

COLLINGSWOOD

Don Christ Music & Hi Fi, 267 Haddon Ave.

CRANFORD

Stuart's Audia, 8 Alden St.

DOVER

Kay Distributors, 75 West Blackwell St.

GREENWICH

Greenwich Music Center

MARGATE CITY

F. John Pessolano Jr., 505 No. Pembroke Ave.

EAST ORANGE

Custom Music Systems, 426 Main St. International Saund Engr. Co., 185 Central Ave.

EATONTOWN

High Fidelity Sound Center, Rt. 35 P.O. Box 432

FLIZABETH

Leader Electronics Supply Ca., 72 Prince St.

FAIRLAWN

Key Electronic Supply Co., 0-115 E. Amsterdam Ave.

HACKENSACK

Nidisca-Hackensack, Inc., 55 State Street

Sherwaad Distributars, Inc., 1210 Liberty Ave.

Levys, 149 Manticello Ave. Nidisca Jersey City Inc., 713 Newark Ave.

LINDEN

Lee-Creighton Ca., 740 Haven Place

MENLO PARK

Bambergers, Menia Park Shapping Ctr.

MONMOUTH

Bambergers, Monmouth Shapping Center

MONTCLAIR

Perdue Radia Ca., 8 Sauth Park

MORRIS PLAINS

Park Electronics, 187 Speedwell Ave.

Bambergers, 131 Market Street Federated Purchaser, 114 Hudsan St. Krich-New Jersey, 428 Elizabeth Ave. Lafayette Radia, 24 Central Ave. Aaran Lippman & Co., 99 107 Newark St. Saund Repraductions, 34 New St.

NEW BRUNSWICK

Bay Electranics, 226 Talmadge St. Hi Fi Haven, 28 Easton Ave. Williams Radia, 265 Waadbridge Ave.

PALISADES PARK

Arnca TV Parts, 236 Braad Avenue

PARAMUS

Churchill Custom Hi-Fi, Route 4, Carner MacKay Ave. Gem Electronics, 385 Route 17
Goody Garden State, Rautes 4 & 17
Gray Sound of Paramus Inc., E. 54 Route 4
Korvette, E. J., Route 4
Lafayette Electronics Corp. Paramus, 182 Route 17
Music Age, 171 Route 4

PASSAIC

Nidisca-Passaic, Inc., 24 Passaic St.

PATERSON

H. Bagrad & Ca., 226 Market St. R. Bograd & Ca., 220 Market St.
Bremy Electronics, 394 E. 18th St.
Community Radia Sound, 705 Market St.
Erie Modern Furniture, McLean Blvd. & 20 Ave.
Jersey Electronic Dist. Ca., 74-86 E. 30th
Magnetic Recarding Co., 344 Main St.
TV & Electronic Services, 152 Patersan St.

PERTH AMBOY

Atlas Electronics, 774 Pfeiffer Blvd. Bennett Radio Supplies, 224 Market Street

PHILLIPSBURG

Carl B. Williams Ca., 154 S. Main St.

PLAINFIELD

Lafayette Radio Corp., 139 W. 2nd St. Unian TV Parts Co., 403 Watchung Ave.

PRINCETON

Princetan Music Center, 7 Palmer Sq. W. Princeton University Boak Store, 16 University Place Sun Radio & Electronics, 206 Princeton Ctr., Rte. 206

RED BANK

Manmouth Radio, 404 Shrewsbury Ave.

RIDGEFIELD

Nidisca-Cliffside, Inc., 484 Bergen Ave. NRM Wholesale Radia, 284 Teaneck Road SHREWSBURY

Federated Purchaser, 483 Broad St.

SPRINGFIELD

Federated Purchaser, 155 U.S. Route 22 Gem Electronics, U.S. Highway 22

SOMERVILLE

Masters TV Supply Co., Depot Sq. & Division St.

TEANECK

Linsey Electronics, 943 Teaneck Rd. **TRENTON**

Allen & Hurley, 25 S. Warren St. Almo Radio Co., 201 3 Calheun St. Cooper Sales Ca., 508 Hamilton Ave. Gearge's Sterea Center, 122 Sc. Broad St.

Hause of Hi Fi, 956 61 Princeton Ave. E. J. Korvette, Olden & Princeton Avenue Mercer Music Co., 558 Ingham Street Nidisco-Trenton, Inc., 985 Princeton Ave. The Dragon Ca., 959 Liberty St.

VINELAND

Alma Radio, 219 Landis Avenue

WANAMASSA Dart Electronic Mart, 1027 Hwy 35

WESTFIELD

Stuart's Audia, 17 Elm Street

WEST NEW YORK

Levys, Bergenline Ave. 62nd St. WHIPPANY

The Music Center, 208 East Oak Ave. State Electronics, 399 Rte. 10 at Troy

WILDWOOD

The Music Center, 208 E. Oak Ave.

WYCOFF

Victors Hause of Music, 633 Wycaff Ave.

ALAMOGORDO

Alamagarda Music Center, 918 New York Radia Specialties Ca., Inc., 209 Pennsylvania Ave.

ALBUQUERQUE

Audia Equipment Ca., 2119 San Matea N.E. Electronic Parts Ca., inc., 222 Truman St., N.E. Saund Equipment Ca., 3011 Mante Vista, N.E. V & H Associates, 2818 Cuerva Dr., N.E.

FARMINGTON

Custom High Fidelity, 723 East Ute

LAS CRUCES

The Music Bax, 206 S. Main St. Ed Nable Hi Fi Shop, 1952 Klein Ave.

LOS ALAMOS

Valley Engineering Co., 601 Cedar St. ROSWELL

Supreme Sound Studio, 129 W. 2nd St.

SANTA FE A-1 Communications Supply Co., 441 Cerrillos Rd. Sonders & Associates, 70 W. Marcy St.

NEW YORK

ALBANY Audio Video Corp., 324 Central Ave.
Fort Orange Radia Dist. Co., 904 Broadway
Seiden Sound, 335 Central Ave.
Edwin E. Taylor Ca., 465 Central Ave.
Taylared Sound Inc., 443 Sand Creek Rd,
Wilbur Visual Service, 1182 Western Ave.

AMSTERDAM

Adirondack Radia Supply, 185 W. Main St. AUBURN Dares Radia, 22 E. Genesee St. Geherins Music Center, 22 Narth St.

BATAVIA

Radio Equipment Carp., 5 Center St.

BAY SHORE Gem Electronics, 1216 Sunrise Highway Long Island Electronics, 337 West Sunrise Highway

Snyder Electronics, 39 25 Bell Bivd.

BELLEROSE

Electronic City, 241 Union Turnpike Gem Electronics, 247-10 Jamaica Ave.

BETHPAGE S & R Electranics, 40 20 Hempstead Tpke.

BINGHAMTON Audio Service Ca., Inc., 130 State St. Federal Electronics Inc., P.O. Box 208 Marris Distr. Co., Inc., 195 Water St. Stack Electronics Inc., 25 State St.

BLOOMFIELD

Voriety Electronics Corp., State St. BLUE POINT, L. I.

Standard Parts Carp., Mantauk Highway **BRONX**

Bay Electronics Distributars, 1736 Jerame Ave.
Central Electronic Dist. 4 E. 175 St.
Fordham Radia Supply Co., 265 E. 149th St.
Gem Electronics of Fordham, 565 East Fordham Rd.
Gem Electronics, 351 Grand Cancourse
Lafayette Radia, 542 E. Fordham Pl.
Slote & Co., 3960 Merritt Ave.
Tri-Par Dist. Ca., 1558 White Plains Rd.
Wescan Electronics, 580 East Fardham Rd.

Acme Electronics, 74 Willaughby St. AMA, 1625 Bedfard Ave. Audio Exchange, Inc., 1065 Flatbush Ave.

1964 EDITION

B. S. A. Customs Inc., 876 Flatbush Ave.
Bay Electronic Distributors, 3480 Nostrand
Churchill Custom Hi Fi, 436 Rockaway Ave.
Craig Hill Custom High Fidelity Ltd., 392 Rockaway Ave.
F. D. Cabinet Works, 2731 Atlantic Ave.
Jerome Fulton Inc., 943 Flatbush Ave.
Gem Electronics, 485 Coney Island Ave.
Green Tele. Radio Distributors, 3701 18th Ave.
Hy Grade Electronics Inc., 9216 Church Ave.
Kent TV, 505 Driggs Ave.
E. J. Korvette, 485 Fulton St.
Laco, 49 24 4th Ave.
Masterpiece Showplace, 1801 Kings Hwy.
Mark Electronics, 1171 Flotbush Ave.
National Radio Parts, 572 Albany Ave.
Paulton Electronics Corp., 6325 New Utrecht Ave.
Recco Audio Designs, 2057 Coney Island Ave.
Starling Electronics Corp., 1500 Sheepshead Bay Rd.
Styleline Television Corp., 597 Flatbush Ave.
Television Parts Inc., 1910 Coney Island Ave.
Universal Component Corp., 1749 McDonald Ave.
Witmol Electronics Corp., 1266 Manhattan Ave.
BUFFALO

BUFFALO

BUFFALO
Dymac Inc., 2329 Moin St.
F. M. Sound Equipment Corp., 1241 Main St.
Fisher Sound Systems, 2238 Bailey Ave.
Genesee Radio & Parts Co., 2550 Delaware Ave.
O'Brien Electronics, 1383 Delaware Ave.
O'Brien Electronics, 1283 Delaware Ave.
Olson Electronics, Inc., 711 Main St.
Radio Equipment, 147 Genesee St.
Sheridan High Fidelity Ctr., 2200 Sherldon Drive
Standard Electronics Inc., 1497 Main St.
Summit Distributors Inc., 916 Main St.

CARLE PLACE

E. J. Korvette Inc., Glen Cove Rd. & Westbury

CEDARHURST

Marrt Electronics Lab., 690 Central Ave.

CHITTENANGO

Formers & Traders Exchange, Genesee St.

COMMACK

S & R Electronics, 6516 Jericho Tpke.

CORONA

Mannfred Electronics Corp., 102 09 Northern Blvd.

CORTLAND

McNeil Music, 11 Clinton Ave. Winchell Electronics, 149 Main St.

EASTCHESTER

Boynton Goodall, 737 White Plains Rd.

EAST MEADOW

Newmark & Lewis, 2557 Hempstead Turnpike Sirkins Inc., 2339 Hempstead Tpke.

EAST NORTHPORT

Turnpike Electronic Distributors, 2066 E. Jericho Tpke.

ELMIRA

Chemung Service Co., 403 E. Third St. Fred C. Harrison Co., 108 W. Church St. Le Valley McLead Inc., 215 E. Church St. Stack Electronics Inc., 306 Railroad Ave.

FARMINGDALE, L. I.

Gem Electronic Distributors, 34 Hempstead Tpke.

FLUSHING

Allen Electronics Inc., 41 42 Main St. Bay Electronic, 136 05 35th Ave. Stuart Electronics Dist., Inc., 79-12 Parsons Blvd.

FOREST HILLS

A. B. Tape Audio Service Co., 106-21 Continental Ave. Continental Saund Co., 107 27 Continental Ave. Gem Electronics, 101-10 Queens Blvd.

FREDONIA

Barker Higbee Inc., 27 Water St.

GARDEN CITY, L. I. Electronics City, Rsvlt Field Shpg Ctr.

GLENS FALLS

Ray Supply Inc., Upper Glen St.

GREAT NECK

Gem Electronics, 271 Northern Blvd. Northern Electronics, 9 Station Plaza

HEMPSTEAD, L. I.

Churchill Custom Hi Fi Ltd., 159 Hempstead Tpke. Hempstead Electronics, 18 Grenage Ave. Newmark & Lewis, 43 Main St. Standard Parts Corp., 277 N. Franklin St.

HICKSVILLE, L. I.

Bay Electronics, 186 Broadway Gem Electronics Distrs. Inc., 2**36 Broa**dway

HORNELL

HUDSON

Harnell Electronic & Motor Equip Co., 286 Main St.

Repliphanic Sales Ca., 18 Becraft Ave.

HUNTINGTON

Audio Consultants Inc., 8 W. Corver St. E. J. Korvette, Walt Whitman Road

ISI IP

Islip Electronics, 355 Main Street

ITHACA

Alcor Inc., Green & Tioga Sts. Freds Record Shop, 124 W. State St. Stallman Distributing Corp., 714 W. Clinton St.

JAMAICA, L. I.

Audio Exchange Inc., 153 21 Hillside Ave. Harrison Radio Corp., 144 24 Hillside Ave. Lafayette Radio, 165 08 Liberty Ave. Norman Radio Distr. Inc., 94 29 Merrick Rd. Peerless Radio Distr. Inc., 9 23 Merrick Rd.

JAMESTOWN

Johnson Radio & Electronic Equip., 119 Hunt Rd. Warren Radio Inc., 2208 Washington

KENMORE

Sheridan Hi Fi Center, 2200 12 Sheridon Dr.

KINGSTON

Arace Electronic Dist., 16 Van Deusen St. Central Electronics Inc., Albany Ave. Ext.

LAURELTON

Inamex, 131-74 230th Street

LEVITTOWN

Newmark & Lewis, 2557 Hempstead Turnpike

LINDENHURST

TV Radio Parts, 26 28 E. Sunrise Hwy.

LOCKPORT

Lockport Audio Center, 415 High St.

LONG BEACH

Tiben Music Center, 60 W. Park Ave.

LONG ISLAND CITY

Graybar Electric Co., 21 15 Bridge Plaza N.

LYNBROOK

Dantomouro Furniture, 616 Merrick Rd. Peerless Radio Dist. Co., 19 Wilbur St.

MALONE

Ray Supply Inc., 55 W. Main St.

MAMARONECK

Custom Design of Westchester, 510 W. Post Rd.

MANHASSET

Audio Exchange, 451 Plandome Rd. Northern Electronics, 1522 Northern Blvd.

MASSAPFOLIA

A & P Electronic Supply, 12 Sunrise Highway Sunrise Electronic Supply, 12 Sunrise Hwy.

MIDDLETOWN

Certified Electronics Inc., Wickham Ave. Ext. Rt. 84 S & L Electronics, 17 21 Cottage St.

MINEOLA, L. I.

Arrow Electronics Inc., 525 Jericho Turnpike

MT. VERNON

Fischer Dist. Co., 620 So. Columbus Ave. Gem Electronics of Mt. Vernon, 66 Eost 3rd St.

Chief Electronics Inc., 248 Washington St. Seaman's Photo Supplies, 386 Broadway

NEW HYDE PARK

Dressner Audio Sales, 1523 Jericho Tpke.

NEW YORK CITY

A8 Tope Audia Company, 715 Second Avenue
Adson Radio & Electronics Co., 189 Greenwich St.
Airex, 85 Cortlandt St.
Amparon Electronics, 24 East 81st Street
Arrow Electronics Inc., 65 Cortlandt St.
Audio Unlimited, 715 Second Avenue
F. B. Arthur Inc., 149 E. 57th St.
Asco Saund, 115-17 West 45th Street
Bonafide Radio & Electronics Corp., 72 Cortlandt St.
Borgers Television & Radio Service, 1409 Second Ave.
Bryce Audio Appliance, 110 W. 40th St.
Central Stereo & Hi Fi, 251 West 42nd St.
Churchill Custom Hi Fi, 11 East 45th St.
Consolidated Radio Seles Corp., 768 Amsterdam Ave.
Coronet Electronics, 120 Liberty St.
Crown Electronics, 120 Liberty St.
Crown Electronics, 64 Cortlandt St.
Durant Sound Equipment Co., 24 W. 55th St.
Electronic Center, 160 Fifth Ave.
Electronic Workshop Sales Carp., 26 W. Eighth St.
Electronic Workshop Sales Carp., 26 W. Eighth St.
Electronics, 202 East 44th St.
Gem Electronics, 205 Fulton Street
Sam Goody East, 666 Third Ave.
Sam Goody East, 666 Third Ave.
Sam Goody East, 666 Third Ave.
Grand Centrol Radio, 124 E. 44th St.
Gray Sound, 441 Madison Ave.
Greylock Electronics Supply, 554 West 168th St.
Harmony Hause, Inc., 147 E. 76th St.
Harmison Radio, 225 Greenwich St.
Horvey Radio Co., 103 W. 43rd St.
Heins & Balet, 68 Cortlandt St. **NEW YORK CITY**

Hi Fidelity Center, 220 East 23rd Street
Hi Fiddle Dee, 189 West 10th St.
Hi Fi Hq. Inc., 235 East 60th St.
Key Electronics Co., 120 Liberty St.
Kooper Products, 125 East 88th Street
E. J. Korvette, 125 East 88th Street
E. J. Korvette, 575 Fifth Ave.
Lafayette Radio, 100 6th Ave.
Leonard Radio Inc., 1163 Sixth Ave.
Liberty Music Shops, 450 Madison Ave.
Liberty Music Shops, 450 Madison Ave.
Lion Electronics, 215 Fulton Street
Lyric, 1221 Lexington Ave.
Marcani Bros., 864 Lexington Ave.
A. L. Matthews & Co., 2751 Holland Ave.
Aidway Radio & Electronics Corp., 60 W. 45th St.
Milo Electronics, 330 Canal St.
Murray's Audio Center, 821 Broadway
National Radio Distr Manhattan Inc., 1799 First Ave.
New York Hi-Fi Exchange, 1034 A Lexington Ave.
O & W Radio Co., 141 Cedar St.
Packard Electronics, 33 Union Square West
Rabson's, Inc., 119 West 57th St.
Recording Tope Co., 123 E. 88th St.
G. Schermer, 4 East 49th St.
Sonacraft Corp., 115 117 W. 45th St.
Stentors Recording Machine Co., 469 Fourth Ave.
Sylvan Wellington Co., 269 Canal St.
Terminol-Hudsan Electr, 48 West 48th Street
Terminal Radio Corp., 85 Cortlandt St.
Tholia Hi Fi, 762 Madison Ave.
Julius Weikers & Co., 4380 Broadway
NIAGARA FALLS

NIAGARA FALLS

Highland Furniture Co., 2521 25 Highland Ave. Niagaro Falls Audio Center, 1720 Pierce Ave.

Blumenthal Co., 234 N. Union Radio Equipment Corp., 1615 W. State St.

ONEONTA

Lynn M. Finch, South Side Dr.

PATCHOGUE

Standard Parts Corp., 325 West Main Street

PLATTSBURG

Ray Supply Inc., 13 Soilly Ave.

POUGHKEEPSIE

B & B Electronics Co., 535 Main St.
Central Electronics Inc., 5 Porker Ave.
Chief Electronics Inc., 14 N. Bridge St.
Dutchess Television, 5 Spackenkill Rd.
Higgins & Sheer Electronics Dist., 105 Dutchess Turnpike

RICHMOND HILL

Anchor Electronics Distr. Corp., 116 01 101st Ave.

RIVERHEAD, L. I.

D & S Electronics Inc., 201 Roilroad Ave.

ROCHESTER

Craig Audia Laboratory, 12 Vine St. Jerry Fink Co., 644 Clinton Ave. S. Mosline Electronics Inc., 511 Clinton Ave. S. Rochester Radio Supply Co., 600 E. Maln

ROCKVILLE CENTRE

Green Tele Radio, 14 16 So. Village Ave.

ROME

Rome Electronics Inc., 108 110 Spring St.

ROSLYN

Audio by Zimet Inc., 1038 Northern Blvd.

SCARSDALE

Baynton-Goodall Audio, 737 White Plains Rd. Lafayette Radio Electronics Corp., 691 Central Pork Ave.

SCHENECTADY

Adirondack Electronics, 710 12 Broadway Electric City Radio Supply, 2469 Albany St. Hause of Harmony, 1444 State St. Schenectady Electronic Dist. Corp., 1708 Altamont

STATEN ISLAND

B & D Distributing Co., 639 Thompkins Ave. SYOSSET

Lofayette Radio, 111 Jericha Turnpike SYRACUSE

W. E. Berdnt, 655 S. Warren St.
W. G. Brown Sound Equip. Corp., 521 E. Washington
Cambridge Electronics, 468 Westcott St.
Morris Distributing Co., Inc., 1153 W. Fayette St.
Olmsteds Victrala Shop, 752 So. Crouse Ave.
Stewart W. Smith Inc., 325 E. Waler St.
Syracuse Arms & Supply Co., 125 Cambridge St.
Syracuse Radio Supply Co., 620 S. Salina St.
Varsity Camera Shap Inc., 804 So. Crouse Ave.

TROY

Trojon Electronic Supply Co., 15 Middleburgh St. Troy Comera Shop Inc., 51 3rd St.

TUCKAHOE

Boynton Studio, 295 Main St.

ξ

UTICA

Associated Electronic Supply, 1429 Sunset Ave. Saundrama Hi Fi Components, 1411 Oriskony St. Vaeth Electric, 35 Genesee St. Volley Electronics Labs., Inc., 1415 19 Oriskany St.

VALLEY STREAM

Gem Electronics of Valley Stream, 218 Sunrise Hwy. Som Goody, 88 Central Mall, Green Acres Shopping

WATERTOWN

Severance Photo Inc., 46 Public Sq. Watertown Electronics, 680 Mill St.

WEST HEMPSTEAD Churchill Custom Hi Fi, 159 Hempstead Turnplke

WHITE PLAINS

Audio Exchange, 203 Momaroneck Ave. Churchill Custom Hi-Fi, 141 East Post Road Melville Radio Corp., 43 Hamilton Ave. Westchester Electronics, 610 Momaroneck Ave.

WOODMERE

J & S TV. 1040 Broadway

WOODSIDE

Boro Electronics Inc., 69 18 Roosevelt Ave.

YONKERS

Gem Electronics, 1937 Central Ave. General Communications lab., 20 Palisades Ave. Normandy Piano & Music Center, 24-26 Warburton Ave. Sam Goody Cross County, 5 Xavier Drive

NORTH CAROLINA

ASHEVILLE

Bradley Hi Fi Center, 826 Hendersonville Freck Radio & Supply Co., 38 Biltmore Ave. Longs Distributing Co., Inc., 12 Biltmore Ave.

CHAPEL HILL

Kemps Record & Hi Fi Equip., 207 E. Franklin St.

CHARLOTTE

Brodt Music Co., 1409 N. Independence
Dixie Rodio Supply Co., Inc., 1431 Bryant St.
Joe Little Record Shop, 126 W. Fifth St.
Music Inc., 1415 Elizabeth Ave.
Holly Smith Sound Center, 213 So. Tryson St. and 4145 Park Rd.

Cobbs Television & Sound Inc., 308 Bon Air Ave.

FAYETTEVILLE

Eostern Radio Supply Inc., 835 Brogg Blvd.

GASTONIA

Hi Fi Sound Systems, 112 Green Dr.

GOLDSBORO

The Melody Shop, Sunrise Shpg Center

GREENSBORO

Harvey West Music Co., 226 W. Morket St. Johannesen Electric Co., Inc., 312 N. Eugene St.

JACKSONVILLE

Mollory Sales Inc., Hghy 24 E. P.O.B. 428

KINSTON

Custom Music Installations, 1101 S. Queen St.

NASHVILLE

Morris Bros., 812 St. Alston St.

RALEIGH

Southeastern Radio Supply Co., 414 Hillsboro St. Stephenson Music Co., 2011 Comeron St.

ROCKY MOUNT

W. C. Reid & Co., 143 S. Moin St.

WILMINGTON

French Radio Co., 1220 Dock St.

WILSON

Dicks Electrical Co. High Fidelity Dept.

WINSTON-SALEM

Dalton Hege Radio Supply Co., 938 Burke St. Electronic Wholesalers, Inc., 938 Burke St.

NORTH DAKOTA

BISMARCK

Electronic Center, 214 Broadway

Bristol Distributing Co., 1345 Main Ave. Rodio Equipment Co., 806 ''P' Ave. Walter Electronic Co., 9402 N P Ave.

Bristol Distr Co., 25 N. Main St. John Iverson Co., 216 2nd St., S.W.

OHIO

AKRON

Electronic Engineering Co., 362 W. Bowery St. Olson Electronics, Inc., 69 West State Street Sun Radia Co., 110 E. Morket St. Temple Square Hi Fi Inc., 739 N. Main St.

ASHTABULA

Marrison Radio Supply, 331 Center St. Warren Radio Inc., 776 Center St.

ATHENS

Vere Smiths Audio Visual Service, 42 N. Court St.

Burroughs Radio Co., 2705 Fulton Rd., N.W. Conton Stereo, 3023 Cleveland Ave., N.W. George F. Ebel Co., 3017 Cleveland Ave. Grosham Camera Center, 1326 Whipple N.W. Walkerodio, 3301 Harrison N.W. Geo. C. Willie Co., 601 Cleveland Ave. N.

CINCINNATI

CINCINNATI
Customcrafters Inc., 2259 Gilbert Ave.
Economy Electronics Dist. Co., 619 Elm Street
Herrlinger Distr. Co., 112 East Liberty St.
Hi Fi Audio Inc., 2000 Modison Rd.
Holub & Hogg, 14 Sycomore St.
Industrial Comm. & Sound, 3197 Linwood Ave.
Mytronic Co., 2145 Florence Ave.
Porter Engineering Co., 619 Elm St.
Steinbergs Inc., 633 Wolnut St.
United Radio, 1314 Vine St.

CLEVELAND

CLEVELAND

Adventures In Music, 2172 S. Taylor
Atias Radio Company, 714 Prospect Ave.
Audio Craft Co., 2915 Prospect Ave.
Custom High Fidelity Inc., 13449 Euclid Ave.
Edelmuth & Campany, 1741 Euclid Ave.
Electronic Products, 1231 Moin Ave.
Fox Radio Parts Company Inc., 4314 Lee Rd.
Hillcrest Record & Hi Fi Center, 6717 E. Gate Dr.
Music Unlimited, 13410 Detroit Ave.
National Audio Center, 1000 Homilton Ave.
Olson Electronics, Inc., 2020 Euclid Ave.
Olson Electronics, Inc., 2020 Euclid Ave.
Olson Electronics, Inc., 2020 Euclid Ave.
Olson Electronics, Inc., 2030 Foxpert Road
Perry Briggs Co., 4135 W. 150 St.
Pianeer Radio Supply Co., 5403 Prospect Ave.
The Progress Radio Supply Co., 413 Huron Rd.
Radio & Electronic Parts Carp., 3235 Prospect Ave.
Seewoy Electronic Parts Carp., 3235 Prospect Ave.
Shoker Music Shop Inc., 16505 Kinsman Rd.
Phil Thal Appliance Co., 736 Prospect Ave.
Winteradio Inc., 1468 W. 25th St.

COLUMBUS

Anderson High Fidelity Center, 2453 Neil Ave.
Anthony Music Co., 3430 Indianola Ave.
Buckeye Electronics Distr. Inc., 242 E. Long St.
Electronic Supply Corp., 814 W. 3rd Ave.
Fisher Music Co., Inc., 3430 Indianola Ave.
Hughes Peters Inc., 111-117 E. Long St.
Magnetic Service Corp., 1670 West 1st Ave.
Oison Electronics, Inc., 142 N. High St.
Polmer Eng. & Electronics, 1589 West 5th St.
Scott Steree, 2388 W. Broad St.
Whitehead Radio Co., 124 N. Grant Ave.

DAYTON

Custom Electronics Inc., 1918 S. Brown St.
Doyton Music Service, 311 Salem Ave.
Executone Systems Co., 2671 South Dixie Hwy.
Goldkomp TV 3746 Solem Ave.
Ham N Hi Fi Inc., 314 Leo St.
Klapfs Music Shop, 320 Salem Ave.
Srepco Inc., 314 Leo St.
Stotts Friedman Co., 108 N. Jefferson

ELYRIA

El A Co., 235 Lodi St.

EUCLID

V. Demshor & Son Inc., 22034 Lake Shore Blvd.

FAIRVIEW PARK

Counterpoint Inc., 20971 Westgate Shop

LANCASTER

Bletzoker Electronics, 135 W. Chestnut St. Commercial Music Service, P.O. Box 20 The Hi Fi Shop, 111 S. George St.

LIMA

Acme Photo Supply Inc., 207 W. High St.

LORAIN

Nelson & Fain, 1755 Oberlin Ave. Pioneer Electronic Supply Co., 1648 Broadway

MANSFIELD

Audio Consultants, 81 Parkwood Blvd, The Burroughs Radio Inc., 218 E. 2nd St. Metronome, 1354 Lexington Wholesaling Inc., 775 Springmill Rd.

MARIETTA

Marietto Radio & TV Supply Co., 1028 N. Greene St.

MARION

Audio Duplication Services, 239 East Church St.

MASSILLON

M. H. Martin Co., 1118 Lincoln Way E. MIDDLETOWN

Hinkles Electronics, 5021 Grand Ave.

PARMA Winteradio Electronic Sup. Co., 5373 Ridge Rd.

PORTSMOUTH

Sound Electronic Supplies, 7th & Findley Sts.

SALEM

Jones Company, 1090 Jones Drive

SANDUSKY

Barco Electronic Parts, 1725 Columbus Ave. Monroe Service Inc., 640 Camp St.

SHAKER HEIGHTS

Adventures in Music, 20320 Fornsleigh Rd.

SPRINGFIELD Standard Radio of Springfield, 1300 St. Paris Rd.

STEUBENVILLE D & R Radio Supply, 221 S. Third St. Gerrero, 136 South 5th St.

TIFFIN

Electro Alarms Co., 24 S. Woshington St.

TOLEDO

The Audio Center, 1546 Alexis Rd.
Hillebrond Electronics, 4665 W. Bancroft St.
Hines World of Sound, 621 Madison St.
The Jamieson Co., 3417 Dorr St.
Lifetime Electronics, 1501 Adoms St.
Selectronic Supplies, 3185 Bellevue Rd.
Toledo Sound Equipment Co., 1758 Sylvania Ave.
Warren Radio Co., 1002 Adams St.

WARREN

D & J Electronic Supply Co., 207 Elm Rd., S.E. Rodio Specialties Co., 136 Pine Ave., S.E.

YOUNGSTOWN

Armies Electronics, 320 W. Federal St. Kochs Hi Fi Shap, 805 N. Hazelwood Ave. Rodia Parts Co., 230 E. Boordman St. Ross Rodio Co., 325 W. Federal St.

ZANESVILLE

Thompson Radio Supplies, 110 S. Sixth St.

OKLAHOMA

ARDMORE

Steve The Radio Mon, 525 R S W

ENID

Bill Cunningham Hse of Sound, 102 So. Grant Johnsons Wholesole Electronics

LAWTON

I. G. Coles, 1805 Coche Rd.

MUSKOGEE

Sooner Rodio & TV Supply, 208 N. Main

NORMAN

Hi Fi House, 753 Asp Thompson Sound Systems, 315 W. Boyd

OKLAHOMA CITY

OKLAHOMA CITY

Atomic Sound Equip. Co., 117 N.W. 23rd Sf.
Biggs of Calif. Hi Fi, 417 N High
Electronic Supply Co., 212 N.W. 10th St.
General Electronics Inc., 1052 Classen Blvd.
Johnson Wholesale Electronics, 927 N.W. First
Larsen Music Co., 314 Park St.
Miller Jackson Co., 111 E. California
Rodio & Sound Clinic, 1003 N. Shattel
Radio Supply Inc., 724 N. Hudson
Pete Soule Radio & TY, 3319 N. Villa
Trice Wholesale Co., 800 N. Hudson

SAPULPA

Jocks Camera Shop, 13 S. Pork St. SHAWNEE

Music Mart, 128 W. MacArthur

STILLWATER

Audio Sound Systems, 507 S. Woshington

TULSA Audio Electronics Inc., 216 E. 10th St.
High Fidelity Center Inc., 3529 So. Harvard
Imperial Sound Inc., 3505 S. Peoria
Midwest Electronic Supplies, 625 Wright Bldg.
Oil Capital Electronics, 708 S. Sheridon
Radio Inc., 1000 S. Main St.
S & S Radio Supply, 537 S. Kenosho
Science & Sound Center, 3529 S. Howord
Sight & Sound, 2120 So. Harvard
Sound Unlimited, 3745 S. Peoria

OREGON

ALBANY

Home of Sound, 334 West Second Ave. BEAVERTON

Sight & Sound, 4325 S.W. 96th Ave.

COOS BAY

Musicland, 134 S. 3rd

CORVALLIS

Chase Radio & TV, 435 S. Second

FUGENE

Lou Johnson Co., Inc., 207 E. 8th St. Smeed Saund Service, 790 West Eighth St. Thampsons, Braadway & Oak St. United Radio Supply Inc., 974 W. 6th Ave.

GRANTS PASS

Rolfings Rodio & TV, 120 S.W. H St.

KLAMATH FALLS

R. F. Supply Co., 2367 S. 6th St.

MEDFORD

United Radio Supply Inc., 605 N. Fir St. Verl G. Walker Co., 205 W. Jackson

PENDLETON

Pendleton Music House, 112 S. Main St. The Town Shop, Main at Court Ave.

PORTLAND

PORTLAND

Adon Oregon Ltd., 40 N.E. 28 Ave.

H & R Radio Supply, 5141 N. E. Sandy Blvd.

Hawthorne Electronics, 712 S.E. Hawthorne Bl.

Hi Fidelity Unlimited Inc., 2816 S.W. Sam Jackson

Lou Johnson Co., Inc., 1506 N.W. Irving

Manchester Chandler Co., 2915 N.E. Alberto St.

Meler & Frank Inc., Fifth & Sixth Sts.

Oregon Typewriter & Recorder Co., 340 S.W. 5th Ave.

Otts Radio & Appliance, 3470 S.E. Hawthorne

Portland Radio Supply Co., 1234 S.W. Stark

Sixth Avenue Records, 511 S.W. 6th Ave.

Television & Radio Supply Co., 1327 S.E. Grand

United Radio Supply Inc., 22 N.W. Ninth Ave.

SALEM

Cecil Farnes Co., 440 Church St., N.E. Lou Johnson Co., Inc., 935 S. Commercial

PENNSYLVANIA

ALLENTOWN

Baker Communications, 9 S. 12th St. Federated Purchaser Inc., 1115 Hamilton St. E. J. Harte & Co., 1339 //2 Gordon St. A. A. Peters, 231 No. 7th St. Rodio Electric Service Co., 1313 Linden St.

ALTOONA

Book & Record Shop, Pleasant Volley Shopping Center Hollenbacks Radio Supply, 2221-25 Eighth Ave.

ARDMORE

Crt. Dist. Co., 53 W. Lancaster Ave. Soundex Electronics, 45 W. Lancaster Ave.

BRADDOCK

Marks Parts Company, 317 Braddock Ave.

BEAVER FALLS

Grubers, 1327 Seventh Ave. Reliable Radio & TV Supply, 617 17th St.

BETHLEHEM

Audio Laboratories, 808 Mohican St. Buss Radio Supply Co., 431 W. Broad St.

BLOOMSBURG

Alvo Elect. Dist. Inc., 1027 Old Berwick Rd.

BRISTOL

Powell Elec. Sales Co., 400 Otter St.

BUTLER

Barron's Radio Supplies, 333 W. Jefferson St.

CHARLEROI

Mon Valley Electronics Inc., 615 McKean Ave.

CHESTER

A C Radio Supply Co., 126 E. 24th St. Bell Electronics Supplies Inc., 1835 W. 9th St.

DOYLESTOWN

Louis Pearlman, 34 S. Main St.

EASTON

Federated Purchaser, 921 Northampton St. Radio Electric Serv. Co., 1700 Northampton St.

ELKINS PARK

A. G. Radio Parts Ca., 939 Township Line

ERIE

Mace Electronics, 24th & French Warren Radio Co., 1313 Peach St.

HARRISBURG

Electric Wholesalers Inc., 1922 Paxton St. Harrisburg Radio Laboratory, 1124 Market St. Music Box, 1325 Derry St. Radio Distributors Co., 915 S. 13th St. Terry Phone Inc., 3805 Paxton St.

HAVERFORD

Kass Electronics Distr., Westchester Tpke.

HAZELTON

Moyer Electronic Supply Co., 758 N. Locust St. Pensocks, 136 N. Wyoming St.

HOLLIDAYSBURG

Peggy & Tams Music Corner, On the Diamond

HOMESTEAD

M. Leff Radio Parts, 247 W. 8th Ave.

JOHNSTOWN

Cambria Equipment Co., 17 Johns St. Hesselbein Sound Studio, Westmant Shpg Center TV & Radio Parts Co., Johnstown, Inc., 226 Main St.

LANCASTER

Geo. D. Barbey Co., 622 Columbia Rd. Robert Romig Elect. Spec., 307 N. Duke St.

LEBANON

Geo. D. 8arbey Co., Inc., 821 Quentin Rd.

Marts Music Store, 32 Sa. 9th St.

LEECHBURG

Kiski Valley Photo Supply, 160 Market St.

LEVITTOWN

Audio Lab., 121 Hedge Rd.

LEWISTOWN

Alvo Elect. Dist. Inc., 207 W. Market St.

LOCK HAVEN

Alvo Elect. Dist. Inc., 801 Bellefonte Ave. MANSFIELD

B. A. Neal TV & Appl. Co., 50 W. Wellsbore St.

MCKEESPORT

Barno Radio Co., 927 Walnut St. Hi Fi Center of McKeesport, 321 Sixth Ave. McKeesport Electronics Inc., 1661 Fifth Ave.

MEADVILLE

Worren Radio Inc., 1057 S. Main St.

MERIAN

Hi Fidelity Electronics Sound Corp., 368 Montgomery Ave. MEYERSDALE

Leo's Radio & TV Sales & Service, 331 Meyers Ave.

NEW BRIGHTON

Television Parts Co., 518 Fifth Ave.

NEW CASTLE

Home Music Systems, 311 Neschannock St.

NEW KENSINGTON

RPC Electronics Co., 1102 Second Ave.

NEWTON SQUARE

Herbicek & Mathews, 3109 W. Chester Pike

NORRISTOWN

Almo Radio Co., 550 Markley St. General Radio Sup Co., 624 W. Airy St. Kratz Brothers, Corner Oak & Kohn St.

PAOLI

Hi Fi Center, 1550 E. Loncoster Ave.

PHILADELPHIA

A C Radio Supply Co., 1539 W. Passyunk Ave.
Air Tone Sound & Recording Co., 1710 Sansom St.
Allied Parts, 1320 W. Erie Ave.
Almo Radio Co., 913 Arch St.
Austin Electronics, 1627 Sansom St.
Barnett Bros. Radio Co., 622 Arch St.
Crt. Dist. Co., 13 So. 21st St.
Danby Radio Corp., 19 S. 21st St.
Friends, 614 Arch St.
General Sound Inc., 3500 N. 9th St.
Sam Goody of Snellenburgs Inc., 1125 Chestnut St.
Graybar Electric Co., 910 Cherry St.
Herback & Rademan, 1204 Arch St.
Lectronics of City Line Ctr., 7644 City Line Ave.
Lee Electronics, 1112 Knorr St.
Horry Levin Inc., 3064 Kensington Ave.
J. F. McCarthy Inc., 719 No. 24th St.
Penn Electronic Parts Co., 5303 Fronkford Ave.
Philo Electronics Inc., 1225 Vine St.
R E S Co. of Pennsylvonia, 3412 Germontown Ave.
R E S Co. of Pennsylvonia, 5930 Market St.
Radio Clinic, 154 So. 60th St.
Radio Clinic, 154 So. 60th St.
Radio Clinic, 154 So. 60th St.
Ree Bros., 7711 Ogontz Ave.
Raymond Rosen & Co., 51 St. & Porkside Ave.
Ten Gotes Assoc., 6128 Morton St.
Al Steinberg & Co., 2520 N. Brood St.
Walker Radio Service Sales, 3rd & Fern Sts. **PHILADELPHIA**

PITTSBURGH

PITTSBURGH

Audio Associates, 115 Hawthorne Drive
Audio Video Co., 609 Hill Ave.
Cameradio Co., 1121 Penn Ave.
Cancerto Room, 824 S. Aiken Ave.
Fotoshop Sq. Hill Inc., 5834 Forbes Ave.
Graybar Electric Co., 900 Ridge Ave.
Joseph Horne Co., Penn & Stonwix
House of Audio, 508 Stanwick St.
L. B. Electronics, 1521 Brawnsville Rd.
Metropolitan Elect., Inc., 5648 Friendship Ave.
Modern Sound Co., Nobletown Rood, RD #5
Olson Electronics, Inc., 5918 Penn Ave.
Opus One, 225 Oliver Ave.
Radia Parts Co., 929 Liberty Ave.
Sam Goady, 639 Liberty Ave.
So. Hills Electronics Sup. Co., 1420 W. Liberty Ave.
Tydings Co., 3337 Penn Ave.
Wolks High Fidelity Center, 306 Forbes Ave.

POTTSTOWN

Geo. D. Barbey, 157 No. York St.

POTTSVILLE

Moyer Elect. Supply, 330 E. Norwegian St.

READING

A G Radio Parts Co., 628 Schuylkill Ave. Gea. D. Barbey Co., Inc., 333 No. 4th St. Electronic & TV Distr. Co., 201 S. 4th St. Rader & Fasig, 704 Wolnut St., 938 No. 8th St.

ROCHESTER

Grubers, 234 Adams

ROSLYN

Hi Fi Stereo Center, 1373 Easton Rd.

SCRANTON

General Radio & Refrig. Co., 1129 Wyoming Ave. Fred P. Pursell, 1221-27 N. Wash. Ave.

SHARON

Radio Parts Co., 1891 E. State St. Sharon Electronic Supply Co., 1344 E. Stote St.

SHARPSVILLE

L. C. Vath, P. O. Box C

ST. MARYS

B & R Electric Co., 26 Railroad St.

STATE COLLEGE

Alvo Electronics Dist. Inc., 103 S. Pugh St. Shadle Associates, 151 So. Allen St.

SUNBURY

Moyer Electronic Supply, 310 No. 2nd St.

SWARTHMORE

Hi Fi Studio, 17 So. Chester Rd. Wholesale Electronic Supply Co., P.O. Box 7

UNIONTOWN

TV & Radio Parts Co., 1 Mill St.

WARMINSTER

Allied Elect. App. Parts, York Rd. & Street Rd.

WASHINGTON

Electronic Soles & Service, 569 E. Maiden St.

WAYNE

High Fidelity House, 167 W. Lancaster Ave.

WEST HOMESTEAD

M. Leff Radio Parts Co., 247 W. 8th Ave.

WILKES-BARRE

Communication Eng. Corp., 41 N. Franklin St. General Radio & Electronics Co., 396 S. Main St. Radio Service Co., 346 S. Main St. Shelborne Elects. Inc., 169 Penna Ave.

WILLIAMSPORT

Alvo Electronics Distributors, 123 E. 4th St. General Radio & Electronics Co., 232 William St. Lowry Elect. Sup., 643 Elmira Ave.

WILLOW GROVE

Radio Elec. Service Co., 29-31 York Rd. WYNCOTE

Audio Electro, 300 E. Glenside Ave.

WYNNEWOOD Shryock Radio & Televsion Co., Banwit Teller Bldg.

YORK

J R S Dist., 645 W. Market St. Sol Kesslers Melody Shop, 205-207 S. George St. Resco, 850 Bull Rd. Wholesole Rad. Ports, 1650 White Rd. Rd. 7

RHODE ISLAND

CRANSTON

Rodio Shock Corp., 1301 Reservoir Ave. Sound O Roma Inc., 758 Reservoir Ave.

NEWPORT J & S Supply Company, 25 Third St.

PROVIDENCE Audionics Co., 790 N. Main St. Del Padre Supply, 41 Broadway De Mambra Radio Supply Co., Inc. Wm. Dandieta & Co., 28 Wolcott St. W. H. Edwards Co., 94 Broadway Electronic Distributors, 41 Broadway Gertz Inc., 257 Adelaide Ave.

WOONSOCKET

Adams Electronics, 176 Park Pl.

SOUTH CAROLINA

CHARLESTON

Fox Music House, 535 King St. Radia Laboratories, 475 E. Bay St. Wholesale Radio Supply Co., 515 E. Bay St.

COLUMBIA

Brodford's Record Shap, 1225 Main St. Dixle Radio Supply Co., Inc., 1900 Barnwell St. Hi Fi Music & Record Center, 621-23 Harden St.

FLORENCE

De Leon Finklea, Inc., 223 S. McQueen St.

GREENVILLE Mary's Record & Hi Fi Center, 520 S. Main St.

SPARTANBURG

Four Star Distributors Inc., 491 Union St. SOUTH DAKOTA

ABERDEEN

Burghardt Radio Supply, 102 S. 2nd St.

RAPID CITY Burghardt Radio Supply, 403 Sturgis St. Reade Electronics, 223 East Oakland

SIOUX FALLS Gefke Music Ca. Hi Fi, 222 So. Main

STEREO/HI-FI DIRECTORY

172

McKenzie Distributors Inc., 800 N. Main Ave. Warren Radio Supply, 115 S. Indiana Ave.

WATERTOWN

Burghardt Radio Supply Co., 621 4th St., S.E.

TENNESSEE

CHATTANOOGA

Camera & Craft, E. Ridge Shopping Ctr. College High Fidelity, 2345 McCallie Ave.

JOHNSON CITY

Bowman-Howard Electronics, 2207 Kingsport-Bristal Blvd.

KINGSPORT

Radio Electric Supply Co., 961 E. Sullivan Watkin's Sound & Hi Fi, 116 Virginia St.

KNOXVILLE

McClung Appliances, 310 Georgia St., N.E. Eunice Miller Interiors, 2704 Kingston Pike Music Land, 5911 Kingston Pike

MEMPHIS

Glenn Allen Co., 1146 Union Ave.
Bluff City Distributing Co., 234 East St.
Hirsh Electronics, 1658 Union Ave.
Lavender Radio Suppy Co., 180 S. Cooper St.
W & W Distributing Co., 644 Madison Ave.

NASHVILLE

Electra Distr. Co., 1914 West End Ave. Michelson's High Fidelity, 113-115 Nineteenth Ave. So.

NEWBERN

Audio Components, P.O. Box 207

OAK RIDGE

The Music Box, 5 Broadway

TEXAS

ABILENE

Crescenda Enterprises, 1801 Lincoln Dr. R & R Electronic Co., 1010 Pine St.

AMARILLO

Audio Cammunications, 1601 West 3rd. Nichals Paint & Wallpaper, 123 W. 6th St. R & R Eectronics Co., 707 S. Adams Red Feorn Ca., 1418 15th St. West Texas Electronics, 1601 W. Third St.

ARLINGTON

Audio Acoustics, 130 Fairview

AUSTIN

Berkmans, 2234 Guadalupe St. Hargis Austin Inc., 410 Baylor High Fidelity Inc., 1605 Lavaca Music Center, 2313 Narth Laap Speedway Radio & TV, 2010 Speedway

BAYTOWN

Genes HI Fi Center, 122 E. Texas Ave.

BEAUMONT

Audio Engineering, 2520 Calder St. Brock Audia Inc., 2293 Calder Ave. Gateway Audia, 186 Gateway Montague Radio & Dist Co., 760 Laurel Sterling Radio of Beaumont, 1160 Laurel

BIG SPRING

Hi Fi House, 503 Edwards Bivd. Lavender Radio & TV Supply, 401 E. 2nd Ave.

BORGER

Humphreys Hi Fi Sales, 305 W. 10th St.

BROWNSVILLE

Blockburns, 747 E. Elizabeth Electronic Equip. & Engr., 12th & Madisan

BRYAN

Fidelity House, 2014 Texas Ave.

CONROE

Richard Keyes Electronics, 210 N. Main

CORPUS CHRISTI

CORPUS CHRISTI

Electronic Equip. & Eng. Co., 805 S. Stoples St.

Greens Music Shop, 3165 S. Alomedo

Hi Fi Systems, 2126 Leopard

High Fidelity Inc., 56 Parkdale Plaza

Lavender Radio & TV Supply, 1627 31 S. Alameda

Leader Electronic Supply, 1701 Margan

Radio Center, 1718 So. Alameda at 6th

Wicks Radia Equipment, 513 15 S. Staples St.

DALLAS

DALLAS

Adleta Ca., 1914 Cedar Springs
Ali State Distr. Ca., 2411 Rass Ave.
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Carver Saund Equip. Co., 2280 Yontage
Central Electronics Inc., 4117 Maple Ave.
Custom Music, 4228 Oak Lawn
Ernstroms, 4356 Lovers La.
Graybar Electric Co., 717 Latimer St.
Hi Fi Inc., 4111 Abroms Rd.
Hillcrest Recards, 6309 Hillcrest
Home Music Assoc., 4518 N. Central Expwy.
James T. Hunt Ca., 602 N. St. Paul
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Sanborns Hi Fi Center, 5551 W. Lavers Lane

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DUMAS

Caxs Hi Fi, 303 Dumas Ave.

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Sterling Radio Praducts Co., 1616 McKinney Ave.
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Wholesale Electronics Supply, 203 South High

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MCALLEN

Audio Center Inc., 1912 N. 10th St.

MCGREGOR

Bruce Hyatt Electronics

MIDLAND

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Modern Electronics Ca., 2000 Broadway
Radio & TV Parts Co., 1828 N. St. Marys
Slivey Music Ca. Na. 3, 1237 Austin Highway
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E. M. Royle Corp., 333 W. 33rd So.
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House of Music, 115 So. Main St.
Moore Radio Supply Inc., 147 E. 6th Sa.
Olaughlins Radio Supply, 113 E. Broadway
Ralph Rytting Audia Inc., 3096 Highland Drive
Standard Supply Co., 225 E. 6th Sa.

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Jarvis Radio & TV, 25 Depot Street

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Wilson Music Ca., 37 Center St.

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J. N. Dotson, Box 575

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CLARKSTON

Wasems Inc., 845 6th St.

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W. P. Brush, 224 So. Harrison St.

LONGVIEW

Kortens, 1400 Commerce Ave.

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Quality Hi Fi Components Co., W. 109 Third Ave.

MT. VERNON

High Fidelity Saund Systems, 305 Milwaukee St. Pringle Rodio Wholesale Co., 822 N. 4th

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United Sound Service, 329 W. Main St.

HUNTINGTON

Electronic Supply Inc., 422 Eleventh St. Singer Electronics Inc., 1555 Third Ave.

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Hausfeld Radio Supply, 536 Seventh Ave.

WHEELING

James M. Black & Sons, 1206 Chapline St.

WISCONSIN

APPLETON

Appleton Radio Supply Ca., 1217 No. Richmond St. Valley Radio Distributors, 518 Appleton St.

BELOIT

Hi Fi Cellar, 1247 Lincoln

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Nesio Electronic Dist., 715 S. 14th St.

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Jax Hi Fi House, 152 W. Wisconsin
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Van Velzors House of Music, 309 W. 16th St.

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Johns Inc., 216 Ivinson Wyaming Musicenter, 100 So. 2nd St.

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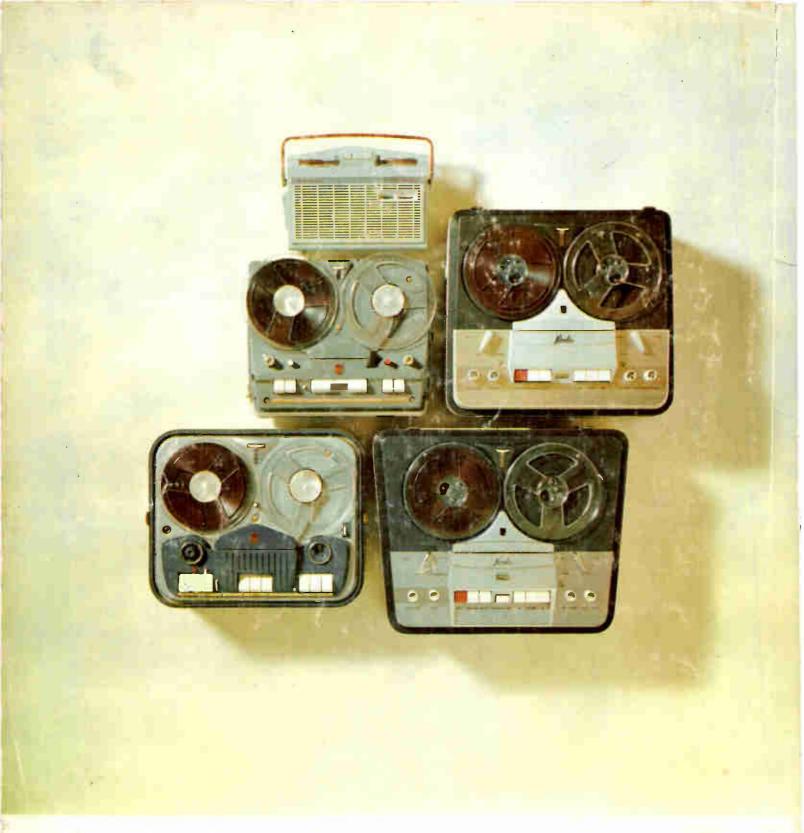


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